Implementing the DoD/VA Virtual Lifetime Electronic Record

SOA IN HEALTHCARE CONFERENCE

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DoD/VA Interagency Program Office (IPO)

Agenda

- What is the IPO?

- Current State of DOD/VA Interagency Health Data Exchange

- Background: Virtual Lifetime Electronic Record (VLER)

- Implementing VLER

  - NHIN Framework

  - VLER Pilots

  - Successes and Challenges

- Summary

DoD/VA Interagency Program Office (IPO)

Mission

- Established in April 2008, as a result of NDAA FY 2008 Section 1635, to oversee completion of full interoperability of electronic health records (EHR) or capabilities

- Re-chartered in September 2009 to serve as the single point of accountability for the coordination and oversight of JEC-approved IT projects, data, and information sharing activities, including the Virtual Lifetime Electronic Record (VLER)

Role

- Actively participate with the DoD, VA, and HHS to develop, adopt, and implement National Standards for health and benefits sharing

- Actively interact with DoD, VA, and HHS to further the Nationwide Health Information Network (NHIN)

IPO Scope of Responsibilities

- The IPO ensures "harmonization between the Departments' plans and the result will serve as the baseline agreement between the Departments and as the roadmap required to achieve successful implementations"

- The Departments retain responsibility for:
  - Mission requirements development
  - Lifecycle program management activities, such as planning for:
    - Financial management (costs)
    - IT systems development (task activities, deliverables, schedules)
    - Implementation

A Quick Historical Recap/Stage-Setter… on the DoD/VA EHRs

- VHA and the Department of Defense Military Health Services (DoD/MHS) have been working EHR Information Technology (IT) issues TOGETHER for decades

- VA/VHA currently uses Veterans Health Information Systems and Technology Architecture (VistA)/Computerized Patient Record System (CPRS). DoD/MHS uses AHLTA/Composite Health Care System (CHCS)

- Both Departments have come to rely on their own EHR systems and utilize them everyday. Each also have various elements of their systems in some areas of the Nation, working together

- This "working-together" effort has resulted in products such as the Bidirectional Health Information Exchange (BHIE) and the Clinical and Health Data Repositories (CHDR). This has also resulted in systems and capabilities that allow for full interoperability for healthcare delivery between the two Departments
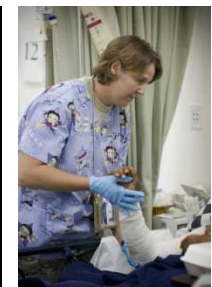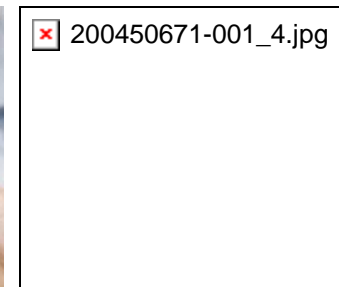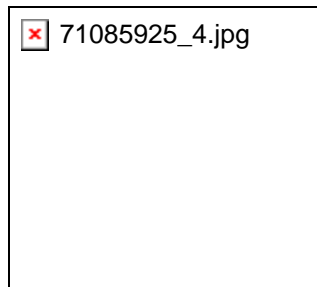
Shared Patients

