Electronic Information Environment (EIE)

Service Specification Document/Interface Control Document

Navy Industry Notification Specification – External

External – In the above context is intended to reflect that this content is for Industry partners who have been contracted to participate in an In-Service-Support phase of a Weapon System or Platform that the Department of National Defence has acquired.

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1 Introduction

This document establishes an interface between Canada Electronic Data Exchange (EDE) system and the ISS Contractor responsible for maintenance of a fleet subject to Performance Based Contracting (PBC). This interface will be used by the ISS Contractor to send Notification messages to Canada EDE. To support the Work Order transfer between Canada EDE and the ISS Contractor, both systems need to support specific Web Service operations as well as request and response Extensible Markup Language (XML) schemas as described in this document.

1.1 Intended Audience

- ISS Contractor System Designers
- Canada EDE Designers
- ISS Contractor Testers
- Canada EDE Testers

1.2 References

[Ref. 1] Electronic Information Environment (EIE) Business Use Case - BUC 4.26 Navy - Exchange Maintenance Notification Data – ISS Contractor

Electronic Information Environment (EIE) Business Use Case - BUC 7.3 Navy - Exchange Engineering Change Notification Data – ISS Contractor

[Ref. 2] Annex L: Navy Maintenance Process Model – In the Context of Performance-Based Contracting (PBC)

Annex O: Navy Configuration Management Process Model – In the Context of Performance-Based Contracting (PBC)

[Ref. 3] Electronic Information Environment Service Interaction Model

[Ref. 4] Electronic Information Environment Industry Maintenance Services Operational Model – For Industry-performed maintenance

2 Business Information

Business Information is based on the EIE Business Use Cases [Ref. 1] and Business Process Catalogues [Ref. 2].

The ISS Contractor will transfer the maintenance and engineering change notification datasets to Canada.

Within Canada, DND maintenance business processes are supported by two types of information systems, known generically as:

- Canada Maintenance Management System (CMMS)

- Canada Supply System (CSS).

Currently both functions are supported within Canada DND by the Defence Resource Management Information System (DRMIS).

2.1 Business Processes

The ISS Contractor may be assigned preventive maintenance tasks as a result of deadline monitoring, or as a result of work tasking by the On-Site Management Team (OSMT). If the ISS Contractor does not accept the maintenance assignment, the ISS Contractor will return the maintenance to the OSMT for review and action.

Exchange of engineering change related data contained within an Engineering Change Notification involves new exchange business processes between CMMS and the ISS Contractor data consumers which complement already documented configuration management business processes.

2.2 Business Triggers

The following actions within the ISS Contractor systems, the business triggers, will result in Notification data being sent to Canada.

- For work tasking which the ISS Contractor does not accept, the maintenance notification user status is set to 'Rejected by ISSC' (RISC), along with the reason for rejection, and returned to the OSMT for review and action.

- If the ISS Contractor accepts the maintenance tasking via the EIE EDE, the notification user status is set to 'Accepted by ISSC' (AISC).

- For Engineering Change, upon completion of the options analysis or development package, the ISS Contractor will send the EC options analysis package to Canada via the CE, and send the EC notification with updated user status 'Ready for Review' via the EDE.

For Further information, including cross-references to business processes, please refer to the Business Use Cases [Ref. 1].

2.3 Business Error Processing

In the event Canada encounters business errors while attempting to post Notification data to their backend systems, Canada will report errors on a Notification message in one error message.

Where possible, the ISS Contractor will correct the data based upon reported errors, and generate a new Notification message.

3   Business Constraints

Constraints on *Usage* of the Service

1) Canada EDE shall ensure a Notification message is only processed from an ISS Contractor which is properly authenticated and authorized to see maintenance and materiel data for that platform.

2) Every invocation of a service operation shall be secured using secure credentials such as PKI Certificate.

Constraints on *Behaviour* of the Service

3) The Notification service shall operate in near-real time.

4) Canada will authorize invocations of operations of the Notification service

5) Canada EDE will report any business processing errors through the Notification Error operation.

6) Notification messages will be signed using digital certificates between Canada EDE and Industry. Please see Service Interaction Model [Ref. 3] for details.

7) The ISS Contractor may attempt to repeat operation invocations in response to technical faults. This behaviour is controlled by parameters for each operation. Please see Service Interaction Model [Ref. 3] for details.

4 Service Use Case

The requirements for the Industry Notification service are defined by one use case with several scenarios.

4.1 Service Context

A high level view of the context of the service is shown in Figure 4-1 below. For simplicity this view omits error scenarios. These are discussed in Service Use Case Scenarios.
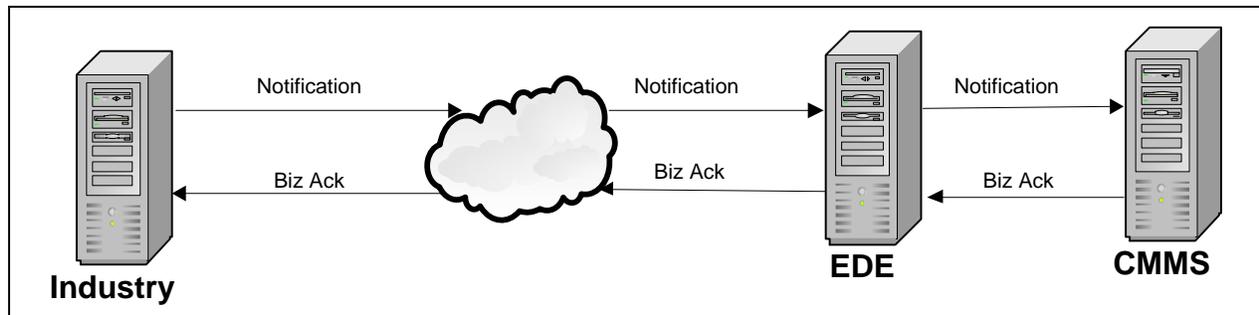
Figure 4-1 Industry Notification Service Context

The following steps occur:

1. Industry performs maintenance or engineering change activity requiring Notification update.
2. Industry generates a Notification message.
3. Industry sends Notification to Canada EDE – Canada EDE accepts the message and returns a 'technical' response.
4. Canada EDE sends Notification to CMMS – CMMS accepts the message and returns a 'technical' response.
5. CMMS performs the required "back-end" processing including enforcement of pre-established business rules as per agreement with Canada-DND and Industry, and updates its Notification records.
6. CMMS sends a Notification 'Biz Ack' message indicating CMMS' acceptance of the Notification message sent by Industry.

The "technical response" referred to above either (*i*) confirms a party in the exchange has accepted a message for further processing, or (*ii*) contains a fault message. A technical acceptance does not preclude subsequent "business" errors being observed by Canada and reported back to Industry as required.

