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Electronic Information Environment (EIE) Project

Business Use Case (BUC)

BUC 3.45 Navy - Exchange Part Return Issue Data

EIE Project

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1. EIE Business Use Case[1] 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

Parts that are ISS Contractor-owned will be demanded and fulfilled through Canada Maintenance Management System (CMMS) / CSS and ISS Contractor supply management system via EDE. A Part Return Issue dataset will precede or accompany the physical return of the part to ISS Contractor, in accordance with the transmission definition agreed to with ISS Contractor.

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

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[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.

1.3   Intended Audience

The intended audience for this BUC includes:

- ISS Contractors who require detail 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

- 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 N	Annex N – Navy Supply Process Model
[Ref. 2] PBC Business Process Catalogue Annex L	Annex L – Navy Maintenance Process Model

2. BUC 3.45 Navy - Exchange Part Return Issue Data

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

2.1 Overview

Identifier	BUC 3.45
Name	Navy - Exchange Part Return Issue Data
Business goal	Send Part Return Issue dataset as required to inform the ISS Contractor of the materiel being returned to the ISS Contractor.
Stakeholders	Canada and ISS Contractor(s)
Workflow/interaction	Exchange of Part Return Issue datasets between Canada and ISS Contractor when an ISS Contractor-owned part is being returned. Canada initiates this data exchange to inform the ISS Contractor of: • Unserviceable parts being returned. • Unused serviceable parts being returned. • Serviceable parts being returned after FMF-performed backshop repair. • STTE being returned Refer to the corrective and preventive maintenance business process flows that identify the supply materiel touch point of returning parts to the ISS Contractor. Reference [Ref. 2].
Processes	Information exchange is automated (system to system). The exchange is immediate upon a triggering event occurring in the source system which is CSS, in accordance to transmission definition agreed to with ISS Contractor. Some error scenarios may require manual intervention.
Context	Business Domain: Supply materiel Functional Area: Supply materiel return: • Part Return • Pack-Up Kit (PUK) Return • Return of STTE
Period of Time	The full lifecycle of the subject platform.
Description	The ISS Contractor-owned parts shall be returned to the ISS Contractor in accordance with predefined ISS Contractor instructions. When ISS Contractor-owned parts are removed from a platform it is Canada's responsibility to return the unserviceable and returnable parts back to the ISS Contractor at the designated return HoP. Canada conducts a part return process in CSS to send part data back to the ISS Contractor via EDE.

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.

2.3 Business Rules and Assumptions

- The CMMS/CSS and EDE systems shall ensure Part Return Issue dataset for a platform is sent to the ISS Contractor system which is properly authenticated and authorized to receive 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:

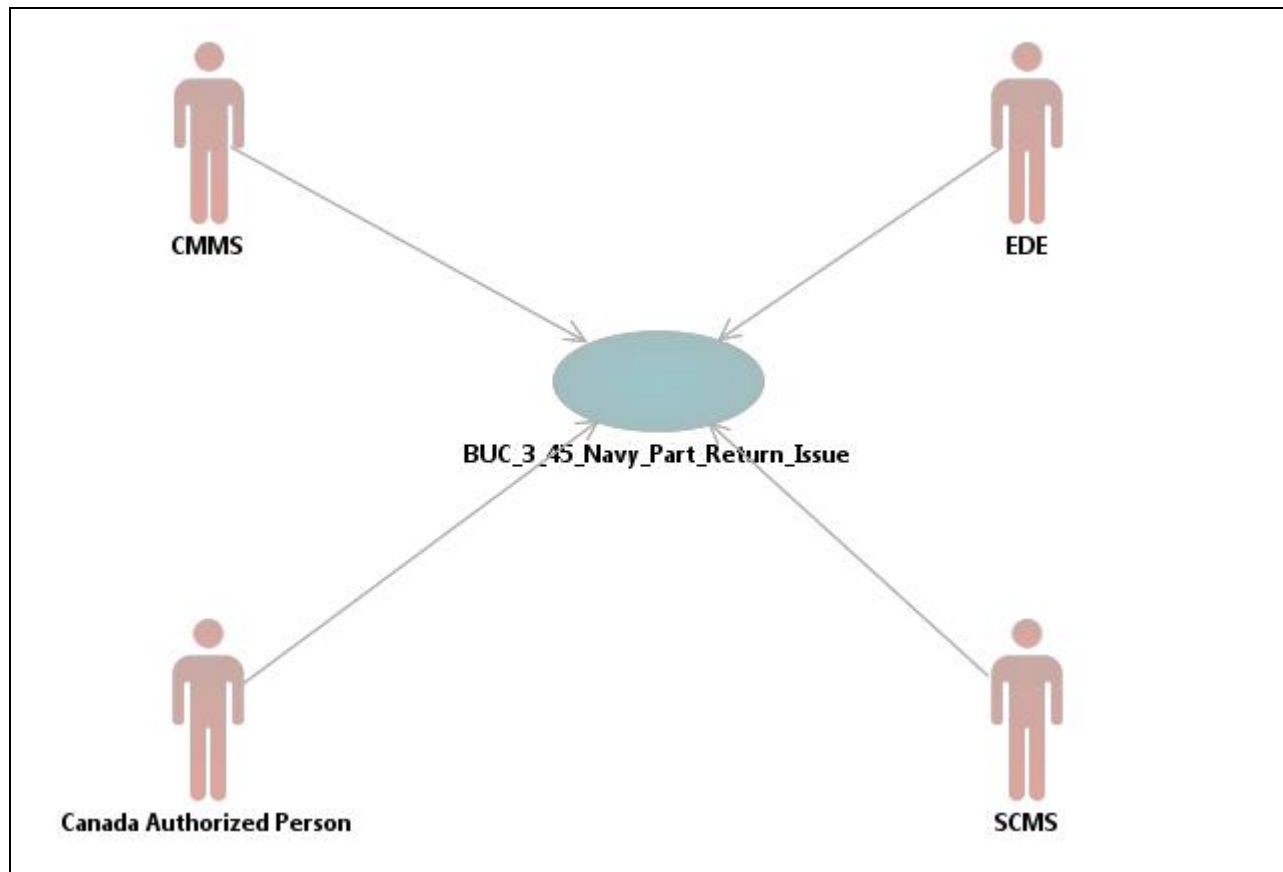| Role Name	Role Description / Responsibilities
Canada Authorized Person	• Removes the part from Canada inventory system in CSS • Initiates part return
CMMS/CSS	• Sends a Part Return Issue transactions
EDE	• Transforms and transfers the Part Return Issue data to ISS Contractor
ISS Contractor (Supply Chain Management System (SCMS))	• Provides a system that will have the ability to accept and process a Part Return Issue data sent from Canada

