



**Business Requirements for**

**Measure,**

**Determine**

**Meter Read**

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## A. About this document

This document contains ebIX® Business Requirements for the processes regarding the measured data for determining a meter read for a switch or for a change of a characteristic, both for electricity and for gas.

As a general introduction ebIX® has published a separate document “Introduction to ebIX® Business Requirements and Business Information Models” [4]. The introduction also includes the generic model elements that are not specific for a particular business process.

In line with UN/CEFACT Modeling Methodology version 2 (UMM-2) ebIX® defines the business requirements before starting the actual modeling. The requirements have been specified by the ebIX® work group “Exchange Metered Data” and are the basis for the Business Information Model which is published in a separate document.

The Business Information Model is in turn the basis for the creation of XML schema’s and is expected to be the basis for the specification of web services in a next version of the model document. Since ebIX® supports both Edifact and XML the model will also serve as the basis for the creation of Message Implementation Guides for the mapping to Edifact UNSM’s. The Business Information Model and the syntax specific structures are specified by the ebIX® “Technical Committee” (ETC).

### A.1. Comments to the ebIX® model

If you have comments or suggestions to the requirements please contact any member of the project group or directly to Kees Sparreboom, [kees.sparreboom@capgemini.com](mailto:kees.sparreboom@capgemini.com) .

### A.2. References

#### A.2.1. Standards

- [1] UML Profile for UN/CEFACT’s Modeling Methodology (UMM), Base Module, version 2.0.  
([http://www.unece.org/cefact/umm/umm\\_index.html](http://www.unece.org/cefact/umm/umm_index.html))
- [2] UML Profile for UN/CEFACT’s Modeling Methodology (UMM), Foundation Module, 2.0.  
([http://www.unece.org/cefact/umm/umm\\_index.html](http://www.unece.org/cefact/umm/umm_index.html))
- [3] The Harmonized Role Model (for the Electricity Market) by ebIX®, ENTSO-E, and EFET  
([www.ebix.org](http://www.ebix.org))

### A.2.2. ebIX® Documents

- [4] Introduction to ebIX® Business Requirements and Business Information Models ([www.ebix.org](http://www.ebix.org))
- [5] Recommended Identification Schemes for the European Energy Market ([www.ebix.org](http://www.ebix.org))
- [6] ebIX® model for Structuring of the European Energy Market: [UMM 2 Business Requirements View for structuring of the European energy market, including customer switching and maintenance of master data](#) ([www.ebix.org](http://www.ebix.org))
- [7] ebIX® Business Requirements for Measure for Reconciliation ([www.ebix.org](http://www.ebix.org))
- [8] ebIX® Business Requirements for Measure for Billing ([www.ebix.org](http://www.ebix.org))
- [9] ebIX® code lists ([www.ebix.org](http://www.ebix.org))

### A.3. Participants in the project

These Business Requirements as part of the ebIX® Model for the European Energy Market (see [4]) are made in a project with the members of EMD. For a list of members of EMD see [www.ebix.org](http://www.ebix.org).

### A.4. Main changes since last version

		Old	New	Clarification	Date
<b>Start of updates for Version 2.0.B</b>					
		Meter Read for Switch	Renamed into Meter Read	ebIX® EMD concluded, that a generic process for determine meter read will also satisfy the needs for the processes that need a meter read for a switch.	August 2011
		Class Diagram for Meter Read		Has been removed, since ebIX® EMD concluded that there is no need for a separate exchange of a meter read, since the notification for reading a meter in the end only will lead to exchanges for other purposes that have already been specified.	August 2011
<b>End of updates for Version 2.0.B</b>					

