eGovernment and Preservation: Implications for Open Government

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Outline

- Pre-eGovernment electronic government
- Some Trends in eGovernment
- Selected issues
- Selected key questions
- Concluding comments
U.S. Pre-eGovernment Digital Government

- Information Resources Management (IRM)
  - 1977 Federal Paperwork Commission
  - Pre-cursor to Paperwork Reduction Act

- Notion that information was
  - A resource
  - Could be strategic
  - Required management
  - Had a lifecycle (creation to disposition)

- Technology was a key component to information management
U.S. Pre-eGovernment Digital Government

- Electronic Benefits Transfer (EBT)
  - Electronic Funds Transfer and Point-of-Sales terminals
    - Began in the early 1990s to make the transition from paper-based food stamps to combination of magnetic swipe cards with POS
      - Several Pilots
      - Full state implementations 2008
U.S. Pre-eGovernment Digital Government

- Federal Information Locator Service/Government Information Locator Service
  - Initiatives in the 1990s to create record locators for government information
    - Metadata to facilitate agency and public discovery, management, access, and retrieval

- GPOAccess
  - Launched in 1994
U.S. Pre-eGovernment Digital Government

- National Performance Review/Reinventing Government
  - Initiative directed by then Vice President Gore that combined
    - Business process redesign and [reengineering]
    - Technology
    - Service to the public
U.S. Pre-eGovernment Digital Government

- Various pre-eGovernment laws and information policies
  - Government Performance and Results Act
  - Information Technology Management Reform Act
  - Federal Acquisition Reform Act
    - Clinger-Cohen Act (P.L. 104-106)
    - Creation of federal CIOs
  - Paperwork Reduction Acts (various versions and reauthorizations since 1980)
  - Federal Records Act (and its updates)
  - OMB Circular A-130
  - OMB Circular A-76
Drivers of eGovernment

- Cost effectiveness/savings
- Workforce reduction
- Service to the public
- Increased access to content and information
- Technology capabilities and investments

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- Openness/transparency
- Accountability
- Social innovation (citizen co-creation, crowdsourcing)
- Economic development
- Engagement
Four Eras of eGovernment (Functionality)

- Informational
- Transactional
- Event-Based
- Anticipatory
Evolution of eGovernment (Outcomes)

Fig. 1. Digital Government Evolution Model.

Tomasz Janowski

Digital government evolution: From transformation to contextualization


http://dx.doi.org/10.1016/j.giq.2015.07.001
Four Eras of eGovernment (functionality)

- Informational
  - One-way, push
  - Information provision about
    - Agency/government
    - Process
    - Laws, policies, regulations

- Still an important underlying component of eGovernment
  - E.g., information about getting a passport, citizenship

- In some cases, it is still the focus

- But increasingly information is enhanced, subsumed, and integrated into other features
Four Eras of eGovernment (functionality)

- **Transactional**
  - Focused on discrete interactions with government by citizens, governments, and organizations
    - Online licenses
    - Online passport applications
    - Renewals
    - Etc.
  - Most often enshrined in a digital version of the analog service
    - No or little thought to process redesign or the user experience
    - Seeking efficiencies (cost reduction, time) from an agency’s point of view
      - How can we use IT to reduce our costs and time spent?
      - Not necessarily seeking gains in effectiveness and outcomes for the user(s) of the service(s)
  - Built on underlying information about process, policies, regulations, etc.
Four Eras of eGovernment (functionality)

- Event-Based
  - Focuses on life-issues such as
    - Getting married
    - Buying/selling a home
    - Signing up for health care
    - Disaster recovery
  - Builds on both the information and transaction foundations
  - But:
    - Designed to streamline
    - Integrate across many jurisdictions
      - Local, national
    - Seek effectiveness of service that is designed around the user experience, needs, and context
    - Still can provide economies of scale and efficiencies, but these are byproducts of the user experience
Four Eras of eGovernment (functionality)

- **Anticipatory**
  - The Amazon influence
  - Emerging trend based on anticipating service needs
  - For example
    - Approaching retirement age, getting all signed up (or even automated) for social services/health care
    - Having a child, establishing Social Security number

- **Builds on information, transaction, and event-based features**
  - Not just integration and streamlining across jurisdictions and events, but actually anticipating and automating based on various life stages and events
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<thead>
<tr>
<th>Era</th>
<th>Predominant Content Types</th>
<th>Functionality</th>
<th>Design</th>
<th>Policy Adequacy</th>
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<tr>
<td>Informational (c. 1990s-today)</td>
<td>• Web pages/html • PDF files (mostly scanned)</td>
<td>• One-way</td>
<td>IT</td>
<td>• Yes</td>
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<td>• Web pages/html • PDF files (scanned/enhanced) • Forms (scanned/enhanced) • [Multi-media] • [Social media] • [Engagement platforms] • Databases</td>
<td>• One-way • Limited two-way (prescribed)</td>
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<td>• Yes, but starting to show wear last years of decade</td>
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<td>Event-Based (c. 2010-today)</td>
<td>• Web pages/html • PDF files • Forms • Multi-media • Social media • Engagement platforms • Databases • Rise of Open Data</td>
<td>• One-way • Two-way (prescribed forms) • Interactive • Crowd-sourcing • [Public-Private Partnerships]</td>
<td>IT Inter-operability UX Design</td>
<td>• Worn • “Fixes” through EOs and OMB Circulars • Limited updates (e.g., Federal Records Act)</td>
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<td>Anticipatory (c. 2013 [Aspirational])</td>
<td>• Web pages/html • PDF files • Forms • Multi-media • Social media • Engagement platforms • Databases • Open Data</td>
<td>• One-way • Limited two-way (prescribed) • Interactive • Crowd-sourcing • Co-design • Public-Private Partnerships</td>
<td>IT Inter-operability UX Design</td>
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Four Key Issues in Relation to eGovernment and Preservation

