DM Review

EXTENDED EDITION

August 2006 Volume 1 Issue 3

Features

Designing Transformational Scorecards

By Mark Place and Carlos Mora
A transformational scorecard can create better alignment between dealership activities and the manufacturer's corporate business objectives.

Distributing Accountability Across the Enterprise

By Richard Stark
Include line managers in financial reporting so more sets of eyes can view more points of the process and create a system of accountability beyond the CFO's office.

Column

BI Suites: Enablers or Inhibitors to Pervasive BI?

By Rick Sherman

Best Practices

Service-Oriented Architecture Success

By Sandy Carter

BI Competency Centers

By Terri Kowalchuk

ITIL

By Paul Goetz

Case Study

InsightAmerica Gains Visibility into Critical Data

By George Huffman

Quick Stats

Ventana Survey: Application BI

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from the editor

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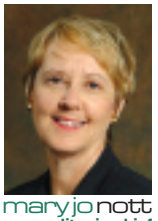

maryjo nott
editor in chief

The dog days of summer are upon us. If it is too hot to hike, bike or do yard work, spend a little time catching up on your reading. This Extended Edition of the August issue of DM Review contains industry-specific BI applications, a new Quick Stats feature along with best practices in the areas of SOA, ITIL and BI competency centers. Enjoy the issue.

Mary Jo Nott

upcoming events

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Critical Factors for Master Data Management Success.
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ProClarity: Key Data Visualization Techniques
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Building a better warehouse is important for solving today's business problems. And building a better warehouse takes modeling. Join David Dichman and Matt Creason of Sybase to discuss PowerDesigner and how it can help you make the best use of your data.

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http://www.tdwi.org/info.aspx?id=26627

Public Sector IT Policy Executive Forum - Dallas, September 6-8
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Metadata Symposium 2006 – New York, October 27
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Designing TRANSFORMATIONAL SCORECARDS that Improve Dealer Performance

By Mark Place and Carlos Mora

Merely declaring that the purpose of the scorecard is to help dealers improve does not mean that it actually helps dealers improve.

Car dealers perform a series of activities with the ultimate purpose of selling vehicles and services to customers. Automotive manufacturers face many challenges when evaluating and optimizing the performance of their dealership channel. Because the manufacturer does not own its franchise-based sales channel, it often lacks direct visibility into the day-to-day activities of an automotive dealership and cannot apply the same management controls used to improve the performance of corporate operations.

How well can a manufacturer measure dealer behavior, discover and communicate problems, and coordinate solutions? How effectively can manufacturers and dealers use this information? The automotive manufacturer can identify low- and high-performing dealers by their bottom line, but gaining insight into why dealers perform as they do and increasing their performance proves to be more difficult.

Historically, the automotive industry has focused its effort on improving manufacturing efficiency from both a financial and operational perspective. As a result of this focus, auto manufacturers have implemented more sophisticated systems to evaluate plant-level and internal corporate activities. An automotive manufacturer may evaluate dealerships for certification purposes but may struggle to maximize the effectiveness of these programs.

A Web-based dealer scorecard can track metrics, such as first fixed visit (FFV) or customer satisfaction index (CSI), and provide more visibility into dealership activities. A competently implemented dealer scorecard provides many well-known technology-based benefits. For example, the scorecard provides a single version of truth, in which both the dealer and manufacturer obtain a valid picture of where the dealership stands in terms of the key metrics. Any scorecard application must provide these basic benefits.

A transformational scorecard, however, provides more than operating efficiency. It creates better alignment between dealership activities and the manufacturer's corporate business objectives. To be transformational, a dealer scorecard must operate in the context of a comprehensive performance improvement plan that:

- Identifies the key process variables that affect performance;
- Identifies the cause-and-effect relationships among process variables and between process variables and business results; and
- Fosters greater cooperation between the manufacturer and dealer.

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A transformational scorecard must make data that is timely, accurate (technology-based benefits) and correlated to performance (information-based benefits) easily available.

Timely, Accurate Data

At the most basic level, the scorecard must provide accurate data that can be easily accessed and reflects the most current performance of the dealerships. If assembling information is too cumbersome and time-consuming and the data is outdated or not even correct, the dealer scorecard cannot enhance decision-making for the manufacturer or the dealer.

One of the primary challenges when launching or overhauling a dealer scorecard application is the migration of a diverse range of existing data sources into an integrated solution. Data feeds, often in a flat file format, may be processed on different systems, including those of third-party vendors. Creating reports and correcting mistakes can be difficult, often involving many people exchanging flat files. In addition, unlike a balanced scorecard used solely by corporate managers, security and other technical or political requirements may dictate that dealership and corporate staff access data through different systems. A dealer scorecard must be able to handle multiple access modalities to accommodate multiple groups of users.

The manufacturer can migrate data to a corporate data warehouse. All data owners can update this consolidated data source, which can be used by the scorecard as well as other corporate and dealership applications. Therefore, a dealer scorecard data mart can provide a unified data access point for corporate and dealer systems. A data mart's flexibility in supporting ad hoc query requests provides for sophisticated information retrieval in time to meet pressing business requirements. Extract, transform and load (ETL) tools can create monthly updates with minimal human involvement.

Consolidating and automating the manufacturer's business data reduces sources of error and ensures that accurate and up-to-date information can be shared more extensively with a minimal degree of administrative effort. Reporting flexibility and intuitive user interfaces are also key to making the data easily accessible. Intelligent use of reporting tools can ensure that dealers and corporate users see the same report. In addition, the scorecard's interface can be designed according to group metrics in distinct categories and provide an easy-to-use drill-down capability that allows dealers to identify areas requiring improvement or attention and restricts access to sensitive data, depending on the user's access.

Key Process Variables, Cause-and-Effect Relationships

Merely declaring that the purpose of the scorecard is to help dealers improve does not mean that it actually helps dealers improve. Some universal performance metrics, including revenue, profit, supply costs, staffing and certifications, appear in scorecards for organizations across all industries. Typical measurements for dealer scorecards include FFV, CSI, parts and accessories purchases, warranty payments, customer, parts and service profitability, and certification. These metrics are addressed in one way or another by most dealer scorecards. An understanding of how they interact with one another and how they impact business goals is missing.

Tracking performance results without an understanding of cause-and-effect relationships does not accurately portray high-performing dealerships. For example, good or bad sales may be the result of general economic conditions or another external factor. A dealership that shows good sales numbers will get good scores even if its activities are deficient. Tracking results does not evaluate how well a dealership is performing activities, only the effects. The discrepancy between the metrics tracked by the scorecard and the information that actually helps dealers improve their business results can be distressing.

One dealership study contained a detailed analysis of an evaluation system used by an automotive manufacturer to measure dealer compliance to the manufacturer's standards. Independent of the compliance scores, the study obtained eight dealer performance measures, including unit sales, part sales, market share for two different vehicles and customer satisfaction with the sales, parts and service departments. Out of more than 107 items used in the manufacturer's dealer evaluation system, only 17 showed consistent relationships with business results. This analysis provides an example of a disconnect between assessment instruments and the dealer performance measures they are purported to improve.

Medical diagnosis offers a compelling example of the link between test results and critical behaviors. Physicians study the signs and symptoms revealed by medical tests and prescribe medicines, diets, surgical procedures or exercise programs to their patients. Taking the medicines in the prescribed dosages, following the recommended diet and practicing the exercises are the critical behaviors that help patients improve their health. If the medical tests were faulty, the signs and symptoms would be wrong and the doctors would be unable to make proper recommendations.

In medicine, the skill to properly read the signs and symptoms uncovered by tests and other diagnostic tools is called semiotics. The tests work because they embody scientific theories of human anatomy and physiology that explain biological interdependencies. We do not have the semiotics of dealerships because the interdependencies of all the relevant variables in the life of the dealership have not been studied. A good theory of the dealership that would identify the critical variables in all areas of interest and how those variables impact business goals is lacking.

See Figure 1 for how a portion of this theory of the dealership may look. The figure shows how several different underlying dealership variables might have an effect on the FFV metric tracked by a scorecard. For a dealership, if a vehicle is repaired correctly the first time (does not require multiple visits to dealership to correct the same problem), the FFV metric is increased.

