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Deputy Chief  
Requirements Analysis and Mgmt (RAM)



# 2014 Defense Health Information Technology Symposium

**Functional Requirements:  
An Enterprise Decision Making Tool**



***“Medically Ready Force . . . Ready Medical Force”***

# DHA Vision



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



***“Medically Ready Force . . . Ready Medical Force”***

## Learning Objectives

- Participants will be able to use Integrated Capabilities Development Teams (ICDT) to build consensus within functional communities.
- Participants will be able to use documented requirements prioritization to optimize limited resources.
- Participants will be able to use enterprise focused requirements documentation to promote standardization.
- Participants will be able to use analysis tools to demonstrate savings.

# Functional Requirements Agenda



- Understanding Requirements (strategies, definitions, and players)
- Current Procurement/Acquisition Process (and challenges)
- Developing a Functional Requirements Baseline (FRB)
- Optimizing Procurement/Acquisition Process (and benefits)
- Understanding the Criteria Analysis Matrix (CAM) Tool
- FRB and Portfolio Rationalization
- Summary

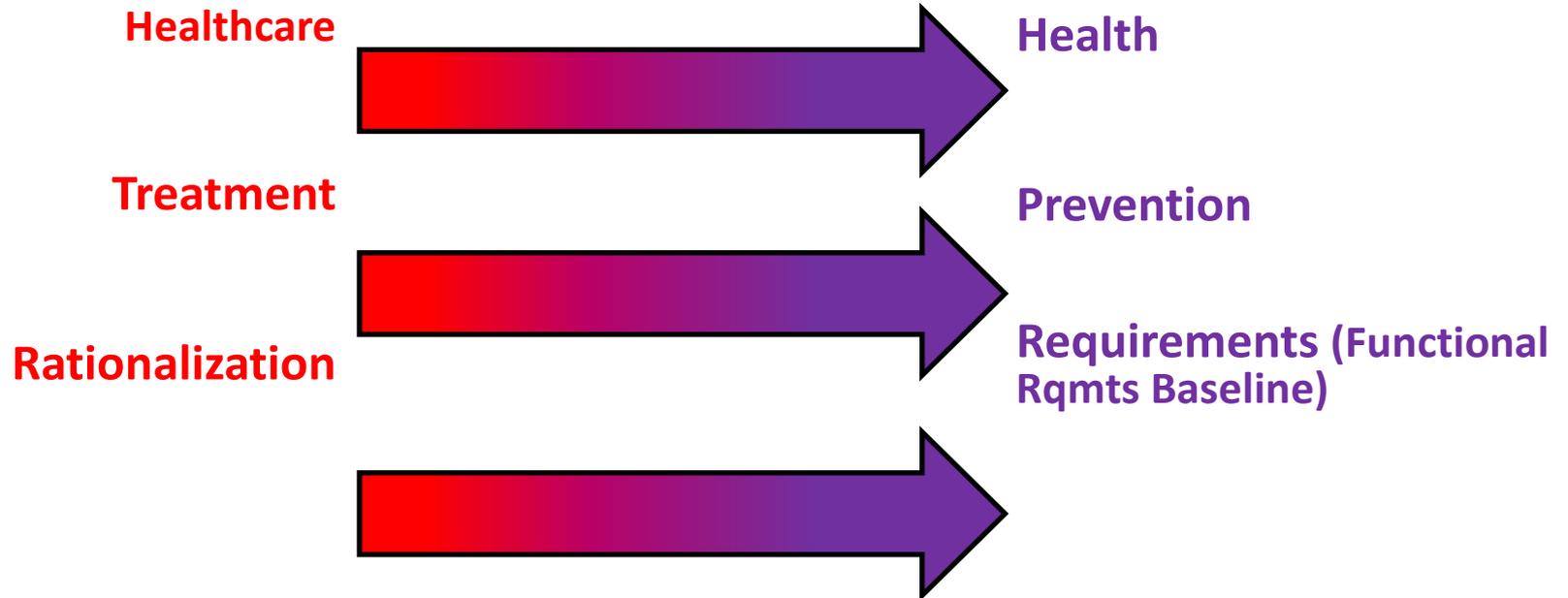
# Strategy

*Supporting a pro-active approach*



RE-ACTIVE

PRO-ACTIVE



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# What types of requirements exist?