1.	Paragraph on references			The list of references has been limited to references directly relevant for a document containing business requirements	2013-07-22
2.	UseCase “Validate Measurements”		The generic UseCase “Validate Measurements” replaces specific validation processes.	The generic process for “Validate Measurements” is specified in the document Introduction to ebIX® Business Requirements and Business Information Models (www.ebix.org)	2013-07-22
3.	All activity diagrams have been brought in line with the rules stated in the Introduction to ebIX models			One-way processes have final node in receiving swim lane; two-way processes have final node in triggering (sending) swim lane	2013-07-22
4.	Class diagram		A table with semantic definitions of classes and properties has been added	To bring model documents for ebIX® CuS and ebIX® EMD in line	2013-07-22
5.	Class diagram, all classes for “...-additions”		The properties Sector and Reason have been deleted	As a consequence of modeling for web services as one of the implementation options	2013-07-22
<b>End of updates for Version 2.0.C</b>					
6.	Class diagram		Header and context information has been added	In order to bring this BRS in line with other ebIX® BRS documents	2014-8-8

<b>End of updates for Version 2.0.D</b>					
7.	Class diagram		Product code for gas has been added	In order to make this BRS fit for use in the gas sector	2015-6-5
<b>End of updates for Version 2.0.E</b>					

## 1. Business Requirements View: Measure for Determine Meter Read

The process “Determine Meter Read” is developed to be used as part of ebIX® processes for change of master data, when an independently established status by means of a meter read for the moment of change is needed.

### 1.1. Overview

The overview presents in broad lines the surroundings of the process for determine meter read. It starts with a trigger to change master data e.g. a customer finds a new supplier or notifies that he has moved or the metering or settlement method has been changed. In some cases the customer may also present a recent meter reading to his contact (the supplier). In these cases the supplier will from thereon start the necessary procedures like requesting the MP administrator to change master data for a MP. In any case of changing Metering Point master data the MP administrator will notify the Validator, that there is a need for a status by means of a meter read for the moment of change. In case the Validator has no recent meter read available (either from the customer or from some other source) he can ask the Collector for collected data.

It is assumed that the availability of a meter read at the Validator will trigger the next relevant exchange processes (as part of Measure for Reconciliation or Measure for Billing).

The change processes are in more detail specified in the ebIX® Structure documents [6].

**Note:** the present overview is based on changes in roles linked to the Metering Point. Other changes in Metering Point master data (like metering or settlement method) have not yet been specified in ebIX® models.

**Note:** changes in other master data (like master data for the meter) may also require a meter read. Since these processes have not yet been specified in ebIX® models, the overview does not yet take this into account.

