



6 Steps to Implementing Technology Business Management at Your Agency



William Hough, Program Manager
January 2019

INTRODUCTION

You've likely started, or are about to start, your agency's transition to use Technology Business Management (TBM)¹ to manage IT investments. When starting the transition to TBM, agencies often find themselves with more questions than answers about their investments and about TBM itself. This white paper provides the fundamental building blocks needed to implement TBM at your agency.

In addition to meeting the objectives set by the President's Management Agenda² and the Office of Management and Budget, implementing TBM will give your agency greater transparency into its IT investments.

The six steps outlined in this paper cover the discovery, implementation, and evaluation activities that are key to launching a TBM program, and provide a path to see the

incremental value that TBM delivers soon after you start implementation. The insights gained from following these six steps will point to other opportunities for improvement, and add powerful decision-making tools for your agency.

¹ Technology Business Management (TBM) is an expense and budgeting framework and methodology that brings together an organization's finance, IT, and business stakeholders to bring transparency and insight into information technology investments.

² The President's Management Agenda (PMA) is the President's strategy for improving the management and performance of the federal government.

Identify stakeholders

TBM is, at its core, necessarily a collaboration between the Chief Financial Officer (CFO), the Chief Information Officer (CIO), and Mission/Business Owner³ functions. To achieve a successful and efficient implementation, organizations must be in lock-step agreement on goals, priorities, and the processes used to achieve them.

They must build on one another's expertise to define an optimal solution that is best for the organization as a whole and leverages the investment in TBM for real benefit rather than just compliance with mandates. Selected stakeholders must help drive different parts of the effort and be ready to provide required information.

Any organization embarking on TBM should form a stakeholder team.

It is wise to consider candidates from:

- **The CIO organization**, and any **distributed IT organizations** (if they exist)
- **The CFO organization** (Finance and Budget)
- **Key Mission Business Owners**
- **IT Program and Project Managers**
- **Financial analytics SMEs** that may exist within the mission organizations
- **Contracts/Procurement and Accounts Payable**

Stakeholders should be given training in the fundamentals of TBM, including the **taxonomy and the model**, and provide dedicated time to the effort. A good place to find resources for newcomers is the TBM Council website (www.tbmcouncil.org). Stakeholders' first assignment should be to define the metrics and goals of the TBM effort as outlined in Step 2.

³ Within the Agile software development approach, the Business Owners are a small group of stakeholders who have the primary business and technical responsibility for governance, compliance, and return on investment (ROI) for a Solution developed by an Agile product release.

STEP 2




Identify metrics, reports, and goals

Metrics and clearly defined goals are at the heart of TBM. They promote transparency and are drivers of the insights that will generate value throughout the TBM process. Thus, it is critical to validate existing metrics/reports and goals to identify the right set of additional metrics and perspectives early in the process to avoid costly rework or missed opportunities.

As TBM is a collaboration between the CFO, CIO, and Business Owner functions, joint solutions design meetings are a valuable technique to define what metrics to report and which goals to strive for. These are similar to Joint Application Design (JAD)⁴ sessions



but focus on solutioning as opposed to technical requirements. This joint approach enhances stakeholder alignment and fosters creativity and collaboration as a team. It also leads to less stakeholder time spent reworking and reacting to the ideas of other stakeholders.


At the highest level, the organization of the joint sessions consists of three phases:

-  Preparation and framing before the solutions design meeting
-  The solutions design meeting itself
-  Refinement and confirmation after the solutions design meeting

The following table highlights the activities that should be carried out in each phase of Step 2. In addition to creating a comprehensive list of selected metrics and their attributes (a Metrics Catalog), at this stage it is appropriate to begin creating a TBM maturity roadmap to use in later phases of the work.

⁴ Joint Application Development (JAD) is a methodology that involves the client or end user in the design and development of an application, through a succession of collaborative workshops called JAD sessions.

