

Mr. Albert Dickson

**Branch Chief of Operations, Engineering, Design and Deployment,
Infrastructure and Operations**



A Standard Virtual Desktop for DoD Healthcare



“Medically Ready Force...Ready Medical Force”

“A joint, integrated, premier system of health, supporting those who serve in the defense of our country.”



Learning Objectives



- Understand the DHA Health Information Technology (HIT) Infrastructure and Operations (IO) Desktop as a Service (DaaS) Shared Service Offering
- Explain why a standardized desktop is important to the enterprise and the deployment of the new EHR
- Learn about the DaaS design and features
- Learn about upcoming standardization initiatives currently in the MTFs and find integration opportunities

Overview

Standard Desktop Design

Implementation Strategy

Standard Desktop Model and Elements

- Desktop as a Service (DaaS) Overview and Benefits
- DaaS Design
 - Facts and Assumptions
 - Desktop, Server, and Application Environment
 - DaaS Design
- Roll-out and Implementation Strategy
 - Implementation Activities and Timeline
- DaaS Model and Elements
 - DaaS Enterprise Approach and EHR
 - DaaS Elements
 - As-Is and To-Be Layers and Patch Management

DaaS Problem Statement and Future Vision

Problem Statement

- As medical providers and staff move between patient rooms and MTFs, they experience inconsistent computing configurations and performance.
- The non-standard, decentralized desktop environment is difficult to manage, costly, less secure, unpredictable and inflexible causing an adverse impact on health care providers' performance to meet the healthcare mission

Future Vision

- Provide a standard desktop across the MHS to support clinical systems and the new EHR
 - Consolidate Application and Desktop Virtualization efforts into a single DHA Desktop service offering
 - Establish a centrally managed and maintained standard image and baseline configuration for all medical EUDs
 - Expand life-cycle management of EUDs to all Medical EUD
 - Centralize and standardize essential desktop support functions maintained through an enterprise management framework
- Facilitate a predictable and reliable deployment of the new EHR and present an opportunity to drive reductions in IT lifecycle costs, rationalize application portfolios and improve clinical business practices through a standardized user experience

A Standardized Desktop will optimize and rationalize MHS application portfolios, systems, and data to improve clinical business practices through a standard user experience – facilitating a reliable deployment of EHR

Standard Desktop



Benefits of the Standard Desktop to the Enterprise

Improves Service Offering

- Improves reliability of clinical systems
- Ensures patient safety to improve caregiver satisfaction
- Enables speedy introduction of new capabilities

Cost Efficiencies

- Reduces PC acquisition/support/lifecycle refresh costs
- Eliminates redundant test systems and activities support costs

Agile Application Deployment

- Supports an agile and standard architecture to allow for faster application deployment

Improves Security

- Standard baseline configurations reduce variance which can be managed and monitored over time for improvements
- Strengthens security posture

Reduces Operational Complexity

- Running consistent hardware and optimized software in servers and storage devices can significantly reduce the operational complexity

DEFINE

- Define technical standards for all aspects of a standard medical desktop
- Stakeholder input essential

+

DELIVER

- Field the Infrastructure and capability to deliver standard medical desktops (and servers) as well as the ability to sustain them over time
- The people, process and technology

+

MEASURE

- Deliver the ability to measure performance and health of standard medical desktop baselines – whether physical or virtual
- Must define to be able to measure

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What does DaaS include?

DaaS includes:

- *Software Licensing*
- *Standard image, applications, delivery framework*
- *Security, reliability*
- *Technical support*
- *Hardware acquisition*

DEFINE

- Operating System (OS)
- STIG (GPOs, policies)
- Tools & Utilities (HBSS, banner, anti-virus)

DELIVER

- Operating System Deployment (OSD)
- SCCM Applications (AHLTA, Office)
- SCCM Infrastructure
- Virtualization
- Application Updates and patches (IAVAs)
- AGM Compliance (with DCM)
- Change Advisory Board (CAB)

MEASURE

- Operations Manager
- Desired Configuration Manager (DCM)
- Enterprise Reporting

DaaS Design Facts & Assumptions



CURRENT FACTS

User Data

- 250,000 total EUDs in the DHA
 - 200,000 Users

User Locations

- Pacific Northwest Pilot
- Mission: EHR delivery focused
- Spans global DoD healthcare

EUD Costs

- \$300M replacement cost of DHA EUDs

ASSUMPTIONS/DEPENDENCIES

Assumptions

- 4-Year EUD Life-Cycle
- Current mix of laptops, tablets and desktops will not change and replacement costs will remain constant
- Remedy System accurately captures IT staff for desktop support
- Traditional desktop delivery may diminish, but isn't going away

Dependencies

- Network in place (MED COI)
- AD Migration to JAD
- SCCM 2012 in place
- Acquisition strategy for centralized EUD hardware purchases
- ESD in place
- Virtual application delivery framework in place
- Licensing in place

Sources of Variance

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Example of a Variance: Office 2010 GPO



WILLIAM BEAUMONT ARMY MEDICAL CENTER INFORMATION MANAGEMENT DIVISION INFORMATION ASSURANCE
 REQUEST FOR OFFICE 2010 STIG ROLLBACK