## Types of Requirements and their Evolution

### User Need/Want Statements

- Something that a user needs/ wants
- Has potential to improve current work processes or capability gaps

### Functional Requirements

- Translated from user needs/ wants
- Specifies functional language/ business outcomes
- Does not focus on a solution

### Validated Requirements

- Functional requirements that have been clarified, vetted, and prioritized by functional community

### Technical Requirements

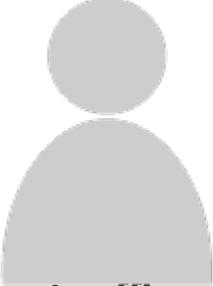
- Derived from vetted/approved functional requirements
- Represent more detailed technical terms

# Requirements Process

## *The Players*

### **RAM**

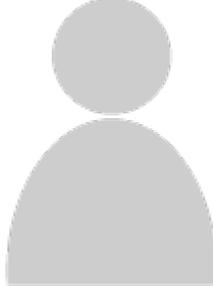
#### **Requirements Analysis and Management**



Service requirements office that insures all requirements are valid. RAM charts Integrated Capability Development Teams (ICDT) to assist in the requirements process.

### **CM**

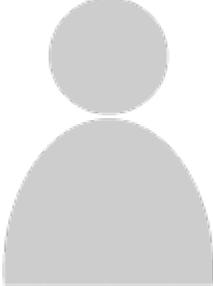
#### **Capability Manager**



Service capability manager office that insures that the User's needs are represented. CM works with Subject Matter Experts (SME) to get a complete picture of needs.

### **FC**

#### **Functional Consultant**



Service functional leadership that insures that the functional interests are in sync with enterprise strategies.

# Why are GOOD requirements important?

## ■ BLUF: Saves \$\$\$\$\$\$\$

- Supports centralized acquisition of IT system solutions
- Reduces ADA risk inherent with current stand-alone solution purchases

## ■ Required by:

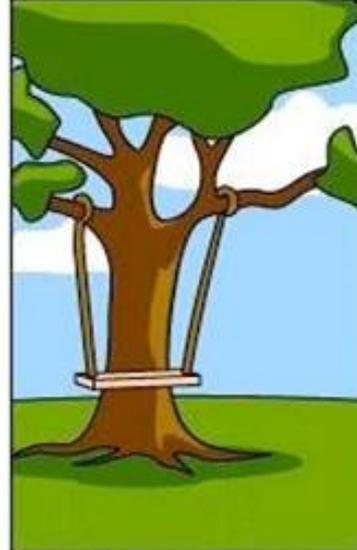
- Federal Law
- Presidential Directive
- Secretary of Defense Directive/Instruction (DODD 5000.01/DODI 5000.02)
- Joint Capabilities Integration and Development System (CJCSI 3170.01H)
- Office of Management and Budget Circulars

## ■ Best Business Practice:

- IEEE 12207 (S/W RDT&E standard); IEEE 1362-1998 (CONOPS standard)
- Gartner Group Studies



