FITARA Agile Acquisition for
Assured IT Modernization

2018 CxO Briefing

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- VADM Kevin Green (Ret) IT-AAC Vice Chair
- Honorable John Grimes, former DoD CIO
- Honorable Duane Andrews, former OUSD ASD C4I
- Tony Scott, former; Federal CIO, MS CIO, VMware CIO, Disney CIO, GM CTO
- Dr. Marv Langston, former Navy/DoD CIO
- Dennis Nadler, former US TRANSCOM CTO

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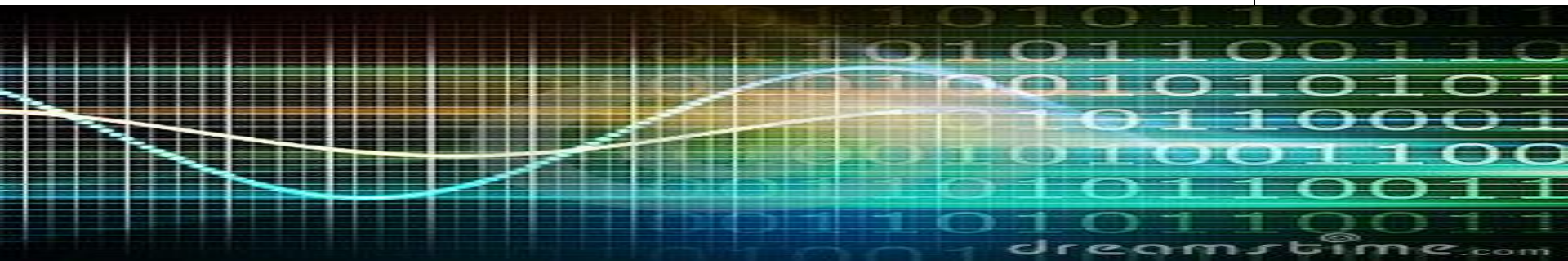


A public/private "do tank"

Conduit to commercial IT innovations & standards

IT-AAC 501c6

- Consortia of 24 Standards Bodies, Academia, Think Tanks and Non-Defense COIs.
- Greybeard Council
- Focus on sharing Commercial IT best practices and lessons learned
- Conduit to reaching over 108k innovative companies
- Reach core of $4 Trillion Global IT Market
- Critical source for Open Architectures and Standards; SDN, SOA, Cloud, IA, Mobile, ITIL/COBIT, Internet of Things

Interop. Clearinghouse (ICH)

- DOD Chartered institute (SWOB)
- Consortia Management (OT lite)
- Focus on measures and metrics for **interoperability, security, service levels, commerciality & risk.**
- Resource for mentoring government transformation efforts
- Proven maturity model for Agile Acquisition, Tech Assessment and Business Case Analysis
- Superior source for risk based decision making
- Conflict free, no rice bowls

IT-AAC Community of Practice

emanating from the $4T Global IT market

IT - AAC Partners	Agile Methods	IT/Cloud Standards	Innovation Access	IT Risk Mgt	Industry Best Practices	Pilots & Contracts	IT Policy & Governance	Number of Companies (SMEs)
Aerospace Industry Association (AIA)			✓		✓		✓	325+
Open Network Foundation (ONF)					✓		✓	**150+**
Cloud Security Alliance (CSA)		✓	✓		✓	✓		48,000
Cloud Standards Customer Council (CSCC)	✓	✓			✓		✓	750+
Interoperability Clearinghouse (ICH)	✓		✓	✓	✓			360 SMEs
Intern'l Information Systems Security Certification Consortium (ISC2)		✓			✓			80,000+
Information Systems and Security Group (ISSA)		✓			✓		✓	10,000+
Object Management Group Industrial Internet Consortia	✓	✓	✓	✓	✓		✓	800+ 250+
AFCEA Ft Belvior Chapter			✓	✓	✓	✓	✓	1,600+
IDC/IDG					✓		✓	1,100 SMEs
Consortium for IT SW Quality (CISQ)			✓	✓	✓	✓		600+
Telecommunication Industry Association (TIA)		✓	✓		✓		✓	290+
Financial Services Roundtable FS Round + FSTC)	✓		✓	✓	✓	✓	✓	100+

Body of Evidence

"Federal IT Acquisition is Broken" Obama

Acquisition

- Long acquisition cycle-times
- Successive layers … built over years
- Limited flexibility and agility
- Risk Management is Deficient

Requirements

- Understanding and prioritizing requirements
- Ineffective role and comm in acquisitions

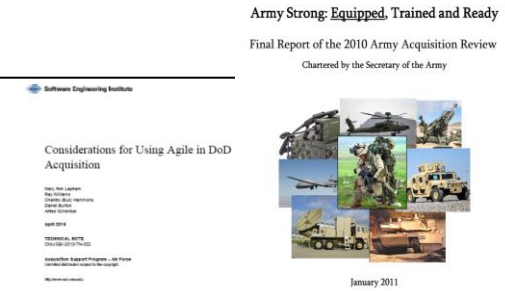
Test/Evaluation

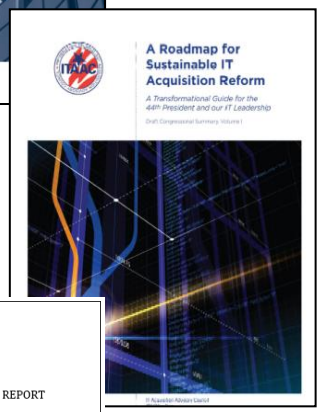
- Testing is integrated too late and serially
- Lack of automated testing

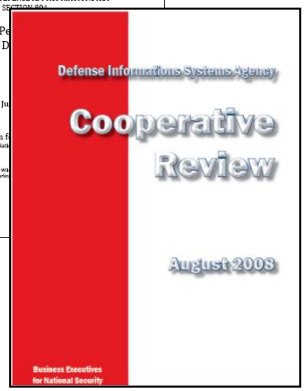
Funding & Governance

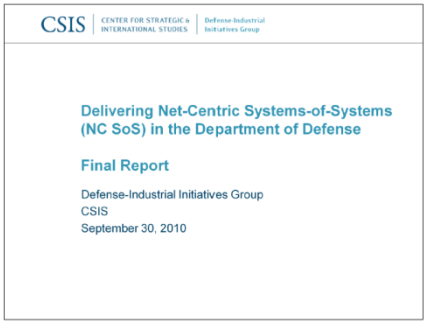
- Program-centric, not capability-centric
- Overlapping decision layers (e.g., multiple review processes)
- Lack of customer-driven metrics
- Funding inflexibility & negative incentives

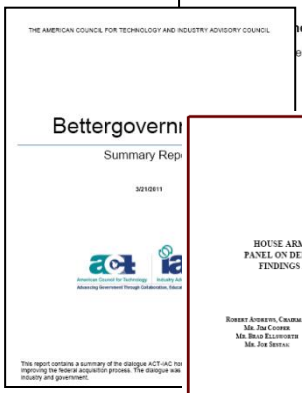
"The inability to effectively acquire information technology systems is critical to national security. Thus, the many challenges surrounding information technology must be addressed if DOD is to remain a military leader in the future. The development of a new acquisition process, coupled with clear roles and responsibilities of key decision makers, and an experienced leadership and workforce, are important elements of the solution." Defense Science Board Report to Congress

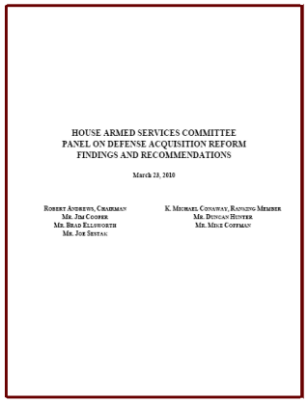












Lessons learned over the past 10 years

60 workshops, 50 studies, 40 program assessments

"Agile Acquisition" can work if these challenges are addressed:

1. **BROKEN, INDUSTRIAL AGE ACQUISITION METHODS** take too long, cost too much and rarely deliver and costing $20B/year in avoidable waste
2. **ILL-EQUIPED IT ACQUISITION CORE**: Both government and its SETA/FFRDC contractors lack Agile Acquisition Methods and IT expertise to be effective. Inexperience and dis-incentives drive focus on paperwork compliance vs mission outcomes.
3. **RISK MGT vs RISK AVOIDANCE:** Decision adverse culture prevents risk taking. Problem is compounded by fear of the unknown, and inability to leverage lessons learned from early adopters.
4. **BARRIERS TO IT INNOVATIONS and BEST PRACTICES**: Traditional Federal Sis & FFRDCs are vested in design-to-spec engineering methods tuned for 20 year weapon system lifecycles. Dedication to Federal IT market hinders access to design patterns and standards that drive a $4 Trillion dollar global IT Market (of which the DIB represents less than ½ of 1%).

3 Phase IT Modernization CoE

4-6 months, evidenced based approach

- Phase 1: As-Is Gap Analysis and Risk Assessment

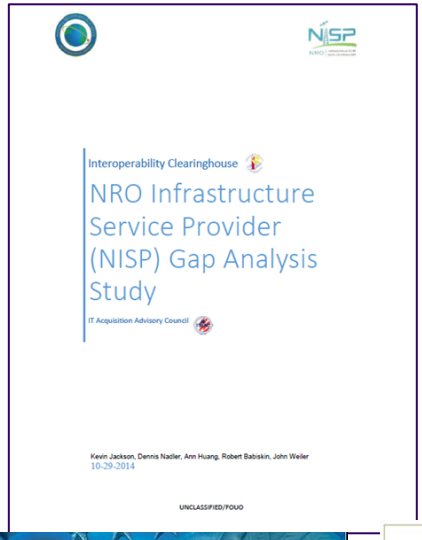
  Deliverable: Measure gaps in terms of acquisition processes, organization skills and IT Infrastructure resilience.

