



Electronic Information Environment (EIE) Project

Business Use Case (BUC) BUC 3.43 Navy - Exchange Part Issue 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

When a work order is released in the Canada Maintenance Management System (CMMS) or when a maintenance task or operation is added to a work order that requires ISS Contractor-owned parts, the system checks for availability of the parts at Canada storage locations that are dedicated to holding ISS Contractor-owned stock. If the required parts are available, a reservation will be created, parts will be committed and will be issued to the work order in the Canada Supply System (CSS). If the ISS Contractor-supplied parts are not available at Canada storage locations, a Part Demand for the required parts is generated in the CSS and sent to the ISS Contractor via the EIE EDE. The ISS Contractor will respond to the Part Demand by providing a near-real time Part Demand Response via the EDE.

The ISS Contractor will provide a Part Issue message when the demanded parts are shipped to the agreed HoP. If the materiel being issued is serialized and requires an Equipment Master Record (EMR) within the CMMS, the ISS Contractor will also send the EMR data and, if applicable, the EMR's associated

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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maintenance plan(s), measurement point data and most recent measurement data for parts issued to Canada as required. This part history data, along with the data in the Part Issue, is required to properly initialize the CMMS and CSS with the part's operating hours, maintenance and repair history, and other required parameters and documentation.

This Business Use Case (BUC) describes the exchange of Part Issue data between Canada and ISS Contractor for a platform managed according to PBC.

1.3 Intended Audience

The intended audience for this BUC includes:

- ISS Contractor who requires 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) described here
- 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 3.43 Navy - Exchange Part Issue Data

This BUC will identify processes and activities and define scenarios which apply to Part Issue data exchange.

2.1 Overview

Identifier	BUC 3.43
Name	Navy - Exchange Part Issue Data
Business goal	Receive Part Issue dataset as required to efficiently enable the CMMS / CSS to complete Canada -performed maintenance for which the issued part is required.
Stakeholders	Canada and ISS Contractor(s)
Workflow/interaction	Exchange of Part Issue dataset between Canada and ISS Contractor occurs when an ISS Contractor-owned part is supplied to Canada Authorized Person. The ISS Contractor may initiate this data exchange as a result of a part being demanded when inventory is not available in Canada supply chain, or Canada-held inventory is reduced below the established minimum inventory threshold. 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: Supply of ISS Contractor-owned parts <ul style="list-style-type: none"> • Part Demand and Fulfillment • Initial Setup of STTE in CMMS/CSS
Period of Time	The full lifecycle of the subject platform.
Description	The ISS Contractor SCMS sends to Canada the Part Issue dataset that provides necessary data to induct the supplied part into CMMS / CSS. The Part Issue 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 Part Issue 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.

2.4 Actors

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

Role Name	Role Description / Responsibilities
Canada Authorized Person	<ul style="list-style-type: none"> • Receives and distributes part received from ISS Contractor. Updates CSS for the received inventory.
ISS Contractor SCMS	<ul style="list-style-type: none"> • Generates and sends Part Issue data to Canada
EDE	<ul style="list-style-type: none"> • Transports and transforms the Part Issue data to CMMS/CSS.
CMMS / CSS	<ul style="list-style-type: none"> • Receives and processes Part Issue data.

