HOW EDIG@S MAY SATISFY THE GAS PROCESSES

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Message and Workflow Design Working Group (Edig@s-WG)

Agenda

- What is Edig@s
- History of Edig@s and of the Edig@s WG
- Major gas roles: Who may/shall use Edig@s
- Geographical coverage of Edig@s in Europe in 2012
- Major business processes covered by Edig@s
- Major use cases covered by Edig@s
- Edig@s documentation (Message Implementation Guidelines)
- Process to create MIG documentation
- Conclusions

What is Edig@s?

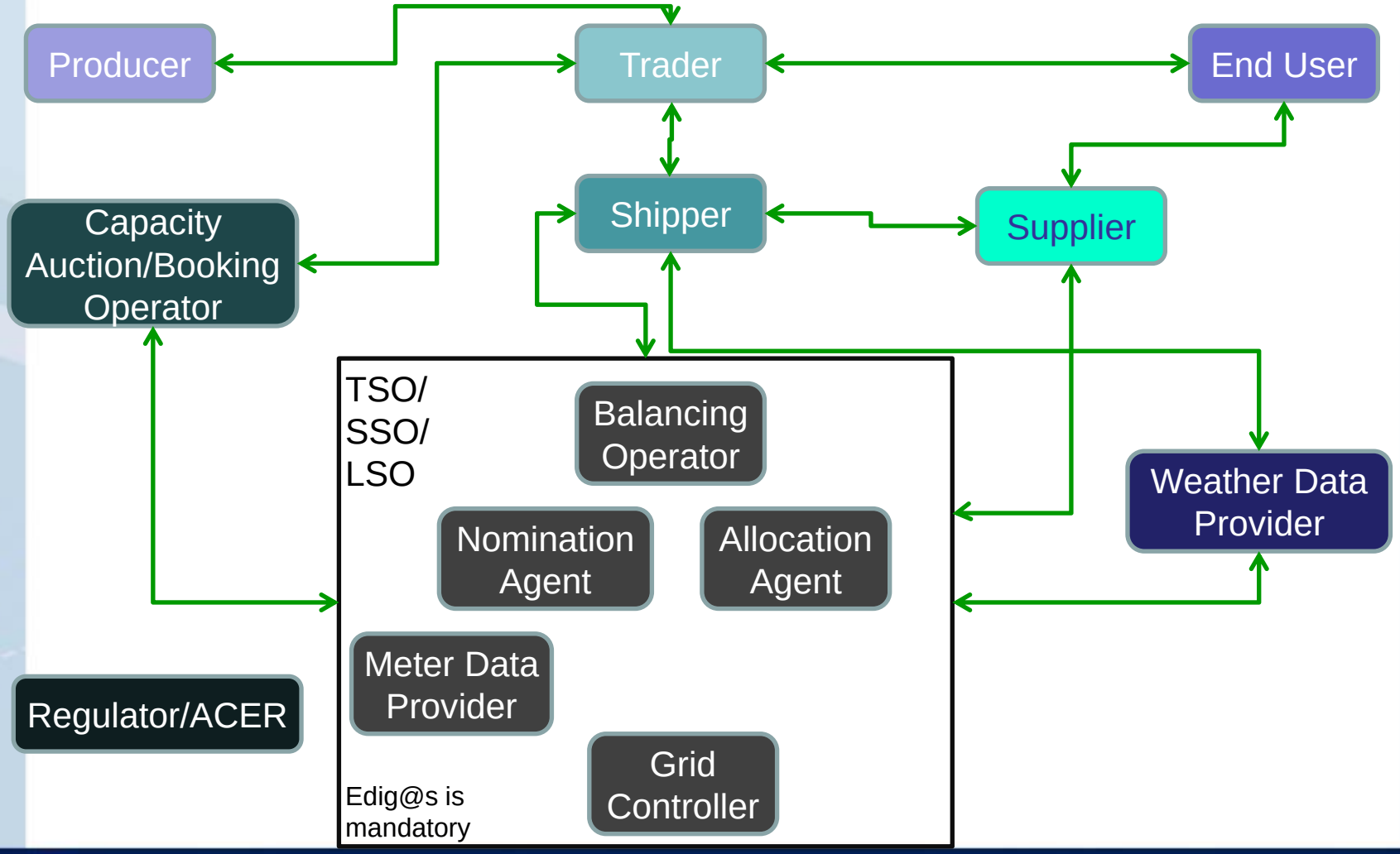
- EDI standard for the exchange of data via electronic means between parties involved in the gas industry.
  - It uses XML format
  - Former version was using UN/EDIFACT format
  - It is a kind of language
  - It is not a communication protocol (FTP, AS2, AS4) !!
  - It is independent from the communication medium (internet, ISDN, ..)
  - Based on UML (Unified Modelling Language)

- Trademark by EASEE-Gas
  - Free of charge
  - Developed and maintained by Edig@s WG on behalf of the EASEE-Gas association where all gas segments are represented

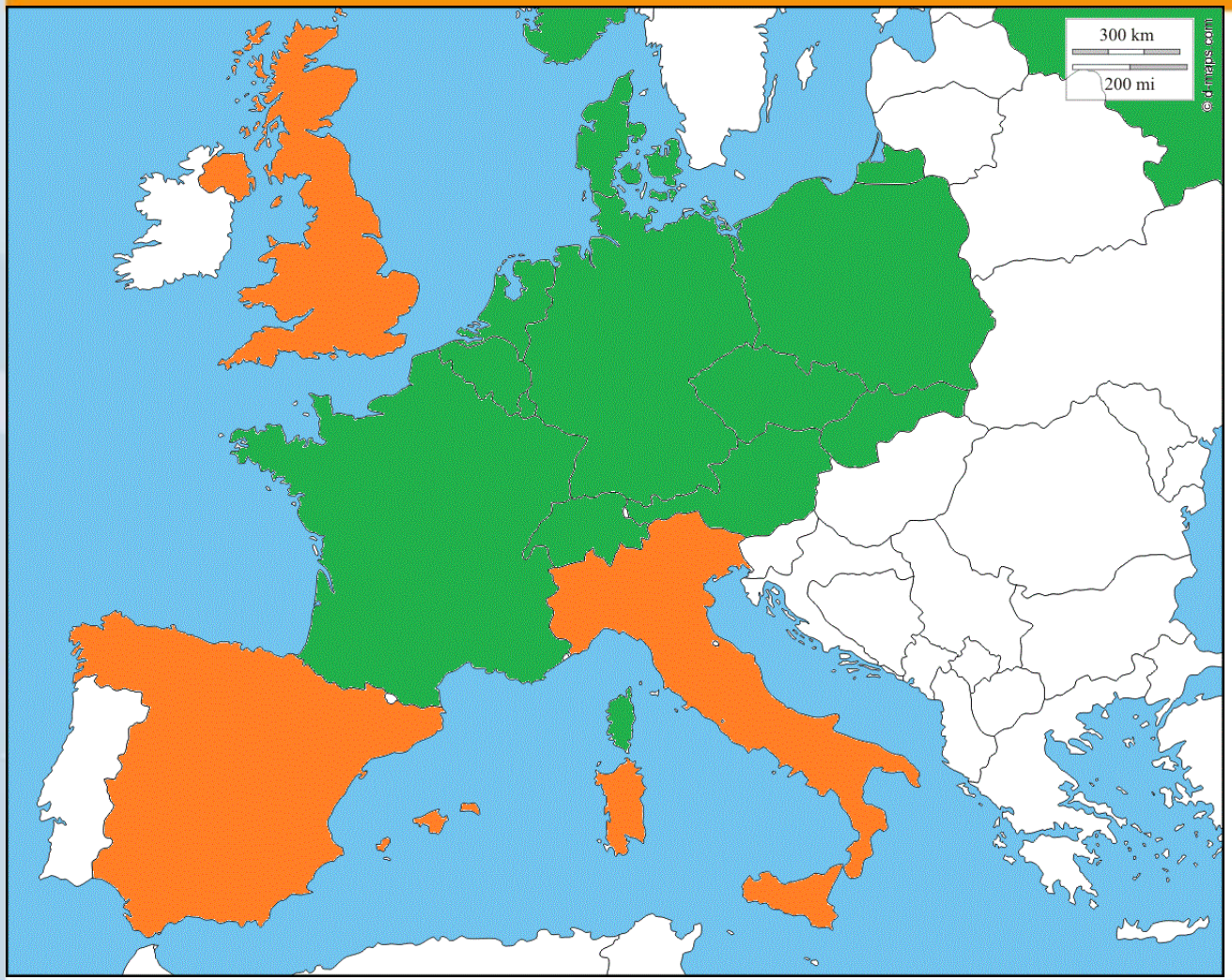
History

- UN/EDIFACT was created in 1987 under the United Nations
- Edig@s was created in 1996 as European standard for information exchange related to the gas market
- In 2002, merged into EASEE-Gas as the working group WG2: Message and Workflow Design Working Group
- In 2003, Edig@s adopted as an EASEE-Gas Common business Practise
- In 2007, version 4 of the Edig@s message set was approved proposing the Edig@s message set in both the UN/EDIFACT and the XML syntax using business process modelling methodology (UML)
- End of 2013, Version 5 (only XML) of the Edig@s message set was approved

