



# BEYOND TECHNICAL INTEROPERABILITY

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*Connecting People With Information*

**CIO/MII**  
**Enabling Net-Centric Operations**





The global war on terrorism, humanitarian assistance, and stability operations like those in Iraq - what do these all have in common? They are a small part of the whole when it comes to the scope of operations conducted by the Department of Defense in collaboration with a wide variety of mission partners.

Today, these operations must be planned and executed in an uncertain, changing, and essentially unknowable environment. Central to doing this effectively is ensuring information is available to the people who need it most - whether they are known or unanticipated. In either case, enhancing the DoD's efficiency and effectiveness means enabling all users to easily discover, access, trust, and use information to support their mission objectives, regardless of their location or time of day.

Net-Centricity is the DoD's vision for a global, internet/web enabled environment that ensures user focused information sharing. Rather than viewing information handling from the perspective of an information producer, net-centric operations instead views it from that of a user (whether human or software agent).

The nature of a net-centric environment is complicated - because of the people, processes, and organizations involved, and the wealth of information housed within the DoD and its mission partners. That said there are several key attributes that characterize it. First and foremost, it must adapt Internet and world wide web constructs and standards. It must also be a "smart pull" atmosphere, in which users can find and pull information directly, subscribe, or use value-added services to obtain the information they need. Perhaps most critical, however, is the ability to post in parallel. Publishers must make information visible and accessible without delay so users get the information when and how they need it.

The end result is people, organizations, and technology working together to create an agile enterprise empowered by access to and sharing of timely and trusted information.





# Net Centric Environment: Context

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*“Uncertainty is the defining characteristic of today’s strategic environment.” (National Defense Strategy)*

## Challenge – UNCERTAINTY

- Leave behind the reasonable predictability of the past
- Adjust to an era of surprise and uncertainty

*“We have set about making US forces more AGILE and more expeditionary.” (Quadrennial Defense Review)*

## Response – AGILITY

- Enterprise-wide: Battlefield Applications; Defense Operations; Intelligence Functions; Business Processes
- Capabilities Based: Access, Share, Collaborate
- Fundamental Changes: Process, Policy, Culture
- Emphasis Shift: From moving the user to the data – to moving data to the user

