



# Electronic Information Environment (EIE)

## Business Use Case (BUC) BUC 2.2 Exchange Master Data - Inbound

### EIE Project

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## 1. EIE Business Use Case<sup>1</sup> Overview

### 1.1 Introduction

Performance Based Contracting (PBC) contains a set of guidelines for the in-service support (ISS) of Canadian Forces (CF) platforms. Under these guidelines Canada is responsible to perform corrective and/or preventive maintenance activities on the platform. The ISS Contractor(s) will own, manage and deliver to the specified Handover Point (HoP) all platform materiel required to support the platform, with the exception of Canada-owned materiel. In order for Canada and an ISS Contractor to fulfill their obligations under ISS contract, specific data sets must be exchanged between Canada and the ISS Contractor.

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

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

### 1.2 Purpose

Canada Maintenance Management System (CMMS) needs to have the latest Master Data to ensure that most up-to-date maintenance information is available for Canada's platforms. Initially, Canada will load ship data into CMMS based on information from the Shipbuilder(s). The ISS Contractor will request an initial data load for each ship from Canada. Canada will provide CMMS master data associated with the platform to the ISS Contractor through the EDE. Once the ISS Contractor has the necessary ship data, the ISS Contractor will manage any subsequent updates to the Master Data. Any agreed upon updates will be sent to Canada from the ISS Contractor through the EDE.

This Business Use Case (BUC) describes the exchange of Master Data from the ISS Contractor to Canada through the EDE for a platform managed according to PBC.

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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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### 1.3 Intended Audience

The intended audience for this business use case includes:

- ISS Contractor(s) who require detail of their business service-level interactions, benefits and obligations under PBC.
- All Canada personnel implementing the PBC.
- Solution Architects who will define a Business Service Model for the business service(s) that are described.
- Functional Testers who will use the business use case 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] Business Process Catalogue Annex P: Navy CMMS Data Initialization - In the Context of Performance Based Contracting

With respect to the referenced documents this BUC addresses the following sections:

Reference	Section
[Ref. 1] Business Process Catalogue Annex P	Annex P – Navy CMMS Data Initialization Process Model and cross-functional process flows - 3.2

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## 2. BUC 2.2 Exchange Master Data - Inbound

This BUC will identify processes and activities and define scenarios which apply to Master Data being sent to the ISS Contractor.

### 2.1 Overview

<b>Identifier</b>	BUC 2.2
<b>Name</b>	Exchange Master Data - Inbound
<b>Business goal</b>	Send Master Data sets to Canada from the ISS Contractor as necessary for data updates
<b>Stakeholders</b>	Canada and the ISS Contractor(s)
<b>Workflow/interaction</b>	Exchange of Master Data sets between the ISS Contractor and Canada when: <ul style="list-style-type: none"> <li>• Canada initiates a Master Data update request</li> </ul> Refer to the Navy CMMS Data Initialization Process Model business process flows that identify master data touch points. Reference [Ref. 1].
<b>Processes</b>	Information exchange is automated (system-to-system). The exchange is immediate upon a triggering event has occurred in the source system - Master Data Inbound.  Some error scenarios may require manual intervention.
<b>Context</b>	Business Domain: Master Data Functional Area: Master Data
<b>Period of Time</b>	The full lifecycle of the subject platform.
<b>Description</b>	The ISS Contractor will manage master data information in their source system. The ISS Contractor will notify Canada when a master data update is required. Canada will utilize the data to construct the CMMS/CSS infrastructure as required. On request from Canada, the ISS Contractor will transfer the Master Data to Canada.  The ISS Contractor will use EDE to transfer to Canada the Master Data set which is to be updated in CMMS/CSS.

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## 2.2 Business Rules and Assumptions

1. The EDE systems shall ensure Master Data sets are sent only from an ISS Contractor system which is properly authenticated and authorized to send maintenance and materiel data for that class of ship.
2. Canada will validate and determine what data sent by the ISS Contractor will be used to update CMMS/CSS.

