

Strategic dashboards: designing and deploying them to improve implementation

Michael K. Allio

Michael K. Allio is a practical strategy consultant to private sector and non-profit clients, a Principal at Allio Associates, LLC in Providence RI USA.

Corporations call the performance management tool they use to display critical data by different names—dashboard, scorecard, or report card. By some estimates, more than half of U.S. enterprises use the Balanced Scorecard [1] version alone [2], and more than 70 percent of U.S. enterprises use some form of performance measurement system [3]. Yet failure rates are reported at 50 to 70 percent [4], and may well be higher, depending on the success metric. Dashboards are increasingly prevalent in the non-profit world as well, as funders attempt to impose quantitative and private sector methodologies on organizations to drive for effectiveness, calibrate impact, and gauge ROI. Why are dashboards, a tool premised upon the uncontroversial notion that managers should capture meaningful strategic data and consider its significance routinely to improve implementation, so ineffective?

In recent years, more corporations and non-profits determined to improve implementation of business and corporate strategy have sought to devise a dashboard specifically designed to track key performance indicators. But to really unlock this tool's strategic potential, leaders need to forge a broader process that incorporates how the dashboard is designed, positioned, populated, and deployed across the organization.

Symptoms: why managers regularly reject dashboards

One of the most common complaints about dashboards is that they unfairly simplify a complex world. "You can't reduce our business to a few indicators, and the leadership team rips them out of context to feel like they're steering the bus," comments a typical senior executive. Other common complaints are that indicators or metrics are:

- Misaligned or incorrect: targets and indicators fail to reflect critical strategic initiatives or business activities; data used to compute indicators are flawed, incomplete, or stale
- Too numerous: often the sheer volume of indicators tracked overwhelm both leaders and managers, who struggle to weigh and interpret reams of disconnected data points; poor visual design compounds this syndrome
- Imposed without consultation: indicators (and performance targets) are often created by executive committees or external consultants; their connection to day-to-day management is tenuous or poorly explained, and their imposition from on high rankles those charged with tracking and managing them

- Just for reporting, or politics: arbitrary targets are set and then erratically reviewed as a pro forma exercise around budget time, or worse, used to goad or shame managers or teams who have fallen out of favor.

What's in a name? Scorecard vs. report card vs. dashboard

- “*Scorecard*” is a game metaphor, and resonates with executives intent on putting points on the board. Because games are won or lost, it seems to underscore the stakes – and may exacerbate the anxiety many managers bring to most forms of performance management. While the modifier ‘balanced’ softens the impact – who can argue with balance? – the goal is still to score, to demonstrate prowess.
- “*Report card*” is an education metaphor, and certainly conveys a sober judgment. It may appear to be a form of grading, and thus alienate staff who seek more democratic collaboration.
- “*Dashboard*” is a driving metaphor, implying the need to glance frequently at key gauges to help navigate, while still in motion. It measures an organization’s velocity relative to the external environment – something successful leaders never forget to do. A strategic dashboard is one that homes in on the key metrics that reflect progress in implementing strategy. Its primary value lies in its ability to focus senior executive attention, provoke analysis and reflection, and trigger decision-making that improves performance.

Solutions: how to improve dashboard performance.

Using some form of dashboard to chronicle and explore progress in implementation is a natural – and essential – step in the implementation of any strategic plan. In fact, between strategic planning cycles, it could be argued that performance management is the professional and fiduciary duty of leaders, and a truly strategic dashboard can be catalytic: it can call attention to critical trends, prompt preventative action, trigger investment to seize emerging opportunities, help managers home in on root causes, and course-correct or fine-tune their priorities. So if it’s a good tool in principle, how can management teams use it more effectively in practice? After working with dashboards and metrics across hundreds of client firms, and using them myself as an operating executive in both the private and philanthropic sectors, I can suggest some guidelines.

Clarify the actual strategy the dashboard monitors.