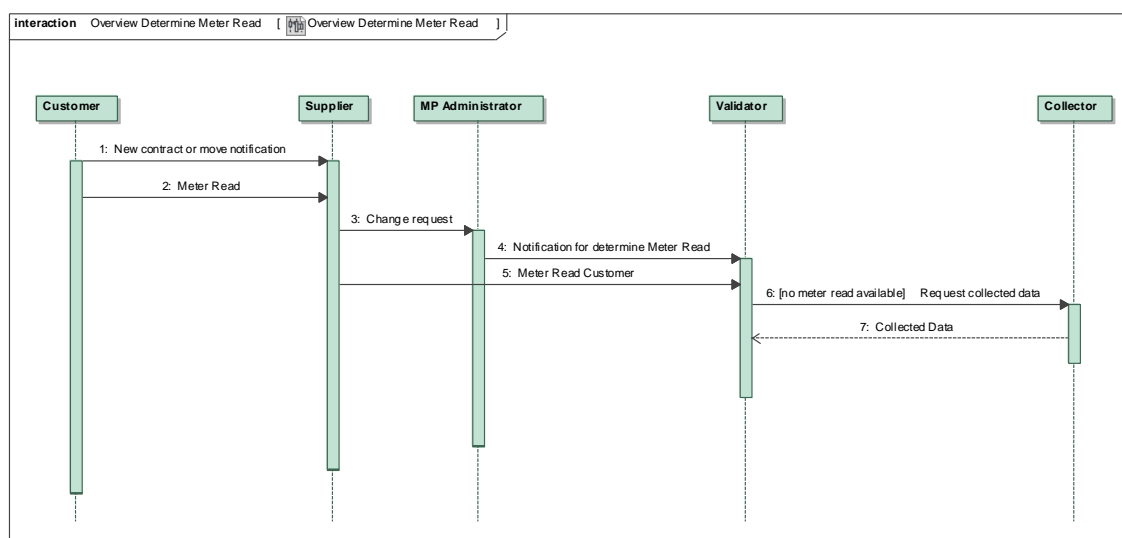


Figure 1 Overview

## 1.2. Determine Meter Read (Business Process UseCase)

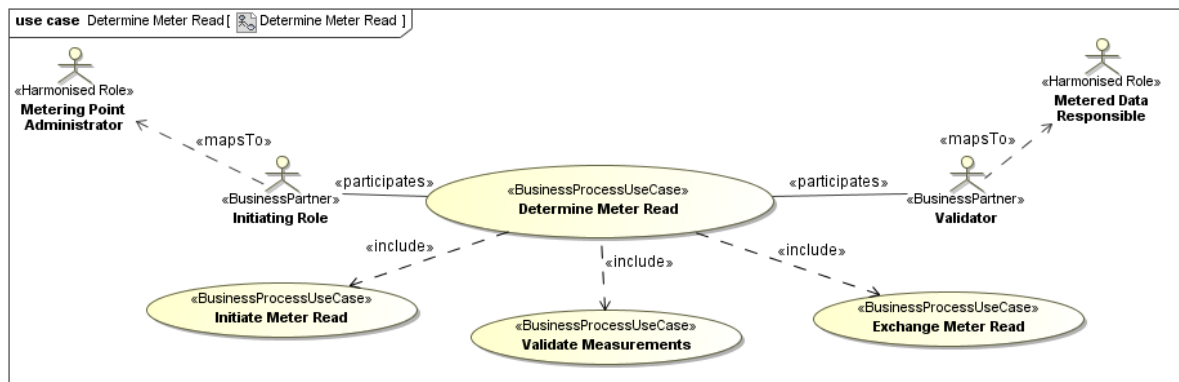


Figure 2 Determine Meter Read

### 1.2.1. Description

UseCase description: Determine Meter Read	
definition	Provides validated meter read for processes that need an independently established status by means of a meter read for the moment of change.
beginsWhen	The Initiating Role triggers the process.
preCondition	A process in need of an independently established status by means of a meter read for the moment of change is running;  Partners responsible for the execution of the processes should have access to relevant master data.
endsWhen	The Meter Read has been made available to the business process that needs an independently established status by means of a meter read for the moment of change.
postCondition	The Meter Read has become part of the metered data history;  The processes that need an independently established status by means of a meter read for the moment of change can be continued.
Exceptions	None
actions	See 1.2.2

Note: When ebIX® starts modeling processes that regard changes in meter master data, the Meter Administrator will be added as initiating role.



