

GSRM

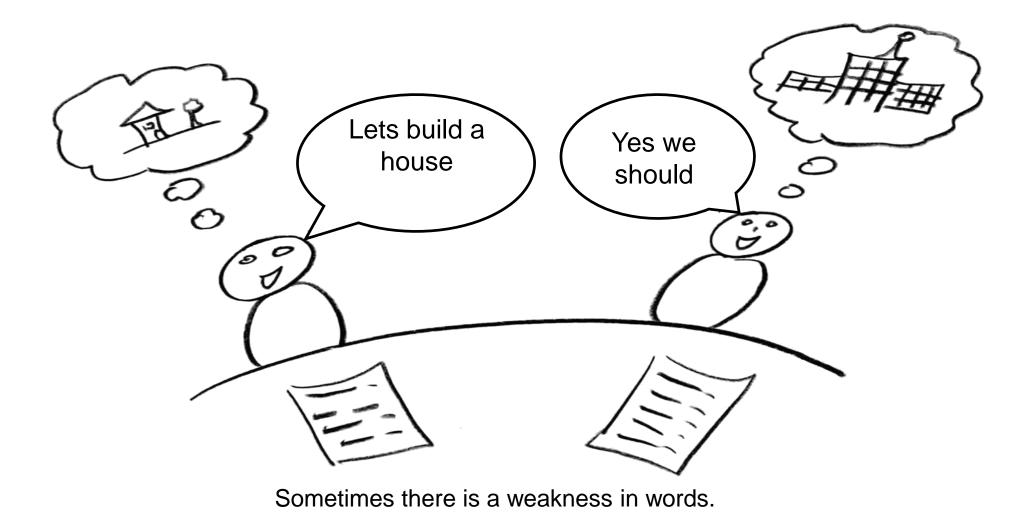
Governments of Canada Strategic Reference Model Primer

Gary Doucet

Independent Consultant & D4iS Associate Partner (VP)

Neil Kemp

Independent Consultant & D4iS Associate Partner



EA in the GC: Government of Canada

But models can help.

Government of Canada Strategic Reference Model (GSRM)

A consistent model for describing public-sector business designs

- A common multi-government public sector vocabulary
- Common tools and common language for GC business architecture designs
- Supports stakeholder communication, collaboration and consensus
- Reusable program/service design patterns
- Facilitates business designs to be scalable, integrated and aligned
- Supports rigorous, high level analysis and design across diverse portfolios

Why a Reference Model?

Standards for objects and their relationships to each other to:

- Enable comparison and **alignment** of services, solutions, investments, requirements.
- **Simplify** the work of builders and developers.
- Enable reuse and enable interoperability of business and systems.
- Increase understanding of business and systems.
- Ensure services target group (i.e., seniors, youth, indigenous) achieve intended outcomes?
- Align execution to strategy.
- Deliver unified, seamless, accurate and proactive service to clients.

The GSRM was created as a tool to describe government policy and its implementation

Why a Reference Model?

Improving Business Change Planning

Fosters a common government-wide approach to design:

- Provides a common reference point for business "program/service" design.
- Helps express and understand the "whole business system" as a strategic design.
- Supports the evaluation of alternate strategies and designs.
- Requires formal ongoing design governance i.e. aligning investments for business and/or IT change.
- Advances goals for seamless and interoperable client centric services.

Please note use of "or".

Introduction

The public sector reference model work done in Canada, starting in the early 1990's, was and still is highly regarded by some practitioners.

1990: MRM: Municipal Reference Model developed (Winnipeg). A standard way to

describe services and enable "Service Based Costing"

- 1995: PSRM: Public Service Reference Model (Ontario).
- 2005: GSRM: Governments of Canada Strategic Reference Model (GC).
- 2009: GSRM activity declines during move to ICCS.

See notes for more history



Provider Programs

Provider program fields are identified by the needs of public programs & other provider programs

- Public Policy,
- Planning and Management
- Corporate Policy,
- Planning and Management, Integrated Delivery,
- Communications Management,
- Human Resources Management,
- Financial Management,
- Information Management
- Information Technology,
- Supply Chain Management,
- Administrative Services
- Facilities, Fleet and Equipment,
- Professional Services

Public Programs

Public program fields are identified by the public needs recognized by the government

- (Socio-) Economic Development
- Science and Knowledge Development
- Natural Resources
- Environment Protection
- Public Health
- Legal, Collective, Democratic & Human Rights Protection
- Social Development
- Cultural Development
- Educational Development
- Public Safety
- National Security & Defence
- Justice

Public Target Group(s)

