Enterprise Performance Management: Connecting the Dots

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EXECUTIVE OVERVIEW

Every organization has management processes and multiple systems to support them, but these systems are often disconnected. Thousands of spreadsheets are necessary to arrive at an annual budget. Financial consolidation lives in total isolation from the rest of the organization. Operational reports cannot be linked to strategic objectives. Such process disconnects lead to errors, lengthy cycles, and high management costs.

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An enterprise performance management (EPM) system brings the management processes under a single umbrella, connecting financial and operational decisions and activities with transactional systems to form a comprehensive management picture.

The results speak for themselves: integrating the operational and financial views helps managers have greater confidence in the numbers, better predict financial results, and assess the impact of operational decisions. By bringing together dozens of transactional systems, you can quickly implement new strategies and get immediate feedback on their effectiveness.

This white paper demonstrates how an EPM system connects people and processes, metrics, businesses, and systems. It introduces important criteria for successful design and implementation while also exploring the far-reaching benefits of EPM: improved decision-making and greater competitive advantage.

CHAPTER 1: INTRODUCTION

Chief Executive Officer

"Earlier today on the earnings call, you heard that financial analysts have doubts about our ability to manage profitability over the coming quarters. How does our pipeline look?"

Senior Vice President, Sales

"We set up a dashboard that shows the pipeline on a daily basis, but it has proven hard to connect that information to the cost of sales, let alone the customer service cost."

Chief Financial Officer

"The guy who ran the cost-of-goods-sold reports left the company without documenting his spreadsheets. We're putting in an activity-based management system, but it won't include customer service or any back-office activities, much less integration with our channel partners in an integrated value chain."

Chief Marketing Officer

"We have lined up a major branding campaign, and this should help increase sales and enable us to charge a premium. But I don't know how much."

Chief Executive Officer

"Is there anything we can do with the compensation plan to fire up the sales force even more?"

Senior Vice President, Human Resources

"Yes, but the bonus pool has not been fully funded. Also, there might be cultural issues in some regions if salespeople earn more than their managers."

Chief Executive Officer

"In how many cases could that happen?"

Chief Information Officer

"We don't have that information in our data warehouse, but I could get one of my people to look into it and create a report…"

Today's management teams have an array of well-established tools, key performance indicators, and best practices to guide their decision-making; yet, even the most sophisticated dashboards and scorecards fall short. Where is the missing link?

Despite many advances in management practices, business processes, and IT systems, discussions like this are still taking place in boardrooms around the world. Today's management teams have an array of well-established tools, key performance indicators, and best practices to guide their decision-making, yet even the most sophisticated dashboards and scorecards fall short. Where is the missing link?

In a complex marketplace shaped by globalization, regulation, and heterogeneous systems, covering the basics of reporting is no longer enough. Used in isolation, industry-standard financial and planning applications and management dashboards each capture only a part of the enterprise performance picture. The challenge lies in connecting the dots.

From Insight to Action

Unlike yesterday's performance management strategies, an enterprise performance management (EPM) system connects financial and operational decisions and activities with transactional systems to form a comprehensive management picture. Although the various activities that are part of performance management have been around for years, EPM brings them together for the first time under a single umbrella.

The results speak for themselves: integrating the operational and financial views helps managers have greater confidence in the numbers, better predict financial results, and assess the impact of operational decisions. By bringing together dozens of transactional systems, you can quickly implement new strategies and get immediate feedback on their effectiveness.

EPM helps companies identify information gaps, focus on the right points of connection, and evolve their performance measurement as the business inevitably changes with the demands of the market. It is about connecting processes, people, metrics, systems, and businesses to improve decision-making and drive competitive advantage.

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What Is Enterprise Performance Management?

- EPM drives the realization of the goals of all of an organization's stakeholders, leading to sustained success.
- EPM comprises all performance-related strategic, financial, and operational management processes an organization undertakes.
- EPM consists of all methodologies, systems, metrics, and structures to support the management processes.

Why Is EPM Essential Today?

Several converging business trends have made EPM a business necessity for companies that want to get—and stay—ahead of their competition.

EPM provides all key stakeholders with relevant, actionable insight.

Corporate transparency is here to stay

In a regulated business environment, every stakeholder needs to understand the organization's strategy and results:

- Regulators, financial analysts, shareholders, and rating agencies want assurance that the strategy is sound and that published results are a fair representation of reality and comply with regulatory requirements.
- Company staff members are motivated by seeing their contributions to the overall performance, and they need to understand the strategy to make the right operational decisions.
- As integral parts of the value chain, suppliers and business partners need to align their objectives and operations.
- Customers may want to see practical information such as their order status, or they may simply need to know that the company runs an ethical business.

EPM provides all of these stakeholders with relevant, actionable insight.

Business agility is the way to win

In recent decades, most organizations have optimized the quality of their products and services; few companies compete solely on quality anymore. Meanwhile, strategies based on price competition lead only to margin erosion. Today's winning strategies rely on the ability to adapt quickly to changing competitive circumstances, disruptive innovations, new regulations, and customer demands. An EPM system increases agility by linking financial performance management applications and operational business intelligence to transactional systems. Decisions can be implemented immediately, and important operational feedback leads to immediate response.

Businesses compete on many levels

As the global business environment evolves, companies have devised creative ways to outperform their competitors. It's no longer enough to acquire the best customers. Now, you have to win exclusive or preferred partnerships, develop affiliate relationships that complement your core competencies, and hire the best people in the industry. You may compete for special tax agreements in various parts of the world or for a prime office location that attracts talent, customers, and partners. An EPM system provides the insight you need for managing multifaceted competition.

