Electronic Information Environment (EIE) Project

Business Use Case (BUC)
BUC 4.21 Navy - Exchange Maintenance Notification Data

EIE Project

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The information being provided is to illustrate the model that exists for business processes and information exchange within the Performance Based Contracting (PBC) solution for the Department of National Defence. The information is provided to facilitate an understanding of the business architecture and the solution architecture that exist for the PBC program. The content is not intended to reflect the end state specifications for all of the PBC EIE related services.

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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 DND 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 corrective and/or preventive maintenance activities on the Platform. In order for Canada and an ISS Contractor partner to fulfill their obligations under PBC specific datasets must be exchanged between Canada and ISS Contractor.

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

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

1.2 Purpose

DND maintenance activities are tracked in the Canada Maintenance Management System (CMMS). Exchange of maintenance-related data involves new exchange business processes between CMMS and ISS Contractor data consumers which complement already documented maintenance business processes.

This Business Use Case (BUC) describes the exchange of Maintenance Notification records between Canada and ISS Contractor for a Navy Ship Class managed according to PBC.

1.3 Intended Audience

The intended audience for this BUC includes:

- ISS Contractor who requires detail of their business service-level interactions, benefits and obligations under PBC.
- DND Offices 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] "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/.

1.4 References and Traceability

Business Process documents

[Ref. 1] 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 L	Annex L – Navy Maintenance Process Model

2 BUC 4.21 Navy - Exchange Maintenance Notification Data

This BUC will identify processes and activities and define scenarios which apply to maintenance notifications. Maintenance notifications have several distinct parts (See Functional Data Definition). For the purpose of a maintenance history data exchange, a notification with some or all of its parts will be sent from Canada to ISS Contractor. "**Notification datasets**" will be used to refer to a set of notifications, including respective parts, prepared for exchange.

2.1 Overview

Identifier	BUC 4.21
Name	Navy - Exchange Maintenance Notification Data
Business goal	Send maintenance notification dataset to ISS Contractor as necessary to allow ISS Contractor to fulfill its obligations under PBC.
Stakeholders	Canada and ISS Contractor(s)
Workflow/interaction	Exchange of maintenance notification dataset from Canada to ISS Contractor as defined at multiple points in corrective and preventive maintenance business processes. Reference [Ref. 1].
Processes	Information exchange is automated (system to system). The frequency of exchange is determined by Canada and each ISS Contractor. Some error scenarios may require manual intervention.
Context	Business Domain: Maintain Platform Functional Area: Preventive and Corrective Maintenance • Preventive Maintenance (PM) Planning – PM Initialization – Maintenance Planning - Ship Staff – Maintenance Planning - Fleet Maintenance Facility (FMF) – Maintenance Planning - On-Site Management Team (OSMT) • Corrective Maintenance Planning • Execute Corrective or Preventive Maintenance – Execute Maintenance - Ship Staff/FMF – Execute Maintenance - ISS Contractor • Cancel • Deviation and Waiver – Deviation and Waiver - Ship Staff/FMF – Deviation and Waiver - ISS Contractor • Conduct Trials

	– Conduct Trials - Ship Staff/FMF – Conduct Trials - ISS Contractor • Backshop Maintenance
Period of Time	The full lifecycle of the subject platform.
Description	Part of Canada's responsibility within the PBC is the execution of 1st and 2nd level maintenance (corrective or preventive) activities on a Platform. The 2nd level maintenance activities could be the result of an engineering change request on the Platform that would result in the Platform configuration change. In order to systematically track the request for execution of the maintenance activities and to record the damages identified on the Platform or required Platform configuration change, a maintenance notification is created in the CMMS. In accordance with the ISS contract, all maintenance notifications associated with the Platform will be transferred to the ISS Contractor in order to facilitate contractually agreed obligations. On a pre-determined, periodic basis, through the entire Platform lifecycle, Canada will transfer to the specific ISS Contractor, maintenance notification datasets, which are permitted by the business to be shared with the specific ISS Contractor.

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.

The highlighted activities within the 1st and 2nd level maintenance business process are supported by this use case.

2.3 Business Rules and Assumptions

1. The system shall ensure maintenance notification datasets for a Platform are sent only to the ISS Contractor system which is properly authenticated and authorized to see maintenance notification datasets for that ship class.

2. The system may impose a latency (or delay) prior to releasing maintenance notification datasets to the ISS Contractor. A delay may be imposed for operational or security reasons.

3. CMMS, as the system of record for maintenance data, will determine when data can be released to the ISS Contractor and will initiate transfer to the ISS Contractor.

4. Any created, updated, or closed maintenance notification which is managed in a disconnected instance of CMMS will not be released to the ISS Contractor until the disconnected CMMS instance is synchronized with the central CMMS and/or latency is concluded, whichever is later.

