



IT Management Maturity Model

In support of the implementation of the Federal Information Technology Acquisition Reform Act (FITARA) - Version 2

IT Management and Modernization Community of Interest

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Synopsis

To support the implementation of FITARA, this paper proposes an updated IT Management Maturity Model to help agencies assess their maturity in six critical functions of IT management. Since the initial development and implementation of this model in September 2015, additional federal government-wide initiatives, policies, and legislation were issued that tie directly into the tenets of FITARA and IT management. Additionally, agencies provided feedback based on direct experience implementing the model that was included in this update.

The key updates to the model include adding a cybersecurity function, adding Technology Business Management (TBM) attributes, strengthening the emphasis on modernization and incremental development throughout the model, building a stronger focus on software license management, ensuring connections between IT strategic planning and IT budget planning, and including IT workforce re-training to meet IT priorities.

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The information, conclusions, and recommendations contained in this publication were produced by volunteers from government and industry who share the ACT-IAC vision of a more effective and innovative government. ACT-IAC volunteers represent a wide diversity of organizations (public and private) and functions. These volunteers use the ACT-IAC collaborative process, refined over thirty years of experience, to produce outcomes that are consensus-based. The findings and recommendations contained in this report are based on consensus and do not represent the views of any particular individual or organization.

To maintain the objectivity and integrity of its collaborative process, ACT-IAC does not accept government funding.

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IT Management and Modernization Community of Interest

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Disclaimer

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Introduction to the IT Management Maturity Model

The objective of the Federal Information Technology Acquisition Reform Act (FITARA) is to improve the management of IT within an agency and hence, improve the ability for that agency to deliver its mission and conduct its business. The Office of Management and Budget (OMB) has drafted guidance to implement FITARA.

This guidance sets forth a “Common Baseline” to establish a framework of IT management capabilities and related roles and responsibilities that agencies are expected to implement. Recognizing that one size does not fit all, the Common Baseline sets a minimum level of standards that provide flexibility for agencies to implement the law in a manner consistent with each agency’s unique requirements. In August 2015, agencies provided OMB with a copy of their FITARA Common Baseline self-assessments and improvement plans for IT management and this IT Management Maturity model provides both context for OMB and reporting agencies and a way for those agencies to develop a roadmap on how to improve IT management maturity over time.

To support the implementation of FITARA, ACT-IAC formed a working group of more than 50 people from various backgrounds, to include the public and private sector, from the fields of IT, finance, human resources, and acquisition. The project team developed this IT Management Maturity Model to help agencies assess their maturity in five critical functions of IT management. Since the initial development and implementation of this model in September 2015, additional federal government-wide initiatives, policies and legislation were issued that tie directly into the tenets of FITARA and IT management. In June 2018, ACT-IAC reconvened its working group to evaluate the current Model and make adjustments to further assess IT management within agencies. Based on the review and feedback from agencies using the model, a cybersecurity function was added. Additionally, some new traits were included within the existing five functions to capture new policy and legislation around IT management. Specifically, the model was evaluated for compliance with the Modernizing Government Technology (MGT) Act, Making Electronic Government Accountable By Yielding Tangible Efficiencies (MEGABYTE) Act and cybersecurity measured by compliance with the Federal Information Security Modernization Act of 2014 (FISMA). Additionally, the project team reviewed requirements outlined by OMB on Technology Business Management (TBM) taxonomy compliance and recent

OMB FITARA Guidance

In the June 10, 2015, guidance to agencies on FITARA, OMB identified the following requirements for agencies:

1. Agency chief information officer (CIO) authority enhancements,
2. Enhanced transparency and improved risk management in IT investments,
3. Portfolio review,
4. Federal Data Center Consolidation Initiative,
5. Expansion of training and use of IT cadres,
6. Maximizing the benefit of the Federal Strategic Sourcing Initiative, and
7. Government-wide software purchasing program.

Executive Orders focusing on IT resource management. Given the policy changes within the last several years, the Model is updated to include six functions to better capture all aspects of IT Maturity. The six functions are depicted below:

- **Governance** – the collaboration and decision making glue by which IT management works.
- **Budget** – the process to formulate, obtain approval, and execute the use of funds to support IT.
- **Acquisition** – the buying process used to obtain IT products and services.
- **Organization & Workforce** – the process to determine needed competencies and develop and sustain a workforce that has those competencies through recruitment and professional development.
- **Program Management** – 1) the set of disciplines used to deliver IT capabilities to meet an agency mission or business need, or 2) the operations and maintenance of an existing system.
- **Cybersecurity** – the process to establish, monitor and refine secure IT resources.

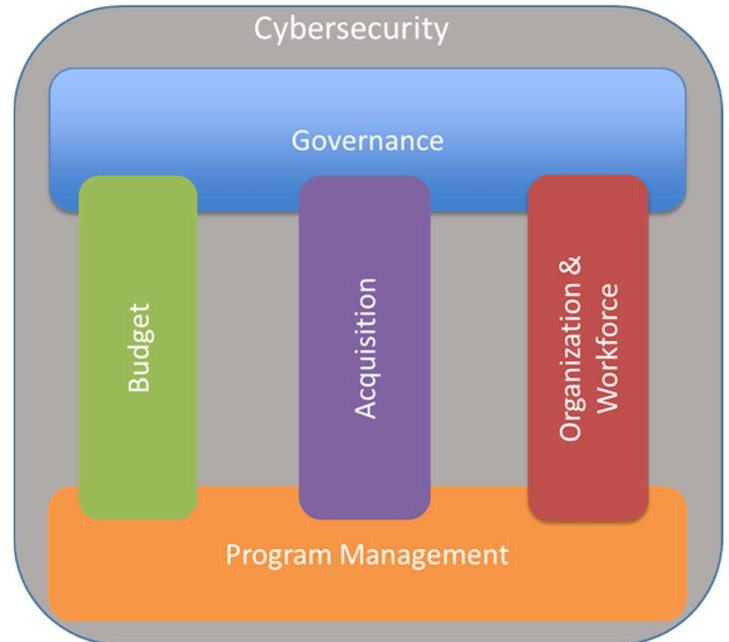


Figure 1: Six Functions of IT Maturity

OMB’s Common Baseline for IT Management includes sections for Budget Formulation, Budget Execution, Acquisition, and Organization & Workforce. This paper reorganized and reoriented these sections slightly to support the development of the IT Management Maturity Model. During the initial development of the Model, the group combined budget formulation and execution to highlight the degree of integration typical in most agency budget processes. Upon further review during the 2018 updates, the group identified the need to delineate between budget formulation and budget execution. The Budget Function assigns each attribute and trait to either budget formulation or budget execution activities. In a few a cases, a trait covers both formulation and execution. As the teams developed the traits and characteristics of the IT Management Maturity Model Version 1, Governance and Program Management topics became recurring themes that cut across the three primary pillars of Budget, Acquisition and Organization & Workforce. As a result, this paper illustrates the integrative power of both Governance and Program Management to effective IT management. When revising the Model, the group took a similar cross-cutting approach for cybersecurity and created a new function focused on this topic. The focus, requirements and importance of cybersecurity continue to grow across the federal space. Creating a separate function specifically for cybersecurity helps agencies specifically track maturity within this area.

For each of these functions, the project team developed a description of the function, along with defining a number of attributes, and for each attribute, traits, which can be used to assess the maturity of an organization in that function. The model specifies characteristics of three levels of maturity, to include

Level 1 – Basic Capabilities, Level 2 – Evolving Maturity, and Level 3 – Demonstrated Maturity.

Recognizing that each agency is unique, the maturity model focuses on the behaviors and outcomes expected at each level of maturity, not on the organizational structures and processes required to achieve those behaviors and outcomes. Hence the maturity model can be applied to both small, centralized agencies as well as to the largest, most diversified cabinet-level departments.

The IT Management Maturity Model includes explicit linkages to elements of the OMB Common Baseline and OMB’s Agency Submission Review and Analysis Plan where the team believes an agency would have achieved the requirements of the Common Baseline. The linkages are highlighted in the graphic on page 7 and also in yellow in each of the five functional areas of the maturity model. Page 8 shows a high-level crosswalk of the six critical functions and attributes of the model to the most recent FITARA Scorecard (7.0) issues by the House Oversight and Government Reform Committee.

FITARA refers to “agency” as one of the CFO Act Agencies with some exceptions for the Department of Defense (DOD), the Intelligence Community, and portions of other agencies that operate systems related to national security. For agencies that are federated (have bureaus, components, or equivalent and multiple IT organizations) the agency CIO can use this maturity model to assess the agency as a whole, to include the appropriate interaction, authorities, and delegations from the agency to the bureaus/components or program. A bureau/component or program-level CIO can also use this maturity model as applied to IT management within a bureau/component or program.

In applying the model, all attributes and traits across all functions are important, and even moving from one level to a successive level for even one trait is beneficial. Agencies can conduct self-assessments using the model and consider sequencing its improvement initiatives. Certainly, progress can be made concurrently across all functions, but if an agency is looking to set priorities for improvement, it is recommended the focus be in this order:

1. Governance (must have leadership alignment to drive progress)
2. Budgeting (required for both sustain operations and fund new programs)
3. Cybersecurity (ensuring security is key aspect of all IT resource decisions)
4. Organization & Workforce (addressing have skilled staff in proper roles)
5. Program Management (addressing how new functionality is delivered and current systems are operated)
6. Acquisition (optimizing the buying process).

Within a function, the priority should be placed on moving from Level 1 to Level 2 to have Evolving Maturity across a management function, then working to move to Level 3 - Demonstrated Maturity. Agencies should use pilots to improve on a project or part of the agency, but recognize that achieving a level of maturity requires that attribute be exhibited across all IT management in the agency. Finally, the objective should be to institutionalize practices in an agency at Level 2 and eventually Level 3 through use of policy directives, procedural guidance, and tools – demonstrated maturity must survive changes in leadership.

OMB Common Baseline Mapping to IT Management Maturity Model

Common Baseline for IT Management				
Section Responsibility	Budget Formulation	Budget Execution	Acquisition	Organization and Workforce
Visibility	<p>A1: Visibility of IT resource plans/decisions to COI <i>Budget Levels 1-2</i></p> <p>A2: Visibility of IT resource plans/decision in budget materials <i>Budget Levels 1-2</i></p>	<p>F1, F2: Visibility of IT Expenditures reporting to CIO <i>Budget, Acquisition Levels 1-2</i></p>		
Planning	<p>B1, B2: CIO role in pre-budget submission for programs <i>Budget Level 2</i></p> <p>C1, C2: CIO role in planning program management <i>Budget Level 2, PM Level 1</i></p>		<p>I1: Shared acquisition and procurement responsibilities <i>Acquisition Level 2</i></p>	<p>P1, P2: IT workforce planning <i>Workforce Levels 1-2</i></p>
Governance		<p>H1, H2: CIO role on program governance boards <i>Governance, Budget Levels 1-2</i></p> <p>F2: Participate with CIO on governance boards <i>Governance, Budget Levels 1-2</i></p> <p>J1: CIO role in modification, termination, pause of IT <i>PM Level 2</i></p> <p>G1: CIO defines IT processes</p>	<p>K2: CAO is responsible for ensuring contract actions, which require IT are consistent with CIO-approved plans and strategies. <i>Acquisition Level 2</i></p> <p>I1, I2: Shared acquisition and procurement responsibilities <i>Acquisition Level 2</i></p>	<p>Q1: CIO reports to agency head (or to Deputy/COO) <i>Workforce Levels 2</i></p>
Program Collaboration		<p>E1, E2: Ongoing CIO engagement with program managers <i>Budget Levels 2-3, PM Level 1</i></p>		<p>N1, N2: CIO role in ongoing bureau CIO's evaluations <i>Workforce Levels 1-2</i></p> <p>O1, O2: Bureau IT leadership directory <i>Workforce Level 1</i></p>
Certification & Approvals	<p>D1, D2: CIO reviews and approves major investment portion of budget requests <i>Budget Level 2</i></p>	<p>L1, L2: CIO of reprogramming requests <i>Budget Level 3</i></p>	<p>K1: CIO review and approval of acquisition strategy and plan <i>Acquisition Level 2</i></p>	<p>M1: CIO approval of new bureau CIOs <i>Workforce Level 1</i></p>

While the primary audiences for this document are OMB and the 24 agencies that share responsibility to implement FITARA, there a number of other key stakeholders who will be interested in this work. In particular, oversight organizations like the Congress and the Government Accountability Office are key players ensuring the effective implementation of the Act. Likewise, there a number of government-wide domain forums like the management councils for CIOs, CFOs and CAOs that will be helping their respective communities of practice to develop and share best practices and lessons learned supporting implementation of FITARA.

