

# INFORMATION MANAGEMENT AND DIGITAL GOVERNMENT

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Presentation at

School of Public Policy and Governance

University of Toronto

February 6, 2015

# Outline

- Research context – why this topic?
- What is information?
- Why is information important?
- Information management in the federal government
- Information management and information and communications technologies (ICTs)
- Some recent developments in federal information management
- Some lines of inquiry and a modest proposal

# Research context – why this topic?

- Information has always been at the heart of public administration and public policy
  - But limited focus as a sub-discipline of either field
- Technological change in the past 25 years has had a major impact on nature and use of government information and information holdings
  - Networked data bases, cloud storage, big data, mobile data, etc.
- The possibilities of available technologies have driven the process, less attention to the risks and costs
  - Proposition: we risk killing the goose that is laying the golden eggs
- Proposed research topic for Digital Governance Partnership (<http://www.digital-governance.ca>)
  - Digital Governance Forum – Ottawa, January 28 & 29, 2015
  - CAPPa conference paper – Toronto, May 25 & 26, 2015
  - Develop research proposal for SSHRC - 2016

# Why should we care about information and information management?

- Information and citizenship
  - Registration and identity
  - The governance compact – information, taxation and citizenship
- Information and governance
  - Information and the rule of law
  - Transparency and accountability
  - Personal information as the new taxation
- Information and public administration
  - Information as a public resource – knowledge-based gov't
  - Information and the pathologies of public administration
    - Good stewardship and the lack thereof
    - Corruption, national security, etc.

# What is information (for public administration purposes)?

- No set definition of information – value-added hierarchy
  - Data/Information/Knowledge/Wisdom
- Information as such is elusive for management purposes
  - Focus on information holdings = records (internally held information) + information in the public domain (published material)
  - No \$ or other metrics for information management
  - Two tectonic plates determining an unfocused and unstable fault line
- Independent of medium
  - Multiple forms – paper is most enduring
  - Electronic is revolutionizing, has many dimensions itself
  - Big data presents a new set of challenges
- Information life-cycle has anchored IM practices
  - Acquisition/creation, use/re-use, maintenance and preservation, disposal

# IM and public administration

## Characteristics

- Fundamental but often neglected component of public administration
  - Broad but not unified field
  - Deep-rooted (entrenched?) institutions: Canada Gazette (1841), Public Archives (1872)
- Numerous critical studies since 1890s
  - Universally bemoaning neglect
  - First systematic attention post-Glassco report – 1960s
- Always shaped by technology, transformed by ICTs
  - Information services and supporting IM a priority in Government On-Line (1999-2006)
  - Electronic databases, networked communications, multiple access
  - Use (and protection) of personal information an increasingly central concern
  - Growing centrality of IM to ICT-driven politics

# IM and public administration

## Statutory and policy context

- No overarching legislative framework
  - General TB authorities under *FAA* s. 7
  - Contrast with financial and HR management
  - Numerous Acts touch on aspects of IM
- Catalyst for a comprehensive approach to IM was *Access to Information and Privacy Acts* 1983
  - Retrievable records under the control of a government institution
  - Outer perimeter is information held in the public sphere – domain of the government communications policy
- Key roles for *Library and Archives Act* and *Security of Information Act* 2001
  - Numerous other relevant areas of legislation – focus on protection, much less on dissemination or management in general
- Major Treasury Board IM policies linked to life-cycle
  - Management of Information, Access to Information, Security, Communications, Federal Identity Program
  - In pre-digital era managed as a single policy suite, not since 1998
  - Close links to policies on IT Management, Service to the Public

# IM and public administration

## Institutional context

- IM represents a series of horizontal management programs within government
  - Many with a public policy overlay – ATIP, communications, information services to the public, official languages,
- Most but not all policy areas are centred on TBS Chief Information Officer
  - Communications policy centred in TBS corporate communications, major role for PCO
    - Arguably the most politically sensitive area of public administration
    - Accentuated by 24/7 news cycle, Twitterverse
- Each policy area has a whole-of-government structure
  - Common service agencies, lead agencies, functional communities of practice
  - PWGSC, LAC, RCMP, CSIS, CSE, PCO
  - Oversight agencies – n.b., Information and Privacy Commissioners, more limited oversight in security area
  - Not traditionally a major concern of the Auditor General or Parliament – but n.b., Standing Committee on Ethics and ATI

