THE POTHOLES OF PERFORMANCE MANAGEMENT TECHNOLOGY

A New Road and Its Obstacles

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Constituents, elected officials, and executive mangers have become accustomed to real-time data retrieval and analysis in their everyday lives. Podcasts, CNN, online search engines, and instant messaging have created an expectation that relevant information should be easily, if not instantly, accessible. People wonder why government cannot provide the same access to information, especially when there is a need for that access, driven by factors such as Governmental Accounting Standards Board pronouncements, political issues, or a simple desire to make management decisions based on meaningful performance data. This phenomenon will only gain momentum, so public managers would be wise to start addressing demand now by considering technology strategies to complement their performance management strategies. A performance management technology strategy is more successful and less expensive when implemented in a gradual, incremental fashion, so it is important to get started before demand reaches a crescendo.

A TRAIL OF FALSE HOPES

Some public managers (and vendors) have held out hopes that technologies like enterprise resource planning (ERP)[1] systems would create a single source of data and information. While these systems have improved the state of government data, the universe of information required for performance management is simply too expansive to be captured by any single system, given the array of services and programs under the purview of local governments. Technologies have emerged to automate government operations for these services, just as ERP did for administrative services, and the proliferation of systems adds a new challenge — a propagation of electronic data that must be gathered, sorted, and commingled (often with financial and human resources data) to create useful performance information, in addition to the data created by tools like the Internet and spreadsheets maintained apart from systems of record that may have implications for performance management. Unfortunately, technology has thus far fallen short of its promise to turn these prodigious amounts of data into prodigious amounts of useful information. Despite the unprecedented levels of data being captured and the unparalleled access decision makers, analysts, and many everyday users have to it, the principle complaint remains: *I cannot seem to get at the data the way I want to report it, and I cannot combine it with other data sources in the same report without the help of an information technology expert, if at all.*

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A NEW ROAD AHEAD

This conundrum is not unique to public employers — the private sector has also been trying to derive insights and competitive advantages from vast stores of operational data. Recently, advancing technology has coincided with a mandate from top management to use data to drive business decision making. In his new book, *Competing on Analytics: The New Science of Winning*,[2] noted business and technology researcher Thomas Davenport describes how a confluence of technology and management leadership has led to impressive results at diverse organizations. Davenport found that 65 percent of firms he defined as "high performers" (in terms of profit, shareholder return, and revenue growth

relative to their industry) made extensive use of performance management technology, compared with 23 percent of low-performing companies. This research shows that performance management technology has finally arrived and that the potential is real.

There is no reason the public sector cannot replicate these successes. As Davenport points out, the technology, while far from "plug-and-play," is no longer the primary barrier. Rather, what is paramount is leadership commitment to making decisions based on performance data. When leaders lead, the technology follows. In the public sector, the impetus for such leadership comes from professional demand, as is reflected by the emphasis professional associations such as the Government Finance Officers Association (GFOA) and the International City/County Management Association place on performance management. There are also external motivators like legislated performance data requirements (e.g., No Child Left Behind, in the case of schools) and stagnant local revenues that require more thorough analysis of the service and cost models put forth by departments.

The Benefit of Early Action

A local paper ran an article about how a county government was not suspending payments to vendors that owed taxes because there was no interface between the county's tax system and its vendor system. The issue quickly became political, and finding a way to integrate the data became an urgent priority. Unfortunately, costs escalated rapidly because the technology had to be implemented in a rush, rather than as part of a planned and deliberate approach.

As for the technology, it has coalesced into widely accepted performance management architecture. Just a few years ago, the market presented a veritable Wild West of independent vendor, tool, and architecture choices that had to be cobbled together into a coherent system. A more standard concept of technology architecture exists today, and major vendors are providing complete sets of tools to implement it. Data sources feed into a staging area where data is sorted, indexed, and organized into the most suitable format for answering the performance questions of greatest interest to the organization (see Exhibit 1). Once the data is properly organized and optimized, users can access and manipulate the information using mediums such as:

- **Reports and queries** that are similar in look and feel to traditional reports and queries, although now they can be compiled much more quickly and can be more easily customized to user needs.
- **Alerts** that are sent out to users (e.g., via e-mail or mobile phone) when defined performance thresholds are exceeded.
- **Dashboards** that compile key metrics into a single portal that provides at-a-glance information on performance issues of greatest interest to a given user.
- **Drill-down** capabilities that allow users to access the detailed data underlying the summary presentations that appear in the mediums listed above.

