

Enterprise Reporting

A Sound Step to Superior Performance
Management

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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Table of Contents

Information Excellence at Risk.....	3
A Way Out.....	3
Turning Data into Reports.....	4
Maturing from Many to One.....	7
Embracing Enterprise Reporting.....	8
Five Key Benefits.....	9
Lower TCO and Simpler License Management.....	9
Comprehensive, Accurate Views of Information.....	9
Increased User Adaptability.....	10
Reduced IT Backlog.....	10
A Foundation for Performance Management.....	10
About Ventana Research.....	11

Information Excellence at Risk

For organizations seeking to improve return, cut costs, manage risk and act on new opportunities, it's not hard to understand the need for high-quality business intelligence (BI) and performance management solutions. Most IT organizations have responsibility for lots of data, lots of applications – and hundreds, perhaps thousands, of reports. Employees and business partners count on these reports to keep them up to date and to support their decision-making, even as they acknowledge that the reports often do not provide complete or sufficiently timely information. Generated through an array of different tools, the multiple (and perhaps contradictory) data points presented in the heterogeneous reports require users to move from interface to interface to piece together a consolidated view of customers, products and their department's performance as compared to expectations.

There is nearly universal agreement that users spend too much time gathering and organizing data from reports, but the nature and number of the systems that generate them make it hard for IT to help. Legacy and homegrown reports have traditionally taken a long time to run, consuming processing cycles and locking out other users and processes that need the same data. If user requirements change in the middle of a run, often the whole process must be started over from the beginning. When IT has to service one report after another, it has little time to plan how to break out of this cycle and enable users to take advantage of new forms of information access, analysis and reporting. This poses challenges both to organizations that have leaned down in response to challenging market conditions and those that are in growth mode.

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Ironically, even as businesses in many industries have intensified their determination to cut costs, IT's reporting responsibilities are increasing. New regulatory compliance demands put pressure on organizations to use reporting to establish audit trails and define accountability. Strategic initiatives, such as improving customer satisfaction and thus retention, require collaboration among multiple departments and business functions. Management and users demand that IT deliver "a single version of the truth": a consistent picture of customers, sales channels or other matters of interest based on high-quality data brought together from all relevant sources. But the array of point reporting solutions dispersed across the enterprise are a major impediment to achieving this goal.

A Way Out

Enterprise reporting can provide a way out of this chaos. A fundamental reason why organizations choose to move from point solutions and invest in an enterprise reporting platform is that users are struggling to overcome confusion wrought by

conflicting or inconsistent data. In primary research conducted recently by Ventana Research, participants cited “too many incompatible tools” as the biggest reason why their organizations cannot establish a single version of the truth. Enterprise reporting offers a single platform that can provide access to and deliver this reliable high quality view of data across a range of reports. And it simplifies life for IT, enabling it to manage changes in user requirements centrally rather than having to work with a different tool in each case.

There are a number of compelling arguments for the deployment of enterprise reporting, not the least of which is that it can provide a solid platform on which to expand the reach of BI tools affordably to more users and to focus BI on producing actionable intelligence that can make a difference for the business immediately.

An enterprise reporting platform thus can enable organizations to advance their BI implementations toward performance management, which aligns not only information but also people, processes and technology systems with a common set

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of strategic goals and objectives. Six Sigma, Balanced Scorecard and other measurement methodologies rely on key performance indicators (KPIs) that in turn depend on BI reporting systems to feed relevant and timely data to metrics.

The starting point for performance management is reporting. Combining performance management with an enterprise BI reporting system yields exponential benefits across the organization and does so more cost-effectively than point solutions implemented by individual lines of business and functions. However, to give

performance management the attention it deserves while conserving resources, an organization’s IT managers should consider upgrading and consolidating reporting into an enterprise system that can decrease their workload rather than add to it. Crucial to meeting this challenge is self-service, which reduces the burden on and cost to IT. Our research shows that most users prefer a self-service capability that lets them create and modify their own reports, dashboards and scorecards. By supporting self-service in a managed way, enterprise reporting can empower users and maintain, if not sharpen, an organization’s strategic capabilities while keeping IT’s maintenance workload in check.

