Technology Business Management (TBM) Overview

Kevin Coyne

Director of Technology and Services

Bureau of Industry and Security

U.S. Department of Commerce

Agenda

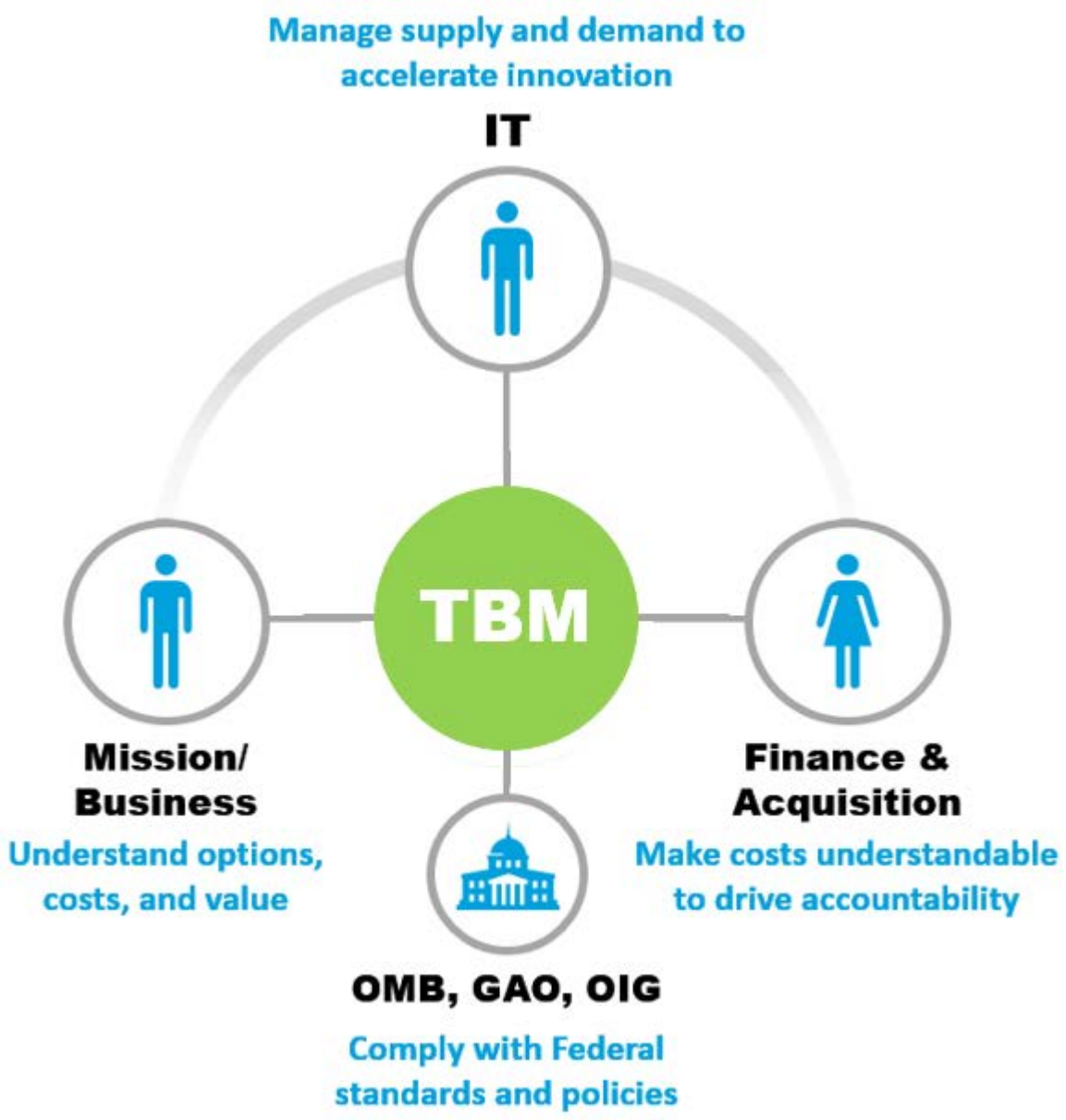
- What is TBM?
- Who is TBM for?
- How we got here…
- TBM adoption
- TBM Stakeholder Support and Process Integration
- What are example TBM processes?
- Tools of TBM
- TBM Data Requirements
- TBM and OMB eCPIC reporting requirements

What is TBM?

