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700 Montreal Road,
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K1A 0P7

REQUEST FOR RESPONSES FOR EVALUATION AMENDMENT

MODIFICATION DE LE DEMANDE DE RÉPONSES POUR L'ÉVALUATION

The referenced document is hereby revised; unless otherwise indicated, all other terms and conditions of the RFRE remain the same.

Ce document est par la présente révisé; sauf indication contraire, les modalités de la DRPE demeurent les mêmes.

Title – Sujet Data Warehouse for Canada Border Services Agency	
Solicitation No. – N° de l'invitation 10029562/A	**Amendment No. – N° de modif.** 004
Client Reference No. – N° référence du client **13-0444**	**Date** July 4, 2013
File No. – N° de dossier CAB10029562	
RFRE Closes – La DRPE prend fin **at – à 02 :00 PM** **on – le** July 22, 2013	**Time Zone** **Fuseau horaire** Eastern Daylight Saving Time (EDT) Heure avancée de l'Est (HAE)
F.O.B. - F.A.B. **Plant-Usine:** ☐ **Destination:** ☐ **Other-Autre:** ☐	
Address Inquiries to : - Adresser toutes questions à: Melissa Ho	**Buyer Id – Id de l'acheteur** CAB
Telephone No. – N° de téléphone : 819-956-1389	**FAX No. – N° de FAX** Not applicable
Delivery required - Livraison exigée See Herein	**Delivered Offered – Livraison proposée**
Destination – of Goods, Services, and Construction: **Destination – des biens, services et construction :** See Herein	

Comments - Commentaires

This document contains Security Requirements

Ce document contient des exigences sécuritaires.

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This amendment is raised to answer Industry questions and to modify the draft RFP document, Statement of Requirements (SOR) and Attachment 4.1 – Mandatory Requirements.

Question 10:
Doc 269189.U003, section 4.2.4 Proof of Proposal Test of Top-Ranked Bid states:
b. After being notified by the Contracting Authority, the Bidder will be given 10 business days to deliver and start the installation of the proposed Solution.

While 10 business days is the norm for GoC RFPs, we ask that the number of days be changed to 30 from 10. The internal process to have an engineered system built, packaged, shipped etc... cannot be accomplished in 10 business days as there are factors outside of our control (i.e. possible delays while undergoing customs inspection), as well as the necessary internal approval process. Typically we set an expectation with our clients of 6-10 weeks for delivery when purchased through standard procurement processes.

Answer 10:
Canada will extend the period of time from 10 to 15 days. Canada will not accept the 30 day request on the grounds that this requirement is the Proof of Proposal (POP) stage. All information is made available in the draft RFP to all Respondents well in advance in regards to the POP technical requirements. The Bidder with the top ranked bid must be prepared to comply with the POP technical requirements.

Please see Modification 008.

Question 11:
Doc 269189.U007, section 3.1 General Requirements states:
3.1.4 - The Bidder should identify in sufficient scripted detail the manner in which their solution would integrate with the existing DB2 z/OS database engine seamlessly, such that existing DB2z/OS based queries will not have to be modified to exploit the solution and the existing DB2 optimizer recognizes solution as an option.

Our understanding is that the ensuing RFP will be for a data warehouse platform, which based on multiple requirements in the draft RFP (3.12.2, 3.12.3, 3.19.1, 3.19.6, 3.4.1, 3.11.1 etc...) could include a relational database. This requirement seems to indicate that queries will still run against existing DB2 z/OS instances, possibly not on the resulting engineered system. The likely solution, however, will include a data warehouse platform which will include the relational database running on the engineered system, and as such this requirement seems irrelevant. We respectfully ask that the requirement be removed so as not to limit the ensuing RFP to run a pre-existing relational database.

Answer 11:
Canada will not make the requested change.

