



**ARMY MEDICINE**  
Serving To Heal...Honored To Serve

# Informatics Workforce Development

---

LTC Rich Wilson, CIO Army Medicine  
LTC Angela Icaza, CMIO Army Medicine

UNCLASSIFIED



# BRIEFING OUTLINE

1. Problem statement
2. Informatics perspectives
3. Standardized CMIO
4. Workforce development
5. EHR preparation



# Problem Statement

- Technology is outpacing implementation
- Informatics workforce is not enough
- EHR implementations a informatics intensive



# Informatics Perspectives

## Applications

- Training
- Management
- Technical

## Business Processes

- Integration
  - Technical
  - Process
- Change management

## Methods

- Genomics
- Natural language processing
- Machine learning

## EHRs

- Standardization
- BPR
- Integrations



# CMIO Standardization

- Goal: provide standardized CMIO paragraph for MTFs
  - Manpower documentation
  - Scott Norris team
- Composition:
  - CMIO
  - Clinical System Trainers
  - Clinical Workflow Analysts
  - Informaticists



# Clinical Informatics Workforce Development

- Approved October 2010 with focus on assessing a subset of the current Clinical Informatics Workforce, determining workforce gaps, and establishing a comprehensive Workforce Development Strategy (“Strategy”) to close the gaps
- The primary objective to ensure that the MEDCOM has an educated, trained, and competent clinical informatics workforce
- Sets the guiding principles and parameters that guide the development of programs and principles going forward to ensure they are integrated and aligned
  - Defines the integrated approach that MEDCOM will take to acquire, onboard, develop, motivate, and engage primary clinical informatics talent with the right skills to achieve the mission
  - Provides a central reference point around which the MEDCOM can manage and track progress related to clinical informatics workforce development
  - Offers a forward-looking approach that will evolve alongside the mission and objectives



# Clinical Informatics Roles with Role Profiles

## MTF

- CMIO
- Deputy CMIO
- Clinical Systems Trainer/Supervisor
- Clinical Systems Trainer 1
- Clinical Systems Trainer 2
- Clinical Workflow Analyst/Supervisor
- Clinical Workflow Analyst 1
- Clinical Workflow Analyst 2

## RMC

- Regional CMIO
- Regional Deputy CMIO
- Regional Clinical Systems Trainer/Supervisor
- Regional Clinical Systems Trainer 2
- Regional Clinical Workflow Analyst/Supervisor
- Regional Clinical Workflow Analyst 2

## HQ

- CMIO
- Chief, BPM Branch
- Deputy Chief, BPM Branch
- BPM Specialist
- Chief, CSI Branch
- Deputy Chief, CSI Branch
- IT Specialist
- Chief, T&S Branch
- Deputy Chief, T&S Branch
- Training Specialist
- Chief, CBI Branch
- Deputy Chief, CBI Branch
- IT Specialist/Data Analyst



# Phase I: Creating Role Profiles

- The first step in creating the Strategy was to define a standard set of competencies, technical skills, and experiences required for success in primary Clinical Informatics roles.
- After conducting a series of interviews and focus groups with the current workforce, role profiles were developed for CMIOs, CWAs, and CSTs at the OTSG, RMCs, and MTFs
- The role profiles contain:

## 1. Role purpose statement

Intended outcomes for the role

## 2. Key responsibilities

Primary tasks and activities an individual is expected to perform to achieve the intended outcomes

*\*Role profiles are intended to apply globally and, therefore, will reflect ~80% of the responsibilities, leaving ~20% variation for regional & local differences*

## 3. Competencies

Knowledge, skills (non-technical), and abilities required for superior performance. Competencies fall into the following categories: foundational, functional, supervisory, and leadership, and they vary by role

## 4. Technical skills

Specific areas of technical expertise and ability that enable one to perform the responsibilities of the role

## 5. Critical prior experiences

Required and preferred experiences that individuals should have to be successful in the role



