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Effective performance management: integrate methods under one umbrella

By Roberto Michel

Performance management—when narrowly defined—spans so many individual managerial methods that few people seem to agree on what it is. But define it broadly while ignoring *integration* of these methods, and it risks becoming little more than a slogan for a disjointed mix of projects.

There is real promise in performance management. Companies that approach it broadly while linking its various methods can fulfill that promise and avoid the usual pitfalls. "It's helpful to think about performance management as an umbrella concept that integrates different methods within a single decision-support framework," says Gary Cokins, global product marketing manager for performance management at SAS, a leading provider of business analytics software and services. "But these methods and tools need to be integrated. Many companies think about performance management as just a set of dashboards, dials, and financial reports, for instance—and they end up with siloed efforts."

A performance management framework may include methodologies and supporting software for activity-based cost management (ABM), balanced scorecards and strategy maps, dashboards and key performance indicators (KPIs), as well as systems and measures for customer relationship management (CRM), supply chain management (SCM), lean management, resource planning, and budgeting & forecasting. "Ideally, one method or tool should feed the other," says Cokins—who is APICS certified in production and inventory management. "For example, your ABM solution should inform your CRM solution or your production management system if it's apparent that cost drivers are changing, or KPI targets are being missed."

Even when various methods

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Performance management carries a contradiction in its name. If an organization is just monitoring data and trying to "manage" around historical trends, can it fully optimize performance?

"Performance management is not about monitoring the dials, but *moving* the dials," says Gary Cokins, global product marketing manager for performance management at SAS, a leading provider of business analytics software and services. "Performance management should have initially been called performance improvement. It is about transforming data into meaningful information to lead to quicker analysis, conclusions, and ultimately, to better decisions."

To achieve a more proactive performance management framework, multiple components need to be in place, culminating in predictive modeling and analytics that can help managers test and validate alternatives. These components include:

- Sound transactional systems such as enterprise resources planning (ERP), customer relationship management (CRM), and sourcing systems. These provide much of the raw data and standard reports needed to monitor performance.
- Data warehousing and data management tools. These solutions extract transactional data from mul-

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under a performance management umbrella are successfully linked, says Cokins, it's important to embed each method with analytics such as segmentation analysis, and especially predictive analytics software. "Predictive modeling and analytics is what move a company toward forward-looking, pro-active decision making, rather than measuring what has happened in the past," he says. *(See "Moving the dials: getting proactive," page 1, for more.)*

In its simplest sense, performance management—which spans terms such as business, corporate, and enterprise performance management—is the translation of plans into results. Performance management can be defined as the integration of operational and financial information into a single decision support and planning framework. The framework's methodologies should be integrated and embedded with analytics to promote pro-active decision making. Finally, the entire system should work in a circulatory and simultaneous manner.

SAS is a leading provider of software for performance management. Its offerings take SAS's award-winning business intelligence (BI) technologies to a higher level by providing more context for problem solving. These offerings include software for building dashboards and scorecards, ABM, budgeting & planning, customer and supplier intelligence, predictive modeling & analytics, as well as data warehousing and data management. But as experts agree, it's an organization's approach to the software—and success in integrating techniques and technologies within a framework—that are most crucial to improving performance.

United methods

Some of the component methodologies of a performance management framework have been around decades. For example, balanced scorecards first gained popularity in the mid-1990s, and BI software for displaying measures within a "dashboard" has also been around for years. But all too often, these tools aren't used in an integrated fashion around strategic goals.

One problem with balanced scorecard efforts, says Cokins, is that many organizations have failed to design and implement a strategy map as the basis for the scorecard. "The balanced scorecard and its companion strategy map from which the scorecard's strategic projects and mission-critical processes, KPIs, and targets are derived, are only one methodology in a portfolio of methodologies that constitute a performance management framework," says Cokins. "Others include profitability reporting, customer loyalty and value management, lean management, and driver-based rolling financial forecasts. The problem is most organizations implement these sequentially and in isolation of each other. There is synergy when you integrate them, and even more synergy when you imbed each methodology with analytics, such as segmentation analysis; but especially predictive analytics."

Individual improvement techniques can be of high value. For instance, ABM systems that reject standard cost accounting for an approach that traces actual cost drivers allow companies to truly understand where they are making or losing money.

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tiple systems and wipe out redundancies, allowing companies to create a clean pool of high-integrity data for modeling and analysis.

- Performance management software with capabilities for management and control of strategic objectives, as well as reporting. Some organizations use a strategy map and a balanced scorecard to establish their key performance indicators (KPIs).
- Predictive modeling and analytics software. This type of software capability—ideally embedded within supporting performance management applications such as activity-based management—allows managers to pose "what-if?" scenarios and test probable outcomes.

Get predictive

Predictive modeling and analytics software, however, is well beyond standard reporting tools, or even the more advanced ad-hoc querying tools. A reporting or query tool can be effective at summarizing or comparing historical data—typically from a single transactional system—whereas predictive analytics is built upon modeling capabilities that allow companies to combine vast pools of data and test alternative scenarios.