Table 1: FITARA Maturity Model 2.0 Alignment with OGR 7.0 FITARA Scorecard

Model Category	Category Attribute	FITARA Scorecard Elements							
		Incremental Dev	Risk	Portfolio (TBM)	DCOI	MEGABYTE	MGT Act	FISMA	CIO Boss
Governance	Horizontal Integration								
	Vertical Integration			X			X		
	Right Authority								
	Right Information	X							
	Right Timing								
	Risk Management	X	X						
	Information Security							X	
Budget	Horizontal Integration			X					
	Vertical Integration								
	TBM (IT Cost Accounting)			X					
	Modular Execution	X							
	Right Authority						X		
	Right Timing			X					
Organization and Workforce	Horizontal Integration								
	Vertical Integration								
	Right Leadership								
	Right People					X			
	Strategic Workforce								
	Right Placemat								X
Acquisition	Horizontal Integration					X			
	Vertical Integration						X		
	Right Information								
	Right Timing	X							
Program Management	Program and Project Management								X
	Horizontal Integration								

Table 1: FITARA Maturity Model 2.0 Alignment with OGR 7.0 FITARA Scorecard

Model Category	Category Attribute	FITARA Scorecard Elements							
		Incremental Dev	Risk	Portfolio (TBM)	DCOI	MEGABYTE	MGT Act	FISMA	CIO Boss
	Comprehensive and Agile SDLC	X							
	Development and use of architecture		X						X
	Right Timing	X							
	Right Information			X					
	Risk Management		X						
	Information Security							X	
Cybersecurity	Education and Awareness							X	
	Horizontal Integration							X	
	Vertical Integration							X	
	Use of NIST Cyber Security Risk Management Framework		X					X	
	Information Security							X	

Definition of FITARA Scorecard Elements

- Incremental Development:** FITARA requires CIOs to certify that IT investments are adequately implementing incremental development. The objective is to reduce the “waterfall” or large and long IT programs that often struggle with cost, schedule and performance.
- Risk:** FITARA requires OMB to provide detailed information to the public on federal IT investments. Additionally, CIOs need to categorize all program risks for major IT investments. The objective of risk management is help provide transparency on IT investments and mitigate risks as possible.
- PortfolioStat (and TBM):** FITARA requires agencies to review their IT investment portfolios and measure investment against OMB created performance metrics. The objective is to identify areas for efficiencies within IT, reduce commodity IT spend and demonstrate alignment of investments to mission and business functions. Tied to this element is the adoption and implementation of the TBM taxonomy. TBM will provide agencies greater insight and tracking of all IT spend. This in turn can help identify areas of duplication and waste and help increase efficiency across IT resources.

- *Data Center Optimization Initiative (DCOI)*: FITARA requires agencies to provide OMB with a data center inventory, a strategy for consolidating and optimizing the data centers. The objective is to reduce the data center footprint for the federal government and identify areas for consolidation and associated efficiencies.
- *Making Electronic Government Accountable By Yielding Tangible Efficiencies (MEGABYTE)*: FITARA requires GSA to improve software license agreements across the federal government. Additionally, MEGABYTE requires agencies to establish and manage a software license inventory. The objective is to capture cost savings through better software license management and deeper analysis of license inventory.
- *Modernizing Government Technology (MGT) Act*: The Act supports IT modernization through the establishment of a federal-wide Technology Modernization Fund (TMF) as well as allowing agencies to establish their own IT Working Capital Fund (IT WCF) to support internal modernization. The objective is to provide base funding to spur IT modernization and migrate away from costly legacy systems
- *Federal Information Security Modernization Act of 2014 (FISMA)*: The Act aims to improve cybersecurity across agencies and focuses on automation to support continuous security monitoring within an agency. The objective is to actively prepare against cyber threats that have become more frequent and more severe.
- *CIO Boss*: A core tenet of FITARA is increasing the authority and oversight of the CIO within his or her agency. To do this, FITARA states the agency CIO should report to the head of the agency or the deputy. Additionally, *Executive Order Enhancing the Effectiveness of Agency Chief Information Officers*, further stresses the reporting structure outlined in FITARA. The objective is to raise the level of the CIO to strengthen his or her ability to manage IT.

Section 1: Governance

Functional Area	Attributes	Traits	Level 1 Basic Capabilities Characteristics	Level 2 Evolving Maturity Characteristics	Level 3 Demonstrated Maturity Characteristics
GOVERNANCE EFFECTIVE GOVERNANCE DRIVES BETTER IT OUTCOMES	<p>Functional Area Description: The objective of FITARA is to improve the management of IT within an agency and hence, improve the ability for that agency to deliver its mission and conduct its business. To effectively enable the agency’s mission IT must meet the current functional needs as well as evolve to meet the future needs as laid out in the agency’s strategic plan. Governance is the means by which IT programs and projects are selected and managed to ensure the agency’s needs are met in an effective manner while minimizing unnecessary duplication. IT governance requires an approach that brings together IT, mission/business, procurement, finance, human resources, etc. to be the right authority, with the right information, at the right time, to make the best possible decisions to effectively deliver IT programs. This need for proper collaboration and decision making includes both horizontal (to include all appropriate stakeholder organizations) and vertical (from strategy all the way to a program) integration.</p> <p><i>Note: Agency means a department or establishment of the Government (compare to bureau). e.g., Treasury is an agency where Enterprise governance would reside. The bureaus under Treasury would include mission specific portfolios and sub-portfolios aligned to the functions of the bureau. Yellow highlights identify linkages to the M-15-14 Attachment A: Common Baseline for IT Management and CIO Assignment Plan elements.</i></p>				
	<p>Horizontal Integration: Is there proper level of involvement from all appropriate agency stakeholders, including the mission/business leaders, Privacy Officer, General Counsel, and the CIO, CAO, CFO, CHCO (the CXOs) etc.? Are portfolio strategies governed by executives who are in the best</p>	<p>Governance framework in the agency across the IT management lifecycle</p>	<p>Partially defined</p>	<p>Fully defined</p>	<p>Governance drives decision-making across all IT Management lifecycle activities</p>
		<p>Key stakeholder representation of Business, IT and related support areas like Finance, Acquisition, Legal, etc. in decision making</p>	<p>H.1 CIO role on program governance boards. Appropriate representation and participation from business and IT to meet agency needs. Participation from other areas is lagging, especially at portfolio and program level boards</p>	<p>H.2 CIO role on program governance boards. Appropriate representation and participation from business and IT to meet agency needs. There is active, but not full, participation from other stakeholders at the portfolio and program-level boards</p>	<p>Governance at each level (enterprise, portfolio, program) has all proper stakeholders involved with active participation to drive mission aligned, cost effective IT spending (both investments and operations & maintenance)</p>

Section 1: Governance

Functional Area	Attributes	Traits	Level 1 Basic Capabilities Characteristics	Level 2 Evolving Maturity Characteristics	Level 3 Demonstrated Maturity Characteristics
	position to identify existing capability gaps, set priorities for IT spending and investment, and adapt quickly to evolving strategic priorities and business challenges? Is the governance model properly integrated with enterprise-wide processes for strategic planning, requirements development, programming, budgeting, acquisition, and execution (the IT management lifecycle)?	Executive-level participation in enterprise decision making	Senior agency leadership participation is limited and participation is irregular. Critical enterprise decisions rely on ad hoc meetings	Senior agency leadership participation includes regular participation in governance boards to drive enterprise decisions	Highest level executives within the agency are actively engaged in enterprise level decision making
		Integrated decision making across functions (CXO lanes) used to drive consensus-based governance decisions	Fragmented decision making by function impacts ability to implement governance decisions. Incongruent decisions require multiple meetings to create alignment	Fully defined framework and appropriate representation creates better integration between functions. There are few decisions that require resolution outside the governance framework	All decisions are made in an integrated manner providing cohesive governance decisions. Boards strive for consensus-based decisions
		Roles and responsibilities of governance boards are clearly articulated and recognized	Policy is defined, but routine attempts made to bypass governance or overrule/ignore governance decisions	Policy is defined, but there are still attempts made to bypass governance or overrule/ignore governance decisions	Policy clearly defined, and the agency requires adherence to the governance framework and its decisions
		Mission/Business Leadership focus to drive mission capabilities	More emphasis on IT processes rather than what capabilities are needed	Focus on shifting to desired services and capabilities and less emphasis on how the capabilities will be delivered	Focus on desired capabilities, allowing IT to propose best solutions
	Vertical Integration: Is there completeness and linkage from Enterprise Governance (overarching strategy of an	Governance structure is linked across enterprise, portfolio, and program level governance	Partially accounts for enterprise, portfolio, and program level governance; governance set up at all levels but the decision making alignment across the levels is nascent	Enterprise, portfolio, and program level governance; in place; but the decision making alignment across the levels is still under development	Enterprise, portfolio, and program governance are operational with enterprise, portfolio, and program governance boards in place and alignment decisions made and

Section 1: Governance

Functional Area	Attributes	Traits	Level 1 Basic Capabilities Characteristics	Level 2 Evolving Maturity Characteristics	Level 3 Demonstrated Maturity Characteristics
	<p>agency) to Portfolio Governance (the appropriate grouping of mission/business activities of an agency) to Program Governance (oversight for program planning and execution activities)? Is the governance decision making process recognized and adhered to throughout? Are there clear escalation rules and paths for decisions that can have broader impacts?</p> <p>(Caveat: for small agencies, it may be possible to combine enterprise and portfolio governance)</p>				implemented at each level
		Strategic alignment and objective success measures are linked to portfolios	Initial stages of developing a strategic plan for the agency, with objectives and success measures to drive portfolio decision making	Established strategic vision and strategic alignment is underway and performance measurement and monitoring are in the early stages of initiation	Overarching strategic plan in place, with objectives and success measures used to drive portfolio decision making
		Decision making is made and enforced at the proper level of governance	Decision making routinely bypassed; escalation frequent	Appropriate level decision making; occasional escalation during normal management of IT portfolio	Appropriate level decision making; escalation used rarely during normal management of IT portfolio
		Escalation rules and paths for contested decisions are clearly defined and enforced	Ad-hoc; few rules or paths	Rules exist, but not consistently enforced	Rules exist, and are consistently followed and enforced
		Portfolio governance is operational and allocates requirements to programs	Emerging with constant reorganization; does not properly allocate requirements to programs	Becoming operational through the "Select" phase; does not in all cases allocate requirements to programs	Good visibility into portfolio strategies and the performance of related programs; allocates requirements and success metrics to programs
		Program governance is operational and provides set guidance for programs to achieve success	Operational, but not in place for all programs and inconsistent sharing with portfolio governance; inadequate guidance and oversight	Program governance in place for all development programs with improving alignment to portfolio governance. Processes and metrics are not yet standardized	Program governance sets guidance for programs, and helps the PM and program staff achieve success. Program governance covers all programs, including those in

Section 1: Governance

Functional Area	Attributes	Traits	Level 1 Basic Capabilities Characteristics	Level 2 Evolving Maturity Characteristics	Level 3 Demonstrated Maturity Characteristics
					operations and maintenance
	(Vertical Integration)	Governance structure oversees IT Portfolio and has process to evaluate all elements of the portfolio	Somewhat defined or followed governance structure that only oversees the IT Portfolio at a high level	Defined governance structure that oversees the IT Portfolio at a high level but does not evaluate every aspect of the Portfolio	Clearly defined governance structure oversees IT Portfolio and ensure all aspects of the Portfolio are reviewed
		Strategic direction for IT is developed with a multi-year approach aligned with IT needs and IT WCF process	Strategic direction is developed for IT; however, it is often hard to execute a multi-year approach making funding IT needs a challenge	Strategic direction is developed for IT with a multi-year approach but does not always align or tie to IT WCF process making funding a challenge	Strategic direction is developed for IT with a multi-year approach that aligns with the budget and IT WCF processes
	Right Authority: Does each level of governance (and associated governance bodies) have the ability to make authoritative decisions that are binding for that organization (e.g., does a program-level governance body have authority over the program being governed)? Are there distinctly defined relationships between each governance tier with clear, non-redundant roles, responsibilities,	Governance model contains delegation authorities at each level of governance, and enables authoritative decision making	Gaps present in delegation authorities for some levels of governance; delegations have not been made to enable authoritative decision making on a consistent basis	Appropriate delegation authorities for each level of governance, however, inconsistencies in delegation hinder consistent authoritative decision making	Appropriate delegation authorities at each level of governance to enable authoritative decision making
		Well-structured and non-overlapping roles for each level of governance exist	Structure under development. Overlap of roles is common and may result in duplicative or contradicting decisions	Exists, but hand-offs between boards may be unclear	Clearly defined; clean hand-offs occur between boards ensuring transparency and accountability of all decision making
		Decisions by the governance boards are implemented and enforced	Frequently reversed by agency executives; undermines the effectiveness of the governance process – resulting in increased cost and delays	Occasionally reversed by higher level boards; lower frequency of reversals creates more stability	Decisions are not changed by a higher level board unless there is a compelling business reason

Section 1: Governance

Functional Area	Attributes	Traits	Level 1 Basic Capabilities Characteristics	Level 2 Evolving Maturity Characteristics	Level 3 Demonstrated Maturity Characteristics
	and authorities? Is the span of governance optimal for the boards to be effective considering scope of governance, expertise and number of boards?	Governance decision making is consistent, and backed by evidence-based information and analysis, on a timely basis	Inconsistent decision making; may be swayed by agency leadership. Not always made in a timely manner	Demonstrated decision making that is typically within the authority of the board, is timely, and is based on appropriate presentation of data and analysis to help support the decision process	Evidenced-based decision making is demonstrated at all levels of governance
		Clearly defined approach to ensure that governance boards are operating consistently with an objective decision-making framework, allowing the measurement of governance effectiveness	Not fully defined or operating, thus the effectiveness of the governance boards cannot be measured	Defined and operating consistently, but measures of governance effectiveness are still lagging	Defined and operating consistently; allowing the effectiveness of all governance boards to be measured to ensure all boards are getting the information they need, holding regular meetings, having the right engagement, and demonstrating the ability to make decisions based on proper analysis and discussion of the stakeholders
		Span of control in governance boards are appropriately sized to enable effective decision making across the breadth of the portfolio	Either too broad to be knowledgeable, or too narrow to effectively see the big picture. The narrow span of governance results too many boards and delayed decision making	Boards have a better span of governance ensuring decisions are made with insight into programs, however some lower-level governance boards (particularly at a program level) are not authorized to make decisions	Optimal for effective decision making
		Number of governance boards	Proliferation of boards often staffed by the	Better defined roles and responsibilities	Appropriate balance is struck among number