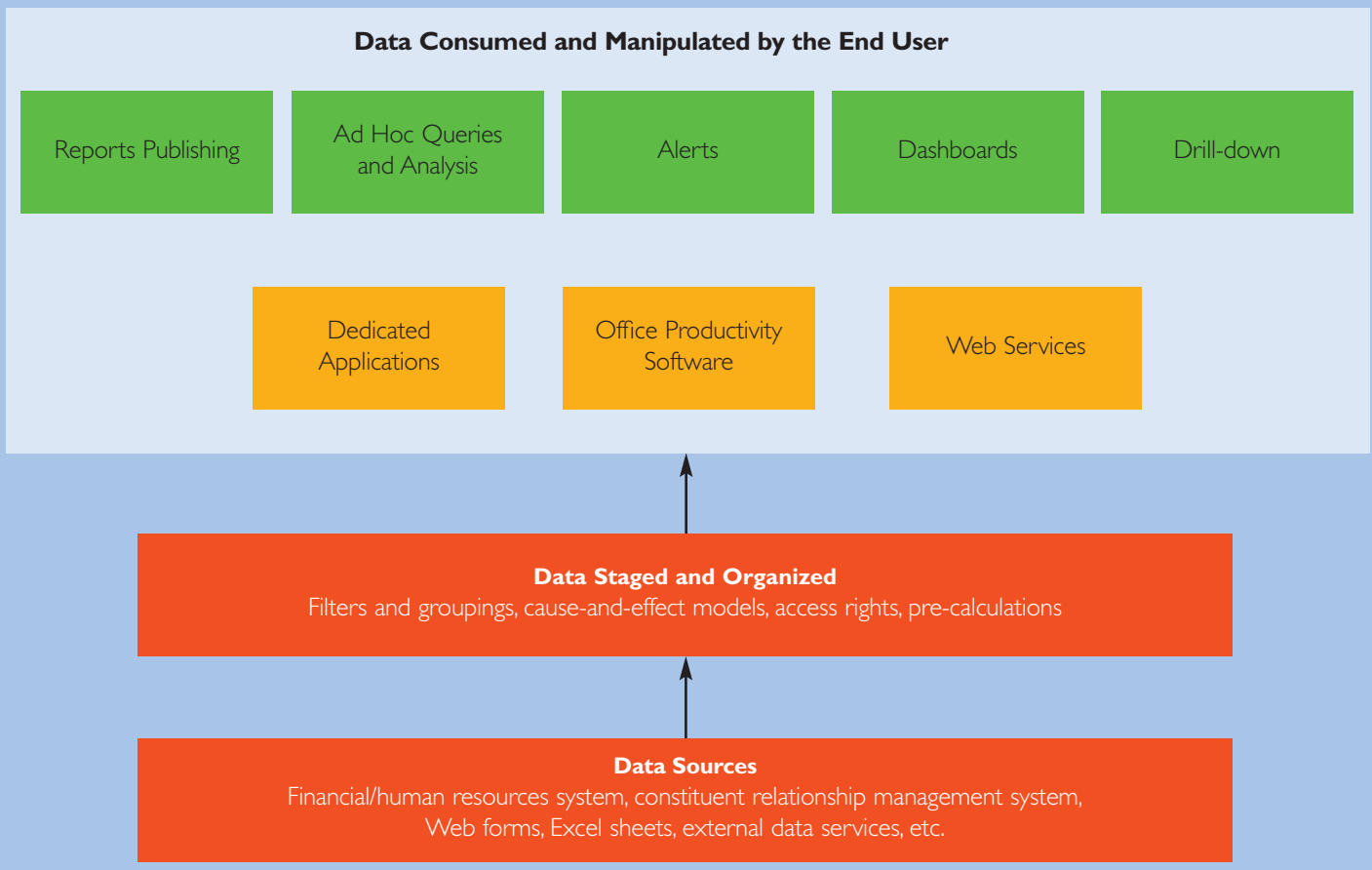
THE POTHOLES

Though there is a road ahead, all is not smooth driving. There a number of potholes to watch out for. These potholes are not technical in nature, but a result of organizational and human factors. These issues are often more difficult to overcome than technical concerns, but the rewards are more enduring and the benefits extend beyond just the technology implementation: Performance management will be supercharged as the organization and its members get better at what they do.

