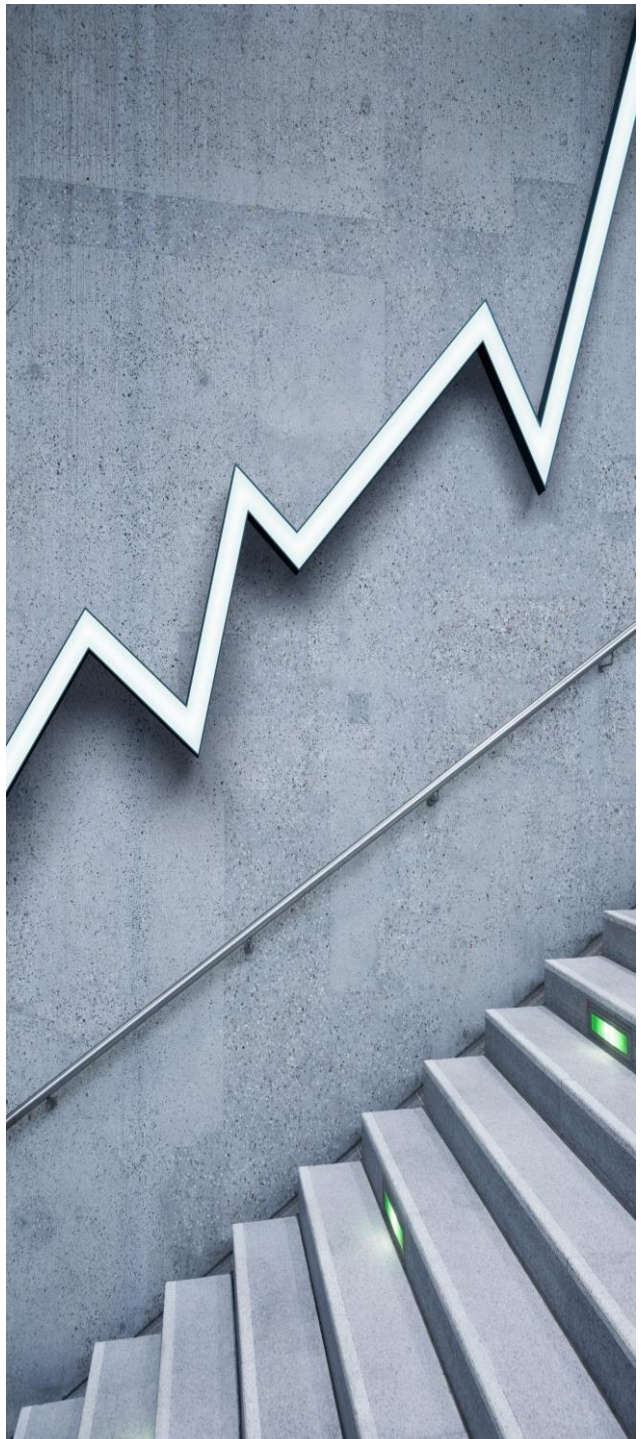


Secure Digital Modernization Proving Ground

Public/Private Partnership enabling EO14028

Team IT-AAC is Public/Private Partnership of standards bodies, innovation labs and just-in-time SMEs that collectively provide an agile and evidenced based SCRM/SBOM tech assessment process, leveraging an elastic pool of just-in-time SMEs and a virtual network of testing facilities that proven to deliver decision quality results in rigorous IT assessment at scale. As PubSec only accounts for 2% of the Global IT Market, it is critical that we reach outside the confines of the Federal IT sector, and deeper into the expertise, innovations and standards of practice driven by both Silicon Valley and Fortune500.

IT-AAC's unique partnership of leading standards bodies, do tanks and IT communities of practice are well positioned to advance CYBER EOs and NDAA mandates at the speed of need, leveraging Agile Methods, Metrics and Honest Broker Capabilities already vetted by DoD, leading FFRDCs and GSA. *Measurable, repeatable, scalable, transparent and conflict free!*

IT-AAC VADM (ret) Kevin Green, Chairman, former Navy DCNO, former IBM VP Defense/IC kevin.green@IT-AAC.org,
Interop. Clearinghouse & IT-AAC John Weiler, Exec Director | john@ICHnet.org | 703-863-3766
IT-AAC Bob Dix, SVP Strategy & Policy, Bob.Dix@IT-AAC.org
IT-AAC Ted Manakas, VP Strategic Alliances | Ted.Manakas@IT-AAC.org | 703-929-6074
IT-AAC Gary Wang, Research Fellow | gary.c.wang@IT-AAC.org | 858-837-2150

Who We Are

The Interop. Clearinghouse was Chartered in 2000 as a 501C6 Consortium to provide Honest Broker of emerging IT/Cyber Standards, Innovations and Tech Assessments/Testing results needed to accelerate adoption of advanced technology at the speed of need. In 2007, ICH forged a Public/Private Partnership (P3) in 2007 called IT-AAC to improve IT/Cyber best practices sharing. This P3 is uniquely qualified advance key provisions of EO 14028, SBOM and SCRM objectives, that can rapidly assess commercial IT/OT capabilities, interoperability, SCRM and mission fit.

