## Oracle Utilities SGG V2.0.0 and MDM V2.0.1 Integrations

Utility Reference Model 5.6.3.1a SGG-MDM.Manage On-Demand Read (L+G)

May 2013



Oracle Utilities SGG V2.0.0 to MDM V2.0.1 Integration Utility Reference Model 5.6.3.1a

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# Chapter 1 Overview

This chapter provides a brief description of the SGG-MDM.Manage On-Demand Read (L+G) business process and associated process diagrams. This includes:

**Brief Description** 

#### **Brief Description**

**Business Process:** 5.6.3.1a SGG-MDM.Manage On-Demand Read (L+G)

Process Type: Process

Parent Process: 5.6.3 SGG-MDM.Manage Devices

Sibling Processes: 5.6.3.4a SGG-MDM.Manage Device Remote Connect (L+G), 5.6.3.5a SGG-

MDM.Manage Device Remote Disconnect (L+G)

This process gets initiated when a 3rd Party Application (E.g. Customer Care and Billing Application), makes a request for an On-demand Read or a MDM or SGG Authorized User manually requests for an On-demand Read within SGG system. SGG initiates On-demand Read by communicating with respective L+G Head-End System that in turn communicates with the Smart Meter device, collects read, and sends it back to SGG.

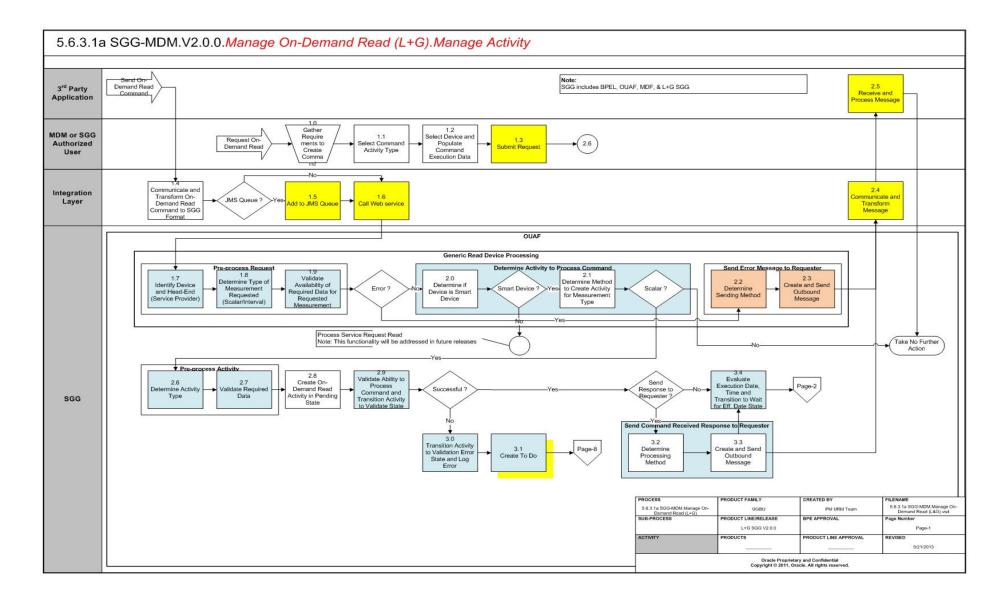
## Chapter 2

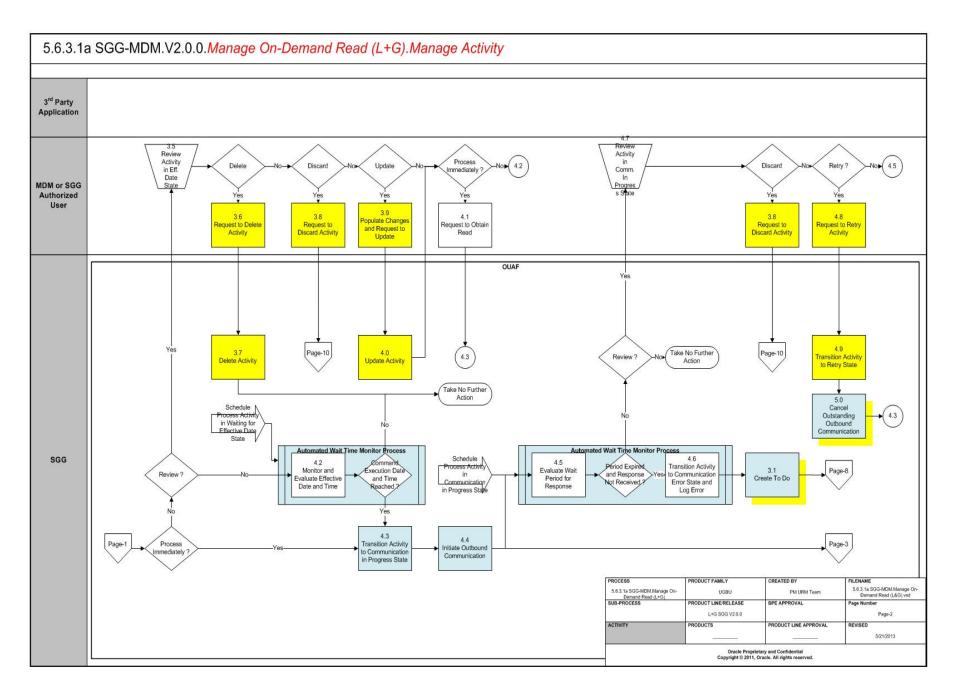
## **Detailed Business Process Model Description**

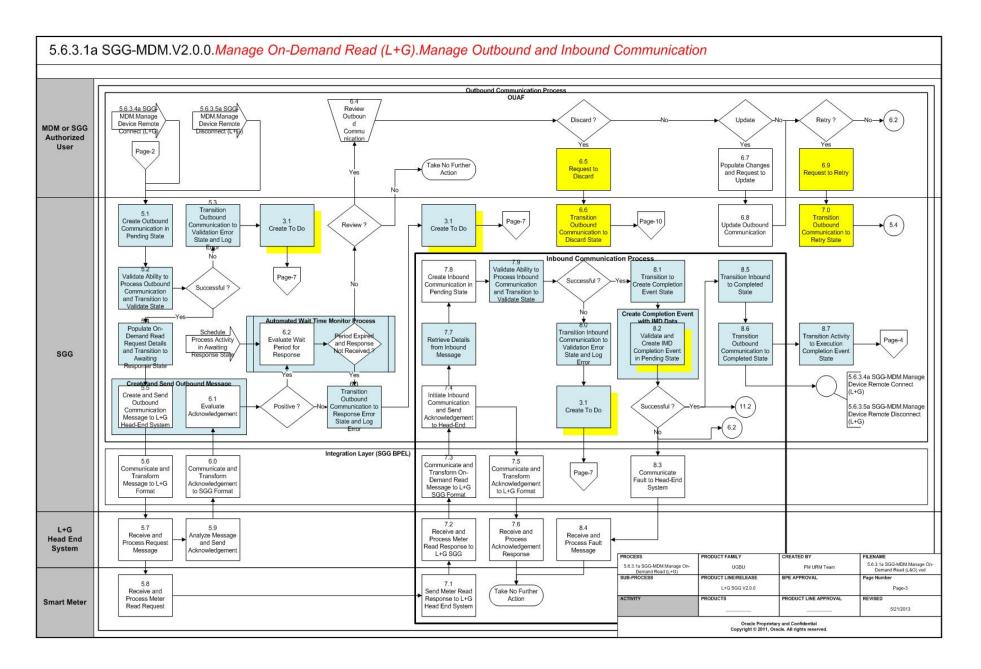
This chapter provides a detailed description of the SGG-MDM.Manage On-Demand Read (L+G) business process. This includes:

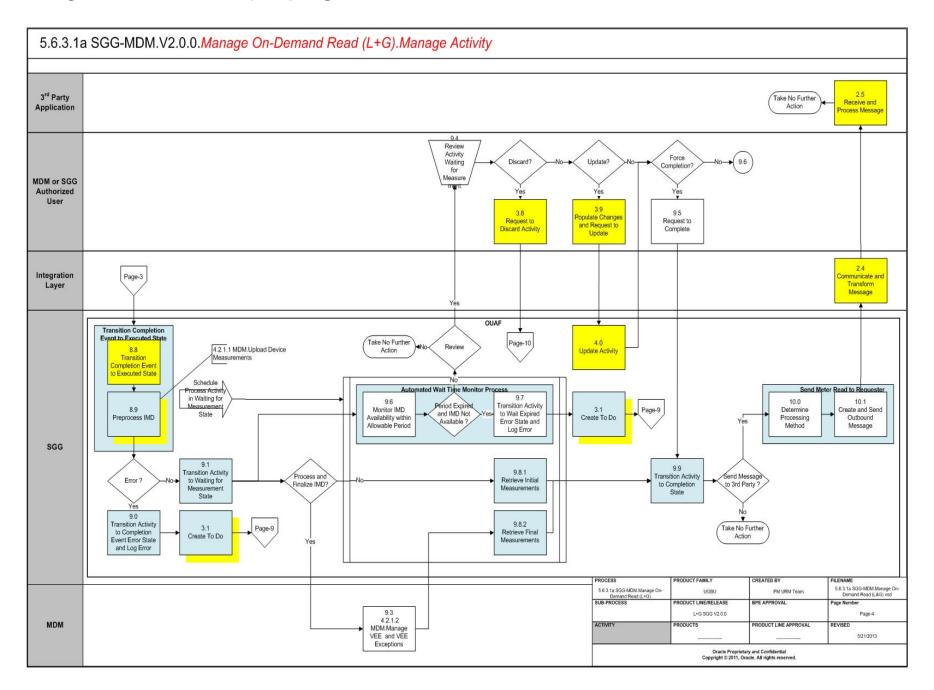
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  - D1-CompletionEvent