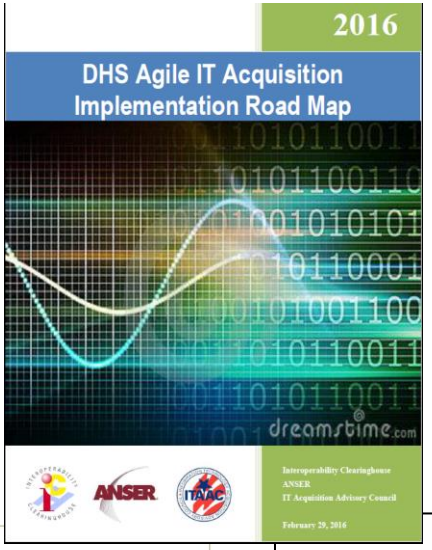
- Phase 2: To Be Services Architecture Design Patterns (MDA)

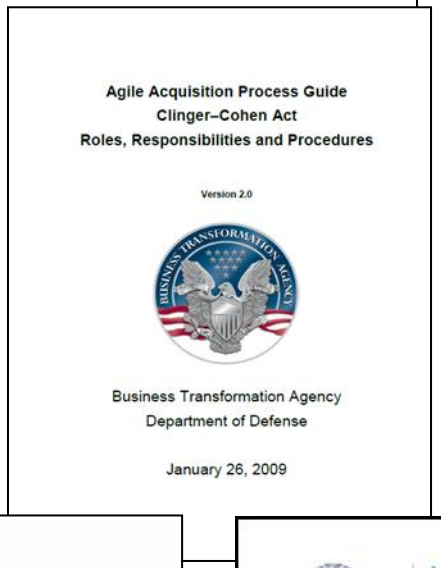
  Deliverable: Define To-Be Architecture and Con-Ops. Adopt agile methods, tools, governance frameworks, and open standards. Reach out to IT communities of practices to capture best practices and lessons learned

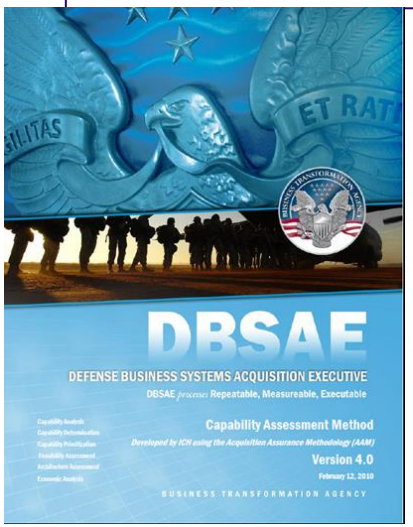
- Phase 3: Transformation Roadmap Deliverable: Complete market research, tech assessment to support new or existing hi-risk project demonstrating better, faster, cheaper approach. Leverage existing XaaS, Shared Services, Cloud offerings that already exists.

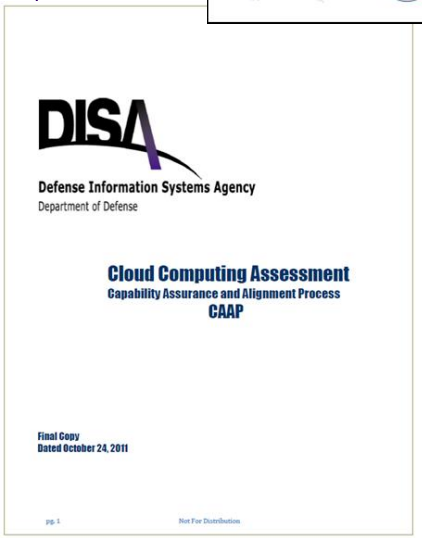
We wrote the playbook on Agile Acquisition and IT Modernization

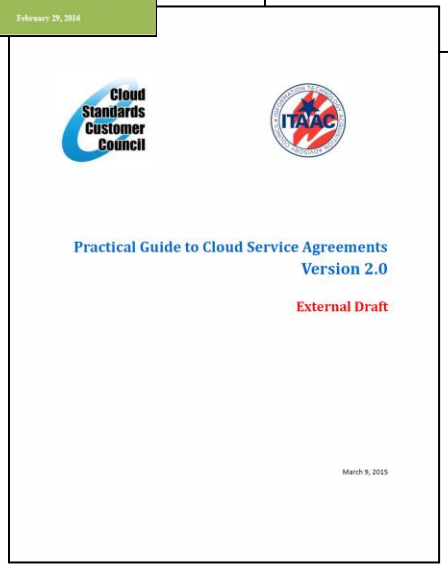


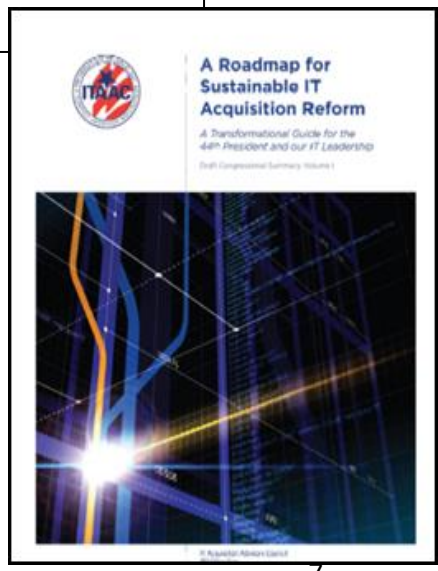












Acquisition Assurance Method (AAM)

Agile Framework for Assured Outcomes

Phase 1

Mission Needs: Value Stream Analysis:

- Problem ID
- MissionRqts
- Prioritization
- Constraints

Phase 2

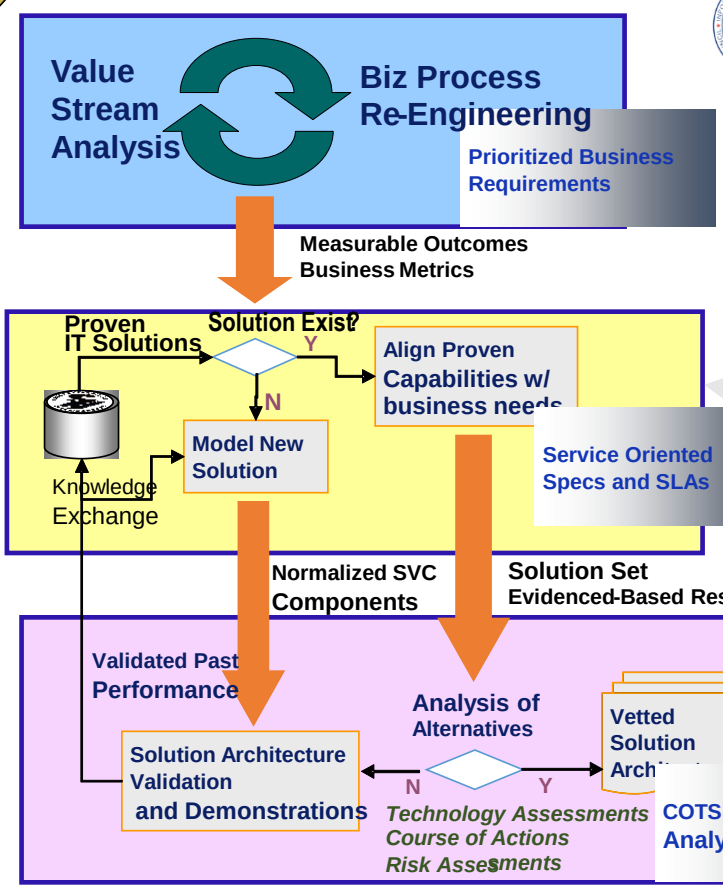
Performance Management Assessment

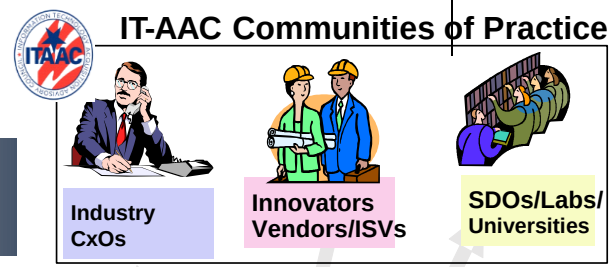
- Feasibility
- Service Attributes
- SLAs
- Shared Services

Phase 3

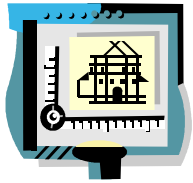
Solution Architecture Modeling

- Selection
- Certification
- Interop Spec
- Openness





Validated Acquisition Strategy, SLAs & SourceSelection Criteria



AAM Tools

Problem Statement	Capability Analysis	Solution Determination	Capability Prioritization	Feasibility Assessment	Economic Analysis	Roadmap	Risk Dashboard Assessment

AAM's Evidence Based

CPIC Decision Analytics

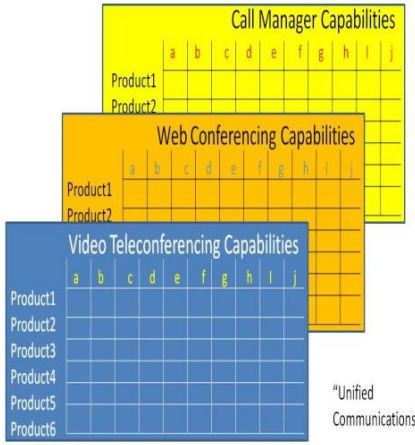
Problem Statement **Prioritized Capabilities** **Solution Determination Alternatives**

Mission Capability	No	High level Capability
2	1	Reduce time to deploy infrastructure
1	2	Reduce infrastructure cost
1	3	Improve Reliability, Availability Survivability (RAS)
4	4	Work within current Security Management Posture
		Provide support for AF Use Cases
1	6	Support SBC storage strategy
2	7	Support Infrastructure Requirements
1	8	Improved Manageability
1	9	Provide the same user experience (irrespective of client; rich or thin client).