Section 1: Governance

Functional Area	Attributes	Traits	Level 1 Basic Capabilities Characteristics	Level 2 Evolving Maturity Characteristics	Level 3 Demonstrated Maturity Characteristics
		are right-sized and appropriately staffed to avoid governance fatigue, and to facilitate timely and effective decisions	same members, resulting in governance fatigue	result in less duplication of boards and membership is reduced	boards, membership, and the items to be governed facilitating timely and effective decisions
	Right Information: Does each level of governance (and associated governance bodies) have the means to obtain the right information to be able to make properly informed decisions? Does Enterprise Architecture inform the governance process? Is there evidence-based decision making? Is there transparency and information accountability? Are metrics actively used to measure effectiveness of governance? (metrics on governance process – meeting regularly, outputs) (caveat: for small	Governance boards have the means to obtain the right information to inform and support decision making	Operates with the right types of information, but there are significant gaps in the quality of data and analysis	Operates with the right types of information, but have gaps in the quality of data and analysis	Operates with reliable information and analysis to support informed decision making
		Enterprise governance is supplied with objective information and analysis to support strategic decision making	Some objective analysis but much information tends to be anecdotal	Analysis and information is generally provided to support strategic decision making; improvements can be made in obtaining information, particularly from the portfolios and external entities	Information is supplied from both internal (portfolios) and external entities regarding expectations of performance for the agency, perceived or real shortfalls, political imperatives, etc. that fully supports decision making on strategic direction and objectives
		Enterprise architecture (EA) model enables portfolio-level governance to assess the state of the portfolio, assisting with decisions that are in alignment with mission or business outcomes	EA exists, but does not fully represent current state of the portfolio; there is uneven analysis of the ‘to-be’ state to support improved mission or business outcomes	EA is incomplete in at least one dimension; the current portfolio is mostly understood but has gaps in the ‘to-be’ state to support improved mission or business outcomes	Mature EA enables full transparency of the current state of the portfolio, and enabling complete analysis of the ‘to-be’ state to support improved mission or business outcomes

Section 1: Governance

Functional Area	Attributes	Traits	Level 1 Basic Capabilities Characteristics	Level 2 Evolving Maturity Characteristics	Level 3 Demonstrated Maturity Characteristics
	agencies, it may be possible to combine enterprise and portfolio governance)	Program staff is able to provide reporting on program status, risks, issues, and recommendations via dashboards; standards and tools for reporting are defined and implemented	Program staff is in the initial stages of establishing standards and tools for consistent and accurate reporting on program status	Program staff has defined standards for tracking and program metrics, and is in the process of implementing tools for consistent collection of data; data quality improvement is in progress through analysis and training	Program staff is able to provide consistent and complete reporting on program status, risks, issues, and recommendations due to fully defined and implemented standards and tools
		Governance outcomes and effectiveness tracking is in place, supported with data reflecting the status of IT spending	Outcomes, effectiveness tracking, and process metrics are yet to be measured	Decisions are tracked, but implementation tracking is lagging. Governance outcome and effectiveness tracking is nascent	Outcomes, effectiveness tracking are standard process, with data accurately reflecting the true status of IT spending. Governance process metrics are tracked and used to make improvements
		Agency leverages iterative software development processes to deliver in increments (e.g. 6 months, etc..) versus broadly scoped and delivering functionality over several years after initiation	Process for incremental development process established to review and leverage iterative practices for software development (e.g., Agile) to be used to ensure delivery completed in 6 month or less increments	Mature iterative process for incremental development process metrics are established, tracked and measured leading to iterative practices to reduce the risk and drive quality while incrementally delivering software components	Agency has well established iterative development process metrics that are tracked and measured leading to iterative practices to reduce the risk and drive quality. A large percentage of the software projects which planned to deliver functionality incrementally

Section 1: Governance

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	<p>Right Timing: Does enterprise governance work well within the timing required for strategic planning, requirements development, programming, budgeting, acquisition, and execution? Are there timely decisions for a program in execution at the program governance level, especially as enterprises leverage modular and agile methodologies to drive smaller and more frequent incremental releases?</p>	Governance structure is operational to make decisions in support of all phases of the IT management lifecycle	Operating; but governance at all levels struggles to make timely decisions	Operating at all levels, but there are occasionally failures to make timely decisions	Fully operational at all levels and making timely decisions
		Governance board meetings are aligned with the IT management lifecycle	Governance meetings are not aligned; decisions are often made outside of governance framework	Governance meetings are mostly aligned; most decisions are prioritized and staged for decision making	Governance meetings are fully aligned, ensuring decisions are prioritized and staged for timely decision making
		Board meetings are held consistently and attended by principal attendees	Inconsistent meetings, or principal attendees do not consistently attend	Consistent meetings, however, principals do not always attend; delegates are sent without appropriate background or empowerment resulting in delayed decision making	Consistent meetings and attended by principal attendees
		Enterprise governance board meets continuously throughout the year	Only meets during the budget preparation cycle	Meets throughout the year, and may meet more frequently during budget preparation	Meets throughout the year, and will meet more frequently during budget preparation
		Portfolio governance boards meets continuously throughout the year	Meets less than quarterly during a year; or board sessions are cancelled or delayed significantly	Meets quarterly after the portfolio EA has been developed. There may be unevenness in the maturity and meeting frequency of the portfolio governance boards	Meet quarterly after a mature portfolio EA has been developed

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		Program governance boards meet as appropriate to support timely decision making	Do not meet often enough to support the program(s), providing limited proactive help	Vary in meeting frequency; occasionally fail to provide timely decision making for a program(s), but making improvements through incremental implementation and agile development	Vary in meeting frequency; but boards will meet with proper frequency to provide timely decision making for a program(s)
	Risk Management (while a specific management discipline, risk management is so critical to an agency's success that is recognized as an attribute for assessing governance maturity): Does the agency have a comprehensive risk management approach, to include risk identification and impact assessment, risk prioritization analysis, risk mitigation, and risk reporting? Are risks considered in all levels of governance?	Agency has a robust risk management program in place	Agency has a comprehensive risk management process but it is not used consistently at all levels of governance	Agency has a comprehensive risk management process but that is used at all levels of governance but does not cover all programs	Agency has a comprehensive and well documented risk management process in place supporting all levels of governance and all programs
		Risks are integrated into agency decision-making	Risks are clearly understood by senior agency leadership. Decision making focuses on risks proactively. Prioritization is based on a balanced set of factors, including probability, degree of impact, past history, and interdependencies	Risks are clearly understood at enterprise and portfolio levels of governance. Decision making focuses on proactive management of risks. Prioritization is based on a balanced set of factors, including probability, degree of impact, past history, and interdependencies	Risks are clearly understood at all levels of governance. Decision-making focuses on proactive management of risks. Prioritization is based on a balanced set of factors, including probability, degree of impact, past history, and interdependencies
		The agency uses risk analysis to evaluate approach and execution of IT program delivery	Agency has a risk analysis toolkit (process/policy/people) but not all elements are standardly applied to IT program delivery	Agency has a risk analysis toolkit (process/policy/people) but only some elements are standardly applied to IT program delivery	Agency has a risk analysis toolkit (process/policy/people) and all elements are standardly applied to IT program delivery

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	<p>Information Security (IS) (while a specific technology area and set of requirements for an IT environment, information security is so critical that is recognized as an attribute for assessing governance maturity): Does the agency properly recognize and incorporate information security requirements? Does the agency have proactive means in place to keep information security policies and approaches current? Does the agency measure effectiveness of information security outcomes by actively collecting metrics? Does the agency use metrics to improve programs and acquisition processes?</p>	<p>The agency has mechanisms in place to monitor and response to cyber threats</p>	<p>The agency has begun implementing automated Security Assessment Tools for continuous monitoring and a Security Operations Center (SOC) provides continuous monitoring and diagnostics of IS posture</p>	<p>The agency has implemented automated Security Assessment Tools for continuous monitoring, reports via CyberScope, and works closely with US-CERT</p>	<p>The agency has implemented a fully automated Security Assessment Tools for continuous monitoring, reports via CyberScope, and works closely with US-CERT</p>
		<p>The agency leverages leading IS practices to improve their IT security posture</p>	<p>There is a process to review and leverage leading IS practices to be used to make improvements to the agency's IS posture</p>	<p>Some IS process metrics are tracked and there is a process to review and leverage leading IT security practices to be used to make improvements to the agency's IT security posture</p>	<p>IS process metrics are tracked and there is a process to review and leverage leading IS practices to be used to make improvements to the agency's IT security posture</p>
		<p>The agency has aligned IS policies with organizational levels, performs assessments, provides training, and uses metrics actively to measure effectiveness of IS outcomes and improve programs</p>	<p>The agency has stand-alone IS policies and procedures, addresses assessments and training to meet minimal requirements. The agency collects metrics only as required for FISMA reporting</p>	<p>The agency has established a linkage between IS policies at each level in the agency, actively assesses risks, and collects metrics for FISMA reporting. Assessments and risk management are key IT responsibilities</p>	<p>The IS program fully supported throughout the agency, has integrated IS into agency's mission and performance measures, has a robust IS training, collects metrics for FISMA reporting and uses them used for continuous IS process improvement</p>
		<p>There are modernization efforts to replace antiquated and insecure networks and infrastructure,</p>	<p>The agency is working to secure funding to implement incremental modernization efforts to replace insecure</p>	<p>The agency is working to secure funding and schedules incremental modernization efforts to replace insecure networks,</p>	<p>The agency has secured funding and is incrementally implementing modern infrastructure to replace insecure</p>

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		and to improve resilience of legacy applications	networks, infrastructure, and legacy applications	infrastructure, and legacy applications	networks, infrastructure, and legacy applications

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Functional Area	Attributes	Traits	Level 1 Basic Capabilities Characteristics	Level 2 Evolving Maturity Characteristics	Level 3 Demonstrated Maturity Characteristics
BUDGET TRANSLATING STRATEGY INTO ACTION	<p>Functional Area Description: The IT budget process translates strategy into actionable plans by making funding choices for investments and operational programs. For IT, the budget process begins with formulation processes that result in budget justifications that demonstrate the role of IT in fulfilling agency mission, business, and program goals. Budget justification documents at the program, bureau/component and agency eventually find their way to Congress through either the President’s budget or in supporting documentation like Congressional justifications for the Appropriations committees. This process and the resulting artifacts become the primary mechanism for demonstrating the value proposition and mission criticality of IT spending. The IT budget process continues with budget execution, which ensures a linkage of agency strategic direction to tactical commitment of resources. In particular, budget execution is one of the most reliable mechanisms to ensure that IT spending across the organization is economical and effective supporting agency missions. Budget execution supports FITARA through CIO approval of decisions to obligate funds by approving IT acquisitions, reprogramming requests for IT, and even stopping payments for poor contractor performance. Within this Function, traits are identified as tied to either budget formulation or budget execution. In a few cases, traits are associated with both phases of the budget process.</p> <p><i>Note: Yellow highlights identify linkages to the M-15-14 Attachment A: Common Baseline for IT Management and CIO Assignment Plan elements.</i></p>				
	<p>Horizontal integration: Is there the proper level of involvement from all appropriate stakeholders, including CIO, CAO, CFO, CHCO (the CXOs) and the mission/business leadership of the agency in the budget preparation and execution process?</p>	<p>The agency has an enterprise governing board that oversees all facets of the agency IT budget (Formulation)</p>	<p>Agency-wide board exists and meets</p>	<p>B1. CIO role in pre-budget submission. Agency-wide board includes all CXOs and mission/business leaders and addresses all phases of the spending lifecycle from investment to O&M and balances both IT and non-IT considerations</p>	<p>Agency-wide board is the authoritative decision making body for all facets of IT spending over its lifecycle</p>
		<p>Planned IT expenditures are established and reported according to agency policy (Execution)</p>	<p>The CIO has defined a policy for defining and communicating IT spend plans</p>	<p>A1, A2 & F1. Visibility of IT resources & Visibility of IT planned expenditure reporting to CIO. The CIO, CFO and CAO collaborate on the agency-wide policy to establish and report on planned expenditures for all transactions that include IT resources</p>	<p>The CIO, CFO and CAO collaborate on the enforcement of the agency wide policy to establish and report on planned expenditures for all transactions that include IT resources</p>

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Functional Area	Attributes	Traits	Level 1 Basic Capabilities Characteristics	Level 2 Evolving Maturity Characteristics	Level 3 Demonstrated Maturity Characteristics
		Joint Accountability exist between the CIO and CFO for budget decisions and oversight (Formulation/Execution)	The CIO is minimally involved in budget decisions for IT resources and the CFO often determines the final outcome	The CIO is somewhat involved in budget decisions IT resources and is consulted by the CFO before final decision making	The CIO is fully engaged IT resources and equally accountable for budget decisions as the CFO
		Program budgets are overseen by the PM with support from senior leadership (Formulation/Execution)	The PM has limited authority and oversight of the budget of the program	The PM has some authority and oversight for the program budget but is not involved in the final decisions	The PM has full (primary) control of all budget aspects of the program to include operating, planning, execution, deviation, and presentation
		Mission/business leadership along with IT management are held jointly accountable for performance on IT initiatives and the contribution of IT to the agency mission (Formulation)	All IT spending is assessed through a variety of measures including both business outcome measures and IT project progress measures	C1, E1. CIO role in planning program management & Ongoing CIO engagement with program managers. Ongoing IT spending is regularly evaluated with regard to project progress against the plan and continued contribution to the agency's mission	The CIO is significantly involved in the development of the Agency Strategic Plan, and the CIO's IRM Plan explicitly supports that plan. IT spending is regularly assessed regarding its contribution to the agency mission and Strategic Plan
		IT spending review examines both investments and base spending for operations and maintenance activities (Formulation/Execution)	IT spending review includes review of investments and some operational programs	Agency has a robust operational analysis capability to look for economies and unnecessary spending in operational IT systems	Agency has conducted a zero-based budget review of IT spending to identify to eliminate unnecessary and free up spending for new IT investments
		Rules are established that provide for repurposing and reprogramming of IT	J1. CIO role in recommending modification, termination, or pause	C1. CIO role in planning program management Ongoing IT spending is regularly	Agency-level decision making is highly adaptable to externalities and

