

Configuration Management of Tactical Data Link Interoperability

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Overview

- Role of ADFTA
- Interoperability Management process – iSMART
- Interoperability Management supporting software – eSMART
- Integration into ADF and progress
- Future activities
- Questions

ADFTA Roles (1)

- Australian Defence Force (ADF) Tactical Data Link (TDL) Authority
- Part of Satellites and Tactical Interoperability (S&TI) branch of Defence Materiel Organisation (DMO)
- Centre of Expertise for TDLs
- Monitor and enforce conformance with the Chief Information Officer's (CIO) Tactical Information Exchange (TIE) policies and standards

ADFTA Roles (2)

- Provides through life support and guidance on TIE systems acquisition and operation to the ADF:
 - Engineering
 - Test and Compliance
 - Operations Support
 - Training
 - Link 16 Network Design
 - *Interoperability Assurance:*
 - *Standards Management; and*
 - *Requirements Capture and Definition*

Interoperability Management Process (1)

- **iSMART** – interoperable Systems Management and Requirements Transformation
- Developed by Lockheed Martin
- Evolution of TULIP – Through Life Interoperability Planning Process
- Mandated for ADF by DI(G) OPS 10-3 (by default)
DI(G) CIS shortly

iSMART (1)

- Systems Engineering methodology applied throughout life of platform
- Provides knowledge and understanding of Tactical Information Exchange Capabilities and Requirements of platforms (within System of Systems), from
 - “Big picture”; down to
 - Warfighter
- Enables Interoperability Assurance

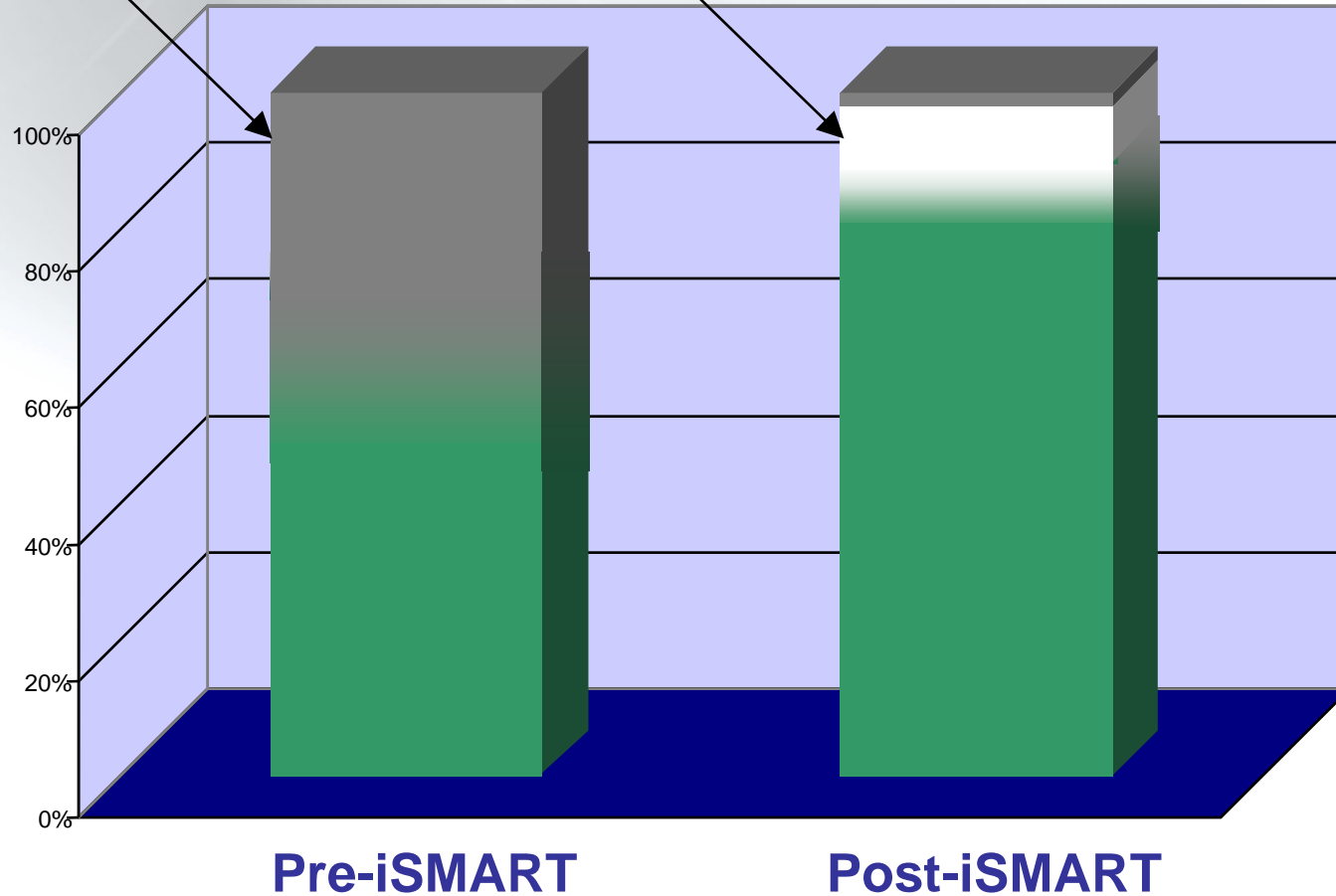
iSMART (2)

- Used by many NATO and non-NATO nations
 - Canada
 - France
 - Italy
 - Norway
 - Sweden
 - UK
 - Denmark
 - Germany
 - Netherlands
 - Spain
 - Switzerland
 - US
- User driven requirements

Improves Interoperability

Black Hole: IO Issues Unknown

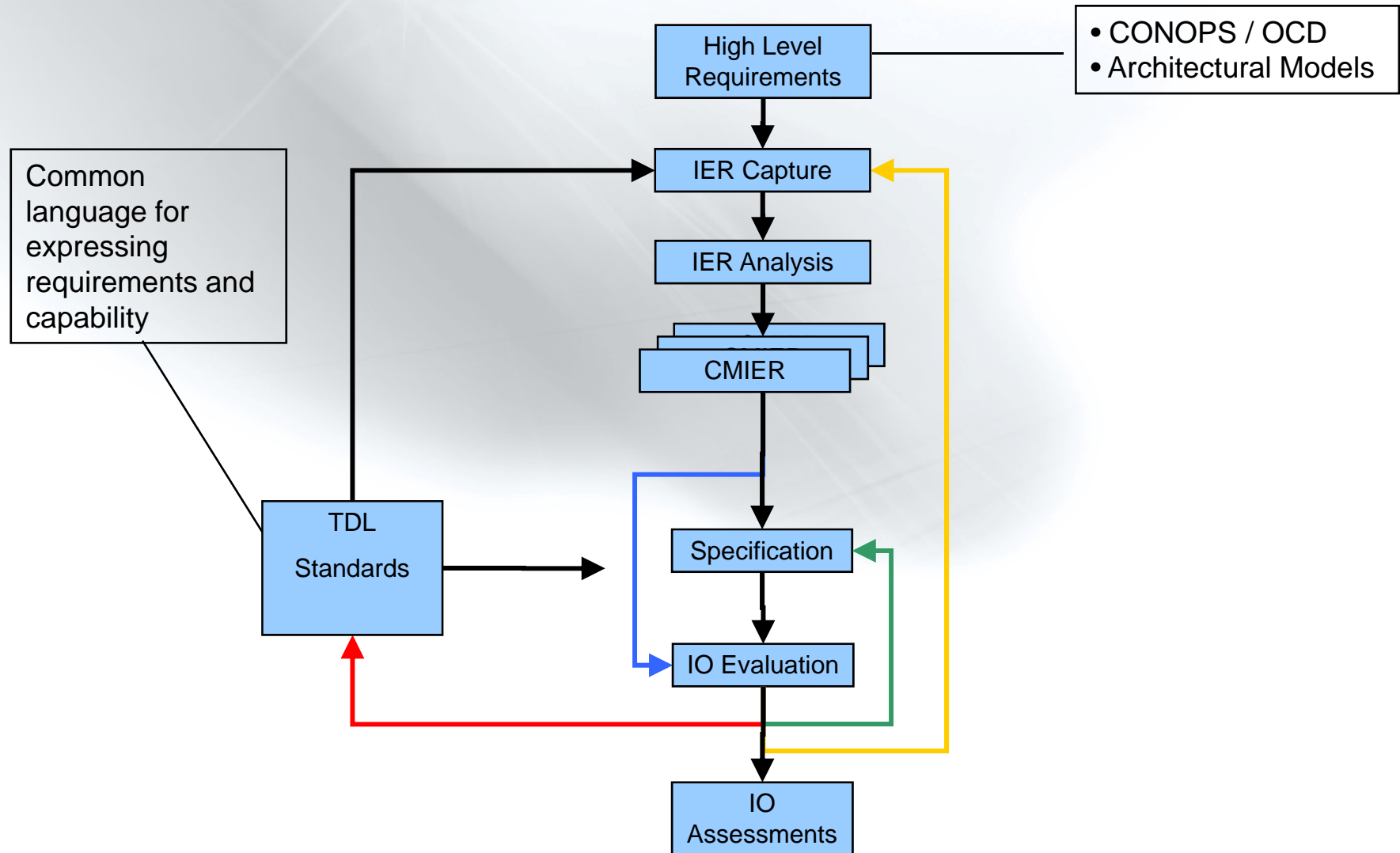
White Hole: IO Issues Known – Operational Work-Arounds



