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The Renewed Enterprise Architecture Program

A briefing to the CIOC

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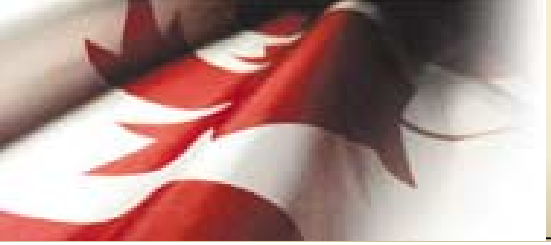

Our Agenda

- Enterprise Architecture
- Views of EA
- Transforming EA
- Impacts and Challenges

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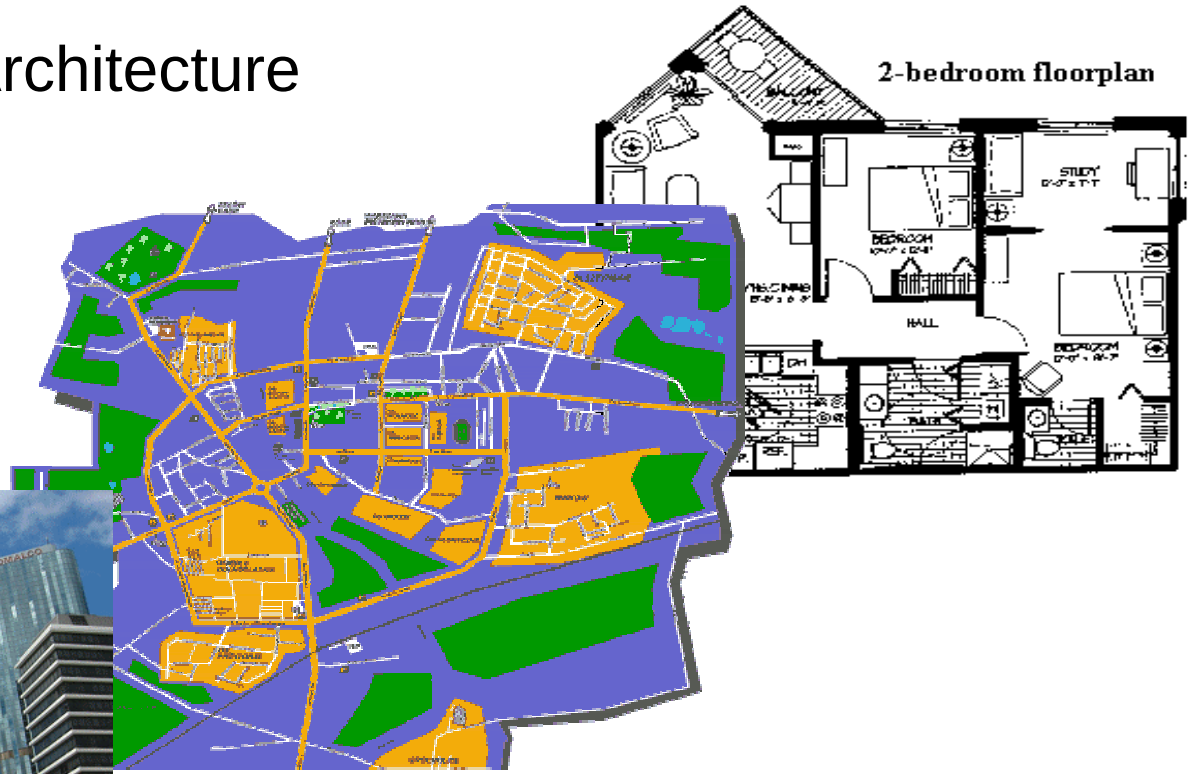
Enterprise Architecture

Expressions of Architecture

- Is it a design of …
  - a bridge,
  - a building,
  - a city plan…



What about a service, process, job description, annual plan?

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Enterprise Architecture

A Formal Definition

- The fundamental organization of an enterprise (i.e. government); outlining its components, their relationships to each other and the environment, along with the principles governing its design and evolution

Adapted from ANSI / IEEE Std 1471-2000

An Enterprise Architecture program?

- To achieve, integrated and interoperable business processes that support service transformation: i.e., client-centric service delivery across all government departments
- To provide the means for effective design and management of all programs, services, processes and resources in response to an ever-changing environment

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Architecture as a Discipline

Accounting Discipline

- The SFO (Senior Financial Officer) provides rules and tools on how to do accounting and makes sure it's done right
- The SFO provides integrated accounting results to DM based on the results of departmental efforts
- The SFO stewards the GC fiscal plans and safeguards the enterprise's financial health
- Proper financial controls is something built into all of our daily business processes
- The Chart of Accounts is our authoritative classification for fiscal data
- The larger the enterprise, the more robust the financial controls are likely to be

Enterprise Architecture Discipline

- The CA (Chief Architect) provides rules and tools on how to do EA and makes sure it's done right
- The CA provides integrated architecture views ('as is' and 'to be') to the DM based on the results of departmental efforts
- The CA stewards the GC enterprise architecture to safeguard and align the strategic plans and designs
- EA is a pervasive element of all planning, design, management and transformation activates
- The GSRM is our authoritative classification for all program and service information
- The larger the enterprise, the more vital the need for an architected approach

Enterprise Architecture - a Growing Trend

What are the industry analysts saying:

- By 2007, 15 percent of EA core teams will move out from under the IT organization's management structure, with direct reporting relationships to either corporate strategy or corporate change management functions.

- By 2007, 40 percent of enterprise architects will have primary expertise in business strategy or process engineering

META Group: Meta Trends
2003-2004 & 2004-2005

- By 2008, 70% of Global 2000 enterprises will have transitioned from just technical architecture to enterprise business architecture, enterprise information architecture, and enterprise solution architecture.
- By 2009/10, true enterprise architecture will be commonplace in industry leaders, enabling core strategies, adaptability, and agility (0.7) probability.

Gartner: Briefing Notes 2005

EA Outcomes

EA can help us to:

- See the “big picture” and all its pieces (a holistic view);
- Spot opportunities and problems to be addressed;
- Design services that best address clients needs;
- Reuse services (that are designed to fit together);
- Ensure everyone is heading in the same direction, and
- Better plan, build, deliver and manage the services desired by Canadians.

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What are Architectural Views?

- Architecture views are:
  - Representations of the overall architecture;
  - Meaningful to one or more stakeholders;
  - Chosen and developed to communicate the architecture to all the stakeholders; and
  - Enables the stakeholders to verify that the "Enterprise" and its building block components will address their concerns.
- The role of an architecture view:
  - Represents by means of one or more architecture models a coherent description of an "Enterprise";
  - Reduces complexity as a single, comprehensive model is often too complex to be understood and communicated
  - Describes all the relationships between the various building blocks;
  - Enables the communication of the architecture through multiple views to the different stakeholders.

DOMAINS

Representative EA Services

- EA Community of Practice Development
- EA Designs and Work Products
- Compliance Assessment Support
- Create & Harvest EA Artifacts
- EA Best Practice Development
- EA Education and Training
- EA Expert Provision

Etc.

EA Domains

Business

Information

Applications

Technology

Privacy

Security

Accessibility

Etc.

Direct Outcomes

- Increased alignment of business components to the enterprises' strategic direction
- Increased integration of business components across the enterprise
- Increased ability to identify and define the enterprise in a systematic way
- Enhanced ability to identify opportunities for enterprise transformation
- Increased understanding of the complexity of the enterprises' business elements and their relationships to aid in planning, building and operating
- Increased understanding of the ramifications of alternate designs

