

The Joint Services Systems and Software Technology Conference

The Direction of the Global Information Grid

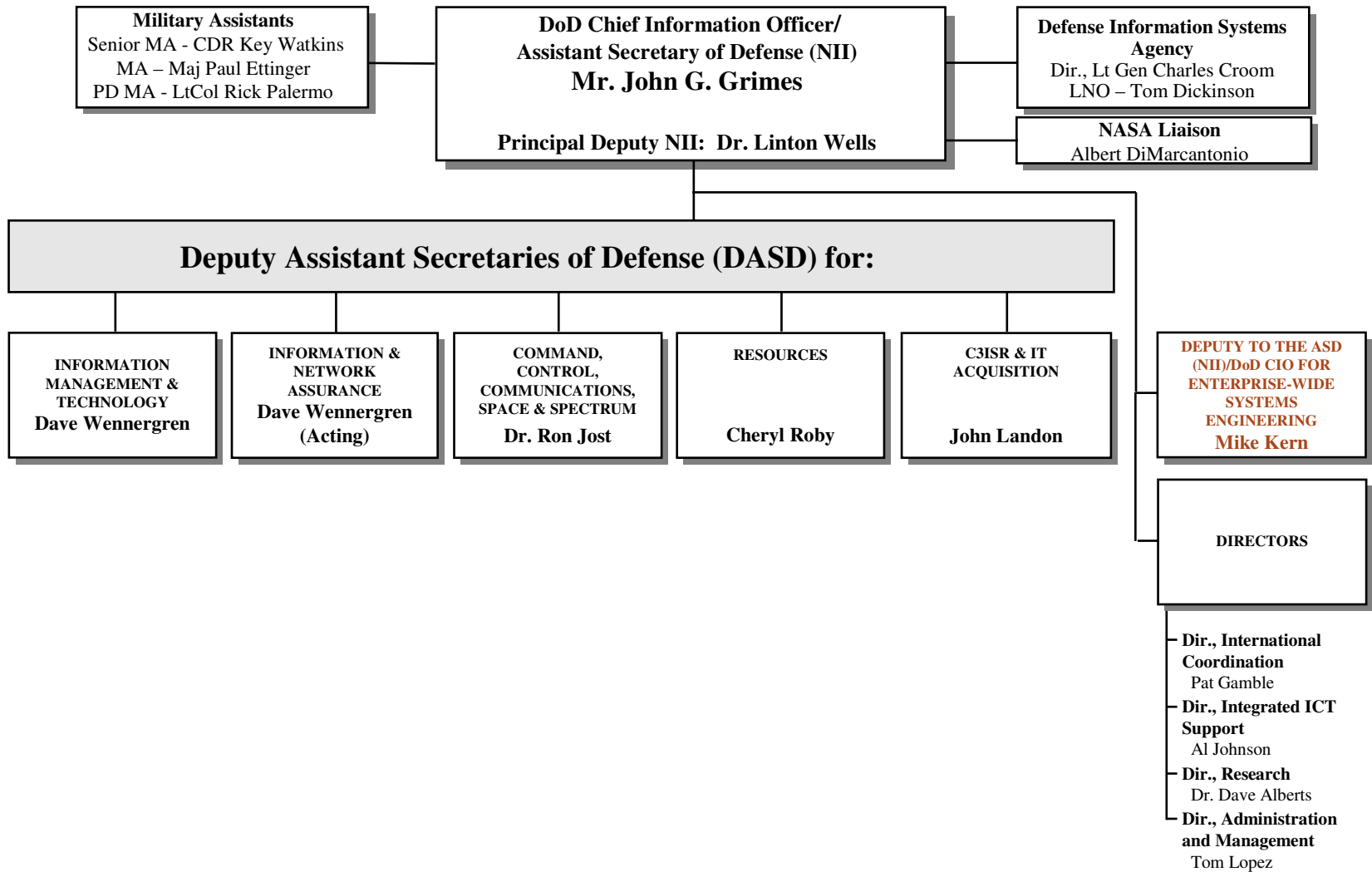
June 21, 2007
Tampa, Florida



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SE | Enterprise-Wide
Systems Engineering

