Electronic Information Environment (EIE)

Service Specification Document/Interface Control Document

Navy Part Demand Response – External

External – In the above context is intended to reflect that this content is for the In-Service Support (ISS) Contractors who have been contracted to participate in an ISS phase of a Weapon System or Platform that the Department of National Defence has acquired.

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The information being provided is to illustrate the model that exists for business processes and information exchange within the Performance Based Contracting (PBC) solution for the Department of National Defence. The information is provided to facilitate an understanding of the business architecture and the solution architecture that exist for the PBC program. The content is not intended to reflect the end state specifications for all of the PBC EIE related services.

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1 Introduction

This document establishes an interface between Canada Electronic Data Exchange (EDE) system and the In-Service Support (ISS) Contractor responsible for maintenance of a Platform subject to the Performance based Contracting (PBC). This interface will be used by ISS Contractor to send Part Demand Response messages to Canada EDE. To support the Part Demand Response transfer between Canada EDE and ISS Contractor, both systems need to support specific Web Service operations as well as request and response Extensible Markup Language (XML) schemas as described in this document.

1.1 Intended Audience

- ISS Contractor System Designers
- Canada EDE Designers
- ISS Contractor Testers
- Canada EDE Testers

1.2 References

[Ref. 1] Electronic Information Exchange Business Use Case - BUC 3.42 Navy - Exchange Part Demand Response Data

[Ref. 2] PBC Business Process Catalogue Annex M: Navy Supply Process Model - In the Context of Performance Based Contracting (PBC)

[Ref. 3] Electronic Information Exchange Service Interaction Model

[Ref. 4] Electronic Information Exchange Materiel Management Service Operational Model – External

2 Business Information

Business Information is based on the EIE Business Use Case for Part Demand Response [Ref. 1].

The business processes for supply of parts from ISS Contractor[1] inventory to a Canada maintainer involves a number of Supply Services to ensure accurate management of inventories and accountability for time elapsed in the Supply processes.

The goal of the Part Demand response service is to receive a response from ISS Contractor, in a near real-time manner, for ISS Contractor owned and managed parts and Special Tools and Test Equipment (STTE)[2]. ISS Contractor will then issue the parts to allow for timely completion of tasks on maintenance Work Orders (WOs).

Within Canada, maintenance business processes are supported by two types of information systems, known generically as:

- Canada Maintenance Management System (CMMS)
- Canada Supply System (CSS)

Currently both functions are supported within Canada by the Defence Resource Management Information System (DRMIS).

2.1 Business Processes

The ISS Contractor-owned, managed, and delivered Platform spares and consumables required for the platform maintenance activities performed by Canada personnel will only be requested on as-needed basis during maintenance activities. The parts required to complete maintenance tasks will be listed in the WO in CMMS. Each part will be identified as either Canada or ISS Contractor-owned/managed. For all ISS Contractor-owned/managed parts, the CSS checks for availability of the parts at Canada storage locations. If the required parts are available at either one of the supplying locations, a reservation will be created for the part(s). If the ISS Contractor-supplied parts are available at Canada storage locations, and issuing the part reduces Canada inventory below the established minimum inventory threshold, a Part Demand for the quantity required to reach the established maximum inventory threshold for that part is generated in the CSS and sent to the ISS Contractor. If the ISS Contractor supplied parts are not available at the supplying storage locations, a Part Demand transaction for the required parts is generated in CSS and sent to the ISS Contractor.

In response, ISS Contractor will send Part Demand Response messages indicating availability of the demanded parts with Estimated Date of Delivery (EDD) if a part is not immediately available. If more than one unit of a part has been demanded, there may be different EDD's for partial fulfillment of the

[1] In this document the terms Industry and ISS Contractor are synonymous. The term ISS Contractor is used during description of the business process to align with the Business Use Cases. The term Industry is used during description of service interactions and service descriptions.

[2] Wherever the word "part" is used, this also encompasses STTE's. The service is designed to support Special Tools and Test Equipment (STTE) but may or may not be used for STTE.

demand. ISS Contractor is required to provision requested parts (spares, consumables) and STTE within contractually agreed time in order to meet Performance Based parameters.

Once a part is available and ready to be provided to Canada from ISS Contractor, ISS Contractor will send a part issuance message through Canada EDE to CSS. A Canada technician will pick up the part from the Handover Point (HoP) and acknowledge the receipt of the part in CSS. CSS will send a part receipt message through Canada EDE to ISS Contractor, completing the transaction cycle for a part.

2.2 Business Triggers

The following actions within ISS Contractor systems, the business triggers, will result in Part Demand Response data being sent to Canada:

- ISS Contractor needs to notify Canada of the Estimated Delivery Date (EDD) and quantities of parts from a preceding Part Demand, or
- ISS Contractor is providing an updated Expected Delivery Date for an existing unfulfilled part demand.

For further information, including cross-references to business processes, please refer to the EIE Business Use Case for Part Demand Response [Ref. 1].

2.3 Business Error Processing

In the event Canada encounters business errors while attempting to post Part Demand Response data to their backend systems, Canada will report errors on all line items within a Part Demand Response message in one error message.

Where possible, the ISS Contractor will correct line item data based upon reported errors, and generate a new Part Demand Response message using the same Purchase Order number.

3 Business Constraints

Constraints on *Usage* of the Service

1) Canada EDE shall ensure a Part Demand Response message is only processed from an Industry which is properly authenticated and authorized to see maintenance and materiel data for that ship class.

2) Every invocation of a service operation shall be secured using secure credentials, such as PKI Certificate.

Constraints on *Behaviour* of the Service

3) The Part Demand Response service shall operate in near-real time[3].

4) Canada EDE does not expect that Part Demand Response messages will be received in the same order they were created by Industry. It is the responsibility of the CSS to collate Part Demand Response messages based on the Purchase Order Identifier within each Part Demand Response message.

5) Canada will authorize invocations of operations of the Part Demand Response service.

6) Canada EDE does acknowledge there can be more than one Part Demand Response message for an individual preceding Part Demand request message.

7) Canada EDE will report any business processing errors through the Part Demand Response Error operation.

8) Canada will not report successful conclusion of business processing of the Part Demand Response to Industry.

9) Part Demand Response messages will be signed using digital certificates between Canada EDE and Industry. Please see Service Interaction Model [Ref. 3] for details.

10) Industry may attempt to repeat operation invocations in response to technical faults. This behaviour is controlled by parameters for each operation. Please see Service Interaction Model [Ref. 3] for details.