Phase	Activities
 <p>Preparation and framing</p>	<ol style="list-style-type: none"> 1. Identify the executive sponsor(s) and discuss the process with them. 2. Identify and finalize the list of stakeholders. 3. Facilitate brief iterative sessions with stakeholders to identify existing metrics, measurements and Key Performance Indicators (KPIs), and any known desired metrics. 4. Prepare a “thought-jogger” of metrics used at other organizations and metrics already in place. 5. Select and schedule a time for the session and handle tactical logistics such as location, A/V, etc. 6. Prepare a package for each participant (including the “thought-jogger”), what to expect during the solutions design meeting, and logistics.
 <p>Solutions design meeting</p>	<p>A solutions design meeting is a structured requirements elicitation and elaboration session with a facilitator and a scribe. The session is designed to efficiently identify and gain consensus on the metrics that will guide the TBM effort.</p> <p>The goal is to define additional factors for each metric such as:</p> <ul style="list-style-type: none"> ▪ Audience ▪ Frequency ▪ Primary intended use(s) ▪ Initial thoughts on data sources and possible gaps <p>To maximize participants’ time, the team should designate follow-up individuals (designees) for each metric who can provide more detailed insight into data sources and gaps. Depending on the organization, the session should be scheduled for at least two hours and stakeholders should be prepared for the possibility of a follow-up session if more than two hours is required.</p> <p>Unlike individual stove-piped interviews, the session creates common understanding and agreement between the stakeholders, which means nuances will be captured. This approach minimizes the amount of time required by the stakeholders outside the meeting to gain consensus/approval. Stakeholders should also be provided a point of contact to whom they can communicate additional thoughts they had after the meeting that may bear on the metrics or views themselves.</p>

Phase	Activities
 <p>Refinement and confirmation</p>	<p>Because the solutions design meeting results in alignment and consensus, the time after the solutions design meeting is not spent on coordinating multiple meetings or discussions among stakeholders to achieve that consensus. Rather, the time after the meeting can be spent solidifying details such as data sources and gaps (although not an exhaustive or overly-detailed set of gaps at this juncture). This is achieved through discussions with the identified designees in brief, iterative refinement sessions that allow time for “homework” and research into finer details to maximize the efficient use of the delegates’ time.</p> <p>After the meeting is the time to:</p> <ul style="list-style-type: none"> ▪ Organize the notes ▪ Solidify data source details with designees to determine the list of data inputs required to generate each metric (this begins to inform the data gap analysis task of the methodology) ▪ Gather and integrate thoughts that came up after the meeting ▪ Document and recommend a single set of metrics. This will include: <ul style="list-style-type: none"> - The frequency with which each metric will be reported - The audience for each metric ▪ The list of the data input(s) needed to generate each metric ▪ Present to a group or individually gain approval from stakeholders and CIO representatives, whichever fits better with the stakeholders’ schedules ▪ Based on that input prepare a Metrics Catalog

STEP 3

Conduct spending data sources gap analysis and refine existing data taxonomy

This work focuses on the metrics/goals that were identified in Step 2 that have gaps in data sources. It will not focus on existing metrics, reports, visualizations, and goals that are suitably fulfilled in the existing environment.

Data gaps come from a variety of sources and depend—to a great extent—on the situation at the organization.

A few common examples we have encountered include:

- Insufficient rigor or granularity in timekeeping and/or time attribution
- Additional data tagging/allocation of license/infrastructure costs
- Contracts that never anticipated TBM taxonomies and therefore do not include Contract Line Item Numbers (CLINs) or require invoice reporting at the needed level of granularity/tagging
- Lump sum costs that need allocation according to an agreed model

Starting with the data sources and high-level gaps identified in Step 2, the goal of this step is to identify gaps in data availability and/or data tagging/attributability at a detailed level and associate them with sources in the Systems-of-Record.

To initiate this process, first generate a metrics collection framework that is part of the Metrics Catalog. Create a “prototype” of each metric, identifying sources and how it might be derived in an ideal setting.

This will structure the framework in such detail (e.g. where one intends to look and what one intends to determine) that content and comments can themselves be more detailed and actionable. It is valuable to include sufficient detail on the artifacts that you will be requesting, as well as the proposed interview candidates, that stakeholders can comment proactively.

Next, identify, obtain, and analyze relevant financial and asset data artifacts, and conduct the appropriate interviews to identify sources and gaps for each “perfect world” metric scenario. Simultaneously, identify intermediate allocation schemes or other approaches that will be beneficial in achieving partial maturity of the metric.