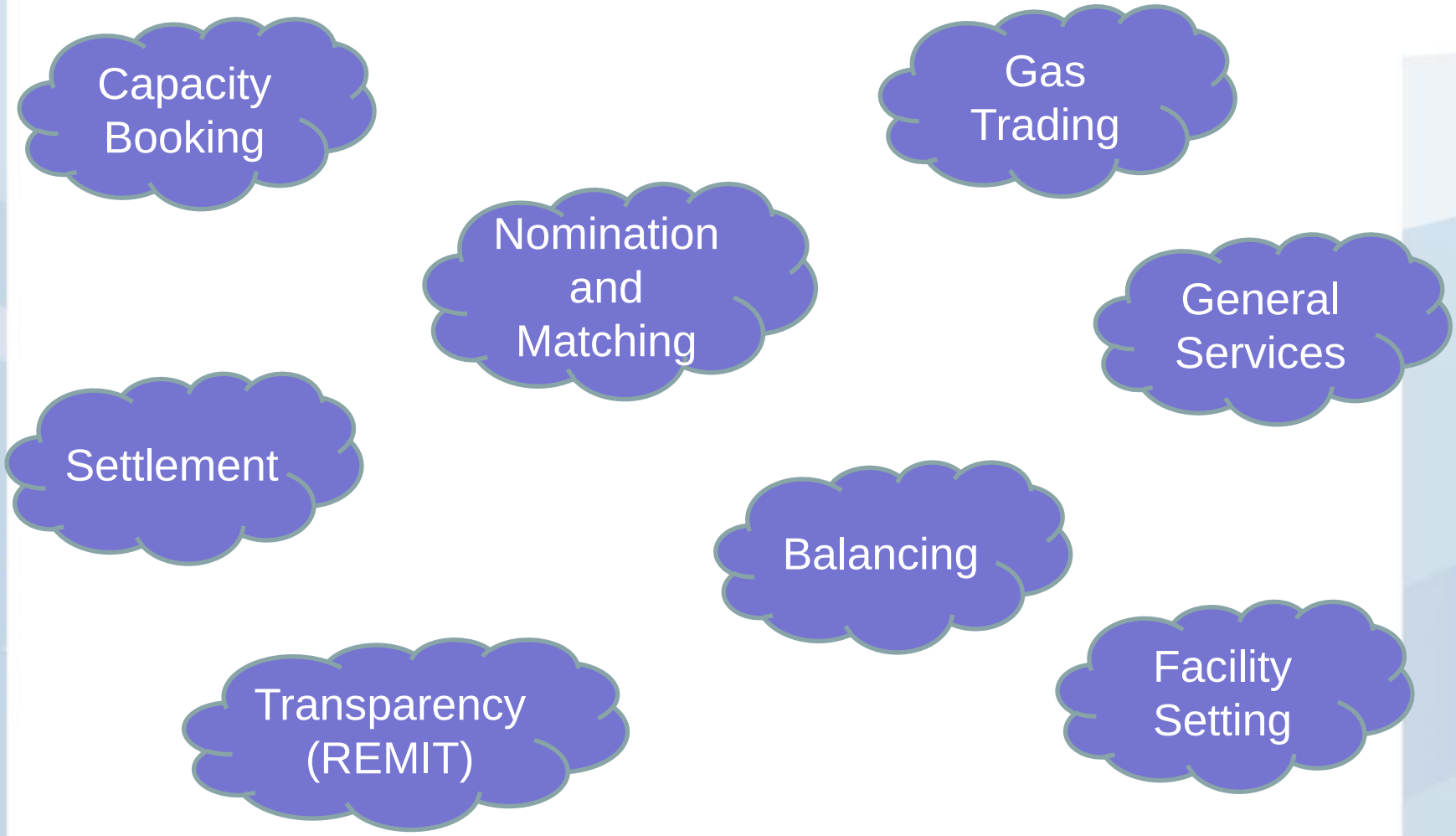
Major Gas Roles in the Market



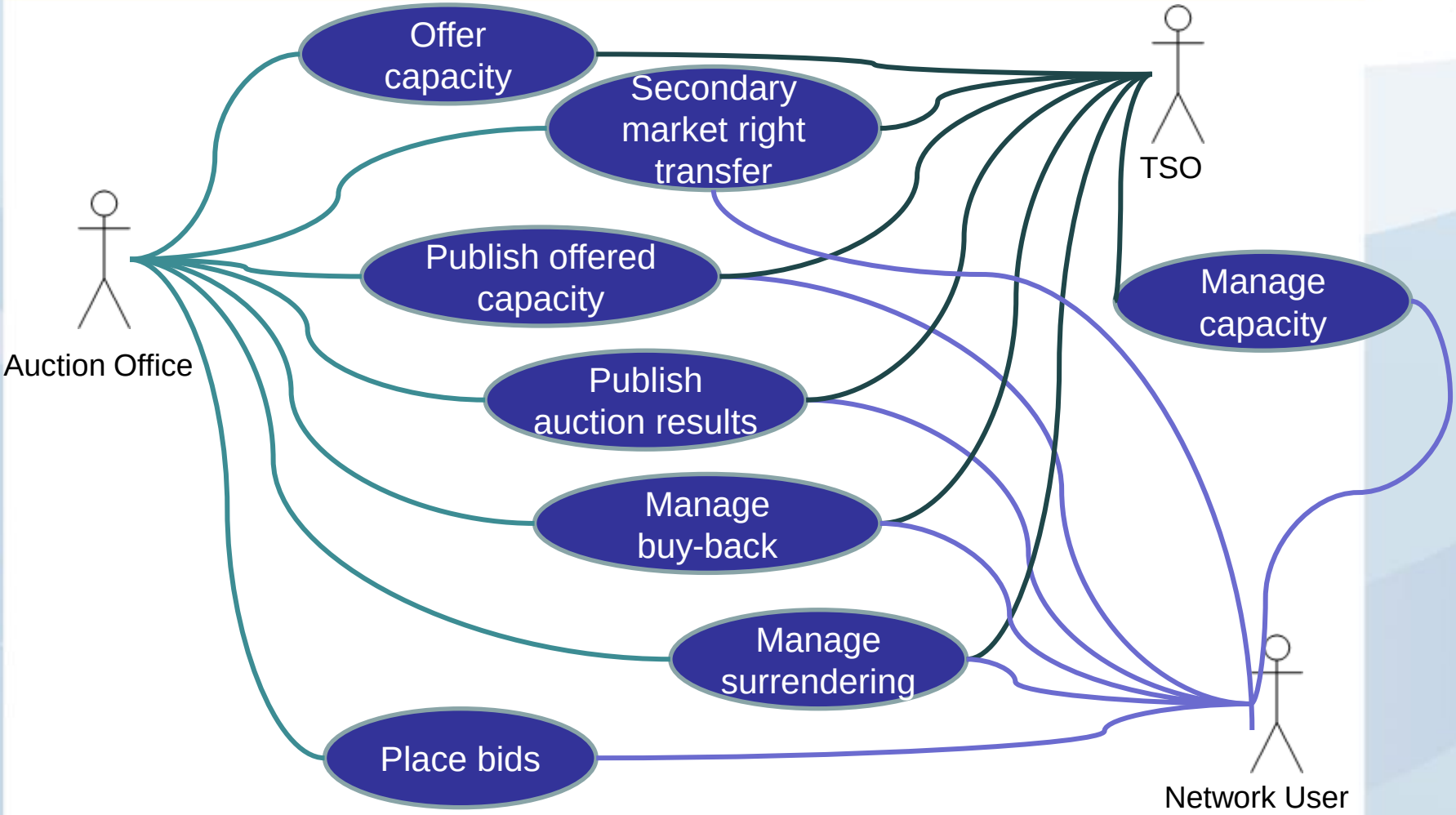
Geographical coverage of Edig@s in Europe in 2012