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Functional Area	Attributes	Traits	Level 1 Basic Capabilities Characteristics	Level 2 Evolving Maturity Characteristics	Level 3 Demonstrated Maturity Characteristics
		<p>spending consistent with agency priorities and appropriate use of funds</p> <p>(Formulation)</p>	<p>of IT projects or initiatives. IT spending is monitored and reported on by the CIO through established performance measures and TechStats (or similar) reviews</p>	<p>evaluated with regard to their progress and continued contribution to the agency's priorities. This information informs the prioritization of IT spending on a regular basis by the investment board, on which the CIO sits</p>	<p>supports just in time decision making that provides for effective agency responses to emerging requirements</p>
	<p>Vertical Integration: Is there clearly stated and quantified relationship between agency mission/business outcomes and investment scope and timelines?</p>	<p>The agency has processes and workforce capabilities linking measurable mission/business goals, benefits, and outcomes to time and IT resources invested (Execution)</p>	<p>General linkage to IT spending to business goals</p>	<p>Specific linkage of IT spending elements to mission accomplishment</p>	<p>E1. Ongoing CIO engagement with program managers. Linkages of IT spending to business goals and mission accomplishment supported by a mix of quantitative and qualitative measures of impact</p>
		<p>The agency has the ability to review and prioritize the investment backlog at the agency, bureau or component, and program levels</p> <p>(Formulation)</p>	<p>Only Agency-level investment backlog management</p>	<p>Agency, bureau/component and program-level investment backlog management exist separately</p>	<p>Integrated backlog management among agency, bureau/component and program level portfolios</p>
		<p>The agency IT strategic plan satisfies three objectives: 1) aligns to agency mission and strategic goals; 2) addresses gaps the current strategic and organizational plan through IT spending; and 3) sets a course</p>	<p>Alignment of IT spending priorities to agency missions and strategic goals</p>	<p>Alignment of IT spending to address agreed-upon gaps in organizational capabilities</p>	<p>Alignment of IT spending agency priorities and to address agreed-upon gaps in organizational capabilities over a number of years with high-level milestones and anticipated deliverables</p>

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Functional Area	Attributes	Traits	Level 1 Basic Capabilities Characteristics	Level 2 Evolving Maturity Characteristics	Level 3 Demonstrated Maturity Characteristics
		for successful deployment of IT initiatives to advance realization of agency mission and business goals (Formulation)			
		An EA enables the agency to understand the relationship among the mission and business requirements and provides the basis for organizing IT spending portfolios for those requirements. (Formulation)	Existence of an EA program	An EA program that shapes IT spending portfolios	An EA program that outlines spending needs and priorities across portfolios
		The agency has a IT cost estimating policy and practices (Formulation)	IT cost estimating policy established at the agency level	IT cost estimating guidance and related training program across agency	Acceptable methods of performing IT cost estimates that can be applied to varying kinds of IT spending projects across agency
		Technical basis of IT spending estimates (Formulation)	Program staff develops IT spending estimates	Technical SMEs inform IT spending estimates	Program staff and technical SMEs inform IT spending estimates based on historical data by spending class and available industry data
		Budgets are executed in a way that provides transparency into commitments, obligations, and expenditures for	A1, A2 & F1. Visibility of IT resources & Visibility of IT planned expenditure reporting to CIO. IT budget (formulation and execution) data information is shared	IT budget (formulation and execution) data are shared regularly among relevant stakeholders	IT budget (formulation and execution) data are posted internally for appropriate staff to review

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		appropriate stakeholders (Formulation/Execution)	among relevant stakeholders upon request		
		Program Managers and key stakeholders are actively involved in all aspects of the program budget (Program engagement)	The program manager is responsible for managing the budget but not involved in budget formulation or other key budget decisions	The program manager is somewhat involved in the budget formulation and oversees budget execution of the program	The program manager is fully involved in the budget formulation and execution of the program budget
	TBM- IT Cost Accounting:	The agency is reporting planning expenditures in the TBM taxonomy outlined by OMB (Reporting requirements)	The agency is reporting standard investments in the TBM taxonomy (through the CPIC process); however, a majority of the alignment to IT towers and cost pools is based on rough percentages	The agency is reporting standard investments in the TBM taxonomy and the alignment to IT towers and cost pools is reported with a high level of confidence	The agency is reporting standard investments in the TBM taxonomy and alignment to IT towers and cost pools are validated with actual obligations and expenditures
		TBM informs decision making at all levels of the agency (decision making)	The agency has not fully implemented TBM and is not used the framework in any IT decision making activities	The agency has fully implemented TBM and is using data in selective cases to inform IT decisions	The agency has fully implemented TBM and is using the framework to make key decisions in IT activities and resources

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Functional Area	Attributes	Traits	Level 1 Basic Capabilities Characteristics	Level 2 Evolving Maturity Characteristics	Level 3 Demonstrated Maturity Characteristics
	<p>Support for Modular Execution: Does the agency IT budgeting process enable many of the objectives for incremental and modular development?</p>	<p>Does the IT budgeting process enable IT spending for projects and programs to be broken down into discrete increments or useful segments that deliver value and measurable outcomes over time? (Formulation)</p>	<p>IT budgets for programs and projects are sometimes described in a modular manner aimed at achieving overall program objectives over a time period</p>	<p>IT budgets for programs and projects are consistently described in a modular manner aimed at achieving overall program objectives over a time period and enable logical and progressive program and acquisition planning and budget execution</p>	<p>The agency maintains a fully mature IT budget process that can relate the processes for mission and business-driven investment to support planning for modular execution in ways that enable extensive use of Strategic Sourcing vehicles and enterprise sourcing concepts across the agency, including extensive consolidation of commodity IT infrastructure and service</p>
	<p>Right Authority: Is there clear review and approval authority in budget formulation and execution decisions for IT programs and acquisitions?</p>	<p>The IT budgeting process ensures the CIO helps to shape agency IT spending policies and requirements through all budget formulation and execution processes (Formulation/Execution)</p>	<p>H1. CIO role on program governance boards. The CIO is a formal member of the IT budget process of the agency</p>	<p>D1, G1. CIO role in budget request & CIO defines IT processes and policies. The CIO is an active participant in and has review and approval authority over IT spending throughout the IT spending lifecycle for all major IT spending. The CIO and CFO jointly affirm the CIO's significant role in developing the IT budget request</p>	<p>L1. CIO approval of reprogramming. CIO is informed and participates in negotiations with OMB and Congress regarding any changes on the IT budget to include re-allocation/reprogramming requests. CIO approves all reprogramming of IT funds that require Congressional notification. CFO ensures CIO participation</p>
	<p>Right Timing: Does the agency plan and allocate sufficient resources and time for:</p>	<p>During budget formulation, is there a schedule to begin planning the budget. Are the IT spend plans being used as</p>	<p>A generalized budget planning timeline is known but not documented or published</p>	<p>A generalized budget planning timeline is known and published</p>	<p>A generalized budget planning timeline has achieved milestones that are being met The most current IT spending plan is being</p>

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	<ul style="list-style-type: none"> Budget formulation Budget plan development Budget execution <p>To make sound portfolio decisions and meet budgetary timelines?</p>	<p>your baseline and priority decision-making?</p>	<p>Spend plan is available to IT offices and stakeholders</p> <p>IT Actuals are being tracked against the project apportionments</p>	<p>Spend plan is readily available to offices and stakeholder in a centralized place</p> <p>Polices and process are in place to track IT spending deviations and reprogramming</p>	<p>maintained, used and leveraged</p> <p>Polices and process are in place to track IT spending deviations and reprogramming and brought to an internal governing body for a decision</p>
		<p>Does the timing of updates to actual costs and forecast expenditures support routine agency cost and schedule performance reporting, and does it fully support agency reporting requirements for TechStat and PortfolioStat? (Execution)</p>	<p>IT spending data are generally available, subject to some reporting lags, with some manual adjustment and interpretation to support external reporting requirements</p>	<p>IT spending data are available with minimal manual intervention and reporting lags to support agency external reporting requirements.</p>	<p>IT spending data are available real time with no manual intervention. The data includes updates for latest actual costs and current forecast cost, schedule and performance outcomes. The data supports internal management information requirements and external reporting to OMB, Congress and other external stakeholders</p>

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Functional Area	Attributes	Traits	Level 1 Basic Capabilities Characteristics	Level 2 Evolving Maturity Characteristics	Level 3 Demonstrated Maturity Characteristics
ACQUISITION AGILE ACQUISITIONS – THE CORNERSTONE FOR SPEED IN DELIVERY	<p>Functional Area Description: FITARA aims to streamline the acquisitions process and eliminate wasteful buying practices. This will require changes from the current model of purchasing currently used in many agencies, to include more rapid delivery of capabilities to support the shortening IT lifecycle; more centralized buying to take advantage of shared services, leverage the government's buying power and reap the benefits of category management; better integration with program staff to ensure acquisitions meet program objectives; and better collaboration among stakeholders to ensure that acquired capabilities meet business and mission needs. For clarification of the distinction between acquisition and program management – program management is the set of activities to deliver a new or upgraded set of capabilities to ultimately support mission or business needs of the agency, and a program may involve a series of related, ongoing projects. As part of a program, there may be one or more acquisitions (buying of labor or IT services, or hardware and software, in this context synonymous with “procurement”) to support the overall delivery of the program.</p> <p><i>Note: Yellow highlights identify linkages to the M-15-14 Attachment A: Common Baseline for IT Management and CIO Assignment Plan elements.</i></p>				
	<p>Horizontal integration: Are there clear and measurable success criteria for acquisitions that all stakeholders agree to? Are there incentives for various stakeholders to collaborate? Is there proper level of involvement from all appropriate stakeholders for an acquisition, including representatives from CAO, CFO, the mission and business organization, General Counsel and other</p>	<p>Objectives and performance measures are synchronized across functions that participate in the acquisition process</p>	<p>There is a collaborative working environment among the acquisition team, including representatives of the program, CAO, CIO, and CFO</p>	<p>All members of an acquisition team are incentivized based upon program success and their performance is to some degree measured on meeting the program success criteria. Incentives are aligned to quality outcomes and results. Program and procurement rewards are aligned with strategic objectives</p>	<p>Acquisition personnel are treated as part of the program staff when acquisitions support a specific program. All members of an acquisition team are incentivized based upon well-defined outcome-based program success criteria and their performance is substantially measured on meeting the success criteria.</p>
		<p>All functions participating in the acquisition process are appropriately engaged in the process</p>	<p>CIO, CAO, CFO, and program leaders work together informally. Stakeholders, oversight and programs, as well as vendors/suppliers, collaborate when crafting solutions and innovating</p>	<p>K1, K2 CIO review and approval of acquisition strategy and acquisition plan. CIO, CAO, CFO, and program teams meet regularly to review acquisition status and issues in accordance with their defined roles in the process. Oversight acts as a</p>	<p>CIO, CAO, CFO and program leaders consider themselves to be strategic partners and prioritize attendance at meetings or reviews required in order to clear roadblocks in the process. Deep, extensive engagement with suppliers and markets;</p>

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	oversight, and suppliers?			business advisor built into program business operations. Communications with suppliers are open, ongoing	public/private partnerships are common
		All participating stakeholders have necessary training to support software procurement and management across the agency	Some stakeholder positions are defined and training for identified roles are in the nascent stages of development/roll out	All stakeholder positions needed for software procurement and management are defined but training is not standardized across the agency. Available training is mandatory and made available to those in software procurement and management roles across the agency	All stakeholder positions needed for software procurement and management are defined and training is standardized across the agency. Training is not only mandatory but reported upon for compliance purposes on a regular basis
	Vertical Integration through Category and Supplier Management Strategies: How well developed is the organization's Category Management and Strategic Sourcing capability? Do they go beyond simple contract consolidation and move into system consolidation and total cost of ownership (TCO) reduction? Do they provide IT infrastructure	The agency culture recognizes and embraces the use of Category Management and Strategic Sourcing approaches to leverage buying power, simplify the IT infrastructure, and enable more rapid acquisition of new capabilities	There is some use of Strategic Sourcing vehicles across the agency. Procurement strategies at the program level have some alignment with an overall enterprise strategy	12. Shared acquisition and procurement responsibilities. Strategic Sourcing vehicles are used across the agency, with an effort to consolidate some contracting of commodity IT infrastructure and services. Sourcing is guided by a consistent supplier selection process that is informed by enterprise strategy and priorities. The agency actively participates in interagency Category and Commodity Teams to assemble cross-agency agreements.	There is extensive use of Strategic Sourcing vehicles and enterprise sourcing concepts across the agency, including extensive consolidation of commodity IT infrastructure and services and incremental or modular contracting. The agency volunteers internal staff to lead Government-wide sourcing and category management efforts. Agency accesses products on-demand and onsite using technology