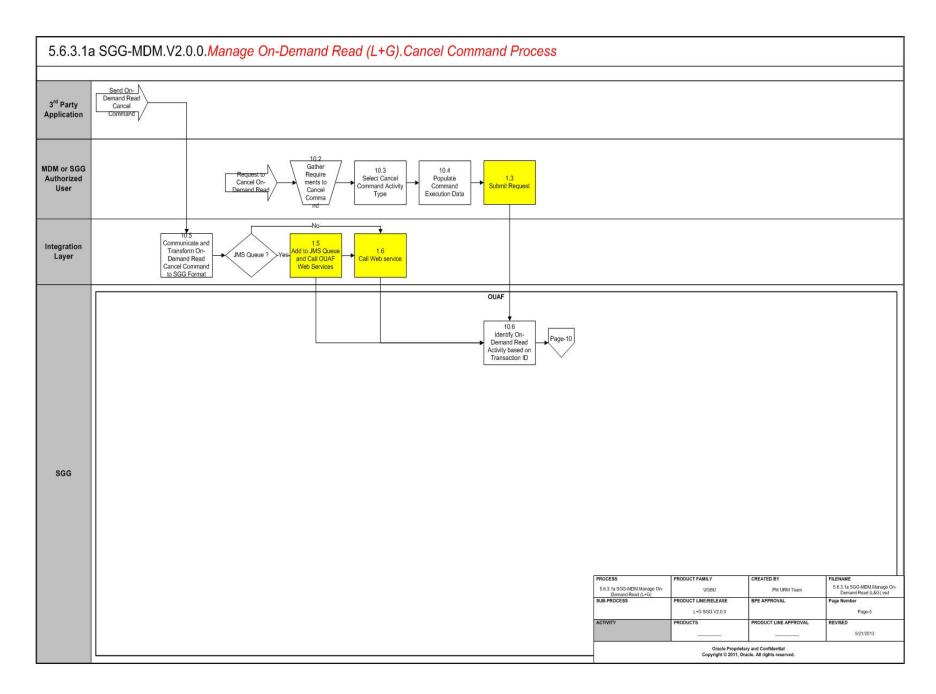
#### **Business Process Diagrams**

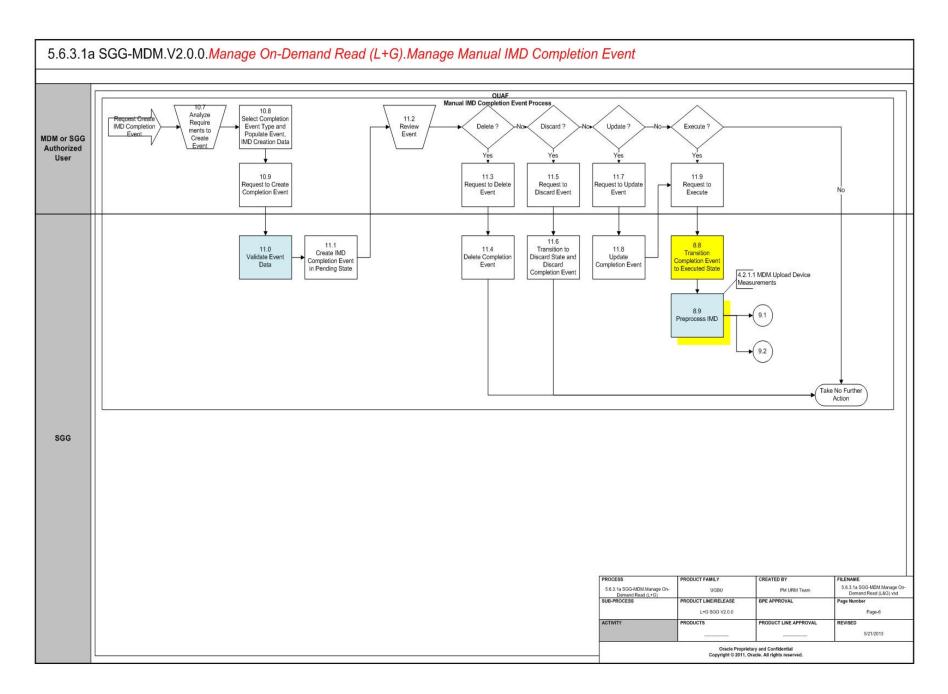


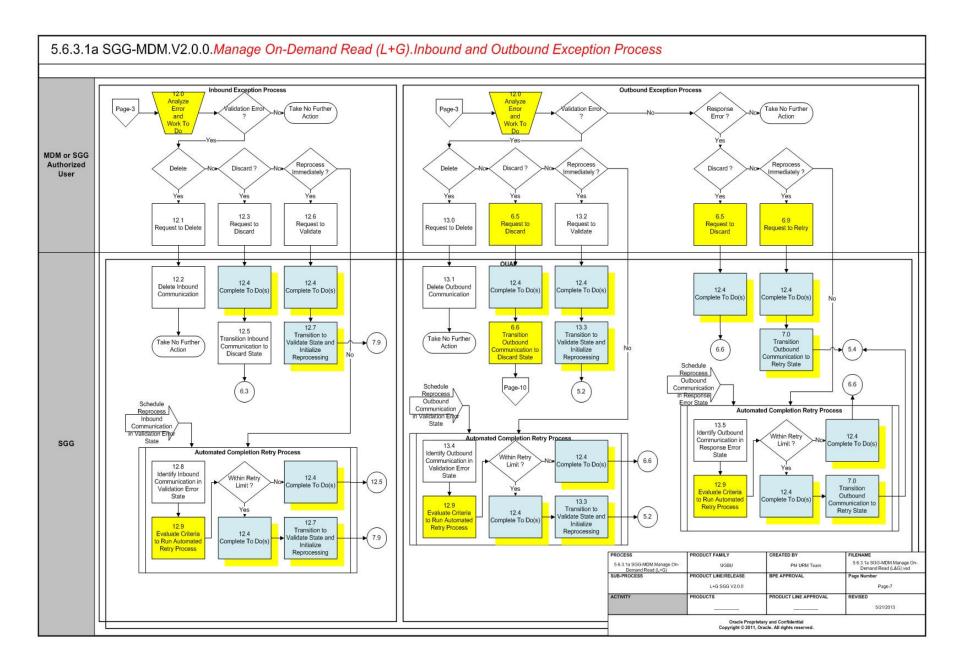


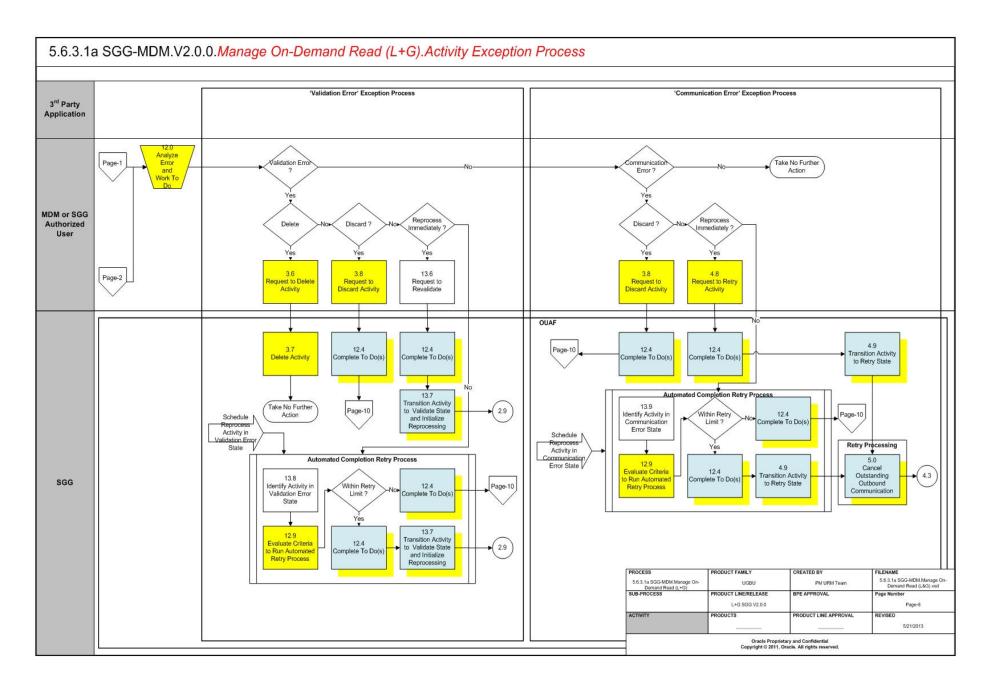


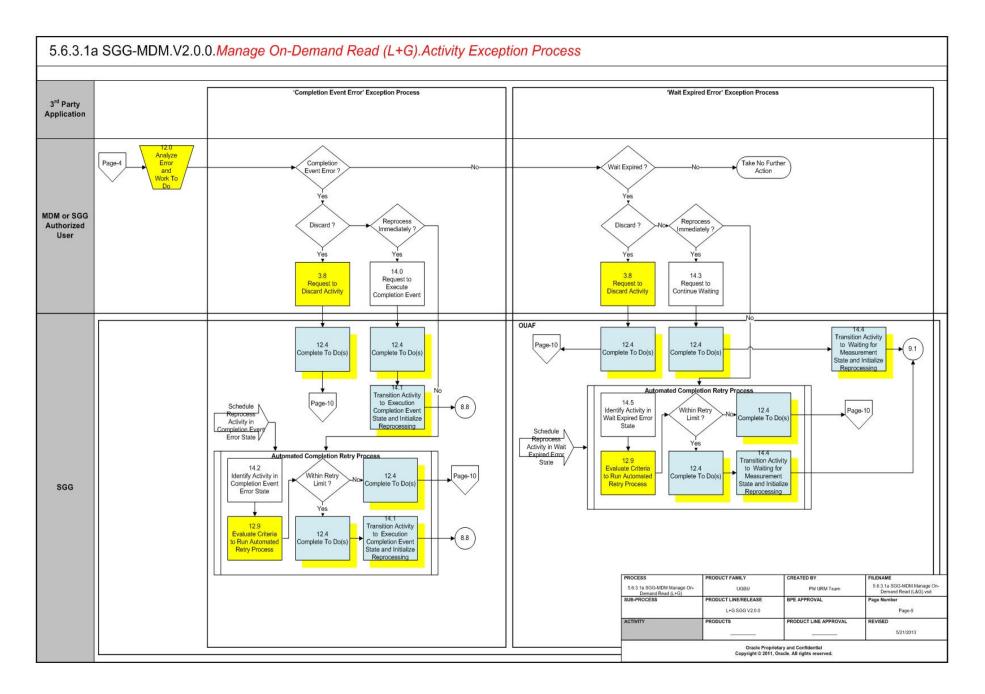


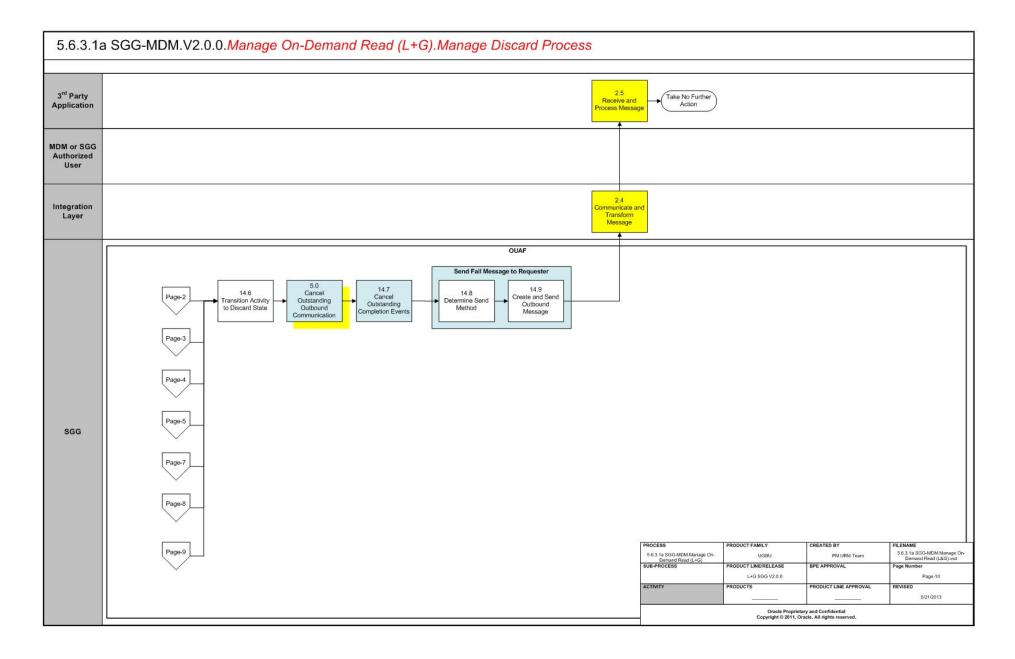












#### SGG-MDM.Manage On-Demand Read (L+G) Description

This section includes detailed descriptions of the steps involved in the SGG-MDM.Manage On-Demand Read (L+G) business process, including:

- 1.0 Gather Requirements to Create Command
- 1.1 Select Command Activity Type
- 1.2 Select Device and Populate Command Execution Data
- 1.3 Submit Request
- 1.4 Communicate and Transform On-Demand Read Command to SGG Format
- 1.5 Add to JMS Queue
- 1.6 Call Web service
- 1.7 Identify Device and Head-End (Service Provider)
- 1.8 Determine Type of Measurement Requested (Scalar/Interval)
- 1.9 Validate Availability of Required Data for Requested Measurement
- 2.0 Determine if Device is Smart Device
- 2.1 Determine Method to Create Activity for Measurement Type
- 2.2 Determine Sending Method
- 2.3 Create and Send Outbound Message
- 2.4 Communicate and Transform Message
- 2.5 Receive and Process Message
- 2.6 Determine Activity Type
- 2.7 Validate Required Data
- 2.8 Create On-Demand Read Activity in Pending State
- 2.9 Validate Ability to Process Command and Transition Activity to Validate State
- 3.0 Transition Activity to Validation Error State and Log Error
- 3.1 Create To Do
- 3.2 Determine Processing Method
- 3.3 Create and Send Outbound Message
- 3.4 Evaluate Execution Date, Time and Transition to Wait for Eff. Date State
- 3.5 Review Activity in Eff. Date State
- 3.6 Request to Delete Activity
- 3.7 Delete Activity
- 3.8 Request to Discard Activity
- 3.9 Populate Changes and Request to Update
- 4.0 Update Activity
- 4.1 Request to Obtain Read
- 4.2 Monitor and Evaluate Effective Date and Time
- 4.3 Transition Activity to Communication in Progress State
- 4.4 Initiate Outbound Communication