Question 12:
Doc 269189.U004, section 3.1 General Requirements states:
The Solution must provide isolation between Sandbox, Development/Test, Pre-Production and Production environments such that the workload, modifications or outage in one environment cannot impact another environment; furthermore, the Production and Disaster Recovery environments must be physically isolated from other environments.
a. Sandbox
b. Development/Test
c. Pre-Production
d. Production
e. Disaster Recovery Production

In this requirement, development and test are combined into a single environment. Many organizations separate the two as testing many include more rigorous demands on the underlying infrastructure resources. This also will have an impact on the resulting RFP's proposed architecture and possibly financial quotes. Please confirm that this requirement is accurate and that CBSA/SSC wish to have a single, shared Dev/Test environment.

Answer 12:
Canada will not make the requested change. Testing is not deemed resource intensive in this scenario and is only meant to satisfy functional integrated testing. The Pre-Production environment is where the resource intensive demands which mimic production will run.

Question 13:
Doc 269189.U007, section 3.1 General Requirements states:
3.20.1 - The Contractor's Solution must integrate with LDAPv3-Compliant Directory.
3.20.2 - The Contractor's application software must require a user name and password login.
3.20.12 - The Contractor's Solution must include integration with CA E-trust Directory LDAP for authorization and authentication to the Solution.

These requirements all speak to the task of authentication and authorization. However, it is not clear for which roles and responsibilities and for which functional tasks these requirements are being included. For instance, is this for the user responsible for data loading, for monitoring, for patching, for auditing etc... If further clarification, or business case examples, could be provided that would be appreciated.

Answer 13:
All authentication and authorization must be off-loadable to LDAP. Whether it's to query the databases, administrative functions like restarting the solution, upgrading firmware etc.

Question 14:
Doc 269189.U004, section 3.1 General Requirements states:
3.22.1 - The Contractor's Solution must include the capability for backups to be sent directly to Canada's current backup Solution "IBM's Tivoli Storage Manager" by using the SAN fabric connection (not over network).

It is our interpretation that this requirement is included to address the need of reducing network traffic, and increasing performance/speed, during a backup to IBM's Tivoli Storage Manager. In order to increase the openness of the ensuing RFP, we ask that CBSA/SSC amend the requirement to allow for alternative, but equally effective, methods of backups that provide the same business and technical value.

For instance:
3.22.1 - The Contractor's Solution must include the capability for backups to be sent directly to Canada's current backup Solution "IBM's Tivoli Storage Manager" by using the SAN fabric connection (not over network), or using an alternative approach that negates the need for large transfers over the existing network.

Answer 14:
Please see Modifications 009 and 010.

Question 15:
3.1 General Requirements

3.1.4 The Bidder should identify in sufficient scripted detail the manner in which their solution would integrate with the existing DB2 z/OS database engine seamlessly, such that existing DB2z/OS based queries will not have to be modified to exploit the solution and the existing DB2 optimizer recognizes solution as an option.

100% (15 points): The Bidder's solution would integrate with the existing DB2 z/OS database engine seamlessly; such that, existing DB2z/OS based queries will not have to be modified to exploit the solution and the existing DB2 optimizer recognizes solution as an option.

20% (3 points): The Bidder's solution would integrate with the existing DB2 z/OS database engine seamlessly but existing DB2z/OS based queries will have to be modified to exploit the solution or the existing DB2 optimizer does not recognize solution as an option.

0% (0 points): The Bidder's solution does not integrate with the existing DB2 z/OS database engine seamlessly

Are all queries using strict ANSI compliant SQL only?

Answer 15:
Yes. All queries from DB2 z/OS for this platform would be ANSI compliant.

Question 16:
Given the complexity of the requirements for the Data Warehouse (DW) FOUNDATION, Data Management & Data Warehouse and due diligence required to ensure that the proposed solution and all items comprised in the resulting IT Products List are fully compliant, we respectfully request a four week extension to the solicitation period.

Answer 16:
Please see Amendment 003.

