

FWD50 Follow Up 

Trusted Information Exchange Services (TIES) Demonstration

Treasury Board Secretariat

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FWD50 Government of Canada GC Digital Future

-> **Future not set yet**

-> **We can invent it!**

- > **GC Services Delivered on Any Platform**
- > **GC Services Delivered on Any Device (Smartphone, TV's, Cars, etc)**
- > **Open Innovation Eco-System (Data, Open Source, Greater Collaboration with All Sectors)**

1. Be digital first
2. Be solution oriented
3. Get out of ivory towers
4. Stop the linearity
5. Engage and collaborate

**Connect Digital Services Everybody to Everybody and Everything
In an Open Secure and Interoperable Innovative System of Systems**

-> **Improved Services**
-> **Enhanced Security**
-> **Better Value & Cost**
**GC Is World Leader
In Digital Services**

Trusted Information Exchange Services (TIES)

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**Critical Enabler -> Broad Based Responsible
Information Sharing & Safeguarding**

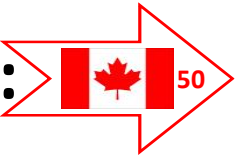
**Aggregate information from diverse
structured (add unstructured in the
future) data sources to be classified,
tagged, labeled and redacted in real-time**

**Context Sensitive Dynamic Provisioning of
the Right Information to Right Entity at the
Right Time**

Trusted Information Exchange Services (TIES) Innovation

- > The ability to classify and tag structured information elements as they are aggregated and assembled in accordance with Government of Canada policy.**
- > Information Sharing and Safeguarding Policy Models are developed by the business, serialized and injected into the runtime environment. Programmers not required to generate machine readable executable interfaces**
- > Policy models that are reusable and shareable as architecture artifacts.**
- > User control (activate, deactivate, delete and modify) of policies (rules and constraints) in the runtime environment. This provides increased operational control, flexibility and agility.**
- > Interoperability based on open standards. Enabling the evolution of an ecosystem that promotes additional innovation and multiple vendor participation**
- > Automated policy enforcement. Providing increased ability to operate with partners and share information across organizational boundaries while respecting GC privacy and security constraints.**

TIES Capability is Nascent and Represents Opportunity for GC to Deliver:



- > GC Services on Any Platform
- > GC Services on Any Device (Smartphone, TV's, Cars, etc)
- > Open Innovation Eco-System (Data, Open Source, Greater Collaboration with All Sectors)

TIES Good Candidate



- * Agile Approach
- * Experimentation In Continuous Improvement Program
- * Learn & Fail Fast