2.4 Actors

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

Role Name	Role Description / Responsibilities
Health and Usage Monitoring System (HUMS)	• When the HUMS is present, fault codes may be uploaded into CMMS that will initiate a corrective maintenance notification creation
Canada DND Authorized Person	• Creates corrective maintenance notification based on Platform observations • Creates corrective maintenance notification based on Platform fault codes • Creates notification to request a deviation or waiver • Creates notification to conduct trials • Closes notification as maintenance is completed by a maintainer
CMMS	• Supports creation and processing notification data.
EDE	• Transports and transforms the notification data.
ISS Contractor	• Provides a system that will have the ability to: - Accept and process maintenance notifications data sent from Canada, and - Acceptance of the Acknowledgement of data from Canada

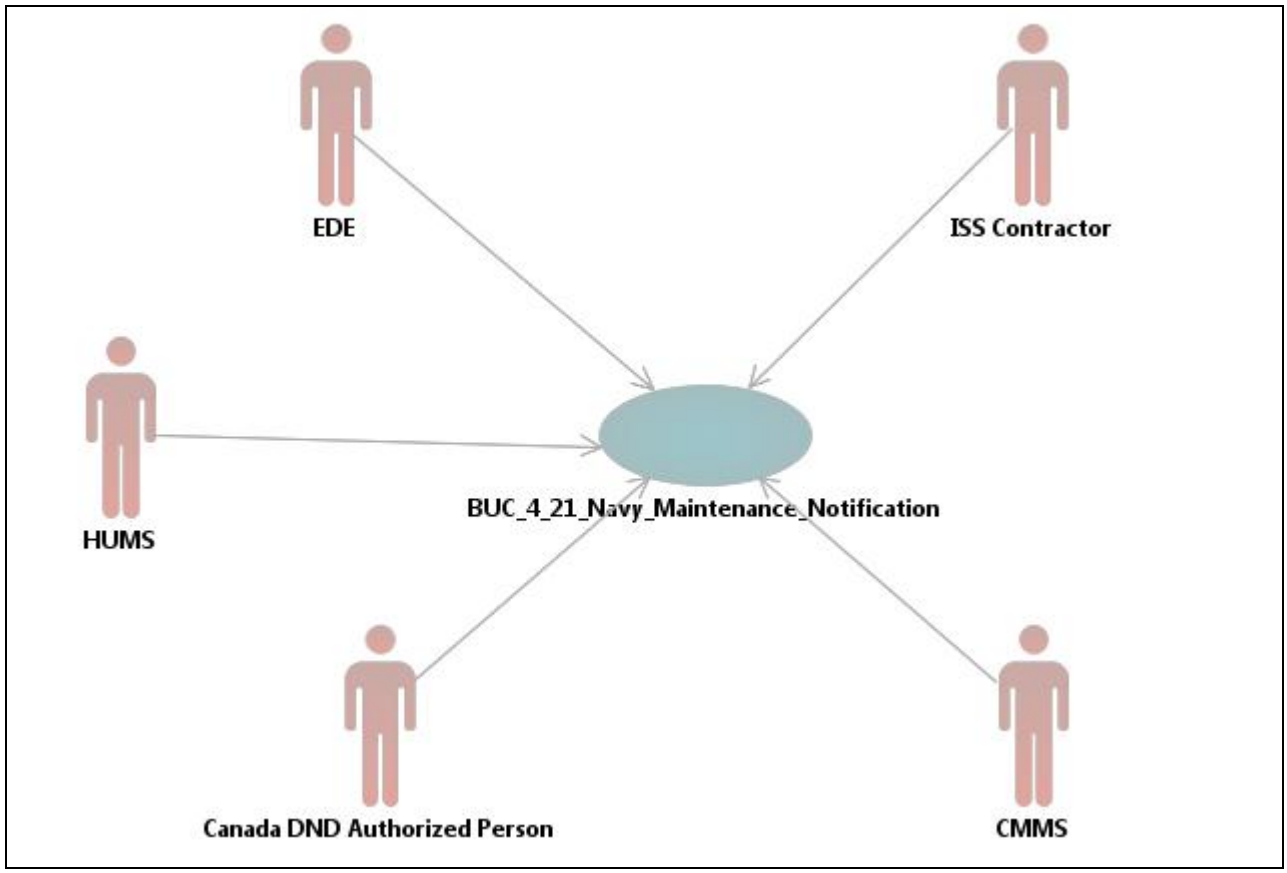

Figure 2-1 Navy - Exchange Maintenance Notification Data

2.5 Common Pre-Conditions

These apply to every scenario unless explicitly stated otherwise.

1. As per PBC, ISS Contractor requires that the maintenance notification datasets be sent to ISS Contractor Consumer System;
2. Canada and ISS Contractor have agreed upon maintenance notification dataset format (see Functional Data Definition);
3. Canada and ISS Contractor have agreed upon maintenance notification data exchange mechanism.

2.6 Common Post-Condition(s)

The following applies to every scenario unless explicitly stated otherwise.

1. Maintenance notification 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
Determine which notification datasets are to be sent to the ISS Contractor	CMMS determines which notification data is applicable for a given ISS Contractor, ship class, and business event and may apply latency conditions to determine what is available for release to the ISS Contractor.	CMMS
Prepare and send maintenance notification data	CMMS creates and sends maintenance notification records as per input parameters provided.	CMMS
Convert maintenance notification data to common format	EDE converts data to XML-based format that has been adopted by Canada and the ISS Contractor.	EDE
Send maintenance notification data to ISS Contractor	EDE sends maintenance notification datasets to the ISS Contractor, in accordance with transmission definition as per Canada EDE defined standards.	EDE
Acknowledge receipt of maintenance notification data	ISS Contractor system acknowledges receipt of maintenance notification records.	ISS Contractor
Forward acknowledgement to CMMS	EDE forwards the acknowledgement receipt to CMMS.	EDE
Mark maintenance notification records as sent	CMMS updates its maintenance notification records as being sent.	CMMS
Send data integrity validation acknowledgement	ISS Contractor system conducts data integrity validation as per established business rules as agreed between Canada and the ISS Contractor. ISS Contractor system sends acknowledgement to Canada EDE. Note: ISS Contractor will send error information if the data fails integrity validation	ISS Contractor
Receive data integrity validation acknowledgement from ISS Contractor	EDE receives the data integrity validation acknowledgement and dispatches the information to CMMS.	EDE
Mark maintenance notification records as being business acknowledged	CMMS updates its maintenance notification records as being business acknowledged by ISS Contractor system.	CMMS

2.8 Scenarios[2]

In the following scenarios the pre-condition and trigger serve to uniquely identify the maintenance notification exchange in the context of a maintenance business process. This supports direct traceability between maintenance business processes and exchange use case scenarios.