Question 17:
RFP Document U002 Annex C – IT Products List
1.3.1 "Manufacturer of the Product/software and by OEM of embedded components' **Proprietary Question**

Please can you clarify what is meant by OEM of embedded component and what is the lowest level this has to be identified to? We manufacture an Appliance and we manufacture the internal boards and controllers ourselves using OEM electronic components (eg cpu and memory chips, capacitors, wire harness, power supplies, network cards, disks and disk controllers) from a very wide range of OEMs. .Will we be compliant if we provide the details at the product identifier level, as we do not disclose the OEM subcomponents? We can identify the OEM suppliers for CPU processor chips and disk and tape drives, but it is very difficult to identify sub-components below that level.
In the Draft RFP U003, section 5.6.3, it is stated that " for the purpose of this bid solicitation, OEM means the manufacturer of the hardware, as evidenced by the name appearing on the hardware, all documentation, certification and support software. As the manufacturer of the Appliance, all customer orderable items bear our name, so are we correct in that we do not have to go down to the OEM components within those customer orderable items?

Answer 17:
All pluggable components (ex. Network components, I/O components, Memory components, UPS components, disk components) used to build the appliance needs to be identified, however sub-components of those components (IC technology, capacitors, resistors, wires, etc) do not need to be identified.

Question 18:
RFP Document U004 Annex A Statement of Requirements
3.1.6 Page 6 "The contractor's solution must have a constant availability of 99.95%"
Does the 99.95% also apply to the Sandbox and Development platform? We suggest that to minimise cost to the government that a lower availability percentage be considered for these two non-mission critical platforms.

Answer 18:
No, Sandbox and Development platforms have a lower availability expectation and are not subject to the 99.95% availability requirement.

Question 19:
RFP Document U004 Annex A Statement of Requirements
3.1.6 page 6 – Proprietary Question "The contractor's solution must have a constant availability of 99.95%"

How will availability be measured . e g hardware availability (i.e. hardware is either up, partially down or down) or user availability (i.e. if a hardware component is down but the users can still use the system with degraded performance)?
Our solution provides near fault tolerant hardware and software; if a hardware component becomes unavailable, it automatically is configured out of the system which would still be available to users, but with degraded performance.
Our solution provides integration between production and DR systems such that if production system is down, users can continue on the DR system – how is availability measured in that situation?

Answer 19:
Degraded performance is still considered "available" however in the case that there is a required time outage to switch users over to a failover solution (ex. Requirement for another sign-on) that time is considered an "availability outage".

Question 20:
RFP Document U004 Annex A Statement of Requirements
3.1.8 Page 6 "The Contractor must agree that all technology aspects of their Solution as included under the Contract are to be replaced by latest available technology from the Contractor as released for sale in the marketplace at no additional cost to Canada during the life of the Contract and any extensions issued thereto."

We request this condition be removed as it is financially punitive to vendors, and appears to be in conflict with 7.18 in RFP Document U003 Draft RFP Appendix

"D 7.18.1 During the Contract Period, if technological improvements have been made to the products available for purchase under the Contract, the Contractor may propose new products that are an extension of an existing product line or the "next generation" of an existing product line that meet or exceed the specification(s) of existing products under the Contract, if the price for the new product does not exceed:

a. the firm price (or ceiling price, if applicable) for the product originally offered in the Contractor's bid that resulted in the award of the Contract plus 5%;

b. the current published list price of the substitute product, minus any applicable Government discount; or

c. the price at which the substitute product is generally available for purchase,
whichever is the lowest."

Answer 20:
Agreed. Please see Modifications 011 and 012.

Question 21:
RFP Document U004 Annex A Statement of Requirements
3.14.4 Page 15 "The Contractor's Solution must include any proprietary high speed adapters/interfaces necessary to achieve the fastest data loads possible with technology being proposed"

Can the Tier 3 mainframe(s) identified in Appendix 1 of the RFEP (Page 28) in use by CBSA/SSC support Long Wave FICON

Answer 21:
No, the Mainframe z196 does not currently support Long Wave FICON.