### 1.2.2. Business Process

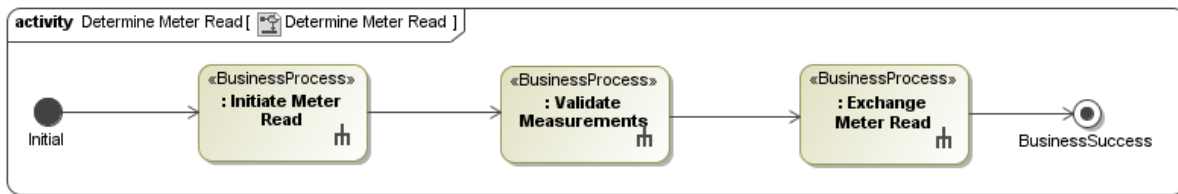


Figure 3 BP Determine Meter Read

### 1.2.3. Initiate Meter Read (Business Process UseCase)

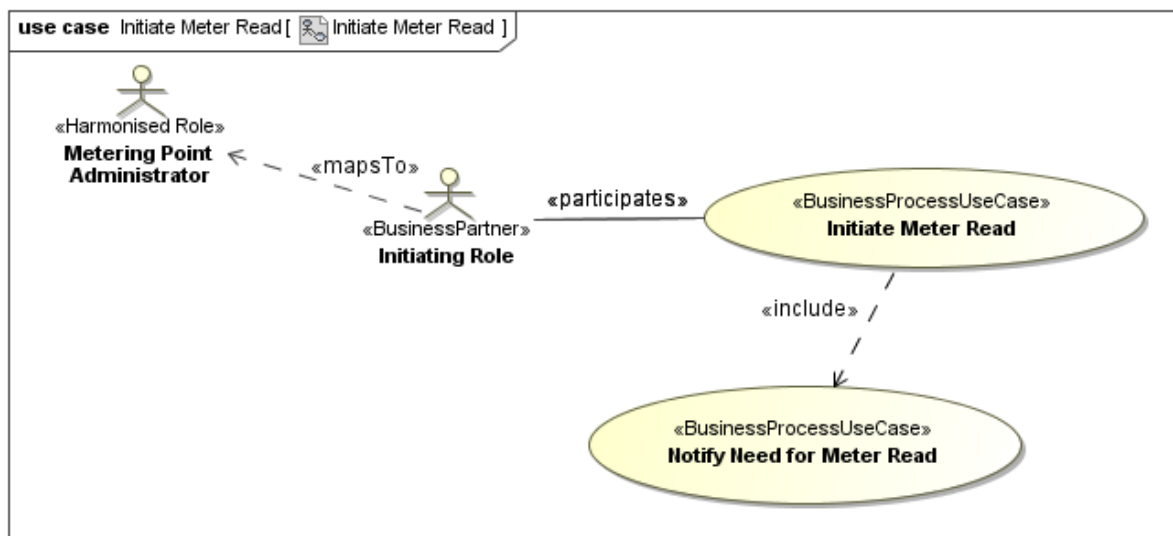


Figure 4 Initiate Meter Read

#### 1.2.3.1. Description

UseCase description: Initiate Meter Read	
definition	<p>An initiating role prepares the notification of the need for a meter read for a change and sends the notification. The initiating role is in this case the Metering Point Responsible;</p> <p><i>Remark: In the present ebIX® description this process is described in general terms only to leave it open to a more detailed specification based on national rules.</i></p>
beginsWhen	<p>The initiating role</p> <ul style="list-style-type: none"> <li>• decides to, or</li> <li>• when the (national) rules prescribe him to.</li> </ul>
preCondition	<p>The initiating role processes a change request that needs an independently established status by means of a meter read for the moment of change.</p>
endsWhen	<p>The preparations for the notification have been completed.</p>

postCondition	The exchange of the notification can start.
exceptions	None
actions	See 1.2.3.2