GSRM - Types of Service Outputs

	Service Output Type	Service Type		
Cumply concelty to	Funds	Acquiring and providing financial resources		
Supply capacity to act	(Units of) Resource	Providing resources such as goods, equipment, accommodations (apart from funds and human resources)		
	New Knowledge	Conducting research		
	Care & Rehabilitation Encounters	Providing care & rehabilitation to people and things		
Enhance capability to act	Educational & Training Encounters	Providing education and training experiences		
	Recreational & Cultural Encounters	Providing recreational & cultural experiences		
	Movements	Moving people and things		
	Advisory Encounters	Providing information & advice		
Facilitate & influence action	Matches, Referrals & Linkages	Brokering, referring, connecting, matching		
	Advocacy and Promotional Encounters	Influencing, advocating, persuading, promoting awareness		
	Periods of Agreement	Creating collaborations, negotiating agreements, settling disputes		
	Periods of Permission	Regulating, licensing, permitting, certifying, identifying, authorizing		
	Findings	Inspecting & investigating		
Regulation	Rulings & Judgements	Applying rules & dispensing justice		
action	Penalties & Periods of Sanction	Enforcing compliance, meting out punishment, penalizing		
	Periods of Protection	Monitoring, warning, guarding, storing, eliminating threats, reducing risks		
	Interventions	Intervening, responding to threats & emergencies, giving aid, restoring order		
Core	Rules (laws, regulations, policies, strategies, plans, designs, standards)	Creating and changing rules		
	Implemented changes	Changing existing organization, practices, systems		

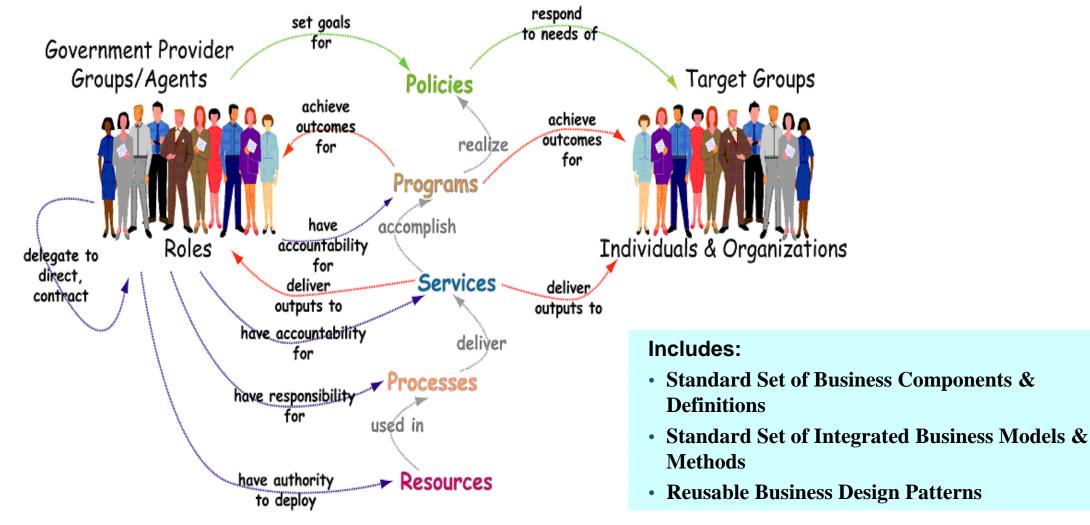
GSRM – Patterns

GSRM:

- Over 100 patterns
- Patterns for:
 - Service Measures (~25)
 - Process Patterns (~ 100)
- Supports the 19 Output Types
- Complex enough for all government services
- Tailorable for Private Sector
- Can be associated with capabilities (in progress).

GSRM Model

Common Language and Structure



The GSRM "Cartoon"

<u>B</u>usiness <u>Transformation Enablement Program</u>

- Not the focus of today but it was the home for GSRM.
- Started as part of Federal Government GOL Program
- Follow on to GC Federated Architecture Program (FAP)
- Business focussed: Visions, Designs and Transformations
- Approach to Strategic Planning & Design, service transformation and business architecture.
- Currently unsupported but parts still get referenced/used
- TOGAF 9 references BTEP (Transformation Readiness Assessment)

Current Status

GSRM: Not actively being maintained by GC. Web assets archived in 2007.

MRM: Municipal Reference Model

Still active but quiet on the development front

http://www.misa-asim.ca/members/group.aspx?id=135372

PSRM: Public Service Reference Model

Still very active in the province of Ontario

GO-ITS 56 - OPS Information Modeling Handbook

CGRM : Canadian Governments Reference Model

Technically "managed" by ICCS but not actively

Link <u>http://www.iccs-isac.org/research/cgrm/?lang=en</u>

Despite lack of formal activity and governance, there are still regular inquiries as to status of work and location of assets for MRM and GSRM.