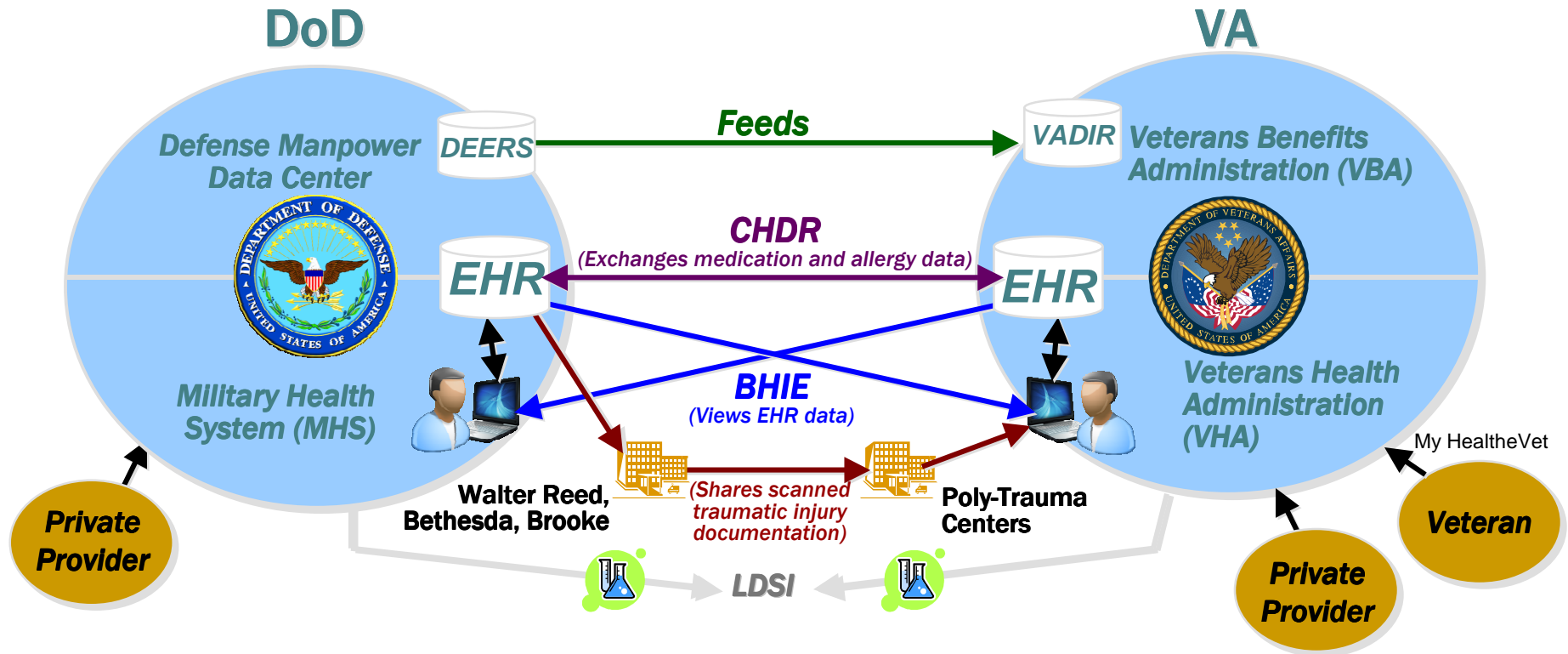| Supports care for more than 3.5 million patients to date	DoD providers access VA data through AHLTA	VA providers access DoD data through VistA or VistA Web	Specialists in VBA access DoD data through CAPRI

- Allergies
- Outpatient pharmacy
- Demographics
- Inpatient and outpatient lab results
- Radiology reports
- Ambulatory encounter notes
- Procedures
- Problem lists

- Inpatient notes (from DoD Essentris sites)
- Theater clinical data
- Vital signs
- Family history, social history, other history
- Questionnaires

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Current DoD/VA Information Sharing

DoD

VA

DEERS → **Feeds** → VADIR

Defense Manpower Data Center

Veterans Benefits Administration (VBA)

CHDR
(Exchanges medication and allergy data)

EHR ↔ EHR

Military Health System (MHS)

Veterans Health Administration (VHA)

BHIE
(Views EHR data)

Walter Reed, Bethesda, Brooke

(Shares scanned traumatic injury documentation)

Poly-Trauma Centers

My HealtheVet

Private Provider

Veteran

Private Provider

LDSI

Acronyms
BHIE = Bidirectional Health Information Exchange
CHDR = Clinical Data Repository/Health Data Repository

EHR = Electronic Health Record
VADIR = VA Defense Information Repository
DEERS – Defense Enrollment Eligibility Reporting System

Joint Vision for VLER

- On April 9, 2009, President Obama directed DoD and VA to create a Virtual Lifetime Electronic Record (VLER) that:

"will ultimately contain administrative and medical information from the day an individual enters military service throughout their military career and after they leave the military."

