



Testing for an Enterprise Enterprise Service Mission Threads

Mission Threads



The ability to achieve a desired effect under specified standards and conditions through combinations of means and ways across doctrine, organization, training, materiel, leadership and education, personnel and facilities (DOTMLPF) to perform a set of tasks to execute a specified course of action.

The documentation of the Warfighter's critical path

DoD OV-1

Warfighter Operations



Business Operations

Relating Threads to Services

- Mission Threads rely on Enterprise Services (ES), where the building blocks of the threads are services
- Mission Threads have 3 key components (End-state, Activities, & Objects)
- Mission Threads if clearly purposed, can be decomposed into testable measures
- Testing Mission Threads is a flexible process by using a prioritized selection of desired effects and high level tasks



End-state



Activities



Objectives

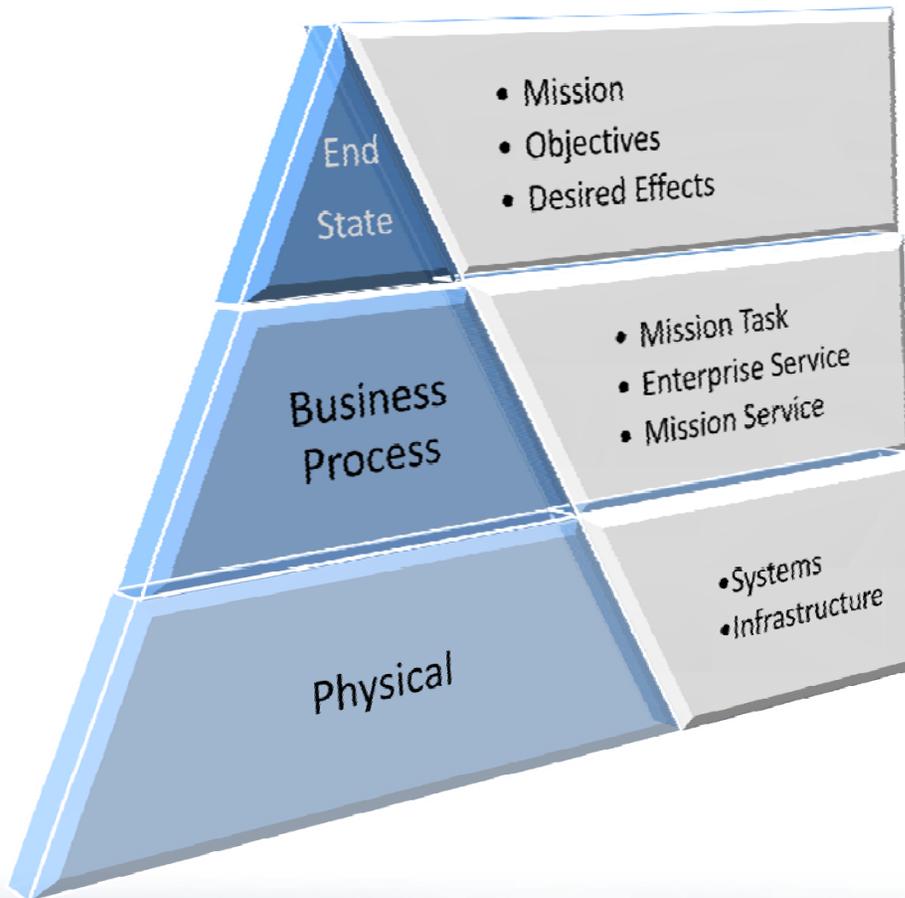
Enterprise Services marry **business process** (that is **Warfighter missions and tasks**) to the enabling IT capabilities

Analytic Framework

- Mission Analytic Framework systematically maps components of the enterprise architecture, in a robust and repeatable manner, to a mission thread in order to evaluate the operational effectiveness of the mission within the enterprise architecture and TTPs in use
 - A decomposition from warfighter language on mission threads into relevant components such as mission, task, and system
 - Focuses the analyst on relevant attributes to ensure appropriate set of measures across mission, tasks, and services
- Why do we need it?
 - Gives testers an understanding of relationships between components so they can make objective statements on impact to mission and task outcomes

How to Measure for the Desired Effects!