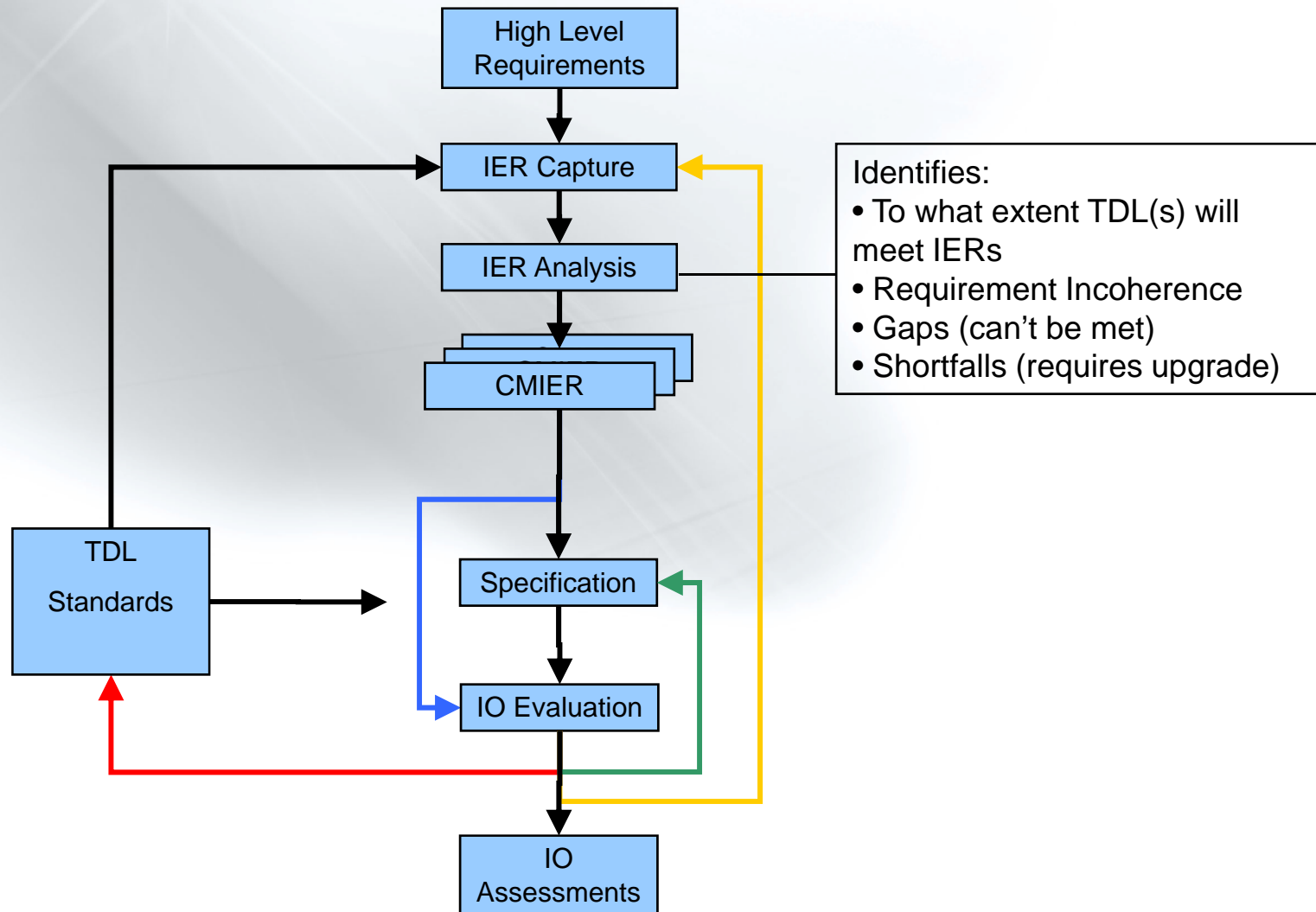
Note: 100% Interoperability unlikely ever to be achieved

iSMART Process

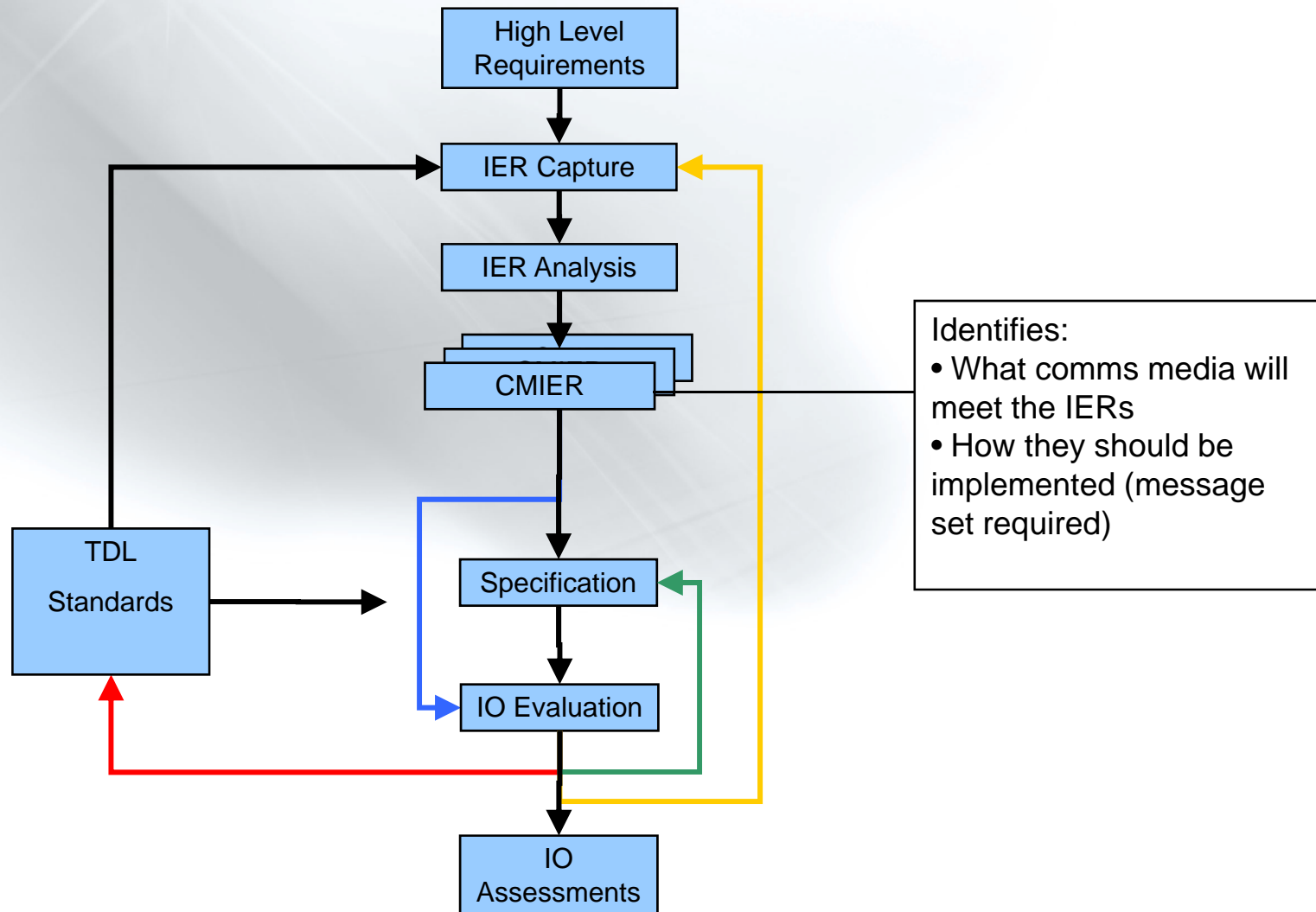
iSMART Process (1)



