TBM Maturity Model
For Federal Agencies

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Introduction

It has only been a few budget cycles since the Office of the Federal Chief Information Officer (OFCIO) at the White House Office of Management and Budget (OMB) adopted the Technology Business Management (TBM) methodology to help manage the federal IT budgeting process. TBM holds great promise for improving technology management throughout the federal government.

However, it is important to note that this is a major change for CIO shops government-wide. To address some of the inevitable growing pains, TCG has developed a TBM Maturity Model to help agencies assess and manage their progress from their current state to fully leveraging the value of TBM. The model is complemented by our **6 Steps to Implementing Technology Business Management at Your Agency** white paper and the TBM Playbook[1] , which was developed by GSA and the Department of Education as a product of the latter's TBM implementation.

The model is a framework for assessing an agency's TBM maturity and for developing a precise set of actionable items to move agencies from the conceptual to the practical stage of TBM integration. The Maturity Model developed by TCG provides a holistic perspective, revealing multiple dimensions of an agency's TBM implementation, and offers a clear and detailed path toward achieving a high level of TBM maturity.

TCG has developed other white papers that discuss in detail how the maturity model allows agencies to effectively assess maturity, identify existing barriers to implementation, and formulate action plans in the areas of Leadership, Budgeting and Performance, Data Analytics, Technology, and Processes. You can find the collection of papers at www.tcg.com.

TCG believes that TBM can make government IT management better, faster, and more efficient. The purpose of TBM integration is to ensure that government IT is providing maximum value to taxpayers and to the mission.

TBM Maturity enables an agency to clearly communicate about the role IT plays in fulfilling its mission by:

- **Informing effective benchmarking** within and across agencies;
- **Moving agencies beyond compliance** and leveraging TBM and budget forecasting beyond what is required in the OMB guidance for better internal management;
- **Getting better, more informed decision making** from leadership; and
- **Producing more granular and reliable data** to support analytics and budget scenarios.

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[1] **https://www.cio.gov/How-to-win-with-Technology-Business-Management**/ #7 Keep Maturing the TBM Implementation

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TBM Vision

The Maturity Model developed by TCG moves agencies beyond a surface-level focus on TBM-specific systems or components in the Office of the Chief Information Officer and identifies the values and key factors that will drive agencies to push their practice to the next level. TBM implementation involves asking difficult, crucial questions about an agency's current practices.

For instance:

- How is the CIO working with the Chief Financial Officer (CFO) and Chief Administrative Officer (CAO) to link existing processes to TBM processes?

- How reliable is the information that organizational leaders use to make important decisions?

- How are agencies dealing with changes to existing CPIC practices and data structure?

The number of stakeholders involved and the different perspectives of various leadership teams create challenges in communicating effectively about questions like these.

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The maturity model provides a framework for communicating about the existing barriers and establishes a plan of action that will:

- **Collect high-quality** granular data using the **TBM taxonomy**;

- **Provide access and analytics** through a user-friendly portal to all relevant stakeholders;

- **Forecast future needs** (cost) and be able to provide budget scenario analysis;

- **Make budget decisions** and meet reporting requirements from GAO and OMB, eventually moving agencies beyond compliance to raise standards for internal management controls; and

- **Compare spending** using the TBM taxonomy with other similar government agencies to identify areas of potential improvement and drive cost savings for the organization.

What is the TBM Maturity Model?

In the TBM Maturity Model (shown below), maturity levels are represented in each column of the matrix, primary focus areas are in each row, and individual maturity stages intersect each focus area and maturity level. Figure 1 shows the TBM Maturity Model with the maturity levels (Novice, More Mature, Mature, and Leveraged) as well as the focus areas (Leadership, Budget & Performance, Data Analytics, Technology, and TBM Processes).

