



Interoperability Process

and

Net-Ready Key Performance Parameter (v1.0)

LTC Tom Gaetjen

J6

Agenda



- **Set Stage**
- **Today's Approach**
- **Tomorrow's Vision**
- **How Do We Get There?**

Revised DODD 5000.1, DODI 5000.2 and DOD 5000.2R - USD-AT&L

DODD 4630.5 & DODI 4630.8 - OASD-NII

Capabilities

CJCSI 3170 (J8)

- Capability Validation Process/Procedures
- ICD, CDD, CPD Format
- NET READY KPP

CJCSI 6212 (J6)

- Interoperability and Supportability Certification and Testing
- Methodology for Net Ready KPP Development /Validation

Acquisition

Information Support Plan (OASD-NII)

Operational/Systems /Technical Architecture Infrastructure Support

Testing

TEMP

Systems specs accurately reflect requirements and acquisition documents

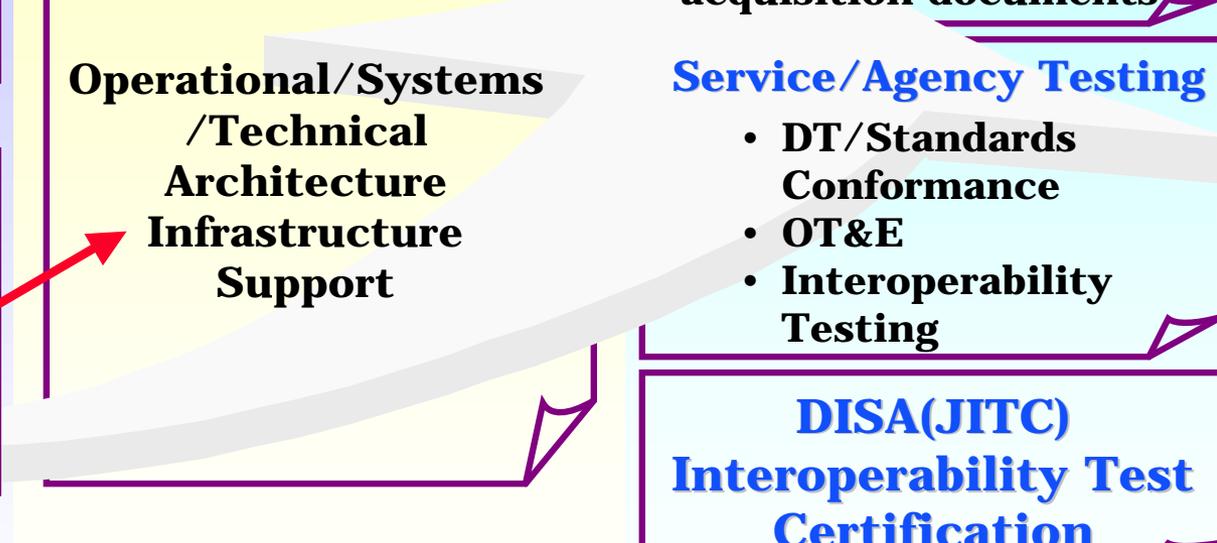
Service/Agency Testing

- DT/Standards Conformance
- OT&E
- Interoperability Testing

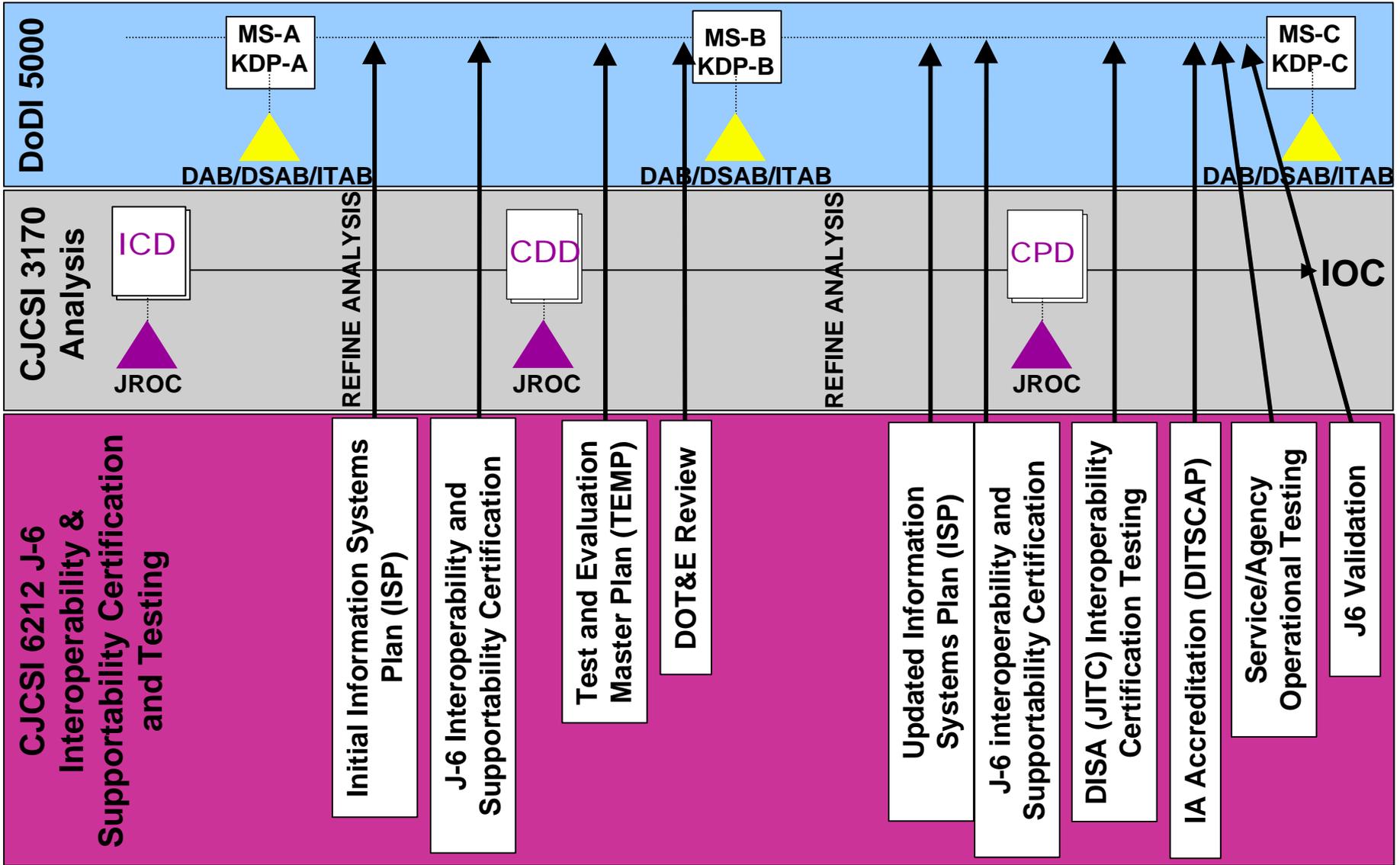
DISA(JITC) Interoperability Test Certification

J-6 Interoperability System Validation

Process



Sync – DoDI 5000 & CJCSI 3170 and 6212



Interoperability KPP Today

Top-level IERs will be used as the basis to develop interoperability KPPs. The interoperability KPP definition will include that all top-level IERs will be satisfied to the standards specified in the threshold and objective values.

Typically the threshold criterion for the interoperability KPP will be 100 percent accomplishment of the critical top-level IERs, and the objective criterion for the interoperability KPP will be the accomplishment of all top-level IERs.

Interoperability KPP	Threshold (T)	Objective (O)
All top-level IERs will be satisfied to the standards specified in the Threshold (T) and Objective (O) values.	100% of top-level IERs designated critical	100% of top-level IERs

(CJCSI 6212.01B)

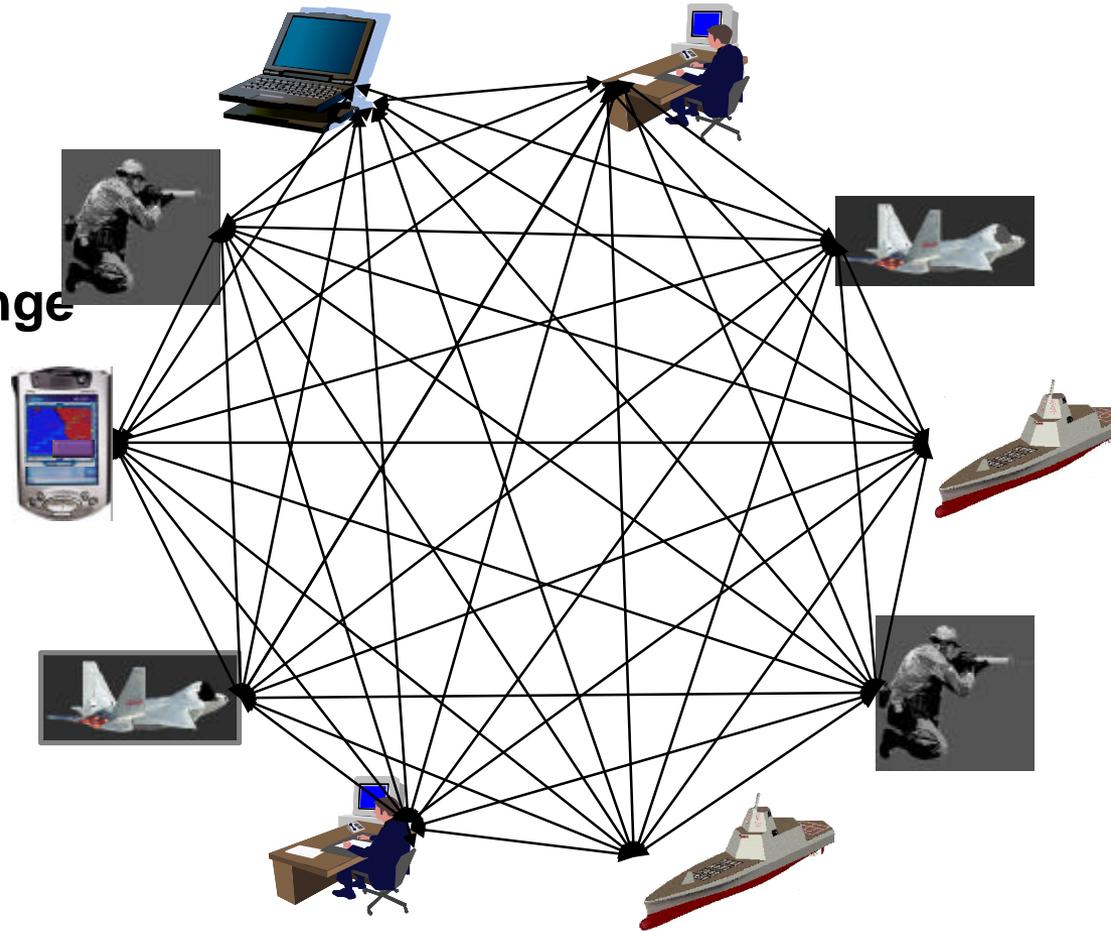
Problem: IER Scalability

One-to-One

Current Interoperability KPP centers around one DoD architectural view (OV-3) that contains “Information Exchange Requirements” (IERs)

- One-to-one relationship (point-to-point)

This example: 10 systems
IERs $10(9-1) = 90$



Operational Information Exchange Matrix (OV-3) – Notional USCENTCOM Targeting Extract

* Identifier/ Name of Operational Needline Supported (from OV-2)	* Identifier/ Name of Information Exchange	* Nature of Transaction								* Purpose/ Triggering Event	* Information Source		* Information Destination	
		* Mission/ Scenario	Language (For Multi-National Operations)	* Description (Content)	Size	Units	* Media	Collaborative (Y/N)?	LSI Level Required		* ID of Producing Node (facility or logical node)	* ID/ name of Producing Activity	* ID of Receiving Node (facility or logical node)	* ID/name of Receiving Activity
1	WOC-AOC	Targeting	Eng.	BDA Reports	1-10 pgs	.5-2 MB	.doc .jpg .mpg .ppt .cgm	Y	2a	Air Strike 072200 0615am	XXXth TFW	WOC	609 AIS	AOC
	WOC-AOC	Targeting	Eng.	Target Nominations	1 pg	20KB	.doc	N	1b	ATO XXX 072300	XXXth TFW	WOC	609 AIS	AOC
2														
⋮	⋮	⋮	⋮	⋮	⋮	⋮	⋮	⋮	⋮	⋮	⋮	⋮	⋮	⋮
n	MAW-AOC	Targeting	Eng.	BDA Reports	1-10 pgs	.5-2 MB	.doc, .ppt .jpg, .cgm .mpg	Y	2a	Air Strike 072200 0615am	VMF XXX	MAW	609 AIS	AOC

Note: All values shown above are notional.

Solution: The Net-Ready Approach

One-to-Many

Net Ready approach centers on central network:

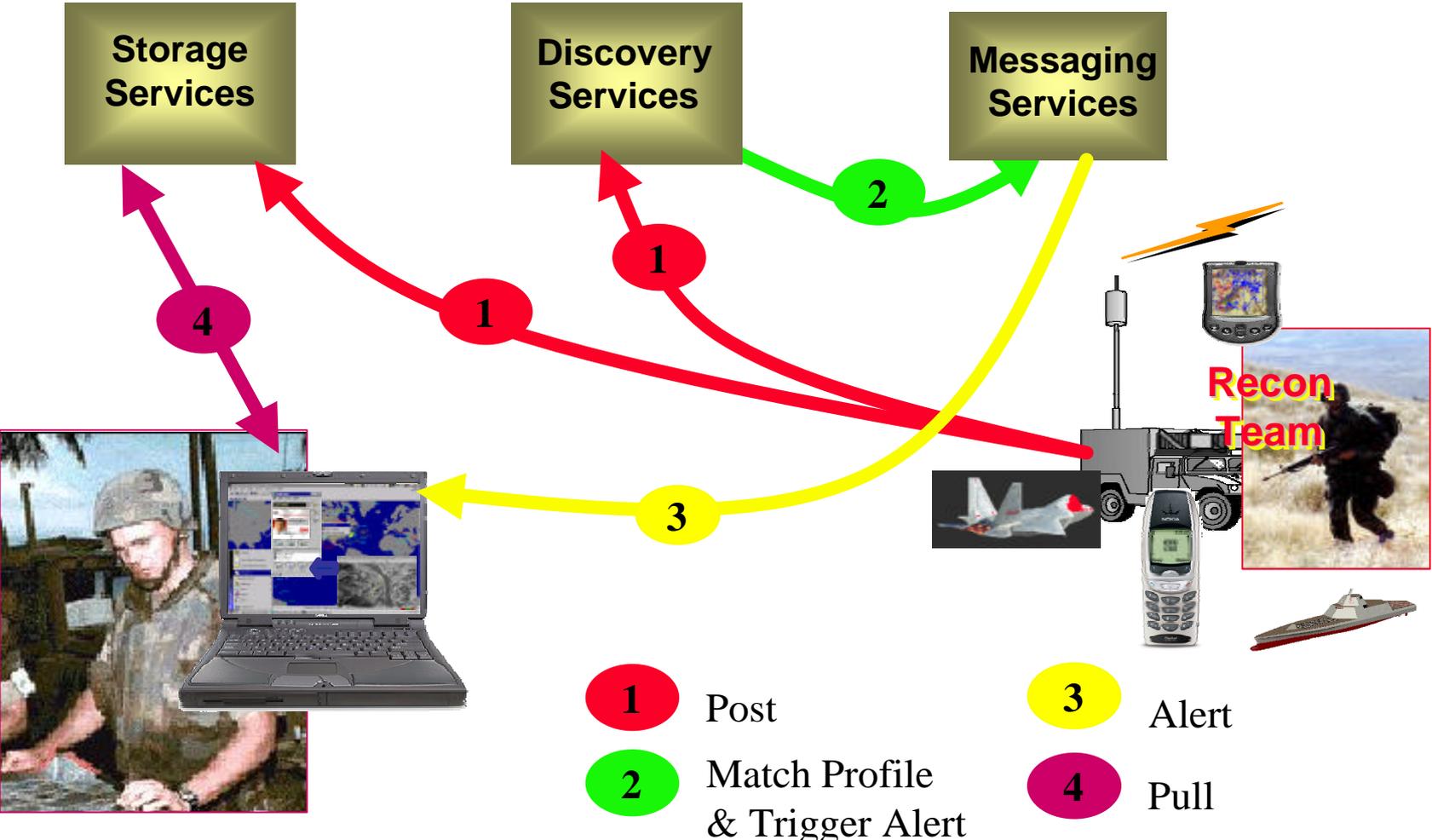
- Focus on organizational contributions and consumption of information
- One-to-network paradigm



