Metrics that matter: seven guidelines for better performance measurement

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Most strategies fail in the implementation phase, regardless of their brilliance. Performance metrics are critical tools for monitoring and guiding implementation, but they are often underdeveloped or misaligned. The author proposes seven guidelines for creating and deploying metrics that encourage strategic behavior, provide timely feedback, simplify the challenges of managing in a turbulent world, enhance stakeholder alignment, and galvanize the team.

Most strategies fail in the implementation stage, regardless of their relevance or elegance. Translating broad aspirations into tangible actions – and sticking with them – are never easy tasks. In the arsenal of weapons firms use to drive implementation, performance metrics are often mentioned, but usually underdeveloped. In a recent Economist survey, only one-third of the 276 senior operating executives judged their company's "performance management" systems to be effective (Economist Intelligence Unit, 2004.)

Broad metrics often fail to give managers enough guidance to help them set priorities and make choices. The wrong metrics provoke counter-productive, or destructive behavior. Budget-imposed metrics (revenue, growth, profit) are fine indicators of performance from 30,000 feet, but the most successful firms align their metrics system carefully with the strategies they are pursuing, taking care to calibrate them to invoke the right behavior and perspective.

What are the characteristics of a fine-tuned and nimble approach to measuring performance? I'll propose seven practical guidelines for measuring and monitoring performance, drawn from experience with a portfolio of North American and European firms.

What is wrong with the budget?

In many firms, the budget is the primary – and exclusive – tool utilized to set goals and measure performance. This approach works well enough in some instances, for example, in the monitoring of investment and expense activity, but it suffers from a number of shortcomings for the strategic manager.

Budgets are inflexible

Measuring to a set budget is fine if the budget is based on reasonable and appropriate assumptions, but what if the market or technology demands a different response from what was envisioned months ago? For example, an advertising spend of 5 percent of expected revenue seems a reasonable target, but what if revenue plummets? Is the strategic response to ratchet back advertising proportionately, or to increase advertising to offset lower demand? What, in fact, has caused the revenue drop? All too often, the budget imprisons management, and dictates strategy, rather than converse.

Budgets are inward-looking

Budgets represent an inside-out view of the world: what we will spend based on the resources we deem available. Strategy demands a counter-balancing outside-in perspective: it is necessarily informed by the market and the competitive realities. The budget implicitly reflects strategic choices, but if it is not closely linked with a strategic perspective, it can limit management's purview: managers make incremental adjustments relative to the precedent set by last year's budget, emphasizing more or less of the same activities.

Budgets are often out of sync with performance

Budgets are typically set annually, and reviewed – but not changed – periodically. The problem, particularly in a world of accelerated change, is that deviance from budget is *de facto* a reactive, historic exercise: the manager needs to wait for the system to capture the info, process it, print out a variance, and deliver it to the powers that be for their reasoned reflection. To sustain and build competitive advantage, what is called for are finely tuned performance measures that signal important changes in the business early-on – and that in the best cases prompt proactive adaptation before financial performance is impacted.

Budgets do not necessarily reflect strategy

A final limitation of the conventional budget (as a sole mechanism for allocating resources) is that it may not cut across functional boundaries. Implementing a strategy may require cooperation and investment from multiple departments: a growth strategy needs contributions from marketing, R&D, and manufacturing, for example. Managers need to develop, in addition to the standard budget, budgets by strategy to identify, track, and manage the implementation process.

For these (and other) reasons, a budget is not sufficient as the unique mechanism of measurement and control in today's environment: the budget must interact with, and reflect, the firm's strategy. Figures 1 and 2 illustrate two contrasting approaches to resource allocation and performance measurement.

What to measure?

If the budget (and forecast) provides too little guidance for the strategic manager, as firms grow more complex and sophisticated, we see another common pitfall: the quagmire of measuring too many things.

The advent of the quality movement, in all its many flavors (especially Six Sigma), has triggered a massive upswing in metrics, a great step forward in terms of improving process control, consistency, and repeatability. While it is true that we typically only pay attention to what we measure, in practice the data generated can overwhelm – and many managers fail to pay attention to even half of what they painstakingly "track". How can you set priorities when everything is "critical"?

In well-run enterprises, financial measures complement a small set of strategic measures. "Strategic," in this sense, implies that they:

- are linked to the strategies the firm articulates; and
- measure performance both inside and outside the firm, relative to competitors and customers.