Spanning the Government
and the Globe

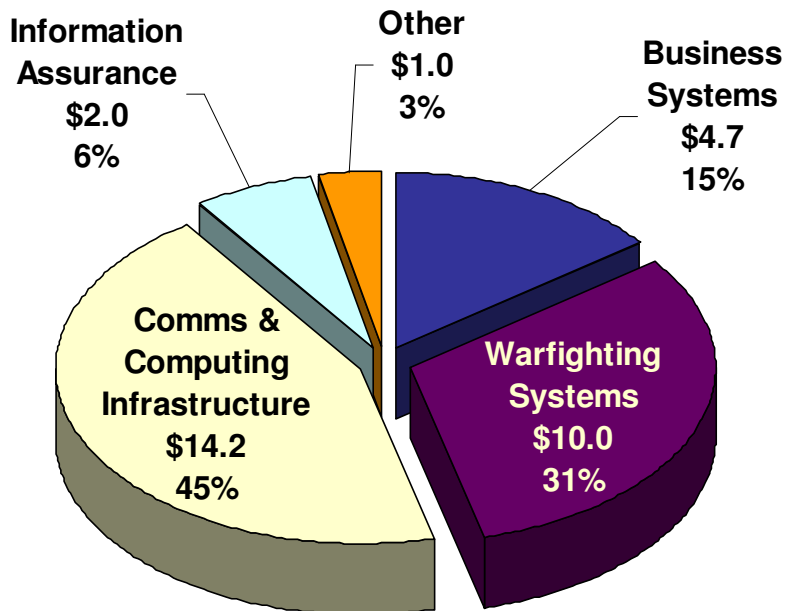
CIO/NII Organization



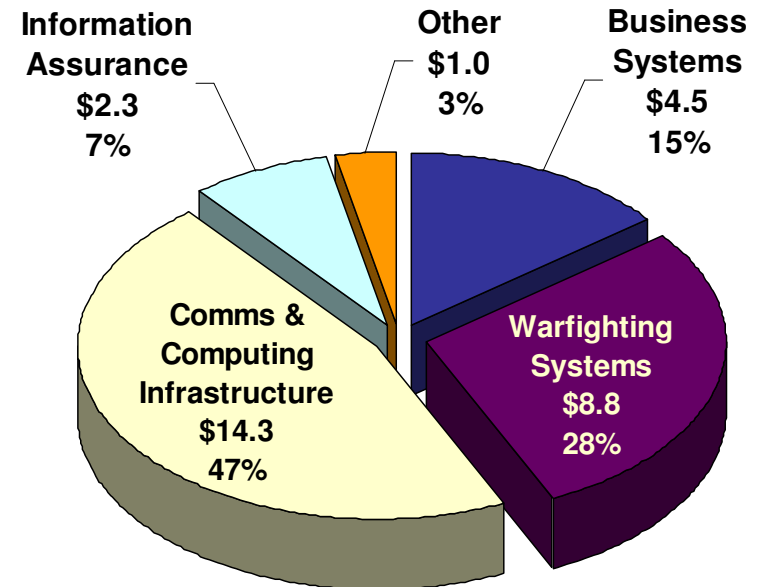
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DoD IT Budget (FY07PB)

(dollars in billions)



FY 2006
\$31.9



FY 2007
\$30.9



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A Net-Centric Information Environment

“I can get the information I need”

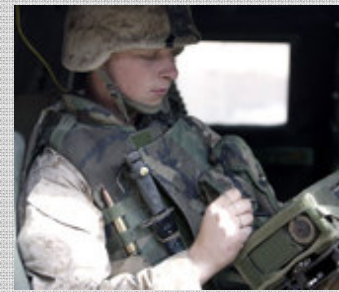
When I need it



Where I need it



How I need it



“Uncertainty is the defining characteristic of today’s strategic environment”

National Defense Strategy

“...focus on providing the tip of the spear with the information and actionable knowledge to determine the best course of action...”