# Phase I: Assessing the Workforce

- The next step was to assess the current informatics workforce against the role profiles to identify organizational strengths and weaknesses in competencies and technical skills
- The online assessment was conducted as a “pilot” and administered within the Western Region; participation was broadened to remaining regions following the pilot
- Assessments were created for the following roles:

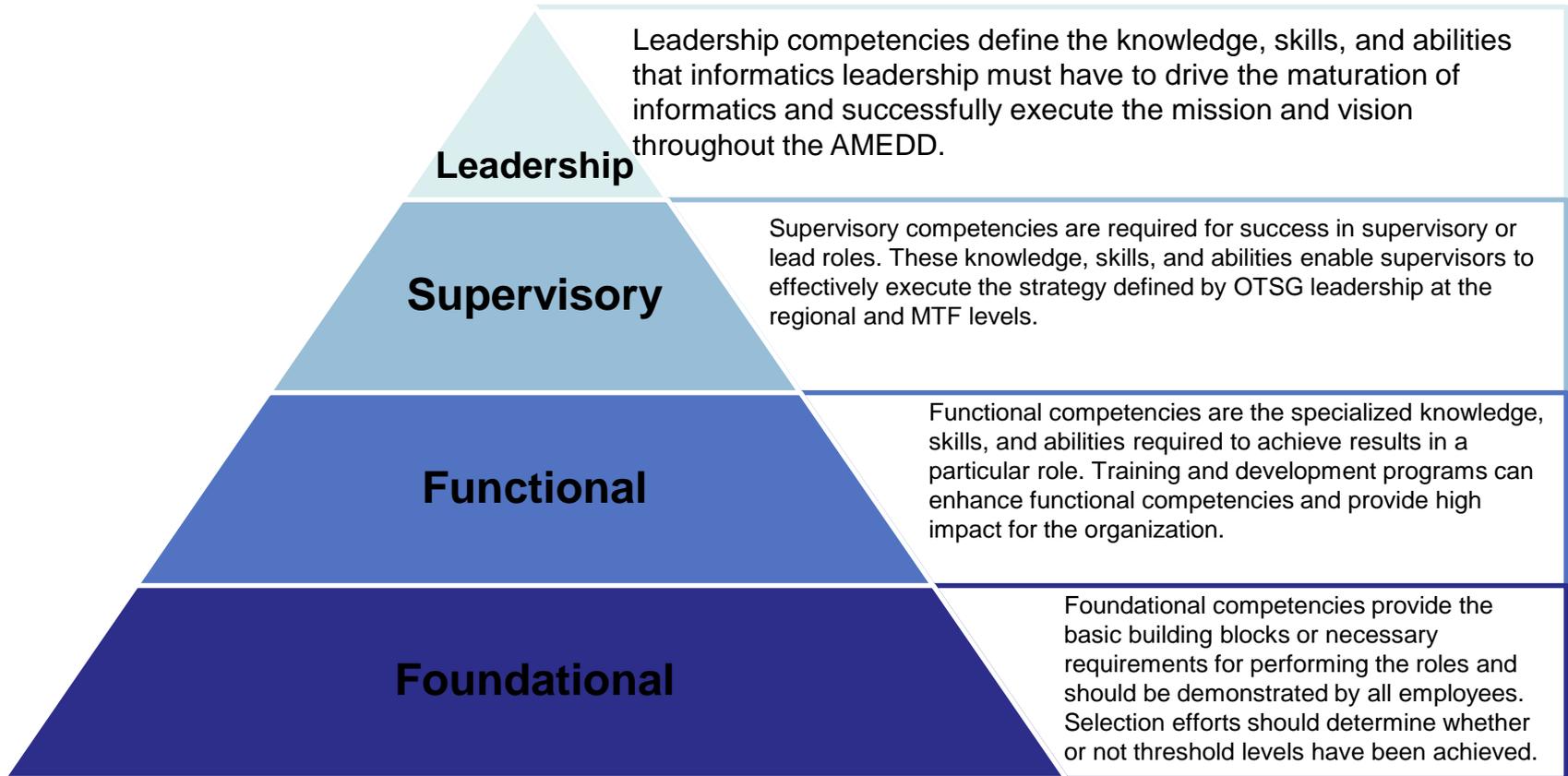
Strategic Leadership	Clinical Workflow Analyst	Clinical Systems Trainer
Deputy CMIO (MTF)	CWA 2 (MTF)	CST 1 (MTF)
CMIO (MTF)	CWA Supervisor (MTF)	CST 2 (MTF)
Deputy CMIO (RMC)	CWA 2 (RMC)	CST Supervisor (MTF)
CMIO (RMC)	CWA Supervisor (RMC)	CST 2 (RMC)
		CST Supervisor (RMC)