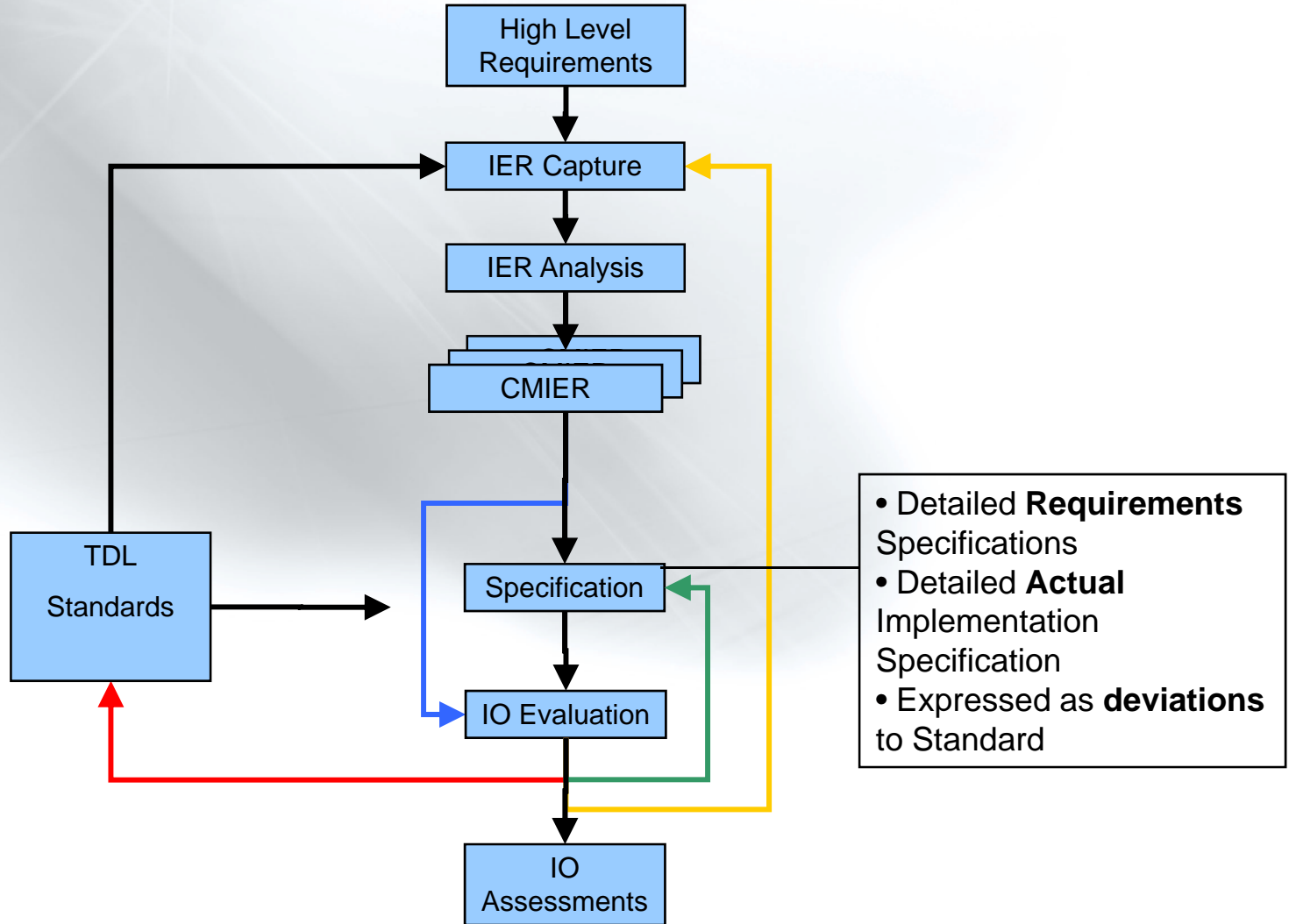
iSMART Process (4)



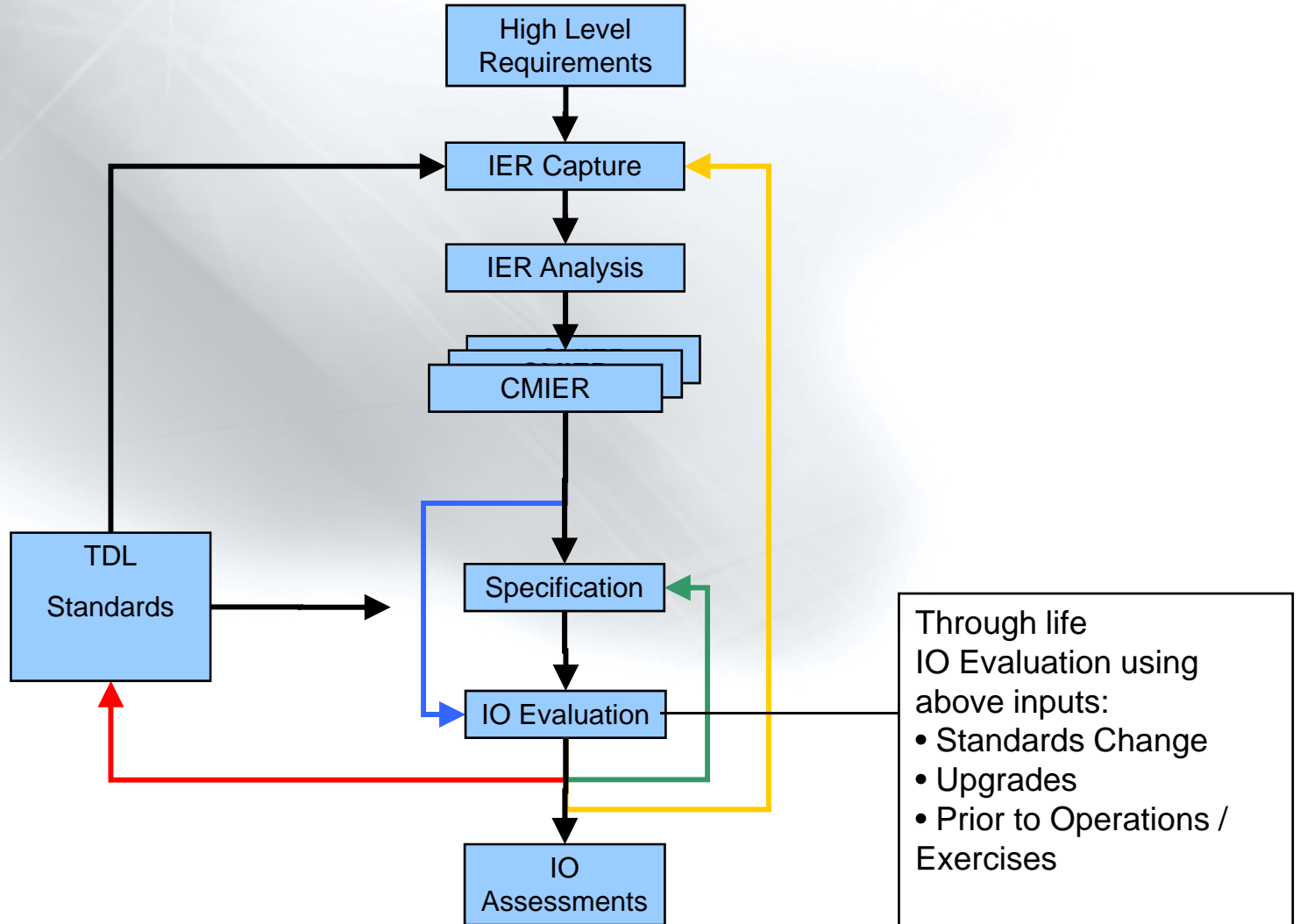
iSMART Process (5)