Turning Data into Reports

It can be intimidating for IT managers to contemplate the enormous quantity of data that exists within their organization and in outside sources that must be gathered into the reports users want. Online transaction processing (OLTP) systems, e-commerce systems and other applications pour so much data into underlying repositories that even midsize enterprises are starting to find

themselves having to store many terabytes. In today's information-driven economy, IT must play a critical role in organizing data and helping users across the business derive meaning from it that they can apply for timely business analysis, collaborative decision-making and regulatory compliance.

Reporting systems have long played a vital role in answering requests for data and delivering it to users in formats they can use. In the past, IT had to write customized programs to produce each kind of report – and in many organizations, these legacy systems live on. While more accessible and visually appealing than the stacks of “green bar” paper reports of old, legacy reporting systems – often hard-coded in siloed applications or transaction systems – have contributed mightily to IT's maintenance headaches. As well, the information integration challenges they present are substantial and complex.

Most organizations have invested in reporting tools to help them address business requirements and deliver data in a rapid, repeatable fashion. Reporting tools typically offer application programming interfaces (APIs) or more customized programming options for accessing databases, files and application systems. There are many styles of reports. Typically, after they interview users to understand their requirements, IT developers choose among five kinds of reports:

- Production reports
- Analytic reports
- Operational reports
- Ad-hoc reports
- Managed reports.

Standard production reports generally are the default choice for IT. These normally use fixed formats and parameters to deliver year-to-date sales by sales rep, response rates for marketing campaigns, inventory depletion by region and other key operational and planning support information. Regional business managers in a restaurant chain, for example, use them to track quarterly or monthly profit and loss for each of their locations. Most reporting tools have management features that make it possible to schedule report execution, handle security and ensure the data is available and in correct formats. If they're needed, IT can create operational reports that focus on particular business operations or processes, zeroing in on the needs of employees in the field or the front office or the analytic demands of business managers and executives.

Ad-hoc reporting allows users to go beyond fixed reporting to do their own queries against data sources. It often is the first step toward self-service; technically astute executives and analysts use online analytical processing (OLAP) and ad-hoc query tools to interact directly with the contents of a data mart, generally without IT's involvement. Sales managers who must adjust their planning quickly to address changing business conditions, for

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example, will do ad-hoc querying rather than wait for IT staff to customize a standard production report. Corporate executives who don't do ad-hoc querying and reporting themselves might designate business analysts – that is, the small number of power users who are intimately familiar with departmental spreadsheets and other reports as well as the corporate database – to perform all ad-hoc queries.

While this is an important capability, too much ad-hoc reporting is a sign that the standard reports aren't doing their job; it also exposes IT systems to poorly focused or overly broad “queries from hell” – the dreaded queries that bring databases to their knees, dim the lights and make it impossible for other users or applications to access the data. Unfortunately, some reporting tools bundled with applications and data marts are either too “canned,” forcing users to turn to IT for ad hoc queries, or insufficiently preconfigured, inviting users to engage in too much ad-hoc activity.

Thus, a major goal of managed reporting is to develop, validate and organize

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instances of production reports so that before choosing to issue an ad-hoc query, a user can check to see if another report already offers the information being sought. Such managed, “parameterized” reporting can also be interactive, allowing a user to input values in fields or select values for query parameters, often from drop-down lists. In this context, users can drill down from within the production report through a hierarchy of reports to see the sales results for a brand of soft drinks, for example, or to compare regional and national sales reports. This style of reporting is far more manageable from an IT perspective, both ensuring

that overall query performance is acceptable and protecting underlying data sources from corruption or crashes.

Reporting in general is so vital to organizational performance that IT should continuously re-evaluate whether current tools and procedures are delivering to users the most useful and most complete understanding of the data. This evaluation should always focus on the business goal of reporting: to enable users to make smart decisions that benefit the whole organization. IT managers should always ask, Are users finding what they want? Is the data timely? Are we getting too many requests for customization? And finally, do the tools available to IT developers allow them efficiently to make improvements, tailor reporting styles to fit users' needs and schedule report delivery as needed? Addressing these questions should be an ongoing process.

