



Joint C2: Situational Awareness & Intel Global Command and Control System – Joint (GCCS-J)

GCCS-J

Vision and Goals

- **Vision**
 - Deliver dynamic, customizable, and user-driven Command and Control (C2) capabilities that are secure, interoperable, and responsive to current and future warfighter requirements
- **Goals**
 - Sustain the currently supported system
 - Provide an integrated, flexible, and secure system infrastructure
 - Deliver new and enhanced functionality in response to validated and prioritized requirements
 - Provide a strategy and migration path to integrate emerging technology in accordance with the Joint C2 architecture
 - Maximize reuse of GCCS-J capabilities by Services, combatant commands, and coalition partners
 - Maximize program and partner C2 resources to gain efficiencies and reduce sustainment cost drivers



Rapidly deliver
C2 capability to the field

Global Command & Control System-Joint (GCCS-J)

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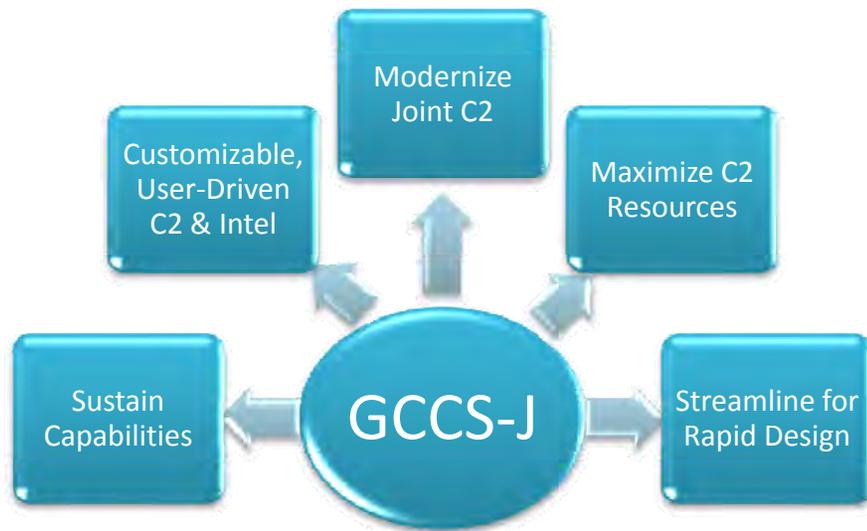
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GCCS-J Top 5 Priorities



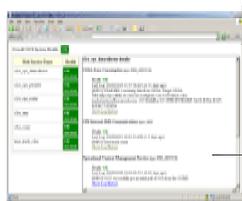
- Sustain all fielded GCCS-J capabilities to ensure operational availability
- Deliver dynamic, customizable, and user-driven Command and Control (C2) and Intelligence capabilities that are secure, interoperable, and responsive to current and future warfighter requirements
- Continue modernization of Joint C2 Capabilities to enable increased use and ability to provide enterprise and C2 services, reduce sustainment cost drivers, and enable reuse by Services, combatant commands and interfaces
- Maximize C2 resources (HW, SW, People, and Dollars) to gain efficiencies and cost sharing where possible, to better support warfighting demands
- Streamline processes and structures within the GCCS-J PMO to more rapidly design and deliver Joint C2 capabilities

GCCS-J Overview

Current SOR for Joint C2 ACAT IAC:
Principal advisor to the Chairman on C2 = JS J3
MDA = DISA CAE
DAA = STRATCOM
Ops Sponsor = J8/CCD

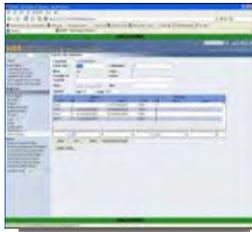
Global Infrastructure

- Provides cross-functional products forming a common foundation for the GCCS Family of Systems
- Utilize both COTS/OSS and GOTS and GCCS-J Apps
- Evolving to meet growing needs of joint operations, sites and FoS for ease of administration and installation
- Agile integration and fielding experiences



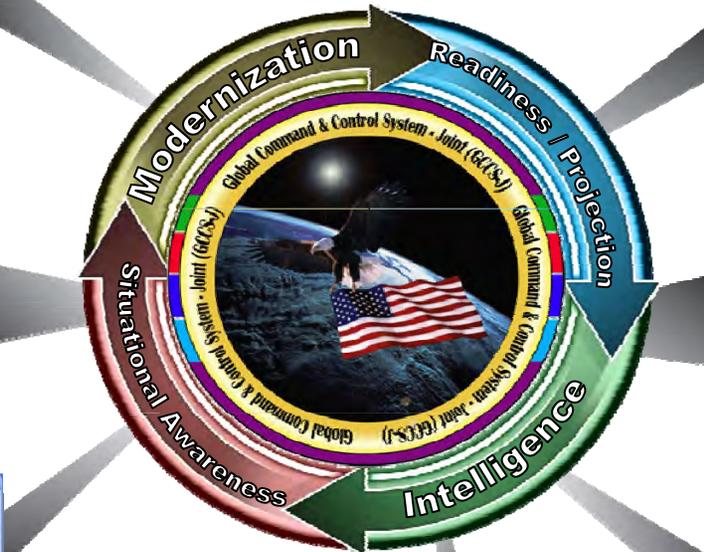
JOPES (Joint Operation Planning & Execution Systems)

- Provides the joint warfighter with the ability to identify, validate and source force requirements, and request the time phased movement of forces to theater of interest
- Used for development, maintenance, and management of Time Phased Force Deployment Data (TPFDD), functional plans and Operation Orders (OPORD)



I3 (Integrated Imagery & Intelligence)

- Uses horizontally integrated intelligence services to enhance operational situation awareness and command decision-making
- Enables deliberate and time-critical target planning
- Optimizes full interoperability across the tactical, theater, and national communities



JC2CUI (Joint Command & Control Common User Interface) Modernization Initiative

- Single point of entry for Joint C2 systems
- Includes a Government Open Source Software (GOSS) Ozone widget framework, marketplace
- Single sign-on capability to provide access to views of enterprise data and evolving services via a common visualization layer
- Allows the warfighter to customize their desktop and presents capabilities that scale to fit mission needs



COP (Common Operational Picture)

- Delivers distributed data processing and exchange environment that allows each AOR to tailor the view to their Command role (e.g., ISAF or OEF)
- Key toolset for the Commanders in planning, conducting operations, monitoring, execution, and coordinating operations
- Used to execute operational directives with the Joint Task Forces (JTF) and individual units.