*MG Peter W. Chiarelli
CG, 1st Cavalry Division*



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What is the GIG?

- ▶ The Global Information Grid (GIG) is an **all-encompassing communications** project of the U.S. Department of Defense, with multiple partners.
- ▶ Defined as the **globally interconnected, end-to-end** set of information capabilities, associated processes, and personnel for collecting, processing, storing, disseminating, and managing information on demand to warfighters, policymakers, and support personnel.
- ▶ Includes all DoD managed communications and computing systems and services, software (including applications), system data, security services, and other associated services necessary to achieve **information superiority** for the United States military.
- ▶ The physical manifestation of the **Network-Centric** warfare doctrine.
- ▶ Envisioned by the DoD CIO on September 22, 1999
- ▶ Was **officially mandated** by an overarching directive from the Deputy Secretary of Defense on September 19, 2002



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The Move to Net-Centricity

History = Rigid

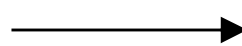
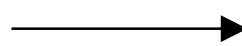
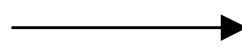
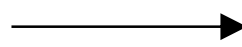
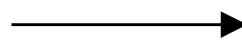
Information stovepipes

“Welded” interfaces

Predetermined needs

Fixed display formats

Need to know



Net-Centric = Agile

Shared information

Unconstrained

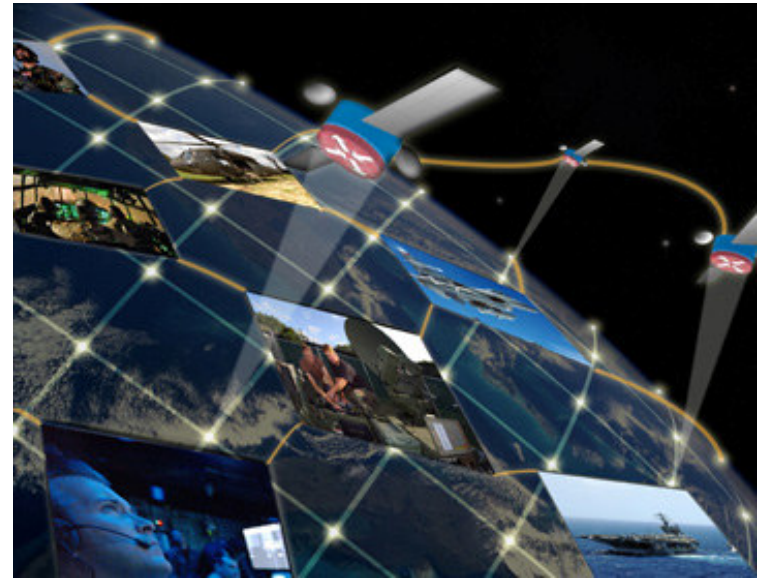
Unanticipated users

User-defined info and formats

Need to share; right to know



Global Information Grid
Enterprise-Wide Systems Engineering (GIG EW SE)





“Why Change?”

History shows —

- ▶ Cannot communicate across stovepipes
- ▶ Cannot meet spiraling information demands
- ▶ Cannot support unanticipated needs and users
- ▶ Is a Static vice Dynamic System with long deployments and large footprints
- ▶ Protects networks not data
- ▶ Lacks network mobility
- ▶ Information Assurance is a major concern

We need a new approach!