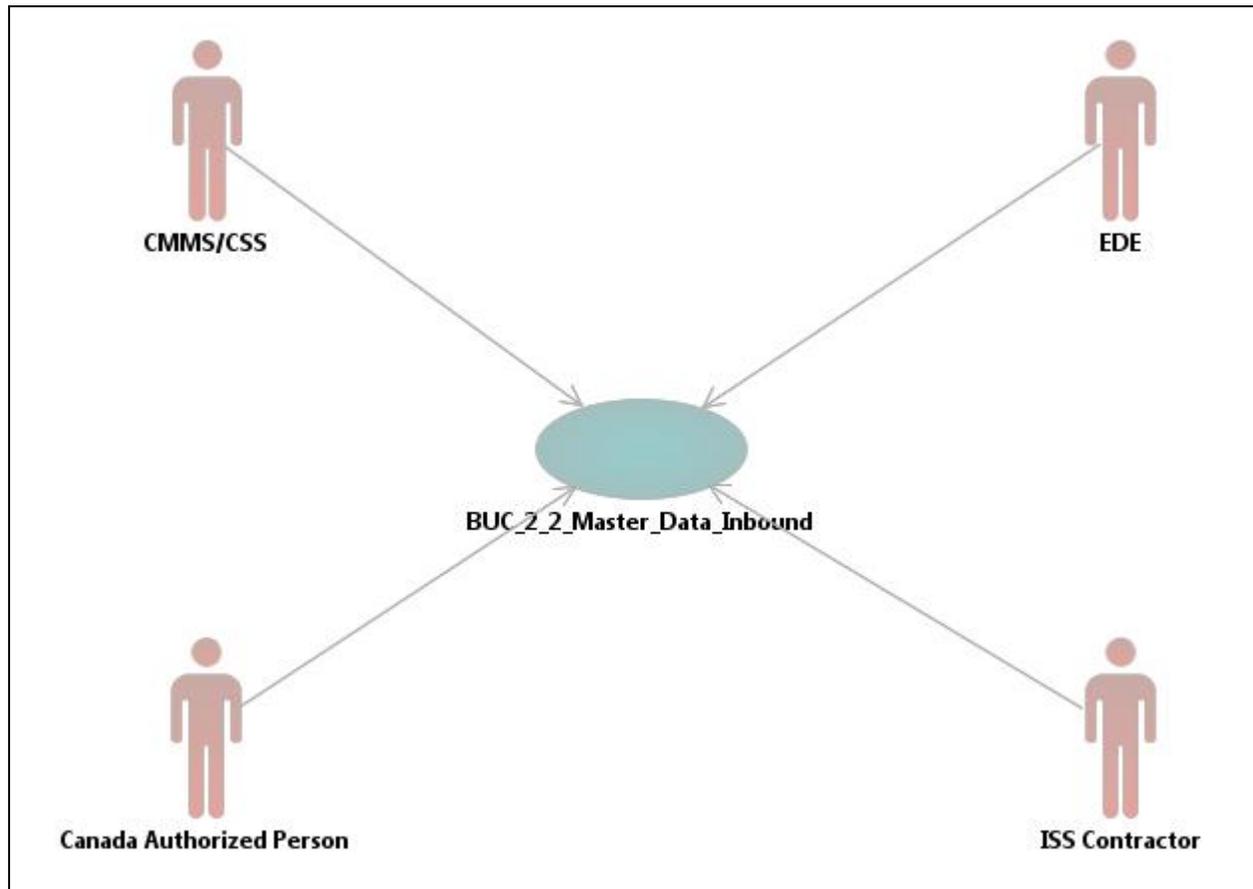
## 2.3 Actors

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

Role Name	Role Description / Responsibilities
ISS Contractor	<ul style="list-style-type: none"><li>• Prepares the Master Data to be transferred to Canada</li><li>• Trigger sending of Master Data to Canada via EDE</li></ul>
Canada Authorized Person	<ul style="list-style-type: none"><li>• Initiates request for the ISS Contractor to send Master Data to Canada</li><li>• Provides a system that will have the ability to:<ul style="list-style-type: none"><li>– accept and process a Master Data sent from the ISS Contractor, and</li><li>– acknowledge acceptance of the data</li></ul></li></ul>
CMMS / CSS	<ul style="list-style-type: none"><li>• Receives and stores Master Data sets for update</li></ul>
EDE	<ul style="list-style-type: none"><li>• Transports and transforms the Master Data set to Canada</li></ul>

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**Figure 2-1 Master Data - Inbound**

## 2.4 Common Pre-Conditions

These apply to every scenario unless explicitly stated otherwise:

1. Canada and the ISS Contractor have agreed upon Master Data set format (see [Functional Data Definition](#))
2. Canada and the ISS Contractor have agreed upon the exchange mechanism for the Master Data set.

## 2.5 Common Post-Condition(s)

The following applies to every scenario unless explicitly stated otherwise:

1. Master Data set has been received by Canada and an acknowledgement has been received by the ISS Contractor.

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## 2.6 Common BUC Steps

Each scenario defined below includes the following common steps:

Common Steps	Step Description	Actor
Validate Master Data dataset	EDE receives and technically validates the Master Data dataset	EDE
Convert Master Data dataset to common format	EDE converts data to XML-based format that has been adopted by Canada and the ISS Contractor.	EDE
Send Master Data dataset to Data Consumer	EDE sends Master Data dataset (which may be an acknowledgement or error message) to the Data consumer, in accordance with the transmission definition agreed with Canada.	EDE
Acknowledge Receipt of Master Data dataset	The data consumer (ISS Contractor System or CMMS) sends a technical acknowledgement receipt to EDE for received and successfully processed Master Data set.	Data consumer (ISS Contractor or CMMS)

## 2.7 Scenarios<sup>2</sup>

In the following scenarios the pre-condition and trigger serve to uniquely identify the Master Data exchange in the context of ISS Contractor provided Master Data in support of master data updates.

<sup>2</sup> A scenario corresponds to a specific activity in the Inbound Master Data business processes when a triggering event occurs which causes a Master Data set exchange. Each exchange use case scenario corresponds to a vertical slice from a Master Data business process which results in a Master Data set being transferred to Canada.

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**2.7.1 2.2.1 Master Data Request [N2.2.2.1.1]**

<b>Scenario Name</b>	<b>2.2.1 Master Data Request [N2.2.2.1.1]</b>		
<b>Business Process</b>	<p>This scenario occurs in the following business processes:</p> <ul style="list-style-type: none"> <li>• Engineering Change Data Loads</li> <li>• On-Demand Loads</li> </ul>		
<b>Business Context</b>	<p>Canada will initiate a Master Data update request. The Master Data will be used to update CMMS/CSS dataset with based on agreed upon changes to the applicable system of record.</p> <p>Engineering Change Data Loads</p> <ul style="list-style-type: none"> <li>• Canada will initiate a Master Data request corresponding to the engineering change that will be evaluated by the ISS Contractor. If the request is invalid, the ISS Contractor will send the 'Master Data Request Error' message to Canada, otherwise the ISS Contractor will dispatch the Master Data to Canada via the EDE.</li> </ul> <p>On-Demand Loads</p> <ul style="list-style-type: none"> <li>• Canada will initiate an On-Demand Master Data Request using the Date as a request key that will be evaluated by the ISS Contractor. If the request is invalid, the ISS Contractor will send the 'Master Data Request Error' message to Canada, otherwise the ISS Contractor will dispatch the Master Data to Canada via the EDE.</li> </ul>		
<b>Precondition(s)</b>	See <a href="#">Common Pre-Conditions</a> .		
<b>Trigger event</b>	Canada initiates a request for Master Data		
<b>Steps</b>	<b>Step Name</b>	<b>Step Description</b>	<b>Actor</b>
	Initiate the Master Data request	The actor decides to initiate the request for Master Data from the ISS Contractor.	Canada Authorized Person
	Send Request for Master Data	The actor sends Master Data request to the ISS Contractor.	CMMS
	Process Master Data Request	The ISS Contractor will process the Master Data Request. This will result in an error back to Canada or a dispatch of Master Data to Canada.	ISS Contractor
Continue with <a href="#">Common BUC Steps</a>			