Builds On

	5e	Provide support for client type – Remote
	5f	Provide support for client type – Unmanaged
125	6	**Support SBC storage strategy**
	6a	Provide server-side storage of System data and/or system images
	6b	Provide server-side storage of enterprise data
	6c	Provide server-side storage of user data and/or system images
	6d	Provide server-side storage of user application
	6e	Provide server-side storage of enterprise data application
125	7	**Support Infrastructure Requirements**
	7a	Maintain current bandwidth/network loads (min 10 GB to max 100GB user profiles, 100 MB to the desktop)
	7b	Provide consistent capability, whether rich or thin, with differing capabilities based on Active Directory rights/groups
	7d	Provide support for the Common Access Card (CAC)/DOD Public Key Infrastructure (PKI) logon
150	8	**Improved Manageability**
	8a	Provide for remote manageability of desktop
	8b	Provide support for all business and mission applications, including bandwidth sensitive applications
	8c	Provide for a client computing environment solution that scales over the AF enterprise
	8d	Allow use of a diverse mix of hardware end devices in a heterogeneous environment
	8e	Increase IT service availability to the mobile/pervasive user
150	9	**Provide the same user experience (irrespective of client; rich or thin client).**

Builds On



Feasibility Assessments & Management Risks **Economic Analysis/TCO/ROI) Tradeoff**

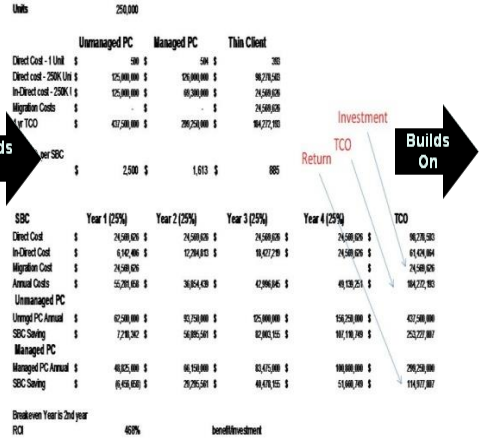
Road Map

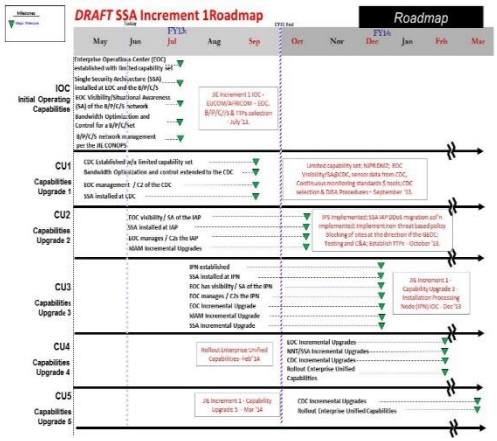
	Reduce time to deploy infrastructure	Reduce infrastructure cost	Improve Reliability, Availability Survivability (RAS)	Work within current Security Management Posture	Provide support for AF Use Cases	Support SBC storage strategy	Support Infrastructure Requirements	Improved Manageability	Provide the same user experience (irrespective of client; rich or thin client)	Score
Value Factors	15%	15%	5%	5%	5%	13%	13%	15%	15%	
Softgrid	1.67	3.00	3.40	1.50	0.73	1.40	1.00	1.55	1.00	1.67
Ardent	2.33	3.15	3.40	3.00	1.53	1.40	1.33	2.11	2.00	2.23
ClearCube	1.67	2.23	1.30	2.50	2.07	1.40	2.00	2.78	4.00	2.48
Wyse	1.00	1.92	1.30	1.50	2.80	1.00	2.33	4.22	5.00	2.67
CCIMP	1.67	2.23	1.30	2.50	2.07	1.40	2.00	2.78	4.00	2.83
Citrix	1.00	1.92	1.30	1.50	2.80	1.00	2.33	4.22	5.00	3.03

Overall Score on each Product

Blue = Essential	1 - 1.99
Green = Desirable	2 - 2.99
Yellow = Less Desirable	3 - 3.99
Red = Undesirable	4 - 5.00

Builds On





How we measure up against Traditional Advisors (SETA/FFRDC)

No rice bowls, conflicts of interests and better leverage of real best practices

Resource Type / CSF for IT Acquisition	Non-profit Public/Private Partnership	Federal System Integrator	SETA Contractors	FFRDC	Academia
Open, inclusive structure by which innovations of the market can be quickly assessed	☑ ITAAC partners do not sell, customize or integrate any IT to ensure objectivity	☒ reseller agreements & implementation interests cannot be firewalled.	☑ For profit structure inhibits knowledge sharing across many communities	☑ Objective but lacking formal mechanisms for reusing past results.	☑ Best suited for R&D activities associated with specific solutions
Access to real world commercial best practices, (CCA Mandate)	☑ Partnership with SDOs and Testing Labs enable rapid assessments of IT	☒ focus on stock holder value and profits harms reuse of 3rd party results	☑Non-conflicted but lacking organic access to innovations of the market or industry COPs	☒ FFRDC restrictions prevent partnering with industry, limited access to real world expertise.	☒ Focus on research issues. Most work done by students.
Ability to train and equip Acq. Core. Tap a wide range of SMEs when needed.	☑ IT-AAC's 14 Partners access 10s of thousands of just-in-time SMEs and evidence	☑limiting ability to bring in real world expertise outside of core bench	☑ Depends or depth and breadth of company.	☑ Often have higher percent of SMEs with advanced degrees. Academic approach not effective for implementation	☑ Often have higher percent of SMEs with advanced degrees. Academic approach not effective for implementation
Standardized & Agile Acquisition Methods tuned for the fast paced IT market.	☑ Acquisition Assurance Method already proven to conform to Sec 804 and OMB guidance.	☒ Evidences suggests little incentive to use COTS, prefer costly build to spec model.	☑ Cannot set standards. Can only adopt.	☒ Not a focus area of FFRDCs, and contrary to OMB A119 and FAR restrictions	☒ Not a focus area. Cannot set standards

Federal IT Mgt Best Practices

Where Team ICH has delivered the ounce of prevention

Navy: Assessment of Infrastructure Consolidation Program – CANES SOA & Security Strategy **Contact Value: $350k** **Eliminated hi-risk Requirements by 23%, $100Ms in potential savings**	**USAF: Streamlined NaaS Acquisition Process. Consolidated AF Mobile Network (LTE/LMR).** **Contract Value: $480k** **Established Roadmap for AF Wide Consolidation. $458 million savings**	**AF ISRA: Applied AAM to conduct ISR Portfolio Risk Assessment (PRA)** **Contract Value: $500K** **Guiding reorganization and restructure of ISR Portfolio**
DISA CAE: DISN GSM-O Re-compete Restructured performance metrics, acquisition strategy and SLAs to enable 30% savings on existing DISN Mgt. **Greatly Exceeded Forecasted Saving in both analysis and acquisition**	**GSA CFO: Financial Mgt. System consolidation using AAM.** **Contract Value: $500k** **Moved GSA FMS from OMB "red" to "green". Eliminated duplicative investments that saved $200M**	**BTA DBSAE: Transformed DOD's Requirements and Sourcing process, shifting DoD towards XaaS Model** **Contract Value: $800k** **$300 million in potential savings with minimal investment**
Discovery Channel: Apply AAM to complete AoA and BCA for Enterprise Web Services/Tactical Cloud **Contract Value: $330k** **Provided actionable roadmap for world wide multi-media web services**	**GPO: Developed Acquisition Strategy for Future Digital System FDSys** **Contract Value: $250k** **Led to successful acquisition and implementation on time, on budget and 80% cheaper than NARA RMS**	**DISA: Cloud Broker Framework Applying AAM to comply with NDAA/FITARA IT Reform Directives** **Established a robust Cloud Broker framework complete with Metrics, Category Mgt, Tech Assessment and Business Case**

"we believe that it is necessary to develop a comprehensive set of metrics to give transparency to program execution, avoid subjective judgment, and avoid the wasting of time in both executing commands and in oversight offices. This is consistent with the fundamental recommendations of the Packard Commission and Secretary Robert Gates's initiative to eliminate inefficiency and waste." PARCA-RAND Root Cause Analysis of Nunn-McCurdy Breaches

IT-AAC's Elastic Public/Private Partnership

filling the IT knowledge and expertise gaps in Defense IT

- **Non-profit "do tank"** composed of the worlds most respected public service institutes and domain experts not available through traditional contracting mechanisms
- **Clearinghouse and Knowledge Exchange** that captures proven market innovations in an acquisition ready context (measurable design patterns)
- **Benchmarked Best Practices and Lessons Learned** (SOA, SDN, Cloud, IaaS, PaaS, SaaS, Web Services) provided by customers who share business value from real world implementation and testing results
- **Risk Based Decision Analytics** that pools and normalizes infrastructure requirements, architectures, tech assessments, performance metrics (SLAs) business case analysis, and evaluation criteria.
- **Leadership Roundtables and Educational Forums** that provides a hype free interchange with government and industry leaders
- **Virtual Solution Architecture Innovation Lab (SAIL)** that validates realm-of-the-possible commercial IT solution sets.
- **DoD/GSA Certified Agile Acquisition Framework** that significantly reduces decision making time, risk and time to market.

Concluding Thoughts

If you are ready for sustainable IT reform

- Agency CIOs needs a **standardized, templated based, data driven approach** per new FITARA and OMB guidance, supported by IT governance, investment controls' and oversight roles that balance needs of agency with IT practitioners
- OCIO can improve decision making by establishing a **standard program management information model and risk metrics** to support FITARA, TechStat and CPIC reporting
- Economy Act and CCA suggest the OCIO should **avoid duplicating processes** that have already been developed, matured, and proven
- Requirements process can be improved by establishing a **continuous monitoring and rapid assessment of emerging commercial IT innovations** (COTS/OSS/Cyber) under control of the CTO. Partnering with standards bodies is key
- FITARA and OMB A130 implementation suggest using portfolio and asset management tools to enable **visibility into investments across the federal enterprise**
- OCIO should establish a **common set of IT infrastructure services** (these typically account for 70 percent of all IT program investments).
- White House recommends establishing a **cadre of just-in-time IT acquisition specialists** to mentor high-risk programs, a capability provided by IT-AAC

Past Performance = Predictable Results

Case Study: Streamlining the DoD's IT Acquisition for Infrastructure

Challenge: Establish OSD BTA's Agile Acquisition Method for IT Infrastructure (SOA)

- Applied ICH's Acquisition Assurance Method (AAM) standard
  - Developed IT Business Systems lifecycle entry/exit criteria for great transparency
  - Established enhanced Clinger Cohen Act process guide for OSD BTA CIO
  - Developed Value Chain Capability Assessment Methodology (CAM)
  - Established IT Acquisition Advisory Council to overcome cultural impediments.
- Outcomes; IT Acquisition Reform we can believe in
  - Complemented Business Capability Lifecycle (BCL), providing analytical tools for framing decisions
  - Enabled actionable Clinger Cohen Act compliance that goes beyond check list
  - Enabled Component Acquisition Executive with means of judging business value of IT investments
  - Provided OSD BTA with alternative approach to DoD weapons systems style processes
  - Used to conduct Pre-milestone B "Hosting" AoA and Business Case Analysis in just 4 months. Projected Savings = $350M over 5 years.