To gain maximum insight from transactional data, you need to derive new information that does not exist anywhere in the enterprise.

Heterogeneous systems persist

Although some large organizations have been successful in standardizing their business systems—and, in some cases, consolidating into a single instance—the majority of companies have a heterogeneous environment (even when there is a single-instance business application, many other datasources reside within and outside the organization). Furthermore, to gain maximum insight from transactional data, you need to derive new information that does not exist anywhere in the enterprise. Management teams draw data from financial accounting systems, human resources, manufacturing, supply chain, customer relationship management, and other sources to support tactical and strategic decision-making. Many companies have developed and deployed data warehouses and data marts to help with the integration of transactional data to support decision-making; some even have multiple data warehouses to support different functional groups. Faced with this reality, many IT departments are looking for ways to leverage existing investments in information systems—and the data they generate—to enhance their decision-making.

Where EPM Fits In

In recent years, companies have implemented transaction systems—enterprise resource planning (ERP), customer relationship management (CRM), human capital management (HCM), and supply chain management (SCM)—to run various parts of the business. These systems generate and capture a lot of data, creating an opportunity for greater insight into business performance. Analytical software can provide a single view of performance across functions. And business intelligence (BI) tools and various performance management applications are often evaluated as a means to address this opportunity.

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But only an EPM system, which includes operational BI applications as well as financial performance management applications, can create that critical link between the operational systems and management systems that enables insight to action—or the ability for an executive or manager to perform strategic analysis of data from operational sources and take action by driving a decision or reallocation of resources back into the operational systems. The more seamless this link, the more agility the organization gains, enabling it to respond quickly to changes in markets and organizations.

The following chapters of this paper explore the many innovative ways in which an EPM system helps companies connect processes, people, metrics, businesses, and systems.

CHAPTER 2: CONNECTING PROCESSES AND PEOPLE

Effective enterprise performance management begins with establishing vital connections among the people and processes that run the business. People do not perform in isolation. It is only when you combine unique skills and resources and work together as a team that ambitious goals become not only thinkable but also realistic.

How It Works

Traditional performance management has always been approached as a top-down process that conforms to the steps of the management cycle. Managers derive goals from a corporate strategy, make plans to achieve the goals, and monitor progress toward those goals.

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An EPM system automates and strengthens performance management activities at each step in this cycle; however, unlike existing solutions, it can also account for human behavioral influences that ultimately determine the effectiveness of any performance measurement strategy.

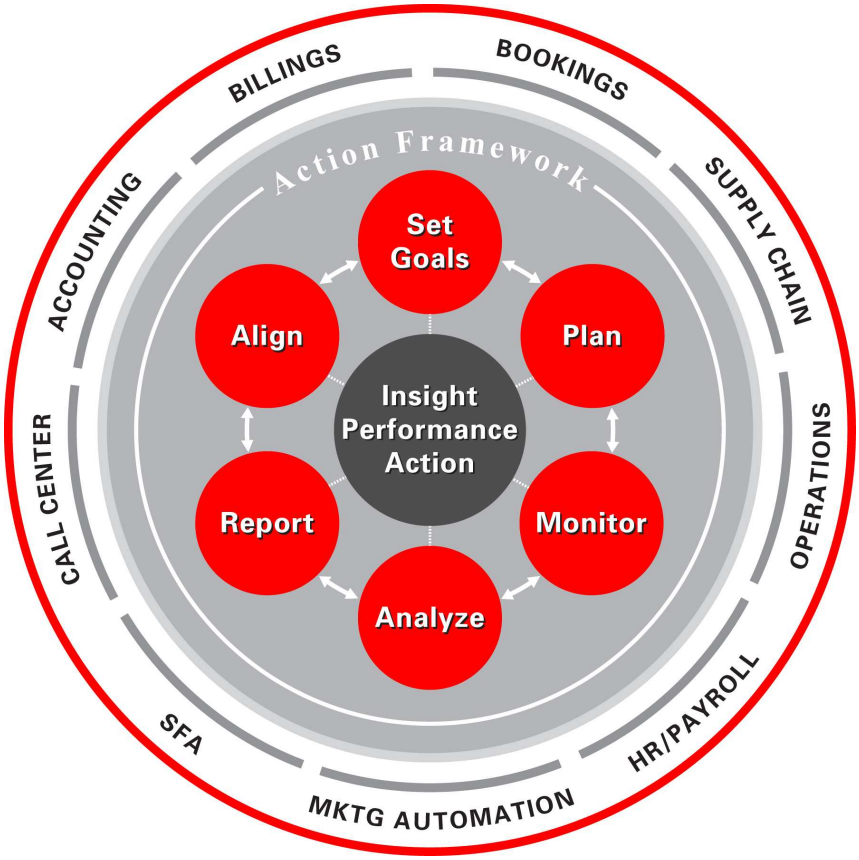

Figure 1: The management cycle

Set Goals

The first step for any management team is to define and articulate its organization's goals. Historically, businesses have typically focused on financial metrics to guide the goal-setting process. Increasingly, these are being supplemented with nonfinancial metric considerations—increased market share, increased production quality, higher direct marketing response rates, or lower absenteeism—that align with the underlying drivers of the business unit to better predict future performance. An EPM system helps you calculate the financial impact of operational goals and vice versa, providing you with an integrated view that connects goals to plans.

Plan

Most organizations have an annual formal planning process called the budget, which involves modeling financial targets and constraints, conducting companywide negotiations, and refining models and plans (and, in some cases, resetting goals). Some organizations have a more resources-driven approach that involves translating bottom-up plans into financial results. In either case, planning is a highly iterative and interactive process. An EPM system helps you manage budgets across the enterprise in a structured manner, manage complex workflows of this iterative process, and standardize the definitions of all metrics so that management can compare actual results with plan.

