



# Electronic Information Environment (EIE)

## Business Use Case (BUC)

### BUC 3.47 Navy - Exchange Pack-Up Kit (PUK) Issue Data

#### EIE Project

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## 1. EIE Business Use Case<sup>1</sup> (BUC) 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

Canada may demand a pack-up kit (PUK) based on an anticipated operational deployment. The deployment type and conditions are usually communicated to the ISS Contractor outside the EDE to determine the required content, prior to deployment. The content of the PUK is usually determined by the ISS Contractor. The ISS Contractor will respond by sending a PUK Demand Response via the EDE using the common Part Demand Response interface indicating the EDD.

The PUK Issue will include a listing of the pre-determined parts and Special Tools and Test Equipment (STTE), and will be sent from the ISS Contractor to the CSS via the EDE for each PUK Demand. The physical PUK will be delivered to Canada at the HoP. If the PUK includes materiel that is serialized and requires an EMR within the CMMS (as indicated in the MMR master data), the ISS Contractor will also

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<sup>1</sup> "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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send the EMR data and, if applicable, the EMR’s associated maintenance plan, measurement point data and most recent measurement data for the parts via the EDE.

This BUC describes the exchange of PUK Issue data between Canada and ISS Contractor for a platform managed according to PBC for initial deployment and replenishment scenarios.

### 1.3 Intended Audience

The intended audience for this BUC includes:

- The ISS Contractors who require details of their business service-level interactions, benefits and obligations under PBC.
- All Canada personnel implementing 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 3.47 Navy - Exchange PUK Issue Data

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

### 2.1 Overview

<b>Identifier</b>	BUC 3.47
<b>Name</b>	Navy - Exchange PUK Issue Data
<b>Business goal</b>	Receive PUK Issue dataset as required to efficiently instantiate the CMMS CSS, or replenish supply of the PUK, and to complete Canada-performed maintenance for which the issued PUK is required.
<b>Stakeholders</b>	Canada and ISS Contractor(s)
<b>Workflow/interaction</b>	Exchange of PUK Issue dataset between Canada and the ISS Contractor occurs when a PUK is supplied to the Canada Authorized Person. ISS Contractor will initiate this data exchange as a result of preparation for deployment to instantiate a PUK into CMMS/CSS. A PUK Issue dataset is expected for each PUK demand request.  Refer to the corrective and preventive maintenance business process flows that identify supply materiel touch points. Reference [Ref. 2].
<b>Processes</b>	Information exchange is automated (system to system). The exchange is immediate upon a triggering event has occurred in the source system – ISS Contractor Supply Chain Management System (SCMS).  Some error scenarios may require manual intervention.
<b>Context</b>	Business Domain: Supply materiel Functional Area: <ul style="list-style-type: none"> <li>• PUK Demand and Fulfillment</li> <li>• PUK Replenishment.</li> </ul>
<b>Period of Time</b>	The full lifecycle of the subject platform.
<b>Description</b>	The ISS Contractor SCMS sends to Canada PUK Issue data that provides necessary data to instantiate supplied PUK into CMMS/CSS. The PUK Issue dataset will be transmitted to CMMS/CSS via the 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 PUK 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. A PUK Issue will be received from the ISS Contractor in a response to a demand for the PUK. A PUK Issue message will only address a single PUK Demand message.
3. When replenishing an existing PUK, ISS Contractor will generate PUK Issue dataset without a new demand request from Canada.

## 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 for Electronic Information Exchange that will have capabilities to generate and send PUK Issue data to Canada
EDE	Transforms and transports the PUK Issue data to CMMS/CSS
CMMS / CSS	Receives and processes PUK Issue data
Canada Authorized Person	Receives and distributes PUK received from ISS Contractor. Updates CSS for the received inventory.