- 4.5 Evaluate Wait Period for Response
- 4.6 Transition Activity to Communication Error State and Log Error
- 4.7 Review Activity in Comm. In Progress State
- 4.8 Request to Retry Activity
- 4.9 Transition Activity to Retry State
- 5.0 Cancel Outstanding Outbound Communication
- 5.1 Create Outbound Communication in Pending State
- 5.2 Validate Ability to Process Outbound Communication and Transition to Validate State
- 5.3 Transition Outbound Communication to Validation Error State and Log Error
- 5.4 Populate On-Demand Read Request Details and Transition to Awaiting Response State
- 5.5 Create and Send Outbound Communication Message to L+G Head-End System
- 5.6 Communicate and Transform Message to L+G Format
- 5.7 Receive and Process Request Message
- 5.8 Receive and Process Meter Read Request
- 5.9 Analyze Message and Send Acknowledgement
- 6.0 Communicate and Transform Acknowledgement to SGG Format
- 6.1 Evaluate Acknowledgement
- 6.2 Evaluate Wait Period for Response
- 6.3 Transition Outbound Communication to Response Error State and Log Error
- 6.4 Review Outbound Communication
- 6.5 Request to Discard
- 6.6 Transition Outbound Communication to Discard State
- 6.7 Populate Changes and Request to Update
- 6.8 Update Outbound Communication
- 6.9 Request to Retry
- 7.0 Transition Outbound Communication to Retry State
- 7.1 Send Meter Read Response to L+G Head End System
- 7.2 Receive and Process Meter Read Response to L+G SGG
- 7.3 Communicate and Transform On-Demand Read Message to L+G SGG Format
- 7.4 Initiate Inbound Communication and Send Acknowledgement to Head-End
- 7.5 Communicate and Transform Acknowledgement to L+G Format
- 7.6 Receive and Process Acknowledgement Response
- 7.7 Retrieve Details from Inbound Message
- 7.8 Create Inbound Communication in Pending State
- 7.9 Validate Ability to Process Inbound Communication and Transition to Validate State
- 8.0 Transition Inbound Communication to Validation Error State and Log Error

- 8.1 Transition to Create Completion Event State
- 8.2 Validate and Create IMD Completion Event in Pending State
- 8.3 Communicate Fault to Head-End System
- 8.4 Receive and Process Fault Message
- 8.5 Transition Inbound to Completed State
- 8.6 Transition Outbound Communication to Completed State
- 8.7 Transition Activity to Execution Completion Event State
- 8.8 Transition Completion Event to Executed State
- 8.9 Preprocess IMD
- 9.0 Transition Activity to Completion Event Error State and Log Error
- 9.1 Transition Activity to Waiting for Measurement State
- 9.3 4.2.1.2 MDM.Manage VEE and VEE Exceptions
- 9.4 Review Activity Waiting for Measurement
- 9.5 Request to Complete
- 9.6 Monitor IMD Availability within Allowable Period
- 9.7 Transition Activity to Wait Expired Error State and Log Error
- 9.8.1 Retrieve Initial Measurements
- 9.8.2 Retrieve Final Measurements
- 9.9 Transition Activity to Completion State
- 10.1 Create and Send Outbound Message
- 10.2 Gather Requirements to Cancel Command
- 10.3 Select Cancel Command Activity Type
- 10.4 Populate Command Execution Data
- 10.5 Communicate and Transform On-Demand Read Cancel Command to SGG Format
- 10.6 Identify On-Demand Read Activity based on Transaction ID
- 10.7 Analyze Requirements to Create Event
- 10.8 Select Completion Event Type and Populate Event, IMD Creation Data
- 10.9 Request to Create Completion Event
- 11.0 Validate Event Data
- 11.1 Create IMD Completion Event in Pending State
- 11.2 Review Event
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- 11.7 Request to Update Event
- 11.8 Update Completion Event

- 11.9 Request to Execute
- 12.0 Analyze Error and Work To Do
- 12.1 Request to Delete
- 12.2 Delete Inbound Communication
- 12.3 Request to Discard
- 12.4 Complete To Do(s)
- 12.5 Transition Inbound Communication to Discard State
- 12.6 Request to Validate
- 12.7 Transition to Validate State and Initialize Reprocessing
- 12.8 Identify Inbound Communication in Validation Error State
- 12.9 Evaluate Criteria to Run Automated Retry Process
- 13.0 Request to Delete
- 13.1 Delete Outbound Communication
- 13.2 Request to Validate
- 13.3 Transition to Validate State and Initialize Reprocessing
- 13.4 Identify Outbound Communication in Validation Error State
- 13.5 Identify Outbound Communication in Response Error State
- 13.6 Request to Revalidate
- 13.7 Transition Activity to Validate State and Initialize Reprocessing
- 13.8 Identify Activity in Validation Error State
- 13.9 Identify Activity in Communication Error State
- 14.0 Request to Execute Completion Event
- 14.1 Transition Activity to Execution Completion Event State and Initialize Reprocessing
- 14.2 Identify Activity in Completion Event Error State
- 14.3 Request to Continue Waiting
- 14.4 Transition Activity to Waiting for Measurement State and Initialize Reprocessing
- 14.5 Identify Activity in Wait Expired Error State
- 14.6 Transition Activity to Discard State
- 14.7 Cancel Outstanding Completion Events
- 14.8 Determine Send Method
- 14.9 Create and Send Outbound Message

#### 1.0 Gather Requirements to Create Command

See Manage On-Demand Read (L+G) Page 1 on page 2-2 for the business process diagram associated with this activity.

Actor/Role: MDM or SGG Authorized User

**Description:** MDM or SGG Authorized User analyzes requirements and gathers information required to create On Demand read command.

#### 1.1 Select Command Activity Type

See Manage On-Demand Read (L+G) Page 1 on page 2-2 for the business process diagram associated with this activity.

Actor/Role: MDM or SGG Authorized User

**Description:** MDM or SGG Authorized User selects Activity Type to create an On-demand Read request.

#### **Entities to Configure**

Activity Type

#### 1.2 Select Device and Populate Command Execution Data

See Manage On-Demand Read (L+G) Page 1 on page 2-2 for the business process diagram associated with this activity.

Actor/Role: MDM or SGG Authorized User

**Description:** MDM or SGG Authorized User selects the device and populates required data such as request effective and expiration dates, priority. Authorized User also indicates if command creation is optional and could be substituted by existing read that matches all the business requirements.

**Note:** The logic of using existing measurements is applicable only for devices with interval Measuring Components.

#### 1.3 Submit Request

See Manage On-Demand Read (L+G) Page 1 on page 2-2 for the business process diagram associated with this activity.

Actor/Role: MDM or SGG Authorized User

**Description:** MDM or SGG Authorized User submits request using On-Demand Read Manual Request screen.

#### **Business Objects**

D1-OnDemandReadAbstract

D1-OnDemandReadScalar

#### 1.4 Communicate and Transform On-Demand Read Command to SGG Format

See Manage On-Demand Read (L+G) Page 1 on page 2-2 for the business process diagram associated with this activity.

Actor/Role: Integration Layer

**Description:** Integration Layer facilitates the communication between the 3rd Party Application and the SGG Application. It receives the On-demand Read request, transforms, and converts the request into format compatible with SGG Application.

#### 1.5 Add to JMS Queue

See Manage On-Demand Read (L+G) Page 1 on page 2-2 for the business process diagram associated with this activity.

Actor/Role: Integration Layer

**Description:** Integration Layer of SGG adds the On-demand Read request to JMS queue.

#### 1.6 Call Web service

See Manage On-Demand Read (L+G) Page 1 on page 2-2 for the business process diagram associated with this activity.

Actor/Role: Integration Layer

Description: Integration Layer of SGG calls web services to process further the On-demand

Read request.

#### 1.7 Identify Device and Head-End (Service Provider)

See Manage On-Demand Read (L+G) Page 1 on page 2-2 for the business process diagram associated with this activity.

Group: Generic Read Device Processing

**Group:** Pre-process Request

Actor/Role: SGG

**Description:** SGG initiates pre-processing of the On-demand Read request that came from 3rd Party Application. It attempts to read the request message and determines the Device for which the read request is made, and the Head-End system that communicates with the device.

Entities to Configure
Device
Head -End System (Service Provider)

Business Objects	Available Algorithms
D1-GenericReadDevice	D1-DDR (Determine Device and Recipient)

#### 1.8 Determine Type of Measurement Requested (Scalar/Interval)

See Manage On-Demand Read (L+G) Page 1 on page 2-2 for the business process diagram associated with this activity.

Group: Generic Read Device Processing

Group: Pre-process Request

Actor/Role: SGG

**Description:** SGG determines the type of measurement for On-demand Read.

Entities to Configure	
Measuring Component(s)	
Measuring Component Types	

Business Objects	Available Algorithms
D1-GenericReadDevice	D1-DMT (Default Measurement Type)

#### 1.9 Validate Availability of Required Data for Requested Measurement

See Manage On-Demand Read (L+G) Page 1 on page 2-2 for the business process diagram associated with this activity.

**Group:** Generic Read Device Processing

Group: Pre-process Request

Actor/Role: SGG

**Description:** The SGG validates the availability of required data for processing the On-demand Read request (e.g., Interval Start Date/Time and Interval End Date/Time are available for an Interval Read request).

Business Objects	Available Algorithms
D1-GenericReadDevice	D1-VSEDTMT (Validate Interval Start Date Time and Interval End Date Time)

#### 2.0 Determine if Device is Smart Device

See Manage On-Demand Read (L+G) Page 1 on page 2-2 for the business process diagram associated with this activity.

Group: Generic Read Device Processing

Group: Determine Activity to Process Command

Actor/Role: SGG

**Description:** The Application determines whether the request for On-demand read is for Smart Device or not.

**Note:** Currently Application processes requests for Smart Devices only. Service Requests functionality will be included in later releases.

Business Objects	Available Algorithms
D1-GenericReadDevice	D1-DRDTBO (Determine Read Device Transaction BO)

#### 2.1 Determine Method to Create Activity for Measurement Type

See Manage On-Demand Read (L+G) Page 1 on page 2-2 for the business process diagram associated with this activity.

**Group:** Generic Read Device Processing

Group: Determine Activity to Process Command

Actor/Role: SGG

**Description:** SGG determines the method to create Activity based on the measurement type

(Interval or Scalar).

Business Objects	Available Algorithms
D1-GenericReadDevice	D1-DRDTBO (Determine Read Device Transaction BO)

#### 2.2 Determine Sending Method

See Manage On-Demand Read (L+G) Page 1 on page 2-2 for the business process diagram associated with this activity.

**Group:** Generic Read Device Processing **Group:** Send Error Message to Requester

Actor/Role: SGG

**Description:** SGG determines the method to send the error message to 3rd Party Application.

**Note:** Sending mechanism could be different and depends on Application landscape. Currently it is determined based on customer requirements.

#### 2.3 Create and Send Outbound Message

See Manage On-Demand Read (L+G) Page 1 on page 2-2 for the business process diagram associated with this activity.

**Group:** Generic Read Device Processing **Group:** Send Error Message to Requester

Actor/Role: SGG

**Description:** SGG creates the outbound message to be sent to the 3rd Party Application on error, and sends it based on the send method.

#### 2.4 Communicate and Transform Message

See Manage On-Demand Read (L+G) Page 1 on page 2-2 for the business process diagram associated with this activity.

Actor/Role: SGG

**Description:** Integration Layer receives the outbound message from SGG, transforms, and converts it into format compatible with 3rd Party Application.

#### 2.5 Receive and Process Message

See Manage On-Demand Read (L+G) Page 1 on page 2-2 for the business process diagram associated with this activity.

Actor/Role: 3rd Party Application

Description: 3rd Party Application receives message from SGG and processes it.

#### 2.6 Determine Activity Type

See Manage On-Demand Read (L+G) Page 1 on page 2-2 for the business process diagram associated with this activity.

**Group:** Pre-process Activity

Actor/Role: SGG

**Description:** SGG identifies the Activity Type to be assigned to the Activity to be created.

**Note:** Typically system has different Activity types configured to reflect different business scenarios for scalar and interval, however L+G supports scalar only so system will select here only scalar Activity type.