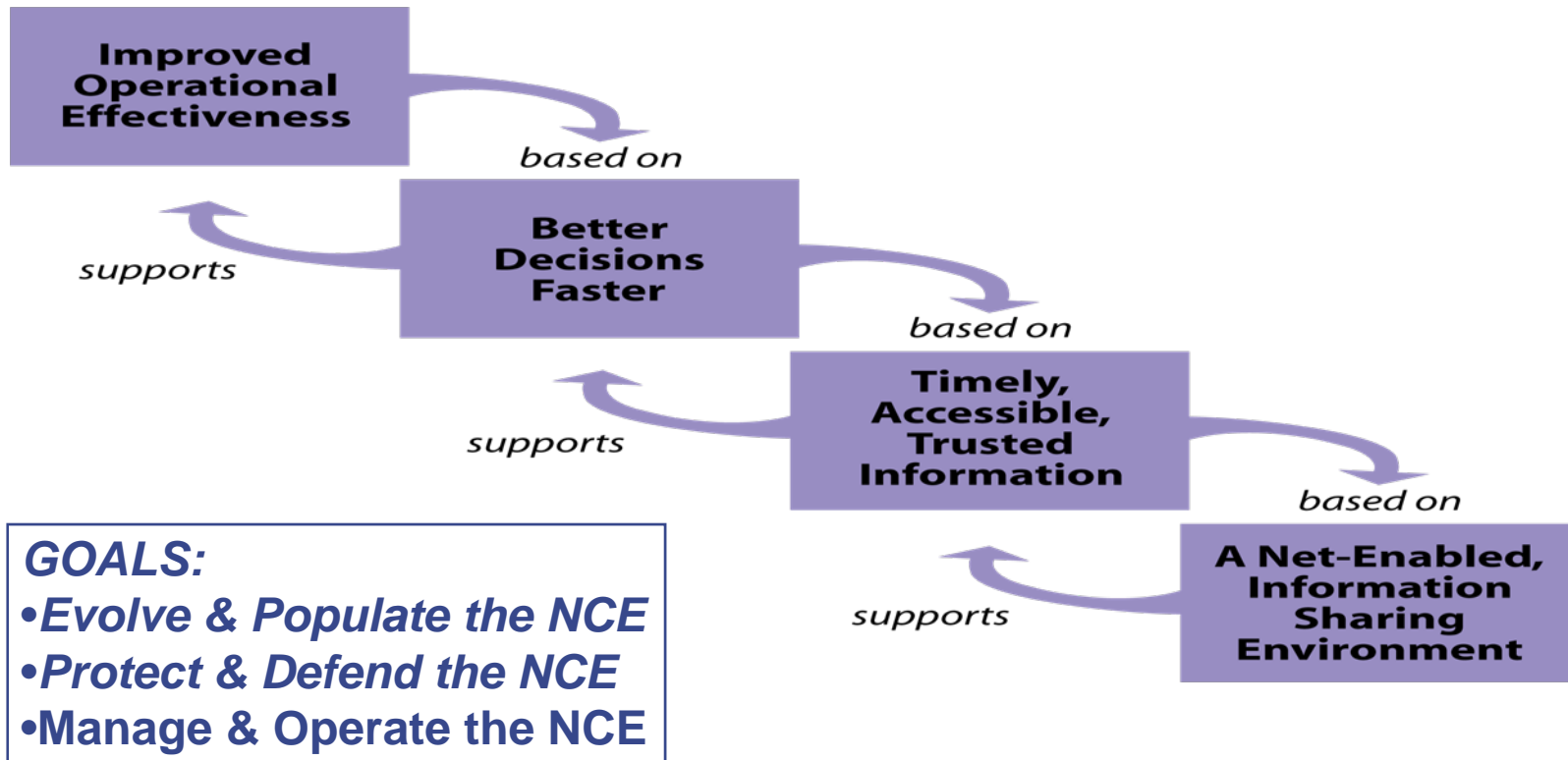
**Confront Uncertainty with Agility**





# Net Centric Environment (NCE): Objective, Goals & Description

*Objective:* All users, whether known or unanticipated, are able to easily discover, access, trust, and use the data/information that supports their mission objectives unconstrained by their location or time of day.

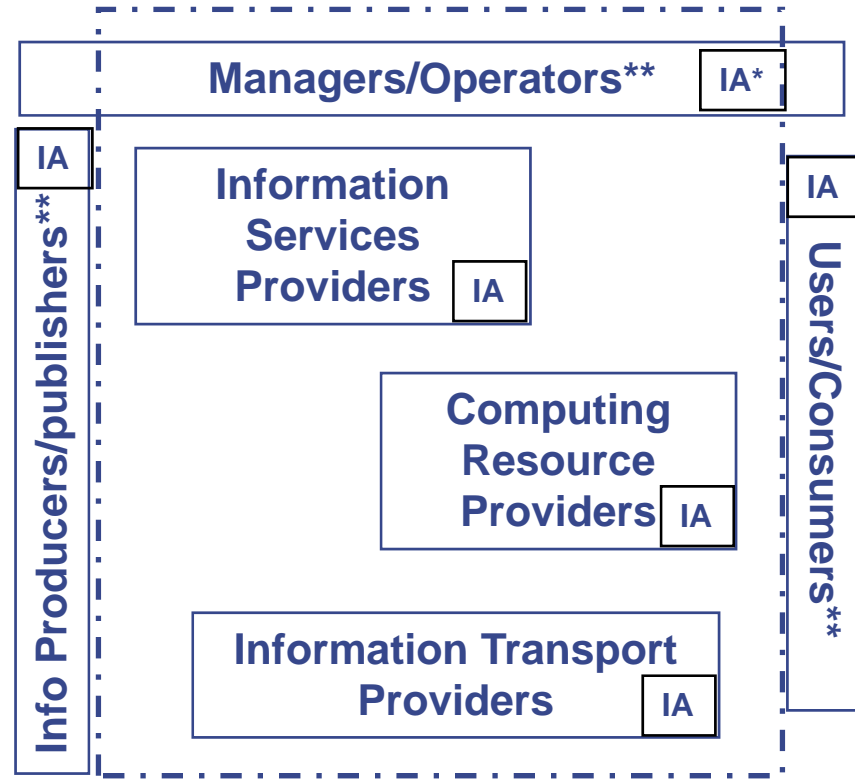


*The NCE is implemented with evolving balanced & synchronized sets of Process, Organization, People, Information & Matériel (POPIM) Solutions.*





# Net Centric Environment: Functional Entities



- *Behavior and relationship characteristics include: Quality of Service; Quality of Protection; Addressing; Tagging of content & roles/Identities;*
- *Information Forms include voice, video, images, text, graphics....*

*\* IA = Information Assurance*  
*\*\* Includes Software Applications whether hosted locally or by a computing resource provider.*





# Net Centric : Attributes

Attribute	Description
Internet & World Wide Web Like	Adapting Internet & World Wide Web constructs & standards with enhancements for mobility, surety, and military unique features (e.g. precedence, preemption) .
Secure & available information transport	Encryption initially for core transport backbone; goal is edge to edge; hardened against denial of service.
Information/Data Protection & Surety (built-in trust)	Producer/Publisher marks the info/data for classification and handling; and provides provisions for assuring authenticity, integrity, and non-repudiation.
Post in parallel	Producer/Publisher make info/data visible and accessible without delay so that users get info/data when and how needed (e.g. raw, analyzed, archived).
Smart pull (vice smart push)	Users can find and pull directly, subscribe or use value added services (e.g. discovery). User Defined Operational Picture vice Common Operational Picture.
Information/Data centric	Information/Data separate from applications and services. Minimize need for special or proprietary software.
Shared Applications & Services	Users can pull multiple applications to access same data or choose same apps when they need to collaborate. Applications on “desktop” or as a service.
Trusted & Tailored Access	Access to the information transport, info/data, applications & services linked to user’s role, identity & technical capability.
Quality of Transport service	Tailored for information form: voice, still imagery, video/moving imagery, data, and collaboration.





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***Questions ?***