[3] This will be discussed further in EDE Service Interaction Model [Ref. 3].

4 Service Use Case

The requirements for the Part Demand Response service are defined by one use case with several scenarios.

4.1 Service Context [4]

A high level view of the context of the service is shown in Figure 4-1 below. For simplicity this view omits error scenarios. These are discussed in Service Use Case Scenarios.

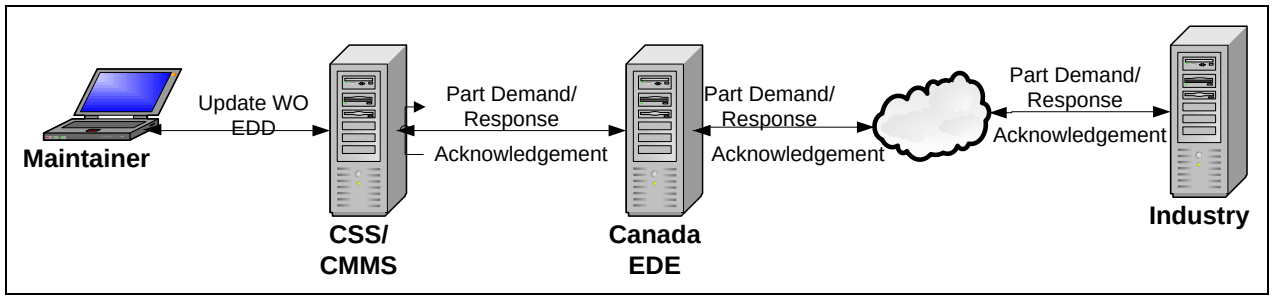


Figure 4-1 Part Demand Response Service Context

The following steps occur:

1. A Part Demand message has been received by Industry in the usual way – see [Ref. 2].
2. Industry supply system determines the estimated delivery dates (EDDs) and associated quantities for the demanded parts based on its availability to issue as per original demand request.
3. Industry generates a Part Demand Response message.
4. Industry sends Part Demand Response to Canada EDE – Canada EDE accepts the message and returns a 'technical' response.
5. Canada EDE sends Part Demand Response to CSS – CSS accepts the message and returns a 'technical' response.
6. CSS performs the required "back-end" processing including enforcement of pre-established business rules as per agreement with Canada and Industry.

The "technical response" referred to above either (*i*) confirms a party in the exchange has accepted a message for further processing, or (*ii*) contains a fault message. A technical acceptance does not preclude subsequent "business" errors being observed by Canada and reported back to Industry as required.

4.2 Successful Request and Technical Response

The Part Demand Response Message Flow is shown in Figure 4-2. This is the main or "Happy Day" scenario.

[4] The terms ISS Contractor and Industry are used interchangeably in this document.

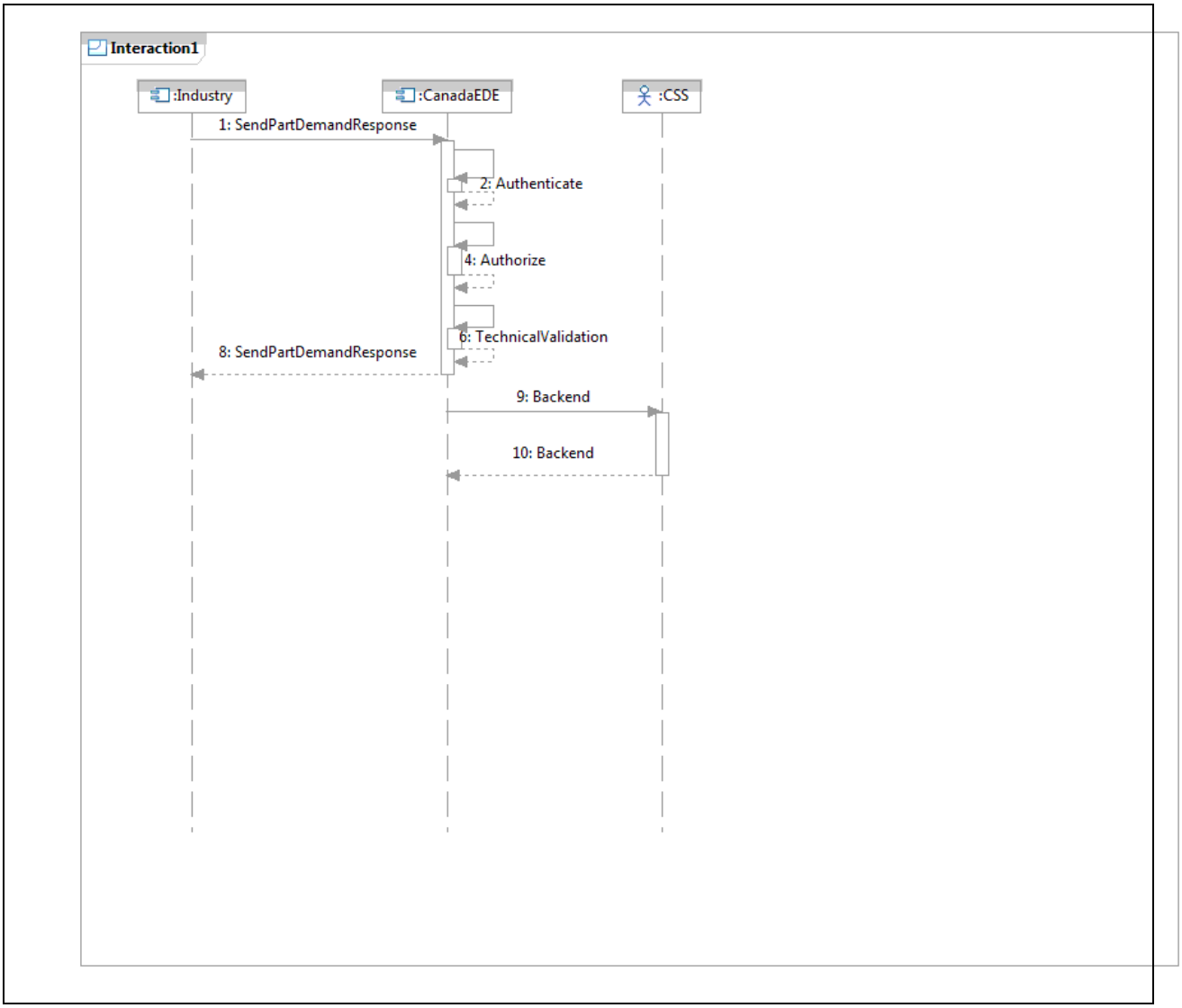


Figure 4-2 Part Demand Response Message Flow

Main Flow	
Scenario	"Happy Day:" Industry successfully sends Part Demand Response to Canada.
Pre-Condition	A Part Demand message has been received by Industry from Canada. Industry has determined estimated delivery dates for parts as per the Part Demand request
Post-Condition	Part Demand Response message is successfully received by Canada. CSS is updated.

