Interoperability Network Code Data Exchange requirements WS

Stakeholders' Workshop

Brussels – 25 February 2014

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WELCOME….

Brussels – 25 February 2014

Interoperability Network Code Data Exchange requirements WS

Stakeholders' Workshop

Panagiotis Panousos

Business Area Manager, System Operation

Brussels – 25 February 2014

Emergency Evacuation

- Emergency Evacuation Plans - Plans located on two main corridors of ENTSOG office indicating the way of evacuation from offices located on the Second Floor of Cortenbergh 100 Building.
- The meeting point is in front of the Mosque –Parc du Cinquantenaire,

Plan d'évacuation | Evacuatie plan | Evacuation map

ENTSOG aisbl - GIE aisbl

CONSIGNES EN CAS D'INCENDIE

Ne paniquez pas
N'emportez rien
Ne revenez pas sur vos pas
Dirigez-vous vers une issue de secours
N'utilisez pas les ascenseurs
Rendez-vous au lieu de rassemblement

VEILIGHEIDSRICHTLIJNEN IN GEVAL VAN BRAND

Blijf kalm
Neem niets mee
Keer niet terug
Begeef u naar een nooduitgang
Gebruik geen liften
Afspraak op verzamelpunt

WHAT TO DO IN CASE OF FIRE

Keep calm
Don't take anything
Don't come back in your room
Leave building via emergency exit
Do not use the elevator
Go to the meeting point

VOUS ETES ICI / U BENT HIER / YOU ARE HERE

CHEMIN D'EVACUATION / VLUCHTWEG / EVACUATION WAY

POINT DE RASSEMBLEMENT / VERZAMEL PUNT / MEETING POINT

EXTINCTEUR / BRANDBLUSAPPARAAT / FIRE EXTINGUISHER

DEVIDOIR / HASPEL / FIRE HOSE REEL

BOUTON D'ALARME / ALARM DRUKKNOP / ALARM BUTTON

LOCAL ELECTRICITE / ELEKTRICITEITSLOKAAL / ELECTRICAL ROOM

SORTIE DE SECOURS / NOODUITGANG / EMERGENCY EXIT

SORTIE NORMALE ET DE SECOURS / UITGANG EN NOODUITGANG / USUAL AND EMERGENCY EXIT

+2

APL

DESSINE : MD | DATE : 17/06/2011 | NUMERO DU PLAN : n°02 | MISE À JOUR : 01

Introduction

- Participants through webex to identify themselves
- Consultation on-line response form through Monkey Survey– CNOT process and BAL BRS - (non-confidential) responses published
- Report on received consultation responses to be published
- Material and notes / list of participants to be published

…hoping that this has been a fully transparent process

Structure of event

AGENDA

Please note all sections (other than the Welcome) will allow time for open discussion

No	Description	Time
1	**Opening** (ENTSOG: Panos Panousos) > Welcome / Introduction / Structure of Event > Objectives	**10:00-10:15**
2	**CNOT process** > Presentation of CNOT development process (ENTSOG) > Task of EASEE-gas > Discussion panel (Q&A)	**10:15-11:15**
	Coffee Break	**11:15-11:30**
3	**Current BRSs presentation** > BRS Nominations and Matching (ENTSOG) > Status of CAM process including CMP extensions (ENTSOG) > Stakeholders' view > Discussion	**11:30-13:00**
	Lunch	**13:00-14:00**
4	**AS4 protocol profile** > Introduction (ENTSOG) > First version of the AS4 profile (ENTSOG) > Proof of concept (ENTSOG) > Further planning and evaluation (ENTSOG) > Stakeholders' view > Discussion Panel (Q&A)	**14:00-15:30**
	Coffee Break	**15:30-15:45**
5	**Conclusions and closing remarks**	**15:45-16:00**

Thank You for Your Attention

Panagiotis Panousos
Business Area Manager, System Operation

ENTSOG -- European Network of Transmission System Operators for Gas
Avenue de Cortenbergh 100, B-1000 Brussels

