DISN REQUIREMENTS CONVERGENCE TO SUPPORT UNIFIED CAPABILITIES

Track Description

DISA's convergence to support enterprise services and unified capabilities extends to the revised Capabilities Production Document (CPD) for the DISN, and the way that DISA is considering contracting for networking services beyond the DISN Core.

DISA is moving away from circuit oriented contracting. This presentation will discuss:

- How the DISN is moving towards a highly meshed IP router solution more suited for unified capabilities solutions for both its internal circuits used for DISN access/selected DISN Backbone needs, and to satisfy customer meshed circuit needs where use of the DISN core is not called for.
- Examine how the CPD and the GNS Capabilities Need Document (CND) are evolving, and will point to social media sites that allow for government input on both documents, and industry input for the CND.

Global Network Services (GNS) is….

- An acquisition for global bandwidth and telecommunication services.

GNS will provide		
Cloud access* and related services	DISN backbone bandwidth* leases	Integrated customer funded solutions that integrate bandwidth* and DISN architecture enclave solutions

* May be expanded to include Unified Capabilities

Global Network Services Scope

GNS

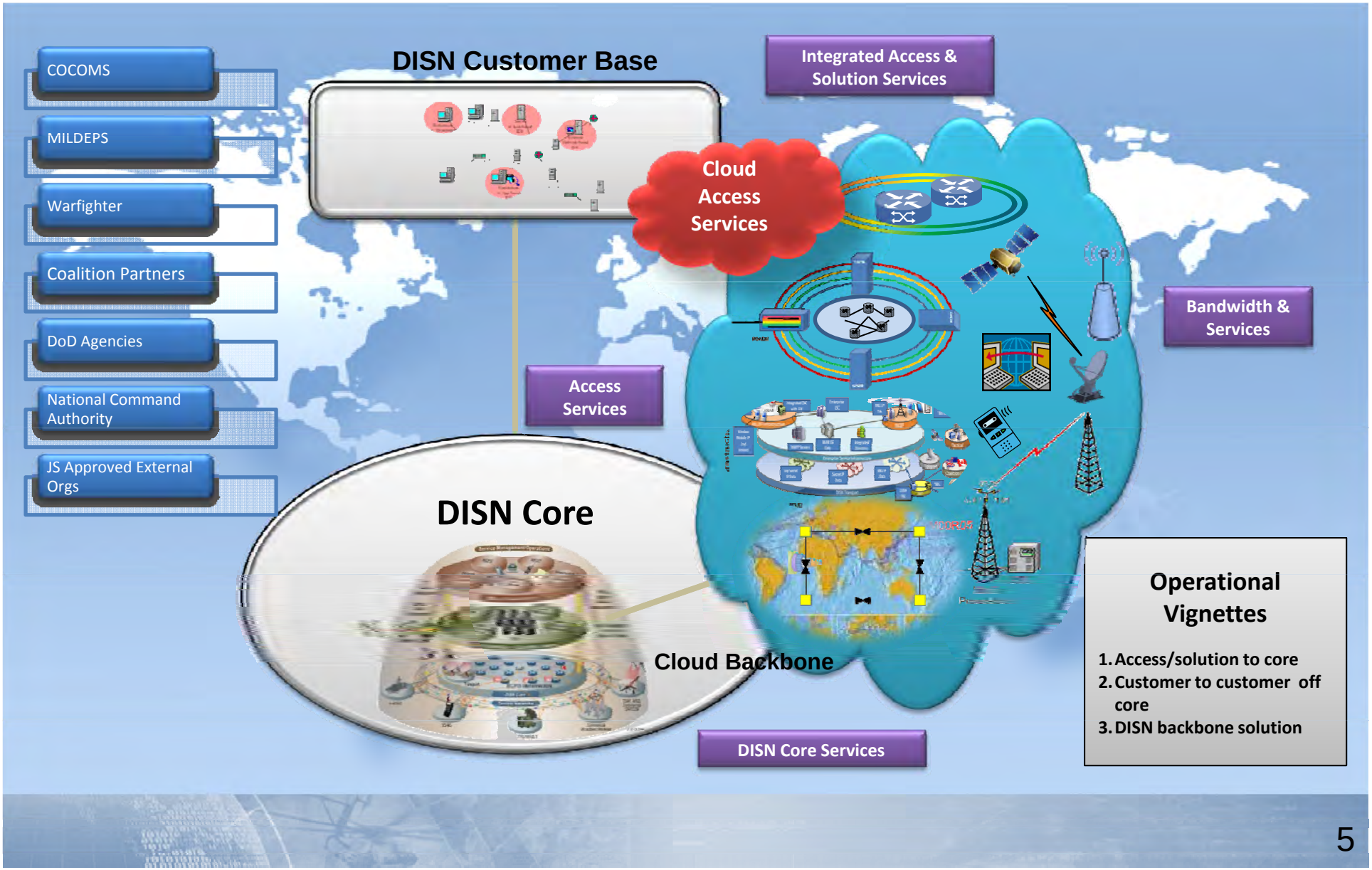
Leverage technology and integrate capabilities globally through 2020 and beyond

