National Defence / Défense nationale

Electronic Information Environment (EIE) Project

Business Use Case (BUC)

BUC 3.50 Navy - Exchange Inventory Report Data

EIE Project

document identification	identifier du document
issue date	date de diffusion
	09 September 2015
version	version
	1.0
OPI	BPR
	PBC - EIE Solution Office
designator	désignation
	EIE Project
group / division	groupe / division
	ADM(IM) / DGEAS

Table of Contents

List of Figures

List of Tables

1. EIE Business Use Case (BUC)[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

The ISS Contractor will be responsible for monitoring the materiel consumption and stock level of the Canada storage locations and maintaining defined stock levels. In order to accurately monitor inventory level, CSS will send Inventory Visibility Reports (Inventory Report, Part Request Report, and Usage Report) to the ISS Contractor, via EDE on a scheduled basis.

The ISS Contractor can use this information to track inventory levels of ISS Contractor-supplied spares and STTE, and may use the information provided in the reports to adjust inventory levels.

This BUC describes the exchange of the materiel inventory data (the Inventory Report) between Canada and ISS Contractor for materiel managed according to PBC.

---

[1] "BUC: 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) 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

2. BUC 3.50 Navy Exchange Inventory Report Data

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

2.1 Overview

Identifier	BUC 3.50
Name	Navy - Exchange Inventory Report Data
Business goal	Send materiel Inventory Report dataset to ISS Contractor in order to enable monitoring of the serviceable stock level in inventory and timely initiation of replenishment.
Stakeholders	Canada and ISS Contractor(s)
Workflow/interaction	Transfer of materiel Inventory Report datasets between Canada and ISS Contractor on a predetermined basis. Canada initiates this data transfer to inform the ISS Contractor of the serviceable inventory levels. Reference [Ref. 2].
Processes	Information exchange is automated (system to system). The CSS will capture the inventory levels and send an Inventory Report to the ISS Contractor on a scheduled basis. Some error scenarios may require manual intervention.
Context	Business Domain: Supply materiel Functional Area: • PUK Replenishment • Inventory Report
Period of Time	The full lifecycle of the subject platform.
Description	On a predetermined schedule, Canada will collect inventory overview data with the most recent inventory information for each relevant storage location. The ISS Contractor can use this information to track inventory levels of ISS Contractor-supplied spares and STTE.

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

1. An Inventory Report is created for specific ISS Contractor-owned parts for parts currently in stock in the CSS.

2. The CMMS/CSS and EDE systems shall ensure an Inventory Report dataset is sent only to the ISS Contractor system which is properly authenticated and authorized to see maintenance and materiel data for that ship class.

2.4 Actors

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

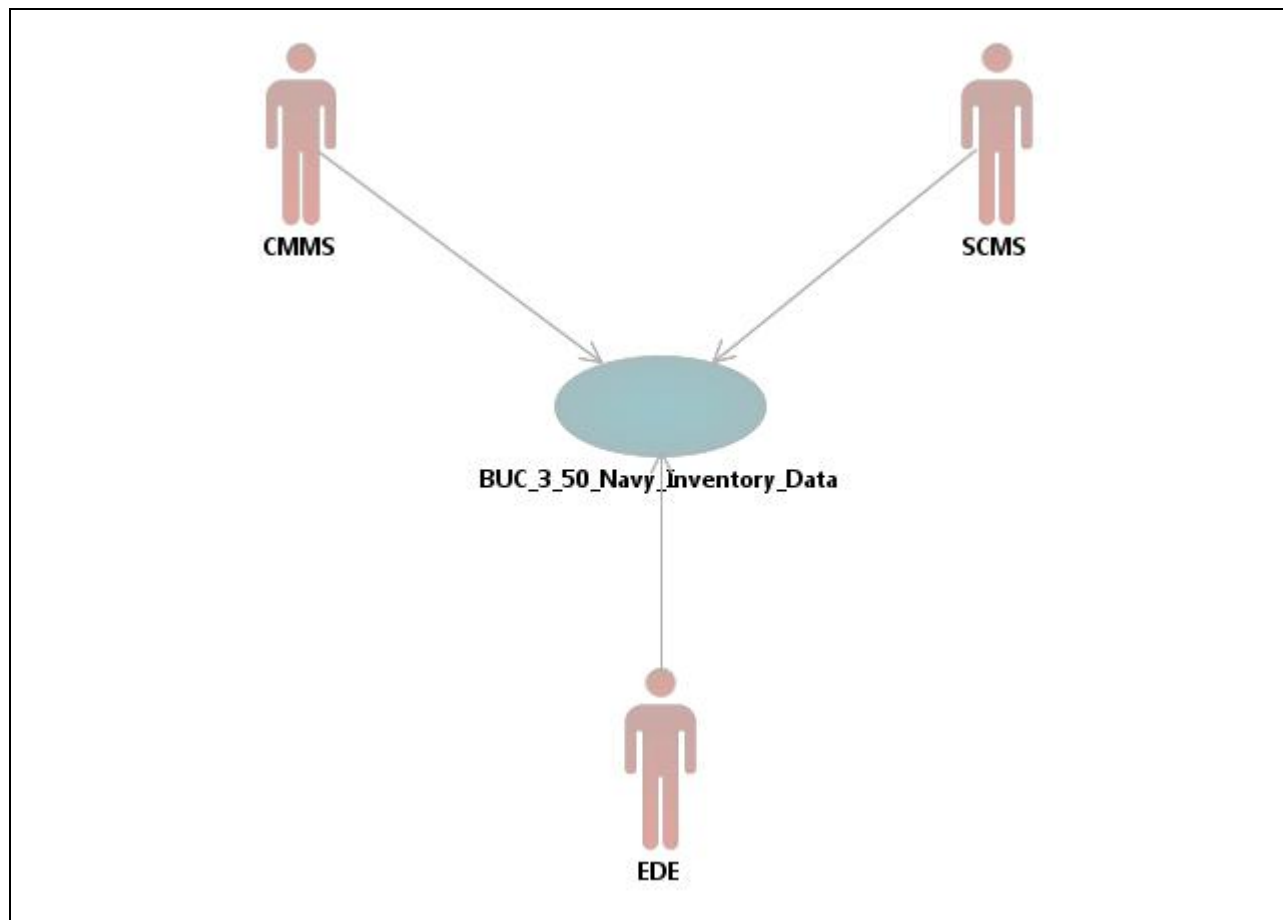| Role Name	Role Description / Responsibilities
CMMS/CSS	Creates and sends Inventory Report data
EDE	Transports and transforms the Inventory Report data
ISS Contractor (SCMS)	Provides a system that will have the ability to: • accept and process an Inventory Report data sent from Canada, and • acceptance of the acknowledge of the data from Canada