Rate the data fields and/or sources in terms of (at a minimum):

- Confidentiality
- Integrity
- Availability
- Timeliness

As part of this work, the team will naturally conduct a high-level systems analysis of data structures and interfaces of systems providing the source data.

They can create a document describing the data gaps and additional data required to create the TBM metrics, and any observations around the data in terms of:

- The four criteria above;
- Partial maturity approaches to be considered (e.g. allocations where granular attribution is not immediately possible); and
- Analysis of the systems/technology used to produce the data in terms of its data structure and capability to support desired analyses and interfaces (rather than underlying technologies).

STEP 4

Recommend structural changes and define associated criteria based on TBM structure and processes

The scope of the evaluation in this step is across the entire IT investment portfolio, including all direct and indirect functional support, operations, and maintenance. Evaluation should include financial management and TBM structure, and produce recommendations for changes and process improvements for efficiency, effectiveness, and transparency of IT spend. The TBM structure should be assessed using data gathered from previous steps and by developing additional data models and a roadmap.

The evaluation of basic financial processes and their related systems will have been completed as part of Step 3. However, the additional evaluation of structure and other TBM processes in this Step is organized according to the focus areas in the **Maturity Model** itself.

Structural evaluation and any proposed changes will be based in the criteria in the table below. This criteria focuses on consistently improving maturity while prioritizing “low hanging fruit” and “biggest bang for the buck” structural changes to inform prioritization in the roadmap:

Focus Area	Sample Criteria
Leadership	<p>Assess the maturity of using TBM to inform whether decisions at the highest level are delivering value, and produce policies and procedures to ensure proper guidance and oversight:</p> <ul style="list-style-type: none">▪ Can every stakeholder clearly agree with, support, and draw a line to the structural components and cost allocations aligned to their mission or functional area?▪ Is there ambiguity for stakeholders?▪ Are we burdening other groups in the organization?▪ Do the services represent all key service components?▪ Are there organizational components for each mission area?▪ Are we enabling the agency's mission?▪ Are there clear goals for what the CIO hopes to achieve in different service lines?▪ Are our decisions providing the value we expected?

Focus Area	Sample Criteria
<p>Budget and Performance</p>	<p>Assess the maturity of how the organization derives value from its investment in TBM:</p> <ul style="list-style-type: none"> ▪ Would a structural change provide required granularity or additional transparency that would lead to an actionable view of the data? ▪ Would a structural change provide flexibility to easily support other related changes in the organization that might occur in the future? ▪ Is there a question we wish to answer that we simply cannot answer utilizing the current structure? ▪ What items belong in an IT Bill of Services to drive performance, behavior, and transparency? ▪ How are we performing against similar agencies? ▪ Which internal departments have spending outliers? ▪ Are we spending more for premium-level service when the standard-level will meet our needs? ▪ Are there lower-cost alternatives that provide the same features? ▪ What assumptions can we make about work that will need to be done in the next few years? ▪ What are the trade-offs that need to be considered given our budgetary restrictions?
<p>Data and Analytics</p>	<p>Assess how well data is managed and “put to work” within an agency by supporting decision-making through automated reporting, improved data quality, and increased insights using advanced data tools:</p> <ul style="list-style-type: none"> ▪ Is the current structure causing allocations of costs that “muddy” the picture and make data unreliable or open to disagreement? ▪ Are there underlying issues with the way the data is collected that cannot be altered and render some part of the structure ineffective (e.g. laws, regulations, organizational boundaries, contractual terms, etc.)? ▪ Are there reasonable allocations that can be supported by stakeholders to achieve interim maturity while more detailed changes to underlying data are considered? ▪ Is there a definitive source for the data for each metric in the catalog? ▪ Is the data collected in a timely enough manner to support necessary regular metric reporting? ▪ What is the appropriate aggregation and attribution method for each type of cost (e.g. population-based attribution, consumption, even distribution, etc.) ▪ Is there a way to aggregate data that retains the value while better facilitating “apples to apples” benchmarking? ▪ How much would next year’s budget be if current trends continued? ▪ What assumptions can we make to inform next year’s budget?