Surprisingly, many dashboards suffer not from poor indicators, but from poor linkage with actual strategy. For example, in a middle-market automotive manufacturing firm with a growth strategy, most dashboard metrics reflected operational efficiency goals, likely because they were easier to measure. Yet in the company’s core areas of projected growth – speed of new product development, quantity of new distribution partners in new regions, success ratio of proposals to new customers – metrics were sparse. Consequently, senior executives reviewing the dashboard spent a disproportionate amount of time focused on efficiency and current profitability, and far less time on the

drivers and investments for growth called for by their strategy. In the nonprofit sector, many mission-driven organizations use dashboard metrics but tend to measure the wrong things: inputs and activities, rather than outputs or, better still, the outcomes and impact of their work [5]. In both sectors, strategic plans typically characterize the organization's aspirations, goals, and priorities, but rarely articulate quantifiable metrics. Without specific metrics and concrete targets, how could a dashboard track what matters[6]? And for many organizations, implementation processes are far less developed than planning processes: once the strategic plan is completed and ratified, managers turn back to what they perceive to be the 'real work'. Assertive CEOs and Boards take an active role in delineating the strategy in concrete terms, then testing the alignment of metrics with strategy. Equally important, they extend the purview of the planning cycle to include implementation monitoring through strategic dashboards.

Key questions: are we measuring what we actually hope to accomplish through our strategy? Do our dashboard metrics help us track progress in implementing critical path initiatives, or gauge the degree of traction we're experiencing as resources are applied to enhance competitive advantage? Do we periodically validate the metrics we use, confirming alignment?

Include management teams in the design of balanced, multidimensional metrics and targets to boost accountability.

Many dashboards are thwarted by managers who resist them because the performance indicators have been dictated to them, without ample input or dialogue. As a divisional vice-president commented when the executive team published the Executive Dashboard: "I have no idea where these numbers come from – and half of them are not in my scope to influence....I'm not even sure what some of them mean, let alone where the data would come from."

A better approach is to direct cross-functional teams to develop and recommend indicators and targets that they can embrace. This has other advantages: it engages managers in translating the strategy into terms that more directly correlate to their responsibilities, and it compels teams to look across the organization at more strategic goals, rather than strictly functional or tactical ones. Finally, involving stakeholders from different altitudes and geographies increases the likelihood that the metrics and targets are well-rounded, and can surface critical issues about reconciling competing targets. If speed to market is a performance metric, for example, it may threaten quality or even cost. Metrics that concentrate on short-term indicators of success may mask longer-term threats or opportunities. By developing a portfolio of metrics that managers can test, these differences can be debated, and even resolved, through careful target-setting.

Key questions: does everyone understand the indicators? Do the performance targets match the resources being invested [7]? Does the portfolio of critical metrics span multiple timeframes, and reflect multiple stakeholders' perspectives, especially those of customers? Do key managers 'own' the metrics?

"Quantity isn't quality: decision-makers need more than information – they need insight."

Use simple metrics, and insist that less is more

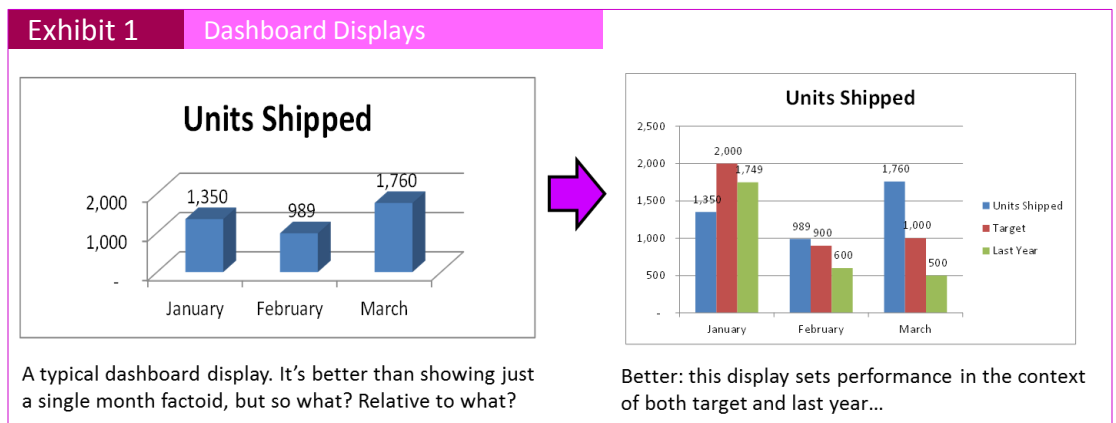
Not everything that can be measured matters, and most dashboards are crowded with far too many indicators that don't measure contributors to strategic success. The Internet's data aggregators and analyses, along with internal enterprise resource planning (ERP) and business intelligence software and infrastructure, all make more data available than ever before. But quantity isn't quality; decision-makers need more than information – they need insight. The best strategies are often elegantly simple: they describe a core set of initiatives designed to propel the organization forward towards a clear goal. Likewise, the best dashboards limit the indicator mix to the most powerful 10 – 15 indicators, reflecting those initiatives, displayed in two pages or less. Ratios are usually helpful: for example, quality errors/unit shipped and advertising spend/new customers acquired both describe performance and provide insight into the tradeoffs inherent to managing a complex business. Today's technology makes it tempting to create interactive displays that allow for drill-downs and disaggregated data views, but good dashboards focus executive attention on the short-list – the truly core KPIs that reflect the real drivers of implementation success [8].