Framework Structure

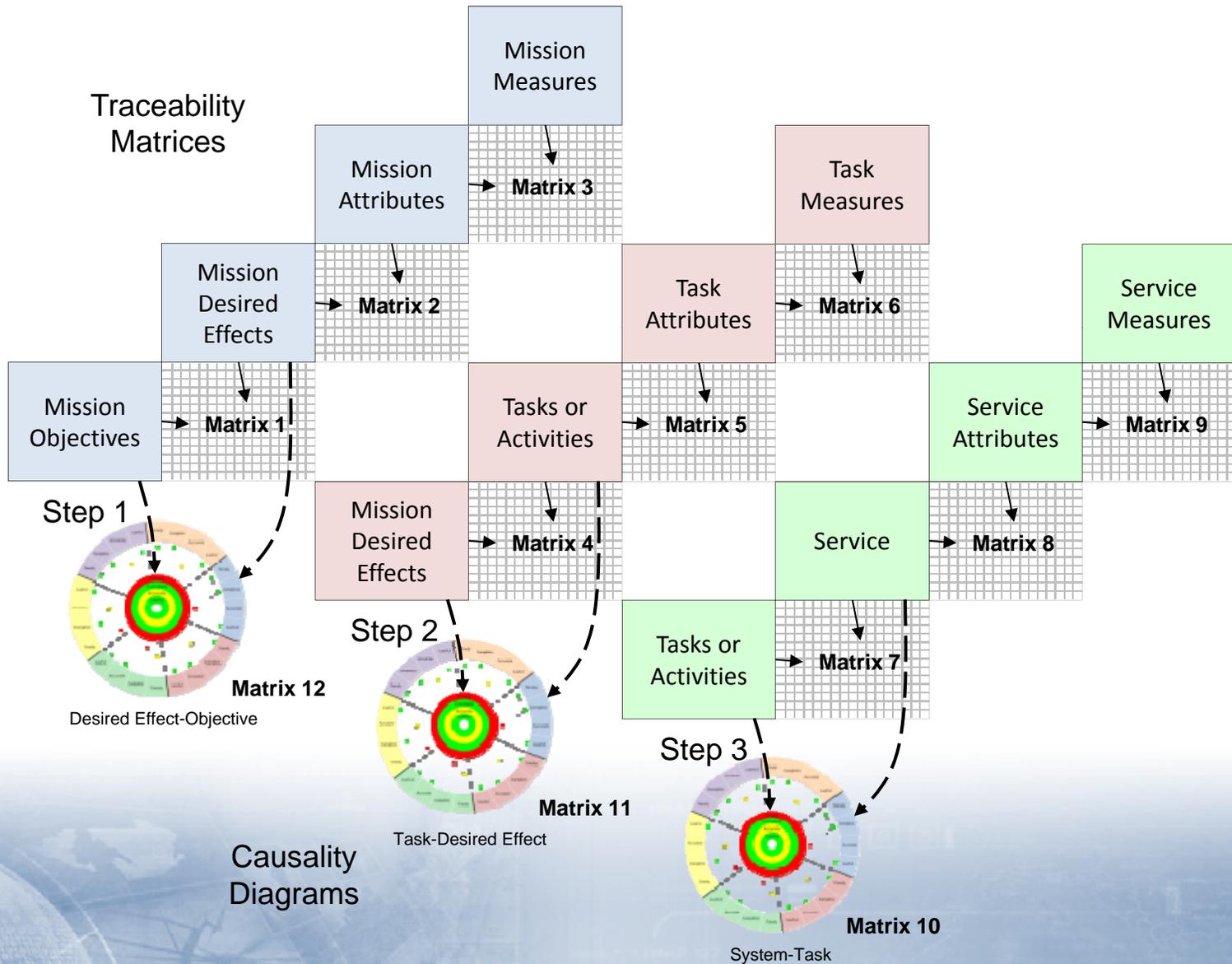


• Framework of measures that examines all levels of capability

- Mission Effectiveness
- Mission Task & Service Suitability
- Enterprise Infrastructure Attributes