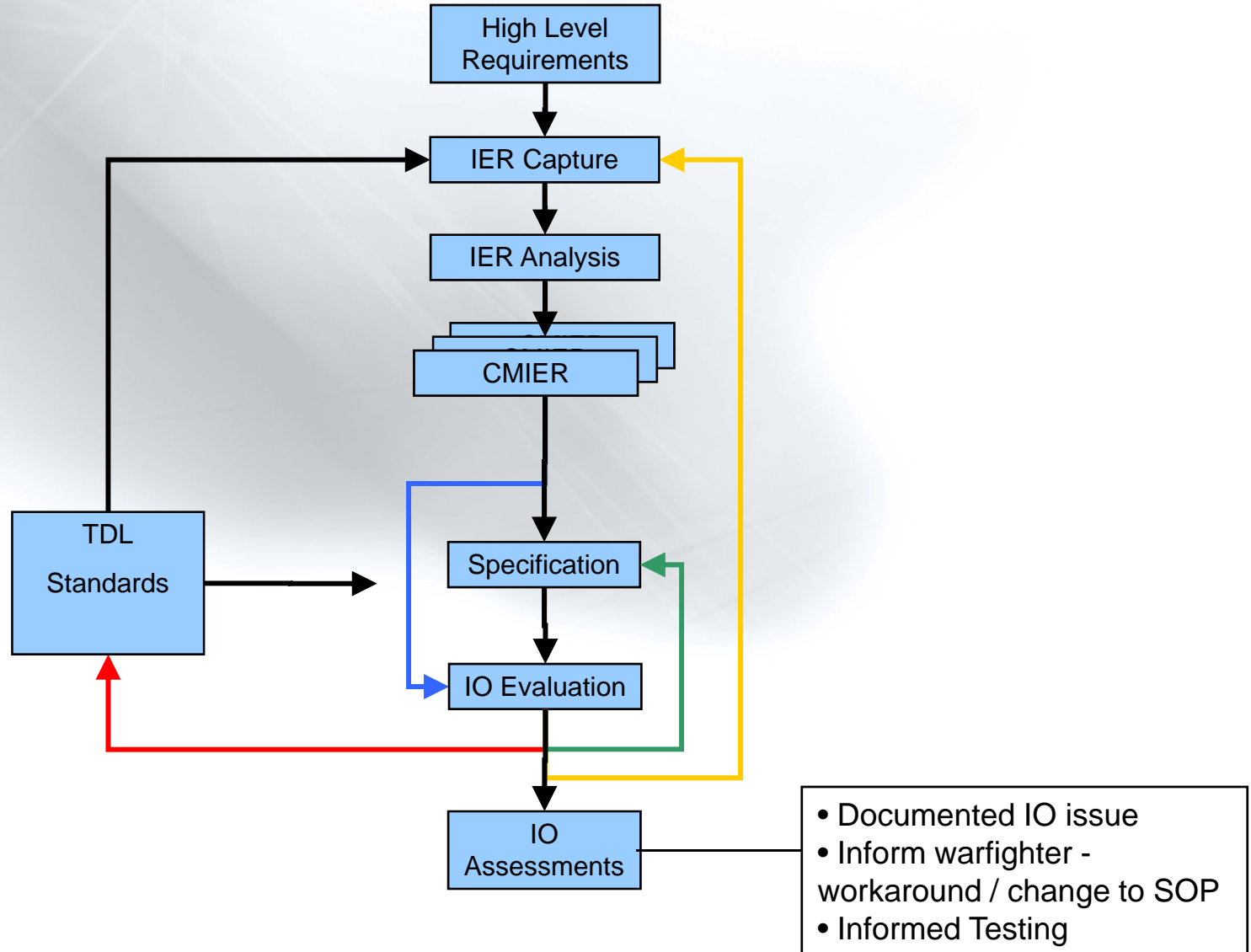
iSMART Process (6)



iSMART Process (7)



iSMART Process (8)

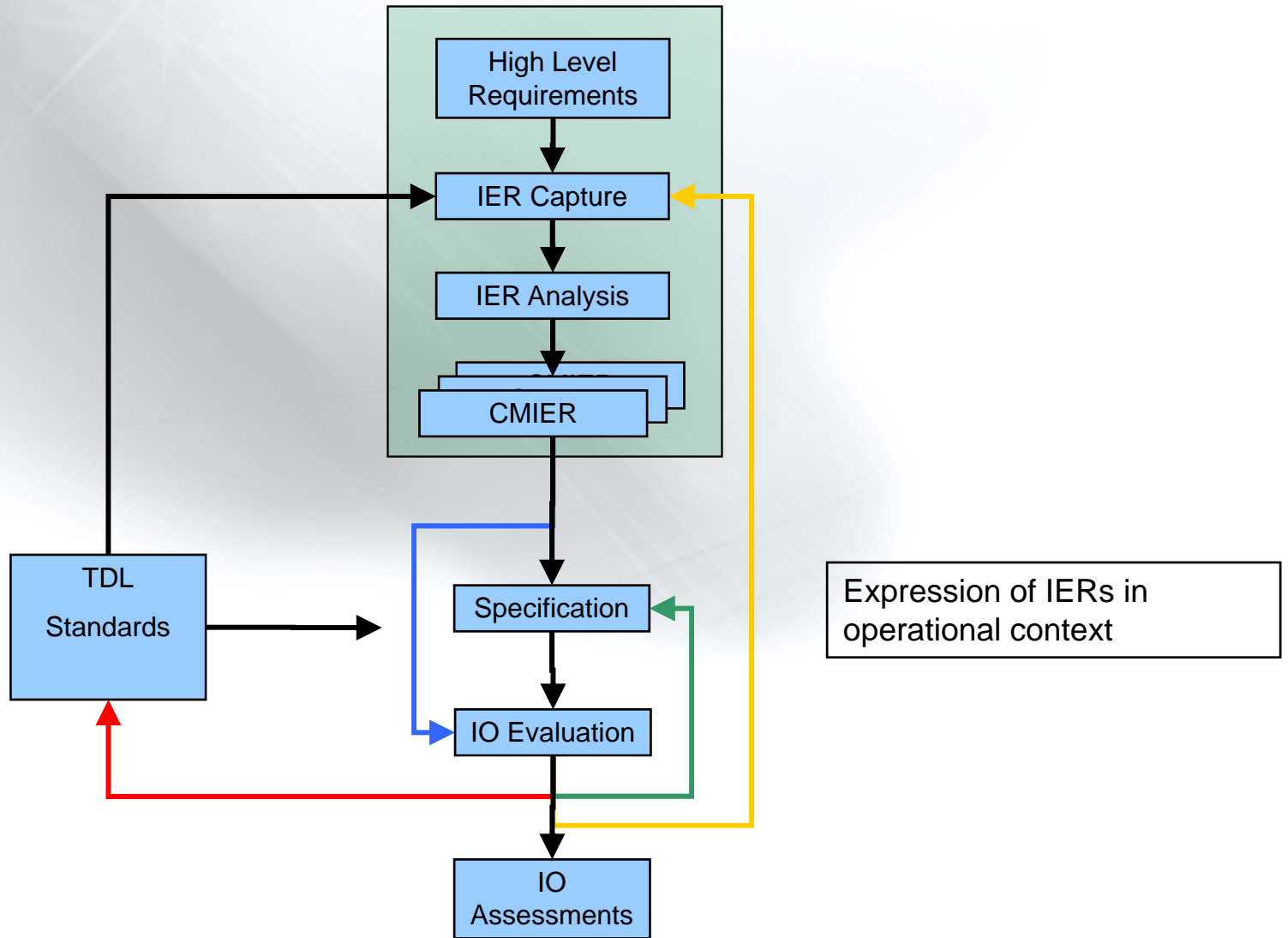


eSMART Software

eSMART Software Tool

- Integrated set of software tools supporting iSMART process
- Installed on internal standalone SECRET network at ADFTA
- Web based, SQL server database
- XML data
- Link 11, Link 16, Link 22, JREAP, VMF, USMTF, ASMTF

