**Interoperability ClearingHouse**

**IT Acquisition Advisory Council**

# Service Orient Acquisition Roadmap

## for Establishing

# A Virtual Lifetime Health Record

*An ICH/IT-AAC Research Report for*

**OSD HA CIO and CAE**

April 14, 2009

# Briefing Structure

- Interoperability Clearinghouse (ICH) & Principle Investigators
- Understanding the DoD/VA Health Record Interoperability Challenge
- ICH Three Prong Method for IT Program Office support
- How the Architecture Assurance Method (AAM) enables compliance
- How ICH and AAM can help DoD/VA achieve its interoperability objectives and time lines
- Backup Slides: Supporting the EHR Acquisition Supply Chain

# Who is the Interop. Clearinghouse (ICH)

*Honest Broker for enabling sound and timely IT Investment Decisions*

- **Trusted Advisor:** ICH is an elastic, conflict free, non-profit research coop and knowledge exchange that empowers sound decision making by leveraging the collective knowledge and expertise of many communities of practice, standards bodies and academia.
- **Architecture Assurance Method:** AAM is repeatable, measurable, Services Oriented decision framework that transparently aligns and validates critical business processes with interoperable IT solutions.
- **A Solution Architecture Innovation Lab: SAIL** is a collaborative "virtual lab" that repurposed existing implementation and testing results from real world implementations derived from users, potential suppliers and innovators.
- **IT Acquisition Advisory Council:** the **IT-AAC** is a non-partisan Think Tank focused on driving federal IT Acquisition process and policy improvements

OSD/Mitre Assessment of ICH: *"... 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 half 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."*

# ICH Principle Investigators

- John Weiler, ICH Founder and Chief Architect
  AAM Co-Author, 35 years of major IT program implementation, GCPR Lead Architect
- Gen (ret) Tom Verbeck, former AF IT Director
- Kevin Carroll, Former PEO EIS, ICH Research Fellow
  Major IT System Acquisition, IT-AAC Vice Chair
- Skip Snow, Former Citigroup EVP of Architectures/SOA
  Major Systems Integration, SOA Governance, SOA Infrastructure
- Col (ret) Kirk Phillips, ICH Research Fellow and SOA Acquisition Expert
  Strategic Planning, DoD 5000, Kaiser Case Study

# VLHR Acquisition Recommendations

# Policy & Business drivers for OSD HA EHR Acquisition

## Policy Drivers:

1. DoD 5000.2 establishes ACT1/MAIS program responsibilities if any EHR elements exceeds $34M/year
2. Congress requires both DoD and VA to collaborate on an interoperable EHR, requiring DoD/VA architecture views be put in canonical form.
3. CCA requires OSD HA maximize the use of COTS solutions and requires Business Process Re-engineering and Portfolio Mgt. CCA calls out for 11 Compliance Sign offs by the CIO.
4. OSD HA must document and assess current IT portfolio to meet statutory requirements.
5. NTTAA, requires govt to leverage standards and leverage labs, universities, non-profits. Encouraged to commercialize govt innovations in processes and technology.
6. FAR OCI, contractor's who develop program architecture or engineering specs may not receive award for implementation (sub/prime).
7. E-Gov Act and OMB directives require agencies work together on common infrastructure and business apps.
8. Obama Memorandum to agencies to increase collaboration with non-profits, innovative companies, communities of practice

## Business Drivers:

A. Improve Ability to assess and hold suppliers accountable for delivery and interoperation of EHR system elements.

B. Establish CAE and CIO processes, roles and responsibilities in partnership with OSD NII, BTA and OSD ATL

C. OSD HA should coordinate with DoD/VA IPO to establish a Shared Acquisition and SOA Approach that enables standardized infrastructure services and interfaces

D. CAE needs to establish actionable acquisition Measures of Effectiveness (MOE), SOA performance metrics and SLAs.

E. Establish Oversight Mechanisms for continuous business view of emerging technology & standards that define "realm of the possible"

F. Adopt commercial SOA best practices and lessons learned (see SOA Best Practices Report)

G. Establish collaborative, inclusive & transparent Solution Architecture Working Groups

H. Clearinghouse reuse mechanisms for solution architectures that maximize COTS, Open Source and GOTS solutions that minimize custom development and reduce cycle times.