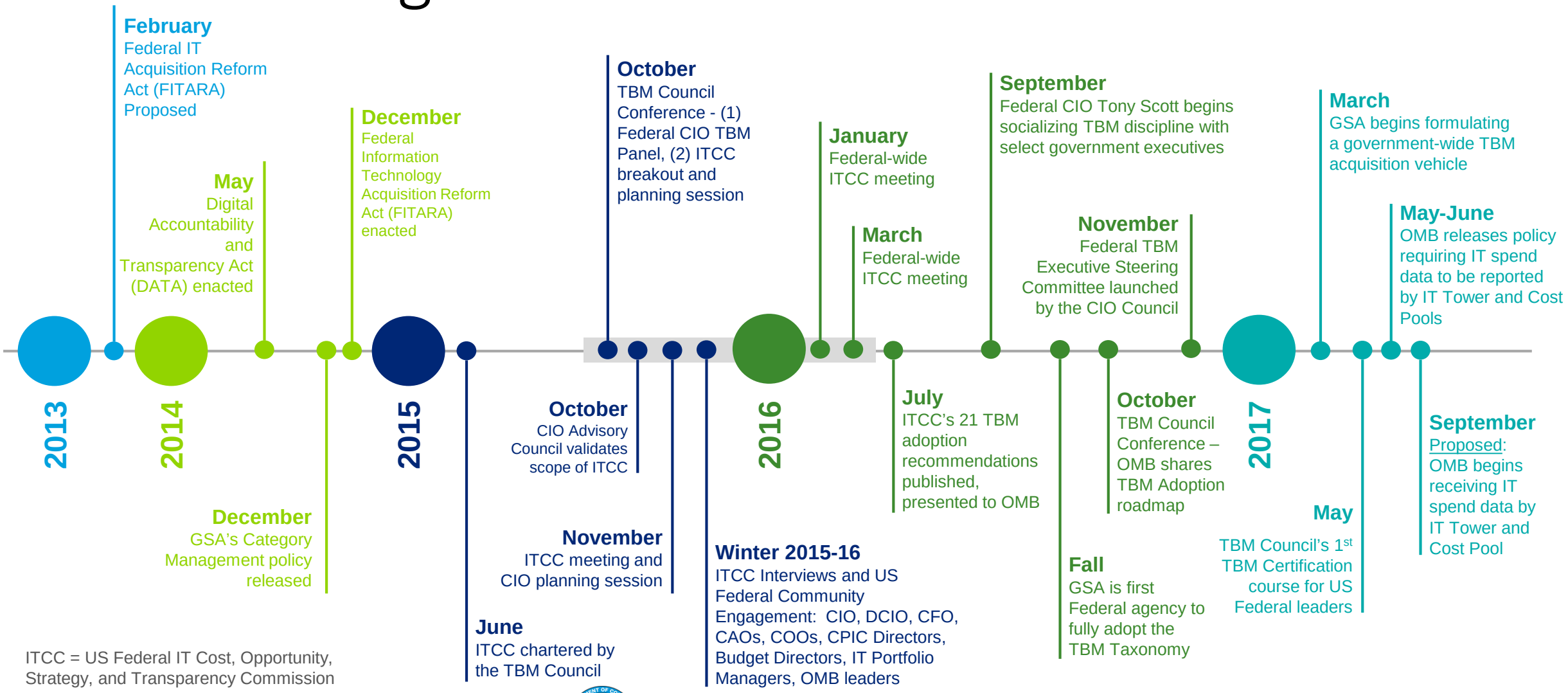
- TBM defines a **business model and decision-making framework** which enables IT to run as a business.
- TBM provides IT organizations with the solutions—strategies, methodologies, and tools—to **manage the cost, quality, and value of their IT services.**
- TBM was instituted by CIOs, CTOs, CFOs, and other technology leaders. **Founded on transparency of costs, consumption, and performance**, TBM gives technology leaders and their business partners the **facts they need to collaborate on business-aligned decisions.**

TBM Benefits

- **Optimize:** Continuously **improve the unit cost of technologies** and services while keeping cost and quality in proper balance
- **Rationalize:** Better **focus of time and resources** on the services, applications, technologies and vendors that drive the most value
- **Innovate:** Mission/business and IT **partnership that ensures maximum value** from technology investments
- **Transform:** **Provide mission/business partners with agility** to "pivot" more quickly to exploit innovation and capitalize on new opportunities