Different performance measures for different times

Satisfying customers is a requirement that every firm faces, regardless of industry. But in every stage of an industry's evolution, different performance measures stand out as critical to the future of the firm – that is, to successful implementation of the firm's strategy. In a start-up high technology business, for example, managers focus primarily on technical performance – reliability, speed, efficiency. In the growth stage, when competitors vie for new customers, the key measure of performance is probably market share. In mature industries, when the name of the game becomes price, managers focus on production cost or capacity utilization. And in an aging industry, when firms harvest, cash flow emerges as the predominant metric.

Well-run enterprises deploy a combination of strategic metrics: quantitative and qualitative, internal and external, short-term and long-term. In an ideal world, all the performance metrics would be quantifiable, to simplify monitoring, trending, and communication. Occasionally, useful metrics cannot be translated easily into "units": enhanced teamwork, for example, is difficult to measure empirically. But many "soft" metrics can be quantified: "creativity," for example, is often cited as a key metric. The term itself is abstract, and can fall prey to subjective interpretation, but at a $1 billion cosmetics company, for which innovative product launches are a central point of differentiation, "creativity" was measured in terms of:

- the number of new product concepts that made it through prototype and test market stage over the course of 12 months;
- the number of alternative media publicity placements scored after product launch; and
- the number of industry design awards garnered.

Surrogates can also work well, when resources are constrained. For example, in the absence of funding to definitively monitor "customer satisfaction" (via focus groups, questionnaires, or surveys), a smaller manufacturing firm turned to corollary measures: they tracked warranty rates, returns, and reorder rates after initial order.

Figure 1 Resource allocation logic: conventional

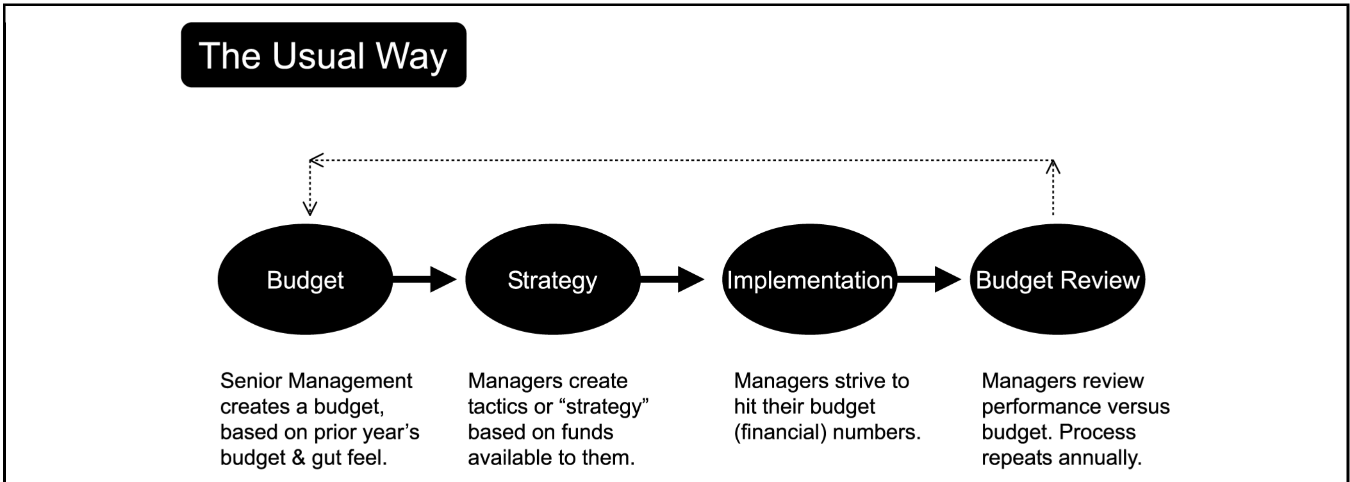
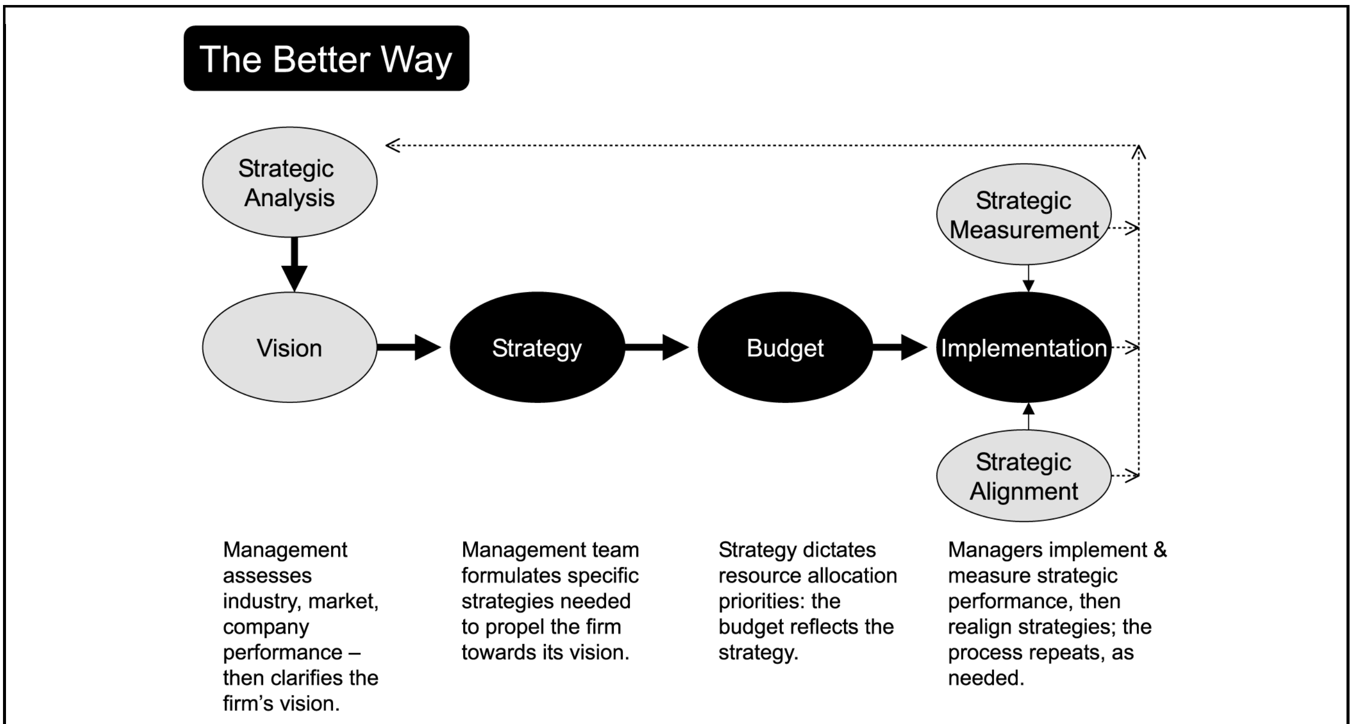