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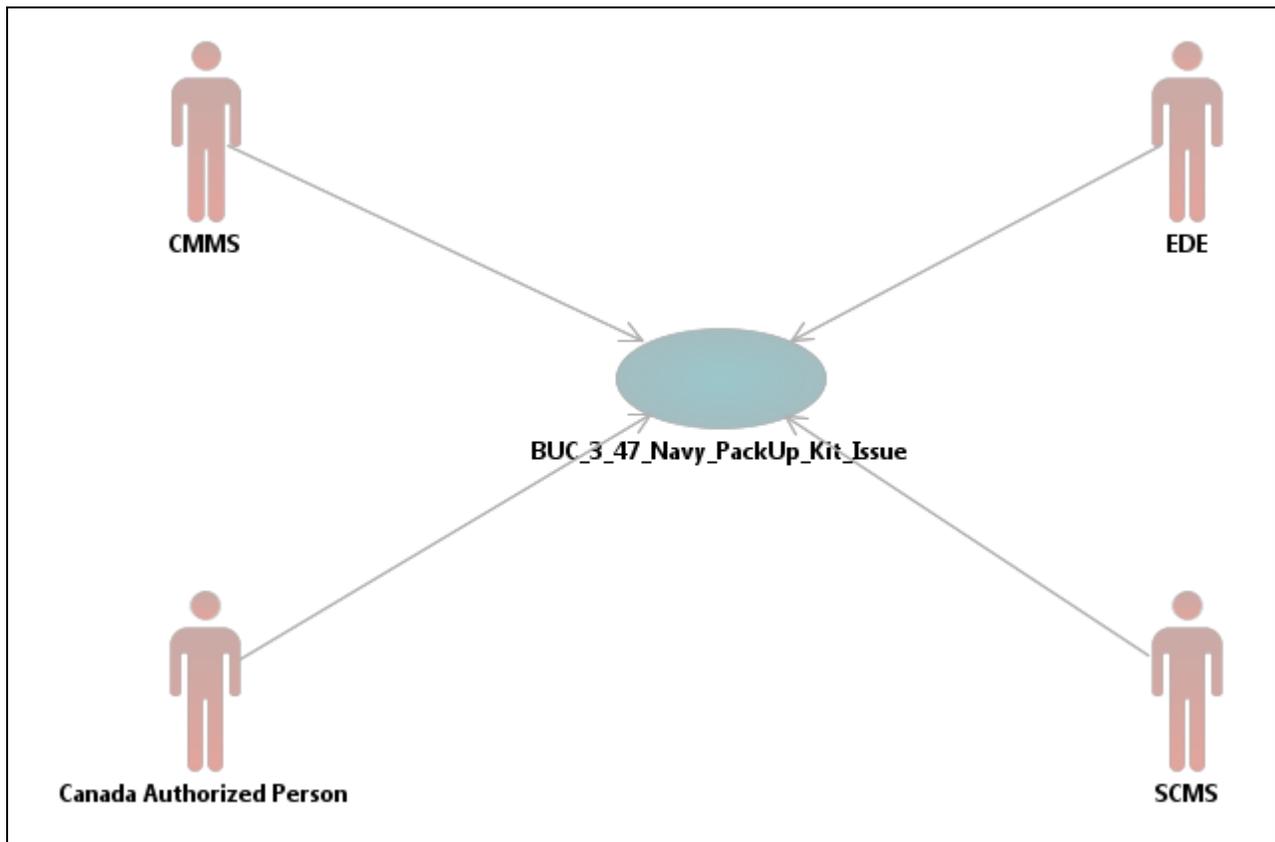


Figure 2-1 Navy - Exchange PUK Issue Data

## 2.5 Common Pre-Conditions

These apply to every scenario unless explicitly stated otherwise.

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

## 2.6 Common Post-Condition(s)

The following applies to every scenario unless explicitly stated otherwise.