Main Flow	
Steps	1) Industry sends Part Demand Response message to Canada EDE. 2) Canada EDE successfully Authenticates the service consumer. 3) Canada EDE successfully Authorizes the service consumer. 4) Canada EDE conducts the required validations as per Service Interaction Model [Ref. 3]- Section Technical Delivery Phase 5) Canada EDE sends technical response to Industry indicating message was accepted. 6) Canada EDE invokes back-end processing in CSS.

Implicit in the above diagram is that a service Consumer may retry to send a message to the service Provider in the event there is no technical response from the Provider or if the Provider response indicates a technical error. Resend behaviour is governed by parameters in the non-functional requirements of each operation.

4.3 Alternate Scenarios

The following scenarios apply to all uses of the Part Demand Response service.

Alternate Flow 1 (Authentication Failure)	
Scenario	Industry does not provide appropriate credentials to Canada EDE.
Pre-Condition	Industry has invoked the Canada EDE Part Demand Response Service.
Post-Condition	Canada EDE sends an Authentication Failure fault response
Steps	1) The authentication credentials are either not provided or are incorrect. 2) Canada EDE sends an Authentication Failure fault as the technical response. 3) Industry processes the error.
Alternate Flow 2 (Authorization Failure)	
Scenario	Industry is not authorized to use a service.
Pre-Condition	Industry has invoked the Canada EDE Part Demand Response Service. Canada EDE has completed Authentication successfully.
Post-Condition	Canada EDE sends an Unauthorized Request fault response.
Steps	1) The request message does not pass Canada EDE authorization. 2) Canada EDE sends an Unauthorized Request fault as the technical response. 3) Industry processes the error.
Alternate Flow 3 (Message Technical Validation Failure)	
Scenario	Industry sends a malformed message to Canada EDE.

Pre-Condition	Industry has invoked the Canada EDE Part Demand Response Service. Canada EDE has completed Authentication and Authorization successfully.
Post-Condition	Canada EDE sends a Malformed Message fault response.
Steps	1) The message does not pass validation as per agreed schema. (Regardless of the number and types of errors). 2) Canada EDE sends Malformed Message error information as the technical response as the fault message as defined within the exposed interface. 3) Industry processes the message technical validation error.
Alternate Flow 4 (Canada EDE Service unresponsive)	
Scenario	Industry does not receive technical response within ACK_TIME_INTERVAL.
Pre-Condition	Industry has invoked the operation but does not receive the technical response within the time specified for the Part Demand Response service.
Post-Condition	Industry marks the message as Dead Message.
Steps	1) Industry does not receive any response from Canada EDE within the allowed ACK_TIME_INTERVAL. 2) Industry will retry sending the message up to the defined maximum retry count and/or Time to Live interval. 3) If there is no response, then Industry marks the request message as Dead and handles it via the DeadMessageHandlerService.

Figure 4-3 presents the Part Demand Response Business Validation Failure Message Flow.

Figure 4-3 Part Demand Response Business Validation Failure Message Flow

Alternate Flow 5 (Business Validation Failure)	
Scenario	CSS business validations fail on one or more Part Demand Response data records.
Pre-Condition	Industry has invoked the Canada EDE Part Demand Response service, the message has passed Authentication, Authorization and message technical Validation and a successful technical response has been received by Industry.
Post-Condition	Canada EDE sends error information to Industry.
Steps	1) The Part Demand Response data records failed CSS's business validation process. 2) Canada EDE sends business error information to Industry via the Part Demand Response Error operation exposed by Industry. 3) Where possible, Industry will correct line item data based upon reported errors, and generate a new Part Demand Response message using the same Purchase Order number. 4) Industry will send only the corrected line items in the new Part Demand Response message, with the original Purchase Order number.

5 Service Description – Part Demand Response Service

5.1 Service Overview

Part Demand Response service requires interacting web services exposed by Canada EDE and Industry. Canada EDE will expose a service which Industry will use to send the Part Demand Response message (see Section 7 for message definition). Upon receipt of the message, Canada EDE will return a technical response back to Industry.

Industry will provide a Part Demand Response Error operation to be used by Canada EDE to report a Technical or Business Fault if errors are found during Canada internal processing post initial technical acknowledgement of the part demand response message.

5.2 Service Properties

Service Property	Description
Enterprise Service Name (Business)	Part Demand Response Service
Enterprise Service Name (Technical)	IndustryPartDemandResponseService
Purpose	This service supports the Canada PBC Maintenance process for scheduled and unscheduled maintenance tasks. On the occurrence of business triggers, Industry uses this service to send Part Demand Response messages to Canada EDE on a near-real time basis. This service also supports reporting of business errors encountered while processing Part Demand Response messages within the Canada supply systems.
Business Response Time Interval	N/A (no business response to this message)
Service Domain	Supply Management
Business Owner	ADM (IM)
Service Grouping	Supply Materiel / Part Demand Response
Source Provider	Canada EDE
Target Service Consumers	Industry
Business Process Supported (now)	Perform 1st and 2nd level maintenance Execute Corrective or Preventive Maintenance
Business Process Supported (future)	None currently identified

Service Property	Description
Business Objective Supported	See Section 2: Business Information.
Expected life time	The full lifecycle of the subject platform using PBC.

5.3 Service Operations

Provider	Consumer	Operation
Canada EDE	Industry	SendPartDemandResponse
Industry	Canada EDE	SendPartDemandResponseError

5.3.1 SendPartDemandResponse Operation

This operation is used by Industry to send a Part Demand Response message to Canada EDE. Canada EDE's implementation of this operation will perform authentication, authorization and technical message validation on the Part Demand Response message. Canada EDE will return a status or fault information to the consumer.

If Canada accepts the message for further processing an output message is returned. The content of the output indicates SUCCESS, Canada accepts custody of the message for further processing. If Canada does NOT accept the message, Canada will return one or more fault blocks.

5.3.2 SendPartDemandResponseError Operation

This operation is used by Canada to send a Part Demand Response Error message to Industry in the event a business error is encountered by Canada backend supply system. Industry's implementation of this operation will perform authentication, authorization and technical validation on the Part Demand Response Error message. Industry will return a status or fault information to the consumer.