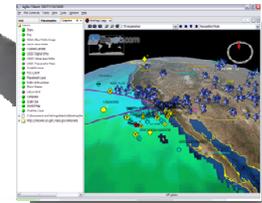
CDS (Cross Domain Services) Modernization Initiative

- Multi-Level Secure solution for GCCS-J Common Operational Picture (COP) Tracks, Intelligence, and Imagery
- Certified at Protection Level 4 (PL-4)
- Improves the quality and consistency of GCCS-J COP and I³ data flows and interoperability between SCI, Collateral, and Coalition networks



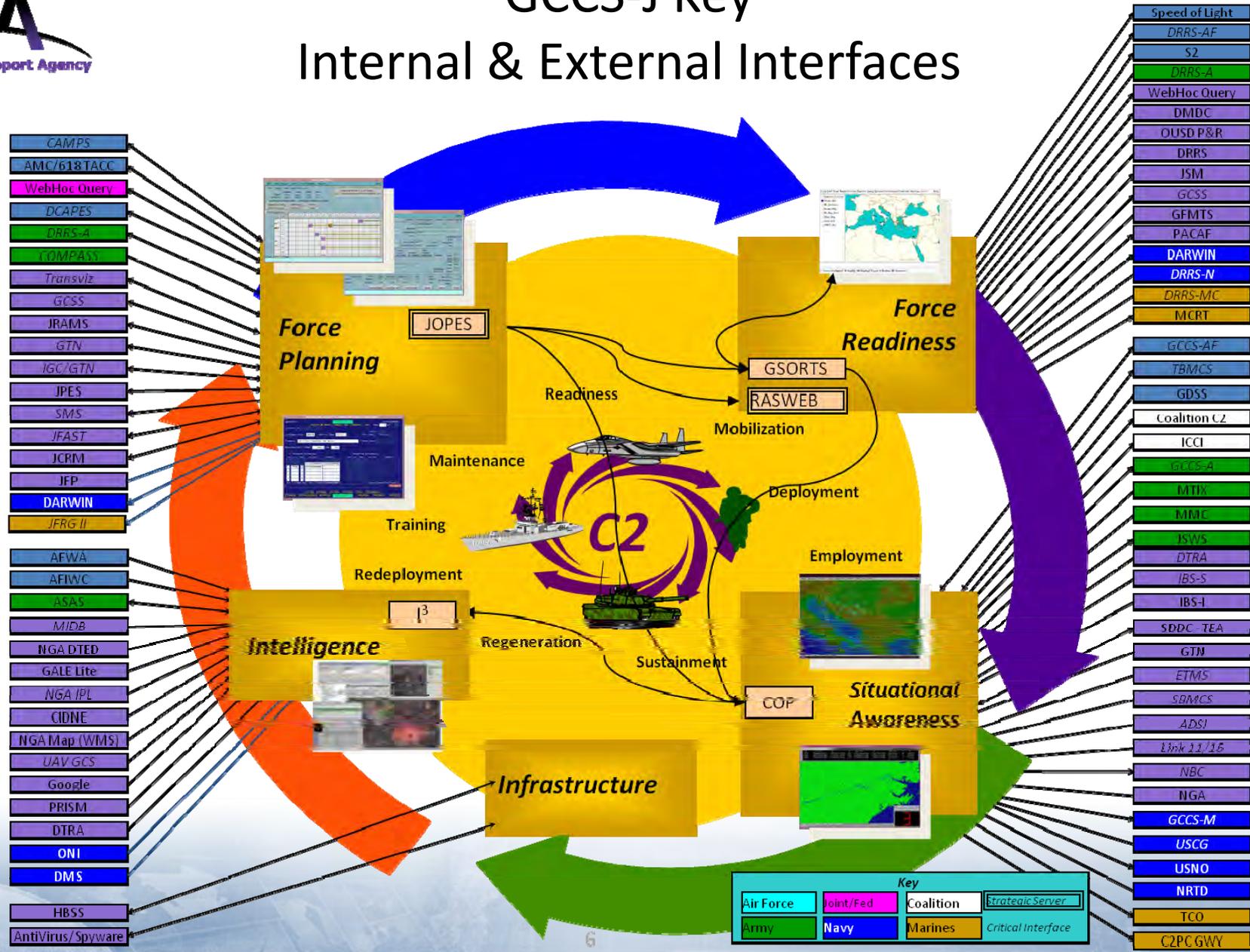
AC (Agile Client) Modernization Initiative

- Modular rich-client Application providing a 3-D common operational picture.
- Promotes development and use of AC plug-ins by multiple sources, improving efficiency and data access
- Improves mission effectiveness by tailoring the user's application with only the capabilities and data needed for their specific mission



Sustain → Synchronize → Modernize
Rapidly deliver C2 capabilities to the Warfighter

