



3rd Digital Transformation in Government Conference

CBSA Architecture Program: a Digitalization Enabler

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Table of Contents

Introduction

1

Context

2

Design
WITHOUT EA

3

Design WITH EA

4

Role of EA

Description

5

CBSA Architecture
Program

6

Review of 6 functions

7

Architecture
Collaboration Platform
(ACP) - Demo

Conclusion

8

Next Steps
for the CAP

9

Key TakeAways and
Questions

Context



Canadians expect modern and digital services from their government



CBSA has a very complex business landscape to manage which hardly copes with growing volumes/threats



CBSA's core business relates to risk management

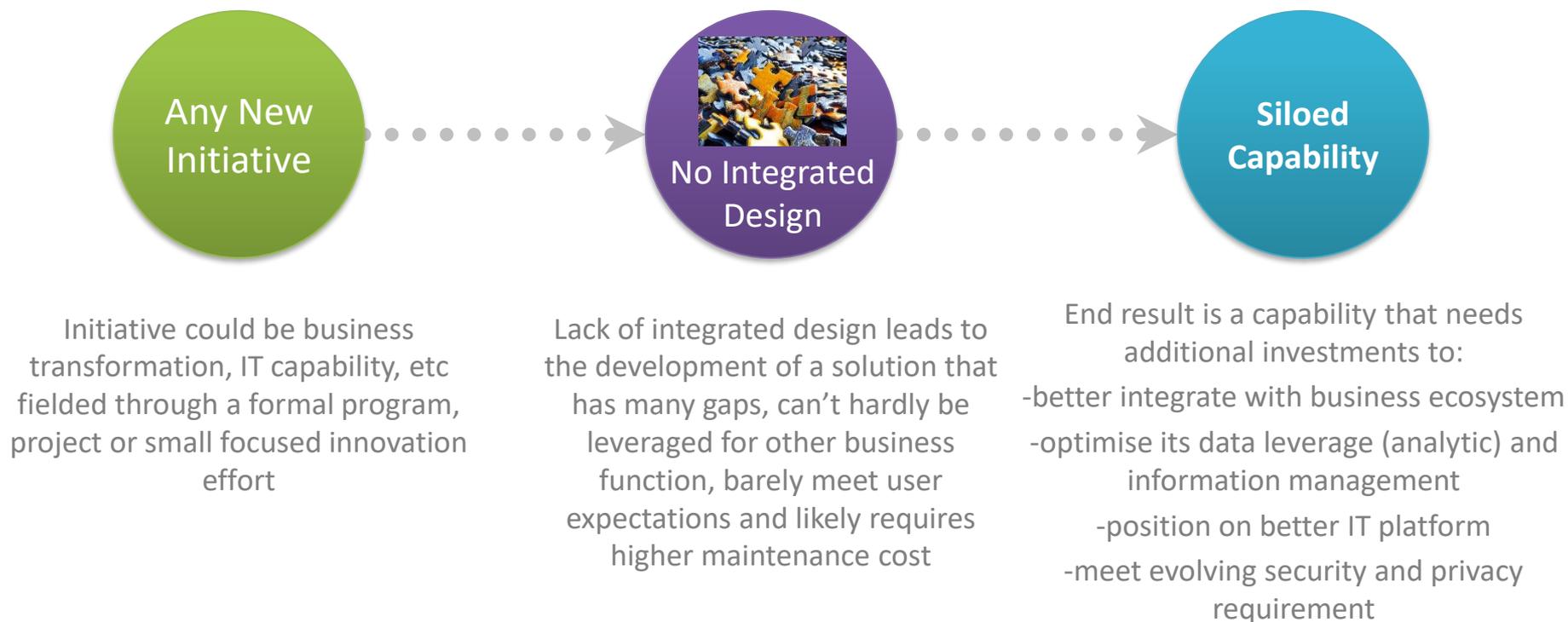


Because of its complexity and needs, CBSA's future ecosystem **MUST** be architected!