The dealership variables affecting FFV include attributes of the dealership itself (size, recognition) as well as attributes about the service manager (training, satisfaction) and about the dealership's infrastructure (number of service advisers, whether technical training is available). A complete theory of the dealership would take the cause-effect relationships one step further and determine whether high or low FFVs had any impact, either directly or indirectly by affecting another metric, on business results such as market share, unit sales or revenue.

In automotive manufacturing, final inspection was the dominant model for quality control until it was demonstrated that it made more sense to focus on the processes. It is easier to locate the true cause of a failure, or potential failure, in the process rather than in the final product. Similarly, a theory of

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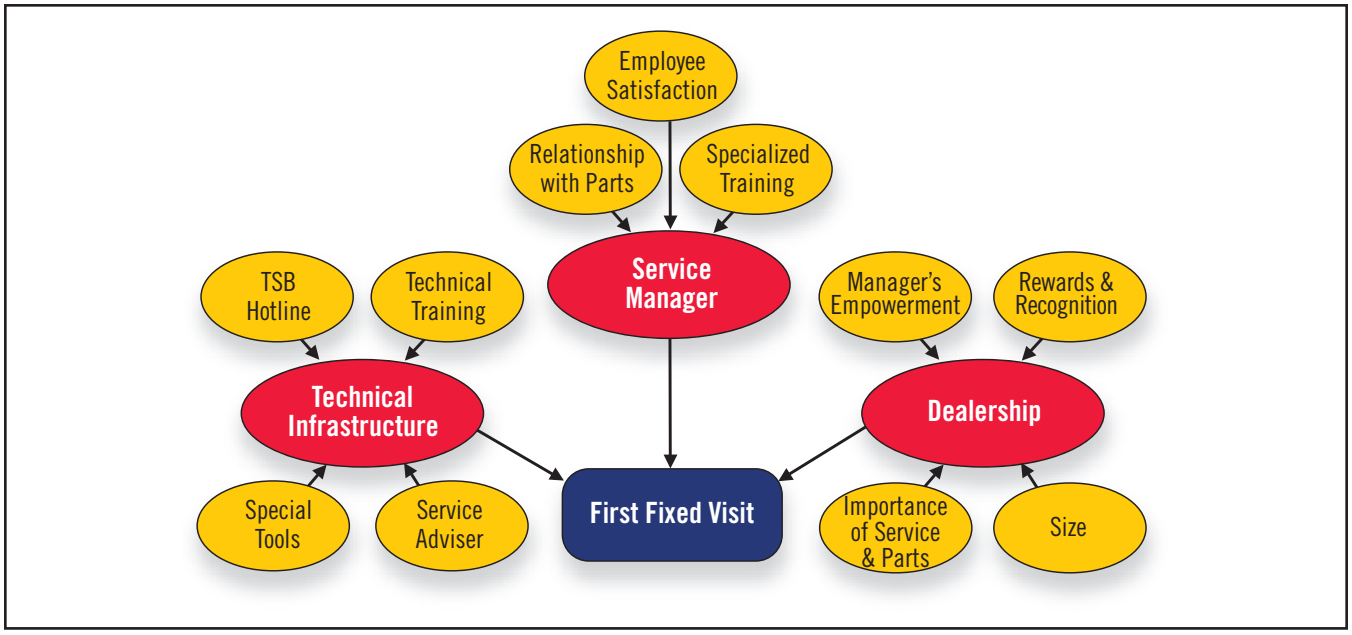

Figure 1: Dealership Variables

dealership helps rationalize what metrics to measure. By selecting those measurements that the manufacturer and dealership can use to make valid inferences about the effectiveness of activities, they can know where to improve and how to allocate resources and effort.

For example, suppose that FFV has a significant positive effect on CSI, which, in turn, is found to be highly correlated to dealership revenue and the auto manufacturer's market share. The scorecard shows that the dealership's CSI is average when compared to other dealerships in its region, but its FFV is much lower. From the scorecard, the dealership has determined that the best way it can affect CSI is to increase the FFV metric. Again, the scorecard, through a drill-down interface, may show the different activities the dealership can engage in to increase FFV. If the dealership does not currently provide specialized training to its service managers and the scorecard indicates that this training has the greatest impact on FFV, the dealership may require that its service managers take specialized training.

Fosters Cooperation

Dealers and manufacturers have compatible albeit not identical interests. Both are interested in selling cars and parts, the former at the retail level and the latter wholesale. Both are interested in satisfied and loyal customers. It makes sense, then, to expect that dealers and manufactures would cooperate in efforts to improve and sustain the end customer experience in order to increase satisfaction, loyalty and profits.

It is unfortunate that in many instances, the relationships between dealers and manufacturers have been tense, even antagonistic. The antagonism is manifested in lawsuits, reward/punishment programs and conflicting priorities. For the wholesaler, given the magnitude of its operation, the key driver is volume. For the retailer, given the relatively high cost of doing business, the key driver is profit. Higher profit at the retail level threatens volume, more so if strong competition from other manufacturers colors the business landscape. We find evidence of antagonism in warranty systems. A recent study published by the Center for Automotive Research notes that many warranty systems are designed to monitor dealer claims and deter fraud despite the fact that only a miniscule percent of dealers would try to commit fraud. The real culprits of warranty problems are product quality and the inadequacy of systems to report root causes of warranty claims.[1]

If the relative priorities of the auto manufacturer and dealers are different, even antagonistic, the scorecard will be perceived as an enforcing tool by the manufacturer and as a threat by the dealers. Conversely, if both manufacturer and dealership agree that customer satisfaction and loyalty are their most important priorities, they will likely decide to co-create value for the customer at the dealership. In that case, the scorecard can become an effective and efficient tool that helps dealers identify areas of improvement and make decisions that contribute to meeting local and strategic performance objectives. DMR

Reference:

1. "The Warranty Process Flow within the Automotive Industry." Center for Automotive Research, August 2005.

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Financial Performance Management

Distributing Accountability Across the Enterprise

By Richard Stark

Performance and Predictability: The Elusive Financial Goal

Across all industries, executives are struggling to make the performance of their enterprises more measurable and predictable.

Closing the Books Opens Pandora's Box

In the month-end close process at most organizations, financial analysts download summary and transactional data from general ledger and budgeting systems as they perform their month-end analysis activities. As significant variances appear, the analysts leave voice and email messages asking cost-center managers to explain discrepancies.

If the cost-center managers discover errors, they send messages back to finance, but most of these communications go undocumented and untraceable. If the analysts hear nothing back from cost center managers, they are left to assume that all the deviations from plan are correct. How are CFOs to certify financial statements when they cannot even tell if the numbers have been reviewed or what managers communicated in the review process?

To make matters worse, this bulky information-exchange process is time-consuming, inexact, error-prone, hard to audit and creates multiple versions of the truth. The process also forces financial analysts to spend a large portion of their time clarifying miscommunication rather than helping managers run their businesses.

Trust in the Numbers Doesn't Come Easy

After the period-close process, financial analysts collate and prepare actual vs. budget reports and distribute them to business-unit managers. In many companies, these monthly performance reports are the only guides that cost center managers receive to help them make decisions. These reports often take the form of unwieldy, hard-to-use spreadsheets that are out of date the moment they are received. As a result, many managers don't trust the reports enough to use them at all. Instead, they resort to making decisions based on incomplete, inconsistent and outdated information, and even rely on estimates, hearsay, instinct and guesswork. In doing so, these managers and their business units:

- Fall prey to inconsistent, inefficient and unrepeatable processes that hammer productivity;
- Are victimized by budget overruns and underruns;
- Make poor decisions based on missing, late and wrong information; and
- Miss business opportunities regularly.

The sad truth is that most organizations have a long way to go before they can declare that their financial controls, reports and forecasts are truly trustworthy. New regulations require executives to testify that all financial processes and results are both comprehensive and accurate. Such mandates leave managers frightened that they are being misled by falsified, erroneous or missing information. They have great reasons to be fearful; financial performance is often erratic, forecasts are missed regularly with little warning and reporting processes are slow and error prone.