- Employees completed a self-assessment for their current role and, when applicable, managers also completed assessments for the employees they oversee
- The assessment output formed the basis for the Strategy, aiming to leverage organizational strength and close gaps



# Competency Model

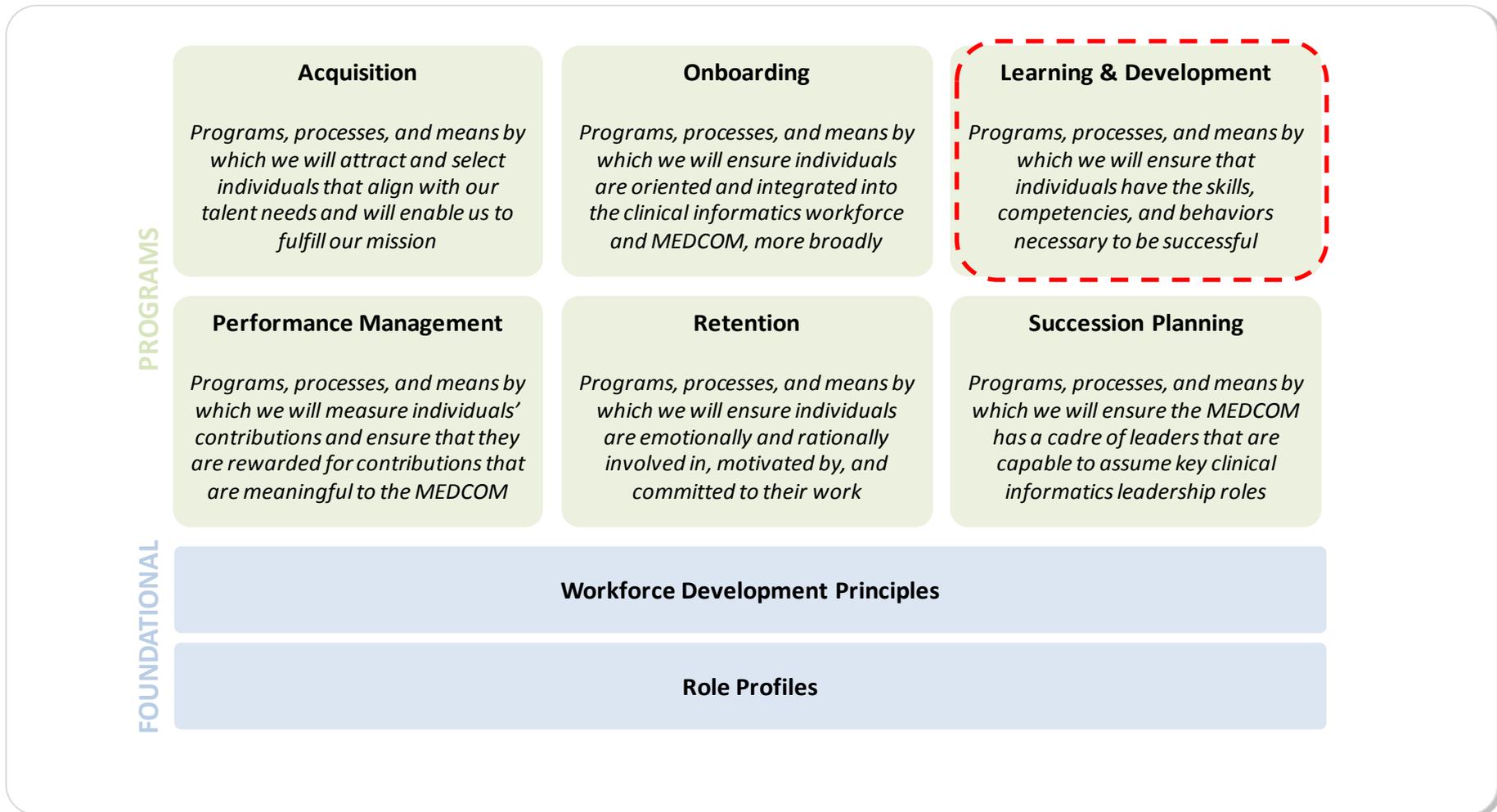
Each assessment included the critical competencies identified for a particular role. Competencies comprised of the following four categories and varied by role/level:





# Components of the Workforce Development Strategy

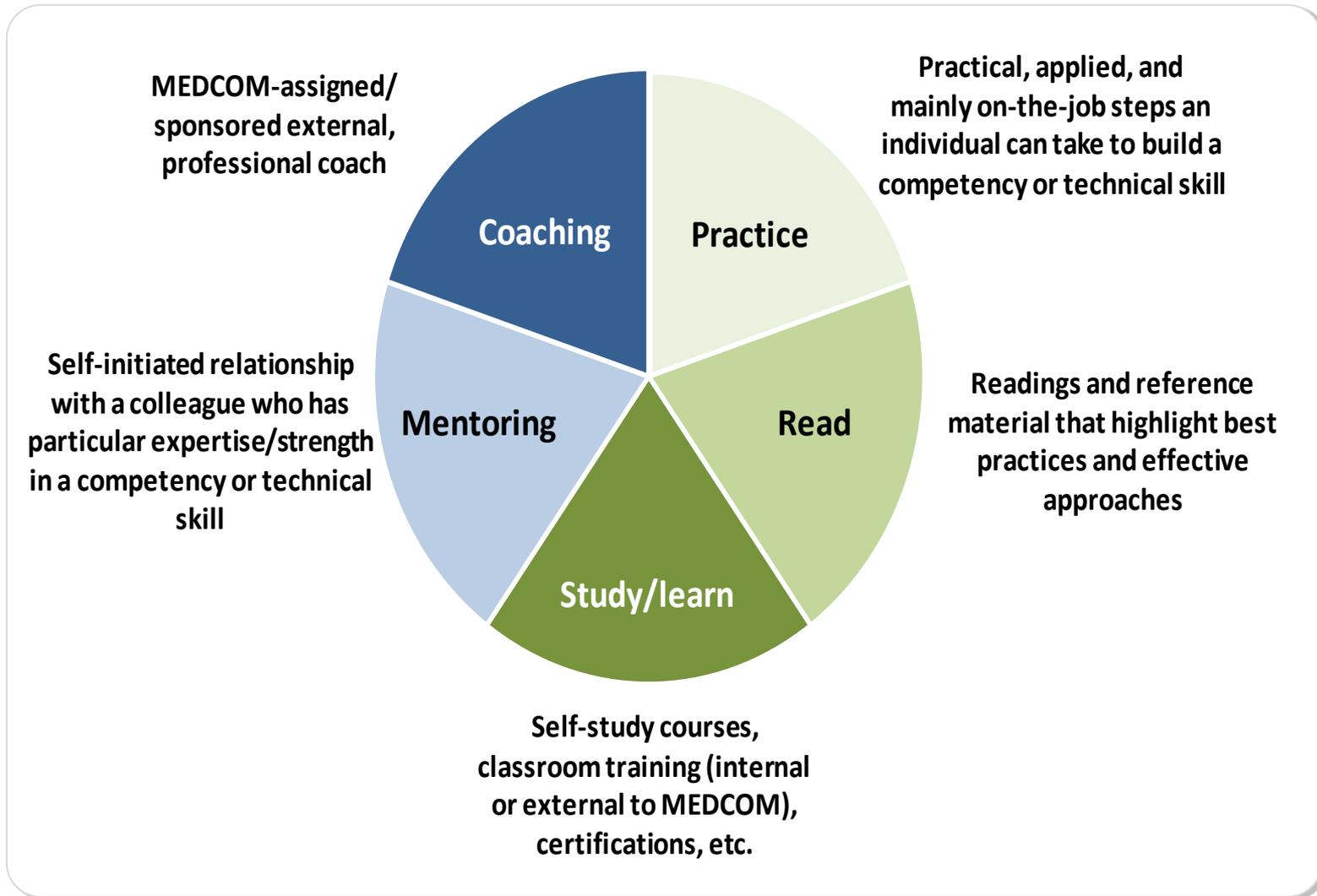
- The Strategy was finalized in October 2011 and includes the following components:





# Learning & Development Program Components

- The Learning & Development Program contains 5 components:





# CMIO Competencies and Technical Skills

## Technical Skills

### Target proficiency level definitions

Level 1	Level 2	Level 3	Level 4	Level 5
<b>No Application</b> Does not demonstrate or has limited opportunity to demonstrate the behavior	<b>Aspiring</b> Is not yet at the learning level for this capability, but aspires to begin	<b>Learning</b> Proactively working to develop the behavior through study, experience	<b>Demonstrating</b> Consistently and deliberately exhibiting the behavior in a variety of	<b>Role Modeling</b> Exhibiting mastery of the behavior; often modeling for others to emulate and

### Competencies

## MS Office Suite

1. MS Office: Excel and create charts
2. MS Office: PowerPoint and create collateral materials
3. MS Office: Word format text documents

## Clinical Systems

4. AHLTA - Understand EHR. Is able to support end users' needs
5. CHCS - Understand EHR. Is able to support end users' needs
6. ESSENTRIS - Understand DoD EHR. Is able to meet end user needs
7. ICDB/Carepoint - Understand DoD EHR. Is able to meet end user needs
8. MAPS Tools (Dragon, Asutype, OneNote) purpose as a support help shape their workflow

## Other

9. Clinical/business value clinical/business workflows

### Target proficiency level definitions

Level 1	Level 2	Level 3	Level 4	Level 5
<b>No Application</b> Does not demonstrate or has limited opportunity to demonstrate the behavior	<b>Aspiring</b> Is not yet at the learning level for this capability, but aspires to begin	<b>Learning</b> Proactively working to develop the behavior through study, experience	<b>Demonstrating</b> Consistently and deliberately exhibiting the behavior in a variety of	<b>Role Modeling</b> Exhibiting mastery of the behavior; often modeling for others to emulate and

### Foundational Competencies

#### Communication

##### Behavioral Indicators

1. Communicates clear demeanor
2. Translates complex concepts into relevant
3. Actively listens and identifies stakeholders' needs
4. Presents recommendations in a clear manner (both written and verbal)

#### Learning Agility

##### Behavioral Indicators

1. Treats unclear protocols as challenges
2. Builds on previous experiences
3. Seeks out informal learning opportunities
4. Takes on challenging assignments
5. Stays abreast of new technologies

#### Results Orientation

##### Behavioral Indicators

1. Displays resilience
2. Anticipates and prevents problems
3. Often goes beyond the call of duty
4. Regularly seeks performance improvement

#### Teamwork

##### Behavioral Indicators

1. Volunteers support
2. Participates in knowledge sharing
3. Seeks opportunities to help others
4. Makes commitments
5. Builds a cohesive team
6. Fosters teamwork

## Role Profile

### Regional Chief Medical Information Officer (RMC)

#### Role Purpose

Supports the quality, safety, and efficacy of clinical operations by developing and implementing the informatics strategy and corresponding best practices for the RMC. Serves as liaison between the clinical and IT community at the RMC and is responsible for the management and oversight of informatics programs, processes, and personnel.