Pothole 1 — Build It and They Will Come

When designing a performance management technology system, banish the metaphor of a wide-open field and think of a well-planned roadway system. While building a comprehensive system and data repository that can answer a variety of performance management questions — even some that are not being asked yet — may seem like a good idea, this

Exhibit 1: Executive Summary of a Performance Management Architecture



approach is expensive and does not work. The better path is to focus on answering a few key questions of strategic and enduring interest to executive managers, and to answer them thoroughly and correctly. This way, executive managers will be interested in system development and more likely to support it. It is also easier to succeed with more limited goals, and early success is important because it builds user confidence in the technology and creates a desire to tackle additional questions. In fact, Davenport found that one of the best approaches is to build performance management technologies within a single department and then use that victory as a springboard to initiatives in other departments and eventually to a project of organization-wide significance.

Pothole 2 — Relying on Technology to Define the Questions

Before the system is put in place, hard, strategic thinking must go into both defining the performance management framework that will be expressed through the technology and identifying the performance measures that matter most. Technology vendors that purport to deliver a standard set of measures that are of universal interest or otherwise claim to know the performance questions you want to answer should be regarded with suspicion. The technology vendor should instead support your ability to answer your own questions.

Consider beginning with the basics. Good starting points might include an audit management letter, a strategic plan, or simply asking departments what their top reporting frustra-

Warning!

Never just ask users what they want — wants are unlimited. Instead, ask users to limit and prioritize their requirements, such as listing their top three reporting issues.

tions are. In fact, the reports people want and the burning questions they want to answer tend go hand-in-hand. These fundamental concerns will suggest which technology solutions will best lead to desired answers, thereby focusing and limiting technology investments.

Pothole 3 — Users Do Not Like the Answers

Even if the answers provided by performance management technology are correct, they may not be to the users' liking because the technology can point out potentially disturbing trends. For example, at an HIV outreach program to support HIV education and encourage testing in high schools, the number of students who received counseling and education was what had been anticipated, but the number of students who actually got tested was lower than expected. Students who had been counseled to get tested were not doing so, raising political questions about the cost and effectiveness of the programs. This kind of answer can deter departmental users from supporting the system, as they may worry about exposing unfavorable information to top-level decision makers. It can also deter the top-level decision makers themselves, as they might prefer to avoid scrutinizing and possibly reforming or eliminating popular programs

Fortunately, there is a satisfactory answer for everyone. If there is a commitment to using this kind of data to perform deeper analysis and gain understanding of why the performance is what it is, then real program improvement can result, and everyone wins. In the previous example, for instance, further analysis and review led to questions about the location of the mobile HIV testing unit. The testing unit had been placed in the school parking lot, and students did not want to be seen going in. When the testing unit was moved to the parking lot of a nearby shopping mall, more students began to take the test. The answers obtained through performance management technology can lead to questions that may have nothing to do with the data contained in the system, but have everything to do with performance. Users have to be committed to looking beyond the data to uncover the full story.

Learn More about Technology

The GFOA is producing a Research Report that describes in detail the technical architecture for performance management technology and the considerations for implementation. E-mail Shayne Kavanagh at skavanagh@gfoa.org to be notified when the report is available.

Three Stages of Technology Resistance/Acceptance

- **Stage 1:** Users have the following reactions: I do not like it; it will not work; it creates more work; it will replace me.
- **Stage 2:** Partial acceptance by one or more individuals who see value in it and begin using the technology to make their jobs easier.
- **Stage 3:** Widespread adoption and acceptance as users see it as part of the day-to-day process.