Figure 2 Resource allocation logic: strategic



What not to measure

Creating the right set of metrics is not an easy task, and unfortunately, the repercussions of deploying the wrong metrics can be devastating. Occasionally, and unintentionally, a firm adopts a set of metrics that are toxic – ones that on the surface appear benign, but that in fact run counter to the strategy, or that encourage the wrong type of behavior.

Consider the case of a high-growth manufacturer of gardening products targeting the attractive home improvement consumer segment. The firm had developed a breakthrough product line in the category, but was encountering stiff competition from national, billion-dollar competitors such as Black & Decker and Coleman.

A test program with $71 billion retailer Home Depot seemed like a godsend: it could lead to a broad national rollout, in 1,600 stores – a pre-emptive blow to the competition; retailer-sponsored advertising, delivering a big boost in consumer awareness; and rapid uptake by other major retailers. The test

program, endorsed by the retailer's category merchant, encompassed 100 stores, and the guidelines were straightforward: if these stores do well, we'll roll it out to the rest of them.

The company's sales force understood the stakes. To incentivize them to drive the test program, the company instituted a Special Promotion Incentive Fund (SPID), doubling commissions on all sales within the test period. So the primary performance metric selected was sales.

When primary metric results in counter-productivity

A great new product, a growth category, a power retailer, and a motivated sales force: does it all sound reasonable? Yes, but unfortunately, the primary metric (sales!) elicited behavior that was remarkably counter-productive. The sales reps raced to their stores and, because they felt it would help to have product in hand (and increase their commissions!), convinced department managers to double the quantity of the initial orders/store. Stores choked on the inventory when it arrived, and consigned excess units to the overhead racks, well out of consumer reach. When product sell-through was initially slow, managers further reduced the retail shelf space.

In response, instead of focusing on merchandising and training in the original stores, most sales reps opted to recruit more stores to participate in the test (further amplifying their commissions), figuring that if more stores had product, chances were better for more sales. Most of the new stores were concentrated in urban metro locations, whose customer base was markedly different from the original 100 test stores.

The consequences? The manufacturer bulked up for a huge initial order, but then had to sit and wait without reorders, while the stores themselves sat on inventory that was rarely in a position to move. The stores concluded they were force-fed a program that didn't fit their customers, and with 32,000 other SKUs to worry about, they lost interest (or worse, sent the product back). From the category merchant's perspective, although some stores sold quite a few units, the average sales/store was negligible; inventory turns averaged far below the department's target, a death knell for a merchant focusing on profit and asset turnover as his key metric. Even the sales force suffered, because product returns and no reorders translated into low commissions.