4.2 Successful Request and Technical Response

Figure 4-2 presents the main or "Happy Day" scenario.
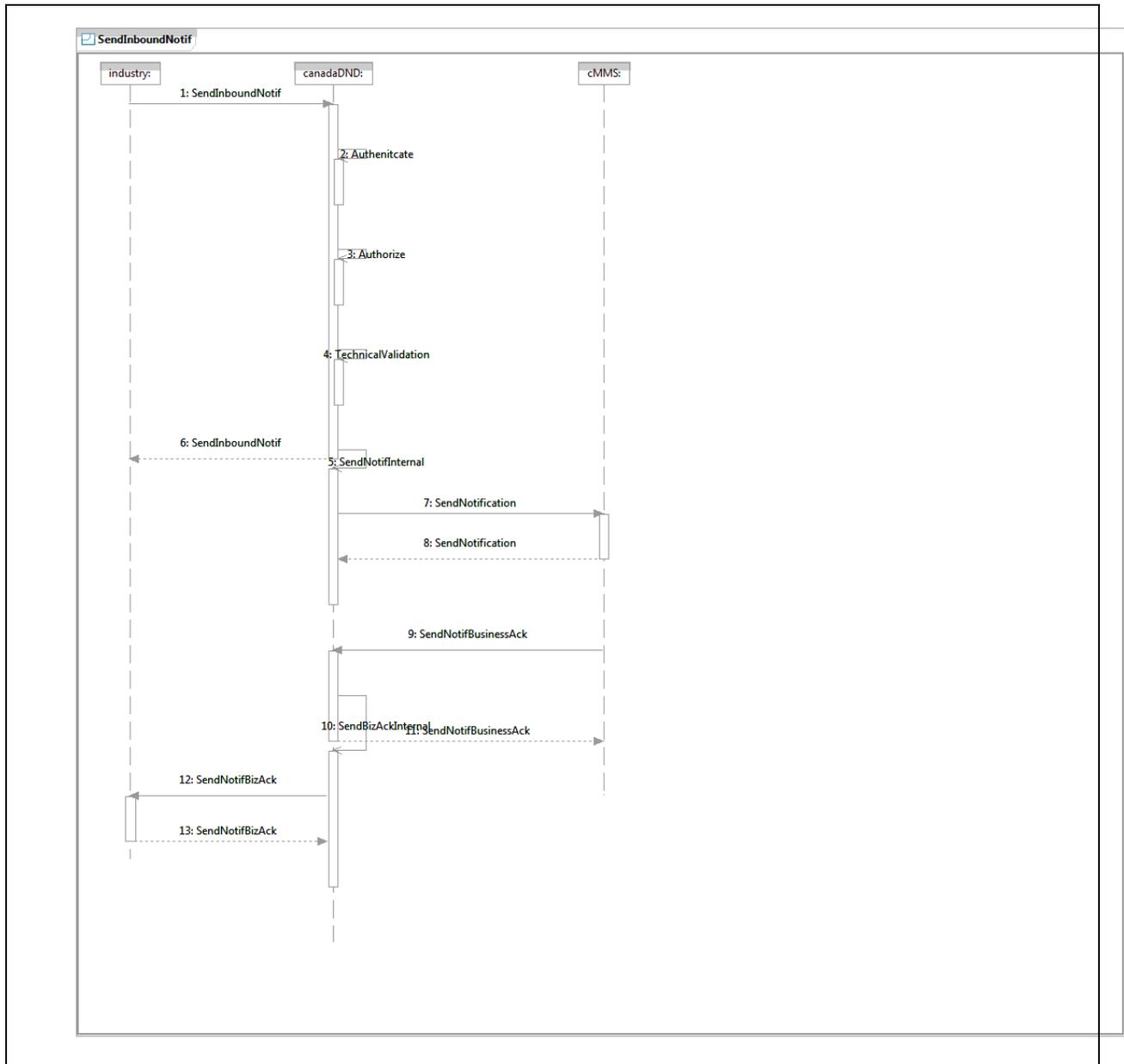
Figure 4-2 Notification Message Flow

Main Flow	
Scenario	"Happy Day:" Industry successfully sends Notification to Canada.
Pre-Condition	Industry performs maintenance or engineering change activity requiring notification update.

Main Flow	
Post-Condition	Notification message is successfully received by Canada.
Steps	1) Industry sends Notification message to Canada EDE.
	2) Canada EDE successfully Authenticates the service consumer.
	3) Canada EDE successfully Authorizes the service consumer.
	4) Canada EDE conducts the required validations
	6) Canada EDE sends technical response to Industry indicating message was accepted.
	5/7/8) Canada EDE invokes back-end processing in CMMS.
	9/10/11) CMMS sends Notification business acknowledgement message to Canada EDE.
	12) Canada EDE sends Notification BizAck message to Industry, indicating successful processing of the Notification in CMMS.
	13) Industry sends technical response to Canada EDE indicating message was accepted.

Implicit in the above diagram is that a service Consumer may retry to send a message to the service Provider in the event there is no technical response from the Provider or if the Provider response indicates a technical error. Resend behaviour is governed by parameters in the non-functional requirements of each operation.

4.3 Alternate Scenarios

The following scenarios apply to all uses of the Notification service. The Notification Business Validation Failure Message Flow is shown in Figure 4-3.

Alternate Flow 1 (Authentication Failure)	
Scenario	Industry does not provide appropriate credentials to Canada EDE.
Pre-Condition	Industry has invoked the Canada EDE Notification Service.
Post-Condition	Canada EDE sends an Authentication Failure fault response
Steps	1) The authentication credentials are either not provided or are incorrect.
	2) Canada EDE sends an Authentication Failure fault as the technical response.
	3) Industry processes the error.
Alternate Flow 2 (Authorization Failure)	
Scenario	Industry is not authorized to use a service.
Pre-Condition	Industry has invoked the Canada EDE Notification Service.
	Canada EDE has completed Authentication successfully.

Post-Condition	Canada EDE sends an Unauthorized Request fault response.
Steps	1) The request message does not pass Canada EDE authorization. 2) Canada EDE sends an Unauthorized Request fault as the technical response. 3) Industry processes the error.

Alternate Flow 3 (Message Technical Validation Failure)	
Scenario	Industry sends a malformed message to Canada EDE.
Pre-Condition	Industry has invoked the Canada EDE Notification Service. Canada EDE has completed Authentication and Authorization successfully.
Post-Condition	Canada EDE sends a Malformed Message fault response.
Steps	1) The message does not pass validation as per agreed schema. (Regardless of the number and types of errors). 2) Canada EDE sends Malformed Message error information as the technical response as the fault message as defined within the exposed interface. 3) Industry processes the message technical validation error.