EA Services → Offered collectively across all Domains → Yield these outcomes

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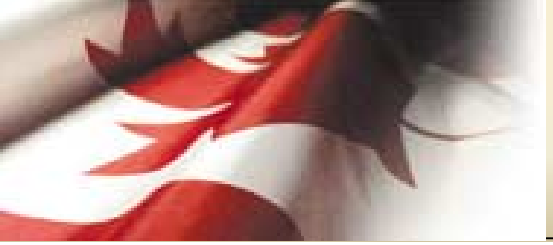
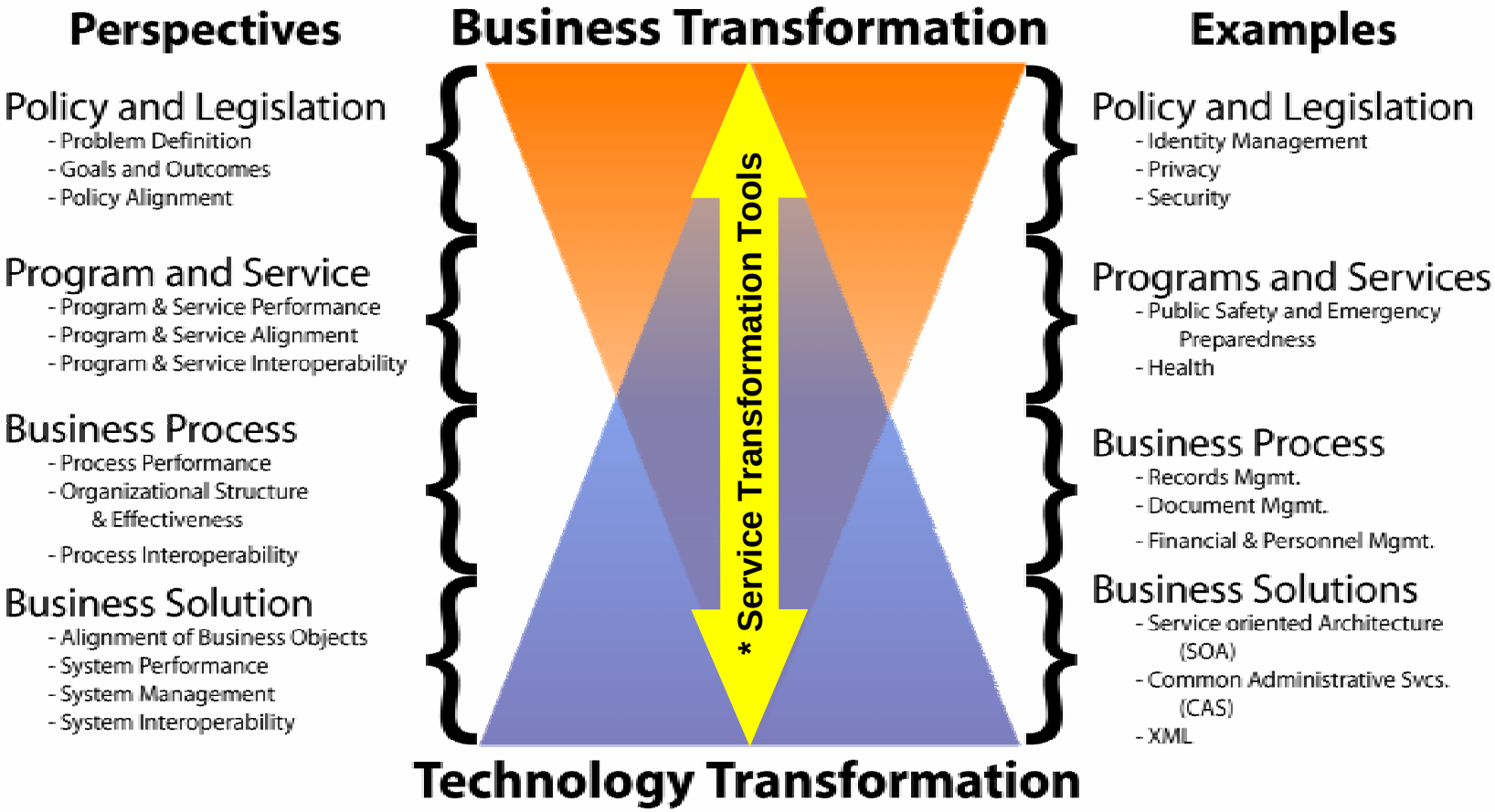
Breakthrough Transformation for All





*** Common language between business, information & technology experts based on SERVICES.**

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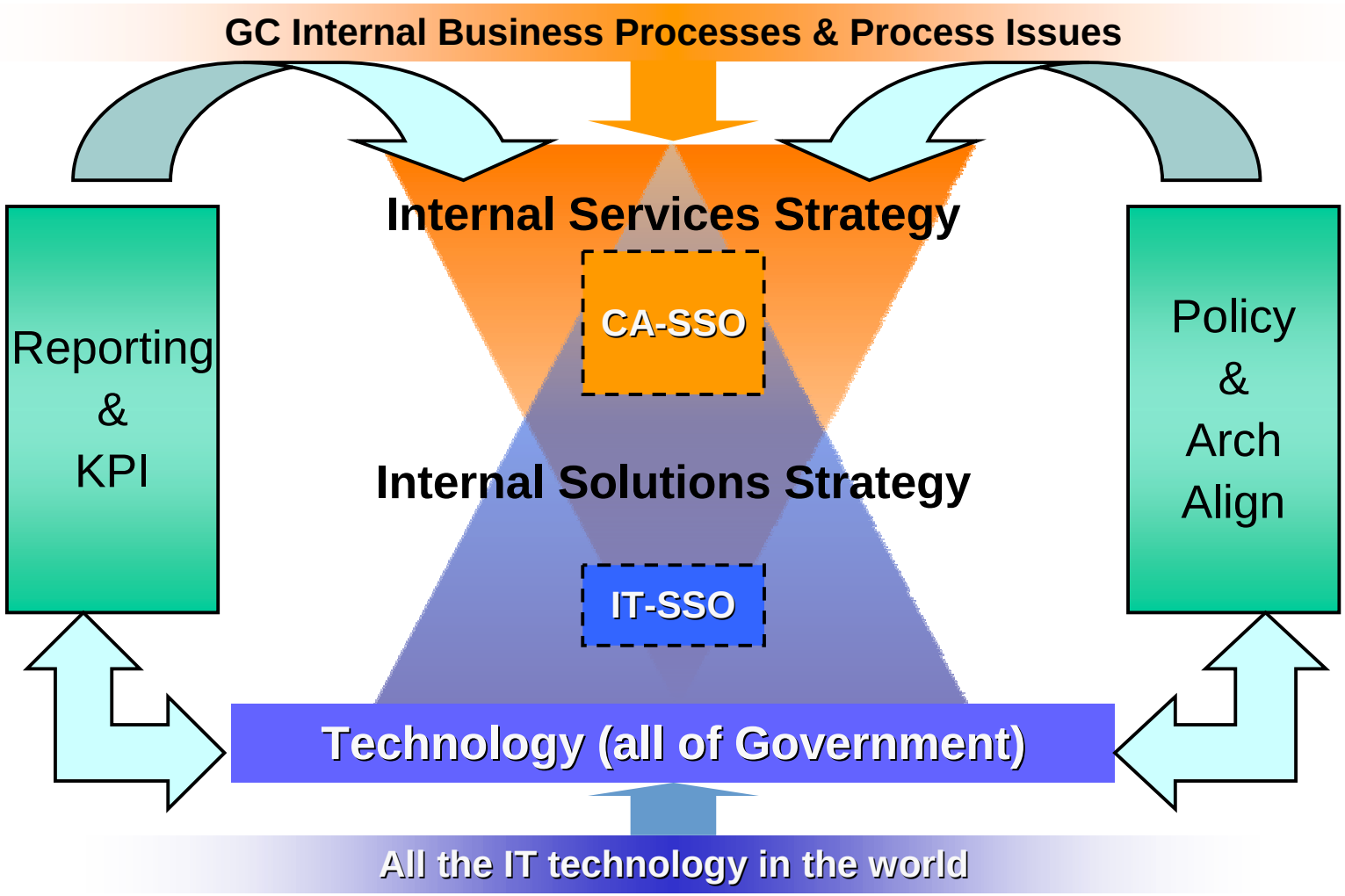
TISS Manager Roles & Relationship Model