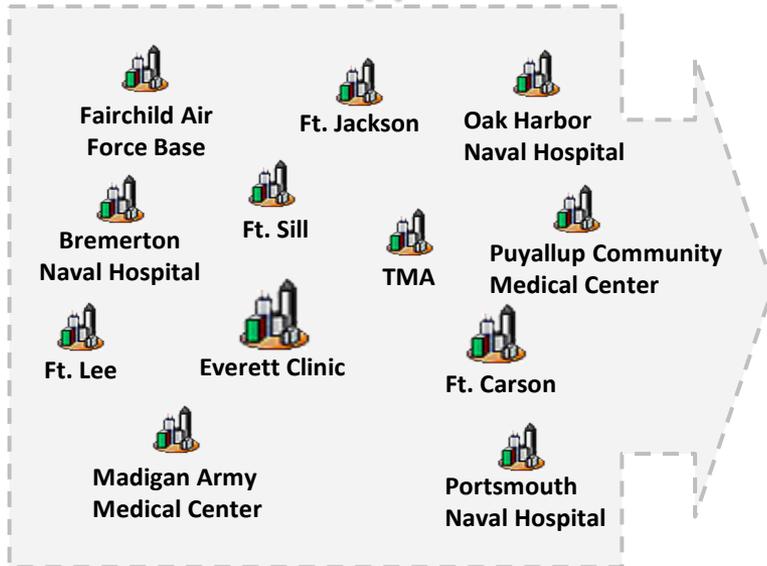
Grp ID (Vulid)	Group Title	Rule ID:	Severity	Rule Version (STIG-ID)	Access Rule Title	Vulnerability Discussion	Justification
V-1151	Secure Print Driver Installation	SV-25035r1_rule	CAT III	3.029	Print Driver installation privilege is not restricted to administrators.	By default, the print spooler allows any user to add and to delete printer drivers on the local system. This capability should be restricted to privileged groups to ensure only stable, non-malicious drivers are used.	A setting configured within the latest Enterprise Windows 7 STIG GPO release prevents any WBAMC end user from installing a printer on their system. This is particularly affecting WBAMC users on virtual desktops from installing printers. This is currently prohibited by DISA STIG "Windows 7 Version:1, Dated 25 OCT 2013".

MTF & User Level



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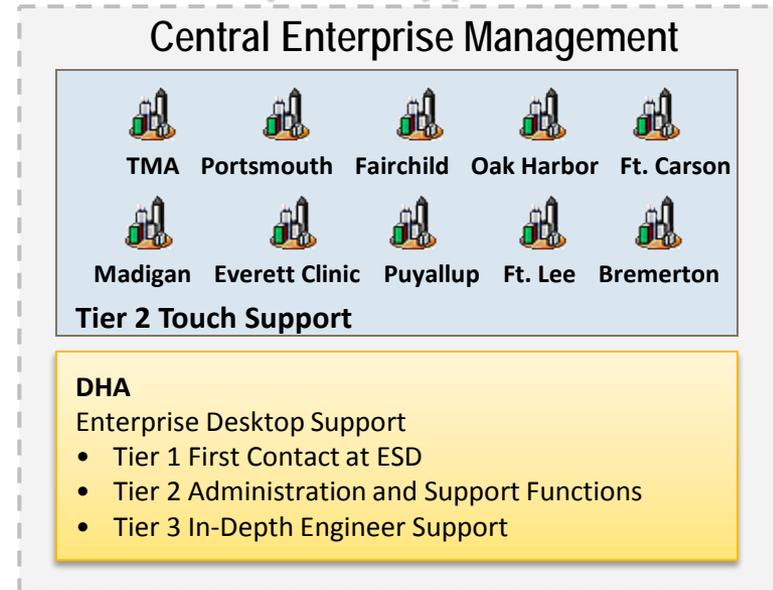
Current Approach



'AS-IS' Key Attributes

- Provider experience 'below par'
- Disparate management tools
- Non-compliant, unsecured desktops
- Costly, UFR-driven funding, manpower intensive
- Unstable, inflexible functionality
- Platform dependent, slow advancing

Enterprise Approach



'TO BE' Key Attributes

- **Provider Focused**
- Managed, standard configurations
- Secure, reliable; integrity maintained
- POM controlled, reporting capability
- Predictable, agile functionality
- Platform, vendor independent

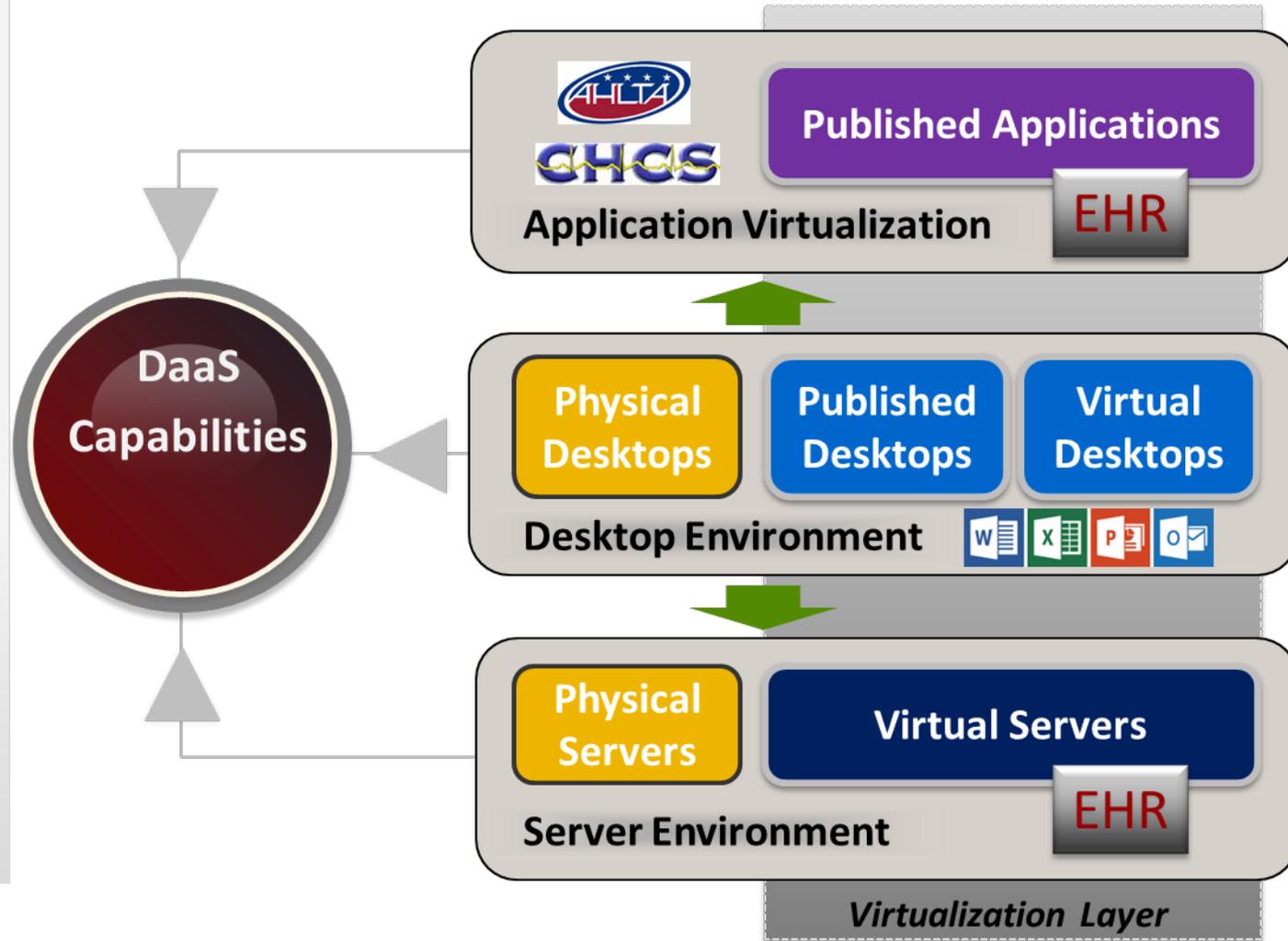
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Standardizing DaaS Design