The Framework is based on tasks necessary to accomplish a mission in an Enterprise Environment

Mission Framework



Enterprise Services to the Edge



Agencies



Core Services

Chat
Voice
VTC (Video)
Global Directory Services
Web Services
E-mail

Services

COCOMS



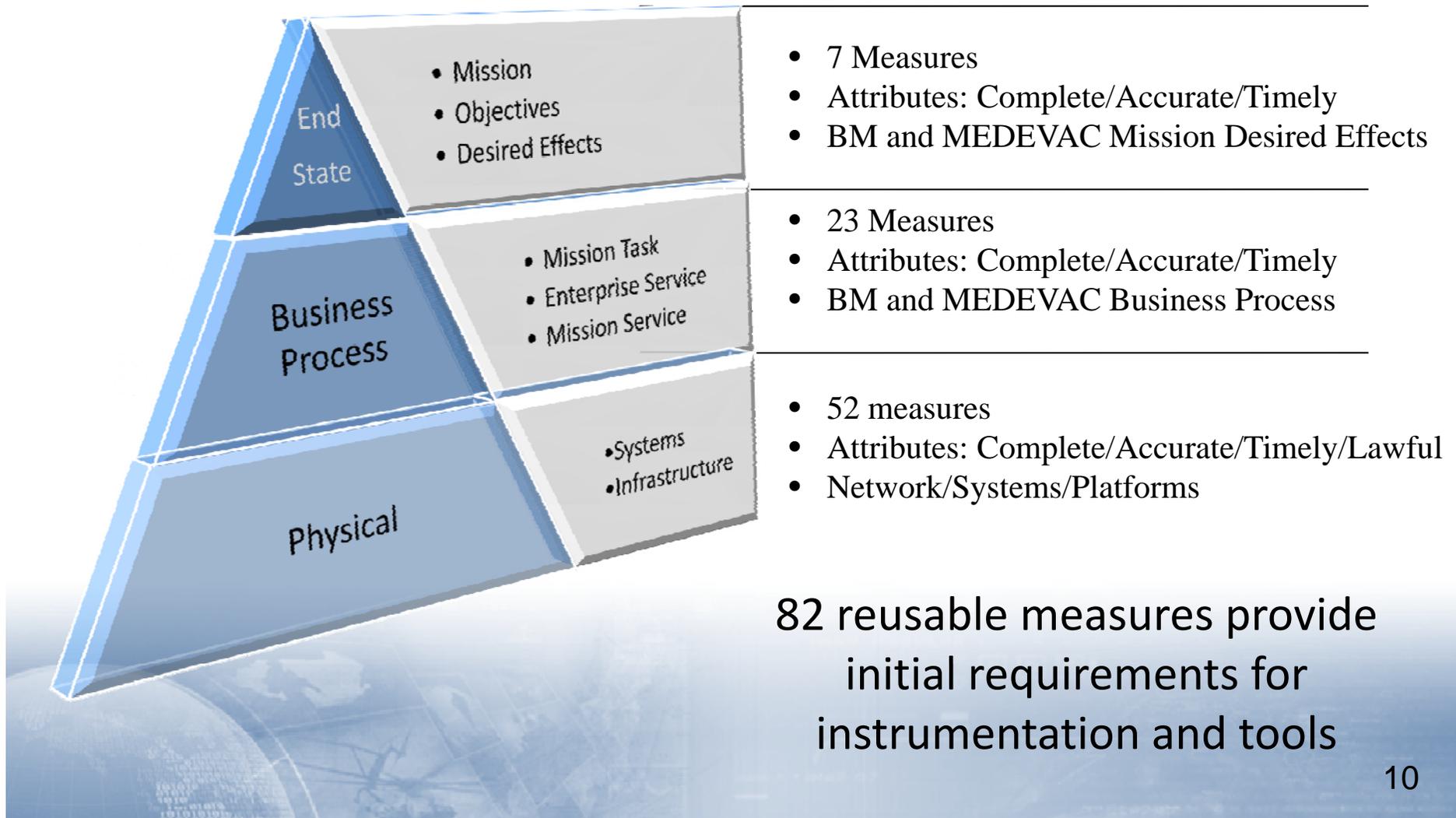
Attributes: Confidentiality, availability, integrity, authenticity, non-repudiation, agility, robustness, persistent, accessible, security, visibility