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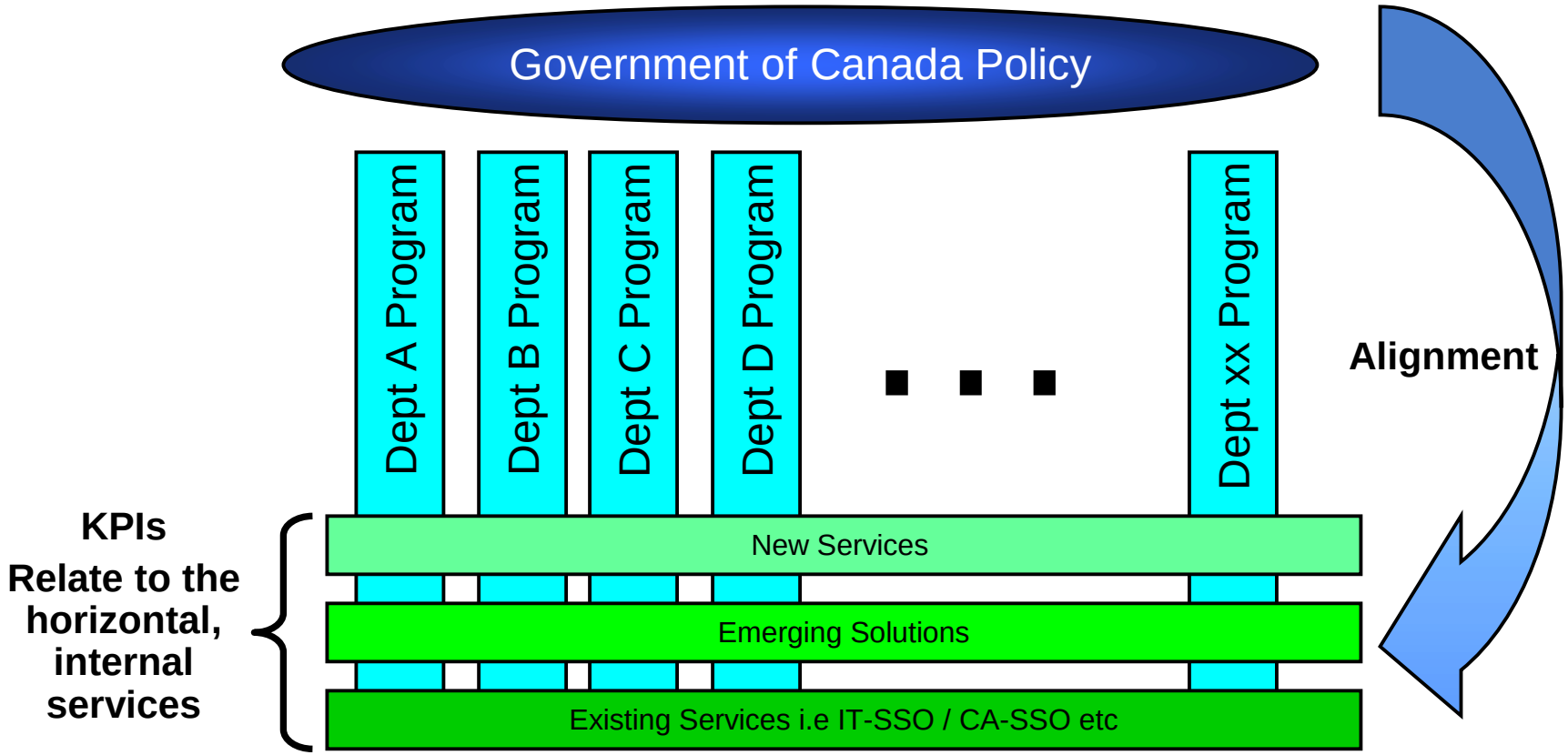
TISS KPIs and Alignment



Horizontal = All of Government = Internal Service

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Profiling IT Services

IT Services Groups	Profile of GC IT Services
Distributed Computing	Standard Desktop and Office Productivity Suite
	Electronic Messaging and Workgroup (Collaboration) Services
	GC Corporate Administrative / Program-Specific Applications
	File/Print Service
	Remote Desktop Delivery Service
	Logical Access Directory Service
Application Development & Maintenance	Applications Development Services
	Deployment Services
	Integration Services
	Engineering and Testing Services
	Certification/Release Services
Production and Operations Computing	Midrange Computing Services
	Mainframe Computing Services
	Dedicated Application Hosting & Management Services
	Facilities Management Services
Telecommunications Network – data, voice	Network Management and Operations Services
	User Community Connectivity Services
	Inter Data Centre Network Services
	Traffic and Transmission Management Services
	Voice Network Services
IT Security	Secure Physical Environment Services
	Identification, Authentication, Defence Services
	Detection, Response, Recovery, Audit Services

Transforming Enterprise Architecture

Creating value
- Technology and information management strategies
- Enterprise information and technology architectures and interoperability

Enabling strategic transformations
- Enterprise technology, information & service strategies, architectures & interoperability
- Citizen-centric service
- Reduced cost & complexity
- Increased transparency

Basic responsibilities
- IT standards and policies
- Enterprise technology architecture and interoperability

EA – part of everything we do

Business-driven Enterprise Architecture

IT-focused Architecture

The "Blueprint"

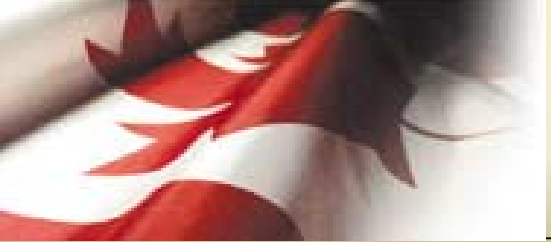
Y2K **FAP 1** **Service Improvement** **BTEP** **Operational reviews: CAS, IT & service delivery**

1993 1994 1995 1996 1997 1998 1999 2000 2001 2002 2003 2004 2005 2006 2007

Chief Informatics Officer created

GOL launched

- **Privacy and security policy**
- **Service visions & catalytic projects**
- **GOL moved to PWGSC**



Current Snapshot

Where are we now:

- Government On-Line is winding down (very successful)
- But services not re-engineered, external focus, opportunities lost by not acting as an enterprise
- Budget 2005 committed to changing the way government works
  - Improved service quality and efficiency
  - Reinforced public service capacity
  - Strengthened governance and accountability
  - Sound stewardship of public resources

Change … the only Constant

Management of GC:

- **Continuous Improvement**
  - Policy
  - Governance
  - Management
- **External Services**
  - Service Canada
  - Service Delivery
- **Internal Services**
  - Corporate Admin Services
  - IT Services
  - Procurement
  - Real Property

EA Tools, Methods & Services

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GSRM: Governments of Canada Strategic Reference Model

GSRM Context of the Public Service

One Vocabulary & Structure for all Public Service

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GSRM
A Common Language

Key Features

- A common language (for policy, transformation and operations).
- Holistic for all public sectors & jurisdictions in Canada. Started in cities and then provinces years ago. Federal Government simply added to the existing model.
- An essential tool for:
  - Context & guidance;
  - Integrated business planning;
  - Work assignments;
  - Accountability; and
  - Governance.
- Aligning with and extending existing GOC performance model

Update: Ontario a lead partner in initiative to create a managed pan-Canadian ownership and governance for GSRM.

BTEP: Business Transformation Enablement Program

BTEP: Key set of tools for transformation

Roadmap for transformation

Methodology for transformation

Government Strategic Reference Models containing authoritative business designs and patterns

Transformation framework that defines and organizes all elements of a business

Set of core enablers that provide strategic horizontal capabilities to increase business integration

Transformation governance model

Packaged together, these tools provide powerful business transformation capability to assist the Government of Canada in achieving alignment across its business strategies

Review of BTEP

Gartner Research Publication

"Application of the Canadian BTEP produces highly strategic, breakthrough improvement opportunities for more-citizen-centric government."

"The methodology must have the participation and buy-in of key business stakeholders. The initial learning curve is steep for getting participants familiar and comfortable with the methodology and for acquiring the common vocabulary needed to work together across organizational boundaries. Success requires strong facilitation skills and a gradual introduction of more-detailed materials as the participants come to grips with what transformation means to them and their organizations"

Date: 27 June 2005

ID Number: G00128065

EA Program
Who is it for?

Governance and Oversight Body

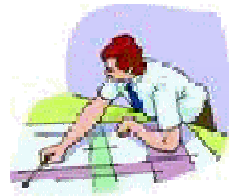
Alignment of business components to the enterprises' strategic direction
Integration of business components across the enterprise
Understanding of the complexity of the enterprises' business elements and their relationships to aid in planning, building and operating

Business and Business System Designers &

Transformation Initiatives

Ability to identify and define the enterprise in a systematic way across the scope of transformation
Ability to identify possible significant transformation opportunities and potential innovations
Understanding of the ramifications of alternate designs

EA Community



Skilled practitioners
Recognition of the value contribution of EA
Funds

Transforming Enterprise Architecture

Current Reality and Challenges

- Federated Architecture Program – 2000 (and not updated since)
- Architecture and EA known and practiced but often isolated within department, region, etc.
- Common/Enterprise initiatives with silo'ed architectures.
- Variable methods, tools and approaches:
  - inconsistent rules to facilitate exchange or sharing of business strategies and architectures
- Disharmony in processes & inconsistently applied.
- The unique challenges of a government context

Need: *Well-architected GC-Wide overarching EA strategy*

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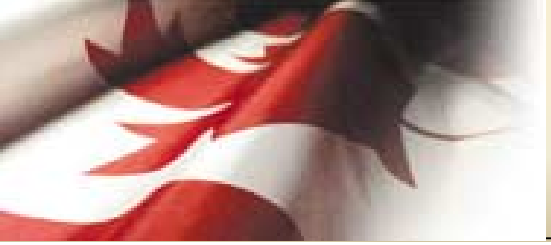
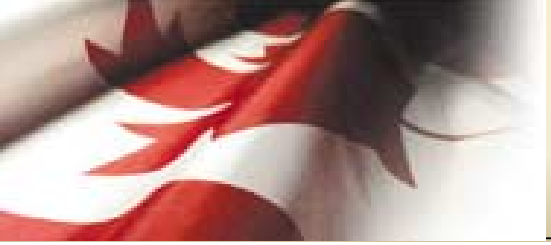