"As one of the leading advocates of open systems and interoperability, the OMG believes that the Interoperability Clearinghouse initiative will help users realize the benefits from our combined efforts." Says Bill Hoffman, OMG President

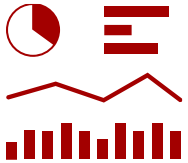
Tech Proving Grounds Summary

IT-AAC offers Government PMs an opportunity to improve cyber and risk assessments of commercial IT/Software by leveraging the significant investments already made by leading standards bodies, do tanks, and Fortune500/Silicon Valley communities of interests collaborating to improving the quality, security and interoperability of enterprise IT.

IT-AAC partners are dedicated to improving IT/OT Supply Chain Risk Management (SCRM), needed to accelerate and assure Digital Transformation and Modernization at the speed of need. Key building blocks include:

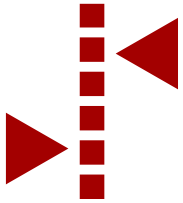
- **Partnership of leading IT/Cyber Standards Bodies, Do Tanks, and UARCs working in the public interests**
- **Just-In-Time SMEs. C**ritical to improving workforce competencies and skills. This model has been promoted by OMB and Congress.
- **Rapid SCRM/SBOM Assessment.** Built on NIAP and AF Solution Assessment Process (ASAP), exceeding DFAR, CCA, FITARA, and NDAA Sec 804 mandates. This includes SBOM, ZTA, and related NIST 800 Standards.
- **Agile Acquisition and DevOps Methods.** Design Patterns, and Digital frameworks with quantitative analysis and based on evidence. Our DOD/FFRDC approved approach is derived from commercial best practices and adapted to meet FITARA, IT MGT Act and White House policy directives.
- **IT/SaaS/IoT Standards of Practice.** Service Level Management, Risk Assessment Tools, Governance Models developed by SDO partners and validated by Fortune500 consumers.
- **Solution Architecture Innovation Lab (SAIL)** composed of Universities, Standards Bodies, Communities of Practice, Innovators and SMEs that are not vested in the status quo, reaching deep into a $4Trillion global IT market.

Core Assessment Modules for Proving Grounds



Cyber/SCRM/SBOM Metrics

- ✓ Measurement and discussion in governance committees goes a long way to setting behavior
- ✓ Codify Gate controls that measure cyber risks, and mission value
- ✓ Software Bill of Materials and Vulnerability Exploitability Exchange (VEX)



Digital Transformation Enablers

- ✓ Transformed IT Acquisition that enable continuous measurements of risk/value
- ✓ Leverage commercial IT/Comms Certifications
- ✓ Streamlined Tech assessment and acquisition processes that are Mission Driven, Evidenced Based, and Agile
- ✓ Support IT Modernization stake holders decision analytics