# The promise of IM in government

- “Efficient and effective IM to support program and service delivery; foster informed decision-making; facilitate accountability; ensure access to information and records for the benefit of present and future generations”

Treasury Board IM Policy  
or

- Knowledge-based government in the knowledge-based economy and society

?

# The reality of IM

- More often than not seen as part of the problem, not the solution
  - ... and in any case not as a priority
- Has not matured as a discipline of public administration
  - Boundaries and what is included are contested
- Achievement of IM goals depends on actions of all public servants individually, institutional actors, systemic responses
  - Little over-all coherence – the whole is less than the sum of the parts
- Historical neglect is compounded by effects of ITCs, structural and cultural factors
- Major challenges across the board

# Some recent developments in the world of public sector Information Management

- There have been a number of developments in recent years that affect IM
  - Technology creating a dramatically changed IM environment
  - Also being used to justify budget cuts - limited visibility or apparent coherence, booking savings before implementing them
  - Pressures on communications and security policy have led to significant reconfiguration of traditional IM relationships
- Many of the changes have been in a positive direction
  - Large scale internal infrastructure building – Shared Services Agency role in consolidating data centres, e-mail, desktops
  - Greater agility in mobilization and use of electronic data
- Others appear more negative, raise questions about effects and capacity
  - But information about them is often anecdotal and impressionistic

# Some recent developments

## Library and Archives Canada

- November 2015 Auditor General chapter 7 on Documentary Heritage of the Government of Canada
  - Only 30 out of 195 government institutions have long-term disposition agreements with LAC called for under 2009 TB recordkeeping directive
    - Institutions may not dispose of records without LAC consent
    - Unresolved issues of defining long-term business and archival value
  - 98,000 unprocessed boxes of records in LAC custody in April 2014
    - Inadequate finding aids, even where records have been processed
  - No corporate strategy for digitizing records or handling digital records
    - Stated goal of digital records as format of choice by 2017
    - \$15M + spent on cancelled digital repository
- Questions about Treasury Board commitment to implementation of directive, collaboration with LAC

# Some recent developments

## Records management

- Major push towards digital record-keeping supported by TBS
  - GCdocs and related efforts to create common digital records platform
  - Efforts to consolidate e-mail services, desktops through Shared Services Canada
    - Major start-up problems, gradual progress
    - Challenge of wide range of underlying (and ageing) computing environments
  - Potential archival issues arising from limits on e-mail and digital memory
  - Challenge of capturing records in mobile devices
    - Compounded by fact that covered by ATIP regime
  - Not clear to what extent digital records are organized on a cross-institutional basis or that there is interoperability government-wide
    - Obstacle to organizational flexibility?
  - Relationship between digital and ongoing paper-based IM not clear
    - Anecdotal evidence of lack of coherence, limited resources for paper records
- Both current operational and archival implications

# Some recent developments

## Information dissemination

- Widespread closure of government libraries
  - Budget cuts combined with moves to digitization
  - Most visible impact on science libraries, loss and destruction of significant collections
  - No apparent central co-ordination or efforts at consolidation
  - Focus on internal requirements, limited attention to public use
  - Concerns about loss of library staff and related skills
- Termination of the Depository Libraries Program (Mar/14)
  - Definitive collections of government documents in public and university libraries
    - Ongoing ripple effects including break-up of collections
  - No replacement mechanisms to support public access to government publications
    - Implications for the governance compact?

