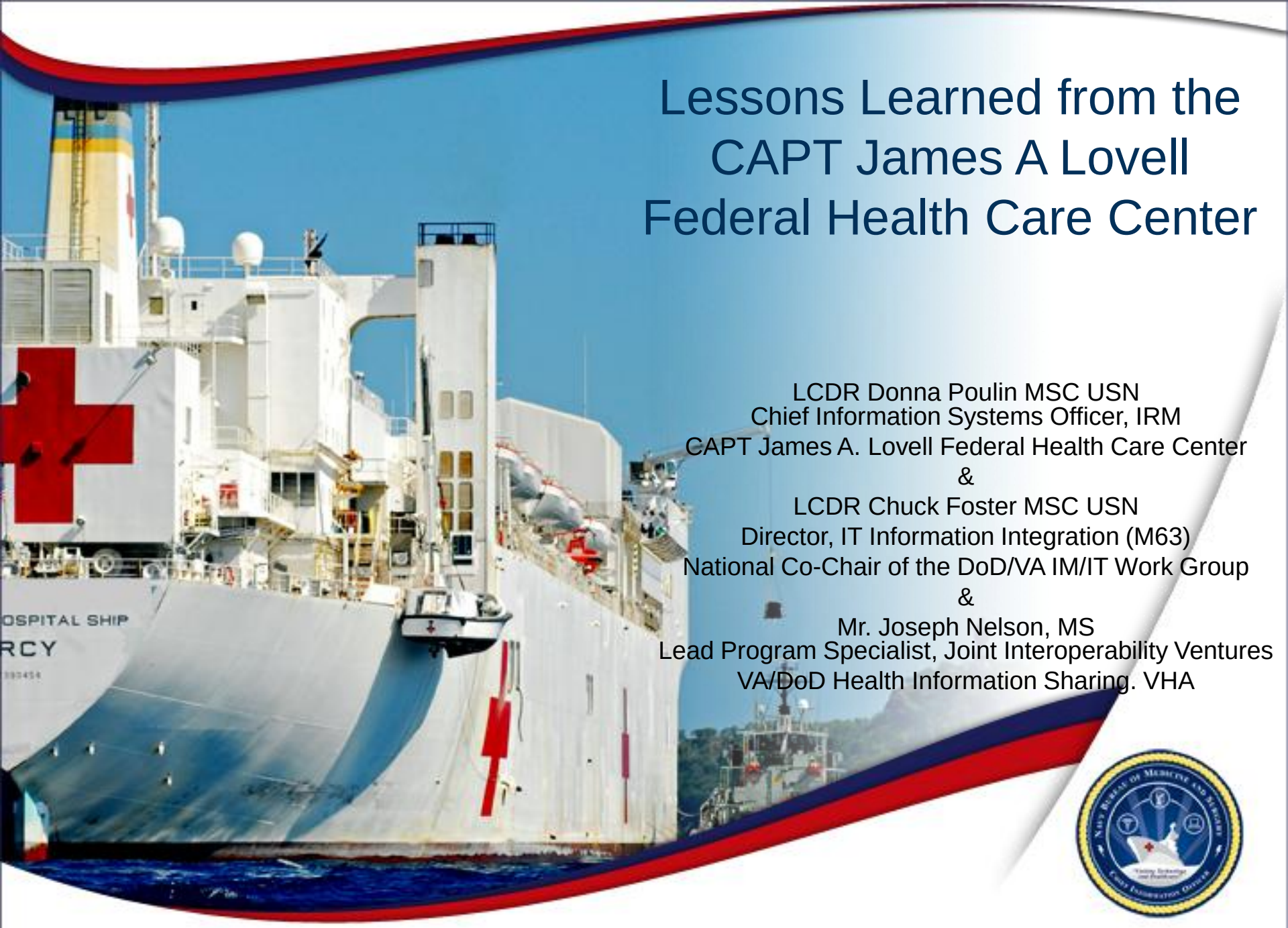


Lessons Learned from the CAPT James A Lovell Federal Health Care Center

LCDR Donna Poulin MSC USN
Chief Information Systems Officer, IRM
CAPT James A. Lovell Federal Health Care Center
&
LCDR Chuck Foster MSC USN
Director, IT Information Integration (M63)
National Co-Chair of the DoD/VA IM/IT Work Group
&
Mr. Joseph Nelson, MS
Lead Program Specialist, Joint Interoperability Ventures
VA/DoD Health Information Sharing. VHA

Learning Objectives

- The participants will have an understanding of the changes in the delivery of health care in the new formation of federated health care centers, to include the administrative, organizational and human resources issues.
- The participants will have an understanding of the challenges in supporting the emerging operational capabilities of a joint business.