-President Barack Obama
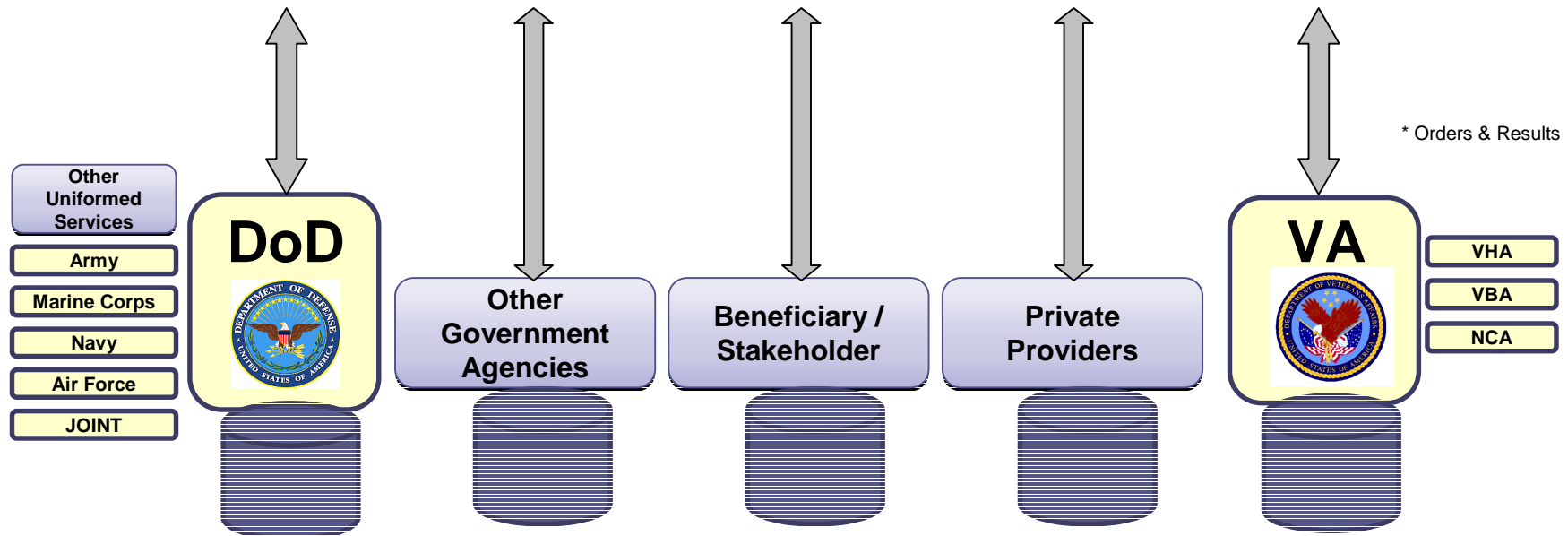

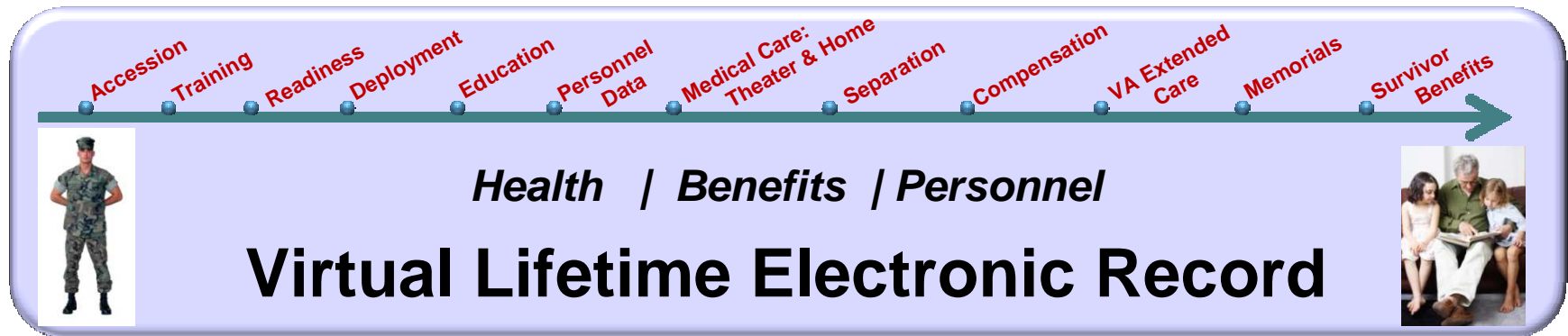*Source: Washington Post, April 9, 2009*

What the VLER Will Mean For…

…Service and Benefits Providers…	…Service Members, Veterans, Dependants…	…Departments…
•Immediate access to all information needed to effectively and efficiently perform duties, regardless of specialty or administration •Longitudinal data commencing at the point of accession, but potentially inclusive of information from birth •Access to electronic medical records containing health information collected in the DoD MTFs, VAMCs, and from third-party private sector providers	•Consistent and coherent view of personal data •Information portability and accessibility spanning the life-cycle of military affiliation •On demand, real-time access to information •Confidence in the authenticity and security of personal data	•Veteran or Service Member, and family member if eligible, is known throughout the Department by a single identifier with multiple distinguishing traits •Common interoperability standards developed through a collaborative approach •Health information exchange standards based on Health & Human Services (HHS) codified criteria •Role-based, secure information access •Secure exchange with authorized private partners •More data available to trend and analyze population health and benefits data in support of decision making

….The Nation

- Expansion of the NHIN as the predominant means for health information exchange nationwide
- Adoption of health IT by the private provider community as VLER pilots continue to leverage the NHIN and other national standards
- Contribution to patient-focused healthcare initiatives through the focus on PHRs
- Integration of privacy and security measures for broad health information exchange

- Promulgation of national health IT priorities
- Development of health and benefits information exchange best practices
- Contribution to health IT standards development organizations (SDOs)
- Support of population health goals through broad adoption of health IT

Joint Vision

Accession · Training · Readiness · Deployment · Education · Personnel Data · Medical Care: Theater & Home · Separation · Compensation · VA Extended Care · Memorials · Survivor Benefits

Health | Benefits | Personnel

Virtual Lifetime Electronic Record

* Orders & Results

| Other Uniformed Services |
| Army |
| Marine Corps |
| Navy |
| Air Force |
| JOINT |