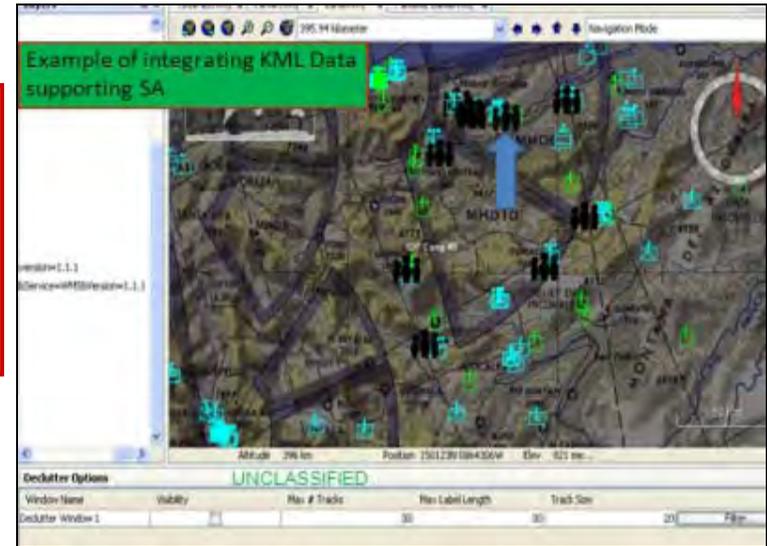
GCCS-J Key Internal & External Interfaces



How GCCS-J is Used



SOUTHCOM use of GCCS-J Agile Client in their JOC & CAC for FA-PANAMAX 2010



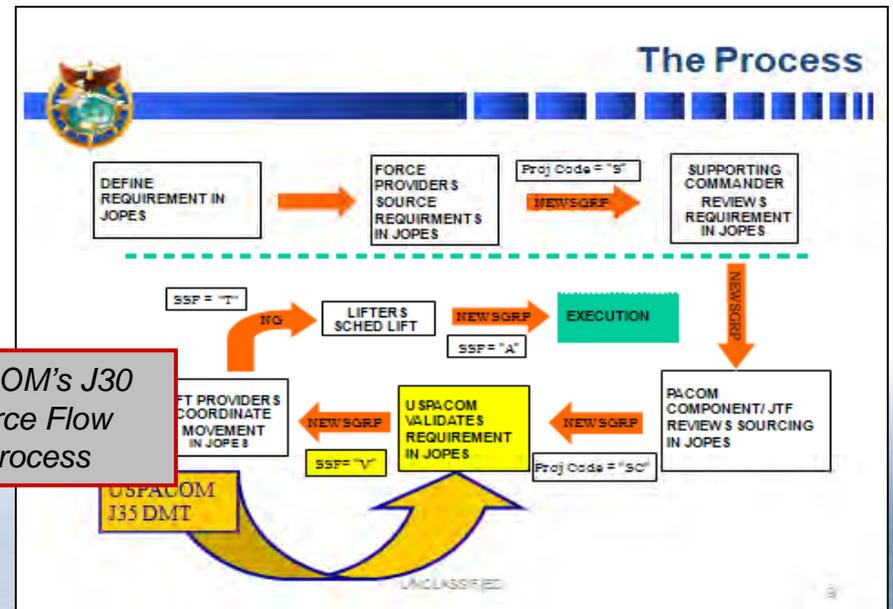
JSJ36 briefing chart

Why do we need GCCS-J?
GCCS-J is the core basis for the GCCS-FOS

- GCCS-J is the DOD's C2 System of Record
 - No major force movement executed without GCCS-J
 - Deployment, Redeployment, Retrograde and Reposturing
 - Missile Defense Agency System of Record for Missile Tracking
- Crisis Action Planning and Execution
 - JOPES is critical to force projection
 - SORTS integrated for GFM sourcing decisions
 - Workflow engine across COCOMs/Services/Agencies
- Global Common Operational Picture
 - Tactical-Operational-Strategic
 - Integrated with Intel systems
 - Provided to National Military Command System

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PACOM's J30 Force Flow Process





GCCS-J in Current Ops & Joint Environments

Estimated number of Global GCCS-J users: **35,000**

Estimated number of JOPES users : **7,616**

All named operations use JOPES

Total number of passengers moved in support of OEF and OIF/OND is more than 7 million

Total amount of cargo moved is more than 12M STONS

- CENTCOM

- Continued to provide on-site GCCS-J system administration, training, and functional support at key CENTCOM sites in Afghanistan in support of Operation ENDURING FREEDOM
- Support GCCS-J installation and administration on the CENTRIX-ISAF network in the Afghan Theater of Operations
- Combined Joint Operations Area - Afghanistan (CJOA-A) – Fully interoperable COP (NATO C2 Systems and Joint COP) capability

- AFRICOM & EUCOM

- Libya Operations ODYSSEY DAWN & UNIFIED PROTECTOR – Onsite COP and I3 Subject Matter Experts (SME) support
- Support to EUCOM for meeting urgent data transfer needs with ICADB and MIDB NATO Friend Force Requirements during conflict

- PACOM

- Operation TOMADACHI – Provided expertise for displaying sensor / NBC messaging on the COP during Japan earthquake and reactor emergency
- USFK – ICSF fixes unique to USFK to include processing of Korean tracks and synchronization between US and Korean COPs

- COALITION & NATO Support

- Coalition Exercise CWIX – GCCS-J ISAF Interface support for combined CENTCOM and NATO NFFI, NRIS, and BKNTRK requirements
- Developed and deployed coalition build used for CENTCOM coalition releases
- Foreign Military Sales (FMS) Sales to coalition partners

- Interface Synchronization

- IGC Transition –Maintain GCCS-J Global connection to Integrated Dev Env/Global Transportation Network Convergence (IGC) with shutdown of GTN
- New FAA System – Enables COP access to FAA tracks via the new FAA system
- Achieved DIA's Protection Level - 4 Top Secret/SCI and Below Interoperability (TSABI) Authority To Operate (ATO) for the GCCS-J CDS
- AOC-WS Interface – Global 4.2.0.9 delivered to resolve interface issues between GCCS-J and the AOC