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<b>Postcondition(s)</b>	ISS Contractor prepares to send Master Data.
<b>Notes</b>	

**2.7.2 2.2.2 Send Master Data [N2.2.2.1.5, N2.2.2.1.6, N2.2.2.1.7, N2.2.2.1.8, N2.2.2.1.9, N2.2.2.1.10, N2.2.2.1.11, N2.2.2.1.12, N2.2.2.1.13, N2.2.2.1.14]**

<b>Scenario Name</b>	2.2.2 Send Master Data [N2.2.2.1.5, N2.2.2.1.6, N2.2.2.1.7, N2.2.2.1.8, N2.2.2.1.9, N2.2.2.1.10, N2.2.2.1.11, N2.2.2.1.12, N2.2.2.1.13, N2.2.2.1.14]
<b>Business Process</b>	<p>This scenario occurs in the following business processes:</p> <ul style="list-style-type: none"> <li>• Engineering Change Data Loads</li> <li>• On-Demand Loads</li> </ul>
<b>Business Context</b>	<p>Canada will initiate a Master Data update request. The Master Data will be used to update CMMS/CSS dataset with based on agreed upon changes to the applicable system of record.</p> <p>Engineering Change Data Loads</p> <ul style="list-style-type: none"> <li>• Canada will initiate a Master Data request corresponding to the engineering change that will be evaluated by the ISS Contractor. If the request is invalid, the ISS Contractor will send the 'Master Data Request Error' message to Canada, otherwise the ISS Contractor will dispatch the Master Data to Canada via the EDE.</li> </ul> <p>Depending on the nature of the engineering change, any of the Master Data objects may be included in the change set. The Master data load sent to Canada may include material master data (MMR (Material Master Record) [N2.2.2.1.5], FFFC (Fit Form Function Class) [N2.2.2.1.7], BOM (Bill of Materials) [N2.2.2.1.12]), technical structure data (MPL (Master Parts List) [N2.2.2.1.6], FLOC (Functional Location) [N2.2.2.1.8], EMR (Equipment Master Record) [N2.2.2.1.9], MPOINT (Measurement Point) [N2.2.2.1.13]), and/or maintenance program data (MTL (Maintenance Task List) [N2.2.2.1.10], MP (Maintenance Plan) [N2.2.2.1.11], and MDOC (Measurement Documents) [N2.2.2.1.14]).</p> <p>On-Demand Loads</p> <ul style="list-style-type: none"> <li>• Canada will initiate an On-Demand Master Data Request using the Date as a request key that will be evaluated by the ISS Contractor. If the request is invalid, the ISS Contractor will send the 'Master Data Request Error' message to Canada, otherwise the ISS Contractor will dispatch the Master Data to Canada via the EDE.</li> </ul>

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	The On-Demand Master data load sent to Canada may include any or all material master data objects (MMR [N2.2.2.1.5], FFFC [N2.2.2.1.7], BOM [N2.2.2.1.12]).		
<b>Precondition(s)</b>	See <a href="#">Common Pre-Conditions</a> .		
<b>Trigger event</b>	The ISS Contractor receives a valid Master Data Request		
<b>Steps</b>	<b>Step Name</b>	<b>Step Description</b>	<b>Actor</b>
	Process Master Data Request	The ISS Contractor receives and processes the Master Data Request.	ISS Contractor
	Initiate Dispatch of Master Data to Canada	On a valid Master Data Request, ISS Contractor will initiate the transfer of Master Data elements to Canada.	ISS Contractor
	Send Master Data	The ISS Contractor triggers transfer of Master Data to Canada.	ISS Contractor
	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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**2.7.3 2.2.3 Master Data Request Error [N2.2.2.1.2]**

<b>Scenario Name</b>	<b>2.2.3 Master Data Request Error [N2.2.2.1.2]</b>														
<b>Business Process</b>	<p>This scenario occurs in the following business processes:</p> <ul style="list-style-type: none"> <li>• Engineering Change Data Loads</li> <li>• On-Demand Loads</li> </ul>														
<b>Business Context</b>	<p>Canada will send a Master Data Request to the ISS Contractor. The ISS Contractor will process the Master Data Request. If the request is not valid, the ISS Contractor will generate an error and send the error to Canada.</p> <p>Engineering Change Data Loads</p> <ul style="list-style-type: none"> <li>• Canada will initiate a Master Data request corresponding to the engineering change that will be evaluated by the ISS Contractor. If the request is invalid, the ISS Contractor will send the 'Master Data Request Error' message to Canada, otherwise the ISS Contractor will dispatch the Master Data to Canada via the EDE.</li> </ul> <p>On-Demand Loads</p> <ul style="list-style-type: none"> <li>• Canada will initiate an On-Demand Master Data Request using the Date as a request key that will be evaluated by the ISS Contractor. If the request is invalid, the ISS Contractor will send the 'Master Data Request Error' message to Canada, otherwise the ISS Contractor will dispatch the Master Data to Canada via the EDE.</li> </ul>														
<b>Precondition(s)</b>	See <a href="#">Common Pre-Conditions</a> .														
<b>Trigger event</b>	The ISS Contractor receives an invalid Master Data Request.														
<b>Steps</b>	<table border="1"> <thead> <tr> <th>Step Name</th> <th>Step Description</th> <th>Actor</th> </tr> </thead> <tbody> <tr> <td>Receive Master Data Request</td> <td>The ISS Contractor receives a Master Data Request from Canada</td> <td>ISS Contractor</td> </tr> <tr> <td>Validate Master Data Request</td> <td> <p>The ISS Contractor validates the Master Data Request.</p> <ul style="list-style-type: none"> <li>• If the request is invalid, the ISS Contractor will send the 'Master Data Request Error' message to Canada.</li> </ul> </td> <td>ISS Contractor</td> </tr> <tr> <td>Send error message to Canada</td> <td>Send the Master Data Request error message to Canada.</td> <td>ISS Contractor</td> </tr> </tbody> </table>			Step Name	Step Description	Actor	Receive Master Data Request	The ISS Contractor receives a Master Data Request from Canada	ISS Contractor	Validate Master Data Request	<p>The ISS Contractor validates the Master Data Request.</p> <ul style="list-style-type: none"> <li>• If the request is invalid, the ISS Contractor will send the 'Master Data Request Error' message to Canada.</li> </ul>	ISS Contractor	Send error message to Canada	Send the Master Data Request error message to Canada.	ISS Contractor
Step Name	Step Description	Actor													
Receive Master Data Request	The ISS Contractor receives a Master Data Request from Canada	ISS Contractor													
Validate Master Data Request	<p>The ISS Contractor validates the Master Data Request.</p> <ul style="list-style-type: none"> <li>• If the request is invalid, the ISS Contractor will send the 'Master Data Request Error' message to Canada.</li> </ul>	ISS Contractor													
Send error message to Canada	Send the Master Data Request error message to Canada.	ISS Contractor													