Agenda

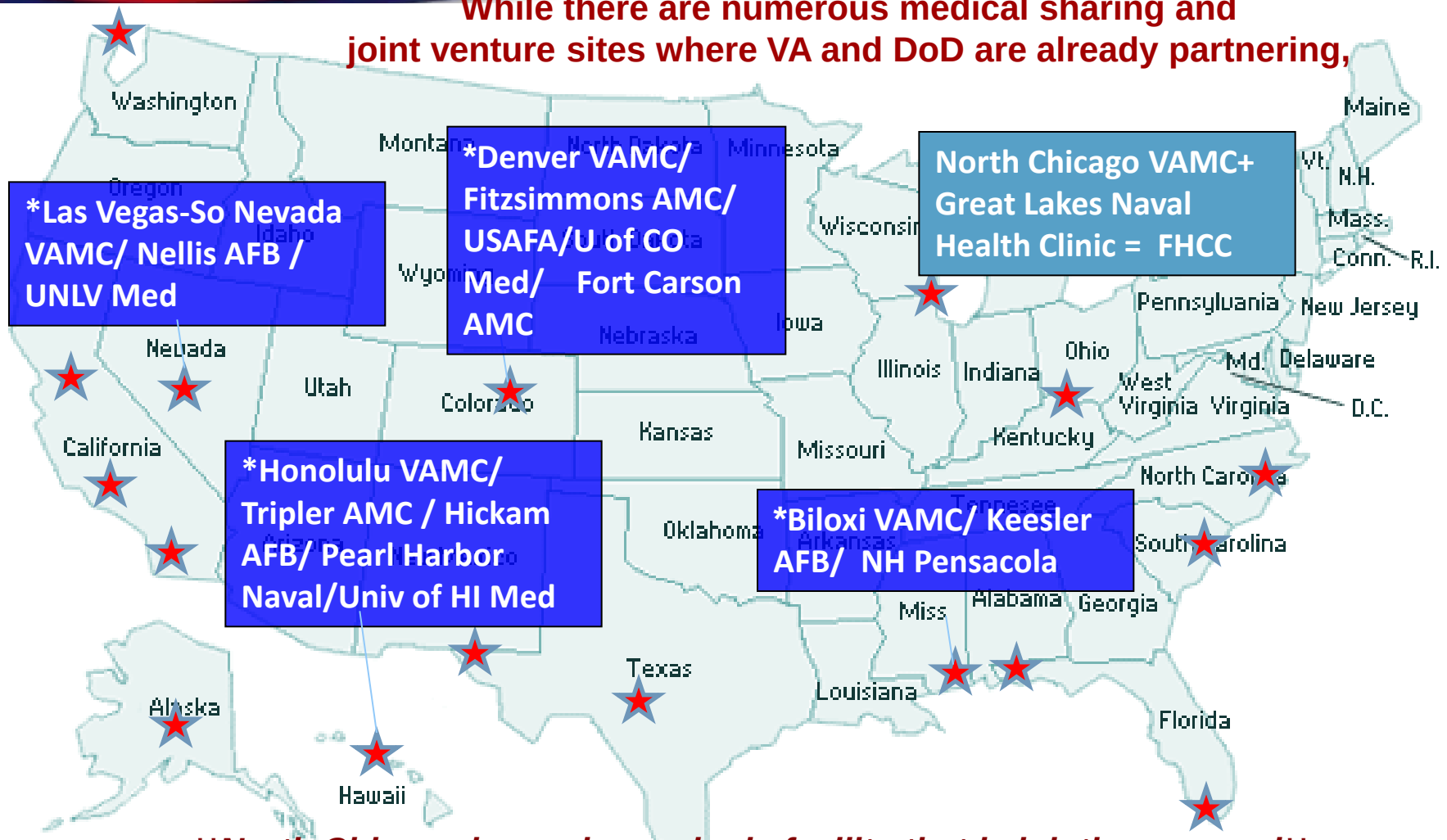
- Background
- Administration / Organization
- IM Perspective
- Capabilities
- Architecture/Infrastructure

Why JALFHCC?