This example: 1 system has to deal 1 interface



How GES/NCES works

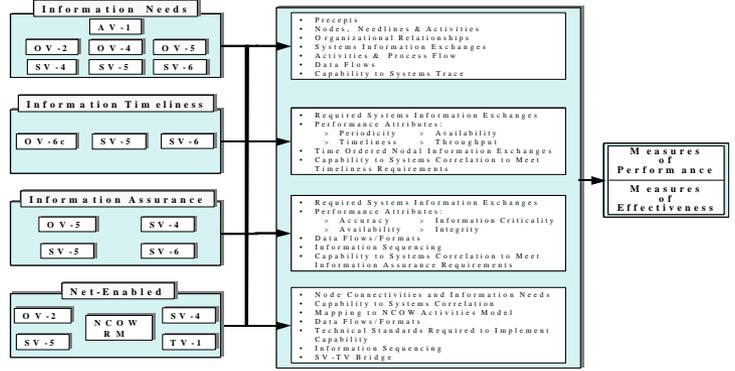


Net-Ready KPP

NCOW RM Compliance



Integrated Architecture

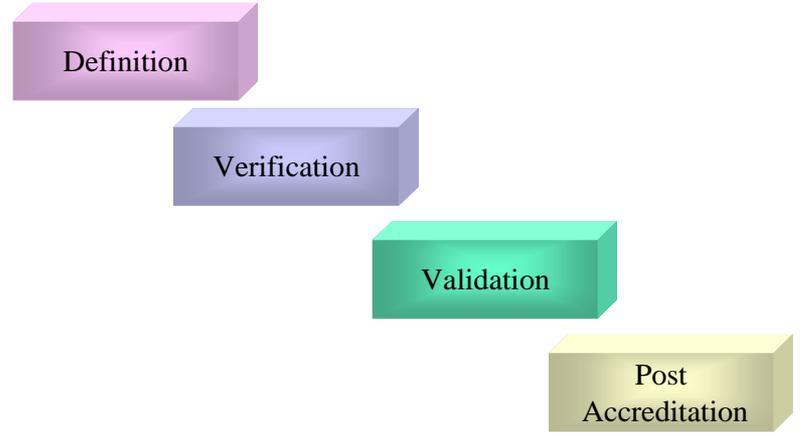
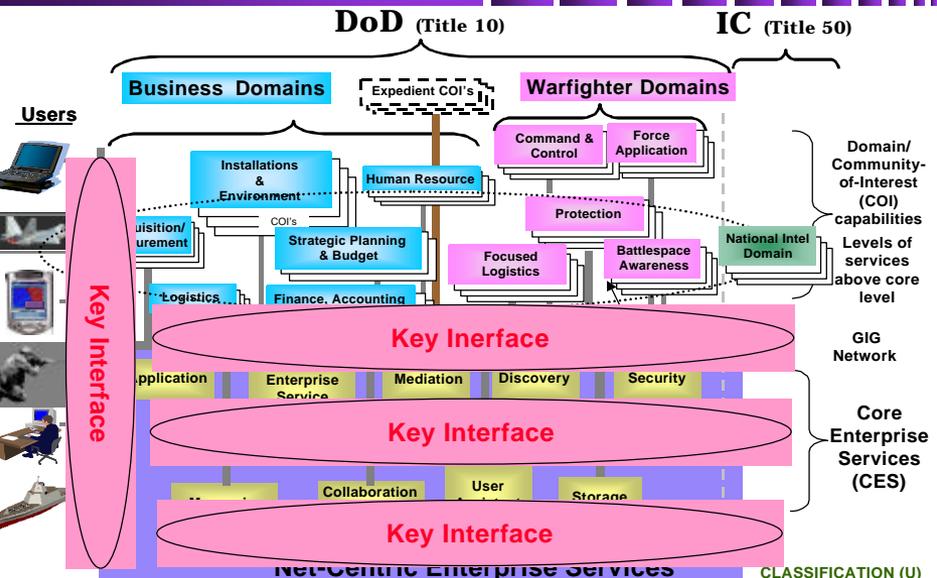


KIP Compliance

Information Assurance

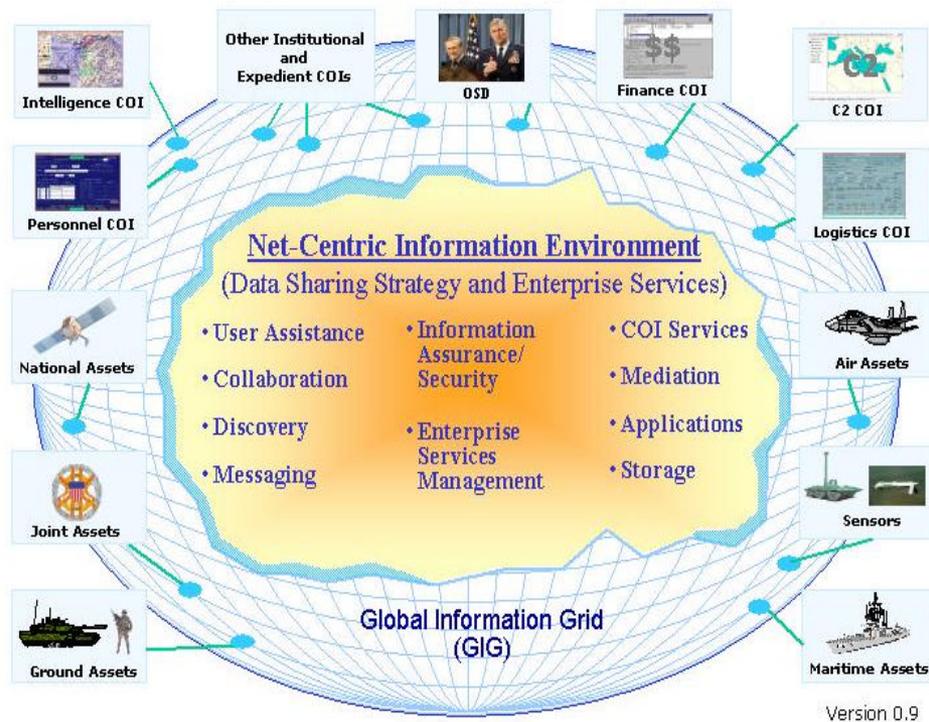
(DITSCAP*) Information Assurance

GIG Enterprise Services Vision



*DoD Information Technology Security Certification and Accreditation Process

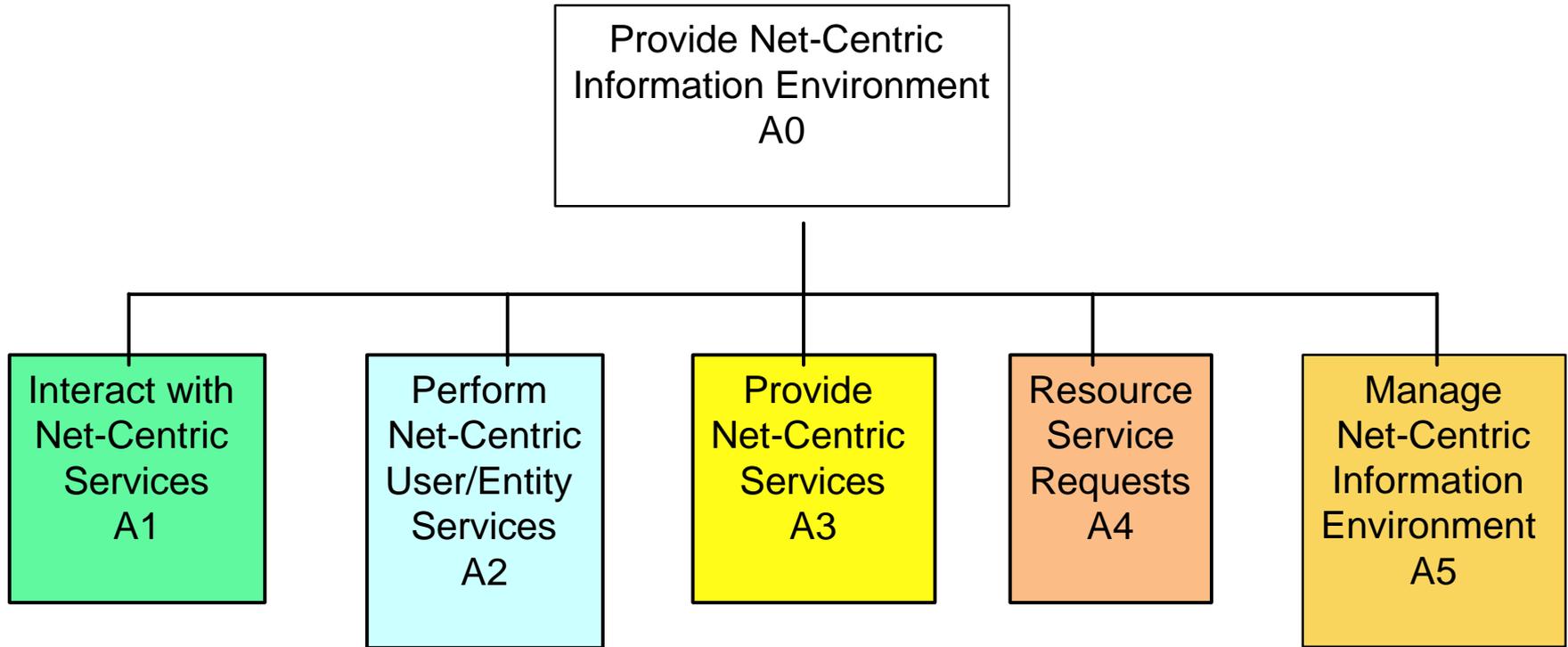
Net-Centric Operations and Warfare (NCOW) Reference Model



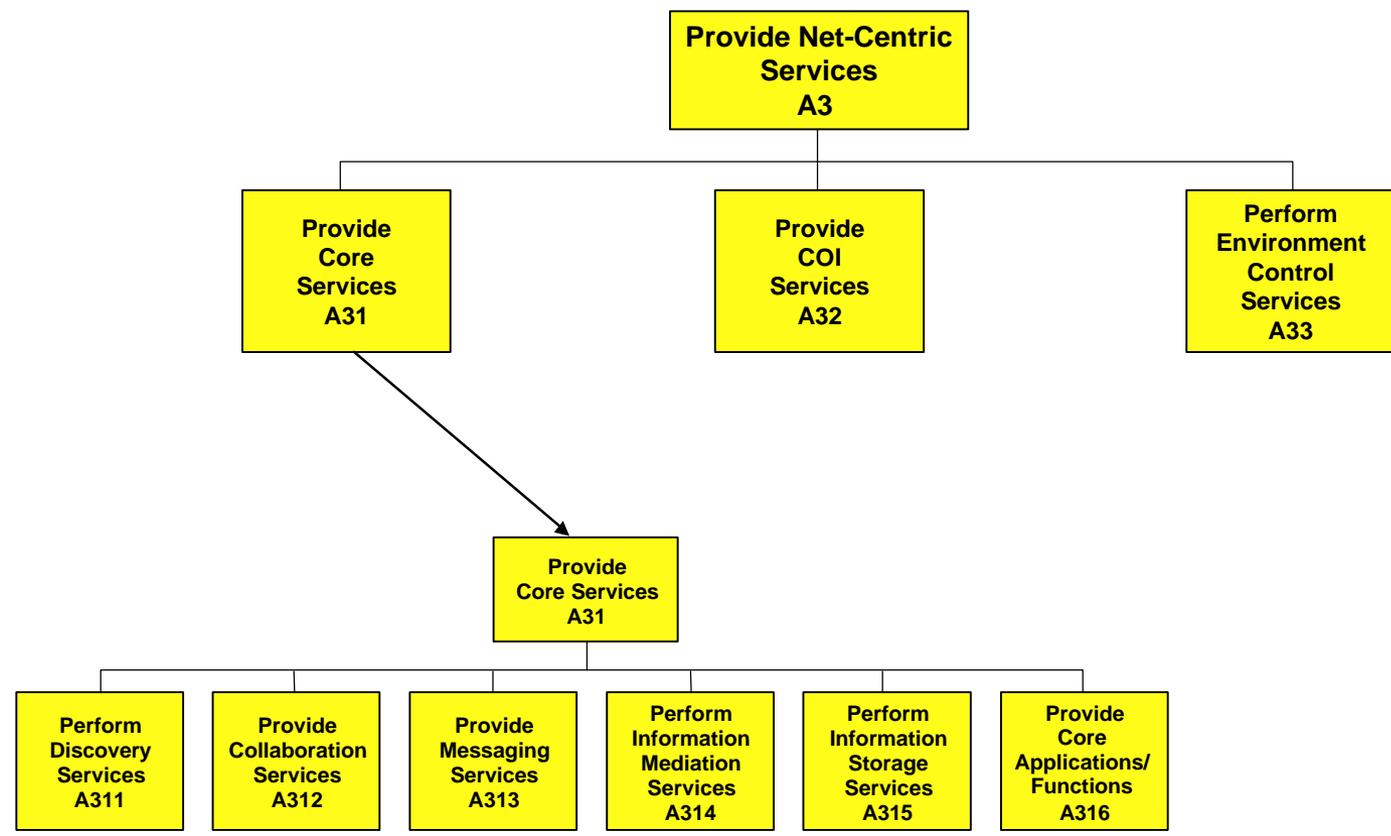
- **Generic user-interface**
- **Intelligent-assistant capabilities**
- **Net-centric service capabilities (core services, Community of Interest (COI) services,**
- **Environment control services**
- **Enterprise management components.**

Net-Centric Operations and Warfare (NCOW)