EA Program Vision Statement
(iteration 1)

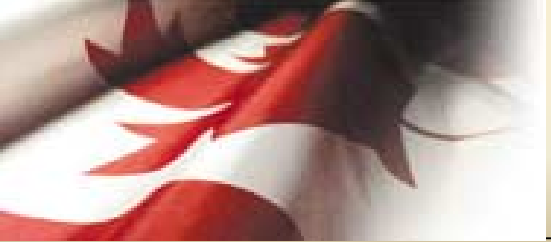
Target group *… scoped-in target groups*
Who need to *…scoped-in target group needs*
Will be able to *…describe new outcome(s).*
This will be enabled by *…business features*
Made possible by *…innovations*
We will know we've achieved this when *…sample performance measure(s).*



EA Program Vision Statement

(iteration 1) …

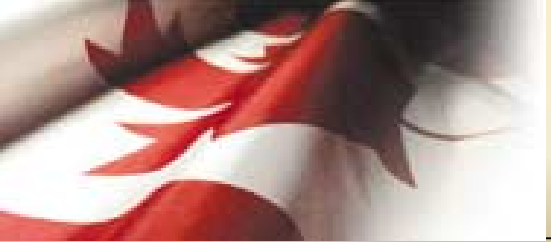
Target group… *scoped-in target groups*	Our primary target group the: Government of Canada **Oversight and Governance Body**
who need *…scoped-in target group needs*	• Alignment of business components to the enterprises' strategic direction; • Integration of business components across the enterprise; and • Understanding the complexity of the enterprises' business elements and their relationships to aid in planning, building and operating.
will be able to *…describe new outcome(s).*	• Increased alignment of business components to the enterprises' strategic direction; • Increased integration of business components across the enterprise; Increased understanding of the complexity of the enterprises' business elements and their relationships to aid in planning, building and operating; • Increased ability to identify and define the enterprise in a systematic way across the scope of transformation; • Increased ability to identify possible significant transformation opportunities and potential innovations; and an Increased understanding of the ramifications of alternate designs.



EA Program Vision Statement

… (iteration 1) continued

this will be enabled by *…business features*	• **Common language** to uniformly define business elements like programs, outcomes, services, processes, and resources that facilitates greater collaboration across government jurisdictions; • Availability of **skilled resources** to support enterprise designs; • Recognition of **local EA delivery capabilities**; • Formal and **proven disciplines** to create enterprise designs; • Widespread sharing of **best practices**; and • Authoritative and reusable design patterns to promote **shared and common services**.
made possible by *…innovations*	• **GC-wide governance framework** for enterprise architecture that goes beyond the traditional IT based realms of architecture to include business and policy; • Federated approach that recognizes individual program autonomy and accountability with a **Chief Architect role in each enterprise**; • Proven methods, tools and job-aids like **self-assessment guides,** certification of EA practitioners; Authoritative System of Record, supported with EA repository tools; • Proper incentives and minimal adoption barriers to encourage and promote acceptance of enterprise architecture (both cultural and policy); • **Mandating the use of GSRM** federally and promoting Pan-Canadian acceptance; and • **Embedding EA practices** throughout government management practices.



EA Program Vision Statement

… (iteration 1) completed

We will know we've achieved this when *…sample performance measure(s).*	*Direct measures the EA program can be accountable for:*
	• A growing number of departments with well established EA capabilities;
	• Program owners increasingly consider EA is a essential element to understanding and transforming their business;
	• Decreasing percentages of TB submissions with an EA component that are declined or "conditionally-accepted" due to lack of strategic alignment;
	• Growing quantity and frequency of design patterns are reused; and
	• Government-wide penetration of certified EA practitioners.
	
	Indirect measures the EA program must successfully contribute towards:
	• Reduced cost and time needed to respond to mandated program changes;
	• Measurable consistency in program and service design;
	• Greater ease of date exchange and interoperability across jurisdictions; and
	• Independent assessments of Public satisfaction in areas such as:
	  ◦ Service level improvements and increased horizontal service delivery, and
	  ◦ Greater faith in government accountability and transparency

More on Features & Innovations

- EA “Management Board”
  - Cross Enterprise Board (IM, IT, Security, Privacy, Accessibility, Health, Protection, etc)
  - Approve/Publish EA Policy, Tools, Methods, Enterprise Roadmap
  - Domain Alignment Guidance (oversee domain strategies, designs, assessment and maturity models)
- Domain Teams (‘Programs’ in their own right)
  - Each with a community, leader and a lead architect (e.g. IM, IT, etc)
  - Using EA Tools & Methods to express strategies, designs, targets, etc.
  - Domain Standards

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More on Features & Innovations

- Departments and Agencies
  - Each with a Chief Architect (Ensure Proper use of T&M)
  - Signs off on Architected Enterprise Plans, Self Assessments, etc
  - Use common language for describing their enterprise.
- Enterprise Architecture and Standards @ CIOB
  - Support to and guided by EA Management Board
  - Stewards of:
    - Enterprise Standards
    - Roadmap
    - EA Tools and Methods

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More on Features & Innovations

- Chief Architect Role…
  - Lead discipline of Enterprise Architecture (How)
    - All Domains (Business, Information, Application, Technology …)
    - All requirements (Security, Privacy, Accessibility, …)
  - Capture, hold, and publish architectures (What)
    - Domain visions, strategy's, and designs
    - Enterprise Architectures (Roadmap)
  - Responsible for Business Transformation Enablement Program
    www.tbs-sct.gc.ca/cio-dpi
  - Standards Program (From IT to Business Design Standards)

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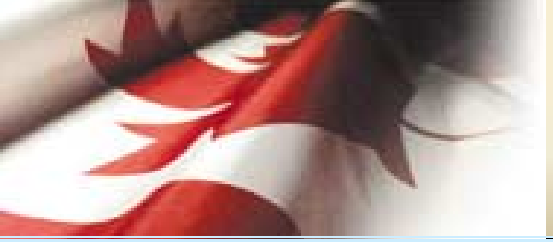
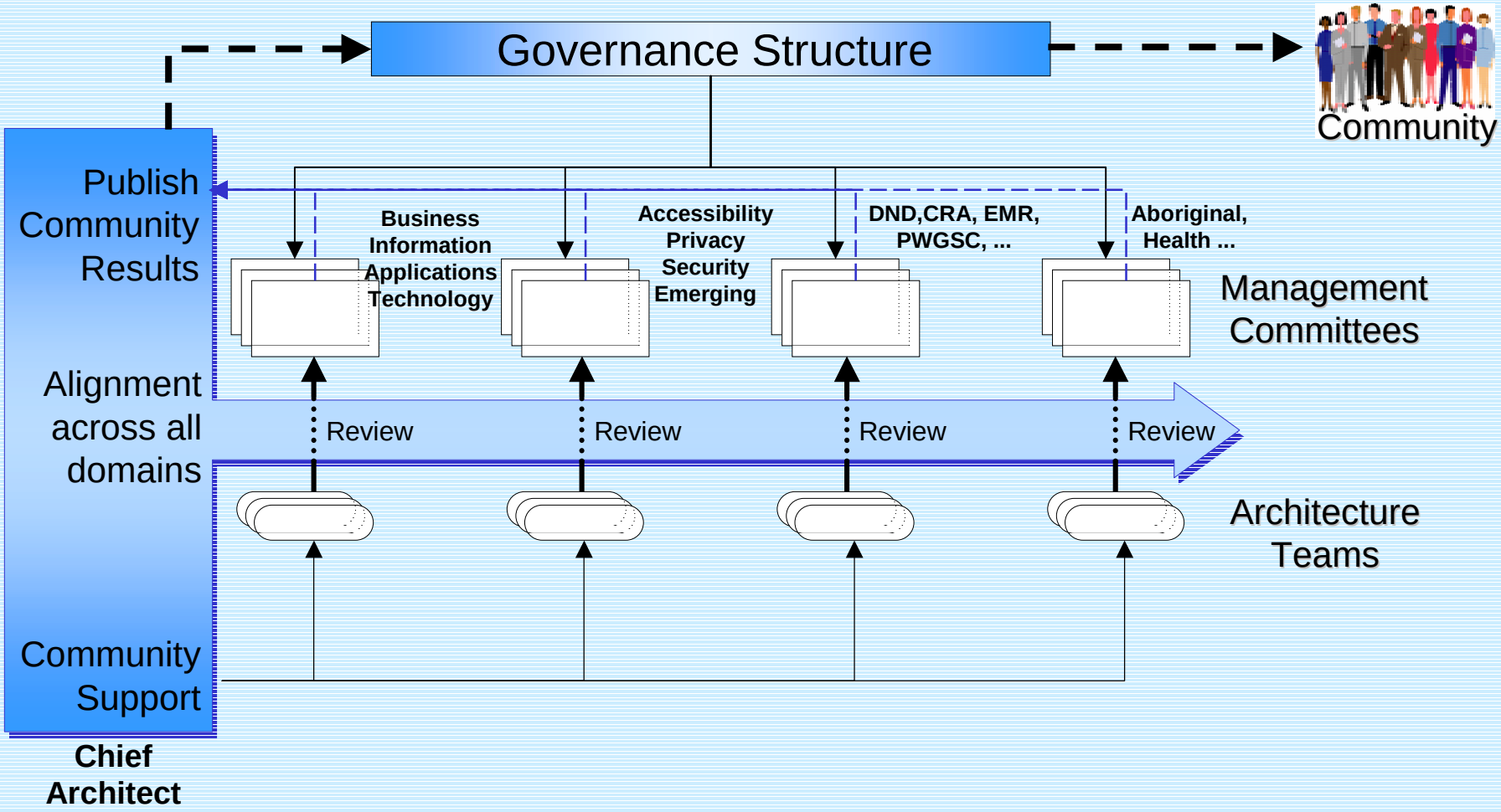
Building the Enterprise View





