



**Key Performance Indicators should work for you,
not the other way around!**



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Overview

KPIs are an excellent performance measurement tool that businesses in many different sectors employ to improve performance. The key to KPIs is finding a way to quickly gather and simply distribute the key business information without becoming beholden to large, complex databases and applications. KPIs should work for the business without requiring half the organization to work for groups that make, maintain, and feed these KPI systems. Traditional database systems don't provide real-time information and require a lot of time and money for customization or consulting. By utilizing a real-time performance management system as the basis for KPIs and scorecards, progressive companies enhance their competitive advantage and improve the overall decision-making across an entire enterprise. KPIs are a way to continuously improve the business at all levels, and with the PI System™, the systems that gather the KPIs for business can work in real-time.

Key Performance Indicators (KPIs) are a valuable tool for improving overall business operations. The problem is that somewhere along the line the burden imparted by gathering and compiling month-end KPIs has become greater than the value these sometimes “outdated” numbers represent. How much effort, custom coding, and cost must go into compiling and communicating these measures?

Successful KPI implementation depends on the organization's ability to quickly gather and distribute this key business information without becoming beholden to large, complex, relational databases and applications. Traditional systems can't provide real-time information and require far too much effort and money. KPIs should work for the business without requiring that half the entire organization work for groups that make, maintain, and feed these KPI systems.

KPIs are tools to help manage the business; they are not the business itself. KPIs should work for you—not the other way around!



What are KPIs?

KPIs are a combined set of financial and non-financial metrics which give executives and other employees a clear view of how their business is performing. Well-designed KPIs use a consistent, easy-to-understand format that is familiar to everyone in the organization.

KPIs are capable of consolidating performance information both vertically within a business unit and horizontally across an enterprise. KPIs are the basis for Balanced Scorecards and other management methodologies that companies utilize to translate strategic imperatives into action.

Characteristics of Well-Designed KPIs (Key Performance Indicators)

- Measurable
- Accurate
- Timely
- Specific
- Rationalized
- Aligned
- Agreed-upon

Figure 1

Well-designed KPIs (see Figure 1) focus each individual within an organization on the aspects of their job that they must manage to produce results. Like the cockpit of any airplane or a well-designed sports car, KPIs are the concentrated metrics and gauges that measure and report the performance required to bring about safe, timely, and efficient progress (or travel!).

The Impact of KPIs

KPIs provide a management tool to capture key pieces of data, measure performance against metrics, and track overall progress. KPIs impact the entire organization, its strategies, its people, and its processes (see Figure 2). Key Performance Indicators can easily help everyone see their impact on the business. Combined with training, this knowledge can also be mapped into positive action. However, to achieve this, the organization must devote adequate time to identifying KPIs, specifying the desired



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performance level, providing employees the means of improving performance, and educating the enterprise. The purpose for having KPIs is to actually improve the business performance of the organization—not to simply publish the data or punish the guilty after the fact.

Impact of KPIs on People and Processes

- Support strategic goals
- Support drill-down for detail
- Provide distilled measures
- Provide business context
- Provide individualized, actionable information
- Establish one version of the truth

Figure 2

The Business Benefit from KPIs

- Reduced costs
- Reduced cycle time
- More effective strategy
- More efficient employees
- Improved focus
- Better communication

Figure 3

Payback from this effort can be substantial. Typical benefit areas for manufacturers and others span the entire supply chain (see Figure 3). The successful implementation of KPI management programs often distinguishes top performers in the marketplace. Achieving results is not easy, and determining what to present from the myriad of possible measurements is an essential first step. To be effective, KPIs must provide the right information, to the right people, at the right time.