Entities to Configure	
Activity Type	
To Do Type	
To Do Role	

Business Objects	Available Algorithms
D1-OnDemandReadAbstract D1-OnDemandReadScalar	D1-DETACTTYP (Determine Activity Type)
D1- OnDemandReadScalarType	

#### 2.7 Validate Required Data

See Manage On-Demand Read (L+G) Page 1 on page 2-2 for the business process diagram associated with this activity.

**Group:** Pre-process Activity

Actor/Role: SGG

**Description:** SGG validates the availability and correctness of required information. Usually system checks Requester information, Device information, Effective Date/Time and Expiration Date/Time etc.

Entities to Configure	
Device	
Edge Application Details	

Business Objects	Available Algorithms
D1-OnDemandReadAbstract	D1-GINPVAL (Common Input
D1-OnDemandReadScalar	Validation)
	D1-VALMDEST (Validate
	Measurement Destination)
	D1-VALMREQO (Validate
	Measurement Requested)

#### 2.8 Create On-Demand Read Activity in Pending State

See Manage On-Demand Read (L+G) Page 1 on page 2-2 for the business process diagram associated with this activity.

Actor/Role: SGG

Description: SGG creates an On-demand Read Activity in 'Pending' state.

Business Objects	
D1-OnDemandReadAbstract	
D1-OnDemandReadScalar	

## 2.9 Validate Ability to Process Command and Transition Activity to Validate State

See Manage On-Demand Read (L+G) Page 1 on page 2-2 for the business process diagram associated with this activity.

Actor/Role: SGG

**Description:** SGG validates ability to process On-demand Read request. Typically system validates for Device and its Measuring Components, ability of the Head-End system to support On-demand Read command, etc.

Entities to Configure	
Activity Type	
Measuring Component	
Processing Method for On-demand Read	

Business Objects	Available Algorithms
D1-OnDemandReadAbstract	D1-GINPVAL (Common Input
D1-OnDemandReadScalar	Validation)
	D1-VALMDEST (Validate
	Measurement Destination)
	D1-VALMREQO (Validate
	Measurement Requested)

#### 3.0 Transition Activity to Validation Error State and Log Error

See Manage On-Demand Read (L+G) Page 1 on page 2-2 for the business process diagram associated with this activity.

Actor/Role: SGG

**Description:** If any error occurs during validations, SGG transitions the Activity to 'Validation Error' state and logs an error.

Business Objects
D1-OnDemandReadAbstract D1-OnDemandReadScalar

#### 3.1 Create To Do

See Manage On-Demand Read (L+G) Page 1 on page 2-2 for the business process diagram associated with this activity.

Actor/Role: SGG

**Description:** Once an error is logged, SGG creates a 'To Do' entry for the Authorized User.

Entities to Configure	
Activity Type	
Measuring Component	
Processing Method for On-demand Read	

Business Objects	Available Algorithms
D1-OnDemandReadAbstract	D1-CTDEBOE (Create To Do
D1-OnDemandReadScalar	Entry for BO in Error)

#### 3.2 Determine Processing Method

See Manage On-Demand Read (L+G) Page 1 on page 2-2 for the business process diagram associated with this activity.

Group: Send Command Received Response to Requester

Actor/Role: SGG

Description: SGG determines the method of sending Acknowledgement to the 3rd Party

Application.

Entities to Configure	
Processing Role	

Business Objects	Available Algorithms
D1-OnDemandReadAbstract	D1-RRER (Send Received
D1-OnDemandReadScalar	Response to External Requester)
D1-OutboundMessage	

#### 3.3 Create and Send Outbound Message

See Manage On-Demand Read (L+G) Page 1 on page 2-2 for the business process diagram associated with this activity.

Group: Send Command Received Response to Requester

Actor/Role: SGG

**Description:** SGG creates the message and sends it based on the identified sending method.

Entities to Configure	
Processing Role	

Business Objects	Available Algorithms
D1-OnDemandReadAbstract	D1-RRER (Send Received
D1-OnDemandReadScalar	Response to External Requester)
D1-OutboundMessage	

#### 3.4 Evaluate Execution Date, Time and Transition to Wait for Eff. Date State

See Manage On-Demand Read (L+G) Page 2 on page 2-3 for the business process diagram associated with this activity.

Actor/Role: SGG

**Description:** If command's effective date and time is available, SGG uses it to determine execution date and time. If the effective Date and Time is not available, SGG processes the Outbound Communication immediately. If effective Date and Time is in the future System waits till then in 'Wait for Effective Date' state.

Business Objects	Available Algorithms
D1-OnDemandReadAbstract D1-OnDemandReadScalar	D1-WAITEFFDT (Wait for Effective Date) F1-AT-RQJ (Transition to Default Next Status (Java))

#### 3.5 Review Activity in Eff. Date State

See Manage On-Demand Read (L+G) Page 2 on page 2-3 for the business process diagram associated with this activity.

Actor/Role: MDM or SGG Authorized User

Description: MDM or SGG Authorized User reviews and analyzes the Activity.

Business Objects
D1-OnDemandReadAbstract
D1-OnDemandReadScalar

#### 3.6 Request to Delete Activity

See Manage On-Demand Read (L+G) Page 2 on page 2-3 for the business process diagram associated with this activity.

Actor/Role: MDM or SGG Authorized User

**Description:** If MDM or SGG Authorized User determines that the Activity is not required, Authorized User requests to delete Activity record.

Business Objects	
D1-OnDemandReadAbstract D1-OnDemandReadScalar	

#### 3.7 Delete Activity

See Manage On-Demand Read (L+G) Page 2 on page 2-3 for the business process diagram associated with this activity.

Actor/Role: SGG

**Description:** SGG deletes the Activity.

**Note:** Once an Activity record is deleted it is permanently removed from the system and cannot be recovered. This option is not recommended for common business practice.

#### **Business Objects**

D1-OnDemandReadAbstract D1-OnDemandReadScalar

#### 3.8 Request to Discard Activity

See Manage On-Demand Read (L+G) Page 2 on page 2-3 for the business process diagram associated with this activity.

Actor/Role: MDM or SGG Authorized User

Description: MDM or SGG Authorized User if determines that the Activity is not required, Authorized User requests to discard it.

#### **Business Objects**

D1-OnDemandReadAbstract D1-OnDemandReadScalar

#### 3.9 Populate Changes and Request to Update

See Manage On-Demand Read (L+G) Page 2 on page 2-3 for the business process diagram associated with this activity.

Actor/Role: MDM or SGG Authorized User

Description: MDM or SGG Authorized User modifies Activity data and requests to perform

appropriate updates.

#### **Business Objects**

D1-OnDemandReadAbstract D1-OnDemandReadScalar

#### 4.0 Update Activity

See Manage On-Demand Read (L+G) Page 2 on page 2-3 for the business process diagram associated with this activity.

Actor/Role: SGG

**Description:** SGG updates the Activity with data populated by Authorized User.

#### **Business Objects**

D1-OnDemandReadAbstract D1-OnDemandReadScalar

#### 4.1 Request to Obtain Read

See Manage On-Demand Read (L+G) Page 2 on page 2-3 for the business process diagram associated with this activity.

Actor/Role: MDM or SGG Authorized User

**Description:** If command's effective date and time is in the future and MDM or SGG Authorized User identifies the need to execute command immediately, Authorized User requests to initiate the command processing.

Business Objects	
D1-OnDemandReadAbstract D1-OnDemandReadScalar	

#### 4.2 Monitor and Evaluate Effective Date and Time

See Manage On-Demand Read (L+G) Page 2 on page 2-3 for the business process diagram associated with this activity.

Actor/Role: SGG

**Description:** SGG periodically monitors to check if the command effective date and time has reached.

Customizable Process
D1-CRWT (Command Request Wait - Monitor)

Business Objects	Available Algorithms
D1-OnDemandReadAbstract	D1-WAITEFFDT (Wait for
D1-OnDemandReadScalar	Effective Date)

#### 4.3 Transition Activity to Communication in Progress State

See Manage On-Demand Read (L+G) Page 2 on page 2-3 for the business process diagram associated with this activity.

Actor/Role: SGG

**Description:** SGG transitions Activity to 'Communication in Progress' state to initiate outbound communication when command effective date and time has reached. The other possible option of transition and initiation is when the Authorized User makes a manual request for read.

Business Objects	Available Algorithms
D1-OnDemandReadAbstract	D1-WAITEFFDT (Wait for
D1-OnDemandReadScalar	Effective Date)

#### 4.4 Initiate Outbound Communication

See Manage On-Demand Read (L+G) Page 2 on page 2-3 for the business process diagram associated with this activity.

Actor/Role: SGG

**Description:** SGG determines the processing method for On-demand Read Outbound Communication and initiates the Outbound Communication process.

## Entities to Configure Outbound Communication Processing Method Outbound Communication Type

Business Objects	Available Algorithms
D1-OnDemandReadAbstract	D1-CROBCA (Create Outbound
D1-OnDemandReadScalar	Communication for On-Demand
D3-InitiateMRByMtrNbr	Read (Scalar))

#### 4.5 Evaluate Wait Period for Response

See Manage On-Demand Read (L+G) Page 2 on page 2-3 for the business process diagram associated with this activity.

Actor/Role: SGG

**Description:** SGG periodically check if the Activity expiration wait time configured for monitoring the response has expired or not.

Customizable Process	
D1-CRWT (Command Request Wait - Monitor)	
Entities to Configure	
Entities to Configure	

Business Objects	Available Algorithms
D1-OnDemandReadAbstract	D1-WTTMOUTEX (Wait Time
D1-OnDemandReadScalar	Out - Transition to Exception)

#### 4.6 Transition Activity to Communication Error State and Log Error

See Manage On-Demand Read (L+G) Page 2 on page 2-3 for the business process diagram associated with this activity.

Actor/Role: SGG

**Description:** If the wait time for Outbound Communication response has expired, SGG transitions the Activity to 'Communication Error' state and logs an error.

#### **Business Objects**

D1-OnDemandReadAbstract
D1-OnDemandReadScalar

#### 4.7 Review Activity in Comm. In Progress State

See Manage On-Demand Read (L+G) Page 2 on page 2-3 for the business process diagram associated with this activity.

Actor/Role: MDM or SGG Authorized User

Description: MDM or SGG Authorized User reviews and analyzes the Activity.

#### **Business Objects**

D1-OnDemandReadAbstract D1-OnDemandReadScalar

#### 4.8 Request to Retry Activity

See Manage On-Demand Read (L+G) Page 2 on page 2-3 for the business process diagram associated with this activity.

Actor/Role: MDM or SGG Authorized User

**Description:** MDM or SGG Authorized User requests to recreate the Outbound Communication process.

#### **Business Objects**

D1-OnDemandReadAbstract D1-OnDemandReadScalar

#### 4.9 Transition Activity to Retry State

See Manage On-Demand Read (L+G) Page 2 on page 2-3 for the business process diagram associated with this activity.

Actor/Role: SGG

**Description:** SGG transitions Activity to 'Retry' state.

#### **Business Objects**

D1-OnDemandReadAbstract D1-OnDemandReadScalar

### 5.0 Cancel Outstanding Outbound Communication

See Manage On-Demand Read (L+G) Page 2 on page 2-3 for the business process diagram associated with this activity.

Actor/Role: SGG

**Description:** SGG cancels any existing outstanding Outbound Communications.

#### **Business Objects**

D1-OnDemandReadAbstract D1-OnDemandReadScalar

## 5.1 Create Outbound Communication in Pending State

See Manage On-Demand Read (L+G) Page 3 on page 2-4 for the business process diagram associated with this activity.

**Group**: Outbound Communication Process

Actor/Role: SGG

Description: SGG creates an On-demand Read Outbound Communication in 'Pending' state.

#### **Entities to Configure**

Outbound Communication Processing Method

Outbound Communication Type

Business Objects	Available Algorithms
D1-OnDemandReadAbstract D1-OnDemandReadScalar D3-InitiateMRByMtrNbr	D1-COMMINFO (Communication Information) D1-GDRFFPA (Default required fields from Parent Activity) D1-CROBCA (Create Outbound Communication for On-Demand
	Read (Scalar))

# 5.2 Validate Ability to Process Outbound Communication and Transition to Validate State

See Manage On-Demand Read (L+G) Page 3 on page 2-4 for the business process diagram associated with this activity.