The future of GSRM?

- Option 1 Institute for Citizen-Centred Service ICCS <u>www.iccs-isac.org</u>.
 - A not-for-profit organization that provides an inter-governmental platform to pursue partnerships and coordinate initiatives focused on innovative public sector service delivery and IT/IM initiatives.
 - Already stewards other government-owned intellectual property and is looking for new subscription services to
 offer its government members
 - Has asked for a report defining and evaluating different xRM support models ranging from none to full.
- Option 2 An Existing standards organization?
 - Open Group Still in the midst of developing Open Business Architecture <u>https://publications.opengroup.org/p161</u>.
 - Object management Group <u>Business Architecture Core Metamodel (BACM)</u>, (<u>http://empoweringgovernment.org/</u>)
 - BAInstitute <u>http://www.bainstitute.org/</u>

What ever the choice ... the uniquely public service orientation should not be lost.

A Practitioner's Story

GSRM Applied

Neil Kemp

Experience

- Consulting services for 15 years full time, as a business architect, using the GSRM
- Providing advice on questions of interest to executives
- Much more business than technical questions
- Increase in questions of transformation of the business to exploit digitally enabled channels

GSRM "Likes"

- Allows the creation of a repeatable, implementation independent and strategic views of the business to explore issues of purpose, value, accountability.
- Focuses on things of great interest to executives
- Exposes gaps and overlaps of a fundamental nature in what the business needs to achieve its mission
- Provides a tool to explore questions about insourcing/sourcing, merger and divestiture and other strategic questions
- Sets an important context for investments in capability by first understanding the nature of value to the enterprise

Principles for working with the GSRM

- Maintain a single, integrated view of the business independent of any technology
- Start with the principle elements of the GSRM; purpose, and value, augmenting the model as necessary to solve client problems
- Always apply basic data modelling standards to document the reference framework
- Be evidence based
- Make the methods repeatable
 - 1. Rules
 - 2. Patterns
 - 3. Principles
- Gradually use a tool to hold and automate the work

Observation: Existing standards do not connect with each other – adopting any one advances your maturity. Adopting any other(s) reduces it

Current work to extend the GSRM

- Stabilize the extended model and patterns
- Working to develop prototype software tool to automate the full extended model, patterns, and reference framework
- Still outstanding
 - A repeatable method of finding logical roles independent of the implementation of the business
- Research Results
 - Design work that took man years at the start of the process can now produce credible designs in a small number of months with higher quality results

Align to APQC, COBIT, OCEG, ITIL, and to IT4IT to gain insight on the impact of size and deployment strategies on the IT value chain

Reusable Patterns

(under continuous improvement)

- 19 Service Output Types
- 23 Program Types
- 60 Functions
- 900 High Level Processes
- 5 detailed process types (with 20 detailed processes)
- 21 Process Exception Conditions
- 57 logical Solution Types
- 12 Channel Types

- 40 Service (Value) Measure Patterns (across the 19 service types)
- 60 Process Measure Patterns
- 10 Resource Measures Patterns (a work in progress)
- 1500 Business Capability Types

(under development)

- Service and Process Roles
- Control Types
- Risk Types

What I would like to see

- Ability to gain the insight about applying the GSRM business architecture with other practitioners.
- See the GSRM adopted as a standard that will take in the experience of practitioners
- The GSRM used to provide a mechanism to align and integrate the full architecture stack. Connecting all parts of the design to the achievement of purpose and the delivery of value

Architecture Accelerator

- Using the patterns and appropriate automation we are now shortening the architecture cycle
 - Previous time to create a viable and credible strategic architecture 1-5 person years
 - Use of patterns has reduced the time to 2-10 months
 - Indications that automation will cut the high end in half (still need time to think \odot)

GSRM Example

The Lemonade Stand

Program Service Alignment Model

- Establishes Scope and Purpose of a sliver or slice of the business
 - Mission
 - Vision
- Public Sector: Connects a Program or Project to the DRF — Benefits realization

• Private Sector: Strategy

Imagine your neighbourhood has some industrious children and they set up a lemonade stand.