#### Key Responsibilities

1. Oversees the development, implementation, and execution of the informatics strategy, policies, and practices for the RMC by integrating OTSG best practices, user needs/requirements, and business objectives and ensuring alignment with RMC objectives.
2. Builds sponsorship and creates alignment for informatics best practices throughout the RMC to ensure all stakeholders (e.g., clinical staff, informatics staff) are active, visible sponsors of informatics within their respective roles.
3. Disseminates key information, including the informatics strategy, policies, and practices, from the OTSG to the RMC and MTFs to create alignment throughout all levels of the organization.
4. Works closely with clinical staff members (e.g., providers, nurses, clinicians) and Clinical Systems Trainers and Clinical Workflow Analysts to determine functional, training and support, data and reporting, and usability needs/requirements of clinical systems necessary to support clinical operations, and liaises with the appropriate IM/IT and informatics staff groups to provide necessary support.
5. Leads clinical and process improvement teams and participates in RMC and MEDCOM governance meetings to represent user requirements and inform stakeholders of all informatics best practices.
6. Conducts and/or attends regular meetings with informatics colleagues to discuss emerging trends/developments throughout the AMEDD, including software upgrades, new program rollouts, and communication efforts that may affect informatics programs and, when necessary, revises the RMC's informatics strategy to accommodate these changes.
7. Creates a roadmap for migrating policies, strategy, and best practices across the RMC in a manner that addresses the preferences and needs of individuals and clinics.
8. Participates as a member CIO and IM/IT leadership committees by representing the needs and requirements of the clinical community.
9. Assists the CIO and IM/IT leadership in every stage of the system life cycle to ensure efficient and effective coordination, planning, acquisition, implementation, maintenance, and evaluation of clinical systems in the clinical setting.
10. Serves as an advisor to integrate informatics strategy, policies, and best practices into the AMEDD strategic plan.
11. Monitors and executes resource, portfolio, and personnel management initiatives.
12. Oversees informatics staff to ensure all project objectives and customer needs are met and to determine if materials, processes, or tools warrant changes or updates, and executes all people management duties, including the hiring, deployment, assessment, and development of informatics staff members.
13. Participates in knowledge sharing initiatives with other members of the CMIO community and shares tools, processes, experiences, and issues with CMIO counterparts serving MTFs and RMCS.

## Competencies\*:

- Foundational
  - » Communication
  - » Learning Agility
  - » Results Orientation
  - » Teamwork
- Supervisory
  - » People Management
  - » Talent Development
- Leadership
  - » Strategic Alignment/Mission Focus
  - » Resource Management
  - » Change Management

## Technical Skills\*:

- MS Office Suite (Excel, PowerPoint, Word)
- Clinical Systems
  - » AHLTA
  - » CHCS
  - » ESSENTRIS
  - » ICDB/Carepoint
  - » MAPS Tools (Dragon, Asutype, OneNote)
- Clinical/Business Process Analysis and Reengineering

\*Apply to all roles within scope of this engagement



# Learning & Development Solutions Library

- The Learning & Development solutions library houses the “Practice,” “Read,” and “Study/Learn” solutions for every role, competency, and technical skill in one central location

**AMEDD OCIO/OCMIO Clinical Informatics**  
Learning & Development Library

<b>1. Role</b>	Chief Medical Information Officer (MTF)	<b>3. Type</b>	All	<input type="button" value="View L&amp;D Actions"/>
<b>2a. Competency</b>	All	<b>4. Recommended</b>	All	
<b>2b. Technical Skill</b>	Select a technical skill	<b>5. Timing</b>	0 - 6 months in role	