If Industry accepts the message for further processing an output message is returned. The content of the output indicates SUCCESS, Industry accepts custody of the error message for further processing. If Industry does NOT accept the message, Industry will return one or more fault blocks. Irrespective of outcome, if Canada reports a business error through this service, no further processing of the originating Part Demand Response message takes place.

5.4 Message Interaction

As defined in Section 4: Service Use Case, the Part demand response service supports a business-asynchronous interaction with a message-passing paradigm. Each Web Service operation must be defined such that the messages required by the system use case (faults in particular, see Section 4.3 Alternate Scenarios) are explicit in the Web Service definition. This implies each Part Demand Response web service operation must be defined with an input, output and fault element.

Message interaction is further described in Electronic Information Exchange Service Interaction Model [Ref. 3].

6 Information Model

This section describes the **business objects** which are used in the Part Demand Response service. The Unified Modeling Language (UML) notation is used. A functional view[5] of the information model is provided in the EIE Business Use Case for Part Demand Response [Ref. 1], Section 3: Functional Data Definition, and an Entity-Relationship diagram (ERD) is provided in Appendix A of this document.

The purpose of this section is to provide a bridge between the functional view of the information model and the concrete details of the design as expressed in an XML Schema.

Note: The only authoritative source for purpose of the information exchange will be the specific XML Schema for the business object.

6.1 Purchase Order

A Part Demand Response message contains a Purchase Order business object. The Purchase Order information model is shown in Figure 6-1 below.

The Purchase Order is used to manage demand for parts through delivery and receipt of demanded parts between Canada and Industry. A Purchase Order is uniquely identified by the Purchase Order Number. If the Purchase Order is generated as a result of a maintenance action, it will include the Work Order Number.

A Purchase Order contains one or more Line Items. A Line Item represents a demand for a quantity of a certain part – a part is identified by Manufacturer Part number and Cage Code. A Line Item must be contained in a Purchase Order. For each part demanded the required date must be specified, referred to here as a SupplySchedule. A SupplySchedule must be contained in a LineItem.

The field descriptions are elaborated in the Functional view (please see EIE Business Use Case for Part Demand Response [Ref. 1]).

Note: Canada Supply System supports demand quantities that include decimal format, and this decimal representation exists within the Canada-defined interfaces.

[5] The Functional View details the collection of fields which make up a purchase order and its sub-records.

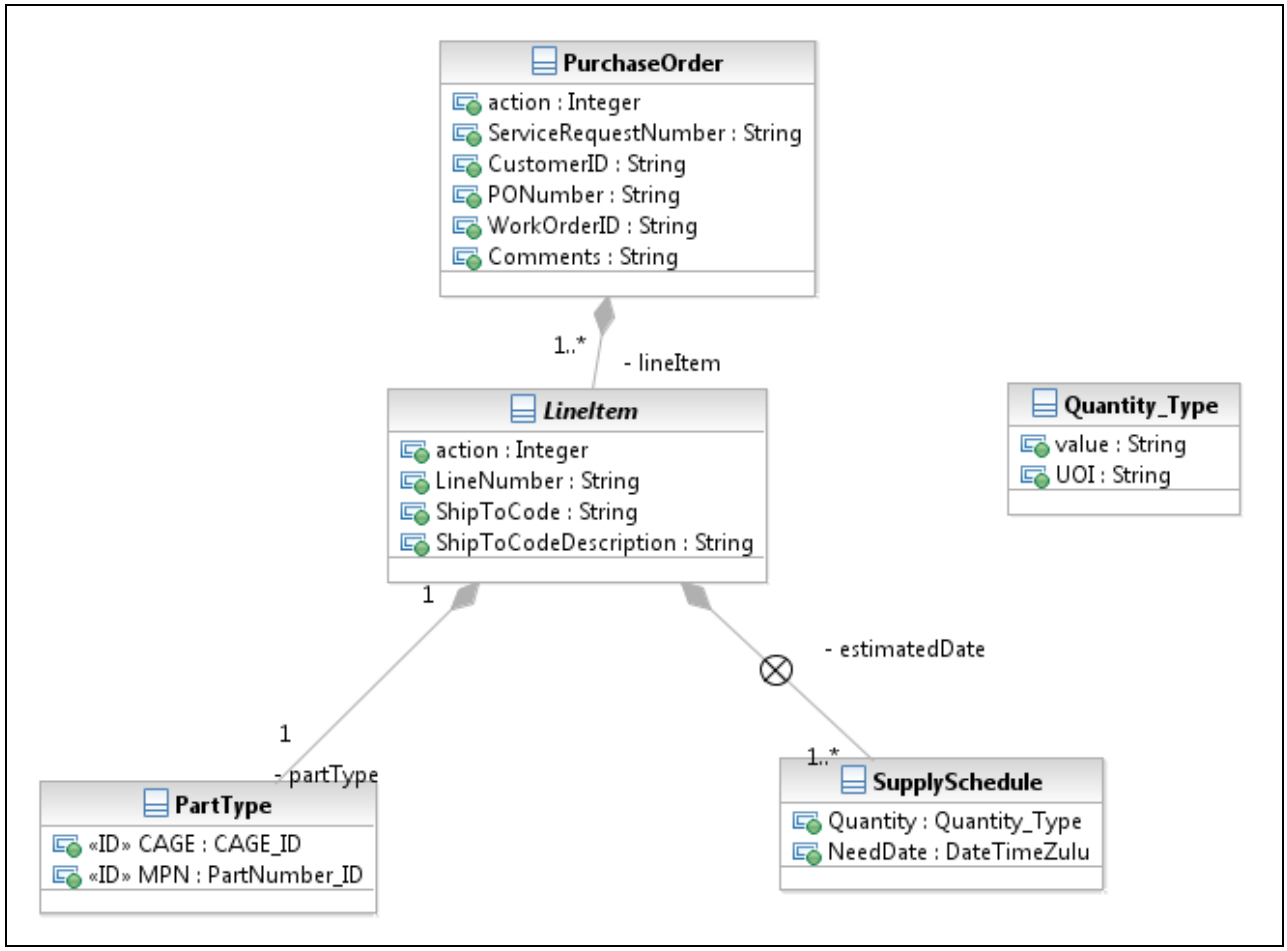


Figure 6-1 Information Model – Purchase Order for Part Demand Response

The 'action' attribute is discussed in Section 7.3.1 Part Demand Response Input Messages.

7 Operation Message Model

This section describes how the business objects described above (Section 6 Information Model) are aggregated for the purpose of reliable information exchange.