"There are now superior application software tools that offer a complete suite of analytic applications and data models that enable organizations to tap into the virtual treasure trove of information they already possess, and enable effective performance management

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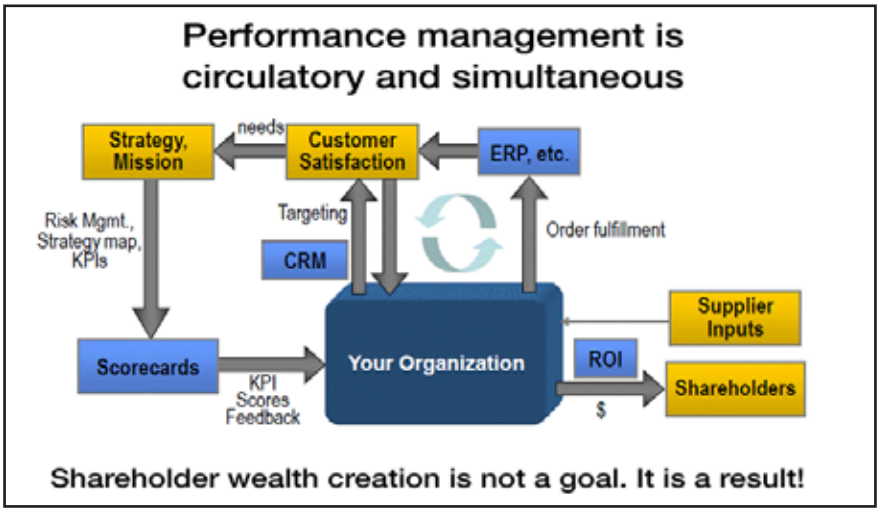

For example, ABM can address:

• Analysis of production changeover costs for different batches. While standard cost accounting spreads costs across operations or time periods, ABM can pinpoint at the batch or order level how production changeover alternatives would impact costs by causing more or less downtime—time that can greatly impact the bottom-line.

• Analysis of the cost of quality. While manufacturing execution systems can usually track scrap, an ABM solution can be applied to analyzing more aspects of the cost of quality such as the specific activities and cost drivers in rework operations, or the drivers in warranty repair. With warranty repair, these costs may be spread across departments and logistics operations, but ABM can account for these activities, highlight where problems occur, and provide management with visibility into the drivers and best fixes.

Once methods such as ABM and balanced scorecards are linked, the entire framework should operate in a circulatory and simultaneous fashion, notes Cokins. "Performance management should be seen as a continuous flow of information and resource decisions," says Cokins.

What is performance management?

Performance management is all about *improvement*–the translation of plans into results. Rather than being limited to one single managerial methodology, performance management integrates operational and financial information into a single decision-support and planning framework. Components of the framework may include strategy mapping, balanced scorecards, costing (including activity-based cost management), budgeting, forecasting, and resource capacity requirements planning. Each component or methodology should be linked with the other, with the entire framework functioning in a circulatory and simultaneous manner, with individual applications embedded with analytics to promote proactive decision making.

What are analytics?

Analytics software is based on data management and data modeling technologies, tools that deliver business intelligence, allowing executives to make adjustments before problems occur, rather than trying to manage around historical trends. Two key types of analytics are crucial to true performance management: segmentation analysis, which allows users to parse and analyze a data set—such as a customer base or a product mix across multiple plants—to identify precise trends; and predictive analytics, which allows users to test and validate alternative business scenarios.

How to get there

Like most enterprise-wide projects, performance management needs top-level executive involvement, with follow through cascading to all layers of management. A strategy map and a supporting balanced scorecard for feedback are a means of doing this.

A strategy map's scorecard—properly implemented—sets the executive team's objectives. The result, says Cokins, is that companies establish "key" performance measures, rather than a more arbitrary set of

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Performance management spotlight

ZAP optimizes production performance—and profits

ZA Pulawy (ZAP), Poland's leading chemicals and fertilizer manufacturer, needed a way to drive its continuous production in a more flexible, responsive, and profitable way. ZAP uses SAS® to understand production costs and optimize processes.

The SAS platform—which includes Activity-Based Management—improves corporate performance by enabling fast margin calculations, the ability to optimize the product portfolio, and profitability analyses of products.

"We need to optimize production costs and maximize production processes, which means understanding costs at each stage of production," says Lech B. Schimmelpfennig, a board member at ZAP. "With SAS we gained a far broader and deeper understanding of the entire production process. We can optimize our processes and the structure of our product portfolio, and evaluate the performance of different manufacturing units. We have much better control over costs."

ZAP needed to test what-if production scenarios based on different market conditions to better control its portfolio and profit margins. "We needed detailed information on the total cost of production," Schimmelpfennig says. "This included information about the structure of variable and fixed costs per product unit rolled up to different levels – particularly the enterprise level. We wanted fast analyses to be able to understand and act on the changes in raw material prices."