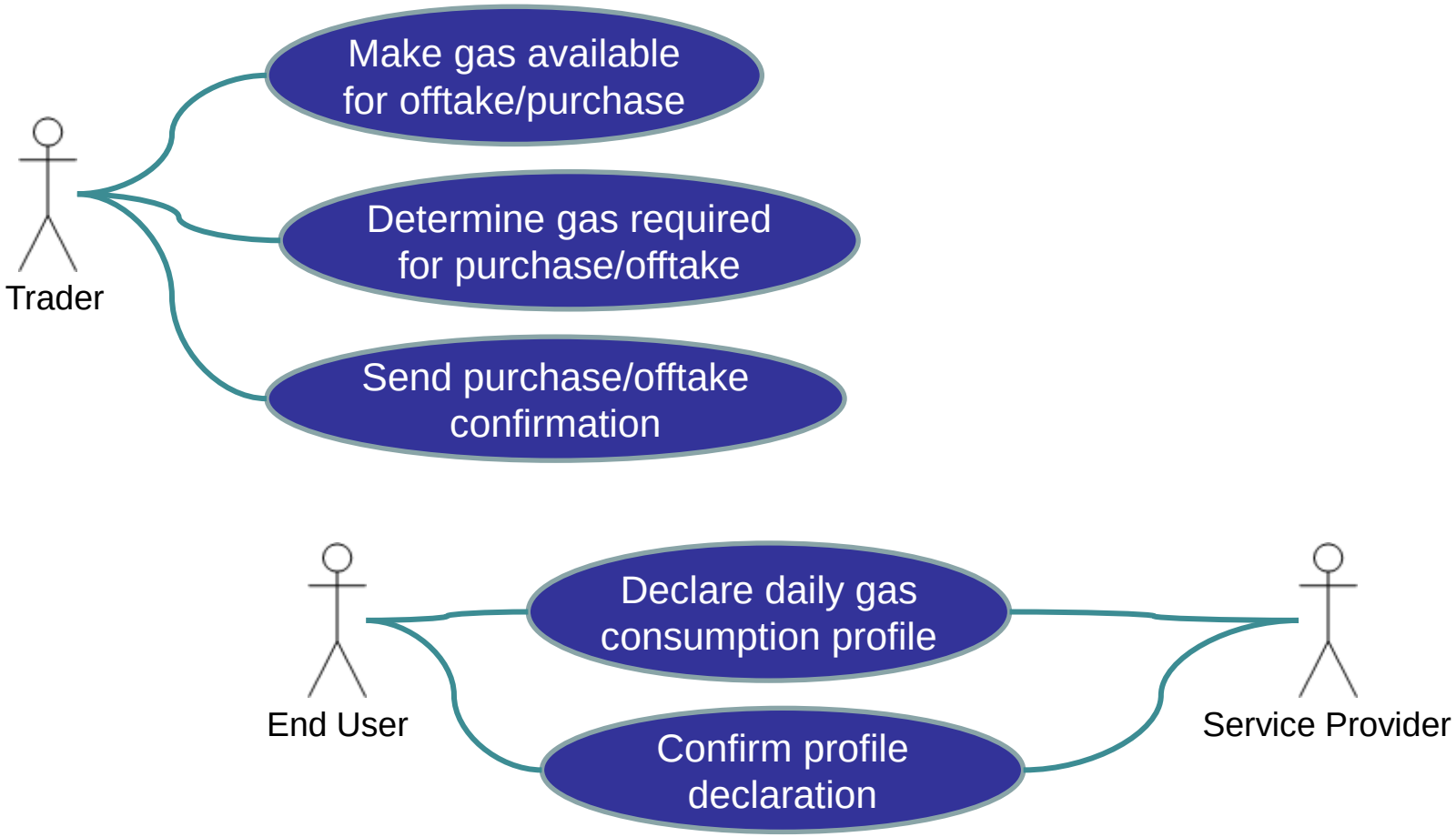
Major Processes covered by Edig@s



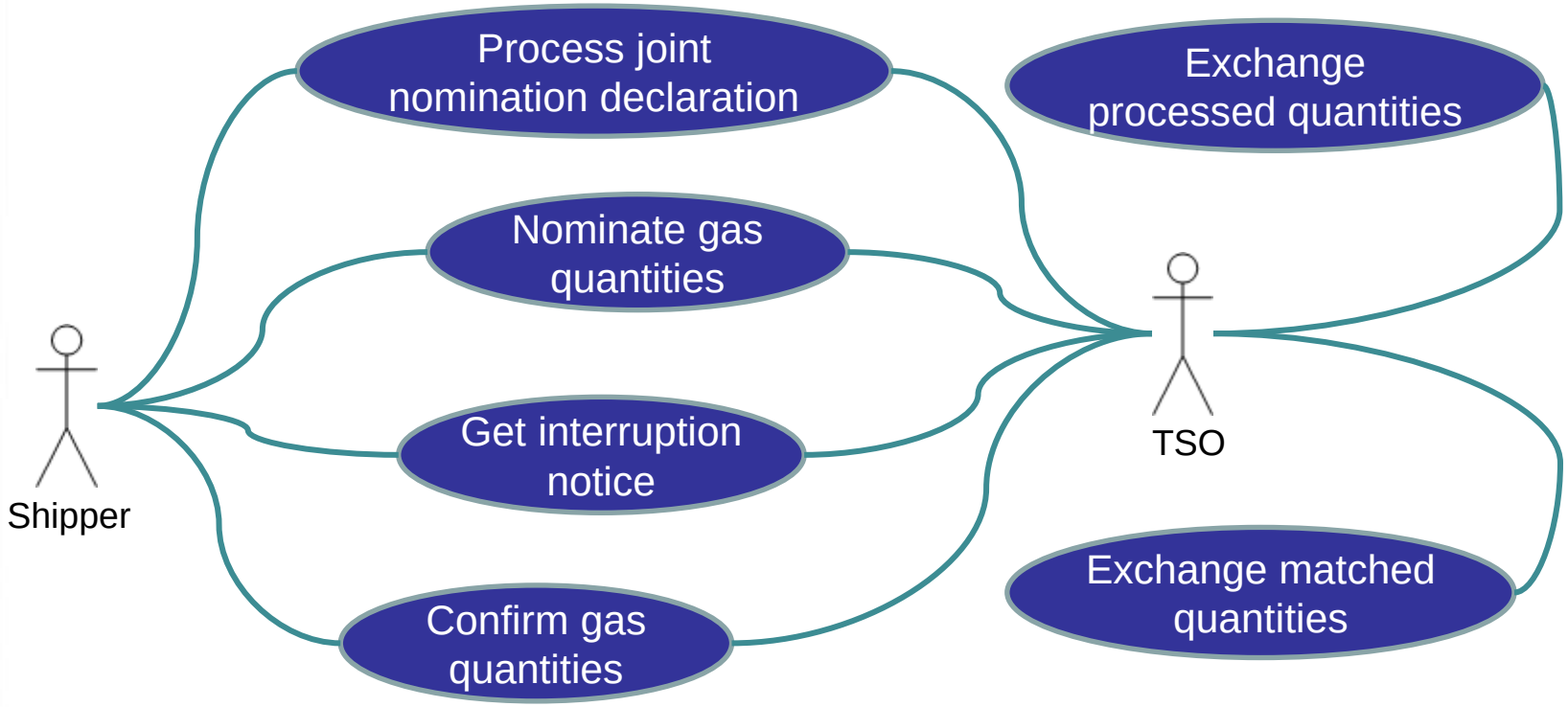
Capacity Booking: Use Cases covered by Edig@s



