Challenges to Change in Government: Technology-based Cross-agency Innovations in the U.S.

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National Center for Digital Government
University of Massachusetts Amherst
Today’s Talk

1. What is the National Center for Digital Government?
2. Cross-agency institutional developments
3. “How to” – Tackling the challenge of informatization, governance and organization
The National Center for Digital Government
ncdg.org

- Supported by the National Science Foundation, a U.S. federal agency
- 2001-present
- Catalyze a field of study at the intersection of technology, institutions and governance
  - Use and extend social science research
  - Build institutional and political analyses
### Scientific Objectives: Collaborative Projects and Catalysis

#### Projects
- Open Source
- Connecting to Congress
- Local government responses to demand for broadband
- Center for Computational Politics
- Mobile emergency response in rural settings
- Aboriginal Canada Portal

#### Collaborating Institutions
- Congressional Management Foundation
- IBM
- University of Tokyo
- MIT
- Digital Nations Foundation, Santiago, Chile
- Univ. of California Riverside
- Ohio State University
- Carnegie Mellon
- Fulbright Commission
- Claremont Graduate School
Building Global Capacity

- Faculty, post-doctoral and doctoral fellows
- Visiting fellows from the U.S., Netherlands, Switzerland, Germany, Austria, Sri Lanka, Korea and Japan in residence
- National workshops on social science research, e-rulemaking, authentication and time-critical information services
- Research design and methods workshops
- Seminar series with value-added online content
- Collaborative research projects
- International partners from several countries
The U.S. Federal Perspective: Institutional Developments 1993-present
Chronic Problems in E-Government

- **Putting the status quo online:** Agencies automate political and institutional problems – “paving the cowpath”

- **Islands of automation:**
  - History of departmental autonomy – “stovepipes”
  - Citizens deal with multiple agencies (22,000 websites) for services
  - Agencies cannot easily collaborate for key missions

- **Redundancy:** Multiple agencies buy/develop the same item

- **Poor program management:** Few IT projects delivered on time, on budget

- **Poor modernization strategies:** Few agencies have business-driven enterprise architectures connecting IT investments to performance improvement

Source: Mark Forman
The U.S. Federal Perspective: Institutional Change

- Institutional change at the Office of Management and Budget (OMB)
- Cultural shift in civil service
- Civil service ownership of projects
- Horizontal, cross-agency collaboration
- Enterprise architecture
Why Research?
We are building knowledge societies

E-Government: the use of digital technologies to transform government operations.

- Necessary but not sufficient.
- Governments are knowledge organizations, not simply operations.
Why We Focus on E-government: We Live in a Web of Interdependencies

Source: Mark Forman, former CIO of the U.S. Government
Interdependence to Cyberinfrastructure

Source: Tom Horan, Time-Critical Information Services Workshop
Yet Government is Vertically Structured

**Bureaucracy**

- Jurisdiction – clear scope of authority
- Hierarchy – decisionmaking rights
- Rules and procedures – equitable, standardized
- Files – precedent, documentation
- Neutrality – no favorites

- Replace particularism
How do we better integrate ICT, organizations and governance?
Cross-agency Research, Phase I

- U.S. central government, 1988-2000
- 30 virtual agencies: students.gov, seniors.gov, etc.
- Technology Enactment framework
- International Trade Data System
- Business Advisor

Brookings Institution Press, 2001
Challenges for Public Servants

• Autonomous ministries: Vertical institutional structures
• Perverse incentives
  – Collaboration leads to loss of autonomy
  – Efficiencies lead to loss of budget
• Misuse of capital/labor substitution - downsizing
• Outsourcing v. integration/reform
Technology Enactment

Objective
IT

Organizations
Bureaucracy
· Hierarchy
· Jurisdiction
· Standardization
· Rules, files
· Stability
Networks
· Trust vs. Exchange
· Social Capital
· Interoperability
· Pooled resources
· Access to Knowledge

Institutional Arrangements
· Cognitive
· Cultural
· Sociostructural
· Legal & formal

Actors Group A:
· Vendors
· Consultants

Actors Group B:
· CIO
· Decisionmakers
· of IT system

Enacted Technology
· Perception
· Design
· Implementation

Actors Group C:
· Policymakers
· Managers,
· Operators,
· Workers

Outcomes
· Indeterminate
· Multiple logics
· Unanticipated

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Comparative Perspectives
Cross-agency Research Phase II

• 2001-present
• 25 Cross-agency initiatives in the U.S. federal government
• Associated institutional and organizational developments
Cross-Agency Initiatives