I. Evidenced based, fast pathed approach for quickly assessing fit, finish and interoperability of IT services

# Six CSFs for DoD/VA Process Transformation

*Weapons Systems Style Processes doesn't work for IT or SOA*

To establish an interoperable electronic healthcare record "*that spans full life of Service Members and Veterans"*, DoD/VA leadership must address six critical success factors;

1. Establish common requirements and capability development methods that remove ambiguity and over specification. Consider adoption of BTA Capability Assessment Method refinement.
2. Revamp current Architecture Governance and Solution Engineering processes that drive a technology neutral SOA paradigm in automating Business Process and Infrastructure Capabilities. This requires access to commercial expertise and best practices.
3. Adopt SOA enabled methods that drive Reusable & Standardized Solution Architectures, Performance Metrics and Assessment Results. Reuse can significantly reduce cost, risk and cycle times.
4. Adopt a standardized data interoperability framework the establishes a common vocabulary and standards of practice established within a true public/private partnership.
5. Leverage public/private partnership structure and Solution Architecture Working Group approach that will establish standards of practice for community adoption and criteria for assessing the business fit of COTS, GOTS and Open Source Solutions.
6. Establish collaborative mechanisms by which practitioners, non-traditional suppliers, innovators, standards bodies and communities of practice can participate.

Albert Einstein: *"Insanity is defined as continuing the same process over and over again and expecting different results…. You can't solve today's problems with the same kind of thinking that got you their in the first place."*

# *EHR/SOA Acquisition Study Results for OSD HA*

*ICHnet.org is poised to facilitate to mentor agency transformation efforts*

1. Focus on a major problem and let a SOA approach evolve from that problem.
2. Determine what is a good service and enforce it
3. Don’t start till your metadata is defined … you will never recover
4. Use strongly enforced data policy and active governance policy enforcement to create machine-machine mechanism for a real-time SOA needed in the Afloat program
5. Reuse as much as possible from legacy (do not start from scratch)
6. Determine how services are to built for the OSD HA, you cannot assume separate funding will achieve enterprise SOA service components and pay for themselves during the life-cycle
7. Create and fund service component owners who’s customers will be the function al application owners
8. Build service domain that cover large major functions and not an array of small service components (subroutine-like; remember FEDEX has only 12)
9. Learn how to accredit a reusable service component, possibly from enclave testing policy.

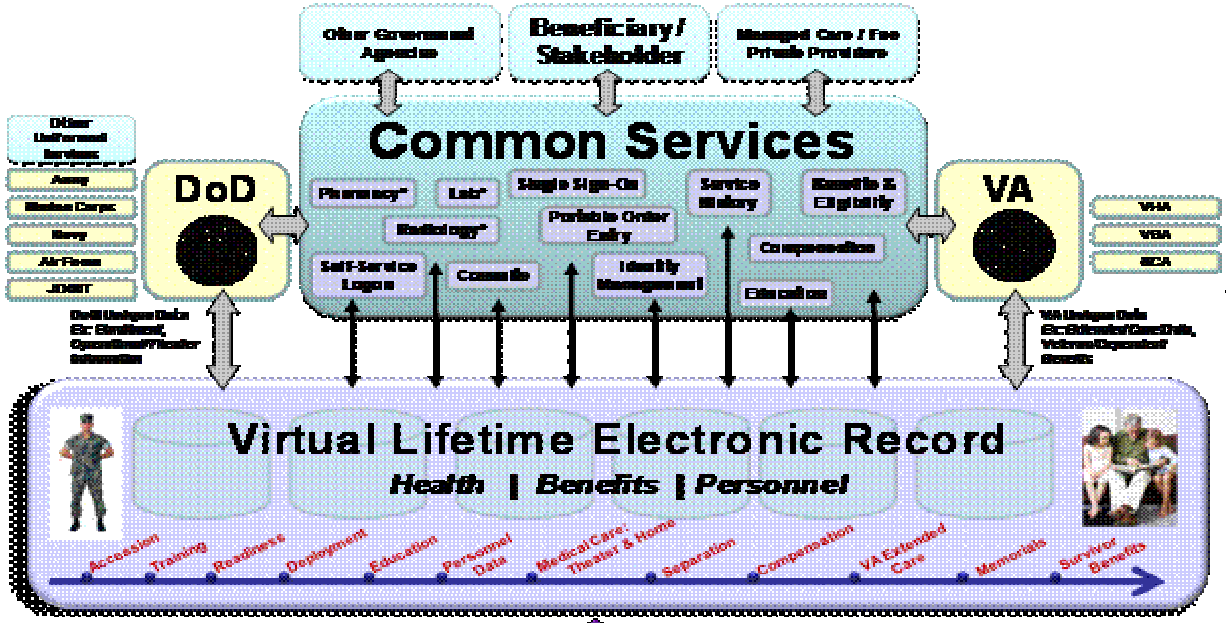
# AAM Informs and Assures "Common Services & EHR"

*Enabling Governance Model and Actionable Architecture*

- **Requirement Justification - Collaborative**
  - Jointly Define Other Common Services Needed
  - Define Common Services with Other Agencies
  - Determine Next Set of Common Services for Development

- **Solution Architecture Working-groups**
  - Governance Readiness Assessment
  - Prioritization Analysis
  - Requirements Agreement

- **Planning for IOC for Governance Implementation**




- **Statues and Reg's Compliance**

- **Industry Benchmarks**
  - Business Process Models
  - Evidence of working subsets
  - Requirements Validation

**SOA Implementation Approach defined with SLAs & KPP**

- **Standards**
  - Information Exchanges
  - Technologies
  - Cross-oganizational

# Recommended DoD/VA Health IT Acquisition Approach

Conforming to all required regs and laws while mitigating common risks and failure patterns.