**Group**: Outbound Communication Process

Actor/Role: SGG

Description: SGG validates ability to process Outbound Communication. Typically, system

checks for communication type.

Entities to Configure
Communication Type

Business Objects	Available Algorithms
<b>D3-InitiateMRByMtrNbr</b> D3-InitMtReadByMtNumType	D1-VALCOMTP (Validate Communication Type)

# 5.3 Transition Outbound Communication to Validation Error State and Log Error

See Manage On-Demand Read (L+G) Page 2 on page 2-3 for the business process diagram associated with this activity.

**Group:** Outbound Communication Process

Actor/Role: SGG

**Description:** If any error occurs during validations, SGG transitions the Outbound Communication to 'Validation Error' state and logs an error.

Business Objects	
<b>D3-InitiateMRByMtrNbr</b> D3-InitMtReadByMtNumType	

# **5.4 Populate On-Demand Read Request Details and Transition to Awaiting Response State**

See Manage On-Demand Read (L+G) Page 3 on page 2-4 for the business process diagram associated with this activity.

Group: Outbound Communication Process

Actor/Role: SGG

**Description:** SGG transitions Outbound Communication to 'Awaiting Response' state and populates On-demand Read Outbound Communication message details.

Entities to Configure
Inbound Communication Processing Method

Business Objects	Available Algorithms
<b>D3-InitiateMRByMtrNbr</b> D3-InitMtReadByMtNumType	D3-PIMRMMN (Populate Send Detail for Initiate Meter Read By Meter Number)

# 5.5 Create and Send Outbound Communication Message to L+G Head-End System

See Manage On-Demand Read (L+G) Page 3 on page 2-4 for the business process diagram associated with this activity.

**Group:** Outbound Communication Process **Group:** Create and Send Outbound Message

Actor/Role: SGG

Description: SGG creates Outbound Communication and sends it to L+G Head-End System.

Business Objects	Available Algorithms
D3-InitiateMRByMtrNbr	D3-CIOUTMSG ( Create
D3-InitMtReadByMtNumType	Outbound Message for Initiate
D3-CCOUTMSG	Meter Read by Meter Number)

### 5.6 Communicate and Transform Message to L+G Format

See Manage On-Demand Read (L+G) Page 3 on page 2-4 for the business process diagram associated with this activity.

Group: Outbound Communication Process

Actor/Role: SGG

**Description:** Integration Layer of SGG facilitates the communication between the SGG and L+G Head-End System. It receives the Outbound Communication request, transforms, and converts the request into format compatible with L+G Head-End System.

# 5.7 Receive and Process Request Message

See Manage On-Demand Read (L+G) Page 3 on page 2-4 for the business process diagram associated with this activity.

**Group:** Outbound Communication Process

Actor/Role: L+G Head-End System

**Description:** L+G Head-End System receives the On-demand Read request from SGG and processes it.

**Note**: This is external and outside the Oracle SGG environment.

## 5.8 Receive and Process Meter Read Request

See Manage On-Demand Read (L+G) Page 3 on page 2-4 for the business process diagram associated with this activity.

**Group**: Outbound Communication Process

Actor/Role: Smart Meter

**Description:** Smart Meter Device receives request from Head-End System for On-demand meter read and processes it.

Note: This is external and outside the Oracle SGG environment.

### 5.9 Analyze Message and Send Acknowledgement

See Manage On-Demand Read (L+G) Page 3 on page 2-4 for the business process diagram associated with this activity.

**Group**: Outbound Communication Process

Actor/Role: L+G Head-End System

**Description:** L+G Head-End System on receipt of On-demand Read request from SGG, analyzes and sends a real-time acknowledgement back to SGG.

## 6.0 Communicate and Transform Acknowledgement to SGG Format

See Manage On-Demand Read (L+G) Page 3 on page 2-4 for the business process diagram associated with this activity.

Group: Outbound Communication Process

Actor/Role: SGG

**Description:** Integration Layer of SGG facilitates the communication between the L+G Head-End System and SGG. It receives the synchronous acknowledge, transforms, and converts the acknowledgement into format compatible with SGG.

### 6.1 Evaluate Acknowledgement

See Manage On-Demand Read (L+G) Page 3 on page 2-4 for the business process diagram associated with this activity.

**Group**: Outbound Communication Process **Group**: Create and Send Outbound Message

Actor/Role: SGG

Description: SGG evaluates acknowledge and checks the success of sending Outbound

Communication.

Business Objects	Available Algorithms
<b>D3-InitiateMRByMtrNbr</b> D3-InitMtReadByMtNumType	D3-CIOUTMSG (Create Outbound Message for Initiate Meter Read by Meter Number)

## 6.2 Evaluate Wait Period for Response

See Manage On-Demand Read (L+G) Page 3 on page 2-4 for the business process diagram associated with this activity.

Group: Outbound Communication Process

Actor/Role: SGG

**Description:** SGG periodically checks if the Outbound Communication expiration wait time configured for monitoring the response has expired or not.

#### **Entities to Configure**

Outbound Communication Type

#### **Customizable Process**

D1-COMM (Batch Control for Communications)

Business Objects	Available Algorithms
<b>D3-InitiateMRByMtrNbr</b> D3-InitMtReadByMtNumType	D1-TIMEOUT (Time Out)

# **6.3 Transition Outbound Communication to Response Error State and Log Error**

See Manage On-Demand Read (L+G) Page 3 on page 2-4 for the business process diagram associated with this activity.

Group: Outbound Communication Process

Actor/Role: SGG

**Description:** If the wait time for Outbound Communication response has expired, SGG transitions the Outbound Communication to 'Response Error' state and logs an error.

#### **Business Objects**

D3-InitiateMRByMtrNbr

D3-InitMtReadByMtNumType

#### **6.4 Review Outbound Communication**

See Manage On-Demand Read (L+G) Page 3 on page 2-4 for the business process diagram associated with this activity.

**Group:** Outbound Communication Process **Actor/Role:** MDM or SGG Authorized User

Description: MDM or SGG Authorized User reviews and analyzes the Outbound

Communication.

#### **Business Objects**

D3-InitiateMRByMtrNbr

D3-InitMtReadByMtNumType

#### 6.5 Request to Discard

See Manage On-Demand Read (L+G) Page 3 on page 2-4 for the business process diagram associated with this activity.

**Group**: Outbound Communication Process **Actor/Role**: MDM or SGG Authorized User

Description: MDM or SGG Authorized User if determines that the Outbound Communication

is not required, Authorized User requests to discard it.

#### **Business Objects**

## D3-InitiateMRByMtrNbr

D3-InitMtReadByMtNumType

#### 6.6 Transition Outbound Communication to Discard State

See Manage On-Demand Read (L+G) Page 3 on page 2-4 for the business process diagram associated with this activity.

**Group**: Outbound Communication Process

Actor/Role: SGG

Description: SGG transitions Outbound Communication to 'Discard' state.

**Note:** When an Outbound Communication is 'Discarded' it still remains in the system database and is not removed, hence, this is the preferred business practice to perform.

#### **Business Objects**

#### D3-InitiateMRByMtrNbr

D3-InitMtReadByMtNumType

# 6.7 Populate Changes and Request to Update

See Manage On-Demand Read (L+G) Page 3 on page 2-4 for the business process diagram associated with this activity.

**Group**: Outbound Communication Process **Actor/Role**: MDM or SGG Authorized User

Description: MDM or SGG Authorized User modifies Outbound Communication data and

requests to perform appropriate updates.

#### **Business Objects**

D3-InitiateMRByMtrNbr

D3-InitMtReadByMtNumType

## **6.8 Update Outbound Communication**

See Manage On-Demand Read (L+G) Page 3 on page 2-4 for the business process diagram associated with this activity.

**Group**: Outbound Communication Process

Actor/Role: SGG

Description: SGG updates the Outbound Communication with data populated by Authorized

User.

Business Objects	
D3-InitiateMRByMtrNbr D3-InitMtReadByMtNumType	

### 6.9 Request to Retry

See Manage On-Demand Read (L+G) Page 3 on page 2-4 for the business process diagram associated with this activity.

**Group:** Outbound Communication Process **Actor/Role:** MDM or SGG Authorized User

Description: MDM or SGG Authorized User requests to recreate the Outbound

Communication.

Business Objects	
<b>D3-InitiateMRByMtrNbr</b> D3-InitMtReadByMtNumType	

# 7.0 Transition Outbound Communication to Retry State

See Manage On-Demand Read (L+G) Page 3 on page 2-4 for the business process diagram associated with this activity.

Group: Outbound Communication Process

Actor/Role: SGG

**Description:** SGG transitions Outbound Communication to 'Retry' state. The other possible option for retry processing, is when the outbound is in error state, and retry is processed.

Business Objects	Available Algorithms
<b>D3-InitiateMRByMtrNbr</b> D3-InitMtReadByMtNumType	D1-RBOE (Retry BO in Error)

## 7.1 Send Meter Read Response to L+G Head End System

See Manage On-Demand Read (L+G) Page 2 on page 2-3 for the business process diagram associated with this activity.

**Group**: Outbound Communication Process

Actor/Role: Smart Meter

**Description:** Smart Meter Device sends a response for the On-demand Read request received.

Note: This is external and outside the Oracle SGG environment.

## 7.2 Receive and Process Meter Read Response to L+G SGG

See Manage On-Demand Read (L+G) Page 3 on page 2-4 for the business process diagram associated with this activity.

**Group**: Outbound Communication Process **Group**: Inbound Communication Process

Actor/Role: L+G Head-End System

**Description:** L+G Head-End System, receives the response from Smart Meter and processes a response for SGG.

**Note:** This is external and outside the Oracle SGG environment.

# 7.3 Communicate and Transform On-Demand Read Message to L+G SGG Format

See Manage On-Demand Read (L+G) Page 3 on page 2-4 for the business process diagram associated with this activity.

**Group**: Outbound Communication Process **Group**: Inbound Communication Process

Actor/Role: SGG

**Description:** Integration Layer of SGG facilitates the communication between the L+G Head-End System and SGG. It receives the response, transforms, and converts the response into format compatible with SGG.

## 7.4 Initiate Inbound Communication and Send Acknowledgement to Head-End

See Manage On-Demand Read (L+G) Page 3 on page 2-4 for the business process diagram associated with this activity.

**Group:** Outbound Communication Process **Group:** Inbound Communication Process

Actor/Role: SGG

**Description:** SGG receives response and initiates Inbound Communication process. Further, it sends an acknowledgement to Head-End System.

## 7.5 Communicate and Transform Acknowledgement to L+G Format

See Manage On-Demand Read (L+G) Page 3 on page 2-4 for the business process diagram associated with this activity.

**Group**: Outbound Communication Process **Group**: Inbound Communication Process

Actor/Role: SGG

**Description:** Integration Layer of SGG facilitates the communication between the SGG and L+G Head-End System. It receives the acknowledgement, transforms, and converts the acknowledgement into format compatible with Head-End System.

## 7.6 Receive and Process Acknowledgement Response

See Manage On-Demand Read (L+G) Page 3 on page 2-4 for the business process diagram associated with this activity.

Group: Outbound Communication Process
Group: Inbound Communication Process
Actor/Role: L+G Head-End System

Description: L+G Head-End System receives acknowledgement and processes it.

Note: This is external and outside the Oracle SGG environment.

## 7.7 Retrieve Details from Inbound Message

See Manage On-Demand Read (L+G) Page 3 on page 2-4 for the business process diagram associated with this activity.

**Group**: Outbound Communication Process **Group**: Inbound Communication Process

Actor/Role: SGG

**Description:** SGG retrieves details from inbound message for processing. E.g. Device details,

Recipient details, etc.

#### Available Algorithms

D1-COMMINFO (Communication Information)
D3-SETDFBOEL (Default Main BO Elements for Reading Changed Notification)

## 7.8 Create Inbound Communication in Pending State

See Manage On-Demand Read (L+G) Page 3 on page 2-4 for the business process diagram associated with this activity.

**Group**: Outbound Communication Process **Group**: Inbound Communication Process

Actor/Role: SGG

Description: SGG creates Inbound Communication in 'Pending' state.