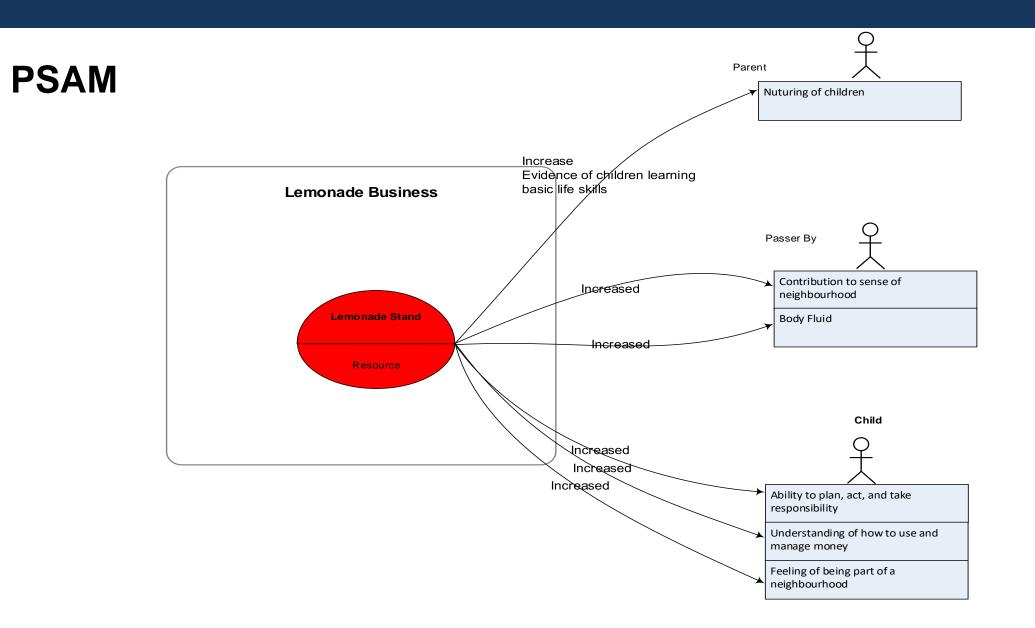
After applying for the correct permits from NCC. They start selling nice cold lemonade.

Let's do a PSAM for this:

- What are the services involved?
- What is the "Program"?
- What would be the Scope and Purpose of this business?
- What is the mission and vision?
- What are the benefits and outcomes?



Source :http://www.cbc.ca/news/canada/ottawa/ncc-lemonade-stand-1.3667287



Taxaat Croup	T	Mead	Commitment	Value Statement		Direct Outcome
Target Group	Туре	Need	Commitment	Value Statement		Direct Outcome
				Service->		Lemonade Stand
				Service Output Type		Resource
Parent	Individual	Nurturing of children	Increase	Evidence of children learning basic life skills	Lemonade Stand contributes to the fulfilment of Parent's need Nuturing of children by providing Evidence of children learning basic life skills	Bring about a Increase in Evidence of children learning basic life skills for a Parent based on their Nuturing of children
Passer by	Individual	Contribution to sense of neighbourhood	Increase	-	Lemonade Stand contributes to the fulfilment of Passer by's need Contribution to sense of neighbourhood by providing sense of neigbourliness	Bring About a Increase in sense of neigbourliness for a Passer by based on their Contribution to sense of neighbourhood
Passer by		Body Fluid	Decrease	thirst quenched	Lemonade Stand contributes to the fulfilment of Passer by's need Body Fluid Replacement by providing thirst quenched	Bring About a Increase in thirst quenched for a Passer by based on their Body Fluid Replacement
Child	Individual	Ability to plan, act, and take responsibility		Ability to plan, act, and take responsibility	Lemonade Stand contributes to the fulfilment of Child's need Ability to plan, act, and take responsibility by providing Ability to plan, act, and take responsibility	Bring About a Increase in Ability to plan, act, and take responsibility for a Child based on their Ability to plan, act, and take responsibility
Child		Understanding of how to use and manage money			Lemonade Stand contributes to the fulfilment of Child's need Understanding of how to use and manage money by providing Understanding of how to use and manage money	Bring About a Increase in Understanding of how to use and manage money for a Child based on their Understanding of how to use and manage money
Child		Feeling of being part of a neighbourhood	Increase	a neighbourhood	Lemonade Stand contributes to the fulfilment of Child's need Feeling of being part of a neighbourhood by providing Feeling of being part of a neighbourhood	-

- A SIAM is a view of a business that represents the requisite organizational capabilities (i.e. business services or process patterns) and the accountability relationships necessary to achieving a specified outcome - the value of the enterprise (i.e. as set out in the PSAM).
- An "accountability" may be operationalised as a service level agreement, a contract or through some other performance based agreement.

Service/Process

(unit of) resource

Recognize resource provision service planning cycle. Recognize resource provision service contingency event Plan response to service contingency event Test funds service business continuity plan Forecast resource provision service demand Forecast resource provision service risks Forecast consequences of failure to supply adequate resources Forecast consequences of failure to acquire resources to supply Establish classification standards for service output Set performance targets for resource provision service, processes, resources Measure performance of resource provision service, processes, resources Estimate resource provision service resource requirements (energy, labour, skills, funds, information, rules, fixed and movable assets, consumables, facilities, accommodations) Allocate resources to resource provision service processes Assess and improve resource service processes Establish criteria to request resource service delivery Establish criteria to receive resource service output Monitor resource provision service resource consumption Monitor resource provision service resource availability

See note for more complete listing...