# Required EHR Acquisition Gates

## *Applying the Acquisition Assurance Method (AAM)*

**AAM Analytics**

- ***Project Strategy (PS)***
- ***Capability Analysis (CA)***
- ***Capability Prioritization (CP)***
- ***Capability Determination (CD)***
- ***Feasibility Assessment (FA)***
- ***Economic Analysis (EA)***

***Project Strategy*** – The Project Strategy defines the Problem Statement. The problem statement sets the direction of the assessment so that the outcome answers the Problem Statement. This must be supported by an assessment of the current OSD HA Portfolio of systems/assets that supports the problem statement. Identify congressional mandates, outcome gaps, and outstanding mission objectives.

***Capability Analysis (CA)*** – the initial process of the *AMM* identifies the requirements in terms of capabilities (new/gaps) for the EHR program and further defines the problem statement and scope of the effort. Capabilities and Service Components (SOA) are defined with expected outcomes at the Program level as a basis of the business case. This analysis ensures that there is sufficient data to develop ERH Solution Architecture service levels needed to establish the Total high level cost of ownership (TCO) for the materiel solution. Here is where core SOA infrastructure services must be defined and separated from EHR Application components.

***Capability (Services) Prioritization (CP)*** – The CP process is used to assess the comparative value of the capabilities (measures of effectiveness or MOE) under review to the various activities/roles (use case) of the organization. This process of elimination of low priority and high risk requirements/service components increase the viability of a COTS solution, reduce time/cost of implementation and decrease the risk of failure. A common EHR comms and application infrastructure MUST have the highest priority for a successful SOA.

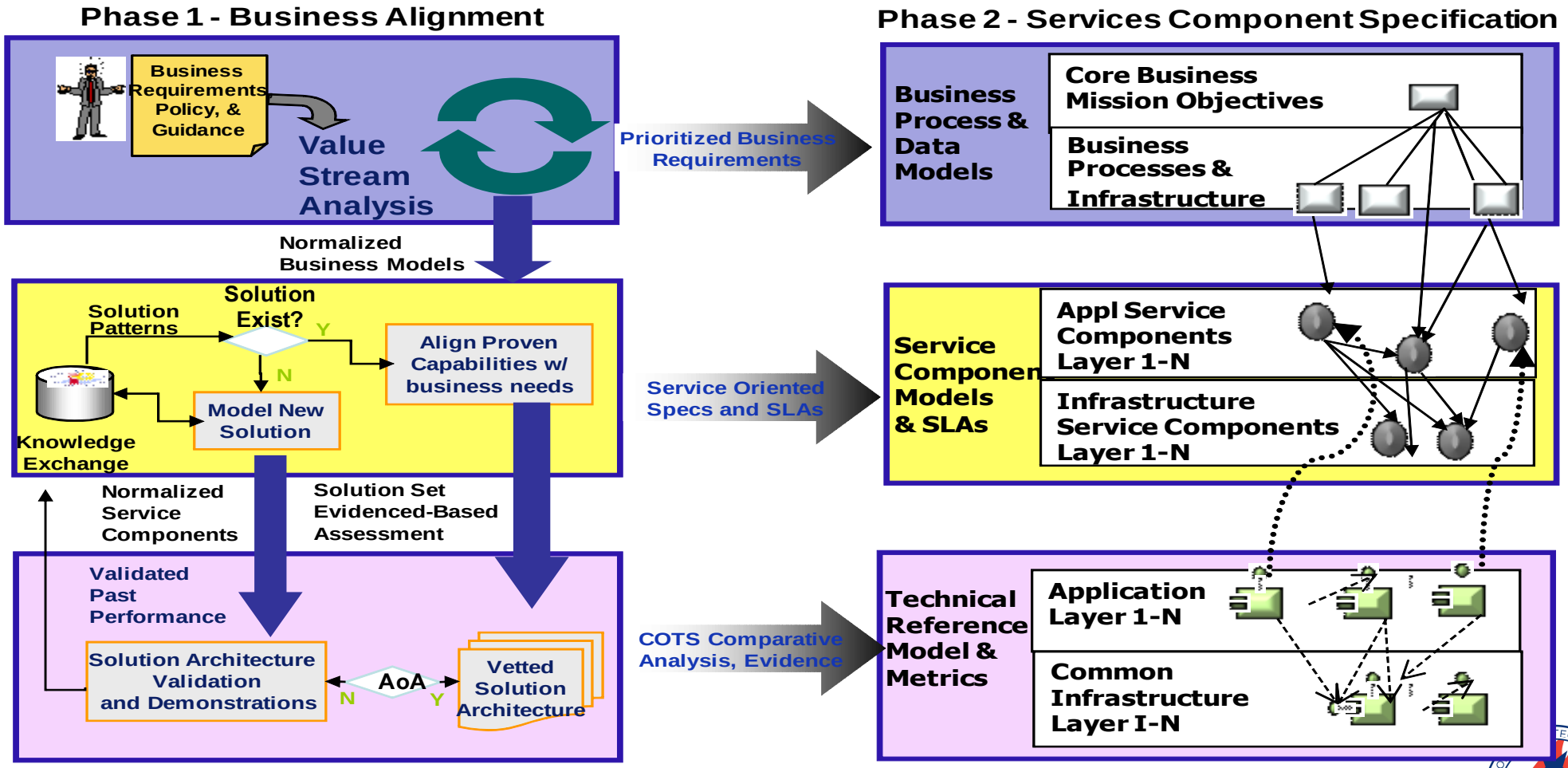
***Capability Determination (CD)*** – The Capability Determination process defines "what" SOA service components are to be implemented for IOC, and by "what" technologies. This is a process that creates groupings (tables) of service components that satisfy the capability gaps. This is an important step, which establishes the plan for how the assessment will be conducted. A key output of this analysis will produce Service Level Agreements.