Alternate Flow 4 (Canada EDE Service unresponsive)	
Scenario	Industry does not receive technical response within ACK_TIME_INTERVAL.
Pre-Condition	Industry has invoked the operation but does not receive the technical response within the time specified for the Notification service.
Post-Condition	Industry marks the message as Dead Message.
Steps	1) Industry does not receive any response from Canada EDE within the allowed ACK_TIME_INTERVAL. 2) Industry will retry sending the message up to the defined maximum retry count and/or Time to Live interval. 3) If there is no response, then Industry marks the request message as Dead and handles it via the DeadMessageHandlerService.
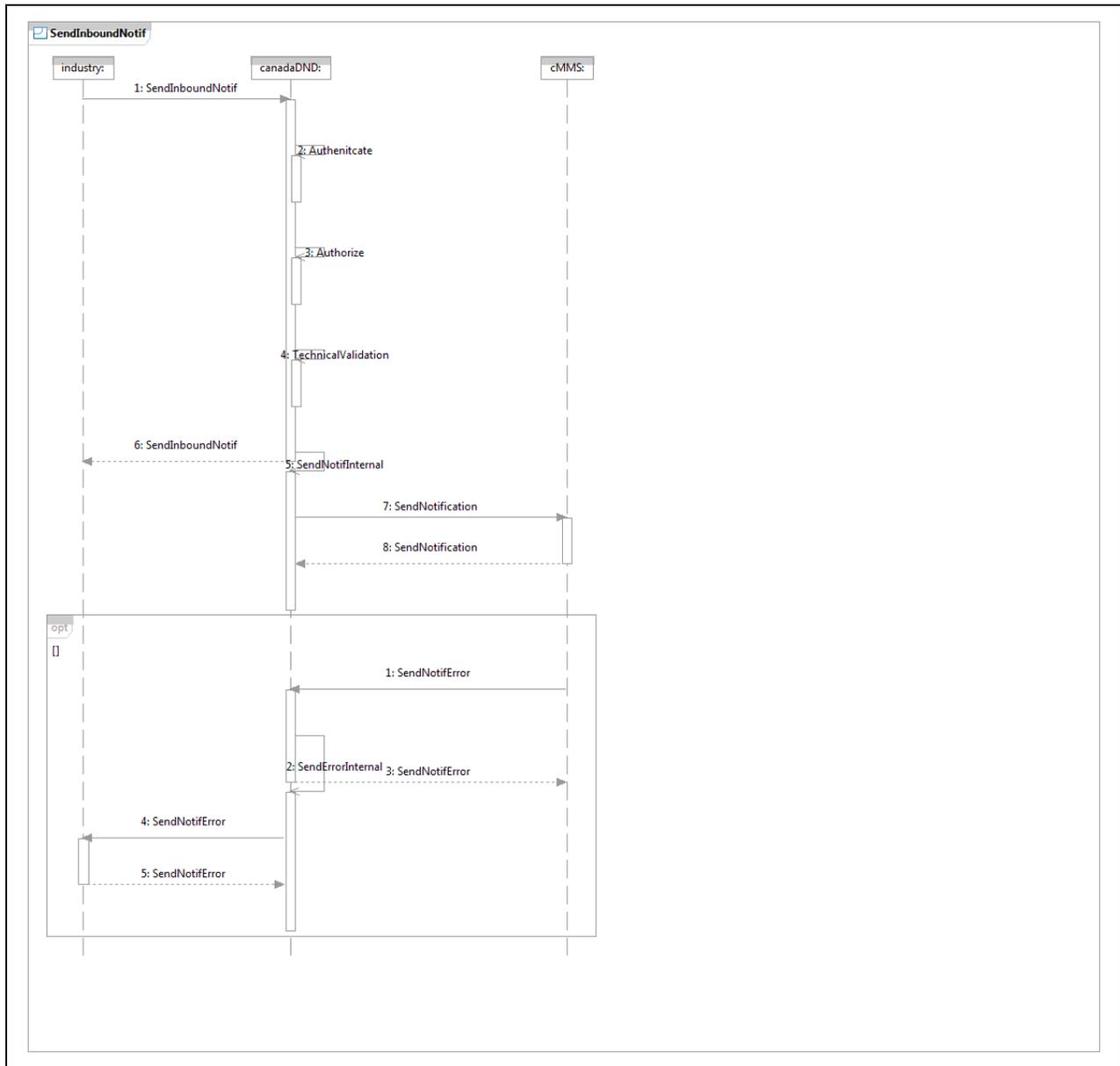
Figure 4-3 Notification Business Validation Failure Message Flow

Alternate Flow 5 (Business Validation Failure)	
Scenario	CMMS business validations fail on the Notification data record.
Pre-Condition	Industry has invoked the Canada EDE Notification service, the message has passed Authentication, Authorization and message technical Validation and a successful technical response has been received by Industry.

Post-Condition	Canada EDE sends error information to Industry.
Steps	1) The Notification data record failed CMMS's business validation process, and Canada CMMS forwards Notification business error message to Canada EDE. 2) Canada EDE receives error message. 3) Canada EDE sends "technical" ack to Canada CMMS. 4) Canada EDE sends business error information to Industry via the Notification Error operation exposed by Industry. 5) Industry returns a "technical" ack to Canada EDE.

5   Service Description – Industry Notification Service

5.1   Service Overview

Industry Notification service requires interacting web services exposed by Canada EDE and Industry. Canada EDE will expose a service which Industry will use to send the Notification message (see Section 7 for message definition). Upon receipt of the message, Canada EDE will return a technical response back to Industry.

Industry will provide a Notification Error operation to be used by Canada EDE to report a Technical or Business Fault if errors are found during Canada internal processing post initial technical acknowledgement of the Notification message.

5.2   Service Properties

Service Property	Description
Enterprise Service Name (Business)	Notification Service
Enterprise Service Name (Technical)	IndustryNotificationService
Purpose	This service supports the Canada Maintenance process for Industry-performed maintenance of Canada WS platform. On the occurrence of business triggers, Industry uses this service to send Notification messages to Canada EDE on a near-real time basis.
Business Response Time Interval	N/A
Service Domain	Maintain Platform
Business Owner	ADM (IM)
Service Grouping	Maintain Platform – Preventive and Corrective Maintenance
Source Provider	Notification – Canada DND Notification Acknowledgement - Industry Notification Error – Industry
Target Service Consumers	Notification – Industry Notification Acknowledgement – Canada DND Notification Error – Canada DND
Business Process Supported (now)	Preventive and Corrective Maintenance • Execute Maintenance - ISS Contractor
Business Process Supported (future)	None currently identified.

Service Property	Description
Business Objective Supported	See Section 2: Business Information.
Expected life time	The full lifecycle of the subject weapons system using ISSCF.

5.3 Service Operations

Provider	Consumer	Operation
Canada EDE	Industry	SendNotification
Industry	Canada EDE	SendNotificationAcknowledgement
Industry	Canada EDE	SendNotificationError

5.3.1 SendNotification Operation

This operation is used by Industry to send a Notification message to Canada EDE. Canada EDE's implementation of this operation will perform authentication, authorization and technical message validation on the Notification message. Canada EDE will return a status or fault information to the consumer.

If Canada accepts the message for further processing an output message is returned. If the content of the output indicates SUCCESS, Canada accepts custody of the message for further processing. If Canada does NOT accept the message, Canada will return one or more fault blocks.

5.3.2 SendNotificationAcknowledgement Operation

This operation is used by Canada to send a Notification Acknowledgement message to Industry in the event the notification is accepted by Canada backend maintenance system. Industry's implementation of this operation will perform authentication, authorization and technical validation on the Notification Acknowledgement message. Industry will return a status or fault information to the consumer.

If Industry accepts the message for further processing an output message is returned. If the content of the output indicates SUCCESS, Industry accepts custody of the acknowledgement. If Industry does NOT accept the message, Industry will return one or more fault blocks.

5.3.3 SendNotificationError Operation

This operation is used by Canada to send a Notification Error message to Industry in the event a business error is encountered by Canada backend maintenance system. Industry's implementation of this operation will perform authentication, authorization and technical validation on the Notification Error message. Industry will return a status or fault information to the consumer.