The New Business Model: Implications for Industry Managed Services and Service Oriented Architecture



CHANGING FROM THIS:

CHANGING TO THIS:

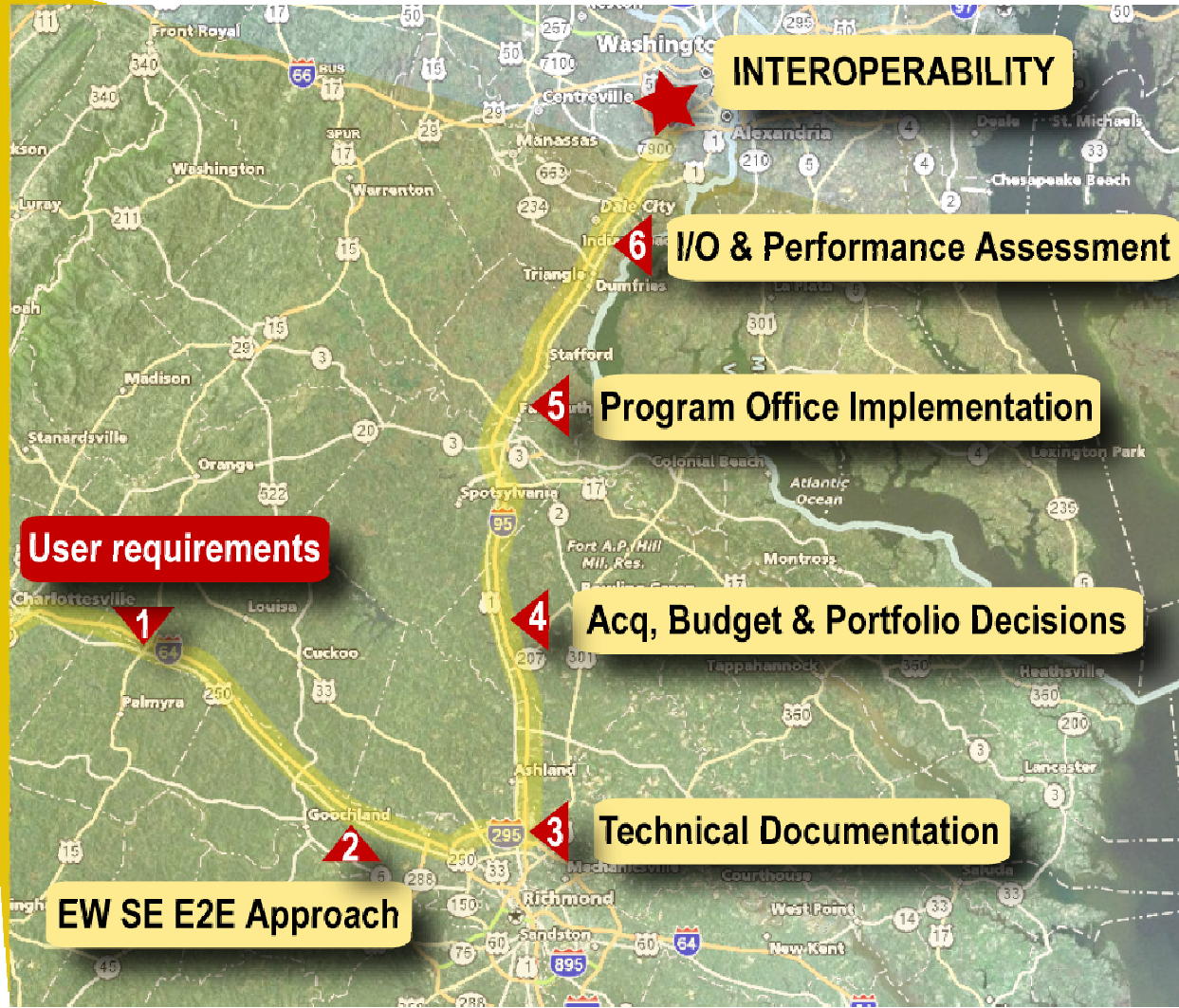
- Build a Platform → Create an Environment
- Buy “Things” → Purchase Managed Services
- Own It → Use It
- Application Focused → Data Driven
- Closed Systems → Open Service Oriented Architectures
- Proprietary Solutions → Common Standards
- Stovepipes → Enterprise
- Pre-Engineered Interfaces → Accommodate Unanticipated Users
- Info Assurance After-the-Fact → Information Assurance Baked-In
- Password Access → Attribute-Based Access