eIER – IER Capture



IER Capture – Information Definition example

Situational Awareness - Air Track

Activity

Altitude

Call Sign

Control Channel

Friendlys Targeted

Fuel Endurance Estimate

Fuel Remaining

Heading

Hostility

Assumed Friend

Friendly

Hostile

Neutral

Pending

Suspect

Unknown

IFF Modes

Mode I

Mode II

Mode III

Mode IV

Impact Point

Intentions / Probable Course of Action

Launch Point

Location

Mission Number

Nationality

Number of Aircraft

Speed

Systems / Onboard Capabilities

Track Number

Type / Subtype

Voice Frequency Channel

Weapons

Information Exchange Requirements - Capture

- Identify T/R requirements

8		Subject System: AH64D					
9		IDFs	Summary IERs	CRC	PATRIOT	F16	JSF
-	578	Situational Awareness Air Track	↓	↓	↓	↓	↓
-	579	» Activity					
.	580	» » Activity Codeword / Designator					
.	581	» » Activity Type					
.	582	» » Stage of Confirmation					
.	583	» Altitude	T R	T R	T R	T R	T R
.	584	» Call Sign	T R	T	T	T R	T R
.	585	» Control Channel	T	T	T		
.	586	» Engagement Inhibit Indicator					
.	587	» Friendlies Targeted					
.	588	» Fuel Endurance Estimate	T R				
.	589	» Fuel Remaining	T R				
.	590	» Heading	T R	T R	T R	T R	T R
-	591	» Hostility	↓	↓	↓		
.	592	» » Assumed Friend	R	R	R		

Information Exchange Requirements - Analysis

- How well do various comms media meet the identified T's/R's?
- Assume we choose VMF

8		Subject System: AH64D	IERs	ADAT-P3	Link 11	Link 16	Link 22	USMTF	VMF
9		IDFs	Summary IERs						
+	10	Air Operations CAS A/c Attack Posn & Tgt Designation	↓ [13]						13
+	29	Air Operations CAS Final Attack Control	↓ [4]						4
+	34	Air Operations CAS Mission Information	↓ [23]						22
+	66	Air Operations General Flight Status Report	↓ [3]		2	2	2		3
+	75	Air Operations General Weapons Control & Coordination	↓ [29]		9	29	14		4
+	275	Assessment Battle Damage Close Air Support	↓ [9]						9
+	285	Electronic Warfare Operations Product & Parametric Info	↓ [10]		5	10	10		
+	356	Fire Support Operations Call for Fire	↓ [23]	18				20	20
+	405	Fire Support Operations Check Fire	↓ [4]						3
+	411	Fire Support Operations Command to Fire	↓ [2]						2
+	414	Fire Support Operations Message to Observer	↓ [16]	16				16	13
+	458	Fire Support Operations Observer Mission Update	↓ [1]						1
+	464	Fire Support Operations Observer Readiness	↓ [6]						5
+	474	Fire Support Operations Subsequent Adjust	↓ [25]	20				23	19
+	521	Fire Support Status / Report In Progress Mission	↓ [8]						7

Information Exchange Requirements - CMIER

- How will a specific comms media meet the identified T's/R's?

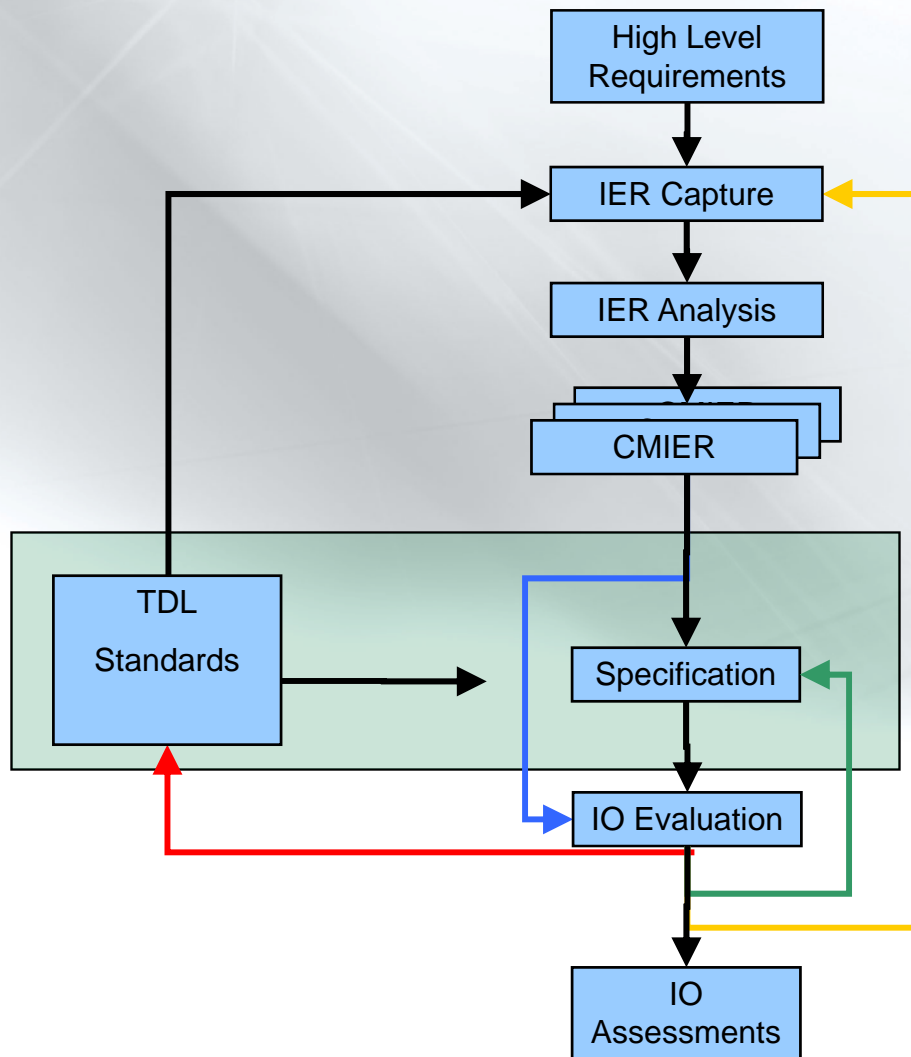
7	Subject System: AH64D	IERs	Capability Support
8	IDFs	Summary IERs	K-Series Messages that may support this type of Information Exchange
543	Protection Warning Air Threat Imminent	↓	↓
552	Recce Report Enemy Sighting	↓	
565	Search & Rescue Mayday Report	↓	↓
566	» Ammunition Types and quantity Left On Board		K03.6
567	» Daytime	T R	K03.6
568	» Distressed Vessel		
569	» Downed Aircraft	T R	
570	» Emergency Location	T R	
571	» Emergency Type	T R	K03.6
572	» Fuel Left Onboard		K03.6
573	» Location	T R	
574	» Man In Water		
575	» Personnel Involved		K03.6
576	» Unit Declaring Mayday	T R	K03.6
577	Situational Awareness Air Track	↓	
618	Situational Awareness Land Track / Point	↓	

Information Exchange Requirements Tool - Analysis

- System of Systems Analysis
- Take into account **actual or proposed** capability of systems
- Assign / remove TDLs to see the effect on information exchange

Subject System		Object System		System of Systems Mode					Show Analysis	April	2004
ACCI/AOC		ACCI/AOC	AH-64	AWACS	F-15E	F-16	LCC/ASOC	OA-10	TACP		
MISSION STATUS ACCEPT					↓	↓		↓			
PLATFORM AND SYSTEM STATUS				T R	T R	T R	T R	T R			
CTRL UNIT CHANGE				T R			T R				
TARGET BEARING				- R	- R	- R		- R			
AIR PLATFORM AND SYSTEM STATUS				↓	↓		↓				
AIRSPACE CONTROL MEANS CONTROL				T R	- R	- R	T R	- R			
COMMAND				↓			↓	↓			
CONTROLLING UNIT REPORT				T R			T R				
MISSION ASSIGNMENT				↓	↓	↓	↓	↓			
BATTLE DAMAGE INDICATION				↓	-	-	↓	-	↓		
REQUESTS				↓	↓		↓	↓			
AIR TRACK											
TRACK NUMBER				-	↓						
LOCATION											
INFORMATION											
HEADING				T R	T R	T R	T	-	T R		
ALTITUDE				T R	T R	T R	T	-	T R		
SPEED				T R	T R	T R	T	-	T R		
TYPE/SUBTYPE				-	R						
FORMATION SIZE				T R	T R	T R	T	-	T R		
L2 MISSION NUMBER											
NATIONALITY											
WEAPONS							T	-			
SYSTEMS/ONBOARD CAPABILITY											
FUEL REMAINING				-	R		T	-			
FUEL ENDURANCE ESTIMATE				-	R		T	-			
ACTIVITY											
INTENTIONS/PROBABLE											

eDOC and eBIT - Specification



- Captures and supports maintenance of deviations from TDL standards
- Supports IO evaluation
- Spec = Standard + Deviation
- **Contractual requirement**
- **Requirements Specification**
 - PRS = STD + PRDD
- **Actual Implementation**
 - APIS = STD + PIDD

