EA Governance and Lessons Learned in Small Departments

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Public Service Commission

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ABOUT THE PUBLIC SERVICE COMMISSION

- Federal department, founded in 1908
- Mandate: Ensuring merit-based, non-partisan staffing within the GC
  - Most visible activities: GCJobs; Second-Language Assessments; Audits
  - Also: Staffing assessments, political activities authorizations; investigations
- Roughly 750 employees, 90$M-100$M budget
  - Gatineau headquarters + 4 regions: Halifax, Montréal, Toronto, Vancouver
- Information Technology Services Directorate (ITSD)
  - 100 Employees, 12$M-14$M budget
  - Three directors: Application development, Infrastructure, Corporate IM/IT
  - Roughly 15 projects at any given time, including 3-4 "major" ones.

About Enterprise Architecture at the PSC

- 2010-2012 (death by SSC & ETI), renewed 2015
- Housed within IT / Corporate IM/IT management
  - Strong integration with PMO, Planning, Client Business Services
- 4 positions: 1 manager, 2 technical specialists, 1 team lead
  - *Sometimes* a student – limited usefulness in EA context
- Long-term plans to incorporate Business Analysts
- TOGAF training expected, provided
- **Issue**: Hiring and Retention
  - A good EA can do anything!

EA Manager (CS-4)

Technical Specialist (CS-3) | **Technical Specialist (CS-3)** | **Team Leader (CS-3)**

EA Maturity Level Self-assessment

- 2015: Level 1
  - Many oversight mechanisms in place, awareness, desire to move forward
- 2019: Level 2.5
  - Understanding of "What is Enterprise Architecture?" *for the PSC*
  - Strong integration with PMO, Planning, Governance
  - **Issue**: Staffing levels and ability to deliver
  - **Issue**: Informal focus on deliverables, not so much on EA standards
- 2020: Level 3
  - Sustainable staffing level and resilience, repeatable processes, more rigour
- No intention of aiming for level 4 or 5
  - Requires more resources than the PSC is reasonably expected to allocate
  - Impact: Limited appetite for EA repository, frameworks, meta-models

EA in a Small Department

- Challenges
  - Constant need to prove business value
  - Retention/Focus remains a challenge
  - Jack-of-all-trades required
  - Always do more with less
  - Mandatory alignment with Treasury Board Secretariat (TBS) guidance
- Opportunities
  - EA guidance and framework from TBS is increasingly helpful
  - Close alignment with PSC business lines
  - Easier to establish the practice by taking over unwanted roles
  - Easier to discuss issues with colleagues as colleagues
  - Easier to shift the organization

THE ARCHITECTURAL REVIEW COMMITTEE

EA's Home Field: The weekly 90-minutes Architectural Review Committee (ARC)

- Long-time (<2005) "Technical Review Committee" taken over by EA in 2016
  - No governance re-invention = Easier fit
- Equivalent to a Departmental Architecture Review Board mandated by TBS, adapted for small organization purposes
- Chaired by EA Manager; voting members include all IM/IT managers
  - "Senior Technical Discussion Group"
- Blends operational review and architectural review
- "Architecture review as a habit, not an event"

## Sample Agenda

PART I - OPERATIONS
1 ● Welcome / Opening Remarks
2 ● Last meeting's minutes approval and Action Items Review
3 ● Change Approval Board (CAB) and DMC debriefs
4 ● Release Schedule
5 ● Operational items   • ETI, Windows 10, Firewall Upgrade, SuSE server update
6 ● IT Security update

PART II - PROJECTS & ARCHITECTURE
6 ● Project Management Office Update
7 ● Committee Review: Arrivals, departures, agenda changes

8 ● Architecture items
    • New Software Intake - Visual Studio Code
      https://gcdocs.gc.ca/psc-cfp/llisapi.dll/open/8026353
    • Architectural Review – GCJobs Transformation Options Analysis
    • Overview of the newest changes to the *Directive on the Management of Information Technology*
    • Upcoming: DMC presentations, APerforM, Impromptu Replacement, updated roadmap roadshow, secure file transfer