1.2.3.2. Business Process

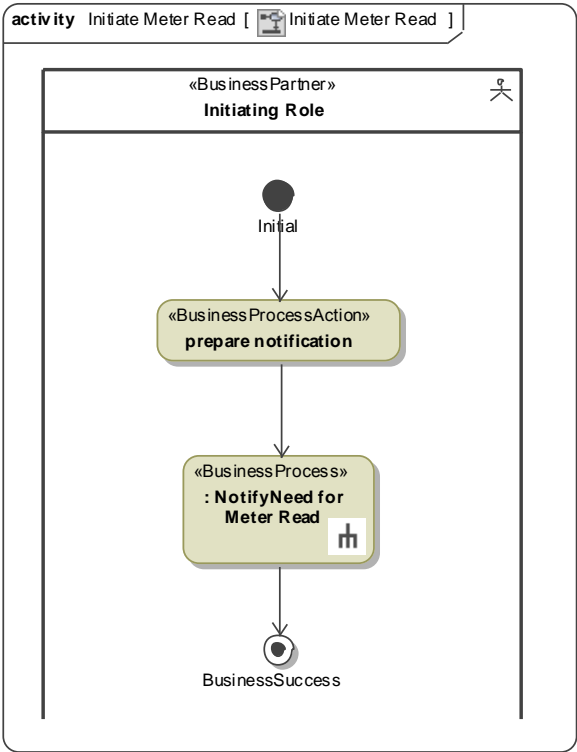


Figure 5 BP Initiate Meter Read

### 1.2.3.3. Notify Need for Meter Read (Business Process UseCase)

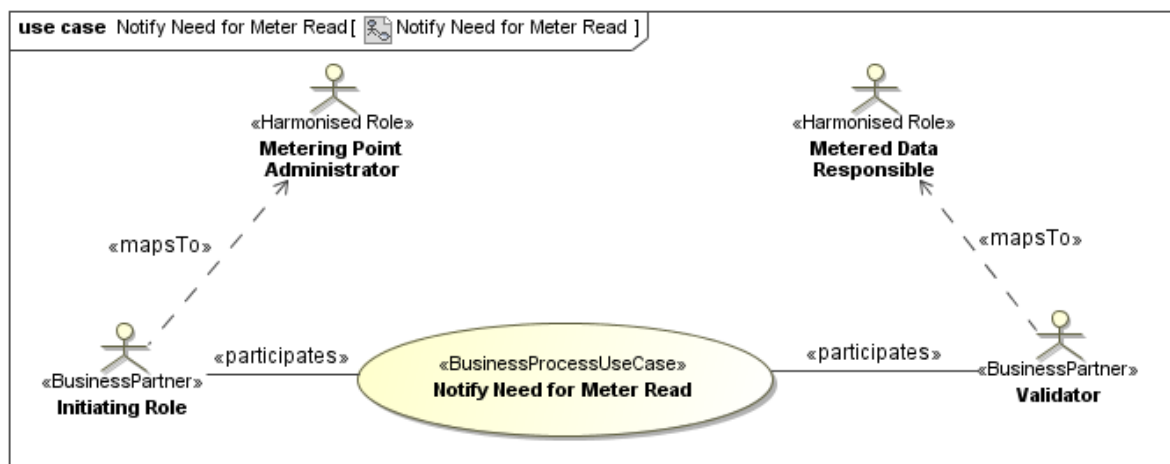


Figure 6 Notify Need for Meter Read

#### 1.2.3.3.1. Description

UseCase description: Notify Need for Meter Read	
definition	A Metering Point Administrator acting as initiating role notifies the need for an independently established status by means of a meter read for the moment of change, to the Validator.
beginsWhen	The process “initiate Meter Read” has been completed.
preCondition	The process “initiate Meter Read” has ended successfully.
endsWhen	The notification has been received by the Validator
postCondition	The Validator can start the process for the establishment of a meter read.
exceptions	none
actions	See 1.2.3.3.2