Figure 2-1 Navy - Exchange Part Return Issue

2.5 Common Pre-Conditions

These apply to every scenario unless explicitly stated otherwise.

1. Canada and ISS Contractor have agreed upon Part Return Issue dataset format (see Functional Data Definition)

2. Canada and ISS Contractor have agreed upon near real-time exchange mechanism of Part Return Issue data.

2.6 Common Post-Condition(s)

The following applies to every scenario unless explicitly stated otherwise.

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

2.7 Common BUC Steps

Each scenario defined below includes the following common steps:

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

2.8 Scenarios[2]

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

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[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 Return 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 a maintenance or supply business process which results in a Part Return Issue dataset being transferred to ISS Contractor.

2.8.1 3.45.1 Part Return Issue [N1.5.3.1.6]

Scenario Name	3.45.1 Part Return Issue [N1.5.3.1.6]
Business Process	This scenario occurs in the following Supply Materiel business processes: • Part Return Issue • PUK Return • Return of STTE
Business Context	Part Return • As ISS Contractor-owned parts are removed from the Platform, they become due for return to the ISS Contractor within a specified period of time. The ISS Contractor-owned parts shall be returned in accordance with predefined ISS Contractor instructions. • The ISS Contractor-owned Part Return is tracked by Canada until the parts reach the agreed HoP and the change of custody is acknowledged in the CSS and the ISS Contractor systems. When the returned parts are removed from the CSS inventory, a Part Return Issue is sent to the ISS Contractor via the EDE. PUK Return • The contents of the PUK will be verified prior to return to the ISS Contractor. A Part Return Issue will be generated in the CSS for each part in the PUK (remaining repairable and unused parts) as well as the STTE from the pack-up kit and sent to the ISS Contractor via the EDE. Return of STTE • When ISS Contractor-owned STTE is due for calibration or repair, a request for return will be communicated to Canada via a mechanism outside the scope of the EDE, and the physical STTE will be delivered to the HoP for return to the ISS Contractor. As a result, the Canada supply technician will initiate a return of STTE from the CSS to the ISS Contractor. The CSS will generate and send a Part Return Issue to the ISS Contractor via the EDE to accompany the physical return of the STTE.
Precondition(s)	See Common Pre-Conditions.
Trigger event	A Part Return Issue transaction is sent from CMMS / CSS for a repairable part; a part in excess of requirement, or as the result of backshop repair.

Steps	Step Name	Step Description	Actor
	Part Return Issue transaction	When an ISS Contractor-supplied part is removed from Canada inventory in CSS, a Part Return Issue transaction is sent to ISS Contractor via EDE.	Canada Authorized Person
	Send part to SCMS	A part has been physically sent to the ISS Contractor and the part data, sent in the Part Return Issue datasets have been sent.	Canada Authorized Person
	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;
- Returned Part Identification Data (Line number)

In addition, each record consists of:

- Returned quantity and unit of measure of returned quantity.
- Returned Part identification data (MPN, CAGE)
- Part serial number, if serialized component;
- Batch lot and shelf expiry date as relevant.

2.10 Special Requirements

None identified.

3. Functional Data Definition[3]

The data elements which make up a Part Return 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 Return 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/return.	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 return quantity by part within a PO).	Num	5
Work Order Number	CMMS internally generated unique identifier of a Work Order against which the removed part is being returned from. (Not applicable to Navy)	Char	12
Manufacturer Part Number (MPN)	Designated Manufacturer's Part Number (MPN). *Note:* 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

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[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 and provided in a subsequent activity.

Name	Definition	Type	Length
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
Unit of Issue	The Unit of Issue of the returned quantity.	Char	3
Ship To Code	Location to return the materiel. In the case of a Pack-Up Kit return, Ship-to-Code identifies from which the Pack-Up Kit part is being returned. 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
Serial Number	The Serial Number for the materiel returned	Char	30
Batch Lot	The batch lot identifier for the materiel returned	Char	10
Shelf Life Expire Date	The expiration date for life limited parts returned	DateTime	
Returned Quantity	The quantity of parts returned for this Line/ MPN/ Cage	Float	13,3
Returned Date	The date the part was returned to ISS Contractor.	DateTime	
Tracking Number	Tracking Number from the shipper.	Char	20
Unserviceable Code	Indicates whether the part returned is in a serviceable or unserviceable state.	Char	1
Unserviceable Code Description	English description of the Unserviceable Code value.	Char	20
Service Request Number	ISS Contractor generated number for unserviceable backshop repair to be performed by Canada.	Char	26

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
STTE	Special Tools and Test Equipment
STE	Support and Test Equipment
WO	Work Order

7. Document Control

7.1   Document History

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