CONFRONT UNCERTAINTY WITH AGILITY

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The Road to End-to-End Interoperability & Performance is a Distributed Process

► Oversight & Policy provide the helicopter view and the how to



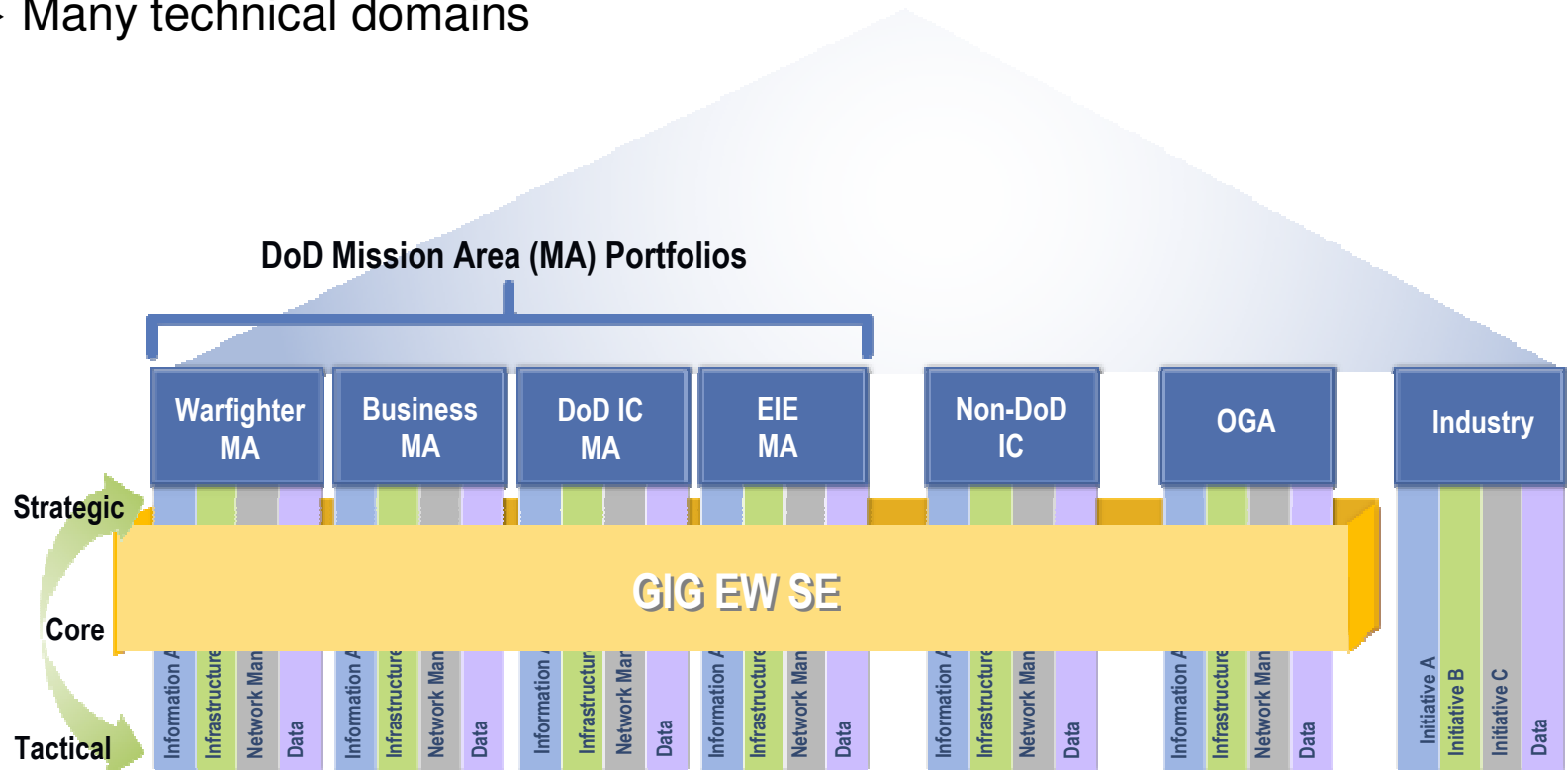
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GIG EW SE Environment spans across...