***Feasibility Assessment (FA)*** – Feasibility Assessment is analyses market and technology maturity, (COTS, GOTS, Open Source) regarding the degree to which they will satisfy the capabilities or gaps identified. AAM brings into view the evidence supporting competing solution architectures derived from real world implementation successes. Kaiser, FedEx, and international EHR implementation results should be leveraged to enable objective decision making and risk mitigation.

***Economic Analysis (EA)*** – identifies solution alternatives and provides business and technical arguments for selection and implementation to achieve stated organizational objectives. The Economic Analysis is a simplified Business Case Analysis, providing a uniform, evidenced based foundation upon which sound decisions are made.

# AAM Process Models

***Validates and aligns business drivers with proven interoperable IT Services***



# AAM Analytics – Compliant with Reg's & Statutes

*A step by step approach for assuring SOA implementation success*

## AoA/Economic Analysis Plan

### Capability Alignment

**Perform Capability Analysis**
Step C1 – Build JOPsc Matric
Step C2 -- Functional Capability Matrix

**Perform Capability Determination**
Step C3 – Market Survey of Technology
Step C4 – Create Analysis Model(s)

**Perform Capability Prioritization**
Step C5 – Create Prioritization Criteria
Step C6 – Weight Capabilities by Importance

### Analysis of Alternatives

**Perform Fesability Assessment**
Step T1 – Create Scoring Criteria
Step T2 – Score Technologies by Evidence of achieving Capability

**Perform Architecture Assessment**
Step T1 – Create Scoring Criteria
Step T2 – Score Technologies by Evidence of achieving Capability

### Economic Analysis

**Determine the Model:**
Step E1 – Setting Up the Model

**Translating the Scope to the Financial Model:**
Step E2 – Determine the Quantities
Step E3 – Setting up the Sub-Models
Step E4- Developing the ROI Cost and Returns

**Determine the Alternatives**
Step E5 - Determining the Alternatives
Step E6 – Determining the Financial Indicators

**Collect Data & Benchmark Metrics**
Step E7 – Collect the Model's Data & Assumptions

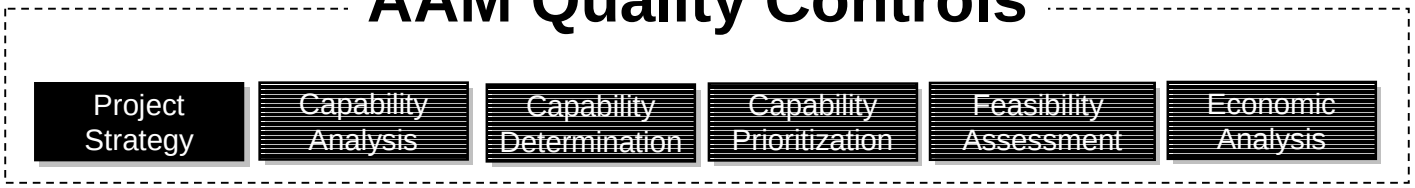
**Conduct the EA Analysis**
Step E8 - Conduct the EA Analysis

| DoD 5000 | Clinger Cohen Act Compliance |
|---|---|
| Milestone: A - FAA<br>Milestone: B – CDD | CCA Review Area 1: Acquisition supports core priority functions [Linked to DOTMLPF & JOPsC]<br>CCA Review Area 2: Performance measures linked to strategic goals |
| Milestone: B – AoA | CCA Review Area 4: No Private Sector or Government source can better support the function |
| Milestone: A – FAA<br>Milestone: B – CDD | CCA Review Area 1: Acquisition supports core priority functions |
| Milestone: A – FAA<br>Milestone: B – FSA, CDD, CPD, AoA, CONOPS | CCA Review Area 3: Redesign the processes that the system supports to reduce costs, improve effectiveness and maximize the use of COTS technology<br>CCA Review Area 5: An analysis of alternatives has been conducted |
| Milestone: B – Economic Analysis, LCCE | CCA Review Area 6: An economic Analysis has been conducted that includes a calculation of the return on investment or for non-MAIS programs a LCCE has been conducted |