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Case in point: in the first half of 2005, a record number of companies have been forced to restate or delay their financial statements. This demonstrates how many, if not most businesses lack predictability and control, and their finance departments must be the watchdogs that right the ship and put it back on course. However, the Capgemini study found that 67 percent of CFOs say they still need more time to comply with Sarbanes-Oxley Section 409, which requires them to disclose material changes to company financial condition within two days. Clearly, companies need better processes and tools to forecast and report on the financial health of their business.

Down and Out in Corporate Finance

To take their organizations to the next level, finance teams must become more active partners in business processes throughout the organization and push accountability downward and outward into the organization. This effort is difficult because most organizations:

- Have many financial and operational systems from many different vendors to handle order entry, sales forecasting, production, distribution, customer service, human resources, accounting, payroll, budgeting, planning and other functions;
- Need to empower large numbers of line managers with tools to manage business activity, including but not exclusively revenues and spending;
- Must comply with increasingly strict and complex reporting regulations.

Typically, finance organizations have found it difficult to become proactive partners to the rest of the enterprise. Instead, they are buried under mountains of work that grow ever taller as managers and government agencies demand more trustworthy information on a timelier basis.

Performance Data and Responsibility is Stuck in Finance

Most financial systems play a crucial role in capturing and managing financial information, but they are not designed to integrate information from multiple sources and distribute it across the enterprise. As a result, financial performance data is stuck in finance. Without the ability to arm line managers with the information they need to run their business, organizations cannot take full advantage of the managers' extensive experience, nor hold them accountable. There are many reasons for this problem:

- Data is usually provided too late due to aggregation and replication delays;
- Data is not in a form that can be accessed and manipulated easily by users;
- There are too many data sources and reports;
- There is no drill down to detail from summary data;
- There is no monitoring capability to provide visibility, so issues are not discovered until it is too late;
- There is no timely dialog between financial managers, line managers and executives; and
- There is no audit trail that documents assumptions and conversations regarding budget andforecast exceptions.

Financial Policing Does Not Scale

For all these reasons, financial groups have been solely responsible for reviewing the accuracy of all transactions, clearly casting the finance function as a police force to the rest of the enterprise. Studies and real-world experience prove that this policing approach creates adversarial rather than partner relationships and does not scale efficiently as organizations and the responsibilities of the financial function grow.

One of the primary problems with traditional approval workflows is that they route transactions through a series of sign-offs that elongate approval processes. When exceptions are found during period-close efforts, there is very little online, subjective information for financial analysts to examine, and long email and phone interchanges ensue, threatening close deadlines and making the period-end process a harrowing experience.

Unless the financial reporting process changes, the only way finance groups can fulfill their responsibilities is to hire many more accountants to police each and every transaction for accuracy and compliance – and in doing so, they will still miss many of the exceptions that undermine the trustworthiness of financial reports.

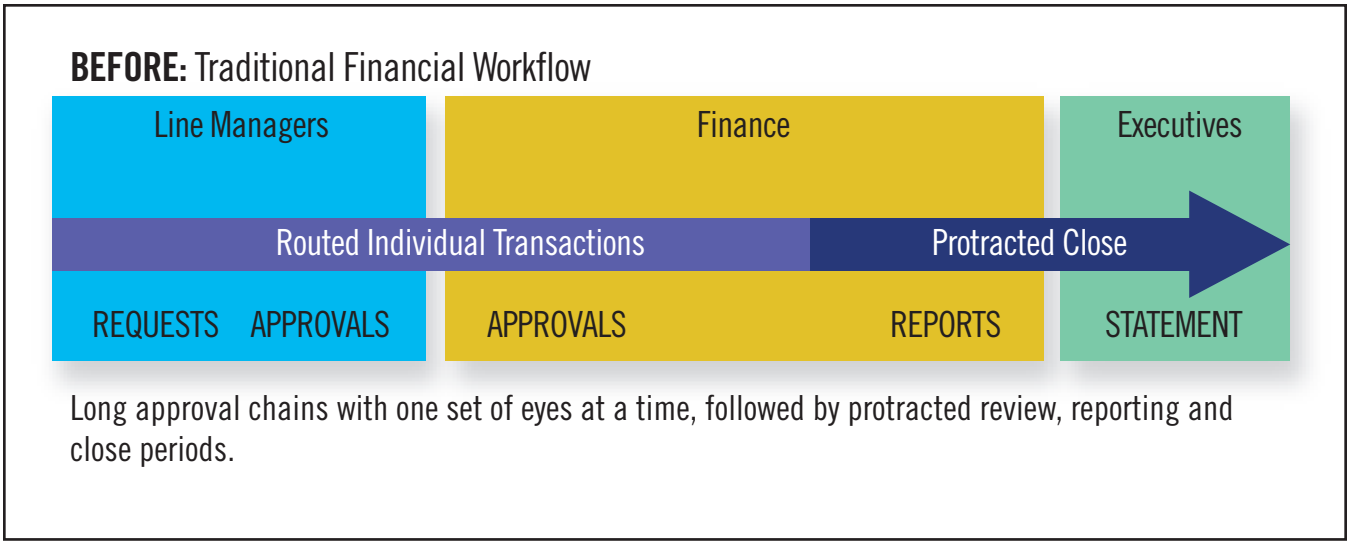

Figure 1: Traditional Approval Workflow

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Include Line Managers in the Financial Review Process

It has not been until the last few years that the world has recognized that finance groups alone cannot possibly vouch for the validity of all transactional information entered into financial systems. They need the help of line managers, who are best equipped to review and validate their own financial statements because they are most intimate with their business. This approach makes every manager a driver of corporate performance because they agree up front to their targets and know that they are being measured against them. Therefore, managers review financials more frequently and more carefully, and become part of the process of producing accurate statements.

Without the participation of line managers, the financial review process includes only limited checks and balances instituted by a few financial analysts who are unfamiliar with day-to-day operations. Hence, errors and fraud occur much more easily and continue undetected. These very real dangers have given birth to new regulations that require a high degree of scrutiny and control in the preparation of financial results. Many executives have falsely assumed that this in-depth effort applies only to the creation of financial statements, but most errors and fraud occur in individual transactions – the atomic elements that make up the statements. Therefore, to produce trustworthy and accurate financial reports, organizations must have more trained eyes looking at transactions more often and *during the normal business process* – not just after the fact. In essence, a proper review process is like watching an entire movie rather than seeing just a snapshot of its ending.

To include line managers in financial review processes, organizations must transform their management reporting systems into financial performance management (FPM) systems. FPM brings more eyes, more often to the financial review process and transforms financial teams from police into performance experts. Rather than losing control by pushing accountability outward into the organization, CFOs actually *gain* control by adding the insight and experience of line managers to financial review processes. The result is higher productivity, profitability and performance across the entire enterprise.

A modern FPM system arms its new community of reviewers with the information and tools needed to measure, monitor and analyze their piece of the business and become productive, accountable contributors to corporate performance. Using such a system, everyone can evaluate trends and opportunities; facilitate better, timelier decisions; react faster to changing market conditions; and share their expertise and insight with others in the organization.

An FPM system improves the quality and trustworthiness of financial information across the enterprise by giving reviewers the ability to measure performance with periodic reports, monitor real-time performance with dashboards and ad hoc reports, forecast revenues and expenses more dependably, and manage budgets more effectively.

To meet new, stringent requirements for financial reporting accuracy, FPM systems help organizations to shorten review and validation processes significantly, give executives confidence in financial information, and address the challenges of the Sarbanes-Oxley Act and other disclosure mandates.

Business Requirements of an FPM Solution

To distribute accountability throughout the enterprise, organization must implement an FPM system. FPM aggregates information from general ledger, budgeting and planning systems and combines it with data from human resource, ERP, supply chain, sales and other applications. In addition, it creates consolidated views of cost centers' financial performance that pinpoint and explain variances against plan. To accomplish this, an FPM delivers the collaboration, process management and information integration power required to drive financial performance in an organization.