Figure 1

TBM Maturity Model

Focus Areas	Maturity Levels			
	Novice	**More Mature**	**Mature**	**Leveraged**
Leadership	No Leadership Buy-In	Clear IT Providers	Cost/Decision Transparency	Mission Focused Investment
Budget & Performance	Unreliable Metrics	Established Standard	Efficiency Gains	Budget Scenarios
Data Analytics	Ad Hoc & Reactive	Standards Developed	High Data Quality	Robust, Predictive Analytical Models
Technology	Key Features	Data Tools and Managment	Key Development Goals	Integrated & Modern
TBM Processes	Manual	Aligned	Automated	Efficient

Figure 1 represents the maturity model at a high level. At a more detailed level, each maturity stage has a definition and set of associated attributes. An agency appraises itself against these attributes to identify its maturity level for each focus area. Based on these attributes, standard methodologies and common solutions exist to address each issue or maturity gap. Below we summarize each focus area, the goal of each focus area, and provide examples of common issues addressed using the maturity model. (Additional **white papers** explore each of the focus areas in greater detail.)

1 Leadership

In this focus area, TBM methods are assessed to inform executive decision-making and produce policies and procedures that ensure proper guidance and oversight.

Q: How is IT leadership incorporating the insights of organizational leaders from across the agency into their decision making process?
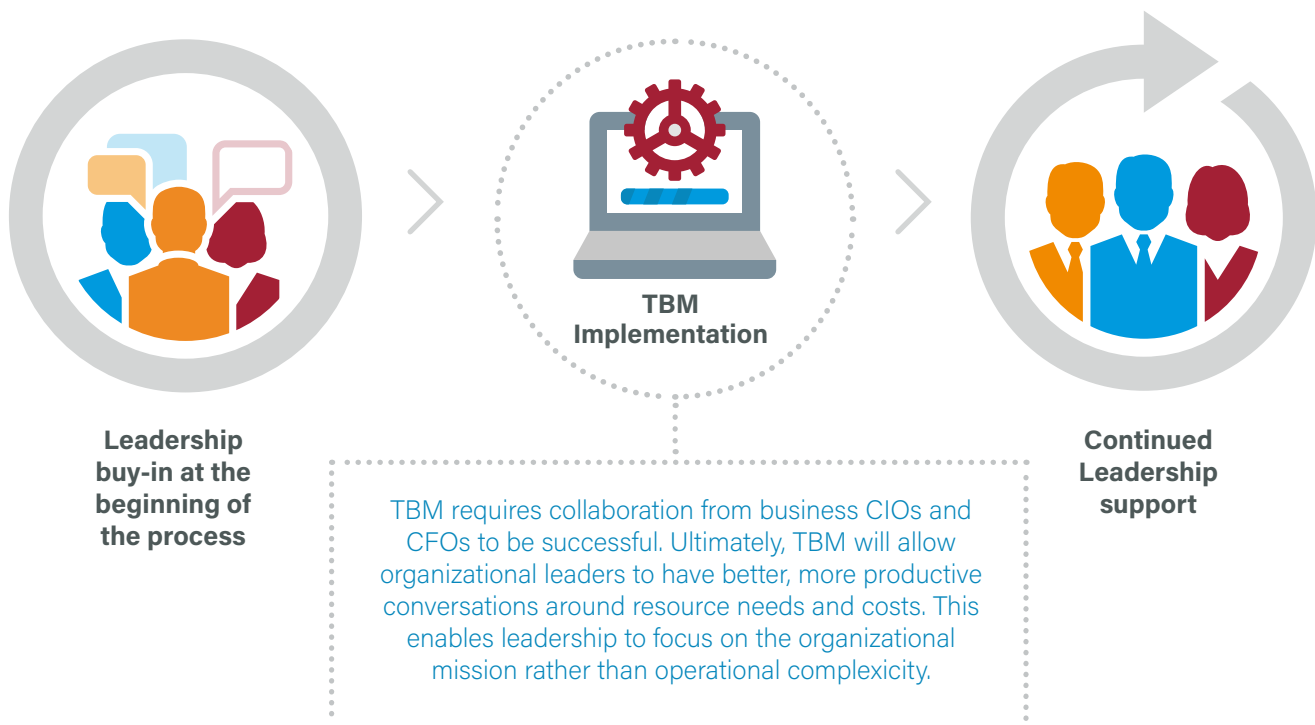
A: The goal of the leadership focus area is to champion TBM as an organizational tool to help drive the necessary changes that a TBM implementation entails. In addition, it is the role of leadership to ensure that the value proposition of TBM is realized.