Reference Model

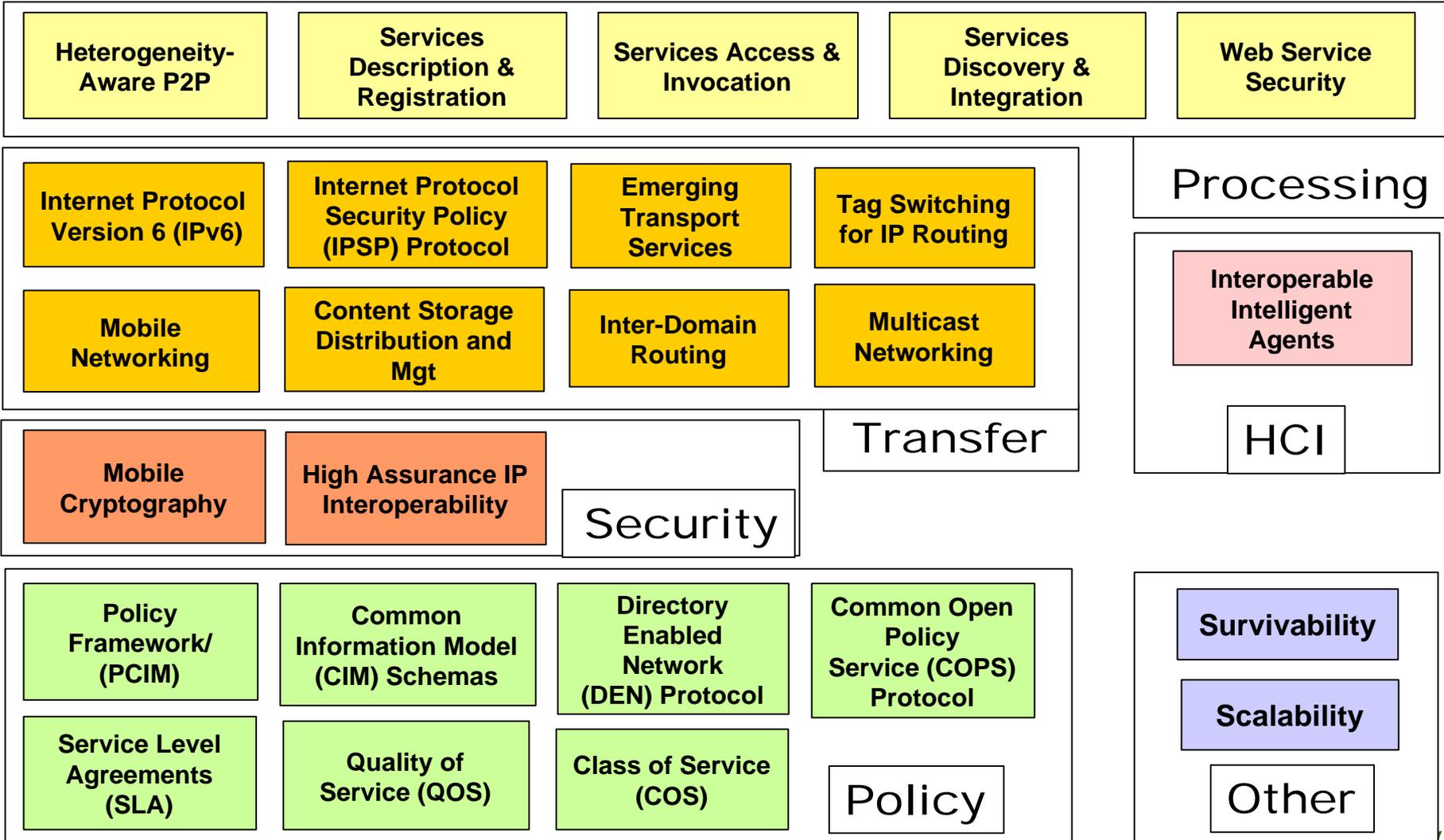


Net-Centric Operations and Warfare (NCOW) Reference Model

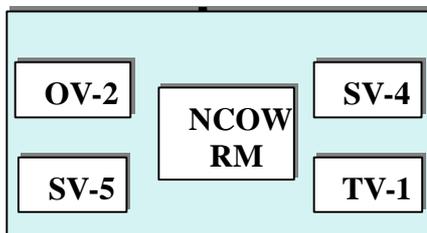
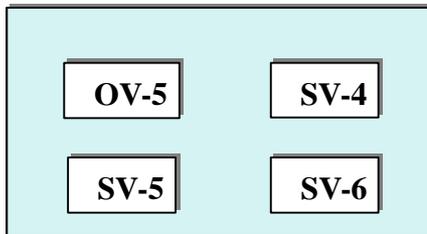
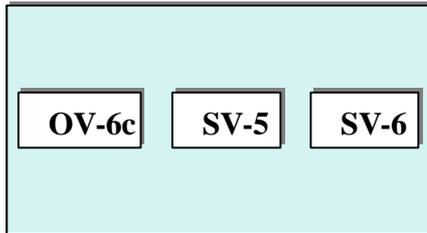
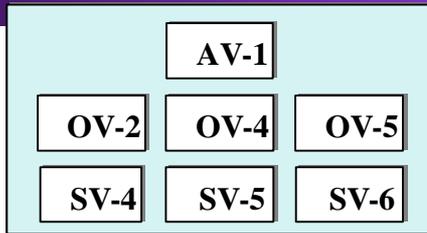


NCOW RM Target Technical View

(Technical Areas by Core IT Category)

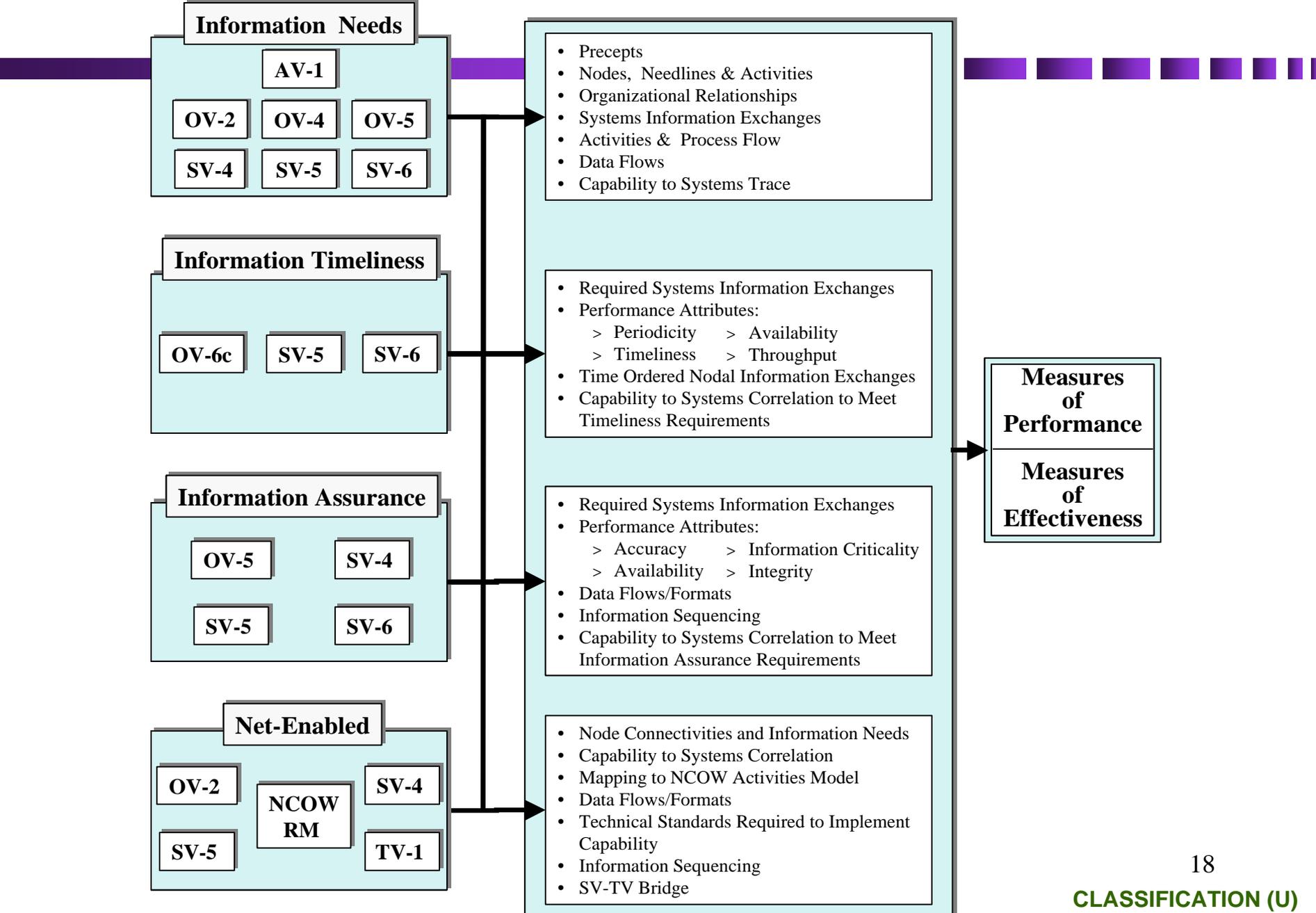


Integrated Architecture



- **Operational Nodes**
- **Organizational Relationships**
- **Operational Activity**
- **Operational Event-Trace**
- **Systems Functionality Description**
- **Operational Activity to Systems Function**
- **Systems Data Exchange**
- **Technical Architecture Profile**

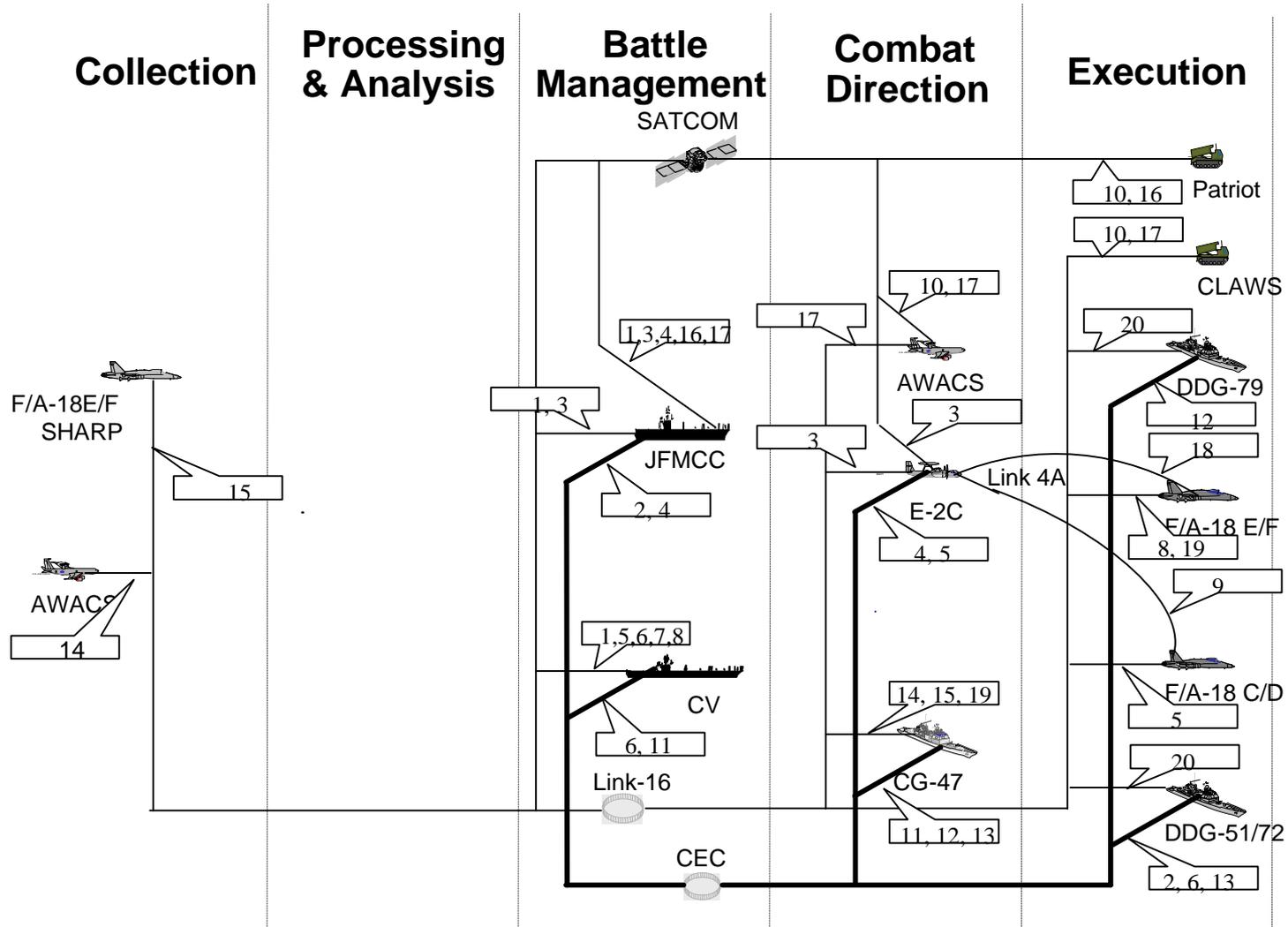
Integrated Architecture



Supporting Integrated Architecture Products

Framework Products	Framework Product Name	General Description
AV-1	Overview and Summary Information	Scope, purpose, intended users, environment depicted, analytical findings
OV-2	Operational Node Connectivity Description	Operational Nodes, operational activities performed at each node, connectivity and information exchange needlines between nodes
OV-4	Organizational Relationships Chart	Organizational, role, or other relationships among organizations
OV-5	Operational Activity Model	Operational activities, relationships among activities, inputs and outputs. Overlays can show cost performing nodes, or other pertinent information.
OV-6c	Operational Event-Trace Description	One of three products used to describe operational activity sequence and timing – traces actions in a scenario or sequence of events and specifies timing of events.
SV-4	Systems Functionality Description	Functions performed by systems and the information flow among system functions
SV-5	Operational Activity to Systems Function Traceability Matrix	Mapping of systems back to operational capabilities or of system functions back to operational activities.
SV-6	Systems Data Exchange Matrix	Provides details of systems data being exchanged between systems.
TV-1	Technical Standards Profile	Extraction of standards that apply to the given architecture.