Figure 2-1 Navy - Exchange Inventory Report Data

2.5   Common Pre-Conditions

These apply to every scenario unless explicitly stated otherwise.

1. Canada and ISS Contractor have agreed upon materiel Inventory Report dataset format (see Functional Data Definition)

2. Canada and ISS Contractor have agreed upon an exchange mechanism of Inventory Report data.

2.6   Common Post-Condition(s)

The following applies to every scenario unless explicitly stated otherwise.

1. Materiel Inventory Report 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
Convert Inventory Report dataset to common Format	EDE converts data to XML-based format that has been adopted by Canada and ISS Contractor	EDE
Send Inventory Report dataset to ISS Contractor (SCMS)	EDE sends Inventory Report dataset to ISS Contractor, in accordance to transmission definition agreed to with ISS Contractor.	EDE
Acknowledge a receipt of Inventory Report dataset	ISS Contractor (SCMS) sends an acknowledgement receipt to EDE for received Inventory Report dataset.	ISS Contractor (SCMS)
Forward acknowledgement to CMMS/CSS	EDE forwards the acknowledgement receipt to CMMS/CSS.	EDE
Mark Inventory dataset as sent	CMMS/CSS processes acknowledgement receipt.	CMMS/CSS

2.8   Scenarios[2]

In the following scenarios the pre-condition and trigger serve to uniquely identify the Inventory Report 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 a materiel Inventory Report 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 an Inventory Report dataset being transferred to the ISS Contractor.

2.8.1   3.50.1 Inventory Report [N1.5.3.4.4]

Scenario Name	3.50.1 Inventory Report [N1.5.3.4.4]		
Business Process	This scenario occurs in the following Supply Materiel business processes: • PUK Replenishment • Inventory Report		
Business Context	PUK Replenishment • Based on the terms of the PBC, the ISS Contractor may be responsible for monitoring the stock levels of a PUK and initiating PUK replenishment in order to maintain Platform operational capability. The requirement for replenishment will vary as per the specifics of the particular platform/ship class requirements. In order to assist in monitoring the inventory levels of a PUK, the CSS will capture part consumption and send Usage, Part Request, and Inventory Reports to the ISS Contractor, via the EDE on a scheduled basis. Inventory Report • On a predetermined schedule, Canada will collect inventory overview data with the most recent inventory information for each relevant storage location. The ISS Contractor can use this information to track the inventory levels of ISS Contractor-supplied spares and STTE.		
Precondition(s)	See Common Pre-Conditions.		
Trigger event	Inventory Report is generated on a pre-determined schedule.		
Steps	**Step Name**	**Step Description**	**Actor**
	Create Inventory Report	The CSS creates an Inventory Report based on the on-hand inventory for materiel that is in CSS within a specific storage location.	CSS
	Send Inventory Report	The CMMS/CSS sends the Inventory Report dataset to EDE.	CMMS/CSS
	Continue with Common BUC Steps		
Postcondition(s)	See Common Post-Conditions.		
Notes			

2.9 Information Requirements

The details of the data elements are provided in section 3.

2.10 Special Requirements

None identified.

3. Functional Data Definition[3]

The data elements which make up an Inventory Report 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 Report Dataset

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
Posting Date	Date item was posted for issue or transfer. CMMS uses yyyymmdd formatting.	Datetime	
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
Ship To Code	In combination with Plant, 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
Ship To Code Description	English description of the Ship To Code value.	Char	16
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	Char	34

---

[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.

Name	Definition	Type	Length
	31 characters or less.		
Part Description	Description of the Designated Manufacturer's Part	Char	30
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
Total Quantity	The total serviceable quantity remaining by MPN.	Num	13,3
Unit of Issue	The Unit of Issue of the remaining quantity	Char	3
Serial Number	Manufacturer serial number associated to the materiel (as applicable)	Char	30
Batch Lot	The batch lot identifier for the materiel (as applicable)	Char	30
Shelf Life Expiry Date	The expiration date for life limited parts	Datetime	
Bin ID	Storage BIN number associated to the materiel	Char	10

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
ISSC	In Service Support Contracting
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
WO	Work Order

7. Document Control

7.1 Document History

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