Requirements

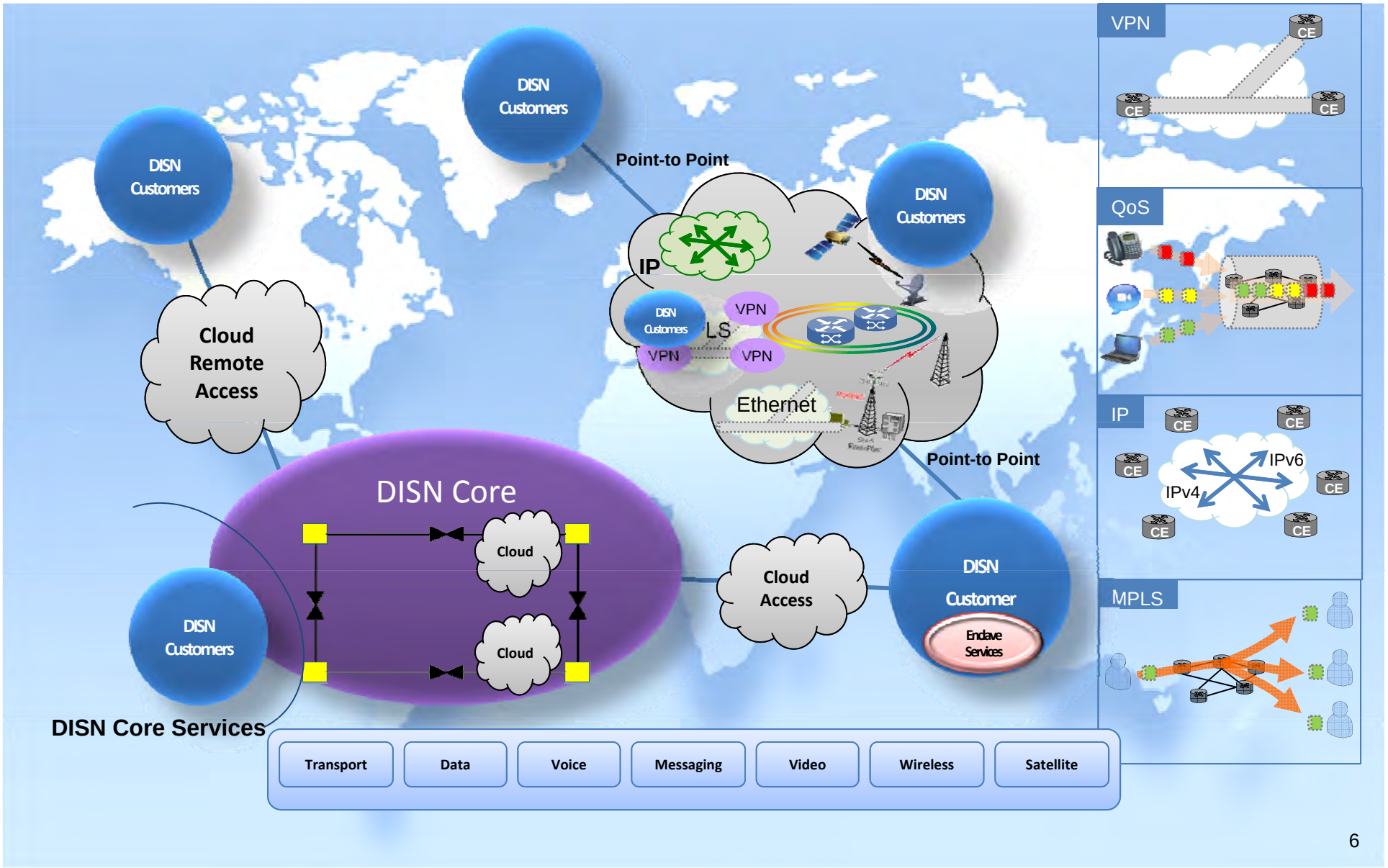
Provide the sets of capabilities needed to support DISA-provided networks and infrastructure