- Defining a record
- Preservation of and access to a range of digital assets
- An increasingly ongoing, interactive, co-created, cross platform engagement set of events that generate a number of (by)products
- An inadequate records policy framework
What is a Record?

- Record as evidence
  - Government and transparency
  - Legal
  - Events
- Record as information
  - And/or information to the user
- Record as an item
- Record as memory/heritage
- Record as values
- Record as document
- Record is persistent
What is a Record?

- Tension between those who view a record as
  - Static, stable, impartial
  - Evolving, dynamic, context-embedded

- Our policy frameworks and practices regarding records are based on a linear approach that has a clearly defined beginning and end
Information Lifecycle View

- **Creation**
  - Authentic and reliable
  - Declare as a record
  - Classification of primary or secondary value for retention purposes

- **Disposition**
  - Long-term preservation of records containing "enduring value"
  - Secure destruction by overwriting data or destruction of media

- **Maintenance and Use**
  - Protection from modification or destruction
  - Ensure access to authorized individuals
  - Maintained for retention period based upon assessed value
Federal View

Canada - Information Lifecycle

- Circular/continuous approach from planning to creation to disposition

A Continuum View

Figure 2.1

Upward’s Information Continuum Model

Typical Agency Website
Another Approach

Coming to Denmark
If you are coming to Denmark you will have to address practical issues. You can start here.

Living in Denmark
This is a guide to some of the practical things you need to know when living in Denmark.

Leaving Denmark
Before leaving Denmark there are relevant things you need to address – you can look it up here.

Online self-service
- Nem ID self-service
- View your holiday allowance
- Contributions to ATP Livslang Pension
- Notification of change of address
- Claim your holiday allowance
- Order a new health insurance card

Welcome to Denmark!
Lifeindenmark.dk is a practical guide relevant to your stay in Denmark - whether you are here to work or study. We hope you will have a rewarding stay in Denmark.
eGovernment and Digital/Digitized Assets

- Multiple types and generations of assets
- Functionality and accessibility vary by generation and type
- And it may well be that some are lost – or effectively so – due to
  - Resource constraints
  - Lack of saving
  - Deletion
  - Embedding in proprietary technologies/systems/applications
  - Buried somewhere on a decommissioned server…
eGovernment and Digital/Digitized Assets

- For newer digital assets
  - Quantity
  - Rapid change
    - Continual website updates and redesigns
    - New versions datasets/multiple access points
    - Third party proprietary platforms
      - Facebook, twitter, YouTube, etc.
      - Different policies and data governance
      - No permanence – or guaranty of it
### Dataset Info

These fields are compatible with DCAT, an RDF vocabulary designed to facilitate interoperability between data catalogs published on the Web.

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### Additional Info:

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</table>
### Data.Medicare.Gov

#### All datasets

**Hospital General Information**
- A list of all Hospitals that have been registered with Medicare. The list includes addresses, phone numbers, and hospital type.

**Hospital Compare - CASPER / ASPEN Contacts**
- 8,532 views

**Structural Measures - Hospital**
- 8,826 views

**Medicare Hospital Spending by Claim**
- Also known as Medicare Spending per Beneficiary (MSBP) Spending. Breakdowns by Claim Type file. The data displayed here show average spending levels during hospitals' Medicare Spending periods. An MSBP episode includes all Medicare Part A and Part B claims paid during the period from 3 days prior to a hospital admission through 12 months post discharge.

**Outpatient Imaging Efficiency - Hospital**
- Use of medical imaging - provider data. These measures give you information about hospitals' use of medical imaging tests for outpatients. Examples of medical imaging tests include CT scans, MRIs, and mammograms.

**Healthcare Associated infections - Hospital**
- The Healthcare-Associated Infection (HAI) measures - provider data. These measures are developed by Centers for Disease Control and Prevention (CDC) and collected through the National Healthcare Safety Network (NHSN). They provide information on infections that occur while the patient is in the hospital. These infections can be related to devices, such as

**Patient survey (HCAHPS) - Hospital**
- A list of hospital ratings for the Hospital Consumer Assessment of Healthcare Providers and Systems (HCAHPS). HCAHPS is a national, standardized survey of hospital patients about their experiences during a recent inpatient hospital stay.