SV-1: 2003 Strike Mission Node Connectivity Diagram



Operational Capability to System Traceability Matrix (SV-5)

OV-5 Operational Activity

SV-1/2 Systems

	Operational Activity a	Operational Activity b	Operational Activity c	Operational Activity d	Operational Activity e	Operational Activity f	Operational Activity g
System 1	●		●			●	
System 2		●		●		●	
System 3		●		●	●		●
System 4	●		●	●	●		
System 5		●		●			●
System 6				●		●	

Operational Activity to Systems Function Traceability Matrix (SV-5)

System Functions	Operational Activities																
	3.11	3.11.3	3.12	3.12.1	3.12.2	3.12.3	3.13	3.14	3.14.1	3.14.2	3.14.3	3.14.4	3.15	3.16	3.17	3.17.1	
1	X																
1.1		X															
1.1.1			X														
1.1.1.1	X																
1.1.1.2					X												
1.1.1.3							X										
1.1.2										X							
1.1.2.1				X													
1.1.2.2						X											
1.1.2.3								X									
1.1.3											X						
1.1.3.1													X				
1.1.3.2									X								
1.1.3.3															X		
1.1.3.4														X			

Systems Data Exchange Matrix (SV-6)

SV-6: 2003 Strike Mission (Illustrative Data)

IER No.	Sender	Receiver	Content	Media	Info Char	Format	Security	Freq	Timeliness	Thru put
1	JFMCC	CVIC	Target ID	JTIDS/SAT	Data	J 3.90	KGV-8	N/A	30 sec	N/A
2	DDG-51	JFMCC	Track Init.	DDS	Sensor	CEC data	KY-?	N/A	1 sec	N/A
3	JFMCC	E-2C	Engage Order	JTIDS/SAT	Data	J 13.85	KGV-8	N/A	15 sec	N/A
4	E-2C	JFMCC	Track Update	DDS	Sensor	CEC data	KY-?	N/A	7ms	N/A
5	CVIC	F/A-18	Engage Order	JTIDS	Data	J 13.85	KGV-8	N/A	10ms	N/A
6	DDG-51	CVIC	Target Loc	DDS	Sensor	CEC data	KY-?	N/A	4 sec	N/A
7	Patriot	CVIC	Target Acq	JTIDS	Data	J 4.56	KGV-8	N/A	2 min	N/A
8	F/A-18CD	CVIC	Target Killed	JTIDS	Data	J 8.76	KGV-8	N/A	3 min	N/A
9	E-2C	CVIC	CAP Posit	JTIDS	Data	J 10.74	KGV-8	N/A	35 sec	N/A
10	Patriot	AWACS	Target Loc	JTIDS/SAT	Data	J 12.101	KGV-8	N/A	4 Sec	N/A
11	CG-47	CVIC	Target Loc	DDS	Sensor	J 12.101	KY-?	N/A	2 sec	N/A
12	CG-47	DDG-81	Target ID	DDS	Sensor	CEC data	KY-?	N/A	1 sec	N/A
13	DDG-51	CG-47	Posit Info	DDS	Sensor	CEC data	KY-?	N/A	500 ms	N/A
14	CG-47	AWACS	Cse Orders	JTIDS	Data	J 7.99	KGV-8	N/A	2 min	N/A
15	CG-47	SHARPS	Cse Orders	JTIDS	Data	J 7.99	KGV-8	N/A	2 min	N/A
16	Patriot	JFMCC	Target Loc	JTIDS/SAT	Data	J 12.101	KGV-8	N/A	4 min	N/A
17	Hawk	JFMCC	Target Loc	JTIDS/SAT	Data	J 12.101	KGV-8	N/A	4 min	N/A
18	E-2C	F/A-18EF	Cse Orders	JTIDS	Data	FDL	KGV-8	N/A	30 sec	N/A
19	F/A-18EF	CG-47	Target ID	JTIDS	Data	J 3.90	KGV-8	N/A	30 sec	N/A
20	DDG-81	DDG-51	Target ID	JTIDS	Data	J 3.90	KGV-8	N/A	30 sec	N/A

Note: Notional architecture for instructional purposes CLASSIFICATION (U)

Net-Ready Key Performance Parameter Products

Document	Supporting Architecture Products														N C O W R M	K I P C o m p l i a n c e	I A C o m p l i a n c e	LISI Profile	
	A V - 1	O V - 1	O V - 2	O V - 3	O V - 4	O V - 5	O V - 6 C	S V - 1	S V - 2	S V - 3	S V - 4	S V - 5	S V - 6	T V - 1					
	ICD		X																
CDD	X		X		X	X	X				X	X	X	X	X	X	X	X	X Basic
CPD	X		X		X	X	X				X	X	X	X	X	X	X	X	X Complete
CRD		X		1		2									2	2	2		
ISP	3	3	3		3	3	3			3	3	3	3	3	3	3	3	3	3 Complete

Note: X = Required

(1) Old CRDs Updates

(2) New CRDs

(3) ACAT, NON ACAT and Fielded Systems. NR KPP products produced for the CDD and CPD will be used in the ISP

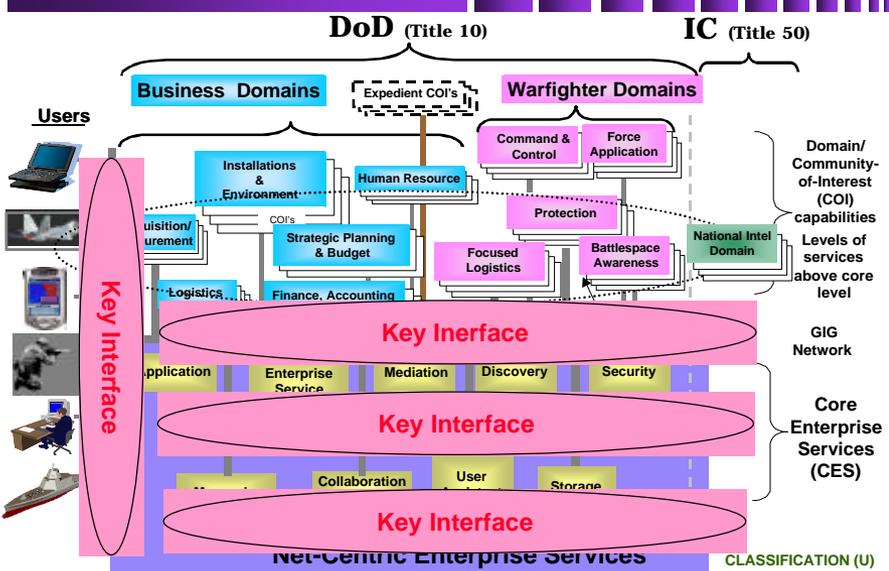
Key Interface

Net-Centric Operations and Warfare (NCOW) Reference Model
Operational Concept Graphic (OV-1a)

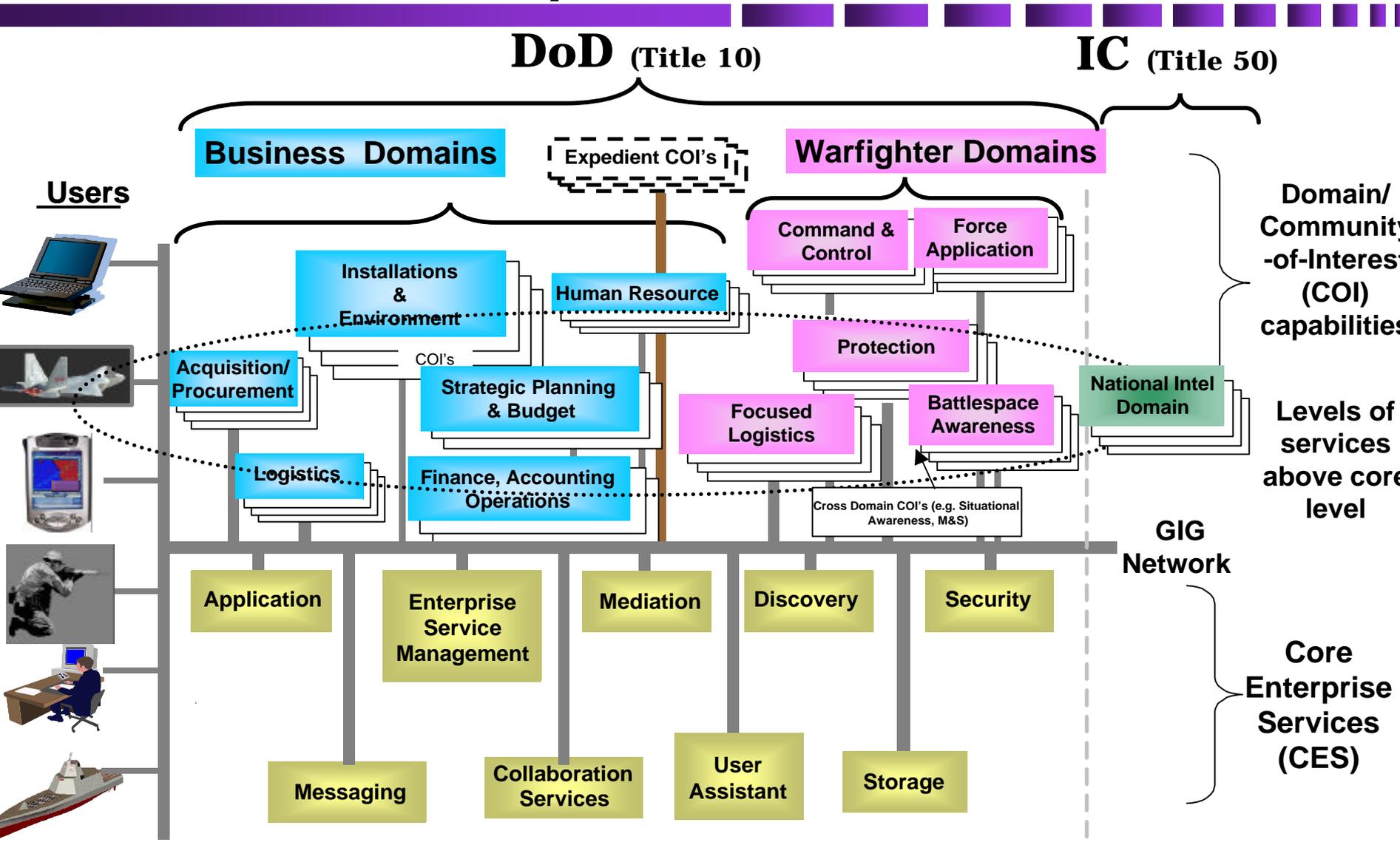


- **Organizational boundaries.**
- **Mission critical.**
- **Difficult or complex to manage.**
- **Capability, interoperability, or efficiency issues.**
- **Impacts multiple acquisition programs.**
- **Vulnerable**

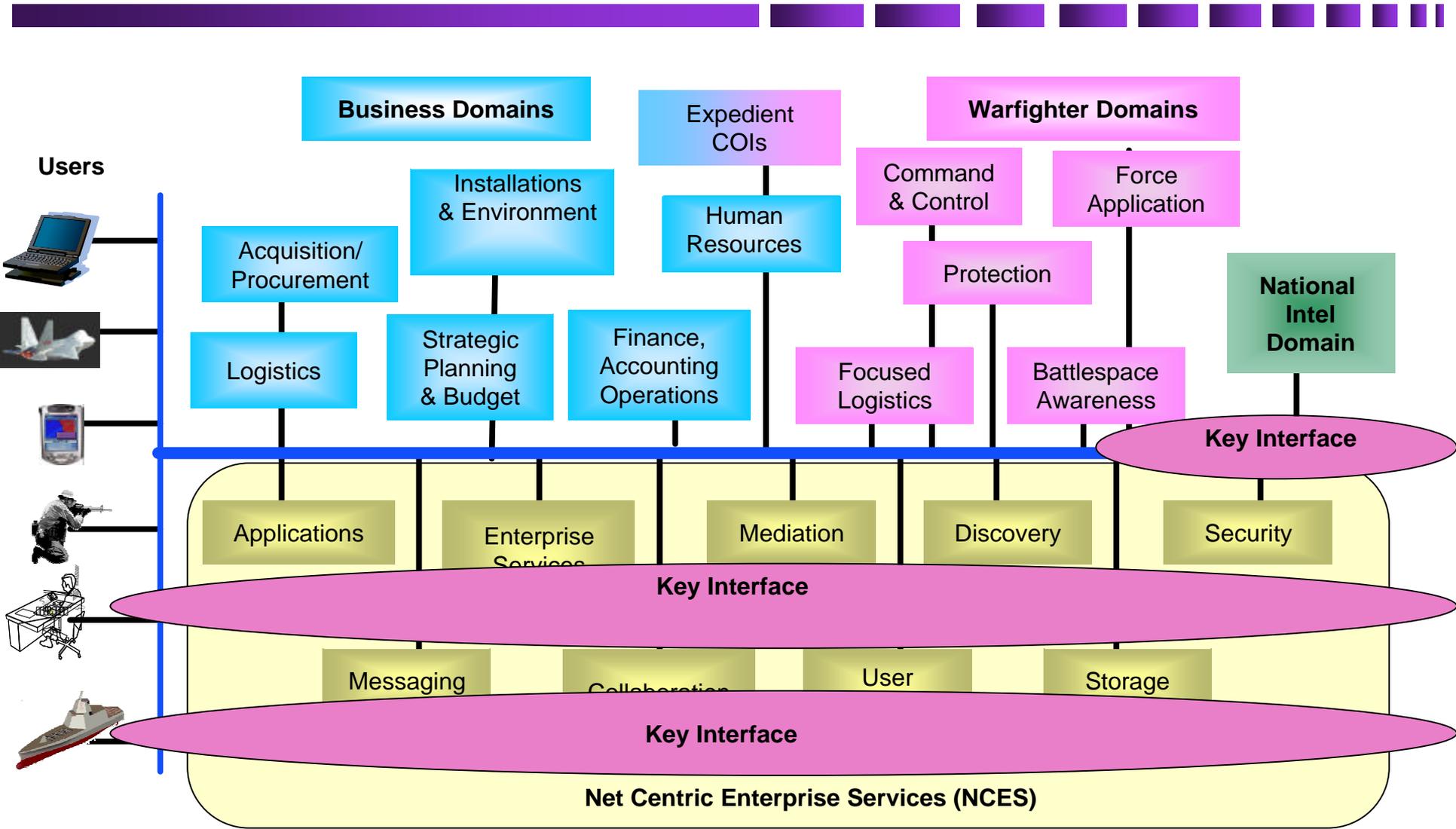
GIG Enterprise Services Vision



GIG Enterprise Services Vision



GES/NCES



Users

Business Domains

Expedient COIs

Warfighter Domains

Acquisition/Procurement

Installations & Environment

Human Resources

Command & Control

Force Application

Logistics

Strategic Planning & Budget

Finance, Accounting Operations

Protection

National Intel Domain

Focused Logistics

Battlespace Awareness

Key Interface

Applications

Enterprise Services

Mediation

Discovery

Security

Key Interface

Messaging

Collaboration

User

Storage

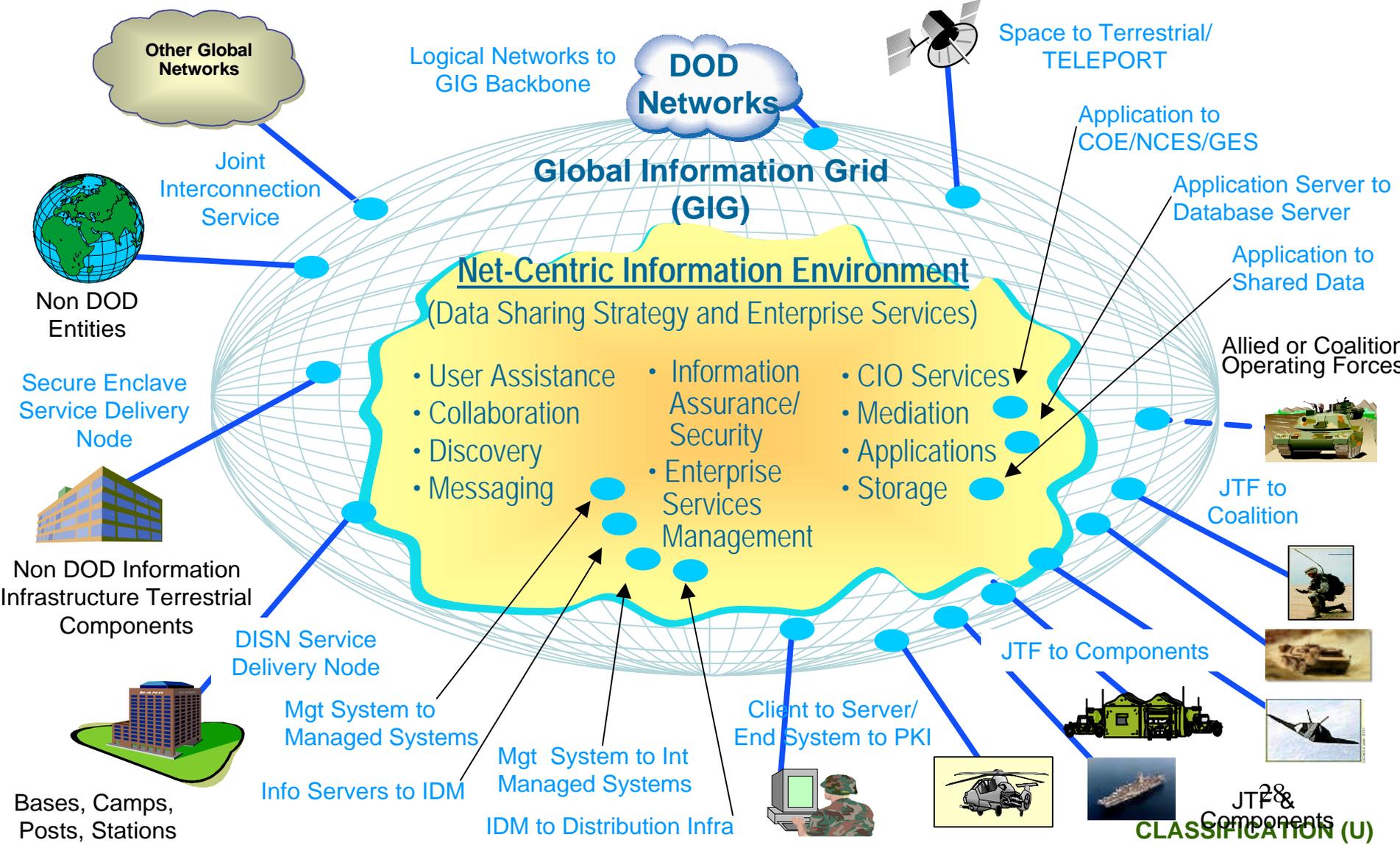
Key Interface

Net Centric Enterprise Services (NCES)