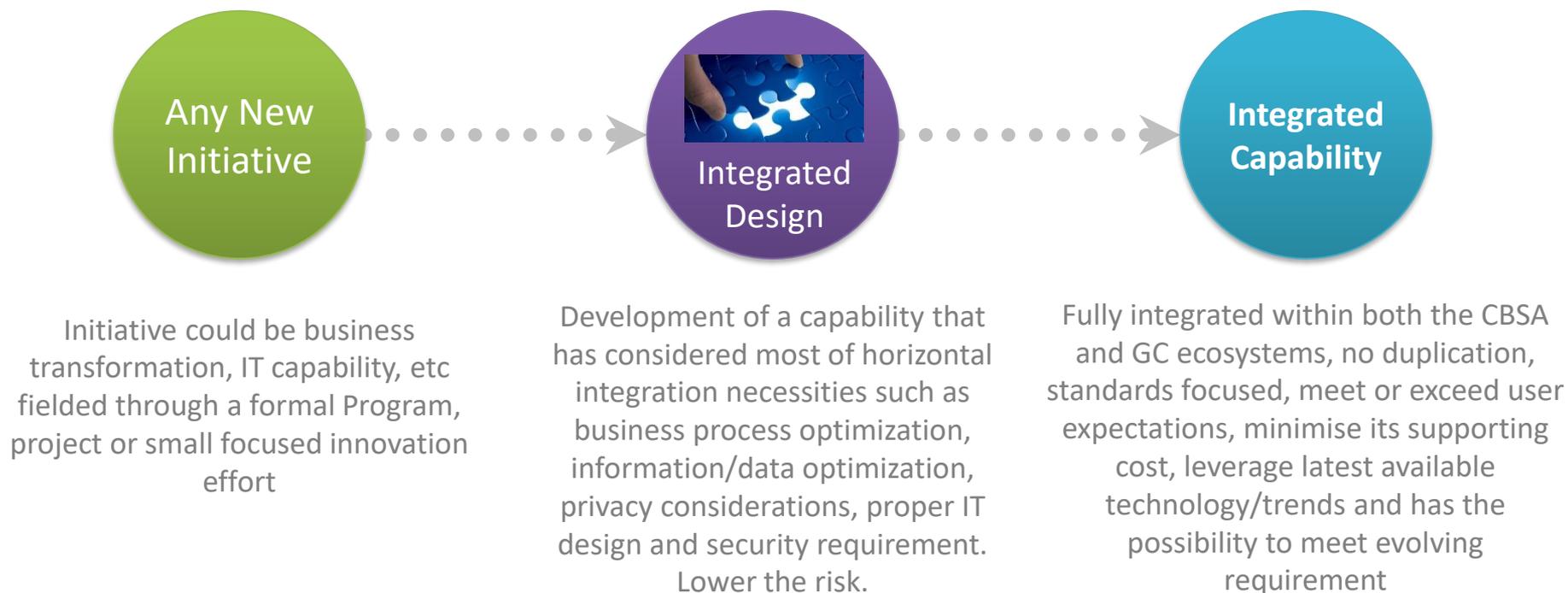
WITHOUT Enterprise Architecture

Every time a new capability is being designed, its implementation lacks horizontal integration which leads to siloed design resulting in partial business value



WITH Enterprise Architecture

Every time a new capability is being introduced, a by-design architecture function is applied to optimise its implementation into the current CBSA ecosystem which will ultimately bring a greater business value





What EA wants to address:



01. Stovepipe design

No integration in ecosystem. No ability to easily exploit the information and data. Difficulty to maintain in the long run or to apply change.

02. Duplication

In business processes, in information objects, in application functions, in technology services, in security features, etc
No standardization