Pothole 4 — User Resistance to Technology

User resistance can sabotage any technology-led innovation. This problem is not unique to performance management technology. People tend to dislike change, especially when it is perceived as an Orwellian effort to punish underperformers or eliminate their jobs. Avoiding the first three potholes will go a long way toward alleviating user resistance. If the system answers vital questions the performance information is used primarily for improving programs rather than sanctioning employees, interest in using the system will be piqued and one potential threat diffused.

The concern that jobs will be eliminated can be addressed by pointing out that a lot more time needs to be devoted to analysis than is currently possible, and gaining useful insights from performance data requires human ingenuity. For example, Oakland County, Michigan, has been developing its performance management capabilities since 1997. One of its projects involved developing analytical capabilities for land-parcel information to be used for property tax assessment. Before this project, county staff had needed 30 days to assemble a special study-area map. Now, it takes one day. County personnel now allocate about 80 percent of their work time to analyzing data and 20 percent to gathering data, whereas before this ratio was reversed. These efficiencies also allowed the county to eventually eliminate six clerical positions, but those reductions were made via attrition and transfers, not layoffs.

Performance management technology is different from many other kinds of technologies because it is used exclusively by top-level managers and possibly even elected officials, instead of operational personnel or mid-level managers.

Therefore, when looking for potential sources of resistance, one must also consider the specific concerns top officials might have. For example, elected officials might not trust a system if the aggregate or summary-level information they receive from it seems overly abstract. They may not find the reports compelling or, at worst, they could even view them as an attempt by staff to hide what is "really" going on. This problem can be solved by giving elected officials the ability to drill-down to the data underlying the composite indicators used to create the summaries.

These examples of resistance are by no means exhaustive. Resistance can come from any quarter, so anticipate it and address it.

Pothole 5 — A System Cast in Concrete

The only constant in the universe is change. Performance models change based on changes in political leadership, program mandates from federal or state government, and local issues, so the process and architecture must be adaptable. Failure to adapt will make the technology obsolete very quickly! Just as a road must be periodically patched, resealed, and even repaved, resources must be dedicated to maintaining the relevance of the performance management system.

Pothole 6 — Funding

One word says it all. Limited budgets will always be an impediment to the performance management ideal, since projects include costs for hardware, software, consultants, and, especially, manual effort to cleanse and organize data. The way around this pothole is to be realistic, not idealistic. Identifying a few key questions that can be answered with a reasonable level of effort will limit the initial investment required and lead to an early success that will generate momentum for further development. The key word is scalability — construct the system in pieces that can be expanded as demand increases. For example, do not buy powerful data presentation software before you know you can get to answers worth presenting. A fancy presentation can come later, after decision makers are excited by the quality of the information.

Pothole 7 — Cultural Incompatibility

Davenport found that to be effective, performance management technology must be backed by a culture that is dedicated to making decisions based on facts and figures. Performance management technology is going to be fundamental to the operations of this kind of culture, which will help the organization drive past the other potholes. People in such an environment are keen to ask meaningful performance questions; there is consensus on how the answers will be used; users welcome the prospect of technology to help them answer the questions; and there is a firm commitment to funding performance management technology adequately and consistently. This kind of culture is shaped by top management who demonstrate a personal commitment to data-driven decision making and fact-based management and demand the same from everyone else.

> **"In God we trust; all others bring data."**
>
> — W. Edwards Deming encapsulates what it means to have a data-driven culture

CONCLUSION

Advances in technology have created new opportunities for the public sector to make use of performance management, although technology alone will not answer all the human and organizational concerns that can act as a barrier. Anticipating and avoiding the potential problems will make for smoother ride and strengthen a government's capacity to analyze and improve the results it delivers to its constituents.

Notes

1. ERP systems are integrated financial and human resources systems. They are distinguished by their use of advanced technology, their wide range of functionality and modules, and the level of data integration among modules.
2. Thomas H. Davenport and Jeanne G. Harris, *Competing on Analytics: The New Science of Winning* (Boston, Massachusetts: Harvard Business School Press, 2007).

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