Question 22:
RFP Document U004 Annex A Statement of Requirements

3.15.3 **"**The Contractor's Solution must backup and restore at a minimum rate of 4 TB an hour"

The Backup and Recovery hardware and software is not part of the RFEP, but is required for backups to be sent to Canada's backup solution. Please provide more detailed specifications on the Canada backup solution, so we can determine how to configure our solution. Can Canada's Backup solution sustain 4TB an hour backup and restore volumes?

Answer 22:
Canada's backup and recovery hardware is an EMC Data Domain 890 (DD890) emulating a VTL and the software is IBM Tivoli Storage Manager Version 6.3.1.

Question 23:
RFP Document U004 Annex A Statement of Requirements
3.15.7 "The Contractor's Solution must include the capability to allow read and write access to tables during a backup of the same tables.

Please clarify this request. We suggest that the 'write access' be removed. When backing up a table, concurrent write access to the table can result in data differences between the table on disk and the backed up table. Industry best practice for data integrity to to only allow read access to tables being back up.

Answer 23:
Agreed. Please see Modifications 013 and 014.

Question 24:
RFP Document U004 Annex A Statement of Requirements
3.15.14 "The Solution must meet a "Recovery Time Objective" (RTO) from time of failure and be returned to a fully operational state within the following timelines:

a. Severity Level 1 (if supporting critical queries): 4 hours

b. Otherwise: 24 hours

As the Sandbox and Development platforms should not be running critical queries, does "a" still apply to those platforms?

Answer 24:
No, "a" does not apply to Sandbox and Development platforms.

Question 25:
RFP Document U004 Annex A Statement of Requirements
3.16.2 and 3.16.3 These two sections specify Primary site availability. Does this 99.95% availability include the sandbox and Development system?

Answer 25:
No, the 99.95% availability does not apply to Sandbox and Development platforms.

Question 26:
RFP Document U004 Annex A Statement of Requirements
3.21.3 **"**The Contractor's Solution must work with and must not interfere with Canada's software

Is "Canada's software" referring to Appendix 1 (Page 28) of the SoR, where it lists the Software tools in use? If so, please provide the version release number for each of the Software tools. As several of the software tools in use are very old (eg Impromptu – Cognos 7) please indicate any plans for Canada to upgrade these to more current and vendor supported versions

Answer 26:
The version numbers if the Software tools in use are:

Cognos suite 8.4 and 10

Information server suite 8.5 FP2 and 9.1
IBM CDC 6.5
Clementine 14
Impromptu 7.5
OmniFind 9.1
LanguageWare 7.0.1
Identity Insight 8.1
Business Objects:
SAP BI Suite 4.0

- SAP Crystal Reports
- Business Objects BI Platform
- Business Objects BI Platform Mobile Add-On
- Business Objects Explorer
- Business Objects Analysis Edition OLAP
- Business Objects WEB Intelligence
- Business Objects Dashboard

SAP Netweaver Business Warehouse, 7.3
Netweaver Foundation for Third Party Applications, 7.3
Business Objects Test Analysis XI 3.0 (SP2)
Text Analysis Language Processing
SAP Business Objects Planning and Consolidation for the Public Sector 10.0
SAP Business Objects Strategy Management 10.0

Question 27:
RFP Document U004 Annex A Statement of Requirements
3.21.10 **"**The Contractor must provide a minimum of 3 years support on previous versions of their software" We suggest this be changed to "When the contractor releases a new version of software, they must provide a minimum of three years support".
We make this suggestion to clarify that this requirement does not extend back onto previous versions of software existing prior to the initial version provided to Canada under Contract award.
We also suggest that "a minimum of three years support" be changed to "a maximum of three years" in keeping with industry trends.

Answer 27:
Agreed. Please see Modifications 015 and 016.

Question 28:
RFP Document U004 Annex A Statement of Requirements
3.22.1 **"**The Contractor's Solution must include the capability for backups to be sent directly to Canada's current backup Solution "IBM's Tivoli Storage Manager" by using the SAN fabric connection (not over network)."

Please can you provide additional details on the SAN fabric connection and its interface.