Desktop as a Service

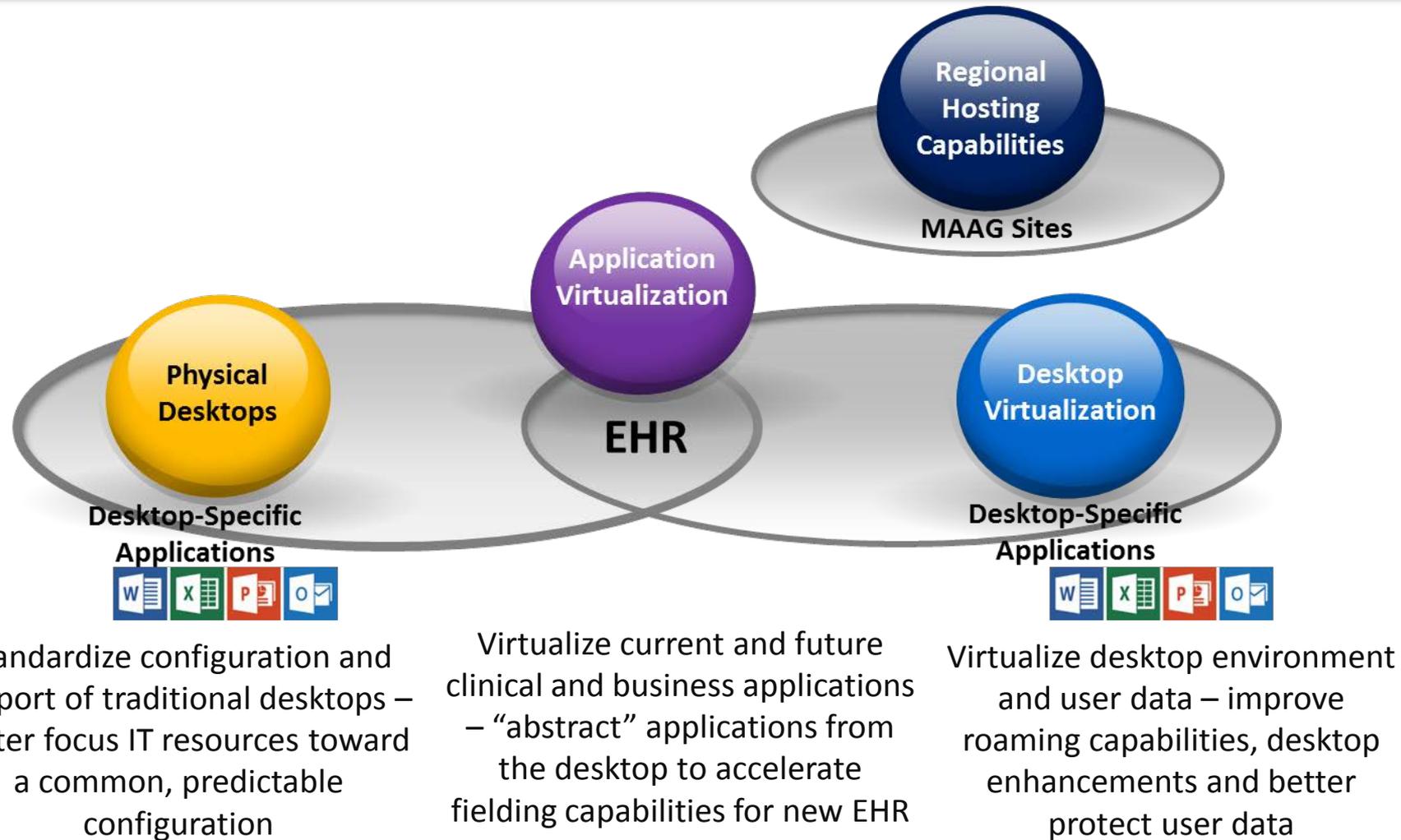
The standard desktop design will include standardization across the application, desktop and server environments.

Standard Desktop capabilities will include a standardized desktop configuration and application virtualization capabilities across physical and virtual desktops.