If Industry accepts the message for further processing an output message is returned. If the content of the output indicates SUCCESS, Industry accepts custody of the error message for further processing. If Industry does NOT accept the message, Industry will return one or more fault blocks. Irrespective of outcome, if Canada reports a business error through this service, no further processing of the originating Notification message takes place.

5.4   Message Interaction

As defined in Section 4: Service Use Case, the Notification service supports a business-asynchronous interaction with a message-passing paradigm. Each Web Service operation must be defined such that the messages required by the system use case (faults in particular, see Section 4.3 Alternate Scenarios) are explicit in the Web Service definition. This implies each Notification web service operation must be defined with an input, output and fault element.

Message interaction is further described in Electronic Information Exchange Service Interaction Model [Ref. 3].

6   Information Model

This section describes the **business objects** which are used in the Notification service. The Unified Modeling Language (UML) notation is used. A functional view[1] of the information model is provided in the Notification Business Use Case [Ref. 1], Functional Data Definition, and an Entity-Relationship diagram (ERD) is provided in Annex A of this document.

The purpose of this section is to provide a bridge between the functional view of the information model and the concrete details of the design as expressed in an XML Schema.

Note: The only authoritative source for purpose of the information exchange will be the specific XML Schema for the business object.

6.1   Notification

The Notification information model is shown in Figure 6-1 below.

The Notification must include the following updated information:

- Notification ID
- Record Timestamp
- User Status
- User Status Timestamp
- Industry comment

In addition, fields initially populated by DND may be echoed back .

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[1] The Functional View details the collection of fields which make up a Notification.
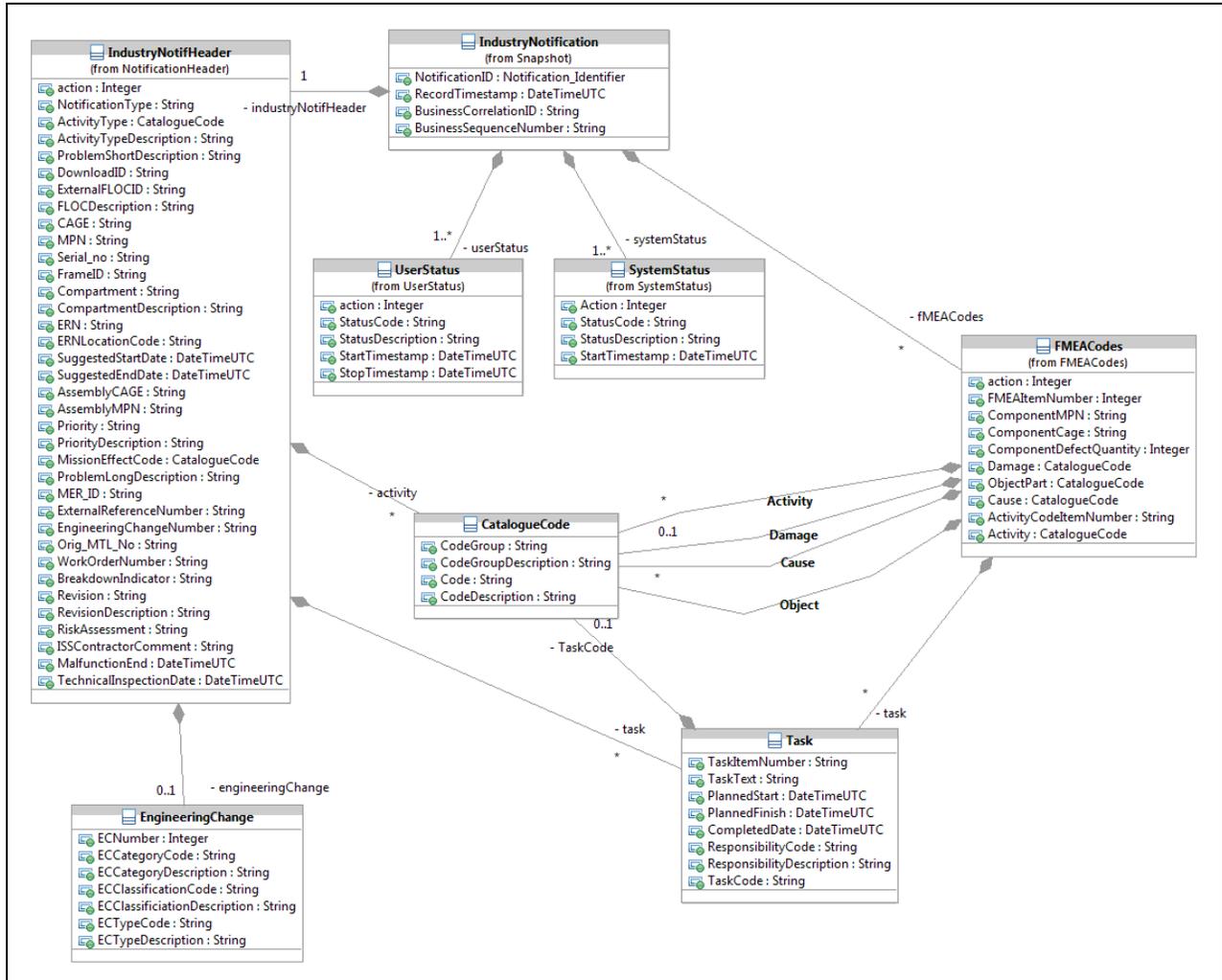
Figure 6-1 Information Model –Notification

The 'action' attribute is discussed in Section 7.1.1 Notification Input Body.

7 Operation Message Model

This section describes how the business objects described above (Section 6 Information Model) are aggregated for the purpose of reliable information exchange.

The Industry Notification service is request/response and each operation definition includes a distinct input, output and fault message. Message definitions use a common canonical message header definition, as well as a common security block definition. Please refer to **[Ref. 3]** Electronic Information Exchange Service Interaction Model for details on message header and security block definition.

7.1 Industry Notification Message Constructs

7.1.1 Industry Notification Input Body

As shown in Figure 7-1, a Notification input message consists of

- a Message Header;
- a Security Block;
- a Notification.