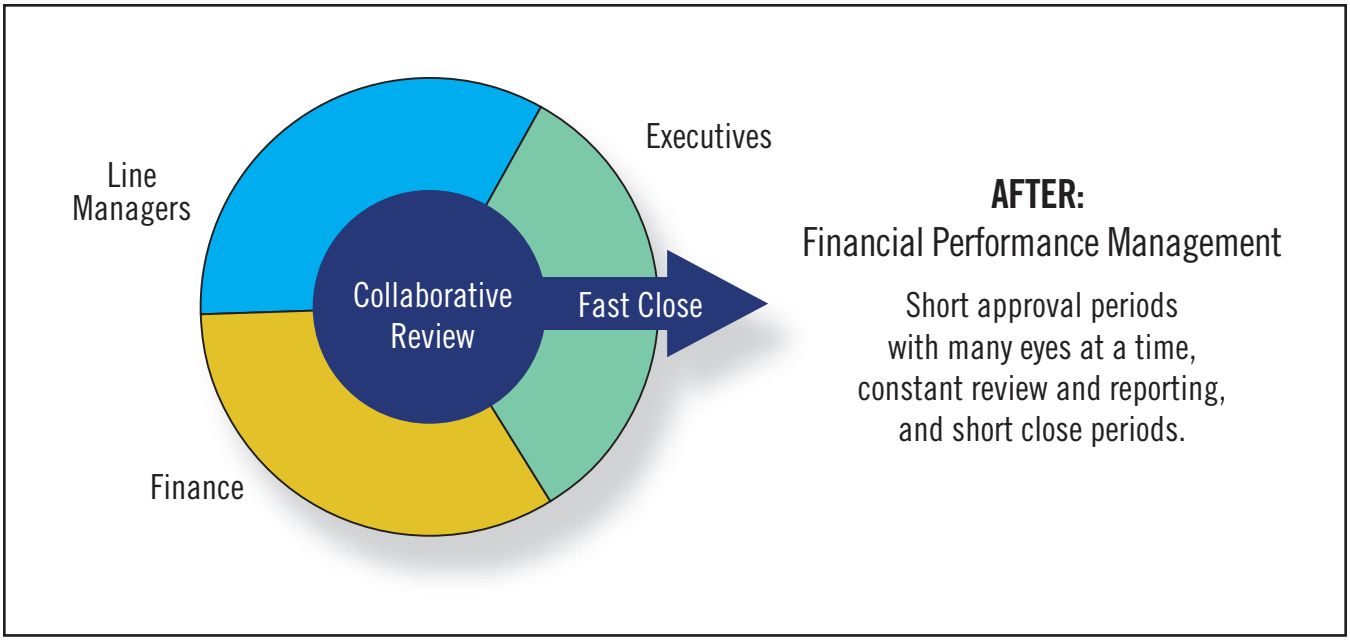

Figure 2: Revised Approval Workflow

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Foster Triple-A Collaboration: Auditable, Accountable, Alert Driven

To expand the community of financial reviewers to include line managers and their staffs, organizations need tools that foster participation, encourage collaboration and capture the questions, answers, analyses and insights that occur throughout the review process.

Auditable: Capturing the insights of line managers in the financial performance system creates an audit trail rich in contextual detail. One manager notes the delay of a project that is causing a division to be under forecast this quarter, but will drive it over its goals next quarter. Another division head enters a justification for exceeding a travel budget to win a profitable deal. To avoid losing this invaluable information forever from the performance management process, review systems must capture the comments and associate them with the right numbers in financial reports. This streamlines review and audit efforts by giving managers and auditors one-click access to essential compliance details.

Accountable: A financial performance management system needs to capture not what happened, but why and when it occurred, who was involved and how those managers decided which actions to take. Documenting such information enables managers to communicate their goals, focuses teams on crucial commitments and creates an environment of accountability that extends to every corner of the organization.

Alert Driven: To round out AAA collaboration, financial performance systems must alert managers to problems the moment they arise. Such alerts may come from automated real-time monitors built into the system, as well as from other managers in the review process whose expertise enables them to see issues in their early stages before they cripple the organization.

Enforce and Automate Financial Review Processes

An FPM system encourages the continuous and efficient review of transactions and results in real time. It delivers reports of budget, actual and variance by cost center, product or project to line managers and finance teams on a scheduled or on-demand basis.

Exception reports and alerts prompt managers to take action – accepting transactions as reported or rejecting them with an explanation. Other reviewers are immediately notified so the review process moves along at an accelerated, efficient pace. At any time, users can view dashboards displaying all the issues that require their attention. With a click, a reviewer can see the details behind any issue on their dashboard or in a report or alert.

An FPM system also allows managers to see who has reviewed reports, approved reports, contested reports and taken action on them at any time. Using this approach, senior managers are instantly aware of how much scrutiny a specific report or set of information has been subjected to, and consequently how much faith to put in the numbers.

Integrate Information Across the Enterprise

In a recent survey by Forrester Research, CFOs revealed that the average enterprise must integrate information from a dozen separate systems to produce statements that represent true financial performance. Therefore, as financial managers distribute reporting responsibility throughout the enterprise, they must provide the new reviewers simple access to those systems. This does not call for simply giving line managers a log-on to those systems; rather, they must have point-and-click access that produces reports in easy-to-consume, understandable formats.

It is no longer sufficient to provide line managers with periodic, summary financial statements. Data warehouses and tools are not the complete answer either, since they can create parallel universes of duplicate data while cutting managers off from real-time access to transaction detail. To efficiently and reliably produce dependable and auditable results, managers must have detailed financial information at their fingertips so they can recognize, analyze and document problems as soon as they see them. With a click, they must be able to drill to the details behind a number and view the detailed transactions, tactics, judgments and analyses that shape the summary information.

What does the perfect FPM system look like? Using a capable FPM system, every cost center, business unit and regional manager drives decisions and activities based on daily financial information describing how they are performing against their objectives. The information – integrated from a variety of financial, HR and other business systems – includes financial summaries and transaction details linked with operational data. Users can drill down from summary reports to transaction-level details to understand performance implications and exceptions. Anyone in the review hierarchy can add comments explaining variances within a report, thereby fostering communication throughout the organization, improving decisions, minimizing expenses and exploiting opportunities.

At the end of reporting periods, financial statements are generated directly from financial systems to minimize the chance of compilation and data-entry error. The reports are automatically sent to business-unit and cost center managers for their review and approval. At any time, executives can view the statements as well as the comments and approvals made by cost center managers who still needs to review the numbers. In short order, the executives gain 100 percent confidence that all exceptions and discrepancies are addressed and corrected.

By including line managers across the enterprise in the financial review process and by enforcing and accelerating it, the FPM system effectively and efficiently distributes accountability across the entire organization, and makes everyone in the enterprise a driver of corporate performance, enforces compliance with reporting regulations, and provides predictability and control that creates confidence in the business, the management team and the company. DMR

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BI Suites: Enablers or Inhibitors to Pervasive BI?

by rick sherman

Business intelligence (BI) is evolving in a way that will empower more people in an organization with tools they can use every day. What role do BI product suites play in this evolution – enabler or inhibitor? The answer depends on who you are.

In the ancient days of the PC (when some of my readers were glued to their Atari game systems, perhaps), people debated about which word processor, spreadsheet and presentation software they would buy. Back then you chose the best product, not just the one that said Microsoft on the box. In fact, Microsoft's products were not considered to have the best features. Then Microsoft decided to bundle their versions of these applications and even threw in a desktop database. In a brilliant move, they priced the package cheaper than the à la carte price of the better products. Next thing you knew, everyone was using the suite of Microsoft Word, Excel, PowerPoint and Access.

Years later, BI vendors provided best-of-breed software specializing in different BI categories: reporting, ad hoc query and online analytical processing (OLAP). Then history repeated itself as the vendors decided that they, like Microsoft, should expand their product offerings to include the full range of BI capabilities. Hence, each of the major vendors now offers a BI suite.

Great idea. Companies can go to one vendor for all of their BI needs. It improves productivity for both business users and IT. On the surface, this appears to be analogous to Microsoft's Office product bundling. There are two significant differences, however.

> For whom are BI suites the right choice? They work well for large corporations with IT personnel dedicated to BI implementations and who specialize in this software.

- *Complexity:* BI suites make BI implementation more complex because there are more working parts. Further complicating matters are the upgrades and transitions required because these suites were created through either acquisitions or major product introductions.
- *Cost:* BI suites increase the cost of implementation. The most obvious cost is licensing. If you need all the parts of a suite, it is more cost-effective than the sum of the parts. However, there are hidden costs: the resource expenses to learn how to design, develop and deploy the suite. If you don't need all the portions of the suite, you end up paying more for licensing and resources.