IT/OT/XaaS Metrics & Service Level Management

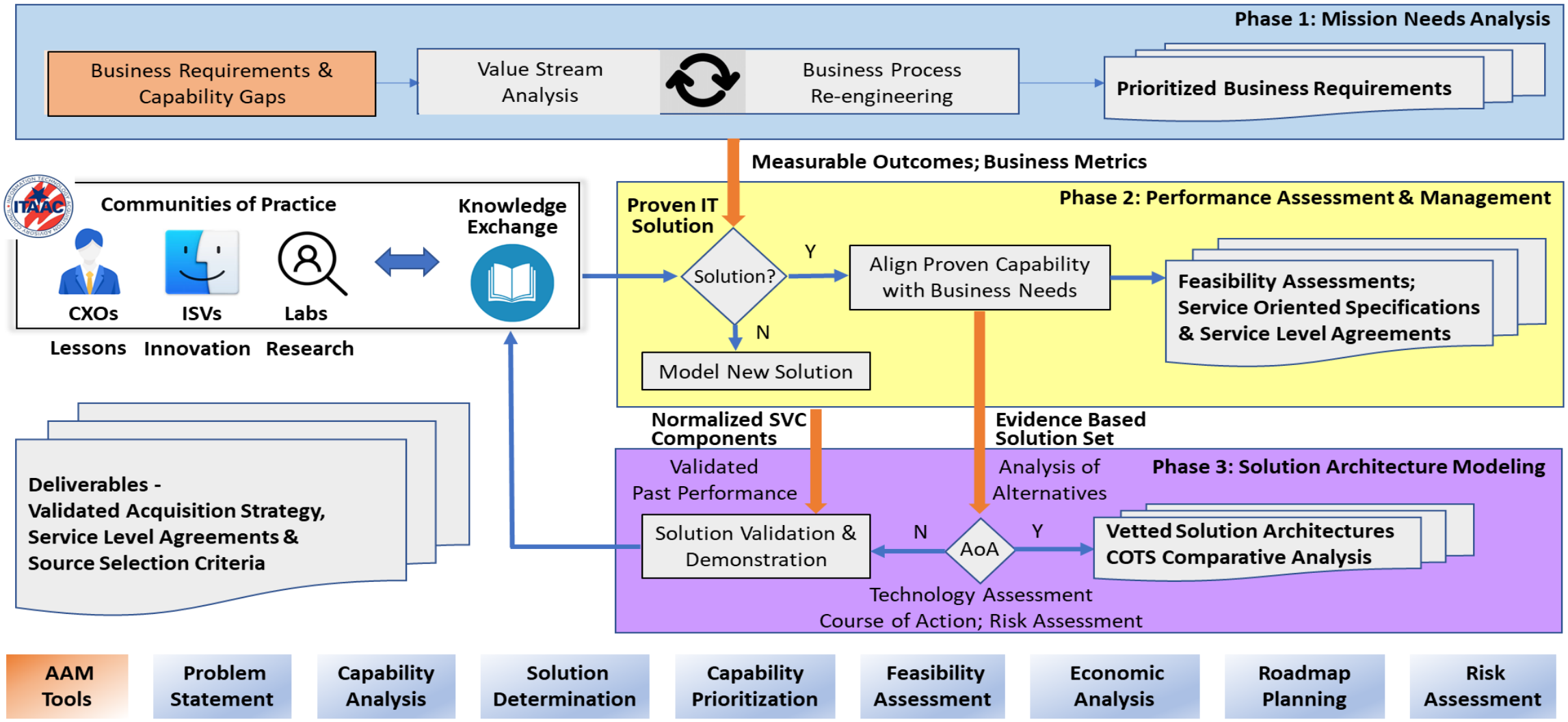
- ✓ Standards frame Modular Open Systems Architecture Specs
- ✓ SLAs that treat software enhancements and maintenance as a service; track levels, penalties, credits
- ✓ Align SLAs with Mission Outcomes and Incentives
- ✓ ZTA/SBOM Cyber Metrics supporting

Make informed decisions based on facts, evidence and prioritized mission needs

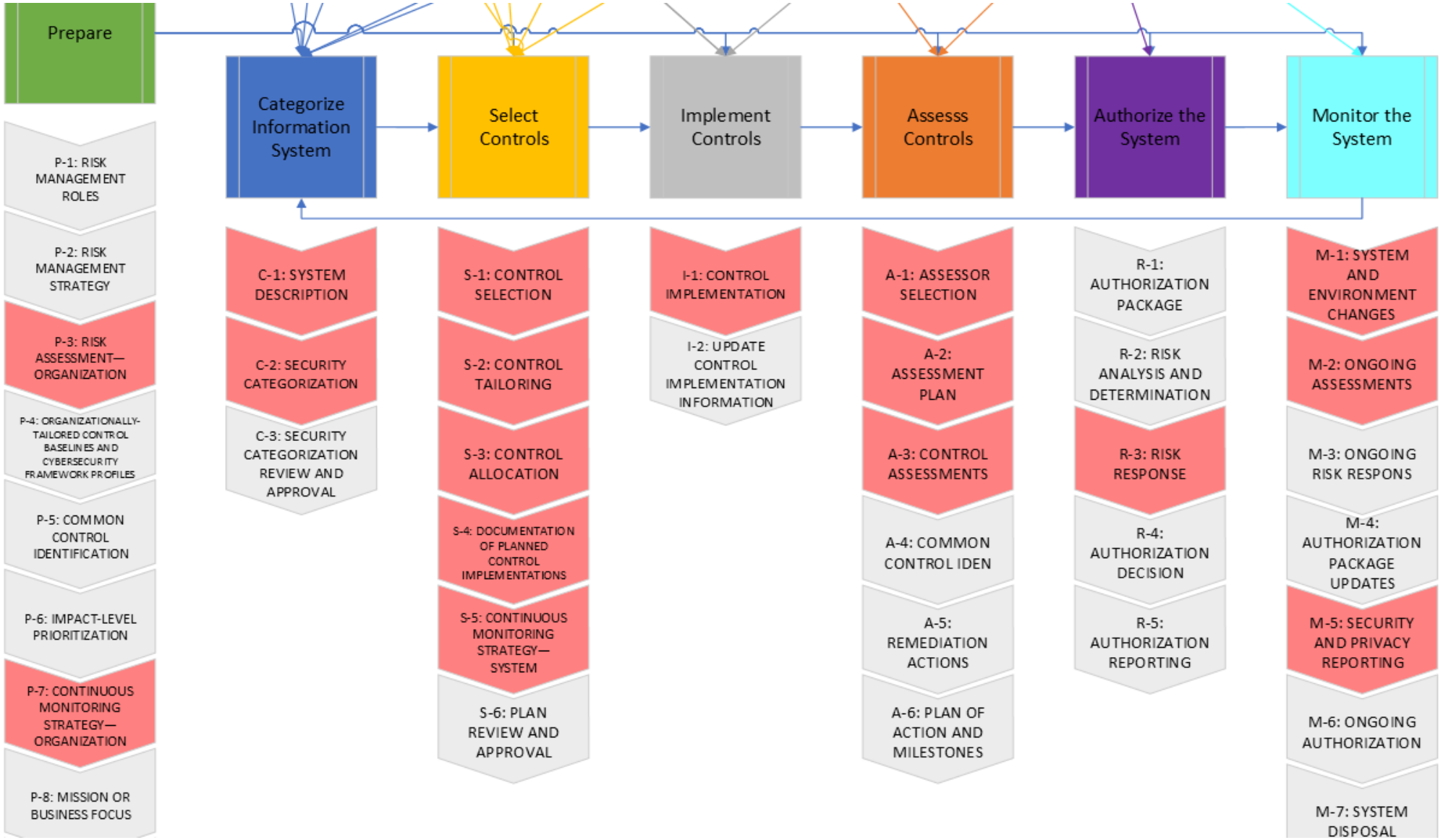
- ✓ Apply minimal set of acceptance criteria for any new development or modernized systems
- ✓ Assess IT Infrastructure Services based on cyber controls (ZTA, SCRM, NIST 800)
- ✓ Accelerate Tech Readiness Levels
- ✓ Determine Lifecycle Cost Models