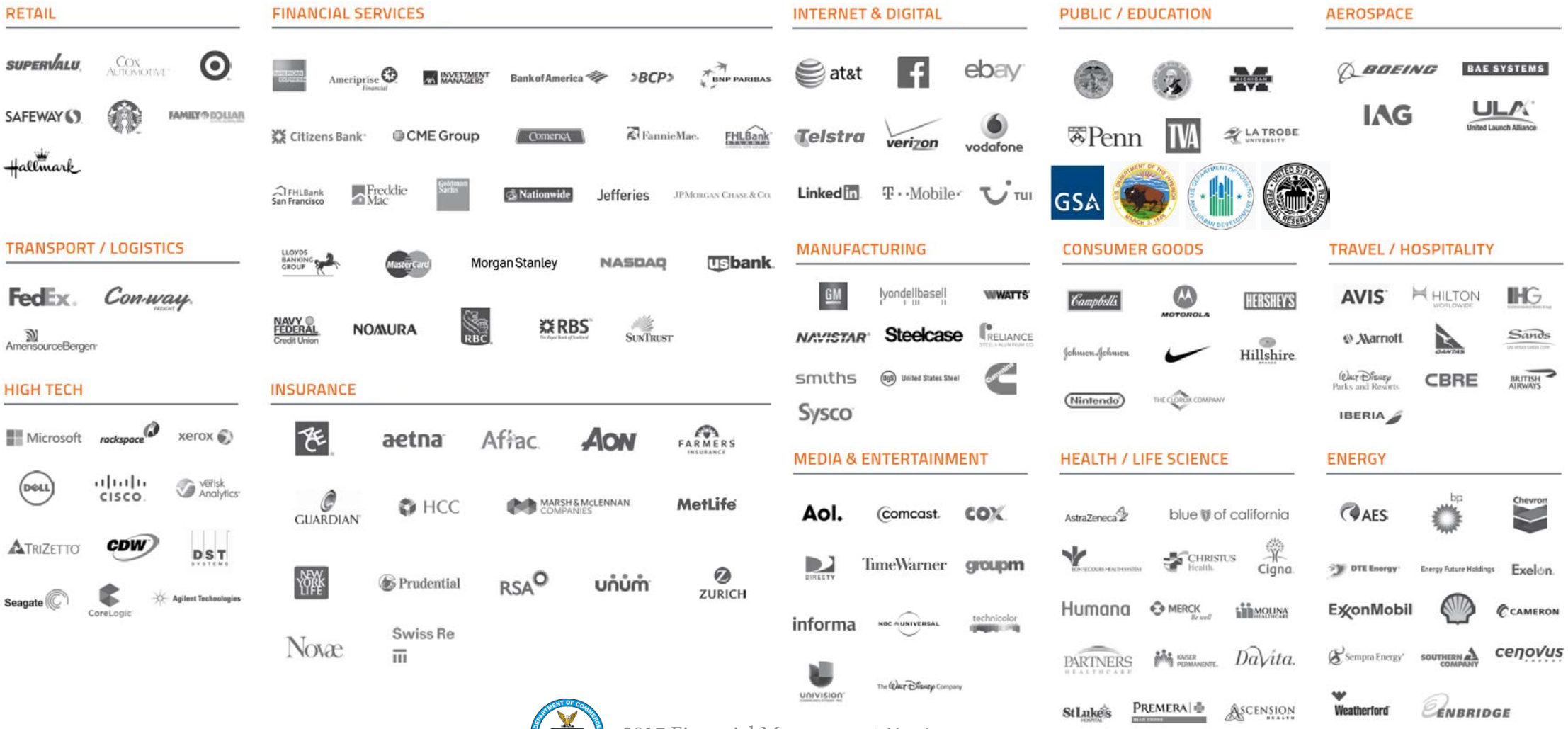


How we got here…



ITCC = US Federal IT Cost, Opportunity, Strategy, and Transparency Commission

TBM Taxonomy – Adopted by over 300 organizations



Who is TBM for?
TBM addresses the needs of several stakeholder personas

DevOps
(Application Owner)

Manage Application Portfolio for Value

Understand application cost, quality, and value ● Rationalize application portfolio ● Right size application infrastructure

- Total cost on applications?
- DME versus O&M spend?
- Impact if applications is decommissioned?
- Application spending levers?
- Release failure rate?

Service Owners
(Infrastructure Platforms)

Show Efficiency and Justify IT Spend

Right size infrastructure capacity to usage ● Rationalize and optimize platforms

- Infra cost by category?
- Unit cost compared to peers, benchmarking?
- What drives O&M cost?
- Applications using non-standard infrastructure?
- EOL at-risk infrastructure?

CIO & IT Leaders

Make Fact-Based Decisions to Shift O&M to DME

Understand the operating cost of IT services and resources

- IT spend on O&M/run vs DME/change?
- Project spend on initiatives?
- Cost reduction progress?
- Spend by mission or BU capability?

Business Relationship Managers

Align Resources to Business Priorities

Communicate the value of IT ● Align IT spend to mission need ● Influence mission demand

- Application, infrastructure, and labor breakdown/
- ID levers to control spend?
- Align demand with consumption?
- Application or service investment / Business Unit and consumption / Business Unit?

IT Finance

Establish Governance & Accountability

Drive awareness of the cost of tech services ● Provide defensible cost allocations ● Mange the IT financial plan

- Where do we spend?
- What's fixed vs variable?
- ID short-term cost reduction opportunities
- What drives variances?
- Under-over spend recovery?
- Adjust service rates?

IT Governance

Support data-driven, fact-based, defensible decision-making

TBM Stakeholder Support and Process Integration

TBM Stakeholder Support

CIO

- Understand unit cost
- Identify duplicative spend
- Total Department IT spend
- Forward/strategic planning
- Benchmark spend vs. internal/external
- Spend by mission/business function
- Current state vs. future for transition plan
- Business case/ROI analysis
- Shared resources/personnel across modes

Application Owner

- Application Total Cost of Ownership (TCO), TCO by cost center/mission area
- Service and capability management, EA alignment
- Application strategic alignment
- Application portfolio prioritization
- Demand management, cost of service(s)

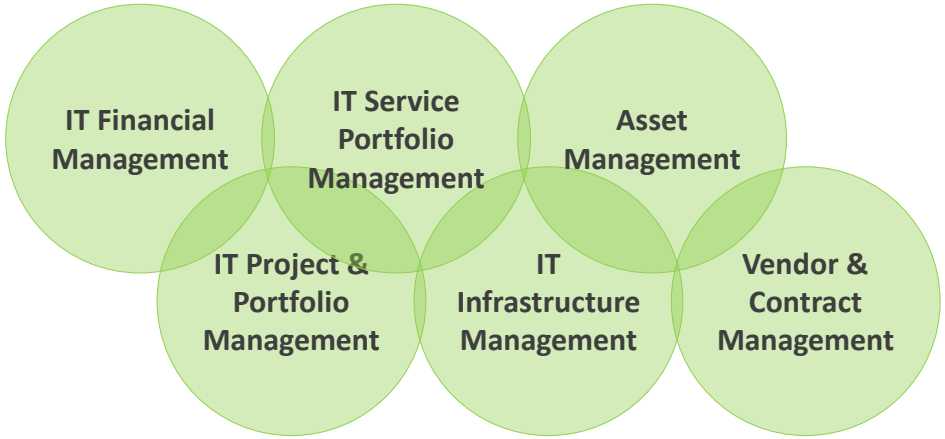
Infrastructure & Operations

- Cost scaling (capacity and growth, demand) identification
- Cost element identification
- Buy vs. build vs. outsource decision-making
- Cost performance
- Updated cost/operating models
- Defensible pricing (1st on vs. last off)

CFO

- IT budget justification
- IT investment justification
- Alignment with federal-wide priorities/initiatives
- Predictable recurring and non-recurring costs
- Validity of obligations vs expenditures
- Accuracy of cost projections
- Baseline costs vs. variable for budgeting/planning in out years

Process Integration



Mission/Business Outcomes

- **Strategic Alignment** through service and project portfolio management
- **Value Delivery** through portfolio, financial, and asset tracking
- **Performance Measurement** through metrics and reporting
- **Resource Management** through labor, software, and hardware tracking
- **Risk and Compliance Management** through policies, procedures, and contracts tracking