### 1.2.3.3.2. Business Process

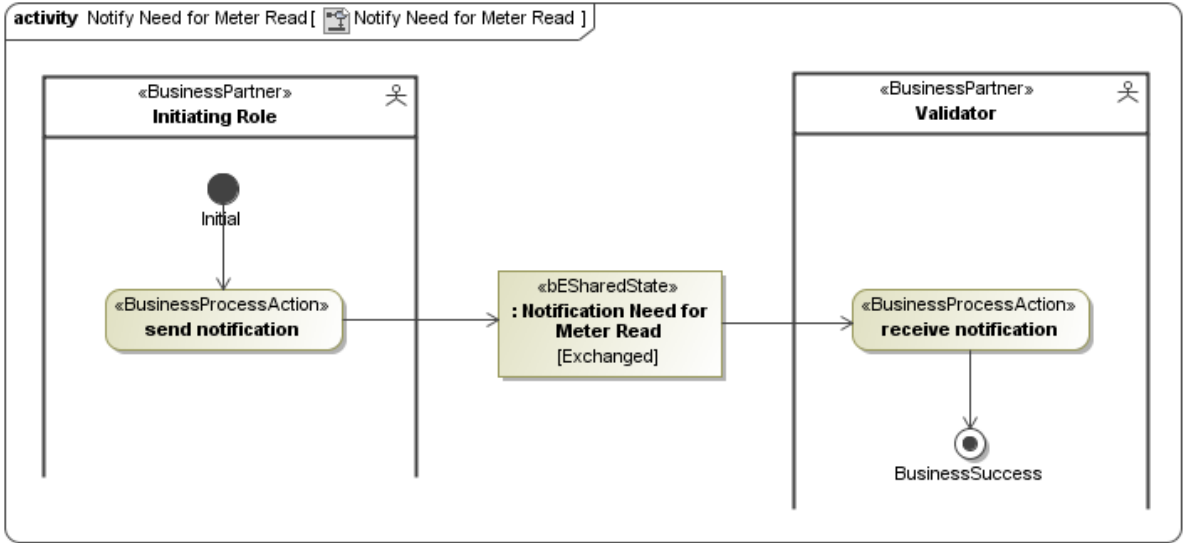


Figure 7 BP Notify Need for Meter Read

### 1.2.4. Validate Measurements (Business Process UseCase)

This process is described in the Introduction to ebIX® Business Requirements and Business Information Models ([www.ebix.org](http://www.ebix.org)), see [4].

### 1.2.5. Exchange Meter Read (Business Process UseCase)

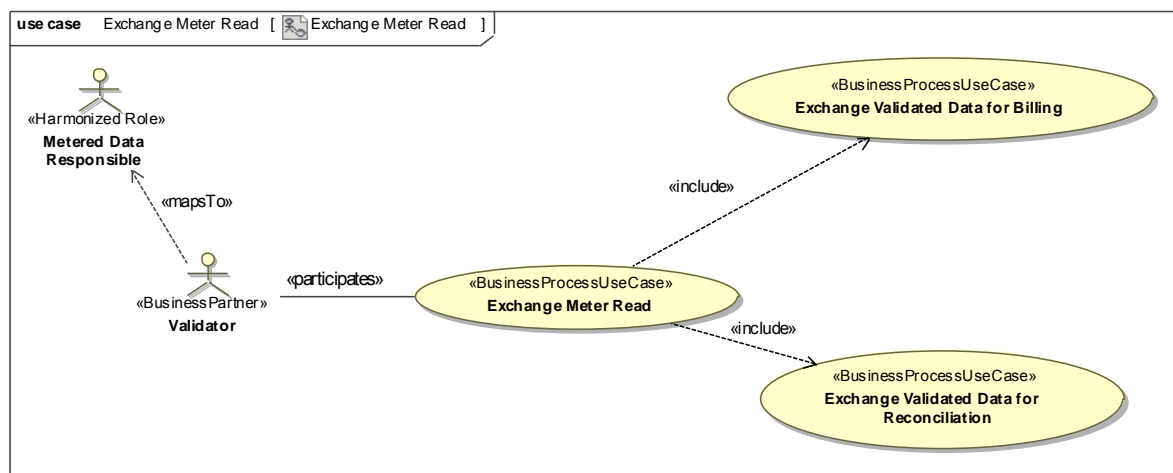


Figure 8 Exchange Meter Read

#### 1.2.5.1. Description

UseCase description: Exchange Meter Read	
definition	Validator exchanges validated data as specified in the included UseCases. Receiving roles are specified in the included UseCases.
beginsWhen	Validator decides to within national rules.
preCondition	The Validator has available: <ul style="list-style-type: none"> <li>meter read and validated data</li> <li>master data for the exchange of data</li> </ul>
endsWhen	The reception of the validated data has been acknowledged by the receiving roles.
postCondition	Validated data are available for the receiving role.
exceptions	none
actions	See 1.2.5.2