Note: The numeric identifier that appears in square brackets besides each scenario name is an identifier that can be used to locate the event in the business process flow as per [Ref. 1].

[2] A scenario corresponds to a specific activity in a maintenance business process when a triggering event occurs which causes a maintenance notification datasets exchange. Picture the maintenance business process as proceeding horizontally through recognition of a corrective or preventive maintenance situation, through fault isolation, some maintenance activities, and possibly a trial test. Each exchange use case scenario corresponds to a vertical slice from a maintenance business process which results in a maintenance notification being transferred to the ISS Contractor.

2.8.1 4.21.1 Maintenance Notification – Full [N1.4.3.1.1]

Scenario Name	**4.21.1 Maintenance Notification – Full [N1.4.3.1.1]**
Business Process	This scenario occurs in the following business processes: • Preventive Maintenance (PM) Planning – PM Initialization – Maintenance Planning - Ship Staff – Maintenance Planning - Fleet Maintenance Facility (FMF) – Maintenance Planning - On-Site Management Team (OSMT) • Corrective Maintenance Planning • Execute Corrective or Preventive Maintenance – Execute Maintenance - Ship Staff/FMF – Execute Maintenance - ISS Contractor • Cancel • Deviation and Waiver – Deviation and Waiver - Ship Staff/FMF – Deviation and Waiver - ISS Contractor • Conduct Trials – Conduct Trials - Ship Staff/FMF – Conduct Trials - ISS Contractor • Backshop Maintenance
Business Context	The creation and closure of a notification as described in the following maintenance business processes will trigger sending the Full record of data to the ISS Contractor. PM Initialization • Deadline monitoring for preventive maintenance performed by ship staff runs weekly and creates work orders one month in advance (maintenance work order type N017) with the creation and auto-release of the corresponding maintenance notifications (maintenance notification type N9). • Deadline monitoring for the preventive maintenance performed by Fleet Maintenance Facility (FMF) runs weekly and creates maintenance notifications six months in advance (maintenance notification type N9) with the auto-setting of the user status of the maintenance notification to 'Passed to Repair Facility' (PTRF). • Deadline monitoring for the preventive maintenance required to be performed by the ISS Contractor runs weekly and creates maintenance notifications six months in advance (maintenance notification type N9) with the auto-setting of the user status of the maintenance notification to ‘Passed to ISSC’ (PISC). • The preventive maintenance notifications and/or work orders that are

created as a result of deadline monitoring are also sent from CMMS to the ISS Contractor, via the EIE EDE on a predefined periodicity/ frequency.

Maintenance Planning - Ship Staff

- Ship staff may forward the maintenance request due to unavailability of resources or other constraints by setting the Notification user status to PTRF, and cloning the original notification if required. The notification's Main Work Centre will be set to one belonging to the OSMT.

Maintenance Planning - FMF

- If FMF accepts the maintenance tasking, the notification user status is set to 'Accepted by Repair Facility' (ACRF), and a maintenance work order (WO) is created and released.

Maintenance Planning - OSMT

- Finally, the OSMT may assign a maintenance request to the ISS Contractor by setting the notification user status to 'Passed to ISSC' (PISC).

Corrective Maintenance Planning

- A corrective maintenance notification (N1 notification), will be created as a result of an identified fault or defect. A corrective maintenance notification could also be created to capture a fault code recorded on the HUMS, or reassignment of an existing corrective maintenance notification.

Execute Maintenance - Ship Staff/FMF

- If required, trials will be conducted and recorded in a trial notification (N3 notification). The trial notification will reference the originating notification.
- Upon completion of the maintenance execution, the technician records their hours against the work order, and the work order is set to technically complete (TECO). The work order is reviewed for completeness by the Section Head. If accepted, the maintenance notification is closed (NOCO).

Execute Maintenance - ISS Contractor

- The work orders are reviewed for completeness by DND. If accepted, the maintenance notification is closed (NOCO).

Backshop

- The CMMS processes the service request and creates a maintenance

notification to initiate the backshop work.

Cancel

- If a notification is not approved and is cancelled, the user status of that notification is set to 'Cancelled' (CANC) and the notification is closed (NOCO). A snapshot of the full record set for the maintenance notification as well as the System Status set to the Notification Closed will be sent to the ISS Contractor via the EIE EDE.

Deviation and Waiver - Ship Staff/FMF

- The deviation or waiver (ND notification) is created for a system/ equipment and will be linked to the originating notification.
- The approval of deviation or waiver is tracked through the notification user statuses.
- The decision from the approval process - approved/rejected by the Formation Technical Authority or approved/rejected by Design Authority - is sent to the ISS Contractor via the EIE EDE.
- When the deviation or waiver is approved, the notification is closed and the related transaction is sent to the ISS Contractor via the EIE EDE.