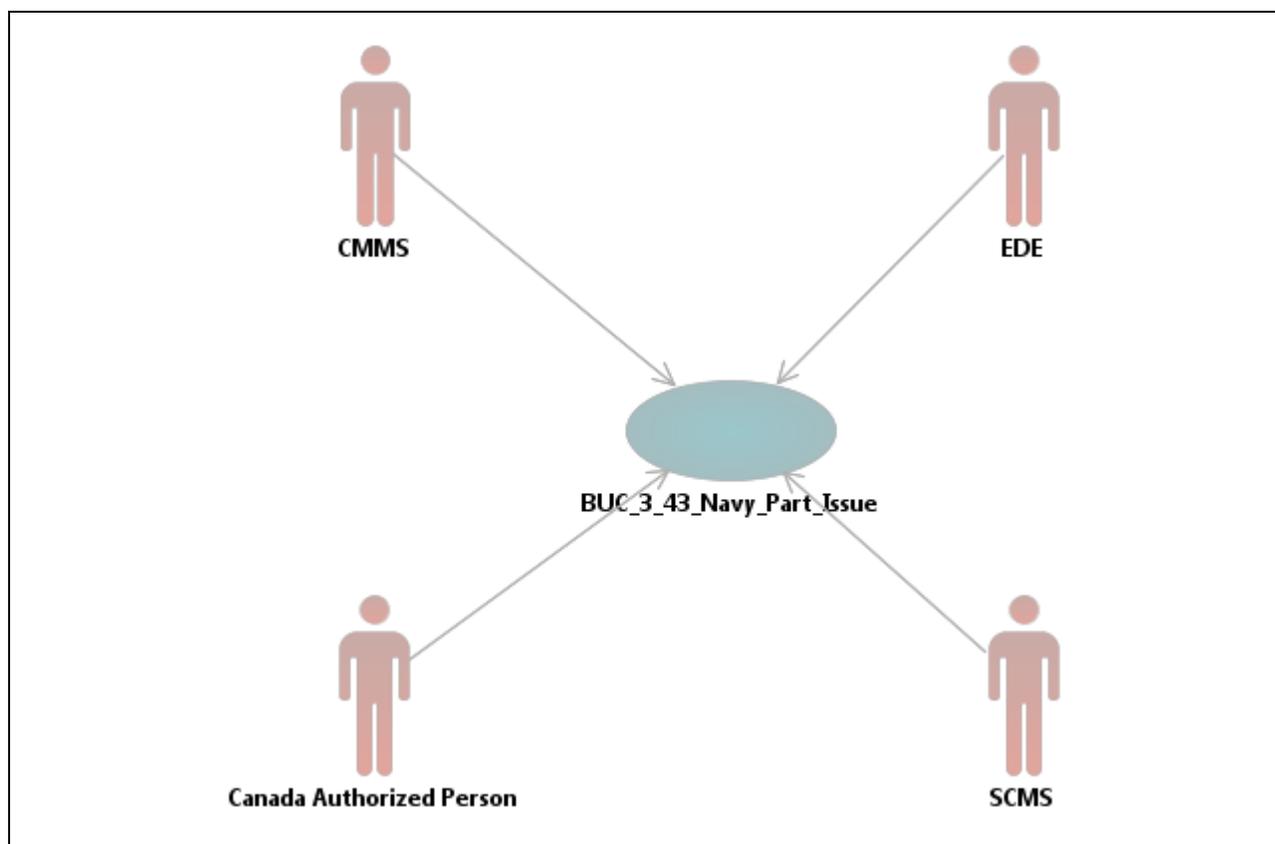


Figure 2-1 Navy - Exchange Part Issue Data

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2.5 Common Pre-Conditions

These apply to every scenario unless explicitly stated otherwise.

1. Canada and ISS Contractor have agreed upon Part Issue datasets format (see [Functional Data Definition](#))
2. Canada and ISS Contractor have agreed upon near real-time exchange mechanism of Part Issue data.

2.6 Common Post-Condition(s)

The following applies to every scenario unless explicitly stated otherwise.

1. Part Issue dataset has been received by Canada and an acknowledgement has been received by ISS Contractor.

2.7 Common BUC Steps

Each scenario defined below includes the following common steps:

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

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2.8 Scenarios²

In the following scenarios the pre-condition and trigger serve to uniquely identify the Part Issue 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.