Monitor

Dashboards help managers present results to their peers and supervisors. An EPM system collects, manages, and distributes large amounts of data, providing all managers with the right information at the right time, in the right format.

To track how well the organization executes its plan, management gathers facts from a variety of operational, financial, internal, and external sources. Some results may be scheduled to occur automatically, whereas others may be generated when a specified event is detected. Dashboards help managers present results to their peers and supervisors. An EPM system collects, manages, and distributes large amounts of data, providing all managers with the right information at the right time, in the right format.

Analyze

Drilling down into the performance data often reveals answers to these questions and helps management decide how to proceed.

When monitoring reveals that actual results do not match expected outcomes, management needs to understand the reason for the variances and propose corrective action. Are the goals no longer compatible with reality? Did execution of the plan fall short? Is there a seasonal pattern that needs explanation? Drilling down into the performance data often reveals answers to these questions and helps management decide how to proceed. An EPM system contains comprehensive analytic capabilities that transform data into valuable information and actionable insight.

Report

Internal and external stakeholders need to be informed about the organization's performance results. Different stakeholders will have varying requirements for how they want this information represented—from static reports, ad hoc queries, and navigable datasources to mandatory financial reports. Operational reporting is equally important: for example, professional investors would want to know about the sales pipeline for a trading company, the ability to attract the right skills for a professional services company, environmental reporting for an oil company, or infrastructure maintenance reporting for a railway company. An EPM system is equipped to create the right reports for the right audiences, with meaningful graphics.

Align

The EPM system is the catalyst that drives each step in the management cycle, creating a common foundation for integrated data and a seamless performance management process.

The last step in the management cycle closes the loop and ensures a continuous process. This is the annual, quarterly, or monthly opportunity to revisit goals and objectives, refine business models, and update business plans based on changes in the industry, economic environment, or resource capabilities of the enterprise. The EPM system is the catalyst that drives each step in the management cycle, creating a common foundation for integrated data and a seamless performance management process.

The Human Factor

The simplicity of a step-by-step performance management process is appealing, but it doesn't account for the types of human behavior that such measurements trigger. Here are some examples:

- **Budget games:** Who can resist the temptation to negotiate a cost budget as high as possible and a revenue target as low as possible, even though it leads not to improved enterprise performance but to average results at best?
- **Running the numbers instead of running the business:** Anyone can manipulate data to their own advantage by changing definitions or creatively analyzing data, but the net result is rarely positive for the enterprise.
- **Different versions of the truth:** Some managers actually prefer the status quo of multiple reports, each with slightly different results, so they can choose the one that best supports their own agenda.

Without a clear understanding of these behaviors, many organizations quickly become dysfunctional. An EPM system addresses this challenge by accounting for four key behavioral elements that affect the management cycle: rationalization, commitment, feedback, and alignment. In this way, EPM enables management teams to predict the human effects of measuring performance, leading to better implementations.

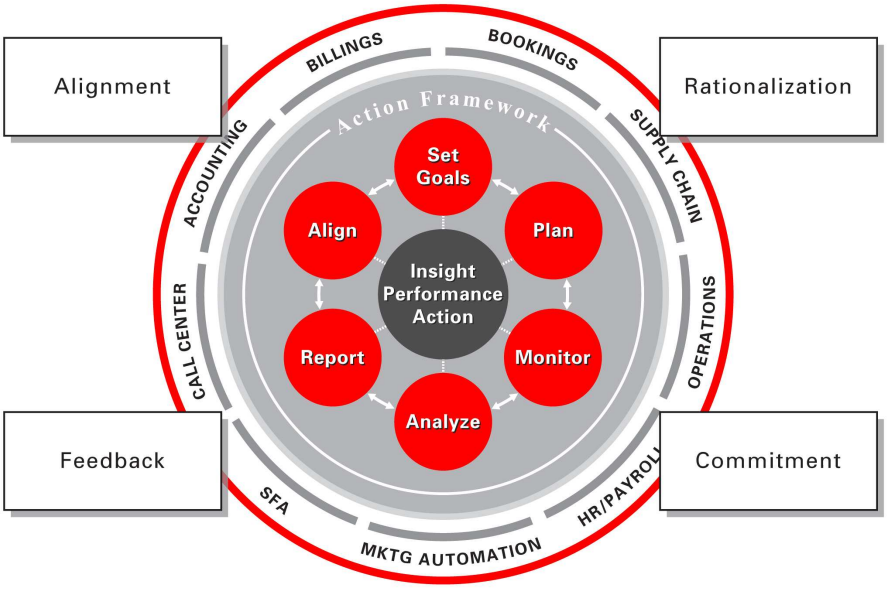

Figure 2: Human needs in EPM

Rationalization

It is the rare organization that doesn't make rushed decisions when faced with changing goals and deadlines. Understanding the tendency to jump to conclusions without fully exploring risks and rewards, an EPM system includes scenario analysis—the ability to compare different options side by side.

It is the rare organization that doesn't make rushed decisions when faced with changing goals and tight deadlines. Who has time to compare all the options when management is demanding an immediate solution? Understanding the tendency to jump to conclusions without fully exploring risks and rewards, an EPM system includes scenario analysis—the ability to compare different options side by side. In a quantitative model, the EPM system calculates the rewards of each option as well as a probability distribution of the feasibility of each one. For each alternative scenario, it compares the rewards with the impact and likelihood of the associated risks. With the analysis of each scenario, management can afford the time needed to consider all the options and avoid the trap of hasty decision-making.