Note: PRS not applicable to VMF; currently bit level implementation in PLIMS

eDOC – Requirements Documentation Management

Document Comparison - AWACS PRDD

MIL-STD-6016C	AWACS PRDD	Airforce
C - Appendix C		
C.0 - INTRODUCTION		
C.0.1 - GENERAL		
C.0.1.1 - J2.x Preci	Amended	
C.0.1.2 - In addition	Deleted	
C.0.1.3 - J13.x Platf	Amended	Deleted
C.0.1.4 - A significar		
C.0.2 - GENERATION O		
C.0.3 - USES OF PPLI M		
C.0.4 - PPLI MESSAGE		
C.0.5 - TRANSMIT TAB		
C.0.6 - RECORD FORM.		
C.1 - PROCESSING OF PPL		
C.2 - PLATFORM AND SYS		
C.3 - PLATFORM AND SYS		

C.0.1.3 J13.x Platform and System Status messages are transmitted by all JUs in a network. The messages are generated by the host system. J13.x Platform and System Status messages are used by command authorities, weapons controllers, and the other members of a nonC² JU's flight to support weapons coordination and management.

Deviation
UK, Airforce, Service

C.0.1.3 ~~J13.x Platform and System Status messages are transmitted by all JUs in a network. The messages are generated by the host system. J13.x Platform and System Status messages are used by command authorities, weapons controllers, and the other members of a nonC² JU's flight to support weapons coordination and management.~~

Not Used
Rationale: Test
UK, Airforce, AWACS

C.0.1.3 J13.x Platform and System Status messages are transmitted by all JUs in a network. The messages are generated by the host system. J13.x Platform and System Status messages are used by command authorities, ~~weapons controllers, and the other members of a nonC²~~ JU's flight only to support weapons coordination and management.

eBIT – Bit Level Platform Implementation

Clone of MIL-STD-6016C Ch1 28 March 2005 [QA 31 Jan 2007] + AEW&C IMP

	Transmit		Receive	
	AEW&C-AU-V0.1+	HORNET-AU-1.0	SUPER HORNET-...	
J12.0 Mission Assignment Message				
HDR				
I MISSION ASSIGNMENT INITIAL WORD				
769 6 TRACK NUMBER, ADDRESSEE	T	R	R	R
1626 1 MISSION ASSIGNMENT DISCRETE	T	R	R	R
0 NO STATEMENT	NT	DM	DM	DM
1 REFUEL	T	R	R	R
2 ORBIT	T	DM	DM	DM
3 RECALL	T	R	R	R
4 RETURN TO BASE	T	R	R	R
5 ENGAGE	T	R	R	R
6 PRIORITY KILL	T	R	R	R
7 BREAK ENGAGEMENT	T	R	R	R
8 INVESTIGATE/INTERROGATE	T	R	R	R
9 CLEAR TO DROP	T	R	R	R
10 CEASE/DO NOT DROP	T	R	R	R
11 INTERVENE	T	R	R	R
12 DIVERT	T	R	R	R
13 AIR-TO-SURFACE	T	DM	DM	DM
14 AIR-TO-AIR	T	DM	DM	DM
15 SEARCH AND RESCUE	T	R	R	R
16 COMBAT AIR PATROL	T	R	R	R
17 DISUSED	T	DM	R	R
18 LASER DESIGNATION	T	R	R	R
19 DISUSED	T	DM	DM	DM
20 CLOSE AIR SUPPORT	T	DM	R	R
21 INTERDICTION	T	R	DM	DM
22 AERIAL RECONNAISSANCE	T	R	R	R
23 ESCORT	T	R	R	R
24 SHADOW	T	R	R	R
25 WEAPONS FREE	T	R	R	R
26 WEAPONS TIGHT	T	R	R	R
27 SALVO/CLEAR AIRCRAFT	T	R	R	R
28 ALERT CONDITION WHITE	T	DM	DM	DM
29 ALERT CONDITION YELLOW	T	DM	DM	DM
30 ALERT CONDITION RED	T	DM	DM	DM
31 COVER	T	R	R	R
32 VISUAL IDENTIFICATION	T	R	R	R
33 DISUSED	NT	DM	DM	DM
34 GO TO VOICE	T	R	R	R
35 HIGH INTEREST TRACK DESIGNATION	T	R	TBD	TBD
36 CANCEL HIGH INTEREST TRACK DESIGNATION	T	R	TBD	TBD
37 SENSOR TARGET REPORTS ON	T	R	R	R
38 SENSOR TARGET REPORTS OFF	T	R	R	R
39 SUPPRESSION OF ENEMY AIR DEFENSES	T	R	R	R
40 ARMED RECONNAISSANCE	T	R	R	R
41 ATTACK	T	R	R	R
42 CEASE ATTACK	T	R	R	R

Key

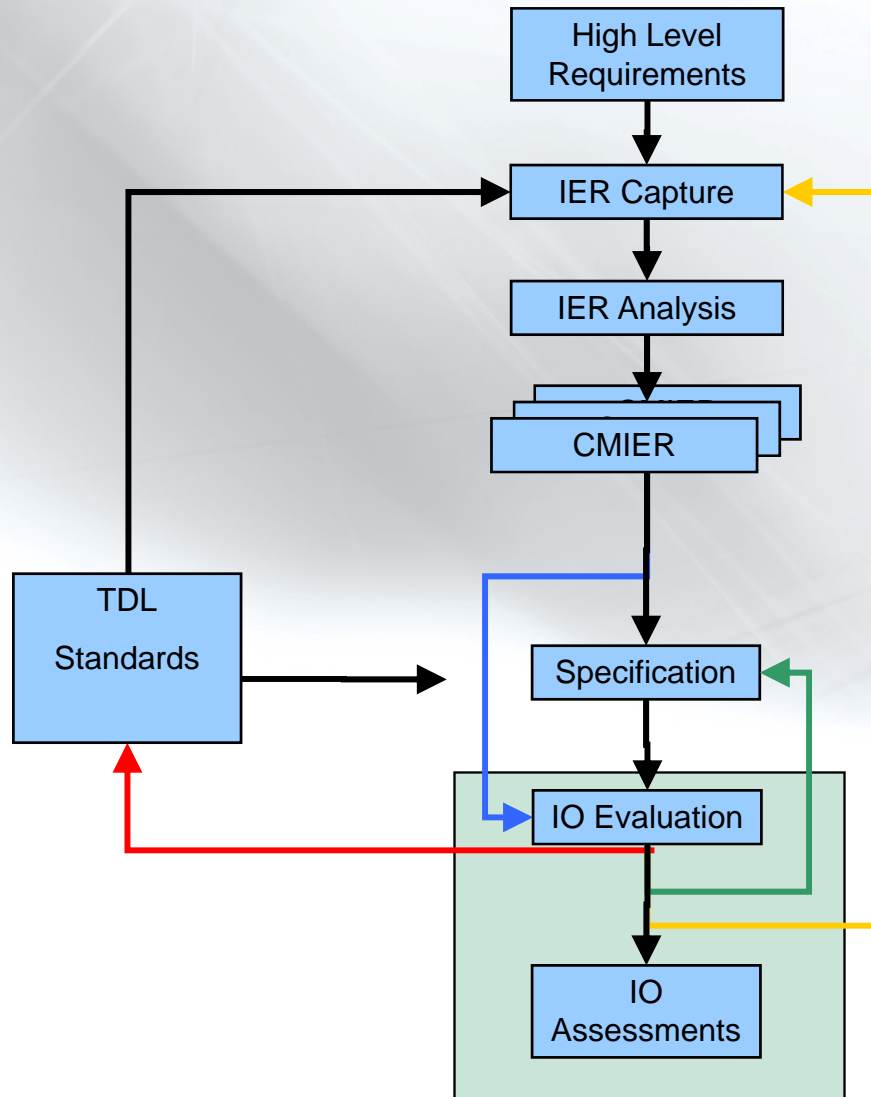
- Element combination is valid
- Element is different between message structures
- No Data present
- Warning
- Node is undefined or there is a difference below
- Element is Different