Example:

At a mature level of leadership buy-in, TBM is incorporated into standing management practices at a foundational level. More succinctly, TBM should become the foundation for IT discussions within an agency. For instance, the standing agendas for IT budget-related meetings (CCB, IRB, IT leadership, etc.) should include regular discussions around performance on TBM benchmarks, and the results of these discussions would be used to prioritize future IT activities. For CIO staff, the result is that actual spending are used to determine working capital fund contributions in collaboration with department heads across the organization.

Figure 2

Roles of organizational leaders in sponsoring and leveraging TBM within their agencies.

Leadership buy-in at the beginning of the process

TBM Implementation

Continued Leadership support

TBM requires collaboration from business CIOs and CFOs to be successful. Ultimately, TBM will allow organizational leaders to have better, more productive conversations around resource needs and costs. This enables leadership to focus on the organizational mission rather than operational complexicity.

2 | Budgeting and Performance

This focus area assesses how the organization efficiently derives value from investment in IT and enables the organization to fulfill its mission.

Q: How can agencies use current spending trends from their organization as well as others to improve budget decisions?

A: The goal of the budgeting and performance focus area is to provide the metrics needed to ensure efficiency and to drive the right budget decisions for the organization.

*"If you can't measure it, you can't improve it."*

– Peter Drucker

Example:

TBM enables benchmarking by providing a standard taxonomy. This means that calculation of metrics will be standardized across organizations. This reduces the risk of apples-to-oranges comparisons. Agencies can leverage existing resources from ACT-IAC and other organizations. ACT-IAC provides over 100 metrics that can be used for benchmarking across and within federal agencies.[2]

Figure 3

Using current spending trends – along with budget assumptions and known performance issues— helps inform IT priorities and develop a more accurate budget forecast.

| Review current spending trends using TBM Taxonomy | Make adjustments | Review benchmarks | Create accurate budget forecast |

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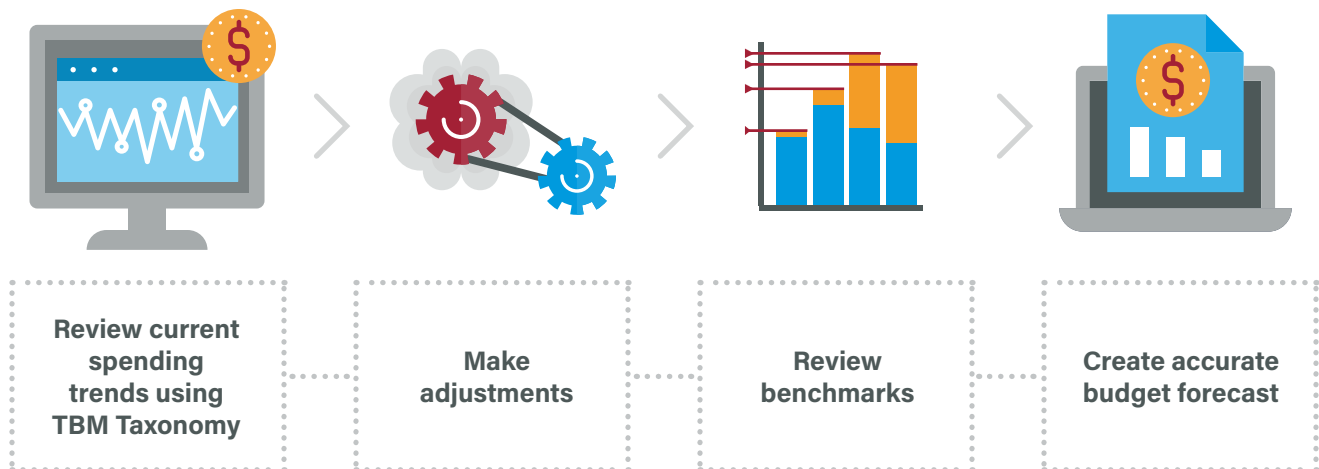
[2] **Federal IT Cost Commission Report**, B1

3 Data Analytics

In this area we assess how well data is managed and "put to work" within an agency.

Q: What can an agency do to get the most out of their improved data?

A: The goal of the data analytics focus area is to ensure that data is analyzed and presented in the most effective way to drive the decisions the organization makes.

