Cooking Up Key Performance Indicators

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Measuring business or work performance is more of an art than science, but we don't know how to measure art. That is why a means is needed to validate our readiness for pursuing excellence and our progress toward a position for achievement. Management dashboards are a means for achieving our objectives when they consist of a set of performance metrics that indicate the state of the organization's Critical Success Factors. Managers are often faced with a need to launch measurement initiatives and commit ownership to ambitious staff members.

Sometimes those initiatives are viewed as unwelcome control instruments that only benefit management. Therefore, staff often tends to display lack of trust and resist the implementation of those metrics in the work environment. In my last Newsletter contribution "Gap Analysis", I alluded to a system of measurements called KPIs subject to gap analysis. Developing KPIs is a consultative process involving people of experience and knowledge in the organization. But time must also be spent educating and explaining the purpose of KPIs to all staff.

The organization can tremendously benefit from performance measures when they are easily understood and applied broadly and economically. Uniformity of interpretation is another enabler. They should cascade through the organization's hierarchy such that achievement of the lower-level goals ultimately supports the achievement of the company's mission.

Indeed, KPIs provide visibility and control, but it doesn't necessarily follow that it is just for management's purposes. KPIs should be empowering to staff, offering them the ability to see and react so that those lower in the hierarchy are empowered to take responsibility by actually removing some of the decision making and control off the managers. Thus, giving staff the ownership and accountability for improving the organization's performance bottom up.

The basis for developing KPIs is the organization's mission and business strategy. Business plans should be based on corporate business strategy. From this flows the Critical Success Factors which are those factors that must be achieved if we are to achieve our mission. This can happen via affecting the Key Performance Indicators.

In my experience in high-tech product design and development, sharp focus, tight control, and rapid achievement are the paramount strategic contributors in managing the company's broad engineering projects and high-tech investments. I have validated their applicability to commercial business management. My working principle is that performance measures serve to align efforts to mission. With evaluation and control, managers can quantifiably monitor characteristics of department outputs and the performance of the individuals and the processes producing them. Performance measures can support staff and managerial decision-making by providing useful information regarding:

a) How much we are producing. This is a question of productivity by inspecting the efficiency of processes and effectiveness of individuals.
b) How much we are spending in doing so. This is a question of waste control by inspecting the cost effectiveness of operations.
c) Are we producing at a consistent level of quality? This is a question of work standards and the level of customer and stakeholder satisfaction.
d) Necessity for improvements
e) Meeting the organization's stated goals

So, what are Key Performance Indicators? We often use a bunch of different words: KPIs, measures, or metrics. They are the score part of the business strategy balanced scorecard. Here, the focus is just on the measure itself and the best practices around setting them, what needs to go into them, and how we use them.

With that in mind, there are three types of performance indicators. This is only a rudimentary way of thinking about how to find your measures. The first type is Raw Information by picking out raw numbers such as the number of new customers, number of reports produced, number of quotes submitted, number of intelligence sources, number of products sold, or number of complaints. In product or process development, it would be Mean Time Between Failures (MTBF), process capability (Cp, Cpk), process yield, number of tests failed, and so on. The second type of measure is a Progress measure in a given time; it comes in the form of percent complete, such as 65% complete. This is a project or activity oriented measure where the percent complete is the performance measure of interest. The last type of measure is a metric that indicates Change. It is a percentage or directional measure. So, an example would be increase in sales over last period (month, quarter, or year), market share, profit margin, or reduction in cost of sales.

A very important point worth mentioning is that these measures are associated with goals, whether department goals or corporate goals. They just don't stand on their own. There's a set of actions that should be taking place in order to move them forward. Otherwise, we're measuring for measurement's sake.

So, with those 3 ideas in mind, let's look further at some other things you need to think about when you're setting your measures. After you determine what the measure actually is, you need to determine the source of the data. One thing you need to think about is do you already have the data or is it new. Do you have to gather it or do you have it somewhere? A source of data would be the ERP system or your own data collected in spreadsheets for the Raw Information type. For the Progress type, it might be the project plan or the business plan status reports. For the Change metrics, it could be sales data or P&L data on the financial system. The point here is to identify where you're getting the data from. Your data collection system must be a proven reliable system.

Another thing you need to think about is the frequency of collecting the data. Some data you can't get in short periods for certain measures or would be too exhaustive to collect too frequently. Some measures would need data to be collected only monthly. In the case of new quotes (Raw Information), that might be weekly or daily. For Progress metrics you may choose monthly or quarterly. For Change metrics, that data can be collected quarterly or whatever the case may be. If it is only an annual metric, such as customer satisfaction, think about how you may get a monthly metric to track your progress in between the years as a proxy.

An important item that goes with your metrics is the target you are trying to hit. One needs to be careful, though, when setting targets. Overly ambitious targets might be too impractical and expensive to achieve. The best practice here is to benchmark your performance within the organization or the industry, then go from there.

Interpreting any set of data starts by graphing it. Graphing the different sets of data to illustrate the individual indicators would become your dashboard. Raw numbers could be presented in bar graphs or scatter plots. Progress indictor data could be presented in a gauge illustration such as a gas tank indicator. Change metrics data could be presented in line graphs.

In summary, if you have key performance indicators and you look at them on a periodic basis, you will keep your strategy on track. Achievement of KPIs can be rated into a scale. An example would be 5 for outstanding, 4 for exceeds requirements, 3 for meets requirements, 2 for does not meet requirements, and 1 for unsatisfactory. Achievement of KPI can be used by a manager to give reward such as bonus, yearly increase, or promotion of subordinates. In Gap Analysis, KPIs can be used by task force teams to close gaps in performance, and that is a cause for celebration.