### 1.2.5.2. Business Process

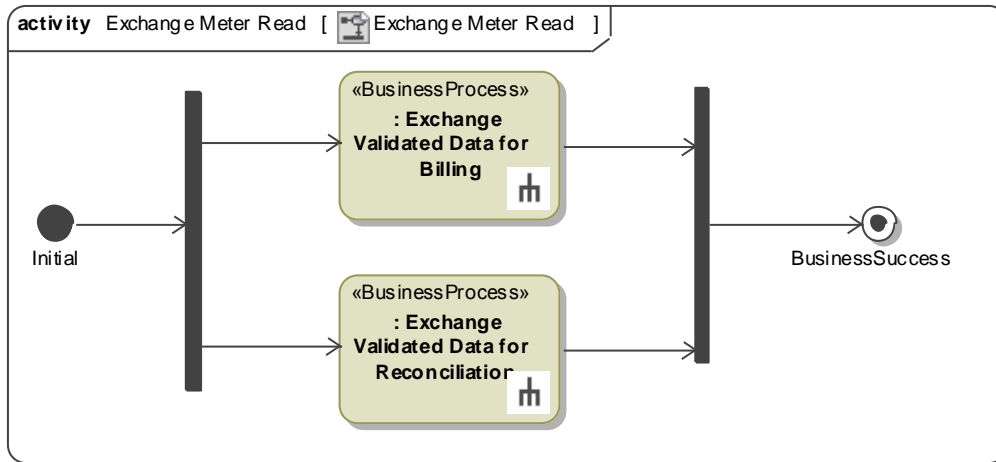


Figure 9 BP Exchange Meter Read

## 1.3. Business Partner View

### 1.3.1. Business Partners for Determine Meter Read

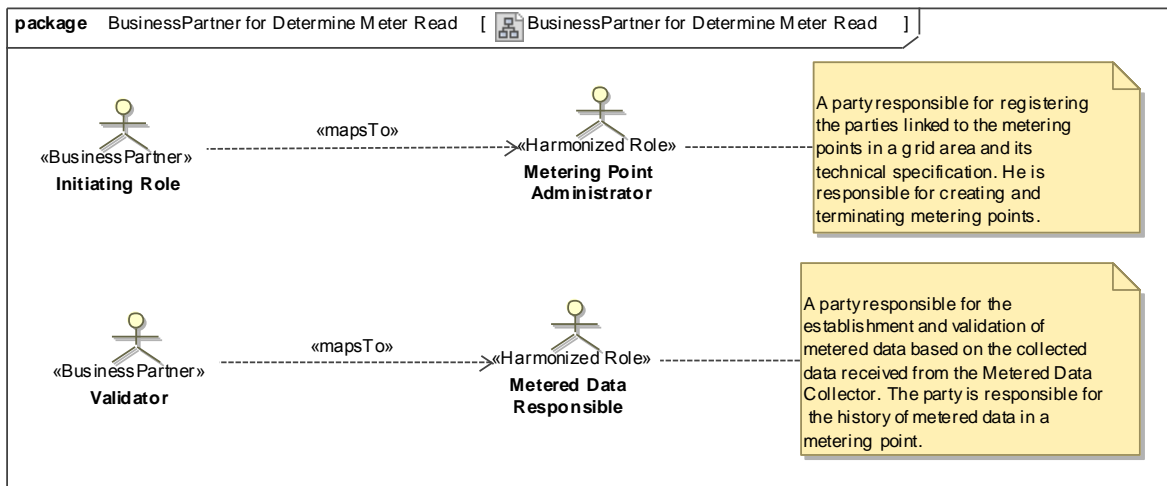


Figure 10 Business Partners for Determine Meter Read

## 1.4. Business Entity View

### 1.4.1. Short introduction

In these business requirements the ebIX® work group EMD has used the principle of specifying the core data set as business requirements. This core data set is defined as the set of information that is required when using synchronous web services as the exchange mechanism.

The information required for a-synchronous web services is added as an option.

Finally optional information is specified.

For exchange as a stand-alone document header and context information will have to be added. But this is not regarded as a business requirement when defining the core data set, but as a requirement for technical implementation or mapping to syntax.

It is important to note that it is assumed for defining the core data set, that Metering Points are uniquely dedicated to either electricity or to gas. As a consequence the specification of the business sector is not part of core data set anymore.