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DaaS Enterprise Approach and EHR



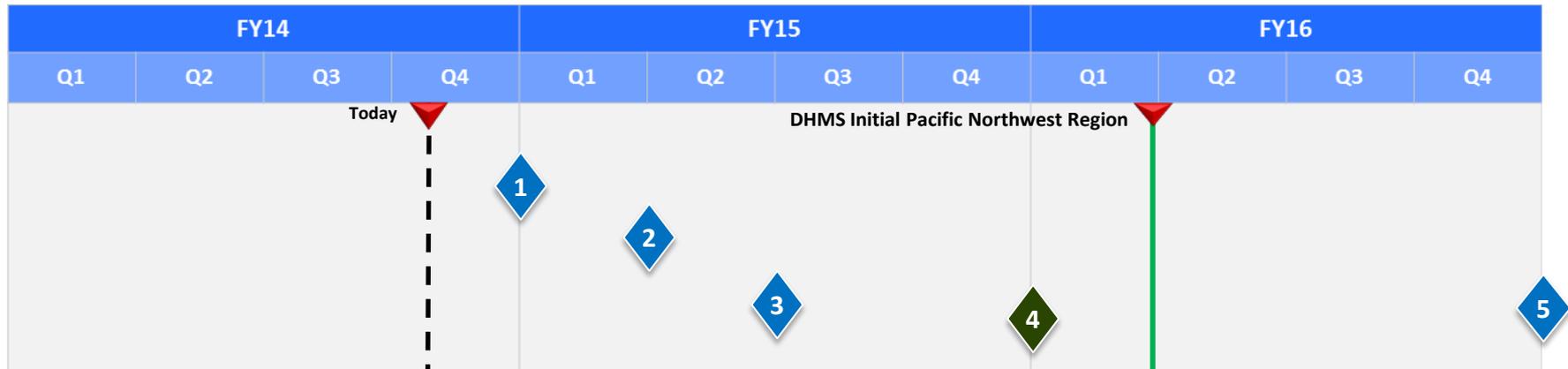
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DaaS Implementation Timeline



Key Implementation Activities (FY14-FY16)

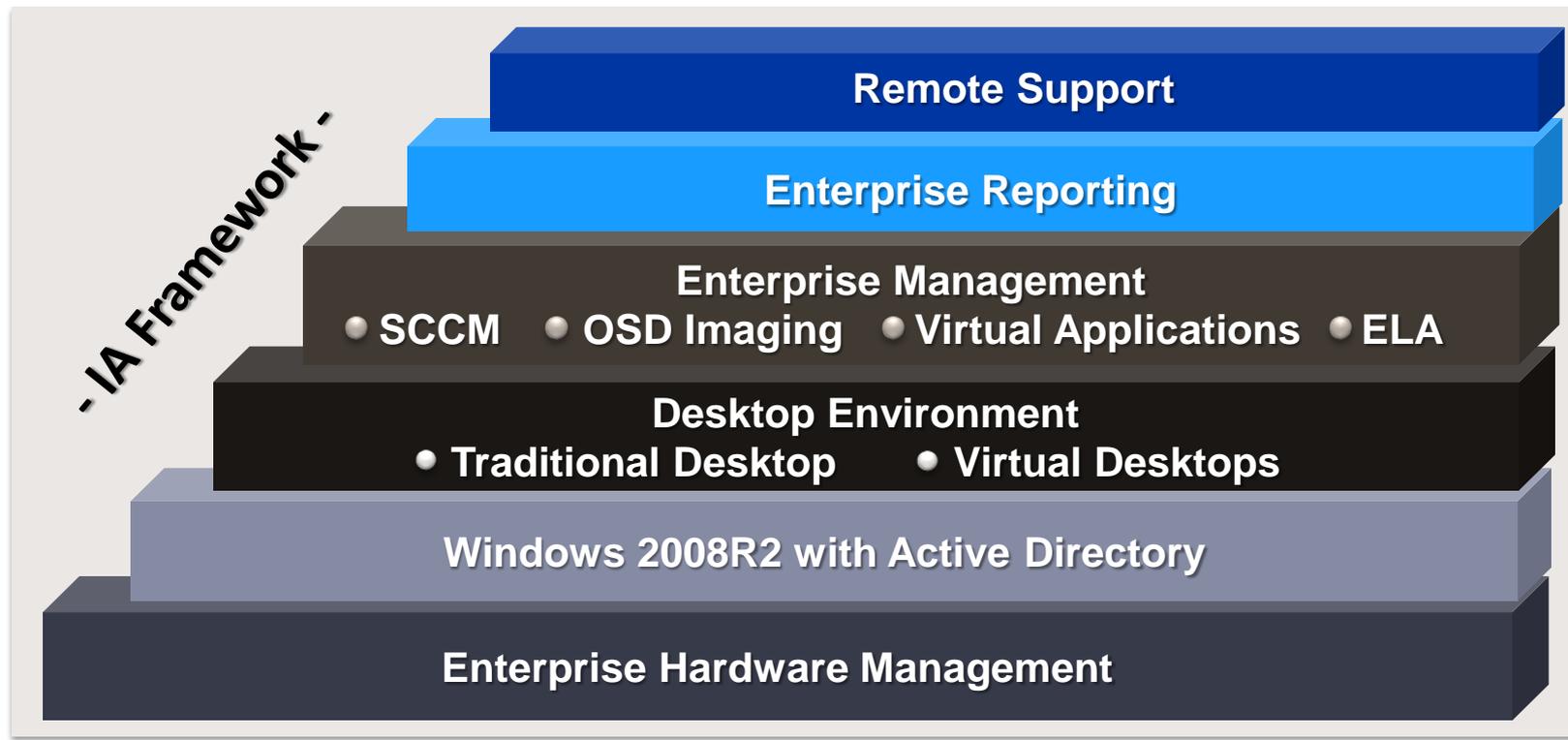
Activity	Key Milestones
<ul style="list-style-type: none"> Establish architecture, business and support process for delivering a standard desktop Define acquisition strategy for centralized purchases (hardware and software) & consolidation of existing solutions Define baseline configurations for Desktop Operating Systems, Core application components and Clinical and Business applications that are common to Army, Navy, NCR MD, former HA/TMA environments Centralize and standardize essential desktop support functions like user data, printing, and DHCP 	<ol style="list-style-type: none"> Analysis and Planning - Q4 FY14 ATO Approved – Q1 – FY15 Procurement – Q2 FY15 Implementation DHMSM IOC Sites – Q4 FY15 Implementation Army, Navy, AF— FY16/17