Deviation and Waiver - ISS Contractor

- The ISS Contractor will inform Canada of the upcoming deviation or waiver. Canada will create a ND notification in CMMS to record the maintenance deviation or waiver. The deviation or waiver notification is created for a specific Platform, system/equipment. The deviation or waiver notification will be linked to the originating notification.
- The approval of the deviation or waiver is tracked through the notification user status.
- The decision from the approval process - approved/rejected by the Formation Technical Authority or approved/rejected by Design Authority - is sent to the ISS Contractor via the EIE EDE.
- When the deviation or waiver is approved, the notification is closed and the related transaction is sent to the ISS Contractor via the EIE EDE.

Conduct Trials - Ship Staff/FMF

- When performing maintenance activities, the Navy may require trials before accepting completion of maintenance. The trials notification is created for a specific Platform or trial.
- When the trial process is complete, the trial notification is closed and the

	related transaction is sent to the ISS Contractor via the EIE EDE. Conduct Trials - ISS Contractor • When performing maintenance activities, the ISS Contractor may be required to conduct trials before Canada accepts the completion of maintenance. The ISS Contractor will inform Canada of the upcoming trial. Canada will create a notification in CMMS to record the trial. The trials notification is created for a specific Platform or trial. • The ISS Contractor will provide trial results through the collaborative environment. When the trial process is complete and accepted by Canada, the trial notification is closed and the related transaction is sent to the ISS Contractor via the EIE EDE.
Precondition(s)	See Common Pre-Conditions.
Trigger event	Actor creates: • a new maintenance notification in CMMS. • a maintenance notification to initiate the backshop work upon receipt of a Service request from the ISS Contractor • a deviation notification in CMMS • a notification for conducting trials Actor closes notification in CMMS.
Steps	

Step Name	Step Description	Actor
Create/close maintenance notification in CMMS	The Actor chooses to create a new or close a maintenance notification.	HUMS or Canada DND Authorized Person
Populate maintenance notification in CMMS	The Actor navigates through the maintenance notification screens and enters maintenance notification data.	Canada DND Authorized Person
Capture in CMMS maintenance notification Full record.	The system will create a maintenance notification full record, containing all available maintenance notification data available as per the data map.	CMMS
Continue with Common BUC Steps		

Postcondition(s)	See Common Post-Conditions.
Notes	

2.8.2 4.21.2 Update Maintenance Notification User Status [N1.4.3.1.4]

Scenario Name	**4.21.2 Update Maintenance Notification User Status [N1.4.3.1.4]**
Business Process	This scenario occurs in the following business processes: • Preventive Maintenance Planning – Maintenance Planning - FMF – Maintenance Planning - OSMT • Cancel • Deviation and Waiver – Deviation and Waiver - Ship Staff/FMF – Deviation and Waiver - ISS Contractor
Business Context	Preventive Maintenance Planning: Maintenance Planning - FMF • If FMF accepts the maintenance tasking, the notification user status is set to 'Accepted by Repair Facility' (ACRF), and a maintenance work order is created and released. Preventive Maintenance Planning: Maintenance Planning - OSMT • The OSMT may reject a notification with user status set to 'Rejected by OSMT' (REOM), which routes the notification back to the originator. OSMT may assign a notification to FMF by assigning the work centre to the corresponding FMF. Finally, the OSMT may assign a maintenance task to the ISS Contractor by setting the notification user status to 'Passed to ISSC' (PISC). Cancel • If a notification is not approved and is cancelled, the user status of that notification is set to 'Cancelled' (CANC) and the notification is closed (NOCO). Deviation and Waiver - Ship Staff/FMF • If a deviation or waiver is to be cancelled, a user status of this deviation or waiver is set to 'Cancelled' and the notification is closed. Deviation and Waiver - ISS Contractor • If a deviation or waiver is to be cancelled, a user status of this deviation or waiver is set to 'Cancelled' and the notification is closed.
Precondition(s)	See Common Pre-Conditions.
Trigger event	Canada Authorized Person changes a User Status within an existing maintenance notification.

Steps

Step Name	Step Description	Actor
Open maintenance notification in CMMS	The Actor chooses to open an existing maintenance notification.	Canada DND Authorized Person
Populate/change maintenance notification data in CMMS	The Actor navigates through the maintenance notification screens and enters/changes the maintenance notification user status.	Canada DND Authorized Person
Create maintenance notification datasets	The system will create a maintenance notification record, containing updated user status records.	CMMS
Continue with Common BUC Steps		

Postcondition(s)

See Common Post-Conditions.