Architecture Assurance Method

Government Approved, SDO Supported



ZTA + SBOM Touch Points within RMF



ZTA/SBOM Data Analytics for Measuring Cyber Risks, Mission Value, and Lifecycle Cost at Commercial IT

Emerging Tech

- Digital Twins
- Secure Cloud
- Large Data
- Edge Computing
- Zero Trust Architectures
- SW Defined Networks
- Open Source Data
- Quantum Computing
- Hyper Converged Infr
- AI/ML

COIs & Labs

Virtual Solution Assessment Lab

- MISI Dreamport
- CMU Cylab
- USU Space Dynamics Lab
- HyperQube
- TIAonline
- OMG/IIOT/Digital Twins
- Consortium for Information and Software Quality (CISQ)
- Cloud Security Alliance
- ICH/IT-AAC
- Transformative Cyber Innovation Lab

Drivers

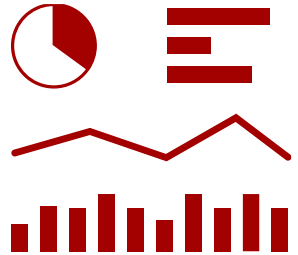
Assessment Reports/Roadmaps

Domains of Expertise

- Space Systems
- Distributed Common Ground Systems
- Maritime Domain Awareness
- Joint Regional Security Stack
- JEDI/JWCC Cloud
- NRO IC-ITE NISP
- JADC2
- GCCS
- AF EITaaS
- JAIC DevSecOps
- CMMC/SCRM