Service Measures

Metric Type	Description	Туре	Resource
Average unit cost.	Value (sometimes price) of one service output compared with the average cost of the resources to produce and deliver it. This metric is equivalent to average cost per service recipient. Many variations on this metric are possible.	Efficiency	Resource provision unit cost.
Average per-capita cost.	Total cost of producing all service outputs per time period, compared with the total number of service recipients targeted in that time period, whether served or not. This metric is equivalent to the investment in meeting target group needs, and many variations are possible.		Resource capacity utilization
Case Outcome (Continuity)	Measures the aggregate of case outcomes in terms of a standard. A case outcome is the distinguishing characteristic of a case, defined as a series of related service outputs delivered over a period of time to the same recipient. A case outcome must be differentiated from a program outcome, which is a metric applied at the level of a target group, or an aggregation of case outcomes.		Correspondence of resource provision with established standards and policies framework
Responsiveness	Refers to the responsiveness of the service to a request where applicable in relation to a rule	Quality	Resource provision responsiveness
Accuracy	Refers to the correctness of the output in relation to a rule where applicable, e.g. is the information or advice provided by the service correct?	Quality	Resource provision accuracy
Availability	Refers to the availability of the service according to a scheduling rule.	Quality	Resource provision availability

Service Measures

Metric Type	Description	Туре	Resource
Responsiveness	Refers to the responsiveness of the service to a request where applicable in relation to a rule	Quality	Resource provision responsiveness
Specification	Compares features of the output of a service to a requirements specification or rule.	Quality	Resource provision cycle time
Compliance	Refers to the number of failures or departures from a constraint imposed for legal or policy reasons, or due to an approved standard	Quality	Resource provision alignment to specification
Reach / Coverage	Refers to the size of the target group's total population and the percentage of that total addressed by or taking up the service.	Quality	Resource provision reach / coverage
Continuity			The extent to which the resource supports overall business and personal continuity of action
Choice	Refers to the degree of choice presented for tailoring the output and its delivery. Examples of choices include: delivery channel; payment vehicle; provider; specification parameters	Quality	Resource provision number of choices (currency, payment vehicles)

Now back to the lemonade stand ...

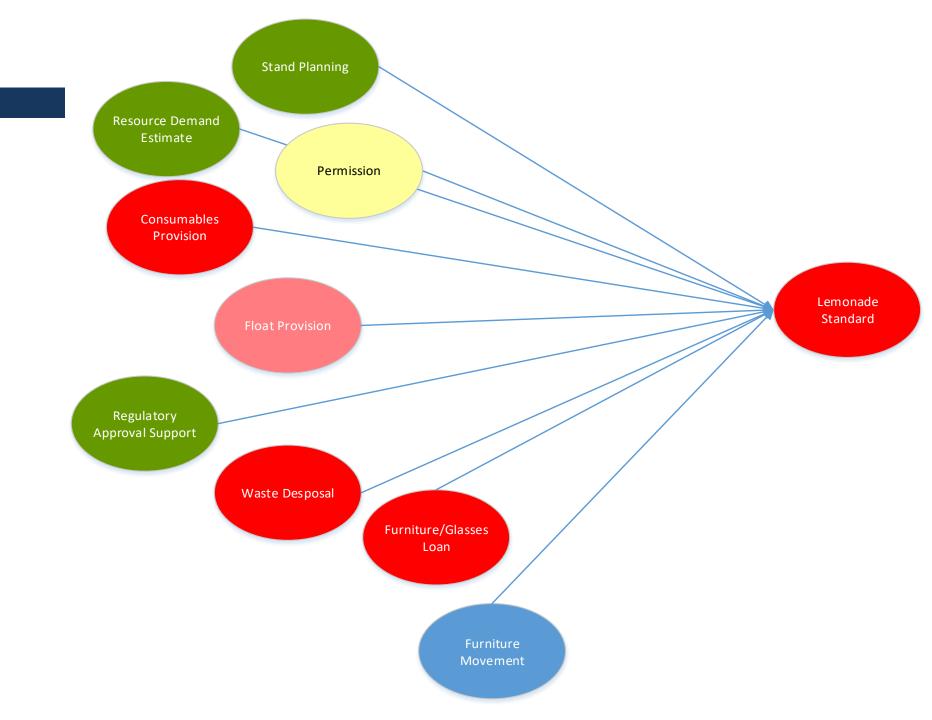
Let's do the SIAM for this:

- What are the organizational capabilities (i.e. business services or process patterns)?
- What are the accountability relationships necessary to achieving a specified outcome as set out in the PSAM)?
- What are the performance based agreements?