For whom are BI suites the right choice? They work well for large corporations with IT personnel dedicated to BI implementations and who specialize in this software. BI vendors and industry analysts all suggest BI competency centers for this very reason. Several of my clients have deployed BI suites to consolidate separate BI offerings from multiple vendors. The choice enabled their business and IT groups to be more productive when using BI tools.

Suites are a difficult choice for small and medium-sized businesses (SMBs) with less than $1 billion in sales. Quite a few firms fit in that category. Their IT staff performs many roles and cannot afford to be dedicated to anything resembling a BI competency center, which many large firms are deploying. For these firms, the cost of the BI suites in terms of licensing fees, the infrastructure to develop and deploy, and to staff are prohibitive.

Some of my SMB clients are no longer using software from the largest BI pure-play vendors. Their goal is to avoid the higher cost and complexity (in their eyes) from their previous vendors' movement to BI suites. Each client had successfully implemented a particular BI tool from one of these vendors, but as these vendors expanded into BI suites, the costs for licensing and resources became more than they were willing to pay. They felt they were paying for a lot of functionality and complexity they were not going to use. Their previous vendors may have the best products on the market in terms of feature evaluation, but the clients did not perceive the value in them.

The SMB customers' need has created a terrific opportunity for small BI vendors that specialize and make their products more cost- and resource-effective. Many BI software vendors offer BI tools for reporting, ad hoc query or OLAP (just as the major vendors used to do) and have loyal customers, but are relatively unknown – never making any industry analysts' lists. In addition, and probably more of a long-term trend, Microsoft's offerings are bundled with SQL Server 2005, and Microsoft partners are building on that SQL Server bandwagon. These small firms, along with Microsoft (who bought their former BI partner ProClarity) fit the need for SMBs.

BI is becoming pervasive; however, two different landscapes are emerging. Major vendors' BI suites are the answer for large corporations, but Microsoft and many small software vendors are seizing the opportunity to provide pervasive BI solutions to SMBs. DMR

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Why SOAs Fail and How to Avoid Becoming a Statistic

By Sandy Carter, Vice President, WebSphere Strategy, IBM

For every service-oriented architecture (SOA) success story, there lays an abandoned SOA project stuck in one of the various stages of deployment. Underscoring the successes and challenges of an SOA is the popularized theory that 50 percent of IT projects are deemed unsuccessful. This, of course, can make embarking on an SOA strategy rather intimidating.

Still, SOAs remain at the top of the executive and IT agenda based on their ability to more closely align technology with the needs of the business. Quickly dismantling the high statistics associated with IT project failures, SOAs have shown demonstrable ROI, so much so that according to IDC, spending on SOA-related services will reach $8.6 billion this year, more than doubling last year's spending, and will grow to $34 billion by 2010.[1] Further, Aberdeen Group found that nine of every 10 companies are adopting or have adopted SOAs and will exit 2006 with SOA planning, design and programming experience.[2]

Bombardier Aerospace has a legacy of innovation that consolidates more than 250 years of aviation history. The company produced 14 new aircraft programs in the past 14 years. Based in Montreal, Quebec, the company has more than 28,000 employees worldwide with locations in Toronto, Wichita and Belfast.

Furthering the growth of the SOA market is the strategy's ability to pay for itself quickly. In fact, the number of opportunities for quick ROI can be surprising. For example, many organizations are unaware of the number of duplicate processes that occur in separate departments and applications, nor do they realize how much these duplicate processes are costing them. When you examine the costs and lost revenue attributable to redundant functions and duplicated efforts, you begin to see the value of centralized services as opposed to managing multiple competing and overlapping functions.

Still, some are asking, "How can SOA succeed where previous approaches have failed?" and "How do I avoid becoming a statistic?" These are powerful questions. Simply stated, a successful SOA strategy can be achieved because the standards, best practices and governance models have finally matured to the point where reuse can actually work. After all, SOA is, by definition, an architecture as well as an approach to IT that can help solve immediate business challenges.

While each company has different business needs and each industry faces its own set of challenges, common issues can lead to the failure of an SOA. The 10 most prevalent are:

1. **Lack of executive sponsorship:** Before presenting how you'll ensure your company's SOA success, be prepared to demonstrate successes and failures of other companies on their path to SOA and articulate how you'll emulate proven practices and avoid pitfalls.

2. **Align the troops:** Converse to overcoming the obstacle of executive support for your SOA is the challenge of aligning your organization to work and think in new ways. To do this, identify and recruit critical champions for each part of the business who will support and even evangelize the SOA efforts.

3. **Consolidate views:** Eliminate the multiple views of information that are currently floating across your organization so that you are only looking at a singular, comprehensive and consistent view of the business.

4. **Reuse equals re-useful:** Identify and maintain a repository of your current Web services to avoid duplication of efforts. You may be surprised how much work has already been done by different pockets of your organization.

5. **Integrate the silos:** In theory, many of today's IT organizations are seeking to integrate and avoid redundancies while maximizing their current IT investments. The reality is that extraordinary efforts are being spent on trying to maintain different IT systems that co-exist but are not integrated. The penny-wise, pound-foolish approach to SOA simply does not work.

6. **Seeing the forest through the trees:** Remember that an SOA is an architecture, not a combination of clumsily bundled point products that need to be force fit. A true SOA is created with an open standards-based approach through four strategic stages: model, assemble, deploy and manage.

7. **Hop on the enterprise service bus (ESB):** An ESB provides the much needed connectivity infrastructure that you can use to integrate services within an SOA. Together, SOA and an ESB help to reduce the number and complexity of interfaces, enabling you to focus on your core business issues, rather than on maintaining your IT infrastructure.

8. **Step by step:** When the thought of rolling an enterprise-wide SOA becomes overwhelming, remember that the best approach is to continually test and modify - roll it out first departmentally then slowly throughout the organization to identify issues while adding to your arsenal of best practices along the way.

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9. **Avoid the *carpe diem* approach:** Remember that you're not building your SOA just for today or this year. This is an organization-wide approach to aligning IT with the needs of the business and must accommodate today's needs as well as those of the future. For example, be sure to include support for mobile and wireless devices as well as ensure you have enough flexibility to support the "next big thing."

10. **Prevent the accidental SOA:** Many organizations may discover that they have a healthy repository of Web services that will comprise the majority of their SOA. (Don't believe that the SOA starts and ends with a collection of Web services.) Remember that an SOA must go beyond Web services in order to support all of your business processes. It must also provide a flexible, extensible and composable approach to reusing and extending existing applications and services as well as constructing new ones.

A good example of a company creating a successful SOA and reaping its benefits is Bombardier Aerospace; following is their story.

Bombardier Aerospace: SOA Strategy Takes Flight

Bombardier Aerospace has a legacy of innovation that consolidates more than 250 years of aviation history. The company produced 14 new aircraft programs in the past 14 years. Based in Montreal, Quebec, the company has more than 28,000 employees worldwide with locations in Toronto, Wichita and Belfast.

Since competition in the international aerospace industry is intense, many aerospace companies are trying to gain an advantage by making their internal processes more efficient. Bombardier is no exception.

The company was faced with three significant business and IT challenges that led to their creation of an SOA. First, they needed to gain more visibility into their supply chain; second was the need to extend critical information to customers and partners; and third was Bombardier's need to integrate the people and processes that resulted from significant shifts in the business.

More specifically, to track products, fulfill customers' orders faster and maintain better control over the products in its warehouses, Bombardier needed its SOA to link a homegrown legacy warehouse management system (WMS) to its existing SAP system, which was deployed to manage its supply chain – everything from operations and finance to spare parts and maintenance.

Additionally, the company was faced with a lack of visibility in identifying spare parts information across multiple manufacturing lines, which often resulted in duplicate orders and shipment delays. Adding to the complexity was the fact that Bombardier had recently undergone several significant mergers and acquisitions, which resulted in various silos of information throughout the company.