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<b>Post condition(s)</b>	Canada receives Master Data Request error from the ISS Contractor. Canada will process the error, and can correct and reinitiate the Master Data Request as required.
<b>Notes</b>	

**2.7.4 2.2.4 Acknowledgement of Data Acceptance [N2.2.2.1.4]**

<b>Scenario Name</b>	2.2.4 Acknowledgement of Data Acceptance [N2.2.2.1.4]		
<b>Business Process</b>	<p>This scenario occurs in the following business processes:</p> <ul style="list-style-type: none"> <li>• Engineering Change Data Loads</li> <li>• On-Demand Loads</li> </ul>		
<b>Business Context</b>	<p>The ISS Contractor will dispatch Master Data to Canada via the EDE. Canada will receive the Master Data in their system of record. After successful receipt, validation, and implementation of the Master Data, Canada will send the ISS Contractor an Acknowledgement of Data Acceptance via the EDE. The ISS Contractor will receive the Master Data Acknowledgement.</p> <p>Engineering Change Data Loads</p> <ul style="list-style-type: none"> <li>• Upon successful validation of the Master Data, Canada loads the Master Data into the CMMS and sends the acknowledgement of data acceptance to the ISS Contractor through the EDE.</li> </ul> <p>On-Demand Load</p> <ul style="list-style-type: none"> <li>• Upon successful validation of the Master Data format, Canada loads the Master Data into the CMMS and sends the acknowledgement of data acceptance to the ISS Contractor through the EDE.</li> </ul>		
<b>Pre condition(s)</b>	See <a href="#">Common Pre-Conditions</a> .		
<b>Trigger event</b>	Canada receives Master Data from the ISS Contractor		
<b>Steps</b>	<b>Step Name</b>	<b>Step Description</b>	<b>Actor</b>
	CMMS Receives Master Data	CMMS receives the Master Data sent by the ISS Contractor.	CMMS
	Process Master Data	Canada Accepts and Acknowledges the data sent by the ISS Contractor.	Canada Authorized Person

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	Send Master Data Acknowledgement	Canada sends Master Data Acknowledgement message.	CMMS
	Continue with <a href="#">Common BUC Steps</a>		
<b>Postcondition(s)</b>	See <a href="#">Common Post-Conditions</a> .		
<b>Notes</b>			

## 2.8 Information Requirements

Each request of a data set and the subsequent inbound exchange of the data set from the ISS Contractor to Canada will have a primary key, consisting of:

- Request Authorization Key

## 2.9 Special Requirements

None identified.

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### 3. Functional Data Definition<sup>3</sup>

The data elements which make up inbound master data sets are enumerated here.

#### 3.1 Business Entity Definition – Master Data Request (N2.2.2.1.1)

Name	Definition	Type	Length
Request Authorization Key	Unique key for the specific request for Master Data from ISSC	Char	10

#### 3.2 Business Entity Definition – MMR (N2.2.2.1.5)

Name	Definition	Type	Length
Request Authorization Key	Unique key that was used for the specific request for Master Data from ISSC	Char	10
Action	Identification of Create/Change/Delete of data	Integer	1
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
Description (EN)	English Item Short Description	Char	40
Description (FR)	French Item Short Description	Char	40
Base Unit of Measure	Standard Unit of Measure of the Material. Unit of Issue for Part Issue and Part Return	Char	3
Batch Management	Value = Y if Material is managed in Batches	Char	1
EMR Indicator	Value = Y if Material requires a Manufacturer Serial Number	Char	1

<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 specified in the Service Specification for that supports this business use case.

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Name	Definition	Type	Length
Reparability Code	Indicator to identify reparability of a material	Char	1
PRT Indicator	Production Resource Tool Indicator	Char	1
HAZMAT Indicator	Indicator to identify Hazardous Material	Char	1
ITAR Indicator	Indicator to identify ITAR relevant Material	Char	1
MIN	Minimum Stock Level	Float	10, 3
MAX	Maximum Stock Level	Float	10, 3
ERN1	Equipment Registration Number (End Item or Assembly) where materiel is used	Char	8
QPE1	Quantity Per Equipment (per End Item) for ERN1	Int	4
ERN2	Equipment Registration Number (End Item or Assembly) where materiel is used	Char	8
QPE2	Quantity Per Equipment (per End Item) for ERN2	Int	4
ERN3	Equipment Registration Number (End Item or Assembly) where materiel is used	Char	8
QPE3	Quantity Per Equipment (per End Item) for ERN3	Int	4
Proposed NSC	Proposed NATO Stock Class (First 4 digits of NSN)	Char	4
Proposed NCC	Proposed NATO Country Code (Next 2 digits of NSN)	Char	2
Proposed IIN	Proposed Item Identification Number (Last 7 digits of NSN)	Char	7
UOI Price	Price per UOI	Float	9, 2
UOI	Unit of Issue	Char	3
UOI Conversion Factor	Unit of Issue conversion factor	Int	5
SMC	Supply Manager Code	Char	3
SMR Code	Source, Maintenance and Recoverability Code	Char	6
MRC	Maximum Repair Cost	Float	9, 2
GSM Indicator	Government Supplied Material Indicator	Char	1