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	consolidation that provides a common platform that enables more rapid deployment of new capability?			Automation limits human intervention in commodity and simple buys and/or maximizes strategic sourcing and compliance with rules and socioeconomic requirements	
		Appropriate flexibility exists to balance program-level needs with enterprise buying strategies	There is flexibility built into Strategic Sourcing to ensure the appropriate contract vehicle is used and to limit roadblocks	There are processes in place to request and approve waivers if it is determined that a specific Strategic Sourcing vehicle is not appropriate	Within Strategic Sourcing contracts and category strategies, the flexibility exists to customize sourcing strategies to fit individual program needs
		Continuous process improvement is utilized to refine and enhance the effectiveness of enterprise buying strategies	Once awarded, contracts and/or strategies are occasionally revisited	The agency conducts annual Strategic Sourcing reviews to identify roadblocks and opportunities to develop action plans for continual improvement. The agency participates in government-wide category management strategy formulation in IT and takes advantage of government-wide initiatives to standardize on common hardware and software to the greatest extent	The agency routinely conducts alternatives assessments to identify and sunset obsolete or low-value purchases. For its size, the agency is able to obtain best-in-class pricing for products and services, especially by using existing category sourcing vehicles. The agency employs cloud-based sourcing software to provide end users a display of IT products already on government-wide or agency contracts for direct purchase and to capture real-time transactional spend and pricing data
	Right Information: Do acquisition teams have the have the	Quality information is available for making decisions	Acquisitions generally rely on the right types of information and metrics, but in many	Acquisitions generally rely on the right types of information and metrics, but in some	Demonstrated capability to provide all acquisitions information and analysis required to support

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	<p>means to obtain the right information to be able to make properly informed decisions? Are there quality control mechanisms to help ensure that the information is correct? Is evidence-based decision making properly integrated with the governance process? Are there transparency and information accountability? Are metrics actively used to measure effectiveness of the acquisition process?</p>	during the acquisition process	cases there are gaps in the quality of the underlying data and analysis to support decision making	cases there are gaps in the quality of the underlying data and analysis to support decision making. Available information supports decisions with near-perfect department acquisition data down to SAT and purchase card levels and complies with regulations and socioeconomic goals	informed decision making using reliable underlying data. Shares data seamlessly between buyers and suppliers; innovates jointly; determines/obtains new data needed to forecast acquisition priorities
		Quality Assurance Surveillance Plans are used to ensure information integrity	There is a basic Quality Assurance Surveillance Plan	There is a Quality Assurance Surveillance Plan established to ensure the correctness of information used to support the acquisition process	There is a comprehensive Quality Assurance Surveillance Plan established to ensure the correctness of information used to support the acquisition process
		Acquisition outcomes and program effectiveness are tracked and measured	Program staff and acquisition personnel have ad hoc standards for tracking program metrics and inconsistent collection of data. Acquisition outcome and effectiveness tracking is nascent	Program staff and acquisition personnel have defined standards for tracking program and acquisition metrics and there is an initiative to implement tools for consistent collection of data. Data quality improvement is in progress through analysis and training. Acquisition outcome and effectiveness tracking is being implemented. Unit and individual performance is linked to agency goals and objectives	Program staff and acquisition personnel provide consistent and complete reporting on acquisition status, risks, issues, and recommendations via dashboards because standards and tools for reporting are fully defined and implemented. Acquisition outcome and effectiveness tracking are part of the process with data accurately reflecting the true status of the investments. Acquisition process metrics are

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					tracked and used to make improvements. Performance evaluation is linked to outcomes/results for citizens and the country
		Data concerning planned and actual spending is available, accurate, and actionable	Some visibility exists to planned expenditures involving IT resources, but there is little availability of key purchase/spending data at both at an agency level across multiple categories, commodities, and services	F1. Visibility of IT planned expenditure reporting to CIO. Planned expenditures involving IT resources are reported in accordance with CIO, CFO, and CAO policy, and there is availability of some key purchase data at an agency level across multiple categories, commodities, and services	Key planned and actual purchase data is available in detail at both a government-wide and agency level across multiple categories, commodities and services. Dashboards provide real time view of portfolio program, and acquisition status, allow for drill-downs for specifics, and are tailored for specific stakeholder needs
		Data is used to identify opportunities to improve leverage and pricing	There is ad hoc opportunity analyses to identify opportunities to improve leverage and pricing	There is ad hoc opportunity analyses to identify opportunities to improve leverage and pricing	The agency routinely conducts opportunity analyses to identify opportunities to improve leverage and pricing
		Approval authorities are delegated to the appropriate level within the agency	Either no formal delegation authority exists, or most decisions require approval at senior levels within the agency	K1. CIO review and approval of acquisition strategy and plan. The agency has a governance process to delegate at least some decision making to the lowest level possible, based on program and acquisition size, complexity, and risk	The agency has a culture and governance process to delegate decision making to the lowest level possible, based on program and acquisition size, complexity, and risk. Acquisition personnel and contractors are each incentivized to value speed in delivery without sacrificing risk, quality, or cost.

Section 3: Acquisition

Functional Area	Attributes	Traits	Level 1 Basic Capabilities Characteristics	Level 2 Evolving Maturity Characteristics	Level 3 Demonstrated Maturity Characteristics
	<p>Right Timing: Best practice for IT programs is to field smaller and more incremental releases of functionality to lower risk and get end user feedback to ensure the program is providing value to the customer. Are the agency's leadership, processes, and culture enabling acquisitions to be completed to meet these short timelines? Is decision making streamlined to minimize delays?</p>	<p>Approval processes are streamlined and/or can be fast-tracked to ensure that programs meet business and delivery deadlines</p>	<p>Agency policies and direction favor use of Strategic Sourcing contracts to accelerate contracting timelines but otherwise are not designed to speed acquisition processes</p>	<p>K1. CIO review and approval of acquisition strategy and plan. Approval processes and documents for acquisitions are integrated and developed with the intent to shorten time but not sacrifice completeness or quality. Small, low cost, low risk programs can navigate fast track acquisition processes in weeks</p>	<p>Programs leverage portfolio strategies, contracts, and architectures to accelerate deliveries. There is an acquisition prioritization process to enable the fast-tracking of time critical acquisitions. Policies and tools keep approval review process flowing and rapidly address disconnects or objections. CAO ensures that IT contract actions and inter-agency agreements that include IT are reviewed and approved by the CIO</p>
		<p>Incremental development is integral into all acquisition strategies and plans (as applicable)</p>	<p>Traditional or waterfall development is the standard approach used for all acquisition strategies and plans (as applicable)</p>	<p>Some Acquisition strategies use incremental development; however, it is not a standard practice</p>	<p>Incremental development is the standard approach used for all acquisition strategies and plans (as applicable)</p>

Section 4: Organization and Workforce

Functional Area	Attributes	Traits	Level 1 Basic Capabilities Characteristics	Level 2 Evolving Maturity Characteristics	Level 3 Demonstrated Maturity Characteristics
ORGANIZATION & WORKFORCE A SKILLED AND EXPERIENCED WORKFORCE IS THE FOUNDATION	<p>Functional Area Description: <i>The objective of FITARA is to improve the management of IT within an agency and hence, improve the ability for that agency to deliver its mission securely and provide appropriate information access to the American public. To be most effective, IT must align to the functional needs of an agency and the agency's organization and workforce strategies are tightly integrated to support the agency's IT portfolio. In order to maximize the success of each program in meeting their unique business drivers, there needs to be cooperation and communication as organizational and workforce processes are integrated to reflect inclusion of all necessary inputs and to minimize unnecessary duplication. Further, IT management requires that the appropriate skills and experience be leveraged not only within leadership, but also throughout the workforce, by means of strategic planning and competency modeling. The workforce goes well beyond IT professionals, but includes acquisition, program management, finance, and others that are instrumental in supporting sound IT management. Workforce planning to meet mission and business needs, development of competencies needed throughout the workforce, and collaboration and decision making to address workforce developmental needs are key elements of maturity for the organization and workforce function.</i></p> <p><i>Note: Yellow highlights identify linkages to the M-15-14 Attachment A: Common Baseline for IT Management and CIO Assignment Plan elements.</i></p>				
	<p>Horizontal integration: Is there the proper level of involvement by all stakeholders, to include the CIO, CAO, CFO and CHCO, in the development and use of workforce planning processes, competencies models, and critical elements definitions? Are agency key critical elements included in bureau/component CIO evaluations?</p>	<p>The CIO and CHCO work in full partnership to develop and use workforce planning processes, tools, competencies models to effectively plan and execute hiring, retention, promotion, and training activities</p>	<p>P1. IT workforce planning. The CIO and CHCO work together to develop and use workforce planning processes, tools, competencies models to plan and execute hiring, retention, promotion, and training activities</p>	<p>IT Workforce planning strategies, processes, and models have all proper stakeholders involved with CIO participation</p>	<p>Agency workforce planning strategies, processes, and competency models, are fully integrated across the agency</p>
		<p>Agency human capital policies explicitly support the needs of an agency's CIOs and the IT workforce across the agency</p>	<p>Agency human capital policies align to IT workforce planning strategies, processes, and models across the agency</p>	<p>Selected IT workforce planning and implementation efforts have the support of mission, business and IT leaders</p>	<p>At all levels of IT workforce planning, significant representation of the mission and business leadership to ensure IT is being driven to meet agency needs</p>
		<p>IT Leadership, in conjunction with CXOs, sets</p>	<p>Minimal training, processes and standards are defined for non-</p>	<p>Training, processes and standards are developed for non-</p>	<p>Robust training, processes and standards are defined and followed</p>

Section 4: Organization and Workforce

Functional Area	Attributes	Traits	Level 1 Basic Capabilities Characteristics	Level 2 Evolving Maturity Characteristics	Level 3 Demonstrated Maturity Characteristics
		standards and requirements for non-technical staff supporting IT execution (procurement, budget, etc.)	technical IT staff to support IT execution	technical staff but not consistently applied across the agency and its bureaus.	for non-technical IT staff across the agency and its bureaus.
	Vertical Integration: Do agency workforce policies clearly align to workforce planning strategies, processes, and models at a bureau/component and program level? Is there proper, timely involvement by the agency CXOs in the recruitment, selection, and evaluation of all applicable bureau/component and program-level CXOs (e.g., Agency CFO involved in selection of bureau/component and program-level CFO?)	CIO and CHCO jointly publish a dataset identifying all bureau/component officials with title of CIO or duties of a CIO and post results as a public dataset	O1. Bureau IT Leadership Directory. The CIO and CHCO jointly publish a dataset of all bureau / component officials with the title of CIO or duties, and it is made publicly available	The CIO and CHCO jointly publish a dataset of all bureau /component officials with the title of CIO or duties, and it is made publicly available. The dataset is updated quarterly	The CIO and CHCO jointly publish a dataset of all bureau officials with the title of CIO or duties, and it is made publicly available. The dataset is updated regularly
		Agency CIO is involved with the recruitment, including the interview process, of any new bureau/component and program-level CIO. Agency CIO approves the selection of any new bureau/component and program-level CIO	M1. CIO approves new bureau CIOs. The CIO is involved in the recruitment and interview process, and approves the selection of any new bureau/component and program-level CIO	CIO and CHCO jointly define the implementation of the CIO role in the recruitment of bureau/component CIOs, approval of the selection of bureau/component and program-level CIOs	The appropriate agency CXO is an active participant with the CHCO in the development of position requirements for recruitment, selection of all relevant bureau/component and program-level CXOs (e.g., Agency CIOs for bureau CIOs, etc.)
		IT workforce planning strategies, processes, competency	The CIO plays a role in establishing consistent critical elements for bureau/component and program-level CIOs	N1. CIO Role in ongoing bureau CIO's evaluation. The CIO plays an integral role with the CHCO in	The CIO uses agency-wide IT strategies to establish critical elements for bureau/component and

Section 4: Organization and Workforce

Functional Area	Attributes	Traits	Level 1 Basic Capabilities Characteristics	Level 2 Evolving Maturity Characteristics	Level 3 Demonstrated Maturity Characteristics
		models, and critical elements for bureau/component CIO evaluations are fully defined across the agency		establishing consistent, fully integrated critical elements for bureau/component and program-level CIO evaluations	program-level CIOs' performance
		The CIO has a role in the evaluation of bureau/component and program-level CIOs	N1. CIO role in ongoing bureau CIO's evaluations. Ratings official includes input from the CIO when determining initial and final summary rating	The agency CIO's appraisal input is used to inform final ratings of all relevant bureau/component and program-level CIOs	The appropriate agency CXO's appraisal input is used to inform final ratings of all relevant bureau/component and program-level CXOs
	Right Leadership: Does the organization's leadership have the necessary skills and experience to lead and ensure the management of IT can reach a demonstrated maturity level?	The CXO and the bureau/component and program-level CXOs have the skills necessary to effectively lead	Competency models are used to inform leadership-hiring decisions and support training and development needs	The agency promotes collaborative leadership across the CXOs and mission and business organizations. In addition, leadership provides and promotes coaching and mentoring throughout the organization, sets continuously higher goals and standards that encourages and rewards professional growth, and utilizes a transparent succession plan and delegation of authority model	Agency and bureau/component and program-level leadership has the experience, background and capabilities at the appropriate level of complexity to engender respect and confidence in stakeholders, senior management and employees
		The CIO provides clear direction and strategies	The CIO maintains a transparent roadmap of IT priorities and target skills/competencies necessary to meet agency mission	The CIO communicates the agency's strategic vision for IT and the role each bureau/component and program-level CIO	The agency CIO communicates the agency's strategic vision for IT and the role each bureau/component and program-level CIO plays