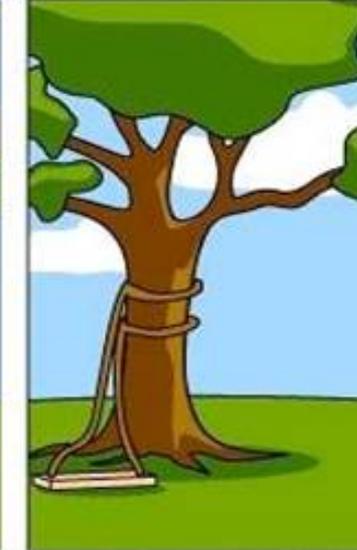
How the customer explained it



How the Project Leader understood it



How the Analyst designed it

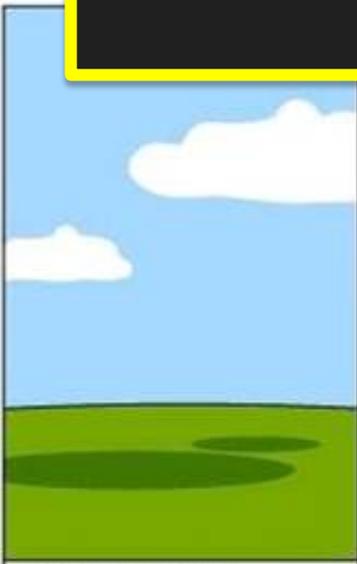


How the Programmer wrote it

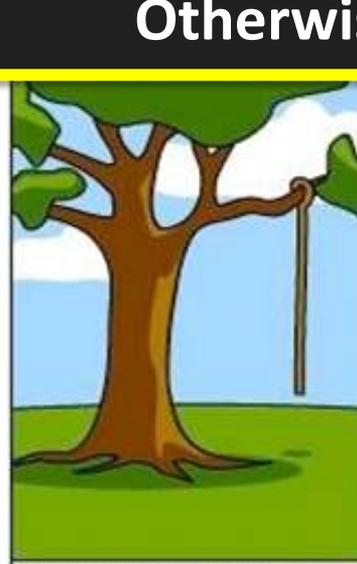


How the Business Consultant described it

**Otherwise you can end up with...**



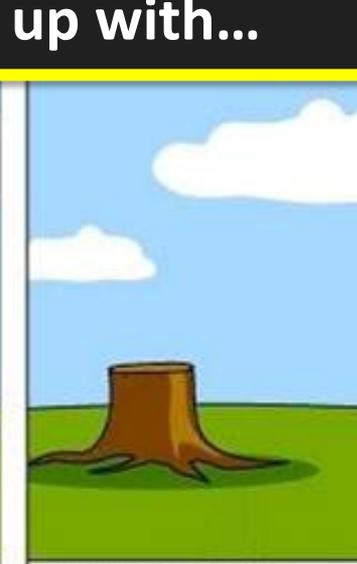
How the project was documented



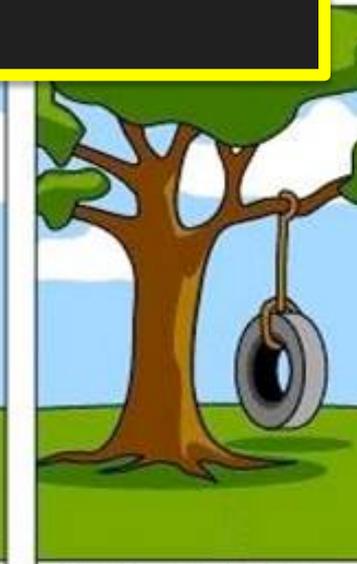
What operations installed



How the customer was billed