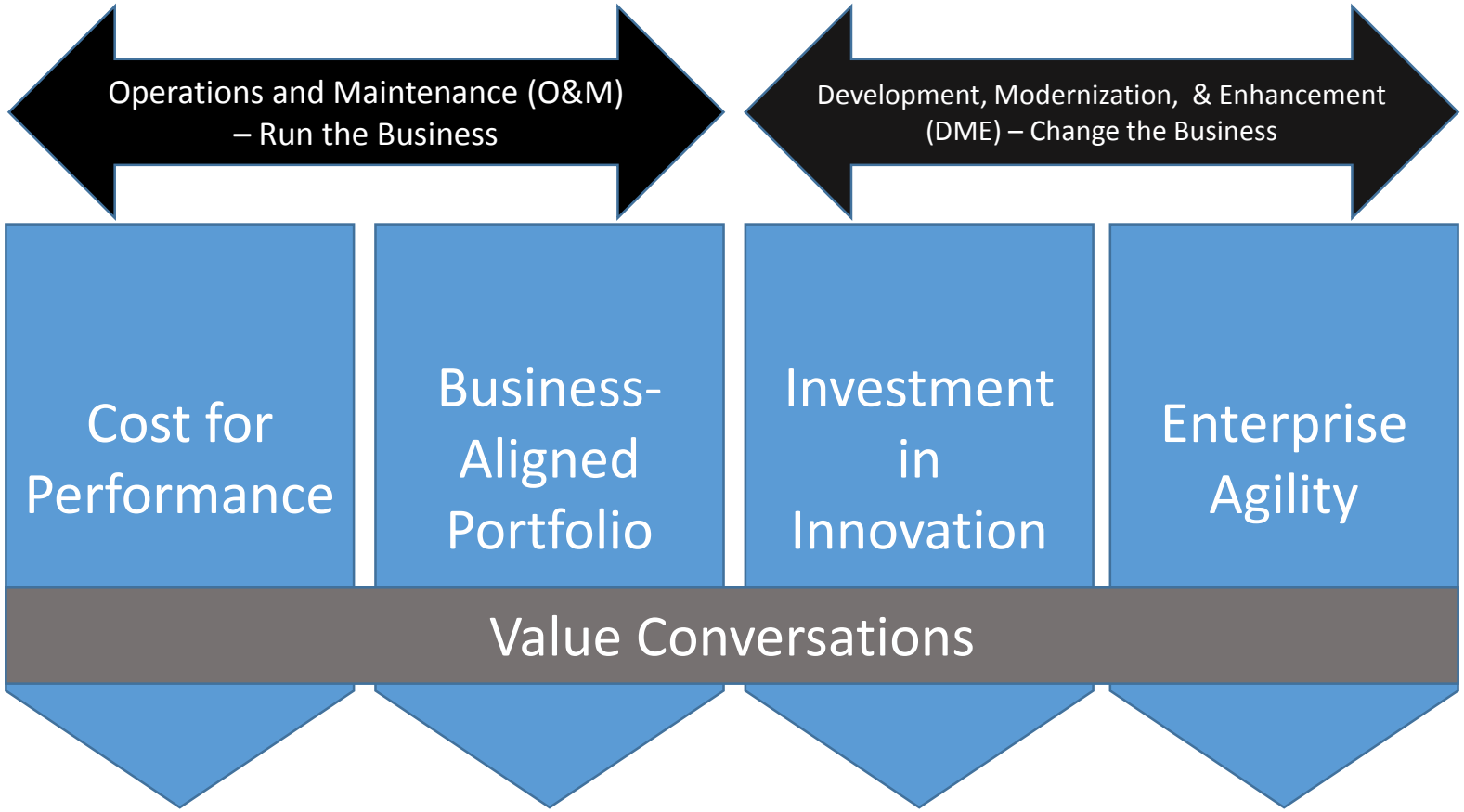
What are example TBM processes?

TBM processes are not new—they are processes DOC does, wants to do, or wants to do better, faster, and more effectively and efficiently

Communicate Cost & Value	Automate Mandated Reporting Metrics	Govern Through Periodic Reviews	Measure and Prove FITARA Compliance	Set Service Rates
Mission Show-back or Charge-back	Understand TCO & Cost Drivers	Track and Compare Cloud Spend	Review Apps & Services	Align spend plan to Demand
Recommend Levers for Choice	Track Variance to Plan	Data-based Decisioning	Review Agency Consumption	Plan Project Financials Based on Resources
Recover Cost	Review Vendors	Review Projects	Improve Data Quality	Track KPIs & Project Actuals
Review Project Costs	Review IT Infrastructure	Review Labor	Build O&M Spend Plan	Benchmark Performance
Build DME / Investment Plan	Align Resource plan to Financial plan	Forecast Service TCO based on Biz Demand	Adjust Forecast	Measure Customer Satisfaction