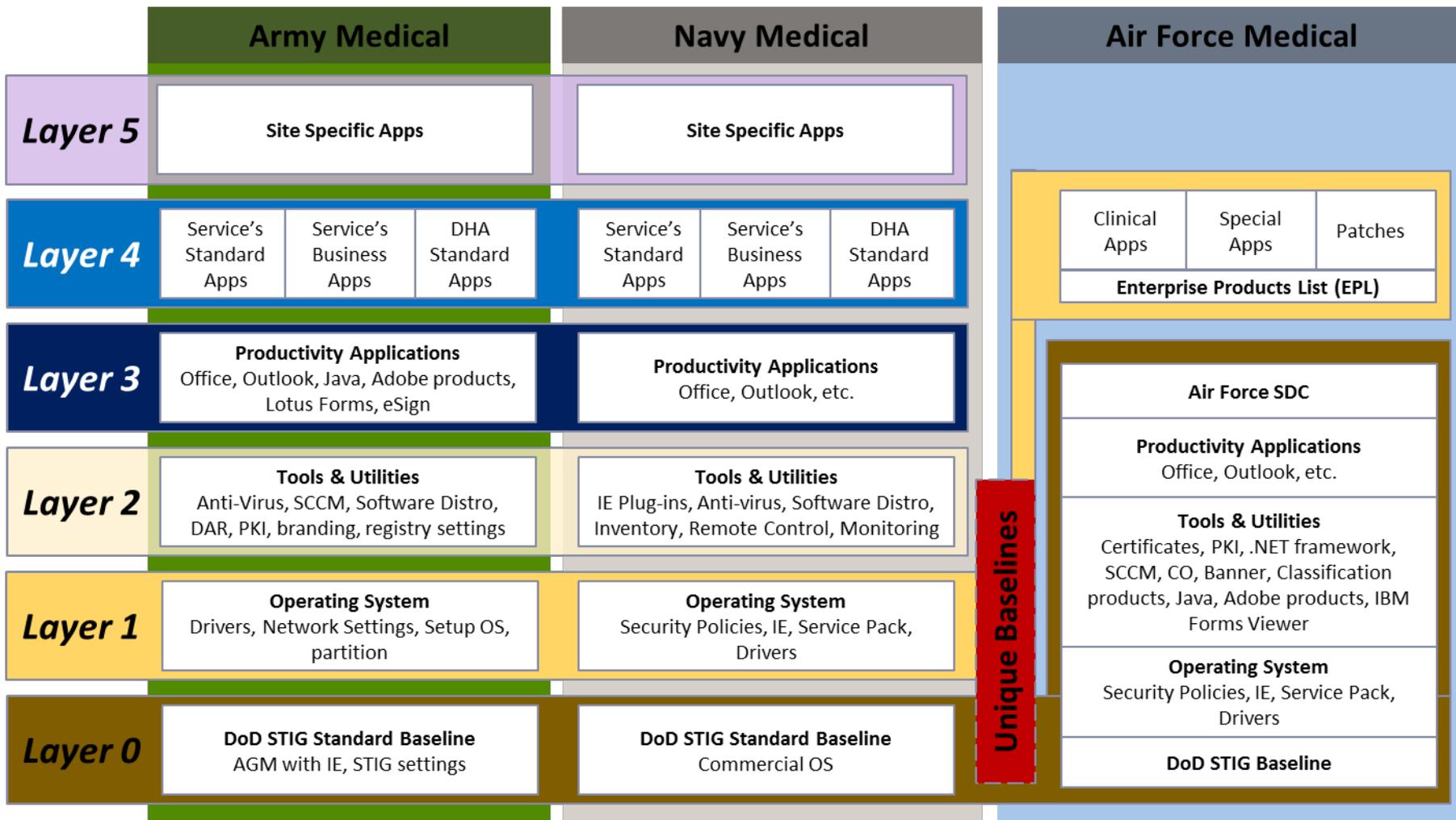
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These are the elements that support a standard desktop environment