- Simultaneous, non-duplicative provisioning of accessible, high quality healthcare for recruit, active duty, dependent, retiree, and Veteran populations
- Establish a premier model for joint partnerships
  - Major initiative for both Departments
  - Integrated systems
  - Single governance
- Applicability for future projects
  - Lessons learned applicable to future joint endeavors
  - Model for advancing other interoperability and integration initiatives

Why JALFHCC? (cont'd)

While there are numerous medical sharing and joint venture sites where VA and DoD are already partnering,



North Chicago is a unique, single facility that is jointly managed*

Administration

- Overall Management of the Facility
  - Executive Agreement (Signed 23 Apr 2010)
  - FHCC Organizational Chart
  - Local Stakeholders Advisory Council
  - External Agency Oversight

- Challenges
  - Single Authority for all IM/IT projects
    - Multiple different chains DoD/VA
    - Multiple different IM/IT Managers
    - Multiple different IAM/ISO Managers

Command Suite

DIRECTOR

VA SES

Direct Reporting Requirements

- Compliance Officer
- Emergency Manager
-Equal Opportunity Officer
- Patient Safety
-- Research Compliance Officer
-- Safety Manager

Reports directly to the Director on emergent issues outlined in position description.

Special Military Assistants

-Command master Chief

-CMEO

-Navy Legal Office (UCMJ)

-Navy Chaplain

- Reports directly to the Navy 06 on all matters pertaining to uniform personnel.