Office of the Secretary of Defense, DCIO (2001) *"Since the value of the ICH to our programs increases rapidly through results sharing, we encourage the defense community and IT industry to participate directly in the public service initiative in terms of sponsorship and lessons learned"*

We Operationalizes unmet IT Acquisition Reforms

Clinger Cohen Act recognizes that government must leverage commercial IT:

(1) *Streamline the IT Acquisition Process*

(2) *Change business processes (BPR), not COTS*

(3) *Favor COTS/OSS over custom development (GOTS).*

(4) *Build business case and select based on lifecycle cost and business value*

(5) *Adopt Commercial IT Standards of Practices (augmented by OMB A119)*

OMB 25 Point Plan Requires: *"Align the Acquisition Process with the Technology Cycle"*

Point 13. Design and develop a cadre of specialized IT acquisition professionals .

Point 14. Identify IT acquisition best practices and adopt government-wide.

Point 15. Issue contracting guidance and templates to support modular development

Point 16. Reduce barriers to entry for small innovative technology companies"

Federal IT Acquisition Reform Act (FITARA) : 1*. Agency Chief Information Officer (CIO) Authority Enhancements 2. Enhanced Transparency and Improved Risk Management in IT Investments 3. Estab. 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 7. Government wide Software Purchasing Program*

EO 13636 Recommends six acquisition reforms:

i. *Institute Baseline Cybersecurity Requirements as a Condition of Contract Award for Appropriate Acquisitions*

ii. *Address Cybersecurity in Relevant Training*

iii. *Develop Common Cybersecurity Definitions for Federal Acquisitions*

iv. *Institute a Federal Acquisition Cyber Risk Management Strategy*

v. *Include a Requirement to Purchase from Original Equipment Manufacturers, Their Authorized Resellers, or Other "Trusted" Sources, Whenever Available, in Appropriate Acquisitions*

vi. *Increase Government Accountability for Cyber Risk Management*

Case Study: Homeland Security, CIO/CPO
FITARA Roadmap for Transforming DHS IT Acquisition & Governance

Challenge: Fundamentally transform how DHS manages IT acquisition risks with FITARA

- **Establish an Architecture Driven Agile Method to comply with CCA and FITARA**
  - Developed root cause of analysis of current weaknesses and deficiencies
  - Identified and integrated govt and industry best practices into a common framework
  - Recommend set of Agile Frameworks, Training Programs, and Pilots
- **Outcomes: Increased traceability from requirements to acquisition through improved governance, risk management and performance metrics**
  - Provided a common, enterprise wide process designed for leveraging existing Agile Acquisition frameworks adopted by AF, BTA, DISA, NRO
  - Improve architecture inputs/outputs to improve transparency of investment decisions
  - Reduce market research and analysis in a fraction of the cost and time by leveraging existing expertise and lessons learned of the market
  - Provided mentoring and educational recommendations for sustainable IT Acquisition Reform

Case Study:
Validating SOA and Cross Domain Solutions
Navy Consolidated Afloat Network Enterprise (CANES)

Challenge: Establish a enterprise ship board SOA infrastructure for all shipboard legacy systems

- **Establish an actionable solution architecture that leverages SOA & COTS implementation best practices**
  - Provide a standardized Solution Assessment Methodology to leverage best practices and mitigate deployment risk (compliment NESI).
  - Establishes a Solution Architecture standard and public/private research partnership that maximizes use of commercial trends (COTS/Open Source solutions) via an actionable Open Architecture (OA)
  - Enable Capability Based Acquisitions. Reveal Gaps in both requirement and industry offerings (define realm of the possible).
  - Establish SOA performance metrics and SLAs that reflect real world limitations and hold suppliers accountable.
- **Outcomes of ICH engagement (reduced requirements over specification by 23%);**
  - Proved out as a standardized IT Assessment & Solution Architecture process that will mitigate deployment risk.
  - AAM assessment products used:
    - Capability Determination and Metrics
    - Service Component Prioritization and Alignment and
    - Feasibility/Risk Assessment
  - Demonstrated the feasibility and viability of using GOTS/COTS/Open Source products within the CANES Architecture
  - Demonstrated a method and a plan to:
    - Assess SOA Service Components for CANES
    - Assess migration to Netcentric “need-to-share” systems
    - Produced a large body of artifacts that are important for the architecture phase

Naval Networks Information Assurance Enterprise Services PMW 160

Case Study:
CCA: Streamlining the AF IT Acquisition process
SAF CIO; AF Solution Assessment Process (ASAP)

Challenge: Establish a common and repeatable AF Wide COTS assessment/acquisition process

- **Integrated ICH Architecture Assurance Method into all major AF IT components**
  - Developed root cause of analysis of current weaknesses and deficienc
  - Identified and integrated both AF and industry best practices into a cor framework
  - Developed series of templates and input/exist criteria for each stage of SDLC process
- **Outcomes: Increased traceability from requirements to acquisition, reducing "thrashing"**
  - Provided a common, enterprise wide process designed for leveraging COTS
  - Augmented architecture process to address legacy and COTS capabilities
  - Reduce market research and analysis in a fraction of the cost and time by leveraging existing expertise and lessons learned of the market
  - Provided mechanisms for forcing adoption of 80% solution.

"We have put to practice the AF Solution Assessment Process (ASAP) at the Air Force Communications Agency (AFCA) with some well documented success. It was developed with Interoperability Clearinghouse (ICH) and provides a structured and measurable IT assessment process with the agility to provide decision-quality assessments ranging from quick-looks to more in-depth capability-focused technology assessments and lightweight business case analysis."
General Mike Peterson, AF CIO

Case Study: World Largest Healthcare Agency

DoD/VA Interoperable EHR Services Architecture

Challenge: Defense Agile Acquisition Framework & SOA E.H.R. Best Practices Guidance

Established Section 804 Agile Acquisition Framework for E.H.R Way Forward

- Developed source selection criteria for TMA Program Office
- Benchmarked SOA/Cloud Industry Best Practices and Lessons Learned with support from 10 Fortune 100 companies
- Built out a proven Agile Framework fully vetted by BTA (Acquisition Assurance Method)

Outcomes: Established SOA Roadmap that addressed stake holder needs

- Enabled award based on unambiguous design specs
- Augmented architecture process to address legacy and COTS SOA/ESB capabilities
- Was able to cycle through market research and analysis in a fraction of the cost and time of traditional efforts.
- Ensured viability of Solution Architecture in terms of; meeting HIPPA, security and interoperability requirements

"The ICH repository data and analysis methodologies was very helpful in supporting a quick turn around for [Information Assurance] section of COTS security products. Highly detailed ICH technology domain and product evaluation data comprised over 60% of this urgently needed [architecture] report". **Northrop Grumman on ICH's support**

Agile IT Acquisition Primer

How AAM's Decision Templates streamlines and assures IT outcomes

Best Practices Approach

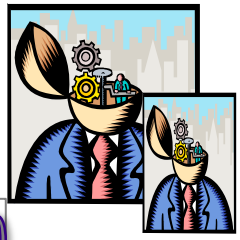
for Sustainable IT Acquisition Reform

Align responsibilities and authorities that establish clear lines of authorities and accountability (AFISRA, AF CIO, BTA, DHS)

Train, mentor and equip acquisition ecosystem on best practices. Provide Just-In-Time SMEs to fill IT Expertise and Knowledge gap. Leverage public/private partnerships that expose real world innovations, best practices, lessons learned. (GSA, DHS, BTA, GPO, USAF)