Section 4: Organization and Workforce

Functional Area	Attributes	Traits	Level 1 Basic Capabilities Characteristics	Level 2 Evolving Maturity Characteristics	Level 3 Demonstrated Maturity Characteristics
			objectives and deliver the IT Portfolio	plays in attaining the agency's goals	in attaining the agency's goals
		The agency leadership drives the culture and change management processes in order to obtain Demonstrated Maturity in IT management	The agency leadership believes in the need for improved IT management but focuses just on the IT organization	The agency leadership believes in the need to achieve Demonstrated Maturity in IT management, but the change management processes have not been implemented to drive the change through the organization	The agency leadership embraces the need to achieve Demonstrated Maturity in IT management, actively supports change management processes throughout the organization, and institutionalizes the changes with policies, practices, and tools
	Right People: Does the agency have a clear view of the skills and experience to perform their assigned duties both now and into the future? Is the workforce planning process and competency models used to guide and inform IT hiring across the organization?	The CXOs ensures that the agency has the right people, with the right skills and grades at the right time to effectively lead and deliver programs	A defined competency-driven career path informs professional expectations and development goals	P1. IT Workforce Planning. The organization has identified a future state functional operating model that is mapped to the critical competencies. The Strategic Workforce Plan reflects the hiring and development necessary to enable agencies to plan and lead delivery of programs effectively	The IT investment portfolio informs a frequently refreshed competency framework and associated career development paths
		Effective recruitment programs are in place	Managers are empowered to recruit and retain mission critical talent to support agency requirements. IT staff recruiting processes recognize "speed to market" issues with hiring	Managers are empowered to recruit and retain mission critical talent to support agency requirements. IT staff recruiting processes recognize "speed to market" issues with hiring. CHCO and other CXOs have	Managers are empowered to recruit and retain the right talent in time to support agency requirements and anticipated demand using all available hiring authorities and workforce planning tools. The agency regularly, and consistently, utilizes all

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Functional Area	Attributes	Traits	Level 1 Basic Capabilities Characteristics	Level 2 Evolving Maturity Characteristics	Level 3 Demonstrated Maturity Characteristics
				agreed upon service levels for CIO hiring timeliness	available hiring authorities to recruit mission critical talent. CHCO and other CXOs have a transparent view into achieving agreed-upon service-level agreements for hiring timeliness
		Effective training programs are in place	Training, mentoring and certification programs are provided consistently across the agency program managers, but others to include system architect, development manager, test manager, configuration manager, contracting officer, cybersecurity professional, financial/budget analyst, acquisition staff, etc.	Robust training, mentoring and certification programs are provided consistently across the agency program managers, but others to include system architect, development manager, test manager, configuration manager, contracting officer, cybersecurity professional, financial/budget analyst, acquisition staff, etc.	In addition to the robust training, mentoring, and certification programs across disciplines, the IT investment portfolio informs and is supported by a comprehensive, tailored, learning and development catalog
		Contract resources are effectively used to support and supplement staff	There is an appropriate balance between permanent staff and contract resources to ensure successful IT services and program delivery	Staff serve as thought leaders, architects, and program managers, and are appropriately augmented by contract resources	The agency effectively uses contract resources as delivery execution and surge support, as well as SME advisors. The Strategic Workforce Plan incorporates contract resources in the overall agency strategies
	Strategic Workforce Planning: Does the agency have	Strategic IT workforce plans are in place; gaps	P1. IT Workforce Planning. There is a strategic IT workforce plan drafted in	There are highly effective systems, processes and project-based development	Daily controls and performance measures are in place to measure progress. In addition,

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Functional Area	Attributes	Traits	Level 1 Basic Capabilities Characteristics	Level 2 Evolving Maturity Characteristics	Level 3 Demonstrated Maturity Characteristics
	an effective, complete workforce planning process to identify workforce skill and competency gaps? Is this planning process integrated with talent management to ensure that personnel have or develop the requisite skills needed to support the mission and adapt quickly to changing requirements?	and plans to fill those gaps exist	alignment with organization's vision, mission and values - Strategic skill gaps are identified and a plan in place to fill gaps through training and recruitment	opportunities in place to identify and develop the next generation of leaders. In addition, the agency regularly reports results of talent management programs on performance.	senior leadership continually assesses leadership talent
		Strategy and plan in place to re-train IT workforce as needs and priorities within IT portfolio change/shift	The agency is aware of the need to re-train staff to meet IT strategic goals; however, minimal training is supported to enhance or augment current IT staff skills	The agency is working to promote re-training of existing IT staff but not all training is available or linked to support strategic direction of IT moving forward	The agency ties together its multi-year IT strategy and employee training needs to augment employee skills to support future direction
	Right Placement and Authority: Do agency CXOs have the proper organization placement and authority to ensure their able to effectively drive organizational maturity in their area and in particular support the agency's ability to effectively manage IT?	The CIO is in the right organizational role and has the necessary roles, responsibilities and authorities	The CIO is part of the overall organizational strategic management team, and represents the organization in intergovernmental committees and before the public	Q1. CIO reports to agency head (or deputy/COO). The CXOs meets regularly with the head of the agency or their deputy, providing strategic advice and counsel, and is afforded the necessary support and decision authority	The CXOs report directly to the head of the agency or their deputy. In addition, bureau/component and program-level CXOs have mirrored placement and authorities in their bureau/component or program

Section 5: Program Management

Functional Area	Attributes	Traits	Level 1 Basic Capabilities Characteristics	Level 2 Evolving Maturity Characteristics	Level 3 Demonstrated Maturity Characteristics
<p>Functional Area Description: The objective of FITARA is to improve the management of IT within an agency and hence, improve the ability for that agency to deliver its mission and conduct its business. Program management is either: 1) the set of activities to deliver a new or upgraded set of capabilities to ultimately support mission or business needs of the agency, and a program may involve a series of related, ongoing projects; or 2) the ongoing operations and maintenance of an existing production system. As part of a program, there may be one or more acquisitions (buying of labor or IT services, or hardware and software) to support the overall delivery of the program.</p> <p>Note: Yellow highlights identify linkages to the M-15-14 Attachment A: Common Baseline for IT Management and CIO Assignment Plan elements.</p>					
<p style="writing-mode: vertical-rl; transform: rotate(180deg);">PROGRAM MANAGEMENT GOOD PROGRAM MANAGEMENT IS THE KEY TO DELIVERING NEW CAPABILITIES</p>	<p>Program and project management disciplines: Does the agency have a well-defined set of management disciplines (e.g., schedule, estimation, requirements, configuration, operations, and risk management) that are used consistently throughout the agency? Are mechanisms in place to ensure these disciplines are being properly applied in programs? Is there training and mentoring for personnel that serve on program teams? Is there a process to update these disciplines to ensure the agency is using modern program management?</p>	<p>Disciplines of sound program management are in place at start of a program</p>	<p>The agency has a process that ensures the program and project management disciplines are properly applied throughout the life of a program</p>	<p>The agency has a process to continually update management disciplines based on feedback from program staff and the latest industry practices</p>	<p>Expert help is available to support programs that are in need of help in implementing or refining management disciplines for a program</p>
		<p>Agency has defined a planning process that includes the CIO in the review of all IT components of mission program planning</p>	<p>Agency has defined a process that incorporates CFO, CIO and program leadership in reviews of IT spending in broader spending plans, but considers IT investments with other uses of agency funding</p>	<p>C1. CIO role in planning program management. CIO approves the IT components of any plans, through defined planning process, but agency head minimally balances IT investments with other uses of agency funding</p>	<p>CIO is fully involved with planning of IT resources at all points in their lifecycle, including operations, disposition and migration across all agency planning processes</p>
		<p>Project personnel are trained and certified in the disciplines and levels necessary for their initiative</p>	<p>Individuals on program teams have proper training in the application of program management disciplines</p>	<p>Individuals on program teams have proper training in the application of program management disciplines</p>	<p>Individuals on program teams have proper training in the application of program management disciplines that is engrained into the organization. Mentoring is available to programs that are struggling with</p>

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Functional Area	Attributes	Traits	Level 1 Basic Capabilities Characteristics	Level 2 Evolving Maturity Characteristics	Level 3 Demonstrated Maturity Characteristics
					implementation of one or more of the management disciplines
		PM has a defined budget evaluation process, that includes the CIO, in the review of all lifecycle and incremental development IT component effecting cost	The PM has ad hoc IT budget and spending reviews with budget personnel	The PM has established and documented processes and policies in place for sharing and update of all costing aspects of the program	The PM regularly holds cost updates and briefings in the lifecycle and incremental development cost planning, execution, and decision making and updates the CIO as required
		Project personnel are identified specifically for costing (budget) roles and responsibilities	Budget individual has basic training and experience in the budget area to perform general requirements (budget estimates and justifications, budget submissions and monitoring, and OMB reporting,	Budget individual has intermediate training and experience in the budget area to perform intermediary requirements (CBA, planning, execution, etc.)	Budget individual has advanced training and experience in the budget area to perform sophisticated requirements (e.g., complex financial and workload relationships; timing of obligations and expenditures in relation to the budget cycle; current and future resource needs; direct or indirect monetary impact of new legislation. Assignments are varied and complex and require in-depth analysis to determine the means of resolution and the application of a variety of non-related

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Functional Area	Attributes	Traits	Level 1 Basic Capabilities Characteristics	Level 2 Evolving Maturity Characteristics	Level 3 Demonstrated Maturity Characteristics
					<p>techniques and methods to a broad range of budget tasks, advises managers on appropriate budgetary action to be taken to meet agency needs, makes recommendations affecting substantive programs, monitors and reports on the rate of expenditure of funds, and alerts managers of trends in obligation of funds.)</p>

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Functional Area	Attributes	Traits	Level 1 Basic Capabilities Characteristics	Level 2 Evolving Maturity Characteristics	Level 3 Demonstrated Maturity Characteristics
	<p>Horizontal integration: Is there proper level of involvement from all appropriate stakeholders for programs, including representatives from the mission and business organization, CIO, CAO, CFO, CHCO, General Counsel, etc.? Are there clear and measurable success criteria that all stakeholders agree to? Is there an integrated program team that all program personnel belong to with reporting to a Program Manager on all aspects of the delivery of that program? Are all program personnel measured on meeting the success criteria for that program?</p>	<p>Integrated program teams are formed in which all appropriate stakeholders (to include mission or business organization, CIO, CAO, CHCO, CISO, etc.) have representatives on the program team</p>	<p>Program team integration is limited and some members of the program team are incentivized and their performance is to a degree measured on meeting the program success criteria. In addition to internal stakeholders, the team has identified external stakeholders for consultation during program execution</p>	<p>Program team consists of full business compliment and most members of the program team are incentivized and their performance is measured on meeting the program success criteria. The program team has an external stakeholder engagement plan</p>	<p>Program Team consists of full business compliment and all members of the program team are incentivized and their performance is substantially measured on meeting the program success criteria. The program team executes consistently on an external stakeholder engagement plan</p>
	<p>Comprehensive and adaptable system development lifecycle (SDLC): Does the agency have an appropriate system development lifecycle that lays out the approach or approaches that will be used to design, develop, test and deploy the</p>	<p>The agency has a comprehensive system development lifecycle</p>	<p>The agency has a system development lifecycle (SDLC)</p>	<p>G1. CIO defines IT processes and policies The SDLC has paths pre-defined for some types of IT programs and can easily be tailored as required for a program. Paths accommodate both traditional linear and iterative/agile frameworks</p>	<p>The SDLC has paths pre-defined that can handle all types of IT programs and can easily be tailored as required for a program</p>

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Functional Area	Attributes	Traits	Level 1 Basic Capabilities Characteristics	Level 2 Evolving Maturity Characteristics	Level 3 Demonstrated Maturity Characteristics
	system? Are there pre-defined paths for different types of IT projects? Can these paths easily be tailored to fit the needs of a program?	The agency has the necessary policies in place to support IT programs	G1. CIO defines IT processes and policies Agency policies and tools keep approval review process flowing, including use Strategic Sourcing vehicles to accelerate contracting timelines. Agency rapidly addresses disconnects or objections to reduce project timing impacts	Most approval processes and documents are integrated and developed with the intent to shorten time but not sacrifice completeness or quality	All approval processes and documents are integrated and developed with the intent to shorten time but not sacrifice completeness or quality
		The agency establishes a process for program managers to engage stakeholders	E1. Ongoing CIO engagement with program managers Customers are actively involved in upfront design and development processes to provide the insight and feedback to ensure that IT investments are incorporated into the agency's strategic plan	Customers are actively involved in the development and testing processes to provide the insight and feedback to ensure that IT investments are delivery customer value and business objectives	Customers are actively involved through-out the SDLC to define, design, and assessment requirements by providing insight and feedback to ensure that IT investments are delivery customer value and business objectives
	Development and use of architecture: Is there a business architecture for each program, which describes the overall process of what the system must do to support the desired business or mission outcomes? Is this business architecture derived from the appropriate portfolio	Programs utilize a business architecture to define initiative mission or business outcomes	Some programs have a business architecture that define the overall mission or business mission outcomes	Most programs have a business architecture that defines the overall mission or business mission outcomes	All programs have a business architecture that defines the overall mission or business mission outcomes
		Business architecture is defined and derived from the EA	The business architecture for some programs is defined and derived from the EA	The business architecture for most programs is defined and derived from the EA, and there is clarity regarding how the program fits into and	The business architecture for all programs is defined and derived from the EA, and there is clarity regarding how the program fits into and