DEPUTY DIRECTOR

Navy 06

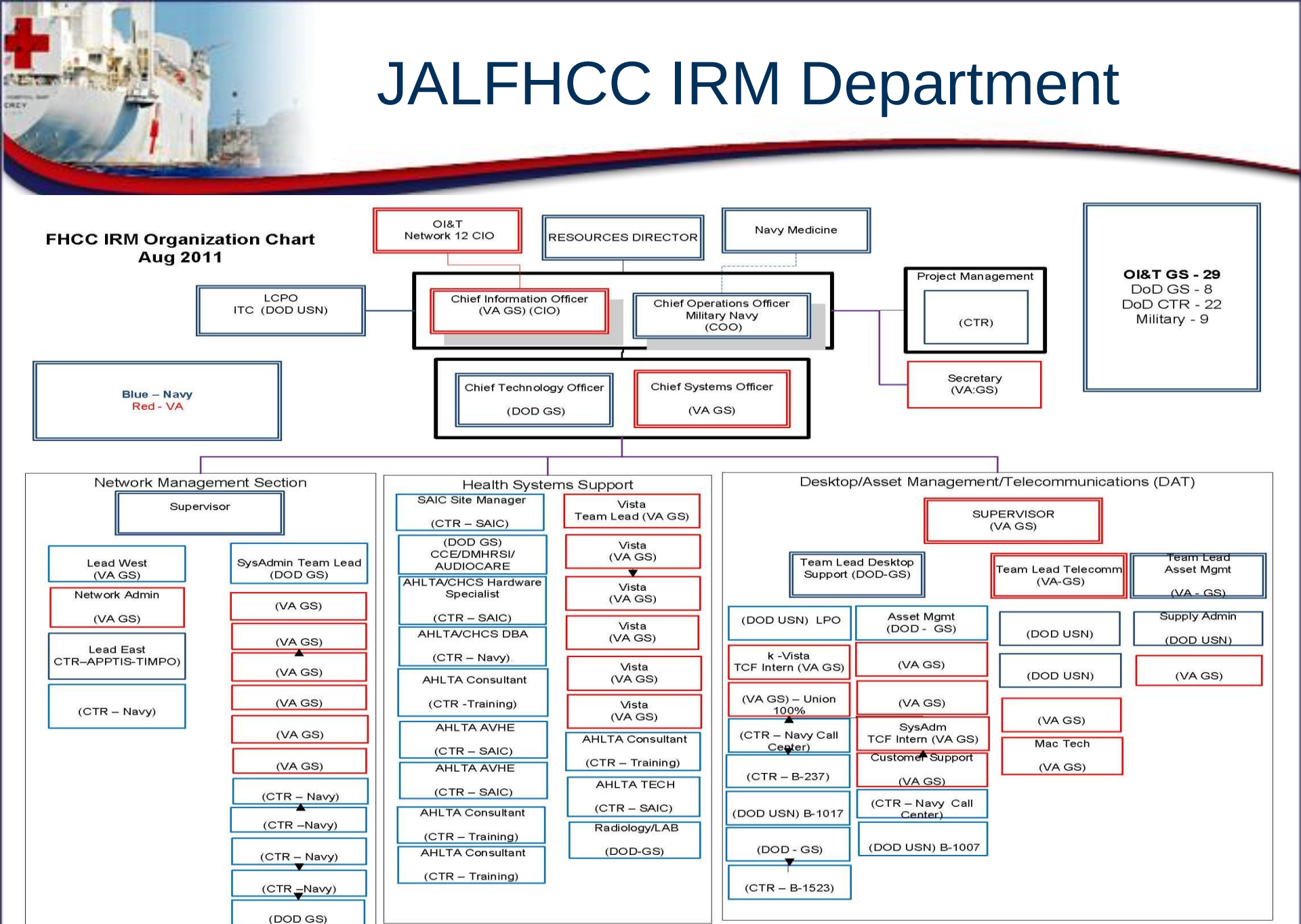
OFFICE OF PERFORMANCE IMPROVEMENT

LEGEND

Red: VA

Blue: NAVY

JALFHCC IRM Department



Lessons Learned IM Perspective

- Functional
  - Gaps in policy to support joint business
  - FHCC business model vs. iEHR

- IT is often seen as the problem solver where business process should be the driver of the technical solution.

Clinical System Capabilities

- Initially implementing six high-level baseline capabilities
  1. Joint Patient Registration
  2. Clinical Single Sign-On (SSO) with Patient Context Management
  3. Orders Portability (Radiology)
  4. Orders Portability (Laboratory)
  5. Orders Portability (Pharmacy)
  6. Orders Portability (Consults/Referrals)
- iEHR Presentation Layer Pilot
- Architecture Assumptions

Joint Patient Registration

- Single Patient Registration (Known as Joint Registration)
  - Registers and updates a patient with single user interface
  - Registers, verifies eligibility, and updates a patient through in native DoD and VA systems
  - Common service, built once, used on both DoD and VA systems
- Capabilities delivered on December 2010
- Sample of Identity Management Challenges
  - Continuous mitigation of software glitches as identified
  - Batch registration of Navy Recruits
  - Correlation between DEERS and MPI

Orders Portability

- OP Laboratory & Radiology:
  - July 2011 OP Radiology was implemented
  - Tiger Teams meeting with SMEs for Laboratory gaps
  - Uses Enterprise Service Bus (ESB) as communication backbone for transport and routing of messages
- Lessons Learned: Multi-points of failure
  - File and table for location files
  - Staff obtaining and maintaining access in both DoD and VA clinical applications (user management)
  - Patients not correlated in VistA and CHCS – Registration dependency
  - Exception Error Handling Management to include filters, clear messages for resolution, and reports

Orders Portability (cont'd)

- Pharmacy
  - will be part of the iEHR solution vice Orders Portability expect a 2013 deployment
- Consults/Referrals
  - Conversation ongoing due to iEHR scope vs. local requirements

Clinical Single Sign-On (SSO) with Patient Context Management

- Basic function:
  - User logs in once and has access to DoD and VA clinical systems
  - Select the patient once and active clinical applications display patient's data with assurance that this is the correct patient across all clinical applications.
- Currently FHCC is supporting two different SSO/CM COTS solutions - Sentillion and CareFX
  - CareFX utilizes Citrix environment to present applications
  - Sentillion utilizes a hybrid of VA applications installed on local desktop and MHS applications presented through CitrixJoint
  - DoD/VA decision reached for CareFX as the joint enterprise Single Sign On with Context Management for iEHR.