The diagnosis? In part, this test failed because the primary metric – sales – was misinterpreted. Had the sales reps been SPIFfed on reorder rates instead of just sell-in, they might have focused on better merchandising, training, and inventory turnover in a small set of well-chosen stores. High sell-through and profitability in a small group of stores would have produced performance averages that exceeded the target, in both profit and turnover, prompting a broader program rollout.

Another example of measuring the wrong thing

Another classic example of how performance metrics dramatically influence behavior can be found on the manufacturing floor of a $75 million automotive component supplier. In response to ever-mounting pressures to cut costs and improve productivity, the firm focused on an earned hours metric, posting daily, weekly and monthly quotas for the percent of labor hours dedicated to producing specific components. To add heft to the metric, the firm instituted a monthly cash bonus for production staff, triggered when the minimum threshold had been met.

The consequence of this metric? While the plant managers and staff paid more attention to the speed at which parts were being produced, and the daily scoreboard of "productivity", the program triggered a series of undesirable additional consequences. When the flow of materials was interrupted, or components needed manual reworking to meet appearance criteria, for example, employees were reluctant to damage their earned hours score by stopping the presses: instead, they drafted staff from the preventive maintenance or engineering teams to help with the reworks. The short-term problems were fixed, with no damage to the earned hour score, but at significant cost: the root cause of the process flaws was not addressed, so the problems persisted (and compounded); the opportunity cost of pulling preventive maintenance crews away from their real tasks was substantial, and led to new problems with downtime on other machines. Worse yet, management had little warning of the compounding issues until several weeks had passed. In sum, productivity was the right idea, but earned hours was the wrong metric – one that led to less productivity, not more.

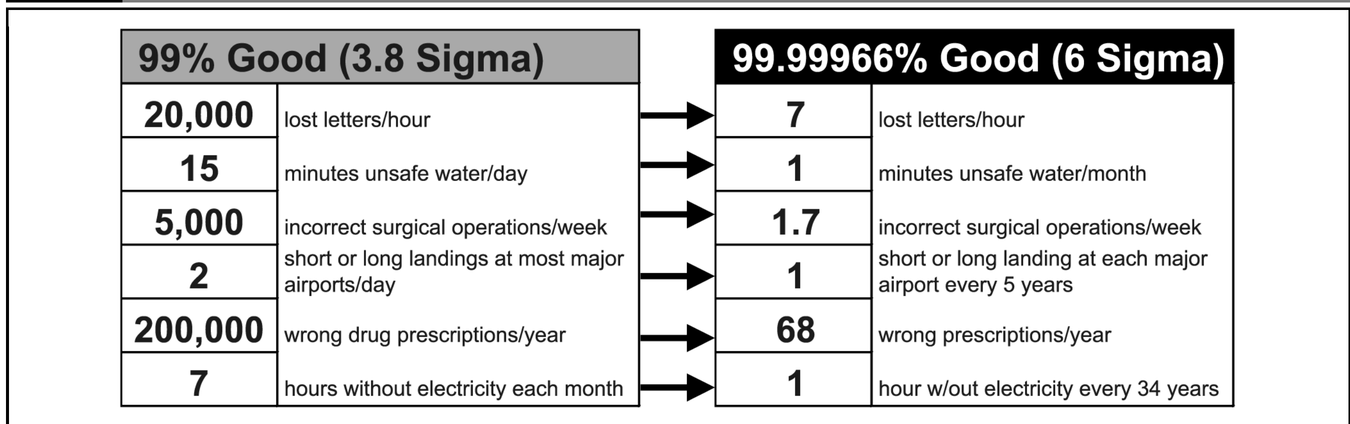
Make sure metrics are grounded in the realities of marketplace

A lesson from both of these examples: performance metrics powerfully shape behavior. To minimize the risk that they elicit inappropriate activity, make sure that the metrics you deploy are firmly linked to, and grounded in, the realities of the marketplace; take pains to anticipate and assess their strategic impact through the value chain.

A word about tolerance

Your firm's key metrics will no doubt be tailored to your particular situation, and ought to reflect a balance of financial and strategic measures. A perennial challenge we encounter is how much to measure, and how often. Again, there are typically two extremes: measuring too little and too infrequently (inhibiting responsiveness), and measuring too much and too often (drowning in data, encouraging myopia). A common problem in more sophisticated firms is clarifying tolerances: delineating how much variance is acceptable before intervention is triggered. Consider the relative impact of these apparently minute changes in tolerance, a favorite of Six Sigma enthusiasts (Figure 3).