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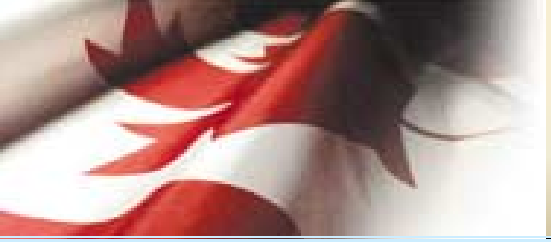
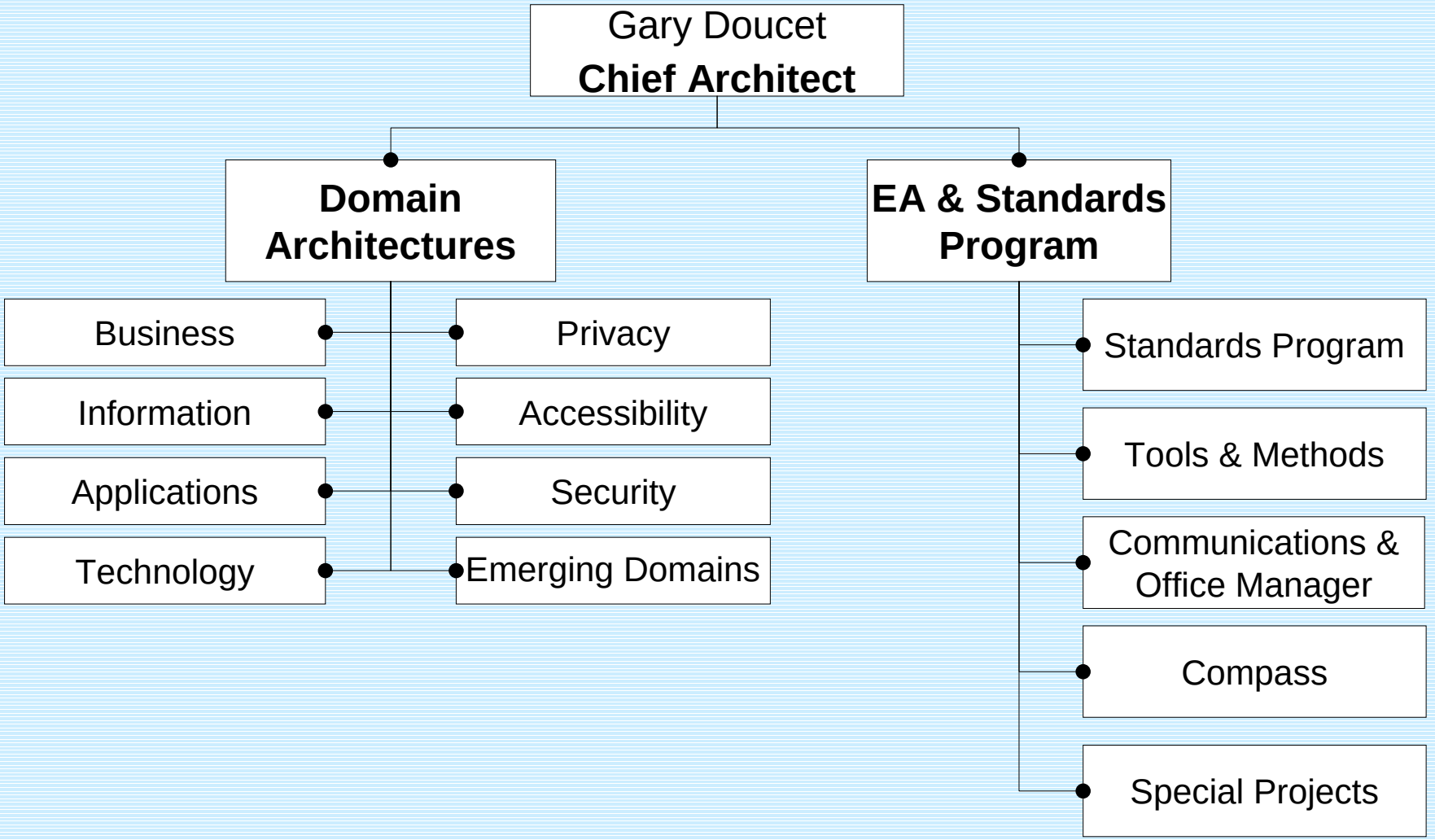
EASD Organization





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EA Program Priorities

- Priorities for 2005-2006
  - Align reference models with management processes (e.g. PAA/GSRM alignment, enhanced stewardship, …)
  - Support major transformations (i.e. CA-SSO, IT-SSO, Service Delivery, …)
  - IT Security Standards and Strategy
  - Information Management Program Support
  - Harvest PSEPC interoperability
  - Emerging trends and Issues (e.g. OSS)
  - Establish system of record for all designs
  - Using EA as a foundation for effective stewardship
  - Building the EA community and governance model

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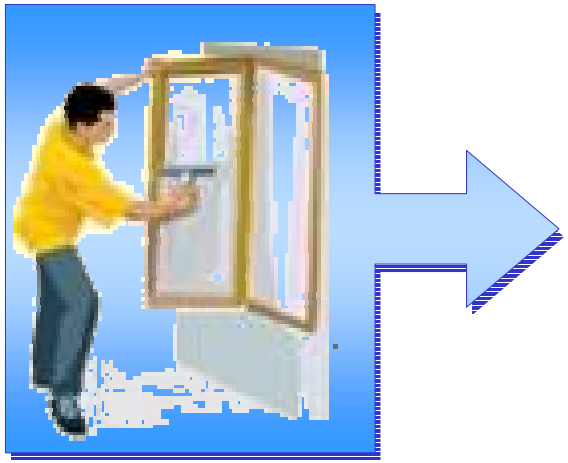
Our EASD Approach



“Just in time Architecture”

- “Do Windows” or whatever needs to be done now
- Not necessarily Architecture with the enterprise in mind

- Apply the *discipline* of EA within real project contexts
- Do just enough architecture to permit strong alignment
- Realise this is not a one time event

- Model Meticulously
- Classify everything absolutely
- Follow the rules religiously applying the science and methods 100%

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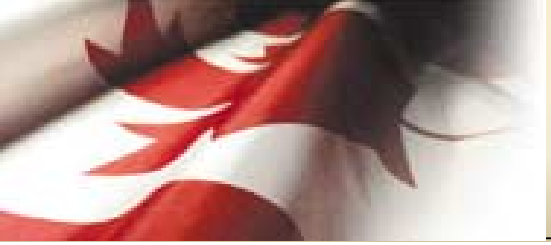

What will be different?

How it "was"	How it "will be"
• IT based	• Business Driven & Enterprise Oriented
• Project Based	• Improved Enterprise and Value Realization
• "Classification" effort	• Imbedded in management process (e.g. MAF)
• One more thing to do	• Executive EA Champion/Sponsor
• Low management acceptance	◦ EAMB & Strong Domains
• Limited support	• Ready Tools, Methods, Techniques
• No authority	• Increased Authority
• Limited understanding	• Community driven
• Independent effort	◦ Chief Architects in each dept

Canada's EA program will be designed so that everyone is doing EA as just a normal part of their work. Emphasizing that architects don't own the architecture ... business owns it.