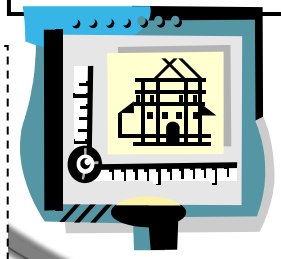
ORGANIZATIONAL REALLIGNMENT

WORFORCE TRAINING EXPERTISE/KNOWLEDGE



LEADERSHIP

IT MGT PROCESS & POLICY UPDATE

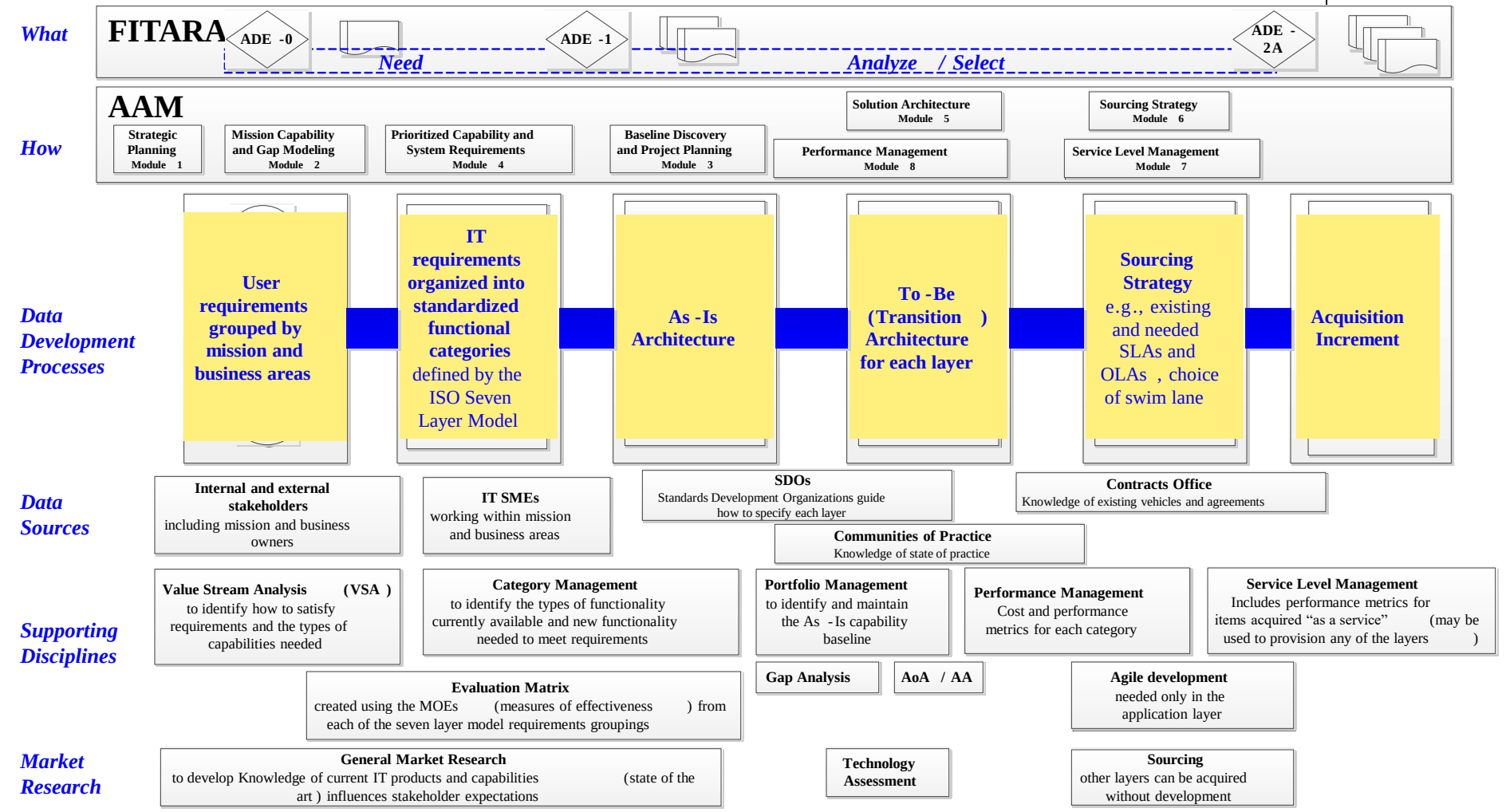


CHANGE MGT INCENTIVES/CULTURE

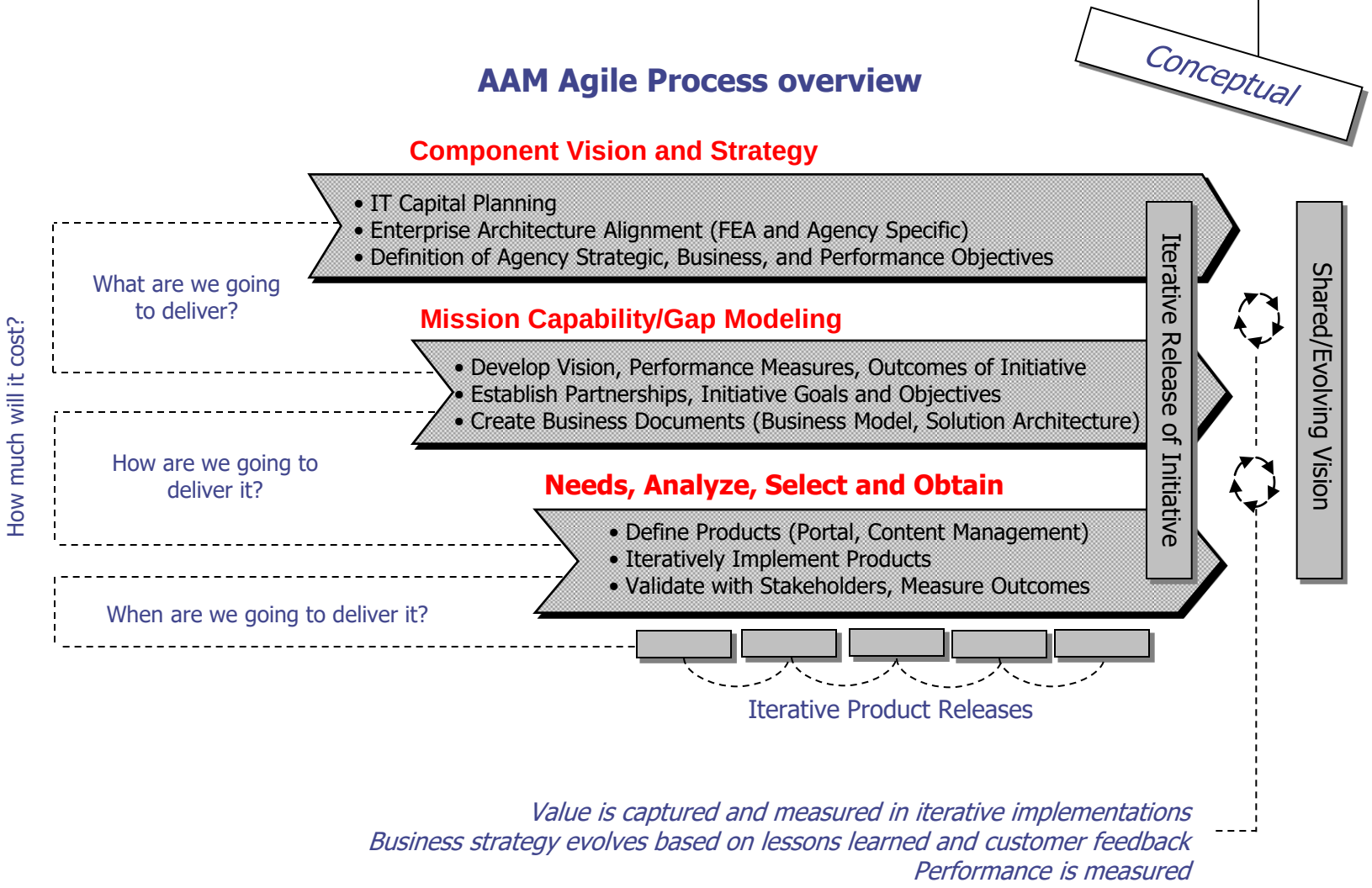
Establish Risk Based Decision Analytics and Performance Metrics that enable sound, fact based investment decisions. (USAF, AFISRA, PTO, GPO, DISA, OSD HA, VA, DHS, NRO)

Establish Value Streams, reward risk takers, encourage small failures, drive 80% COTS solutions that deliver mission outcomes. (USAF, DHS, GPO, BTA, NRO)

Agile SDLC Data Sources

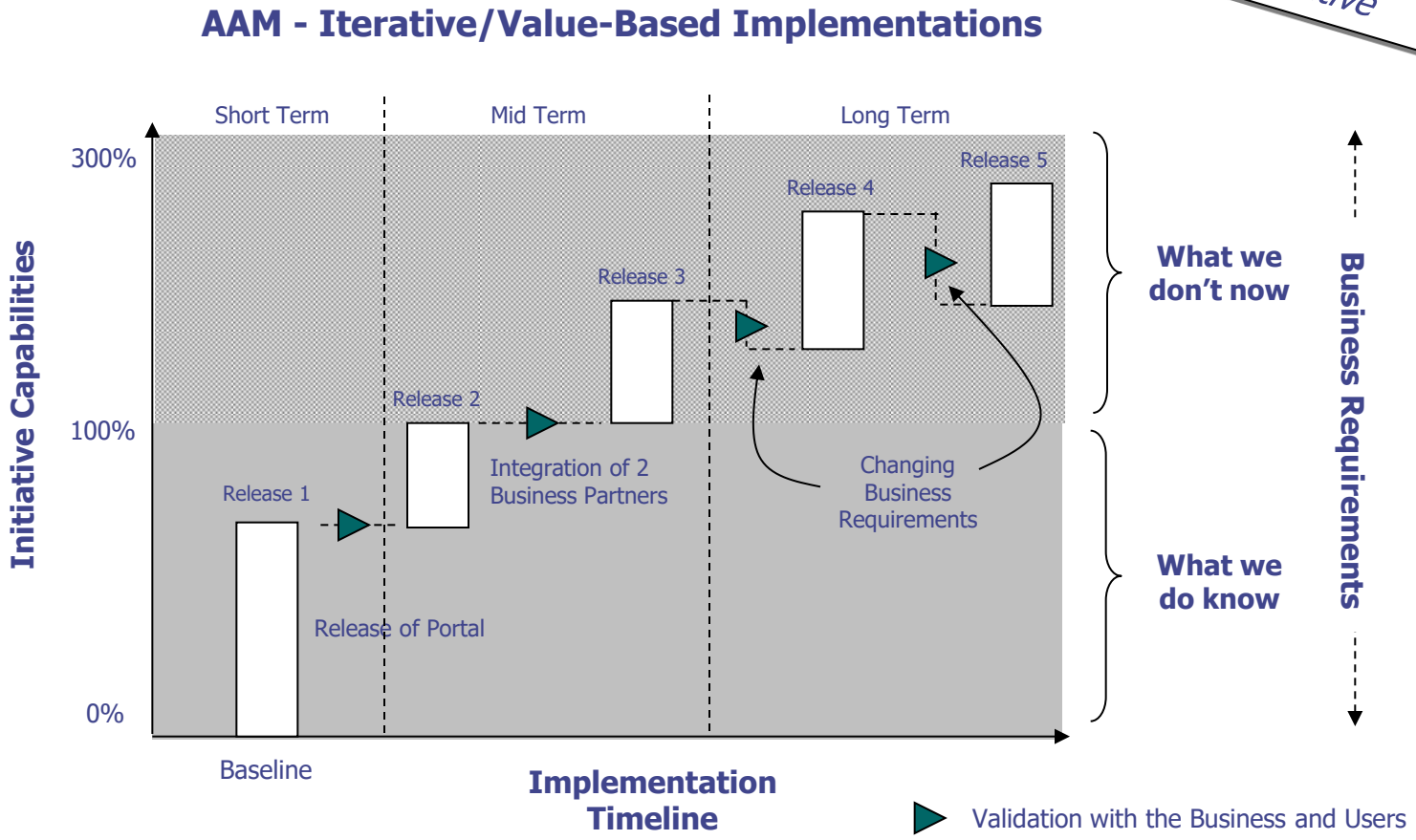


Agile consists of parallel strategic, business and implementation views that continually measure risk vs value