9 ● Roundtable / Closing

ARC'S ROLE IN IM/IT GOVERNANCE
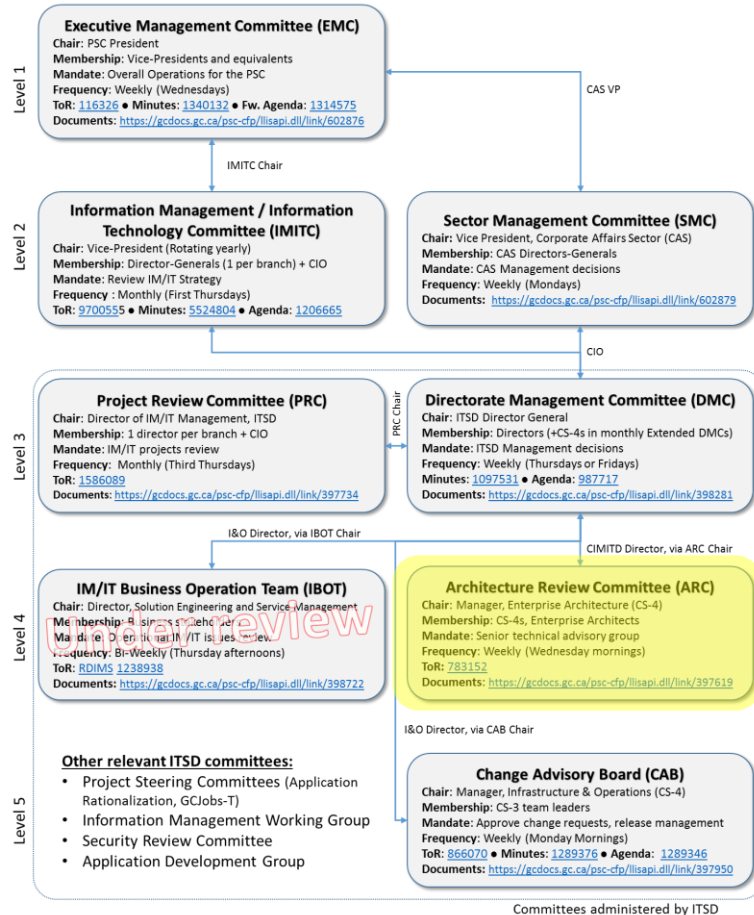
- The PSC has a strong governance framework
- ARC makes recommendations to the ITSD Directorate Management Committee, which approves and/or refers to other business-inclusive committees such as the
  - Sector Management Committee
    - Mid-level corporate management
  - Project Management Committee
    - IM/IT Project management
  - IM/IT Management Committee
    - Senior IM/IT Strategy discussion; gateway to highest-level Executive Management Committee

INTEGRATION IN PROJECT PRIORITIZATION

- During the annual Project Prioritization cycle…
  - EA discusses all project proposals with the business clients
    - Using the TBS concept case template as basis for proposal submissions
  - EA ensures that projects are aligned with the enterprise
    - Occasionally modifies/merges proposals to ensure enterprise alignment
    - Writes "enterprise"-class project proposal
  - EA evaluates the technical alignment of the projects
    - EA alignment recommendations are discussed at the ARC; submitted to the CIO for input in the prioritization assessment
  - EA participates in the costing exercise
    - Submits assessments, provides EA involvement estimate for projects

INTEGRATION IN PROJECT MANAGEMENT

- Enterprise Architecture is explicitly included in the organization's Project Management Framework:
  - EA helps define the project in initial proposals
  - EA identifies interrelationships between projects
  - EA builds/oversees the options analysis when needed
    - Takes the lead in gathering requirements for enterprise projects
  - EA oversees and approves conceptual architecture when needed
    - ARC approval is embedded in gating mechanisms
  - EA oversees consistency of project alignment with plan

EA = Client Relationship Management

- EA is responsible for the application portfolio management (APM) role
  - Link between corporate standards and client relationships.
- Conscious decision to position EA as a third-level intake group, taking over requests that Helpdesk is not prepared to process
  - Early contacts lead to better project submissions
  - EA finds requests commonalities, and proposes enterprise solutions
- Software intake, analysis and recommendation
  - Speaking to business clients to find enterprise solutions
    - Enterprise Secure file transfer solution
    - Recent example: R/Rstudio, Python/Spyder for data analysis, distributed via Anaconda package manager
  - Exploring facets and consequences of software approval
    - The EA-built analysis framework for new software, based on previous experience, includes consideration of business requirements, enterprise sustainability, information management, cyber-security, application development and integration, server/desktop support, etc.