Example:

There are several different cloud computing options (SAAS, PAAS, IAAS, etc.) that IT managers have to consider when evaluating the most cost effective options for managing their systems. Currently, the data is aggregated from vendors. Consequently, it is difficult to create apples-to-apples comparisons because the services provided and the additional support needed within organizations differ depending on the type of service. However, using the granular data that organizations receive when vendors submit invoices in the TBM taxonomy, IT managers can make direct comparisons to properly evaluate the best cloud computing options.

Figure 4

One of the benefits of granular data is to help inform where the best cost savings can be found when choosing cloud computing platforms and their different offerings.
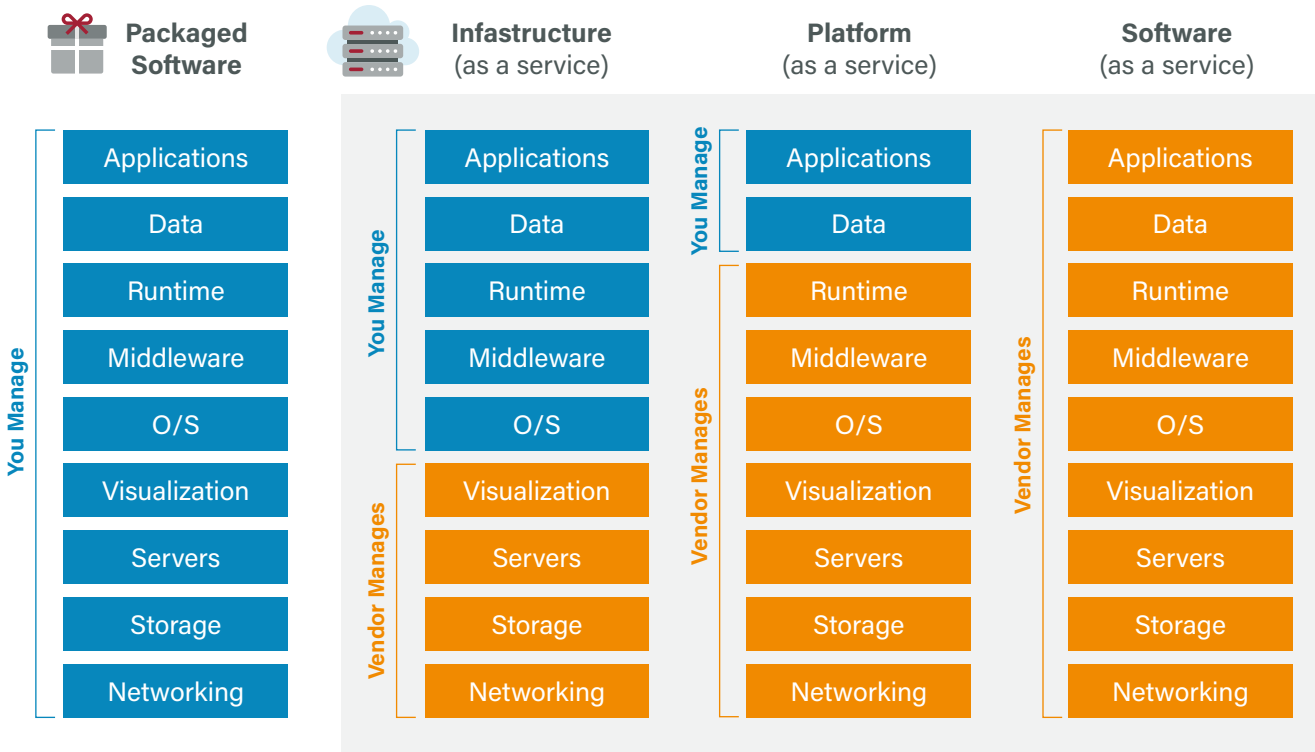
4 | Technology

In this area we assess how well technology is leveraged to further automate processes and make information easily available to business users and other decision-makers.

Q: Do front-end and back-end interfaces support user data, analytical, and decision making needs?

A: The goal of the Technology focus area is NOT to identify the best TBM tool! Instead, the goal is to enable effective and efficient systems to support the other focus areas with minimal manual intervention.

Example:

Agencies need to ensure that technology interfaces actually support the business. This means establishing connections between different systems to create an ecosystem of tools that allow different offices within an agency to retrieve reliable and accurate data.

