



Electronic Information Environment (EIE)

Business Use Case (BUC) BUC 3.48 Navy - Exchange Inventory Replenishment Data

EIE Project

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1. EIE Business Use Case¹ Overview

1.1 Introduction

Performance Based Contracting (PBC) is a set of guidelines to Canada Major Capital Projects (MCPs) on how to model a Platform acquisition and in-service support (ISS) processes. Under these guidelines Canada is responsible to perform some corrective and/or preventive maintenance activities on the Platform. The ISS Contractor will own, manage and deliver to the specified Hand-Over Point (HoP) all materiel required to support the Platform, with the exception of excluded systems. In order for Canada and the ISS Contractor to fulfill their obligations under PBC, specific datasets must be exchanged between Canada and ISS Contractor.

The collection of information systems provided by Canada and ISS Contractor, used to maintain the Platform and the various information exchange mechanism, is collectively known as the Electronic Information Environment (EIE).

The web services and supporting infrastructure which enable the exchange of data between ISS Contractor and Canada's operational systems in support of PBC between Canada and the ISS Contractor(s) is collectively known as Electronic Data Exchange (EDE). The EDE components span application nodes, network zones and the Internet.

Given the significance of materiel demand and supply in the overall success of contracted performance objectives of PBC and platform operational availability, all data exchange between Canada Supply System (CSS) and the ISS Contractor systems will have to occur in near real-time via EDE..

1.2 Purpose

In certain situations agreed to between Canada and the ISS Contractor, the ISS Contractor may initiate a replenishment of inventory stock without a demand transaction being initiated by Canada. This will be by exception only. If the ISS Contractor schedules replenishment of stock, Inventory Replenishment transaction(s) and EMR history data (if applicable) will be sent to the CSS via the EDE.

This Business Use Case (BUC) describes the exchange of Inventory Replenishment data between the ISS Contractor and Canada for a platform managed according to PBC concepts for certain exceptional replenishment scenarios.

¹ "Business Use Case: A business process, representing a specific workflow in the business; an interaction that a stakeholder has with the business that achieves a business goal. It may involve both manual and automated processes and may take place over an extended period of time." - <http://www.ibm.com/developerworks/rational/library/apr07/english/>. Also defined as such in EIE Solution Architecture.

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1.3 Intended Audience

The intended audience for this BUC includes:

- ISS Contractors who require details of their business service-level interactions, benefits and obligations under PBC
- All Canada personnel implementing the PBC
- Solution Architects who will define a Business Service Model for the business service(s) that are described
- Functional Testers who will use the BUC to define test scenarios for Integration testing
- Designers who will perform detailed design and unit test

1.4 References and Traceability

Business Process documents

[Ref. 1] PBC Business Process Catalogue Annex M: Navy Supply Process Model - In the Context of Performance Based Contracting (PBC)

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

With respect to the referenced documents this BUC addresses the following sections:

Reference	Section
[Ref. 1] PBC Business Process Catalogue Annex M	Annex M – Navy Supply Process Model
[Ref. 2] PBC Business Process Catalogue Annex L	Annex L – Navy Maintenance Process Model

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2. BUC 3.48 Navy -Exchange Inventory Replenishment Data

This BUC will identify processes and activities and define scenarios which apply to Inventory Replenishment data exchange.

2.1 Overview

Identifier	BUC 3.48
Name	Navy - Exchange Inventory Replenishment Data
Business goal	Receive Inventory Replenishment dataset as required to efficiently replenish supply at the Canada storage location, and to complete Canada-performed maintenance for which the inventory is required.
Stakeholders	Canada and ISS Contractor(s)
Workflow/interaction	In certain situations agreed to between Canada and the ISS Contractor, the ISS Contractor may initiate a replenishment of inventory stock for a ship without a demand transaction being initiated by Canada. The ISS Contractor will initiate this data exchange as a result of an agreement reached between Canada and the ISS Contractor. Refer to the corrective and preventive maintenance business process flows that identify supply materiel touch points. Reference [Ref. 2].
Processes	Information exchange is automated (system to system). The exchange is immediate upon a triggering event occurring in the source system – ISS Contractor Supply Chain Management System (SCMS). Some error scenarios may require manual intervention.
Context	Business Domain: Supply materiel Functional Area: Inventory Replenishment
Period of Time	The full lifecycle of the subject platform.
Description	The ISS Contractor SCMS sends Inventory Replenishment data to Canada. The Inventory Replenishment dataset will be transmitted to CMMS/CSS via EDE in a near real-time manner.