Standard Desktop Elements

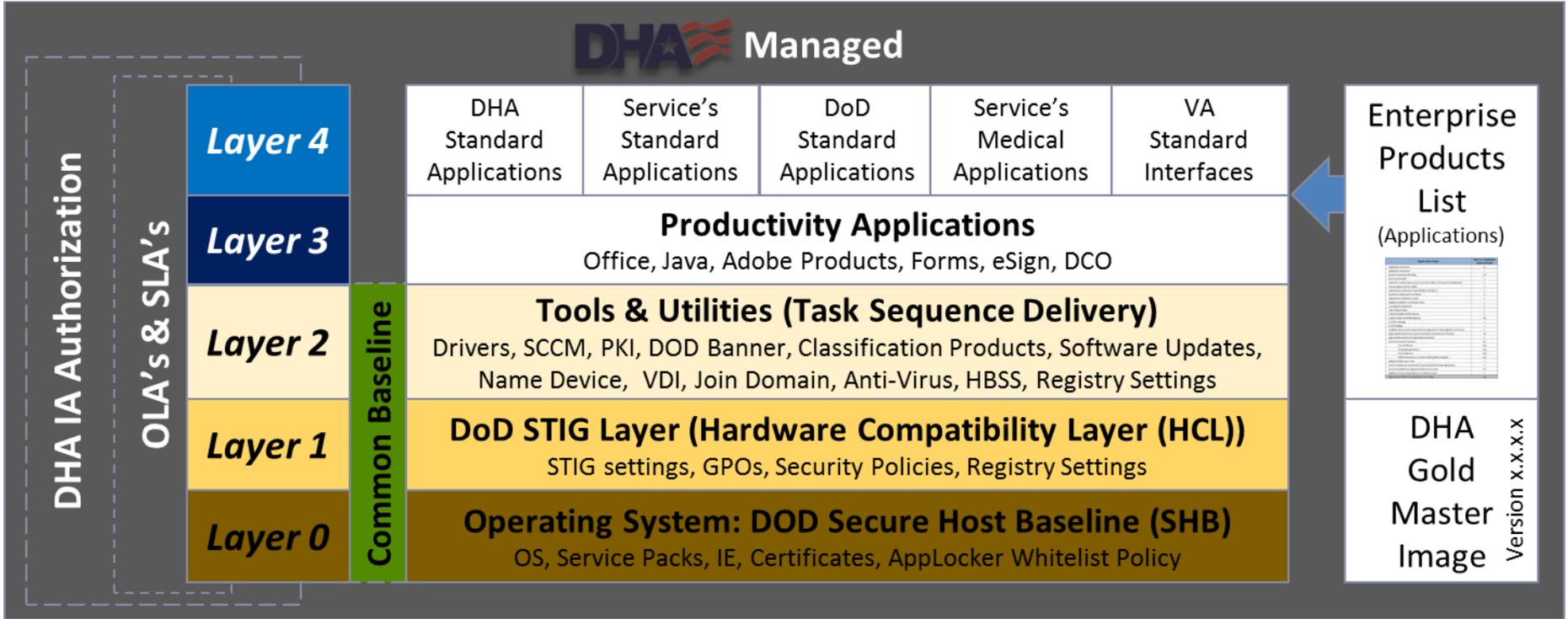
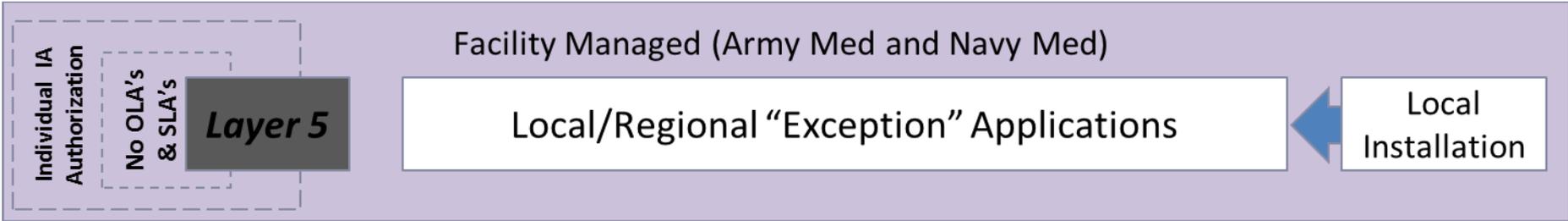


As-Is: Standard Medical Desktop Layers



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Interim State: Standard Medical Desktop Layers