Such an ecosystem might include but certainly would not be limited to:

- An interface to ensure that CIOs can easily pull IT spending information and TBM taxonomy information from the financial system; and
- Timesheets that reflect the systems that are being worked on as well as the amount of time worked.

Figure 5

Existing systems can be updated to provide important, granular data to populate TBM data.

| Current company system | TBM system | Submission for data analytics, decision making |

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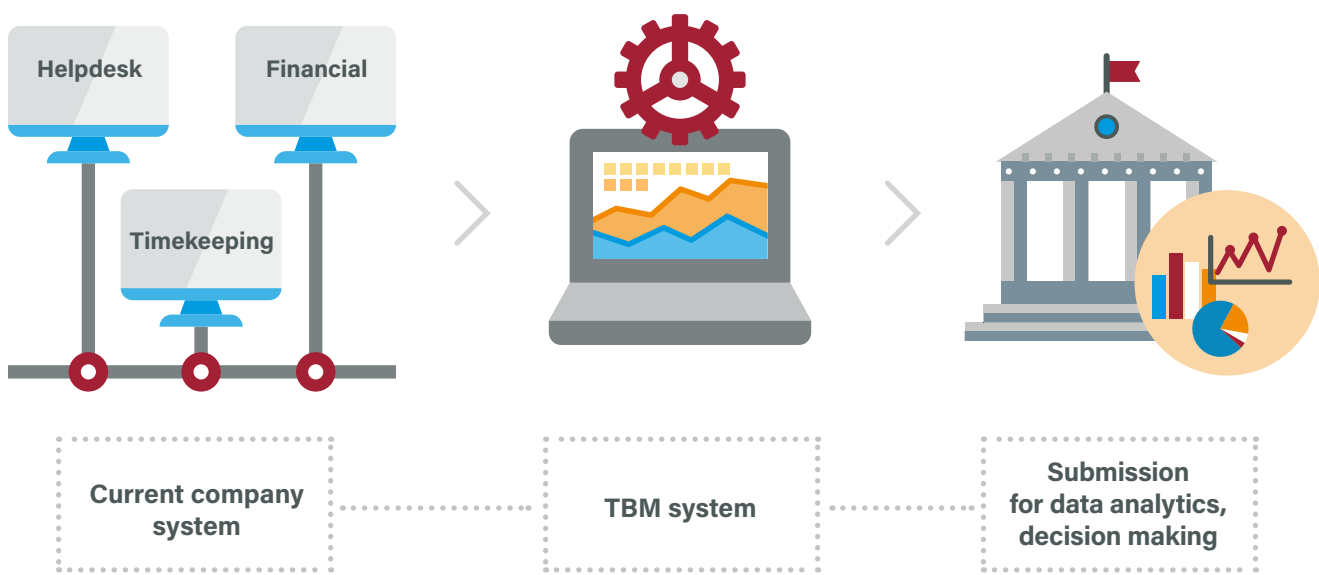
5 | Processes

In this area we assess how well processes are integrated and streamlined across organizations within the agency.

Q: How can agencies enhance and combine existing business processes to support TBM-data-collection activities?

A: The goal of the Process focus area is to define a single, cross-organizational process that provides the organization the ability to collect granular IT spending data for all organizational stakeholders including OCIO, OCFO, and departmental budget staff.

Example:

Mature processes bring together all the stakeholders and ensure that proper data is being collected through contractor invoice procedures. These procedures are vital because they allow stakeholders to see the granular data and the big picture of aggregated numbers. The primary goals of the process focus area are to establish the collaboration necessary for proper invoicing procedures and to ingrain the use of TBM metrics into the decision-making processes of the organization.

Figure 6

Departments across the agency should collaborate on a single process to gather and use granular data.