### 1.4.2. Notification Need for Meter Read (Class Diagram)

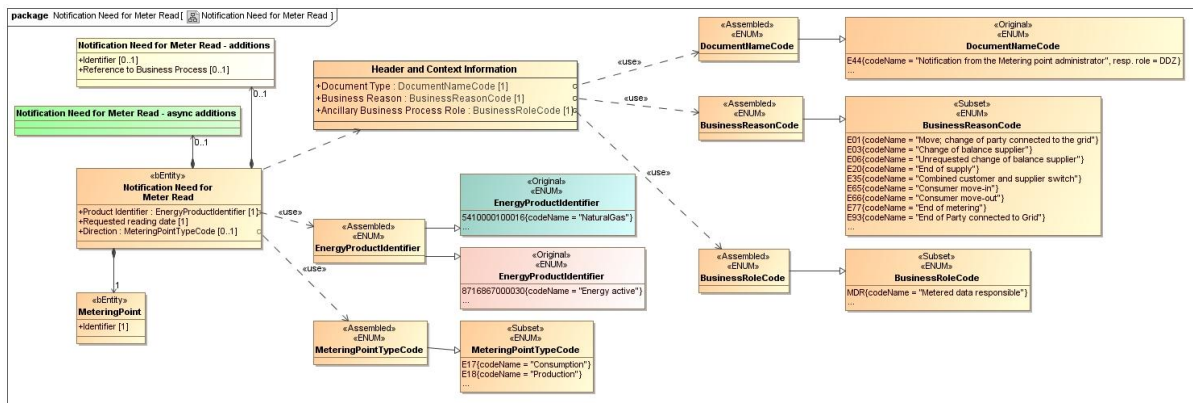


Figure 11 Notification Need for Meter Read

Element definitions, Notification Need for Meter Read	
«Business entity» Notification Need for Meter Read	The Initiating Role processing a change request, notifies the need for an independently established status by means of a meter read for the moment of change, to the Validator.
Product Identifier	A code specifying a the energy product for which the need for a meter read is notified.
Requested reading date	The date for which the meter read is requested.
Direction	A code specifying the direction of the active energy flow in this Metering Point, such as consumption, production or combined.
«Business entity» Metering Point	An entity where energy products are measured or computed.
Identifier	The unique identification of the Metering Point for which the meter read is requested.
Notification Need for Meter Read Additions	Additional information, related to the notification of a need for meter read, the use of which may be agreed on a national level. This is however not used when specifying the payload in the ebIX® model.
Identifier	The unique identification of this set of information as given by the Initiating Role.
Reference to Business process	The unique identification of the instance of the change process, given by the Metering Point Administrator, of this process of which this notification is a part of.
Notification Need for Meter Read Async Additions	Additional information, related to the notification of a need for meter read, needed when using asynchronous communication. This is however not used when specifying the payload in the ebIX® model, but is used when specifying the document in the ebIX® model.



Header and Context Information	The set of information specifying the information to be added to this payload “Notification Need for Meter Read” in order to enable the exchange as a document.
Document Type	A code representing the document type used for the exchange of this set of information.
Business Reason	A code representing the business reason for the exchange of this set of information.
Ancillary Business Process Role	A code representing the role taking part in this exchange together with the role responsible for the process/this exchange.

### 1.4.2.1. Notification Need for Meter Read (State Diagram)

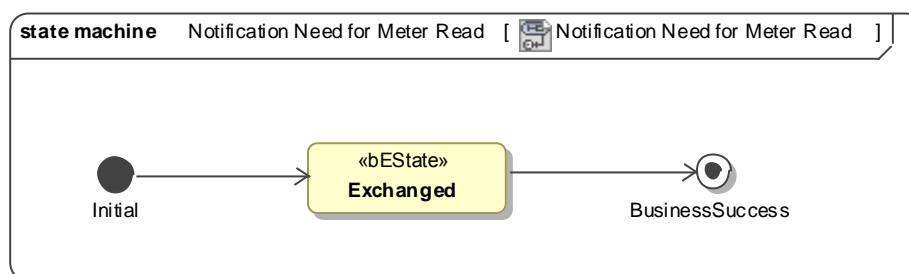


Figure 12 SD Notification Need for Meter Read