Focus Area	Sample Criteria
<p>Technology</p>	<p>Assess how well technology is leveraged to further automate processes and make information easily available to business users and other decision-makers:</p> <ul style="list-style-type: none"> ▪ Are interfaces cumbersome, manual, or unreliable? ▪ Does the source data system(s) collect the data at the correct level and is it tagged with reliable TBM attributions? ▪ Can techniques be used to configure (but not necessarily customize) source systems to easily provide the right attributions/granularity going forward? ▪ Are there ways to leverage configurations in systems to provide simplified collection and reporting at the cost pool and tower levels to avoid relying heavily on manual workarounds? ▪ Can we see a basic breakdown of our current IT spending using the TBM taxonomy?
<p>TBM Processes</p>	<p>Assess how well processes are integrated and streamlined across other organizations within the agency. In addition, this focus area looks at how to effectively define the underlying TBM process based on organizational structure and available resources:</p> <ul style="list-style-type: none"> ▪ Would a structural change simplify the process of cost allocation while making no difference to the decision-making? ▪ Would a structural change simplify the process of reporting up through the hierarchy, eventually ending with OMB, and make no difference to decision-making? ▪ How well do cost pools and IT towers reflect the TBM taxonomy as laid out by the TBM Council (and potentially modified by the agency)? ▪ What is the right allocation and attribution of costs to fulfill OMB reporting requirements? ▪ Can accommodations be made with contractors to provide further granularity in invoicing to support TBM?

STEP 5

Consolidate results of the previous steps into a current-state maturity evaluation and create a prioritized roadmap

At this point the first draft of the roadmap is finalized and a “dashboard” view of progress against achieving TBM goals is created. The roadmap will have a prioritized structure that readily identifies the most important maturity goals, appropriate intermediate steps to full maturity (e.g. allocation schemes as opposed to full cost attribution and tagging), and ultimately what success looks like in each roadmap workstream. At the highest level, the dashboard will be a visualization of maturity that relies on underlying data from the roadmap.

This underlying data should track:

- **Prioritized maturity goals** (with weightings to inform the visualization and a Maturity vs. Importance metric to help identify the “biggest bang for the buck”)
- **Steps required to achieve those goals**, including gaps and system/process modifications to be identified in later tasks (as well as intermediate steps to full maturity)
- **Timeline for each step and goal** (to be improved and adjusted in later tasks)
- **Responsible individuals**

STEP 6

Execute on a prioritized roadmap

Executing on the roadmap begins an ongoing, iterative process of integrating TBM into your agency's core processes. Weaknesses discovered by the gap analysis in Step 2 are addressed in prioritized order, improving the quality and collection of data. At this point TBM becomes an iterative process of testing new methods and processes. Begin by "test driving" the process and getting people involved.

Regular reports should be created on available metrics as well as progress on implementation of TBM itself. These reports should be shared with all stakeholders. Metrics form the basis for action to improve the visibility, timeliness, and quality of information at every level of the taxonomy.

As this process continues, your agency will begin to see incremental value accrue vertically (as executives and managers gain greater insight into the true costs and value of IT spending in actionable ways) and horizontally (as the quality of practices, models, and processes improve). The incremental increases in value will build support over time.

WHAT'S NEXT?

Take the first step! If you can't execute the six steps for the entirety of your IT spend, select a subset or a component organization and execute the steps there. Maybe you can only pick one critical data analysis or report that would provide significant insight and work on that.

If you can get your arms around the entire IT spend but can't work your way through the completion of the prioritized roadmap, use estimated allocations until you have the time to work your way through it and be clear in your reporting that you have done that for now. When the mission, financial and IT leadership teams see the incremental value of TBM, they will want more.

Other Resources

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

- [**TCG's TBM Maturity Model for Federal Agencies**](#)
- [**Ready or Not, Here it Comes: Prepare for Technology Business Management**](#)
- www.tcg.com Keyword:tbm
- For assistance or questions about implementing TBM at your agency, contact [**tbm@tcg.com**](mailto: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.

[**www.tcg.com**](http://www.tcg.com)

7348 Georgia Avenue NW
Washington, DC 20012

[**talktous@tcg.com**](mailto:talktous@tcg.com)

202-986-5533

@TCGnews