If a vendor does not have a "SAN fabric" connection compatible with Canada's TSM solution, we suggest that Canada change 3.22.1 to include "or Private Gigabit (1Gb/sec or 10Gb/sec) network connection"

Answer 28:
Canada's SAN fabric is composed of Brocade DCX fibre channel director switches with 8 Gbps port speed.

Question 29:
RFP Document U004 Annex A Statement of Requirements

3.22.5 "The Contractor must ensure that the power and cooling units of primary site Solution is bottom-vented, and the disaster recovery site is top-vented."

Please can you clarify the site requirement as this item combines both power and cooling requirements? All our systems are front to rear cooling, thus having front and rear vented cabinets. Our cabinets have holes at the bottom and top for cabling, and some partial perforation on the top for venting. Cabling can be through the bottom or top of cabinets, but venting is front to rear. Please can you provide a technical drawing on what Canada is requesting?

Answer 29:
Please see Modifications 017 and 018.

Question 30:
RFP Document U004 Annex A Statement of Requirements
3.22.10 The Contractor's Solution must have power connectors from the customer equipment to our internal grid and supporting L6 type connectors.
This may be in conflict to 3.22.8 (The Contractor's Solution must have power supplies supporting both single and three-phase power)
For single phase or phase to phase AC solution, we can accommodate NEMA L6 plugs. However for 3-phase AC solution, we can't use L6 type connectors.but require 3-phase connectors such as NEMA L21

Answer 30:
Please see Modifications 019 and 020.

Question 31:
RFP Document U004 Annex A Statement of Requirements
3.22.11 The Contractor must ensure that all devices and power units are CSA (Canadian Safety Associated) approved.

We suggest that this clause be modified to recognize that as a result of WTO and NAFTA agreements, industry changes were made whereby a single laboratory could provide certification to both US and Canadian standards. Also both countries standards have been harmonized. Consequently today for our solutions we obtain cTUVus certification from TUV- Rheinland that meets the Canadian requirements signified by the preceding "c" and it meets the USA requirements signified by the trailing "us". Therefore the certification to both US and Canada standards is issued by TUV-Rheinland, not by UL or CSA. Please confirm that this is acceptable.

Answer 31:
Yes, this is an approved certification and is accredited by the Standards Council of Canada to test and certify products to Canadian National Standards.

Question 32:
RFP Document U004 Annex A Statement of Requirements
7.15 **"**The Contractor must provide a minimum of 3 years support on previous versions of their software"
As commented on in 3.21.10 above, we suggest this be changed to "When the contractor releases a new version of software, they must provide a minimum of three years support".
We make this suggestion to clarify that this requirement does not extend back onto previous versions of software existing prior to the initial version provided to Canada under Contract award.
We also suggest that "a minimum of three years support" be changed to "a maximum of three years" in keeping with industry trends.

Answer 32:
Please see Answer 27 and Modifications 015 and 016.

Question 33:
Appendix 1 (Page 28) Current Canada Environment (Page 1 of 2)

For the software tools section, please provide specific version numbers of all software tools listed. As some of these tools are no longer current, please indicate any plans to upgrade them to more current releases.

Answer 33:
Please see Answer 26. Versions listed will be the version in use at time of contract award regardless of future upgrade plans. These versions must be compatible with the Bidder's solution.

Question 34:
Appendix 2 (Page 30) Future Design Overview and Dataflow
In this diagram at top centre is a dashed box, shaded Green, titled DW: Archival Solution. The Green legend indicates it is in RFP scope, but there are no requirements detailed in the RFEP, or draft RFP for an Archival solution. Please clarify.

Answer 34:
The diagram will be re-released with the Archival Item shaded grey to reflect that it is not in scope of the requirement. Please see Modification 021.

Question 35:
RFP Document U007 Attachment 4.2 Rated Requirements
3.1.16 "The Bidders solution is Ready to Use within24/72/120/+ hours of delivery"
In the industry today, solutions of this size (100TB+ of user space) typically require 5-10 days once delivered onsite to "burn-in" the very significant number of disk drives and thus minimising future component failure when in production. We suggest that this section be changed to have 5 days as the 100%/15 points.