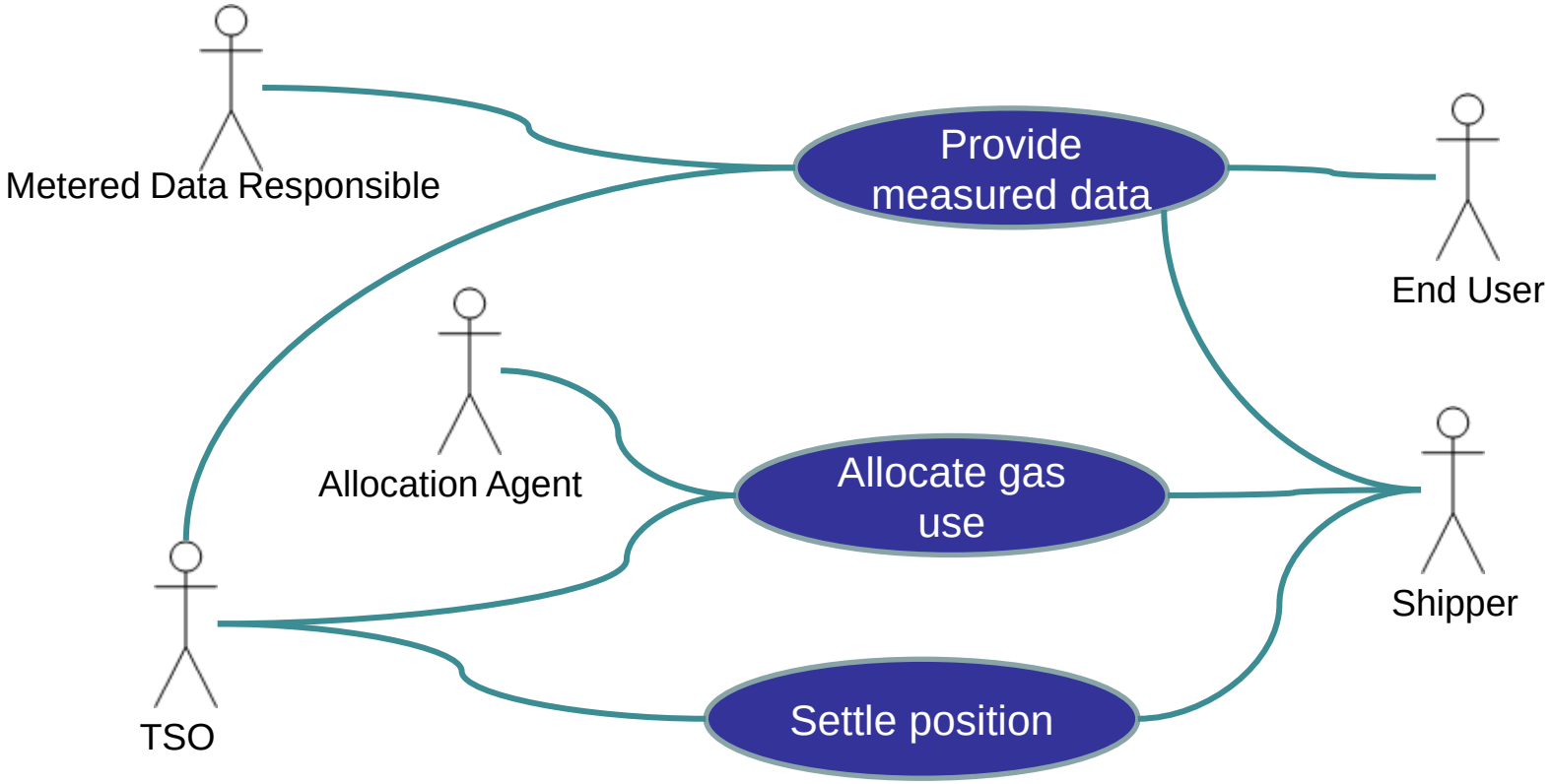
Gas Trading: Use Cases covered by Edig@s



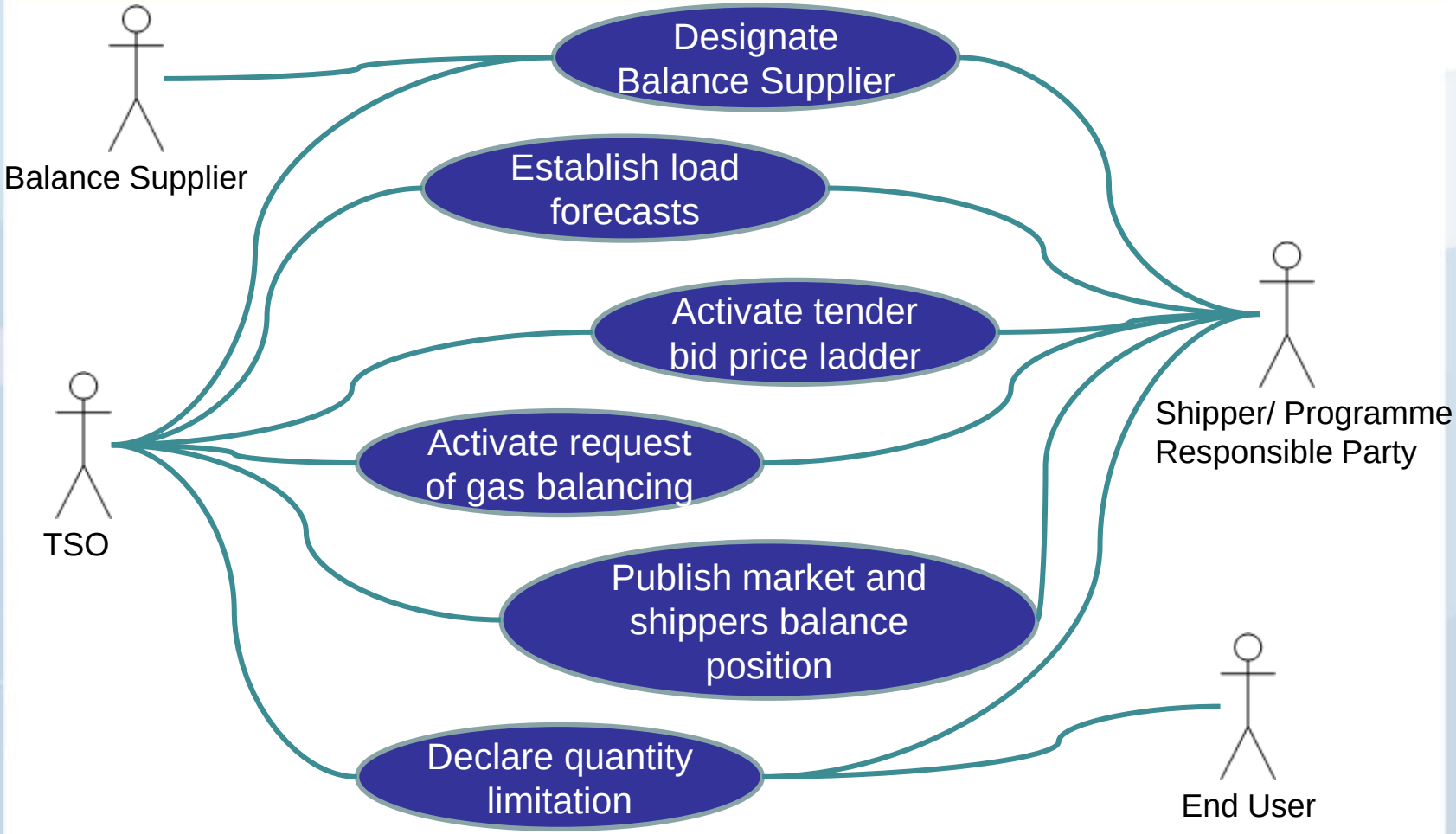
Nomination & Matching: Use Cases covered by Edig@s