Figure 3 Hitting your numbers



99% Good (3.8 Sigma)			99.99966% Good (6 Sigma)	
20,000	lost letters/hour	→	7	lost letters/hour
15	minutes unsafe water/day	→	1	minutes unsafe water/month
5,000	incorrect surgical operations/week	→	1.7	incorrect surgical operations/week
2	short or long landings at most major airports/day	→	1	short or long landing at each major airport every 5 years
200,000	wrong drug prescriptions/year	→	68	wrong prescriptions/year
7	hours without electricity each month	→	1	hour w/out electricity every 34 years

A well-designed performance measurement/control system will specify how much variance is tolerable; who is responsible for tracking, monitoring, and diagnosing the problem; and what corrective action is to be taken.

Seven guidelines

Formulating strategic performance metrics is perhaps more an art than a science, but here are seven guidelines to consider.

1. Measure what is important

The sheer power and speed of contemporary IT systems can be a blessing and a curse. Often, reams of data are generated, but very little information emerges – practical input that can help managers make timely strategic or tactical decisions. Successful firms strive to distill their performance indicators into a small set that closely aligns with the firm's strategies. Here are a few key questions to ask:

- Do our metrics focus on our key strategies (e.g. profit, cash flow, growth, customer satisfaction)?
- Do they reinforce the kind of behavior we'd like to see, and will that behavior continue to satisfy stakeholders?
- Do they reflect what the customer experience is?
- Do they reflect what our competitors are doing?
- When was the last time we actually took action based on this metric?
- Are our metrics simple and clear? (Can they be easily understood/explained/ communicated?)

This last point is critical, because a metric's usefulness hinges on its transparency. One of the best approaches to distilling metrics is surprisingly straightforward: using ratios. By combining several independent metrics, you can add both dimension and simplicity. For example, rather than simply tracking overall sales, production expenses, and overhead expenses independently (something the budget does perfectly well), one plastics manufacturer focused on operating profit/square foot of manufacturing space as a surrogate for productivity. Another example: instead of compelling managers to follow their budgets exclusively to review progress on a market segment diversification strategy (a financial metric), a pharmaceutical company focused on marketing expense/revenue from new customers (a strategic metric) to illuminate their progress, and the relative return on investment.

2. Align your metrics with your key stakeholders' metrics

Every company is in the business of satisfying its stakeholders, so it would seem academic to assert that your metrics should be aligned with theirs: to sustain a healthy relationship you should revere, or at least respect, the same things the customer, supplier, or shareholder does. Unfortunately, in the heat of the battle, many firms drift away from intimately understanding how their key stakeholders really work: managing the complexities of our own business often demands enough of our scarce resources. The rapid rate of change and consolidation in many industries compounds the challenge, as customers and suppliers become moving targets, with shifting management, systems, and strategies.

A $50 million metals supplier illustrates how well-intentioned – but misaligned – metrics can negatively impact both the firm and the value chain. The firm's primary strategy was to enhance efficiency, and their analysis suggested that they should increase the minimum order rate to smaller customers to reduce the fulfillment cost per order. This metric seemed to make sense, and a new policy was put in place to ensure that the bar was raised for all accounts.

One of their best high-growth customers, however, had been struggling to meet large minimum order requirements for the basic extruded aluminum form they used to build their finished product, and had been forced to space out orders until they generated enough demand from their many small customers (dealers) to meet the supplier's minimums. The new minimum

order policy made matters even worse. Delays in reordering placed them lower on the supplier's roster for order fulfillment, which in turn impacted the manufacturer's ability to process the material and ship complete products. Longer fulfillment time translated into lost orders from the manufacturer's dealers, which typically kept very little inventory on-hand, but served consumers requiring instant gratification – a vicious cycle, as shown in Figure 4.

In this example, the misaligned metric actually drove the key customer away from the supplier, eroding profitability instead of enhancing it. What the manufacturer needed was a lower minimum order threshold, so that it could build, continuously, a small inventory and turn it in a timely manner, enhancing its performance with its dealer network.

Fortunately, the supplier reconsidered: by reducing the minimum order threshold, the supplier increased its own turns, and jumpstarted volume by enhancing the production process at the customer's plant (Figure 5).