....for all DISN services....

DISN-GNS Overview



DISN-GNS Interface



What GNS Means to You…

- GLOBAL!
  - Where ever you are, you have access to DISN core quality services
- New, faster transmission speeds
- More bandwidth, cheaper prices
- Value added services to support efficiencies
- Integration with commercial networks
  - Includes emerging technologies and services
- New delivery capabilities
  - Enterprise services vs circuits
  - Everything as a service

COTS solutions and commercial methods for DISA to become:

- ✓ A more ***nimble*** organization
- ✓ With ***modern technology*** capabilities
- ✓ Able to deliver ***high value services*** at a ***competitive price*** to DoD customers
- ✓ ***Integrate*** into the existing and future DISN

What's New

Cloud access services, focusing on VPLS, Ethernet services

Multiple security levels

- Public internet
- Access controls with third party verification
- Secure (commercial standard commercial security)
- Distributed denial of service mitigated

Multiple levels of trustworthiness

- Diversity
- Reliability

Ebonded systems – faster ordering and connection

Automated order entry system

Trusted connections to DoD IP networks

Multiple Award – competition

Global

More choices so you can make the cost/benefit tradeoff for these services when extending beyond DISN Core

The DISN CPD is…

Complies with JCIDS

- The DISN CPD is a JCIDS compliant document that defines the capabilities delivered and the performance of the DISN through the current increment (2012 through 2016)

Defines Numeric Thresholds

- The DISN CPD outlines the numeric thresholds and objectives for Key Performance Parameters (KPPs) and Key System Attributes (KSAs)