Making a habit of scenario analysis trains the management team to think about various opportunities and builds adaptive skills. The decision-making skills of the management team improve overall as people become accustomed to looking at every decision from various angles.

How do you build scenarios in an EPM system? It's a collaborative process in which the journey is also the destination. Sharing assumptions and making assessments as a group creates strategic focus and alignment, even before a decision is made. Making a habit of scenario analysis trains the management team to think about various opportunities and builds adaptive skills. The decision-making skills of the management team improve overall as people become accustomed to looking at every decision from various angles. And because scenario analysis is not a one-off exercise, the process will go faster with every repetition. A highly adaptive culture helps the organization respond faster to new opportunities and threats in the market—and enables the management team to move forward with confidence.

Scenario Analysis at an American University

A U.S.-based university with more than 10,000 students incorporated financial scenario modeling into its annual planning process. With Oracle's EPM solution, the university's finance team is able to maintain a regularly refreshed 10-year forecast of the university's ecosystem as well as an overall view of the balance sheet, based on critical variables such as enrollment, research programs, inflators, cost of capital, and capital plans. By conducting sensitivity analysis on key variables, the university can model cash flow sources, anticipate the timing of debt issues, and test compliance with debt policies. Oracle's tool makes it possible to test new program ideas and model different business units throughout the university.

Commitment

All too often, planning and budgeting exercises are a one-way street: senior management hands down new strategic objectives and financial goals, and middle management translates them into activities. What follows is an inefficient and often ineffective process of negotiation, after which managers must commit to a final plan.

In an ideal world, planning should be not a process of negotiation but one of optimizing the use of organizational capabilities. It should be not a top-down exercise but a circular process.

In an ideal world, planning should be not a process of negotiation but one of optimizing the use of organizational capabilities. It should be not a top-down exercise but a circular process. External stakeholders may expect commitment to financial outcomes, but these need to be checked continuously against an organization's resources and activities. If there is a need to increase margins, the cost of resources can be evaluated and perhaps substituted by alternatives instead of cutting resources. If there is an issue with demand, managers can create various plans using different pricing or other parts of the marketing mix.

Continuously following this planning process—discussing how current resources can be better leveraged and how new resources can be attracted to fuel growth—enables managers to proactively seek ways to improve performance against an internal and/or external benchmark instead of reactively working toward goals imposed from the corner office.

Organizations that follow a more operations-based planning process usually work with rolling forecasts instead of fixed budgeting periods. The result is a more accurate forecast that accumulates developing insight. A more operations-based planning process based on rolling forecasts enables managers to unreservedly commit, based on confidence that they control the results. An EPM system helps you create accurate forecasts, keep track of various versions, and manage complex workflows.

Rolling Forecasts at a Bank Managing More Than $100B in Assets

A U.S.-based regional banking corporation outgrew its spreadsheet-based budgeting and forecasting process and needed something that was more scalable and reliable. The bank deployed Oracle's EPM solution, which supports the financial planning and forecasting process and provides more control and visibility into the details and drivers behind the forecast and plan. The plan incorporates a corporate office top-down process and an affiliates bottoms-up process as well as integration with the HQ and allocations processes. This application is used for the annual planning process as well as for a rolling monthly forecast.

Feedback

An EPM system does more than simply support the top-down management approach. It can also become a valuable tool for sharing feedback within and among departments.

Many companies use performance management exclusively as an instrument of control. Through it, managers learn about operational results, make adjustments, and reward or discipline staff. But an EPM system does more than simply support the top-down management approach. It can also become a valuable tool for sharing feedback within and among departments.

Consider this example: The claims department of an insurance company sorted claims by U.S. postal zip code and distributed them each day to four groups—North, East, West and South. The most important performance indicator was average processing time per claim, and this metric needed improvement. Senior management decided to publish a weekly graph of claims processing production by group on the message board near the coffee machine. There was no change management program and no communication of the objectives—just feedback through the graph. After a few weeks, the effects were visible. Group East offered to help Group West by taking over a load of claims, because two staff members in Group West were ill. At the same time, Group East counted on the help of the others for the next two weeks while a few employees were on vacation. The workload began to balance itself naturally, and the average processing time decreased.

Taking a feedback-oriented approach leads the organization from managing through the hierarchy to managing through the value chain. Employees get feedback on their work performance from their own colleagues who are working on the next step of the business process. A job done on time and to high quality standards encourages others to achieve the same.

With an effective feedback process in place, companies can also begin to feed forward, giving colleagues in the next step of the process an idea of what is coming and how, so they can plan for work to come. This kind of fluid information motivates staff at every level, because it enables each individual to see the effects of his or her contribution on the overall process or organization. An EPM system helps distribute feedback not only to staff but also to all stakeholders.

Alignment

In today's business environment, the many stakeholders in a value chain cannot be expected to share the same goals in the way business units do. Investors want to maximize shareholder value, which may be at odds with the goals of employees, who seek job security or a place to develop skills. End customers are looking for a good deal and quality customer service, whereas suppliers see their customers as a source for more revenue.

Alignment in this scenario is no longer about business units' contributing to the same goals (vertical alignment). It involves reconciling the different goals stakeholders inevitably have in a horizontal alignment process. This reality has a fundamental impact on the best way to design decision-making processes. Before making a decision, management must identify and explore all points of view. By automating much of the analysis, an EPM system helps companies master complex decision-making processes. And with this step, we return to *rationalization,* building various scenarios to include the requirements of all stakeholders.

Benefits of Connecting Processes and People

Once you have connected people by embracing a broader definition of stakeholders and a more flexible performance management approach, it becomes very easy to connect businesses beyond the borders of your own organization.