03. Technology debt

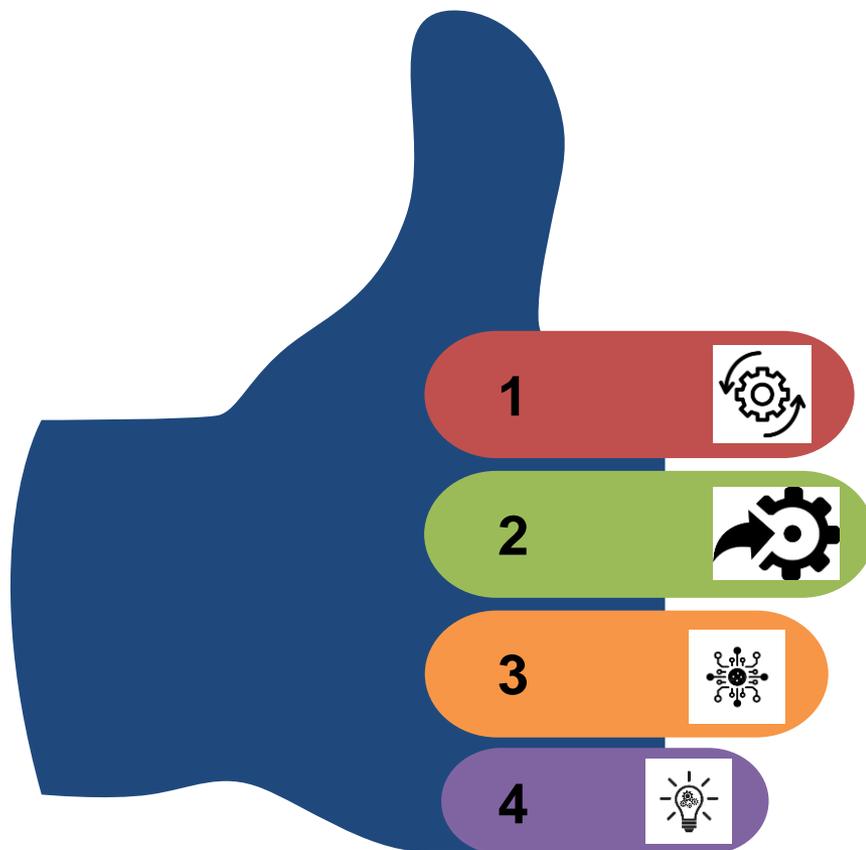
Resulting solution needs dedicated resources to maintain all functionalities. Additional cost needed to properly integrate into CBSA ecosystem. Restricted ability to innovate.

04. Poor user experience

Stovepipe design degrades user experience (business process not optimized, individual login required, identity management duplicated, etc)



What EA wants to promote:



01. Greater efficiency

Optimization within current business processes (LEAN). Better user experience. Tell us once applies. Ability to leverage analytic services to assist decision making.

02. Optimal integration

In business process, in info/data models and from an application functions perspective. No duplication and optimal use of enterprise capabilities (process inventory, MDM/RDM, SOA/API management, security services, etc

03. Digitalization

Optimal digitalization leads to optimal business process design. Better business and client outcome. Ability to further innovate.

04. Innovation

Modern and modularized design easier to support future innovation needs or opportunities.

CBSA Architecture Program (CAP)



What is the CAP all about?

- Implementing changes in complex environment in an optimally integrated manner to bring greater value
- Increase accountability and understanding of design changes
- Increase adoption of Enterprise level capabilities
- Promote innovation and digitalization

What the CAP does?



Tracks and advocates for new trends and innovation applicable to CBSA



Promote architecture governance (functional authorities, CBSA ARB and GC EARB)



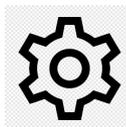
Develop and govern enterprise architecture direction jointly with stakeholders



Develop and maintain a CBSA Reference Architecture (Org Digital Twin) repository



By design support to business optimization, experimentation and transformation initiatives



Steward of Business Process Management and Application Portfolio Management



Tracks and advocates for new trends and innovation



- Attend symposiums, conferences and discuss with industries
- Actively participate into Treasury Board, OGDs and internal working groups
- Integrated into the CBSA innovation teams
- Leverage professional services such as Gartner, McKinsey, Info-Tech, etc
- Train ourselves into promising technology (AI, block chain, etc)
- Write short white papers on new technology trends



Develop and Govern Enterprise Architecture Direction



- Develop jointly with key stakeholders :
 - White papers
 - Vision
 - Reference Architecture (e.g. ICAM, Digital Service Platform, Case Management)
 - Framework (e.g. AI, mobile platform, RPA, Info/data management, etc)
 - Description
 - Standard declarations
- Communicate and share them (EA CoP)
- Govern with functional authorities and at Director, DG and CBSA ARB level



By Design Support to CBSA Optimization, Experimentation and Transformation Initiatives

- The CAP is integrated in:
 - Investment Planning and Project Management Life Cycles
 - Benefit Realization Management Framework
 - Service Management Life Cycle Framework and Agile Framework (IT service delivery)
 - Innovation Framework
- For each initiative above \$1M (digital or not):
 - We assess architecture alignment from gate to gate and also for all IT releases
 - We document business processes, identify information objects/flows and corresponding application services
 - We provide implementation impact assessment