2.8.1 3.43.1 Part Issue [N1.5.3.1.3]

Scenario Name	3.43.1 Part Issue [N1.5.3.1.3]		
Business Process	This scenario occurs in the following business processes: <ul style="list-style-type: none"> Part Demand and Fulfillment Initial Setup of STTE in CMMS/CSS 		
Business Context	Part Demand and Fulfillment <ul style="list-style-type: none"> The ISS Contractor will provide a Part Issue when the demanded parts are shipped to the agreed Hand-Over Point (HoP). Initial Setup of STTE in CMMS/CSS <ul style="list-style-type: none"> If an STTE is given to Canada for use, it will be demanded through a standard Part Demand message. The Part Issue shall be sent for the item and a Part Receipt returned to the ISS Contractor via the EIE EDE along with the physical receipt of the STTE. 		
Precondition(s)	See Common Pre-Conditions .		
Trigger event	A Part Issue transaction sent from ISS Contractor SCMS following a Part Demand initiated by Canada.		
Steps	Step Name	Step Description	Actor
	Create Part Issue	ISS Contractor creates Part Issue dataset.	ISS Contractor SCMS
	Send Part Issue	ISS Contractor sends Part Issue dataset to CMMS/CSS.	ISS Contractor SCMS

² A scenario corresponds to a specific activity in the maintenance or supply materiel business processes when a triggering event occurs which causes a Part Issue 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 maintenance activities. Each exchange use case scenario corresponds to a vertical slice from maintenance or supply business process which results in a Part Issue dataset being received from ISS Contractor and acknowledged by Canada.

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	Continue with Common BUC Steps
Postcondition(s)	See Common Post-Conditions .
Notes	

2.9 Information Requirements

Each record has a primary key consisting of:

- CMMS Customer Identifier
- Unique Canada Part Demand Identifier, i.e. Purchase Order Number
- Demanded Part Identification Data (Line number)

In addition, each record consists of:

- Supplied Part (MPN+Cage)
- Quantity issued including unit of issue
- Part serial number, if serialized component
- Batch lot and shelf expiry date, if relevant.

2.10 Special Requirements

None identified.

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3. Functional Data Definition³

The data elements which make up a Part Issue 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 – Part Issue

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
Purchase Order Number	CMMS internally generated Purchasing document item number identification per PO/demand.	Char	10
Comments	Open text field from the Delivery text segment of the Purchase Order header. (Additional instructions or notes for the Item Manager).	Char	120
Line Number	This number corresponds to CMMS originating PO line item number. (Unique Identifier for a specific demand quantity by part within a PO).	Num	5
Work Order Number	CMMS internally generated unique identifier of a Work Order for which demand is created and part is being issued to. (not applicable to Navy)	Char	12
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	Char	5

³ This is a *functional* view of the data. A detailed schema including fields for parent/child structure, metadata to manage exchange with Industry, more specific types, etc. will be designed in a subsequent activity.

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Name	Definition	Type	Length
	government contract.		
Total Demanded Quantity	The total quantity by MPN+CAGE Code for each Line Item Number.	Float	13,3
Unit of Issue	The Unit of Issue of the demanded quantity.	Char	3
Ship To Code	Location to ship the materiel to satisfy the demand. It is an enumerated field that shall be defined jointly by Canada and ISS Contractor. Each ship class / ISS Contractor partner may have differently agreed values for this attribute.	Char	4
Ship To Code Description	English description of the Ship To Code value.	Char	16
Serial Number	The Serial Number for the materiel delivered to satisfy the demand	Char	30
Batch Lot	The batch lot identifier for the materiel delivered to satisfy the demand	Char	10
Shelf Life Expire Date	The expiration date for life limited parts delivered to satisfy the demand	Datetime	
Issued Quantity	The quantity of parts issued to satisfy the materiel demand.	Float	13,3
Posting Date	The date the part was issued for delivery.	Datetime	
Pick Up Location	Location the materiel is available for Canada to pick up	Char	10
Tracking Number	Tracking Number from the shipper.	Char	20
Certificate of Compliance	Provides a reference to the materiel Certificate of Compliance.	Char	1
External Reference Number	ISS Contractor generated number to identify line item in ISS Contractor systems	Char	30
Service Request Number	ISS Contractor generated number for unserviceable backshop repair to be performed by Canada.	Char	26

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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
SCMS	Supply Chain Management System
STTE	Special Tools and Test Equipment
WO	Work Order

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7. Document Control

7.1 Document History

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