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Closing Remarks

- EA is becoming domain independent as business architecture finally becomes paramount.
- Architecture for the GC will be built by projects in various communities across all domains and business lines.
- EA needs to be there to help and to harvest.
  - Help with standards, methods, shareable architecture assets (collection of aligned project architectures)….
  - Harvest to increase the asset base and improve tools and methods to achieve greater alignment and coherence.
- EA must be in the way we work, not something else we do.
- EASD now reaching out to build the enterprise architecture, the EA community, and community based governance.

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Thank You

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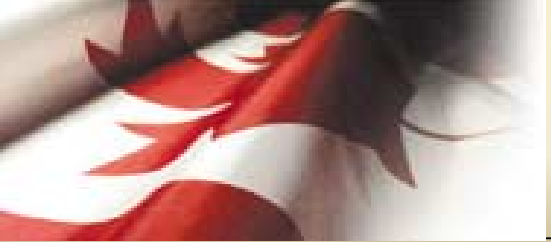
EXTRA SLIDES

For reference only



Context: Ideas and Concepts …

"You can not manage what you can not see"

Reg Alcock, President, Treasury Board

We are "Moving from money well accounted for…to Money Well Spent"

Helen McDonald, GC CIO

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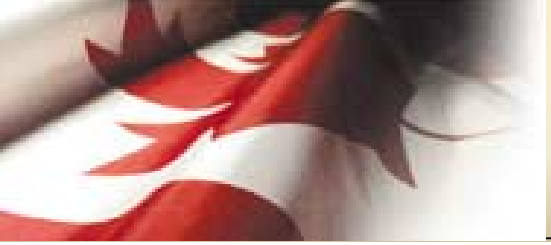

Transforming …Management

Manage as an Enterprise: Reducing the Risk

- Enterprise governance
- Enterprise definitions and view of business lines
- Enterprise view of the client we serve
- Enterprise business processes across all business lines
- Enterprise shared information
- Enterprise identifiers for employees
- Enterprise measurements against corporate goals
- Enterprise infrastructure to support services

= Enterprise Architecture

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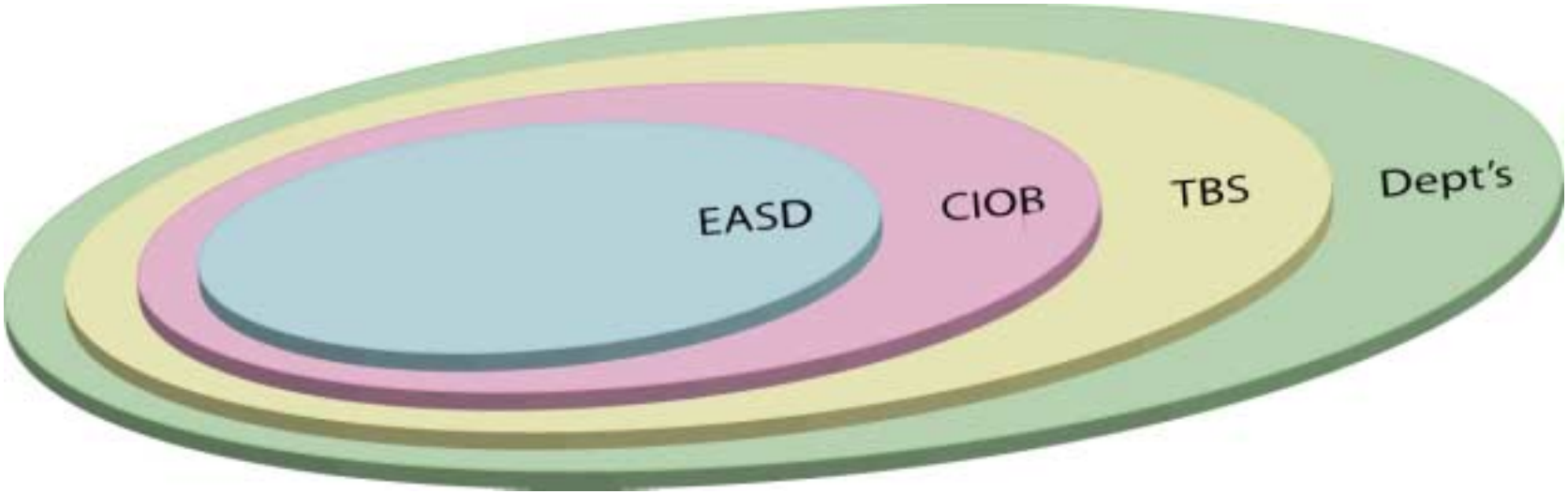
Iteration 1 Results



“Iteration 1”

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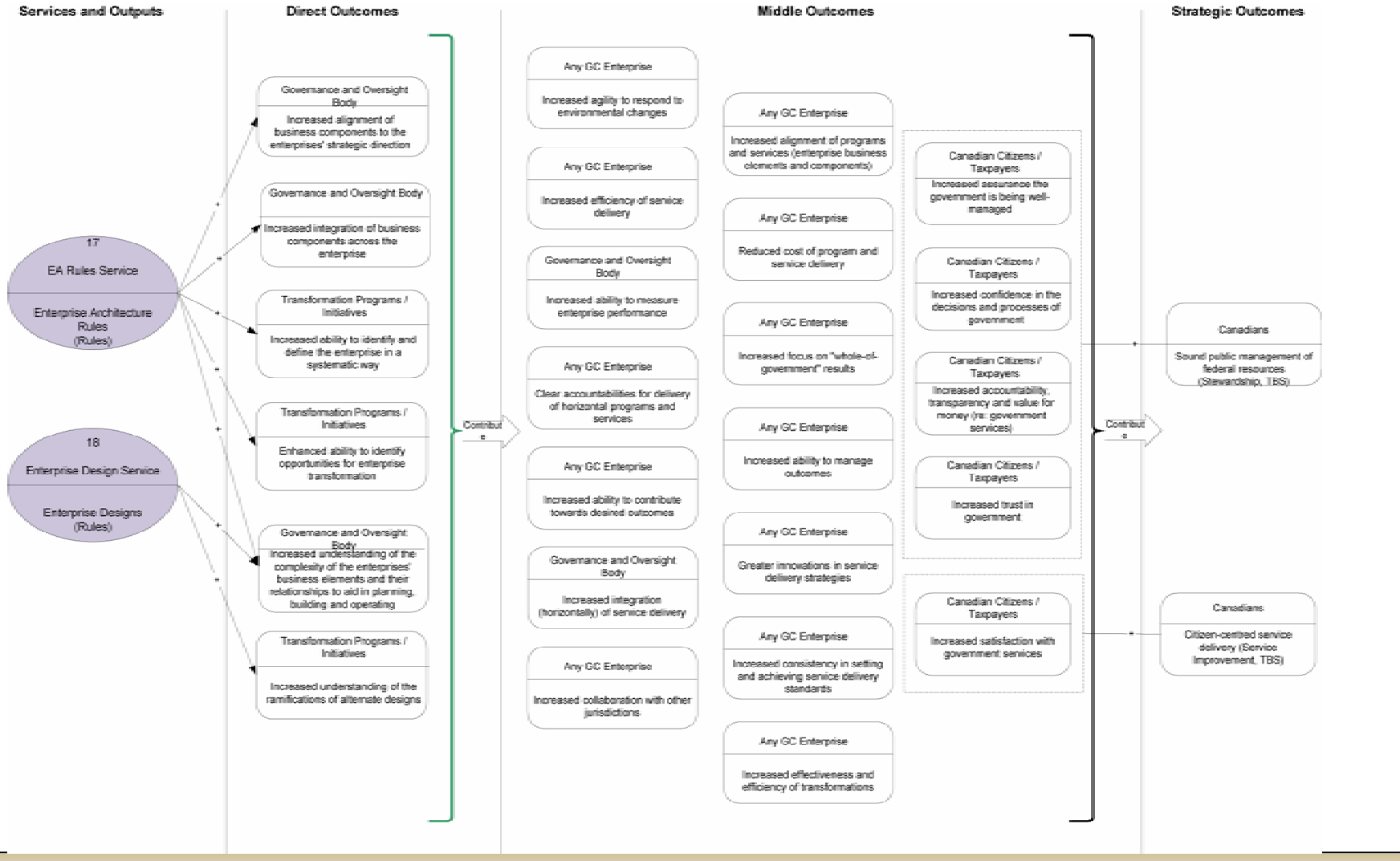
EA Program - Outcomes