How to Develop Measures

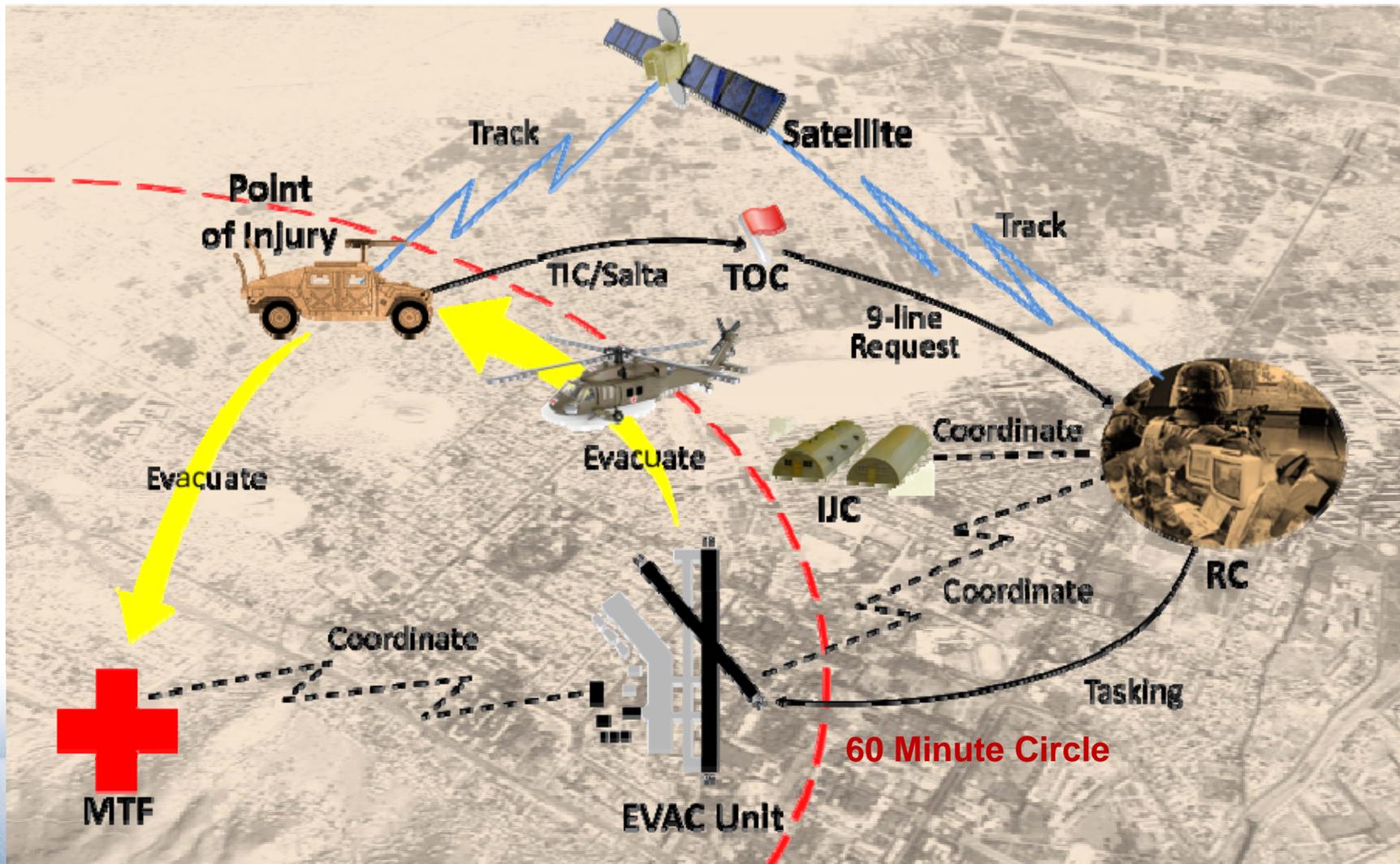
- Using an analytical framework, step by step, define the following
 - Mission definition
 - Business Process (task/service)
 - Physical - Identify relevant systems and facilities
 - Identify appropriate attributes
 - Establish relationship between mission /business process & services/systems & facilities