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Name	Definition	Type	Length
Gross Weight	Gross Weight	Float	10, 3
Net Weight	Net Weight	Float	10, 3
UOW	Unit of Weight	Char	3
Item Length	Length (may be used to calculate Volume)	Float	10, 3
Item Depth	Depth (may be used to calculate Volume)	Float	10, 3
Item Width	Width (may be used to calculate Volume)	Float	10, 3
UOL	Unit of Length	Char	3
Item Volume	Volume	Float	10, 3
UOV	Volume_unit	Float	10, 3
Packed Length	Length (may be used to calculate Volume)	Float	10, 3
Packed Depth	Depth (may be used to calculate Volume)	Float	10, 3
Packed Width	Width (may be used to calculate Volume)	Float	10, 3
Packed Volume	Volume_unit	Float	10, 3
Shelf Life	Total Shelf Life	Integer	3
Material Lead Time	Material Lead Time for Delivery	Integer	3

### 3.3 Business Entity Definition – MPL (N2.2.2.1.6)

Name	Definition	Type	Length
Request Authorization Key	Unique key that was used for the specific request for Master Data from ISSC	Char	10
Action	Identification of Create/Change/Delete of data	Integer	1
Node ID	Node Name, unique identifier of node	Char	40
Node Type	Node Type AN = Access/Root Node (one per MPL) VN = View Node, functional LCN (FLOCs) SN = Structure Node, physical LCN (EMR)	Char	2
Description (EN)	English Node Description	Char	60

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Name	Definition	Type	Length
Description (FR)	French Node Description	Char	60
Class-Characteristics	Associated Class and Characteristics	Char	60
Parent Node	Parent Node Name, unique identifier of parent node	Char	40
Material Variant ID	Variant Identification for Material Variants	Char	8
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
Quantity	Quantity of Material required for Node	Float	10, 3
Unit of Measure	Base Unit of Measure of Material	Char	2
Object Dependencies	Restrict material variant effectivity based on configuration parameters	Char	2000

### 3.4 Business Entity Definition – FFFC (N2.2.2.1.7)

Name	Definition	Type	Length
Request Authorization Key	Unique key that was used for the specific request for Master Data from ISSC	Char	10
Action	Identification of Create/Change/Delete of data	Integer	1
FFFC ID	FFFC Identification number	Char	18
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	Char	34

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Name	Definition	Type	Length
	of 31 characters or less.		
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

### 3.5 Business Entity Definition – FLOC (N2.2.2.1.8)

Name	Definition	Type	Length
Request Authorization Key	Unique key that was used for the specific request for Master Data from ISSC	Char	10
Action	Identification of Create/Change/Delete of data	Integer	1
FLOC ID	Functional Location Identifier	Char	30
Description (EN)	English Functional Location Description	Char	40
Description (FR)	French Functional Location Description	Char	40
Catalog Profile	Key of Reporting Schema (FLOC and MER should be the same)	Char	9
Parent FLOC ID	Parent Functional Location Identifier	Char	30
Main Work Center	Main Work Center of the Functional Location	Char	8
BOM MPN	Bill of Material Manufacturer Part Number <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
BOM CAGE	BOM CAGE Code	Char	5
BOM Structure Element Indicator	Indicates PM assembly	Char	1
ERN	FLOC Equipment Registration Number	Char	8
ERN LOC	FLOC ERN Location	Char	3
Frame ID	FLOC Frame Identification Code	Char	20
Compartment	FLOC Compartment Identification Code	Char	5

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**3.6 Business Entity Definition – EMR (N2.2.2.1.9)**

Name	Definition	Type	Length
Request Authorization Key	Unique key that was used for the specific request for Master Data from ISSC	Char	10
Action	Identification of Create/Change/Delete of data	Int	1
MPN	EMR Manufacturer Part Number <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	EMR Cage Code	Char	5
Serial Number	EMR Manufacturer Serial Number	Char	30
MER Identifier	Master Equipment Identification (Example, Ship ID) <i>Note:</i> MER identifier is null when the equipment in question is not installed on a ship's structure.	Char	14
Description	Description of Equipment	Char	40
Description French	French Description of Equipment	Char	40
Object Type	Type of EMR/Technical Object	Char	10
Location	Key for EMR Location within the Maintenance Plant	Char	10
Catalog Profile	Key of Reporting Schema (FLOC and MER should be the same)	Char	9
Structure Element Indicator	PM Assembly Indicator – Y or N value	Char	1
Parent FLOC Identifier	A unique identifier of a Functional Location of the containing external system	Char	30
Parent EMR MPN	Manufacturer Part Number of the next higher-level equipment <i>Note:</i> Canada-supplied parts may have an MPN up to 34 characters in length	Char	34

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Name	Definition	Type	Length
	ISS Contractor-supplied parts must have an MPN of 31 characters or less.		
Parent EMR CAGE	CAGE code number that uniquely identifies the next higher-level equipment.	Char	5
Parent EMR Serial Number	Serial Number of the next higher-level piece of containing equipment	Char	30
Main Work Center	EMR Main Work Center	Char	8
BOM MPN	EMR Bill of Materials Manufacturer Part Number. Populated if the EMR is associated with a BOM.  <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
BOM CAGE	EMR Bill of Materials CAGE code. Populated if the EMR is associated with a BOM.	Char	5
BOM Assembly	EMR Bill of Materials PM Assembly Indicator	Char	3
ERN	EMR Equipment Registration Number	Char	8
ERN Location	EMR Equipment Registration Number Location	Char	3
Frame ID	EMR Frame Identification	Char	20
Compartment ID	EMR Compartment Identification	Char	5
Node ID	Node ID within the allowed structure	Char	60
Install Uninstall Indicator	For configuration changes of the W/S, indicates if data represents and install or uninstall. Install ("I") or Uninstall ("U")	Char	1
Install Uninstall Date	Date install or uninstall occurred	Date	8
Install Uninstall Work Order	Work Order under which install or uninstall occurred	Char	12
Original CAGE Code	Commercial And Government Entity (CAGE) code number that uniquely identifies the manufacturer of the part or product. Populated if the installed part has been in DND possession, and is now associated with another	Char	5