In order to uniquely identify data from a business payload, certain elements will be identified as elements that can make up the unique Business identifier for each business object that has been transmitted. These elements will then be used by either the consumer or provider to report any errors with associated with the contained business payload.
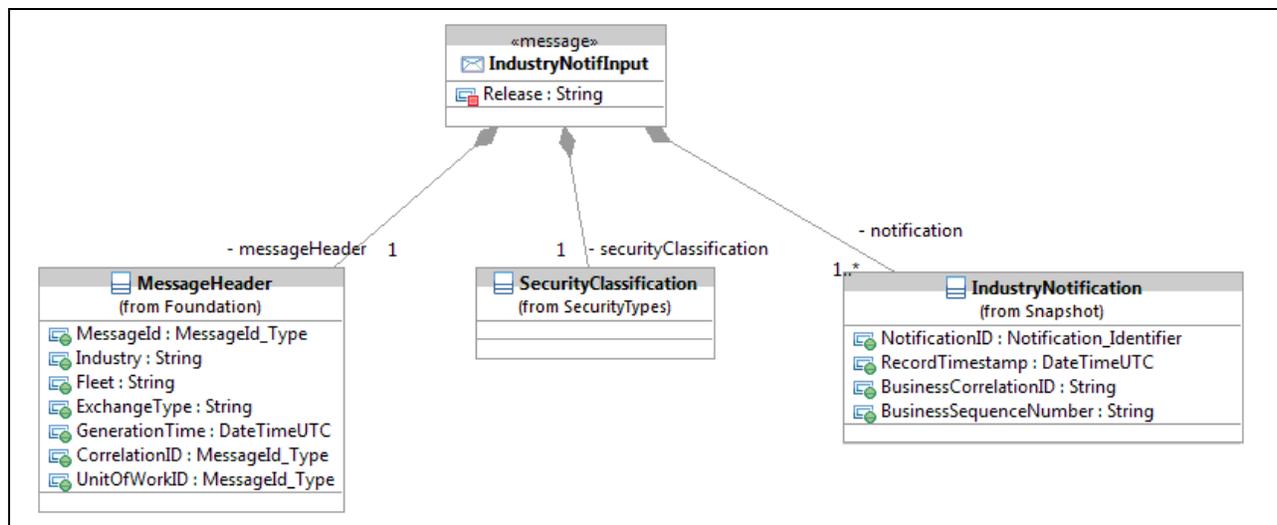

Figure 7-1 Notification Message

For a IndustryNotif Input body the MessageHeader CorrelationID and UnitOfWorkID are not used.

Within the Notification business object there is an attribute named 'action' which is set by the service consumer as a directive to CMMS on handling the business object. Valid values for 'action' are:

- Create a new business object: action = 1;

- Edit an existing business object: action = 2;

- Delete a business object: action = 3;

- Snapshot at a point in time of a business object   action = 4;

7.1.2 Industry Notification Output Message

The output of the SendNotification operation is the IndustryNotifOutput body. As shown in Figure 7-2, the output body consists of:

- a Message Header;

- a CustodyOutput indicating acceptance; the Notification message is accepted in its entirety only.

The output message has no security block. The output does not contain any sensitive or protected information.

This output body definition is common across all Notification operations.
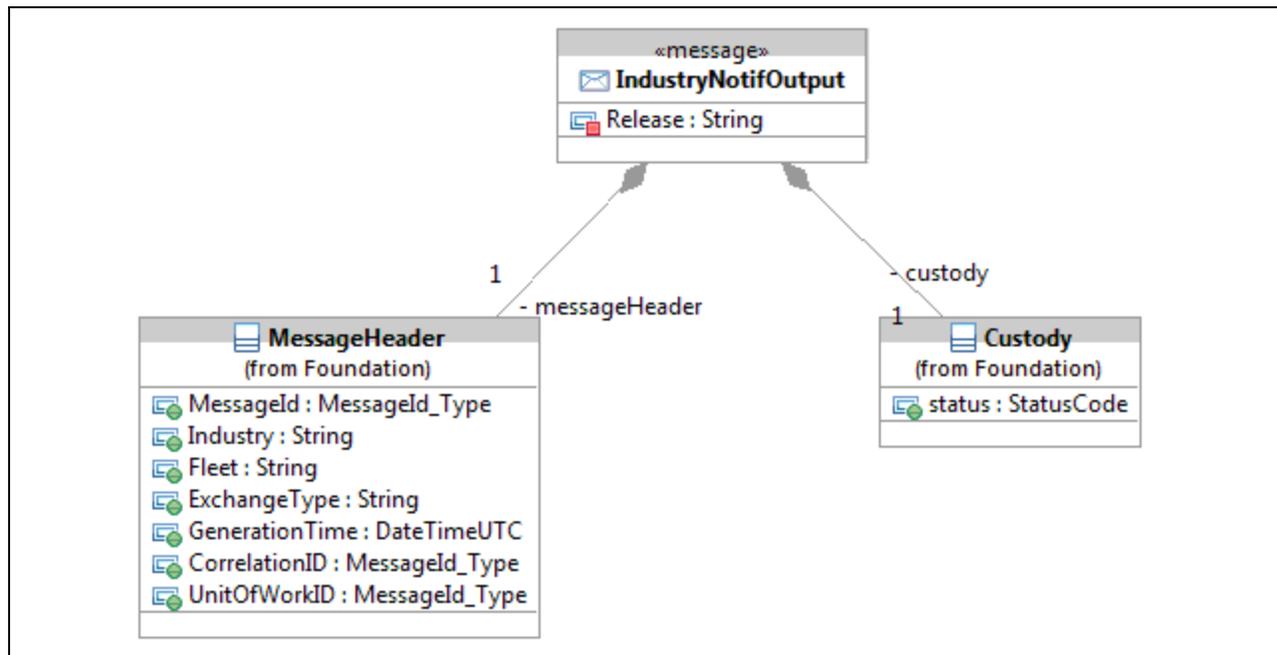

Figure 7-2 Industry Notification Output Message

For a IndustryNotification OutputBody:

- The MessageHeader CorrelationID will reflect the MessageId of the originating Notification input message;

- UnitofWorkID is not used;

- The MessageHeader ExchangeType must be set to the ExchangeType of the IndustryNotification InputBody;

- The value of the CustodyOutput 'status' evaluates to "success".

7.1.3   Industry Notification Fault Messages

A fault returned by the SendIndustryNotification operation uses the IndustryNotification FaultBody element. As shown in Figure 7-3, the fault body consists of:

- A Message Header;
- A Security Block;
- One or more FaultBlocks.

Each fault block pertains to zero to many business objects, to the level of granularity which the Service Provider can provide. If the system cannot determine a Business Identifier then this is omitted. To report differing faults on more than one business object extra fault blocks can be included in the fault message.

This fault body definition is used common all Notification operations.
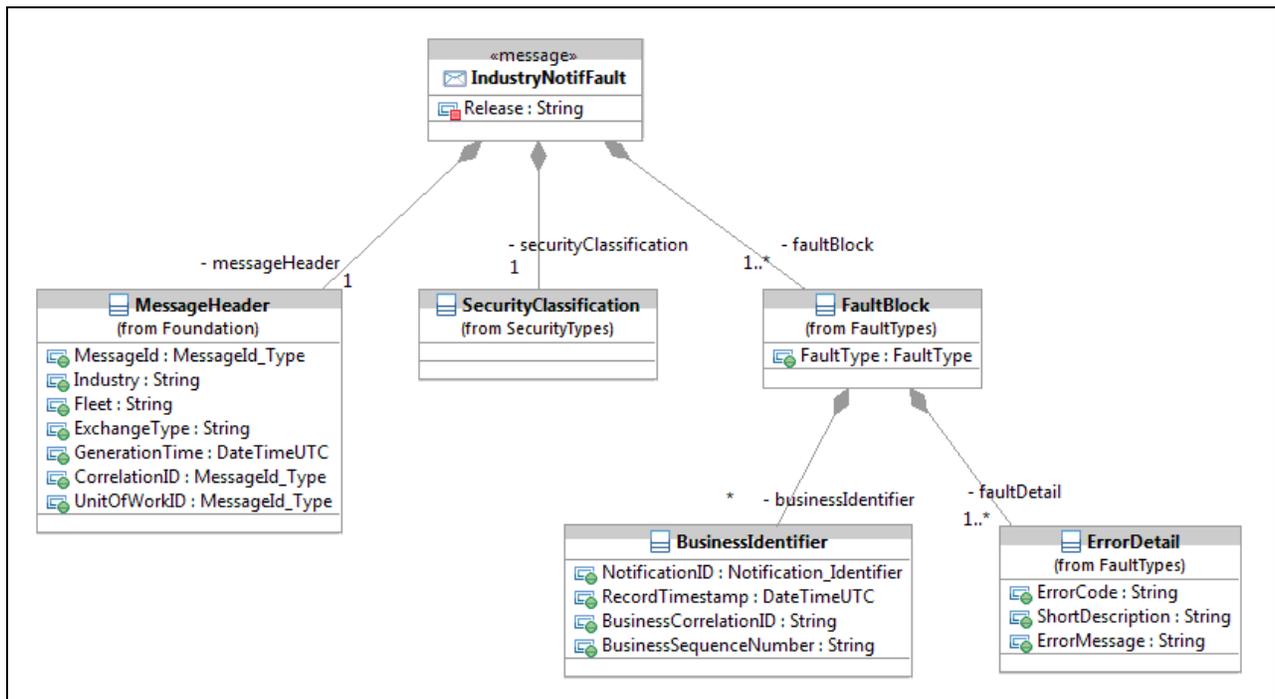