Tools of TBM – TBM Framework

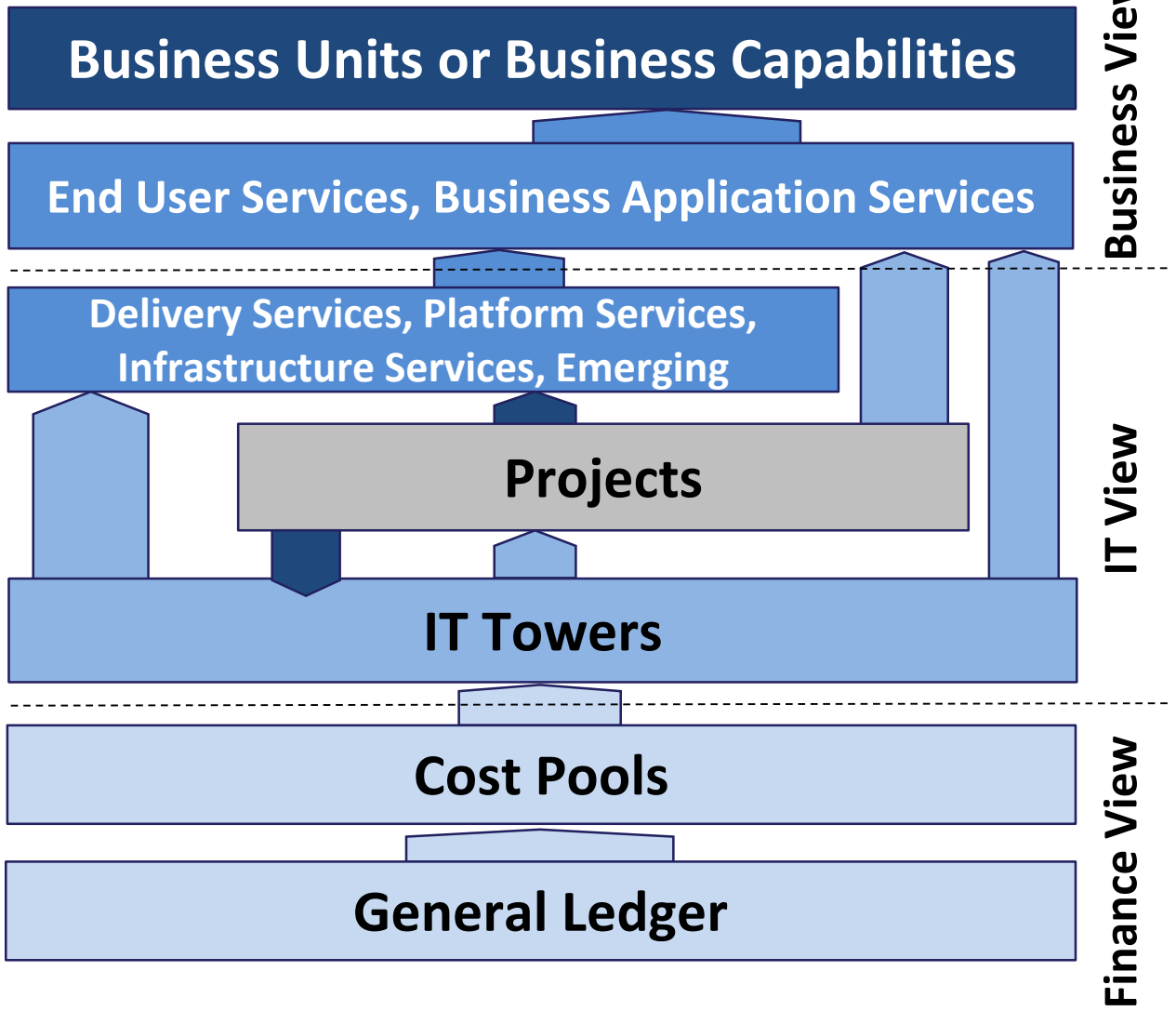
- Value conversations depend on facts about:
  - Costs and spending
  - Performance and Risk
  - Portfolio Investments (Ratios)
  - Return on Investments (ROI)
  - Cost Structure
  - Data Quality
- These can be instrumented and measured with TBM
- Key Performance Indicators, should be employed by CIOs
- Goals can be set and communicated using KPIs



TBM provides metrics that support each of the value conversations (e.g. Unit Cost Actuals vs Targets = Cost for Performance)

Tools of TBM – TBM Model

- The TBM taxonomy:
  - defines the 3 perspectives (languages) of finance, IT, and business
  - does NOT translate between the three perspectives
- The TBM model:
  - translates between the three perspectives
  - allocates (apportions) costs from lower layers to the upper layers
  - Is usually a software tool



Tools of TBM – TBM Taxonomy

Mission/Business Domains

Describes the capabilities (and consumers) of the technology supported by IT spend and resources

IT Applications & Services

Describes the products or output delivered by IT and consumed by business units and programs

IT Towers & Sub-towers

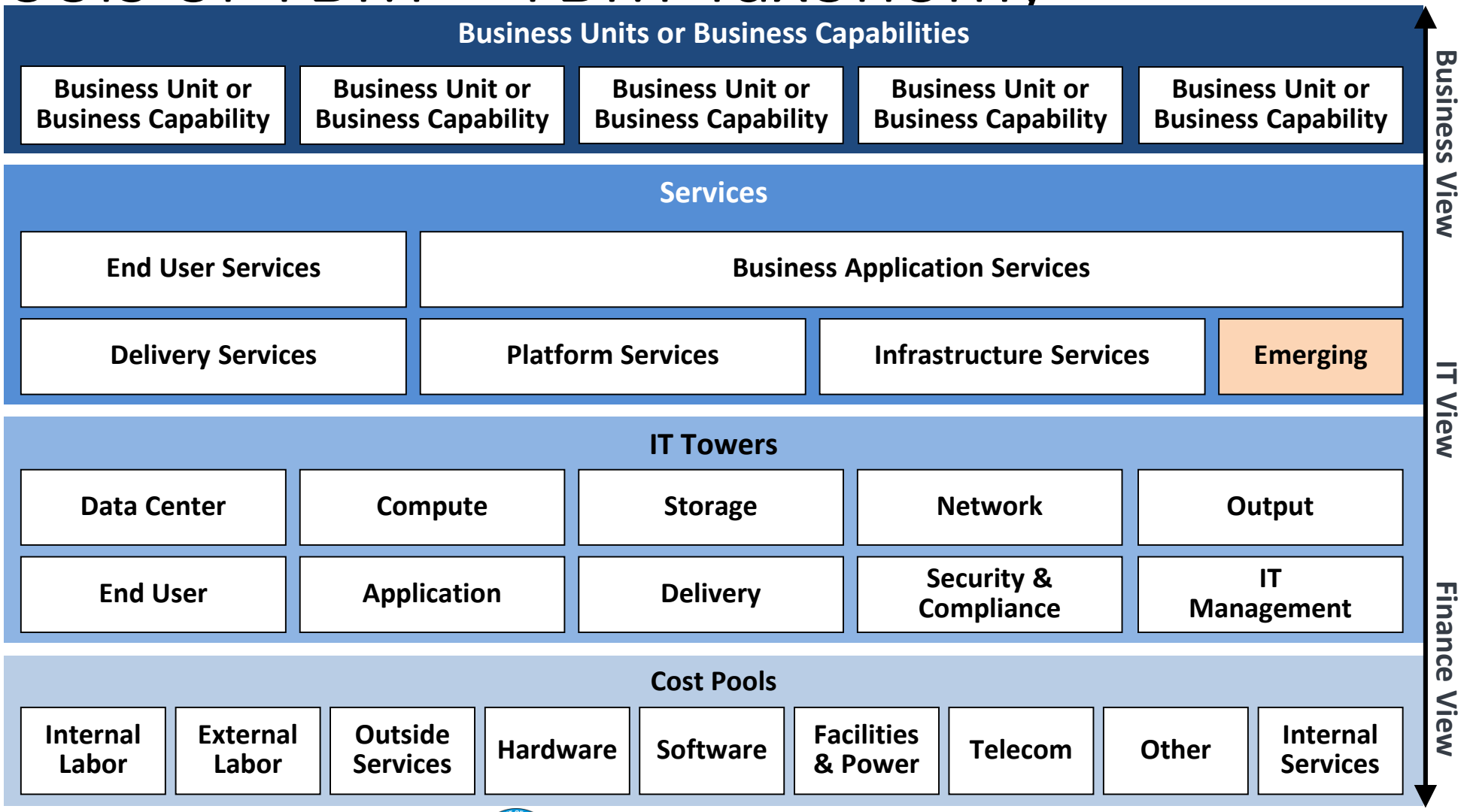
Describes the technology functions supported by IT spend in terms and groupings relevant to the owners and consumers of those functions