Finance

IT

Other stakeholders

TBM process

Fresh, accurate, granular, and reliable data
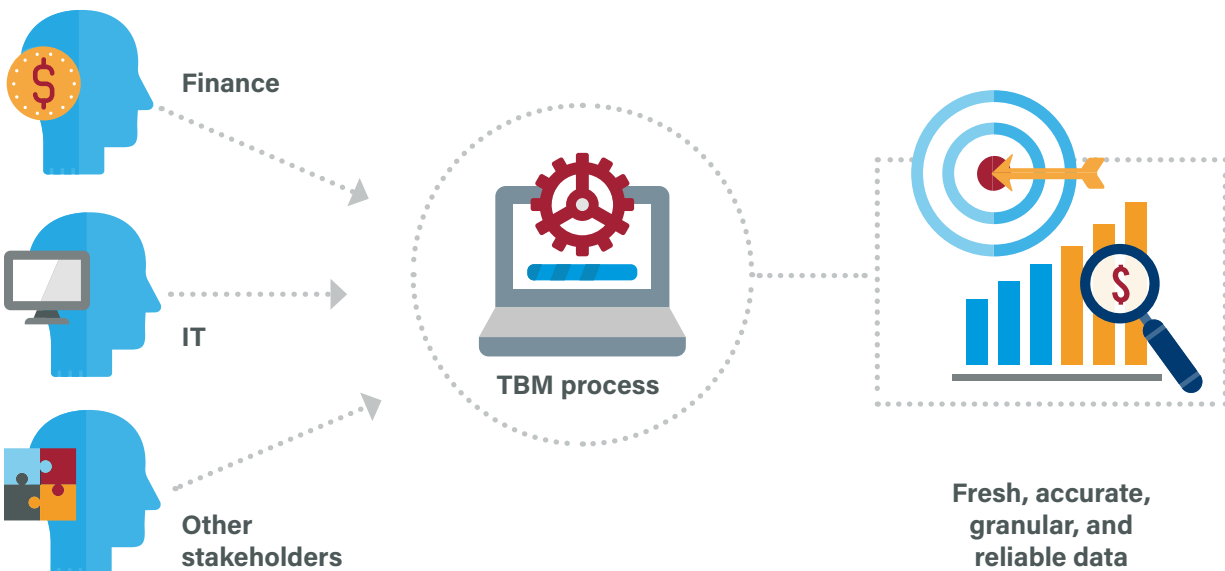
How to use the TBM Maturity Model?

The TBM Maturity Model is specifically designed to foster continuous improvement by highlighting discrete, actionable interventions that government managers can make. The bar diagram (Figure 7) depicts a notional assessment of an agency's maturity in each of the focus areas.

This is the kind of visualization that will be created for an agency after assessment and that can be shared with relevant stakeholders. While the exact visualization created through the assessment phase will differ, the perspective shown in Figure 7 depicts where an agency currently stands and where it needs to improve to more fully leverage TBM. In other words, it allows agencies to understand the gaps between their current state and a more fully leveraged state.