And Describes DISN Transformation

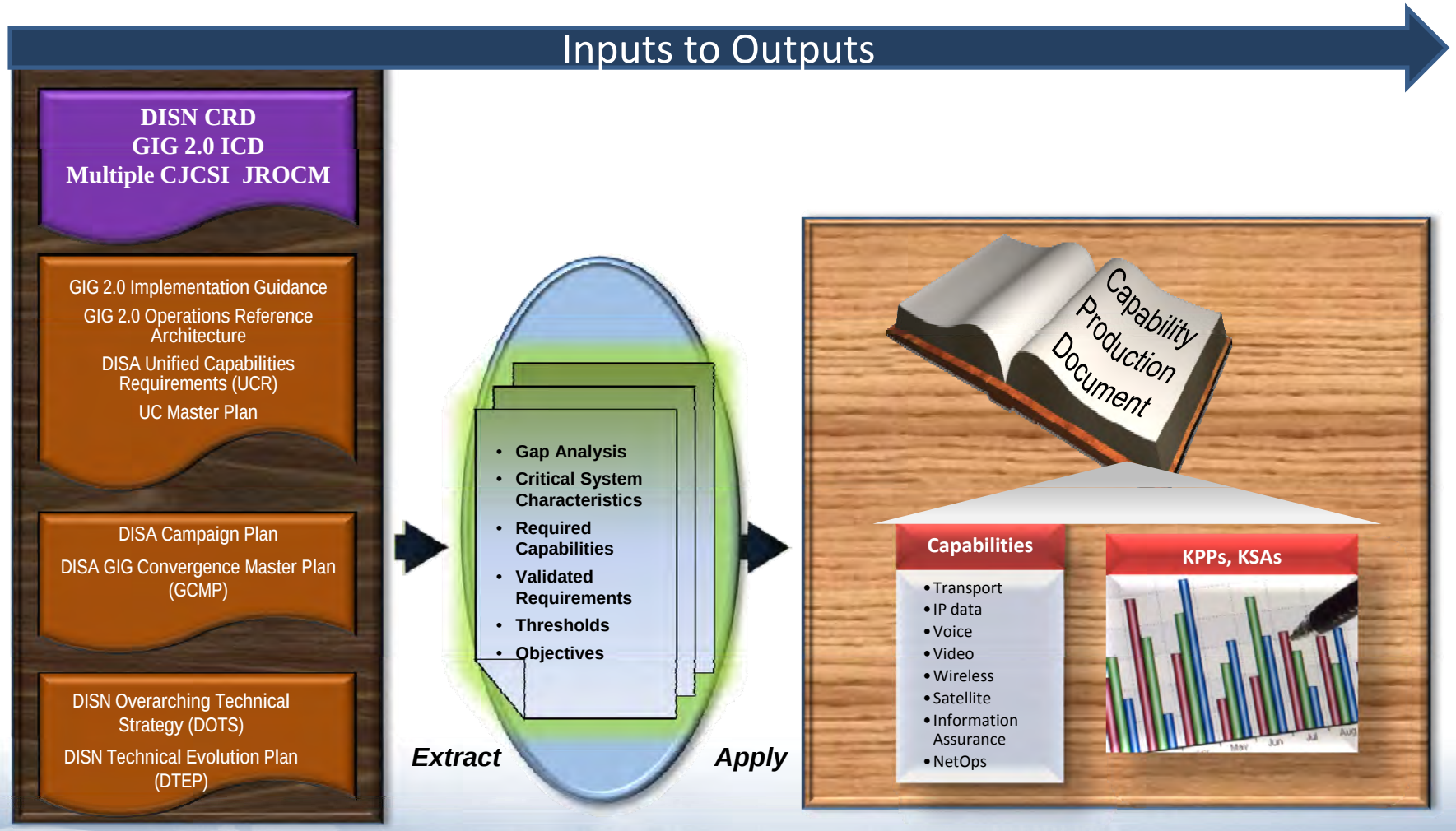
- The DISN CPD describes the transformation of the DISN to a converged, net-centric, IP-based enterprise at an affordable cost

Why a CPD Versus Other Documents?:

- The DISN is in production and sustainment
- A production system requires a CPD

Defines the current DISN increment and associated KPPs

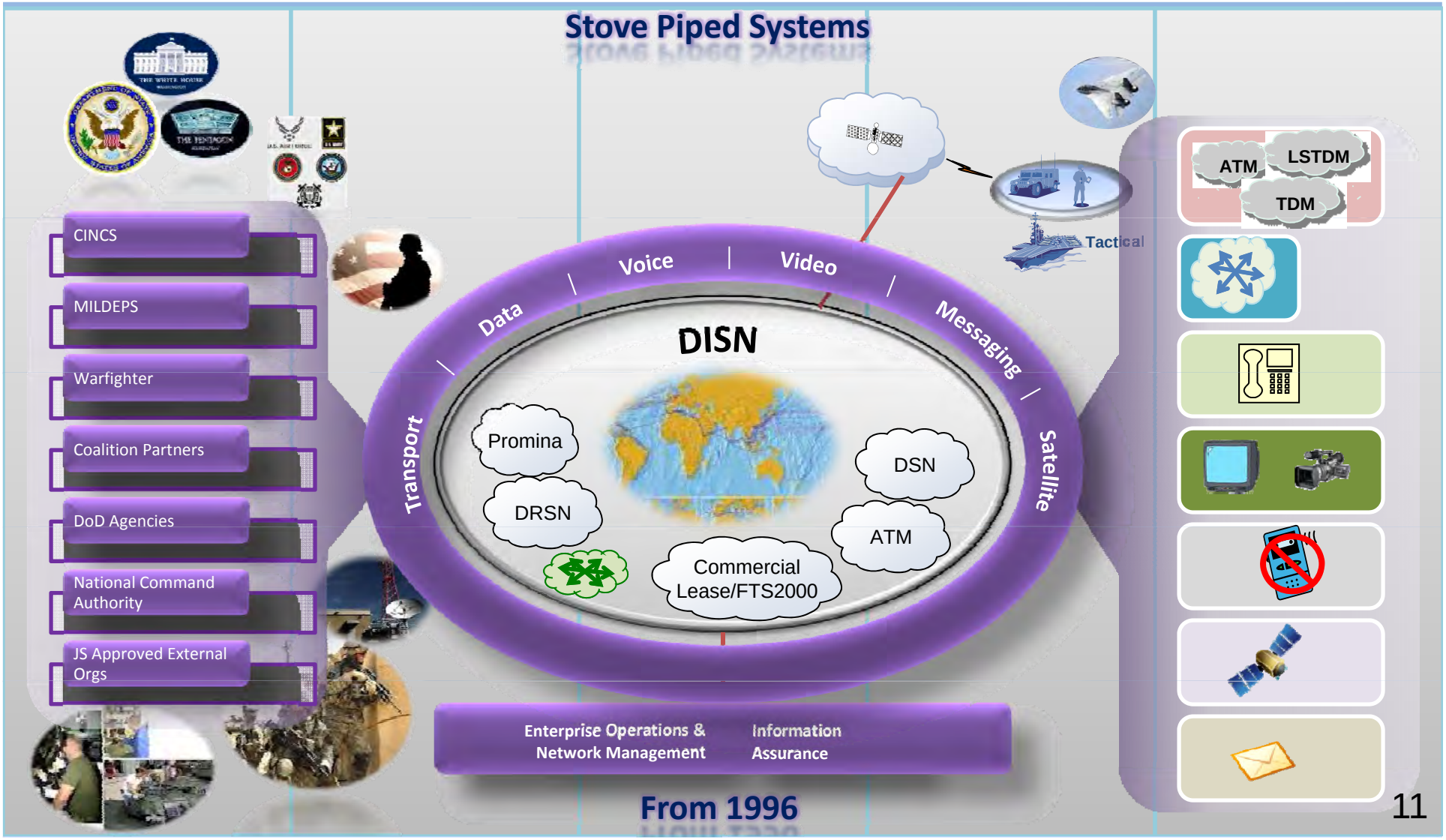
Creating the DISN CPD



Defines the current DISN increment and associated KPPs

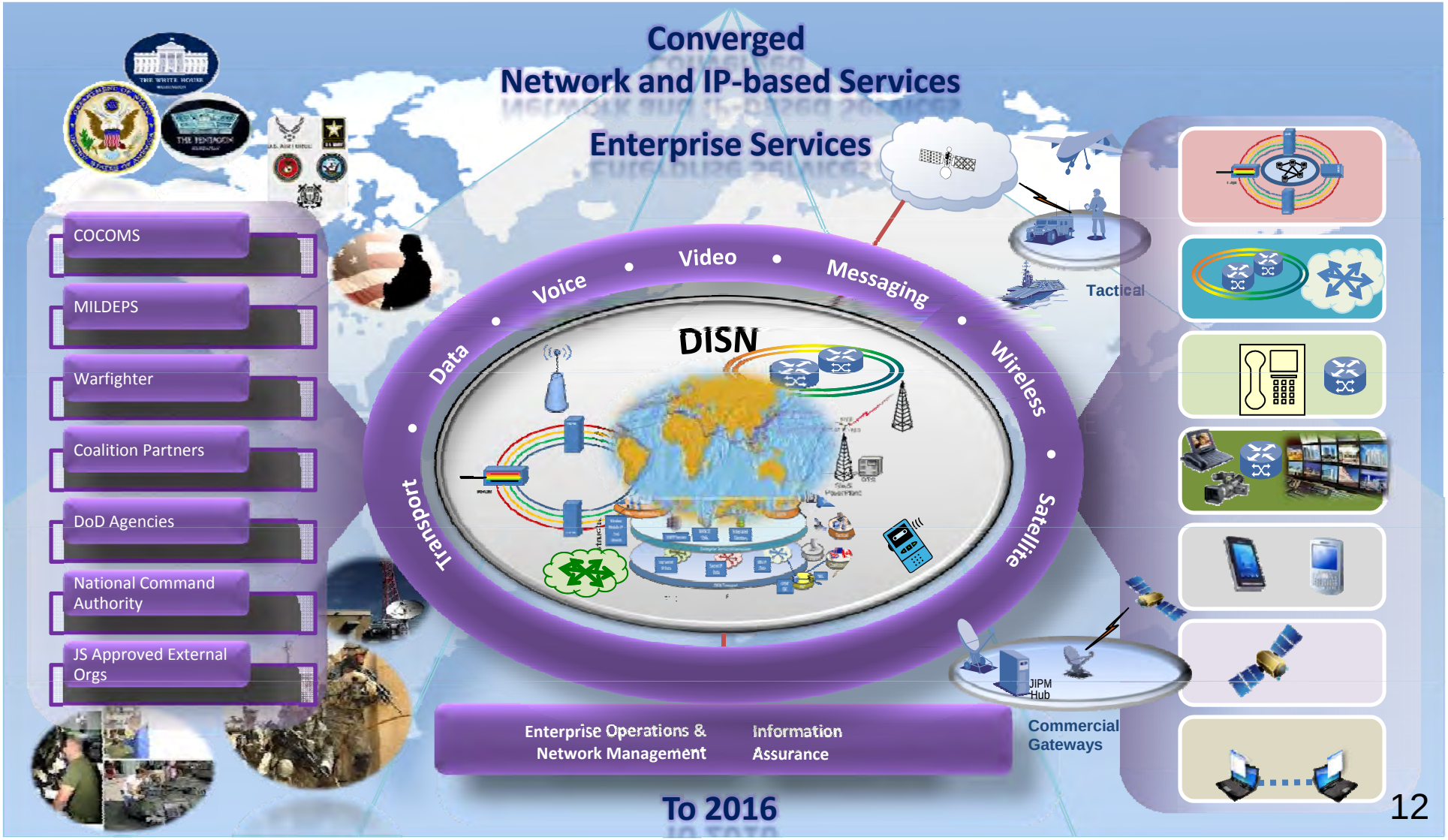
Who Uses the DISN

(Early DISN)



Who Uses the DISN

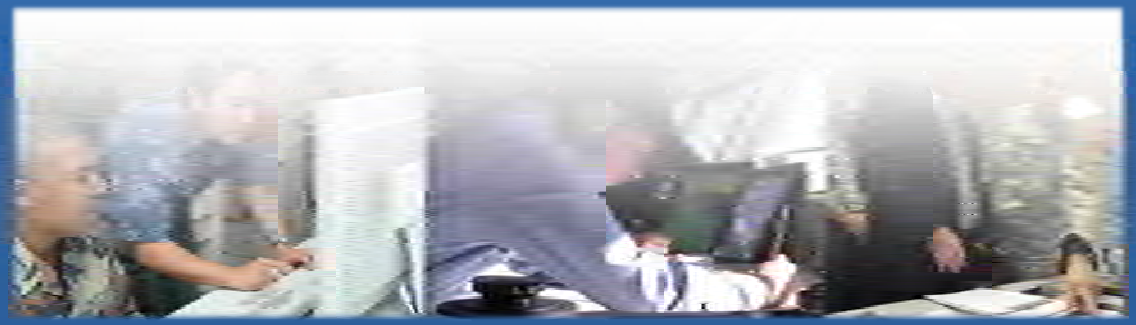
(2016)



Proposed DISN Capability Statement

Converged Enterprise Network and IP-based Services

The DISN is the DoD's worldwide, interoperable, secure and highly available enterprise network infrastructure used to provide converged, net-centric, IP-based voice, video, and/or data services through a combination of DoD and commercial terrestrial, wireless, and satellite communications capabilities, providing end-to-end information transfer and management in support of military operations and national security.