EML: Panagiotis.panousos@entsog.eu
WWW: www.entsog.eu

Common Network Operation Tools

Process for the development of data exchanges

Monika Kaldonek

ENTSOG Adviser

Brussels 25 Feb 2014

Background

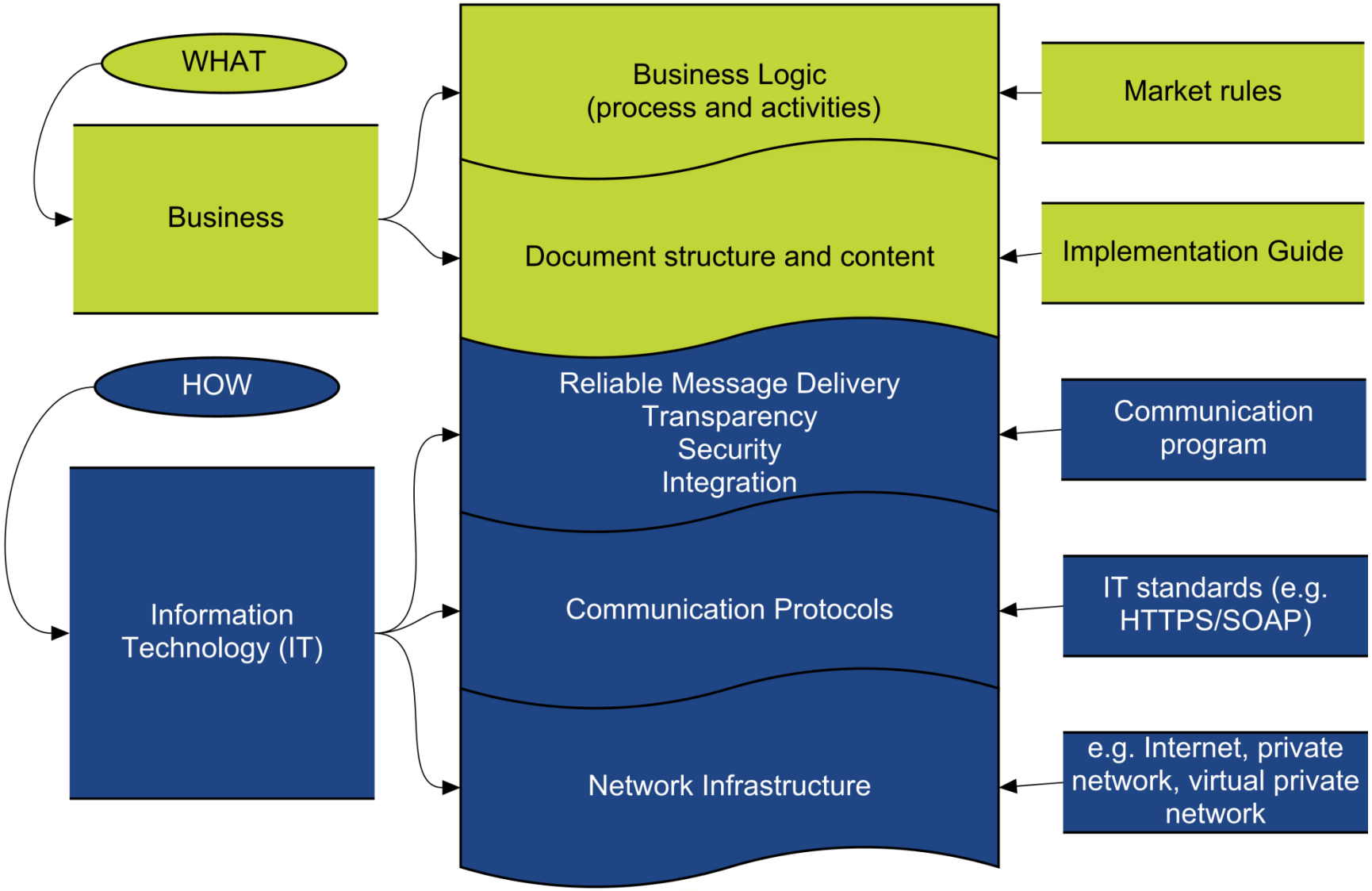
- **WHY: Regulation 715/2009 (Art 8)** – ...*ENTSOG shall adopt: common network operation tools to ensure coordination of network in normal and emergency conditions*,..