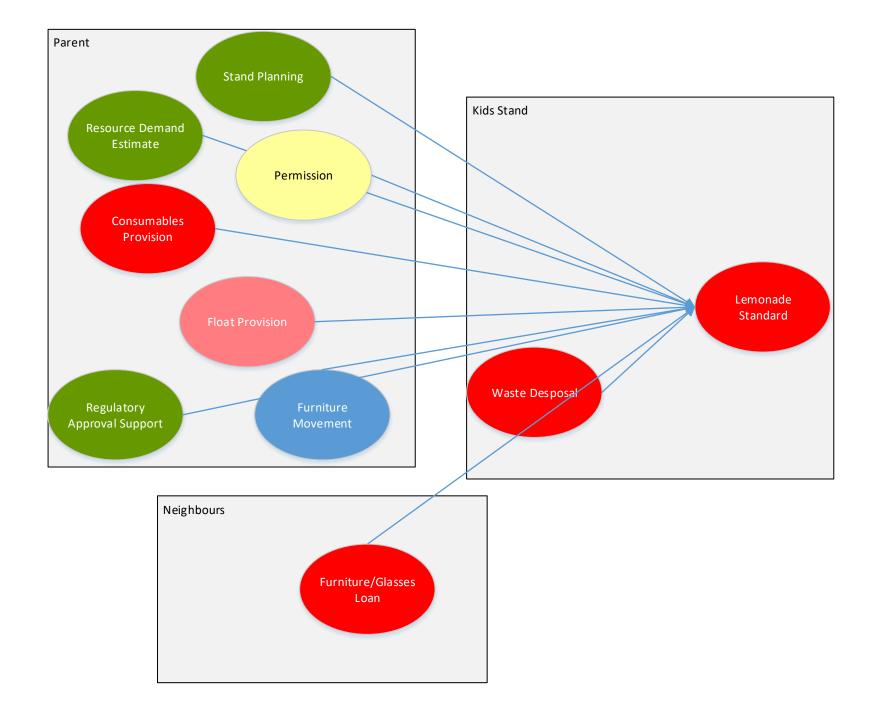


Source :http://www.cbc.ca/news/canada/ottawa/ncc-lemonadestand-1.3667287

Abstract SIAM



Abstract SIAM



Summary

- A logical design that focuses on purpose, value, of a business can be quickly
 produced using patterns to aide in an informed discussion of the business and to
 inform decisions about implementation, investment, and technology
- Few of the references (in the annex) are about technology.
- The reference models are still in use
- ICCS is looking at how to restart governance
- Many practitioners have adopted and <u>adapted</u>, it is time to bring the work together.

If you have comments, suggestions, questions or use case material that you think would be useful ... let us know.

Everyone loves standards ... that's why everybody has one.



Gary Doucet Gary.doucet@gmail.com

Contact Information

Neil Kemp neil@nka-ltd.com

Annex:

Connections to Other Models

- Outcomes on PSAM can be used for Balanced Scorecard/Department Results Framework
- Outcomes on "As is" and "To be" PSAM will provide Benefits Realization details
- Services plus other items will populate much of the Business Model Canvas
- Services can be used to derive Capabilities, Processes in a repeatable form
- Services can be deployed into an Operating Model

Other References

This list was produced nearly a decade ago and is included for context. Much newer examples of usage exist (e.g. DND used BTEP/GSRM extensively in their EA work) but there is not a forum for exchanging that information.

Reference: Winnipeg Fleet Services

(Aug/2006 - Sep/2009)

• Problem

Transform an internal vehicle maintenance organization into a public leasing business

- Key Results
 - Identified missing features in the business
 - Produced an organization design and job descriptions
- Extensions to Methods and Tools
 - Developed an evidence based method for designing organization that align to the strategy (Concepts added and integrated – Function, Authority)
 - Generated job descriptions from the model

Reference: British Columbia Student Loan

(Dec/2008 - Jun/2009)

Problem

Provide an integrated loan application processing and award program

- Key results
 - A repeatable design for integrated service delivery for a complex set of government programs
- Extensions to Methods and Tools
 - Development and method and to for describing a Logical Solution Architecture to support a business design
 - Begin rigorously applying the GSRM service process patterns (from the GSRM Pattern Book) as a repeatable tool in the business design process
 - Identified key process patterns that reside below those in the Pattern Book

Reference: City of Ottawa

(Aug/2009 - Sept/2011)