The leadership challenge



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The most critical element in implementing KPIs should be defining the key elements of strategy and determining how to effectively measure them. This takes work. It's not easy. This process can be involved and difficult, requiring a keen insight, dedicated leadership, and thorough understanding of business dynamics. Organizations have executives and senior managers to lead—now and in the future. Setting performance objectives, and with them the key performance measures, takes an understanding of what the business does well, what the competition does well, and what is necessary to improve. This is true regardless of whether the organization is a multinational pharmaceutical company, an automotive parts manufacturer, a single chemical plant site, or an IT organization charged with making a geographically dispersed enterprise work. Knowing what the enterprise objectives are, knowing why strategies will support them, and knowing how to adapt dynamically—even daily—to the changing marketplace are key functions of the executive level team.

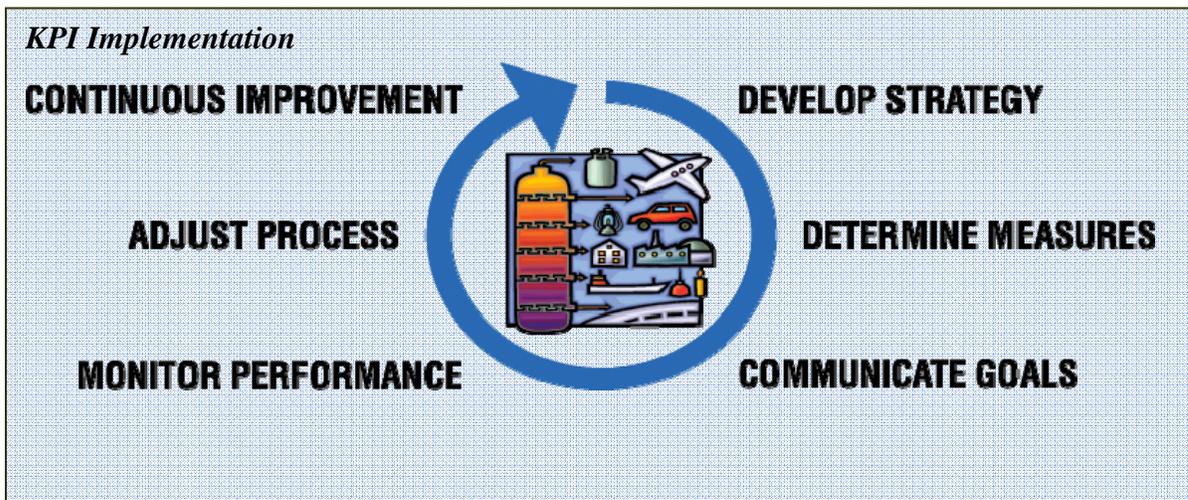


Figure 4



The Culture and Communication Challenge

Implementing KPIs requires that the cycle of developing strategy, defining performance objectives, and continuously improving (figure 4) be undertaken at each level of the organization. If well designed, these KPIs “waterfall” at every level, so that the corporate strategy is steadily expressed, mapped, and expanded in measurable terms for every person at every level of the organization.

Communicating across the enterprise in tangible terms is imperative. Any performance-driven organization, but particularly those involving people and high technology processes or equipment, must focus on educating its workforce. This is not easy or inexpensive in today’s economy of dynamic markets, globalization, and changing workforce demographics.

Everyone within the enterprise must understand the strategies, understand the measures, understand their meaning, and understand the unique role that each team member plays in executing these strategies and driving key decisions.

KPIs provide a means of aligning the entire organization with the company’s key strategies, but they also require careful communication and education.

This education must include the part that these factors all play in the monetary, social, and other incentives that the company offers. What do you measure? How do you reward? And why? Cultural change takes a great deal of effort. It takes persistence, focus, and resources, but the requisite educational effort is seminal to empowering the organization. Like the very setting of performance objectives themselves, communication of KPIs should be a key effort area for the Executive Team and the entire enterprise.

The Disconnect of Working for KPIs

For most enterprises today, training, communication, and working toward active empowerment often receive little attention. Instead, an inordinate amount of day-to-day effort is focused on gathering data. It is generally an organization heavily staffed and focused on massaging data, forcing it into various databases or logs, and extracting reports. Invariably this activity requires a large support staff, but precious little effort is



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actually focused on identifying meaningful information within the data. Based on all that we do today, it seems that the key to KPIs is having a large and complex IT infrastructure replete with programmers and custom development.

