Kevin Jenkins

OVERBOARD WITH DASHBOARDS?

Many in the public sector believe data-reporting methods, like dashboards, overpromise and underdeliver. Kevin Jenkins agrees but says it doesn't have to be that way, and performance dashboards and other data-driven reporting can be much more insightful and useful than they usually are.

A senior executive in a large Crown entity told me recently that their key performance monitoring tool is a set of nearly forty graphs and tables. It's a lot to wade through every month, and they have to extract the insights themselves. They are often confusing and ambiguous, particularly on the first (or sometimes any) reading: "That line chart seems to be contradicted by the bar chart on page 15" – that sort of problem.

Dashboards and other reporting tools like them give data-driven reporting a justifiably bad name. I've heard dozens of public-sector executives report similar problems. Dashboards often track metrics that aren't insightful, piecemeal metrics don't build to any cohesive whole, and the dashboards often just look backwards. On top of that, dashboards are also difficult and expensive to maintain.

Some public-sector leaders are losing faith in the value of the often substantial ongoing investment in data-driven reporting. At a minimum, these kinds of dashboard failures can waste resources – as one Crown entity CEO told me, "The board barely looks at it." In the worst cases, dashboards that don't tell clear and accurate data stories can push executives and boards into poor choices.

DASHBOARDS OFTEN TRACK METRICS THAT AREN'T INSIGHTFUL.

Data analytics has overpromised and underdelivered

In his discussion of the key traps dashboards fall into, Joel Shapiro, Associate Professor Management at Kellogg University, describes why managers love dashboards:

"Single-screen 'snapshots' of operational processes, marketing metrics, and key performance indicators (KPIs) can be visually elegant and intuitive. They show just-in-time views of what's working and what isn't ... A quick scan of a dashboard gives frontline managers transparency and, ideally, the opportunity to make rapid adjustments."

That's the theory – but in this area, data analytics has overpromised and underdelivered. The simplicity that's supposed to be such a plus with dashboards is, in reality, often a superficiality that prevents them being a useful support for decision making.

One of the problems with dashboards involves what Shapiro calls the "importance trap", which is consistent with what I've heard from clients: many dashboards still don't relay the most important metrics and, in the worst cases, just use the software defaults.

Even where metrics do focus on an issue of genuine importance, too often they ignore underlying distributions. For example, a dashboard may tell you your staff turnover is generally stable – but, in fact, hidden behind that general stability, your agency may be steadily losing all its best people.

Dashboards are often short on context and storytelling

One of the key problems with dashboards identified by data expert Andy Krakov is that they can mislead by giving equal prominence to the metrics presented, and the hierarchy or dependencies may be opaque. Storytelling that aids true understanding is usually absent.

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Heading in a similar direction, Joel Shapiro points out that dashboards are "poor at providing the nuance and context that effective data-driven decision making demands". All that empirical, quantitative data seems convincing, but we may not really understand the assumptions that have been made. (This reminds me of Jeff Bezos banning slide presentations and bullet points in favour of four to six page memos, but that's another story.)

Superficial dashboards and incomplete data stories can also collide with the human weakness for assuming causality when we see what looks like a strong correlation or simply two sequential events – what Shapiro calls the "causality trap". A simple data comparison can appear to tell a clear and convincing story, with our assumptions around causality filling in the gaps, while the real story is hidden and quite different.

The website *Spurious Correlations* has some wonderful examples of the correlation-equals-causation assumption. My favourite is the correlation between cheese consumption and people dying through getting tangled in their bedsheets (a close second would be murders by steam, hot vapours, and hot objects correlating with the age of Miss America).

Designing better dashboards: Decide your priorities first, then choose your metrics

A dashboard – or any reporting for that matter – should be designed only after the priorities have been decided. This might sound obvious, but it seems a lot of dashboards are driven by the data that's available, rather than by the decisions the dashboards are supposed to support. So make sure you include only the metrics that might lead you to make better decisions, rather than falling back on those same metrics you've always reported and can easily get your hands on.

Start with why you want metrics – presumably for performance monitoring and for making better decisions – and work through the logic from there. Over time, you'll be able to refine what's important, abetted by access to an ever-growing pool of data and ever-improving analysis and visualisation.

Don't hesitate to revisit the dashboard. A particular suite of metrics may have reflected a pillar of your strategy a year ago, but it may be that this area is now under control and your priorities have moved on – so ask whether those metrics are still valuable or are now just a distraction.

Presenting context well through more dynamic, interactive dashboards

Overwhelmingly, most dashboards are static documents that are intended to be printed. In that static form, attempts by the analyst preparing the pack to anticipate decision makers' need for context contributes further to the never-ending sprawl of numbers that make up most dashboards.

However, it doesn't have to be that way. The tools available for data visualisation and interactivity today allow for qualitatively new levels of storytelling in dashboards. They allow board members and other users to click through and interrogate the data, dropping down levels to investigate the context underlying the issue at hand.

Just as importantly, those other layers can then be hidden away again when not needed, allowing decision makers to focus on the larger picture.

Pass/fail metrics are a recipe for failure

A metric that provides a simple pass/fail result or "traffic light" can be beguiling as a way to simplify reporting. They're often tied closely to target setting, and they offer the appearance of focus and clear expectations.

In reality, pass/fail metrics often drive perverse behaviours and unexpected outcomes. For example, one client had for years reported the percentage of issues resolved within a fifty-day target timeframe. Over time, they saw that percentage get higher and higher, and they considered that a great success. Unfortunately, a closer look at the underlying data revealed the anti-climactic reality – yes, more problems were being closed within the deadline, but fewer were being closed quickly, with almost all running into the final few days.

IT'S ALWAYS IMPORTANT TO LOOK ACROSS METRICS FOR THE WIDER PICTURE.

And worse, once the deadline passed, there was no incentive to do any further work on the issue because it would not affect the reported outcome. The pass/fail metric drove a binary yes/no approach to addressing problems, so some sat stagnant for months or years once the deadline passed, even though further productive work could have been done.

Instead of a single pass/fail metric, a few metrics taken together would have provided a better overall view – for example, an average time to close, an average time of the slowest 10 percent, and a rolling count of issues to hand.

So consider carefully the incentives your reporting creates. If the message you want to send is "We expect issues to be resolved quickly", then a pass/fail metric is seldom the way to do that.

It's always important to look across metrics for the wider picture. One real public-sector example saw an encouraging decline in customer complaints in fact being a decline in reporting. So make sure your dashboard will tell you if success in one area is at the cost of poor performance in another, and ensure that it will also alert you to any imbalances across your agency that may be a harbinger of more trouble to come.

Don't delegate thinking, just the technical execution

Data science and data-driven board reporting are both emerging fields, and we should expect to see rapid improvements in reporting, insights, and projections.

You should absolutely involve data scientists from the outset in designing your board reporting, but remember that good reporting is a marriage of strategy and data. Delegate the technical execution, but only once you're confident the analysts you're delegating to genuinely understand your strategic priorities and the kinds of choices you expect to make based on the data.

By automating your data processes as far as possible you will also free up your smart data people to help you explore and interpret data rather than just producing it. In that interpretation process, prioritise exploring the "why" – and bring the board's own valuable knowledge of context.

Kevin Jenkins is a founder of MartinJenkins (www.martinjenkins. co.nz), and he writes about issues at the intersection of business, innovation, and regulation. Many of his articles can be found in the NZHerald.