How it was supported



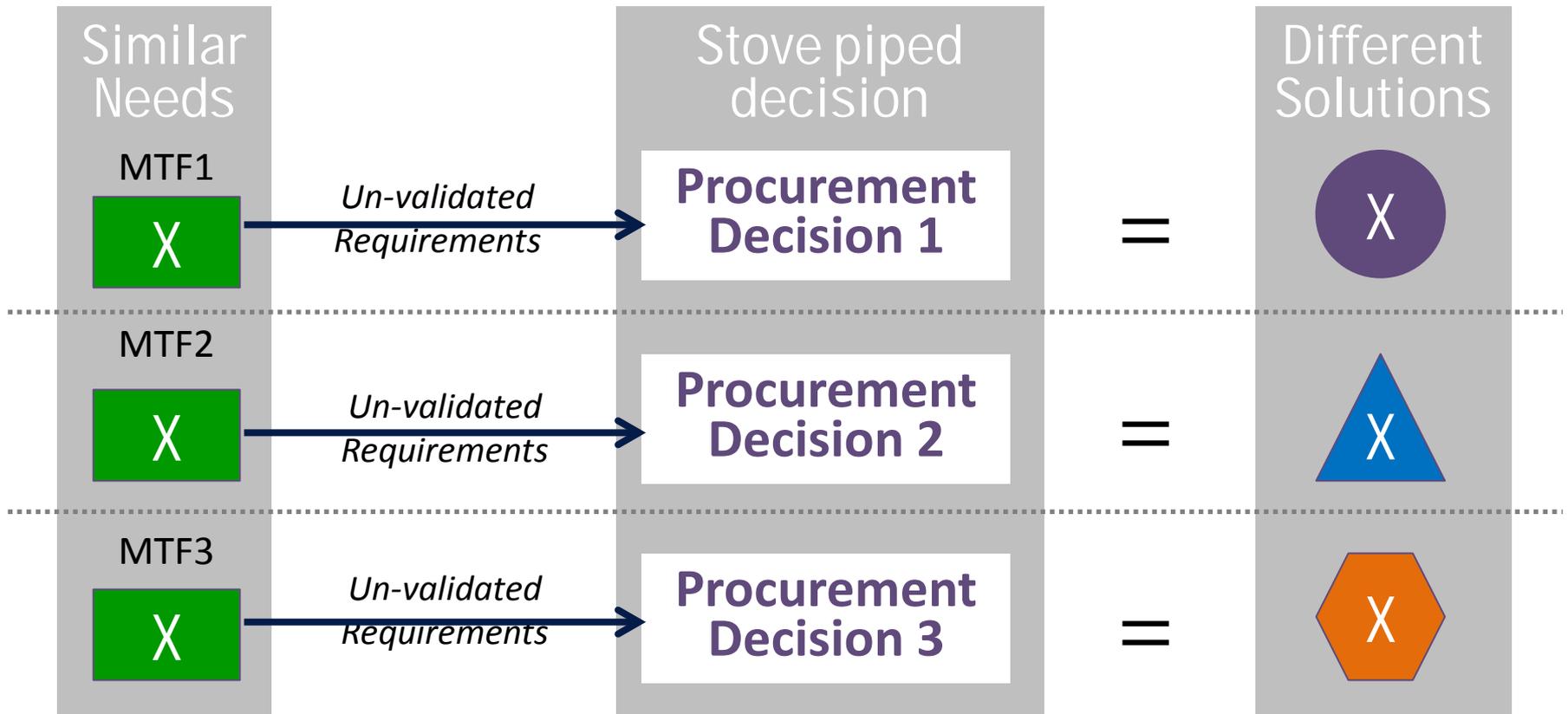
What the customer really needed

\*Source: <http://www.brunojulio.com/companies-gather-good-requirements/>

# Current Procurement/Acquisition Process Overview



Despite similar needs, duplicate solutions are being procured across MTFs



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# Current Procurement/Acquisition *Process Challenges*



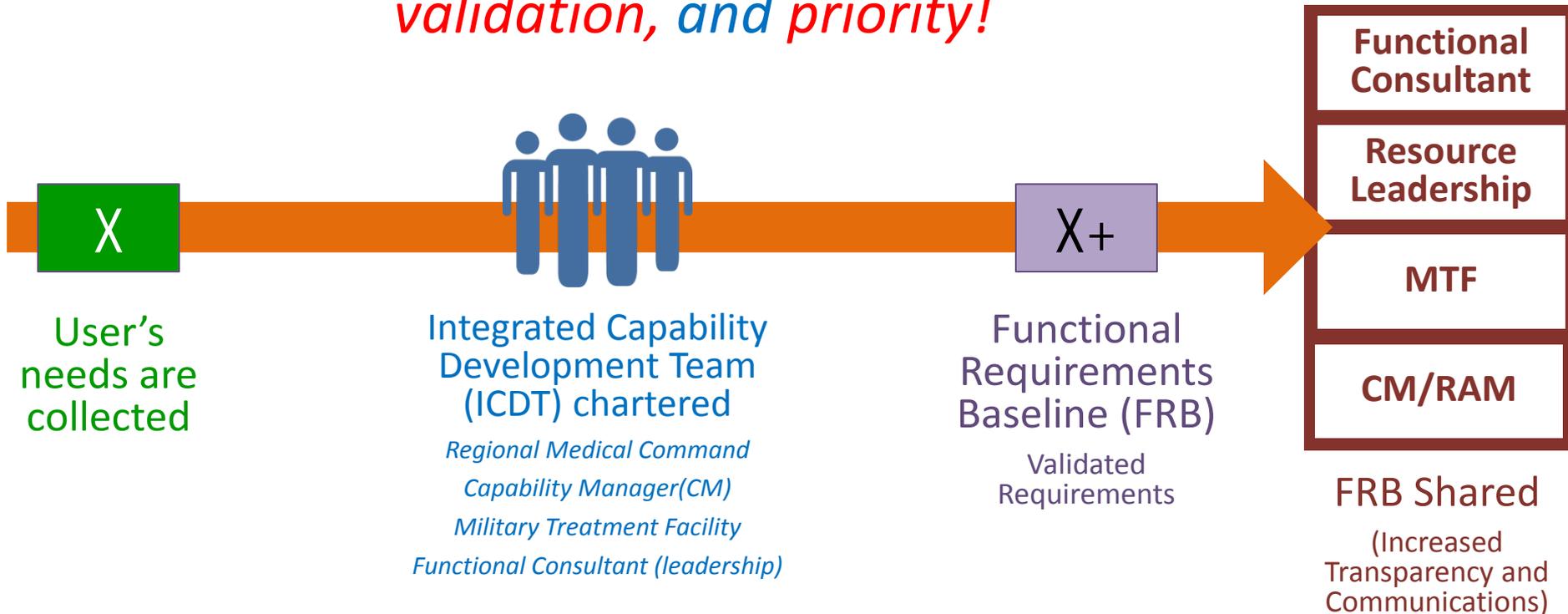
## ■ Un-validated Requirements can also lead to