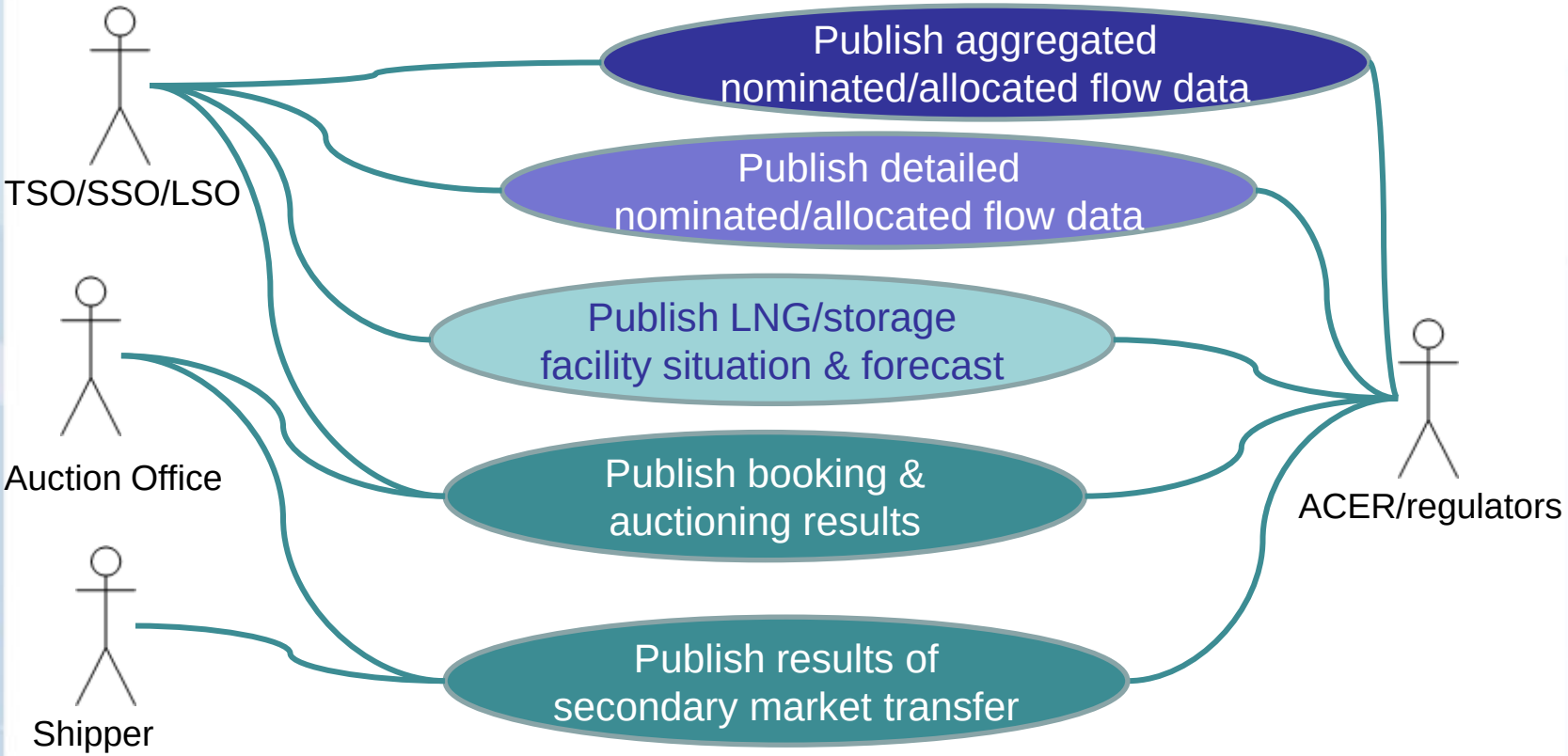
Settlement: Use Cases covered by Edig@s



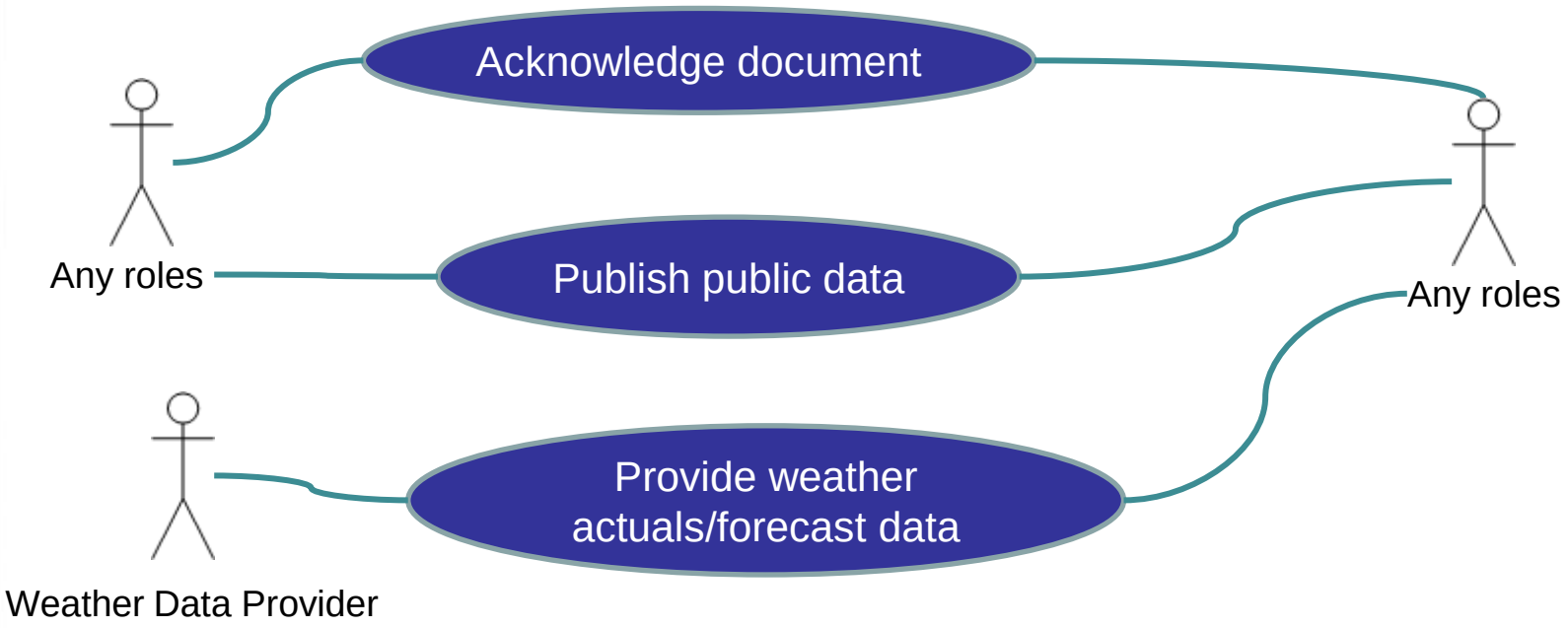
Balancing: Use Cases covered by Edig@s



Transparency (REMIT): Use Cases covered by Edig@s



General Services: Use Cases covered by Edig@s



What is an Edig@s document

- General description of the business process
  - Use case; Sequence; Workflow
- Contextual and assembly model
- Information model description