2.2 Sub-Processes and Activities Supported

Refer to EIE Business Process document, [Ref. 1] for diagrams that capture business process flow supported by this BUC.

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2.3 Business Rules and Assumptions

1. The CMMS/CSS and EDE systems shall ensure that the Inventory Replenishment dataset for a platform is received from the ISS Contractor system which is properly authenticated and authorized to send the maintenance and/or materiel data for that ship class.
2. When replenishing inventory, ISS Contractor will generate Inventory Replenishment dataset without receiving a demand request from Canada through EDE.

2.4 Actors

The following actors have been identified as performing the documented business activities:

Role Name	Role Description / Responsibilities
ISS Contractor (SCMS)	Provides a system that will have the ability to generate and send Inventory Replenishment data to Canada
EDE	Transforms and transports the Inventory Replenishment data to CMMS/CSS
CMMS/CSS	Receives and processes Inventory Replenishment data
Canada Authorized Person	Receives and distributes inventory received from ISS Contractor. Updates CSS for the received inventory.

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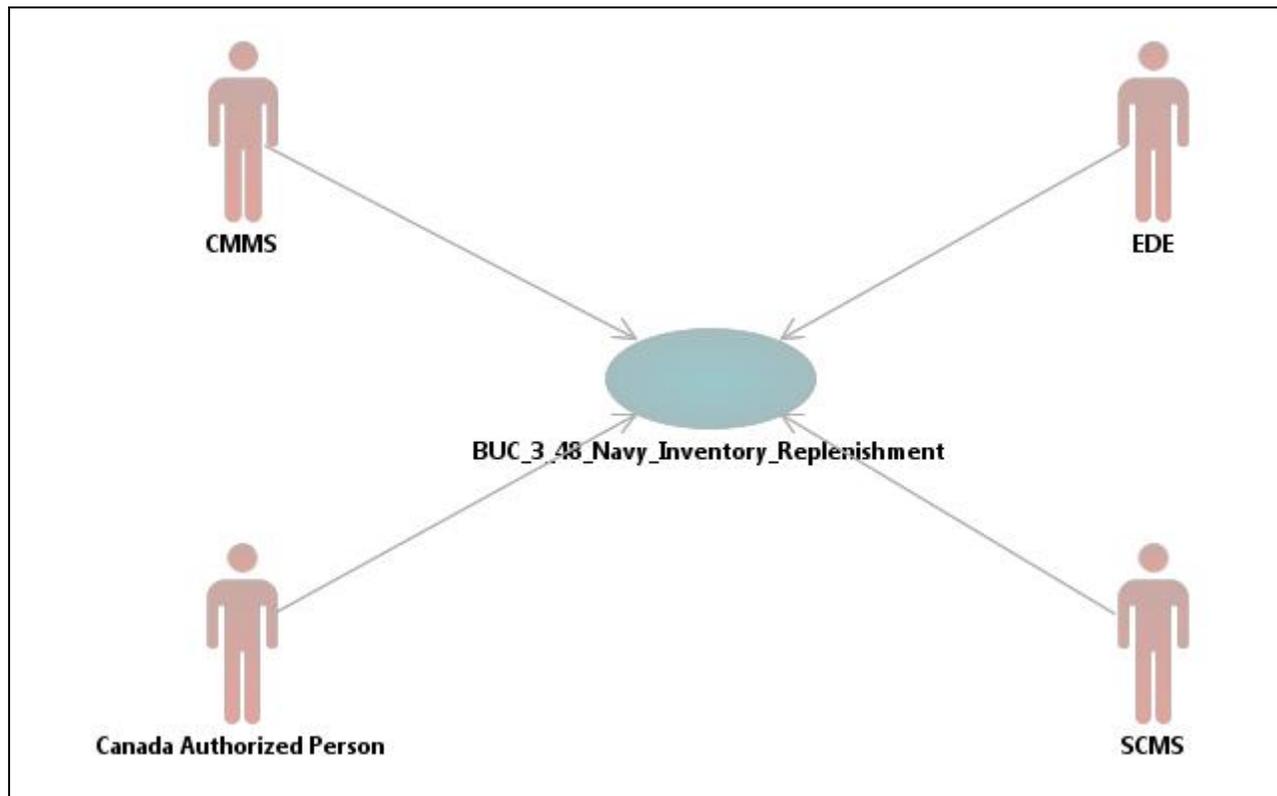