- Un-prioritized purchases
- Multiple equipment sets
- Multiple configurations
- Multiple contracts
- Multiple sustainment tails
- Uncontrolled costs
- Incompatible data
- Multiple training issues

**So how can  
Validated  
Requirements help?**

# Functional Requirements Baseline (FRB) Validation Process

*ICDT establishes requirements **consensus**,  
**validation**, and **priority**!*



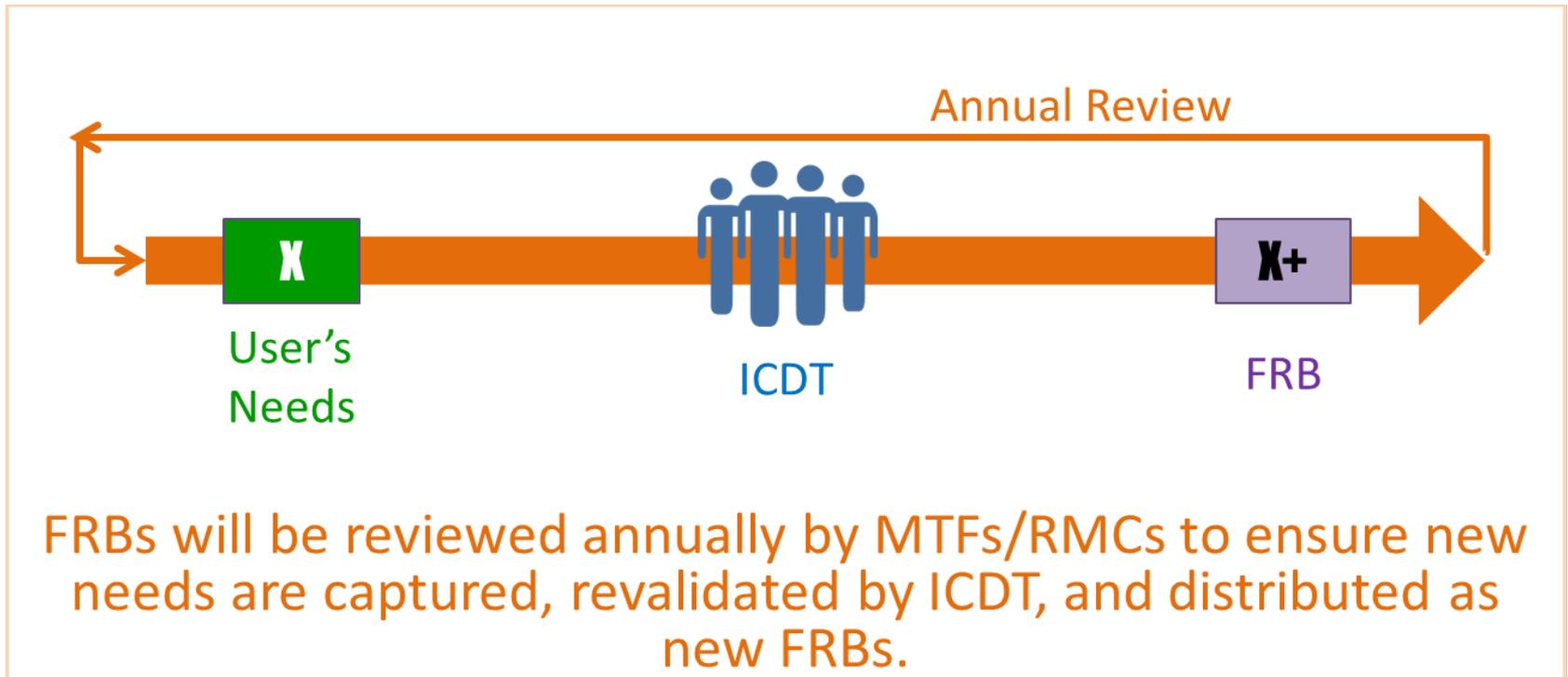
# FRB = Validated, Prioritized, and Approved Requirements



- Approval from enterprise and leadership provides credibility
  - RAM signature confirms the validation of requirements
  - Functional Consultant signature approves overarching functional requirements and priority
  - Capability Manager signature approves the user perspective of the requirements and priority