# Acquisition Assurance Method
# EHR Decision Gates for
# DoD/VA Health IT Acquisition Lifecycle

Clarifying stake holder contributions and gate entry/exit criteria

# AAM Quality Controls




## CAE Activities

- Determine Sponsor and Stake Holder representatives
- Codify Business Problem statement
- Validate Project Scope, Timeline, Outcomes
- Collect and evaluate existing data from RFI responses and other sources
- Deliver Project POAM

## Artifacts/Deliverables

- POAM
- RFI Assessment
- RFI Results
- Other data as Price lists

## Critical Success Factors

### Entry Criteria

- ✓ Initial Data collection
- ✓ Initial identification of Capabilities
- ✓ Business Needs & Gaps

### Exit Criteria - Outcomes

- ✓ Approval of Project Plan
- ✓ Approval of Business Problem and Outcome
- ✓ Criteria: Adequacy of Capabilities or Plan for correction

# AAM Quality Controls

Project Strategy | Capability Analysis | Capability Determination | Capability Prioritization | Feasibility Assessment | Economic Analysis

## CAE Activities

- Capture Problem Statement w/Sponsor
- Establish Performance Measurements
- Document Agency Services Baseline
- Determine industry capabilities and metrics
- Capture Function Capabilities
- Determine level of granularity needed
- Hold Requirements WGs w/Sponsor's Key Stakeholders

## Artifacts/Deliverables

- Publish Capability Analysis Report (CAR) (Requirements and their Justification)
- Work papers on:
  - Justification of Requirements, & Capabilities
  - Problem Statement Validation

**Critical Success Factors**

## Entry Criteria

✓ Approved Project Plan and POAM

## Exit Criteria

✓ Approval of the CAR by the Functional Sponsor

Criteria: Adequacy of Capabilities or Plan for correction

# AAM Quality Controls

Project Strategy | Capability Analysis | **Capability Determination** | Capability Prioritization | Feasibility Assessment | Economic Analysis

## CAE Activities

- Refine Capabilities into Service Component solution models (per OMB FEA-PMO)
- Conduct Market Survey
- Establish Service Component & Groupings
- Review RFQ for adequacy of detail
- If RFI responses lack depth or breadth, ICH will conduct Industry Outreach and Benchmarking
- Construct Service Component Analysis Groups
- PMO review

## Artifacts/Deliverables

- Analysis Group; Service Components reference model mapping to capabilities/requirements
- Work papers on:
  - Results of the Market Survey
  - Standards of Practice
  - Industry Benchmarking Data
  - Standardized Vocabulary for describing service components and basis for establishing SLAs (not in scope)

**Critical Success Factors**

### Entry Criteria

✓ Approved CAR (Validated Capabilities)

### Exit Criteria

✓ Approval of Service Component by the PM

Criteria: Adequate industry metrics or plan for correction

# AAM Quality Controls


## CAE Activities

- Hold Functional WG w/Sponsor's Key Stakeholders
- Develop Prioritization Weighting Scale
- Team Normalized weighting of the Service Components
- Document each weights rationale

## Artifacts/Deliverables

- Capability Prioritization Matrix
- Work papers on:
  - Service Component Prioritization Scale
  - Rationale for each weight given (traceability)

**Critical Success Factors**

## Entry Criteria

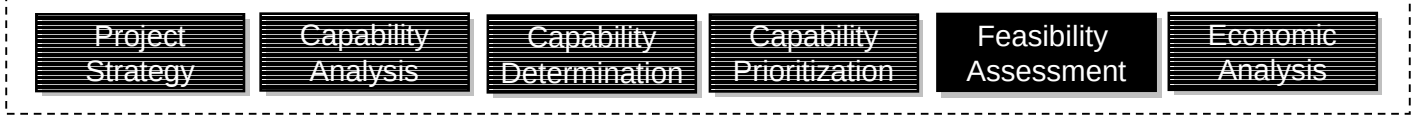
✓ Approved Analysis Groups, Service Components and Standards of Practice

## Exit Criteria

✓ Approved Capability Prioritization Matrix

Criteria: Functional Sponsor Approval

# AAM Quality Controls




## CAE Activities

- Evaluate RFI Responses
- Establish alternatives for the assessment
- Establish Scoring WG team
- Develop Scoring Plan
- Score Alternatives + +
- Perform Sensitivity Analysis on Scoring Results
- Analyze results
- Review AoA date points
- Present Results to Functional Sponsor - May included Functional WG team