All EIE Supply services are request/response and each operation definition includes a distinct input, output and fault message. Message definitions use a common supply message header definition, as well as a common security block definition. Please refer to Electronic Information Exchange Service Interaction Model [Ref. 3] for details on message header and security block definition.

7.1 Part Demand Response Message Constructs

7.1.1 Part Demand Response Input Body

As shown in Figure 7-1, a Part Demand Response input message consists of

- A Message Header;
- A Security Block;
- A Purchase Order (with contained LineItems and Estimated Delivery schedules).

In order to uniquely identify data from a business payload, certain elements will be identified as elements that can make up the unique Business identifier for each business object that has been transmitted. These elements will then be used by either the consumer or provider to report any errors with associated with the contained business payload.

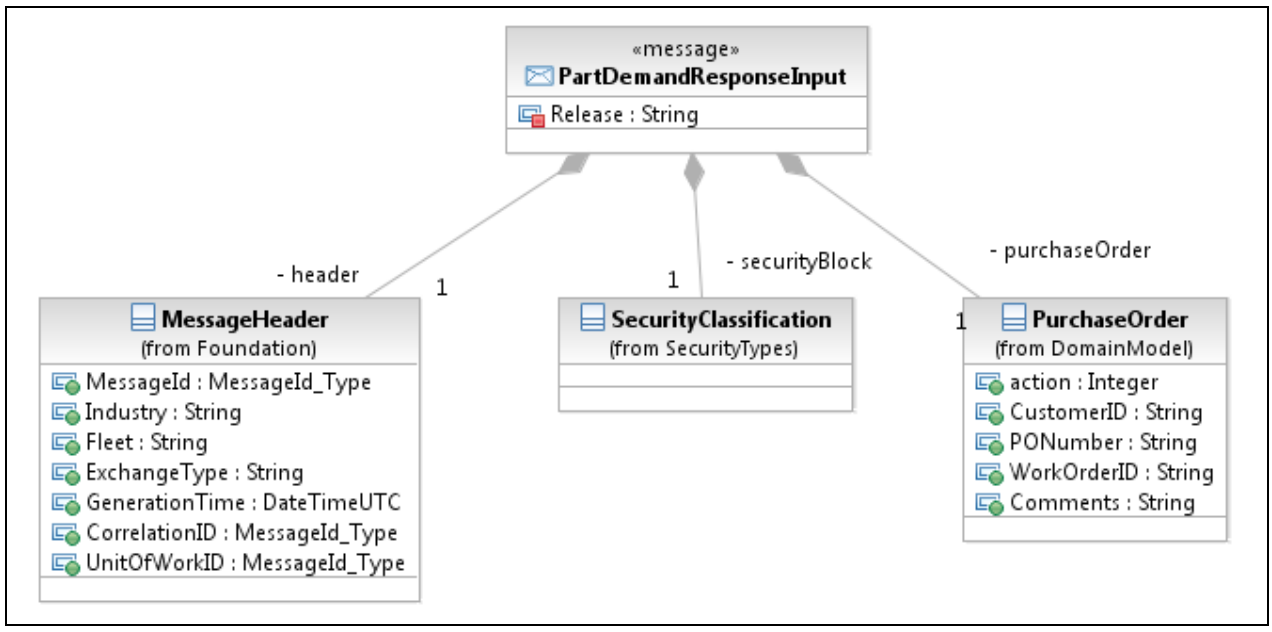


Figure 7-1 Part Demand Response Message

For a PartDemandResponse InputBody the MessageHeader Correlation ID and Unit of Work ID are not used.

Within the PurchaseOrder, LineItem and SupplySchedule business objects (the latter two not shown here) there is an attribute named 'action' which is set by the service consumer as a directive to CSS on handling the business object. Valid values for 'action' are:

- Create a new business object: action = 1;
- Edit an existing business object: action = 2;
- Delete a business object: action = 3.

7.1.2 Part Demand Response Output Message

The output of the SendPartDemandResponse operation is the PartDemandResponseOutputBody. As shown in Figure 7-2, the output body consists of:

- A Message Header;
- A PartDemandResponseOutput indicating acceptance; the Part Demand Response message Purchase Order is accepted in its entirety only.

The output message has no security block. The output does not contain any sensitive or protected information.

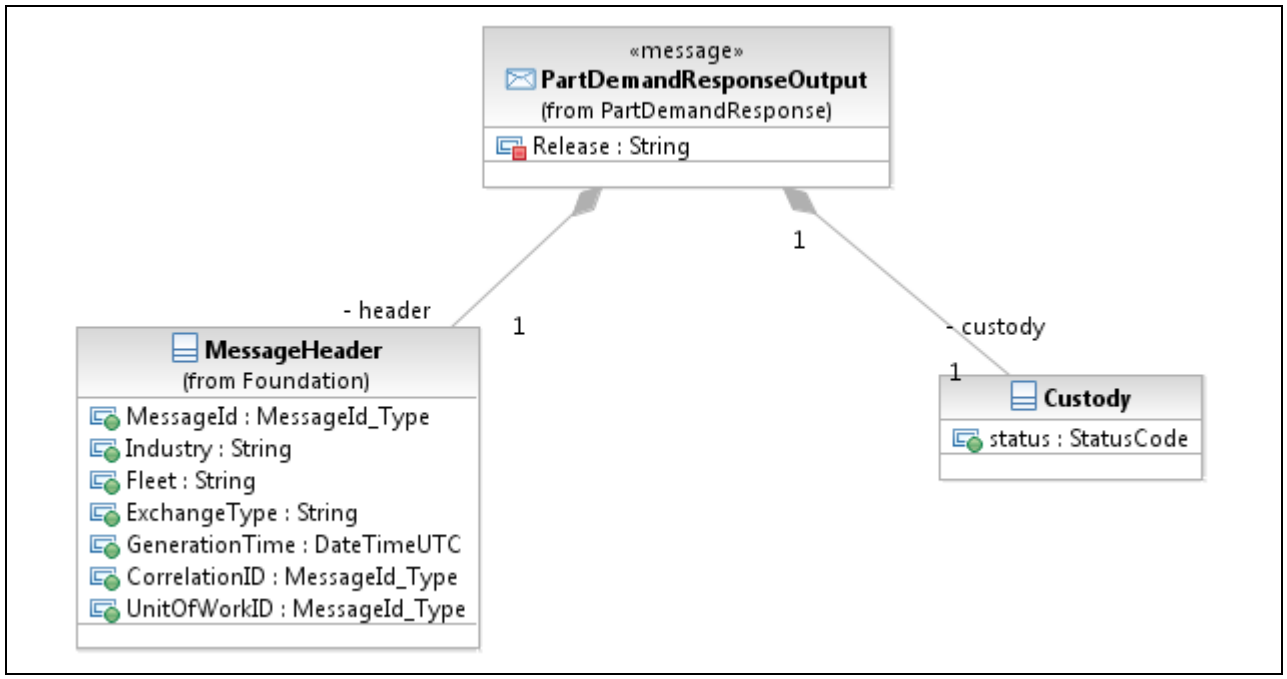


Figure 7-2 Part Demand Response Output Message

For a PartDemandResponseOutputBody:

- The MessageHeader Correlation ID will reflect the Message ID of the originating Part Demand Response input message.
- UnitofWorkID is not used;

- The MessageHeader Exchange Type must be set to the Exchange Type of the PartDemandResponseInputBody;
- The value of the PartDemandResponseOutput 'Custody' evaluates to "success".

7.1.3 Part Demand Response Fault Messages

A fault returned by the SendPartDemandResponse operation uses the PartDemandResponseFaultBody element. As shown in Figure 7-3, the fault body consists of:

- A Message Header;
- A Security Block;
- One or more FaultBlocks.

Each fault block pertains to zero to many business objects, to the level of granularity which the Service Provider can provide. If the system cannot determine a Business Identifier then this is omitted. To report differing faults on more than one business object extra fault blocks can be included in the fault message.

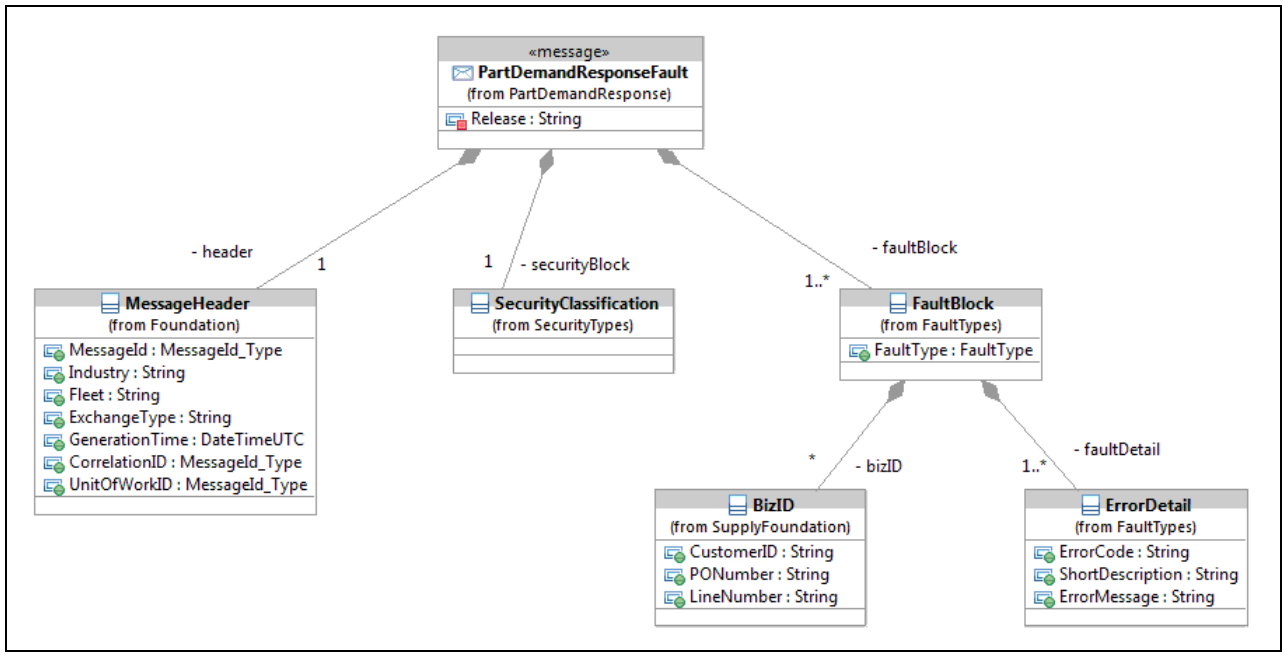


Figure 7-3 Part Demand Response Fault Body

For a PartDemandResponseFaultMessage:

- The MessageHeader Correlation ID will reflect the Message ID of the originating Part Demand Response input message.
- UnitofWorkID is not used.
- The MessageHeader Exchange Type must be set to the Exchange Type of the PartDemandResponseInputBody.

7.2 Part Demand Response Error Message Constructs

In the event Canada encounters a business error while processing the purchase order in their backend supply system, Canada will send Industry a Part Demand Response Error message through the following constructs.

7.2.1 Part Demand Response Error Input Body

As shown in Figure 7-4, a Part Demand Response Error input message consists of

- A Message Header;
- A Security Block;
- One or more Error body.

Within the Error Body, at least one BizID must be provided, along with at least one ErrorDetail block.

- If appropriate, multiple BizIDs may be provided referencing a common set of error(s).

- If appropriate, multiple errors can be defined within the error body. These errors would apply to all BizIDs defined within the ErrorBody construct