Promote Architecture Governance



- Support architecture governance for all initiatives above \$1M
- Engage and brief functional authorities as need be (CIO, CSO, CDO, Cyber Authority Official, Service Authority Official, etc)
- Engage operational leads (CTB, TB, IEB)
- Act as CBSA ARB Secretariat
 - Set up agenda, produce RoDs
 - Review presentation material
- Coordinate all TBS and GC EARB architecture artefact reviews and/or presentations
- Report CAP Key Performance Indicators (KPI) to CBSA ARB



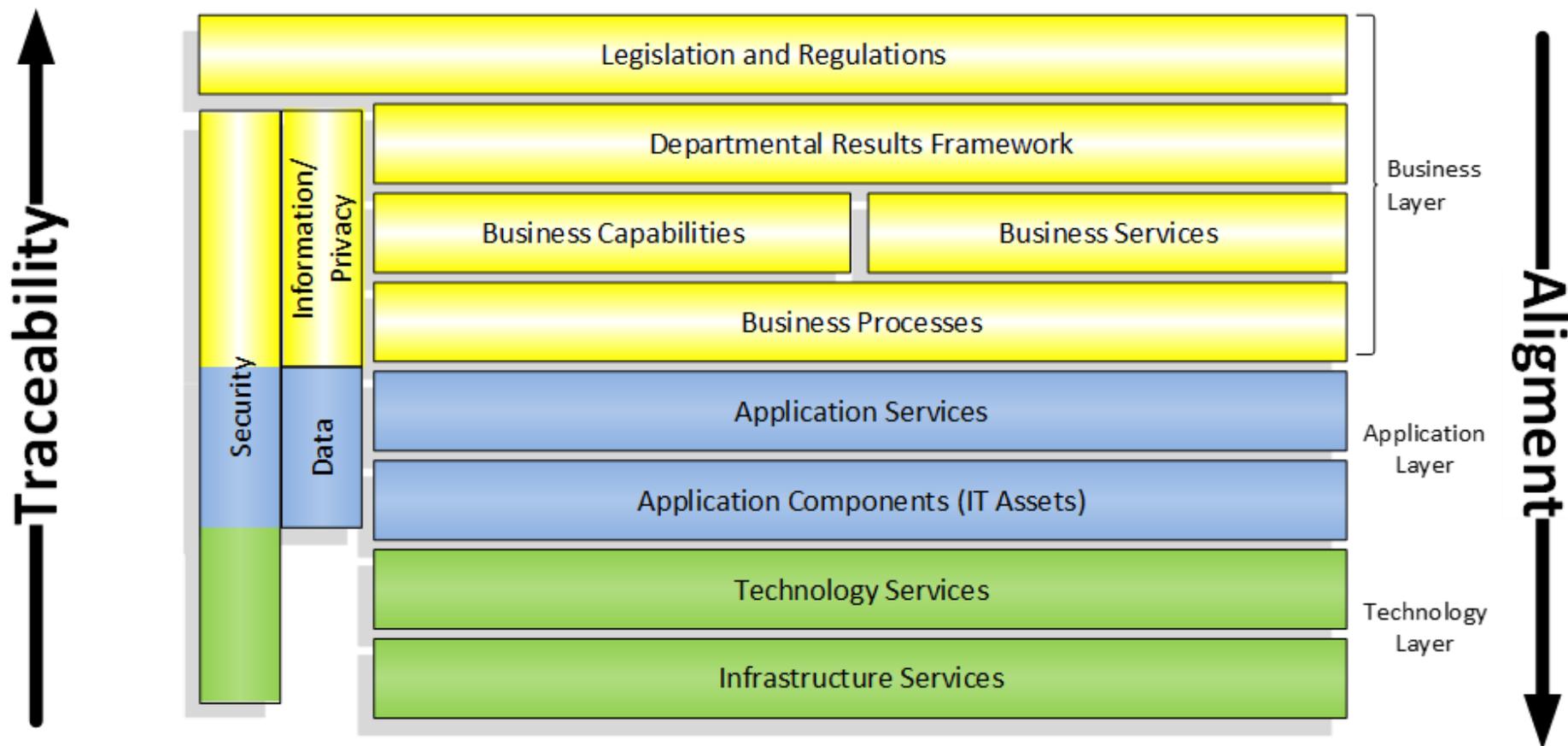
Develop and Maintain a CBSA Reference Architecture Repository