# Some recent developments

## Information dissemination

- Archiving of government websites
  - Limited resources and uneven practice in archiving websites
  - Some backup through collections.gc.ca but questions about completeness or sustainability
    - Earlier sites not always maintained or transitioned
  - Creates a limbo of information that is formally in the public domain – and therefore not subject to ATIP – but not available
    - Issues about longer-term operations, historical record, accountability
- Budget and spending information
  - Decision to create two sets of financial books
    - Budget (Finance) on accrual basis, Estimates (TB) on cash basis
    - Increasingly difficult to reconcile except in hindsight through Public Accounts
  - Reduced summary information on Operations in the Estimates and Budget, lack of year-over-year continuity and comparability
  - Opaque omnibus Budget implementation legislation
  - Resistance to requests for information from PBO

# Some recent developments

## Open Data and communications

- Open Data
  - Move towards US position on intellectual property?
  - New data or old data repackaged?
  - Only data actually or potentially in the public domain or including data subject to ATIP?
- Communications
  - Tight controls on messaging, public service contact with the media
  - Restrictions on public comment, participation in public events by scientists, policy staff
  - Limited public consultation on public policy or regulatory issues
  - Growing use of social media, issues about status of input
  - Politicization of Twitter handles
  - Bluwashing of government websites, branding, advertizing

# Some recent developments

## Access to Information and Privacy

- Access to information
  - No major updating of the core legislation since 1983
  - Additional restrictions, expansion of the Security of Information Act, limitations on access by the courts in national security cases
  - Efforts to improve access to digital information and to make information accessible post-release
  - Major delays in processing Access to Information requests in particular
    - Political efforts to control timing or substance of release
- Privacy and personal information
  - Growing stock of personal information, capacity of databases to mine it
    - Corresponding growth in value, pressure for re-use
  - Tensions in database structuring – privacy by design?
  - Reductions in privacy protection justified by national security

# Some recent developments

## Big data and national security

- Big data questions
  - Information management of big data
    - How structured and managed
    - Antiquated computing foundations
    - Big data across boundaries – inter-jurisdictional, non-governmental
    - Impact of cloud computing
    - Archiving and life-cycle management – the fundamentals or new rules?
  - Uses of big data
    - Privacy, commercial development, quality assurance
    - Profiling and surveillance – security dimensions of big data
    - Ensuring continued quality of data, especially of personal information
    - Accountability
- Security
  - Growing information-based security regime
    - Facilitated by big data
    - Issues about information quality, accountability

# IM under pressure – some issues

- Digital technologies offer considerable potential, also carry risks
  - Pursuit of digital possibilities has outstripped understanding of costs and hostages to fortune
- Some issues
  - Managing information as an increasingly valuable resource
  - Integrated approaches to IM across formats (digital and paper) and across organizational and jurisdictional boundaries
  - IM over time – both enduring and loss of memory
    - Will digital information be readily available in 50, 100 or 200 years?
    - Do we have methodologies and \$ to manage continuous roll-over?
  - Social compact implications of value of personal information
  - Implications of increasingly English-only digital environment
  - IM in the realm of robotics and artificial intelligence

# Focusing the research agenda

- From a public administration, public policy and governance reform perspective there are a number of things we don't know
  - The state of IM in the federal government generally
    - Financial, organizational, people metrics
  - Information and the relationship with the public
    - Active and responsive provision of information, information dissemination and collection
  - Management and use of big data and related issues
  - The relationship between federal government efforts to support big data in the economy and internally
    - Information Highway initiatives mark II?

# A modest package of proposals for October 20

- In the era of Twitter and big data, IM deserves attention on the administrative reform agenda
- Elements of a comprehensive approach could include
  - Recognizing IM as a management discipline in the FAA
  - Complementary public information legislation – duty to inform enshrined in parallel with right of access and protection of personal information
    - Update ATIP legislation, revisit and refurbish boundary between records and published material, institutional implications
  - Measures to identify information as a resource, including managerially significant metrics
    - Inventory of current holdings, integrated view of paper and digital
    - Special attention to big data
  - Inclusion of information resource management in the budgetary cycle, estimates, accounts and audit
    - Related oversight – AG, Parliamentary Budget and Information Office

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