GCCS-J is used every day in full spectrum, joint operations



FY12 GCCS-J Delivered and Planned Releases

Global 4.2.0.8 – Released 27 Jan 2012

- Addresses emergent targeting requirements and provides fixes for issues found in Common Message Format Interface (CMFIF), imagery, intelligence, and weather

Global 4.2.0.9 – Released 19 Jan 2012

- Provides security and infrastructure updates and critical fixes to COP and I3.
- Synchronizes with the newest Command and Control Personal Computer (C2PC).
- Fixes the POINT/Like-Associations issue, the ATO Reverse compatibility issue (CENTCOM) and the JAC Molesworth (EUCOM J2) fix regarding the synchronization of Event records between the GMI and POINT databases.
- JOPES 4.2.1 client compatibility for FFWEB, JRE, TPLNC & JFRG. To be released in conjunction with JOPES 4.2.1.

Global 4.2.0.9 U1 + 3-4 additional Patches

- Targeting specific AOC fixes to problems identified in current system
- Patches to issues found during initial fielding and operational burn in

JOPES 4.2.0.2 – April 2012

- Infrastructure upgrades
- Initial capability of the Transportation Tracking Account Number (TTAN)
- Fixes to issues identified during JOPES 4.2.1 (e.g. audit log problem)

Global Initial 4.2.0.10 – Sep 2012

- Implementation of Security labeling

Global 4..3 – Mar 2013

- Functional enhancements and major fixes deferred from Global 4.2.0.9

Global 5.0 – Sep 2013

- Targets start of Global modernization efforts for X86 transition, COTS swap out and client consolidation

CDS

- Completion of RSC deployment to support CENTCOMO
- EUCOM funding their implementation

JC2CUI 12.1 and 12.2

- Initial fielding of OWF, then shift of the framework to PEO GES
- JC2CUI Release 3 v1.2.0.4 released on 10 Jan as an initial operational capability at JWAC
- Additional releases of widgets

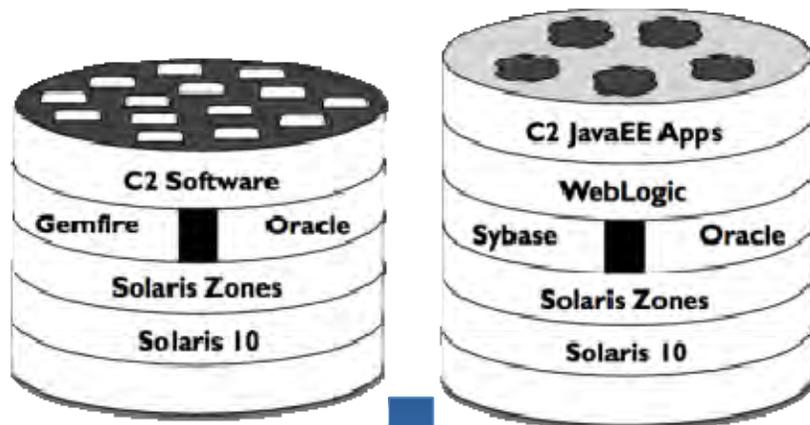
Enterprise COP / Agile Client 4.2.3.x and 4.2.3.0

- Agile Client v4.2.0.5 approved for release on 9 Dec 2011
- Additional releases planned for additional plug-ins and system enhancements