Understanding the human aspects of performance management greatly improves the effectiveness of an EPM system implementation, taking it a step beyond the traditional top-down approach. Moreover, once you have connected people by embracing a broader definition of stakeholders and a more flexible performance management approach, it becomes very easy to connect businesses beyond the borders of your own organization.

Before EPM	After EPM
Top-down approach	Continuous feedback loop
Fixed-period budgets	Rolling forecasts
Hierarchical alignment	Stakeholder alignment

CHAPTER 3: CONNECTING METRICS

Once you've brought people and processes together into one performance management system, the next challenge is to measure how they work together as a whole. But all too often, the information that managers need is difficult to obtain, because it either does not reside in their departmental systems or is fragmented across various applications. Although company functions such as sales, marketing, operations, finance, and human resources are interconnected, the data they produce and store is not.

For a business to achieve optimal performance, information has to flow across functional boundaries. For example, sales, marketing, and service professionals need information from finance, human resources, and manufacturing to help them better manage customers. HR professionals need financial information to gain a better understanding of compensation trends and other workforce costs. Manufacturing and procurement professionals need data on customer orders and material and labor costs to more effectively manage the supply chain.

For a business to achieve optimal performance, information has to flow across functional boundaries.

Most companies lack this kind of cross-value chain insight, because the required data is stored in disconnected systems, such as supply chain, HR, order management, billing, financial, and CRM systems.[1]

How It Works

An EPM system automates and enhances three key steps in the management cycle:

Get the source data right

All metrics reporting begins with selecting the right source data—a step that's usually more complicated, and more important to get right, than many companies realize at the outset. To generate the meaningful key performance indicators that management teams need, you must start with accurate and consistent information. An EPM system achieves this goal by unifying data structure and presentation, protecting the integrity of information as it is moved from one system to another, using consistent business language, and applying a common set of rules, scripts, and calculations to the process. With reliable base data, management can then achieve the quality insight it needs.

Generate the metrics

Every management team dreams of arriving at the magic calculation that represents the health of the business in one index number. In reality, most companies settle for a boatload of line-of-business-oriented KPIs and then struggle to keep them accurate and up to date.

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[1] "Oracle White Paper, Oracle Business Intelligence Applications Overview," March 2007, oracle.com/appserver/business-intelligence/bi-applications.html

There are many reasons why KPIs often fail to deliver the insight that's expected. First, generating a relevant metric often initially requires a lot of work that is both costly and prone to error, because the data is stored in a format optimized for transactions, not analysis. Even a simple ratio might involve millions of aggregated lines, conversions, and calculations from half a dozen datasources. Once you've successfully collected and aggregated the data you require, you then need to apply formulas and manipulate the information to enable a comparison with a benchmark. Finally, you need to ensure a high level of control to protect the results from corruption.

An EPM system solves the metrics conundrum, by taking over the entire chain of events, from transaction to insight. The system collects, calculates, aggregates, and checks for quality in the background, freeing the end user from tedious data manipulation and creating more time for insightful analysis of the results.

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Metrics Analysis at a Multibillion-Dollar Global Oil Company

A global oil company's retail division, with more than 3,000 stores owned mostly by franchisees, needed visibility into several key performance indicators. Each store sells both gasoline and general groceries and the company needs the overall picture—not only on a consolidated level but also by store, product, market, manager, and channel. The company built a central repository with the following information:

- Fuel revenue in dollars and gallons
- Store revenue per product category
- Cost of goods sold; margins
- Plan versus actual variances and year-over-year comparisons

Based on patterns and relationships in the data, this combination of metrics has helped the company predict its full-year estimates.

Combine the metrics

As businesses have expanded globally and adapted to ever-changing government regulations, tracking metrics has become exponentially complex. How can you make meaningful comparisons when one team reports in euros and months whereas another measures in dollars and days? Different lines of business deploy different IT systems—and none of them seems to structure and aggregate data the same way.

An ERP system brings together the right operational data, running through a common process. By contrast, an EPM system provides the necessary tools to transform metrics into actionable insight. EPM connecting heterogeneous transactional systems empowers managers to bridge the gap between isolated metrics and sound decisions.

Figure 3: Combining metrics leads to leading metrics

For instance, a sudden drop in cash inflow may be caused by later-than-usual customer payments. This might be related to an issue with customer satisfaction, such as customer complaints that their orders have not been shipped completely. Or it might be caused by a new policy from the procurement department, such as delaying payment to suppliers. A connected set of metrics reveals the cause-and-effect relationships.

Benefits of Connecting Metrics

Two clear benefits emerge from this approach:

Focus on the leading metrics

Connected metrics give managers the power to identify the group of leading indicators that represents the pulse of the organization and that, through correlation and causality, predicts future business results.

By definition, you can measure only what has happened already. But connected metrics give managers the power to identify the group of leading indicators that represents the pulse of the organization and that, through correlation and causality, predicts future business results. Consolidating complex metrics is only half of the job. What happens if questions arise upon the publication of these leading indicators? Who will then drill down to the details, unwinding the metrics into their subcomponents, following a complex map?

Only a well-structured and traceable process will enable the follow-through this type of metrics analysis demands. An EPM system delivers results by

- Maintaining data integrity
- Empowering users with visualization tools for navigating back and forth across the metrics landscape
- Securing a continuum of homogeneous and aligned information

Address the full scope of the business

Perhaps the most powerful benefit of connecting metrics through an EPM system is the ability to align the needs of stakeholders both within and outside the organization. To assess a company's entire global footprint and economic value, managers need to understand social and environmental factors as well as fundamental financial results. How do you add paper consumption, CO_2 emissions, nonprofit donations, and community feedback to the equation?