Cost Pools & Sub-pools

Describes the type of assets or services purchased using terms and groupings relevant to both IT and finance

* The TBM Taxonomy has been validated by the non-profit Technology Business Management Council consisting of 3,500 members from leading IT organizations, and adopted by over 300 US and global companies.

Tools of TBM – TBM Taxonomy



BUSINESS CAPABILITIES

Business Application Services *(for generic company)*

Finance

- Financial Planning
- Revenue Accounting
- General Accounting
- Fixed Assets
- Payroll
- Procurement
- Accounts Payable
- Treasury
- Tax
- Internal Controls
- Consolidation

Human Resources

- Recruiting
- Talent Management
- Workforce Management
- Employee Communications

Facilities & Assets

- Acquisition
- Construction
- Maintenance
- Disposal

Cross-Function Capabilities

- Enterprise Knowledge Management
- Corporate Communications
- Legal

IT TOWERS

COST POOLS

BUSINESS CAPABILITIES

SERVICES

IT TOWERS (v2)

TBM COUNCIL Standards Committee

DATA CENTER	COMPUTE	STORAGE	NETWORK	OUTPUT	END USER	APPLICATION	DELIVERY	SECURITY & COMPLIANCE	IT MANAGEMENT
Enterprise Data Center	Servers *(Windows/Linux)*	Online Storage	LAN/WAN	Central Print	Workspace	Application Development	IT Service Management	Security	IT Management & Strategic Planning
Other Facilities	Unix	Offline Storage	Voice		Mobile Devices	Application Support & Operations	Operations Center	Compliance	Enterprise Architecture
	Midrange	Mainframe Online Storage	Transport		End User Software	Business Software	Project Management	Disaster Recovery	IT Finance
	Converged Infrastructure	Mainframe Offline Storage			Network Printers	Database	Client Management		IT Vendor Management
	Mainframe				Conferencing & AV	Middleware			
					IT Help Desk	Mainframe Database			
					Deskside Support	Mainframe Middleware			

COST POOLS

Key: Decision, no further feedback | Proposal, needs vote

TBM COUNCIL

BUSINESS CAPABILITIES

SERVICES

IT TOWERS

COST POOLS (v2)

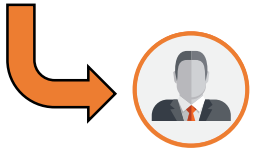
TBM COUNCIL Standards Committee

	INTERNAL LABOR	EXTERNAL LABOR	OUTSIDE SERVICES	HARDWARE	SOFTWARE	FACILITIES & POWER	TELECOM	OTHER	INTERNAL SERVICES
Operating Expenditures	Expense	Expense	Consulting	Expense	Expense	Expense	Expense	Other	by Shared Service*
			Managed Service Provider	Lease	Subscription	Lease	Lease		
			Cloud Service Provider	Maintenance & Support	Maintenance & Support	Maintenance & Support	Maintenance & Support		
				Depreciation & Amortization	Depreciation & Amortization	Depreciation & Amortization	Depreciation & Amortization		
CapEx	Capital	Capital	Capital	Capital	Capital	Capital	Capital		

Tools of TBM – TBM Value Score Card

Driving accountability

Objective: "Make Cloud a critical enabler for transformation"



Target: "Move 30% of existing workload to cloud infrastructure end of FY"

Initiative	Owner	Target	Timeline	Area	Personas	Processes	Outcomes
Cloud Migration	Director of Mission Solutions	Move 30% of App workload to the Cloud	Q4 FY18	• Applications • Infrastructure	Apps Mgrs. I/O Mgrs.	Monthly Tech Business Review	

What data would we need show this outcome?

TBM Data Requirements

SOURCE	DESCRIPTION	WHY IS IT NEEDED?
General Ledger (CBS)	Chart of accounts and actual costs	Most reporting and metrics
Fixed Assets (Sunflower System)	Usually a sub-ledger to the general ledger, provides a list of assets and their depreciation schedules	Reporting and metrics that involve IT assets, such as hardware and software
HR Data (webTA, CBS, Project Tools)	IT employees listed by role plus cost centers and unique identifiers	Reporting and metrics that involve personnel costs, such as admins, development, and maintenance
Projects	List of projects by name and codes along with spending and headcount	Reporting and metrics on project delivery such as planned vs. actual
IT Assets	Lists of hardware and software assets as tracked by IT for delivering services and projects	Calculating accurate TCO of applications and granular decision-making regarding asset utilization and efficiency
Cloud	Billing data from IaaS, PaaS, SaaS vendors	Calculating more accurate TCO of applications and reporting cloud costs back to consumers (e.g. application owners and business partners)