Notes

2.8.3 4.21.3 Update Maintenance Notification System Status [N1.4.3.1.2]

Scenario Name	**4.21.3 Update Maintenance Notification System Status [N1.4.3.1.2]**
Business Process	This scenario occurs in the following business processes: • Preventative Maintenance Planning – Preventive Maintenance Initialization – Maintenance Planning - Ship Staff • Corrective Maintenance Planning • Execute Corrective or Preventive Maintenance – Execute Maintenance - Ship Staff/FMF – Execute Maintenance - ISS Contractor • Backshop Maintenance • Cancel • Deviation and Waiver – Deviation and Waiver - Ship Staff/FMF – Deviation and Waiver - ISS Contractor • Conduct Trials – Conduct Trials - Navy – Conduct Trials - ISS Contractor
Business Context	PM Initialization • Deadline monitoring for preventive maintenance performed by ship staff runs weekly and creates work orders one month in advance (maintenance work order type N017) with the creation and auto-release of the corresponding maintenance notifications (maintenance notification type N9). • Deadline monitoring for the preventive maintenance performed by Fleet Maintenance Facility (FMF) runs weekly and creates maintenance notifications six months in advance (maintenance notification type N9) with the auto-setting of the user status of the maintenance notification to 'Passed to Repair Facility' (PTRF). • Deadline monitoring for the preventive maintenance required to be performed by the ISS Contractor runs weekly and creates maintenance notifications six months in advance (maintenance notification type N9) with the auto-setting of the user status of the maintenance notification to 'Passed to ISSC' (PISC). • The preventive maintenance notifications and/or work orders that are created as a result of deadline monitoring are sent from CMMS to the ISS Contractor, via the EIE EDE on a predefined periodicity/ frequency. Maintenance Planning - Ship Staff • Ship staff may forward the maintenance request due to unavailability of

resources or other constraints by setting the Notification user status to PTRF, and cloning the original notification if required. The notification's Main Work Centre will be set to one belonging to the OSMT.

Corrective Maintenance Planning

- A corrective maintenance notification (N1 notification), will be created as a result of an identified fault or defect. A corrective maintenance notification could also be created to capture a fault code recorded on the HUMS, or reassignment of an existing corrective maintenance notification.

Execute Maintenance - Ship Staff/FMF

- If required, trials will be conducted and recorded in a trial notification (N3 notification).
- The work order is reviewed for completeness by the Section Head. If accepted, the maintenance notification is closed (NOCO).

Execute Maintenance - ISS Contractor

- The work orders are reviewed for completeness by DND. If accepted, the maintenance notification is closed (NOCO).

Backshop Maintenance

- The notification is released, and related notification transaction sent to the ISS Contractor via the EIE EDE.

Cancel

- If a notification is not approved and is cancelled, the user status of that notification is set to 'Cancelled' (CANC) and the notification is closed (NOCO). A snapshot of the full record set for the maintenance notification as well as the System Status set to the Notification Closed will be sent to the ISS Contractor via the EIE EDE.

Deviation and Waiver - Ship Staff/FMF

- The deviation or waiver (ND notification) is created for a system/ equipment and will be linked to the originating notification.
- When the deviation or waiver is approved, the notification is closed and the related transaction is sent to the ISS Contractor via the EIE EDE.

Deviation and Waiver - ISS Contractor

- The ISS Contractor will inform Canada of the upcoming deviation or waiver. Canada will create a ND notification in CMMS to record the maintenance deviation or waiver. The deviation or waiver notification is

created for a specific Platform, system/equipment.

- When the deviation or waiver is approved, the notification is closed and the related transaction is sent to the ISS Contractor via the EIE EDE.

Conduct Trials - Navy

- The trials notification is created for a specific Platform or trial.
- When the trial process is complete, the trial notification is closed and the related transaction is sent to the ISS Contractor via the EIE EDE.

Conduct Trials - ISS Contractor

- The trials notification is created for a specific Platform or trial.
- When the trial process is complete and accepted by Canada, the trial notification is closed and the related transaction is sent to the ISS Contractor via the EIE EDE.

Precondition(s)

See Common Pre-Conditions.

Trigger event

Canada Authorized Person changes a System Status within an existing maintenance notification.

Steps

Step Name	Step Description	Actor
Open maintenance notification in CMMS	The Actor chooses to open an existing maintenance notification.	Canada DND Authorized Person
Populate/change maintenance notification data in CMMS	The Actor navigates through the maintenance notification screens and enters/changes the maintenance notification system status.	Canada DND Authorized Person
Create maintenance notification datasets	The system will create a maintenance notification record, containing updated system status records.	CMMS
Continue with Common BUC Steps		

Postcondition(s)

See Common Post-Conditions.

Notes

2.9 Information Requirements

The following maintenance notification types are created in CMMS for preventive and corrective maintenance business processes:

- N1: Maintenance (Corrective)
- N2: MEPM (Implement Engineering Changes)
- N3: Formation Eng Svcs (Trials)
- N7: TRANREQ (Transfer Request, e.g. Rob)
- N9: Mil. Prev. Maint (Preventive)
- NC: EC Part 1 (Pre-implementation Engineering Changes)
- ND: Mat'l Certification (Deviation & Waiver)
- NR: Navy –CFSS R&O (Off-platform Component Repair & Overhaul)

In general, maintenance notifications may contain the following information:

- Which malfunction has occurred
- Where it happened as per the definition provided for the platform
- Status of equipment (unserviceable or still running)
- Who is reporting it
- What damage has been caused

The following data elements may exist in notification types:

- Notification ID
- User Status
- Notification Type
- Problem Short Text
- Notification Create Date
- One or more FMEA Codes[3], including the following types:
  - Object Part Code
  - Damage Code
  - Cause Code
  - Activity Code

Further details on the data elements of a maintenance notification are provided in Section 3.

2.10 Special Requirements

None identified.

[3] For ship classes which implement FMEA coding

3 Functional Data Definition

The data elements which make up a maintenance notification are enumerated in this section. A notification consists of a record with basic descriptive or tombstone data (also known as the "Header" data) and a number of sub-records.