An EPM system must provide pervasive information access and enable you to monitor data regardless of its origin and type. You also retain the flexibility to add new data at any time. Better yet, all of the information captured becomes available to any authorized user for subsequent analysis, even outside its original domain. The end result? Managers become empowered to draw a comprehensive and accurate picture of the situation. They can use it to communicate results and collaborate on solutions. In the process, they'll reach optimal decisions faster and with far less manual effort.

Clearly, relying on manual labor and scattered spreadsheets or data manipulation tools to connect disparate business metrics is not sustainable or reliable. Only an EPM system can perform the complex tasks across the various ERP systems in the enterprise and provide the analytic tools and applications for generating meaningful insight.

Before EPM	After EPM
Data silos and disconnected metrics	Unified data and meaningful metrics
Error-prone manual processes	Accurate information from automated systems
Metrics calculated in spreadsheets	Metrics calculated in a central system
Hours spent reconciling data	Single version of the truth

CHAPTER 4: CONNECTING BUSINESSES

No modern enterprise stands on its own. Today's reality is that a large part of a company's performance depends on what happens outside the walls of its own organization. Insurers sell insurance through intermediaries that drive revenue. Car manufacturers source most of their parts from suppliers. Supermarket chain margins depend on value chain integration with an array of food distributors and packaged goods companies.

Today's reality is that a large part of a company's performance depends on what happens outside the walls of its own organization.

In all of these industries, business models, processes, and systems are becoming increasingly heterogeneous, making it imperative for an EPM system to connect entire organizations, rather than just their individual people, processes, and metrics. Consider some of these trends:

Business models

Outsourcing and joint product development are but two examples of heterogeneous business models. For example, Adidas codesigned shoes with Porsche Design, the Senseo coffee system was jointly developed by Philips and Douwe Egberts, and many companies have come together to create the ecosystem of accessories around the Apple iPod. Whatever the strategic rationale, there is not a single CEO who commands and controls a complete value chain. Rather, business has become a network managed through collaboration and communication. An EPM system should allow control and collaboration even between organizations.

Business processes

Mass customization, in which products are produced in large quantities but every single order can be different, illustrates the challenge of heterogeneous business processes. Think of the number of options on a car or how to configure a PC. In many cases, it is not even the company itself that runs the customization process; customers choose their own options through the Web. Mass customization processes require a more hands-on and real-time monitoring and management platform.

Business systems

News of megamergers and acquisitions dominates business headlines on almost a daily basis. In most cases, it is impossible to rip and replace systems when two IT departments come together; and even if the business systems come from the same vendor, they are unlikely to be implemented in the same way. Multiple environments need to coexist and interact. Faced with this challenge, companies are beginning to form business application ecosystems in which multiple systems across multiple vendors speak the same language through common middleware. An EPM system must be able to integrate multiple ecosystems effectively.

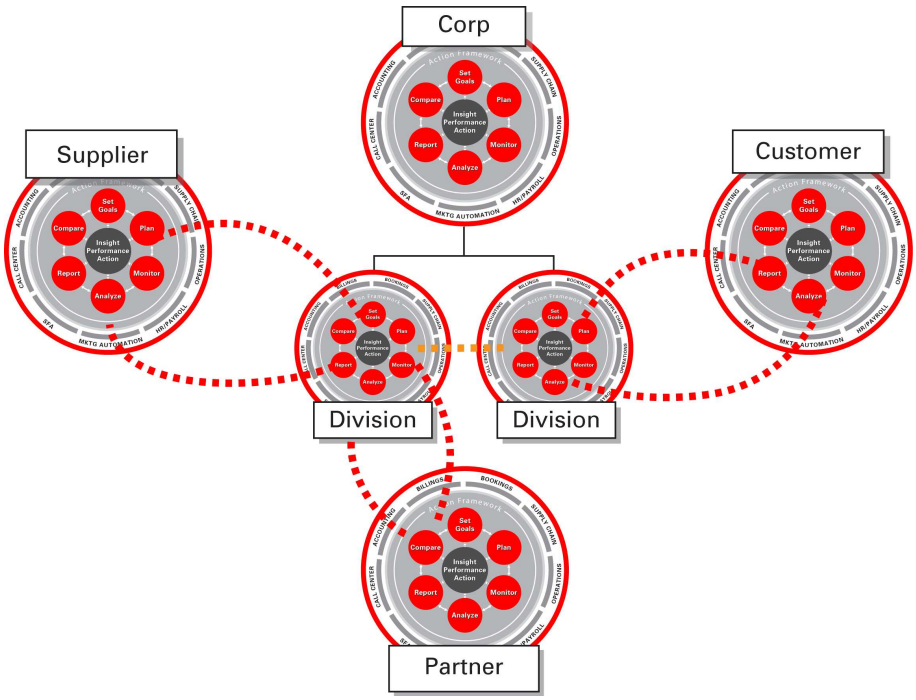

Figure 4: Connected EPM systems

A performance network recognizes all stakeholders in a value chain and aligns their objectives to optimize the performance of the overall network instead of the performance of each individual stakeholder.

The future of EPM is in supporting the complete value chain and integrating all stakeholders in the performance management process. Essentially, EPM systems should manage "performance networks," which recognize all stakeholders in a value chain and align their objectives to optimize the performance of the overall network, instead of the performance of each stakeholder alone. And all stakeholders have their own view of the network.

How It Works

If an EPM system is to support a performance network, it needs to provide the following:

Operational and real-time embedding

If you allow customers to configure their own version of your products and services, it is imperative to monitor these processes closely. Managing cannot be an analytical exercise in the back office. By supporting heterogeneous business processes, EPM becomes a dynamic pricing instrument in the front office.