Figure 7-3 Industry Notification Fault Body

For an IndustryNotification FaultMessage:

- The MessageHeader CorrelationID will reflect the MessageId of the originating Notification input message.
- UnitofWorkID is not used;

- The MessageHeader ExchangeType must be set to the ExchangeType of the IndustryNotifInput body.

7.2 Industry Notification Acknowledgement Message Constructs

Once Canada has successfully processed the Notification in their backend maintenance system, Canada will send Industry an Industry Notification Acknowledgement message through the following constructs.

7.2.1 Industry Notification Acknowledgement Input Body

As shown in Figure 7-4, an Industry Notification Acknowledgement input message consists of

- A Message Header;
- An Error Body.
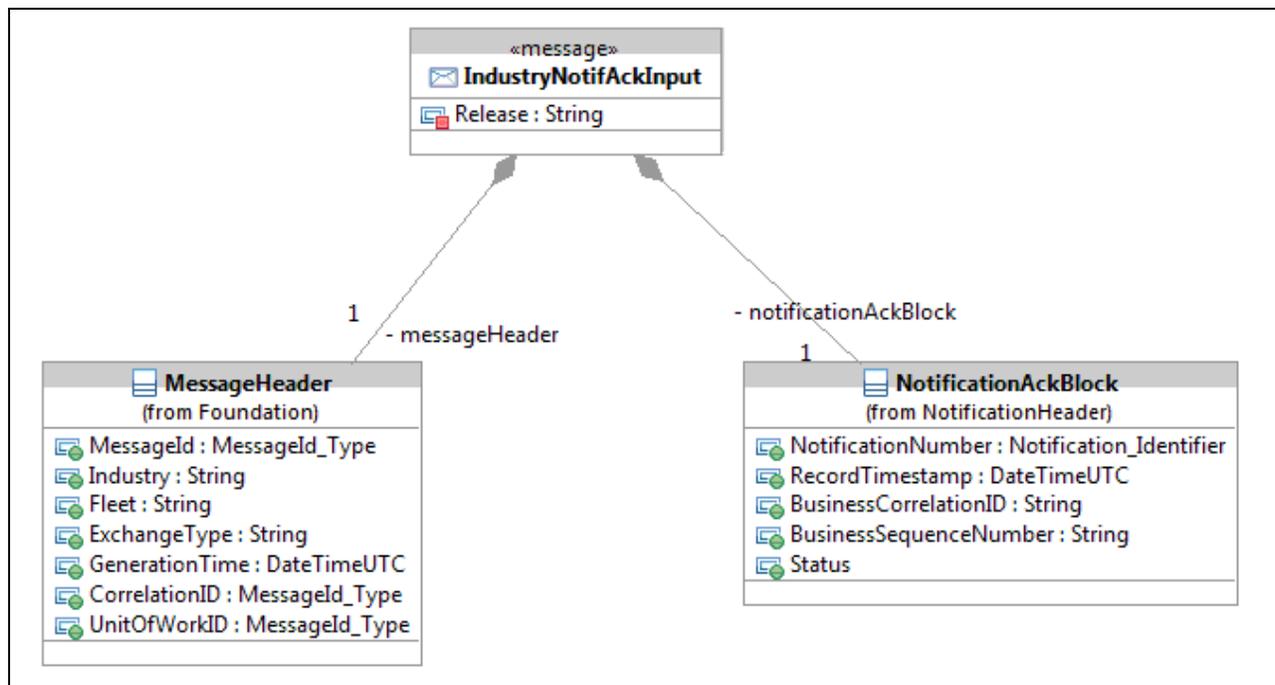
**Figure 7-4 Exchange Messages – Industry Notification Acknowledgement Input Body**

For a IndustryNotification Acknowledgement InputBody the MessageHeader CorrelationID and UnitofWorkID are not used.

The fault body consists of:

- A Message Header;
- One or more Acknowledgement body.

Within the Acknowledgement Body, at least one BizID must be provided. There is no need for a security block as no business data is provided.

7.2.2 Industry Notification Acknowledgement Output Body

Please refer to 7.1.2 Industry Notification Output Message for this definition.

7.2.3 Industry Notification Acknowledgement Fault Body

Please refer to 7.1.3 Industry Notification Fault Messages for this definition.

7.3 Industry Notification Error Message Constructs

In the event Canada encounters a business error while processing the Notification in their backend maintenance system, Canada will send Industry an Industry Notification Error message through the following constructs.