J12.0 Mission Assignment Message

PLIMS

Platform Link Implementation Management System							
File Edit View Tools Help							
Back Difference Matrix Platform							
MILSTD 6017A	INDEX NBR	DFI-DUI	TITLE	BITS	Grp	Rpt	
VMF MESSAGES	INDEX TYPE 1						
K00.1 - NETWORK MONITORING	1.	4057-002	FIRE MISSION TYPE	4			NT/R
K00.2 - SYSTEM COORDINATION	INDEX TYPE 2						
K00.3 - SECURITY MONITORING	2.	4014-002	FPI	1			NT/R
K00.4 - SYSTEM CONFIGURATION MESSAGE	2.1	4003-001	TARGET NUMBER	28			NT/R
K01.1 - FREE TEXT	INDEX TYPE 3						
K01.2 - UNIT REFERENCE QUERY/RESPONSE	3.	4014-001	GPI	1			NT/R
K01.3 - INFORMATION REQUEST MESSAGE	3.1	4079-007	GUN-TARGET LINE INDICATOR	1	G1		NT/R
K01.4 - GEOGRAPHICAL REFERENCE DATA	3.2	4014-002	FPI	1	G1		NT/R
K02.1 - CHECK FIRE	3.2.1	4028-001	OBSERVER-TARGET AZIMUTH	13	G1		NT/R
K02.2 - REGISTRATION DATA	3.3	4014-001	GPI	1	G1		NT/R
K02.3 - FIRE SUPPORT METEOROLOGICAL DATA	3.3.1.1	4045-001	GRI	1	G1/G2	R1 (15)	NT/R
K02.4 - CALL FOR FIRE	3.3.1.2	4014-002	FPI	1	G1/G2	R1	NT/R
K02.5 - SHELL REPORT	3.3.1.2.1	4085-099	TARGET ELEMENT NUMBER	4	G1/G2	R1	NT/R
K02.6 - OBSERVER MISSION UPDATE	3.3.1.3	281-407	TARGET LATITUDE	25	G1/G2	R1	NT/R
K02.7 - SURVEY CONTROL POINT	3.3.1.4	282-407	TARGET LONGITUDE	26	G1/G2	R1	NT/R
K02.8 - SCHEDULE OF FIRES	3.3.1.5	4014-002	FPI	1	G1/G2	R1	NT/R
K02.9 - TARGET DATA	3.3.1.5.1	4130-004	TARGET ELEVATION, MSL	17	G1/G2	R1	NT/R
K02.10 - FIRE PLAN MISSION/FIRE PLAN CANCELLATION	3.3.1.6	4014-002	FPI	1	G1/G2	R1	NT/R
K02.11 - AMMUNITION INVENTORY	3.3.1.6.1	4214-002	TARGET ELEVATION, HAE	22	G1/G2	R1	NT/R
K02.12 - COMMAND TO FIRE	3.3.1.7	4014-002	FPI	1	G1/G2	R1	NT/R
K02.13 - MISSION CLEARANCE	3.3.1.7.1	4119-001	TARGET LOCATION ACCURACY	10	G1/G2	R1	NT/R
K02.14 - MESSAGE TO OBSERVER	3.3.1.8	4014-001	GPI	1	G1/G2	R1	NT/R
K02.15 - FIRE SUPPORT COORDINATION MEASURES	3.3.1.8.1	4025-001	TARGET GENERIC TYPE	5	G1/G2/G3	R1	NT/R
K02.16 - END OF MISSION AND SURVEILLANCE	3.3.1.8.2	4026-001	TARGET SUBTYPE	8	G1/G2/G3	R1	NT/R
K02.17 - COMMAND AND CONTROL (C2) SYSTEM FIRE MISSION PROCESSING	3.3.1.8.3	4014-002	FPI	1	G1/G2/G3	R1	NT/R
K02.18 - FIRE UNIT STATUS	3.3.1.8.3.1	4027-001	DEGREE OF PROTECTION	4	G1/G2/G3	R1	NT/R
K02.19 - TARGET QUERY/STANDING REQUEST FOR INFORMATION	3.3.1.8.4	4014-002	FPI	1	G1/G2/G3	R1	NT/R
K02.20 - SURVEY CONTROL POINT INFORMATION REQUEST	3.3.1.8.4.1	4029-005	NUMBER OF TARGET ELEMENTS	14	G1/G2/G3	R1	NT/R
K02.21 - REQUEST FOR CLEARANCE TO FIRE	3.3.1.8.5	4014-002	FPI	1	G1/G2/G3	R1	NT/R
K02.22 - SUBSEQUENT ADJUST	3.3.1.8.5.1	4117-002	TARGET FORMATION	2	G1/G2/G3	R1	NT/R
K02.23 - FIRE PLAN ORDERS	3.3.1.8.6	4014-001	GPI	1	G1/G2/G3	R1	NT/R
K02.24 - IN PROGRESS MISSION NOTIFICATION	3.3.1.8.6.1.1	4045-001	GRI	1	G1/G2/G3/G4	R1/R2 (3)	NT/R
K02.25 - END OF MISSION NOTIFICATION	3.3.1.8.6.1.2	4110-001	TARGET SUBTYPE ELEMENT	7	G1/G2/G3/G4	R1/R2	NT/R
K02.27 - CLOSE AIR SUPPORT REQUEST	3.3.1.8.6.1.3	4029-012	NUMBER OF TARGET SUBTYPE ELEMENTS	10	G1/G2/G3/G4	R1/R2	NT/R
K02.28 - CLOSE AIR SUPPORT MISSION BATTLE DAMAGE ASSESSMENT (CASBDA)	3.3.1.9	4014-001	GPI	1	G1/G2	R1	NT/R
K02.31 - MISSION REQUEST REJECTION	3.3.1.9.1.1	4045-001	GRI	1	G1/G2/G5	R1/R3 (2)	NT/R
K02.32 - CLOSE AIR SUPPORT REQUEST ACCEPTANCE	3.3.1.9.1.2	4014-002	FPI	1	G1/G2/G5	R1/R3	NT/R
K02.33 - CLOSE AIR SUPPORT AIRCREW BRIEFING	3.3.1.9.1.2.1	4005-003	FIRE FOR EFFECT PROJECTILE	8	G1/G2/G5	R1/R3	NT/R
K02.34 - AIRCRAFT ON-STATION	3.3.1.9.1.3	4014-002	FPI	1	G1/G2/G5	R1/R3	NT/DF
K02.35 - AIRCRAFT DEPART INITIAL POINT							
K02.36 - AIRCRAFT MISSION UPDATE							
K02.37 - OBSERVER READINESS REPORT							
K02.38 - TARGET HANDOVER							
K02.39 - FIRE SUPPORT MISSION GRAPHICS							
K02.40 - CANNON/MORTAR FIRE ORDERS							
K02.41 - FIRE SUPPORT UNIT DEPLOYMENT COMMAND							
K02.42 - FIRE PLAN ASSIGNMENT DATA							
K02.43 - ROCKET/MISSILE MUNITIONS EFFECTS DATA							
K02.44 - TARGET ELEMENT DATA ENTRY							

Interoperability Evaluations



- Paper based evaluation, compare implementations
- Interoperability Assessments – record of a single issue
- Operator Reference Cards
- Stored in IOM database

IOA Example

IOM - IOA Maintenance Print IOAs

IOA NATO Index **IOA Details**

Title Search

General Data | Operational Data | Technical Data | Further Action | Status / Validation

IOA Details:

Country: TDL: IOA Number:

IOA Date: User Applicability:

Release Level: Originator:

Source:

Message Details:

Message:

Functional Area:

IOM Q. Number:

Operational Summary Details:

Classification: Op Sum Date:

The F/A-18 does not implement WES values related to cease engagements and BDA.