Enabling services to the edge: any user, any device, anywhere

Proposed DISN KPPs

KPP	Threshold	Objective
Net-Ready – The DISN systems must support Net-Centric military operations. The capability, system, and/or service must be able to enter and be managed in the network, and exchange data in a secure manner to enhance mission effectiveness. The capability, system, and/or service must continuously provide survivable, interoperable, secure, and operationally effective information exchanges to enable a Net-Centric military capability.	The system must fully support execution of joint critical operational activities identified in the applicable joint and system integrated architectures and the system must satisfy the technical requirements for transition to Net-Centric military operations to include: • DoD IT Standards Registry (DISR) mandated GIG IT standards and profiles identified in the TV-1 • DISR mandated GIG Key Interface Profiles (KIPs) identified in the KIP Declaration Table • Net-Centric Operations and Warfare (NCOW) Reference Model (RM) Enterprise Services • Information assurance requirements including availability, integrity, authentication, confidentiality, and non-repudiation, and issuance of an Interim Approval to Operate (IATO) by the Designated Approval Authority (DAA) • Operationally effective information exchanges; and mission critical performance and information assurance attributes, data correctness, data availability, and consistent data processing specified in the applicable joint and system integrated architecture views. ***(DISN Tailored Information Support Plan, 17 December 2008)***	The system must fully support execution of all operational activities identified in the applicable joint and system integrated architectures and the system must satisfy the technical requirements for Net-Centric military operations to include: • DISR mandated GIG IT standards and profiles identified in the TV-1, • DISR mandated GIG KIPs identified in the KIP Declaration Table, • NCOW RM Enterprise Services • Information assurance requirements including availability, integrity, authentication, confidentiality, and non-repudiation, and issuance of an Approval to Operate (ATO) by the Designated Approval Authority (DAA), and • Operationally effective information exchanges; and mission critical performance and information assurance attributes, data correctness, data availability, and consistent data processing specified in the applicable joint and system integrated architecture views.
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 and information assurance accreditation specified in the threshold and objective values.	100 percent of interfaces, services, policy enforcement controls, data correctness, availability and processing requirements designated as enterprise-level or critical in the Joint integrated architecture.	100 percent of interfaces, services, policy enforcement controls, data correctness, availability and processing requirements in the Joint integrated architecture.

Proposed DISN KPPs (cont.)

KPP	Threshold	Objective	GIG 2.0 ICD
Operational Availability - The global network infrastructure shall be responsive, reliable, timely, and accessible to authorized users.	98.5% of the time (DISN Telecommunications Service Level Agreement, June 1, 2011)	99.5% of the time (Department of Defense (DoD) Information Technology (IT) Enterprise Strategy and Roadmap, Version 1.0 – 6 Sep 2011)	Joint Infrastructure, Global Authentication, Access Control, and Directory Services Common Policies and Standards Fully Leveraged Information and Services

Proposed DISN KPP (cont.)

KPP	Threshold	Objective	GIG 2.0 ICD
Quality of Service – Transport systems shall provide QoS capabilities that ensure information identified as priority is delivered ahead of regular traffic.	99% of the time (GIG MA ICD)	99.9% of the time (GIG MA ICD)	Net-Centric Environment Joint Infrastructure Unity of Command Common Policies and Standards

Proposed DISN KPP (cont.)

KPP	Threshold	Objective	GIG 2.0 ICD
Visibility and Manageability - Systems and services shall have an automated Network Management capability to obtain status of networks and associated assets in near real time.	99% of the time. (GIG MA ICD)	99.9% of the time (GIG MA ICD) .	Joint Infrastructure Agility Fully Leveraged Information and Services

Proposed DISN KPP (cont.)

KPP	Threshold	Objective	GIG 2.0 ICD
Survivable Connectivity – DISN system connectivity must be protected against all threats commensurate with the operating environment and the criticality of the information being transported, and shall also ensure connectivity through the total threat environment**.**	The GIG shall use multiple connectivity paths (not susceptible to the same threats) and media. (GIG MA ICD)	Network, applications and services available 99.9% of the time to authorized users.	Scalable and Modular Network Resilient Information Infrastructure Fully Leveraged Information and Services

Proposed DISN KPP (cont.)