- ▶ The entire Federal Government
- ▶ Multiple programs and statutory authorities
- ▶ Many technical domains



GIG EW SE is the “connective tissue” leveraging industry to foster technical convergence to the appropriate level of detail across these multiple arenas

Enterprise-Wide Systems Engineering EW SE

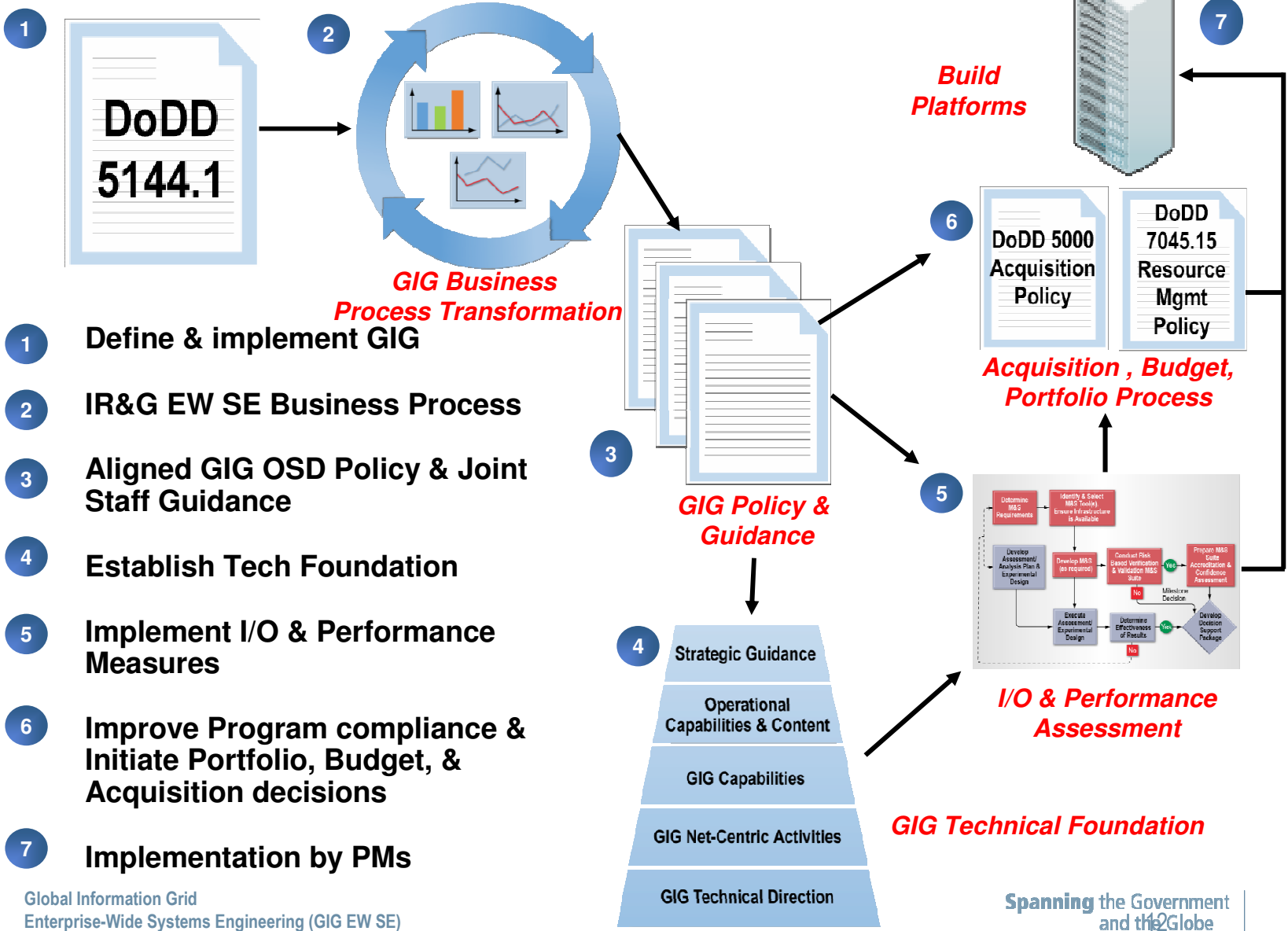
- ▶ **Enables technical implementation** of the GIG across all levels of the DoD/IC/National/International arenas
- ▶ Provides the framework for the **federated interconnection** of GIG services and capabilities across the DoD and partner communities
- ▶ **Supports and transcends** enterprise DoD decision processes
 - Policy
 - Requirements
 - Acquisition
 - Budget
- ▶ **Develops and facilitates** Government and Industry relationships