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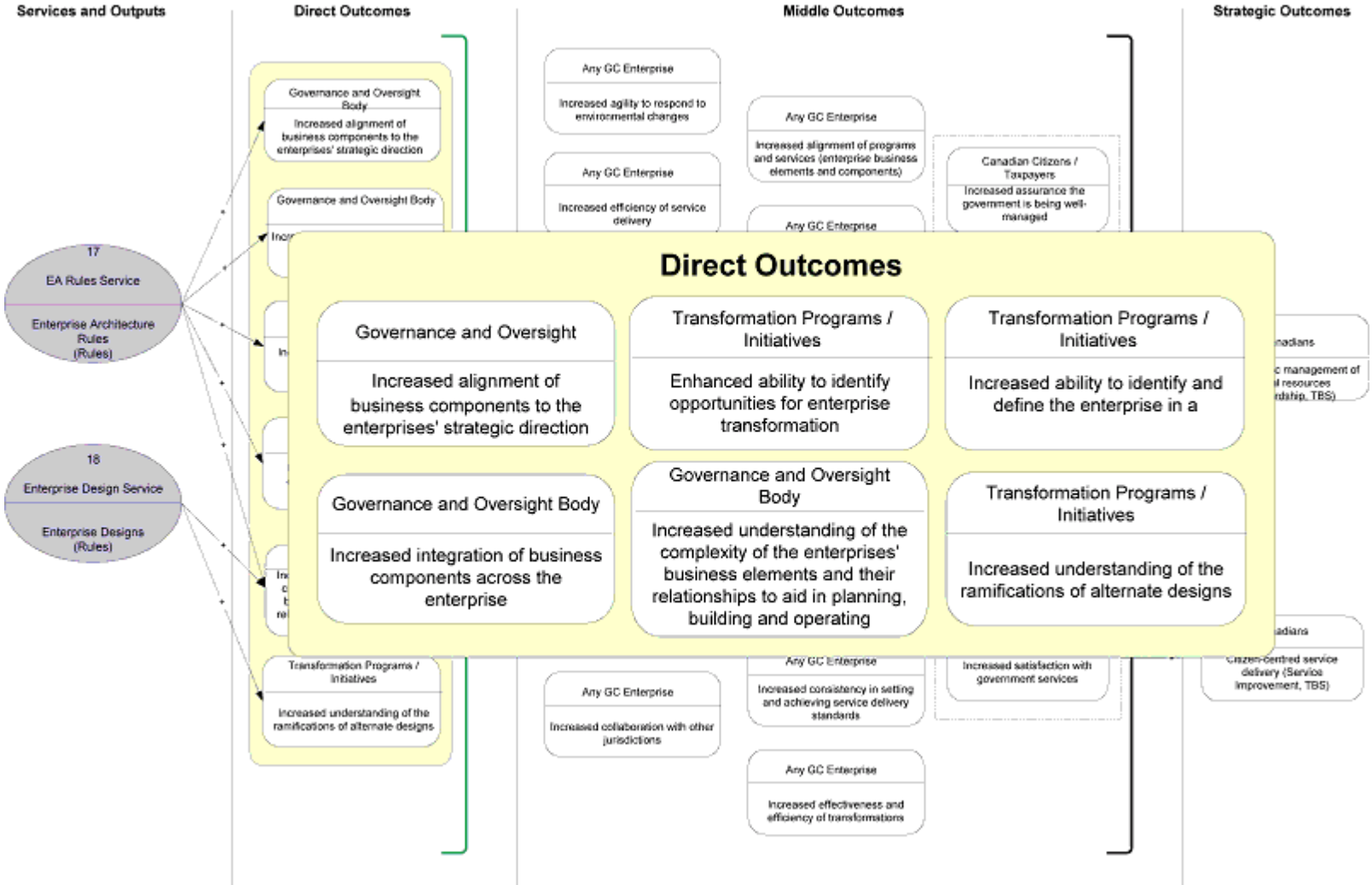
EA Program - Outcomes



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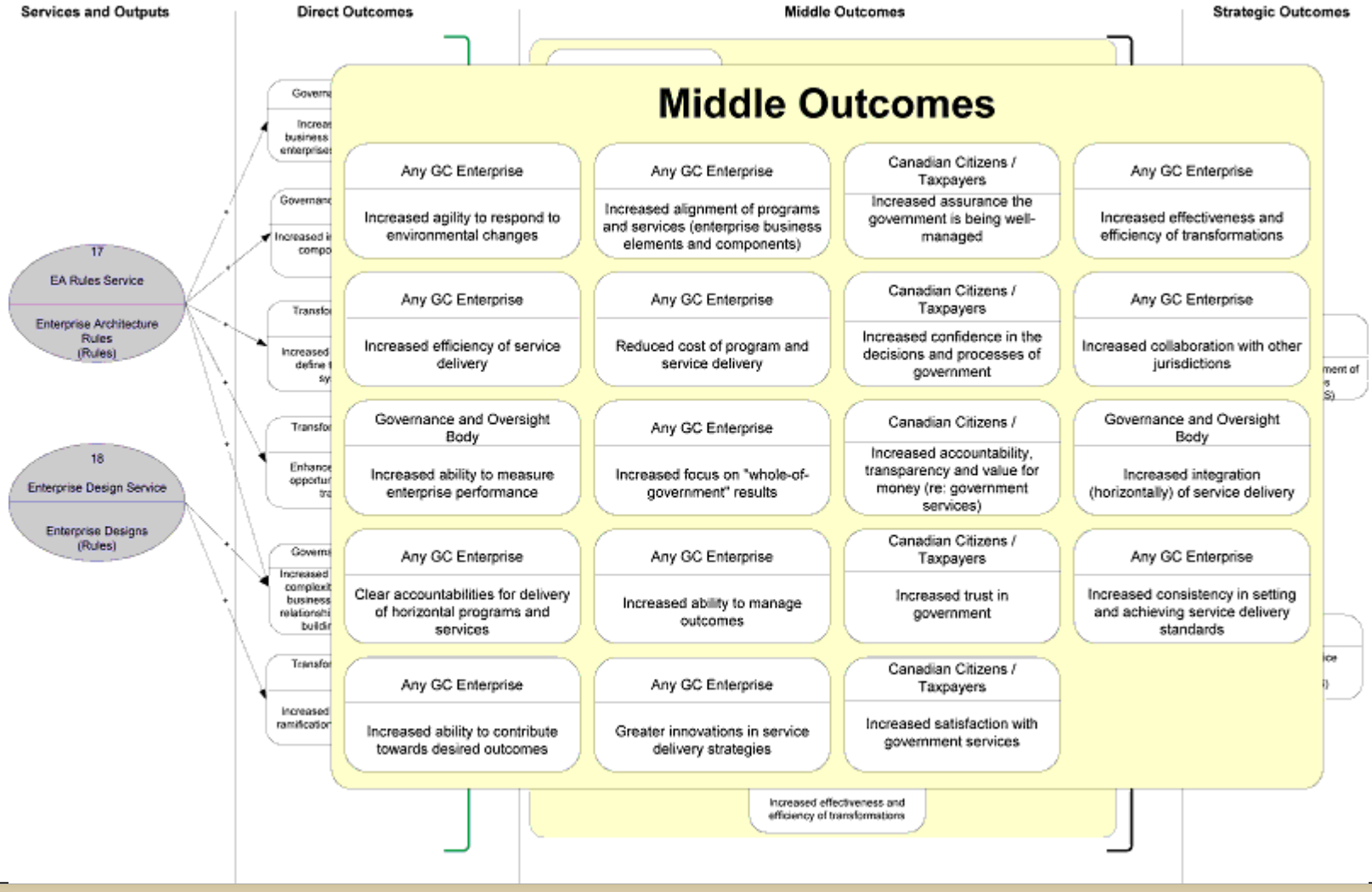
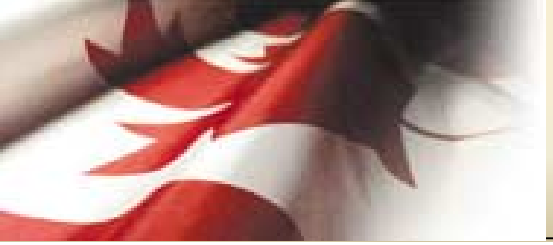
EA Program - Outcomes



EA Program (iteration 1)
Business Problem Statement

We are not currently meeting the needs of	**Our primary target group the: Government of Canada Oversight and Governance Body**
for	Alignment of business components to the enterprises' strategic direction;· Integration of business components across the enterprise; understanding the complexity of the enterprises' business elements and their relationships to aid in planning, building and operating.
This is manifested by	A lack of a “government-wide” management and delivery of programs and services; unnecessary duplication of services and cost inefficiencies, localized strategies and architectures to meet the specific needs of departmental programs and services; and a patchwork of disjointed solutions each seeking to meet the needs of the Canadian public
that are indicative of	Standards are non-existent or poorly enforced; Common language and rules for sharing business strategies do not exist or not used consistently; Departments don’t feel accountable for EA nor are they motivated to reuse and adopt common processes; Capability and capacity to apply GC principles and best practices are inadequate