Value chain planning and optimization

As discussed in the previous chapter, traditional planning exercises tend to be hierarchical in nature, using the organizational chart as the means of collecting plans and cascade objectives. In a performance network, however, there is no such hierarchy. Activities, products, and services move through the complete value chain, crossing multiple organizational borders. An EPM system can support this

more process-oriented and predictive approach by following resources and activities throughout the value chain.

Information sharing

In most organizations, information is seen as an exclusive resource to be protected instead of as an asset to be shared. For an EPM system to connect businesses effectively, an open culture in which relevant information is shared freely among stakeholders needs to be established. Many companies already share supplier dashboards, benchmarking information that compares various geographies, or customer data. Some even exchange margin information with strategic suppliers to entice them to invest in value chain integration. As one CEO put it, "Power used to belong to the information owner. It now belongs to the information giver."

Distribution Tracking and Analysis for a Japanese Car Manufacturer

At a U.S.-based sales, distribution, and marketing unit of a Japanese car manufacturer, management tracks and analyzes the movement of more than 1.5 million vehicles from production to dealer delivery—following every step along the way. Because this company does not own all of its dealerships and service centers, its system connects many businesses. More than 2,000 decision-makers use an EPM solution to access data from hundreds of operational data stores or data marts. Automatically generating reports has resulted in considerable savings and improved business decisions based on timely, accurate data.

Reciprocity

To create an optimized "performance network," key performance indicators need to be reciprocal. Traditional performance management focuses on the question: how do I optimize my performance? However, in a performance network, the answer to this question paints only half the picture, at best. The questions management should focus on when implementing EPM are

- What do my stakeholders contribute to my success?
- What do I contribute to the success of my stakeholders?

It is then when EPM transforms from a tool for tactical, internally focused back-office management into a tool that connects businesses throughout the value chain on a strategic level.

Benefits of Connecting Businesses

Interactive Dashboards for a Commercial Fleet Management Company

A Canada- and U.S.-based leading provider of commercial fleet management services connected its 1,200 client companies to a data warehouse that integrates information from several systems, giving clients access to more than 140 fleet-related reports—as well as interactive dashboards delivered directly to clients' desktops. The EPM system has simplified reporting for executive-level management and delivered valuable competitive differentiation.

EPM becomes a competitive differentiator taking the company that implements it a step beyond competitors that simply deliver a product or service.

Information is an asset to be used as widely as possible throughout the enterprise and across its entire performance network. An EPM system becomes a strategic tool, for example, when companies use it to share information with customers as a value-add service. The newly available information can help customers manage the specific business relationship, or it might help them manage their business or life better. In this sense, EPM becomes a competitive differentiator, taking the company that implements it a step beyond competitors that simply deliver a product or service. When EPM is used to connect businesses, it transcends the definition of a management tool and becomes an integral part of the business itself. Return on investment is the reward.

Before EPM	After EPM
Closed information culture	Open information culture
Hierarchical planning	Value chain planning
Siloed enterprises	Performance networks

CHAPTER 5: CONNECTING SYSTEMS

An EPM system must be able to communicate with other technologies, databases, and business applications—in other words, it needs to be hot-pluggable and work with your existing IT infrastructure.

For processes, people, metrics, and businesses to connect, systems must connect too, yet a one-size-fits-all solution does not exist. To support heterogeneous IT systems resulting from globalization, regulation, and market consolidation, an EPM system must be able to communicate with other technologies, databases, and business applications—in other words, it needs to be hot-pluggable and work with your existing IT infrastructure.

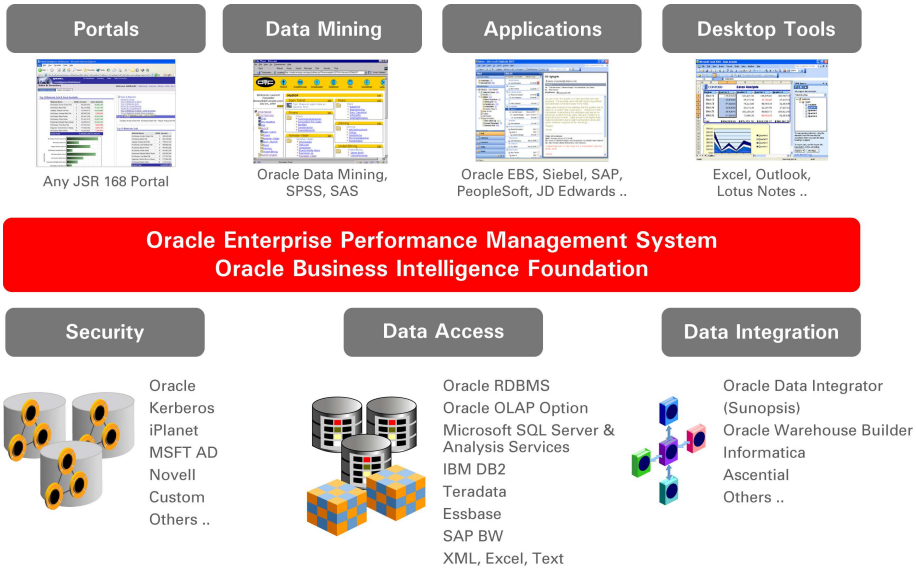

Figure 5: Hot-pluggable EPM

How It Works

A common foundation for information management is essential to making applications hot-pluggable. Accordingly, any EPM system must address management of data quality, metadata, master data, and data integration.

Data-quality management

To make sure all relevant information is complete and correct, you need a range of controls, from the point of data capture all the way to signing off on the annual report. Data-quality management needs to prevent data capture mistakes, detect mistakes that may occur, and correct data-quality issues.