Do the math. Look at the investment, up front and otherwise, made in resources to generate KPIs—and these often include poor fidelity or stale data and may present an inaccurate picture of company performance. Too many organizations have lost sight of the business case for KPIs, and instead have too many systems and people just to gather the KPIs. This is both ironic and unfortunate.

The goal of KPIs is to educate and empower people involved in the enterprise to act, to take corrective action, and to improve performance. Key Performance Indicators should work for you, not the other way around!

The Right Time is Now

KPIs require getting the right information to the right people at the right time. Given the realities of ever-increasing competition and corporate expectations, the right time is right now.

Waiting for month-end KPIs to be published or having to submit a request for historical reporting to a separate group does not make sense. Employing an army of contractors or consultants should not become the result of this otherwise noble—and realistic!—goal of having KPIs. Given the importance of Key Performance Indicators to the enterprise, we need to have them easily rather than expensively, and now rather than later.

In order to empower the organization, information must be readily available, in context and in an actionable time frame. Discovering an operator made mistakes in processing at the end of the month, or that the supply chain is imbalanced a full quarter after the fact does not empower individuals to act. Data after the fact is interesting, but only information presented in real-time is actionable. Action throughout the organization is the only clear path to improved performance.



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Traditionally the barrier to establishing and implementing a system that provides this level of information has been extensive custom development and a significant investment in time. Whether an organization builds an information system itself or enlists a vendor to deploy a custom web visualization tool, it has to wait.

But why wait? Organizations today simply don't have time to wait. Nor do they have the number of people and inordinate amount of money that custom development will require. Time is of the essence. Time is the one thing that no organization can manage effectively today and it tic-tock-takes away competitive advantage as it ticks along, assuming that you are leading today. If not, then it moves faster still as your competition pulls away!

Organizations need to manage business with accurate, up-to-date historical and real-time information. It must be available to everyone and support full drill-down for further detail. Housing all this data in a relational database somewhere and simply pointing people at it will not provide the business value. The key to this information is availability. Similarly, grafting a customized "web-enabled" browser onto flawed data will not be satisfactory in the long run either, since it cannot provide reconciled information in an individualized context without the cost of constant re-programming.

Turning the Corner with Real-Time Information

KPIs are an essential tool in the modern-day quest to run an efficient and effective business, but there is a lot of work required to conceive and communicate the right set of Key Performance Indicators. Clearly the value of this information increases dramatically if it is available in real-time, not after-the-fact. While this is a challenging set of requirements, it is possible.

The key is to be able to quickly deploy an infrastructure that will provide everyone with information—the same information—across the enterprise, in as near real-time as possible. Further, this information must be presented such that each user sees information relevant to his role in an easily digestible format. A real-time platform is needed, capable of providing individualized, actionable views of the real-time information, including KPIs.

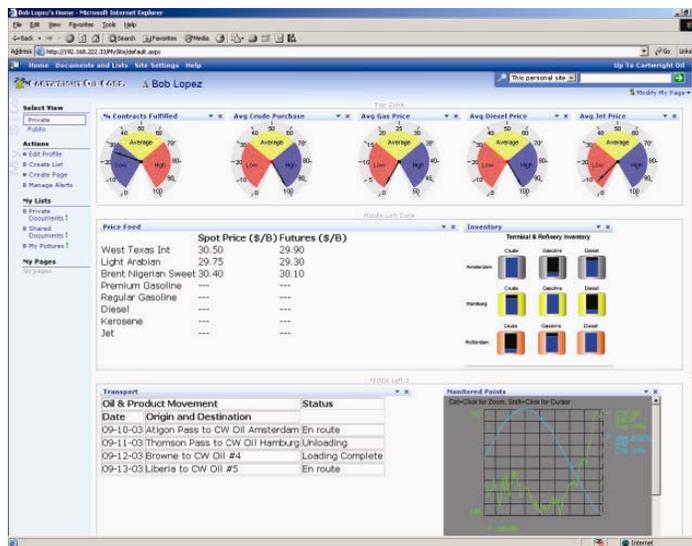


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The PI System powers the Real-Time Enterprise