3.4.6 RULES GOVERNING THE INFORMATION ORIGIN TIMESERIES CLASS

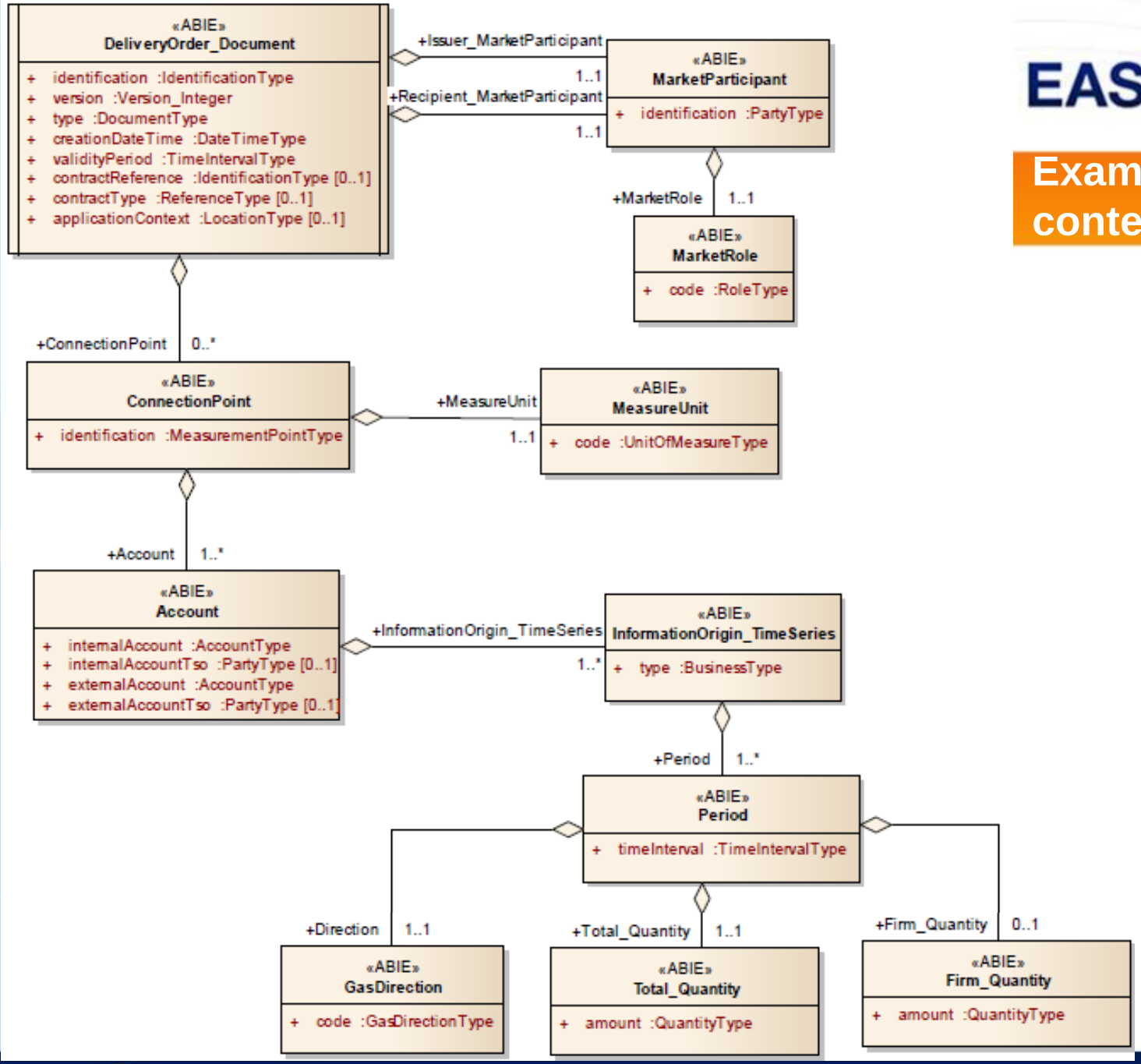
There must always be an Information Origin TimeSeries class.

3.4.6.1 TYPE

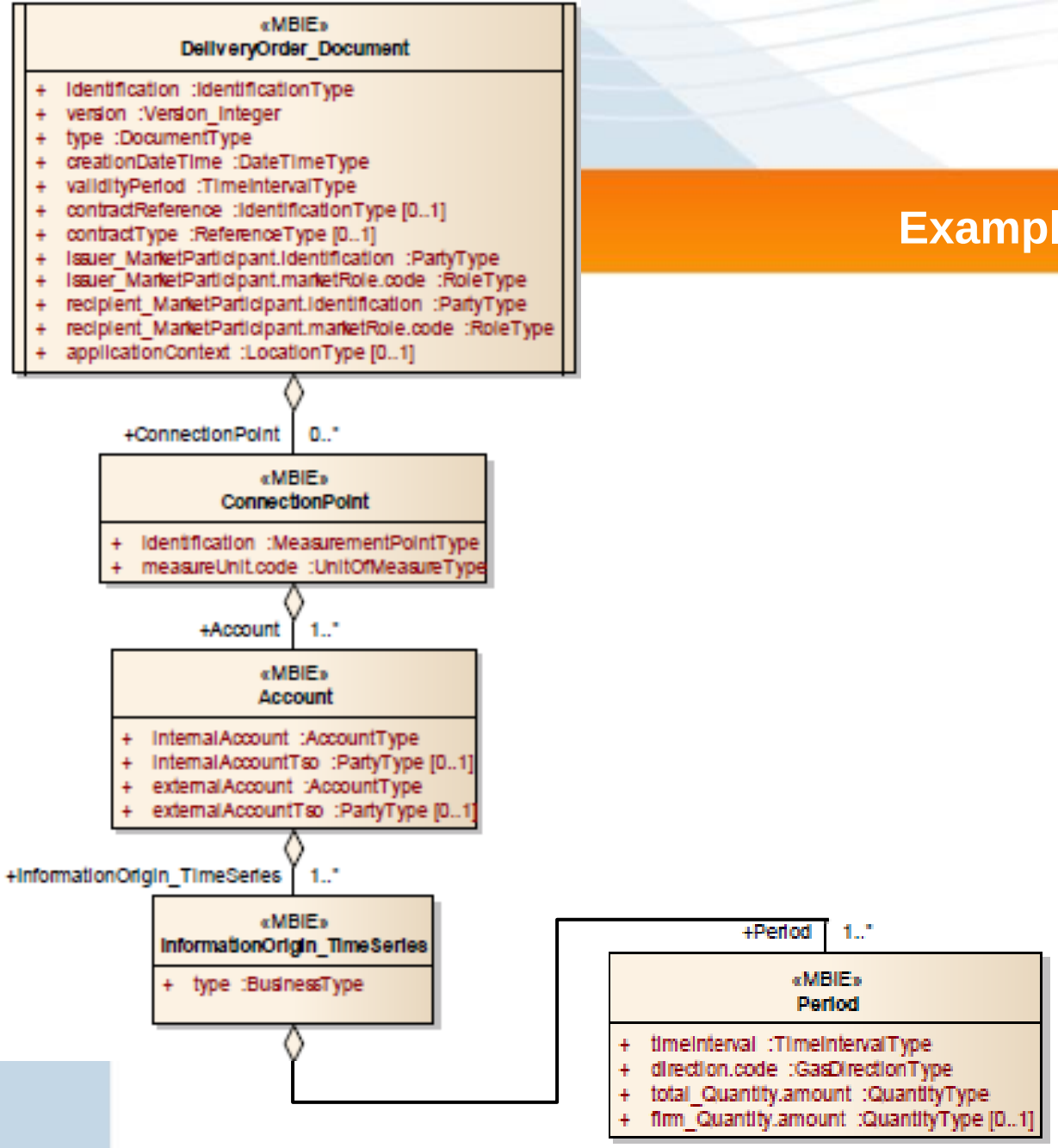
ACTION	DESCRIPTION
Definition of element	The identification of the origin of the information in the time series
Description	The identification of the source of the information that is provided in the Period class and its dependents. The following types are permitted: 12G = Accepted by System Operator 14G = Processed by System Operator **Note:** 14G is mandatory in the Callup notice. 12G is mandatory in the Forwarded single sided nomination. 12G is used in the Callup notice when initial nomination values are required to satisfy specific market rules. (Reference Edig@s BusinessType code list).
Size	The maximum length of the type is 3 alphanumeric characters.
Applicability	This information is mandatory.
Dependence requirements	None.