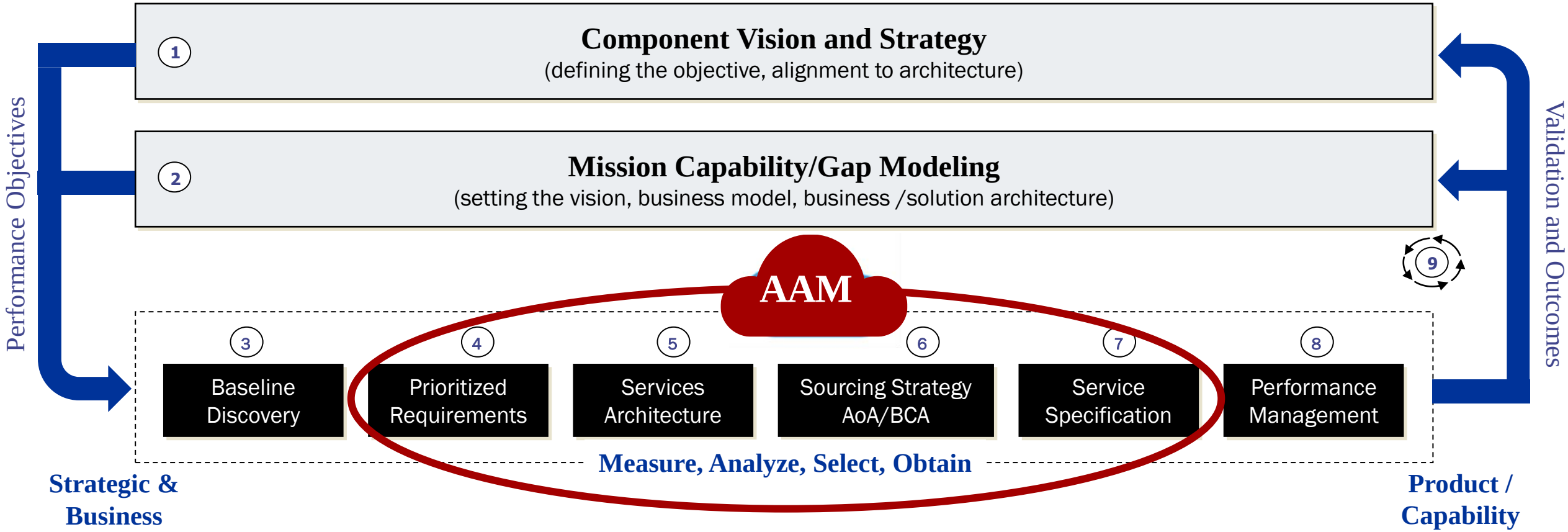
Process Standards

- DFAR/DOD 5000/MOSA
- FITARA/CCA
- NIST 800 series
- Cloud Security
- SLA Management
- IEEE 1471/MDA/SOA
- Cloud and HCI
- XaaS, EITaaS
- DevSecOps
- Process Capability Frameworks
- Service Oriented Architectures
- Software Bill of Materials
- Agile-Adaptive Acquisition



Acquisition Ready Roadmaps & Performance Metrics (SLAs)

Agile Data & Risk Based DevOps Processes



Acquisition Assurance Method (AAM) empowering evidenced based decisions around *Business Value, Mission Risk and Lifecycle Cost*

IT-AAC Proving Grounds Partners

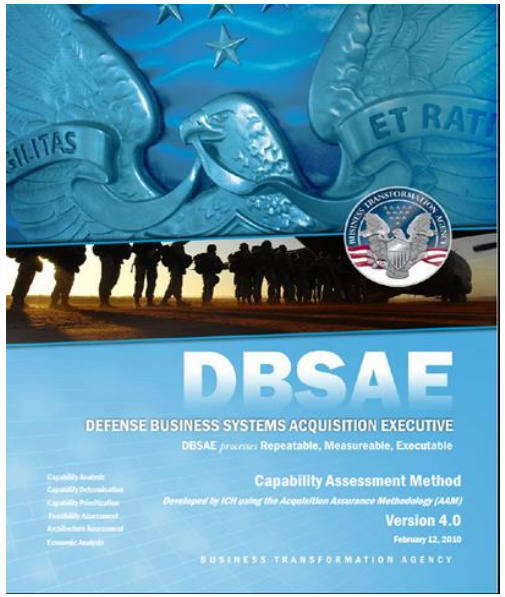
Represents Fortune5000, Silicon Value and Drivers of the $4T Global IT Market

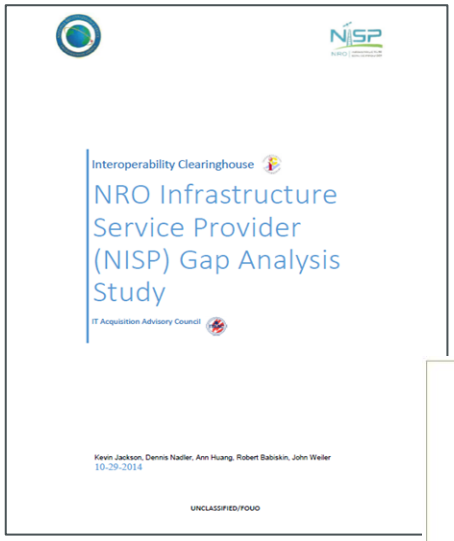
IT-AAC Partners	Agile Methods	Cloud/HCI	Innovation Access	IT Risk Mgmt	Industry Best Practices	Pilots & Contracts	IT Policy & Compliance	#Companies (SMEs)
ANSER Corp	✓		✓	✓	✓	✓	✓	325+
CMU Cylab		✓	✓		✓	✓	✓	150+
Cloud Security Alliance (CSA)		✓	✓	✓	✓	✓		48,000
USU Space Dynamics Lab	✓	✓	✓	✓	✓	✓	✓	750+
Interoperability Clearinghouse (ICH)	✓		✓	✓	✓	✓		360
Info Systems & Security Group (ISSA)		✓			✓		✓	10,000+
Object Mgmt Group Industrial Internet Consortium	✓	✓	✓	✓	✓		✓	800+ 250+
OMG/Digital Twins			✓	✓	✓	✓	✓	1,600+
HyperQube		✓	✓	✓	✓	✓		1,100
Consortium for Information and Software Quality (CISQ)	✓		✓	✓	✓	✓		600+
Telecommunication Industry Association (TIA)		✓	✓		✓		✓	290+
MISI Dreamport	✓		✓	✓	✓	✓	✓	100+