Methodology Use Case

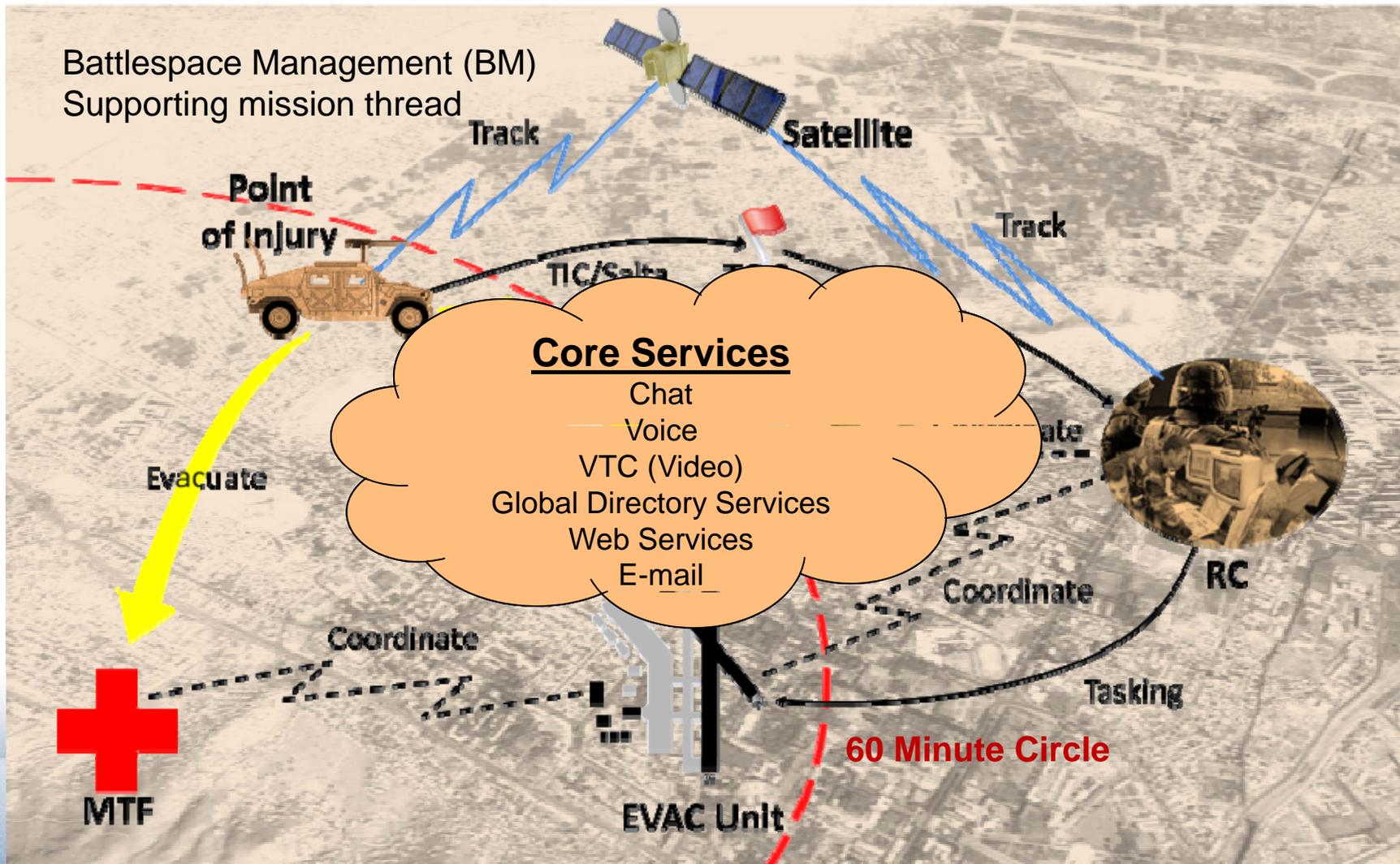
Battle Management and Medivac



MEDEVAC OV-1 Use Case



MEDEVAC OV-1 Use Case



BM/MEDEVAC Results

MEDEVAC System		MEDEVAC Tasks		MEDEVAC Mission	
Attribute	Systems	Attribute	Request – Tasking – Coordinate	Attribute	Desired Effect
Robust		Complete		Timely	
		Timely			

BM System		BM Tasks			BM Mission	
Attribute	Systems	Attribute	Ground Tracks	SIGACTS	Attribute	Desired Effect
Complete		Complete			Complete	
Accurate		Robust			Accurate	
		Accurate				
		Lawful				

- ☑ MEDEVAC System Functionality did not affect MEDEVAC Task or Mission Desired Effects – mitigated by alternative TTPs
- ☑ BM System Functionality and Task Performance did not adversely affect BM or MEDEVAC Mission Desired Effects – deficiencies were not relevant to mission

Example of Enterprise Metrics

Parameter	Context	Threshold	Objective	
Diverse Devices	The user experience should be strikingly similar whether the user is in a remote location, using a wireless or hand held device, PC or high-end workstation.	Provide standard service to all approved devices 95% of the time.	Provide standard service to all approved devices 98% of the time.	
Performance	Handle sudden/big increases in users from other Services with no degradation of performance.	Maintain an optimal environment 99% of the time. (Performance	Same as Threshold	
Core Enterprise Services	Availability	DoD users can access any application or any service from any device, at any time and never experience performance degradation.	Available for use 95% of time.	Available for use 99.99% of time.