OSIsoft has long been an acknowledged leader in the collection, storage, and presentation of real-time information for many customers in the manufacturing sector. OSIsoft has over 11,000 installations, twenty five years of experience, and the leading market share in time-series and event-based data capture and retrieval.

With the PI System, OSIsoft offers a standards-based, commercial, off-the-shelf product that can provide KPIs and other business information to the entire enterprise in real-time. What's more, the PI System does not require a company to replicate data all over the enterprise or discard its investment in ERP, CRM, or other legacy systems. Rather, the PI System leverages this data by seamlessly interfacing plant data, business data, time-series data, relational data, and even web data, so that users can focus on the business value the information provides rather than on the acquisition of the information.



This screen shows a real-time portal page that gives both a visual and detailed summary of key business drivers. The ability to integrate data from various data sources, including financial data, SQL databases, and real-time production or commercial data yields a highly valuable concentrated view of the business status and opportunity.

By aggregating these disparate sources across different suppliers and data streams, and by fully leveraging Portal technology from Microsoft and SAP for visualization, OSIsoft's PI System allows a business to protect its existing IT investments and leverage that infrastructure for competitive advantage. With the PI System your business uses certified off-the-shelf interfaces, no custom solutions, no compromising core competencies, and does not lose sight of the fact that KPIs should work for you.



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These two real-time portal pages show how KPI scorecards that are rendered with real-time data can be used as starting points for additional problem solving. Historical trends of performance and process parameters can be drilled down to for display, as well as, real-time operating graphics show and present performance across a unit, site, or multiple locations.

The manner and mechanism by which the PI System informs a manufacturing manager that his plant is about to be down for an extended period may be different in detail and timing than the context offered to a reliability engineer, or even an operator in that same plant. However, there is no arguing about the underlying information or the KPIs, as all are based on the same data—shared throughout the enterprise and put into individual context. OSIsoft's PI System answers the call for immediate, consistent data. It is capable of providing individualized, actionable information in real-time throughout the organization.

Leveraging Industry Leaders



What makes this infrastructure especially compelling is the ability to leverage three industry standards—Microsoft, SAP, and OSIsoft—for an integrated solution with lower cost of ownership. The PI System provides a solution throughout every manufacturing sector and industry. It aligns three pre-eminent and de facto standards to help you improve your business.



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This screen shows a user's desktop display that integrates real-time scorecard data with other basic business functions and software, such as email, calendaring, task lists, and news updates.

KPIs can be displayed in several visual formats but are most importantly available to the user in context of their day to day computer desktop.

Rather than being filed away in a quarterly report deep within a file cabinet, having these KPIs available and accessible helps improve organizational awareness and supports informed action.

Conclusion: Put KPIs and the PI System to Work for You

Key Performance Indicators provide businesses with a management tool to measure performance against key metrics and track progress, but the organization's emphasis must shift from working to produce the KPIs to putting KPIs to work to produce results.

Companies may report their profits or losses on a quarterly or monthly basis, but the simple fact of the matter is that every company makes or loses money based on real-time decisions made throughout the enterprise. These decisions are made not only by the CEO or the designated line manager, but also by every employee, at every level, every day. The challenge is to make these decisions informed decisions and to make them in a time frame that allows clear corrective action.

The PI System from OSIsoft helps an organization cost-effectively deliver KPIs and other data, in context, to the people who need it in real-time. The PI System can provide the information infrastructure needed for truly effective KPIs and bottom-line impact to help enhance competitive advantage and improve overall decision-making across the entire enterprise. The PI System provides the right information for the right people right now.