Figure 2-1 Navy - Exchange Inventory Replenishment Data

2.5 Common Pre-Conditions

These apply to every scenario unless explicitly stated otherwise.

1. Canada and the ISS Contractor have agreed that this method of inventory replenishment will be used.
2. Canada and ISS Contractor have agreed upon Inventory Replenishment dataset format (see [Functional Data Definition](#))
3. Canada and ISS Contractor have agreed upon near real-time exchange mechanism of Inventory Replenishment data.

2.6 Common Post-Condition(s)

The following applies to every scenario unless explicitly stated otherwise.

1. Inventory Replenishment dataset has been received by Canada and an acknowledgement has been received by ISS Contractor.

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2.7 Common BUC Steps

Each scenario defined below includes the following common steps:

Common Steps	Step Description	Actor
Receive Inventory Replenishment dataset	The EDE receives an Inventory Replenishment transaction from an ISS Contractor partner.	EDE
Verify Inventory Replenishment dataset as per EDE standards	EDE verifies the data received from ISS Contractor.	EDE
Convert Inventory Replenishment dataset to common format	EDE converts data to XML-based format that has been adopted by Canada and ISS Contractor.	EDE
Send Inventory Replenishment dataset to CMMS/CSS	EDE sends Inventory Replenishment dataset to CMMS/CSS, in accordance with transmission definition agreed to with CMMS/CSS.	EDE
Acknowledge receipt of Inventory Replenishment dataset	CMMS/CSS sends an acknowledgement receipt to EDE for received Inventory Replenishment dataset.	CMMS / CSS
Send acknowledgement to ISS Contractor for Inventory Replenishment Data	EDE sends Inventory Replenishment acknowledgement receipt to the ISS Contractor.	EDE, ISS Contractor SCMS

2.8 Scenarios²

In the following scenarios, the pre-condition and trigger serve to uniquely identify the Inventory Replenishment data exchange in the context of a maintenance and supply materiel business processes. This supports direct traceability between business processes and exchange use case scenarios.

² A scenario corresponds to a specific activity in the maintenance or supply materiel business processes when a triggering event occurs which causes an Inventory Replenishment dataset exchange. Picture the maintenance or supply business process as proceeding horizontally through recognition of a corrective or preventive maintenance situation, through fault isolation, and some maintenance activities. Each exchange use case scenario corresponds to a vertical slice from maintenance or supply business process which results in an Inventory Replenishment dataset being received from the ISS Contractor and acknowledged by Canada.

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2.8.1 3.48.1 Inventory Replenishment [N1.5.3.4.5]

Scenario Name	3.48.1 Inventory Replenishment [N1.5.3.4.5]		
Business Process	This scenario occurs in the following Supply Material business processes: <ul style="list-style-type: none"> • Inventory Replenishment 		
Business Context	Inventory Replenishment <ul style="list-style-type: none"> • If the ISS Contractor schedules replenishment of stock, Inventory Replenishment transaction(s) and EMR history data (if applicable) will be sent to the CSS via the EIE EDE. 		
Precondition(s)	See Common Pre-Conditions .		
Trigger event	Canada and the ISS Contractor agree to initiate a replenishment of inventory stock without a demand transaction being initiated by Canada.		
Steps	Step Name	Step Description	Actor
	Create Inventory Replenishment dataset	ISS Contractor prepares Inventory Replenishment data based on the data provided	ISS Contractor SCMS
	Send Inventory Replenishment data to Canada	ISS Contractor sends the Inventory Replenishment data and any other supporting information to Canada	ISS Contractor SCMS
	Continue with Common BUC Steps		
Postcondition(s)	See Common Post-Conditions .		
Notes			