Figure 4 A vicious circle

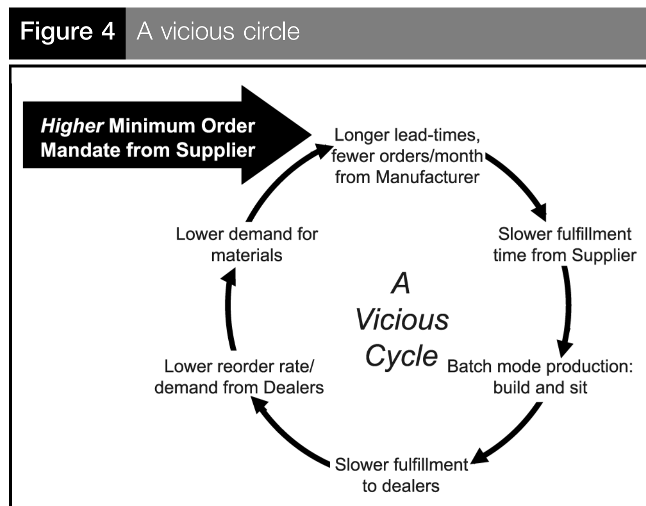
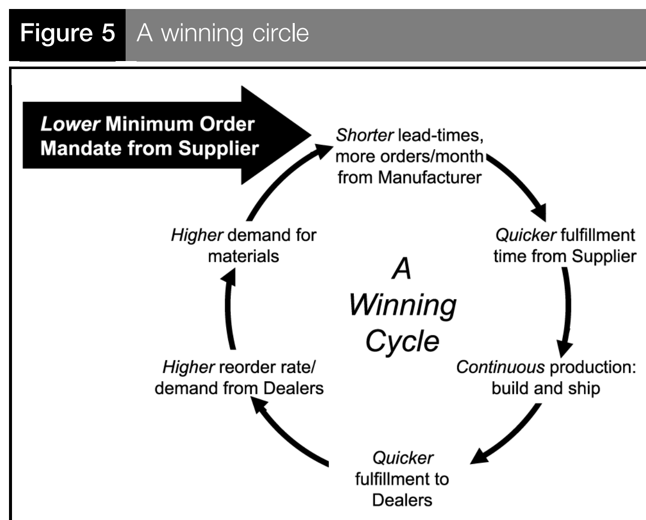


Figure 5 A winning circle



All three stakeholders – the supplier, the manufacturer, and the dealers – benefited from higher inventory turns, stronger demand, and increased profitability. By aligning metrics, the supplier and manufacturer each met their broader strategic goals, stimulating the demand "pull" from farther down the supply chain.

3. Translate qualitative targets into quantitative metrics

Quantitative metrics help limit subjective interpretation and speculation, and give managers hard targets to shoot for and track progress. Even soft concepts, like "innovation" can be translated into quantitative metrics with a little lateral thinking: a biotech firm used new patent applications/scientist as a reasonable surrogate. Similarly, a financial services firm striving to create a "learning" organization measured percentage of staff completing 20 hours or more of training or education/annum as an analog.

4. Deploy early warning systems

Every strategy mutates in the implementation phase, as market, competitive, or regulatory realities intrude. Good implementation hinges on responsiveness to a changing environment – on adapting and modulating along the roads to Mecca. Enlightened managers approach implementation with finely calibrated performance metrics that are tied to their specific strategies. They also focus on not just annual or longer-term goals, but on intermediate and short-term ones as well. For example, an industrial equipment leasing firm developed a strategy to grow through expanding their regional footprint. They set as their metrics increased annual revenue and gross profit, but also threshold interim events – milestones – to trigger increased investment/rollout to new regions. Milestones are a simple but powerful tool: specific, pivotal activities or events that occur along the implementation path that reinforce the sense of progress you are making, or signal the alert if implementation is lagging. The equipment leasing firm selected these milestones:

- Pilot program site is staffed, trained, equipped, and in rent-ready status by 15 June, 2006.
- Revenues reach $500,000, utilization rates at 50 percent, by December 30, 2006.
- Breakeven reached by 15 March, 2007.
- Customer reorder rates exceed 75 percent by 15 June, 2007.
- Region 2 staffed, equipped, rent-ready by 15 September, 2007.

By articulating explicit checkpoints along the path of implementation, managers benefit from either highlighting successes or pinpointing problems that merit closer consideration. Both are helpful. Quick feedback and

information about interim progress are key inputs to managers charged with the responsibility for steering, and modifying, implementation.