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Functional Area	Attributes	Traits	Level 1 Basic Capabilities Characteristics	Level 2 Evolving Maturity Characteristics	Level 3 Demonstrated Maturity Characteristics
	of the EA? Is there appropriate focus on development of a solid technical architecture, especially for a complex system with a number of subsystems? Are there policies that prescribe the use of shared IT infrastructure, leverage of existing capabilities where possible, and use of commercial off-the-shelf solutions to the degree possible?			meets enterprise and portfolio requirements	meets enterprise and portfolio requirements. In addition, all programs have a well-defined technical architecture that leverages a common platform or infrastructure
		EA is integrated with IT governance	An EA process exists with some program governance integration to support program analysis and alignment with targeted state for mission or business	An EA is integrated with governance, program offices, and acquisitions to establish an as-is state and more importantly, perform complete analysis to make decisions that are in alignment with targeted state for mission or business outcomes	A mature EA is integrated with governance, program offices, and acquisitions to understand the as-is state and more importantly, perform complete analysis to make decisions that are in alignment with targeted state for mission or business outcomes
		EA contains security architecture	The agency's EA recognizes the importance of IT Security, but there are significant gaps in some portfolios and programs	The agency's EA recognizes the importance of IT Security, but there are still gaps in some portfolios and programs	The agency's EA recognizes the importance of IT Security, capturing an as-is state and also has determined a to-be state for security at an enterprise, portfolio, and program level
	Right Timing: Best practice for IT programs is to field smaller and incremental releases of functionality to lower risk and get end user feedback to ensure the	Governance process enables proper engagement and decision making to expedite delivery	The agency's culture and governance process requires decision making at the enterprise level, no matter the program size, complexity, and risk	The agency's culture and governance process allows for some delegated decision making at the lowest level possible, based on program size, complexity, and risk	The agency has a culture and governance process to delegate decision making to the lowest level possible

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Functional Area	Attributes	Traits	Level 1 Basic Capabilities Characteristics	Level 2 Evolving Maturity Characteristics	Level 3 Demonstrated Maturity Characteristics
	<p>program is provide value to the customer. Are the agency's leadership, processes, and culture enabling programs too rapidly to deliver capabilities? Is decision making streamlined to minimize delays?</p>	<p>The majority of IT capabilities are delivered via small, frequent releases providing iterative functionality and responsive to changes in business, technologies, risks, and budgets</p>	<p>Some IT projects are delivered via small, frequent releases providing iterative functionality and responsive to changes in business, technologies, risks, and budgets</p>	<p>G1. CIO defines IT processes and policies The majority IT projects and some program are delivered via small, frequent releases providing iterative functionality and responsive to changes in business, technologies, risks, and budgets</p>	<p>The majority of IT capabilities are delivered via small, frequent releases providing iterative functionality and responsive to changes in business, technologies, risks, and budgets. In addition, the agency is using a common platform or infrastructure in the default design to enable ease of integration, and reduce program scope, cost, schedule, and risk</p>
		<p>Programs use well-established solutions to expedite time to delivery</p>	<p>Programs use commercial off-the-shelf solutions when possible and leverage portfolio strategies, contracts, and architectures to accelerate deliveries</p>	<p>In addition to using commercial off-the-shelf solutions when possible, programs leverage the use of existing agency components or services</p>	<p>Programs are required to leverage existing services, components and software standards to the maximum degree possible</p>
	<p>Right Information: Do program teams have the have the means to obtain the right information to be able to make properly informed decisions? Are there quality control mechanisms to help ensure the information is correct? Is there evidence-</p>	<p>The agency has the necessary mechanisms in place to baseline and monitor program performance</p>	<p>While the agency has standard reporting mechanisms in place, each project individually determines how it will baseline and what tools it will use monitor cost, schedule and performance</p>	<p>While the agency has standard reporting mechanisms in place, programs determines how they will baseline and what tools they will use to monitor cost, schedule and performance. TBM is somewhat implemented giving the agency a clearer</p>	<p>The agency has standard reporting mechanisms in place that all programs follow to establish a baseline and standard toolset to monitor cost, schedule and performance. TBM is fully implemented giving the agency a clearer picture of IT spend for each program</p>

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Functional Area	Attributes	Traits	Level 1 Basic Capabilities Characteristics	Level 2 Evolving Maturity Characteristics	Level 3 Demonstrated Maturity Characteristics
	<p>based decision making that is properly integrated with the governance process? Is there transparency and information accountability? Are metrics actively used to measure effectiveness of program delivery?</p>			<p>picture of IT spend for each program</p>	
		<p>Agency has a process to share information and perform analysis required to support program decision making</p>	<p>Demonstrated capability to provide some program information and analysis required to support informed decision-making using reliable underlying data</p>	<p>Demonstrated capability to provide most program information and analysis required to support informed decision-making using reliable underlying data</p>	<p>Demonstrated capability to provide all program information and analysis required to support informed decision-making using reliable underlying data</p>
		<p>Agency has a standard method for reporting on program status, risks, issues, and recommendations</p>	<p>Program staff provide basic reporting on program status, risks, issues, and recommendations</p>	<p>Program staff provide consistent and complete reporting on program status, risks, issues, and recommendations</p>	<p>Program staff provide consistent and complete reporting on program status, risks, issues, and recommendations via dashboards because standards and tools for reporting are fully defined and implemented</p>
		<p>Agency has metrics and dashboards in place to track programs and make improvements</p>	<p>G1. CIO defines IT processes and policies The agency has some program execution process metrics that are tracked and used to make improvements with results posted to Federal IT Dashboard</p>	<p>Program outcome and effectiveness tracking is part of agency process with data accurately reflecting the true status of the programs. Some program execution process metrics are tracked and used to make improvements to include benchmarking IT costs through TBM</p>	<p>All program execution process metrics are tracked and used to make improvements. Dashboards provide real time view of portfolio, program, and acquisition status, allow for drill-downs for specifics, and are tailored for specific stakeholder needs. This includes full IT cost reporting through TBM</p>

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Functional Area	Attributes	Traits	Level 1 Basic Capabilities Characteristics	Level 2 Evolving Maturity Characteristics	Level 3 Demonstrated Maturity Characteristics
	<p>Risk Management (while a specific management discipline, risk management is so critical to program success that is recognized as an attribute for assessing program management maturity): Does the agency have a comprehensive program risk management approach, to include risk identification and impact assessment, risk prioritization analysis, risk mitigation, and risk reporting? Is there proper escalation processes in place to address risks? Does the agency have the processes in place to ensure that a TechStat is triggered when an agency determines that a project is high risk?</p>	<p>Agency uses risk management as a standard mechanism for assessing probability of program delivery</p>	<p>Agency has a comprehensive risk management process in place for use by projects and programs, as appropriate</p>	<p>Agency has a comprehensive and well documented risk management process in place for programs, with risks and their relationships, impacts, and dependencies assessed by the program team and governance structure, as appropriate</p>	<p>Agency ensures all programs are using the risk management process and validates programs have properly implemented and are executing risk management</p>
		<p>The agency has established processes to ensure that a TechStat is triggered when an agency determines that a project is high risk</p>	<p>TechStats are sometimes conducted for high-risk programs</p>	<p>J1. CIO role in recommending modification, termination or pause of IT projects. TechStats are routinely conducted for high-risk programs</p>	<p>Agency TechStats are routinely used so that programs do not become high-risk</p>
		<p>Risks are integrated into program decision-making</p>	<p>Risks are clearly understood by senior program staff. Decision making focuses on risks proactively. Prioritization is based on a balanced set of factors, including probability, degree of impact, past history and interdependencies</p>	<p>Risks are clearly understood at all levels of staff and contractors on a program and its constituent projects. Decision making focuses on proactive management of risks. Prioritization is based on a balanced set of factors, including probability, degree of impact, past history and interdependencies</p>	<p>Risks are clearly understood at all levels of staff and contractors on a program and its constituent projects. Decision making focuses on proactive management of risks. Prioritization is based a balanced set of factors, including probability, degree of impact, past history and interdependencies</p>

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Functional Area	Attributes	Traits	Level 1 Basic Capabilities Characteristics	Level 2 Evolving Maturity Characteristics	Level 3 Demonstrated Maturity Characteristics
	<p>Information Security (IS) (while a specific technology area and set of requirements for a program, information security is so critical that is recognized as an attribute for assessing program management maturity): Do programs properly recognize and incorporate information security requirements? Does the agency have proactive means in place to keep information security policies and approaches current? Does the agency measure effectiveness of information security outcomes by actively collecting metrics? Does the agency use metrics to improve programs and acquisition processes?</p>	<p>The agency has integrated IS into IT programs</p>	<p>The agency has included IS upfront in some programs, leveraging CIO EA and standards</p>	<p>The agency has included IS upfront in most programs, leveraging CIO EA and standards</p>	<p>The agency has fully integrated IS in all programs, leveraging CIO EA and standards</p>
		<p>IS requirements are integrated into the system development lifecycle</p>	<p>Security defects are found and addressed during final testing of program. Program implementations delayed due to minimal security requirements defined early, delaying ability to obtain Authority to Operate</p>	<p>Most security defects are found during development. Post-production defects are reduced. Program implementations completes security requirements to obtain Authority to Operate</p>	<p>Security is incorporated throughout the system development lifecycle to eliminate the majority of post-production defects</p>
		<p>The agency includes IS and supply chain logistics requirements in IT procurements</p>	<p>The agency includes IS requirements in IT procurements</p>	<p>The agency includes IS and supply chain logistics requirements in IT procurements</p>	<p>The agency includes IS and supply chain logistics requirements in IT procurements and there is a continual process to assess and improve IS requirements for IT procurements</p>
		<p>The agency has an approach to ensure IT security policies and approaches for programs and acquisitions are kept current</p>	<p>There is some IT security process metric tracking and there is a review process to leverage leading IT security practices</p>	<p>There is IT security process metric tracking and there is a review process to leverage leading IT security practices</p>	<p>IT security process metrics are tracked and there is a process to review and leverage leading IT security practices to be used to make improvements to the Agency's IT security policies, approaches and IT programs and acquisitions</p>
		<p>Metrics are used to measure effectiveness of IT</p>	<p>IT security and supply chain risk management measures are defined</p>	<p>The agency has initiated integration of IS and supply chain risk</p>	<p>The agency has fully integrated IS and supply chain risk management</p>

Section 5: Program Management

Functional Area	Attributes	Traits	Level 1 Basic Capabilities Characteristics	Level 2 Evolving Maturity Characteristics	Level 3 Demonstrated Maturity Characteristics
		security outcomes and improve acquisition processes	but collection and use of measures varies by program and acquisitions	management measures and analysis into program strategies and acquisitions for development, implementation, operations and procurements	measures and analysis into program strategies and acquisitions for development, implementation, operations and procurements

Section 6: Cybersecurity

Functional Area	Attributes	Traits	Level 1 Basic Capabilities Characteristics	Level 2 Evolving Maturity Characteristics	Level 3 Demonstrated Maturity Characteristics
Cybersecurity	<p>Functional Area Description: <i>The objective of FITARA is to improve the management of IT within an agency and hence, improve the ability for that agency to deliver its mission and conduct its business. To effectively enable the agency’s mission IT must meet the current functional needs as well as evolve to meet the future needs as laid out in the agency’s strategic plan. Given the importance of protecting agency data and systems, cybersecurity has become a critical function in the Management of IT, hence its elevation to a function on par with Governance, Budgeting, etc. In fact, cybersecurity must be properly included in all of the other five functions. Every Governance decision needs to consider cybersecurity as a key requirement, budgets must be determined with cybersecurity in mind, all Acquisitions and related Programs must include cybersecurity requirements, and lastly, the need for cybersecurity expertise in an IT organization is now deemed a critical success factor for agencies.</i></p> <p><i>Through appropriate maturity, an agency can advance its mission through the collaborative development and adoption of enterprise-wide cybersecurity policies matched by prioritized risk management-based implementation of cybersecurity defenses that enable business and mission operations while balancing risk, resource constraints and the need for innovation, and that are subject to clear and measurable performance goals for securing information resources and systems Department-wide.</i></p> <p><i>Note: Agency means a department or establishment of the Government (compare to bureau). e.g., Treasury is an agency where Enterprise governance would reside. The bureaus under Treasury would include mission specific portfolios and sub-portfolios aligned to the functions of the bureau.</i></p>				
	<p>Education and Awareness: Is there adequate understanding across the organization regarding cybersecurity as a priority, and awareness of the threat landscape faced by the Agency?</p>	<p>Cybersecurity is understood to be a shared priority among all stakeholders. Leadership is aware of the evolving threat landscape, broadly as well as in the context of threats that are specific to the agency and/or mission areas</p>	<p>Agency carries out annual cybersecurity awareness training among all staff (federal employees, contractors, and others as applicable). Focus on cybersecurity typically driven across organizations by the Office of the CIO rather than driven from above by Agency and component leadership</p>	<p>Agency broadly carries out role-based training, to include all non-IT professionals who have security-related roles under agency Assessment and Authorization policies, the NIST CSF, etc. Agency leadership briefed on threats on a reactive basis as threats emerge. The topic of cybersecurity is at times part of communications</p>	<p>Training and awareness initiatives extend beyond individuals with security-related roles. Leadership is proactively briefed on a periodic basis, to include classified briefings as appropriate. Communications highlighting the importance of cybersecurity are at times initiated at the top of the Agency or components</p>

