Operationalizing Information Technologies: Impact on People, Processes, and Readiness

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Information Technology Style

• **Digital Native**
  • A person who has grown up with digital technology such as computers, the Internet, mobile phones, and MP3
    • Typically born after 1980

• **Digital Immigrant**
  • A person not born into the digital world:
    • has adopted many aspects of the technology, but just like those who learn another language later in life, retains an *accent* because they still have one foot in the past
    • challenged to communicate effectively with digital natives

• **Analog**
  • A person who chose to not adopt emerging technology

*Digital Immigrants challenged to keep pace with Digital Natives*

Source: Prensky, Mark; *Learning in the Digital Age*; Educational Leadership, December 2005/January 2006; Volume 63; Number 4  Pages 8-13
Current Generation of C4I War Fighters

Today's leaders & soldiers are digital natives and use IT technologies to their advantage for situational awareness and collaborative, agile decision making.

The Environment:

- Lack of information and services that are visible, accessible and understandable
- Information “silos”-- capability needed to move information from one stove–pipe to another
- Hard–wire interfaces aimed at predetermined needs unresponsive to dynamic environment
- Continue to not leverage the latest information technology solutions available commercially

“Digital Natives” trapped in industrial–era institution

* Source: DSB Summer Study 2006
The Co-Evolution
Leveraging IT to Support Mission Operations

Evolution of DoD Operational Environment
- Mission needs drive this transformation
- Commercial IT trends drive transformation

Transforming of Information Environments
- DoD is behind industry – now at early SOA phase
Opportunities to Change -- Leverage Enterprise Efforts*

1947-2007

Agency-Centric Problem Solving
- Statutes
- Regulations
- Standards
- Policies
- Requirements

Guidance
- Separate Agency Problem Solving
- Funding Aggregation
- After-the-Fact Integration

Collaborative Problem Solving Construct
- Statutes
- Regulations
- Standards
- Policies
- Requirements

SIE Process
- Approved Solutions

Guidance
- Community Integration
- Funding Aggregation
- Oversight & Evaluation

* DNI/CIO Strategy

Intelligence collaboration
Impact on People

- **Logistics**
  - Asset visibility
  - Smart weapons systems
  - Wireless technology
  - Training and simulation

- **Medical support**
  - Single health record
  - Ability to track from front lines to hospital

- **Pay and personnel**
  - Guard, Reserve, active transitions
  - Interoperable

*IT “to the edge” improves operations*
Impact on Processes

- Operational decisions are better informed
  - Blue force tracking
  - Information sharing between all Services, Agencies and Allies
  - Rapid secure communications
- Logistics processes more responsive
- Business processes more efficient

IT/Net Centricity changes the way we fight
Impact on Readiness

• **Material readiness improved**
  • Asset visibility enabled across components

• **Personnel readiness enhanced**
  • Training
  • Medical
  • Personnel and pay

*Net Centricity critical to supporting the Digital Natives*
Summary

• Our customers are mostly digital natives and demand Net-centric information sharing to maintain the unprecedented operational advantage.
• We are now following commercial industry.
• The Department is in a transition from the Industrial Age to the Information Age.
• IT will change the way we operate and how we support our customers.

Digital Immigrants challenged to keep pace with Digital Natives