DoD

Other Government Agencies

Beneficiary / Stakeholder

Private Providers
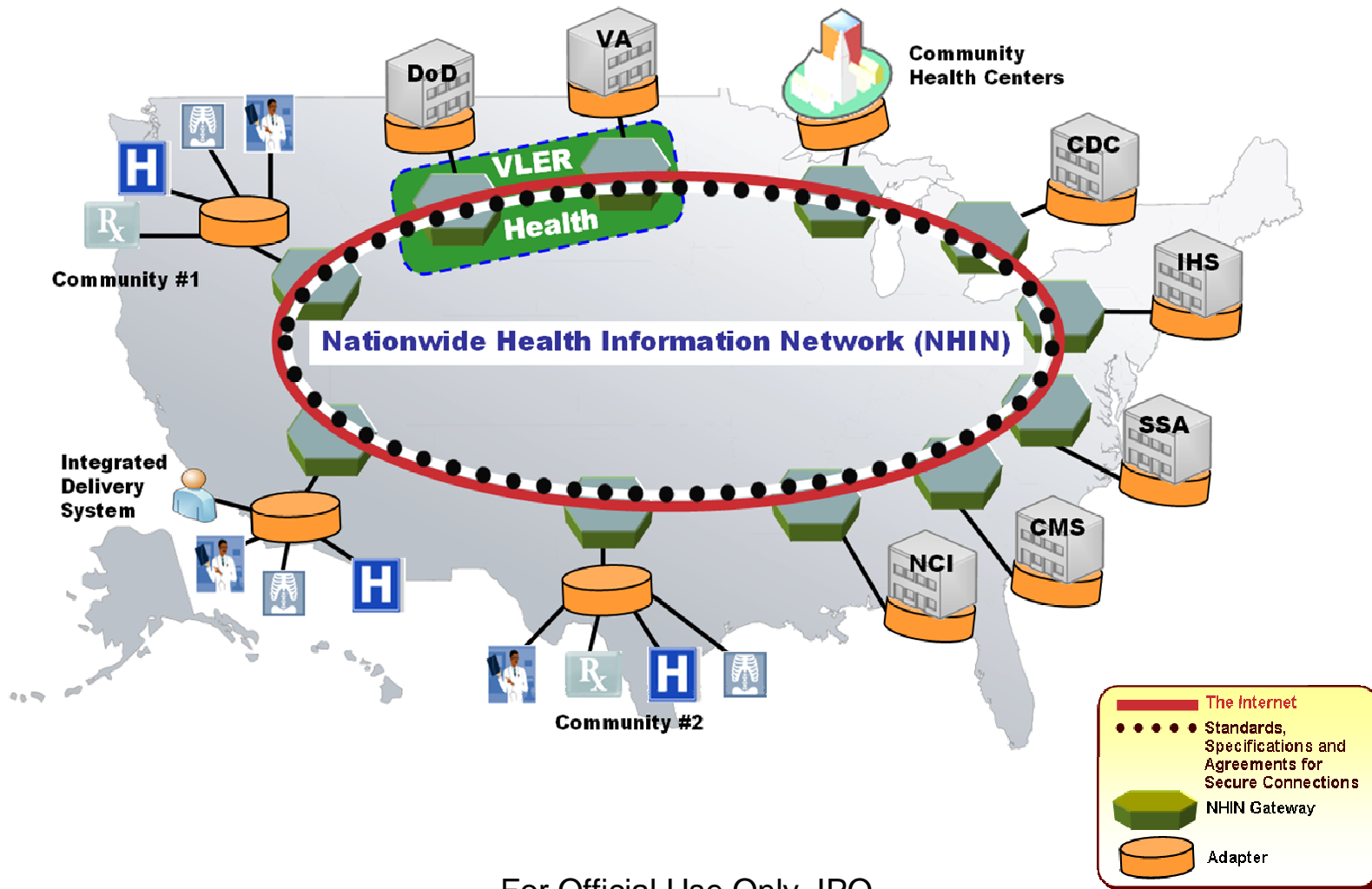
VA

| VHA |
| VBA |
| NCA |

VLER Initiative

- Will support both health and benefits business lines

- A strategy of standards based Health Information Exchanges (HIEs)

  - Use Nationwide Health Information Network (NHIN) as a shared framework

  - Avoids obsolescence as EHR systems modernize

  - Is NOT a large health IT system acquisition

- Allows health care providers access to data from DOD and VA beneficiaries' health records, in a secure and authorized way, regardless of whether care is delivered in the private sector, DoD or VA

  - **over 50% Health Care Provided by Private Sector**

Implementing VLER using NHIN

Nationwide Health Information Network (NHIN)

Legend:
- The Internet
- Standards, Specifications and Agreements for Secure Connections
- NHIN Gateway
- Adapter

Nationwide Health Information Network (NHIN)