#	Competency or Technical Skill	L&D Action	Additional Description	Type	Recommended	Timing
1	Change Management	Publish a DOTMLPF assessment for peer review and knowledge sharing	The learner will prepare a DOTMLPF Assessment on a selected project during any phase of the system lifecycle process and submit for review by peers for discussion and feedback.	Practice	Yes	0 - 6 months in role
2	Change Management	Publish a Leadership/ Stakeholder Decision Brief on a new RMC/MTF initiative for review and knowledge sharing	The learner will prepare and submit a decision brief for review and discussion by peers. The learner will use an approved MEDCOM/ RMC template and adhere to Army Decision Making standards and Enroll in these Army eLearning courses to build your Change Management competency.	Practice	Yes	0 - 6 months in role
3	Change Management	See "Leadership Curriculum" courses in Army eLearning for a variety of applicable courses: Leading Team Through Change, Leading Change, Communicating a Shared Vision, Motivating Employees and Leading Change, etc.		Study/Learn	Yes	0 - 6 months in role
4	Communication	Videotape yourself giving a presentation	Review the videotape and consider: how was your voice, tone, and pacing? did you convey the right level of enthusiasm? did you use easy to understand language?	Practice	Yes	0 - 6 months in role
5	General Knowledge	CMIO Boot camp	The CMIO Boot Camp will produce an experiential learning experience, incorporating interactive classroom elements into each topic of study. The faculty employs multiple teaching methodologies-- video, case study, group exercise--to engage the participants and apply the material directly to the physician world. Below, we have CPHIMS is a professional certification program for healthcare information and management systems professionals. Individuals who meet eligibility criteria and successfully complete the CPHIMS exam are designated a Certified Professional in Healthcare Information and	Study/Learn	Yes	0 - 6 months in role
6	General Knowledge	CPHIMSS Certification		Study/Learn	Yes	0 - 6 months in role
7	General Knowledge	MHS IM/IT Overview		Practice	Yes	0 - 6 months in role
8	Learning Agility	Annual review of RMC/MTF Strategic Plan and Balance Scorecard	This practice facilitates ongoing assessment of organizational objectives and achievements. This will also allow the CMIO to adjust plans and strategies in support of evolving mission requirements	Practice	Yes	0 - 6 months in role
9	People Management	Utilize the informatics role profiles to set expectations with your direct reports	The informatics role profiles are a great tool for clarifying key responsibilities, competencies, technical skills, etc. that are required for a role. Schedule time with your direct reports to ensure they are clear on the profile for their role	Practice	Yes	0 - 6 months in role