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Name	Definition	Type	Length
	manufacturer.		
Original MPN	<p>Manufacturer Part Number for the Equipment. Populated if the installed part has been in DND possession, has been reconditioned and is now assigned a new part number.</p> <p><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.</p>	Char	34
Original Serial No	<p>Manufacturer Serial Number for the Equipment. Populated if the installed part has been in DND possession, and has a new serial number. May occur if temporary serial number updated.</p>	Char	30

### 3.7 Business Entity Definition – MTL (N2.2.2.1.10)

Name	Definition	Type	Length
Request Authorization Key	Unique key that was used for the specific request for Master Data from ISSC	Char	10
Action	Identification of Create/Change/Delete of data	Integer	1
External MTL ID	Unique MTL Identifier as defined by the ISS Contractor	Char	40
Task List Type	Task List functionality classification	Char	1
Description	Task List Description	Char	40
Long Text	Task List additional text	Char	2000
Maintenance Strategy	Identification of Maintenance Strategy/Cycle Set	Char	6
Assembly MPN	<p>Assembly/Construction Type MPN for Task List; Material BOM</p> <p><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.</p>	Char	34

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Name	Definition	Type	Length
Assembly CAGE	Assembly/Construction Type CAGE for Task List; Material BOM	Char	5
Class	Task List Class Name	Char	18
Characteristic	Task List Class Characteristic Name	Char	30
Characteristic Value	Task List Class Characteristic Value	Char	30
Operation Number	Task List Operation/Activity Number. Sequence of the operation within the task list.	Char	4
External Operation ID	ISS Contractor-defined operation identifier	Char	65
Sub-Operation Number	Task List Sub-Operation Number	Char	4
Operation Description	Task List Operation Short Description	Char	40
Operation Long Text	Task List Operation Long Description	Char	2000
Operation Standard Text Key	Task List Operation Standard Text Key	Char	7
Operation Work Center	Operation Work Center	Char	8
Operation Capacity	Number of persons required for this operation	Integer	3
Operation Duration	Duration of the operation	Float	4, 1
Operation Duration UOM	Unit of measure for the duration	Char	3
Operation Work	Amount of work to perform the operation	Float	6, 1
Operation Work UOM	Unit for the amount of work	Char	3
Operation Calculation Key	Key to determine how the duration, capacity and work are calculated	Char	1
Operation Basic Date	Operation Basic Date	Date	8
Operation Amended Date	Operation Amended Date	Date	8
Operation Package 1	Indicates if the operation is performed in the 1 <sup>st</sup> package of the maintenance strategy	Char	2
Operation Package 2	Indicates if the operation is performed in the 2 <sup>st</sup> package of the maintenance strategy	Char	2
Operation Package 3	Indicates if the operation is performed in the 3 <sup>st</sup> package of the maintenance strategy	Char	2
Operation Package 4	Indicates if the operation is performed in the 4 <sup>th</sup> package of the maintenance strategy	Char	2

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Name	Definition	Type	Length
Operation Package 5	Indicates if the operation is performed in the 5 <sup>th</sup> package of the maintenance strategy	Char	2
Operation Package 6	Indicates if the operation is performed in the 6 <sup>th</sup> package of the maintenance strategy	Char	2
Operation Package 7	Indicates if the operation is performed in the 7 <sup>th</sup> package of the maintenance strategy	Char	2
Operation Package 8	Indicates if the operation is performed in the 8 <sup>th</sup> package of the maintenance strategy	Char	2
Operation Package 9	Indicates if the operation is performed in the 9 <sup>th</sup> package of the maintenance strategy	Char	2
Operation Package 10	Indicates if the operation is performed in the 10 <sup>th</sup> package of the maintenance strategy	Char	2
Operation Package 11	Indicates if the operation is performed in the 11 <sup>th</sup> package of the maintenance strategy	Char	2
Operation Package 12	Indicates if the operation is performed in the 12 <sup>th</sup> package of the maintenance strategy	Char	2
Operation Package 13	Indicates if the operation is performed in the 13 <sup>th</sup> package of the maintenance strategy	Char	2
Operation Package 14	Indicates if the operation is performed in the 14 <sup>th</sup> package of the maintenance strategy	Char	2
Operation Package 15	Indicates if the operation is performed in the 15 <sup>th</sup> package of the maintenance strategy	Char	2
Operation Package 16	Indicates if the operation is performed in the 16 <sup>th</sup> package of the maintenance strategy	Char	2
Operation Package 17	Indicates if the operation is performed in the 17 <sup>th</sup> package of the maintenance strategy	Char	2
Operation Package 18	Indicates if the operation is performed in the 18 <sup>th</sup> package of the maintenance strategy	Char	2
Operation Package 19	Indicates if the operation is performed in the 19 <sup>th</sup> package of the maintenance strategy	Char	2
Operation Package 20	Indicates if the operation is performed in the 20 <sup>th</sup> package of the maintenance strategy	Char	2
Component Operation	Operation in which the component is used	Integer	4
Component MPN	Component Manufacturer Part Number	Char	34