Platform Affected Details: Add Combination Add New IOA

Country/Primary Platform/Software Version			Country/Target Platform(s)/Software Version			All	JU Types
<input type="text" value=""/>	<input type="text" value="Nil"/>	<input type="text" value="Nil"/>	vs	<input type="text" value=""/>	<input type="text" value="Nil"/>	<input type="text" value="Nil"/>	<input type="text" value="Nil"/>

IOE Example – Operator Reference Card (1)

SITUATIONAL AWARENESS

The Platform receives and displays:

- Exercise entities
- Simulated entities
- PPLIs including indirect PPLIs, but not Subsurface PPLIs.
- Tracks but not subsurface or space.
- The Platform will process and display surface and ground tracks of all track qualities. However, the Platform does not process the related time (minutes and hour) of Non-Real-Time-Tracks (NRTTs). As NRTTs are reported historically and require extrapolation, this F/A-18 characteristic will lead to errors in determining the true position of surface/ground NRTTs
- The Platform will not apply MIDS navigational data corrections to received ground/surface tracks.
- Non-C² Pointers and non-C² Target Sorting messages.
- Surveillance Identities will be mapped as follows:

Code	Link 16 Identity	Platform Interpretation	Code	Link 16 Identity	Platform Interpretation
0	Pending	Unknown	4	Neutral	Unknown
1	Unknown	Unknown	5	Suspect	Unknown
2	Assumed Friend	Unknown	6	Hostile	Hostile
3	Friend	Friendly	7	Undefined	Unknown

IOE Example – Operator Reference Card (2)

Code / Point Type	Code(s) / Point Amp / [Display String]	Implementation
(0) Hazard	Type Not Processed	Discard
(1) Reference Point (General)	(0,3?7,9,11?15) Various	Discard
	(1) Marshall Point [MRSHL]	Process
	(2) Waypoint [L16 WP]	Process
	(8) Victor Lima [VL]	Process
(2) Station (General)	(0?5,7?15) Various	Discard
	(6) Rescue [SAR]	Process
(3) Station (Air)	(0,3?5,7,12?15) Various	Discard
	(1) Combat Air Patrol [CAP]	Process
	(2) Airborne Early Warning [AEW]	Process
	(6) Strike Initial Point [IP]	Process
	(8) Tanker [TANKR]	Process
	(9) Orbit, Race Track [ORBIT]	Process
	(10) Orbit, Figure Eight [ORBIT]	Process
	(11) Orbit, Random Closed [ORBIT]	Process
(12) Orbit Point [ORBIT]	Process	

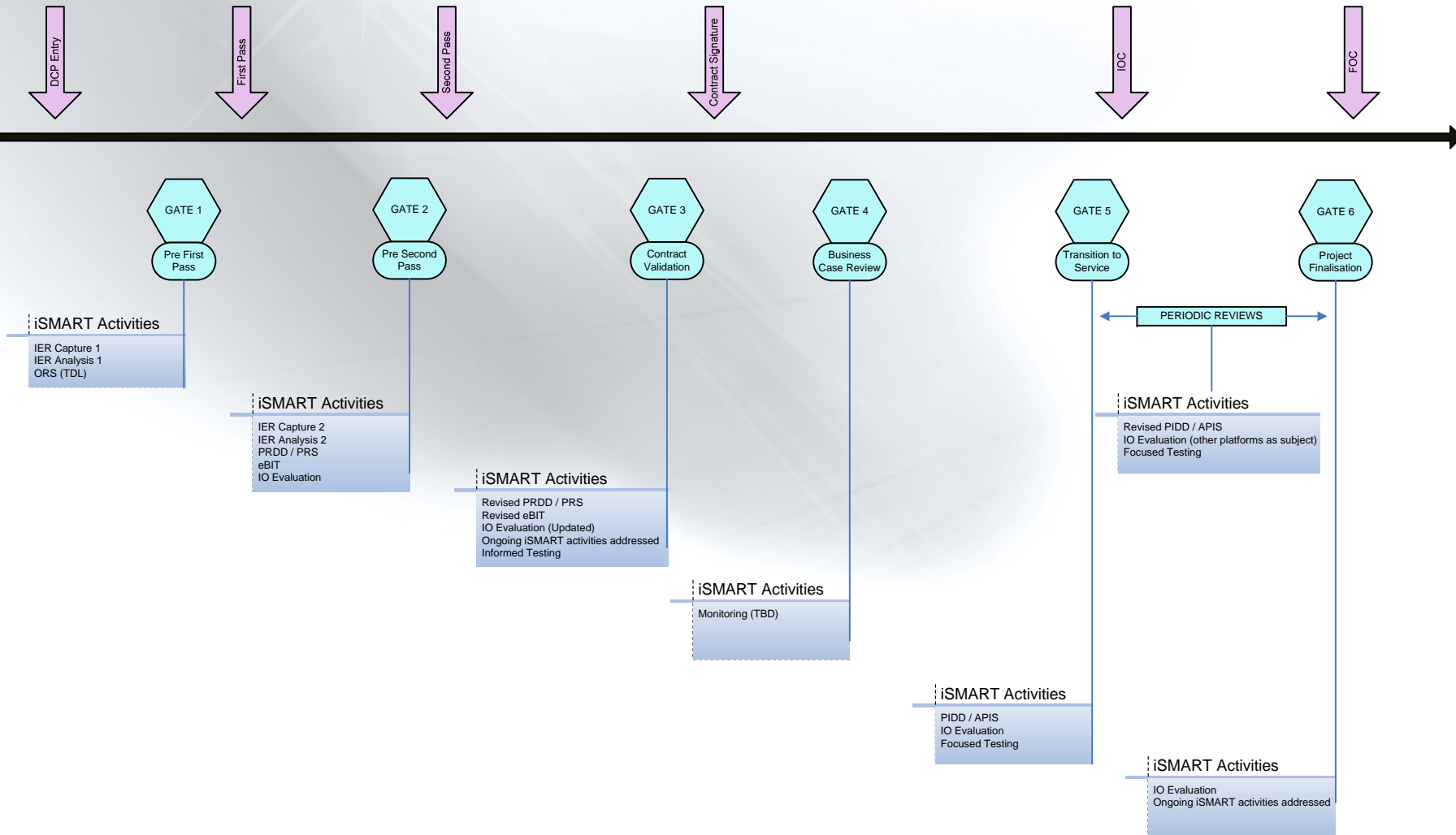
iSMART/eSMART Summary

- Traceability
- Structured and standardised approach
- Data sharing and re-use
- Through life

Current Status (1)

- eSMART software installed Jan 08 at ADFTA
- Personnel support provided by LMUK staff
- Software licence includes annual software updates and XML standards following release
- Integrate iSMART into Australian Defence Force Capability Life Cycle
- iSMART processes/products required at key points in Acquisition

Integration of iSMART Process (1)



Integration of iSMART Process (2)

- DI(G) CIS to mandate iSMART as the required interoperability management process (current policy DI(G) 10-3 mandates TULIP)
- Updating ADF TDL Interoperability Requirements Guide (ADF TDL IRG)
- Updating Capability Definition Document Guides
- Embedding of iSMART processes into Defence Materiel Organisation (DMO) Quality Management System

eSMART Current Status (1)

- IER Captures:
 - Armidale Class Patrol Boats
 - AP3C Orion Aircraft
 - ANZAC FFH
 - Mine Hunter Coastal
 - F/A-18 (Classic and Super)
 - Joint Strike Fighter
 - Majority of Australian Army platforms
 - Planned: Guided Missile Submarine, Wedgetail and Vigilare

eSMART Current Status (2)

- eDOC / eBIT Specifications
 - Australian NDD, C² and Non-C² Templates
 - Hornets (Classic and Super)
 - Joint Strike Fighter
 - Airborne Early Warning & Control
 - Landing Helicopter Dock
 - ANZAC
 - Maritime Refuelling Tanker Transport
 - Vigilare
 - Wedgetail
- IOE
 - F/A-18 and Generic C² platform

Future Activities

- Continue populating database
 - IERs
 - Specifications
 - Enable broader analysis
- Perform IOEs prior to planned exercises
- SPAWAR to perform IOEs against USN platforms
- Obtain data from other iSMART nations
 - C130J, FSTA, JSF already obtained

Questions?