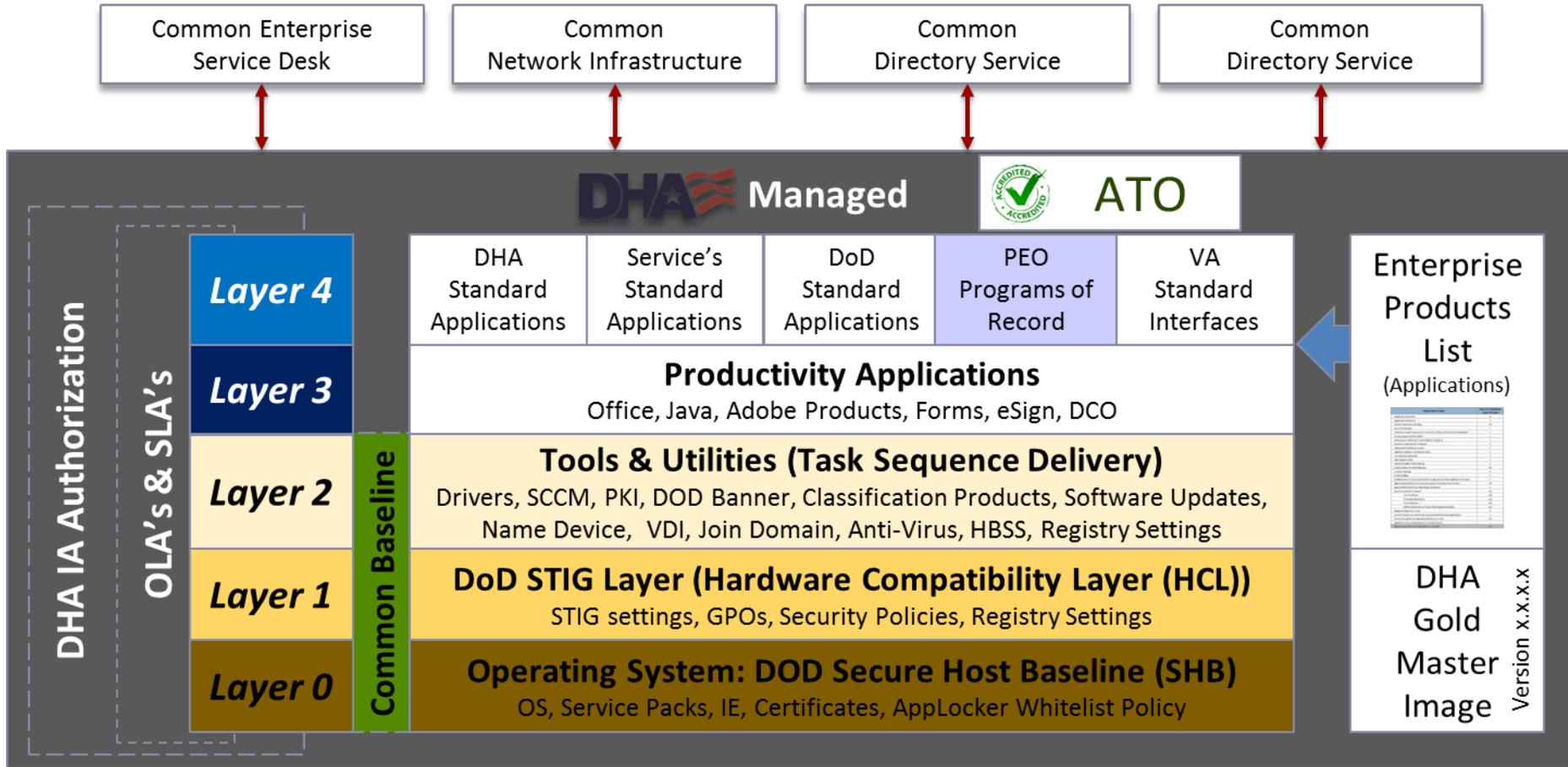


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To Be: Standard Medical Desktop Layers



A standardized, reliable and well-managed desktop environment that drives reductions in IT lifecycle costs, rationalizes application portfolios and improves clinical business practices throughout the DHA



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As-Is Patch Management



	Army Medical	Navy Medical	Air Force Medical	NCR MD	TMA
Reporting	SCCM	IA Reporting	SCCM	SCCM	SCCM
Patching	SCCM and Minimal WSUS	Standalone WSUS	SCCM and Minimal WSUS	SCCM and Minimal WSUS	SCCM and Minimal WSUS
Execution	Decentralized	Decentralized (5% Centralized)	Centralized	Decentralized	Centralized (2 distinct locations)
Admin	Centralized	10% Centralized 90% Decentralized	Centralized	Centralized	Centralized
SCCM Version	2007	2012 & 2007	2007	2007	2012 & 2007

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To-Be: Patch Management

Military Health

Reporting

SCCM 2012

Patching

SCCM and
WSUS

Execution

Centralized (end state)