	Supportability	Centralized Management system supporting the Defense Enterprise Service Centers	Transparency of 98% of Tier 1 to Tier 2 Activities to Users and Support Personnel	Same as Threshold
	Centralized Management	Provide customers uninterrupted, continuous access to information technology equipment and host network and data	Provide 24x7x365 support to resolve technical issues without adversely impacting mission	Same as Threshold
Parameter	Context	Threshold	Objective	
Modular Design	Evaluate modularity of a service to ensure an unrealistic interdependencies are not designed into an enterprise solution set.	95% the interface components are separated from the business logic and the data model components	Same as Threshold	
Legacy Interfacing	Evaluate ability to maintain interfaces with legacy services in a modular fashion.	100% of input/output operations requests are redirected to the legacy system. (may use screen and database proxies)	Same as Threshold	

Physical

Business Process

Metrics are evaluated from different perspectives – not just PM is responsible!

Mission Thread Benefits

- Efficient and agile planning, execution and analysis methodology
- Methodology is scalable to the environment
- Mission Thread Analytic Framework (End-state, Business Process, Objects) provides analytical rigor to answer mission concerns (the “so what” questions)
- Traces causal connections between system, task and mission
- Measures are re-usable across the Enterprise
- Measures apply to not only testing but overall Governance and Management of the GIG

QUESTIONS