EASEE-gas

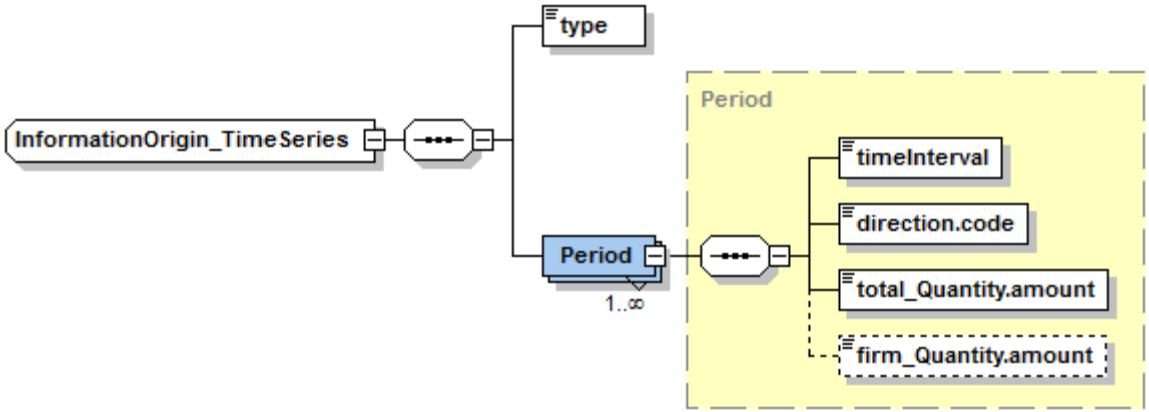
Example of contextual model



Example of assembly model



Extract of an XSD




```
<xs:complexType name="InformationOrigin_TimeSeries" sawsdl:modelReference="http://easee-gas/edigas#TimeSeries">
  <xs:sequence>
    <xs:element name="type" type="BusinessType" sawsdl:modelReference="http://easee-gas/edigas#TimeSeries.type"/>
    <xs:element name="Period" type="Period" maxOccurs="unbounded" sawsdl:modelReference="http://easee-gas/edigas#TimeSeries.Period"/>
  </xs:sequence>
</xs:complexType>
<xs:simpleType name="BusinessType" sawsdl:modelReference="http://easee-gas/edigas#BusinessType">
  <xs:restriction base="BusinessTypeList"/>
</xs:simpleType>
<xs:complexType name="Period" sawsdl:modelReference="http://easee-gas/edigas#Period">
  <xs:sequence>
    <xs:element name="timeInterval" type="TimeIntervalType" sawsdl:modelReference="http://easee-gas/edigas#Period.timeInterval"/>
    <xs:element name="direction.code" type="GasDirectionType" sawsdl:modelReference="http://easee-gas/edigas#GasDirection.code"/>
    <xs:element name="total_Quantity.amount" type="QuantityType" sawsdl:modelReference="http://easee-gas/edigas#Quantity.amount"/>
    <xs:element name="firm_Quantity.amount" type="QuantityType" minOccurs="0" sawsdl:modelReference="http://easee-gas/edigas#Quantity.amount"/>
  </xs:sequence>
</xs:complexType>
<xs:simpleType name="GasDirectionType" sawsdl:modelReference="http://easee-gas/edigas#GasDirectionType">
  <xs:restriction base="GasDirectionTypeList"/>
</xs:simpleType>
```

Process from BRS….

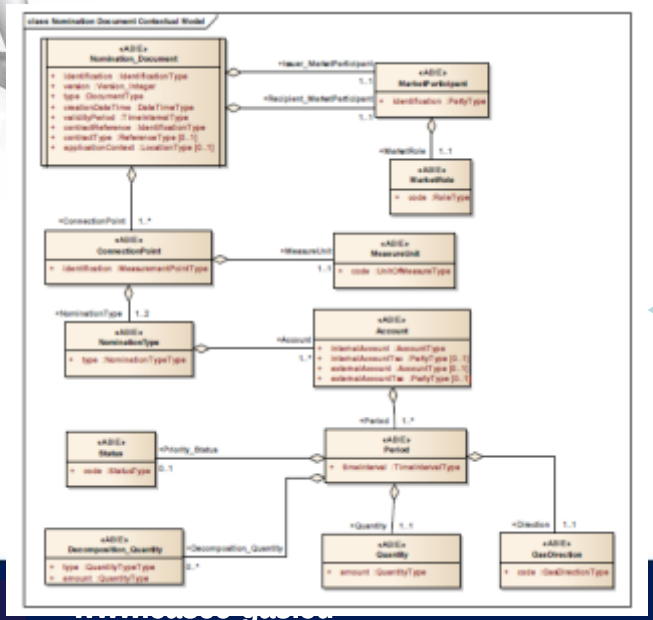
Explanations: network code; business process and rules/constraints; sequence & workflow diagrams; business data requirements

Edig@s WG

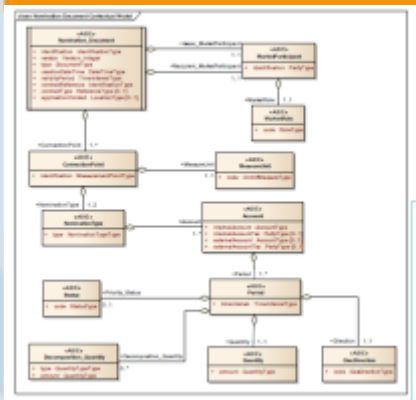
ENTSOG WG

Process …. via the contextual model….

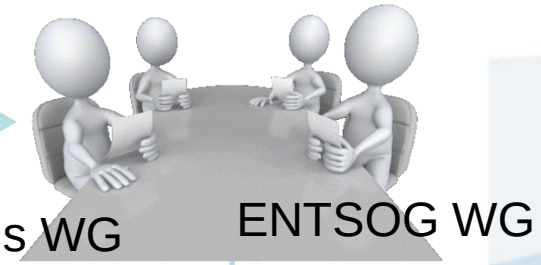
Development of the information model



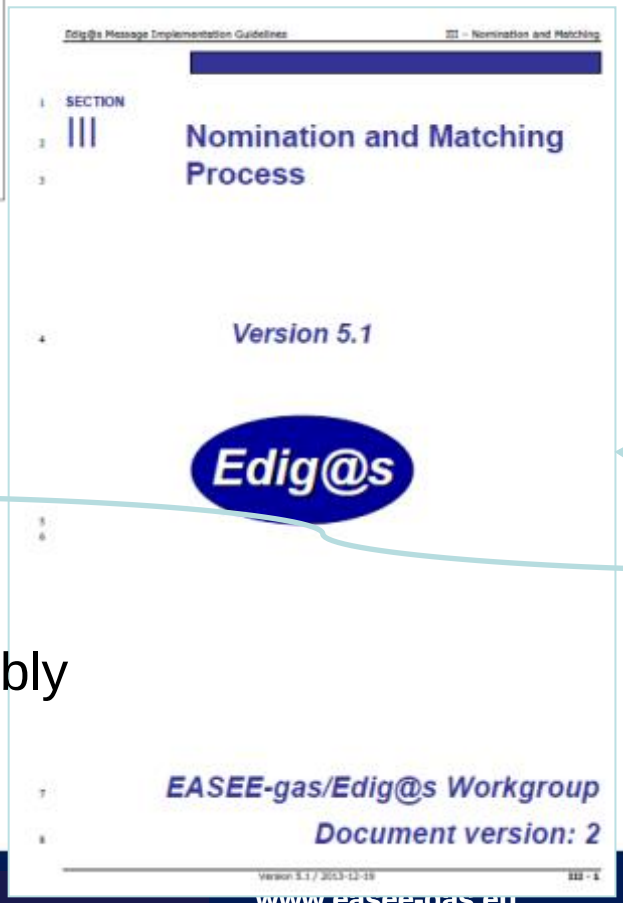
Process …. to the Message Implementation Guidelines ….



