Challenge-Based Solicitation and Other Agile Mechanisms at Shared Services Canada

June 4th, 2019







Table of contents



Background



From the Minister of Public Services and Procurement Mandate Letter (October 4, 2017)

"Modernize procurement practices so that they are simpler, less administratively burdensome, deploy modern comptrollership, encourage greater competition, and include practices that support our economic policy goals, including innovation, as well as green and social procurement."



Challenge-Based Solicitation and Other Agile Mechanisms at Shared Services Canada

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Traditional vs Agile Procurement





Challenge Based Solicitation - Context





In order to deliver **digital services**, **applications** need to communicate with each other.

Challenge: Event Broker Solution



This **Challenge-Based Solicitation** invites suppliers to develop innovative prototype solutions (each a "Solution") for propagating business and data events in real time across the Government of Canada ecosystem and to government, industry, and other stakeholders.

Each proposed Solution must provide **Event Broker capability** that supports ubiquitous **asynchronous messaging across connected systems**.

Key Issues for the Government of Canada



- Lack of a consistent or central platform to publish messages across departmental boundaries.
- Complex network flows, long lead times for implementation, and high latency involved in moving data across a widely distributed and complex network.
- Tendency towards point-to-point integrations rather than more efficient patterns (e.g., broadcast, publish-subscribe).
- Tendency towards data synchronization which tightly couples systems rather than loosely coupled event-driven architectures.
- High developer burden (e.g., learning curve, proprietary tools/ libraries, licensing) to publish or consume messages depending on the messaging platforms.
- Lack of support for DevOps approaches and automation tooling (e.g., manual deployment, manual instantiation of queues and topics, complex coordination with testing to configure stubs and data sinks).

Part 2 – Overview of the Initiative





An Outcomes-Based Statement of Work

 The Contractor must provide a solution that satisfies the Mandatory Solution Requirements (outcomes - the solution must do this...) and provide support services that comply with Mandatory Support Requirements (outcome arising e.g. The Contractor must provide an email account allowing users to seek technical support in writing).

Question

We don't prescribe activities, we prescribe the outcomes of the solution and the effects of the activities

Μ	ilestone	Delivery Date*
M d C	ilestone 5: Solution Design: The Contractor must provide its solution esign to support all of the required functionality identified in the ontract. The solution design must include:	30 business days from the date of exercise of Option 1
\triangleright	Deployment topology	
\succ	Networking and connectivity design	
\succ	Key configuration elements	
	Design for integrating with other Government of Canada integration capabilities	
\succ	Solution constraints	
\geqslant	Security architecture, including auditing and logging capabilities	
	Required access levels that support a role-based access control (RBAC) security model	

We don't ask the Contractor to deliver a solution that the GoC has designed, we ask them to design the solution

Evaluation Framework



11

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An Outcome-Based Evaluation Grid

S2.4	Scalability	3			
	The bidder should demonstrate how the proposed Solution is scalable.				
	Points will be awarded for a solution that can, with minimal effort:				
	 Increase transaction throughput capacity Onboard new endpoints, i.e. new publishers and subscribers Connect to new network zones In this requirement: 				
	• "minimal effort" means without changes to architecture or existing deployed integrations.				
S2.5	Sustainability	2			
	The bidder should demonstrate how the proposed Solution is sustainable.				
	Points will be awarded for a Solution for which the bidder:				
	 Demonstrates a long-term product roadmap. Demonstrates a strong user community. Demonstrates any other elements that demonstrate the bidder intends to continue to evolve and support the product In this requirement: 				
	• "long-term" means: 5 years or more.				
S2.6	Supportability	4			
	The bidder should demonstrate how the proposed Solution is supportable:				
	Points will be awarded for a solution that can be easily supported and operated by a small team.				
	In this requirement:				
	"small team" means two technical resources.				

The Resulting Contracts



Decision-Making Framework for Choosing Solution to be Implemented

Installation and setup procedure: How simple is the solution to install and set up?

Message publisher deployment: How can a message publisher be configured to the solution?

Message subscriber deployment: How can a message subscriber be configured to the solution?