A major issue in all aspects of BI implementation, but particularly reporting, is spreadsheet integration. Whether out of habit or preference, many users do ad-hoc analysis and create reports using desktop spreadsheets such as Microsoft Excel. The spreadsheet is inexpensive, great for personal productivity and versatile enough to support a range of activities, including budgeting and forecasting. But

these conveniences come at a cost: Most spreadsheets exist separately from enterprise resource planning (ERP) and other application systems as well as from BI reporting. In addition, spreadsheet workbooks can exist in multiple versions, and auditing and tracing errors is difficult. Any serious effort at improving reporting must deal with desktop spreadsheets.

Maturing from Many to One

Departments and business functions use various reporting tools, some of which may have come packaged with BI tools, data warehouses, data marts, ERP, customer relationship management (CRM) or other applications. Mergers and acquisitions often bring dissimilar systems under one roof, along with more software licenses to manage. When personal spreadsheets are added to the mix, it becomes clear why the sheer volume and diversity of reports prevent organizations from stepping up to a shared, enterprise view of information.

The Ventana Research Maturity Index is an analytic tool that organizations can use to assess their maturity in, among other factors, deploying and using business and technology tools and processes. Our analysis identifies four levels of organizational maturity. Applying it to the topic at hand, we find that reporting tied to single applications or data sources fits into the lowest (“Tactical”) level, where technology is deployed for departmentally independent initiatives to serve only a primary user community. Before an organization can move up to higher maturity levels, IT and business managers must address a number of messy problems associated with point reporting:

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- **High Cost.** IT must support an array of reporting systems, each of which requires specialized technical training. When people use too many tools to access the organization's data sources, often without proper controls, overall system performance suffers, forcing IT to spend money to upgrade underlying technology.
- **Poor Data Quality and Integrity.** When each reporting system lives within its own silo, IT has a tough time ensuring that users are seeing a single view of customers, products and other vital aspects of business. Each system typically has its own data model. And the multitude of reporting systems can lead to versioning problems and other data integrity woes.
- **Inflexibility.** A reporting system may be great for the one application it is dedicated to, but organizations then have to reinvent the wheel when using that tool to set up reporting for other users or departments. IT also faces a difficult task in trying to modernize systems for the Web or mobile devices.
- **Inability to Manage User Requirements.** Business conditions change with breathtaking rapidity these days, which means that users' reporting requirements also change. Having to make changes for each set of users

dependent on each point reporting tool is a chore both repetitive and unique, and it leads to an application delivery backlog. User requirements are also duplicated across tools, forcing IT to repeat maintenance steps that vary only because the tools are different.

- **Unclear Picture of Business Performance.** Older reporting systems may be good at delivering desired data, but typically they don't deliver the business context or metrics users need to fully understand what the numbers mean. Moreover, single-purpose reporting tools prevent users from knowing more than that particular application or data mart can tell them.

Under competitive pressure, your organization doesn't want sales or service representatives to have to sift through 10 different reports, including that desktop spreadsheet the boss just e-mailed over, just to gain at best a partial view of the customer. Nor does it want IT talent mired in routine maintenance of an array of different reporting systems when their expertise is needed for strategic applications that could help drive the business forward.

Embracing Enterprise Reporting

To address these challenges and set the stage for new initiatives, leading organizations are embracing enterprise reporting. Enterprise reporting develops an integrated view of the organization's entire portfolio of data sources. Through a single platform that brings reporting tools and styles together with robust metadata that can integrate multiple data models, organizations can provide data access and produce an array of reports and dashboards, without having to shift from system to system to get it done. By unifying reporting, they can make centrally accessible

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data held by different departments or in different systems to yield new insights about business performance, resource utilization, risk, compliance and more.

Enterprise reporting also can address IT's pain points by consolidating and streamlining reporting system support and responsibilities. As the demand for managed information delivery increases in intensity, IT needs to gain control of reporting tools and establish an enterprise-level platform that centralizes system performance optimization. IT's

architects also can position enterprise reporting where it belongs: at the core of a comprehensive information architecture, rather than as an uncontrolled assortment of tools applied here and there to business-critical data sources.

With enterprise reporting in place, users in the lines of business also will enjoy fewer maintenance responsibilities and an increased ability to focus on applying information to business decisions and execution, rather than on teasing out the underlying metadata held by different data sources. Enterprise reporting can deliver

modernization as well by supporting data visualization, interactivity, the integration of unstructured information and process management, all of which are important to setting the stage for performance management.