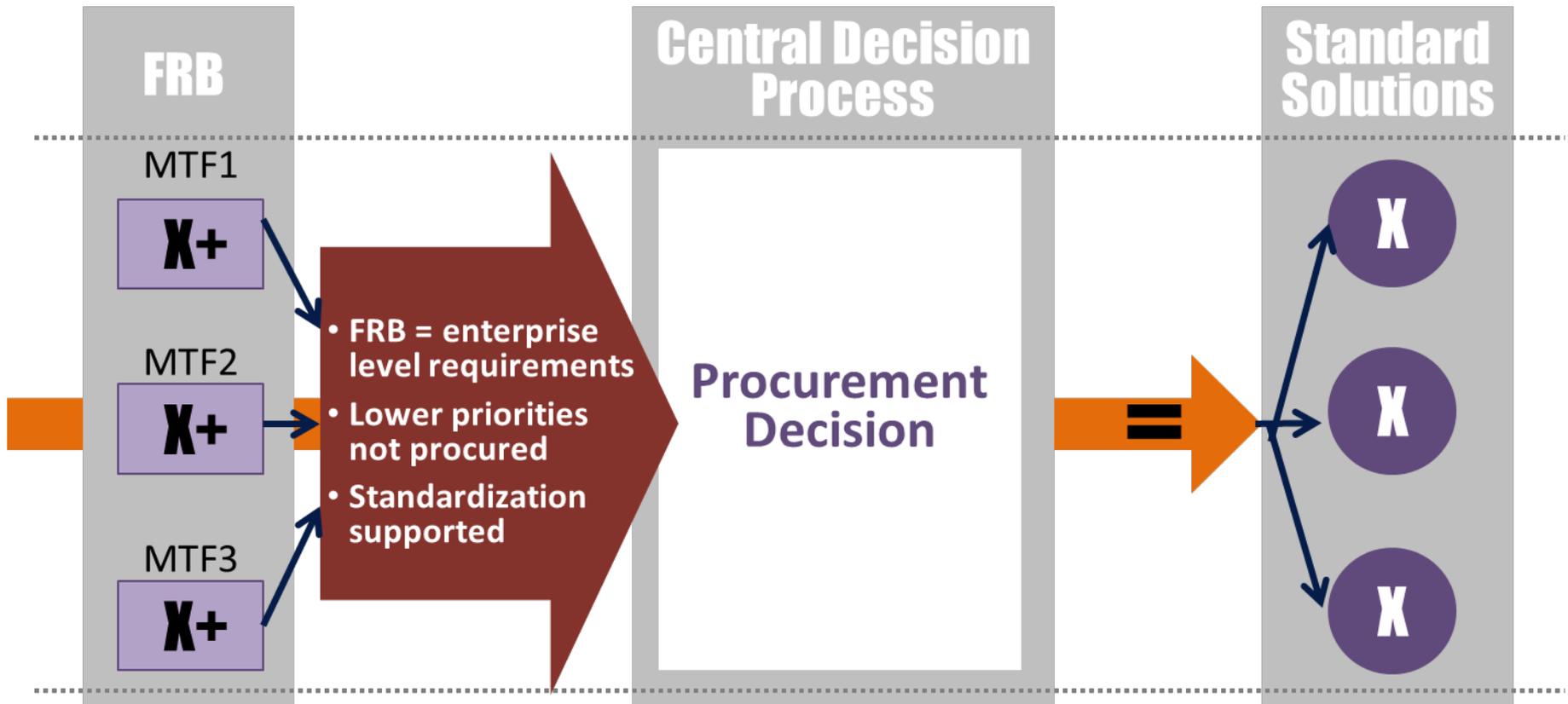
	Functional Requirements Baseline (FRB)	Priority
XXX-1	Ensure all required data (findings, diagnosis, studies) is charted into longitudinal medical record	H
XXX-2	Perform threshold testing of visual field	H
XXX-3	Perform diagnostic testing of anterior segment	M
XXX-4	Take a diagnostic quality image of anterior segment structures	M
XXX-5	Ensure adequate support of coding requirements	L

# FRB Annual Review Process



# Optimized Procurement/Acquisition Process Overview

Leverages established enterprise priorities



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# Optimized Procurement/Acquisition *Process Benefits*