KPP	Threshold	Objective	GIG 2.0 ICD
Secure - The DISN will meet and maintain minimum IA Defense in Depth standards, including certification and accreditation IAW the DIACAP. Capabilities in this area include the abilities to: 1) ***detect and report*** security incidents for all system resources; 2) ***audit and report*** that all system resources are compliant with the approved security policies and posture; 3) ***change system resource*** configuration items to comply with the approved security policies and posture or to repress security incidents as allowed by the DAA; 4) ***audit and restore*** the integrity and availability of system resources after a security incident.	Systems shall meet and maintain minimum IA Defense in Depth standards, including certification and accreditation IAW the DIACAP process (e.g., CJCSI 6510.01C, DoDI 5200.40) (GIG MA ICD)	As Threshold	Net-Centric Environment System and Network Assurance and Validation Common Policies and Standards Protection Against Potential Cyber Threats

Proposed DISN KSA's

KSA	Threshold	Objective	Reference
Network KSAs:			
• ***Core Network Reliability***	• <1% Packet Loss	As Threshold	DISN SLA
• ***DISN Core Restoration***	• Mission critical will not be isolated longer than 30 minutes because of an outage in the backbone	As Threshold	GIG MA ICD
• ***Network Diversity–connectivity shall be protected against all threats commensurate with the operating environment and the criticality***	• Routine Site with **logical diversity** 98.5% • Mission Essential Site with **path diversity** 99.5% • Mission Critical Site with **physical diversity** 99.995%	As Threshold	TBD-NS1 Input
• ***Availability of Satellite Constellation***			
• ***Availability of Satellite Gateway to the DISN Core Network***	• This service must be available 99.8% of the time	As Threshold	DISN SLA
	• This service must be available 99.9% of the time.	As Threshold	DISN SLA

Proposed DISN KSA's (cont.)

KSA	Threshold	Objective	Reference
Voice: • ***Sensitive but Unclassified (SBU) – Voice services*** • ***Secure Voice*** • ***Voice over Secure Internet***	• This service must be available 99.5% of the time. • This service must be available 99% of the time. • This service must be available 99.5% of the time.	• This service shall be available 99.9% of the time. • This service shall be available 99.9% of the time. • This service shall be available 99.9% of the time.	DISN SLA DISN SLA DISN SLA
Video: • ***Dial-up and Dedicated Videoconferencing***	• This service must be available 99.6% of the time.	• This service shall be available 99.9% of the time.	DISN SLA
Digital Messaging Services: • ***Network and System Availability of DMS***	• This service must be available 98.7% of the time.	• This service shall be available 99.9% of the time.	DISN SLA
Wireless: • ***Enhanced Mobile Satellite Service (EMSS)*** • ***Mobile Cellular Communication for Voice and Data***	• This service must be available 99.6% of the time. • Develop and deploy commercial smart phones and devices for tactical services	• This service shall be available 99.9% of the time. • Centrally managed mobile devices, dual stack using IPv4/IPv6, 802.xx and network roaming support	DISN SLA TBD–NS2 Input
Network and Ops management Services: • ***Visibility and manageability of DISN services***	• Ability to generate and provide an integrated/correlated presentation of networks and all associated network assets.	• As threshold	GIG 2.0 ICD

What the CPD Means to You

- The CPD establishes the baseline for how the DISN will support Cloud Solutions, Enterprise Service offerings and realize IT Efficiencies

- Validation to update the DISN
  - IP based
  - More affordable

What this all means

Global Network Solutions gives you a means to cover today's private line networking, and a bridge to modern IP based, cloud access, services

The DISN Capabilities Document ensures that those same services are available for locations served by the DISN core

What We Need From You

- Customer survey at NS7 booth
- Collaborate on GNS
  - What services should GNS buy?
  - Need mix of user, PM, and industry input

DISA
A Combat Support Agency

QUESTIONS