#### **Business Objects**

**D3-ReadingChgNotification**D3-ReadingChgNotificationType

# 7.9 Validate Ability to Process Inbound Communication and Transition to Validate State

See Manage On-Demand Read (L+G) Page 3 on page 2-4 for the business process diagram associated with this activity.

**Group**: Outbound Communication Process **Group**: Inbound Communication Process

Actor/Role: SGG

**Description:** SGG validates ability to process Inbound Communication. Typically, it checks for Communication Type. It also determines the Outbound Communication that initiated it and links

to it.

### **Entities to Configure**

Inbound Communication Type

Business Objects	Available Algorithms
D3-ReadingChgNotification D3-ReadingChgNotificationType	D1-VALCOMTP (Validate Communication Type) D3-FPCOMMBO (Find Parent Outbound Communication BO)

## 8.0 Transition Inbound Communication to Validation Error State and Log Error

See Manage On-Demand Read (L+G) Page 3 on page 2-4 for the business process diagram associated with this activity.

**Group**: Outbound Communication Process **Group**: Inbound Communication Process

Actor/Role: SGG

Description: If any error occurs during validations, SGG transitions the Inbound

Communication to 'Validation Error' state and logs an error.

# **Business Objects**

**D3-ReadingChgNotification**D3-ReadingChgNotificationType

## 8.1 Transition to Create Completion Event State

See Manage On-Demand Read (L+G) Page 3 on page 2-4 for the business process diagram associated with this activity.

**Group:** Outbound Communication Process **Group:** Inbound Communication Process

Actor/Role: SGG

**Description:** SGG transitions Inbound Communication to 'Create Completion Event' state. In this state, SGG maps meter read data from Inbound Communication in to IMD format.

Business Objects	Available Algorithms
D3-ReadingChgNotification D3-ReadingChgNotificationType	F1-AT-RQJ (Transition to Default Next Status (Java)))

## 8.2 Validate and Create IMD Completion Event in Pending State

See Manage On-Demand Read (L+G) Page 3 on page 2-4 for the business process diagram associated with this activity.

**Group:** Outbound Communication Process **Group:** Inbound Communication Process

Group: Create Completion Event with IMD Data

Actor/Role: SGG

**Description:** SGG creates Create IMD Completion Event in 'Pending' state and stores meter read data retrieved from Inbound Message into it in IMD format. Prior to this, SGG validates ability to process Create IMD Completion Event. Typically, it checks for Completion Event and its related Activity Type, Sequence number for Completion Events, etc.

Business Objects	Available Algorithms
D1-CompletionEvent D1-CreateIMD	D3-CCOMPEV (Create IMD Completion Event) D1-CEVTINFO ( Completion Event - Information) D1-VALCEVT ( Validate Completion Event) D1-VALOUTCOM ( Validate Outbound Communication) D1-VALCRIMD ( Validate Create IMD)

## 8.3 Communicate Fault to Head-End System

See Manage On-Demand Read (L+G) Page 3 on page 2-4 for the business process diagram associated with this activity.

**Group:** Outbound Communication Process **Group:** Inbound Communication Process

Actor/Role: SGG

**Description:** SGG communicates fault acknowledge and transforms it into L+G Head-End System format.

8.4 Receive and Process Fault Message

See Manage On-Demand Read (L+G) Page 3 on page 2-4 for the business process diagram associated with this activity.

Group: Outbound Communication Process
Group: Inbound Communication Process
Actor/Role: L+G Head-End System

**Description:** L+G Head-End System receives fault acknowledgement from SGG and processes

it.

**Note**: This is external and outside the Oracle SGG environment.

### 8.5 Transition Inbound to Completed State

See Manage On-Demand Read (L+G) Page 3 on page 2-4 for the business process diagram associated with this activity.

**Group**: Outbound Communication Process **Group**: Inbound Communication Process

Actor/Role: SGG

**Description:** SGG transitions Inbound Communication to 'Completed' state.

Business Objects	Available Algorithms
D1-CompletionEvent D1-CreateIMD	D3-CCOMPEV (Create IMD Completion Event) D1-CEVTINFO (Completion Event - Information) D1-VALCEVT (Validate Completion Event) D1-VALOUTCOM (Validate Outbound Communication) D1-VALCRIMD (Validate Create IMD)

## 8.6 Transition Outbound Communication to Completed State

See Manage On-Demand Read (L+G) Page 3 on page 2-4 for the business process diagram associated with this activity.

**Group:** Outbound Communication Process **Group:** Inbound Communication Process

Actor/Role: SGG

Description: SGG transitions Outbound Communication to 'Completed' state and updates

Event Date/Time on Outbound Communication.

Business Objects	Available Algorithms
D3-ReadingChgNotification D3-ReadingChgNotificationType D3-InitiateMRByMtrNbr D3-InitMtReadByMtNumType	D1-UPPCMEVDT (Update Parent Outbound Communication's Event Date Time) D1-TRANPRBO (Transition Parent Outbound Communication BO)

## 8.7 Transition Activity to Execution Completion Event State

See Manage On-Demand Read (L+G) Page 3 on page 2-4 for the business process diagram associated with this activity.

**Group**: Outbound Communication Process

Actor/Role: SGG

**Description:** SGG, when receives successful response for Outbound Communication, transitions Activity to 'Execution Completion Event' state. SGG, in this state, transitions its Completion Events to 'Executed' state.

Business Objects	Available Algorithms
D1-OnDemandReadAbstract D1-OnDemandReadScalar	D1-UCFLAGTPA (Update On- Demand Read Completion Flag
D3-InitiateMRByMtrNbr	And Transition Parent Activity) D1-EXCMPEVTS (Execute Completion Events)

## 8.8 Transition Completion Event to Executed State

See Manage On-Demand Read (L+G) Page 4 on page 2-5 for the business process diagram associated with this activity.

Group: Transition Completion Event to Executed State

Actor/Role: SGG

**Description:** SGG transitions Create IMD Completion Event to 'Executed' state.

Business Objects	Available Algorithms
<b>D1-CompletionEvent</b> D1-CreateIMD	D1-EXCMPEVTS (Execute Completion Events)

## 8.9 Preprocess IMD

See Manage On-Demand Read (L+G) Page 4 on page 2-5 for the business process diagram associated with this activity.

**Group**: Transition Completion Event to Executed State

Actor/Role: SGG

Description: SGG invokes to preprocess the IMD by invoking seeder preprocessing. Please refer

to process 4.2.1.1 MDM. Upload Device Measurements for further details.

Business Objects	Available Algorithms
<b>D1-CompletionEvent</b> D1-CreateIMD	D1-CREIMD (Create IMD)

## 9.0 Transition Activity to Completion Event Error State and Log Error

See Manage On-Demand Read (L+G) Page 4 on page 2-5 for the business process diagram associated with this activity.

Actor/Role: SGG

Description: If any errors are encountered while transitioning Completion Event to 'Executed' state, SGG transitions Activity to 'Completion Event Error' state and logs an error.

Business Objects	Available Algorithms
D1-OnDemandReadAbstract D1-OnDemandReadScalar D1-OnDemandReadScalarType D1-CompletionEvent D1-CreateIMD	D1-EXCMPEVTS (Execute Completion Events)

## 9.1 Transition Activity to Waiting for Measurement State

See Manage On-Demand Read (L+G) Page 4 on page 2-5 for the business process diagram associated with this activity.

Actor/Role: SGG

Description: SGG transitions Activity to 'Waiting for Measurement' state.

Business Objects	Available Algorithms
D1-OnDemandReadAbstract	F1-AT-RQJ (Transition to
D1-OnDemandReadScalar	Default Next Status (Java))
D1-OnDemandReadScalarType	

## 9.3 4.2.1.2 MDM.Manage VEE and VEE Exceptions

See Manage On-Demand Read (L+G) Page 4 on page 2-5 for the business process diagram associated with this activity.

Actor/Role: MDM

**Description:** MDM performs the VEE processing of IMD created. Please refer to process 4.2.1.2 MDM.Manage VEE and VEE Exceptions for further details.

# 9.4 Review Activity Waiting for Measurement

See Manage On-Demand Read (L+G) Page 4 on page 2-5 for the business process diagram associated with this activity.

Actor/Role: MDM or SGG Authorized User

**Description:** MDM or SGG Authorized User can review and analyze the Activity.

### **Business Objects**

D1-OnDemandReadAbstract D1-OnDemandReadScalar

#### 9.5 Request to Complete

See Manage On-Demand Read (L+G) Page 4 on page 2-5 for the business process diagram associated with this activity.

Actor/Role: MDM or SGG Authorized User

**Description:** While the Activity is in 'Waiting for Measurement' state, MDM or SGG Authorized User can process the Activity immediately by making a manual 'Request to Complete' to SGG.

#### **Business Objects**

D1-OnDemandReadAbstract D1-OnDemandReadScalar

## 9.6 Monitor IMD Availability within Allowable Period

See Manage On-Demand Read (L+G) Page 4 on page 2-5 for the business process diagram associated with this activity.

Actor/Role: SGG

**Description:** SGG monitors if the IMD measurement becomes available in allowable window period.

#### **Customizable process**

D1-CRWT (Command Request Wait - Monitor)

#### **Entities to Configure**

Activity Type

Business Objects	Available Algorithms
D1-OnDemandReadAbstract	D1-WFMTO (Wait for
D1-OnDemandReadScalar	Measurement Time Out)

## 9.7 Transition Activity to Wait Expired Error State and Log Error

See Manage On-Demand Read (L+G) Page 4 on page 2-5 for the business process diagram associated with this activity.

Actor/Role: SGG

**Description:** If IMD is not available within the Wait time and it expires, SGG transitions Activity to 'Wait Expired' state and logs an error.

Entities to Configure	
Activity Type	

Business Objects	Available Algorithms
D1-OnDemandReadAbstract D1-OnDemandReadScalar D1-OnDemandReadScalarType	D1-WFMTO (Wait for Measurement Time Out)

#### 9.8.1 Retrieve Initial Measurements

See Manage On-Demand Read (L+G) Page 4 on page 2-5 for the business process diagram associated with this activity.

Actor/Role: SGG

**Description:** SGG retrieves IMD measurement and stores as On-demand Read on Activity. Depending on the state of IMD measurement availability in the system, SGG has various options of retrieving IMD.

Customizable process
D1-CRWT (Command Request Wait - Monitor)

Business Objects	Available Algorithms
D1-OnDemandReadAbstract D1-OnDemandReadScalar	D1-RMVCE (Retrieve Measurements via Completion Events) D1-RSINIMS (Retrieve Scalar Initial Measurements)

#### 9.8.2 Retrieve Final Measurements

See Manage On-Demand Read (L+G) Page 4 on page 2-5 for the business process diagram associated with this activity.

Actor/Role: SGG

Description: SGG retrieves final measurement and stores as On-demand Read on Activity.

Customizable process
D1-CRWT (Command Request Wait - Monitor)

Business Objects	Available Algorithms
D1-OnDemandReadAbstract	D1-RFINSC (Retrieve Scalar
D1-OnDemandReadScalar	Final Measurements)

# 9.9 Transition Activity to Completion State

See Manage On-Demand Read (L+G) Page 4 on page 2-5 for the business process diagram associated with this activity.

Actor/Role: SGG

**Description:** SGG transitions Activity to 'Completed' state.

Business Objects	Available Algorithms
D1-OnDemandReadAbstract	F1-AT-RQJ (Transition to
D1-OnDemandReadScalar	Default Next Status (Java))

## 10.0 Determine Processing Method

See Manage On-Demand Read (L+G) Page 4 on page 2-5 for the business process diagram associated with this activity.

Group: Send On-demand Read to Requester

Actor/Role: SGG

**Description:** SGG determines the method of sending On-demand Read response to 3rd Party

Application.

Business Objects	Available Algorithms
D1-OnDemandReadAbstract	D1-SNDRDTEA (Send On
D1-OnDemandReadScalar	Demand Read to Edge
D1-OnDemandReadScalarType	Application)

## 10.1 Create and Send Outbound Message

See Manage On-Demand Read (L+G) Page 4 on page 2-5 for the business process diagram associated with this activity.