Key Interface

KIPs to NCES/GES



The 17 Key Interfaces

Communications KIPs

Logical Networks to DISN Transport Backbone

Space to Terrestrial Interface

JTF to Coalition

JTF Component to JTF Headquarters

Teleport (i.e., deployed interface to DISN)

Joint Interconnection Service

DISN Service Delivery Node

Secure Enclave Service Delivery Node (e.g., **SCI/Collateral KIP**)

Computing KIPs

Application Server to Database Server

Client to Server

Applications to COE/CCP

Network Operations KIPs

End System to PKI

Management Systems to (integrated) Management Systems

Management Systems to Managed Systems

IDM to Distribution Infrastructure

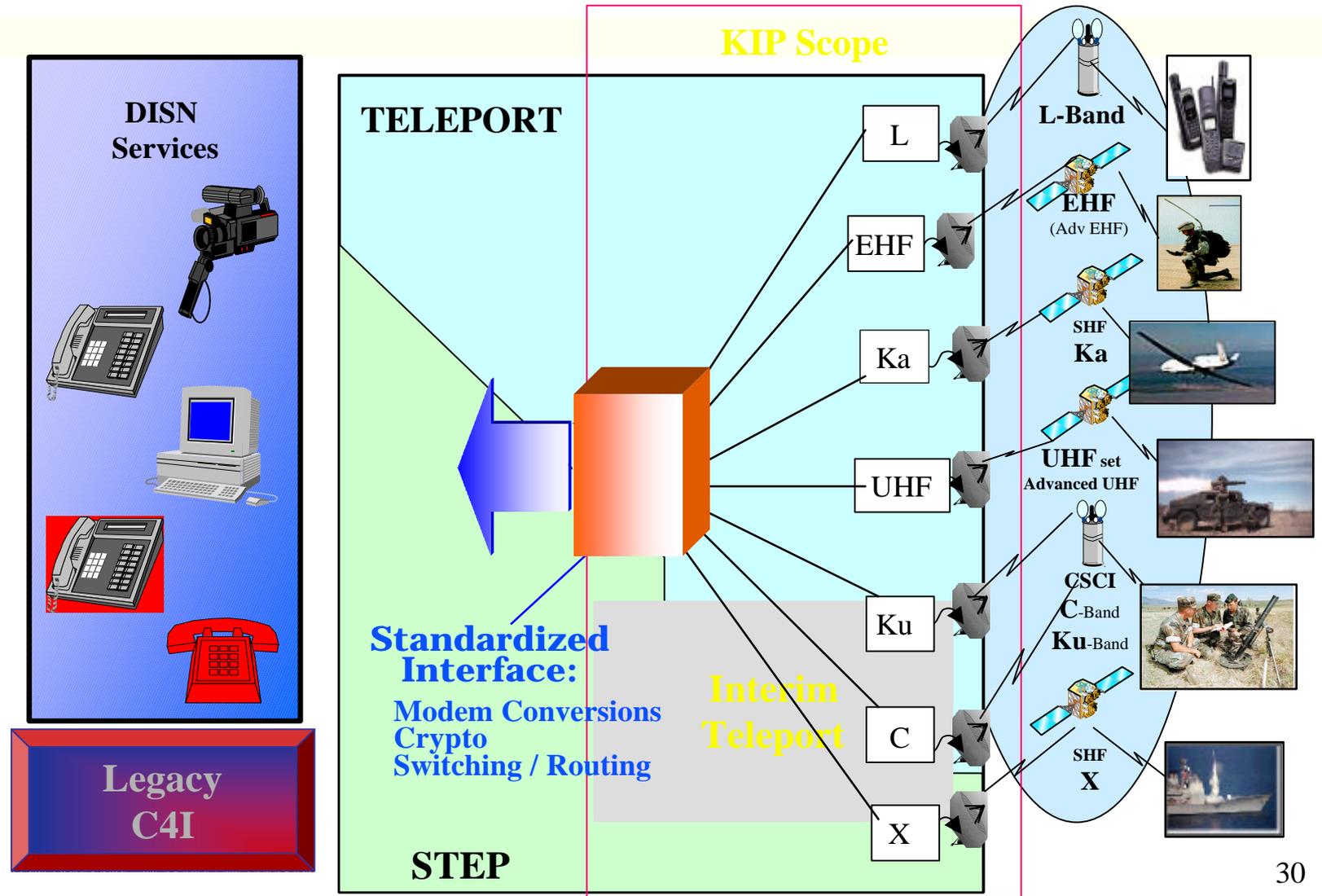
Information Servers to IDM Infrastructure

Applications

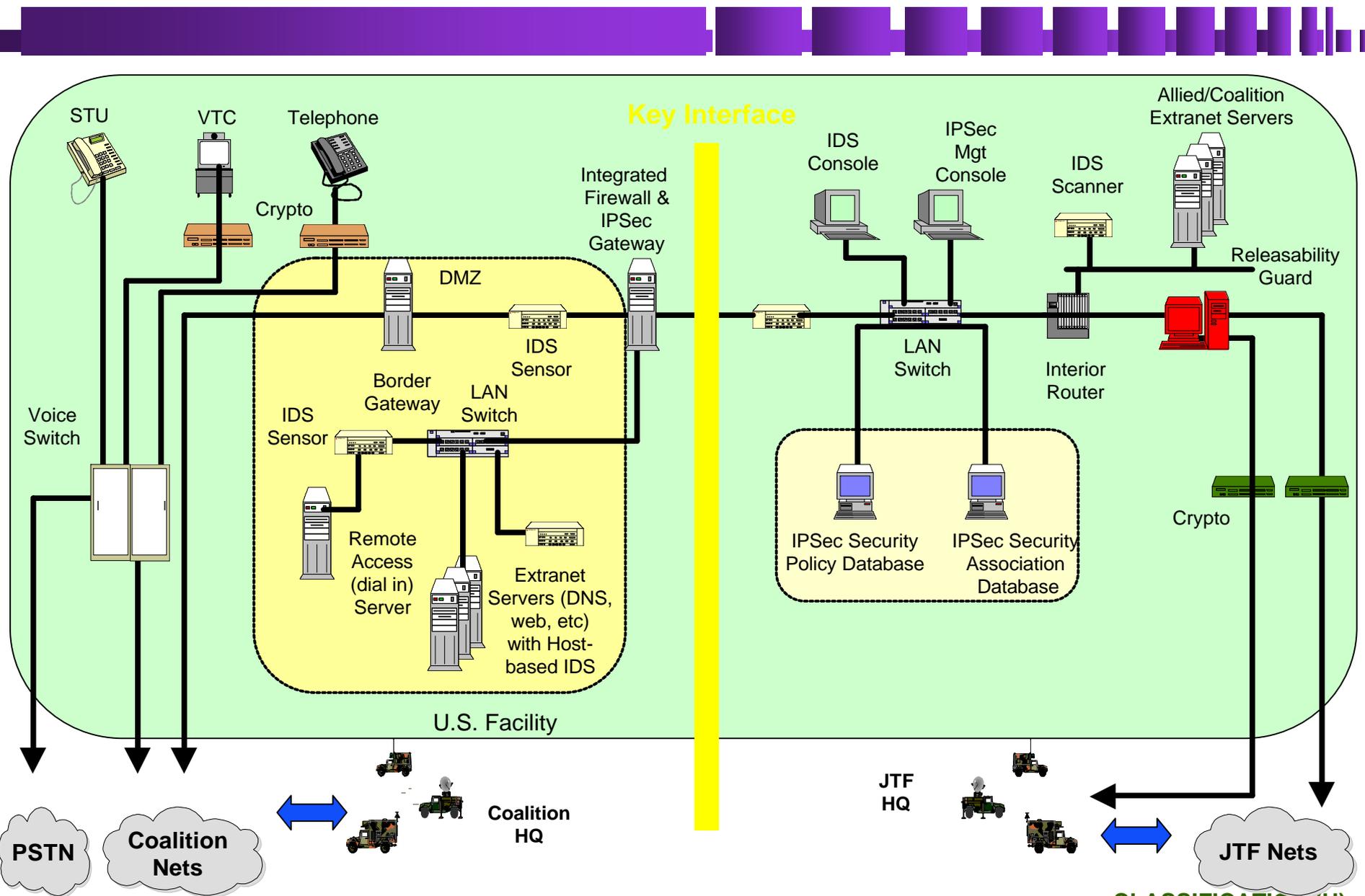
Application Server to Shared Data (e.g., **Situational Awareness Data KIP**)

(Pilot Projects in Red)

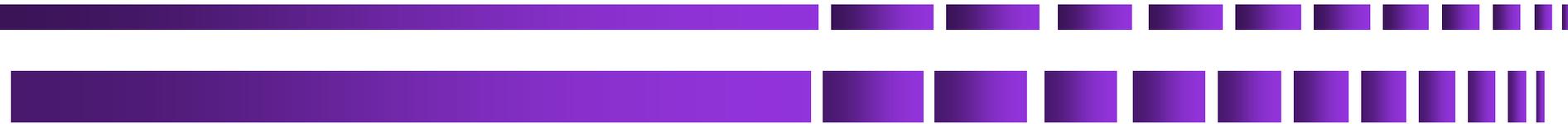
STEP/TELEPORT



JTF to Coalition



Key Interface Profile

- 
- ✓ **Refined Operational View**
 - ✓ **Refined System View**
 - ✓ **Interface Control Specifications -- Interface Control Document (ICD)**
 - ✓ **Technical View & SV-TV Bridge**
 - ✓ **Configuration Management Plan**
 - ✓ **Procedures for Standards Conformance and Interoperability Testing
utilizing reference implementations**
 - ✓ **Engineering Management Plan**

Key Interfaces – Prioritized/Funding Requirements



Priority	Key Interface Profile	Estimated Cost
1.	JTF Component to JTF Headquarters**	400K
2.	JTF to Coalition	300K
3.	Logical Networks to DISN Transport Backbone.....	100K
4.	Space to Terrestrial	300K
5.	TELEPORT.....	done
6.	Client to Server	100K
7.	Application Server to Shared Data	50K
8.	DISN Service Delivery Node	200K
9.	Secure Enclave Service Delivery Node	250K
10.	Application Server to Database Server	200K
11.	Joint Interconnection Service	200K
12.	Management System to Managed Systems	250K
13.	Application to COE/CCP (NCES/GES)	200K
14.	End System to PKI	200K
15.	Information Servers to IDM Infrastructure	250K
16.	IDM to Distribution Infrastructure	200K
17.	Management System to (integrated) Management Systems	<u>200K</u>
		\$ 3.4M

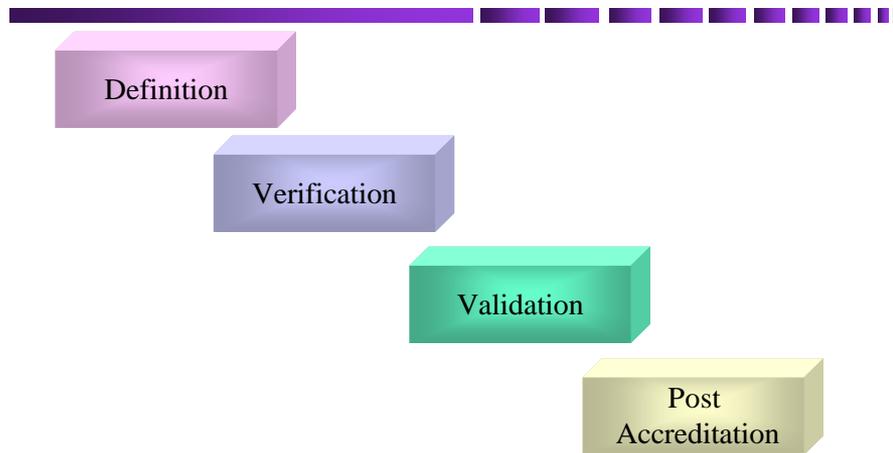


**Must be timed with SJFHQ/DJC2

Information Assurance (DITSCAP*)

CLASSIFICATION (U)

Information Assurance

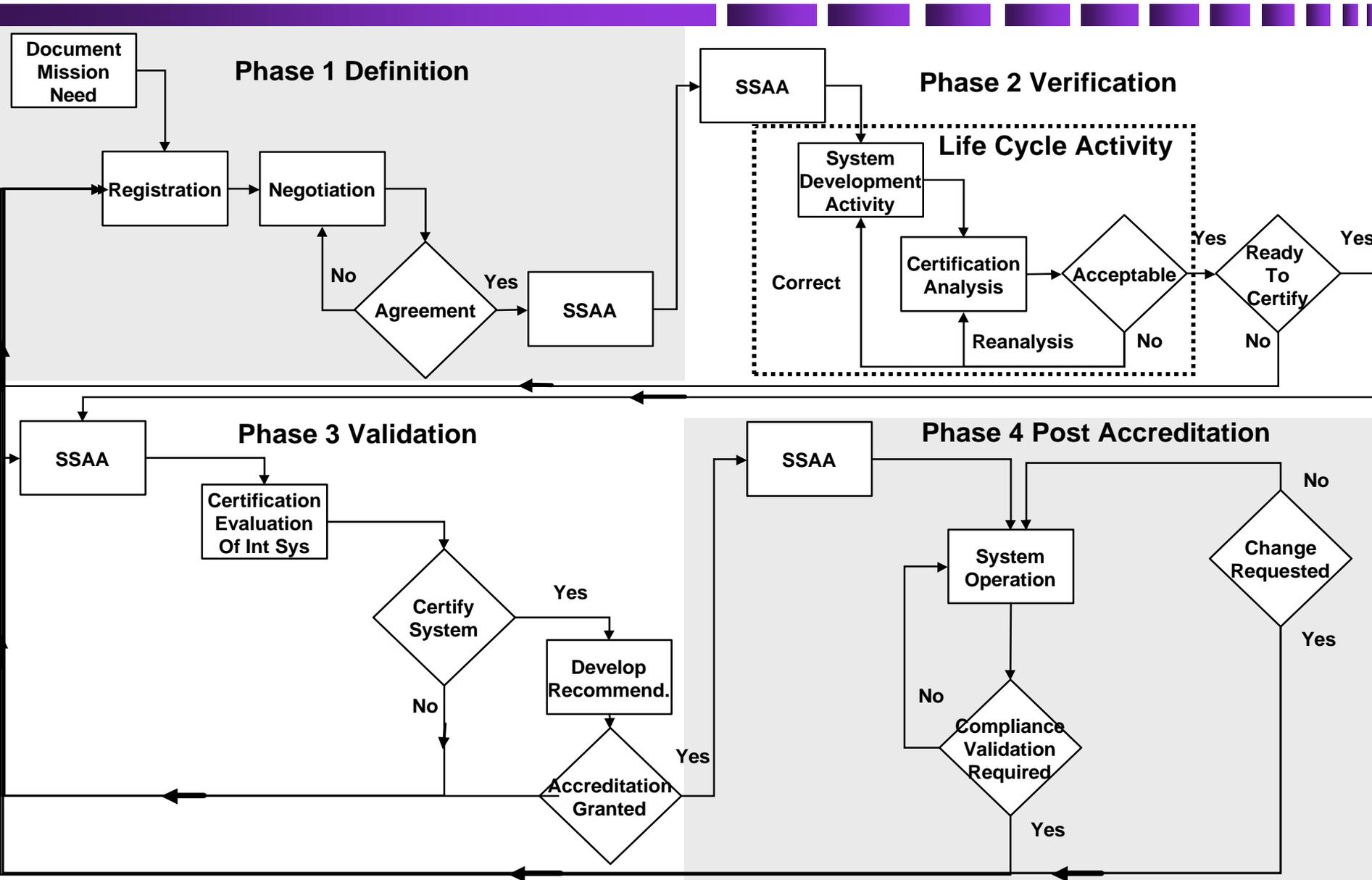


- Availability
- Integrity
- Authentication
- Confidentiality
- Non-repudiation

CLASSIFICATION (U)

INFORMATION ASSURANCE (IA): Information Operations that **protect and defend** information and information systems by ensuring their availability, integrity, authentication, confidentiality, and non-repudiation.