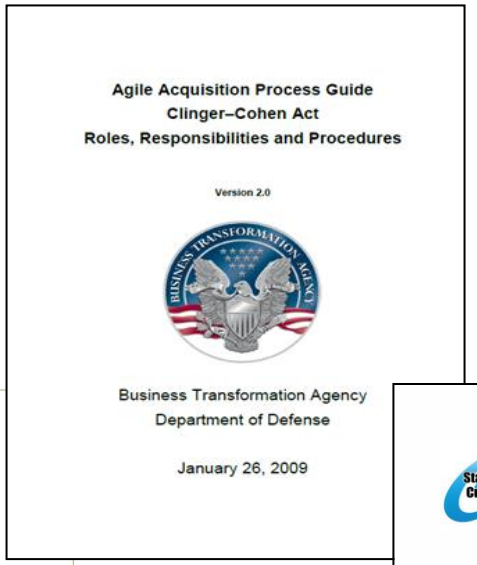
The MITRE Corporation: "the concept of the Interoperability Clearinghouse is sound and vital. Its developing role as an honest broker of all interoperability technologies, no matter what the source, is especially needed. Such efforts should be supported by any organization that wants to stop putting all of its money into maintaining archaic software and obtuse data formats, and instead start focusing on bottom-line issues of productivity and cost-effective use of information technology."

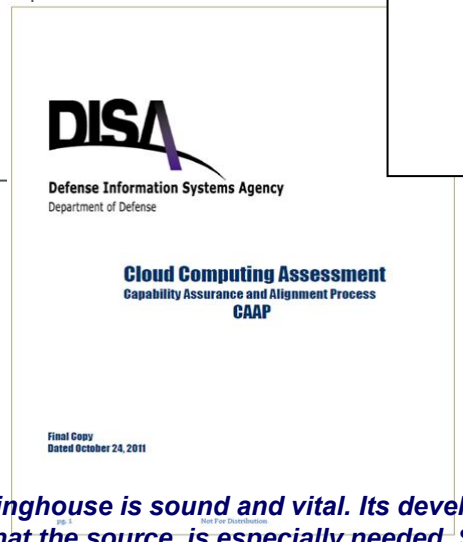
Building on 2 decades of progressive IT Reforms;

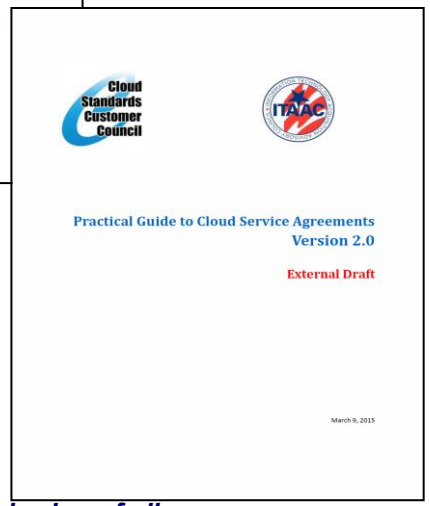
FITARA, NDAA Sec 804, Agile Acquisition, CMMC2.0, Cloud Broker, XaaS, JWCC, GAO Agile DevOps Guide, to name a few











". the concept of the Interoperability Clearinghouse is sound and vital. Its developing role as an honest broker of all interoperability technologies, no matter what the source, is especially needed. Such efforts should be supported by any organization that wants to stop putting all of its money into maintaining archaic software and obtuse data formats, and instead start focusing on bottom-line issues of productivity and cost-effective use of information technology." **OSD Funded Assessment of Interop. Clearinghouse by an FFRDC (Mitre)**

IT-AAC P3 vs DIB models

Partner Type Federal IT Lifecycle	FFRDC	User Groups, Communities of Practice	Standards development Orgs, Trade Associations	ICH/IT-AAC Public Private Partnership	Consultants, IV&V, A&AS Firms	Innovators, Tech Mfg, Open Source	System Integrators
Requirement, Gap Analysis, Innovation Research	Lacks access to commercial innovations or best practices	OMB Lines of Business offers Critical Role	SDOs = Primary driver for open systems. Conflict free structures	Provide Conflict free structure and economies of scale	Limited access to industry lessons learned.	Great source for customer use cases, lessons learned.	FAR OCI Rules limit participation
Open Architecture Planning	Only when no other company can support	Agency CXO provides critical guidance	Provide standards of practice, not support	Principle source of expertise. Organic access to standards	Primary source of expertise, but requires access to Standards	FAR OCI rules limit participation	FAR OCI rules prohibit direct support
PMO & IV&V Support	Only when no other company can support	Not inherently Governmental	Access to standards of practice of suppliers	Optimized for this area	Key role	FAR OCI rules prohibit participation	FAR OCI rules prohibit participation
Solution Engineering	Forbidden if available from other sources	Not inherently Governmental	Access to potential suppliers already in market	Support role, provide process standards, lessons learned	Support role	Provide developmental	Primary partnership area
Solution Development & Sales	Forbidden, may not develop material solutions	Not inherently Governmental	Potential OCI, objectivity	ICH/IT-AAC does not develop, sell, or integrate any IT	Internal IV&V for Prime contract reduces risk.	Provider of key technologies	Primary partnership area