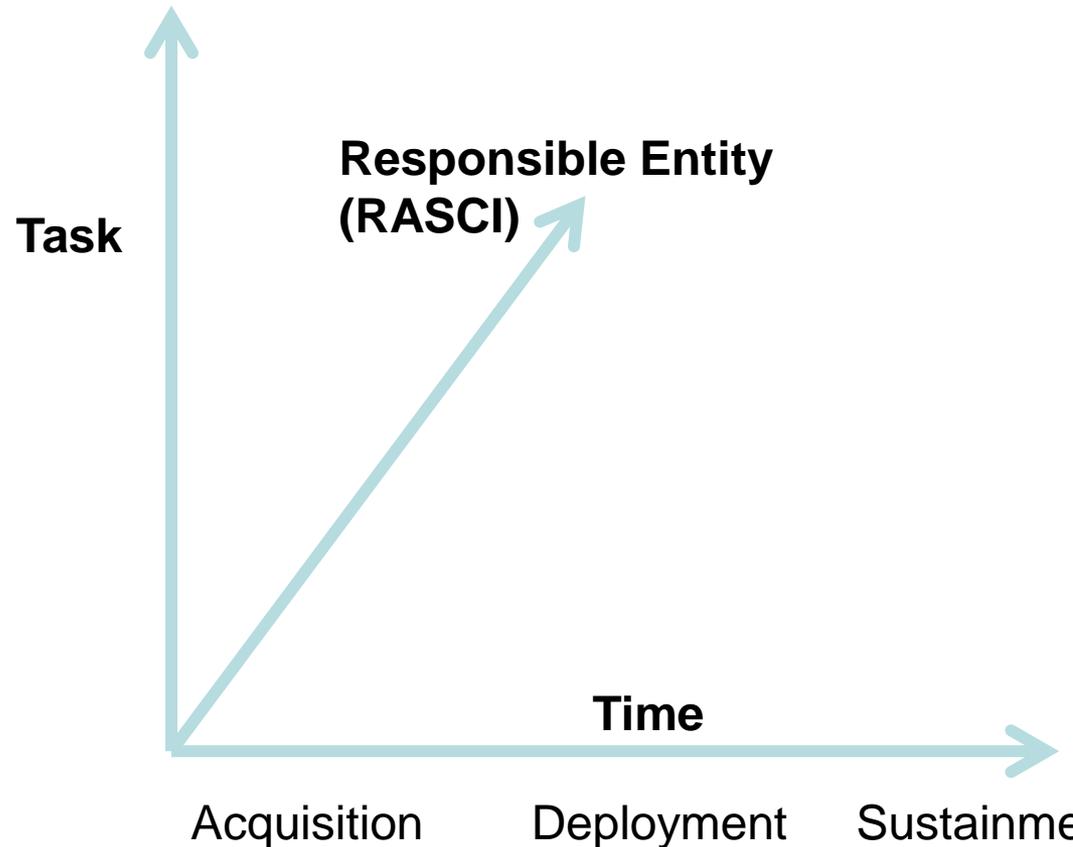
# Next Steps

- Revisit output from previous efforts
  - Review and Validate Role Profiles
  - Update Learning and Development Solutions Library
  - Expand efforts to all 5 Learning and Development Modules
  - Implement with structure for sustainment
- Contract Support
- Align with DHMSM effort
- Implement for CMIO, CST, CWA
- Expand to other role profiles- prioritize



# ROC Methodology

- High Level Tasks
- Assign RASCI
  - Responsible
  - Accountable
  - Supporting
  - Contributing
  - Informed
- For each high level task:
  - RASCI
  - Operation Plan





# Multifaceted RASCI

DHMSM Program Activities	Organizational Units														Other Units									
	PEO DHMS	DHMSM - Deployment & Training	DHMSM - Systems Engineering and Infrastructure	DMX	IPD	DHA/HT - Infrastructure & Operations	DHA/HT - Solution Delivery Division	DHA/HT - Cyber Security Division	DHA/HT - Portfolio Management & Customer	DHA/HT - Operations Delivery Division	DHA - Health Care	DHA - Business Operations Directorate	DHA - Front Office	DHA - Governance	AT&A	ASD(HA)	Services	ICJ Leadership	MTF Leadership	FAC	Clinical Champion	Joint Staff Surgeon		
Program Management & Governance - Acquisition																								
Program Management & Governance - Governance																								
Program Management & Governance - PMO																								
Configuration (Design & Build) - Design & Build																								
Change Management - Change Management & Adoption																								
Change Management - Training																								
Technical - Hardware & Infrastructure																								
Technical - Environment & Technical Change Management																								
Technical - Medical & End-User Device Integration																								
Technical - Security																								
Technical - Reporting, Extracts, and Data Warehousing																								
Technical - Interfaces & Conversions																								
Technical - Legacy System Management																								
Integrated Quality Assurance (IQA) - Testing																								
Deployment/Activation - Go-Live Preparations & Activation																								



# High-level EHR Implementation Tasks

Program Management & Governance – Acquisition

Program Management & Governance – Governance

Program Management & Governance – PMO

Configuration (Design & Build) – Design & Build

Change Management – Change Management & Adoption

Change Management – Training

Technical – Hardware & Infrastructure

Technical – Environment & Technical Change Management

Technical – Medical & End-User Device Integration

Technical – Security

Technical – Reporting, Extracts, and Data Warehousing

Technical – Interfaces & Conversions

Technical – Legacy System Management

Integrated Quality Assurance (IQA) – Testing

Deployment/Activation – Go-Live Preparations & Activation

# Questions?

LTC Rich Wilson

[xxxx.mil](mailto:xxxx.mil)

[@mail.mil](mailto:xxxx.mil)

703-681-1207

LTC Angela Icaza

[Angela.s.Icaza.mil](mailto:Angela.s.Icaza.mil)

[@mail.mil](mailto:Angela.s.Icaza.mil)

703-681-3253