The following fields are used to describe various characteristics of maintenance notification datasets. A detailed technical message schema for exchange of datasets will be provided following the awarding of the ISS contract.

3.1 Data Entities Definition

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

Table 3-1 Data Entities Definition

Name	Description	Type	Length
Notification Identifier	A unique identifier a maintenance notification in the CMMS.	Char	12
Record Timestamp	The timestamp a maintenance notification snapshot is taken in the CMMS	Datetime	
Notification Type	A notification type dictates which fields are available within a notification including the list of available user status values. **Values: *Notification Type*** (Example, N1 Maintenance N9 Mil. Prev. Maint.	Char	2
Notification Activity Type	Further differentiate the type of notification by defining the main activity of the notification/ work order. This field is present where a notification type is used to perform more than one type of work. For example, the NR notification can be used to record work on components that are not installed on the Platform but can also be used to record work required to prepare a Platform component for shipment to the contractor. Note: For a given Notification Type the values of the Notification Type Activity will be identical to the values of the PM Activity	Char	3

Name	Description	Type	Length
	Type in the corresponding Work Order. However, the value in the Notification Type is not mandatory as it is in the Work Order.		
Notification Activity Type Description	Text description of the Notification Activity Type	Char	30
Problem Short Description	Short description of the problem reported into notification.	Char	40
Download Identifier	Download identification number. This applies only if the Health and Usage Monitoring System (HUMS) is available.	Char	64
External FLOC Identifier	Functional Location of the installed equipment (if equipment is identified in the notification).	Char	30
FLOC description	Description of the External FLOC Identifier	Char	40
CAGE	Commercial And Government Entity (CAGE) code of the manufacturer associated to the equipment	Char	5
MPN	Manufacturer part number Note: DND-supplied parts may have an MPN up to 34 characters in length. Industry-supplied parts must have an MPN of 31 characters or less.	Char	34
Serial Number	Manufacturer's Serial number of the part	Char	30
Frame ID	A reference point annotated on ship drawings used to denote major watertight sections within a ship upon a given deck. This field can be used to denote work that cannot be pinned down to a specific compartment.	Char	20
Compartment	An Identification Code used in reference drawings to identify the relative position of major and minor compartments within a ship. **Values: *Compartment*** (Example, 01DA = bridge 01DB0 = Chart room 01DC0 = Fire control equipment)	Char	5

Name	Description	Type	Length
Compartment Description	A description of the Compartment (Example, 'bridge')	Char	80
ERN	Equipment Registration Number	Char	8
ERN Location Code	A code related to the location of the ERN	Char	3
Assembly CAGE	The CAGE code of the Material Master Record (MMR) (assembly) in the notification(header level)	Char	5
Assembly MPN	The MPN of the MMR (assembly) in the notification (header level) Note: DND-supplied parts may have an MPN up to 34 characters in length. Industry-supplied parts must have an MPN of 31 characters or less.	Char	34
Suggested Start Date	Suggested start date of the notification process. When created by a user, this is usually the creation date of the notification unless modified by user. When created by Deadline Monitoring, this is a system-calculated future date.	Date	
Suggested End Date	Suggested end date of the notification process. Usually entered by user for desired due date of the notification completion. When created by Deadline Monitoring, this is a system-calculated future date.	Date	
Priority	A code defining the priority given to the notification for processing. **Values: *Priority Code*** (Example, 01 - 99 for N1, N9)	Char	1
Priority Description	Priority text given to the request for processing.	Char	20
Mission Effect Code Group	Identifies group identifier of the notification. A means of grouping or classifying notifications. For an ND notification it defines the type of deviation or waiver. **Values: *Coding Code Group***	Char	8

Name	Description	Type	Length
	(Example, Notification type = ND Coding Code Group = DEV Description = Deviation)		
Mission Effect Group Description	The description of the Code Group	Char	40
Mission Effect Code	A specific code associated with the code group. The list of allowed codes is determined by the selected value of the Mission Effect Group. **Values: *Coding Code*** (Example for Coding Code Group DEV coding codes: Coding Code = 003, Technical Coding Code = 004, General)	Char	4
Mission Effect Code Description	The description of the Mission Effect Code.	Char	40
Problem Long Description	Long text of the notification. Captures text, entered by a user, which is beyond 40 characters long. Note: There will be no truncation of user entered text.	Char	2 GB
MER Identifier	Platform unique identifier as defined by Canada. For Navy platform, this is the Ship identifier.	Char	14
From Notification	In the case of an arising notification created from original notification, the original notification number (ID) is populated for reference purpose.	Char	12
To Notification	In the case of a notification from which an arising notification was created, the arising notification number (ID) is populated for reference purpose.	Char	12
External Reference Number	Unique identifier used to report: • Authorizing document number for the engineering change • Service request number for performing off-	Char	26