- A collection of standards, protocols, legal agreements, specifications and services that enable the secure exchange of health information electronically
  - Uses standards compliant Gateways and Adapters to access data in existing electronic systems while maintaining architectural integrity of those systems
  - Requires validation of Gateways and Adapters through testing for conformance and interoperability
- Implemented through the HHS/ONC Federal Health Architecture
  - Open source SOA implementation of standards through FHA CONNECT
  - DoD and VA use of the NHIN will help drive the standards for health information exchange (HIE) nationally
- More information at: http://healthit.hhs.gov/portal/server.pt under "ONC Initiatives"

CONNECT Services Architecture

NHIN Profiles

Consumer Preferences Profile
Store and exchange consumer preferences
for sharing of personal health information

Other Profiles in Development
GIPSE (Biosurveillance)

Profiles describe how to implement services for a specific domain like consumer preferences for information sharing or biosurveillance

NHIN Services

Discovery Services
•Subject Discovery
•Authorized Case Follow-up
•Query for Documents
•NHIE Service Registry

Information Exchange Services
•Retrieve Documents
•Query Audit Log
•Health Information Event Messaging

Services describe specific interfaces (web services) used between HIEs to discover and exchange health-related information

Messaging, Security and Privacy Foundation

Messaging
•Message Transport
•Services Definition

Security
•Public Key Infrastructure
•Encryption
•Digital Signature

Authorization Framework
•   Requestor Authentication
•   Requestor Authorization

Messaging, Security and Privacy Foundation describes the underlying protocols and capabilities necessary to send and secure messages between NHIEs
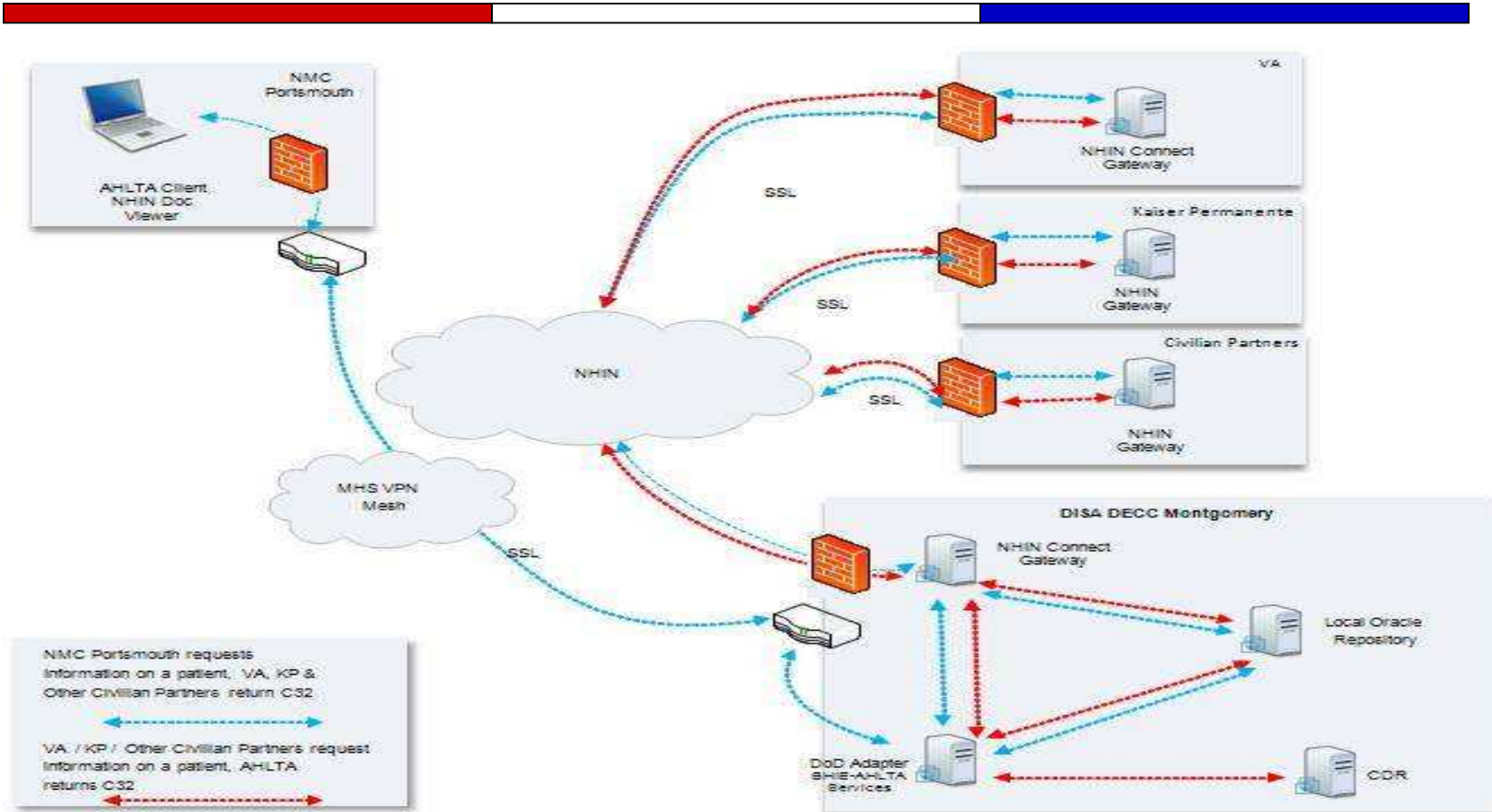
VLER - Pilots