Five Key Benefits

Replacing the organization's point solutions with an enterprise reporting platform is an important step toward turning information into the fuel that powers the business. It will allow organizations to progress to the second ("Advanced") level of maturity in the analysis associated with the Ventana Research Maturity Index – the level where information systems make data meaningful to an audience beyond its original consumers. Plus, a single platform can take advantage of advances in software and Web services that would be harder, if not impossible, to implement with a grab bag of disconnected systems. Let's look at five key areas where enterprise reporting can make a difference.

Lower TCO and Simpler License Management

According to "Service-Oriented Architecture for Business Intelligence: Trends, Needs and Practices," a recent research report by Ventana Research, 59 percent of the organizations represented said they expect to adopt an SOA within the next year. The report highlights the emphasis businesses are putting on lowering the total cost of ownership (TCO) for technology, which drives them to seek more flexible software and service licensing and benefits associated with SOA such as loose coupling of services, reusability and better alignment with business. By establishing enterprise reporting within the SOA framework, an organization can set a course toward acquiring BI services that will further bring down TCO and reduce the number of licenses the organization has to manage.

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Comprehensive, Accurate Views of Information

To understand business performance with respect to customers, supply chains, corporate profitability and other key matters, users need to see information drawn from more than one source, if not more than one department. And they need to be able to drill down to understand the details, not just stop at the summary bar graphs and pie charts that appear in a portal or on a dashboard. Enterprise reporting, as an independent layer above ERP and/or other applications, frees users from being tied to one system and enables them to access and analyze information from heterogeneous sources. The enterprise reporting system's metadata handles integration so that users don't have to know the differences in data models and dictionaries to use the information.

Increased User Adaptability

By working with a consolidated suite, IT doesn't have to employ multiple tools to deliver all the styles of reporting that users need. Business managers, for example, can just drag and drop reporting options to satisfy requirements rather than ask IT for another round of time-consuming, expensive customization. Simplifying and consolidating options into an enterprise platform is important right now because the Web is broadening even further the kinds of information access, analysis and sharing options business users want. In the face of this burgeoning demand, IT won't have time to switch from tool to tool to enable Web-based search, access for mobile devices and connectivity to Microsoft Office tools. The smoother, more cost-effective and more agile approach is to work with an SOA-based enterprise reporting platform.

Reduced IT Backlog

Drag-and-drop simplicity is one facet of a major goal: to give users the ability to do things themselves. Users want the power of information, of course, but IT also needs to give it to them so it can lower its own costs and reduce the application development and upgrade backlog. Self-service is one important way businesses drive down many internal costs, and IT can use it to free up resources to focus on governing and managing information, issues that are ever more critical in this age of intensifying regulation and privacy concerns. Enterprise reporting will give users the confidence that IT is standing behind the quality of the information, rather than standing in the way of legitimate business needs to access and analyze it.

A Foundation for Performance Management

The consistent view of information that enterprise reporting can deliver is a key enabler of advanced BI analysis. Performance management moves beyond just looking at data to understanding what the data says about how the business is

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performing – and even more important, what to do if numbers fall outside of expectations. Drawing from ERP and other relevant applications and data sources, enterprise reporting can populate key metrics and performance indicators with timely data. Finally, organizations will be able to see the results of the application of best practices, Six Sigma and other methodologies. Performance management can become part of a continuous, organization-wide improvement cycle.

Reporting has long been a core activity for getting valuable information out to users. The time has come to take it to the next level: to make possible a broader, richer and higher-quality view of the data so users can make important decisions fast and with confidence. Using enterprise reporting, an organization can progressively address immediate reporting needs, use BI capabilities to acquire greater insight, extend BI to more users and

prepare a platform for the future that includes the implementation of performance management.

In the marketplace, advantages accrue to those who can seize opportunity. Performance management gives organizations uncommon insight, but it takes enterprise reporting to deliver that insight with fact-based clarity and meaning.

About Ventana Research

Ventana Research is the leading benchmark research and advisory services firm. We provide expert guidance to help organizations manage and optimize performance – to become not only more efficient but more effective. 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, rigorous 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. Ventana Research provides the most comprehensive analyst coverage in the industry; more than 2.5 million business and IT professionals around the world benefit from Ventana Research's insights. To learn how our benchmark research and assessment and advisory services can improve your organization's performance, visit www.ventanaresearch.com.