iEHR Presentation Layer

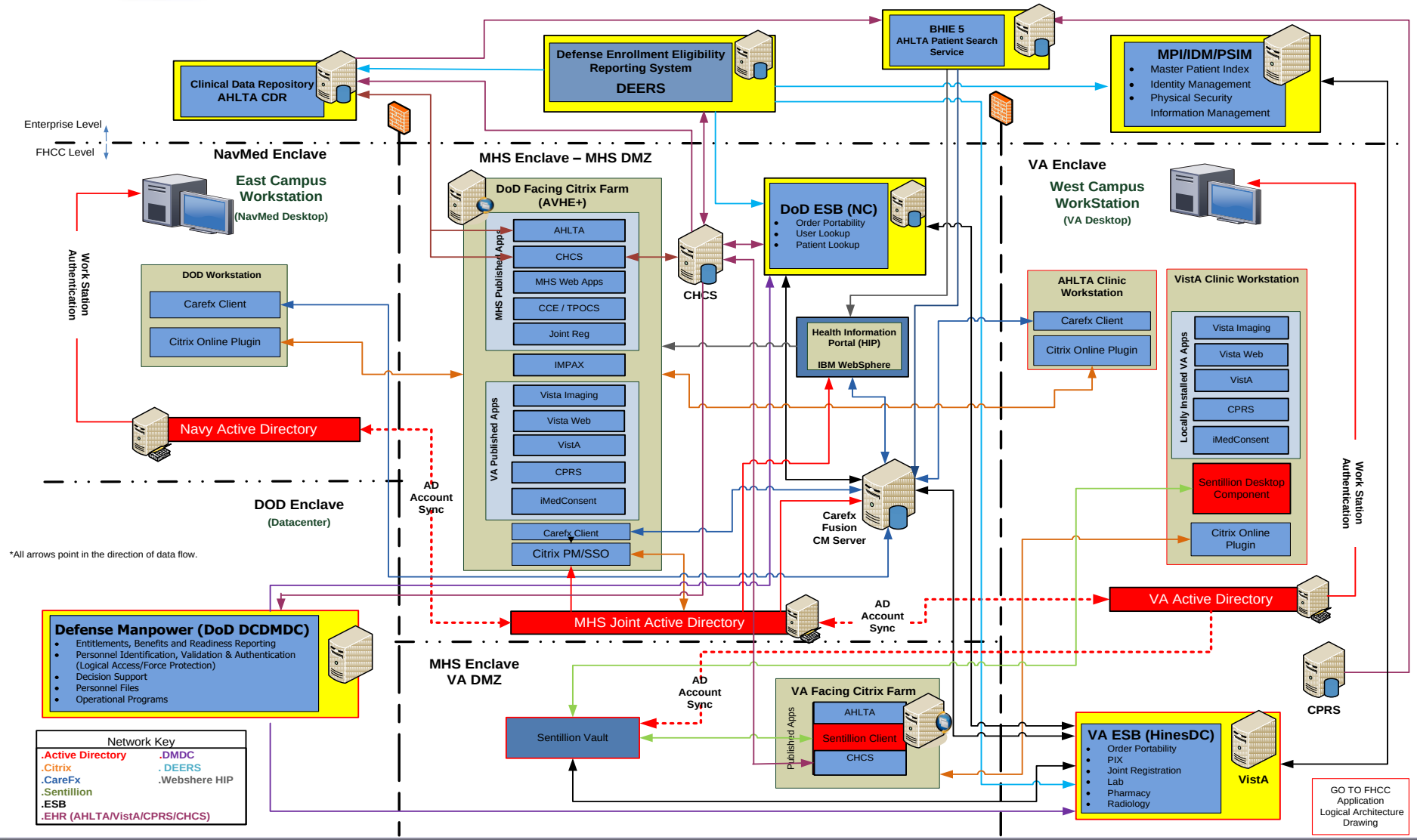
- iEHR Presentation Layer (JANUS)
  - Phase 1 (without AHLTA/CM interfaces) deployed December 2011
  - Phase 2 - Complete updated BHIE and CareFX CM by April 2012
- This web application provides a provider-centric data view of "read-only, real-time" patient information from DoD's Composite Health Care System (CHCS), the VA's VistA Computerized Patient Record System (CPRS), and Web Based Imaging and displays them chronologically on a single screen.
- Final decision on whether or not the JANUS solution will be part of the final Presentation layer is pending.