5. Establish a common language

It seems obvious to assert that performance metrics should be simple and clearly defined – and yet even sophisticated firms suffer from inconsistently defining terms, and so managers rarely speak the same language. Is customer satisfaction the key metric? One business unit's "customer" can be another group's supplier, partner, co-worker, or competitor. "Growth" appears to be a relatively straightforward performance metric, and yet one mature $60 million manufacturing firm's leadership team interpreted this in terms of revenue growth, and pursued rapid lower-margin sales opportunities. While the top line did increase over the course of the year, the board and lenders were less than impressed, as they sought profit growth (higher EBITDA) to enhance the firm's valuation, and accelerate an exit – they would have been happier with lower revenues from higher-value customers.

Consider another example from a $100 million industrial products company whose primary strategy was to enhance efficiencies, leading to improved profitability. The management team discovered that even "profit" had different meanings for different constituencies within the organization. For the sales team, profit translated as gross margin, while for the operations group, it meant operating margin; the finance team, meanwhile, set programs in place to enhance free cash flow (operating profit less capital expenditures). One result of these different interpretations was that each manager made choices that got them closer to their perceived goal – sometimes, at odds with their colleagues. Salesmen brought in new, high volume customers who appeared profitable, but who required extensive engineering support, reducing eventual operating margins. Manufacturing engineers seeking to enhance margins ordered new tooling, which improved piece price but impacted quality. Different interpretations of the language used to describe the key performance metric confounded implementation, as Figure 6 illustrates.

The solution: select a small set of critical performance metrics, take the time to clarify their exact meaning across organizational units/boundaries, and demonstrate how the metrics link back to the organization's strategies.

6. Deploy a balanced portfolio of metrics

"Balance" is a wonderful concept, and is particularly important in the context of performance measurement.

Short-term versus long-term

Most some firms suffer from too great a focus on the short-term, and short-term results (spurred on, in public companies, by the pervasive pressure to meet quarterly earnings targets). Healthy performance metrics include short-term feedback or performance indicators, as well as intermediate and longer-term metrics. Too short a fuse can inhibit innovation, or impel managers to forgo investing in more valuable longer-term initiatives: if my primary metric is revenue growth or reorder rates from existing customers, how will I justify taking time to pursue different segments, irrespective of their eventual contributions?

Many managers fall prey to the temptation of skewing their performance metrics to the short-term, which is altogether more comfortable, and more visible. But care should be taken to extend the metrics framework over the arc or lifespan of the strategy: if a strategy is meant to span three years, the metrics deployed should also span three years.

Internal versus external

Another common pitfall for managers is succumbing to the firm's inexorable, magnetic pull. Far too often, metrics skew internally: the portfolio is overpopulated with internal performance metrics that fail to account for what happens – critically – outside the firm. So managers focus on expense management, and internal deadlines, for example, and in the process lose their connection to the marketplace or the behavior of competitors.

If, as a production engineer, my primary metric is maximizing cycle times (or throughput per machine), why should I release a new tool until it's optimized? What are the odds that I'm even aware of customer delivery deadlines, or an upcoming trade show debut? In a consumer products firm intent on efficiencies, production managers charged with cost reduction targets managed to save 4 percent in the cost of goods by reducing the size and number of the product labels, and limiting box graphics to two-colors. The impact in lost visibility and brand recognition, however, was substantial, and likely contributed to diminishing shelf-space and sell-through in a number of key retail accounts.

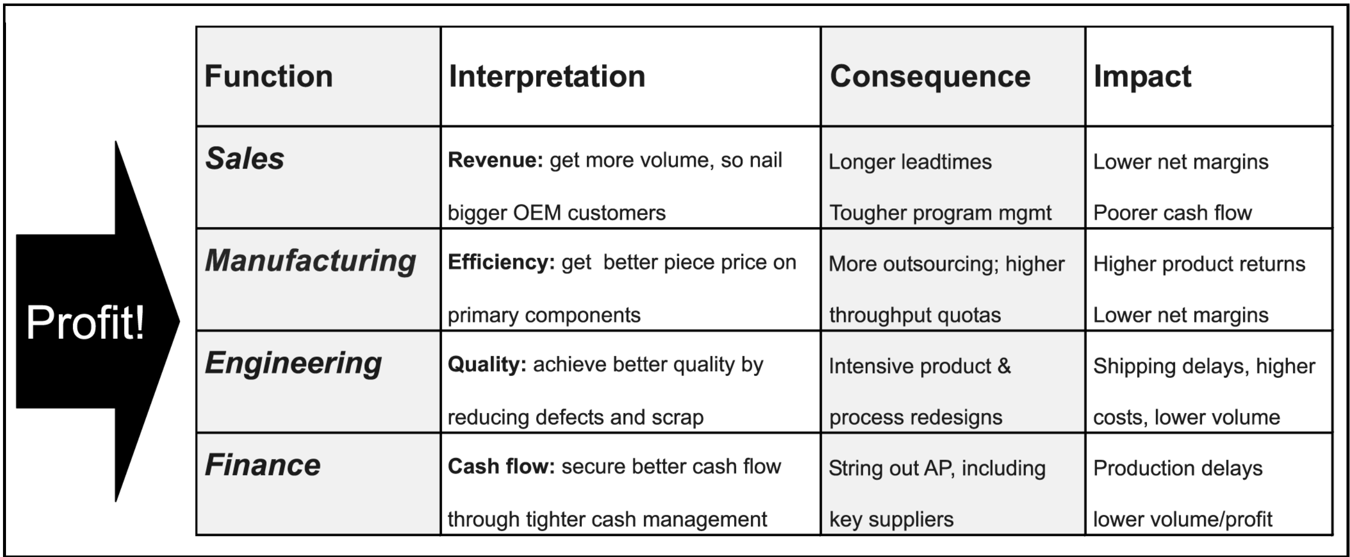
Managers often fail to set targets for performance relative to competitors, eschewing benchmarks because they believe their firm or situation to be unique. Tracking even rough benchmarks, like S, G&A/sales, or number of new product launches/year, can yield important clues about competitor structure or strategy – key input for designing and implementing strategy successfully.