GIG Business Process Improvements Within DoD IR&G Activity



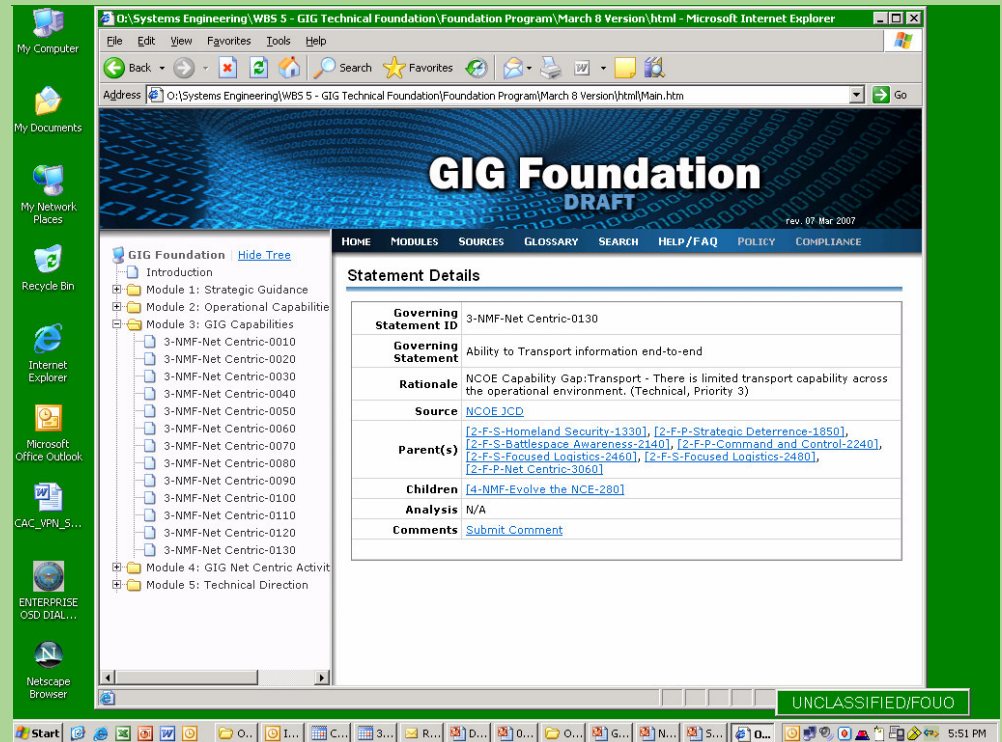
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Moving toward Web-based Service for Coordination & Compliance