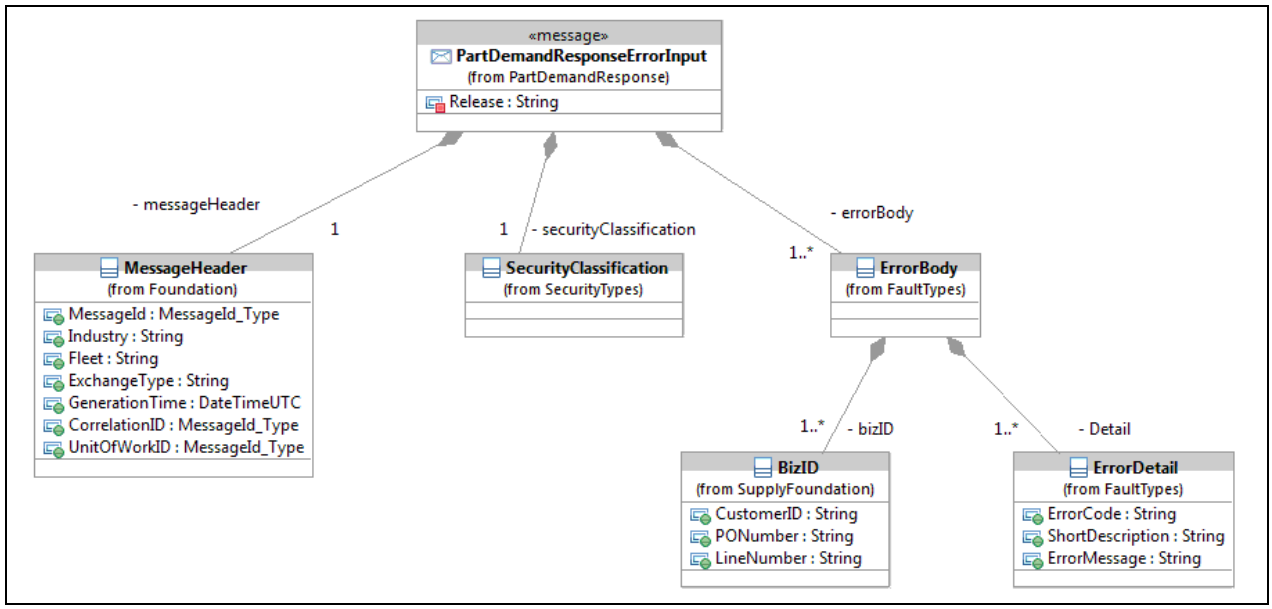


Figure 7-4 Exchange Messages – Part Demand Response Error Input Body

For a PartDemandResponseError InputBody the MessageHeader CorrelationID and UnitofWorkID are not used.

Each error pertains to one or more business objects, to the level of granularity which the Service consumer can provide. To report differing errors on more than one business object extra error blocks can be included in the error input message.

7.2.2 Part Demand Response Error Output Body

The output of the SendPartDemandResponseError operation is the PartDemandResponse ErrorOutputBody The output body is similar to the PartDemandResponse OutputBody.

Please refer to 7.1.2 Part Demand Response Output Body for this definition.

7.2.3 Part Demand Response Error Fault Body

A fault returned by the SendPartDemandResponseError operation uses the PartDemandResponseError FaultBody element.

Please refer to 7.1.3 Part Demand Response Fault Body for this definition.

8 Service Operation Details

8.1 Detailed Operation Characteristics – SendPartDemandResponse

Industry will invoke the exposed Canada EDE Part Demand Response service through this operation. A Part Demand Response message will contain a purchase order.

Refer to PartDemandResponse_Canada.wsdl for implementation specifications.

Detailed Operation Characteristics

Interface Definition	Description
Operation Name	Send Part Demand Response
Operation Technical Name	SendPartDemandResponse
Operation Description	This operation is invoked by Industry to send a Part demand response (Purchase Order) to Canada EDE.
Target Operation Provider	Canada EDE
Target Operation Consumer	Industry
Properties	*Request/Response* message exchange pattern.
Input Message Definition	Please refer to Operation Message Model Section 7.1.1 Part Demand Response Input for details.
Output Message Definition	Please refer to Operation Message Model Section 7.1.2 Part Demand Response Output for details.
Fault Definition	Please refer to Operation Message Model Section 7.1.3 Part Demand Response Faults for details. As discussed in Section 4: Service Use Case / Interaction Model the following faults may be reported: 1) Unauthenticated access 2) Unauthorized request 3) Malformed message 4) Service Unavailable

Non Functional Requirements

Non Functional Requirements/Technical Details	
Frequency	Based on Service Level Agreements (SLA) to be determined between Canada and Industry on a per ship class basis.
Peak Throughput Time	Based on Service Level Agreements (SLA) to be determined between Canada and Industry on a per ship class basis.

Non Functional Requirements/Technical Details	
Peak Throughput Volume	Based on Service Level Agreements (SLA) to be determined between Canada and Industry on a per ship class basis.
Payload Size	~ 2KB per Part Demand Response Line item
Attachments	None
Attachment Size	N / A
ACK Time Interval	2 minutes
Retry Time Interval	5 minutes
Number of Retries	5
Biz. Response Time Interval	N/A – no business response to this message.
Time to Live Span	Nominally 1 hour – if message cannot be delivered within 1 hour, revert to secondary delivery channel, which may be manual.
Service Op Availability	During core processing hours. The specific period will be defined during later phases of service realization 95% available uptime is the goal of the service
Downtime Requirements	The service cannot be used during established maintenance windows, which is currently expected to be for about 2 hours per week. The unavailability window may be accumulated and invoked during major maintenance periods, but ensuring that the overall availability of the service is still maintained.
Dead Message Handling	Alternative communication channel to convey the error being observed by Industry when Industry cannot successfully send Part Demand Response message to Canada EDE.

8.2 Detailed Operation Characteristics – SendPartDemandResponseError

Canada system will invoke the exposed Industry PartDemandResponse Error service through this operation. A part demand response error message will contain Canada-reported business errors encountered while attempting to process a Part DemandResponse message generated by Industry.

Refer to PartDemandResponse_Industry.wsdl for implementation details.

Detailed Operation Characteristics

Interface Definition	Description
Operation Name	Send Part Demand Response Error
Operation Technical Name	SendPartDemandResponseError

Interface Definition	Description
Operation Description	This operation is invoked by Canada to send a Business Error message to Industry. The Business Error describes errors encountered while processing Industry's Part Demand Response message.
Target Operation Provider	Industry
Target Operation Consumer	Canada EDE
Properties	*Request/Response* message exchange pattern.
Input Message Definition	Please refer to Operation Message Model Section 7.2.1 Part Demand Response Error Input for details.
Output Message Definition	Please refer to Operation Message Model Section 7.2.2 Part Demand Response Error Output for details.
Fault Definition	Please refer to Operation Message Model Section 7.2.3 Part Demand Response Error Fault for details.

Non Functional Requirements

Non Functional Requirements/Technical Details	
Frequency	Based on Service Level Agreements (SLA) to be determined between Canada and Industry on a pership class basis.
Peak Throughput Time	N/A
Peak Throughput Volume	N/A
Payload Size	~ 5KB per Error
Attachments	None
Attachment Size	N/A
ACK Time Interval	2 minutes
Retry Time Interval	5 minutes
Number of Retries	5
Biz. Response Time Interval	N/A
Time to Live Span	Nominally 1 hour – if message cannot be delivered within 1 hour, revert to secondary delivery channel, which may be manual.
Service Op Availability	During core processing hours. 95% available uptime is the goal of the service

Non Functional Requirements/Technical Details	
Downtime Requirements	The service cannot be used during established maintenance windows, which is currently expected to be for about 2 hours per week. The unavailability window may be accumulated and invoked during major maintenance periods, but ensuring that the overall availability of the service is still maintained.
Dead Message Handling	Alternative communication channel to convey the error being observed when Canada EDE cannot successfully send Part Demand Response Error message to Industry.