Section 6: Cybersecurity

Functional Area	Attributes	Traits	Level 1 Basic Capabilities Characteristics	Level 2 Evolving Maturity Characteristics	Level 3 Demonstrated Maturity Characteristics
				initiated outside of the Office of the CIO	
	<p>Horizontal Integration: Is there proper level of involvement from all appropriate agency stakeholders, including the mission/business leaders, Privacy Officer, General Counsel, and the CIO, CAO, CFO, CHCO (the CXOs) etc.? Is there proper understanding of the cybersecurity threats and vulnerabilities to the agency? Are mission and business owners involved in setting priorities based on the use of the NIST Cybersecurity Framework (NIST CSF)?</p>	<p>Key stakeholder representation of Mission, Business, IT and related support areas like Finance, Acquisition, Legal etc. in decision-making</p>	<p>Ad Hoc participation of executives from the agency in cybersecurity risk determination and prioritization activities. Not well integrated into the agency's governance processes</p>	<p>Appropriate representation and participation from mission, business and IT to meet agency needs. There is active, but not full, participation from other stakeholders in cybersecurity activities. Cybersecurity addressed as part of planning for major acquisitions and/or major investments</p>	<p>All proper stakeholders involved with active participation to drive mission aligned, cost effective cybersecurity decisions, with the use of a robust governance process. Cybersecurity addressed as part of planning for major acquisitions and/or major investments, as well as at the agency and mission level as part of the Agency annual budget formulation process</p>
		<p>Executive-level participation in enterprise risk management use of the NIST Cybersecurity Framework</p>	<p>Senior agency leadership participation is limited and participation is irregular. Cybersecurity not effectively incorporated into Agency enterprise risk management</p>	<p>Senior agency leadership participation includes regular participation in the use of the NIST CSF</p>	<p>Highest level executives within the agency are actively engaged in enterprise level decision-making using the NIST CSF</p>

Section 6: Cybersecurity

Functional Area	Attributes	Traits	Level 1 Basic Capabilities Characteristics	Level 2 Evolving Maturity Characteristics	Level 3 Demonstrated Maturity Characteristics
			program. The Agency has not embraced the use of the NIST CSF across all functions		
	<p>Vertical Integration: Is there completeness and linkage from Enterprise Cybersecurity (overarching strategy of an agency) to Portfolio Cybersecurity (the appropriate grouping of mission/business activities of an agency to Cybersecurity at a Program Level (oversight for program planning and execution activities)? Is the use of the NIST CSF decision making process recognized and adhered to throughout?</p>	Governance structure for Cybersecurity is linked across enterprise, portfolio, and program levels	Partially accounts for enterprise, portfolio, and program level cybersecurity governance; governance set up at all levels but the decision making alignment across the levels is nascent	Enterprise, portfolio, and program level governance for cybersecurity in place; but the decision making alignment across the levels is still under development	Enterprise, portfolio, and program cybersecurity governance are operational with enterprise, portfolio, and program levels, fully adhering the to the use of the NIST CSF
		Strategic alignment and objective success measures are linked through the use of the NIST CSF	Initial stages of developing a cybersecurity risk management and action plan for the agency, with objectives and success measures to drive decision making	Established cybersecurity risk management and action plan for the agency performance measurement and monitoring are in the early stages of initiation at the enterprise, portfolio, and program levels	Established cybersecurity risk management and action plan for the agency performance measurement and monitoring are mature at the enterprise, portfolio, and program levels
	(Caveat: for small agencies, it may be possible to combine enterprise and portfolio governance)	Agency has a robust risk management program in place	Agency has a comprehensive risk management process but it is not used consistently at all levels of governance	Agency has a comprehensive risk management process but that is used at all levels of governance but does not cover all programs	Agency has a comprehensive and well documented risk management process in place supporting all levels of governance and all programs

Section 6: Cybersecurity

Functional Area	Attributes	Traits	Level 1 Basic Capabilities Characteristics	Level 2 Evolving Maturity Characteristics	Level 3 Demonstrated Maturity Characteristics
	<p>Use of the NIST Cybersecurity Risk Management Framework: Does the agency have a comprehensive risk management approach using the NIST CSF as guidance, to include risk identification and impact assessment, risk prioritization analysis, risk mitigation, and risk reporting? Are risks considered in all levels of governance? Does the agency also have a comprehensive approach to cover the lifecycle functions of the NIST CMF, to include Identify, Protect, Detect, Respond, and Recover? Are customers' specialized needs and ways of doing business properly addressed as part of the risk management approach?</p>	<p>Risks are integrated into agency decision-making properly balancing the need for security with tailoring, wherever possible, customers' specialized needs and ways of doing business. The value proposition for cybersecurity measures must be clear to stakeholders. Furthermore, continuous process improvements from both sides, cybersecurity defenders and customers, is required for long-term success</p>	<p>Risks are clearly understood by senior agency leadership. Decision-making focuses on risks proactively. Prioritization is based on a balanced set of factors, including probability, degree of impact, past history and interdependencies</p>	<p>Risks are clearly understood at enterprise and portfolio levels of governance. Decision-making focuses on proactive management of risks. Prioritization is based on a balanced set of factors, including probability, degree of impact, past history and interdependencies</p> <p>Cybersecurity measures are in alignment with and tailored for meeting customer/business needs. Specifically, iterative processes are utilized to solicit customer input/feedback and to determine and understand customer requirements and challenges</p>	<p>Risks are clearly understood at all levels of governance. Decision-making focuses on proactive management of risks. Prioritization is based a balanced set of factors, including probability, degree of impact, past history and interdependencies</p> <p>Cybersecurity measures are in alignment with and tailored for meeting customer and business needs. Specifically, iterative processes are utilized to solicit customer input/feedback and to determine and understanding customer requirements and challenges. Continuous process improvement activities for both cybersecurity defenders and customers ensures long-term success of these program efforts</p>
		<p>Agency fully covers the five lifecycle functions of the NIST CMF, to include Identify, Protect, Detect, Respond, and Recover.</p>	<p>Agency has ad hoc processes in place to address some or all of the five lifecycle functions of the NIST CMF</p>	<p>Agency has processes in place to address all of the five lifecycle functions of the NIST CMF, but is not fully implemented across all horizontal and vertical elements of the enterprise</p>	<p>Agency has processes in place to address all of the five lifecycle of the NIST CMF, and is fully integrated horizontally and vertically across the enterprise</p>

Section 6: Cybersecurity

Functional Area	Attributes	Traits	Level 1 Basic Capabilities Characteristics	Level 2 Evolving Maturity Characteristics	Level 3 Demonstrated Maturity Characteristics
		<p>Agency fully implements the NIST CMF 7 step process, resulting in a comprehensive Action Plan for the enterprise that is regularly updated.</p>	<p>Agency has ad hoc processes in place in developing plans to address cybersecurity risks and vulnerabilities</p>	<p>Agency has implemented the 7-step process, but is not fully implemented across all horizontal and vertical elements of the enterprise</p>	<p>Agency has implemented the 7-step process, and is fully integrated horizontally and vertically across the enterprise</p>
		<p>Agency demonstrates responsible stewardship regarding cybersecurity resources, by correlating resource allocations to measurable metrics and process improvements based on observable results.</p>	<p>Agency has a process for correlating resource allocations for cyber capabilities to measurable metrics</p>	<p>Agency has a process for correlating resource allocations for cyber capabilities to measurable metrics and also documents process improvements based on observable results</p>	<p>Agency has a process for correlating resource allocations for cyber capabilities to measurable metrics and also documents process improvements based on observable results. Agency ensures process improvements are implemented in accordance with the NIST CMF 7 step process</p>
		<p>The agency has mechanisms in place to monitor and response to cyber threats, providing CIO and leadership have visibility into Agency .cybersecurity posture</p>	<p>Cybersecurity (policy compliance, assessment and authorization status, and operational security status) assessed by the Office of the CIO, or assessed locally and reported to Office of the CIO. Agency has begun implementing automated Security Assessment Tools for</p>	<p>The agency has implemented automated Security Assessment Tools for continuous monitoring, reports via CyberScope, and works closely with US-CERT. Briefings to Agency leadership take place periodically</p>	<p>The agency has implemented a fully automated Security Assessment Tools for continuous monitoring, reports via CyberScope, and works closely with US-CERT. Continuous monitoring data are vertically integrated to provide holistic picture of enterprise-wide security posture of Agency, fused with</p>

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Functional Area	Attributes	Traits	Level 1	Level 2	Level 3
			Basic Capabilities Characteristics	Evolving Maturity Characteristics	Demonstrated Maturity Characteristics
	<p>Information Security (IS): Does the agency properly recognize and incorporate information security requirements? Does the agency have proactive means in place to keep information security policies and approaches current? Does the agency measure effectiveness of information security outcomes by actively collecting metrics? Does the agency use metrics to improve programs and acquisition processes?</p>		continuous monitoring and a security operations center (SOC) provides continuous monitoring and diagnostics of IS posture		internal/external threat information, with frequent reporting to Agency and component leadership
		The agency leverages leading IS practices to improve their IT security posture.	There is a process to review and leverage leading IS practices to be used to make improvements to the agency's IS posture	Some IS process metrics are tracked and there is a process to review and leverage leading IT security practices to be used to make improvements to the agency's IT security posture	IS process metrics are tracked and there is a process to review and leverage leading IS practices to be used to make improvements to the agency's IT security posture
		The agency has aligned IS policies with organizational levels, performs assessments, provides training, uses metrics actively to measure effectiveness of IS outcomes and improve programs.	The agency has stand-alone IS policies and procedures, addresses assessments and training to meet minimal requirements. The agency collects metrics only as required for FISMA and Cross Agency Priority (CAP) Goal reporting	The agency has established a linkage between IS policies at each level in the agency, actively assesses risks, and collects metrics for FISMA and CAP Goal reporting. Assessments and risk management are key IT responsibilities	The IS program fully supported throughout the agency, has integrated IS into agency's mission and performance measures, has a robust IS training, collects metrics for FISMA and CAP Goal reporting and uses them used for continuous IS process improvement
		There are modernization efforts to replace antiquated and insecure networks and infrastructure, and to improve	The agency is working to secure funding to implement incremental modernization efforts to replace insecure networks, infrastructure, and legacy applications. Prioritization of	The agency is working to secure funding and schedules incremental modernization efforts to replace insecure networks, infrastructure, and	The agency has secured funding and is incrementally implementing modern infrastructure to replace insecure networks, infrastructure, and legacy applications

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Functional Area	Attributes	Traits	Level 1 Basic Capabilities Characteristics	Level 2 Evolving Maturity Characteristics	Level 3 Demonstrated Maturity Characteristics
		resilience of legacy applications	resources for modernization may be driven more by potential cost savings than prioritized based on IS risks/exposure	legacy applications. IS risks factor into prioritization decisions relating to allocation of funds for modernization	
		The agency has integrated IS into IT programs	The agency has included IS upfront in some programs, leveraging CIO EA and standards	The agency has included IS upfront in most programs, leveraging CIO EA and standards	The agency has fully integrated IS in all programs, leveraging CIO EA and standards
		IS requirements are integrated into the system development lifecycle.	Security defects are found and addressed during final testing of program. Program implementations delayed due to minimal security requirements defined early, delaying ability to obtain Authority to Operate.	Most security defects are found during development. Post-production defects are reduced. Program implementations completes security requirements to obtain Authority to Operate.	Security is incorporated throughout the system development lifecycle to eliminate the majority of post-production defects.
		The agency includes IS and supply chain risk management requirements in IT procurements	The agency includes IS requirements in IT procurements	The agency includes IS and supply chain risk management requirements in IT procurements	The agency includes IS and supply chain risk management requirements and evaluation factors in IT procurements and there is a continual process to assess and improve IS requirements for IT procurements
		The agency has an approach to ensure that IT security policies and approaches for programs and	There is some IT security process metric tracking and there is a review process to	There is IT security process metric tracking and there is a review process to	IT security process metrics are tracked and there is a process to review and leverage leading IT security practices to be used to

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Functional Area	Attributes	Traits	Level 1 Basic Capabilities Characteristics	Level 2 Evolving Maturity Characteristics	Level 3 Demonstrated Maturity Characteristics
		acquisitions are kept current	leverage leading IT security practices	leverage leading IT security practices	make improvements to the Agency’s IT security policies, approaches and IT programs and acquisitions
		Metrics are used to measure effectiveness of IT security outcomes and improve acquisition processes	IT security measures are defined but collection and use of measures varies by program and acquisitions	The agency has initiated integration of IS measures and analysis into program strategies and acquisitions for development, implementation, operations and procurements	The agency has fully integrated IS measures and analysis into program strategies and acquisitions for development, implementation, operations and procurements

Summary/Conclusion

The objective of the model is to provide a federal-wide framework to agencies to use to evaluate and monitor maturity of IT management. The framework can be leveraged to provide a comprehensive approach to support the FITARA assessment scoring process leveraging best practices and processes to reliably and sustainably produce required outcomes. It is important to remember that the model can be used as a holistic framework to evaluate the entire scope of IT management or instead be used on a category-by-category basis to help an agency focus on one specific area of maturity. Agencies should leverage the model as it best applies to their needs.

The recent updates to the IT Management Maturity Model aim to enhance the usability, accuracy, and value of the model across the federal space. The model continues to be a living document that will be updated and revised as legislation and policy decisions evolve.

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