Developing an Effective KPI Tracking System

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Whether it is used by the shop floor supervisor to monitor productivity and through-put or by the maintenance department to track equipment calibration, the ultimate success of any performance management system is dependent on the quality and integrity of the data. It must be accurate, timely, and relevant. Only a reliable infrastructure can give personnel the comfort-level required to make far-reaching, high-impact decisions. If there is doubt, the system will be poorly adopted by users.

Individuals, departments, and divisions each benefit from monitoring different sets of critical numbers. Chief executives need to match what they see in market trends with their corporate objectives. Middle managers can then focus on establishing and evaluating strategies to reach the high-level goals. Department heads can plan allocation of resources, follow through with logistical execution, and evaluate annual and quarterly initiatives. Front-line personnel can use real-time data to answer day-to-day, task-related questions and make decisions about the best ways to meet customer needs. The critical numbers provide that unbiased connection from top to bottom and back again through all layers of the company.

The benefits of a multi-layer performance management system are numerous. The company can change its entire management process, moving from a reactive management style to one that makes continuous improvements. When the company moves into analytical, preemptive mode, it can set long-term goals, build upon past successes, and continually refine systems. Reactions are controlled, measured, and practical. There is time for thoughtful analysis and careful decision-

making based on fact, rather than emotion and gut instinct.

Working with real-time data, rather than snapshot capture of historical data, allows companies to stay on top of potential problems. The use of automatic notification, alerts, and escalation rules keeps managers informed of warning signs. Thanks to smart phones and tablet devices, even frequently traveling executives can maintain connectivity and monitor dashboards whenever desired.

In fact, all users can track role-relevant critical numbers on an ongoing basis with workbenches that keep the most crucial data on a convenient console-like screen. Goals can be set for critical numbers and corresponding warning levels (top and bottom control points) can be identified so that an automatic alert is sent to the appropriate person when action should be taken. Graphical representation of goals may present the data in the form of a gauge, thermometer, fuel tank, or control panel using red, yellow, and green color indicators.

Utilizing these types of warning systems helps the company stay alert to potential problems, such as low parts inventory or increasing quality control issues, so that corrective measures can be taken and — most importantly — further research can be conducted to find the root cause so the problem can be prevented from occurring again.

Defining Terminology

When building, or refining, the infrastructure needed for an effective performance management system, one of the first steps an organization must take is to establish a common glossary of terminology. Parameters have to be established and defined to ensure that all members of the organization are operating with a common understanding of industry-specific or company-specific jargon.

Even terms that appear on the surface level to be obvious may hold room for subtle variations of interpretation or debate. For example, when setting up KPIs for tracking the progress of the production department, what exactly constitutes a late delivery? What the shipping department considers acceptable as on-time delivery may be far different than what the customer expects and the account manager has promised.

When researching data and setting parameters, it is very helpful to focus on factors which have concrete, easily-defined numbers associated with them, such as longevity of the customer relationship, length of time between purchases, incident volume, new requests for quotes, and even payment history.

Data Capture

Once terminology is defined, the team developing a data capture infrastructure needs to establish the other critical elements in the system: technology, processes, and people.

Technology is a huge factor with many options, largely dependent on the size of the

operation, IT resources, and budget. While a clipboard and paper-based spreadsheet represent the manual low-tech end of the data capture spectrum, the other extreme is a fully integrated business intelligence software solution with predictive analytics, customized workbenches, and automated alerts that keep thousands of personnel in multiple locations fully attuned to the needs of customers and profitability status.

Both extremes, and the solutions in between, have their place. The goal is to find the solution that is most conducive to fulfilling the organization's specific needs and then utilizing that system to its maximum potential. Incremental steps can be made to improve the process. The important part is to begin somewhere — and keep making progress.

Real-Time Data

One of the most important steps in technology application for performance management is moving to real-time data analysis. This should be a high priority for any manufacturer that wants to focus on improving profitability and meeting customer expectations. Real-time analytics are critical to timely decision-making. The plant maintenance technician needs to know if the required replacement part is in the warehouse NOW — not a week ago when a monthly report was run and a printout created.

The ability to be responsive and correct errors before they deteriorate into crises situations relies on real-time data. The sooner a danger can be spotted and avoided, the greater the impact. Like a toppling line of dominoes, one issue leads to another, escalating damage. The disastrous chain reaction can be prevented if the first wobbling domino is spotted and steadied.

So, too, if a critical number is monitored and alert value set appropriately, management can receive notice, via email or a warning flag, of potential order completion problem while there is still time to analyze options, take corrective action and minimize risk or fall-out.

Automating Processes

Processes can be as simple as making manual notes on a work order. For some companies, it may not be a huge risk to productivity to ask the equipment technician to make hand-written comments on the service order concerning any calibration adjustments he made during a shift. For manufacturers that maintain complex equipment with thousands of parts and long serial numbers, automating the process will be a better use of time and more accurate. By equipping the field technician with a mobile device with the ability to capture data, details can be recorded on location.

Automating data capture processes, whenever possible, increases consistency and removes much of the risk associated with human error, distraction, or noncompliance. Automating simple tasks also frees up employees' time so they can be working on more productive tasks — like billable assignments or building

relationships with customers.