The goal of making dashboards simple does not mean choosing simplistic indicators. A set of indicators should address critical links across the value chain: to gain a full view, the dashboard must present financial performance, but also key customer metrics—such as customer satisfaction--and process indicators that will give managers early-warning signals of implementation progress or turbulence. As the CEO of a \$100M software firm put it, “our dashboard metrics need to be both post-mortem and pre-mortem, so management has the time to react and fix issues before they escalate.”

Key questions: has the set of indicators been carefully curated and the key indicators prioritized? Does the dashboard, through these select indicators, present a balanced view of performance? Are those indicators useful guides to making decisions about resource allocation and tracking strategic implications?

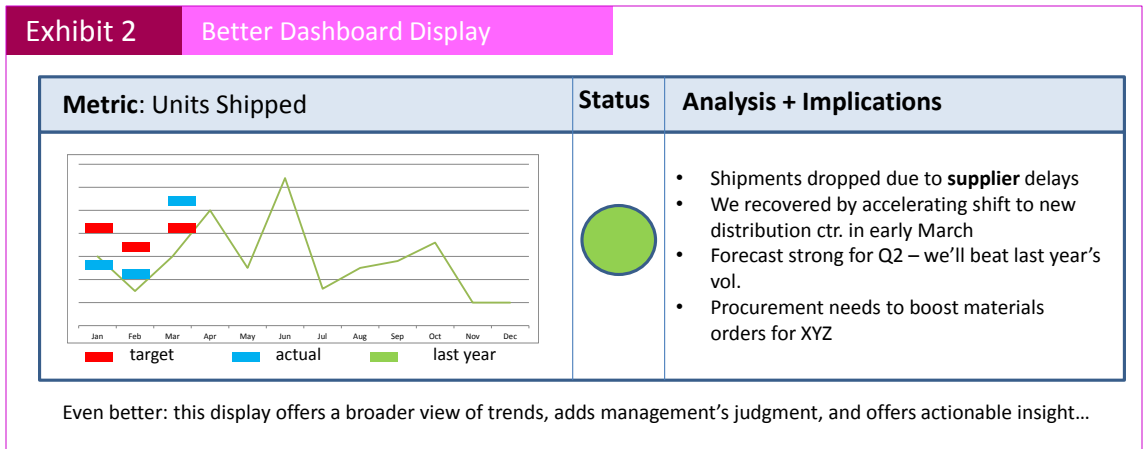
Maximize the context for both the metrics and the dashboard overall.

Indicators on dashboards often seem to lack enough context, which weakens their impact, and sidetracks executives struggling to interpret them. As Exhibit 1 illustrates, reporting on a single dimension alone – in this simplified



example, units shipped – conveys only a morsel of information, and immediately provokes the question: so what? What’s better is to provide more context by displaying, for example, performance relative to target and to last year’s experience.

But even better still, as illustrated in Exhibit 2, is to inject both judgment and some sharp observations about the causes and implications of this performance:



A simple, consistent visual vocabulary helps readers quickly absorb more information, giving a broader view of performance relative to past experience: we note that while units fell below target initially, shipping performance tracks well with last year’s cycle. The “Status” column--using the familiar traffic light colors (red: “significantly off-track,” yellow: “off-track,” green: “on-track” [9])—introduces management’s judgment. Succinct analytic text, in the far-right column, shifts the focus from the data points to management’s *insight*, articulating implications across functional boundaries. This helps executives reviewing the data shift from “what” and “why” questions to “what next?” And while content is king, the dashboard medium is also critical: an uncluttered, immediately accessible dashboard design promotes understanding and dialogue, both key to better decision making [10].

The dashboard itself benefits enormously from explicit context-setting as well. Managers often struggle with legitimate questions about intended audience and use. Clarifying who the audience is can help set the parameters for level of detail required, and timespan, for example: a Director may have different expectations and needs from a divisional head. More broadly, managers usually need reassurance that the dashboard will be used constructively, to elicit strategic analysis and dialogue, not punitively (more on this below). Using dashboards in tandem with other portfolio management tools (like implementation updates, portfolio reviews, vulnerability analyses, and budgets) is another powerful way to enrich their context, underscoring how insight into current performance contributes to broader strategic decisions.