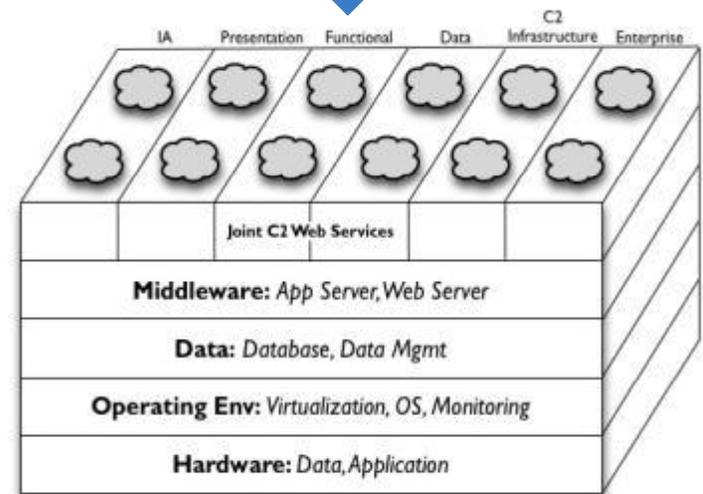
Targeted UNCLASS COP

GCCS-J Modernization

GCCS-J Global

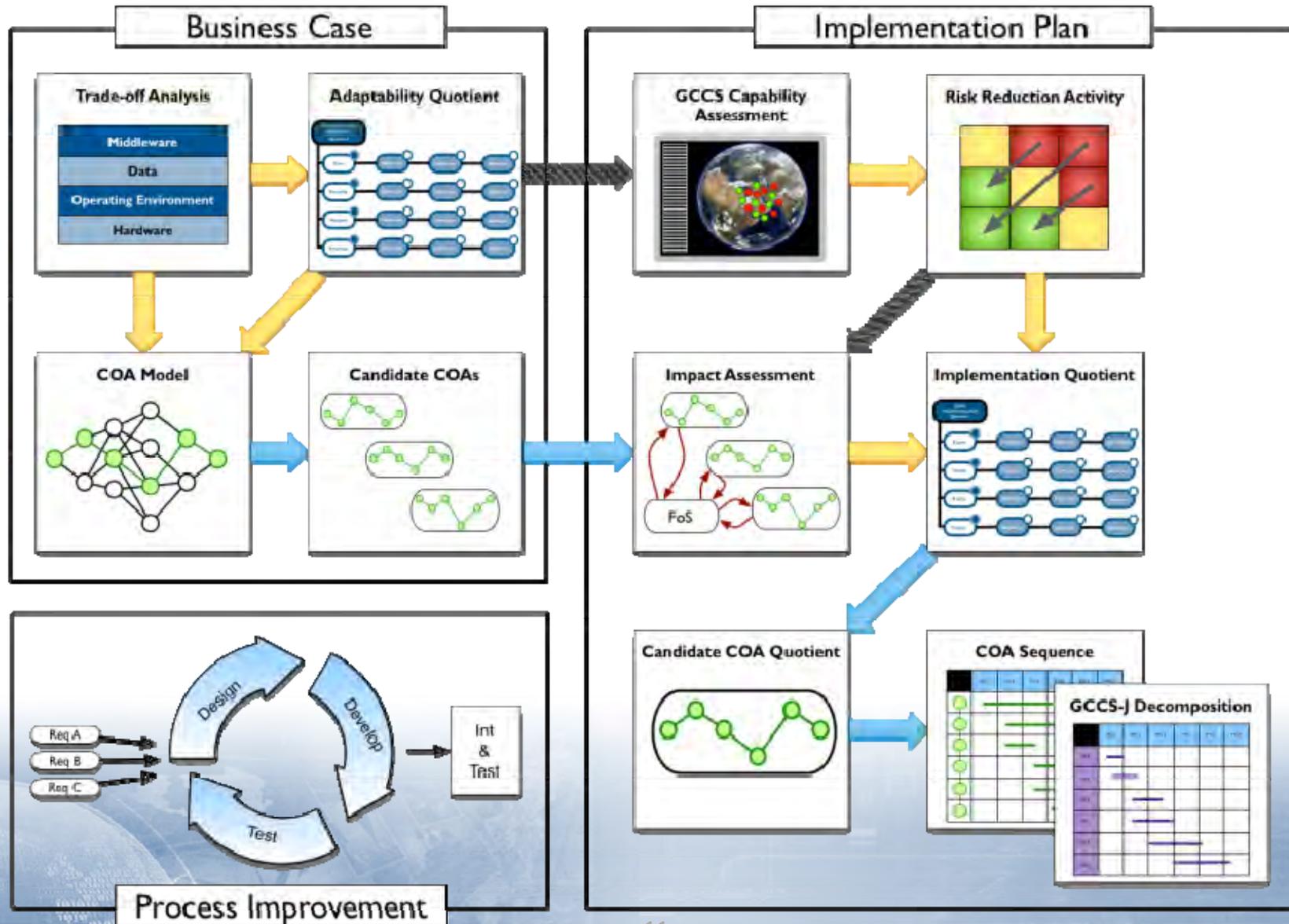


*GCCS-J Way Forward:
Finding the optimal path to incrementally
modernize C2*

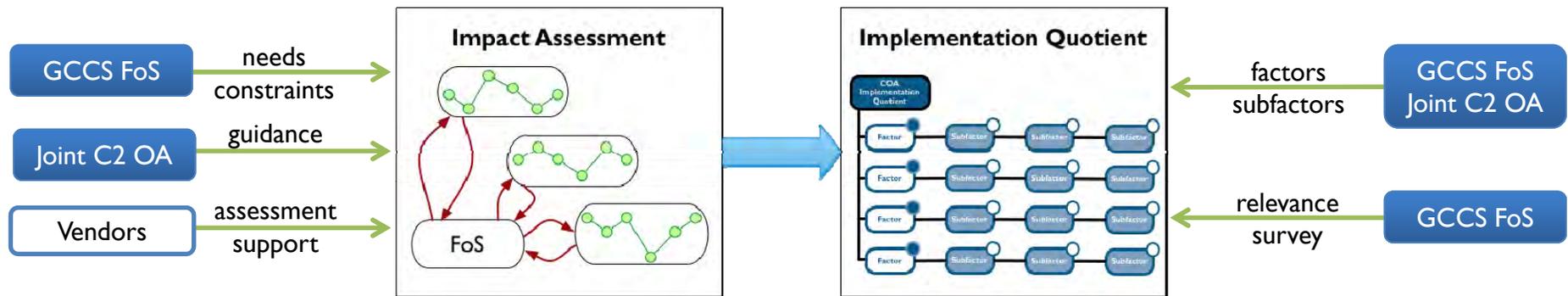


Joint C2 Objective Architecture

Modernization Underpinning



Modernization Implementation Plan Part 1



Discuss Candidate COAs and Impact with FoS representatives

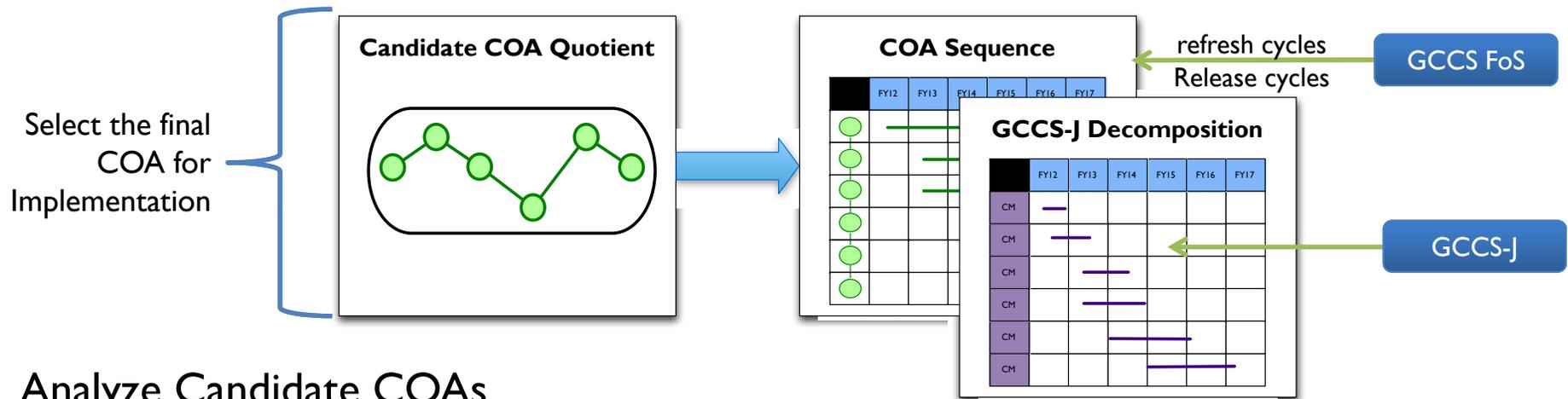
- Impact on development, integration, and test.
- Impact on security, fielding, operations, and maintenance.

Define the Implementation Quotient

- Develop Factors, Subfactors, and Criteria based on discussion
- Conduct FoS survey for Relevance values

Evaluate COA Implementation Quotient for each Candidate COA

Implementation Plan Part 2



Analyze Candidate COAs

- Uses Adaptability Quotient and Implementation Quotient

Select Final COA

- Collaborate with GCCS-J PMO to identify the best COA

Identify COA implementation sequence with FoS

- Consider GCCS FoS refresh and release cycles

Identify opportunities for GCCS-J decomposition with GCCS-J PMO

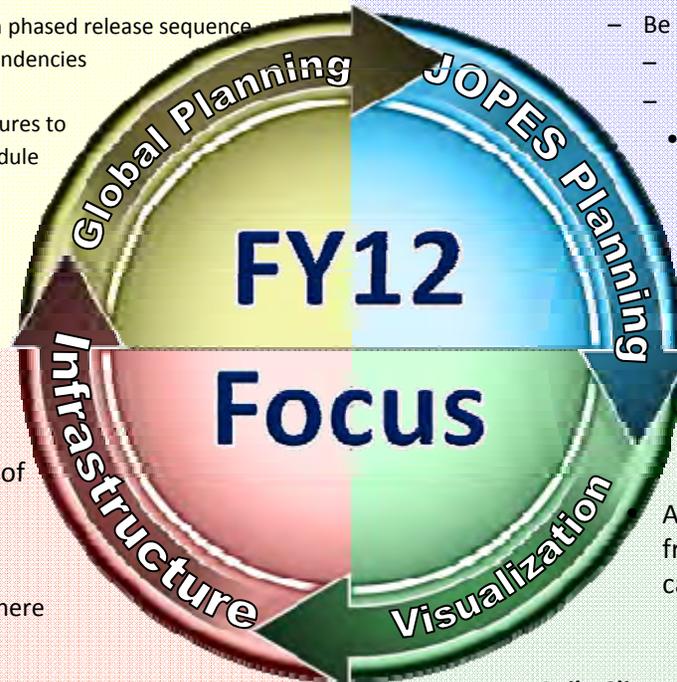
Global Modernization Implementation Plan

- **Trade-off Analysis**
 - **COA summary**
Application of cost saving mechanisms to baseline, including the prioritization of each of the mechanisms/component changes
 - **Business Case**
Business case justifications and cost saving details associated with the selected COA, with the external community as the intended audience
- **Implementation Plan & Schedule**
Delivery mechanism (HW, SW, fielding, etc) of baseline, in phased release sequence by component and fielding schedule, to address key dependencies
- **Process Improvement**
Plan and recommendations on internal processes, procedures to low risk of new delivery mechanisms and associated schedule

JOPES Modernization Planning