In addition to addressing critical business issues through its SOA, Bombardier also established specific long- and short-term goals in order to measure its success. While saving costs and increasing efficiency were at the top of the list, Bombardier was also seeking to consolidate all information about the company as well as information about suppliers. Moreover, they needed to address "working" versus just-in-time delivery and implement cost savings through joint ordering.

Yet Bombardier didn't want an SOA that would require a lot of unique customization nor did they want to have to scrap their existing investments and start from scratch. Bombardier needed a solution that would work quickly with minimal complications after it was implemented.

At first, Bombardier planned to use only its existing SAP solution. However, relying primarily on SAP brought Bombardier the challenge of integrating point to point. In fact, it sometimes took up to 40 days to build a complex interface to connect critical pieces of information. Bombardier soon realized that they needed an integration platform that could connect to its legacy systems and external systems.

Using IBM WebSphere, Bombardier created an SOA that enables them to preserve existing investments in IT while also more closely aligning technology with the needs of the business. Through an open standards-based approach to creating an SOA, Bombardier is able to easily integrate disparate sources of information throughout the company to streamline business processes and accelerate the supply chain.

For example, using IBM WebSphere, Bombardier can now place orders through its SAP system and have its WMS instantly reflect what has been ordered and what parts are required to fill the order. As a result, the solution has significantly reduced the time required to fulfill customers' orders.

As the integration layer, WebSphere is used throughout the organization to extend its existing finance and human resources (HR) applications with critical information from various sources. This enables the company to more easily prepare for future mergers and acquisitions as well as streamline its day-to-day business processes.

Since Bombardier's SOA uses standardized integration protocols, it can be easily and quickly maintained. Bombardier can easily audit the systems' transactions to comply with its legal requirements.

More specifically, Bombardier can take advantage of dramatically reduced cycle times that results in cost savings, efficient handling of spare parts and a consolidated view of the purchasing process and supply chain. The company has been able to decrease that 40-day complex interface-building process down to 10 days and, more importantly, has realized a cost savings of between 50 to 60 percent in what was previously allocated to development, support and maintenance.

As the Bombardier project has shown, SOAs can solve immediate business problems while simultaneously laying the groundwork for flexible IT that is capable of adapting to quickly changing business conditions. Although these solutions were implemented by Bombardier to address specific business needs, the basic concepts are universal. Concepts such as reuse of existing business functions, improvement of business processes, easier application connectivity using open standards, and separation of back- and front-end systems are relevant to virtually every enterprise that uses IT.

The future success of IT will be based on how easily services can be pieced together to quickly create new business solutions. SOA, backed by robust standards, technologies and best practices, will enable this success. DMR

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BI Competency Center: Increase the ROI of Your BI Program

By Terri Kowalchuk, former director of business intelligence at T-Mobile

A recent Gartner survey shows that in 2006, business intelligence was number 1 on the priority list for CIOs.[1] Executives are increasingly discovering the value of decision support systems and funding continued development. But most of us are not getting the full value from our BI systems. We have access to additional data and are able to answer additional business questions, but are we answering them quickly, consistently and accurately?

Focus Turns Strategic

Over the past 10 years, a lot of emphasis has been placed on building out the corporate data warehouse. Hundreds of articles have been written to help you choose the right tools, develop the right models and add the right applications.

More recently, the focus has turned from technical to strategic. The importance of governance and executive sponsorship has come to light. Return on investment (ROI) and total cost of ownership (TCO) have become popular buzzwords in BI. These strategic components, while important, do not tap into the incremental value that comes from the business decisions made through increased usage of your BI investment.

Would you like to be able to extract additional value out of your business intelligence (BI) systems and increase ROI without any additional capital? Whether your systems are young or mature, they still possess the ability to provide even more benefits than you may be getting today.

The more attention your BI program gets from the business, the greater the need for an interpreter to facilitate conversations between IT and the business (typically executives). The executives must understand the value the program will offer in return for their sponsoring and funding the program. IT must understand what the business really is asking for in order to develop a solution that meets the business needs. Both groups need a champion to bring them together and help each manage solid expectations. The best place to start is to put together a center of excellence (CoE) to support the end users.

The BI Center of Excellence

While the IT team is developing additional releases to the data warehouse, the CoE will keep your users engaged and productive. The CoE covers the functions that are truly end-user facing, allowing the IT team to concentrate on new development. Figure 1 shows the variety of functions that the CoE manages. Resources in the CoE need a special mix of skill sets, including the technical skills to understand SQL, data models and analytical tools as well as business skills to understand the types of analysis and needs of the business. Usually, the CoE team is either placed in IT next to the development team or in a business-unit neutral organization such as finance. Either way, the CoE must straddle both the business and technical organizations to be truly successful.

Figure 1: CoE-Managed Functions

CoE Help Desk

An important first step is to establish a point of contact. This person interfaces directly with the end users and provides a first level of triage. This person answers and directs end-user phone calls and email. Some requests can be satisfied immediately, such as questions about tools and data or when the next training class is. When the question or request is more complicated, it is routed to the next level of support.

There are also many opportunities for self-service for your end users. By making use of your corporate intranet and setting up a BI Web site, you can post all kinds of helpful information, such as documentation, how to get access to tools and data, the training and events calendar, data quality issues, load status and the helpline email box. Your users will appreciate being able to get this information quickly and conveniently.

Communication and Marketing

Communication provides the users with information about the BI program, from system status to strategic plans. On-the-spot emails work well for immediate needs, such as system issues, whereas general information is best communicated through a newsletter format. While you should use the Web site to provide static as well as current news, you may always need to send email communication for critical items and then refer customers to Web site for more details.

Evangelizing the BI program to the user community at large is another form of communication. One way to do this is to hold BI town hall meetings, where users are offered incentives to share their success stories. You will find that users trust other users. BI user groups are another way for the CoE to share bigger

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topics in BI that are best done in person. These can include new product demos, subject area focus, tips and tricks or other educational topics.

End-User Training

Educating end users is probably one of the biggest drivers toward getting increased usage and value out of your BI systems. Your CoE is well positioned to develop a training program that supports the use of both the tools and the data. Because the team is comprised of BI subject matter experts, they are naturally the ones to impart that knowledge to the users.

As you develop your training program, consider that end users need training in both tools and data. Based on your available resources, you can determine whether to combine these or teach them separately. Be sure your program addresses logistics – whether to use a dedicated training environment – and tracking metrics such as attendance and satisfaction.

If you have a corporate training department, investigate how they may be able to help you establish your training program.

Complex Ad Hoc Support

It is no surprise that the more your end users know, the more complex their questions become. There comes a point where the user's business analysis needs have surpassed their capabilities to answer them. This is where the CoE can really add value by helping the business to solve those complex questions. The CoE should have advanced skills and knowledge, and should continually provide feedback into the business. Some business groups will have their own power users and some may not. The CoE can help fill the gaps and drive more sophisticated solutions that continue to deliver additional value from the BI program.

Data Stewardship

While driving additional knowledge and skills into the business, the CoE has a responsibility to help ensure the data is treated as a valuable asset. The data stewardship role resides in the CoE and is critical to ensuring that the data is accurate and consistently used.

The data steward covers three key areas:

- Metadata – Driving consistent business definitions which can be published as a part of metadata.
- Proactive data quality – Establishing data quality (DQ) tolerance levels with the business and getting data elements monitored.
- Reactive DQ – Leading DQ initiatives; prioritizing issues and providing communication to the business.

A steward also helps drive the development of DQ monitoring into the BI systems. Data stewardship is a very important and necessary function and because it touches both the business and IT, is best driven through the CoE.

Knowledge Management

The CoE drives knowledge management (KM) as a part of the BI program. It is not enough these days to focus on structured, transactional data alone. Information comes from all kinds of sources, including documents, Web pages or even the minds of other workers.

There are a number of software tools that make sharing knowledge easier. There are document management tools that track and share different types of documents. There are Web-based portals that can serve as a customized user desktop to provide access to the various types of information needed to perform the job. While KM has not typically been thought of as being in the BI space, it acts as yet another avenue of information for the user.

Governance and BI Lifecycle

Governance for your BI program is critical. Governance provides direction for growth, including ownership of the strategic roadmap. Governance starts at the top with C-level executives who sponsor, fund and support BI. Of course there is continual input from the end users, which the CoE must assemble and present back to the formal governance committees.