Key questions: Does the context provided for key metrics convey meaningful trends? Does the dashboard anticipate the “So what?” and “Now what?”

questions? Does the dashboard include analysis and management judgment, helping clarify issues and provoke both discussion and action? Do staff and line managers believe the dashboard is a critical decision-making tool?

Commit to building a performance management and measurement culture

In a recent global survey of more than 1,200 senior executives, benchmarking and strategic planning were ranked in first and second place as the “most popular and pertinent management tools” (out of 25) [11]. Both require some form of dashboard to display and monitor performance efficiently (and in fact the Balanced Scorecard, cooling only slightly in popularity, placed 6th in the same survey). Yet none of these tools or processes adds value if the organization has not created a culture that reinforces their utility. Dashboards are likely to be disdained by middle managers when they’re positioned as a reporting and control tool – rather than used as a learning tool that triggers strategic dialogue. As one executive commented, “Some ‘tools’ are just documents made to be shelved. You know it’s real when the Board actually asks to see it ahead of time, uses it during our sessions to probe and to inform their decisions, and then circles back to it the next time.” These tangible steps can be taken to build this kind of culture:

- Communicate the purpose of the dashboard, and the expected process for use often, to multiple levels of staff within the organization, both to educate and to socialize its use; consider sharing dashboard elements with other critical stakeholders as well.
- Demonstrate senior management commitment to navigating implementation through the dashboard: invoke it and refer to it publicly, routinely. In one organization, dashboards only gained credibility when the president staged quarterly portfolio reviews that mandated dashboards, and facilitated walkthroughs and explication of the dashboard’s indicators, targets, and results in all-staff meetings.
- Democratize access to the tool, at least in some form, for example by publishing it on the Intranet.
- Establish a common vocabulary and dashboard design across the organization. A shared “language” about strategic metrics and targets can break down barriers, spur understanding, and unify stakeholders [12].

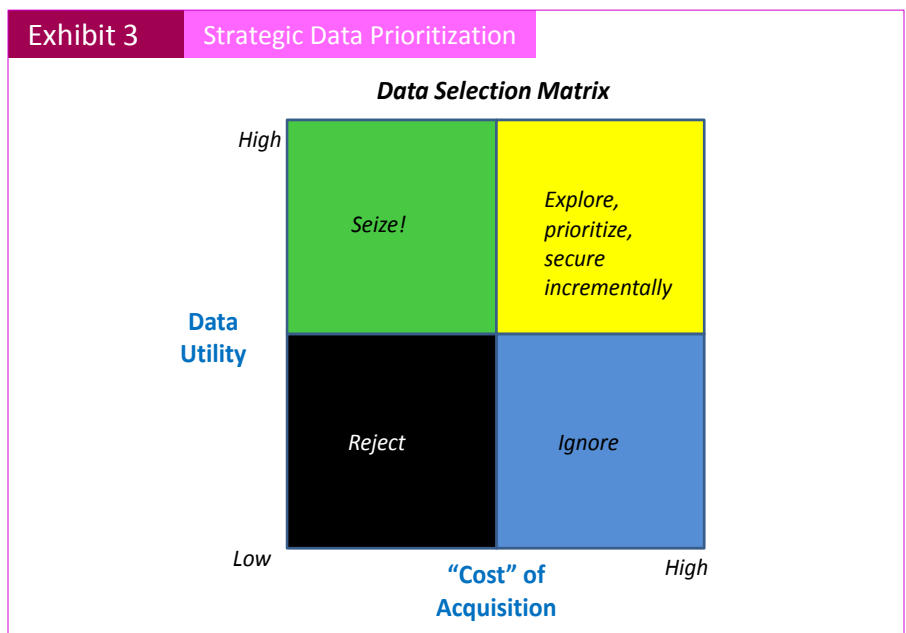
Key questions: Is the dashboard being used merely as a reporting tool, or rather to further strategic insight? When reviewing the dashboard, do we progress beyond “How did we do?” to “Why?” and “What’s next?” Does the leadership team use the dashboard regularly, in multiple forums, with a range of staff and stakeholders? Do managers feel comfortable signaling problems and articulating the implications of missing a target?