DoD Information Technology Security Certification and Accreditation Process (DITSCAP)



Net Ready KPP Statement

Net Ready KPP	Threshold (T)	Objective (O)
All activity interfaces, services, policy-enforcement controls, and data-sharing of the NCOW-RM and GIG-KIPs will be satisfied to the requirements of the specific Joint integrated architecture products (including data correctness, data availability and data processing), and information assurance accreditation, specified in the threshold (T) and objective (O) values.	100% of interfaces; services; policy-enforcement controls; and data correctness, availability and processing requirements designated as enterprise-level or critical in the Joint integrated architecture	100% of interfaces; services; policy-enforcement controls; and data correctness, availability and processing requirements in the Joint integrated architecture

JROCM Guidance



The following statement in the Interoperability Key Performance Parameter section of the document prior to proceeding to further review (re-staffing of the document is not required):

“The <**Document Sponsor**> will update the Interoperability Key Performance Parameter to include all applicable established components of the Net Ready Key Performance Parameter (NR-KPP) in accordance with CJCSI 62 12.0 1 C and a migration strategy to the remaining applicable components of the NR-KPP no later than <**date - no more than 6 months**>.”

This update will be submitted through the Joint Capabilities Integration and Development System (JCIDS) process for certification.

KPP Testing/ Metrics



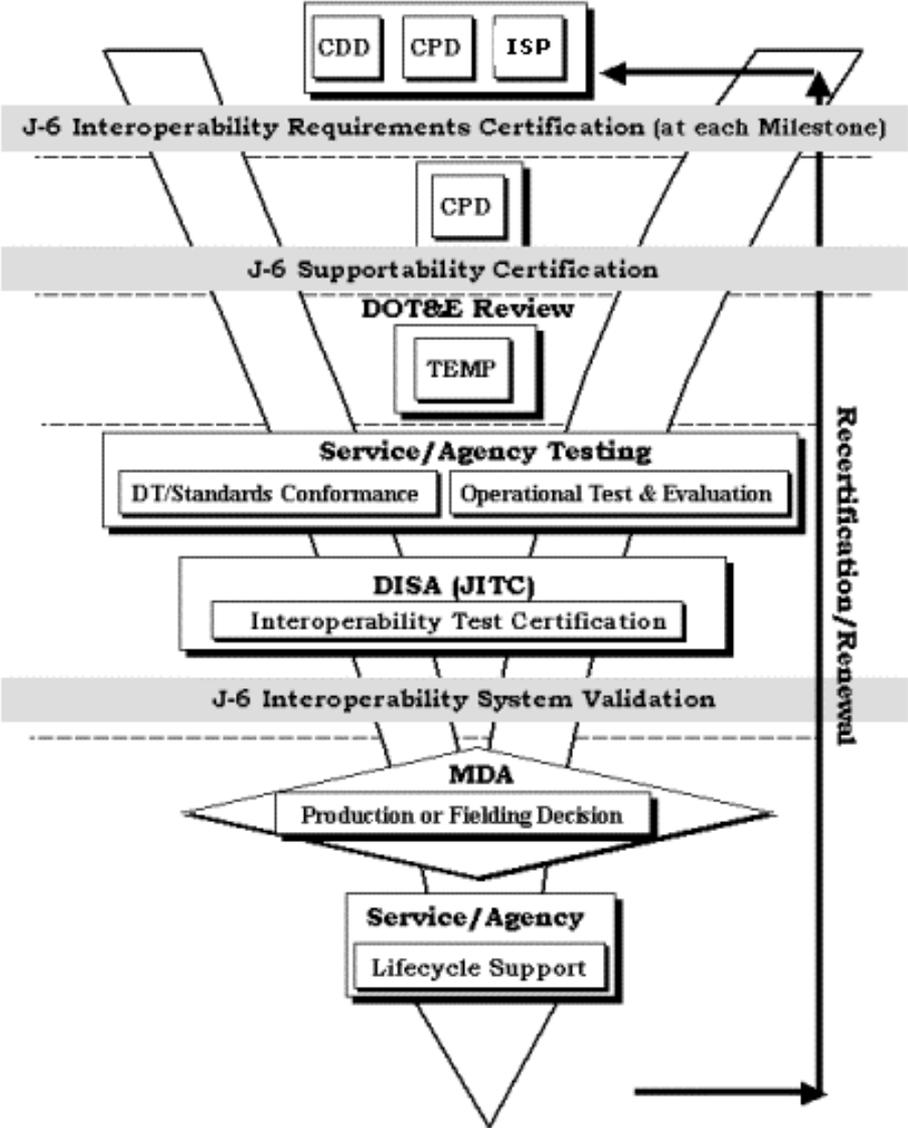
Attributes

- Information needs
- Information timeliness
- Information assurance
- Net-enabled

Metrics

- Core Elements
 - Information Processing
 - Information Transfer
 - Information Modeling, Metadata, and Information Exchange
 - Human-Computer Interface
 - Information Security/Assurance
- Community of Interest (COI) Elements
 - Content, Accuracy, Timeliness, Relevance

Testing



Testing

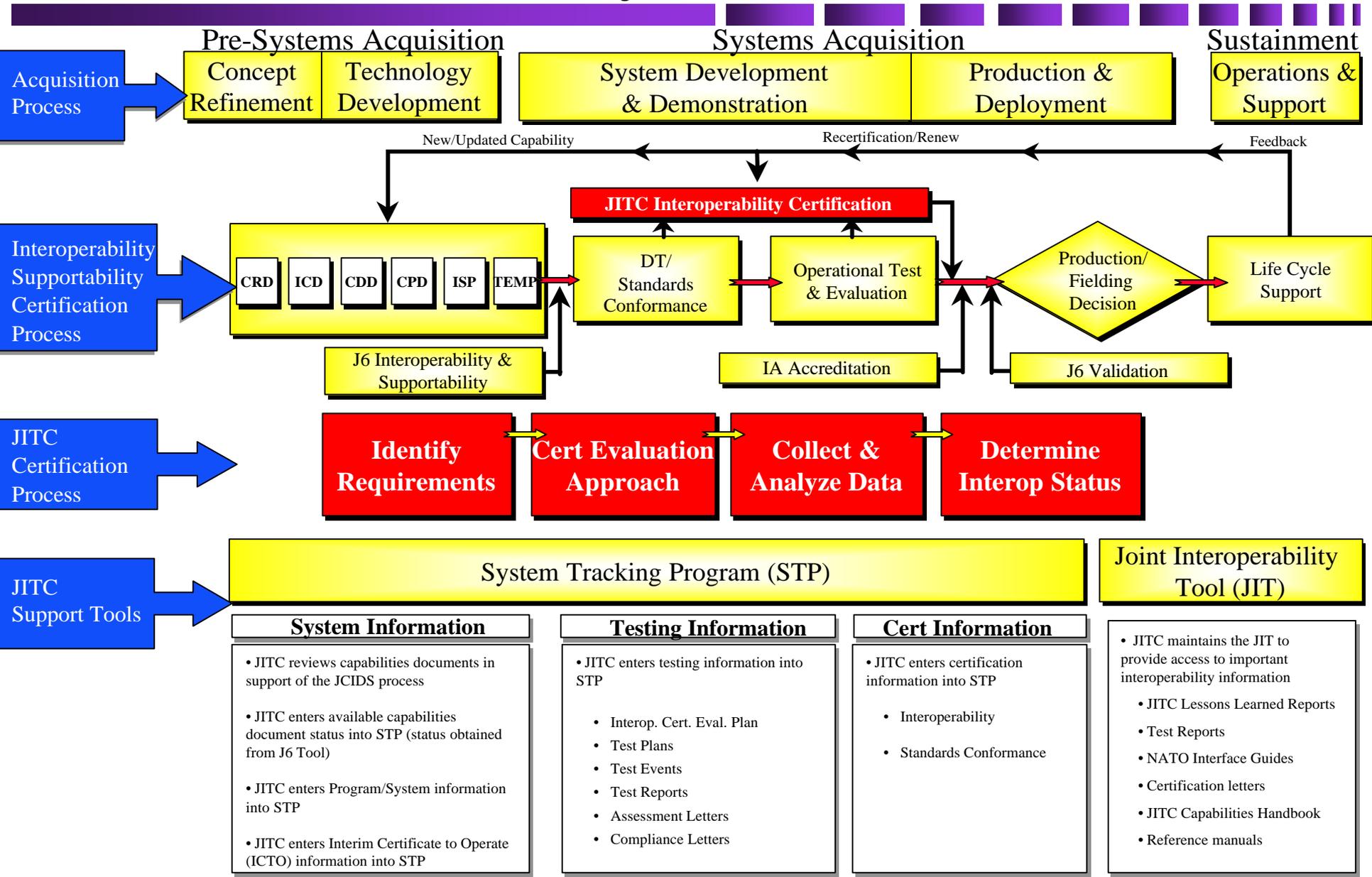
- **Attributes**
 - Information needs
 - Information timeliness
 - Information assurance
 - Net-enabled
- **Metrics**
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 - Human-Computer Interface
 - Information Security/Assurance
- **Community of Interest (COI) Elements**
 - Content, Accuracy, Timeliness, Relevance

OPERATIONAL TESTING

- **Capability Certification**
- **DT / Standards Conformance, OT&E, and Interoperability Certification**
- **Operational Verification**

JITC INTEROPERABILITY TESTING

JITC Certification Process



Testing to the NR KPP



- **GIG Enterprise Services**
 - Compliance
 - Conformance
 - **Key Interface**
 - Compliance
 - Conformance
 - **JTA**
 - Compliance
 - Conformance
 - **Information Assurance**
 - **Cost \$\$**
- **No Change from current**
 - **No Change from current**
 - **No Change from current**
 - **No Change from current**
 - **No Change from current**

What is missing?



NRKPP:

- **GIG Enterprise Services**
- **Key Interface**

- **Cost \$\$**

Example of what is needed:

MISSING:

- **Generic Interoperability Requirement Repository (GIRR) (Virtual)**
 - Includes DISR(JTA), KIPs, etc
 - Repository of certified ‘test cases’ systems