Setting Frequency

The desired frequency of data capture is another consideration that must be planned when developing a service performance management system. While this is one of the most important factors, it is also one of the most difficult to determine due to the numerous factors involved. The purpose behind the KPI, the person(s) ultimately reviewing the data, and the method of data capture all influence the ideal frequency rate.

Critical numbers pertaining to highly volatile issues, such as inventory on fast-moving essential components, should be monitored continually — and by a watchdog who has the authority to make corrective moves, such as placing a rush order to maintain inventory levels.

KPIs related to the balance sheet, such as days sales outstanding, inventory turns, and working capital, are often reviewed on a monthly basis. This allows the data to be reviewed along with monthly reconciliations and gives the CFO the opportunity to evaluate any potential impact on cash flow or cash reserves.

For long-range strategic planning, annualized summaries are often the most helpful since they portray the big picture. The company needs to remember, though, historical trend analysis also helps understand the general course direction.

Settling on the right frequency is a lot like finding a comfortable perspective for viewing a painting. Some distance is needed. The same concept applies to the data being used to guide strategic planning and setting long-range direction for the company. Data points collected weekly will likely be data overkill and provide a too-close myopic perspective that is cumbersome to manipulate and analyze at best. The goal is to continue evaluating and adjusting until a comfortable, but helpful, pace is established.

Identifying Roles

The next step in building the infrastructure for data capture and analysis is to identify the people who will play a role in the process and to define their responsibilities. No longer should performance management data be reserved for senior management sequestered behind the protective barrier of oak paneled doors.

Today, companies striving to maximize performance and productivity often support an open-book philosophy and share access to critical performance data with multiple levels of personnel, including contact center representatives, collection clerks, and service managers.

The result is a team that understands analytics is a priority. Monitoring critical numbers and KPIs becomes internalized, a part of everyday interaction with colleagues and an understood component of performance evaluation and

compensation.

Choosing Which KPIs to Monitor

Strategically aligned inquiries are the groundwork for an effective approach to using KPIs. Unfortunately, it is a step often over-looked. Yes, all KPIs answer questions. Not all questions, however, lead to a meaningful revenue stream ... or a revenue stream which can be influenced.

Executives tend to demand immediate answers when there is a drop in the bottom line. Vague questions, though, are likely to send the search for disappearing profits on a circuitous route. A haphazard quest tracking random KPIs is going to serve little useful purpose in resolving problems. Random reporting or KPI tracking may point to the fact that there is a drop in revenue, but do little to uncover why or what needs to be done to prevent it from happening again.

A more targeted approach starts with the corporate goals and aligns specific data capture inquiries around those goals. For example, if one of the corporate goals is to speed the overall call-to-cash cycle, beginning KPI research should be around defining current length of cycles so that there is benchmark data as a way of measuring progress moving forward. Exactly how long does it take now for a customer to receive the order or service, be billed for the activity and for the payment to be received? Are there trends and variations in the cycle? By aligning performance management strategies around corporate goals, meaningful questions will arise, starting the management team on the clue-by-clue pursuit of the underlying driving factors which influence the priority concerns of the organizations.

The Importance of a Driver

A driving factor is a particular key step in the business process which plays a major influence in the later outcome. The driving factor is one that can be influenced by the team so that the final outcome is improved. It may be a step or action in the process that is far removed from the final outcome, but one that starts a chain reaction. The ultimate goal is to identify the driver early in the process so that it can be corrected before the final impact hits the bottom line and is beyond influence.

Defining drivers is an evolution. Theories will change over time and as research is conducted to determine correlations between multiple factors. After all, most business processes involve dozens of steps, hundreds of cogs in the machinery where delays or gaps in communication can impede efficiency. It is important to remember that careful examination will take time. A process for continuous improvement is essential.

One of the most challenging aspects is determining which driving factors can be influenced and which warrant careful attention. Drivers become the critical numbers that are monitored by the performance management system. Control points can be established around expectations of what the values should be in order to create the desired long-term outcome in the process.

Since the chain reaction of driving factors can be long and complex, the challenge for managers isn’t just identifying the drivers and KPIs to track, but identifying which ones are measurable, predictable, and able to be influenced.

Plant maintenance and service departments within manufacturing organizations need to dig deep to get a grasp on KPIs that are truly relevant and aligned directly to business goals. Personnel working with developing performance management systems need to keep in mind they are not just looking for data — they are looking for data that can be influenced and influencing factors which lead to improvement aligned with a corporate goal.

Anytime a new critical number is identified, there should be a goal associated with it and control points defined. At least two control points should be set, a minimum and maximum. These are points at which the automatic alert can be set and tasks escalated up through the management line. When several people are alerted of an issue, however, it is important that each person knows of his specific role and response.

If action items and role assignments aren’t attached to critical numbers, the data can breed more confusion and leave personnel guessing at ramifications. Confusion can lead to a so-what attitude among personnel who are supposed to be monitoring the critical numbers.

Policy must be clear concerning escalation rules and how employees are expected to interpret data for the sake of active or preemptive intervention. Training will be required in order to keep employees informed of proper application of data. Metrics are powerful tools, but only if the employee understands the ramifications and actually engages in the use.

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