## Artifacts/Deliverables

- Analysis of Alternative (Compare New/Existing Solutions against Prioritized Capability)
- Work papers on:
  - Scoring Plan
  - Scoring Rationale
  - Sensitivity analyses performed
  - Technology Maturity Assessment

**Critical Success Factors**

## Entry Criteria

✓ Approved Capability Prioritization Matrix

## Exit Criteria

✓ Approval of Feasibility Assessment Report by CAE/ PMO

Criteria: (1) Assessment Team agreement on the scores.
(2) Reference material justifying scores

# AAM Quality Controls


## CAE Activities

- Setup Main Cost Model
- Determine the quantities and time frame to be Evaluate
- "Setup Sub-Models for direct, indirect & migration cost + savings"
- Determine Model's elements related to ROI
- Determine the models for each alternative
- Collect Data industry data and assumptions
- Conduct TCO
- Review of Economic Analysis Results

Present Results to Functional Sponsor - May included Functional WG team

- Develop Economic Analysis Report

## Artifacts/Deliverables

- Economic Analysis Report
- Solution Architecture
- Documented CCA compliance
- Work papers on:
  - Model Documentation
  - Documentation of each Alternative
  - Documentation on costs developed for the Mode;
  - Documentation of Industry Metric determined

**Critical Success Factors**

## Entry Criteria

✓ Approved Feasibility Assessment, AoA

## Exit Criteria

✓ Approval of Economic Analysis Report by Functional Sponsor

Criteria: (1) Functional Sponsor Agreement

(2) Reference material justifying cost models

**0 months** | **1 month** | **2 months** | **3 months** | **4 months**

**CAE Assessment**

# SOA Industry Benchmarked Best Practices and Lessons Learned

OSD HA SOA Implementation Best Practices

# *Key Impact Areas of Enterprise SOA Adoption*

*Each must be re-oriented towards Services/Outcomes*

- Governance: Most Critical, Senior Mgt have Iron Fist on Common Data Model and Infrastructure services. Funding control is paramount.
- Enterprise Architecture (EA): DODAF lacks Business Outcomes, COTS/Open Source Assessments and Performance Metrics. EHR EA efforts must be complimented with Bottom up Solution Architecture Views and Service Level Agreement (SLA) linkages. Using OMB's FEA PMO would better enable VA architecture alignment
- Document and assess your current portfolio of IT Capabilities in a Services/Value Context. Leverage your current investments and licences.
- Shift Requirements focus to Capability & Service Component outcomes and measures.
- Evaluating IT (COTS) in a Services and Capability context: View IT for what business and infrastructure services are provided vs technology/standards focus.
- Assessments (TA, AoA, Market Research, JCIDS, DODAF): Must have a bottom/service view of COTS/Open Source that drives decisions
- Key SOA Standards (process and technology), BPM, BPEL, AAM, FEA PMO Reference Models.
- Key Technology and Approaches: Focus on Measures of Effectiveness (MOE) and SLAs
- Security and ID Mgt Decisions also must be addressed early on at each level of architecture decomposition.
- Certification and Accreditation (C&A) and Testing considerations must be incorporated into the Acquisition Lifecycle.

# *Six CSFs for OSD HA Process SOA Transformation*
## *that ICH can Assist you in achieving Success*

**To establish an SOA COE, OSD HA Leadership must address six critical success factors;**

1. Establish common requirements and capability development methods that remove ambiguity and over specification. Consider adoption of Capability Assessment Method refinement.
2. Revamp current Architecture Governance and Solution Engineering processes that drive a technology neutral SOA paradigm in automating Business Process and Infrastructure Capabilities. This requires access to commercial expertise and best practices.
3. Adopt SOA enabled methods that drive Reusable & Standardized Solution Architectures, Performance Metrics and Assessment Results. Reuse can significantly reduce cost, risk and cycle times.
4. Adopt a standardized data interoperability framework the establishes a common vocabulary and standards of practice established within a true public/private partnership.
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6. Establish collaborative mechanisms by which practitioners, non-traditional suppliers, innovators, standards bodies and communities of practice can participate.

# *What is SOA*

*A Fortune 100 User Perspective*

## SOA is about the Business

SOA is an ***architectures style*** and enterprise ***governance structure*** for communicating business needs and measurable service agreements associated with shared enterprise technology services.