Make the dashboard practical and expect it to change, evolve and mature.

Another common barrier to dashboard adoption is insufficient investment in data definition and acquisition. Finding the right stuff in the tsunami of data available takes time, focus, expertise, technology, and clear definitions of the data elements used to compose key ratios. An initial investment in enabling infrastructure helps streamline the process, secure buy-in, and enhance

accuracy. Sustained investment helps keep data fresh, and reinforces its value. Periodic validation of data, metrics, and management's judgment also helps legitimize – and improve the efficacy – of the tool and the process.

However, not all data are worth the cost or effort required to secure them. In a recent large-scale education reform project, executives seeking to create a dashboard for performance management started by building a data warehouse that would capture millions of longitudinal data sets from myriad legacy IT systems in four major US cities. While the data definitions and more than thirty metrics had been painstakingly designed and validated in theory, once the data collection began, flaws and dissonances in existing IT systems revealed themselves and the program sputtered to a halt. With finite resources and an urgent timetable, managers confronted some tough choices about tradeoffs. In this case, as Exhibit 3 illustrates, a matrix mapping data utility against the cost to acquire--in terms of time, effort, and dollars--helped them clarify priorities, allowing the program to advance with a more focused dashboard that, while incomplete, nonetheless displayed implementation progress.



Another common attack leveled by managers who are reluctant to defend their performance through a dashboard is that the data are inaccurate or untimely. While we'd always prefer perfect, real-time data, seasoned managers and the executives who evaluate them have learned to make do with what's practical, and accept data or indicator surrogates to get the process started.

Good dashboards, and the metrics displayed within them, evolve over time, as implementation experience accumulates and external realities shift. In fact, a static and untested dashboard should raise warning flags: few get it right the first time, and management focus and fluency evolve over time as well. While constant flux undermines interpretation and entangles those required to populate the dashboard, it's reasonable to expect to prune outdated or misaligned metrics annually, replacing them with indicators that correlate more closely to emerging pressures, threats, and opportunities.

Good dashboards, like good managers, stay fiercely attuned to environmental changes. It's also natural to expect dashboards to evolve as organizations progress through the life-cycle: for example, key metrics for young organizations – product development speed, penetration into new territory – become less important to maturing firms, whose focus often shifts to metrics tracking efficiency.

Key questions: How hard is it to secure the data required for a truly relevant dashboard, and have priorities been established? What resources are being allocated to the process? What is the process for dashboard replenishment, and are roles, responsibilities, decision-rights for modifying the content [13] and timetables clear and well-understood? Do our metrics and our dashboard reflect our current strategic priorities, or do they need to be refreshed?

Next steps in dashboard development

Like many strategic management tools, the strategic dashboard seems deceptively straightforward; after all, it's just a summary of performance against strategic targets. But dashboards sit at the crossroads of strategy, implementation, data-capture, and decision-making – a busy intersection! Properly designed, developed, and deployed strategic dashboards can cut through clutter, and provide incisive strategic insight, improve decision-making, accelerate response time, and enhance both alignment and implementation performance. Poorly designed and deployed dashboards are debilitating, destructive or ineffective. While there are no silver bullets, careful attention to dashboard content, form, process, and politics will pay mighty dividends to those leaders intent on strategically managing performance.

A quick checklist to consider if you're developing or refining an effective dashboard is presented in Exhibit 4:

Exhibit 4 Strategic Dashboard Checklist		
Dimension	Description: in our organization, we have...	Status
Metrics	tightly aligned indicators/metrics with strategy; prioritized; balanced	
Audience	communicated who the dashboard is designed for, and how it's used	
Data Capacity	invested in data collection, infrastructure, analysis, management	
Stakeholders	involved key staff and stakeholders in metrics design & progress reporting	
Design	structured a succinct, accessible display; included management judgment	
Process	formalized key dashboard processes: when it's updated, presented, modified	
Accountability	assigned responsibility for managing dashboard content and process	
Effectiveness	used the dashboard to trigger strategic analysis, discussion, decisionmaking	



Notes

[1] The Balanced Scorecard is a proprietary name originally coined by Robert S. Kaplan and David P. Norton in their article: "The Balanced Scorecard - Measures that Drive Performance", Harvard Business Review, Feb. 1992. Many versions and derivatives proliferate today.