As new work begins, the CoE must participate in the development lifecycle. It needs to be part of the team that ensures training plans are developed, requirements are understood and will meet the business needs, data and metric tolerances are defined and user acceptance test plans are created and carried out. The CoE also communicates regularly to the business, letting them know the progress of any new releases.

Research and Development

Because your CoE works directly with the end users, they are often in a position to help find quick solutions or develop prototypes for longer-term solutions. As the CoE becomes the business expert, it can quickly develop sample applications for various business needs. This prototyping helps flush out requirements early, leaving less chance for rework and missed expectations. Many times these quick solutions can provide on-the-spot value to the business. At the point in time where the application is ready to become a permanent part of the BI landscape, the requirements are shared with IT, and the two teams partner through development to completion.

Statistical Analysis

Many more companies today are finding value by exploiting their data with statistical tools. As they work at understanding their customer or their business processes, they build predictive and descriptive models to help them find relationships and trends in the data that are not otherwise evident.

For many companies, statisticians are employed in a decentralized fashion. Because the CoE represents the needs of the corporation at large, it makes sense to have a centralized group of statisticians who drive consistent methodology. This group shares best practices across the statistical and analytical community and drives standards and subject matter expertise in statistical tools.

Given the increased focus on budgets and the pressure to keep costs down, it makes sense to leverage the resources you already have. By assembling a team of BI resources who have both business and technical skills, you will maximize the value of your BI systems. The CoE drives consistent usage and knowledge of the data back into the business, which in turn produces more accurate analysis for making good business decisions. DMR

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ITIL: Key to Efficient Storage Infrastructure

By Paul Goetz, VP of EMC Consulting

Despite significant changes in the importance of storage technology and the vital information that it manages, too few organizations consider storage as a strategic asset.

While technology developments in the area of networked storage and storage virtualization have made it possible and economically prudent to treat storage as a separately managed asset, it is still too often tied to the application servers that access the storage and, as a result, gets treated as an afterthought. This approach has fostered haphazard, reactive storage practices at many companies, which is costing them dearly both in terms of increased expenses and lost opportunities.

As business success depends increasingly on how well information is captured, protected and leveraged, it is imperative that the storage infrastructure is approached in a much more disciplined manner.

Strategic and Operational Challenges

The idea of a disciplined approach to help organizations do more with the storage they already have is very appealing.

From an executive perspective, the absence of a strategic view toward storage creates huge challenges for the organization. Significant capital and operational inefficiencies are the result of storage assets that are often woefully underutilized and difficult to manage. Isolated, scattershot storage procedures create barriers that make it difficult to share information across business processes – an essential requirement in today's business environment. The information requirements of business processes often go underserved because of these limitations, and the resulting lack of information makes it difficult for businesses to respond to changing business conditions.

From an operational perspective, the challenges are just as significant. Cheaper disk has created little incentive to be selective regarding which information to keep.

Without consistent and reliable procedures in place to provide insight into the aggregated pool of storage resources, companies simply do not have the information they need to prevent these situations. Instead, they often resort to manual management procedures that are time-consuming, ineffective and error prone.

As a result, day-to-day management of storage resources and data is a nightmare. IT managers and staff have little ability to proactively address broader issues while they run around putting out day-to-day storage fires. Budgets and staff keep shrinking while the data keeps growing.

ITIL Best Practices

Ironically, a lack of technology does not seem to be the reason some organizations find themselves facing these issues. Many of these organizations have already begun the move from direct attached storage to storage networks and sophisticated virtualization software. Rather, the lack of a holistic, coordinated approach to allocating and managing storage resources is to blame.

The key to addressing these challenges is to begin viewing storage as a service that must be delivered at levels consistent with the user's requirements – and then implementing the practices and measurements to do this.

Recently Information Technology Infrastructure Library (ITIL), a set of guidelines originally developed by the OGC (Office of Government Commerce) for the British government, has caught on as an industry-wide standard for a best practices approach to IT services. The ITIL libraries contain documentation on a systematic approach to planning, provisioning and supporting IT services.

ITIL recommends breaking the management of any IT service down to delivery and support tasks. In the delivery tasks, emphasis is placed on making service-level commitments that meet end-user requirements in the areas of performance, availability, capacity, configuration and cost.

In the support tasks, emphasis is placed on ensuring that the commitments outlined by the service level agreements are delivered both reliably and economically. The support tasks include configuration, incident, problem, release and change management as well as the service desk.

A commitment to an ITIL-based approach requires IT to become more user and service oriented. This commitment should result in documented policies, processes, procedures as well as organizational and automation plans that are monitored for compliance and updated at least twice a year. For some global companies, it is important that these documents provide a consistent glossary of terms that can be leveraged company wide.

The Value of a Best Practices Approach for Storage

When applied to the provisioning and management of storage services, the benefits of ITIL best practices are substantial. With limited additional technology investment, organizations can realize significant improvements in cost, complexity, utilization, time to provision and staff productivity.

Operating costs are reduced and capital investments for additional capacity are avoided because existing assets are utilized much more efficiently.

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	Service Delivery					Service Support				
ITIL Practice Area	Service Level Mgmt.	Availability Mgmt.	Capacity Mgmt.	IT Service Continuity Mgmt.	Financial Mgmt.	Incident Mgmt.	Problem Mgmt.	Change Mgmt.	Release Mgmt.	Configuration Mgmt.
Optimized Storage Model Intellectual Property	Storage Management Policy Documents Storage Management Process Run Books Storage Management Procedure Run Books Organizational Plans Automatic Plans Key Performance Indicator Plans Practice Area-Specific Support Documents and Tools									
Management KPIs	• Acquisition Unit Cost • Service Level Metrics	• Storage Availability	• Trigger Thresholds • Assessment Utilization % • Fulfillment Cycle Times • Planning Accuracy %	• Recovery Test Results • Plan Audit Results • Recovery Success %	• Average Unit Cost • Cost Recovery % • Budget Forecast • Accuracy	• Mean Time to Resolution	• Incident/ Asset Ratio	• Change Success Rate • System Audit Results	• File System Utilization • Percent of Environment Under Release Level • Provisioning Cycle Time	• Audit Accuracy • Mean Time to Resolution

Figure 1: Optimized Storage Management Model

IT staff has a much clearer understanding of the functions and roles for which they are responsible with less overlap and role duplication. The need to chase daily fires is greatly reduced, which frees time for higher-value, proactive initiatives.

Most importantly, the implementation of ITIL-consistent storage services allows an organization to leverage its information assets more effectively. Storage services become more closely aligned with the information requirements of the business process that the storage supports. Ultimately, end-user satisfaction increases and risks are reduced because the information needed to complete tasks is more readily available.

Applying ITIL to Storage Services

The ITIL books are best practice guidelines that describe *what* rather than *how*. So, how is an organization to go about applying ITIL to the management of its storage infrastructure?

Often it requires the assistance of a proven third party with storage domain expertise that has taken the ITIL libraries and extended them from the point of view of storage. The most effective methodologies involve threes stages, including an assessment of the existing storage environment and identification of alternative solutions, the development of documented plans and, finally, the implementation and ongoing improvement of those plans.

The assessment stage begins by focusing on the policies, processes, organizations, procedures and metrics for managing storage that may or may not be in place already. Some of the questions include:

- How many support staff members are required per terabyte of storage?
- What is the current overall storage utilization rate?
- How many storage problem tickets are open simultaneously on average?
- How long does it take to provision new storage services or resources on average?
- How many incidents or problems result from making changes?
- What is the overhead associated with storage?
- Are the roles clearly defined?
- How is storage allocated?

Often, the answers are nonexistent or obviously deficient. When enough of these questions have been asked, the issues, and even some potential benefits, become self-evident. For example, the issues uncovered frequently highlight some storage acquisition costs that can be put off or avoided altogether.

Using an ITIL process maturity assessment, the gaps between the current storage environment and a best practice environment are identified along with strategies to close those gaps. Finally, the business impact of closing each gap is determined to rank them in priority order. A financial business case often supports the prioritization of the tasks as they are aligned to the overall IT strategy.