TBM Data Requirements

SOURCE	DESCRIPTION	WHY IS IT NEEDED?
Services	Service catalog or list of services and their definitions	Costing of services and reporting of service consumption and costs to service owners and their business partners
Application & Service Mapping	List of applications and or services and, if available, mappings to the infrastructure	More accurate and complete costing of services, including support resources and costs used for each one
Service Desk	Incidents and requests by user, priority, and impact along with support time by asset or service	More accurate and complete costing of assets and services, including support resources and costs used for each one
Monitoring	Storage consumption (allocated, used) by application, server utilization metrics, and data center utilization (racks, power)	More accurate and complete costing of assets and services, including shared resources, such as virtual servers and storage area networks
Vendor	Vendor lists along with selected billing data for major vendors and cloud providers	Transparency of vendor spending and a more accurate allocation of vendors to assets and services

Federal TBM adoption

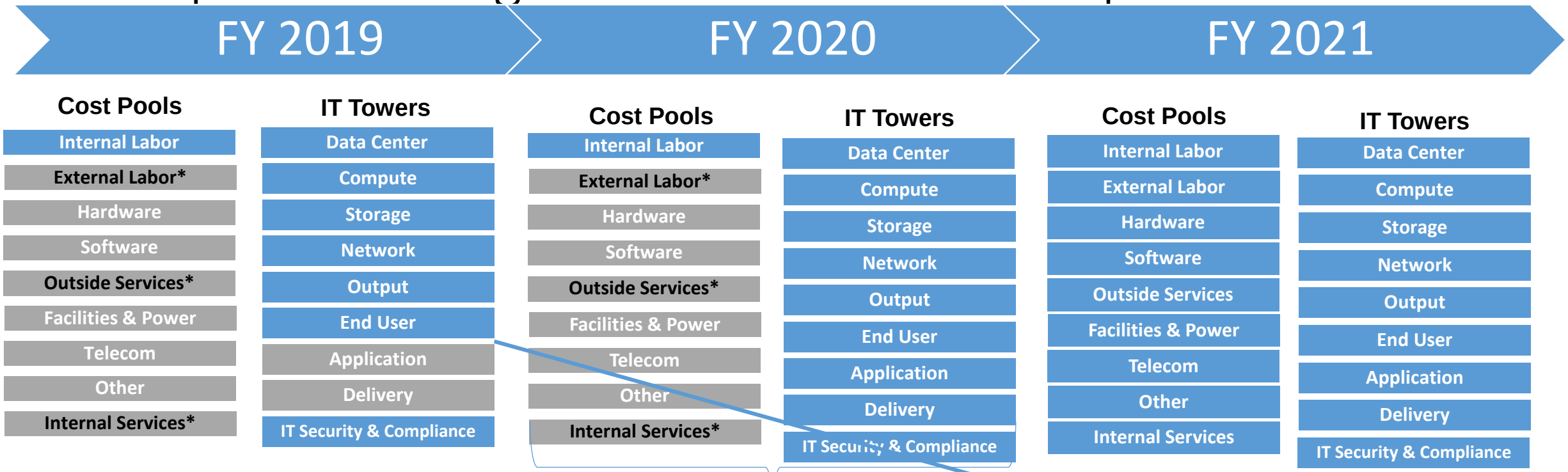
- OMB and Federal CIO Council are driving TBM adoption
- OMB preparing to publish TBM & CPIC guidance
- OMB TBM lead, Kelly Morrison, is scheduled to discuss TBM & CPIC guidance at DOC CIO Council

Translating the TBM Taxonomy

Applying the TBM Taxonomy to CPIC investments

Description	Amount	Sub-Pool	Pool	Sub-Tower	Tower	CPIC Investment	O&M
GS-15 Program Manager	$150,000	Expense	Internal Labor	Operations Management	Delivery	IT Infrastructure	Yes
Network Support Contract	$1,000,000	Maintenance & Support	External Labor	Operations Management	Delivery	IT Infrastructure	Yes
Network Equipment Refresh	$400,000	Capital	Hardware	Converged Infrastructure	Network	IT Infrastructure	Yes
O365 Licenses	$300,000	Subscription	Software	End User Software	End User	IT Infrastructure	Yes
Telephone	$200,000	Managed Service	Telecom	Voice	Network	IT Infrastructure	Yes

Current OMB TBM reporting timeline via Capital Planning & Investment Controls process tool eCPIC