[2] Gartner survey, cited by Advanced Performance Research Institute site: <http://www.ap-institute.com/research.aspx>. In Gartner's annual survey of 1,200 CIOs, Business Intelligence systems remain the top priority for four consecutive years, from 2005-2009: Magic Quadrant for Business Intelligence, January 2010, www.gartner.com

[3] Management Tools 2011: An Executive's Guide, Bain website: <http://www.bain.com/publications/business-insights/management-tools-and-trends-2011.aspx>. The 2006 survey cited that 70% of firms deployed the Balanced Scorecard. In the 2011 edition, a full 63% of survey respondents reported that they planned to use Scorecards in 2011. The proportion of businesses using some form of dashboard is arguably even higher, if we expand the definition.

[4] The failure rate of performance management implementations is cited as between 56% (deWaal, International Journal of Productivity and Performance Management (2009) Volume: 58, Issue: 4, Pages: 367-390) and 70% (Andy Neely, Mike Bourne, (2000) "Why Measurement Initiatives Fail", Measuring Business Excellence, Vol. 4, Issue: 4, pp. 3 – 7). See also Gartner Business Intelligence Report, January 2011, which reports that 70% - 80% of Business Intelligence projects fail.

[5] Many foundations and the nonprofits and agencies they fund increasingly invest in post-intervention evaluations. Higher performing ones take pains to move from convoluted, complicated 'theories of action' to a straightforward, one-page logic chain to spell out their strategic intent, clarify the players and sequence, and characterize categories of cumulative results, over time. This process helps them articulate clearer formative and summative metrics, greatly facilitating the pivot to a dashboard to monitor performance. For a good example, see the GAVI Alliance's 2011-15 Business Plan and measurement framework (<http://www.gavialliance.org/library/gavi-documents/strategy/>)

[6] For more information about the selection of metrics, see Michael Allio, (2006) "Metrics that matter: seven guidelines for better performance measurement", Handbook of Business Strategy, Vol. 7 Issue: 1, pp.255 – 263

[7] Target-setting is a complex art: stretch goals can inspire, but those that are not backed up with reasonable resources often undercut staff morale and confidence and undermine both the dashboard and leadership credibility; they also threaten to derail performance monitoring sessions.

[8] Managers are often tortured by the Catch-22 of presenting too much or too little: granular, disaggregated data cover the bases and allow for deeper probing by the Board or senior exec team – yet take up too much space, and invite even more detailed questioning. At the same time, big picture views of rolled up data sets satisfy those in search of a holistic snapshot, yet frustrate Directors searching for more fine-grained analytics. A good solution is a dashboard technology that allows for both: what one executive termed the 'beauty of the toggle button'. In general, a good rule of thumb is that the quantity of indicators presented decreases as the authority level of the audience reviewing them increases.

[9] An astonishing amount of energy can be expended by managers trying to game something as simple-sounding as green (on-track), yellow (off-track), or red (significantly off-track). Many managers will recognize the 'watermelon metric': green on the outside, but red just beneath the skin. Successful leaders encourage managers to be frank, commit to a choice of color, and resist both glossing over real issues or sand-bagging results – which shifts the discussion from the color itself to what the team will do to manage its implications.

[10] For an excellent discussion of the power of careful design in displaying data, explore Beautiful Evidence, the book by Edward Tufte (www.edwardtufte.com). Especially appealing is his discussion of 'sparklines', the 'small intense simple datawords' or trendline charts that are increasingly appearing in the New York Times, BusinessWeek, and elsewhere. His data:ink ratio counsels managers to maximize the information conveyed per pixel.

[11] Management Tools 2011: An Executive's Guide, Bain website: <http://www.bain.com/publications/business-insights/management-tools-and-trends-2011.aspx>. A full 63% of survey respondents reported that they planned to use Scorecards in 2011.

[12] For a spirited discussion of cultural barriers and the psycho-social factors that come into play to diminish the credibility of metrics (and the dashboards that display them), see Hammer's article "The Seven Deadly Sins of Performance Measurement," MIT Sloan Management Review, Spring 2007

[13] The politics of dashboard production and change management cannot be understated, especially as the tool is used more frequently by senior management or the Board. Establishing explicit rules, processes, timetables, and accountabilities can help reduce friction.

About the author

Michael K. Allio is a practical strategy consultant to private sector and non-profit organizations, a principal of Allio Associates, LLC. He recently served as Deputy Director of Strategy at the Gates Foundation. His articles have appeared in Strategy & Leadership, The Journal of Business Strategy, the Handbook of Business Strategy, and elsewhere. Reach him at Michael@allioassociates.com.