8.3 Service Bindings

8.3.1 SOAP Over http

The initial implementation of this service will use a Simple Object Access Protocol (SOAP) binding with document style messages and Hyper Text Transfer Protocol (http) transport.

The business objects (Section 6), MessageHeader and SecurityMarkings are bound to the SOAP Body element. The SOAP Header is used for EIE adopted WS-* standards-based elements (e.g., WS_Security assertions) elements[6].

In this binding the http response is used for operations' output or fault messages.

8.3.2 SOAP Over JMS

Not currently supported for this service.

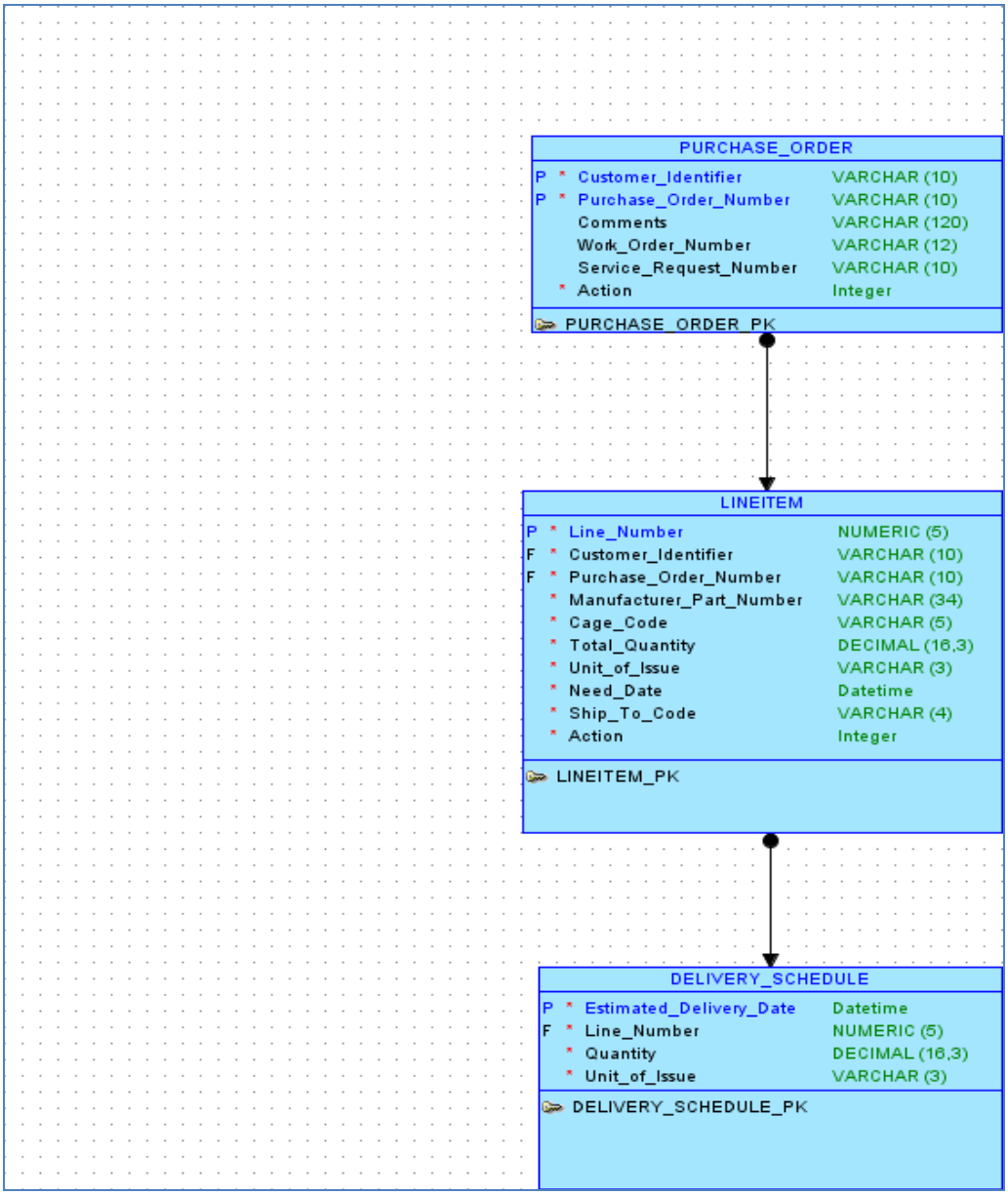
[6] See the Part Demand Response Service WSDL file for the precise binding

9 Definitions, Acronyms, Abbreviations

Acronym	Description
ADM (IM)	Assistant Deputy Minister (Information Management)
ADM (Mat)	Assistant Deputy Minister (Materiel)
BUC	Business Use Case
CMMS	Canada Maintenance Management System
CSS	Canada Supply System
DND	Department of National Defence
DRMIS	Defence Resource Management Information System
EDD	Estimated Delivery Date
EDE	Electronic Data Exchange
EIE	Electronic Information Environment
EMR	Equipment Master Record
HoP	Hand-Over Point
HTTP	Hyper Text Transfer Protocol
HTTPS	Hyper Text Transfer Protocol Secure
ICD	Interface Control Document
ISS	In-Service Support
JMS	Java Message Service
MER	Master Equipment Record
MP	Maintenance Plan
MPN	Manufacturer Part Number
MSN	Manufacturer Serial Number
PBC	Performance Based Contracting
PO	Purchase Order
SLA	Service Level Agreement
SOAP	Simple Object Access Protocol
STTE	Special Tools and Test Equipment
UML	Unified Modeling Language
URL	Uniform Resource Locator
WO	Work Order
WS	Weapon System
WSDL	Web Service Definition Language
XML	Extensible Mark-up Language
XSD	XML Schema Definition
XSL	Extensible Stylesheet Language

10 Appendix A – Information Model Entity Relationship View

Information Model – Entity-Relationship View



The information being provided is to illustrate the model that exists for business processes and information exchange within the Performance Based Contracting (PBC) solution for the Department of National Defence. The information is provided to facilitate an understanding of the business architecture and the solution architecture that exist for the PBC program. The content is not intended to reflect the end state specifications for all of the PBC EIE related services.

11 Document History

Revision Number	Description	Date
1.0	Initial release for Navy RFP.	22 September 2015