EA Program - Services



Governance and Oversight Body

Alignment of business components to the enterprises' strategic direction

Integration of business components across the enterprise

Understanding of the complexity of the enterprises' business elements and their relationships to aid in planning, building and operating

A mandated, common approach to describe and align strategic designs

A mandated, common approach to describe business components and their relationships to each other

A mandated, common approach to describe business elements and their relationships to each other

Multiple views of the enterprise to describe its business elements in order to manage complexity

Enterprise Architecture Program

EA Rules Service

EA Rules (Rules)

Enterprise Design Service

Enterprise Designs (Rules)

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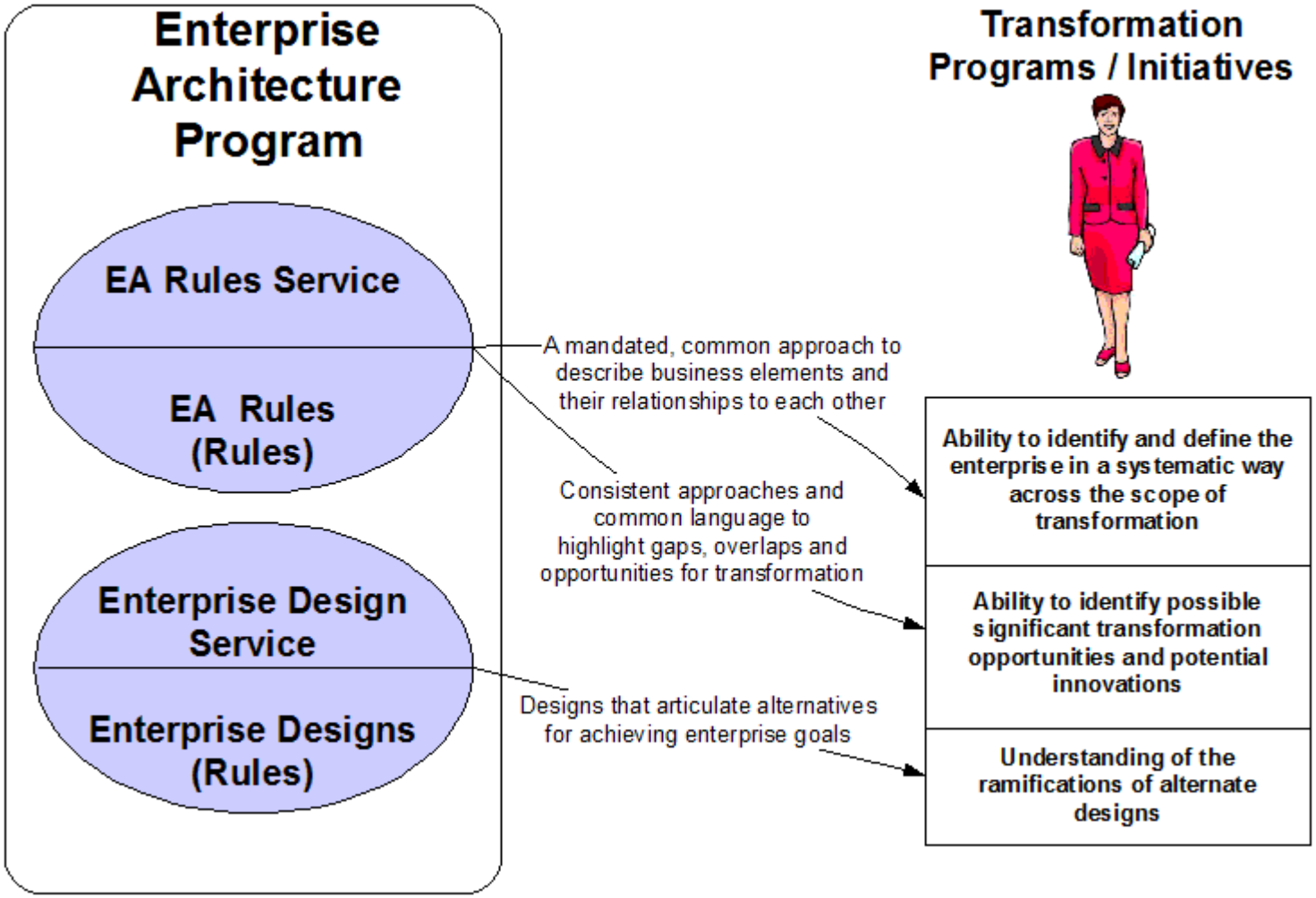
EA Program - Services cont…



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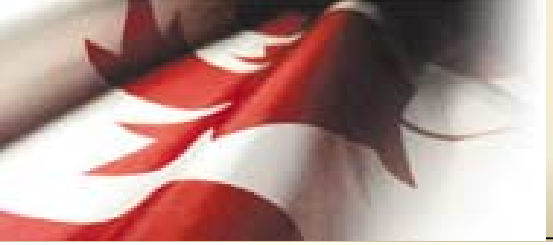
EA Program - Scope and Context



Canadian Citizens / Taxpayers

Governance and Oversight Body

EA Program

Program Management and Oversight Sub-Program

- 20 Strategic Design and Planning Service
- 19 Performance Measurement Service

Enterprise Architecture, Standards and Design Sub-Program

- 6 EA Research and Analysis Service
- 1 Design Stewardship Service
- 16 Architecture and Design Variance Service
- 17 EA Rules Service
- 7 EA Best Practices Development Service
- 14 EA Rules Audit Service
- 15 EA Rules Compliance Assessment Service
- 18 Enterprise Design Service
- 2 EA Advisory Service
- 5 EA Alignment Assessment Service

EA Capability and Capacity Development Sub-Program

- 9 EA Education and Training Service
- 4 EA Expert Provision Service
- 13 EA Accreditation Service
- 12 EA Certification Service
- 11 Enterprise Architect Brokerage Service
- 3 EA Design Drafting Service
- 8 EA Community Development Service
- 10 EA Funding Service

Any EA Program

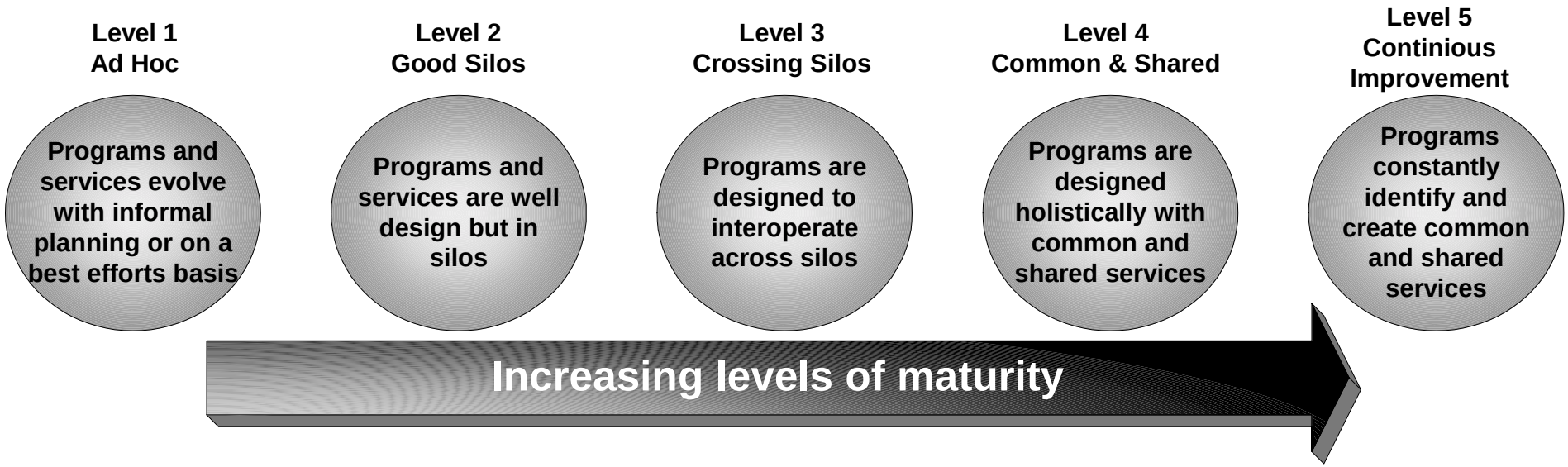
- Skilled practitioners
- Recognition of the value contribution of EA
- Funds

- Alignment of business components to the enterprises' strategic direction
- Integration of business components across the enterprise
- Understanding of the complexity of the enterprises' business elements and their relationships to aid in planning, building and operating

Transformation Programs / Initiatives

- Ability to identify and define the enterprise in a systematic way across the scope of transformation
- Ability to identify possible significant transformation opportunities and potential innovations
- Understanding of the ramifications of alternate designs

A Possible EA Maturity Scale



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