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Name	Definition	Type	Length
	<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.		
Component CAGE	Component CAGE Code	Char	5
Component Quantity	Component Quantity	Float	10, 3
Component UOM	Component Quantity Unit of Measure	Char	3
PRT Operation	Operation in which the Production Resource Tool is used	Char	4
PRT MPN	PRT Manufacturer Part Number  <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
PRT CAGE	PRT CAGE Code	Char	5
PRT Quantity	PRT Quantity	Float	10, 3
PRT UOM	PRT Quantity Unit of Measure	Char	3
PRT Standard Text Key	PRT Standard Text Key	Char	7

### 3.8 Business Entity Definition – MP (N2.2.2.1.11)

Name	Definition	Type	Length
Request Authorization Key	Unique key that was used for the specific request for Master Data from ISSC	Char	10
Action	Identification of Create/Change/Delete of data	Integer	1
MP Name	Maintenance Plan Name and Unique Identifier	Char	40
Type	Maintenance Plan Type (Single Cycle = S, Multi Cycle = M or Strategy = T)	Char	1
Category	Categorizes the maintenance plans and controls	Char	2

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Name	Definition	Type	Length
	the allowed call object		
Strategy	Key identifier which defines the periodicity (Strategy Only)	Char	6
Late Shift Factor	When a call is completed late, the shift factor will delay the subsequent calls planned date, expressed as a percentage of the completion lag (Single Cycle Only)	Integer	3
Late Tolerance	When a call is completed late, the subsequent calls planned date will only be shifted if the completion date falls outside of the tolerance, where the tolerance is expressed as a percentage	Integer	3
Early Shift Factor	When a call is completed early, the shift factor will advance the subsequent calls planned date, expressed as a percentage of the completion lead (Single Cycle Only)	Integer	3
Early Tolerance	When a call is completed early, the subsequent calls planned date will only be shifted if the completion date falls outside of the tolerance, where the tolerance is expressed as a percentage (Single Cycle Only)	Integer	3
Operator	For multi-cycle plans, indicates whether an And or OR relationship exists between the cycles.	Char	3
Cycle Start Date	The date of when the current call starts.	Date	8
Completion Requirement	When set, the preceding call object must be complete prior to generating the next call object	Char	1
Cycle Length	Interval after which a task becomes due	Float	17
Cycle Unit of Measure	Cycle Unit of Measure	Char	3
Cycle Set Sequence	If the cycle lengths or maintenance items vary between calls, the cycle set sequence defines the order (Multi-Cycle Only)	Integer	2
Cycle Offset	Maintenance Cycle initial offset, when the cycle becomes first due	Float	17
Cycle Text	Maintenance Cycle short text	Char	26
Cycle Measurement Name	Measurement name	Char	30
Cycle Measurement	Measurement name Characteristic	Char	30

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Name	Definition	Type	Length
Name Description			
Cycle Measurement Point Position	Measurement Point Position	Char	20
Cycle Measurement Point Name	Measurement Point Characteristic	Char	30
Cycle Start Counter	The accumulated counter reading of when the current call starts.	Float	17
Maintenance Item Description	Maintenance Plan Item Description	Char	40
Maintenance Item FLOC	Maintenance Item Functional Location Identifier	Char	30
Maintenance Item EMR MPN	Manufacturer Part Number for Maintenance Item Equipment Master Record <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
Maintenance Item EMR CAGE	CAGE Code for Maintenance Item Equipment Master Record	Char	5
Maintenance Item EMR Serial Number	Manufacturer Serial Number for Maintenance Item Equipment Master Record	Char	30
Maintenance Item Activity Type	Identification of Maintenance Item Maintenance Activity Type	Char	3
Maintenance Item External MTL ID	Unique MTL Identifier	Char	40
Maintenance Item First Level	Indicates maintenance item is critical to the operation of the ship	Char	1
Maintenance Item Safety Critical	Indicates maintenance item is critical for safety reasons	Char	1
Maintenance Item Dock Dependant	Indicates the maintenance item is docking dependent	Char	1
Maintenance Item Design Authority	Indicates maintenance item cannot be deviate without Design Authority approval	Char	1

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**3.9 Business Entity Definition – BOM (N2.2.2.1.12)**

Name	Definition	Type	Length
Request Authorization Key	Unique key that was used for the specific request for Master Data from ISSC	Char	10
Action	Identification of Create/Change/Delete of data	Integer	1
MPN	Bill of Material Manufacturer Part Number <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	BOM CAGE Code	Char	5
Structure Element Indicator	Indicates if the Bill of Material is a PM Assembly	Char	1
Structure Element Indicator Description	Description of Structure Element MMR	Char	40
Item Number	Item number	Char	4
Item MPN	BOM Item Manufacturer Part Number <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
Item CAGE	BOM Item CAGE Code	Char	5
Item Quantity	Quantity of BOM Item Material	Float	10, 3
Item Structure Element Indicator	Indicates if the BOM Item is a PM Assembly	Char	1
Item Structure Element Indicator Description	Description of Item Structure Element MMR	Char	40
Sort String	Field for sorting BOM items. Not required for all fleets.	Char	10
Item Text	Additional description of item	Char	40
Line of Repair	Not required for all fleets	Char	3

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**3.10 Business Entity Definition – MPOINT (N2.2.2.1.13)**

Name	Definition	Type	Length
Request Authorization Key	Unique key that was used for the specific request for Master Data from ISSC	Char	10
Action	Identification of Create/Change/Delete of data	Integer	1
FLOC Identifier	Functional Location identifier against which the Measurement Point is associated.	Char	30
Manufacturer Part Number (MPN)	Designated Manufacturer's Part Number (MPN) against which the Measurement Point is associated. <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 against which the Measurement Point is associated.	Char	5
Serial Number	Manufacturer Serial Number against which the Measurement Point is associated.	Char	30
Measurement Position	An identifier used to describe the position of the measuring point in relation to the technical object.	Char	20
Measurement Name	Measurement Point Name. Short form or code identifying the measurement	Char	30
Measurement Position Description	Measurement Point Description	Char	40
Category	Measurement Point Category	Char	1
Counter Indicator	Identification if Measurement Point is counter based (X = Counter Based)	Char	1
Code Group	Valuation Codes for Measurement Readings	Char	8
Max Counter Reading	Max Reading for Measurement Point	Float	13,2
Annual Estimate	Estimated counters	Float	13,2
Short Text	Additional Maintenance Plan information	Char	40