**Measure Dates**
- Data Collection Periods for all measures on Hospital Compare.
Interactive eGovernment

To some extent, the Open Government Directive of 2009 launched a new vision for government and eGovernment

- With ICTs, data, and analytics at the core
  - Open
  - Transparent
  - Accountable
  - Engaged
    - Social media
  - Innovative/transformative
    - Crowdsourcing
    - Co-development
    - Communities of practice, experts, data (coding/hacking)
    - Private-public partnerships
    - All things “smart”

At the same time, the Internet of Things has started becoming a reality
Interactive eGovernment

- Non-linear
- Constantly evolving
- Lack of clarity of beginning/end of interaction with government
- Multiple holders/creators/contributors of content
  - Agencies
  - NGOs
  - Civil Society
  - Individuals
  - Private services (social media)
  - Private partners
Interactive eGovernment

- Interactivity often creates new (by)products and experiences
  - Visualizations
  - Mapping tools
  - Mashed-up datasets in constant state of enhancement
  - Code
  - And more

- All of which are fundamental to anticipatory eGovernment and future governance models
eGovernment Policy Framework

- Patchwork
- Fragmented
- Reactionary
- Stovepiped/siloed
- Inadequate for preservation in a digital and interactive context
Key Questions

- **What do we keep?**
  - Items or the experience?
  - All versions (i.e., multiple languages)

- **What do we do with events/platforms like**
  - National Day of Civic Hacking in which many agencies participate?
  - Agency Challenges?
  - We the People?
  - Facebook?

- **What do we do with cross-sector collaborative and data-driven initiatives like smart cities/communities?**
Key Questions

- How do we resolve ownership issues?
  - Co-created
    - Data
    - Code
    - Products

- How do we ensure privacy protections to non-governmental platforms?
  - Facebook
  - Twitter
  - IBM
  - Microsoft
Key Questions

- What’s the “best” way to ensure the preservation of an increasingly participatory, ICT-based government, and partnered government “record”?
- What is a record?
- How do we ensure access to dynamic and continually evolving content for the next generations?
- What models might we use for preservation practices?
Some Emerging Practices

• Looking to the fields of digital asset management and archives
  ◦ “Archival thinking” at the onset, not on the back end

• Principles
  ◦ Digital content must be given the same consideration as other materials when conducting collection development, organization and cataloging of works, and preservation …
  ◦ Access to and use of digital content that is protected by copyright should be provided in a fair and equitable manner, balancing the rights and privileges of users, creators, and owners….
  ◦ Digital collections must be built upon standards and best practices that maximize their usefulness
  ◦ Collection material is digitized once and only once in a use-neutral format that allows for a variety of current and future uses
Some Emerging Practices

- Asset Development and Retention Policies
  - Technical Specifications
    - Technologies
    - Standards
    - Infrastructure
  - Formats
  - Resolution/quality
    - Images, recordings
  - Metadata
  - Quality control
  - File naming conventions
  - Storage
  - Preservation or deletion?
    - Criteria are used to determine retention v. destruction
Some Emerging Practices

- Digital asset specialists incorporated into design teams
  - Coming into the conversation from the onset
  - Designed to help think through short- and long-term issues
    - Corning Museum
    - UNC Chapel Hill/UMD libraries
Key Players in DAM

- Museums
- Archives
- Insurance companies
- Health care providers
Some Emerging Practices

- Game/gaming preservation
- Preserving not just code, but the experience
  - Games often married to range of media (e.g., cartridges, online releases) and technologies (Pentium 3 paired with a particular video card)
  - Games constantly evolve, not just in release but also as you play
Key Players in Gaming Preservation

- Digital humanities
- Library of Congress
- Libraries
- Gaming societies
Some Emerging Practices

- Building of large scale digital infrastructures and platforms
  - Digital Public Library of America
    - Designed to provide:
      - An interoperable large-scale international digital platform for local content
      - A set of open access standards, protocols, and tools
      - Scalable technologies
      - Up and down
      - But this approach emphasizes harvesting, access, and availability
  - Issue is to what extent will DPLA be in the preservation business v. local entities that contribute content
But Three Substantial Issues Remain

- Redefining what a “record” is
  - Fixed artifact?
  - An experience with context?

- Redefining practice
  - Move away from linear practices that have fixed beginning and end points
  - Move away from “serialized” preservation

- Redefining preservation policies
  - Towards a Continuum approach
Some Concluding Comments

- eGovernment viewed all too often as a tool
  - Focus on services, technologies, interoperability, etc.
    - Often borrowed from private sector (lean start up, iterative design)
- Need to avoid “throwing technology” at the challenges
  - Tend to be reactive to a specific problem
  - Solutions can themselves can become part of the problem down the road
- Policy
  - Need to have an integrative and harmonized perspective
  - Principles-driven, not operationally-driven
Some Concluding Comments

- These issues play out in state, local, and governments around the world
- We tend to treat eGovernment as an exception, but it’s rapidly becoming the rule
  - We need solutions to prepare us for when we drop the “e” in eGovernment