- **Support PEO-C2C JOPES Modernization Planning activities**
 - *PEO-C2C has approval to conduct analysis and planning activities*
 - Planning is being conducted by an integrated PEO team
 - **Modernized capabilities will:**
 - Be consistent with the Joint C2 Objective Architecture
 - Be deployed as an enterprise capability
 - Utilize enterprise services
 - Leverage other PEO-C2C investments
 - *Implementation will be conducted via a series of well planned phases which will include risk reduction activities*

Direct feedback/participation from GCCS-FoS and Joint C2 stakeholders



Infrastructure

- Begin execution of early modernization targets of opportunity from Global Modernization Implementation Plan in 2nd Qtr
 - X86 Migration of COP in a Box and I3
 - Agile Client WAN deployment and connection where applicable (i.e. Military Sealift Command)
- Cross Domain Services
 - Complete PL-4 TSABI Accreditation and deployment at SE RSC and JAC Molesworth
- Execution of Implementation Plan guided Risk Reduction Activities (RRAs)
- Add security labels to TMS structure (NRIDs 544, 545) to include Intelligence Community Information Security Markings (IC-ISM) which map to UCORE/C2CORE
- Critical functional fixes for Field Problem Reports (PBI) and associated Software Problems (GSPR)
- Capabilities Based Deployment (CBD)
 - Reduces installation complexity and timeline

Client Consolidation

- High fidelity *As-Is* description of frameworks, mission capabilities, and interdependencies
- Allocate mission capability to each applicable framework based on the needs of the users of that capability – the *To-Be* description

Agile Client

- Continue improvements to AC Framework
- Establish Joint C2 AC Governance in coordination with MPE activities
- Expand third party development model supported via plug-ins
- Deploy Agile Client plug-in marketplace and update center for network provisioning of framework/plug-in updates