7.3.1 Industry Notification Error Input Body

As shown in Figure 7-4, an Industry Notification Error input message consists of

- A Message Header;
- A Security Block;
- An Error Body.
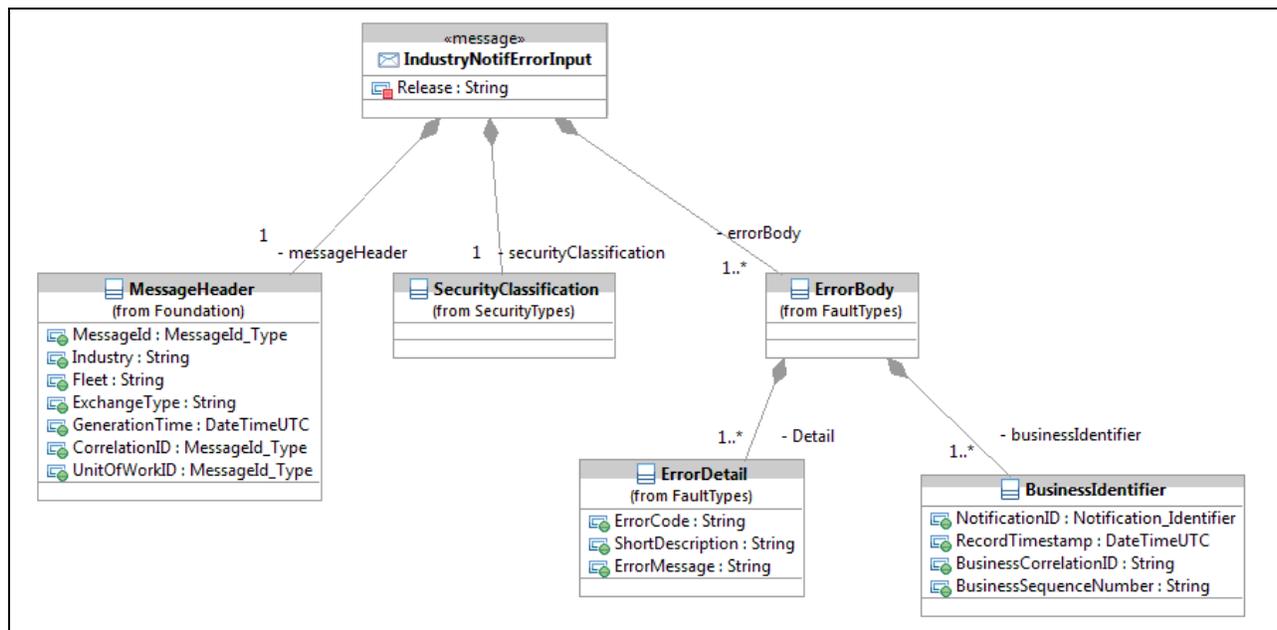
Figure 7-5 Exchange Messages – Industry Notification Error Input Body

For a IndustryNotifError Input body the MessageHeader CorrelationID and UnitofWorkID are not used.

The fault body consists of:

- A Message Header;

- A Security Block;
- One or more Error body.

Within the Error Body, at least one BizID must be provided, along with at least one ErrorDetail block.

- If appropriate, multiple BizIDs may be provided referencing a common error(s).
  - If appropriate, multiple errors can be defined within the error body. These errors would apply to all BizIDs defined within the ErrorBody construct.

Each error pertains to one or more business objects, to the level of granularity which the Service Provider can provide. To report differing errors on more than one business object extra error blocks can be included in the error input message.

7.3.2   Industry Notification Error Output Body

Please refer to 7.1.2 Industry Notification Output Message for this definition.

7.3.3   Industry Notification Error Fault Body

Please refer to 7.1.3 Industry Notification Fault Messages for this definition.

8 Service Operation Details

8.1 Detailed Operation Characteristics – Send Industry Notification

Industry will invoke the exposed Canada EDE Industry Notification service through this operation. An Industry Notification message will contain a Notification record.

Refer to Industry_WO_Canada.wsdl for implementation specifications.

Detailed Operation Characteristics

Interface Definition	Description
Operation Name	Send IndustryNotification
Operation Technical Name	SendIndustryNotification
Operation Description	This operation is invoked by Industry to send a Notification record to Canada EDE.
Target Operation Provider	Canada EDE
Target Operation Consumer	Industry
Properties	*Request/Response* message exchange pattern.
Input Message Definition	Please refer to Operation Message Model Section 7.1.1 Industry Notification Input for details.
Output Message Definition	Please refer to Operation Message Model Section 7.1.2 Industry Notification Output for details.
Fault Definition	Please refer to Operation Message Model Section 7.1.3 Industry Notification Fault Messages for details. As discussed in Section 4: Service Use Case the following faults may be reported: 1) Unauthenticated access 2) Unauthorized request 3) Malformed message 4) Service Unavailable

Non-Functional Requirements

Non-Functional Requirements/Technical Details	
Frequency	As required for third line maintenance.
Peak Throughput Time	No significant peaks are expected.
Peak Throughput Volume	No significant peaks are expected.

Non-Functional Requirements/Technical Details	
Payload Size	~ 50KB per Notification
Attachments	None
Attachment Size	N / A
ACK Time Interval	2 minutes
Retry Time Interval	3 minutes
Number of Retries	5
Biz. Response Time Interval	N/A – no business response to this message.
Time to Live Span	Nominal value is 1 hour – to be confirmed between Canada and Industry on a per ship class basis. If message cannot be delivered within 1 hour, revert to secondary delivery channel, which may be manual.
Service Op Availability	During core processing hours. The specific period will be defined during later phases of service realization 95% available uptime is the goal of the service
Downtime Requirements	The service cannot be used during established maintenance windows, which is currently expected to be for about 2 hours per week. The unavailability window may be accumulated and invoked during major maintenance periods, but ensuring that the overall availability of the service is still maintained.
Dead Message Handling	Alternative communication channel applies to report that this operation is not available when Industry cannot successfully send Notification business objects to Canada EDE. See Service Interaction Model [Ref. 3].

8.2 Detailed Operation Characteristics – Send Industry Notification Acknowledgement

Canada system will invoke the exposed Industry Notification service through this operation. An Industry Notification acknowledgement message will contain acknowledgments of notifications successfully processed by Canada backend systems, namely CMMS.

Refer to Industry_Notification_Industry.wsdl for implementation details. Note that this wsdl will have two operations, one for Acknowledgements, and one for Errors.

Detailed Operation Characteristics

Interface Definition	Description
Operation Name	Send Industry Notification Acknowledgement
Operation Technical Name	SendIndustryNotificationAck
Operation Description	This operation is invoked by Canada to send a Business Acknowledgement message to Industry. The Business Acknowledgment identifies Industry's Notifications which were successfully processed in Canada's CMMS.
Target Operation Provider	Industry
Target Operation Consumer	Canada EDE
Properties	*Request-Response* message exchange pattern.
Input Message Definition	Please refer to Operation Message Model Section 7.2.1 Industry Notification Acknowledgement Input for details.
Output Message Definition	Please refer to Operation Message Model Section 7.2.2 Industry Notification Acknowledgement Output for details.
Fault Definition	Please refer to Operation Message Model Section 7.2.3 Industry Notification Acknowledgement Fault for details.

Non-Functional Requirements

Non-Functional Requirements/Technical Details	
Frequency	Less than *SendIndustryNotification* frequency.
Peak Throughput Time	n/a
Peak Throughput Volume	n/a
Payload Size	~ 5KB per Error
Attachments	None
Attachment Size	N/A
ACK Time Interval	2 minutes
Retry Time Interval	2 minutes
Number of Retries	5
Biz. Response Time Interval	N/A
Time to Live Span	Nominal value is 1 hour – to be confirmed between Canada and Industry on a per ship class basis. If message cannot be delivered within 1 hour, revert to secondary delivery channel, which may be manual.

Non-Functional Requirements/Technical Details	
Service Op Availability	During core processing hours. The specific period will be defined during later phases of service realization 95% available uptime is the goal of the service
Downtime Requirements	The service cannot be used during established maintenance windows, which is currently expected to be for about 2 hours per week. The unavailability window may be accumulated and invoked during major maintenance periods, but ensuring that the overall availability of the service is still maintained.
Dead Message Handling	Alternative communication channel applies to report that this operation is not available when Industry cannot successfully send Notification error message(s) to Canada EDE. See Service Interaction Model [Ref. 3].