Potential for GC to be World Leader in the Provision of Digital Services



- ☆ Better Services
- ☆ Better Cost/Value
- ☆ Better Security

Questions

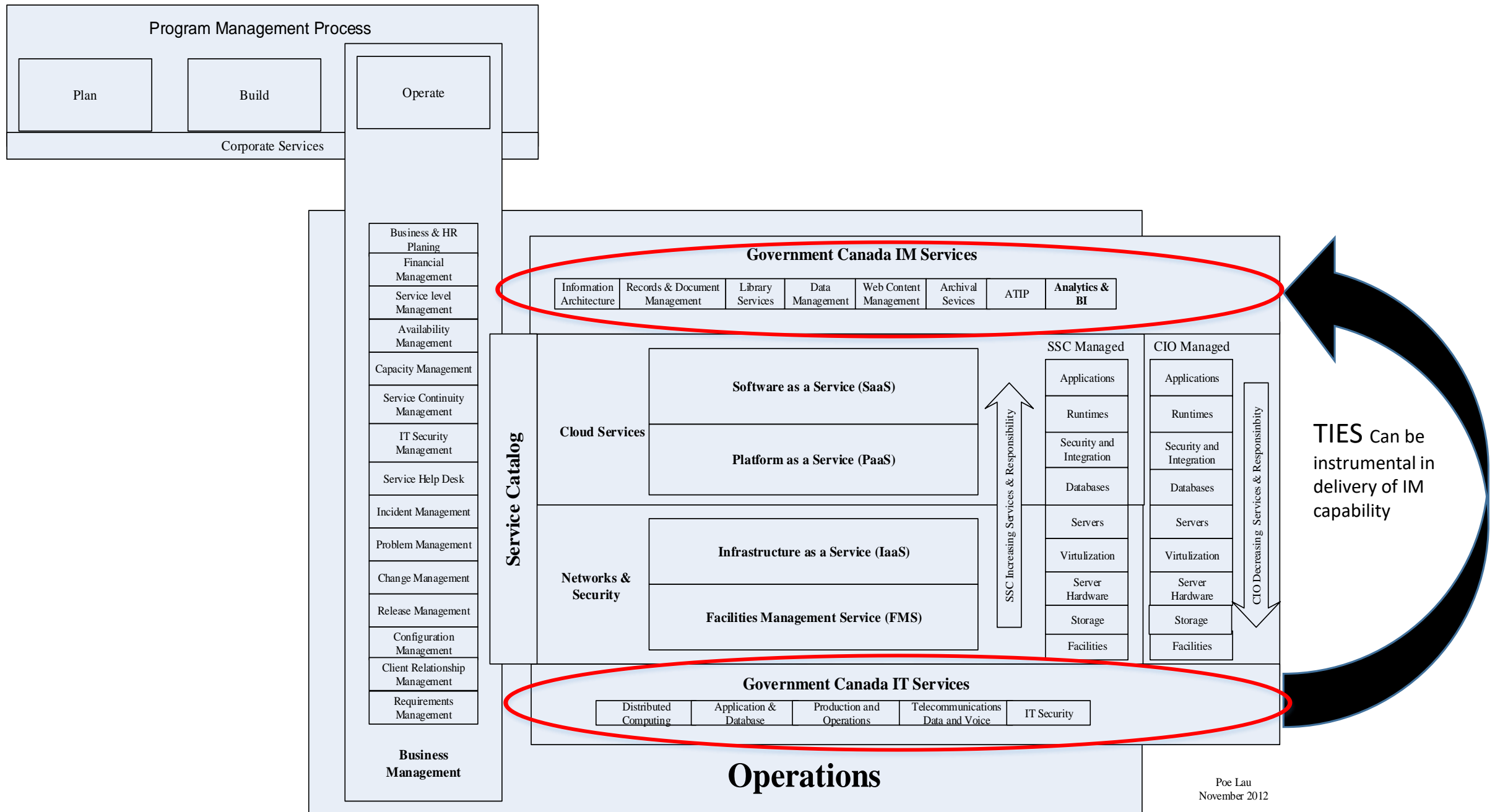


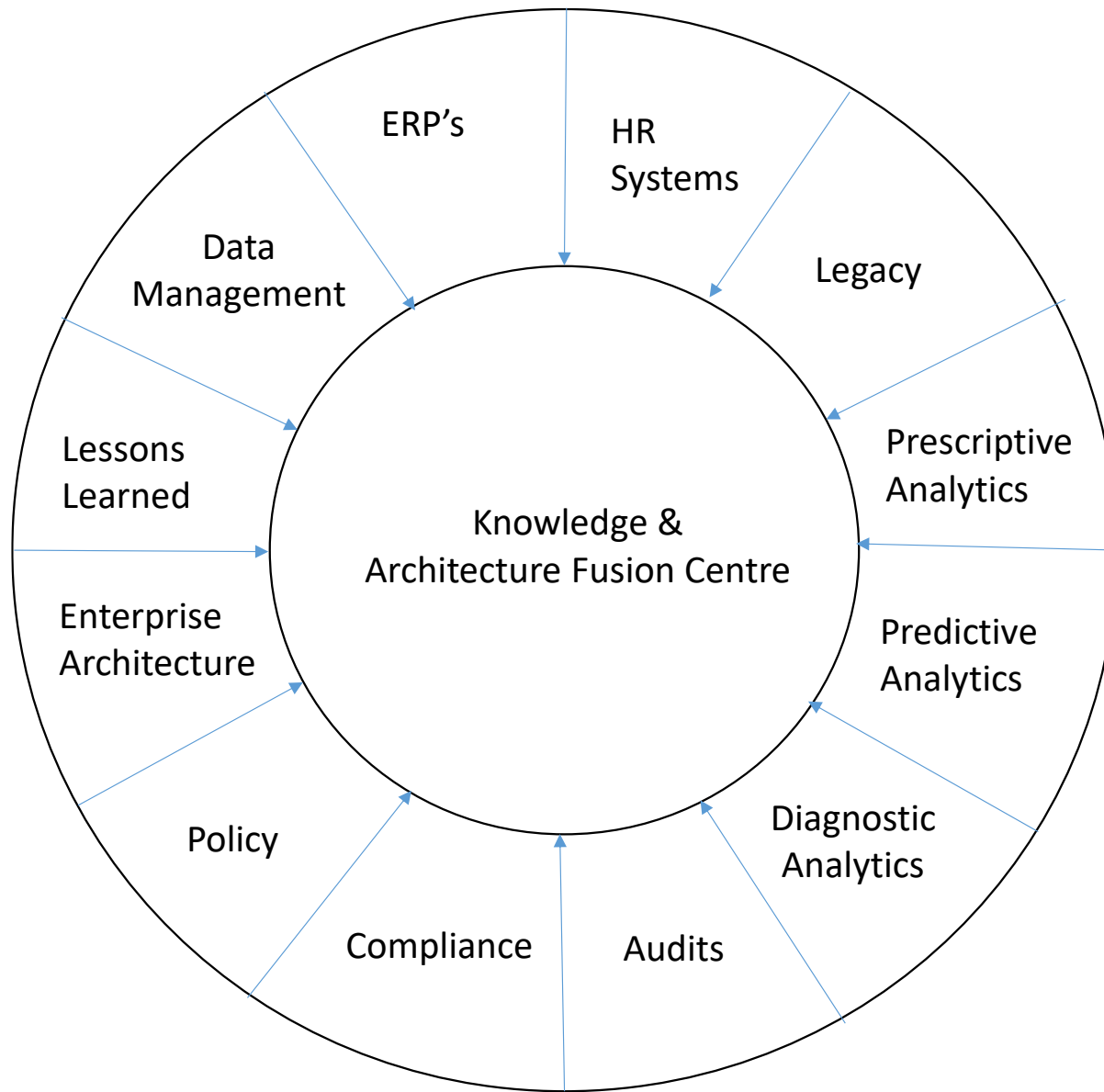
Addressing Current IT Infrastructure Challenges (ISS & Cyber)