THE EA BLUEPRINT/ROADMAP

- Links mandate with IT capabilities and their implementation (blueprint)
- Illustrates 3-year IT plan (roadmap)
- Aware of the GC Capability Model but does not duplicate it
- "Layers" Business, Corporate, IM/IT, and GC capabilities
- Aligns with IT plan, APM, Technology Bricks
- Presented to other areas of IT, PSC
  - Used to show breadth of ITSD activities, approved projects, long-term plan
  - "Calling Card" of EA
- Changes frequently
- Now informs the planning cycle

Layer 1: PSC Priorities
(Mandate and Priorities)

Layer 2: Business Capabilities
(Directly Supporting Mandate)

Layer 3: Corporate Capabilities
(Supporting the Organization)

Layer 4: IM/IT Capabilities
(Supporting IM/IT Work)

Layer 5: GC Capabilities
(Standards, tools and GC providers supporting the PSC)

CURRENT STATE (FY2018-19)

Primarily drawn from projects approved by EMC.

Color	Meaning (TIME guidance)
Black	In-use ("Invest")
▲Blue	New ("Innovate")
■Brown	Contained ("Tolerate")
▼Red	Obsolete/Retired ("Migrate/Eliminate")

The mandate of the Public Service Commission (PSC) is to promote and safeguard merit-based appointments and, in collaboration with other stakeholders, to protect the non-partisan nature of the public service.

PSC Priorities

- **Priority I:** Provide leadership and support in efficiently building a diverse and highly competent public service.
- **Priority II:** Promote and safeguard the integrity of the staffing system and non-partisan nature of the federal public service.
- **Priority III:** Contribute to the development of a competent and professional public service through the provision of high quality services.
- **Priority IV:** Support a high performing workforce through the promotion of a healthy, respectful and modern workplace.

Business Capabilities

1.1 Program: Staffing System Integrity and Political Impartiality (Priority I, Priority II)

Political Activity Assessment
- PA Tool

Priority Administration
- PIMS

1.2 Program: Staffing Services and Assessment (Priority III)

Staffing Systems

PSRS	SLBT
SRS	COOP
▲PSRS Transformation	Infotel

Assessment Systems (PPC)

▼ACIIS	SWS	▼TSRR
DtA	Teleform	▲eMIB
OIT	SLE-SS (RF)	▲Apollo
OLTF	TICS	▲PPC - SIP
OOPS	TRST	Assessment Rooms

1.3 Program: Oversight of Integrity in Staffing and of Non-Partisanship (Priority I, Priority II)

Data Services
- ADS
- SAS-Cubes
- JAIS
- ▲Data Lake

Investigations
- IDEA
- IMIS
- SAT-OVD
- Teammate

Corporate Capabilities

Internal Services (Priority IV)
- Finances
- Human Resources
- Internal Audit
- Information Technology
- Communications
- Commission Secretariat
- Legal Services

Desktop Productivity
- Microsoft Word
- Microsoft Excel
- Microsoft PowerPoint
- Microsoft Access
- Microsoft Visio
- Microsoft Project
- Microsoft OneNote
- Internet Explorer
- Mind Mapper
- Adobe Acrobat

Media Management
- VLC Media Player
- Audacity
- Camtasia
- Photoshop Elements
- Snagit
- Adobe Digital Editions

Survey Management
- Vovici (EFM)

Enterprise Reporting
- ▼Crystal Reports
- ▼Impromptu
- ▲Jasper Report / Studio
- ▲New Reporting Solution