Answer 35:
Canada will not make the requested change.

Question 36:
RFP Document U003 Draft RFP Appendix D
4.2.4 b. We request that the 10 business days for delivery be changed to 20 days as these are large systems. We request that the 5 business days to be ready for testing from starting installation be changed to 10 days as these are large systems.

Answer 36:
Please see Modification 008.

Question 37:
5.8 Code of Conduct Certifications – Proprietary Question
This section requires vendors to provide " a complete list of names of all individuals who are currently directors of the Bidder". Please can you clarify your definition of director and who this should be.. We are the Canadian subsidiary of a publicly listed US corporation. In Canada we have a President but no directors. The US parent has a Board of Directors. Would the non-board level corporate executives of the company be considered directors ?

Answer 37:
The President, Board of Directors, Chief Executive Officer (CEO), or Chief Operating Officer (governing or controlling mind for the company) of an institution or corporation are also considered acceptable.

Question 38:
In Part 3 of the RFRE section 3.1.3 Table 1 Summary of CBSA Data Warehouse Procurement Process

Under the RFRE phase and RFP phase will the Crown permit the prime bidder to name other agents, resellers or subcontractors to perform the work and/or delivery of the products requested under this contract as it would provide the consistent offer to have subcontractors for sales, financial capability, delivery capability and availability to serve this requirement.

Answer 38:

Subcontracting is acceptable only in the instances of delivery and installation of the product. The Bidder must be the OEM supplier of the Solution.

Question 39:
If the Crown permits the prime bidder to name other agents, resellers or subcontractors, to perform the work and/or delivery of the products requested under this contract, will those agents or resellers be allowed to prime the bid using their Vendor Partner's Corporate experience/references as required in Attachment 4.1 Mandatory Requirements Article 1. "The Bidder must have experience in the manufacture, supply, marketing, integration, testing and maintenance and support of a solution similar in size and scope to CBSA's requirement".

Answer 39:
The Bidder must be the OEM supplier of the Solution.

Modification 8:

On page 11 of 56 of the draft RFP, 4.2.4 Proof of Proposal Test for Top-Ranked Bid, item b:

Delete:
After being notified by the Contracting Authority, the Bidder will be given 10 business days to deliver and start the installation of the proposed Solution.

Insert:
After being notified by the Contracting Authority, the Bidder will be given 15 business days to deliver and start the installation of the proposed Solution.

Modification 9:

On page 21 of 47 of the SOR, article 3.22.1:

Delete in its entirety.

Insert:
The Contractor's Solution must include the capability for backups to be sent directly to Canada's current backup Solution "IBM's Tivoli Storage Manager" by using the SAN fabric connection (not over network), or using an alternative approach that negates the need for large transfers over the existing network that does not require Canada to make available any disk storage outside the solution to stage data before it is sent to tape.

Modification 10:

On page 23 of 31 of Attachment 4.1 Mandatory Requirements, article 3.22.1:

Delete in its entirety.

Insert:
The Bidder's Solution must include the capability for backups to be sent directly to Canada's current backup Solution "IBM's Tivoli Storage Manager" by using the SAN fabric connection (not over network), or using an alternative approach that negates the need for large transfers over the existing network that does not require Canada to make available any disk storage outside the solution to stage data before it is sent to tape.

Modification 11:

On page 6 of 47 of the SOR, article 3.1.8:

Delete in its entirety.

Modification 12:

On page 4 of 31 of Attachment 4.1, Mandatory Requirements, article 3.1.8:

Delete in its entirety.

Modification 13:

On page 16 of 47 of the SOR, article 3.15.7:

Delete in its entirety.

Insert:
The Contractor's Solution must include the capability to allow read access to tables during a backup of the same tables.

Modification 14:

On page 16 of 31 of Attachment 4.1, Mandatory Requirements, article 3.15.7:

Delete in its entirety.

Insert:
The Bidder's Solution must include the capability to allow read access to tables during a backup of the same tables.