Network Centric vs Data Centric Solutions

Characteristics	Current State (Network Based Defence -NBD)	Future State (Data Centric Defence -DCD)
Cyber Protection Approach	<ul style="list-style-type: none"> a. Perimeter security and boundary protection b. Network separation based on security level and unique set of caveats 	<ul style="list-style-type: none"> a. Defence in depth delivered by Data / content centric access controls. b. Policy driven information sharing and safeguarding c. Separation of data and policy
Cost Implications	<ul style="list-style-type: none"> a. Proliferation of networks b. Prohibitive and unsustainable cost for networks (e.g., DND maintains over 140 separate secret networks) 	<ul style="list-style-type: none"> a. Consolidate networks within a security domain b. Opportunity for the deployment of and increased number of shared services c. reduction of network costs
Service Implications	<ul style="list-style-type: none"> a. Significant barrier to efficient and effective service delivery b. Significant barrier to rapid adaptation to new cyber threats and incidents c. Information and data elements replicated on multiple networks d. Operator required to manually ferry (extract, collate and synthesize) between networks and systems. e. Rigid and brittle systems and networks unable to adapt to dynamic real-world events f. Significant barrier to Missions requiring real-time information exchange and collaboration across security domains and caveats 	<ul style="list-style-type: none"> a. Facilitates Treasury Board policies and directives b. Enables GC direction to shared services / capability c. Enables agencies to balance the sharing and safeguarding of information d. Enables agencies to interoperate and share to the greatest extent possible. e. Enables real-time information sharing and collaboration within a security domain and across caveats.
Security Implications	<ul style="list-style-type: none"> a. Vulnerability to zero day attack b. Challenges by new and expanding threats c. Zero day attacks require the shutting down the IT services that our partners rely on. 	<ul style="list-style-type: none"> a. Assumes adversary is capable of penetrating controls access to individual data/information elements b. increases real-time audit functions. c. A network breach requires brute force decryption of each information element (file, email, message) d. Mitigates the risk of a zero day attack security breach
Summary	<ul style="list-style-type: none"> a. Complicated network landscape. b. Unaffordable and unsustainable operating costs. c. Barrier to efficient and effective service delivery. d. Indefensible zero day attack security vulnerabilities e. Rigid and brittle systems and networks 	<ul style="list-style-type: none"> a. Simplified network landscape. b. Produce savings and reduce operating cost c. Enhance performance and services d. Defend against security breaches and zero day attacks e. Increased flexibility, agility, and adaptability

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Fusion Centre Dilemma

- Aggregated Data Elevates Security Classification and May Be Problematic Barrier to Information Sharing and Operational Collaboration
- TIES Provides a Solution to Fusion Centre Dilemma

Institutionalize Continuous Improvement, Innovation and Departmental Performance Management Framework (PMF) to Drive Enhanced Force Posture & Readiness

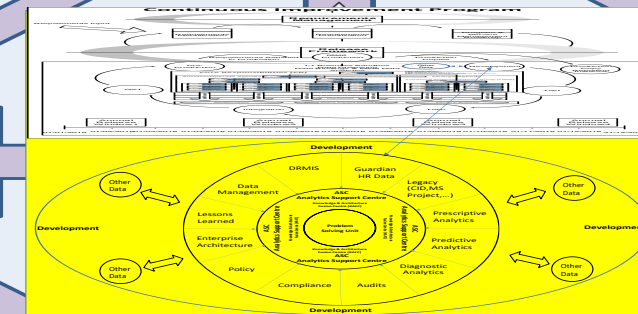
Strategic Question
Are we doing the right things?

Architecture Question
Are we doing them the right way?

PLAN	
Description	Define target outcomes and assign resources derived from analytical evidence based decisions to implement Strategic Direction and allocate scarce resources to priorities in Integrated Business Plan
Information Management	To Know how to efficiently and effectively deploy resources to achieve results in a resource-constrained environment
Strategic Outcome	Strategic Focus & Clarity

ANALYTICS & CONTINUOUS IMPROVEMENT	
Description	Innovative, adaptive and agile organization that through Analytics (information assets logically applied for evidence based decisions) and Adjustments (forward looking course corrections) can respond and adjust to changing priorities, requirements and unexpected performance deviations and reallocate resources as needed in continuous improvement program that embraces innovation
Information Management	To Know how to optimally adapt and adjust to changing and dynamic situations
Strategic Outcome	Innovation

EXECUTE	
Description	Assign accountabilities and implement mission and tasks for coherent end to end activities that contribute to achievement of target outcomes
Information Management	To Translate Knowledge into Operational Actions
Strategic Outcome	Disciplined Business Execution



Are we getting the benefits?
Value Question

Are we getting them done well?
Delivery Question

Measure	
Description	In a Performance Management Framework build Logic/Value Model that showcases the means & journey to deliver the target outcomes overlaid with indicators to measure progress with planned and actual results
Information Management	To Know early when unexpected performance deviations occur and enable adjustments that will result in better outcomes
Strategic Outcome	Performance Management

**Government of Canada
Strategic Direction Input**



Departmental PMF in Continuous Improvement Program