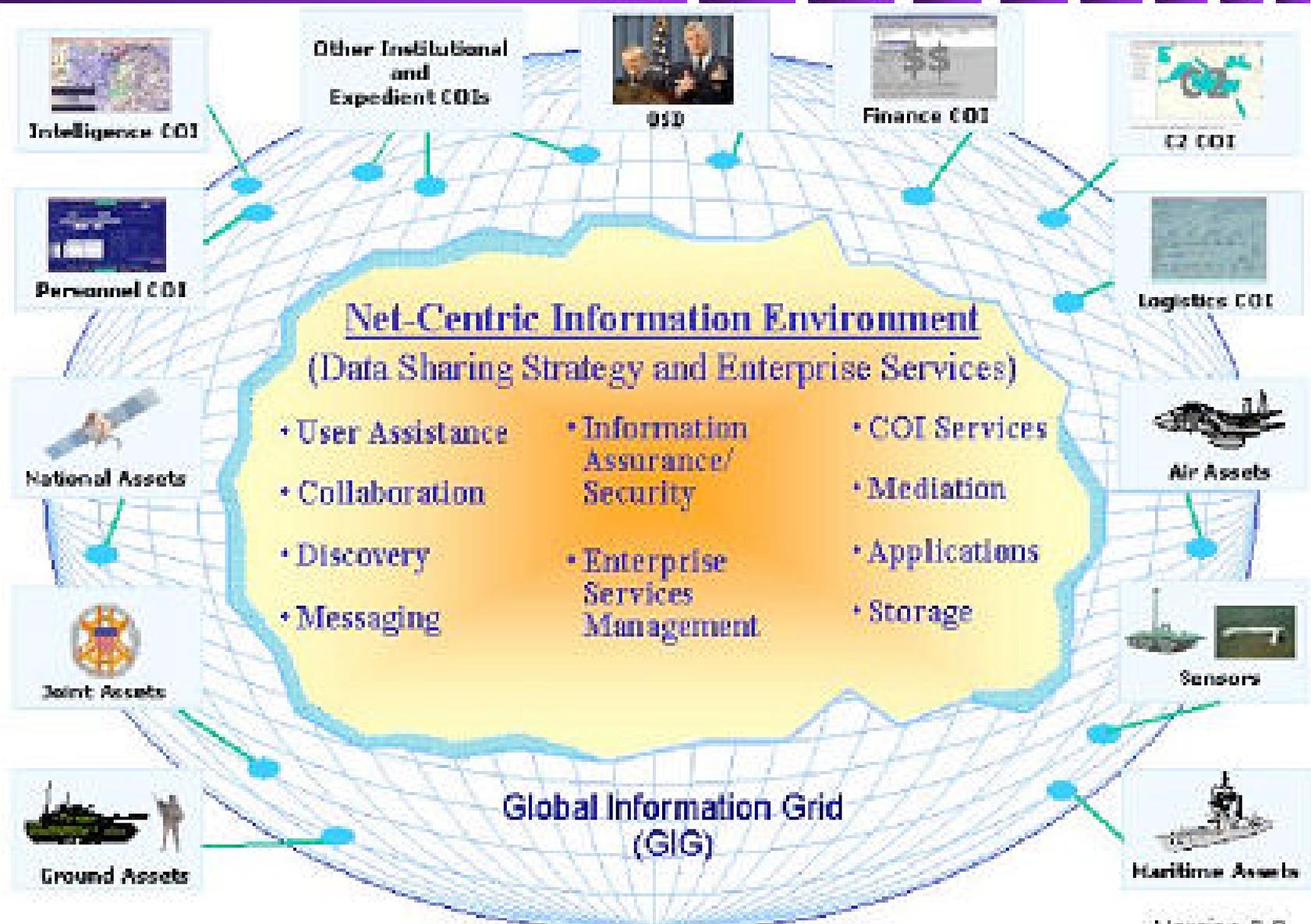
- **Unknown – NCES is the pilot**

GSCR “Generic Switch Center Requirements” for voice/circuit switches

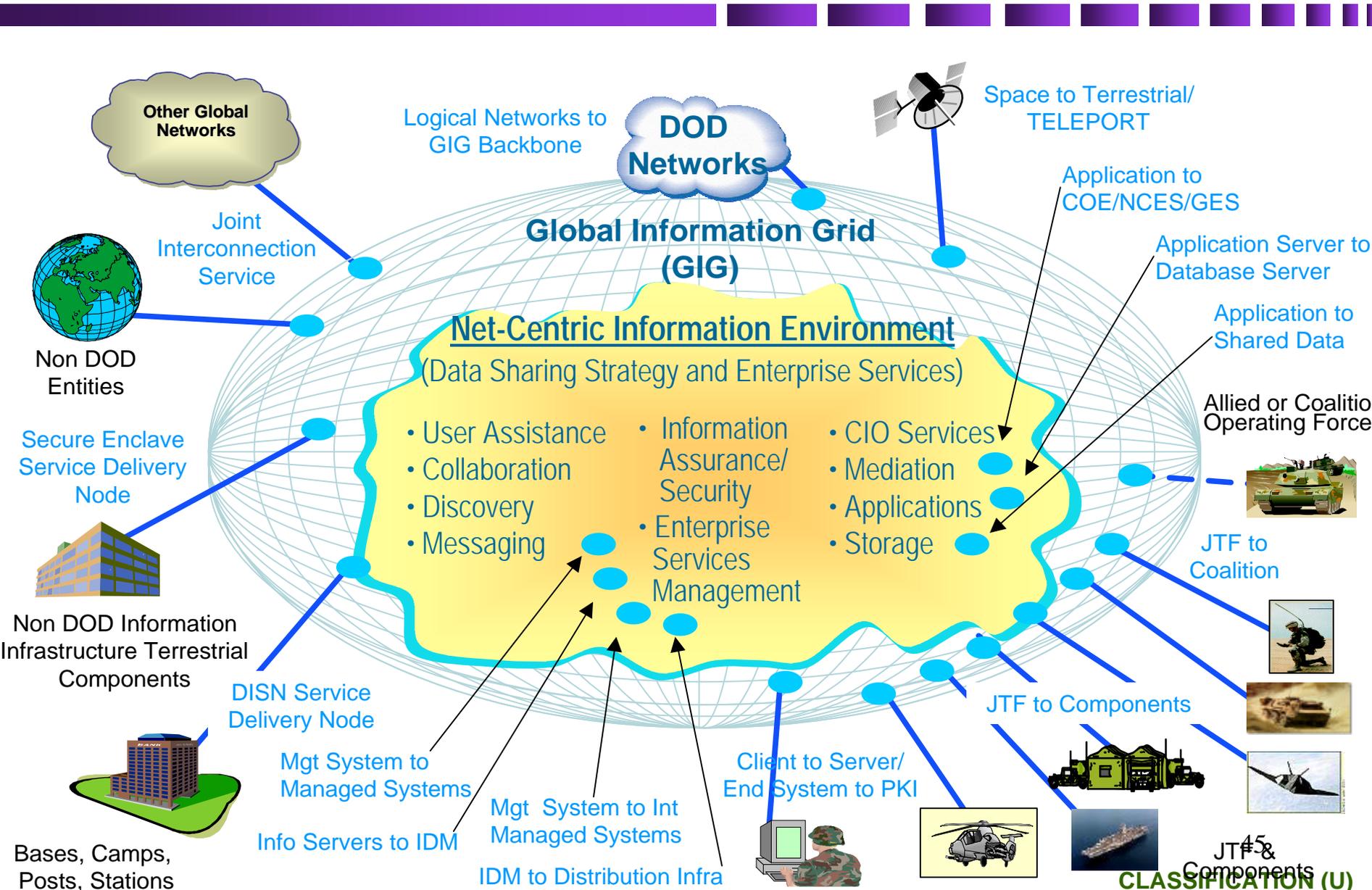
- **GSCR developed over many years, and provides established measurable testable standards.**

TEST WHAT?

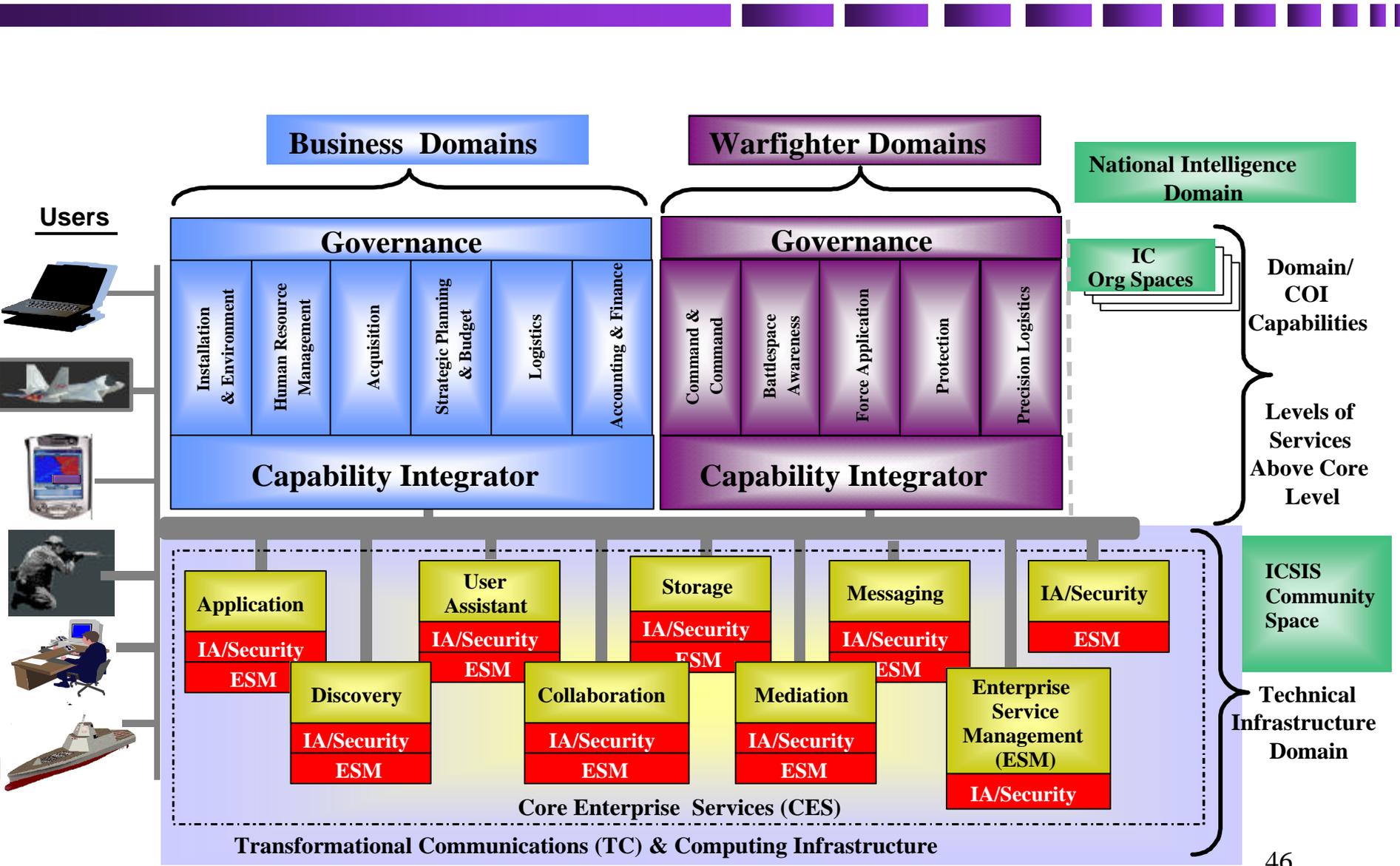
To the GIG



TEST WHAT? To the KIPs/NCES

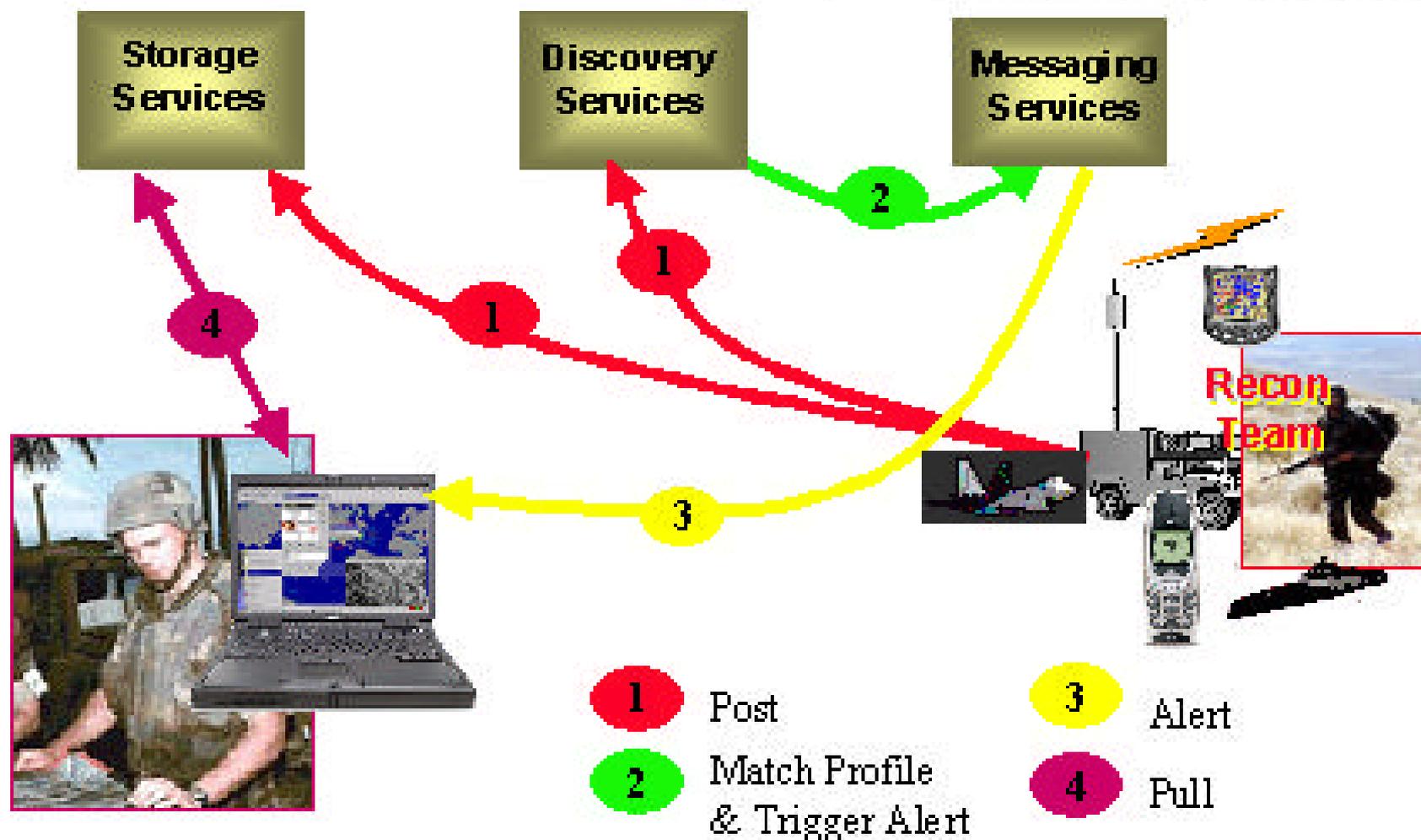


TEST WHAT? To NCES



TEST WHAT?

Content, Accuracy, Timeliness, Relevance



TEST WHAT? THE SYSTEMS



- **Information Processing**
- **Information Transfer**
- **Information Modeling, Metadata, and Information Exchange**
- **Human-Computer Interface**
- **Information Security/Assurance**

The Systems “Operational Capability to System Traceability Matrix (SV-5)”

OV-5 Operational Activity

SV-1/2 Systems

	Operational Activity a	Operational Activity b	Operational Activity c	Operational Activity d	Operational Activity e	Operational Activity f	Operational Activity g
System 1	●		●			●	
System 2		●		●		●	
System 3		●		●	●		●
System 4	●		●	●	●		
System 5		●		●			●
System 6				●		●	

Operational Activity to Systems Function Traceability Matrix (SV-5)

Operational Activities

System Functions	3.11	3.11.3	3.12	3.12.1	3.12.2	3.12.3	3.13	3.14	3.14.1	3.14.2	3.14.3	3.14.4	3.15	3.16	3.17	3.17.1
1	X															
1.1		X														
1.1.1			X													
1.1.1.1	X															
1.1.1.2					X											
1.1.1.3							X									
1.1.2										X						
1.1.2.1				X												
1.1.2.2						X										
1.1.2.3								X								
1.1.3											X					
1.1.3.1													X			
1.1.3.2									X							
1.1.3.3														X		
1.1.3.4														X		

The Systems “Systems Data Exchange Matrix (SV-6)”

SV-6: 2003 Strike Mission (Illustrative Data)

IER No.	Sender	Receiver	Content	Media	Info Char	Format	Security	Freq	Timeliness	Thru put
1	JFMCC	CVIC	Target ID	JTIDS/SAT	Data	J 3.90	KG V-8	N/A	30 sec	N/A
2	DDG-51	JFMCC	Track Init.	DDS	Sensor	CEC data	KY-?	N/A	1 sec	N/A
3	JFMCC	E-2C	Engage Order	JTIDS/SAT	Data	J 13.85	KG V-8	N/A	15 sec	N/A
4	E-2C	JFMCC	Track Update	DDS	Sensor	CEC data	KY-?	N/A	7ms	N/A
5	CVIC	F/A-18	Engage Order	JTIDS	Data	J 13.85	KG V-8	N/A	10ms	N/A
6	DDG-51	CVIC	Target Loc	DDS	Sensor	CEC data	KY-?	N/A	4 sec	N/A
7	Patriot	CVIC	Target Acq	JTIDS	Data	J 4.56	KG V-8	N/A	2 min	N/A
8	F/A-18CD	CVIC	Target Killed	JTIDS	Data	J 8.76	KG V-8	N/A	3 min	N/A
9	E-2C	CVIC	CAP Posit	JTIDS	Data	J 10.74	KG V-8	N/A	35 sec	N/A
10	Patriot	AWACS	Target Loc	JTIDS/SAT	Data	J 12.101	KG V-8	N/A	4 Sec	N/A
11	CG-47	CVIC	Target Loc	DDS	Sensor	J 12.101	KY-?	N/A	2 sec	N/A
12	CG-47	DDG-81	Target ID	DDS	Sensor	CEC data	KY-?	N/A	1 sec	N/A
13	DDG-51	CG-47	Posit Info	DDS	Sensor	CEC data	KY-?	N/A	500 ms	N/A
14	CG-47	AWACS	Cse Orders	JTIDS	Data	J 7.99	KG V-8	N/A	2 min	N/A
15	CG-47	SHARPS	Cse Orders	JTIDS	Data	J 7.99	KG V-8	N/A	2 min	N/A
16	Patriot	JFMCC	Target Loc	JTIDS/SAT	Data	J 12.101	KG V-8	N/A	4 min	N/A
17	Hawk	JFMCC	Target Loc	JTIDS/SAT	Data	J 12.101	KG V-8	N/A	4 min	N/A
18	E-2C	F/A-18EF	Cse Orders	JTIDS	Data	FDL	KG V-8	N/A	30 sec	N/A
19	F/A-18EF	CG-47	Target ID	JTIDS	Data	J 3.90	KG V-8	N/A	30 sec	N/A
20	DDG-81	DDG-51	Target ID	JTIDS	Data	J 3.90	KG V-8	N/A	30 sec	N/A