Correspondence Management
- ▼CCM Mercury
- ▲Correspondence Solution

Email Client
- ▼GroupWise
- ▲Microsoft Outlook

Barcode / Label System
- ▼Versatile Express
- ▲GCDocs Physical Objects
- Label-maker

EDRMS
- GCDocs

Statistical Analysis
- SAS
- SPSS
- QSR-Nx (Nvivo), iThink

Encryption
- ▼GroupShare, PKI Entrust
- ▲GroupShare replacement

Time Tracking
- ▲Microsoft Project Online
- ▼Clarity, ▼EZ-Time

Helpdesk
- IceBar

Physical Assets Mngt
- Basset Pro

Web Sites
- intracom, intranet2/5
- extranet, extranet2/5
- www.psc-cfp.gc.ca, ■jobs-emplois.gc.ca, www2/5

Directory Services
- PSC Phone Directory

Printing Management
- Papercut
- Autostore

Information Mngt
- ▼Shared Drives
- ▲Open Government

ATIP Management
- ATIP Access Pro

Form Management
- Adobe Life Cycle Designer
- Forms Selector (EFS)
- Travel Application
- FormFlow

Human Resources
- MyGCHR
- ▲New Corporate Solutions

Text Messaging
- ?GroupWise Messenger
- ?New Messaging Solution

Issues Tracking
- Remedy
- Bugzilla

Finances
- CMS
- CMS Reporting
- DDNT
- FBF
- FRS
- FSA
- FASD Maintenance Tool
- PBHC
- RMS
- ▲Financial Management System Transformation

Communications
- Mediawiki
- Piwik
- ?ORS/ERS
- WordPress
- Dreamweaver
- Formmail

Writing Tools
- Antidote
- PerfectIT

IM\IT Capabilities

Accessibility
- Zoomtext Extra
- Kurzweil 3000
- JAWS, TextAloud
- Duxbury Braille Translator
- PDF Accessibility Checker
- Dragon Naturally Speaking
- Read&Write Gold
- Magic
- eClipseWriter

Development Tools
- UltraEdit
- Firefox, ▼Safari, Chrome
- IntelliJ, ■JIRA
- Java JDK
- ▲Java Framework Upgrd.
- Filezilla
- SecureCRT
- Jrebel, Xrebel
- ▲New SDLC Tools

Project Management
- ▲Microsoft Project Online
- ▲PMF 2.0

Database Management
- SQL Diagnostic Manager
- TOAD, MySQL GUI – Take 2
- Oracle Client / ODBC
- SDDM
- CA-ERwin
- ▲New PostgreSQL tools

Web Dev. Languages
- Java
- JavaScript
- PrimeFaces / Thymeleaf
- ■PL/SQL
- ■PHP
- ■Perl

Desktop management
- ■Zenworks / SCCM
- AdminStudio

Desktop Dev. Lang.
- Java
- AutoIT
- ■VB.NET
- ■PowerShell
- ▼OpenRoad
- ■C
- ■MS-Access (VBA)

Enterprise Architecture
- ■Sparx EA
- ▲Program Implement.

Application Servers
- Tomcat 9
- ▼WebLogic 12.1.3

App. Release Mngt
- Openshift, Docker
- Flyway
- ▼Artifactory
- Jenkins, Nexus
- Ansible

RDBMS
- ▲Database Refresh
- ▲PostgreSQL (EnterpriseDB, Community)
- Oracle (▼11, 12)
- ■MySQL
- ■MS-SQL
- ▼MS Access

Password Management
- KeePass
- ▲Password Management

Web Servers
- Apache 2.2
- ■IIS

QA Testing (QAT)
- Selenium (Webdriver)
- Katalon Studio
- TestNG

App.Perf. Monitoring
- Loadrunner Community
- ■Wireshark

Source Control
- ▼MS-Visual Source Safe
- ▼Git, Gitlab

IT Security
- BURP Suite Pro, ▲Nexpose
- ▲Program and SA&A Dev.
- Encase

Desktop OS
- ▲Windows 10
- ■Windows 7
- ■MacOS

GC Capabilities

(Not all available GC Capabilities are in use by the PSC)

Mobile Devices
- ▼Blackberry, ▲Android

GC Interop. Platform Implementation (GCIP)