Strategic managers balance internal performance metrics with external ones – specifically those linked to the customers' experiences.

7. Align metrics with strategy

Good metrics facilitate implementation of strategy; poor or misaligned ones impede implementation.

Figure 6 Do we speak the same language?



Profit!

Function	Interpretation	Consequence	Impact
Sales	**Revenue:** get more volume, so nail bigger OEM customers	Longer leadtimes Tougher program mgmt	Lower net margins Poorer cash flow
Manufacturing	**Efficiency:** get better piece price on primary components	More outsourcing; higher throughput quotas	Higher product returns Lower net margins
Engineering	**Quality:** achieve better quality by reducing defects and scrap	Intensive product & process redesigns	Shipping delays, higher costs, lower volume
Finance	**Cash flow:** secure better cash flow through tighter cash management	String out AP, including key suppliers	Production delays lower volume/profit

Once strategy has been developed, high performing firms recalibrate their performance management systems to track and reward strategic behavior. Done right, and implementation accelerates; when the strategy is at odds with the metrics, implementation is jeopardized. In a $50 million beverage industry firm, for example, the annual strategy development session produced three rational strategies: enhance growth, improve customer service, and enhance internal efficiencies. Key managers' performance objectives and bonuses, left over from previous years, hinged on sales growth targets. In the heat of implementation, managers faced several uncomfortable dilemmas: should we allocate time and money to providing more service to customers, or reduce the amount of service provided, to spur efficiencies? Should we focus on existing customers, not new ones, as they are less costly to serve, even though our own performance is measured based on our ability to drive growth and develop new business? These conflicts needed attention, and alignment, to guide management decision-making.

Good implementation hinges on identifying and deploying a small set of performance metrics that encourage the kind of

Figure 7 Strategic metric checklist

Less Is More	We have 1 - 3 **key** metrics for each strategy We have 5 - 10 strategic metrics overall for the firm	
Stakeholder Alignment	Our metrics incorporate input or metrics from customers, suppliers, regulators, other stakeholders	
Quantitative Over Qualitative	We use specific numbers, ratios & indices to gauge performance	
Early Warning Systems	We set short & intermediate targets, and identify specific milestones for implementation	
Common Language	We explicitly define & communicate key terms and metrics, across functional and divisional boundaries	
Balance	We use monthly, quarterly, annual, & multi-year metrics We deploy internal and external performance indicators	
Strategic Alignment	Our metrics reflect our strategies Our managerial systems are aligned with our metrics	

focus and behavior the firm seeks – and rewarding employees for meeting or exceeding strategic targets. Linking metrics directly to rewards is one way to encourage and reinforce the kind of behavior you would like to elicit from your staff. Celebrating successes in reaching or exceeding targets is another tried and true method to motivate staff, and enhance the relevance of strategic planning overall.

Summary recommendations

No two firms are alike, so it is difficult to prescribe a standard approach to designing and deploying performance metrics. A quick checklist is shown in Figure 7. In sum, successful firms recognize the intimate link between metrics and strategy, and work tirelessly to fine-tune their performance measurement systems to:

- encourage strategic focus and behavior;
- provide timely/urgent feedback on implementation progress;
- simplify the complex challenges of managing in a fluid and turbulent environment;
- enhance alignment between individuals, teams, organization units, and stakeholders; and
- communicate positive (and negative) results, to galvanize, mobilize, and energize the team. ■