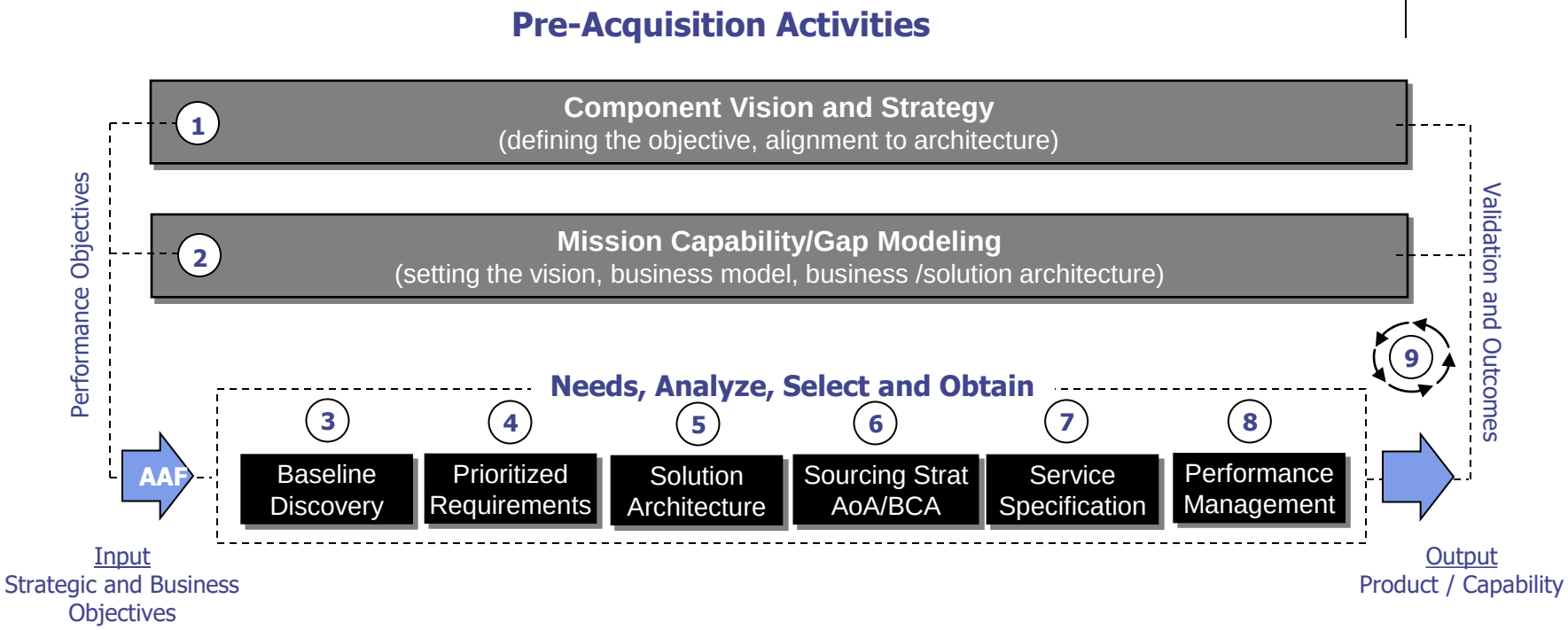


Agile Acquisition can accelerate (and validate) ROI while providing a standardized decision framework for continuous stakeholder visibility

Illustrative



An Agile Acquisition "Ecosystem" must consider needs of all stakeholders, and that IT comes in many forms



Activities 4-7 become optional for several IT swim lanes including;

- Baseline Modernization
- Tech Insertion (taking advantage of new tech/upgrades)
- Reuse of existing service offering (E-Gov)
- Commodities; Desktop, Mobile, Storage, Networks, etc.

Any IT investment must be preceded by mission planning and business strategy that codify service gaps and what success looks like

1 **Pre- Acquisition: Component Visioning and Strategic Planning**
(defining the objective, alignment to architecture)

Activities

- Define Mission Goals, Measures of Effectiveness, and Outcomes
- Capture Stakeholder Expectations
- Align with Higher Policy

Artifacts

- Vision Statement
- Strategic Plan
- Mission Priorities
- Service Orientation of Enterprise *

* The difference between a Service Level Agreement (SLA) and an Operational Level Agreement (OLA) is what the IT organization as a whole is promising to the customer (SLA), and what the functional IT groups promise to each other (OLA).
The SLA can state that "IT will ensure that computer equipment will be maintained". Of course that statement is a generalization that cannot be measured, so perhaps a better statement would be "There will be less than 100 lost man-hours per year due to lack of computer equipment maintenance".

Critical Success Factors

- ✓ Knowing what the problem is
- ✓ Defining baseline and target performance measures
- ✓ Define partners and funding strategy
- ✓ Establish linkages to agency and FEA

Mission owners are the only ones who can truly validate business requirements, processes and measures of effectiveness

2 **Pre- Acquisition: Mission Capability Gap Modeling**
(setting the vision, business model, business / solution architecture)

Activities

- ID Partners and Stakeholders
- Capture Stakeholder Problems / Expectations
- Portfolio Management
- Identify Short, Mid, and Long-term Objectives
- Identify Domain / Industry Best Practices
- Create Target Business Process / Business Flow/ Business Model
- Connection of IT and Business Dots (Solution Architecture)

Outputs needed for Program Initiation

- Establish Compliance / Regulatory Team
- Vision / Charter Document
- Business Process Document (Target)
- Program Management Plan (PMP)
- Agency / FEA Alignment Document (BRM)
- Solution Architecture (working draft)
  - Partners/Value-Chain, Processes
  - Technology / Infrastructure
  - Access and Delivery Channels
  - Business / Performance Objectives
  - Mock-ups / Visualizations

Agile Success Factors

- ✓ Capture stakeholders' and partners' expectations
- ✓ Define target business requirements and processes
- ✓ Establish team to manage compliance and regulatory issues
- ✓ Define working draft Solution Architecture

Identify existing processes, workflow, components, and IT capabilities that can be leveraged (Economy Act, E-Gov Act, FITARA, CCA)

Needs, Analyze, Select, Obtain

3

Baseline Discovery | Prioritized Requirements | Solution Architecture | Sourcing Strat AoA/BCA | Service Specification | Performance Management

Inputs

from 2

- Define Problem Statement
- Commence Business Process Modeling & Metrics
- Capture Base line / DHS Assets
- Capture Existing Processes and Workflow
- Research State of Industry (Standards, Emerging Technology, and Available Services: Cloud, Mobility, Security, Dev. Tools)
- Define New Business Modules and Supporting Services

Outputs

- Business Reference Model (BRM)
- Problem Statement with Metric
- Program Funding Plan (OMB)
- Baseline Assessment
  - Category Management Baseline
  - Market Capabilities Assessment
  - Measures of Effectiveness
  - Required Infrastructure Services
- Agile Acquisition Data

  Capability Name

  Capability Metric – Weigh

Agile Success Factors

- ✓ Understanding of what components / capabilities can be leveraged
- ✓ Define business components and their operation, workflow, and process
- ✓ Create draft solution architecture
- ✓ Consensus

Establish short, mid, and long-term increments, achieve stakeholder buy-in of what success looks like

Needs, Analyze, Select, Obtain

4 → Baseline Discovery | **Prioritized Requirements** | Solution Architecture | Sourcing Strat AoA/BCA | Service Specification | Performance Management

Inputs

from 3

Process

- Development of the Business Capability Requirements that address the Problem Statement Functional requirements
- Model Business Processes
- Prioritization of the capabilities that optimize their importance to solving their Problem State
- Define Legislative, Compliance Requirements
  - Security and Authentication
  - Privacy and Legal, Section 508, IATO/ATO requirements

Outputs

- Validated Mission Capabilities Report with Prioritization
- Recommended Acquisition Swim Lane
- ID US Digital Playbook Phase
- Agile Acquisition Data
  - Capability Name
  - Capability Description
  - Capability Metric - Weight

Mission Capability	No	High level Capability
2	1	Reduce time to deploy infrastructure
1	2	Reduce infrastructure cost
1	3	Improve Reliability, Availability Survivability (RAS)
4	4	Work within current Security Management Posture
		Provide support for AF Use Cases
1	6	Support SBC storage strategy
2	7	Support Infrastructure Requirements
1	8	Improved Manageability
1	9	Provide the same user experience (irrespective of client; rich or thin client).

Agile Success Factors

- ✓ Define short, mid, and long term requirements
- ✓ Establish system, functional, data, and interface requirements
- ✓ Establish component selection criterion
- ✓ Consensus
- ✓ Select Agile Acquisition Tools and train Staff for this Stage

Create Solution Architecture / SOA Blueprint

Needs, Analyze, Select, Obtain

5

Baseline Discovery | Prioritized Requirements | **Solution Architecture** | Sourcing Strat AoA/BCA | Service Specification | Performance Management

Inputs

from 4

Process

- Analyze Solution Alternative favoring COTS/OSS Capabilities and buy vs build alternatives
- Analyze potentiation Alternatives from interfaces definition and other constraint
- Finalize Solution Architecture Blueprints Alternative

Outputs

- Services Reference Model (SRM)
- Identification of core Infrastructure Services critical to application delivery
- Evaluation Matrix of Capabilities vs. Solution Alternative
- Update Acquisition Oversight Data
- DevOp, CM Tool selection

	5e	*Provide support for client type – Remote*
	5f	Provide support for client type – Unmanaged
125	6	**Support SBC storage strategy**
	6a	Provide server-side storage of System data and/or system images
	6b	Provide server-side storage of enterprise data
	6c	Provide server-side storage of user data and/or system images
	6d	Provide server-side storage of user application
	6e	Provide server-side storage of enterprise data application
125	7	**Support Infrastructure Requirements**
	7a	Maintain current bandwidth/network loads (min 10 GB to max 100GB user profiles, 100 MB to the desktop)
	7b	Provide consistent capability, whether rich or thin, with differing capabilities based on Active Directory rights/groups
	7d	Provide support for the Common Access Card (CAC)/DOD Public Key Infrastructure (PKI) logon
150	8	**Improved Manageability**
	8a	Provide for remote manageability of desktop
	8b	Provide support for all business and mission applications, including bandwidth sensitive applications
	8c	Provide for a client computing environment solution that scales over the AF enterprise
	8d	Allow use of a diverse mix of hardware end devices in a heterogeneous environment
	8e	Increase IT service availability to the mobile/pervasive user
150	9	**Provide the same user experience (irrespective of client; rich or thin client).**