Architecture / Infrastructure Baseline

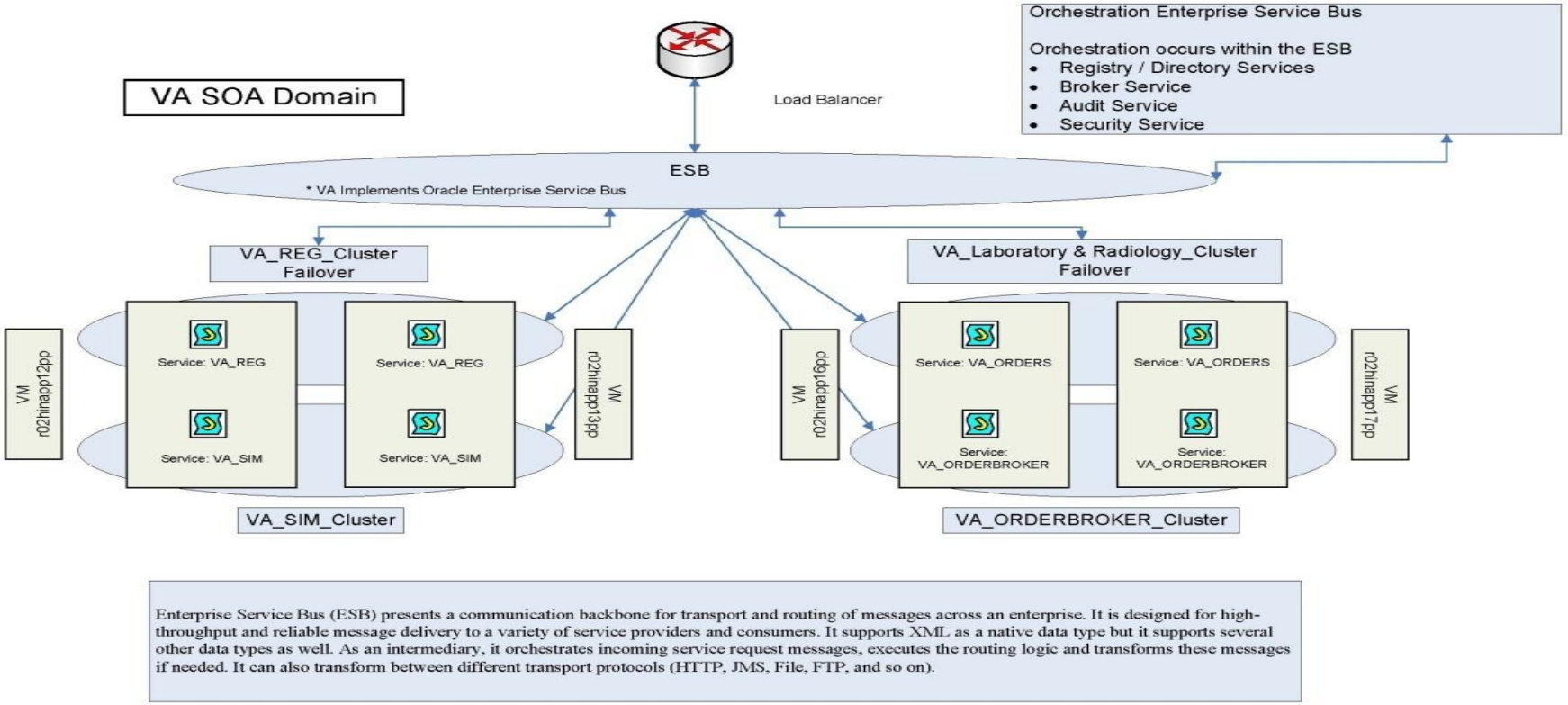
- Common Services Approach
  - Service Oriented Enterprise
  - Enterprise Service Bus architecture to allow for Bi-directional order and data flow
  - Model for other joint Healthcare Information Technology projects
- Three Enclaves
  - JALFHCC (VA) Enclave
    - Accredited and maintained by VA OI&T
    - Hosts the FHCC end-users
  - MHS Enclave
    - Accredited by the MHS
    - Host MHS applications
  - NHCGL (Navy) Enclave
    - Accredited by the NAVY
    - Hosts NAVY only applications and users