Modification 15:

On page 20 of 47 of the SOR, article 3.21.10:

Delete in its entirety.

Insert:
In the event of the Contractor releasing new versions of software, the Contractor must provide a minimum of 3 years support.

Modification 16:

On page 22 of 31 of Attachment 4.1, Mandatory Requirements, article 3.21.10:

Delete in its entirety.

Insert:
In the event of the Bidder releasing new versions of software, the Bidder must provide a minimum of 3 years support.

Modification 17:

On page 21 of 47 of the SOR, article 3.22.5:

Delete in its entirety.

Insert:
3.22.5
a. The Contractor must ensure the following for the primary site Solution:

- The Solution must vent hot air out of the back of the unit based on a hot/cold aisle configuration, with cooling from the front or bottom.
- The Solution's power and network cables must route through the bottom of the unit."

b. The Contractor must ensure the following for the disaster recovery site:
- The Solution must vent hot air out the top of the unit using a chimney system and other than the front, the unit must be sealed on all other sides to ensure warm air exhaust is vented out of the top of the unit.
- The Solution's power and network cables must route through the top of the unit.

Modification 18:

On page 23 of 31 of Attachment 4.1, Mandatory Requirements, article 3.22.5:

Delete in its entirety.

Insert:
3.22.5
a. The Bidder must ensure the following for the primary site Solution:
- The Solution must vent hot air out of the back of the unit based on a hot/cold aisle configuration, with cooling from the front or bottom.
- The Solution's power and network cables must route through the bottom of the unit.

b. The Bidder must ensure the following for the disaster recovery site:
- The Solution must vent hot air out the top of the unit using a chimney system and other than the front, the unit must be sealed on all other sides to ensure warm air exhaust is vented out of the top of the unit.
- The Solution's power and network cables must route through the top of the unit.

Modification 19:

On page 21 of 47 of the SOR, article 3.22.10:

Delete in its entirety.

Insert:
3.22.10
a. The Contractor must ensure the following for the primary site Solution:
- All devices must operate between 208-220 volts;
- Connector types must be Nema L21 for 3 phase recommended or L6 single phase;
- All rack power distribution units used within Canada's Data Centre facilities must have fail arrest capabilities engineered within thus eliminating the potential of fault arrest occurring on the main power distribution system.

b. The Contractor must ensure the following for the disaster recovery site Solution:
- All devices must operate at 400 volt 3 phase 320 amps (230 volt 1 phase);
- Connector types must be Nema L22 for 3 phase;
- All rack power distribution units used within Canada's Data Centre facilities must have fail arrest capabilities engineered within thus eliminating the potential of fault arrest occurring on the main power distribution system.

Modification 20:

On page 23 of 31 of Attachment 4.1, Mandatory Requirements, article 3.22.10:

Delete in its entirety.

Insert:
3.22.10
a. The Bidder must ensure the following for the primary site Solution:

- All devices must operate between 208-220 volts;
- Connector types must be Nema L21 for 3 phase recommended or L6 single phase;
- All rack power distribution units used within Canada's Data Centre facilities must have fail arrest capabilities engineered within thus eliminating the potential of fault arrest occurring on the main power distribution system.

b. The Bidder must ensure the following for the disaster recovery site Solution:

- All devices must operate at 400 volt 3 phase 320 amps (230 volt 1 phase);
- Connector types must be Nema L22 for 3 phase;
- All rack power distribution units used within Canada's Data Centre facilities must have fail arrest capabilities engineered within thus eliminating the potential of fault arrest occurring on the main power distribution system.