Agile Success Factors

- ✓ Define Technical and Data Architecture, Align to Agency / FEA
- ✓ Create System and Security Architecture
- ✓ Create Final Solution Architecture / Blueprints

Implement and test the initiative and/or product

Needs, Analyze, Select, Obtain

6

Baseline Discovery | Prioritized Requirements | Solution Architecture | **Sourcing Strat AoA/BCA** | Service Specification | Performance Management

Inputs

from 5

Process

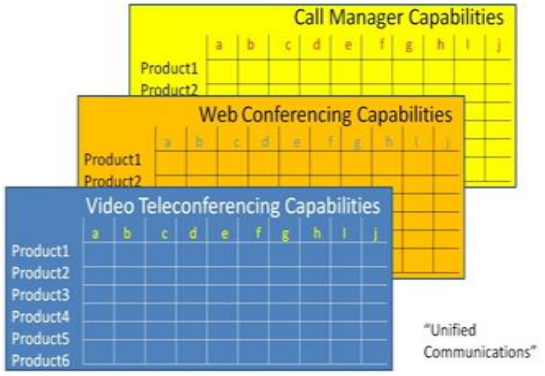
- Conduct and Business Case Analysis that of consists of a analytic assessment of evaluation matrix from Step 4
- Conduct and Business Case Analysis that of consists of a economic cost benefit Analysis
- Conduct tradeoff analysis between function (capabilities vs. total cost of ownership
- Sixing of the problem – user, transaction, DB size, …. etc.

Outputs

- Analysis of Alternatives with lifecycle cost estimates for each path
- Technical Reference Model (TRM)
- Feasibility Assessment of the Alter
- Economic Analysis of the alternatives based on Risk/Value trade offs
- Sequencing of capability increments (COTS, Infrastructure, GOTS, DevOps)

Critical Success Factors

✓ Business Case approval



Source the necessary solution components, establish agreements between users and vendors in architecture / support terms

Needs, Analyze, Select, Obtain

7

Baseline Discovery | Prioritized Requirements | Solution Architecture | Sourcing Strat AoA/BCA | **Service Specification** | Performance Management

Inputs

from 6

Process

- Create Component Sourcing Strategy
- Purchase / Leverage Service Components
- Define Configuration Management and Associated Management Plans
- Create stakeholder Technical Implementation Plan to Guide the Implementation of the Initiative / Product
- Development and Testing
- Support and Maintenance
- User Acceptance T

Outputs

- Refined SRM and Sourcing Plan
  - Buy, Borrow, Build, Leverage, Lease
- Draft Service Level Agreements (SLA) and Operational Level Agreement (OLA)
- Configuration Management Plan
- Security Plan
- Concept of Operations
- Testing Plan, Project Plan
- Technical Implementation Plan (TIP)

	Reduce time to deploy infrastructure	Reduce infrastructure cost	Improve Reliability, Availability Survivability (RAS)	Work within current Security Management Posture	Provide support for AF Use Cases	Support SBC storage strategy	Support Infrastructure Requirements	Improved Manageability	Provide the same user experience (irrespective of client, rich or thin client)	Score
Value Factors	15%	15%	5%	5%	5%	13%	13%	15%	15%	
Softgrid	1.67	3.00	3.40	1.50	0.73	1.40	1.00	1.55	1.00	1.67
Ardent	2.33	3.15	3.40	3.00	1.53	1.40	1.33	2.11	2.00	2.29
ClearCube	1.67	2.23	1.30	2.50	2.07	1.40	2.00	2.78	4.00	2.48
Wyse	1.00	1.92	1.30	1.50	2.80	1.00	2.33	4.22	5.00	2.67
COMP	1.67	2.23	1.30	2.50	2.07	1.40	2.00	2.78	4.00	2.83
Citrix	1.00	1.92	1.30	1.50	2.80	1.00	2.33	4.22	5.00	3.03

Overall Score on each Product

Blue = Essential	1-1.99
Green = Desirable	2-2.99
Yellow = Less Desirable	3-3.99
Red = Undesirable	4-5.00

Agile Success Factors

- ✓ Clear understanding of component and capabilities to support implementation / integration
- ✓ Acquire/ purchase components or services
- ✓ Create risk, security, configuration, testing, and project plans
- ✓ Create technical implementation plan

Launch and support incremental delivery of service capabilities (infrastructure 1st), re-validate performance measures, business requirements, and outcomes with stakeholders

Needs, Analyze, Select, Obtain

8 → Baseline Discovery → Prioritized Requirements → Solution Architecture → Sourcing Strat AoA/BCA → Service Specification → **Performance Management**

Inputs

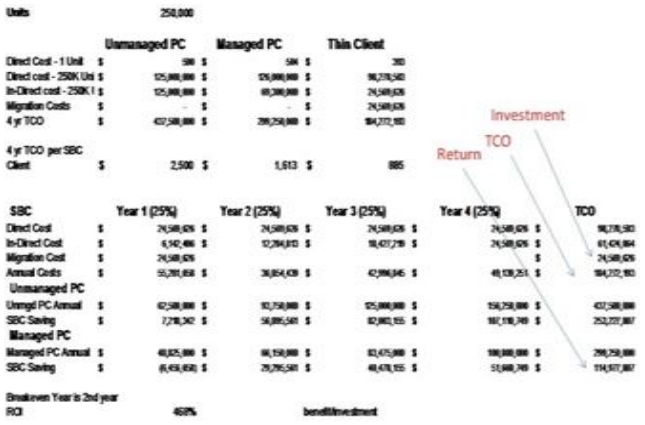
from 7

Process

- Establish Committee to Manage the Change and Updates to the Initiative
- Validate the Business Functions, Processes, and Requirements
- Measure Performance Outcomes
- Query Customers for Satisfaction
- Identify Next Round of Changes and/or Modifications

Outputs

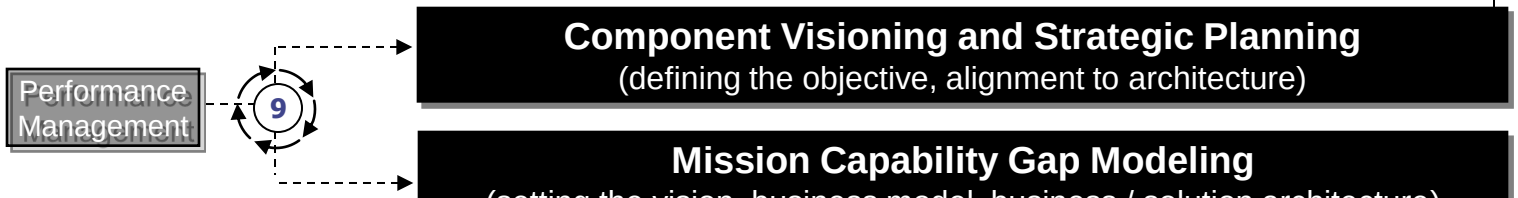
- Final Measures of Effectiveness (MOEs)
- Contract language with SLA/OLA
- Prioritized RMF elements
- Establish Change Management Committee (CMC)
- Performance Mgt Guidance
- Customer Satisfaction Report / Survey



Critical Success Factors

- ✓ Established processes (i.e., CMM) to capture and prioritize the advancement of the initiative
- ✓ Validate initiative / product with customer
- ✓ Measure performance, identify change recommendations

The outcome of Execution assists in driving the next phase of implementation and/or the selection of products or components



Inputs

from 8

Process

- Evolve Business Strategy and Performance Objectives
- Re-Assess Market / Industry Capabilities
- Expand Value-Chain and Partners
- Define Next Round of Strategic, Business, and Performance Objectives

