

NDIA Conference on Net-Centricity and Interoperability



The Yin and Yang of IT Portfolio Management

**Net-Centricity versus Capital Planning
and Investment Control.**

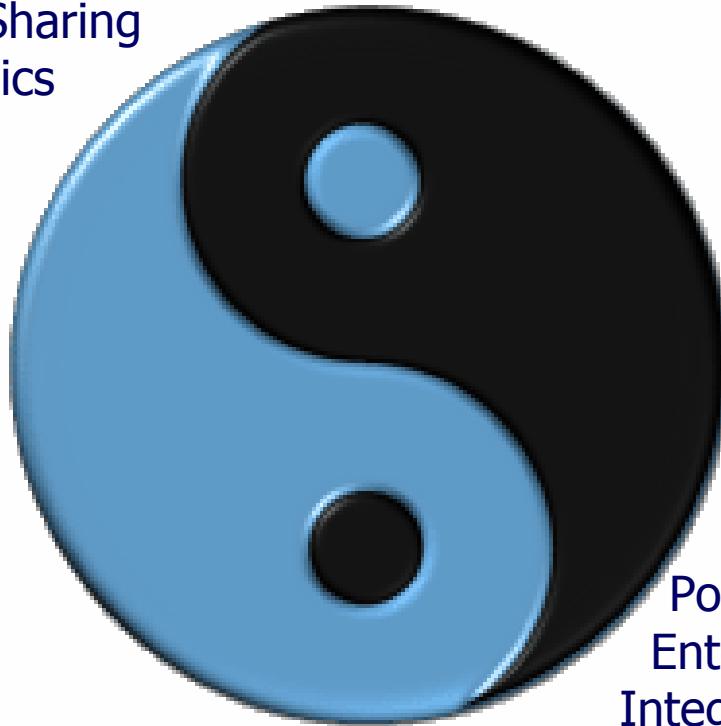
15 Minute Outline

- **Introduction**
 - The Yin and Yang of IT Portfolio Management
 - Net-centricity and CPIC
- **Net-Centric Thinking**
 - Characterized by market forces and cooperation
 - Agility, speed of command, self-synchronization
- **Capital Planning and Investment Control Thinking**
 - Characterized by top down planning & controls
- **Lessons Learned from Classical Game Theory**
 - The Prisoner's Dilemma and Cooperation
 - Information Sharing vs. Information Hoarding
- **Net-Centric Strategic Challenges**
 - A Few of the \$50 Billion Dollar Questions
- **Questions from Attendees**

The Yin and Yang

Net-centricity and CPIC

Service-Oriented Architectures
Information & Data Sharing
Evolutionary Economics
Self-Synchronization
Speed of Command
Sense and Respond
Self-Organization
Market Forces
Net-Centricity
Capabilities
Agility



Top Down
Consolidation
Capital Planning
Investment Control
Portfolio Management
Enterprise Architecture
Integrated Architectures
Federal Enterprise Architecture
President's Management Agenda

Net-Centric Thinking

"What we would like to enable."

Characterized by:

- Market forces, customer satisfaction, information sharing, sense and respond networking, evolution, natural selection, market economics, and capabilities-based.
- Speed of command, agility, sense-and-respond logistics, cooperation, dynamic interactions, self-organization, and self-synchronization.

CPIC Thinking


"What we must deal with in the real world."

Characterized by:

- Political goals and objectives, political oversight, military-industrial complex, quid-pro-quo, consolidation and command economics.
- Lack of agility, lack of cooperation, slow, rigid interactions, turf protection, information hoarding, and self-preservation.

The Prisoner's Dilemma**


"Basic Idea of Cooperation from Classical Game Theory."

	Jones Confesses (“Defection”)	Jones Remains Silent (“Cooperation”)
Smith Confesses (“Defection”)	Smith and Jones get 5 years each.	Jones get 10 years. Smith goes free.
Smith Remains Silent (“Cooperation”)	Smith get 10 years. Jones goes free.	Smith and Jones get 1 year each.

** In classical game theory, a situation in which two players must choose between the risks of cooperation and competition as equated with two prisoners separately deciding whether to confess to a crime. Naturally, the “payoffs” gets more complex as the number of participants increases.

The Prisoner's Dilemma**

"IT Lessons Learned from Classical Game Theory."

	Organization "A" Hoards Information ("Defection")	Organization "A" Shares Information ("Cooperation")
Organization "B" Hoards Information ("Defection")	"A" and "B" get \$5M of funding each.	"B" get \$10M of funding. "A" gets zero.
Organization "B" Shares Information ("Cooperation")	"A" get \$10M of funding. "B" gets zero.	"A" and "B" get \$3M of funding each.

** In classical game theory, a situation in which two players must choose between the risks of cooperation and competition as equated with two prisoners separately deciding whether to confess to a crime. Naturally, the "payoffs" gets more complex as the number of participants increases.

Net-Centric Strategic Challenge

"How do we facilitate cooperation and sharing?"

The \$50 Billion Dollar Questions

How can CPIC processes evolve to facilitate cooperation and information sharing in a world where "defection" and information hoarding has a "bigger payoff" ?

Net-Centric Strategic Challenge

"How do we facilitate cooperation and sharing?"

The \$50 Billion Dollar Questions

Can and should DoD shift from system-based IT acquisition to information-based IT acquisition ?

Information-Based Acquisition

"What is information-based acquisition?"

Concept Exploration

- DoD specifies information requirements, not systems requirements.
- DoD acquires information versus IT systems.
- DoD information service providers compete in an information marketplace, not a systems marketplace.
- Like other "free markets," supply-and-demand for information drives the economics of CPIC.
- Many information service providers of high quality information results in lower acquisition costs.
- Innovation and niche production are encouraged in the "new information economy."

Net-Centric Strategic Challenge

"How do we facilitate cooperation and sharing?"

The \$50 Billion Dollar Questions

What would an information-based approach "look like" and how would it effect CPIC processes ?

Net-Centric Strategic Challenge

"How do we facilitate cooperation and sharing?"

The \$50 Billion Dollar Questions

What are other lessons we can use and apply from cooperative game theory to the "yin and yang" of CPIC processes and our net-centric goals and objectives ?

Net-Centric Strategic Challenge

"How do we facilitate cooperation and sharing?"

Questions from
Conference Participants

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The Yin and Yang of IT Portfolio Management

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