1. PUK Issue 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 PUK Issue dataset	The EDE receives a PUK Issue transaction from an ISS Contractor.	EDE
Verify PUK Issue dataset as per EDE standards	EDE verifies the data received from ISS Contractor.	EDE
Convert PUK Issue dataset to CMMS/ CSS format	EDE converts data to a format agreed and accepted by CMMS/ CSS	EDE
Send PUK Issue dataset to CMMS/CSS	EDE sends PUK Issue dataset to CMMS/CSS, in accordance to transmission definition agreed to with CMMS/ CSS.	EDE
Acknowledge receipt of PUK Issue dataset	CMMS/CSS sends an acknowledgement receipt to EDE for received PUK Issue dataset.	CMMS / CSS
Send acknowledgement to ISS Contractor for PUK Issue data	EDE sends PUK Issue acknowledgement receipt to the ISS Contractor.	EDE, ISS Contractor SCMS

## 2.8 Scenarios<sup>2</sup>

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

<sup>2</sup> A scenario corresponds to a specific activity in the maintenance or supply materiel business processes when a triggering event occurs which causes a Pack-Up 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, some maintenance activities, and possibly a trial. Each exchange use case scenario corresponds to a vertical slice from maintenance or supply business process which results in a Pack-Up Issue dataset being received from the ISS Contractor and acknowledged by Canada.

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**2.8.1 3.47.1 PUK Issue [N1.5.3.3.3]**

<b>Scenario Name</b>	<b>3.47.1 PUK Issue [N1.5.3.3.3]</b>		
<b>Business Process</b>	This scenario occurs in the following Supply Material business processes: <ul style="list-style-type: none"> <li>• PUK Demand and Fulfillment</li> <li>• PUK Replenishment</li> </ul>		
<b>Business Context</b>	<p>PUK Demand and Fulfillment</p> <ul style="list-style-type: none"> <li>• The PUK Issue will include a listing of the pre-determined parts and STTE, and will be sent from the ISS Contractor to the CSS via the EDE for each PUK Demand.</li> </ul> <p>PUK Replenishment</p> <ul style="list-style-type: none"> <li>• If the ISS Contractor schedules replenishment to a deployed PUK, the CSS will be notified of each part issued through a PUK Issue including the EMR part history (EMR, maintenance plan, measurement point, measurement reading) where applicable. The PUK Issue will reference the original PUK Demand.</li> </ul>		
<b>Precondition(s)</b>	See <a href="#">Common Pre-Conditions</a> .		
<b>Trigger event</b>	ISS Contractor initiates sending of PUK Issue datasets in response to Canada demand for a PUK.		
<b>Steps</b>	<b>Step Name</b>	<b>Step Description</b>	<b>Actor</b>
	Create PUK Issue dataset	ISS Contractor prepares a PUK Issue response data based on the previously accepted PUK demand request.	ISS Contractor SCMS
	Send to Canada PUK Issue data	ISS Contractor sends the PUK Issue data and any other supporting information to Canada EDE	ISS Contractor SCMS
	Continue with <a href="#">Common BUC Steps</a>		
<b>Postcondition(s)</b>	See <a href="#">Common Post-Conditions</a> .		
<b>Notes</b>			

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## 2.9 Information Requirements

Each PUK header record has a primary key consisting of:

- Unique Canada Part Demand Identifier, i.e., Purchase Order Number;
- PUK Identifier (Ship-to-Code)

In addition, each PUK line record consists of:

- Supplied Parts 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<sup>3</sup>

The data elements which make up a PUK 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 – PUK Issue Data

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. (One per PUK as necessary)	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
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
Total Issued Quantity	The total quantity by materiel for each Line Item Number.	Float	13,3

<sup>3</sup> This is a *functional* view of the data. A detailed schema including fields for parent/child structure, metadata to manage exchange with the ISS Contractor, more specific types, etc will be fined in the associated service specification that this business use case will use to fulfill the identified scenarios.

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Name	Definition	Type	Length
Unit of Issue	The Unit of Issue of the demanded quantity. Values: Unit of Measure	Char	3
Ship To Code	Uniquely identifies the PUK being supplied. 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 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.	Num	5
Issued Date	The date the part was issued for delivery.	Datetime	
Tracking Number	Tracking Number from the shipper.	Char	20
External Reference Number	ISS Contractor generated number to identify line item in ISS Contractor systems	Char	30

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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
STTE	Special Tools and Test Equipment
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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