Problem

Downsize, outsource, insource, and optimize a fleet management service

- Key Results
 - Guidance on reorganization of operations with insourcing and outsourcing decision built into the design
- Extensions to Methods and Tools
 - Introduced a process hierarchy to normalize the end to end and top to bottom description of work
 - Extended the GSRM service process patterns/leveraging earlier patterns

Reference: Department of Fisheries and Oceans

(Sep/2011 – Mar/2012)

• Problem

Provide advice on a COTS solution for real property based on a transformed organization

- Key Results
 - Created a strategic design for real property management
- Extensions
 - Extended the GSRM service process pattern/leveraging earlier patterns
 - Refined the service, process, and resource performance patterns

Reference: HRSDC/ESDC

(Oct/2011 – Jan/2013)

• Problem

How to integrate the internal operations of the department to provide a shared set of internal services within the department

• Key Results

- Integration of SAP and PeopleSoft
- A recognition that the business problem could be addressed only on a GC wide basis
- Extensions to methods and tools
 - Extended the reference framework to include Channel, Competency (From Foresight Strategic Planning Method)

HRSDC – Human Resources and Skills Development Canada ESDC – Employment and Social Development Canada

Reference: Treasury Board Secretariat (Feb/ 2013 – Mar/2017)

• Problem

Define the end to end financial processes for the government of Canada

- Key Results
 - Using the repeatable patterns created the core models in three months
 - Identified gaps and scoping issues within the software configuration and implementation project
- Extensions
 - Extended the GSRM service process pattern /leveraging earlier patterns
 - Linked the extended service process pattern to APSC, ITIL, OCEG, COBIT looking for gaps based on these best practices

Public Sector Reference Models in Action Labour Market Delivery Agreement

Background

- The LMDA commits both governments to the following goals:
 - The creation of an integrated labour market system designed to achieve a more efficient and effective matching of a skilled labour force with current and emerging needs of employers;
 - The reduction, to the extent possible, of unnecessary overlap and duplication in their labour market development programs and services and the harmonization of their respective programs and services; and
 - The modernization of government services that build a client-centered service culture that offers a seamless, integrated, multi-channel approach to the delivery of government services.

(from Recitals of LMDA, signed November 2005)

• The implementation of the two agreements requires Ontario Government to articulate both what it will deliver to its clients (the business model) and how it will deliver (the service model)

Public Sector Reference Models in Action Labour Market Delivery Agreement

Provincial (20)		ting Programs Federal (7)
 Apprenticeship (Classroom) Training Ontario Youth Apprenticeship Program Pre-Apprenticeship Apprenticeship Client Services Modular Training Co-op Diploma Adjustment Advisory Program Apprenticeship Innovation Fund Sectoral Initiatives Fund Ontario Works 	 Job Connect Literacy and Basic Skills Summer Jobs Program Academic Upgrading Apprenticeship Scholarships / Signing Bonus Access to Professions and Trades Local Boards Job Grow Hotline Apprenticeship Tax Credit Ontario Disability Support Program 	 Employment Assistance Job Creation Partnerships Local Labour Market Partnerships Self-Employment Skills Development Targeted Wage Subsidies Federal Job Bank/Labour Exchange

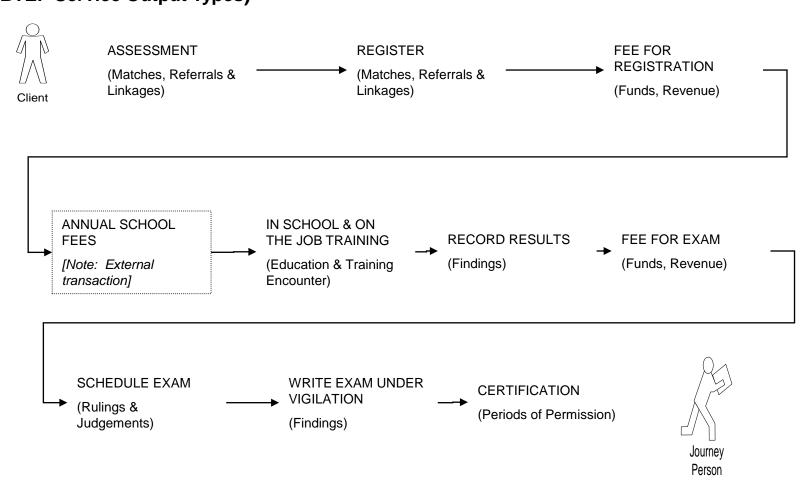
Opportunities for Service Improvements

The Service Mapping process is the methodology that will identify potential improvements of services to Ontario's Training & Employment clients. Through this process, there may emerge some opportunities that fit the vision. For example, opportunities that align with ServiceOntario's vision could include:

- Integration of Job Grow Hotline and Loans for Tools Call Centres
- Journeyperson certificate renewal at ServiceOntario kiosks
- Exam invigilation for apprenticeship certification exams