Secure File Transfer
- Managed Secure File Transfer (MSFT)

Shared Financial Systems Implementation

GC API Store

Remote Access
- GCSRA

Networking Infrastructure
- IPv4

GC Identity, Credential and Access Management Service
- ▲Cyber Authentication

Shared HR Systems
- Compensation Web App, Phoenix
- MyGCHR Infrastructure
- TBS App. Portal (PSPM)

Shared EDRMS
- GCDocs Infrastructure

WTD Management
- DLP Measures
- Windows Provisioning

Writing Tools
- Termium

Open Government

Shared Email System
- Your Email Service (ETI)
- ▼GroupWise Infrastructure

Web Content Mngt
- Canada.ca
- Adobe Analytics
- Hootsuite

Cloud Services
- ■Prezzi
- ■Loop11
- ■Powtoon
- ■Medium.com
- ■myBalsamiq
- ■Pearltrees
- ■Trello

Server OS
- Windows Server (■2008, 2012, 2016)
- RedHat, HPUX
- SLES (▼11, 12)

Data Centers
- Barrie
- ▲Gatineau

GCTools
- GCDirectory
- GCIntranet
- Gcpedia
- GCConnex / GCCollab
- ▲GCMessage
- ▲GC-Wekan

POSITIONING EA AS AN ANALYTICAL TEAM

- The PSC hires Enterprise Architects primarily based on IT experience and analytical ability.
- "The X-Files": EA as a strategic think-tank for unusual requests
  - Emerging technologies
    - Recent example: Machine Learning approach
  - Senior Management requests
    - Recent examples: Intranet Renewal, Induction Loops, "What about this app?"
  - Cross-disciplinary requests packaging
    - Ongoing examples: Application Performance Management, Development Tools Renewal
- Minimize tactical input for projects. Focus on the enterprise strategic perspective that only EA can provide.

DISTRIBUTED ENTERPRISE ARCHITECTURE

- A small EA team cannot do it all by itself
  - It should also maximize its interventions – focus on what only EA can do
- The solution: Distributed Enterprise Architecture
  - Create accessible, shareable, usable documentation
  - Become part of existing processes
  - Be clear, specific and predictable in what you require from others
    - Success metric: "I know what you're going to ask me…"
- Done correctly, the organization self-organizes around the basic principles of EA, allowing enterprise architects to focus on more complex value-added work
  - It also helps EA survive fallow periods

THE PRACTICAL EA SYMPOSIUM FOR SMALL ORGANIZATIONS

Proud to host the
Practical Enterprise Architecture Symposium for Small Organizations

February 26 and 27, 2019

Public Service Commission of Canada — Commission de la fonction publique du Canada

Canada

- When you can't quite find the right event for your learning plan…
  - "If you have $3000 to send me to a conference, you have $3000 to help me organize a conference"
- Keep scope focused: 50-60 seats for small-organization enterprise architects.
  - "This is like organizing a writers' convention"
- Find allies, speakers, or at least people who won't stop you.
  - HoIT, SSC, TBS, PSC management
- Re-use internal resources: Conference room, Communication and Graphic design expertise, on-line registration tool, existing EA community forums and networks, Webex
  - Total cost for those: 0$
- Spend the money on what matters most: the food
  - "You're eating my training budget"
- Result: 2-day informal conference, 50-60 on-site attendees (+Webex attendees), great speakers, a few tweets, happiness for all (including management)
  - "This was the first time Alex Benay re-tweeted me!"

LESSONS LEARNED

1. Staff adequately (at least 2 enterprise architects, preferably 3)
2. Take over tasks that no one else wants (APM, standards, IT plan)
3. Derive your authority from official documentation (thanks, TBS)
4. Hardcode EA governance in your own committee's decisions
5. Aim for the enterprise/strategic quadrant, not project/tactical
6. Become an early point of contact with business clients
7. Memorize, vulgarize everything coming from TBS/SSC/PSPC
8. As an architect, do the work that no one else can
9. Keep management happy so that they ask for more
10. Follow-through is crucial (there's a correlation with tenure)