Admin

Centralized

*SCCM
Version*

SCCM 2012

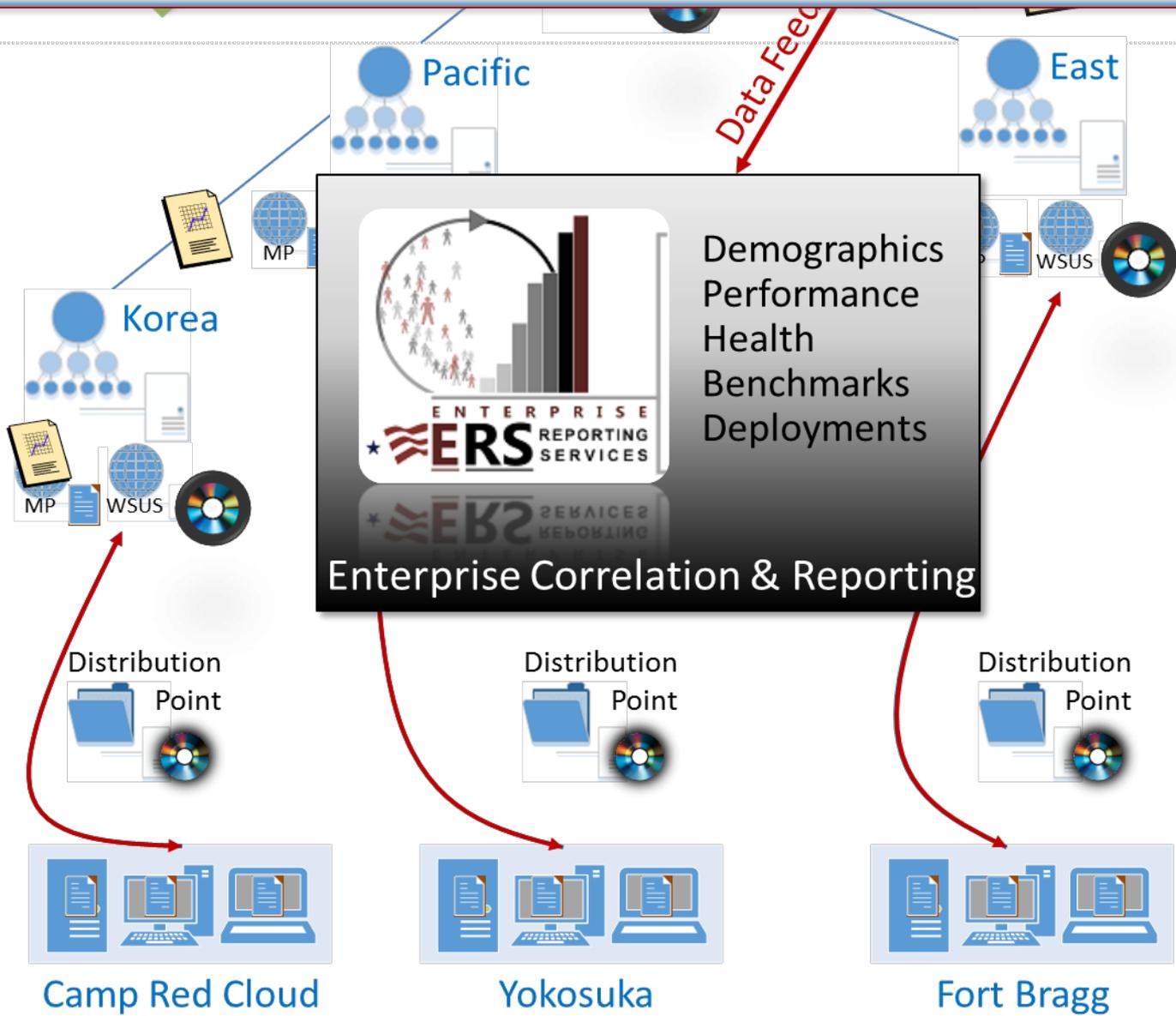


**Common
Process**

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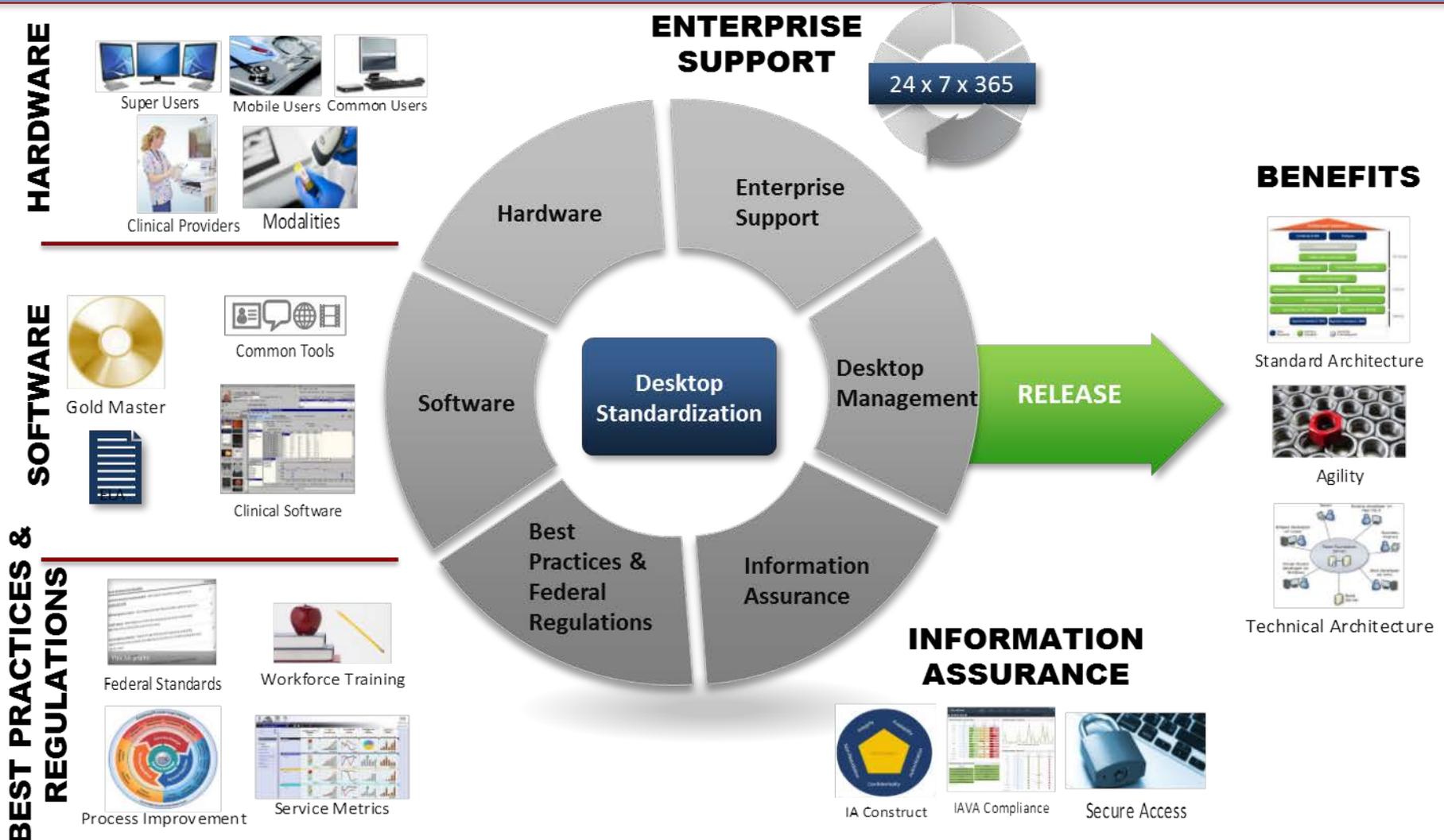
Enterprise Patch Management and Reporting Example

Primary
Secondary
Distribution
Computers



3. Further distribute to Secondary Site Servers as needed
4. Transfer update binaries to Distribution Points
5. Clients communicate with Windows Server Update Services WSUS (not Software Update Point) to receive policy about what updates they should install
6. Client obtains and installs updates from local Distribution Points
7. If needed, Client communicates the update status to its Secondary Site Server's Management Point (Secondary Servers cannot also be Report Servers)
8. Secondary servers consolidate data and send to the Primary Server. Other directly attached Clients report their status as well. Limited reporting is provided at this level only for that Primary Server's child objects in its hierarchy
9. Primary Servers transfer all data to the Central Administrative Site and its SQL Server Reporting Service. (SSRS) for global reporting capabilities

Desktop Standardization Lifecycle



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Standard Desktop Environment

We can get there!



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Questions



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Please complete and submit your evaluations

Mr. Albert Dickson

Branch Chief of Operations, Engineering, Design and
Deployment, Infrastructure and Operations

albert.n.dickson.civ@mail.mil

This is your Defense Health Agency....



Thank You For All Your Efforts!



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