Name	Description	Type	Length
	Platform maintenance (back-shop) These are usually externally provided by the configuration authority.		
External Maintenance Task List Number	The ISS Contractor defined identifier of a maintenance task list.	Char	40
Technical Status (*Not applicable to Navy*)	The equipment status that may be reflected in the Platform as a whole, describes the availability and usability of a piece of equipment. The notification technical status describes the equipment's or FLOC's status that is a result of a snag reported within that notification for corrective maintenance or preventive maintenance activity. The notification technical status may affect the Master Equipment Record (MER) status. (MER record is the CMMS representation of the Platform as a whole). It is used to identify the Platform serviceability based on notification request. Multiple maintenance notifications can be opened for the same MER. The MER Technical Status is determined based on the criticality of all associated open notifications. **Values: *Technical Status*** (Example, SERV Serviceable OPIM Ops Restriction Imposed UNSV Unserviceable QUAR Quarantined IMPD Impounded)	Char	4
Technical Status Description (*Not applicable to Navy*)	The description of the technical status	Char	30
Technical Status Start Time (*Not applicable to Navy*)	Date and time the notification technical status is set in CMMS.	Datetime	
User Status Code	In some cases more than one status can be selected per notification. User Status is a field used to validate and approve content of the notification or to depict a business condition such as deferral.	Char	4

Name	Description	Type	Length
	Values: *User Status Code* (Example, FILV First Level System DKDW Docking Dependent Work)		
User Status Start Date	Date and time the notification user status is set in CMMS.	Datetime	
User Status Stop Date	Date and time the notification user status is un-set in CMMS.	Datetime	
User Status Description	The description of the user status	Char	30
System Status Code	Depicts the life cycle status of the Notification. **Values: *System Status Code*** (Example, OSNO Outstanding Notification NOPR Notification in Progress NOCO Notification Closed)	Char	4
System Status Start Date	Date / time stamp the status was set.	Datetime	
System Status Description	Description of each individual status.	Char	30
FMEA Item Number	This uniquely identifies a Notification item. May have associated Damage Code, Object Part Code, Cause Codes, Activity Codes and Task Codes.	Char	4
Component CAGE (FMEA Item level)	Cage code of the manufacturer associated with the Component. The combination of the Component MPN and Component CAGE fields Identifies non-serialized parts that have Damage codes or Object Part Codes recorded against them. The combination of the Component MPN and Component CAGE fields WITHOUT a damage code can be used to identify consumables used in performance of the maintenance activity.	Char	5
Component MPN (FMEA Item level)	MPN of the manufacturer associated to the Component. The combination of the Component MPN and Component CAGE fields identifies non-serialized parts that have	Char	34

Name	Description	Type	Length
	damage codes recorded against them. The combination of the Component MPN and Component CAGE fields WITHOUT a damage code can be used to identify consumables used in performance of the maintenance activity. Note: DND-supplied parts may have an MPN up to 34 characters in length. Industry-supplied parts must have an MPN of 31 characters or less.		
Component Defect Quantity (FMEA Item level)	The quantity of assemblies against which a damage is recorded for a non-serialized part. A combination of the Component MPN and Component CAGE fields identifies a non-serialized part that has a damage code recorded against this part.	Integer	10
Damage Code Group (FMEA Item level)	Identifies group identifier of the Damage. A means of grouping damage codes. CMMS notification catalogue entry for maintenance history. **Values: *Damage Code Group*** (Example, Damage Code Group = HOWMALF Damage Code Group description = How Malfunctioned Damage Code Group = 001 Damage Code Group description = Fails Tune/Align/Operate)	Char	8
Damage Code Group Description (FMEA Item level)	The description of the Damage Code Group	Char	40
Damage Code (FMEA Item level)	Unique identifier of the damage code within the Damage Code Group. **Values: *Damage Code*** (Example, for damage code group HOWMALF, below is the damage code and its description:	Char	4

Name	Description	Type	Length
	001 Fails Tune/Align/Operate 002 Excessive Vibration/Noise 003 Excessive Heat/Arching)		
Damage Code Description (FMEA Item level)	The description of the Damage Code	Char	40
Object Part Code Group (FMEA Item level)	Identifies group identifier of the Object Part. A means of grouping Object Part codes. **Values: *Object Part Code Group*** (Example, Object Part Code Group = MSG04 Object Part Code Group description = Main Propulsion Object Part Code = SE01 Object Part Code description = Main Batteries)	Char	8
Object Part Code Group Description (FMEA Item level)	The description of the Code Group	Char	40
Object Part Code (FMEA Item level)	The Object Part Code permits a generic categorization of the EMR or FLOC in question. **Values: *Object Code*** (Example, for object part code group MSG04, object part codes: SE01 Main Batteries SE02 Main DC System SE08 Main Motor)	Char	4
Object Part Code Description (FMEA Item level)	The description of the Object Part Code.	Char	40
Cause Code Item Number (FMEA Item level)	Identifies the specific line item of the cause code	Char	4
Cause Code Group (FMEA Item level)	Identifies group number of the Cause. A means of grouping Cause codes. **Values: *Cause Code Group*** (Example,	Char	8

Name	Description	Type	Length
	Cause Code Group = EM0010 Cause Code Group description = Boilers Cause Code Group = 5185 Cause Code Group description = Corrosion)		
Cause Code Group Description (FMEA Item level)	The description of the Cause Code Group	Char	40
Cause Code (FMEA Item level)	Identifies a specific Cause within the Cause Code group. **Values: *Cause Code*** (Example, for EM0010 Cause Code Group cause codes: 5100 – Abnormal Operation 5105 – Abuse 5185 – Corrosion 5275 – Excessive Load)	Char	4
Cause Code Description (FMEA Item level)	The description of the Cause Code.	Char	40
Activity Code Item Number	Identifies the specific line item of the Activity Code	Char	4
Activity Code Group (FMEA Item level or Notification header level)	Identifies group number of the Activity. A means of grouping Activity Codes. **Values: *Activity Code Group*** (Example, Activity Code Group = CMACTION Activity Code Group description = Corrective Maintenance Action Activity Code = 001 Activity Code Description = Adjusted/ Aligned)	Char	8
Activity Code Group Description (FMEA Item level or Notification header level)	The description of the Activity Code Group	Char	40
Activity Code (FMEA Item level or Notification header level)	Identifies a specific Activity within the group. **Values: *Activity Code***	Char	4