Group: Send On-demand Read to Requester

Actor/Role: SGG

**Description:** SGG creates the message and sends it based on the identified method.

Business Objects	Available Algorithms
D1-OnDemandReadAbstract	D1-SNDRDTEA (Send On
<b>D1-OnDemandReadScalar</b> D1-OnDemandReadScalarType	Demand Read to Edge Application)

### 10.2 Gather Requirements to Cancel Command

See Manage On-Demand Read (L+G) Page 5 on page 2-6 for the business process diagram associated with this activity.

Actor/Role: MDM or SGG Authorized User

**Description:** MDM or SGG Authorized User analyzes requirements and gathers information required to cancel On-Demand Read command.

## 10.3 Select Cancel Command Activity Type

See Manage On-Demand Read (L+G) Page 5 on page 2-6 for the business process diagram associated with this activity.

Actor/Role: MDM or SGG Authorized User

**Description:** MDM or SGG Authorized User selects Activity Type as 'Cancel Command' to cancel command request.

### 10.4 Populate Command Execution Data

See Manage On-Demand Read (L+G) Page 5 on page 2-6 for the business process diagram associated with this activity.

Actor/Role: MDM or SGG Authorized User

**Description:** MDM or SGG Authorized User populates the required data such as request expiration date, recipient information, etc.

# 10.5 Communicate and Transform On-Demand Read Cancel Command to SGG Format

See Manage On-Demand Read (L+G) Page 5 on page 2-6 for the business process diagram associated with this activity.

Actor/Role: Integration Layer

**Description:** Integration Layer facilitates the communication between the 3rd Party Application and the SGG Application. It receives the Cancel Command request, transforms, and converts the request into format compatible with SGG Application.

## 10.6 Identify On-Demand Read Activity based on Transaction ID

See Manage On-Demand Read (L+G) Page 5 on page 2-6 for the business process diagram associated with this activity.

Actor/Role: SGG

**Description:** SGG identifies the On-demand Read Activity to cancel based on the transaction ID, which was created in SGG when the request originally came from 3rd Party Application and sent later to 3rd Party Application. However, in case of manual request from Authorized User, the On-

demand Read Activity is identified based on manual selection while populating the required data for cancel command request.

## 10.7 Analyze Requirements to Create Event

See Manage On-Demand Read (L+G) Page 6 on page 2-7 for the business process diagram associated with this activity.

Group: Manual IMD Completion Event Process

Actor/Role: MDM or SGG Authorized User

Description: MDM or SGG Authorized User analyzes requirements and gathers information

required to create 'Create IMD Completion Event'.

### 10.8 Select Completion Event Type and Populate Event, IMD Creation Data

See Manage On-Demand Read (L+G) Page 6 on page 2-7 for the business process diagram associated with this activity.

Group: Manual IMD Completion Event Process

Actor/Role: MDM or SGG Authorized User

Description: MDM or SGG Authorized User selects the Event type as Create IMD Completion

Event and populates the required Event and IMD data.

## 10.9 Request to Create Completion Event

See Manage On-Demand Read (L+G) Page 6 on page 2-7 for the business process diagram associated with this activity.

**Group:** Manual IMD Completion Event Process

Actor/Role: MDM or SGG Authorized User

Description: MDM or SGG Authorized User makes a request to SGG to create a Create IMD

Completion Event.

#### 11.0 Validate Event Data

See Manage On-Demand Read (L+G) Page 6 on page 2-7 for the business process diagram associated with this activity.

Group: Manual IMD Completion Event Process

Actor/Role: SGG

**Description:** SGG validates ability to process Create IMD Completion Event. Typically, it checks for Completion Event and its related Activity Type, Sequence number for Completion Events, etc.

Business Objects	Available Algorithms
D1-CompletionEvent D1-CreateIMD	D1-CEVTINFO (Completion Event - Information) D1-VALCEVT (Validate Completion Event) D1-VALOUTCOM (Validate Outbound Communication) D1-VALCRIMD (Validate Create IMD)

## 11.1 Create IMD Completion Event in Pending State

See Manage On-Demand Read (L+G) Page 6 on page 2-7 for the business process diagram associated with this activity.

**Group**: Manual IMD Completion Event Process

Actor/Role: SGG

Description: SGG creates IMD Completion Event in 'Pending' state.

#### **Business Objects**

 ${\bf D1\text{-}Completion} Event$ 

D1-CreateIMD

#### 11.2 Review Event

See Manage On-Demand Read (L+G) Page 6 on page 2-7 for the business process diagram associated with this activity.

**Group:** Manual IMD Completion Event Process **Actor/Role:** MDM or SGG Authorized User

Description: MDM or SGG Authorized User can review and analyze the Create IMD

Completion Event created.

#### **Business Objects**

**D1-CompletionEvent** 

D1-CreateIMD

## 11.3 Request to Delete Event

See Manage On-Demand Read (L+G) Page 6 on page 2-7 for the business process diagram associated with this activity.

**Group:** Manual IMD Completion Event Process **Actor/Role:** MDM or SGG Authorized User

Description: If MDM or SGG Authorized User if determines that the Create IMD Completion

Event is not required, Authorized User requests to delete it.

#### **Business Objects**

D1-CompletionEvent

D1-CreateIMD

## 11.4 Delete Completion Event

See Manage On-Demand Read (L+G) Page 6 on page 2-7 for the business process diagram associated with this activity.

Group: Manual IMD Completion Event Process

Actor/Role: SGG

**Description:** SGG deletes the Create IMD Completion Event.

#### **Business Objects**

**D1-CompletionEvent** 

D1-CreateIMD

#### 11.5 Request to Discard Event

See Manage On-Demand Read (L+G) Page 6 on page 2-7 for the business

process diagram associated with this activity.

Group: Manual IMD Completion Event Process

Actor/Role: MDM or SGG Authorized User

Description: MDM or SGG Authorized User if determines that the Create IMD Completion

Event is not required, Authorized User requests to discard it.

#### **Business Objects**

D1-CompletionEvent

D1-CreateIMD

## 11.6 Transition to Discard State and Discard Completion Event

See Manage On-Demand Read (L+G) Page 6 on page 2-7 for the business process diagram associated with this activity.

Group: Manual IMD Completion Event Process

Actor/Role: SGG

Description: SGG transitions Create IMD Completion Event to 'Discard' state.

#### **Business Objects**

**D1-CompletionEvent** 

D1-CreateIMD

# 11.7 Request to Update Event

See Manage On-Demand Read (L+G) Page 6 on page 2-7 for the business process diagram associated with this activity.

Group: Manual IMD Completion Event Process

Actor/Role: MDM or SGG Authorized User

Description: MDM or SGG Authorized User modified Create IMD Completion Event data and

requests to perform appropriate updates.

#### **Business Objects**

#### **D1-CompletionEvent**

D1-CreateIMD

### 11.8 Update Completion Event

See Manage On-Demand Read (L+G) Page 6 on page 2-7 for the business process diagram associated with this activity.

**Group:** Manual IMD Completion Event Process

Actor/Role: SGG

Description: SGG updates the Create IMD Completion Event with data populated by

Authorized User.

#### **Business Objects**

#### **D1-CompletionEvent**

D1-CreateIMD

#### 11.9 Request to Execute

See Manage On-Demand Read (L+G) Page 6 on page 2-7 for the business process diagram associated with this activity.

Group: Manual IMD Completion Event Process

Actor/Role: MDM or SGG Authorized User

Description: MDM or SGG Authorized User requests to transition Create IMD Completion

Event to 'Executed' state.

#### **Business Objects**

#### D1-CompletionEvent

D1-CreateIMD

# 12.0 Analyze Error and Work To Do

See Manage On-Demand Read (L+G) Page 7 on page 2-8 for the business process diagram associated with this activity.

Actor/Role: MDM or SGG Authorized User

**Description:** MDM or SGG Authorized User analyzes the error logged and respective To Do created to determine the corrective action and perform work.

#### **Business Objects**

D1-OnDemandReadAbstract

D1-OnDemandReadScalar

D3-InitiateMRByMtrNbr

D3-ReadingChgNotification

#### 12.1 Request to Delete

See Manage On-Demand Read (L+G) Page 7 on page 2-8 for the business process diagram associated with this activity.

**Group**: Inbound Exception Process

Actor/Role: MDM or SGG Authorized User

Description: If MDM or SGG Authorized User determines that the Inbound Communication is

not required, Authorized User can request to delete it.

#### **Business Objects**

#### D3-ReadingChgNotification

#### 12.2 Delete Inbound Communication

See Manage On-Demand Read (L+G) Page 7 on page 2-8 for the business process diagram associated with this activity.

**Group**: Inbound Exception Process

Actor/Role: SGG

**Description:** SGG deletes Inbound Communication.

#### **Business Objects**

#### D3-ReadingChgNotification

### 12.3 Request to Discard

See Manage On-Demand Read (L+G) Page 7 on page 2-8 for the business process diagram associated with this activity.

**Group**: Inbound Exception Process

Actor/Role: MDM or SGG Authorized User

**Description:** MDM or SGG Authorized User, if determines that the Inbound Communication is not required, Authorized User can request to discard it.

**Business Objects** 

D3-ReadingChgNotification

## 12.4 Complete To Do(s)

See Manage On-Demand Read (L+G) Page 7 on page 2-8 for the business process diagram associated with this activity.

**Group:** Inbound Exception Process

Actor/Role: SGG

**Description:** SGG finds all non-completed To Do entries and completes them.

Business Objects	Available Algorithms
D1-OnDemandReadAbstract D1-OnDemandReadScalar D3-InitiateMRByMtrNbr D3-ReadingChgNotification	D1-GTDCBO ( Generic To Do Completion for BOs)

#### 12.5 Transition Inbound Communication to Discard State

See Manage On-Demand Read (L+G) Page 7 on page 2-8 for the business process diagram associated with this activity.

**Group**: Inbound Exception Process

Actor/Role: SGG

Description: SGG transitions Inbound Communication to 'Discard' state.

Business Objects
D3-ReadingChgNotification

## 12.6 Request to Validate

See Manage On-Demand Read (L+G) Page 7 on page 2-8 for the business process diagram associated with this activity.

**Group**: Inbound Exception Process

Actor/Role: MDM or SGG Authorized User

**Description:** If Authorized User wants to reprocess the Inbound Communication, can request to validate it.

Business Objects
D3-ReadingChgNotification

# 12.7 Transition to Validate State and Initialize Reprocessing

See Manage On-Demand Read (L+G) Page 7 on page 2-8 for the business process diagram associated with this activity.

**Group:** Inbound Exception Process

Actor/Role: SGG

**Description:** SGG transitions Inbound Communication to 'Validate' state and initializes reprocessing.

Business Objects	Available Algorithms
D3-ReadingChgNotification	D1-RBOE (Retry BO in Error)

## 12.8 Identify Inbound Communication in Validation Error State

See Manage On-Demand Read (L+G) Page 7 on page 2-8 for the business process diagram associated with this activity.

**Group**: Inbound Exception Process

Actor/Role: SGG

Description: SGG identifies Inbound Communication in 'Validation Error' state.

Customizable process
D1-ICERR (Inbound Communication Error - Retry)
Business Objects
D3-ReadingChgNotification

## 12.9 Evaluate Criteria to Run Automated Retry Process

See Manage On-Demand Read (L+G) Page 7 on page 2-8 for the business process diagram associated with this activity.

Actor/Role: SGG

**Description:** SGG evaluates criteria to run automated retry process. A Batch process is configured for this.

**Note**: If Business requires different criteria to retry the process, those criteria could be configured in parameter section of batch process.

#### Customizable process

D1-ICERR (Inbound Communication Error - Retry)

D1-OCERR (Outbound Communication Error - Retry)

D1-CRERR (Command Request Error - Retry)

#### **Business Objects**

D1-OnDemandReadAbstract

D1-OnDemandReadScalar

D3-InitiateMRByMtrNbr

D3-ReadingChgNotification

#### 13.0 Request to Delete

See Manage On-Demand Read (L+G) Page 7 on page 2-8 for the business process diagram associated with this activity.

**Group**: Outbound Exception Process

Actor/Role: MDM or SGG Authorized User

Description: If MDM or SGG Authorized User determines that the Outbound Communication

is not required, Authorized User can request to delete it.

#### **Business Objects**

#### D3-InitiateMRByMtrNbr

#### 13.1 Delete Outbound Communication

See Manage On-Demand Read (L+G) Page 7 on page 2-8 for the business process diagram associated with this activity.