- VLER initiative implementation will occur through a series of pilots
  - Will build sequential capabilities that allow scalable and extensible engagements with the private sector
  - Will help 'shake-out' successes and challenges before national deployment

- Each pilot will have built upon the goals and measures of previous pilots to define its successful achievement
  - Data Sets exchanged
  - Location expansion
  - Patient engagement volumes

VLER Pilot Conceptual Architecture

Pilot Successes and Challenges

- **Successes**
  - Inter-organizational Governance Structure established
  - Joint Program Management processes adopted
  - First VLER pilot implemented successfully
    - NHIN Standards proved viable
    - CONNECT software proved successful
    - Successful exchange with private partner
  - Standards validation processes established for conformance and interoperability

- **Challenges**
  - 6 month pilot roll-out schedules
  - Cross organizational synchronization (IM/IT, Priorities, Schedules, Funding)

SOA is not just about Technology

- Per "The Practical Guide for SOA in Health Care"

"Governance is an absolutely critical dimension to SOA implementations, as it becomes the guidance, the oversight, the enforcement, and ultimately the compliance mechanism needed for a service-oriented architecture to be successful. Governance should be considered and planned for throughout the life cycle evolution of your SOA effort. In other words, it cannot be done as an afterthought after your architecture is built and is deployed."

VLER Governance
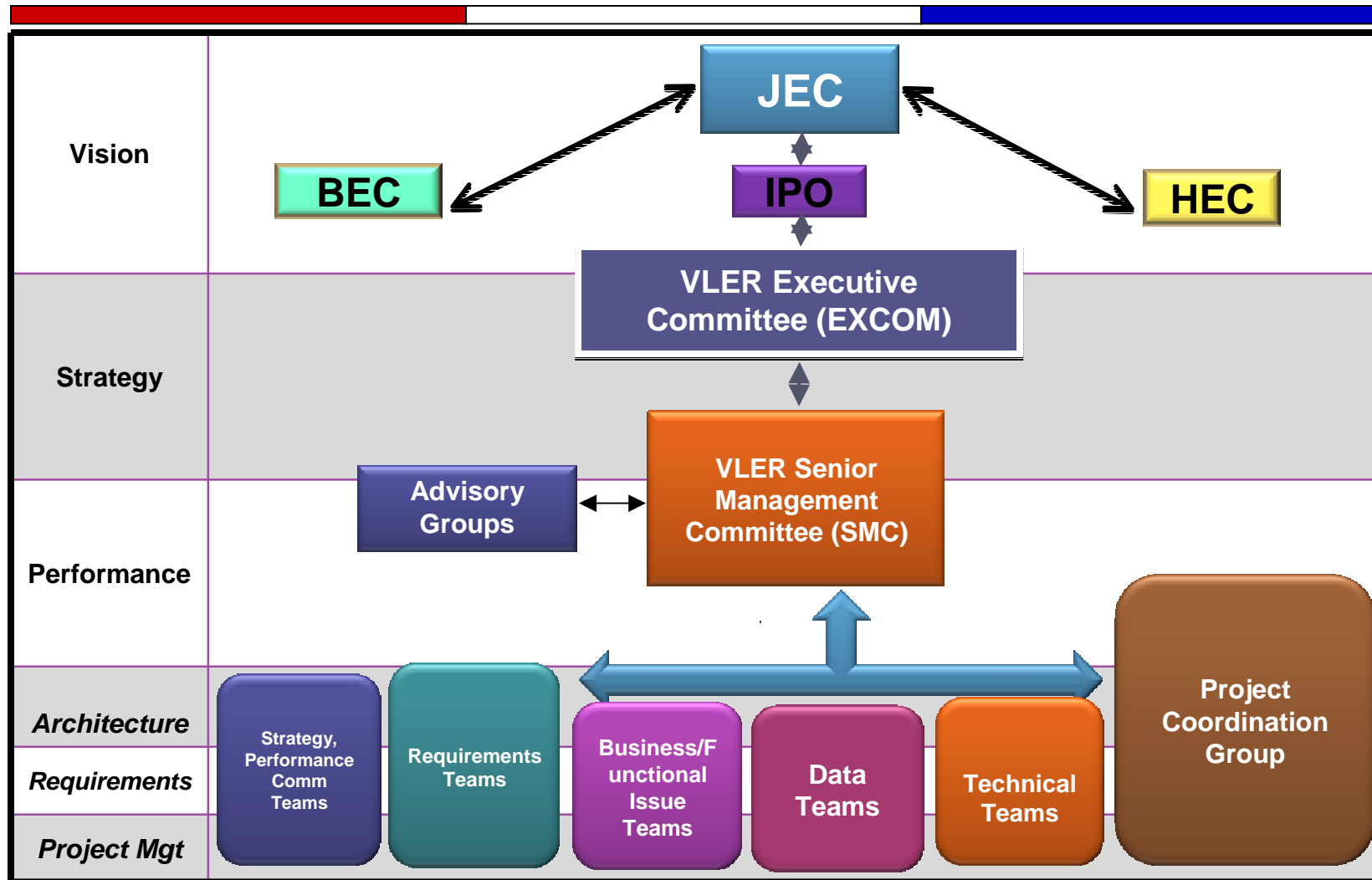
Committee Structure

VLER Senior Executive Committee (EXCOM)	VLER Senior Management Committee (SMC)
• Senior Executive Decision-Making, Arbitration, Guidance • Approves VLER Strategy • Releases VLER Strategic Communications • Directs VLER Senior Mgt Committee • Interfaces with the JEC	• Management and Execution –level Decision-Making, Negotiation, Guidance • Reports to VLER Executive Committee (EXCOM) • Identify Issues for EXCOM • Recommends VLER Strategy • Recommends VLER Strategic Communications • Provides Direction to VLER Workgroups

VLER Vision Will be Achieved When…

- Foundational elements of a Virtual Lifetime Electronic Record are established for both health and benefits

- VLER is deployed on a national scale within both DoD and VA

- VLER transitions into the refinement and modernization of capabilities as part of the ongoing business processes of the Departments.

Summary/Conclusion

- Data exchange capabilities are rapidly expanding between VA and DoD

- Computable data will be increasingly available to support activities like order checks (Remote Data Interoperability) and decision support

- Standards/Standardization and improved user interfaces are needed to optimize systems

Whatever the technology, it is all about the patient!