He adds, "If you manufacture products with low 'value add' and low margins, you risk being unprofitable. Our goal is to mitigate this risk by focusing on products that provide the best margins. If the market price for a product changes by 1 or 2 percent, we need to understand how this will affect our margins and profits. We need to be able to share this information quickly and throughout the company in order to make profitable decisions."

The SAS platform accesses data from ZAP's manufacturing system, as well as finance and accounting systems, to provide analysis on the entire manufacturing process – from costs of materials through production to outputs. The system also covers resource costs such as maintenance and human capital to calculate the total unit cost of each product.

Next up for ZAP's relationship with SAS? Schimmelpfennig says ZAP has plans to continue working with SAS to incorporate predictive modeling into its capabilities, as he puts it, "to move towards our vision of the future – together." ■

Facts at a glance

Company: A chemicals manufacturer, ZA Pulawy (ZAP) is a key exporter of ammonium nitrate liquid fertilizer, and the world's third-largest producer of melamine.
Challenge: Quickly and continuously adjust product portfolio to prioritize high-margin products when raw material costs fluctuate.
Solution: With SAS Enterprise BI Server and SAS Activity-Based Management, ZAP analyzes complex supplier, market and production data and distributes the results to decision makers
Benefits: ZAP can make rapid-fire supplier, production and pricing decisions, increasing its profit margins.

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measures. A scorecard may employ a dashboard user interface, but the scorecard is much more than a dashboard—it provides context and linkage to the strategy.

Two preliminary steps to devising a successful scorecard effort are having the executive team take the time to identify enabling projects to achieve specific objectives, and gaining buy-in from employees to ensure they understand the strategy. "Strategy is all about change," says Cokins. "The presence of enabling projects goes to the heart of what distinguishes a strategic objective from just getting better at what you have already been doing."

In practice, a key step is to delegate to managers the selection of measures derived from the strategy map. "The executives can review and adjust afterwards in collaboration with the managers," Cokins says. "A next step is to assure there is a blend of project-based KPIs—such as date milestones or percentage-of-completion targets—for the initiatives, as well as process-based KPIs to monitor the core processes."

Many organizations also focus on budgeting and forecasting as early components of a performance management effort. However, budgeting & forecasting should be based on solid transactional data, which may need to be "cleansed" to remove issues such as redundant data.

Another component of successful performance management is an ABM solution that can move an organization away from traditional accounting systems that allocate costs using non-causal averages. "An ABM solution doesn't allocate costs, it actually traces them based on cause and effect relationships from the cost drivers that consume resources," says Leo Sadovy, product marketing manager for SAS financial management, and a former VP of finance at the U.S. division of a large, global company. "ABM solutions also should provide managers visibility on how changes in volume of real cost drivers affect product costs, and provide analytical tools to predict outcomes."

Once all parts of a performance management framework are working in unison, a company can proactively improve performance, not just react to data. " ■

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– performance improvement – on a huge scale that is enterprise-wide in scope," says Cokins.

For example, in conjunction with an ABM solution that manages actual cost drivers, predictive analytics could be used to test the most profitable order sizes or locations for where products might be built, taking into account factors such as the need for inter-company transfers that might not be spotted by a typical production planning system.

Predictive modeling and analytics also is being used to investigate what is known as customer lifetime value (CLV) in business-to-consumer industries such as telecommunications, and is also applicable to business-to-business supply chains. This centers on close examination of the potential future economic value of customers as they progress through life stages. "The questions involve which types of customers companies should retain, grow, win back and acquire," says Cokins. "Practitioners of customer lifetime value use statistical forecasting methods to project the future sales volume and mix of products and services. They also model the future costs of those products and services based existing consumption rates and future changes in their financial expense structure. Equipped with these projections, they can better target which customers to provide offers, deals, discounts, up-sell, cross-sell and the like to achieve a higher yield and profit lift from their marketing and sales budgets."

There are both "descriptive" and "predictive" modeling capabilities, notes Cokins. An ABM solution that models the conversion of expense spending into the calculated costs of business processes, work activities, and specific outputs such as product or service lines, is a form of descriptive modeling. A strategic map that links objectives to enabling projects is another type of descriptive model. Predictive analytics differs by focusing on what-if scenarios and future outcomes, rather than historical data. Both types of modeling, however, are essential for performance management.

Proactive leadership

With modeling and analytics embedded within performance management solutions, says Cokins, managers can begin to make proactive decisions, not just "manage" after the fact. For instance, if the goal is to increase customer service measures without increasing costs, predictive analytics could be used to test alternatives, such as whether it's better to increase inventory held in satellite warehouses, or do more direct shipping from a central warehouse.

"Most organizations are shifting their managerial style from reactive after-the-fact reporting to anticipatory planning to proactively make decisions and mitigate risk and problems before they become larger ones," says Cokins. "But in many cases, alternative actions need to be validated. This is where predictive analytics fits in. The ability to project what-if scenarios is powerful because you can select the best one of the alternatives—and strive for optimization." ■