- Agency Collaboration Platform (ACP)
 - Qualiware product
 - Integrates all architecture domains:
 - Business, Information/Data/Privacy, Application, Technology and Security
- Internal web-based, accessible to all
- Used as golden record
- Information maintained directly in the repository via governance engine
- Views and reporting tailored to user needs
- Supported via CBT
- Contains architecture assessments, tracked initiatives, variances, current EA delivery plan, meta models, Digital Product Directory, etc



Repository is based on this Conceptual CBSA Reference Architecture (blueprint) Model



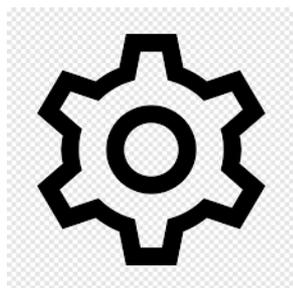
Annex A details the overall content



Architecture Collaboration Platform – Quick Demo

The screenshot displays the ACP-PCA web application interface. The browser address bar shows the URL <https://acp-pca.omega.dce-eir.net/Production/>. The page features a top navigation bar with tabs for HOME | ACCUEIL, BUSINESS | AFFAIRES (selected), APPLICATION | APPLICATION, ARCHITECTURE PROGRAM | PROGRAMME D'ARCHITECTURE, INITIATIVE/PROJECT | INITIATIVE/PROJET, and HELP | AIDE. A left-hand sidebar contains a menu with categories: STRATEGY | STRATÉGIE, BUSINESS | AFFAIRES, INFORMATION & DATA | INFO. & DONNÉES, APPLICATION | APPLICATION, TECHNOLOGY | TECHNOLOGIE, SECURITY & PRIVACY | SÉCURITÉ & CONFID., ARCHITECTURE OPS. | OPS. D'ARCHITECTURE, and ACP TRAINING | FORMATION PCA. The main content area is divided into several panels: a 'Quick Search' panel with input fields for Program, Business Service, Business Process, Business Object, and Business Capability; a 'CBSA Organization' panel showing an organizational chart; a 'CBSA Programs' panel with a flow diagram; a 'CBSA Business Services' panel with a grid of service icons; a 'CBSA Business Processes' panel with a Gantt-style chart; a 'CBSA Business Capabilities' panel with a table of capabilities; and an 'Understanding the Architecture' panel with a complex architectural diagram. The QualiWare logo is visible in the bottom left corner of the interface.

Steward of Business Process Management and Application Portfolio Management



- BPM
 - BPM CoE
 - Steward of the BPM practice at CBSA
 - Assist operational authority to document, validate and Lean their respective continuum
 - Assist internal services (IT, HR, finance, etc) in their efficiency quest
- Application Portfolio Management
 - Steward of CBSA APM practice
 - Coordinate jointly with stakeholders the production of the yearly TBS report
 - APM includes:
 - National and Local/Regional applications
 - Business assessment of each application
 - Financial assessment of each application



Next Steps for the CAP

- Bring more stakeholders into the ACP development + information maintenance
- Extend BPM practice to internal services
- Guide CBSA investment decisions

Key Takeaways

- The CBSA Architecture Program:
 - Supports all business transformational (incl **digitalization**) activities across CBSA, not just IT
 - Game changer moments:
 - Integration in SLMF in 2015
 - Integration in PMF and CBSA ARB stand up in 2020
 - Business architecture is the dominant architecture domain!
- The CAP is a huge enabler of the integration requirement stated in the new Policy/Directive on Services and Digital





Annex A - Complexity of the CBSA

- 18 Programs and 10 Internal Service groupings
- 300+ CBSA, Other Agency and Private Sector Organizational references
- 138 Business Services
- 1200+ Business Processes, sub-processes and process activities
- 96 Acts of Parliament and over 450+ specific Legislative References
- 228 Regulations
- 968 Policy References
- 179 Business Information Objects and 72 Info Requirement models
- 123 Agency and Program Outcomes
- 253 KPIs
- 310+ Business Roles
- 185 National Apps, 98 local and 105 regional Apps