8.3 Detailed Operation Characteristics – Send Industry Notification Error

Canada system will invoke the exposed Industry Notification service through this operation. An Industry Notification error message will contain Canada-reported business errors encountered while attempting to process a Notification message generated by Industry.

Refer to Industry_Notification_Industry.wsdl for implementation details. Note that this wsdl will have two operations, one for Acknowledgements, and one for Errors.

Detailed Operation Characteristics

Interface Definition	Description
Operation Name	Send Industry Notification Error
Operation Technical Name	SendIndustryNotificationError
Operation Description	This operation is invoked by Canada to send a Business Error message to Industry. The Business Error describes errors encountered while processing Industry's Notification message.
Target Operation Provider	Industry
Target Operation Consumer	Canada EDE
Properties	*Request-Response* message exchange pattern.
Input Message Definition	Please refer to Operation Message Model Section 7.3.1 Industry Notification Error Input for details.
Output Message Definition	Please refer to Operation Message Model Section 7.3.2 Industry Notification Error Output for details.

Interface Definition	Description
Fault Definition	Please refer to Operation Message Model Section 7.3.3 Industry Notification Error Fault for details.

Non-Functional Requirements

Non-Functional Requirements/Technical Details	
Frequency	Less than *SendIndustryNotification* frequency.
Peak Throughput Time	n/a
Peak Throughput Volume	n/a
Payload Size	~ 5KB per Error
Attachments	None
Attachment Size	N/A
ACK Time Interval	2 minutes
Retry Time Interval	2 minutes
Number of Retries	5
Biz. Response Time Interval	N/A
Time to Live Span	Nominal value is 1 hour – to be confirmed between Canada and Industry on a per ship class basis. If message cannot be delivered within 1 hour, revert to secondary delivery channel, which may be manual.
Service Op Availability	During core processing hours. The specific period will be defined during later phases of service realization 95% available uptime is the goal of the service
Downtime Requirements	The service cannot be used during established maintenance windows, which is currently expected to be for about 2 hours per week. The unavailability window may be accumulated and invoked during major maintenance periods, but ensuring that the overall availability of the service is still maintained.
Dead Message Handling	Alternative communication channel applies to report that this operation is not available when Industry cannot successfully send Notification error message(s) to Canada EDE. See Service Interaction Model [Ref. 3].

8.4 Service Bindings

8.4.1 SOAP Over http

The initial implementation of this service will use a Simple Object Access Protocol (SOAP) binding with document style messages and Hyper Text Transfer Protocol (http) transport.

The business objects (Section 6) are bound to the SOAP Body element. The SOAP Header is used for EIE adopted WS-* standards-based elements (e.g., WS_Security assertions) and, typically, MessageHeader and SecurityMarkings elements[2].

In this binding the http response is used for operations' output or fault messages.

8.4.2 SOAP Over JMS

Not currently supported for this service.

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[2] See the Notification WSDL file for the precise binding

9   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
EDE	Electronic Data Exchange
EIE	Electronic Information Environment
ERD	Entity-Relationship Diagram
DRMIS	Defense Resource Management Information System
HTTP	Hyper Text Transfer Protocol
Industry	The industry contracted to provide support to Canada DND according to ISSCF
ISSC	In Service Support Contractor
JMS	Java Message Service
MPN	Manufacturer Part Number
PBC	Performance Based Contracting
SOAP	Simple Object Access Protocol
TBD	To Be Defined, To Be Determined
UML	Unified Modeling Language
XML	Extensible Markup Language
WS	Weapon System

10   Appendix A - Entity Relationship Model

Information Model – Entity-Relationship View
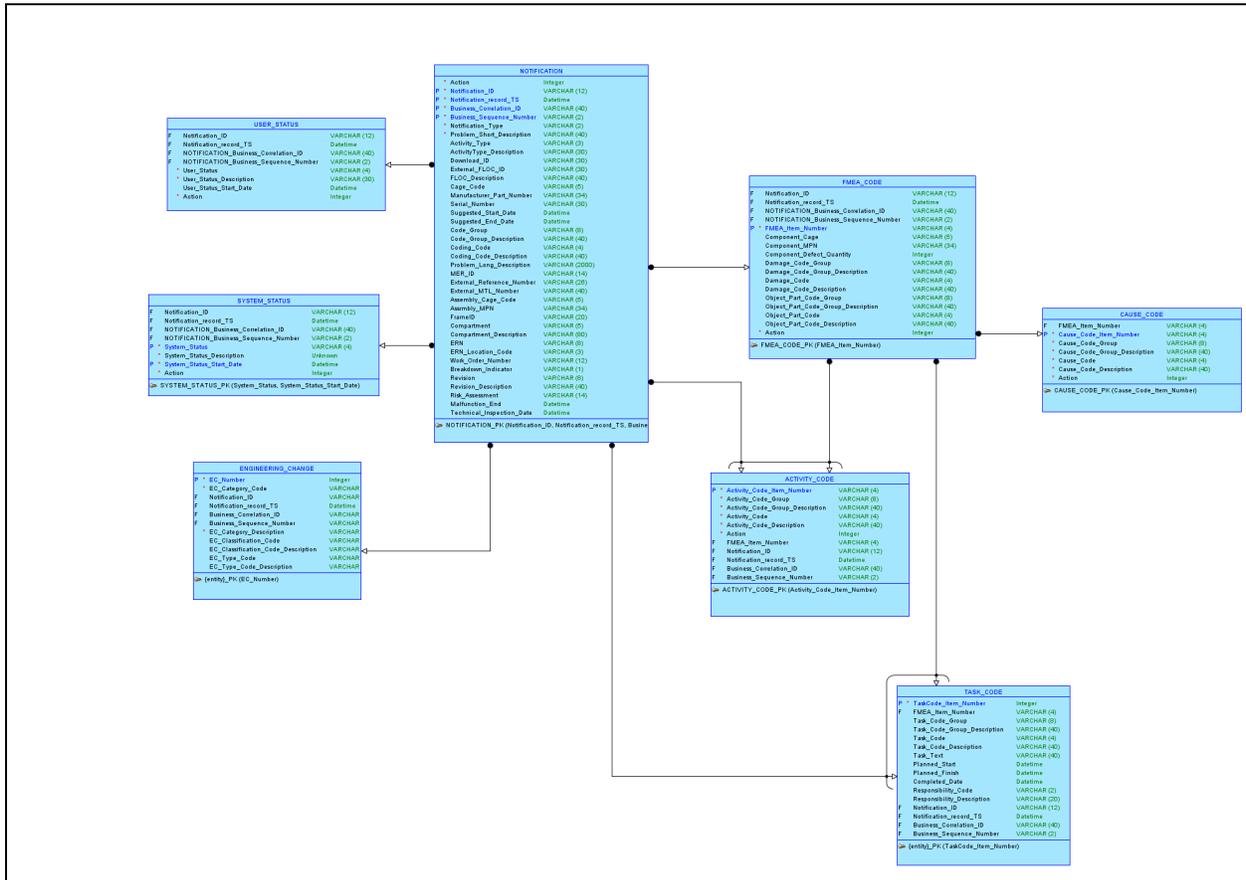
Figure 10-1 Industry Notification ERD

11   Document History

Revision Number	Description	Date
1.0	Ready for Navy RFP	19 October 2015