Validation of the information model



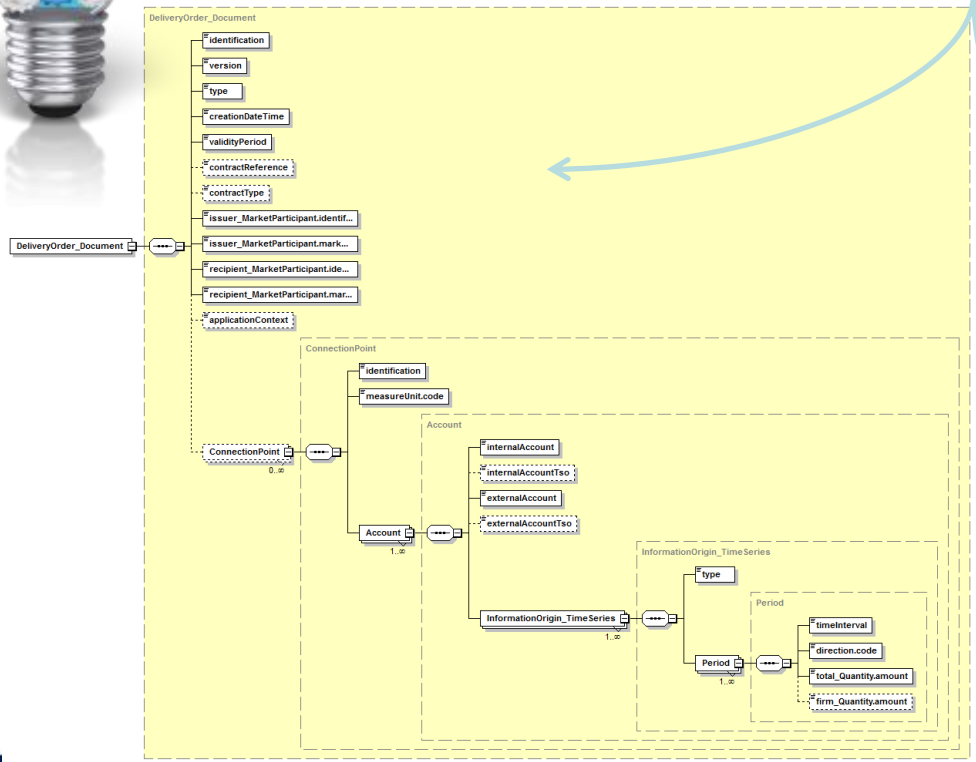
Preparation of the documentation

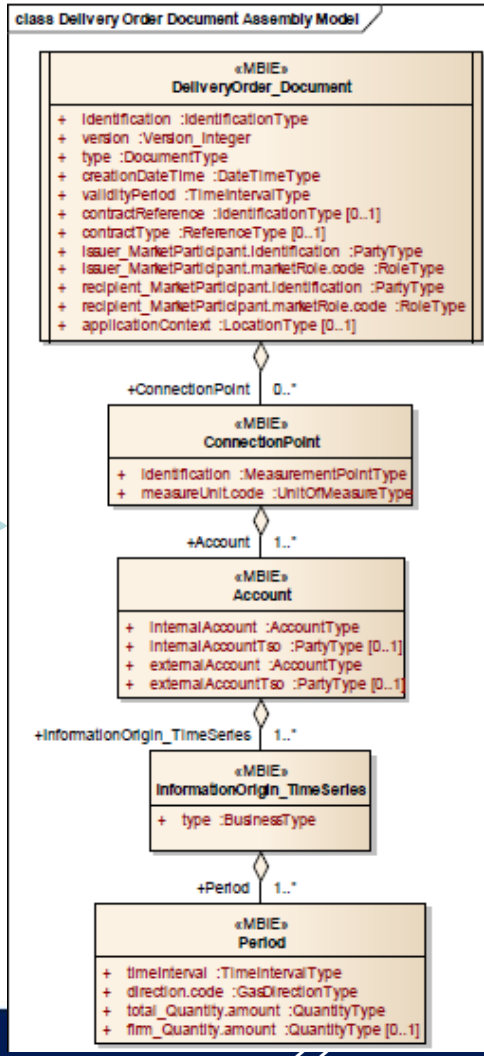


Generate assembly model and XSD

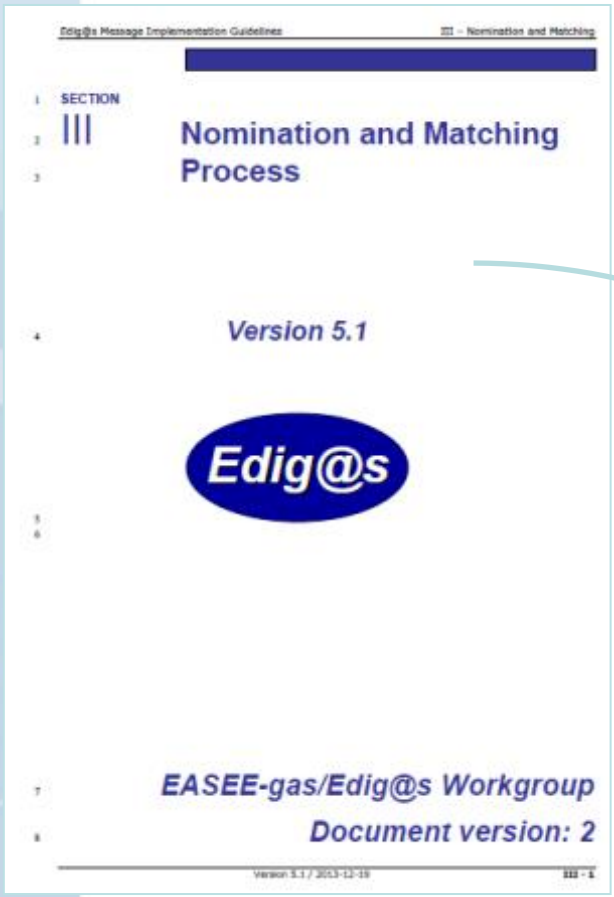
Process …. and to the XSDs….

Review assembly model and XSD

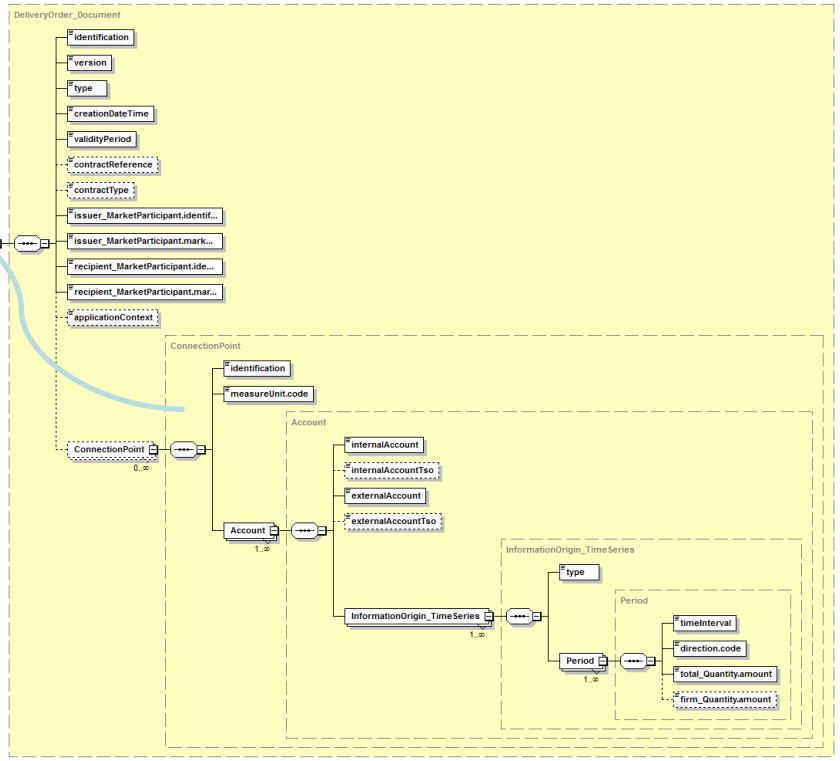




Process …. And finally the approval phase



Approval by Edig@s WG & ENTSOG



New or different functions between version 4 and 5

VERSION 4	VERSION 5
Handled both UN/EDIFACT and XML delivery mechanisms	Handle only an XML delivery mechanism
	Revampe all the message structures to provide a more coherent requirements layout
	Introduce ENTSOG requirements
	Developed with EA UML modelling process from IEC modelling standard.
	Harmonisation of all document headers
	Harmonisation of the document identification with versioning
	Only EIC (Energy Identification Coding) code is authorised for the party identification

Conclusions

- Edig@s: Continuous development but stable process
- New version every 4 years
- Advantages:
  - Harmonised implementation in Europe when TSOs are impacted in communication process
  - Used by major cross-European shippers also for processes between shippers
  - Strict enough to authorise some local interpretation while the message structure is identical for everyone
  - Free of charge (XSDs)
  - Easy to implement (XML version)
  - Covers major gas processes (except short term trading and invoicing)
  - Covers major gas user segments (except public distribution)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