Modification 021:

On page 30 of 47 of the SOR, Appendix 2, Future Design Overview and Dataflow:

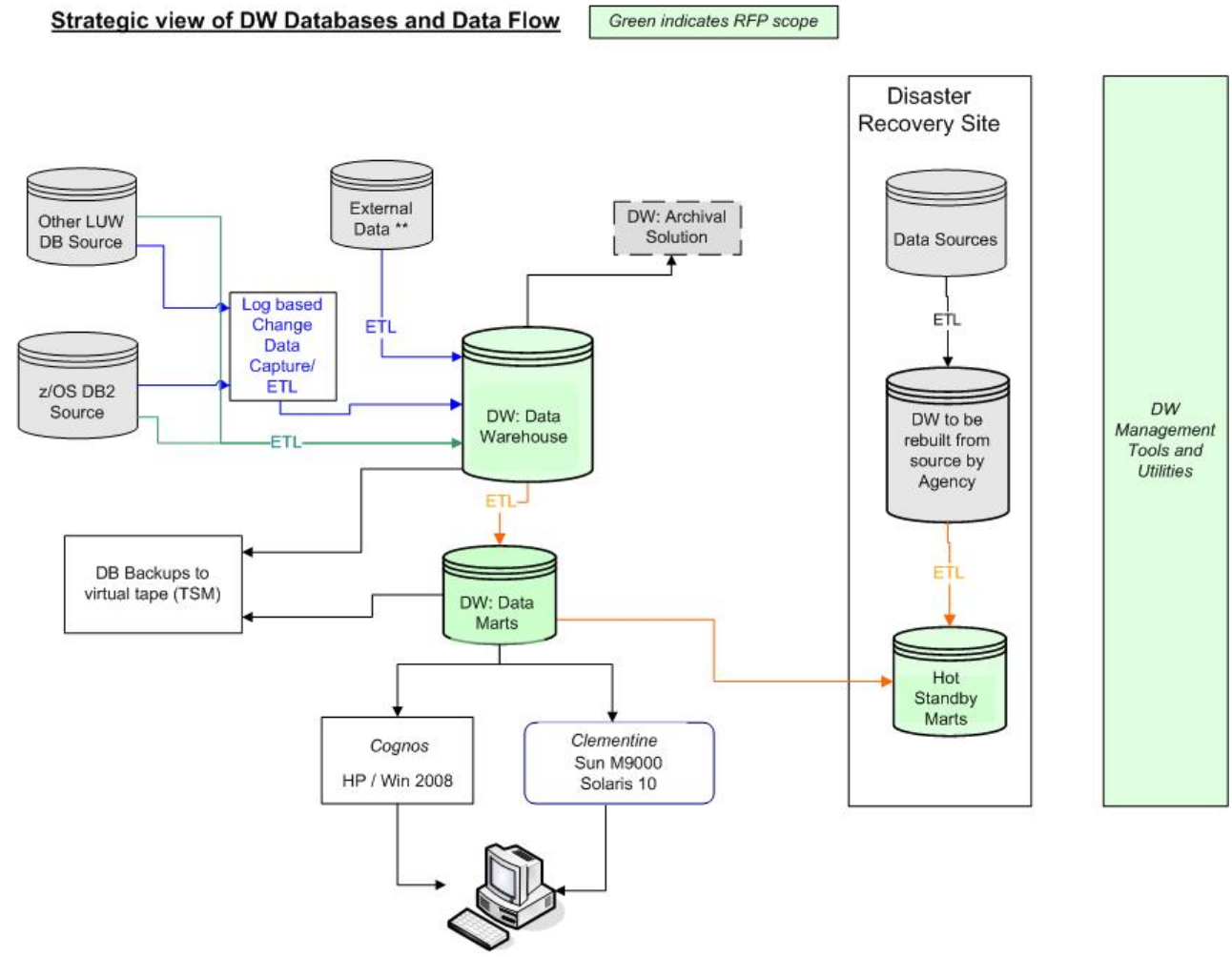
Delete in its entirety.

Insert: See revised Appendix 2 below.

ALL OTHER TERMS AND CONDITIONS REMAIN THE SAME.

Appendix 2 Future Design Overview and Dataflow

The following diagram includes a strategic view of Canada's future Data Warehouse. This environment could change during the life of the contract.



** External data as referenced in this diagram references data originating external to CBSA but subsequently stored inside the Agencies firewall.