Past Performance validates IT-AAC Model

Joint Staff/DDRE JADC2 Readiness Assessment **Identified critical gaps in existing C2 Programs in terms of Agile Processes, ATO, Compliance with CCA, FITARA, FAR and OMB A130**	USAF: Streamlined COTS Acquisition Process. Applied to Server Virtualization. Contract Value: $500k **Established optimal arch with ROI of 450% & $458 million savings**	AF DCGS: 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 Agile process, with 2 successful pilots Contract Value: $800k **$300 million in potential savings with minimal investment**
DOD CIO FITARA Roadmap **Provided actionable guidance and process models for enabling sustainable IT Acquisition Reforms**	GPO: Developed Acquisition Strategy for Future Digital System FDSys Contract Value: $150k **Led to successful acquisition and implementation on time, on budget and 80% cheaper than NARA RMS**	DHS CIO: Agile Acquisition Roadmap Applying AAM to comply with NDAA/FITARA IT Reform Directives **Partnered with DHS FFRDC to shift DHS away from failed weapon systems approach to IT acquisition**

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"

IT-AAC's Primary Proving Grounds Partners

Working in the Public Interests

IT-AAC Enables ZTA and Digital Transformation

Conduit for Fortune500 & Silicon Valley Lessons Learned, Innovations and Standards

FITARA/FISMA Scorecards

- ✓ Measurement and discussion in governance committees goes a long way to setting behavior
- ✓ You can only manage what you measure. Codify Gate controls that measure risk/value

Service Level Management & Performance Metics

- ✓ SLAs that treat software enhancements and maintenance as a service; track levels, penalties, credits
- ✓ Align SLAs with Mission Outcomes and Incentives
- ✓ Measuring what matters most

Transform Acquisition Policy

- ✓ Transform IT Acquisition that enable continuous measurements of risk/value
- ✓ Require vendors to provide CISQ scores/certificate for each release
- ✓ Streamline processes that are Mission Driven, Evidenced Based, and Agile

Acceptance criteria

- ✓ Measure and demand minimal set of acceptance criteria for any new development or modernized systems
- ✓ Modernize IT Infrastructure Services based on commercial design patterns (14 SOA Services)

IT-AAC Partnership Assures Secure Digital Transformation *with Models, Data and Metrics*

Strategic Business Rqt's

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

Functional Capabilities

		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 bas 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).**

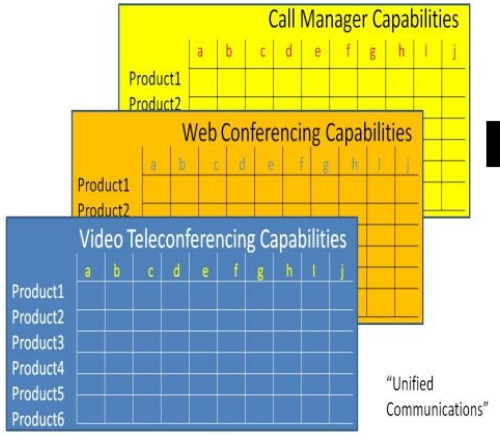
Builds On

Capability Prioritization

		5e Provide support for client type – Remote	3
	5f	Provide support for client type – Unmanaged	5
125	6	**Support SBC storage strategy**	
	6a	Provide server-side storage of System data and/or system images	1
	6b	Provide server-side storage of enterprise data	1
	6c	Provide server-side storage of user data and/or system images	1
	6d	Provide server-side storage of user application	1
	6e	Provide server-side storage of enterprise data application	1
125	7	**Support Infrastructure Requirements**	
	7a	Maintain current bandwidth/network loads (min 10 GB to max 100GB user profiles, 100 MB to the desktop)	1
	7b	Provide consistent capability, whether rich or thin, with differing capabilities based on Active Directory rights/groups	1
	7d	Provide support for the Common Access Card (CAC)/DOD Public Key Infrastructure (PKI) logon	1
150	8	**Improved Manageability**	
	8a	Provide for remote manageability of desktop	1
	8b	Provide support for all business and mission applications, including bandwidth sensitive applications	4
	8c	Provide for a client computing environment solution that scales over the AF enterprise	1
	8d	Allow use of a diverse mix of hardware end devices in a heterogeneous environment	1
	8e	Increase IT service availability to the mobile/pervasive user	2
150	9	**Provide the same user experience (irrespective of client; rich or thin client).**	1

