When non-standardized people meet standardized enterprise systems

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Enterprise Information Systems

- Presidential “green light” by 2008
- Accountability & compliance with oversight – 2007 GAO review
- Financial Integration between Centers
- Programmatic Budgeting, Control, & Budgeting
- WEBTADs Award – Best in US Govt
- Accelerated processes (procurement: 1 week → 1day)

2003-2008 ~ $1 billion
Enterprise Information Systems

- Productivity
- Efficiency & Speed
- Integration
- Control & Accountability
- Cost Savings
- Agility
Change Management: Critical Success Factors

- Top Management Support
- Strategic Goals: Communication Campaign
- Business & IT Cooperation (Top People)
- Partner Selection – packaged solution
- Complementary Business Initiative
- Disciplined project management – scope & schedule
Change Process: Enterprise System Lifecycle

- Implementation (Big Bang vs. Phased)
- Shakeout
- Onward & Upward
- Dedicated support organization
- Limited Customization
- Emphasize process change
- Eliminated Legacy Systems
- Cultural Change

Success a continual accomplishment!

Image: Markus & Tanis 2000
However....

Publicly available NASA image – no relation to topic of presentation.
However....

Goals:
- Single point of data capture
- Universal system use
- Control from Centers to Programs
- Procurement standardization

Often:
- Scientists, engineers, etc., do not use the system
- Project managers and center managers use shadow systems
- Science people “surf” WBS numbers and bill time to allocation
- They circumvent controls & input intentionally
Non-Use

Publicly available NASA image – no relation to topic of presentation.
Shadow Systems

Publicly available NASA image – no relation to topic of presentation.
Circumvention

Publicly available NASA image – no relation to topic of presentation.
Spinning and Surfing
Logics of Local Action

Scientist
- Knowledge
- Autonomy
- Knowledge
- Problem Solving
- Identify with mission

Enterprise System
- Control
- Standardization
- Accountability
- Identify with program goals & budget

Identity of the Scientist: Appropriate Role
Logics

**Priorities:** Values, Goals, Incentives

**Assumptions:** Organizing Principles, Routines & Practices, assumptions about appropriate action

**Identities:** Roles, domains of appropriate action in a given domain
Outcomes of Conflicting Logics: “Loose Coupling” with Enterprise System

Circumvention
Shadow Systems
Human Intermediation
Time Lag
Creative Reporting
Knowledge Workers Reconcile with “Single Version of the Truth”

“Human Shock Absorbers”
Other Instances of Knowledge Workers and Enterprise Systems

Automotive Design (Ford)

Innovative Electromechanical Sales (Bantech)

Complex Architecture, Engineering & Construction (Gehry)
Ford’s Bill of Materials

Different Logic of Practice for Different Units
Ford’s Bill of Materials

- Engineering
- Finance
- Weight
- Manufacturing
- Finance
- Service

WERS

Nightly feed from WERS

Automated WERS load
Bantech: Electromechanical Sales

Incentives and Authority Misaligned with Standards
Gehry’s Complex AEC

To deal with design must learn design intimately

Best way to do so is to redesign

Often redesign in different system

Integration Not Support Learning about Design

Image: buildipedia.com
Nurse Shift Changes - EHR
When Non-Standardized People Meet a Standardized Enterprise System

Downstream reconciliation rather than upstream data capture

Local usefulness rather than centralized control

Business realities rather than ineffective standards

Learning rather than efficiency
Tactics to Consider with Knowledge Workers

- Human Intermediation (rather than universal use & single point of data capture)
- Alternative System Control (rather than enterprise system control)
- Discretion (rather than standardization)
- Recreation (not integration – learning rather than efficiency)
Enterprise Information Systems

• Productivity
• Efficiency & Speed
• Integration
• Control & Accountability
• Cost Savings
• Agility
Thank You!

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