Government to Citizen

1. USA Service  
   - Managing Partner: GSA
2. EZ Tax Filing  
   - Managing Partner: Treas
3. Loans.gov  
4. Rec’n One Stop  
   - Managing Partner: Interior
5. GovBenefits.gov  
   - Managing Partner: Labor

Government to Business

1. Federal Asset Sales  
   - Managing Partner: GSA
2. E-rulemaking  
   - Managing Partner: EPA
3. Simplified and Unified  
   - Managing Partner: Treas
   Tax and Wage Reporting
4. Consolidated Health  
   - Managing Partner: HHS
   Informatics
5. Business Compliance  
   - Managing Partner: SBA
   One Stop
6. International Trade Process  
   - Managing Partner: DOC
   Streamlining

Government to Government

1. E-Vital  
   - Managing Partner: SSA
2. E-Grants  
   - Managing Partner: HHS
3. Disaster Assistance  
   - Managing Partner: FEMA
   and Crisis Response
4. Geospatial Information  
   - Managing Partner: DOI
   One Stop
5. Wireless Networks  
   - Managing Partner: FEMA
   (SAFECOM)

Internal Effectiveness and Efficiency

1. E-Training  
   - Managing Partner: OPM
2. Recruitment One Stop  
   - Managing Partner: OPM
3. Enterprise HR Integration  
   - Managing Partner: GSA
4. E-Travel  
   - Managing Partner: GSA
5. Integrated Acquisition  
   - Managing Partner: NARA
6. E-Records Management  
   - Managing Partner: OPM
7. Payroll Processing

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## E-Government Projects

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Institutional Developments (1993-2005)

- Legislation
- Oversight and central management at OMB
- Funding and budgeting networks
- Structure and practice of civil servants and public management – government-wide (enterprise) mentality
- Accountability in networked governance
Institutional Development at OMB

• Federal CIO (Associate Director of OMB) and ministry CIOs
• Portfolio Management Office – oversight of cross-agency projects
• Managing Agencies for cross-agency projects – lead agency approach
E-Governance Structure

OMB Director
Final Funding Approval

OMB Assoc Dir for IT and E-Gov
Type title here

Portfolio Management Office

Government to Citizen
Portfolio Manager

- Integrated Program Teams
  - Recreation One Stop
  - GovBenefits
  - Online Access for Loans
  - EZ Tax Filing

Government to Business
Portfolio Manager

- Integrated Program Teams
  - USA Services
  - Online Rulemaking
  - Expanding Tax Products
  - Federal Asset Sales
  - International Trade
  - One Stop Business

Government to Government
Portfolio Manager

- Integrated Project Teams
  - Geospatial OneStop
  - E-Grants
  - Disaster Assistance
  - SAFECOM
  - E-Vital

Internal Effectiveness and Efficiency
Portfolio Manager

- Integrated Project Teams
  - E-Training
  - Recruitment One Stop
  - Enterprise HR
  - E-Records
  - E-Clearance
  - E-Payroll
  - E-Travel
  - E-Authentication
  - Integrated Acquisition
  - Fed Enterprise Architecture

Source: OMB: E-Government Strategy,
http://www.whitehouse.gov/omb/inforeg/egovstrategy.pdf
Funding Methodology

• A cross-agency budget workgroup developed the funding model and allocation approach

• Memorandum of Understanding (MOU) between participating agencies to facilitate interagency agreements and fund transfers
Modeling the Antecedents of Successful Collaboration

**Macro-Level**
- Institutional Factors:
  - Accountability
  - Political Leadership
  - Legislative Framework
  - Budgetary Process
  - Organizational Culture

**Meso-Level**
- Operational/Managerial Factors:
  - Structure of Collaborative Work (important task, clear goals, performance metrics)
  - Resources
  - Interoperability

**Micro-Level**
- Individual Factors:
  - Background
  - Skills
  - Experience
  - Social Capital (networks and trust)

Successful Collaborative Initiative

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Research Results: Antecedents of Successful Collaboration
(Forthcoming in Mayer-Schoenberger and Lazer, eds., I-government (MIT Press, September 2007)

Macro-Level
Institutional Factors:
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Successful Collaborative Initiative

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Attributes of Successful Projects (1993-2005)

• Leadership for networked governance
• Project momentum and platforming – from “low hanging fruit” to more ambitious challenges
• Project governance: political power and support
• Highly complex project management skills
• Self and joint funding
• Build credibility and support
• Deep change in civil servant mentality and skills
Toward the Agenda for 2020

• What is central to national or cultural identity?
• Link e-government to government reform initiatives
• Balance vendor influence with governance/societal analysis
• Analyze and manage institutional change as well as information systems change
• Public servants as knowledge workers with a broad governmental (enterprise) perspective