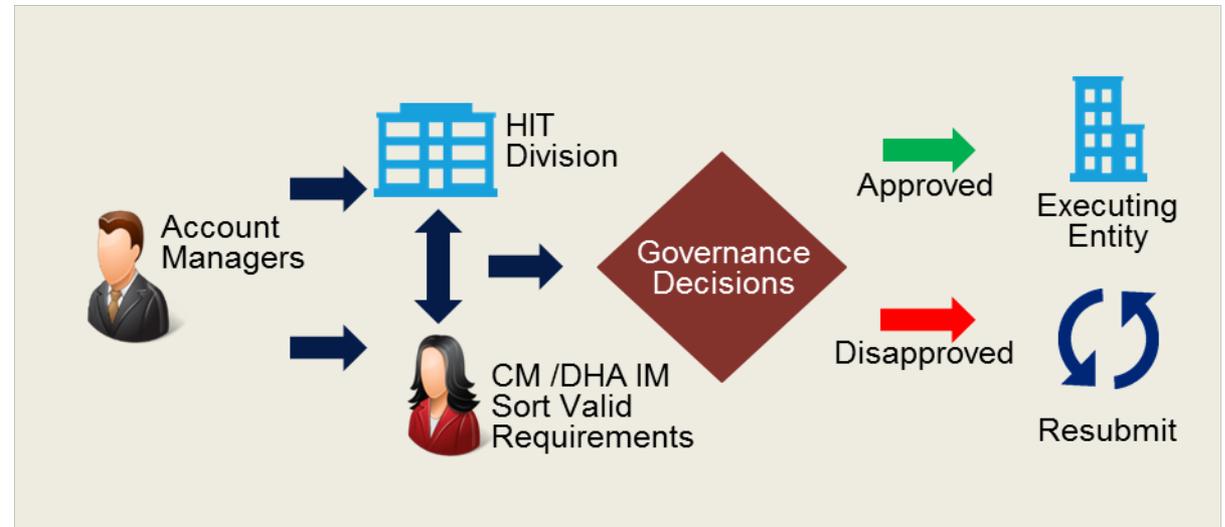
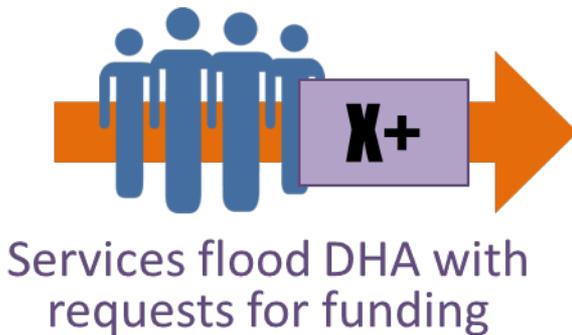


- Top priorities addressed
- Standardized equipment sets
- Same configurations
- Consolidated contracts
- Optimized sustainment
- Economies of scale
- Compatible data
- Standardized Training

# Optimized Procurement/Acquisition Process Benefits (cont'd)



## DHA Approval Process



Requests based on FRBs are *more likely to pass through decision points faster* since analysis/consensus has already been reached

# Criteria Analysis Matrix (CAM)

## *A Tool for Analysis/Standardization*



- Used as an analysis tool for standardizing portfolio/inventory
- Provides derived requirements baseline for vendor/solution evaluation
- Determines if existing systems meets or exceeds derived requirements
- Used in an Request for Information (RFI)/Request For Proposal (RFP) contracting actions

**CAM (derived requirements) is a versatile evaluation tool**

# Criteria Analysis Matrix (CAM)

## *Evaluation Process*



- FRB is broken down into next level of evaluation criteria by the ICDT
- ICDT validates criteria to insure enterprise consensus
- Scoring and totals provides a non-emotional analysis process
- Vendors and/or equipment can be rated per the established criteria

**CAM (derived requirements) evaluates vendors or equipment for standardization**

# Criteria Analysis Matrix (CAM)

## Example



	EVALUATION CRITERIA	Weight	Eq 1	Eq 2	Eq 3	Eq 4	Eq 5
Capability XXX-2	Perform threshold testing of visual field						
XXX - 2.1	All diagnostic exams included (24-2,30-2,10-2,full field, etc)	3	0	0	15	12	12
XXX - 2.2	Results must be considered as acceptable standard of care for field testing with normative database.	3	0	0	15	15	15
XXX - 2.3	Ability to run screening exams as well as well as diagnostic tests	2	6	6	10	10	10
XXX - 2.4	Capability of performing progression analysis to determine advancing condition	3	0	0	15	15	9
XXX - 2.5	Typical results within 2 minutes of testing start per eye	1	5	5	3	2	2
XXX - 2.6	small footprint	1	4	4	3	1	1
XXX - 2.7	quick startup	1	3	3	3	1	1
XXX - 2.8	able to move trial lens moves into acceptable position every time	2	10	10		6	6
XXX - 2.16	Should be able to share data for progression analysis between machines/sites. ideally with cloud to upload patient data from anywhere	2	0	0	10	2	2
XXX - 2.17	Data must be retrievable from alternate workstations per clinic policy	2	0	0	10	2	2
XXX - 2.18	Cost	1	5	5	3	3	3
	Weighted Totals		53	53	134	105	91