Monitoring and operations: How simple is the solution to monitor and operate?

High availability: How does the solution recover from failures?

Troubleshooting: How does the solution support end-to-end troubleshooting of failed integrations?

Interface discovery: How does the solution support discovery of data interfaces?

Overall user experience: What is the overall user (developer and operator) experience during the execution of the various prototype use cases?

Other factors or benefits that would become available or known at Stage 3.

A Flexible Contract

The contract contains the flexibility to change solutions if the original implementation is not fully satisfactory.



Option 6: Implement the Solution for Other Clients



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Price Adjustment Mechanism Example

	Bid Price	Date of adj.	Adjusted Price	Option 3 CPI for Apr 2020= 136	
Stage 4 (Option 1)	\$750,000			CPI for Apr 2021 = 138 Adj. Option 3 = \$450,000 * (1+ (138-136) / 136)	
Stage 5 (Option 2)	\$450,000			Price * (1 + (CPI at the exercise date of the option - CPI at	
Stage 5 (Option 3)		Apr 15 th , 2021	\$456,617.65	beginning of Stage 5) CPI at the beginning of Stage 5	
Opt End of Stage 3 Im	tion 1 Exerci Stage 4 plementatio	sed (on	Option 2 Exercised Stage 5 – Year 1 Operations and maintenance	Option 3 Exercised Stage 5 – Year 2 Operations and maintenance	
March 28 th 2019	P Apr 1.5	^h 2019	Apr 1.5 th 20	20 Apr 15 th 2021	

Lessons Learned

Estimate Realistic Timelines

- Security and Supply Chain Integrity
- Legal Review, Translation and QA
- Production of quality documents



- The benefits of coaching the client during the drafting of the SoW the evaluation grid cannot be exaggerated
- Do not be limited by templates
- > Tailor contracting documents to satisfy the client's needs

Presentations Add Value Ensure sufficient time is allocated for Presentations, Quality Assurance and Reconciliation



Communication on Social Media must be addressed

Solicitation and Social Media

- 2003 13 (2014-03-01) Communications solicitation period
- **Single Point of Contact**: To ensure the integrity • of the competitive procurement process, all formal questions and other communications regarding the solicitation must be directed only to the Contracting Authority identified in the solicitation. Failure to comply with this requirement may result in the bid being declared non-compliant. While public servants (who may or may not be involved in this procurement) may engage in exchanges in other fora, such as social media, official information that is binding on Canada will only be made available by the Contracting Authority and bidders relying on information found do so at their own risk.
- 2003 -18 (2012-03-02) Conflict of interest unfair advantage
- In order to protect the integrity of the procurement process, bidders are advised that Canada may reject a bid in the following circumstances:
 - if the Bidder, any of its subcontractors, any of their respective employees or former employees was involved in any manner in the preparation of the bid solicitation or in any situation of conflict of interest or appearance of conflict of interest;
 - if the Bidder, any of its subcontractors, any of their respective employees or former employees had access to information related to the bid solicitation that was not available to other bidders and that would, in Canada's opinion, give or appear to give the Bidder an unfair advantage.

What needs to change to favor the emergence of agile procurement?

Process

People



- Develop **cultural alignment** and a clear definition of agile procurement
- Develop **clear lines of accountability** in decisionmaking
- Engage cross-functional groups of key stakeholders to collaborate on procurements

• Understand the **end-to-end procurement journey**, break down current silos

 Formalize continuous feedback loops and knowledge management by documenting lessons learned



- Use technology as an opportunity to promote collaboration across silos
- Increase visibility of the workflow and approval process for all stakeholders

Agile Procurement Changing the World of Procurement One Sprint at a Time



Contract Outcome-based Challenge-based Organize Pilots Baseline Experimentation Agile Prototype Engage Increments Efficiency Green Procurement e-Valuate Standardize PEN Bid Compliance Social Procurement Document Modernization Results Support Technology Digital Signatures Feedback Simplification Innovations Automation ABC Measure Bidders Process PBCC Value VPI Open Scrum Clients