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2.9 Information Requirements

Each header record has a primary key consisting of:

- Plant (Ship)
- Ship to Code;
- External Reference Identifier

In addition, each line record consists of:

- Part Identification Data (MPN, CAGE)
- Quantity issued including unit of issue;
- Part serial number, if serialized component;
- Batch lot and shelf expiry date as relevant.

2.10 Special Requirements

None identified.



3. Functional Data Definition

The data elements which make up an Inventory Replenishment dataset are enumerated in this section. A detailed technical message schema for exchange of datasets will be provided following the awarding of the ISS contract.

3.1 Business Entity Definition – Inventory Replenishment

The Data Entities Definition Table 3-1 below contains examples of the reference data. Specific and accurate reference data should be obtained from Canada through official channels prior to using the reference data in downstream design and implementation activities.

Table 3-1 Data Entities Definition

Name	Definition	Type	Length
Customer Identifier	CMMS generated a unique identifier of the ISS Contractor.	Char	10
Comments	Open text field from the Delivery text segment. (Additional instructions or notes for the Item Manager).	Char	120
Manufacturer Part Number (MPN)	Designated Manufacturer's Part Number (MPN). <i>Note:</i> Canada-supplied parts may have an MPN up to 34 characters in length ISS Contractor-supplied parts must have an MPN of 31 characters or less.	Char	34
CAGE Code	Commercial And Government Entity (CAGE) code number that uniquely identifies the manufacturer of the part or product, sometimes produced under government contract.	Char	5
Plant	High level organizational unit that describes a ship or land based entity. In combination with Ship To location it uniquely identifies the stock location being reported on. It is an enumerated field that shall be defined jointly by Canada and ISS Contractor. Each ship class / ISS Contractor may have differently agreed values for this field.	Char	4
Plant Description	English description of the Plant value	Char	16

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Name	Definition	Type	Length
Ship To Code	Location to ship the materiel. It is an enumerated field that shall be defined jointly by Canada and ISS Contractor. Each ship class/ISS Contractor may have differently agreed values for this attribute.	Char	4
Ship To Code Description	English description of the Ship To Code value.	Char	16
External Reference Number	ISS Contractor generated number to identify replenishment items in ISS Contractor systems	Char	30
Serial Number	The Serial Number for the materiel delivered.	Char	30
Batch Lot	The batch lot identifier for the materiel delivered.	Char	10
Shelf Life Expire Date	The expiration date for life limited parts.	Datetime	
Issued Quantity	The quantity of parts issued.	Num	5
Issued Date	The date the part was issued for delivery.	Datetime	
Tracking Number	Tracking Number from the shipper.	Char	20

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4. Issues and Exceptions

None identified.

5. Business Process Flows

Refer to EIE Supply Materiel Business Process document, [Ref. 1] for diagrams that capture business process flow supported by this BUC.

6. Definitions, Acronyms, Abbreviations

Term	Description
BUC	Business Use Case
CAGE	Commercial And Government Entity
CMMS	Canada Maintenance Management System
CSS	Canada Supply System
DND	Department of National Defence
EDD	Estimated Delivery Date
EDE	Electronic Data Exchange
EIE	Electronic Information Exchange
HoP	Hand-Over Point
ISS	In Service Support
MCP	Major Capital Project
MPN	Manufacturer's Part Number
PBC	Performance Based Contracting
PO	Purchase Order
PUK	Pack-Up Kit
SCMS	Supply Chain Management System
WO	Work Order

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7. Document Control

7.1 Document History

Version Number	Description	Date
1.0	Release to the Navy RFP	09 Sept 2015

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