**Group:** Outbound Exception Process

Actor/Role: SGG

**Description:** SGG deletes Outbound Communication from the system.

#### **Business Objects**

#### D3-InitiateMRByMtrNbr

#### 13.2 Request to Validate

See Manage On-Demand Read (L+G) Page 7 on page 2-8 for the business process diagram associated with this activity.

**Group:** Outbound Exception Process

Actor/Role: MDM or SGG Authorized User

Description: If Authorized User wants to reprocess the Outbound Communication, can request

to validate it.

#### **Business Objects**

#### D3-InitiateMRByMtrNbr

## 13.3 Transition to Validate State and Initialize Reprocessing

See Manage On-Demand Read (L+G) Page 7 on page 2-8 for the business process diagram associated with this activity.

**Group**: Outbound Exception Process

Actor/Role: SGG

Description: SGG transitions Outbound Communication to 'Validate' state and initializes

reprocessing.

Business Objects	
D3-InitiateMRByMtrNbr	

## 13.4 Identify Outbound Communication in Validation Error State

See Manage On-Demand Read (L+G) Page 7 on page 2-8 for the business process diagram associated with this activity.

**Group:** Outbound Exception Process

Actor/Role: SGG

Description: SGG identifies Outbound Communication in 'Validation Error' state.

Customizable process	
D1-OCERR (Outbound Communication Error - Retry)	

Business Objects	Available Algorithms
D3-InitiateMRByMtrNbr	D1-RBOE (Retry BO in Error)

# 13.5 Identify Outbound Communication in Response Error State

See Manage On-Demand Read (L+G) Page 7 on page 2-8 for the business process diagram associated with this activity.

**Group:** Outbound Exception Process

Actor/Role: SGG

Description: SGG identifies Outbound Communication in 'Response Error' state.

Customizable process	
D1-OCERR (Outbound Communication Error - Retry)	

Business Objects	Available Algorithms
D3-InitiateMRByMtrNbr	D1-RBOE (Retry BO in Error)

### 13.6 Request to Revalidate

See Manage On-Demand Read (L+G) Page 8 on page 2-9 for the business process diagram associated with this activity.

**Group:** 'Validation Error' Exception Process **Actor/Role:** MDM or SGG Authorized User

Description: If Authorized User wants to reprocess the Activity, can request to validate it.

Business Objects
D1-OnDemandReadAbstract
D1-OnDemandReadScalar

## 13.7 Transition Activity to Validate State and Initialize Reprocessing

See Manage On-Demand Read (L+G) Page 8 on page 2-9 for the business process diagram associated with this activity.

Group: 'Validation Error' Exception Process

Actor/Role: SGG

**Description:** SGG transitions Activity to 'Validate' state and initializes reprocessing.

Business Objects	Available Algorithms
D1-OnDemandReadAbstract D1-OnDemandReadScalar	D1-RBOE (Retry BO in Error)

## 13.8 Identify Activity in Validation Error State

See Manage On-Demand Read (L+G) Page 7 on page 2-8 for the business process diagram associated with this activity.

Group: 'Validation Error' Exception Process

Actor/Role: SGG

**Description:** SGG identifies Activity in 'Validation Error' state.

Customizable process
D1-CRERR (Command Request Error - Retry)

#### **Business Objects**

D1-OnDemandReadAbstract D1-OnDemandReadScalar

#### 13.9 Identify Activity in Communication Error State

See Manage On-Demand Read (L+G) Page 8 on page 2-9 for the business process diagram associated with this activity.

Group: 'Communication Error' Exception Process

Actor/Role: SGG

**Description:** SGG identifies Activity in 'Communication Error' state.

#### **Customizable process**

D1-CRERR (Command Request Error - Retry)

#### **Business Objects**

D1-OnDemandReadAbstract D1-OnDemandReadScalar

## 14.0 Request to Execute Completion Event

See Manage On-Demand Read (L+G) Page 9 on page 2-10 for the business process diagram associated with this activity.

**Group**: 'Completion Event Error' Exception Process

Actor/Role: MDM or SGG Authorized User

**Description:** If Authorized User wants to reprocess the Activity, can request to execute Completion Event.

#### **Business Objects**

D1-OnDemandReadAbstract D1-OnDemandReadScalar

# 14.1 Transition Activity to Execution Completion Event State and Initialize Reprocessing

See Manage On-Demand Read (L+G) Page 9 on page 2-10 for the business process diagram associated with this activity.

**Group**: 'Completion Event Error' Exception Process

Actor/Role: SGG

**Description**: SGG transitions Activity to 'Execution Completion Event' state and initializes reprocessing.

Business Objects	Available Algorithms
D1-OnDemandReadAbstract D1-OnDemandReadScalar	D1-RBOE (Retry BO in Error)

## 14.2 Identify Activity in Completion Event Error State

See Manage On-Demand Read (L+G) Page 9 on page 2-10 for the business process diagram associated with this activity.

Group: 'Completion Event Error' Exception Process

Actor/Role: SGG

**Description:** SGG identifies Activity in 'Completion Event Error' state.

Customizable process
D1-CRERR (Command Request Error - Retry)
Business Objects
D1-OnDemandReadAbstract D1-OnDemandReadScalar

## 14.3 Request to Continue Waiting

See Manage On-Demand Read (L+G) Page 9 on page 2-10 for the business process diagram associated with this activity.

Group: 'Wait Expired Error' Exception Process

Actor/Role: MDM or SGG Authorized User

**Description:** If Authorized User wants to reprocess the Activity, can request to continue waiting.

Business Objects	
D1-OnDemandReadAbstract D1-OnDemandReadScalar	

# 14.4 Transition Activity to Waiting for Measurement State and Initialize Reprocessing

See Manage On-Demand Read (L+G) Page 9 on page 2-10 for the business process diagram associated with this activity.

Group: 'Wait Expired Error' Exception Process

Actor/Role: SGG

**Description:** SGG transitions Activity to 'Waiting for Measurement' state and initializes reprocessing.

Business Objects	Available Algorithms
D1-OnDemandReadAbstract D1-OnDemandReadScalar	D1-RBOE (Retry BO in Error)

## 14.5 Identify Activity in Wait Expired Error State

See Manage On-Demand Read (L+G) Page 9 on page 2-10 for the business process diagram associated with this activity.

Group: 'Wait Expired Error' Exception Process

Actor/Role: SGG

Description: SGG identifies Activity in 'Wait Expired Error' state.

Customizable process
D1-CRERR (Command Request Error - Retry)

Business Objects	Available Algorithms
D1-OnDemandReadAbstract D1-OnDemandReadScalar	D1-RBOE (Retry BO in Error)

# 14.6 Transition Activity to Discard State

See Manage On-Demand Read (L+G) Page 10 on page 2-11 for the business process diagram associated with this activity.

Actor/Role: SGG

**Description:** SGG transitions Activity to 'Discard' state indicating that it cannot be further used.

However, it remains in the system.

Business Objects	Available Algorithms
D1-OnDemandReadAbstract	D1-TPATOF (Transition Parent
D1-OnDemandReadScalar	Activity To Failed)

## 14.7 Cancel Outstanding Completion Events

See Manage On-Demand Read (L+G) Page 10 on page 2-11 for the business process diagram associated with this activity.

Actor/Role: SGG

**Description:** When Activity is discarded, SGG cancels any existing outstanding Completion

Events.

Business Objects	Available Algorithms
D1-OnDemandReadAbstract	D1-COCE (Cancel Outstanding
D1-OnDemandReadScalar	Completion Events)

#### 14.8 Determine Send Method

See Manage On-Demand Read (L+G) Page 10 on page 2-11 for the business process diagram associated with this activity.

Group: Send Fail Message to Requester

Actor/Role: SGG

**Description:** SGG determines the method of sending command fail message to 3rd Party

Application.

Business Objects	Available Algorithms
D1-OnDemandReadAbstract	D1-FRER (Send Fail Response to
D1-OnDemandReadScalar	External Requester)

## 14.9 Create and Send Outbound Message

See Manage On-Demand Read (L+G) Page 10 on page 2-11 for the business process diagram associated with this activity.

Group: Send Fail Message to Requester

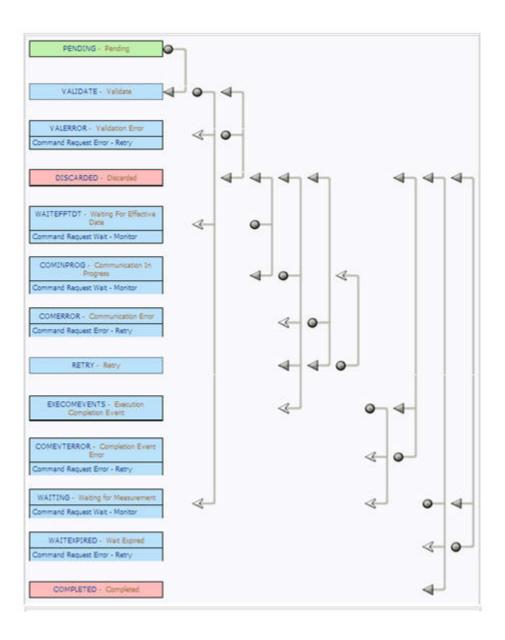
Actor/Role: SGG

**Description:** SGG creates the message and sends it based on the identified method.

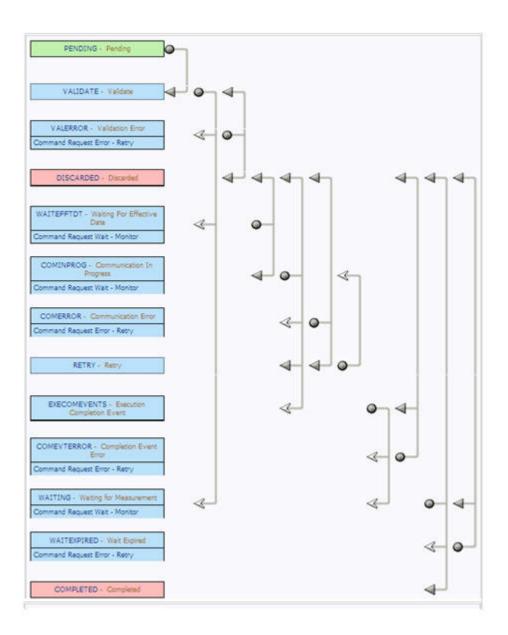
Business Objects	Available Algorithms
D1-OnDemandReadAbstract	D1-FRER (Send Fail Response to
D1-OnDemandReadScalar	External Requester)

# **Business Objects Life Cycle**

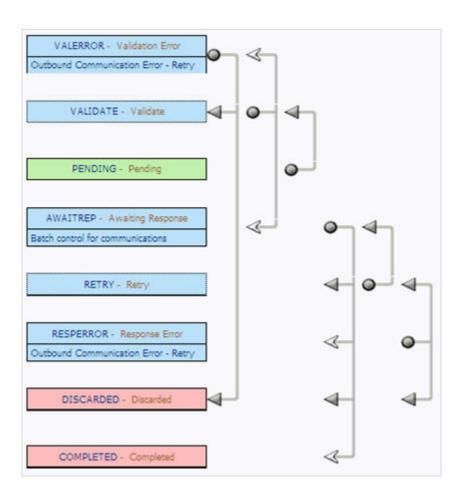
#### D1-OnDemandReadAbstract



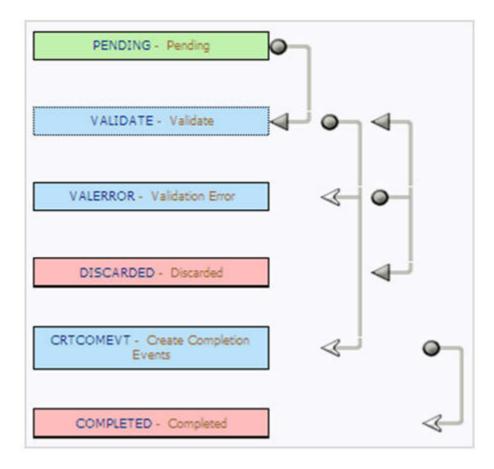
## D1-OnDemandReadScalar



# D3-InitiateMRByMtrNbr



# D3-ReadingChgNotification



## **D1-CompletionEvent**