JC2CUI

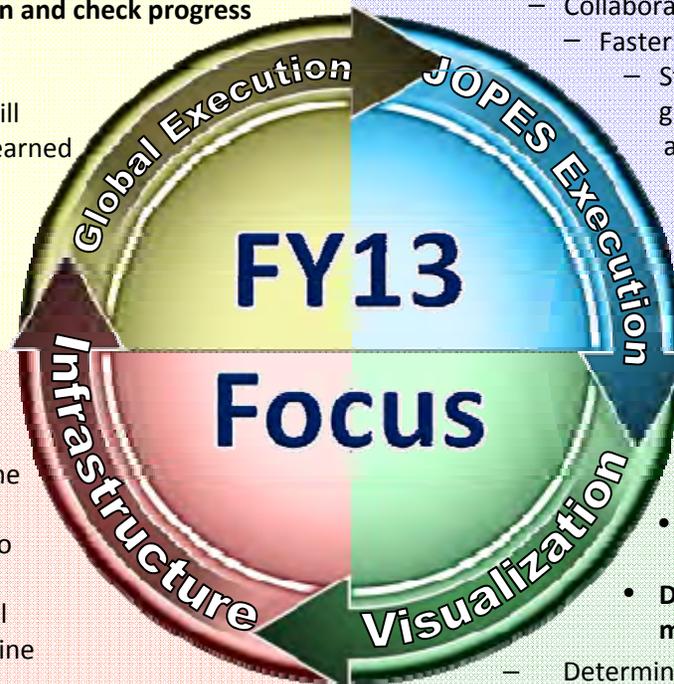
- Continue coordination with OWF GOSS for framework improvements
- Provide third party widget development toolkit
- Expand third party development model supported via widgets
- Establish widget approval process to include C&A for Joint C2 community updates

Global Modernization Execution

- Follow sequence of implementation as outlined in the plan
 - Focus is greatest return on investment
 - Initial data shows x86 migration and alternative application server as greatest targets of opportunity
 - Continue to execute Risk Reduction Activities (RRA):
 - Operating System, App Srv, RDBMS, Virtualization, Distributed Caching
 - Leverage PM-CESG to synchronize execution and check progress
- Process Improvement
 - Implementation plan driven development will incorporate process improvement lessons learned from FY12 execution and RRAs

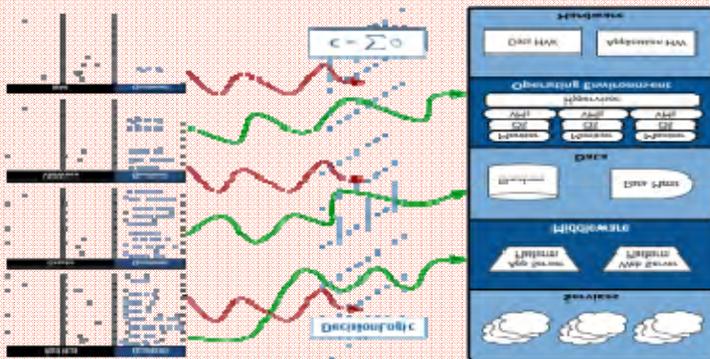
JOPES Modernization Execution

- ALL JOPES Modernization will be executed in accordance with JOPES modernization plan under development by PEO-C2C
- Key drivers for modernization:
 - Database expansion to include all business processes
 - Improve end-to-end C2 of force requirement and movement (movement, analysis, assessment, visualization)
 - Collaboration control capability
 - Faster transition to execution
 - Structured data for guidance task organization and lines of effort



Infrastructure

- Target capabilities that meet ease of adaptability criteria for conformance with the Joint C2 OA
 - Expand on FY12 x86 migration effort to cover entire Global baseline
- Expand FY12 execution to include additional severance of components from Global baseline (driven by implementation plan)



Client Consolidation

- Continue existing GCCS-J Global client migration to Agile Client and JC2CUI
- Target additional client interfaces for removal from Global baseline
- Driven by as-is and objective client functionality mapping:
 - Determine Deployment requirements (COCOM, Site, Forward, Disconnected, ...)
 - Performance requirements (Data quantify, Data rates, available bandwidth, available hardware, ...)
 - User Interface and bandwidth requirements