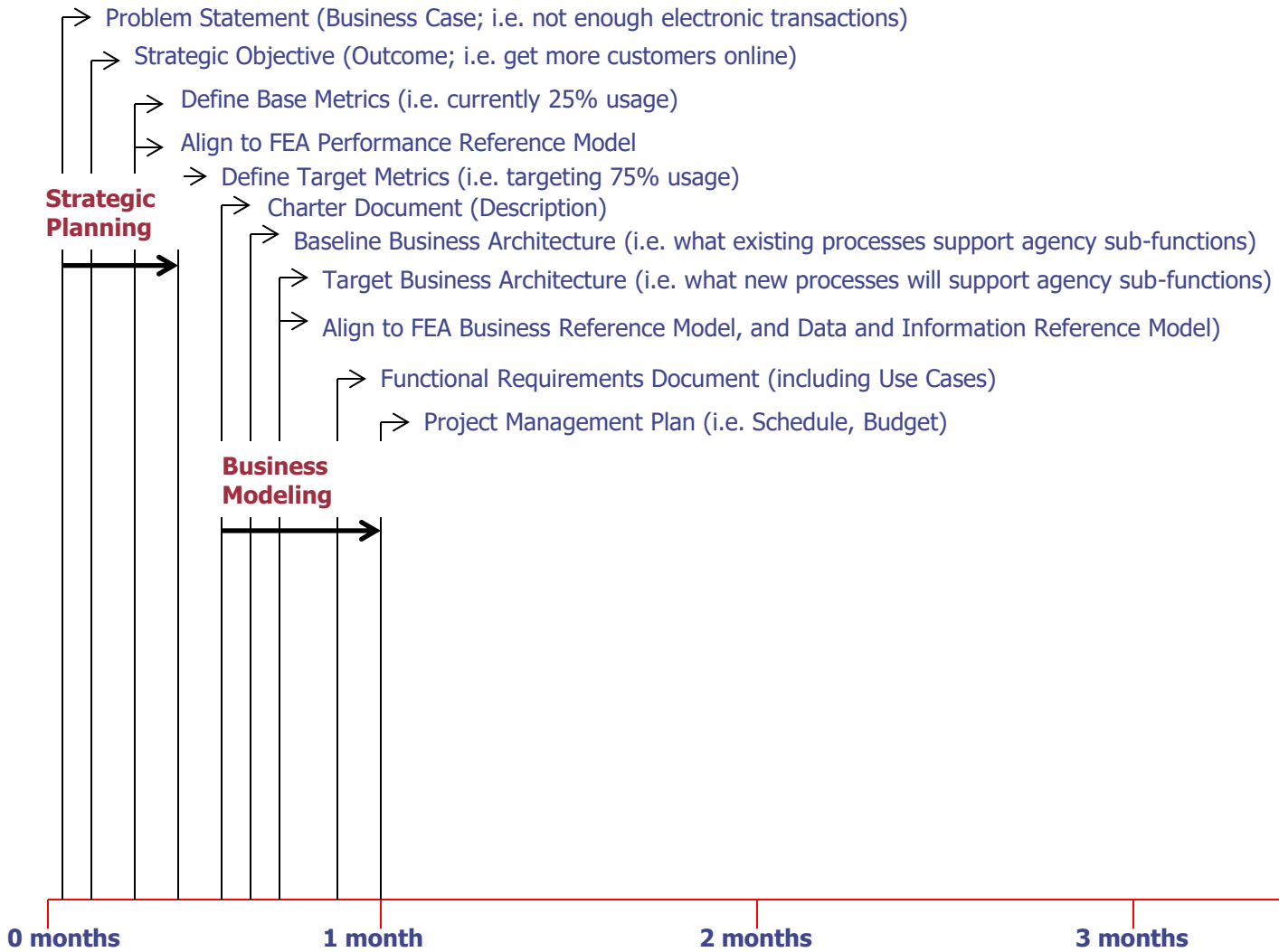
Outputs

- Prioritized Mission Objectives & Metrics
- Prioritized Business Objectives & Stake Holder agreements (define 80% solution)
- Updated Performance Metrics and contract language

Agile Success Factors

- ✓ Evolution of Strategy and Objectives – moving away from the "big-bang" approach (i.e., ERP)
- ✓ Analysis of market / industry capabilities – are there new components and/or solutions available?
- ✓ Definition of next phase of the initiative or product

Example AAM Timeline: GPO Future Digital System (FDSys)



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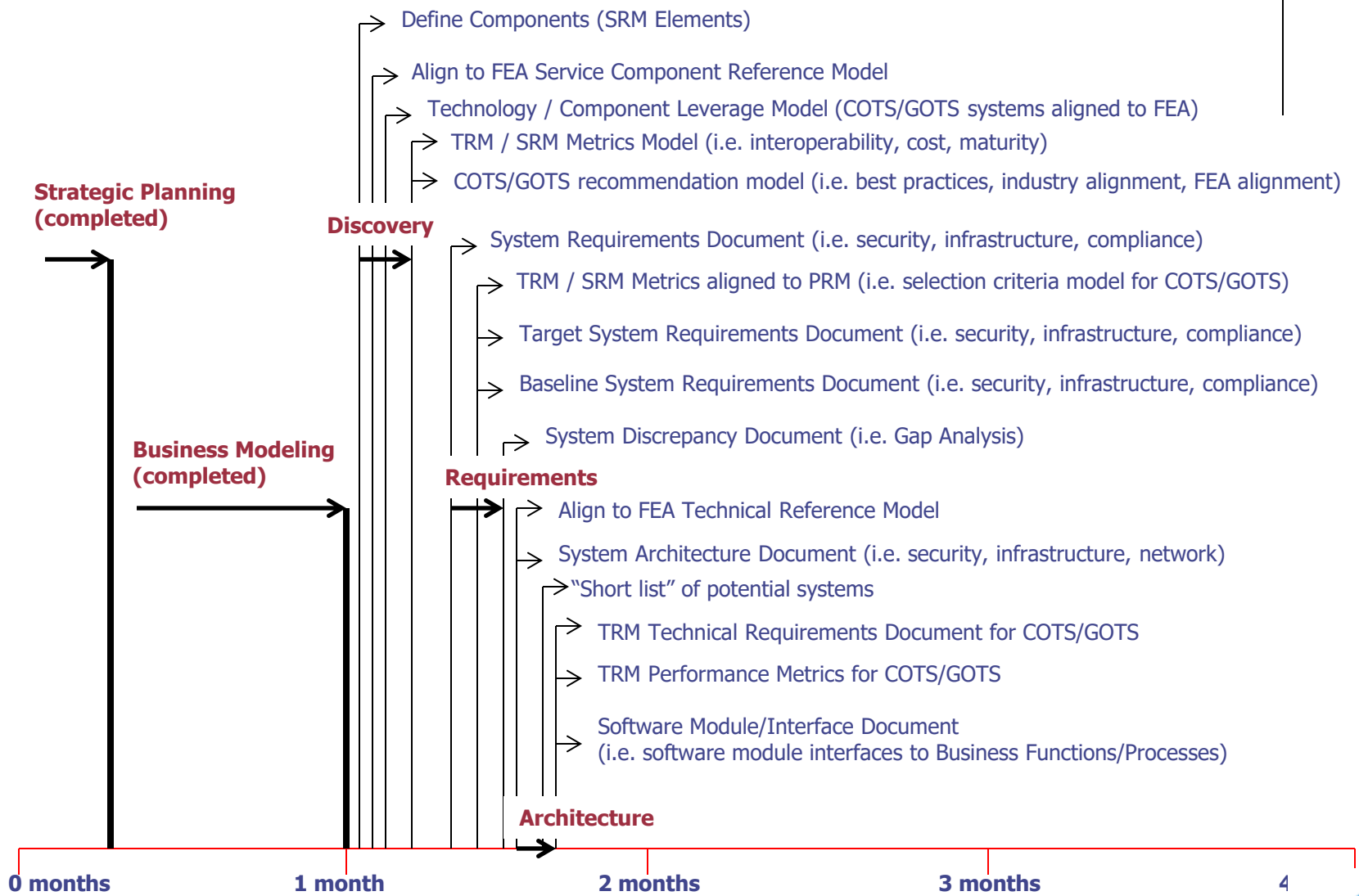

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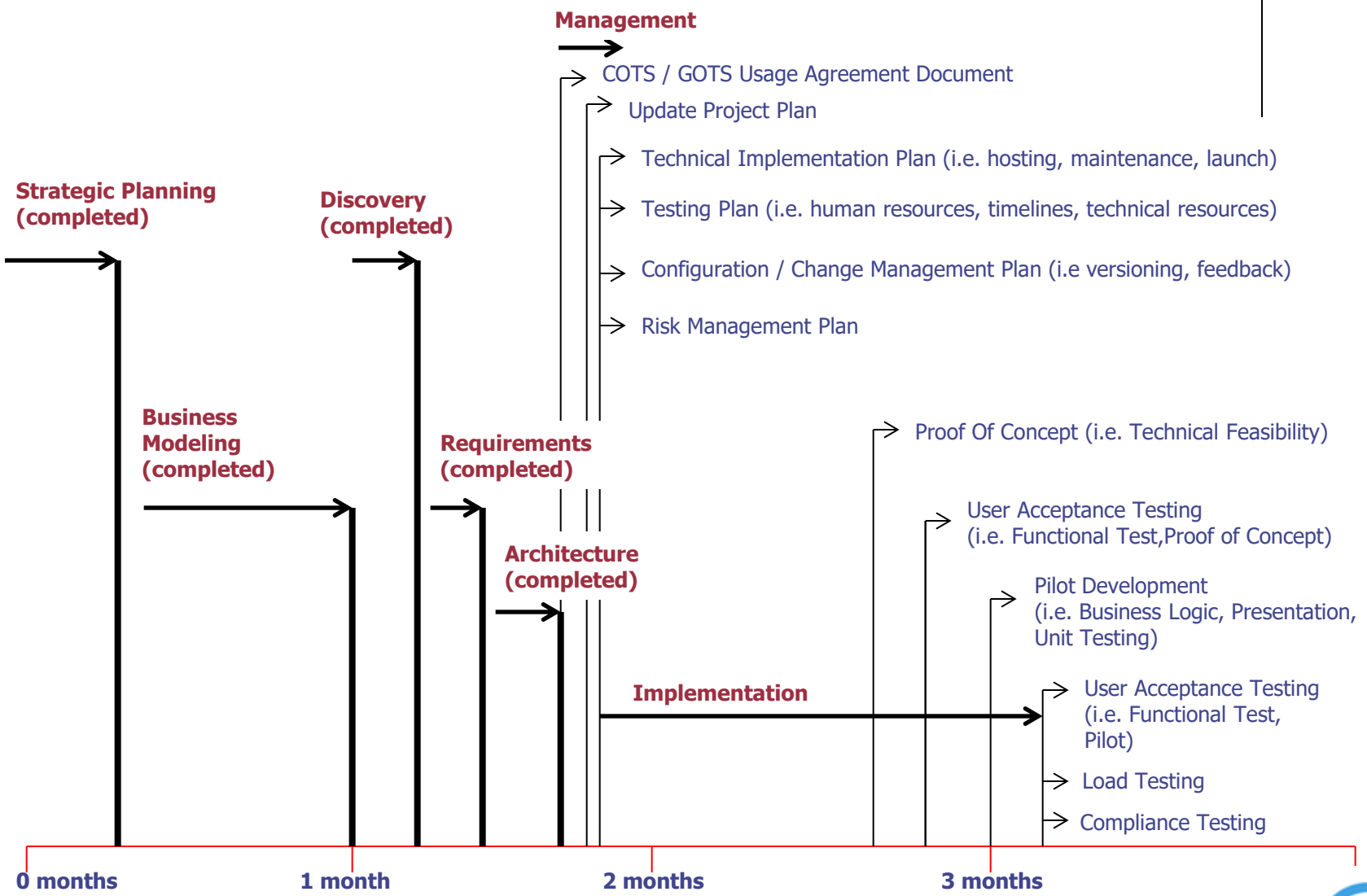

Example AAM Timeline: GPO Future Digital System (FDSys)