Figure 7

Bar diagram showing notional assessment results using the TBM Maturity Model.
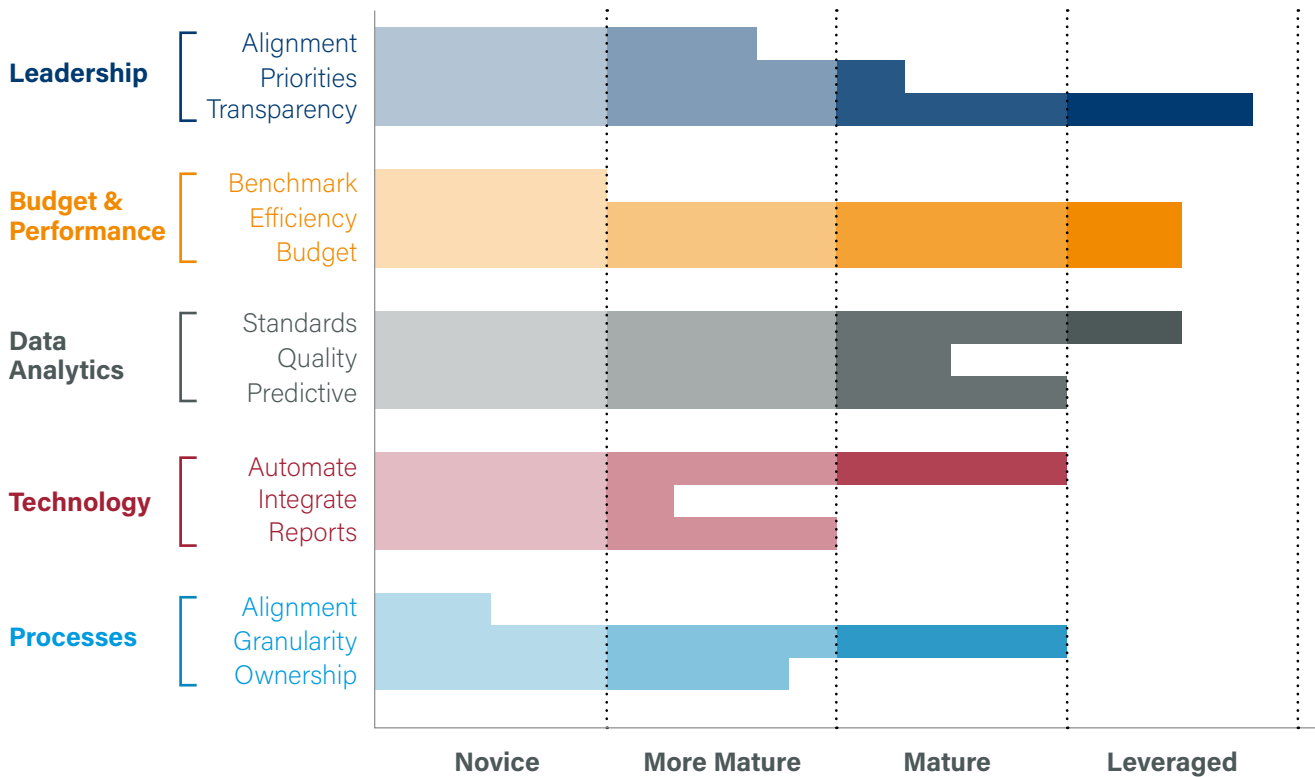
Once these gaps are identified, agencies can then begin to ask questions and identify next steps. For instance, in Figure 7 the agency could identify the fact that they collect fairly granular data from their current processes, and that they need to improve cross-organizational dynamics. This might lead the agency to create a single process to align the different areas of the organization.

With this realization, specific actions can be isolated and carried out such as holding meetings to create a cross-organizational project plan to set up the process. Isolating these initial actions is the first step in creating an implementation roadmap.

Similarly, leadership transparency is assessed at the More Mature level, which is better than Novice but still an area that needs to be improved. This might indicate that the organization needs to incorporate the ongoing discussions of IT delivery at the leadership level to maximize IT value. These conversations serve as a framework to examine current spending patterns for existing services, potential strategies for deriving additional value from those services, and include a detailed analysis of actual costs.

Conclusion

TCG is not the only organization that has generated a TBM Maturity Model. There are a number of excellent maturity models available from TBM Council members and other practitioners. Our goal has been to produce a model that offers concrete and actionable steps to help expedite an agency's journey to TBM maturity.

The goal of the TCG Maturity Model is to close the gap between conceptual models and implementation steps by providing a framework that can be used as an assessment tool, to shine a light on gaps, and to define a pathway based on common, proven solutions.

If you have questions about the maturity model or would like more information on how to use it, please contact **tbm@tcg.com**. We look forward to hearing from you!

Other Resources

Visit **www.tcg.com** for additional information on implementing TBM at your federal agency.

- **A TBM Maturity Model For Federal Agencies - suite of papers**

- **Ready or Not, Here it Comes: Prepare for Technology Business Management**

- **Six Steps to Implementing Technology Business Management at Your Agency**

- **www.tcg.com** | Keyword:tbm

- For assistance or questions about implementing TBM at your agency, contact **tbm@tcg.com**.

About TCG, Inc.

TCG aims to improve the world around us, in big and little ways, every day, for our staff, clients, and community. TCG provides the federal government with positively distinct IT and management advisory services in Agile development, Technology Business Management, federal shared services, budget formulation and execution, and health science analytics that help government programs and America succeed.

TCG played a central role in supporting the roll-out of TBM across the Federal government. Our consultants helped create and distribute the policies agencies are now using to improve their management of IT investments, and our insights into IT spend data underpinned government's evolution towards TBM. As early members of the TBM Council, TCG was at the forefront of understanding and interpreting TBM principles for the federal government context.

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