## SOA is not about Technology

SOA concepts can be operationalized with almost any technology; Web Services, COBAL, ISB, JAVA, RDB, WSDL, UDDI, etc… But focusing on technology is an *anti-pattern*

# *A Distillation of Industry Best Practices*

- **Best Practice Number 1:** To succeed at SOA: align with your organization's leadership by building services that are tightly coupled with the organization's most important goals.
- **Best Practice Number 2**: Services must be easy to find and understand. Those who do use them must be rewarded.
- **Best Practice Number 3:** Ensure that services are well documented and widely publicized.
- **Best Practice Number 4:** The SOA must allow data to flow from one end of the enterprise to the other with its meaning intact and in a secure fashion.
- **Best Practice Number 5:** Don't build SOA. Solve a business problem …. Agility and cost saving will follow. This ancillary to Best Practice 1. Build from within.

# SOA Recommendations to the OSD HA

*ICH is organized to help implement these CSFs*

1. Focus on a major problem and let a SOA approach evolve from that problem.
2. Determine what is a good service and enforce it
3. Don't start till your metadata is defined … you will never recover
4. Use strongly enforced data policy and active governance policy enforcement to create machine-machine mechanism for a real-time SOA needed in the Afloat program
5. Reuse as much as possible from legacy (do not start from scratch)
6. Determine how services are to built for the OSD HA, you cannot assume separate funding will achieve enterprise SOA service components and pay for themselves during the life-cycle
7. Create and fund service component owners who's customers will be the function al application owners
8. Build service domain that cover large major functions and not an array of small service components (subroutine-like; remember FEDEX has only 12)
9. Learn how to accredit a reusable service component, possibly from enclave testing policy.

# ICH Value Proposition:

## Trusted advisory for IT Acquisition Assurance

**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"*

# *ICH Acquisition Assurance Method:*
## *Enabling a Services Oriented Enterprise (SOE)*

### Phase 1 – Map Requirements into Capabilities, Business Processes and Stake Holder Agreements

EXPECTED OUTCOME: Business Reference Model and Validated Problem Statements

This focuses on applying Michael Porters Value Stream Analysis to tease out critical business need, processes and performance measures. Maps directly into OMB FEA-PMO and DODAF Operational Views.

### Phase 2 – Align Business/Infrastructure Gaps/Needs with SOA SLAs & Outcomes

EXPECTED OUTCOME: Analysis of Alternatives, Service Component Reference Model and SLA

Define both application and infrastructure service components. The IOC assessment would answer the question: *Is there sufficient existing services in terms of Open Source, COTS/GOTS offerings to meet the core service capabilities DOD/VA desires in EHR?* ICH would use it Capability Prioritization Product to focus on achieving mission essentials and would appropriately update the Service Level Agreements.

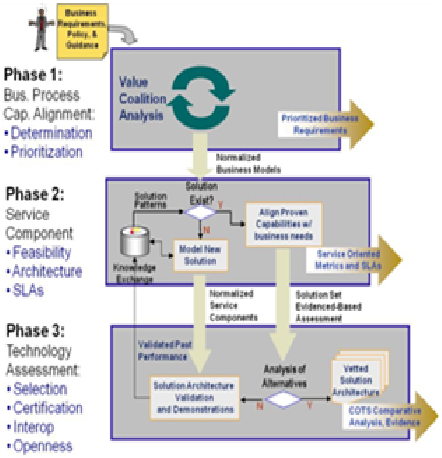
### Phase 3 – Streamline Market SOA Capability Assessment

EXPECTED OUTCOME: Evaluation of Alternatives, Business Case Analysis

A Source Selection Assessment. This assessment follows the business case analysis that applies value to the products as they've scored against one another using a weighted analysis methodology and how they measure up against risk. In the end the selection assessment, ensures the solution enables the most capabilities desired with the least risk. Key step for supporting acquisition of Software as a Service (SaaS)