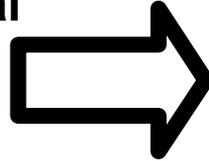
Note: Notional architecture for instructional purposes CLASSIFICATION (U)

Today - IER Based I KPP

FY04 - FY 06 NET READY KPP

Current Interoperability KPP (I KPP)
Centers around one DOD Architectural
Operational View (OV-3) that contains
Information Exchange Requirements
(IER)

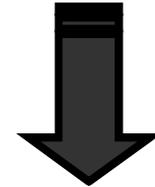
Net Centric Operations Warfare
NCOW Reference Model Compliance



Integrated
Architecture

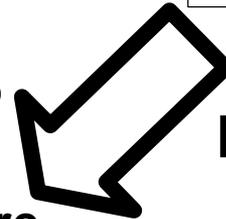
*Applicable
KIPs

Information
Assurance

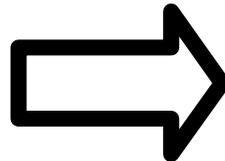


Measurable and Testable Net-Ready KPP

FY06 NET READY KPP

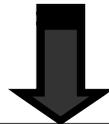


- Net Centric Operations Warfare (NCOW) Reference Model Compliance
- Integrated Architecture
- Key Interface Profiles (KIPs)
- Information Assurance



FY06 and Beyond - NET READY

- Net Ready approach centers on Central network:
- Focus on organizational contributions and consumption of information
 - One-to-Network paradigm



Measurable and Testable Net-Ready KPP

Complementary and Corresponding Systems



- **GIG BE**
- **JTRS**
- **GCCS**
- **NCES**
- **TCS**
- **Crypto Modernization**
- **Collaboration Tools**
- **Horizontal Fusion**

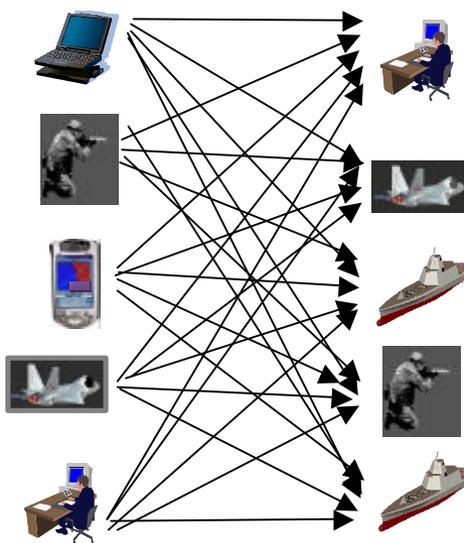
Evolving the Interoperability Key Performance Parameter

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Y

Interoperability KPP	Threshold (T)	Objective (O)
All top-level IERs will be satisfied to the standards specified in the Threshold (T) and Objective (O) values.	100% of top-level IERs designated critical	100% of top-level IERs

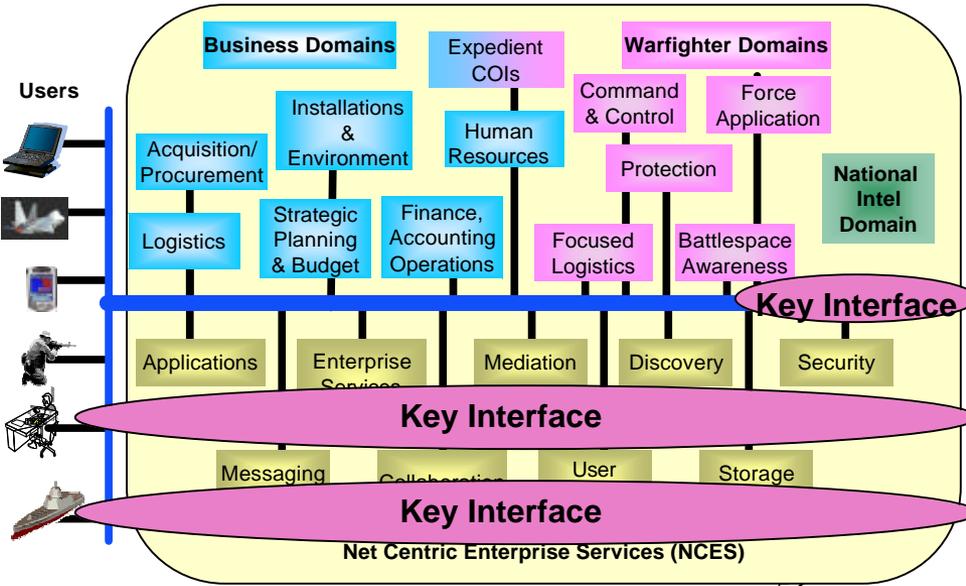
- JTRS**
- Internal growth capacity
 - Set modes/ capabilities/ configuration via net
 - Retransmit/Crossband/waveform supportable
 - Field time/critical waveforms
 - Operate designated # of channels at same time
 - Scalable Networking Services
 - System Network Interoperability

- FCS**
- Joint Interoperability
 - Networked Battle Command
 - Network lethality
 - Transportability
 - Sustainability/Reliability
 - Training
 - Survivability



T
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Net-Centric Operations and Warfare (NCOW) Reference Model Operational Concept Graphic (OV-1a)



4
Pillars



Key Interface



Questions?



BACKUPS

JITC Testing Process Acquisition Process

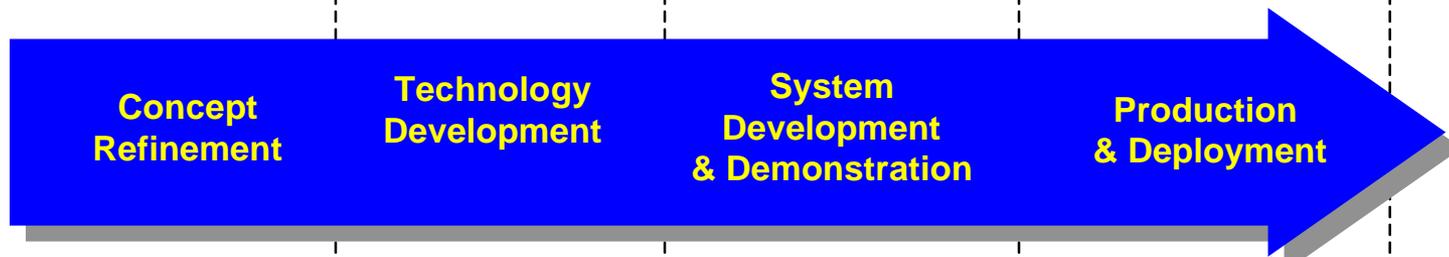


DoD 5000

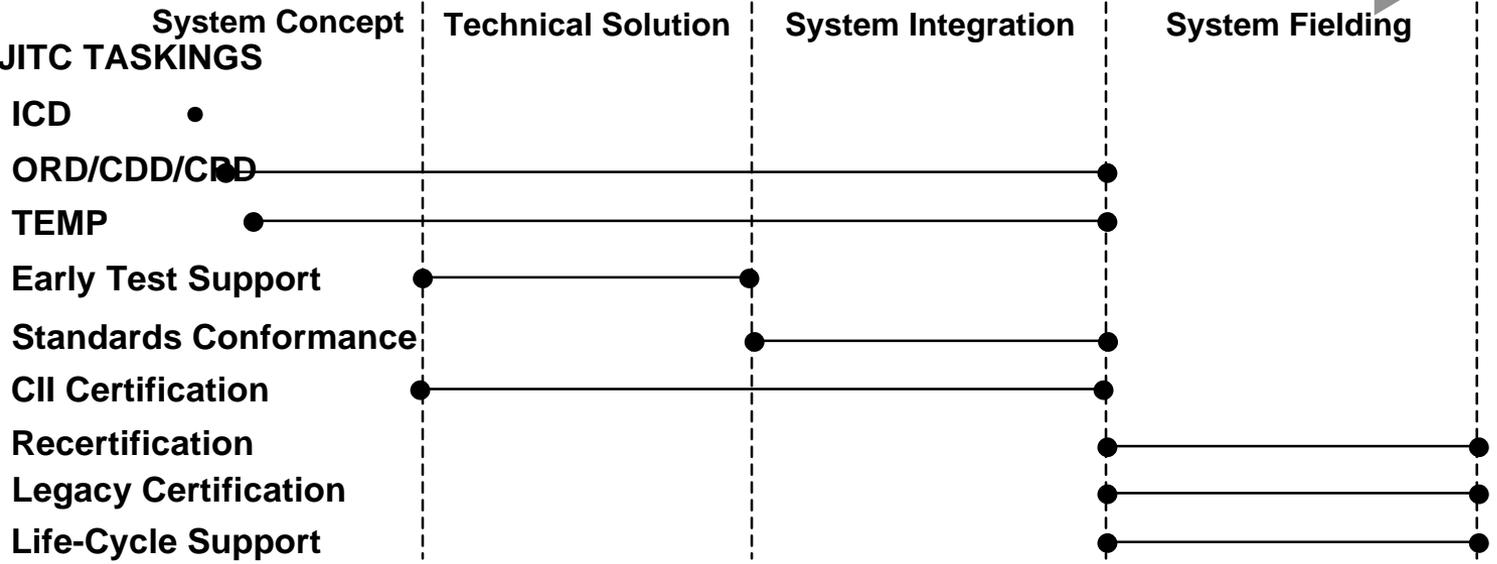
MS A

MS B

MS C

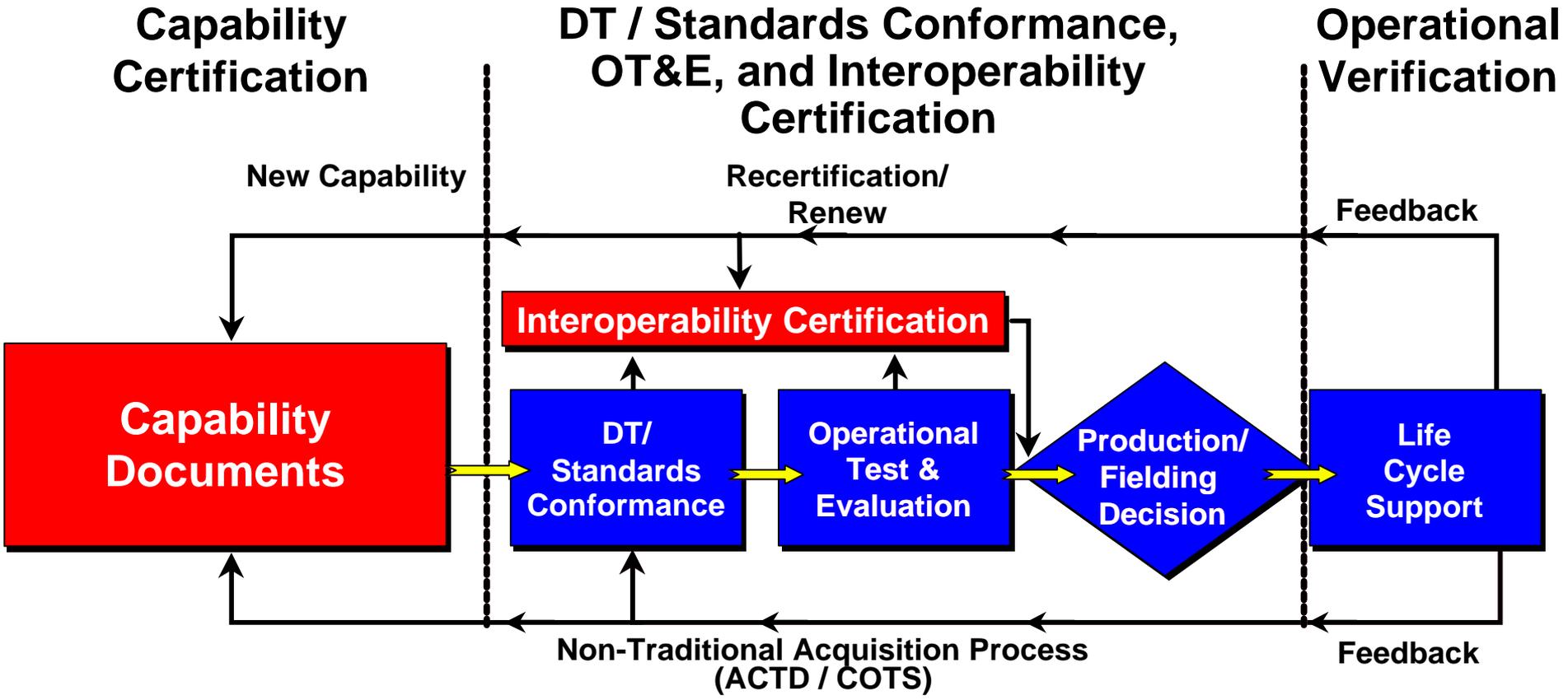


INITIAL OPERATIONAL CAPABILITY



JITC Testing Process

Life-Cycle Certification Process



Joint Interoperability Test Certification Process.



- **Identifying requirements/capabilities.**
- **Developing certification approach (planning).**
- **Testing & Evaluating.**
- **Certifying and other status reporting.**

JITC interoperability products

- **Standards Conformance Certification.** Issued after technical testing against published standards to describe the degree of conformance to that standard (e.g., conformance to MIL-STD-188-181 (DAMA SATCOM)). A standards conformance certification is not sufficient to allow fielding. Additional testing may be required to determine compliance with standards profiles.
- **Joint Interoperability Assessment.** Issued following interoperability testing (OAs, JITC compatibility and interoperability assessments) to provide feedback concerning interoperability strengths and weaknesses when a certification is not appropriate. An interoperability assessment is not sufficient to allow fielding.
- **OT Readiness Review (OTRR) Interoperability Statement.** JITC input, as appropriate, to the OTRR assessing whether a system is ready for OT from an interoperability perspective.
- **Joint Interoperability Test Certifications:** All JITC interoperability test certifications expire upon changes that may affect interoperability. Additionally, all certifications expire three years from date of issue.

Documents Hierarchy



- DODD 5000.1 Defense Acquisition System (**POLICY**)
- DODI 5000.2 Operations of the Defense Acquisition System (**IMPLEMENTATION**)
- DODD 4630.5 Interoperability and Supportability of Information (IT) and National Security Systems (NSS) (**DIRECTIVE**)
- DODI 4630.8 Procedures for Interoperability and Supportability of Information Technology (IT) and National Security Systems (NSS) (**IMPLEMENTER**)
- DODD 8500.1 Information Assurance (IA) (**DIRECTIVE**)
- CJCSI 3170.01C Joint Capabilities Integration and Development System (**POLICY and PROCEDURE**)
- CJCSI 6212.01C Interoperability and Supportability of Information Technology (IT) and National Security Systems (NSS) (**INSTRUCTIONS and IMPLEMENTATION**)

Enforcement



- **If a program/system fails to meet certification requirements, the J-6 will not validate the program and will recommend the program not proceed to the next milestone and that funding be withheld until compliance is achieved and the program/system is validated. The J-6 will make this recommendation to the USD (AT&L), USD (P), USD (C), ASD (NII), the MCEB, and the JROC. The J-6 will also request that the program/system be added to the DOD 4630.8, Interoperability Watch List (IWL).**