JALFHCC Architecture

FHCC Architectural Design : System Topology Major Interfaces



JALFHCC & iEHR



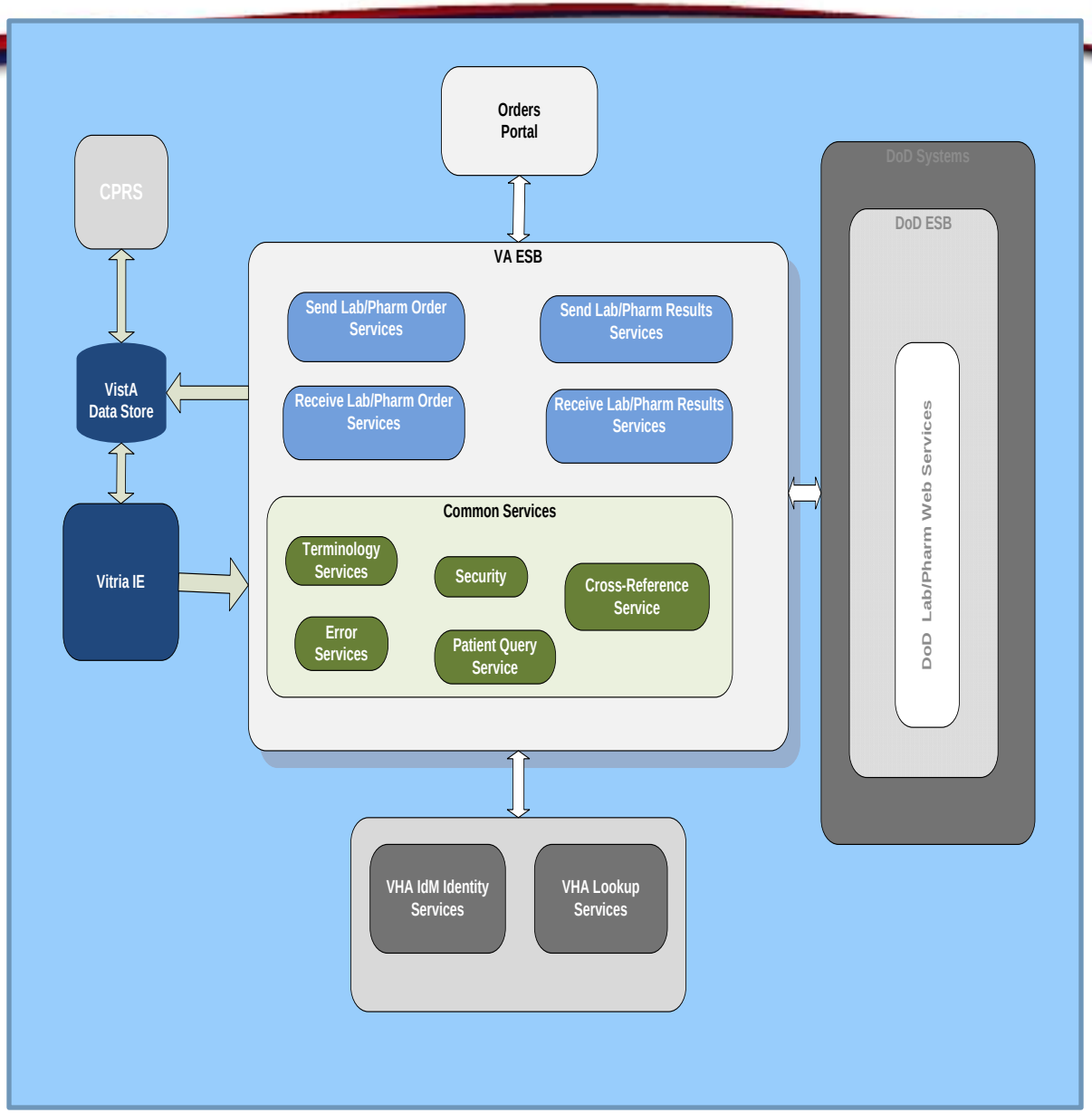
Enterprise Service Bus (ESB) presents a communication backbone for transport and routing of messages across an enterprise. It is designed for high-throughput and reliable message delivery to a variety of service providers and consumers. It supports XML as a native data type but it supports several other data types as well. As an intermediary, it orchestrates incoming service request messages, executes the routing logic and transforms these messages if needed. It can also transform between different transport protocols (HTTP, JMS, File, FTP, and so on).