FOUNDATION NAVIGATOR

- ▶ Displays Governing Statements
- ▶ Links to Source Documents
- ▶ Provides traces to Parent & Children Governing Statements



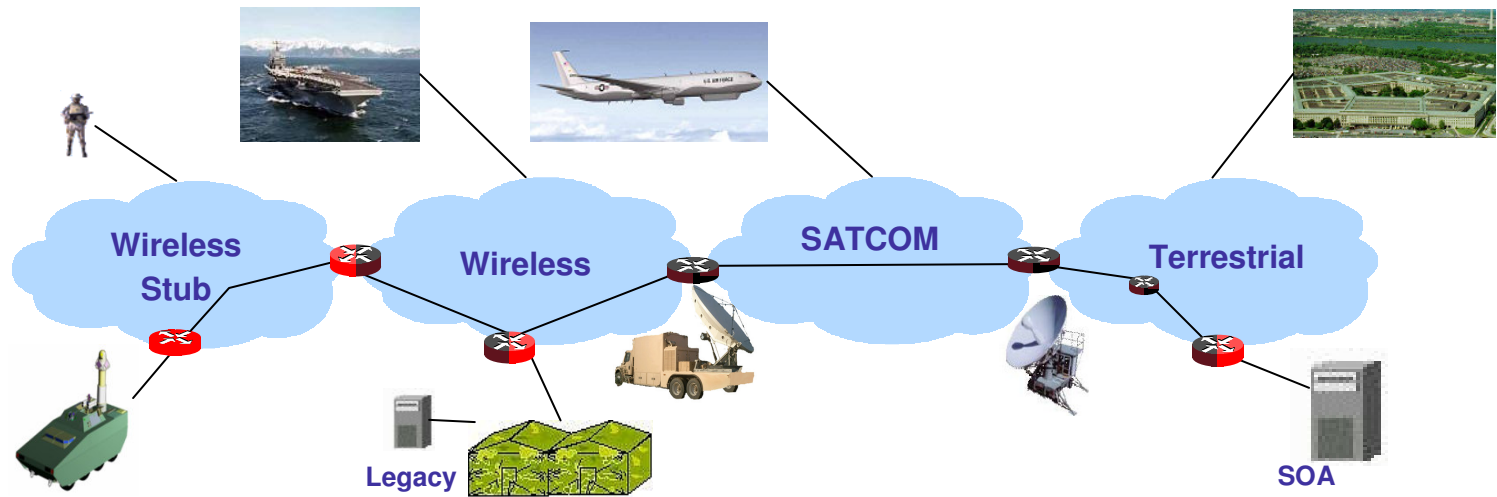
GIG Policy Interface

GIG Technical Foundation Interface

GTF I/O Compliance Assessment Interface



Measuring a Program's Contribution to End-to-End Performance is part of the compliance review process



Component	Wireless	SATCOM	Terrestrial	Interconnects	Services	End-Users Req.
Pathfinder	JTRS SRW	TSAT	GIG-BE	Teleport	NCES	JIC
	JTRS WNW			Gateway		Program SoS
Legacy		TDMA/FDMA	Leased PTP		Legacy	ITU
		Mobile	NIPR/SIPR			
		IP DAMA				

Requirements Based

M&S Based

Standard Model

Monitoring Based

Place Holder



Enhancing the GIG Partnership

- ▶ Participation in both policy and technical discussions
 - The GIG DoD CIO Engineering Board
 - Senior GIG System Engineer meeting
 - GIG Senior Systems Engineering Board (SSEB) meeting
 - GIG End-to-end (E2E) SE Working Group meeting
- ▶ Establish stronger ties between DoD Enterprise Wide Systems Engineering and other organizations to better support the Warfighter mission
 - Identify specific requirements you would like to see covered in emerging GIG Technical Foundation
 - Leverage portfolios initiatives between the DoD and partner communities



URL: <http://www.defenselink.mil/cio-nii/cio/ewse.shtml>

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Questions?



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