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Name	Definition	Type	Length
Parent FLOC ID	Functional location from which measurement documents are transferred	Char	30
Parent Manufacturer Part Number (MPN)	Manufacturer's Part Number of the EMR from which measurement documents are transferred <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
Parent CAGE Code	Commercial And Government Entity (CAGE) code number of the EMR from which measurement documents are transferred	Char	5
Parent Serial Number	Manufacturer Serial Number of the EMR from which measurement documents are transferred	Char	30
Parent Measurement Position	Position of the measurement point from which measurement documents are transferred	Char	20
Parent Measurement Name	Characteristic of the measurement point from which measurement documents are transferred	Char	30

### 3.11 Business Entity Definition – MDOC (N2.2.2.1.14)

Name	Definition	Type	Length
Request Authorization Key	Unique key that was used for the specific request for Master Data from ISSC	Char	10
Action	Identification of Create/Change/Delete of data	Integer	1
CAGE Code	Commercial And Government Entity (CAGE) code number that uniquely identifies the manufacturer of the part or product, sometimes produced under government contract against which the Measurement Document is associated.	Char	5
MPN	Manufacturer Part Number for the Equipment against which the Measurement Document is associated. <i>Note:</i> Canada-supplied parts may have an MPN up to 34 characters in length.	Char	34

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Name	Definition	Type	Length
	ISS Contractor-supplied parts must have an MPN of 31 characters or less.		
Serial Number	Manufacturer Serial Number for the Equipment against which the Measurement Document is associated.	Char	30
External FLOC Identifier	A unique Identifier for the FLOC relative to its external system against which the Measurement Document is associated.	Char	30
Measurement Name	Short form or code identifying the measurement. (Example, OPERATING_HOURS)	Char	30
Measurement Name Description	The description of the Measurement Name. (Example, Engine Diesel PDE)	Char	30
Measurement Position	A value that indirectly represents the physical or logical place at which a measurement is taken. Required to distinguish between the same EMR containing multiples of the same Measurement Name	Char	20
Measurement Position Description	The description of the Measurement Position.	Char	40
Measurement Date/Time	The date and time the measurement is taken for the equipment/FLOC. This timestamp does not have to be the same as the Record Timestamp since a user can back date the actual time the measurement reading was taken when creating a measurement in CMMS.	Datetime	
Current Measurement reading	This field will contain either counter or non-counter readings. When a counter reading, this can be either: <ol style="list-style-type: none"> <li>1. The user-entered value</li> <li>2. A system-determined value if the user entered a difference value (calculated by adding the difference reading value to the previous Current Measurement reading.)</li> </ol> For a counter, this (generally) increments from one Measurement Document to another but it also could be reset to a new value after, say, an R&O. i.e., when a Counter Replacement is required.	Float	16

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Name	Definition	Type	Length
Accumulated Measurement Reading	Applies only to counters. The total accumulated reading value of the counter since its inception; when a counter replacement (see Current Measurement Reading) occurs, the Accumulated Measurement Reading is not updated; subsequent updates to the Current Measurement reading will then start incrementing the Accumulated Measurement Reading value.  Unless a counter replacement has been performed or the Accumulated Measurement Reading has been set externally this field contains the same value as the Current Measurement Reading.	Float	16
Measurement document Short text	This entity may provide additional information.	Char	40
Measurement Reading Code Group	Identifier of a catalogue name under which qualitative values can be specified. (Example, CodeGroup = 'ENVRNMNT')	Char	8
Measurement Reading Code Group Description	Description associated with the Code Group value. (Example, 'environment the ship operated in')	Char	40
Measurement Reading Code	The value chosen by the user for the Measurement Reading ID (Example, Measurement Reading Value = 0001)	Char	4
Measurement Reading Code Description	The description of the Measurement Reading Value (Example, Measurement Reading Value Description = "ARCTIC")	Char	40
Accumulated Measurement Reading Reset	Generally used to enter an initial value for a counter and the basis of which all further counter readings or counter reading differences are to be entered. Can also be used to correct an incorrect value. Value of "Y", when set, otherwise value of 'N'. Applies only to counters.	Char	1
MER Identifier	A unique identifier of the platform for which this Measurement Document applies.	Char	14
Notification Identifier	A unique identifier of a maintenance notification in the CMMS from which measurements were created.	Char	12

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Name	Definition	Type	Length
Long Text	Long text that can be captured against measurement document	Char	2GB

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#### 4. Issues and Exceptions

None identified.

#### 5. Business Process Flows

Refer to Navy CMMS Data Initialization Business Process document, [Ref. 1] for diagrams that capture business process flow supported by this BUC.

#### 6. Definitions, Acronyms, Abbreviations

Term	Description
BOM	Bill of Materials
BUC	Business Use Case
CAGE	Commercial And Government Entity
CMMS	Canada Maintenance Management System
CSS	Canada Supply System
EDE	Electronic Data Exchange
EIE	Electronic Information Exchange
EMR	Equipment Master Record
ERN	Equipment Registration Number
FFFC	Fit-Form-Function-Class
FID	Functional Identifier
FLOC	Functional Location
ISS	In Service Support
MDOC	Measurement Document
MER	Master Equipment Record
MMR	Material Master Record
MP	Maintenance Plan
MPL	Master Parts List
MPN	Manufacturer's Part Number
MPOINT	Measurement Point
MTL	Maintenance Task List
PBC	Performance Based Contracting
QPE	Quantity Per Equipment
SCMS	Supply Chain Management System
UOM	Unit of Measure
WO	Work Order

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## 7. Document Control

### 7.1 Document History

Version Number	Description	Date
1.0	Ready for Navy RFP	14 September 2015
1.1	Incorporates comments from review by Navy	28 September 2015

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