Public Sector Reference Models in Action Labour Market Delivery Agreement

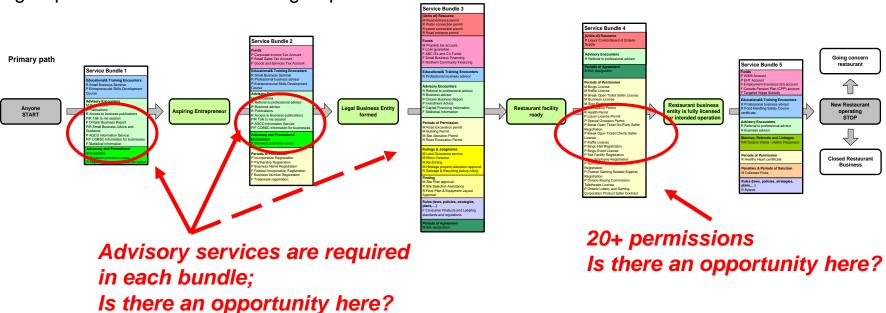
Applying BTEP/ Service Output Types to Apprenticeship (BTEP Service Output Types)



Public Sector Reference Models in Action Restaurant Start Up

Grouping Services to identify opportunities for common business processes

- Defines "bundles" by identifying services that detect, help or prevent transitions of a target group.
- Shows services by type or jurisdiction that must "fit together" to make a difference for the target group.
- Identifies opportunities for common or standardized processes to "join up" services in the bundle.



Public Sector Reference Models in Action Service Inventory

- What is it?
 - Initiative to explore requirements, define an information model and formulate implementation recommendations for developing an inventory of services provided by Government of Canada
- Why is it needed?
 - Provide authoritative list of services offered by the GC
 - Improve citizen access to federal government services
 - Identify the target groups and the needs that specific services are designed to address
 - Provide an information base for evaluating the range of services being offered, identifying overlaps and gaps in service offerings, considering candidates for service transformation

Reimagine this in the context of Government as a Platform. i.e. The app store for services.

Public Sector Reference Models in Action Service Inventory

- GC-TBS-CIOB Project
 - Initiated in participation by a number of departments
 - Project deliverables being reviewed
 - Leveraged earlier work on e-Contact, Seniors Portal, CBSC
- Implications
 - Creating the initial inventory will require collaborative effort and on-going commitment
 - Inventory must have near-term benefit for its stakeholders
 - Need to explore interest from multi-jurisdictional partners
 - Potential exists for outsourcing operations to registry service providers

Reimagine this in the context of Government as a Platform. i.e. The app store for services.

Public Sector Reference Models in Action Service Inventory

Service Inventory Information part of a larger picture ...

-							
	Service Name Service Output (Type) Service Recipient 	Planned Expenditure Actual Expenditure Planned Performance Actual Performance 	Service Delivery Schance Delivery Contact Coordinates :	Service Cost Cost Allocation MAF Indicator	Reporting to Parliament	Dept	
L	S						
	é						
A	X						
$\langle \rangle$	<u>.</u>						
	>						
\wedge	<u> </u>						
F	0						
⊢⋖	Й				ł		
F							
		<u> </u>					

Reimagine this in the context of Government as a Platform. i.e. The app store for services.

Public Sector Reference Models in Action Budget and Planning

Government of Canada Initiative

- Annual planning based on PAA Program Activity Architecture (Now called Program Alignment Architecture)
- GSRM used to inform internal services.
- Intent was to move to public services after piloting provider services.

• Implication: A service listed on the Canada Site would be traceable to annual plan and budget of depts. We'd know the cost, the intended result and what it takes to change our services to attain ...

Public Sector Reference Models in Action Service to Seniors

Seniors needs:

- The average income of Seniors is lower than other age groups
- Health care and support in communities
- Ability to participate in society
- How are these needs being met?
- What are the programs and services and who is providing them?
- Where are there overlaps and gaps?
- Where are there opportunities for shared services, consolidated services, elimination of services?
- Are services being effectively delivered?

Participants: Four orders of government (15 Organizations)

Time: 3.5 months elapsed

Public Sector Reference Models in Action Service to Seniors

Value to Senior's Portfolio

- Distilled complexity focus on what is common rather than what is different
- Identified who delivers service to seniors focus on "what" is delivered rather than "how" it is delivered
- Facilitated inter-jurisdictional discussions on collaboration

Value to Central Agencies

- Improved vertical and horizontal program evaluation and impact analysis
- Clearer horizontal picture to enable improved GC-wide stewardship, decisionmaking and reporting
- Focus on planning to achieve results as well as managing costs