Mandatory Reporting

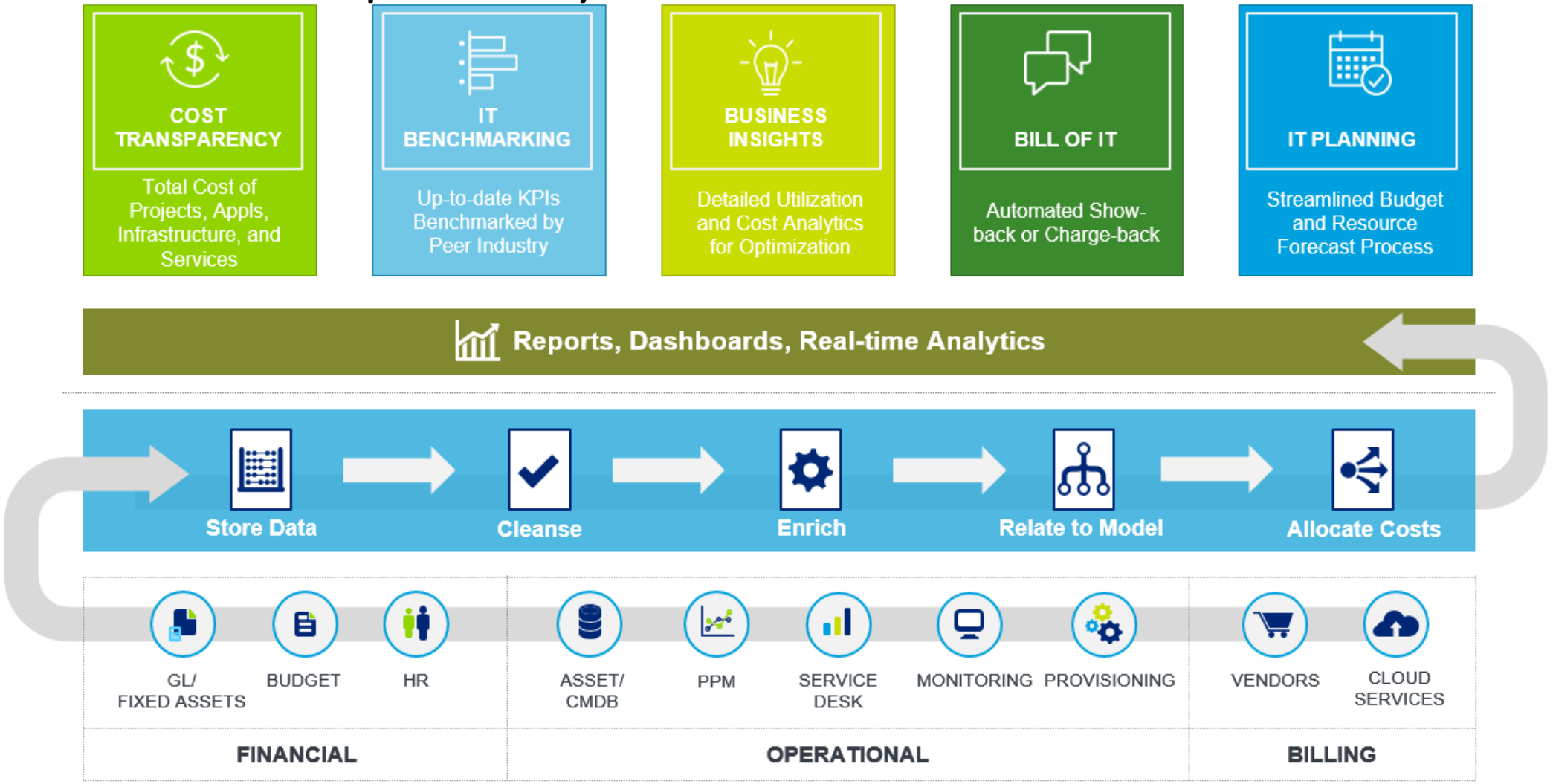
Optional/Phased Roll Out Reporting

This is the current plan and could be impacted by efforts to that could make this easier to implement

September Request Submission: Optional
By President's Budget Submission (est. Jan. 2018: Mandatory

* These cost pools should be prioritized

TBM Enterprise System Automated Tool



Questions

Federal IT Cost Commission Recommendations

TBM Taxonomy and Metrics

Recommendation 1 – Supported by the OMB, agency CIOs should adopt the standard TBM taxonomy for budgeting (planning) and reporting IT expenditures and for driving consistency across stakeholder groups.

Recommendation 2 - Agency CIOs should employ a standard set of TBM KPIs to allow comparability of cost, performance, and value.

Recommendation 3 - Agency CIOs should benchmark significant IT tower and sub-tower costs on an annual basis.

Financial Accounting and Reporting

Recommendation 4 - The GSA's Financial Systems Integration Office (FSIO) should establish a common coding scheme for TBM taxonomy IT tower information.

Recommendation 5 - When implementing TBM, Federal agencies should use an accrual-based calculation of costs, not a cash-based methodology.

Recommendation 6 - Federal agencies should code financial transactions with the corresponding TBM taxonomy IT tower.

Recommendation 7 - Federal agencies should adjust the financial reporting process to ensure IT spend can be identified from other spend.

Recommendation 8 - The OMB should ensure each agency has a budget bureau code dedicated to the Office of the CIO.

Governance Standards

Recommendation 9 - The OMB should establish a government-wide TBM governance board and designate a center of excellence for cross-agency implementations.

Recommendation 10 - Cabinet-level agency CIOs should establish policies and processes to ensure consistent application of TBM taxonomy and reporting across subordinate agencies.

Recommendation 11 - Agency CIOs should develop a multi-year roadmap both for reporting and data maturity and for driving continuous improvement in cost efficiency and value.

Organizational Capabilities

Recommendation 12 - Agency CIOs should take specific steps to ensure better alignment of reporting between their offices, their Offices of the Chief Financial Officer, and the OMB.

Recommendation 13 - Agency CIOs should establish a TBM office comprised of a program director and any TBM analysts and administrator resources needed for modeling, reporting, and metrics.

Recommendation 14 - Agency CIOs should clarify which IT personnel are accountable for TBM metrics, and ensure those personnel are trained on how to use and improve them.

Recommendation 15 - Agency CIOs should develop and implement a stakeholder rollout and end-user training program.

Recommendation 16 - Agency CIOs should implement and monitor key business processes that occur on a regular basis including month-end close, data quality reporting, monthly operating reviews, and quarterly business reviews.

Recommendation 17 - Agency CIOs should remain active sponsors of the TBM program to ensure continuous improvement and that program leaders have their support to overcome roadblocks.

Recommendation 18 - Agency CIOs should take measures to ensure trust in their TBM model and financial reporting.

Functional Capabilities

Recommendation 19 - Agency CIOs should implement a TBM system that is capable of serving the requirements for data integration, scalability, cost and resource modeling, reporting and analytics, and security.

Recommendation 20 - Agency CIOs should implement a TBM model that allows for the costing of both commodity IT products and the more mission-specific IT products and services.

Recommendation 21 - Agency CIOs should implement regular data quality reporting and use the data to continuously mature and enhance the data used for modeling, reporting, and decision making.

OMB's ITCC Recommendation Adoption Time Horizon

Near Term (Define)	Medium Term (Implement/Operate)	Longer Term (Integrate/Optimize)