Builds On

Solution Determination



Builds On

Feasibility Assessments

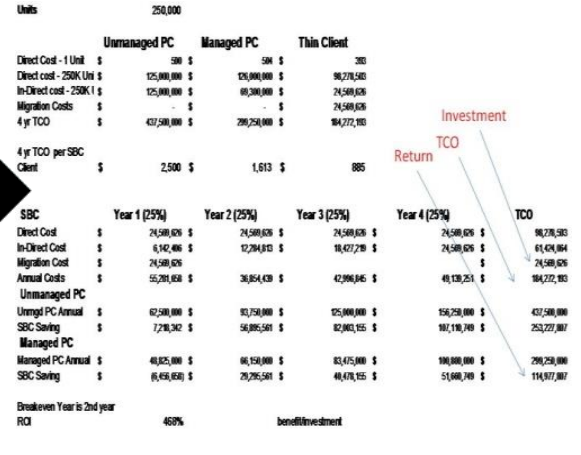
	Reduce time to deploy infrastructure	Reduce infrastructure cost	Improve Reliability, Availability Survivability (RAS)	Work within current Security Management Posture	Provide support for AF Use Cases	Support SBC storage strategy	Support Infrastructure Requirements	Improved Manageability	Provide the same user experience (irrespective of client; rich or thin client)	
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	1.56	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
CC/HP	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

Economic Analysis/TCO/ROI)



Engaging a Non-Profit Research Institute

IT-AAC was THE primary industry advocate of FITARA and a Significant Contributor to IT MGT Act, Cloud First Policy, Cloud Smart Policy, DOD Cloud Strategy, and EO13800. Below are a variety of engagement options…

- Interop. Clearinghouse (ICH) is the consortia management firm for IT-AAC, leveraging its Small Business, GSA Schedule 70, use the Simplified Acquisition Method (up to $7.5m per newish NDAA Guidance for Agile Acquisition Improvements).
- Directed sub on any existing contract, authorizing them to use ICH's Schedule 70.
- IT-AAC is delighted to join Other Transaction Authority (OTA) contract.
- Other than full and open competition under FAR 6-302; Unique and salient capabilities not available from any other source.
- FAR 6-302 - Essential engineering services from a non-profit research institute, FFRDC or UARC.

Assuring Measurable Outcomes; References…

Navy: Assessment of AFLOAT Program – CANES SOA & Security Strategy Contact Value: $350k Eliminated hi-risk Requirements by 23%, $100Ms in potential savings	USAF: Streamlined COTS Acquisition Process. Applied to Server Virtualization. Contract Value: $500k Established optimal arch with ROI of 450% & $458 million savings	AFISRA: Applied AAM to conduct DCGS 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	SPACECOM: EITaaS Contract Value: $500k Guided XaaS Roadmap for consolidating AF CONUS Networks	NRO ISP IC-ITE: Developed Modernization Roadmap for CIO that consolidated legacy network contracts into XaaS model following multiple failed attampts. Contract Value: $500k $1 billion in potential savings with minimal investment
Joint Staff/OSD R&E: Conducted comprehensive JADC2 Readiness Assessment of existing C2 Agile/DevOps environments Contract Value: $500k Identified gaps in ATO, Standardization, Process Engineering	DOD CIO: Developed DOD's Implementation Roadmap for FITARA Contract Value: $350k Established Governance and Agile Acquisition Roadmap	DHS CIO: Agile Acquisition Roadmap Applying AAM to comply with NDAA/FITARA IT Reform Directives Partnered with DHS FFRDC to shift DHS away from failed weapon systems approach to IT acquisition

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 at the Interoperability Clearinghouse (ICH), and our dedicated IT-AAC public service partners, have invested decades in improving the state of Federal IT, and welcome the opportunity to leverage the significant investments of our public services partners who stand ready to help facilitate tech transformation thru the infamous “valley of death”. Our collective work brings a unique mix of international standards, Fortune500/Silicon Valley Innovations, Physical Testing Labs and World Class Domain Experts willing to mentor and facilitate the adoption of mission critical technology at the speed of relevance.

DOD, GSA, IC and DHS have already embraced a suite of alternative, agile DevOps processes and innovation research capabilities that have been underutilized due to DOD’s bureaucratic barriers to change and unwillingness to take the extra effort to embrace alternative methods or sources of expertise outside the confines of the Defense Industrial Base. As DOD’s primary champion of innovation, we recommend that NCD establish a Partnership Intermediary Agreement that closes the SCRM gaps leveraging a wide range of non-profits working in the public interests.

John Weiler
Executive Director, IT-AAC
CEO, Interop. Clearinghouse
703-863-3766
john@ICHnet.org