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# Portfolio Rationalization Analysis

## *Example (without FRB application)*

AMEDD conducted an analysis of their portfolio of optometry systems and identified duplication across almost all major areas of functionality, along with a potential reduction in the portfolio to achieve 20% in savings.

- Current State: 53 applications, \$1.2M spending baseline
- Future State: 14 applications, \$.98M spending baseline

### Functional Review of Optometry Systems

Optometry Solution Inventory						
Primary Functionality	Current Systems	Future Systems Needed	Current System Spend	Future System Spend	Projected Savings	
					%	\$
Anterior Segment Testing	14	3	\$477,440	\$355,248	26%	\$122,192
Anterior Segment Photography	7	2	\$132,359	\$105,764	20%	\$26,595
Image Management	4	2				
Posterior Segment Testing	8	3	UNK	UNK	UNK	UNK
Posterior Segment Photography	15	2	\$306,615	\$255,348	17%	\$51,267
Visual Fields	5	2	\$312,382	\$269,580	14%	\$42,802
<b>TOTAL</b>	<b>53</b>	<b>14</b>	<b>\$1,228,796</b>	<b>\$985,939</b>	<b>20%</b>	<b>\$242,856</b>

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Functional Review of Optometry Systems

M  
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Potential Cost Avoidance/Savings based on Priorities **\$148,787**

## FRB and Portfolio Rationalization

- FRB addresses the beginning of the Acquisition cycle
  - Root cause analysis reveals that excess and non-standard inventory is caused by a lack of validated requirements at procurement cycle commencement
  - Enables optimized resource planning and investments
- Portfolio Rationalization is at the end of the Acquisition cycle
  - Reduction of inventory is treating the symptom
  - Rationalization does not prevent/limit reoccurrence of excess inventory

**FRB (validated requirements) usage can prevent excess inventory**

## Summary

- ICDTs build consensus and enterprise focus within functional communities
- FRBs can justify resources by using documented requirements prioritization
- FRB/CAM are tools that promote standardization thru enterprise focused requirements documentation
- FRB/CAM can demonstrate savings through cost avoidance
- Enduring standardization can be achieved by using CAM objective criteria and analysis

# Questions?

**Please complete your evaluations**



## Contact Information

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## Capability Managers

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# Requirements Analysis and Management (RAM) Staff



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  - Acq Certified Life Cycle Log, Level III
  - Acq Certified Prgm Mgt, Level II
  - Acq Trained Rqmt Mgr & Combat Dev
  - BA, Biology
  - MA, Acquisition & Procurement Management
- Ms. Renee C. Nicholas
  - Acq Certified Info Tech, Level III
  - Acq Certified Prgm Mgt, Level II
  - Acq Trained Rqmt Mgr & Combat Dev
  - BBA, Business Administration
  - MA, Health Services Management

- Mr. C D. Withrow, Sr.
  - Army Acquisition Corps Member
  - Acq Certified Info Tech, Level III
  - Acq Certified T&E, Level III
  - Acq Certified Prgm Mgt, Level III
  - Acq Certified Life Cycle Log, Level I
  - Acq Certified Business - Cost Estimating, Level I
  - Acq Certified Systems Planning, Research, Dev & Eng – Systems Engineering, Level I
  - Science & Technology Manager, Level I
  - Acq Certified Facilities Engineering, Level I
  - Acq Trained Rqmt Mgr & Combat Dev
  - BS, Mechanical Engineering
  - MS, Engineering Systems Management
- Ms. Jeannette G. Koppers
  - Acq Educated
  - Rqmts Educated
  - Sharepoint Admin

## References

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- Government Performance and Results Act
- Clinger-Cohen Act
- DTM 11-009, “Acquisition Policy for Defense Business Systems”
- Joint Capabilities Integration and Development System (JCIDS)
- Office of Management and Budget Circulars

This is Your DHA .....

Thank You For All Your Efforts!



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