Metadata management

It seems to be a rule that the more a certain term is related to the core of the business, the more definitions of it there will be. Effective metadata management requires that all management processes use a repository in which definitions are stored, harmonized, and maintained over time.

Data relationship management

As companies grow and evolve, it becomes essential to manage master data across information silos that result from mergers and acquisitions, departmental initiatives, or legacy system proliferation. Data consistency, integrity, quality, and accuracy suffer, and no one trusts the information and insight that ensue. Data relationship management (also known as master data management) enables organizations to build consistency within master data assets, despite endless changes within the underlying transactional and analytical systems.

Data integration

An EPM system needs to support a wide variety of techniques to enable companies to access, integrate, transform, and move any type of data between a source and a target system, in any frequency and in any format, thereby eliminating data fragmentation across the enterprise. Sometimes this is a physical process, such as storing data in a data warehouse or a data mart, but it can also include data federation, in which data resides in multiple systems and is referenced in an on-demand fashion. This capability enables organizations to separate transactional processes and systems from analytical processes and systems while keeping them aligned.

Benefits of Connecting Systems

Connecting Systems at a Major Telecommunications Company

One of Europe's largest telecommunications companies achieved its goals of lower costs and better management information by using an EPM system to standardize processes, systems, and data models. By integrating EPM with its existing ERP system, the company simplified reporting, streamlined access to information, and optimized its IT architecture.

An EPM system must be able to draw data from a variety of datasources across various ecosystems. Through an integrated presentation layer and integration with various operational systems, an EPM system not only connects the data but is also able to handle heterogeneous business processes.

An EPM system recognizes and accommodates heterogeneous IT environments by plugging in to other business applications and streamlining access to information. It must be able to draw data from a variety of datasources across various ecosystems. Through an integrated presentation layer and tight integration with various operational systems, an EPM system not only connects the data but is also able to handle heterogeneous business processes.

Before EPM	After EPM
Disconnected heterogeneous systems	Connected heterogeneous systems
Inefficient reporting	Streamlined access to information
Multiple data definitions	Effective metadata management

CHAPTER 6: CONCLUSION

Businesses must find new ways to react quickly with the "right" strategic and operational decisions. This requires access to better information about every dimension of business performance. Financial data is one piece of the puzzle, but only an EPM system can address the need for visibility and measurable results across all areas of the enterprise.

EPM strengthens enterprises that deploy it, by forming invaluable connections among people and processes, metrics, businesses, and systems. Early adopters in financial services, manufacturing, telecommunications, and other industries are already experiencing the benefits of this new approach to performance management. They are transforming information into a strategic tool and making it available to employees, customers, and partners as well as the senior management team.

As companies continue to unite data from the various functions in the business, the tenor in the boardroom will change from backward-looking speculation—How did this happen?—to forward-looking strategic analysis and planning grounded in fact-based decisions. And these will be the management meetings that drive business success.

About Oracle's EPM System

The terms *business intelligence* (BI) and *enterprise performance management*

(EPM) are becoming more recognized by mainstream finance and IT executives and staff in most large enterprises around the world, and the lines are blurring between these two technology categories. In response to customer demands for integrated business intelligence and performance management—and the need to link these processes and technologies closely to transactional systems—Oracle is taking the lead in delivering a more comprehensive offering: the enterprise performance management system.

Oracle provides the industry's first integrated, end-to-end enterprise performance management system, delivering a suite of category-leading financial performance management applications and operational BI applications on a common foundation of BI tools and services—integrated with a variety of back-end datasources via Oracle Fusion Middleware. Oracle's approach to enterprise performance management delivers on the notion of "insight to action" with a system that is

- Pervasive: Oracle's EPM system delivers intuitive, role-based intelligence that enables better decisions, actions, and business processes for everyone in an organization—from frontline employees to senior management.
- Comprehensive: Oracle's EPM system integrates information from your financial performance management, operational intelligence, and transactional applications to provide a single view of the truth and support fast, efficient decision-making.
- Hot-pluggable: Oracle's EPM system leverages your existing datasources and systems. Oracle BI products are hot-pluggable with Oracle and non-Oracle environments, so your investments are protected and leveraged to their maximum potential.

Thousands of companies around the world are benefiting from Oracle's comprehensive approach to enterprise performance management, through which they are able to align decisions with strategic goals, reduce financial reporting and planning cycles, compare operational results with plans in real time, and drive insight to action with lower costs and less complexity than nonintegrated point solutions.

ABOUT ORACLE CORPORATION

Oracle is the leader in Enterprise Performance Management (EPM), unifying Performance Management and Business Intelligence (BI), supporting a broad range of strategic, financial and operational management processes. Oracle provides a complete and integrated system for managing and optimizing enterprise-wide performance. This allows organizations to achieve a state of

management excellence – being smart, agile and aligned – which provides competitive advantage and leverages their operational investments.

- **Smart** – Leverage market-leading products and technologies that address enterprise-wide requirements and drive new insights into your business
- **Agile** – Enable advanced integration that improves agility and lowers costs of ownership
- **Aligned** – Drive pervasive intelligence across the enterprise by linking strategic, financial and operational management processes

For more information, go to http://www.oracle.com/epm. Contact us with any comments or questions at epmgbu_ww@oracle.com.

Enterprise Performance Management: Connecting the Dots

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Author: Frank Buytendijk
Contributing Authors: John O'Rourke, Gauthier Vasseur

Oracle Corporation
World Headquarters
500 Oracle Parkway
Redwood Shores, CA 94065
U.S.A.

Worldwide Inquiries:
Phone: +1.650.506.7000
Fax: +1.650.506.7200
oracle.com