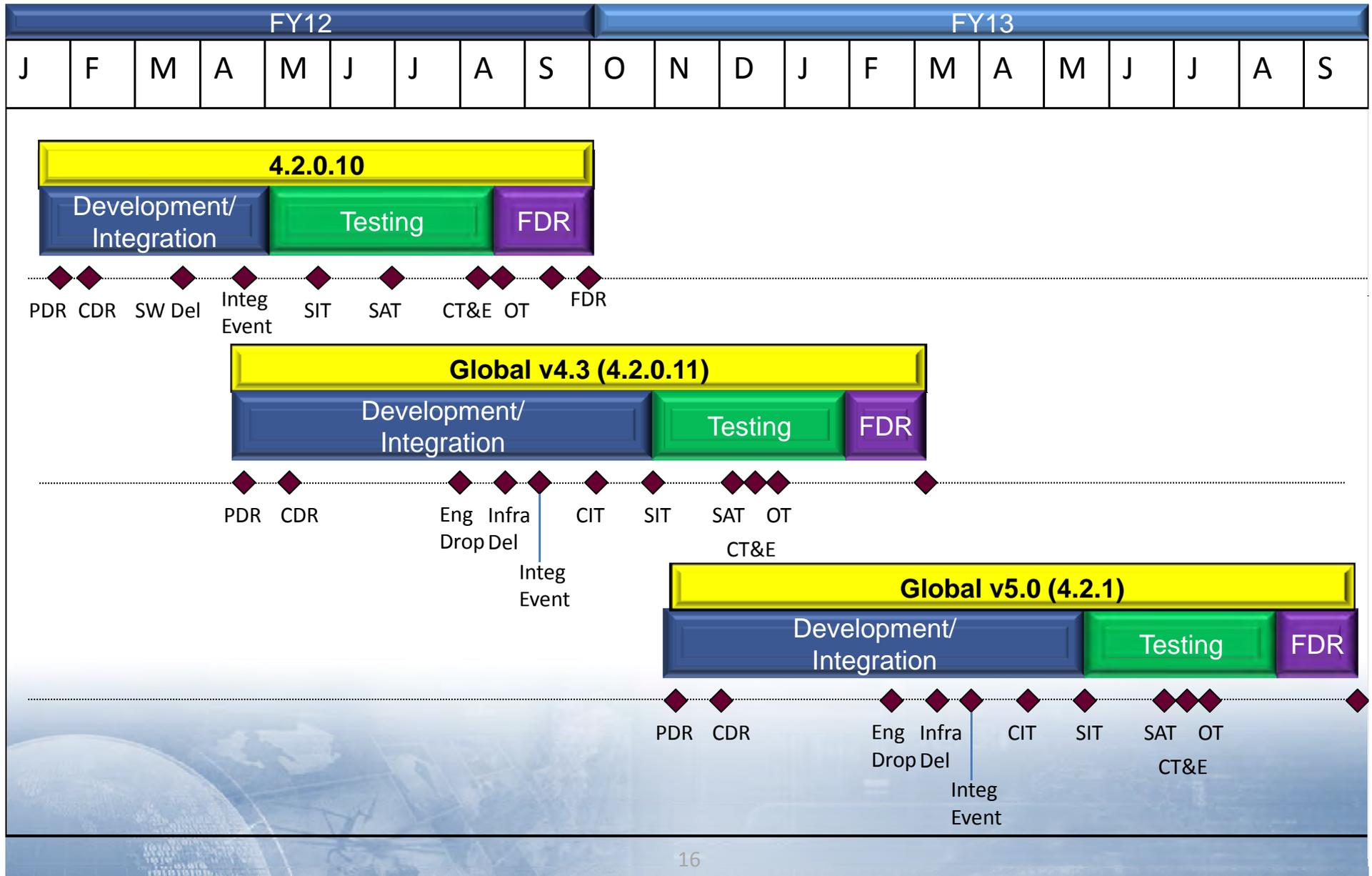
Agile Client

- Continue improvements to AC Framework
- Continue migration of global client capabilities using functionality mapping drivers

JC2CUI

- Complete transition of JC2CUI OWF to PEO-GES
- Continue widget development driven by user prioritized requirements

GCCS-J Notional Blocking Schedule





Upcoming Global Releases

- **Global 4.2.0.10**

- Persistence of Originator and classification Data Fields in ICSF Tracks / Classification and originator of tracks remain unchanged throughout life of track.
- Identification of ICSF Track Originator / Capability to quickly determine a specific originator of a track (UNCLAS description, classified requirement)
 - Not complete until all injected data is tagged. With GCCS-J 4.2.0.10 you will have CSIP, Network, and CST channel data tagged. We estimate this conservatively as 60% of the data on COP. Some sites it will be much more.
- Deliver Track Data Tagging Operational Utility
 - Tag Pedigree information on data input
 - Store and distribute Pedigree information across the enterprise
 - Guard on output
 - Prevent leakage of SI, NOFORN, and Allied data

- **Global 4.3 (Concurrent Maintenance/Updates)**

- Initial x86 migration:
 - Focus on subset of GCCS-J capabilities but meets the needs of many GCCS-J sites
 - Includes high use capabilities (e.g. COP) and low hanging fruit (e.g. Disconnected Ops) – GLOBAL LITE
- Includes Windows 7/Windows Server 2008 Operating System (OS)
- Functional Enhancements
- Perceived benefits:
 - Accelerates reduction in sustainment costs for GCCS-J and mission partners
 - Increases alignment with objective architecture
 - Does not interfere/delay/increase risk associated with the primary GCCS-J Global baseline
 - Accelerates adoption of newer Windows OSs
- Deployment Options:
 - All SPARC
 - Global LITE on x86 ONLY



Release Management Process

Version # Component	Example	Description
Baseline Identifier	GCCS-J Global v 5 .0 (formerly GCCS-J Global v4.2.1)	Baseline indicator. Based on this concept, Global v4.2.1 will now be released as Global 5.0, to include a full x86 offering, and enhancements.
Major Release	GCCS-J Global v4. 3 .0 (formerly GCCS-J Global v4.2.0.11)	Changes when the release contains a significant change in the architecture or operation of the configuration item. Global v4.2.0.11 will now be released as Global v4.3 to include significant fixes, initial x86 offering, and enhancements.
Minor Release	GCCS-J Global v4.2. 3 .0	Changes when new features are added to the release , but the fundamental architecture remains unchanged
Maintenance Release	GCCS-J Global v4.2.3. 1	New features may be added, but the emphasis is on optimization, feature enhancements, or modifications to improve stability and usability
Operational Update	GCCS-J Global v4.2.3.1 U3	Defect fixes only (e.g. IAVAs, critical functional fixes)

Guidance to ensure CM-SDDR compliance

Summary

- Operational needs are our first priority
 - Sustainment – Maintains “Do No Harm” guidance
 - Synchronization – Maintain GCCS-J interoperability with all interfaces
 - Modernization – Delivers prioritized capabilities, decrease sustainment costs and expand Joint C2 towards the tactical edge
- Focus and emphasize on rapid capability development and fielding
- Continue evolution and improvement of technology and processes to support current and future needs
 - Maximize our resources
 - Increase speed to market
 - Deliver value across the enterprise

Functional capability enhancements are driven by user prioritized requirements

QUESTIONS