# AAM: Enabling a Service Orientation of the IT Architecture & Acquisition Process

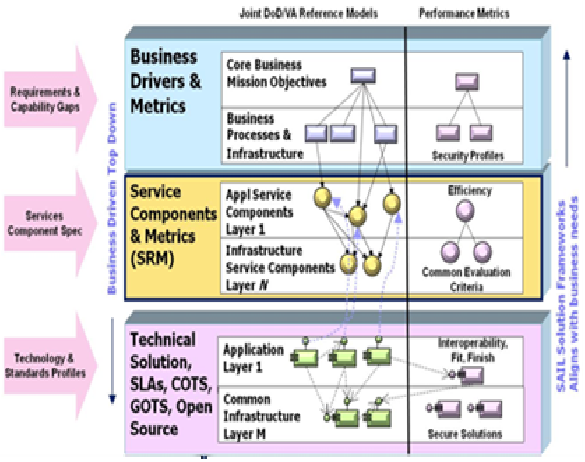
*Repeatable, Measurable, Mature*




**Business Processes**

**SRM**

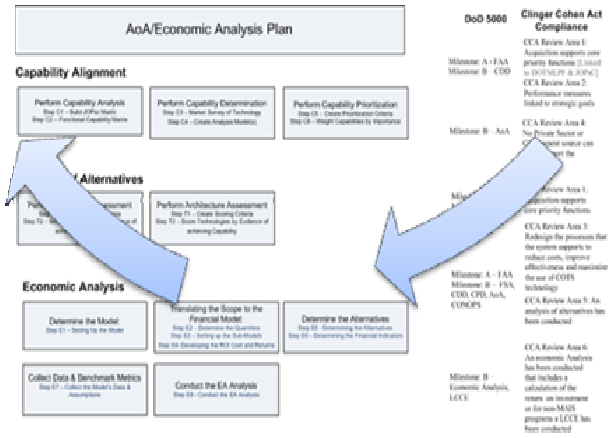
**SOA Sol'n**




## AAM Analytics Tool Kit:

- Decision Support How To Manuals
- Value Chain Alignment
- Reusable Solution Architectures
- Stake Holder Training
- Solution Architecture Working Groups
- Best Practices Mentoring and Outreach
- Solution Domain Expertise
- Consumer Reports

**Compliance**




**Compliance**

| Value Factors | 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 |
|---|---|---|---|---|---|---|---|---|---|---|
| | 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 |
| CCI/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 |

# Predictable Outcomes for SOA/AAM Adopters

*Conflict free Mechanisms for SOA Common Services & Solution Assessment*

- **A Standardized Architecture Method for:**
  - *Aligning DODAF and FEA-PMO structure*
  - *Capturing Business Process and Information Sharing*
  - *Driving SOA Enabled IT Acquisition Lifecycle*
  - *Assuring Services Integration and Contractor Mgt*
  - *Capability Prioritization w/ SLAs and metrics*
- **Assessment Framework for:**
  - *Vetted Business Processes and Requirements*
  - *Assessing Vendor Service Components (COTS, GOTS, Open Source)*
  - *Discerning Technology Feasibility/Risk Assessment. Verify market ability to perform*
  - *Service Level Agreements*
- **Access to Critical Expertise and Knowledge Sources:**
  - *Architecture and Acquisition Processes that work*
  - *Emerging technologies, innovations and open source markets*
  - *Industry best practices in IT Infrastructure and SOA*
  - *Stake Holder facilitation and outreach*

## Biz Value to OSD HA

*Mitigate deployment risk.*

AAM's structure provide decision quality data earlier

*Concentrates on Capabilities and their Importance to Mission*

*Formalizes the Prioritization Process*

*Innovative approach for assuring Interoperable Electronic Health Records*

# *Policy Guidance for engaging a 501C6*

*BizCase for establishing an Other Transaction Authority*

- OMB A119 directs agencies to fund, adopt and promote standards bodies and their outputs
- NTTAA directs agencies to license innovations of the market in terms of technologies and policies.
- FAR 6-302 supports other than full and open competition when acquires services from a non-profit research institute and/or leverage innovative methods/technologies.
- Clinger Cohen Act directs agencies to leverage industry best practices
- Obama Policy Memorandum promotes greater utilization of non-profits over commercial interests to avoid potential conflicts of interest.
- Reliance on Past Performance as an indicator of future success

# Critical Success Factors for Conflict Free Architectures

*A public/private partnership compliments vs. competes*

| Contractor Type<br><br>CSF | Public Private Partnership (ie. ICH) | Federal System Integrator | FFRDC | Academia |
|---|---|---|---|---|
| **Conflict Free, Open Architectures that expose innovations.** | ☑ ICH Does not buy, sell, develop or test any IT, while integrating many communities of practice. | ☒ reseller agreements & implementation interests cannot be firewalled. | ☑ Are not supposed to build solutions, but evidence suggests they compete with market | ☑ Do not delivery solutions but do develop pilots often. |
| **CCA; Access to commercial best practices, LL** | ☑ ICH brings forward 38 PPP and access to over 100K SMEs | ☒ focus on stock holder value and profit inhibits reuse of 3rd party success | ☒ Cannot formally partner with non-govt organizations. | ☒ Focus on research issues. Most work done by students. |
| **Ability to leverage a wide range of expertise & SMEs** | ☑ Virtual corporation model leverages widest range of expertise. | ☑ SI focus is butts in seats, limiting ability to bring in real experts | ☑ Has many very smart academic experts. | ☑ Has many very smart academic experts. |
| **NDAA Sec 803; Formal mechanisms for COTS & reuse** | ☑ Organically structured for reuse. | ☒ Evidences suggests little incentive to use COTS, prefer costly build to spec model. | ☑ Often support .orgs and stdrs bodies who enable this function. | ☑ Often support .orgs and stdrs bodies who enable this function. |
| **OMB A119; OA consensus based standards** | ☑ AAM is a govt proven standard broadly applied. | ☒ Commercial entity cannot set standards. Offer proprietary only. | ☒ Not allowed by law to set standards or compete with stnds bodies. | ☒ Not allowed by law to set stnds or compete with stnds bodies. |