- JALFHCC ESB
  - Orchestration
  - Broker
  - Audit, Security
- JALFHCC SOA
  - Registration
  - Radiology
  - Laboratory

JALFHCC & iEHR (Cont'd)

- Common Services
  - Terminology
  - Identity Management
  - Cross Reference
  - Exception Management

- Orders Service(LAB)
  - Send/Receive service
  - Result/update service



Architecture / Infrastructure Baseline (cont'd)

- Access via Smart Cards
  - DoD Common Access Card (CAC)
  - VA Personal Identity Verification (PIV) Card
  - Access to Networks and Systems
- Collaboration
  - Email
    - Forwarding - waivers
    - Global Address List (GAL) Sharing
    - Calendars
  - File Sharing
  - Intranet

Architecture / Infrastructure Challenges

- Multiple IA policies
- Network Trust/Directory Synchronization
- “Ease of Use”
- Scope of Change Control Management among three, different agencies
- Lessons Learned
  - Established Local IRM CCB
  - Established Enterprise Development CCB
  - Communications

Lessons Learned

- Mapping and terminology service challenges
- Business requirements must align with technical design to meet customer expectations
- Restriction on legacy modifications
- Identity Management Across different networks
  - Three network domains, which heavily rely on Active Directory Sync to allow cross domain account creation and access
  - Different security standards for access to MHS/Navy network with the ANACI and SAAR form requirements
  - Smartcard authentication a new requirement for many staff access to MHS and Navy Domain.
- Administrative and Business IT challenges
  - Communication across two networks for items such as email, intranet, and file sharing
  - Business systems such as M2, FastData, and DMLSS not accessible on VA network
  - Critical MHS and DoD websites needed to PIV enabled

Summary

- Distinction between business solution and technical solution is always a challenge – IT is often seen as the problem solver where business process should be the driver of the technical solution.
- Integration was dependent on the computer systems functioning as planned
  - Local Management Integral in the Process
  - Impacts Financial Success of JALFHCC Integration
- Operational Challenges of IM/IT Impact Integration
  - JALFHCC remains the ideal lab for iEHR Way Ahead

Contact Information

- LCDR Donna Poulin MSC, USN
  - Donna.Poulin@va.gov
  - 224-610-8525
- LCDR Chuck Foster MSC, USN
  - Charles.Foster@med.navy.mil
  - 202-762-3159
- Mr. Joe Nelson, MS
  - Joseph.Nelson@va.gov
  - 724-579-6251

Questions

Back Up Slides

Web-based Systems Configured for PIV Access

Navy Medicine Online (NMO)	BUMED Annual Planning Figure (BAPF)	Defense Travel System (DTS)	Centralized Credentials & Quality Assurance System (CCQAS)	Navy Med Logistics Command (NMLC)
DOD CAC LOOKUP	Defense Enrollment and Eligibility System (DEERS)	Defense Occupational and Environmental Health Readiness System (DOEHRS) Industrial Health (IH)	SHIPS 2000	Enterprise Navy Training Reservation System (ENTRS)
Navy Standard Integrated Personnel System (NSIPS)	HIV Management System (HMS)	Dental Common Access System (DENCAS) and DENCAS Remote	Vaccine Information and Logistics System (VIALS)	Fleet Training Management and Planning System (FLTMPS)
Electronic Knowledge Management (EkM)	Corporate Enterprise Training Activity Resource System (CeTARS)	Expense Assignment System IV (EAS IV)	MTS' Grass Roots Pop Health Team	DoD/Navy and VA Networks
Medical Readiness Reporting System (MRRS)	Medical Board Online Tri-Service Tracking System (MEDBOLTS)	Executive Information System (EIS) Management Analysis and Reporting Tool (M2)	Navy Family Accountability and Assessment System (NFAAS)	Summarized Management Analysis Resource Tool (SMART)

Administrative

- Ability to broker/negotiate solutions
  - Oversight
    - Congressional
      - General Accountability Office (GAO)
    - Interagency Program Office (IPO)
    - Joint Executive Council (JEC)
    - Health Executive Council (HEC)