Name	Description	Type	Length
	(Example, for Activity Code Group CMACTION, activity codes: 001 Adjusted/Aligned 002 Parts Repaired 003 Cleaned/Lubricated 004 Parts Replaced)		
Activity Code Description (FMEA Item level or Notification header level)	The description of the Activity Code	Char	40
Attachment File Name	The name of a file that is attached to a Notification. A filename consists of any combination of letters (upper or lower-case), number, or "_", "-", and "." characters. Spaces are not allowed. The file extension maps to any of the standard mime types. File name extension to the specific mime type association is not guaranteed by the provider due to operating systems differences in associating extensions to mime types. The overall length of the file name including extension will not exceed 100 Characters.	Char	100
Attachment Description	Short description of the attached document	Char	40
Mime Type	The mime type of the attached file.	Char	128
Attachment	The attached document file	Binary	
Business Correlation ID	Canada CMMS identifier used with Business Sequence number to uniquely identify a business object sent to ISS Contractor	Char	40
Business Sequence Number	Canada CMMS identifier used with Business Correlation ID to uniquely identify a business object sent to ISS Contractor	Char	2
Work Order Number	A unique identifier of a work order in CMMS.	Char	12
Breakdown Indicator	An indicator, when set, to identify that the object of the notification is in a breakdown state (i.e., it is not even partially usable)	Char	1
Revision	A revision is used to group together multiple, discrete maintenance objects (such as notifications or work orders) using a single identifier	Char	8

Name	Description	Type	Length
Description of Revision	A description of the revision	Char	40
Risk Assessment	An identifier denoting an assessment related to risk	Char	14
How Found Code	In CMMS it most commonly defines when the problem was found. **Values: *How Found*** (Example, A = During Operations B = During PM routine C = Prep for Ops)	Char	1
How Found Description	A description of the How Found Code (Example, "During Operations')	Char	25
Source System	An identifier as to where an event occurred that resulted in a web service being generated. Can be used to determine, for example, which ship created a notification.	Char	10
Start of Malfunction Date Start of Malfunction Time	Date and time that records when the malfunction was first noticed	Datetime	
End of Malfunction Date End of Malfunction Time	Date and time that records when the malfunction ended	Datetime	
EC Number	Engineering Change Number (Numeric with leading zeroes)	Integer	8
EC Category Code	A code for the type of engineering change	Char	1
EC Category Code Description	A description of the EC category code	Char	60
EC Classification Code	A code for classifying engineering change	Char	1
EC Classification Code Description	A description of the EC Classification Code	Char	60
EC Type Code	A code that identifies the type of engineering change	Char	1
EC Type Code Description	A description of the EC Type Code	Char	60
Tech Inspection Date	The date that the technical inspection was performed (time portion will contain zeroes)	Datetime	

Name	Description	Type	Length
Task Code Item Number	Identifies the specific line item of the Task Code (Numeric with leading zeroes)	Integer	4
Task Code Group (FMEA Item level or Notification header level)	Identifies the group of the Task. A means of grouping Task Codes. **Values: *Task Code Group*** (Example, • Task Code Group = EC-PART1 • Task Code Group Description = Engineering Change - Part 1 • Task Code = F001 • Task Code Description = Statement of deficiency)	Char	8
Task Code Group Description (FMEA Item level or Notification header level)	The description of the Task Code Group	Char	40
Task Code (FMEA Item level or Notification header level)	Identifies a specific Task within the group **Values: *Task Code*** (Example, for Task Code Group EC-PART1, task codes: F001 = Statement of deficiency F002 = Supporting Documentation F003 = Possible solutions considered)	Char	4
Task Code Description (FMEA Item level or Notification header level)	The description of the Task Code	Char	40
Task Text	A description of the task	Char	40
Planned Start for task	The date and time that the task is planned to be executed	Datetime	
Planned Finish for task	The date and time that the task is planned to be finished	Datetime	
Task completed on date	The actual date and time that the task was completed	Datetime	
Task responsibility Code	The type of entity or organization responsible for the task	Char	2

Name	Description	Type	Length
	(Example, VN = Vendor)		
Task responsibility Description	A description of the Task responsibility Code (Example, vendor)	Char	20

4 Issues and Exceptions

None identified at this time.

5 Business Process Flows

Refer to EIE 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
DND	Department of National Defence
E&M	Engineering and Maintenance
EDE	Electronic Data Exchange
EIE	Electronic Information Exchange
EMR	Equipment Master Record
FMEA	Failure Mode and Effects Analysis
FMF	Fleet Maintenance Facility
HUMS	Health and Usage Monitoring System
ISS	In-Service Support
MCP	Major Capital Project
MER	Master Equipment Record
MMR	Material Master Record
OSMT	On-Site Management Team
PBC	Performance Based Contracting
PM	Preventive Maintenance
WO	Work Order

7 Document Control

7.1 Document History

Revision No	Description	Date
1.0	Release for Navy RFP	10 September 2015