With the assessment complete, the policies, processes, organizations and procedures that close the gaps in priority order are documented, implemented, monitored and adjusted to account for changing conditions.

Ideally, the result of this methodology is an optimized storage management model as illustrated in Figure 1.

For those organizations that have yet to address storage management issues, the challenge is becoming more acute and urgent. A significant new technology implementation will not help. Instead, a practical approach that focuses on utilizing existing storage technologies more effectively is needed. ITIL best practices provide the foundation for storage services that do just that. An organization that seeks the assistance of a highly experienced consultant with deep storage domain expertise, and a proven library of ITIL-consistent storage best practices is more likely to successfully leverage the full value of its critical data assets. DMR

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case study

InsightAmerica Gains Visibility into Critical Data

By George Huffman, senior data developer, InsightAmerica

InsightAmerica provides secure, reliable access to hundreds of national and state-specific databases, including identity data, property, addresses, phone numbers, motor vehicle and criminal records, in both online and batch mode. Companies and government organizations turn to the company for the latest, most up-to-date information on criminals, consumer contact information and other publicly available data. Without consistent, accurate and reliable data, the quality of the company's primary product is compromised.

InsightAmerica offers a suite of online, batch and XML API products to provide information to our client accounts. The information provided by InsightAmerica arrives from a variety of government and private-sector organizations. For example, each state has a different file for criminal arrest records, each of which must be integrated into InsightAmerica products every month. Complicating the process, approximately 10 to 20 percent may change layouts or formats between successive files. Data sources typically exceed 350 million records – a figure that only grows with time.

The company's eight-person data management team needed a method for uncovering and addressing the data integration challenge on an ongoing basis. Duplicate records were everywhere within our data stores, and it was difficult to apply standards as data entered the system.

The company decided to implement dfPower Studio, a data quality integration solution from DataFlux. dfPower Studio provides a design environment that allows data professionals at InsightAmerica to analyze incoming data as well as build and apply business rules to fix that data.

DataFlux dfPower Studio

Through an industry-leading GUI-based interface and graphical workflow tools, DataFlux dfPower Studio gives high-level data profiling, data quality and data integration capabilities to the business user. This allows front-line staff - not IT or development resources - to discover and address data problems.

dfPower Studio helps the data management team to identify duplicate records from incoming data sources based on a weighted relevance scale. The technology uses its core matching engine during the profiling phase to find relationships between records, and InsightAmerica can tune the degree of specificity necessary to generate a match using this engine.

Once the technology identifies redundant or duplicate data, InsightAmerica utilizes DataFlux's "surviving record" feature. This capability helps maintain some data points from existing records while updating or augmenting the information with new data as it arrives.

Finally, the company uses DataFlux to codify and enforce business standards for data elements. Once standardized, it is easier for the company to find qualified matches and meet the end goal of a consistent, accurate and reliable master data file.

The implementation of new processes and procedures built on the DataFlux solution revealed a number of valuable lessons:

- *Before doing anything, know your data.* The InsightAmerica team used the profiling technology to provide a deep background on the data before attempting any data quality or data integration techniques.
- *Break down processes into multiple steps.* Creating better data is not as easy as getting from point A to point B. Set milestones and checkpoints for subprojects to make quality a more progressive goal.
- *Push data quality techniques as close to data capture as possible.* We learned that fixing problematic data only becomes more complex over time. By finding and eliminating data defects upstream, the rest of the data quality project is simplified.

After utilizing dfPower Studio to intelligently integrate data from the existing data sources, InsightAmerica noticed an improvement in overall data quality. The software allowed the company to apply consistent formatting for names, addresses and organization names. Further, through the use of delivery point validation information from USPS, the company could ensure that addresses within the records were not only standardized but also valid.

On the data integration side, the product's matching functionality reaped immediate benefits. DataFlux matching allows users to tune the sensitivity of the matching engine, allowing the team to more confidently uncover and resolve duplicate data across sources.

The increased quality of data transcended to the staff members who saw a decrease in the time and effort required to support new data feeds. With consistent, accurate and reliable data at the foundation of their efforts, the amount of scrap and rework to accommodate bad data was reduced dramatically, providing an overall productivity gain for the company. DMR

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Quick Stats

Ventana Research: Application BI

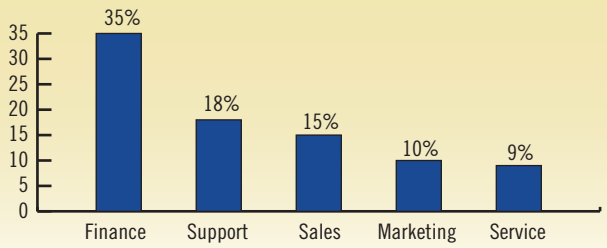
Extracting information from transactional applications is a continuing struggle for businesses today. Vendors have created report templates, metadata management tools, schemas and load scripts. Collectively, these constitute a category of analytic applications tailored specifically for transactional applications. Ventana Research calls these products application BI and conducted a survey earlier this year on the subject.

Adoption of application BI is well established. The majority of survey respondents said they have existing deployments (44 percent) or development under way (27 percent). Few respondents cited no intention to deploy application BI. While most current deployments (66 percent) were relatively small (up to 200 users), final deployments of projects or partial others to be completed in the next 12 months were expected to be much larger: 42 percent claimed final deployments of 1,000 to more than 20,000 users.

Responses were divided equally for and against the idea that application BI deployments reduce dependence upon extraction, transformation and loading (ETL) systems and data warehouses. Specifics of the organization, such as individuals involved, business information needs, and the implementation and support processes involved, likely contribute as much to reliance on ETL applications and data warehouses as does the use or not of an application BI system.

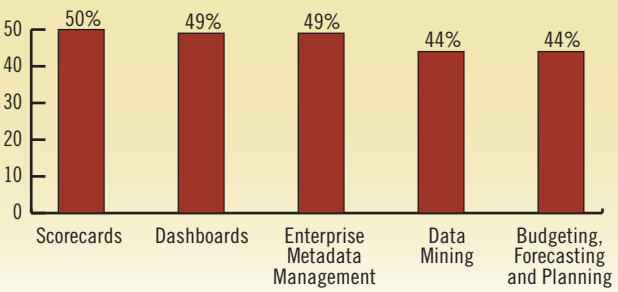
The results of the study indicate that with the proper use of application BI, end users are more self-sufficient, administration is more fully automated and data is integrated better. For more information, please go to www.ventanaresearch.com.

Organizational Departments that Most Commonly Use Application BI



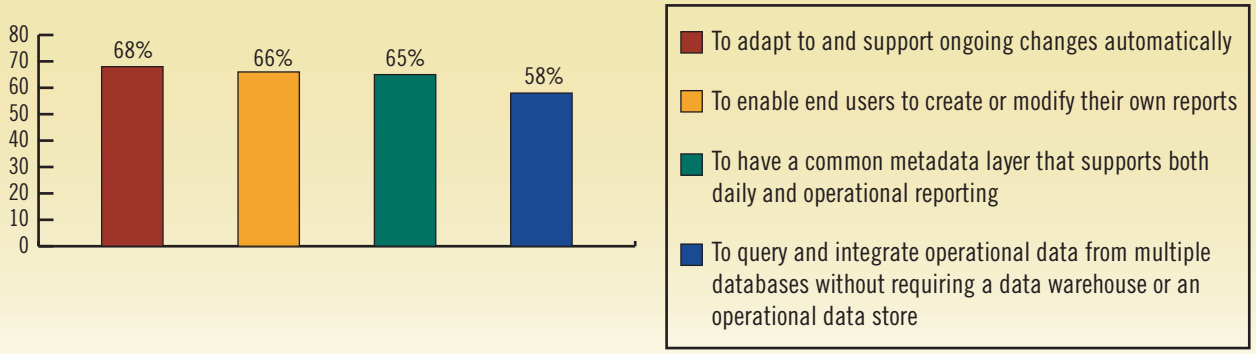
Source: Ventana Research Application BI Survey 2006

Capabilities Planned for Application BI Systems



Source: Ventana Research Application BI Survey 2006

Application BI Benefits Cited as Extremely or Very Important



Source: Ventana Research Application BI Survey 2006

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