- **WHERE:** INT NC provides tools to fulfill the box of `**HOW**‘ data exchanges shall be done

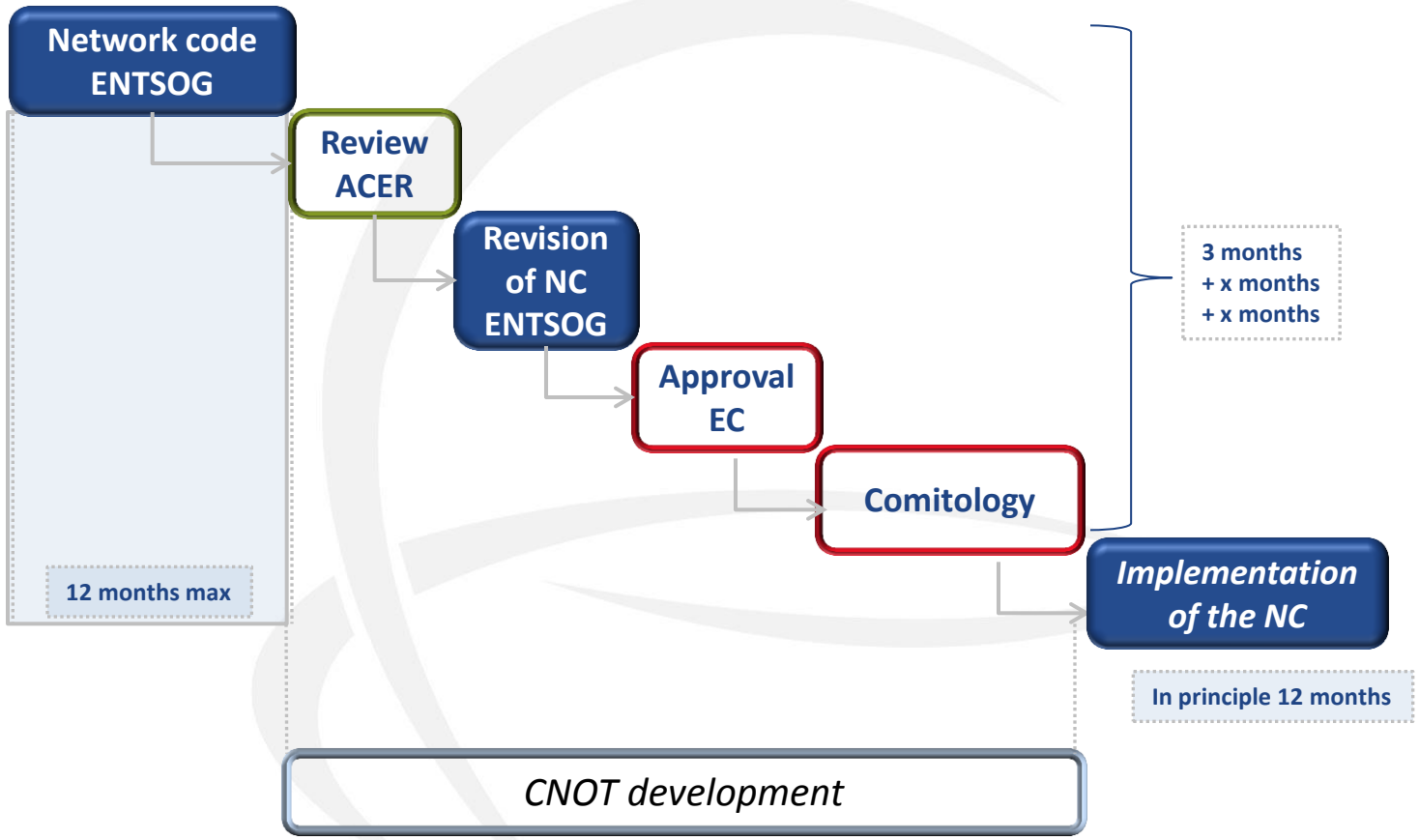
- **WHERE:** INT NC requires ENTSOG to prepare CNOTs wherever data exchange requirements are identified (the box of `**WHAT**‘)

- **STRUCTURE**: for each identified DE need (through NCs) CNOT may consist of:
  - Business Requirement specification (BRS)
  - Technical implementation guideline (IG) and supporting documents

WHAT and HOW


WHAT
Business
HOW
Information Technology (IT)
Business Logic (process and activities)
Document structure and content
Reliable Message Delivery
Transparency
Security
Integration
Communication Protocols
Network Infrastructure
Market rules
Implementation Guide
Communication program
IT standards (e.g. HTTPS/SOAP)
e.g. Internet, private network, virtual private network

CNOT Development Process

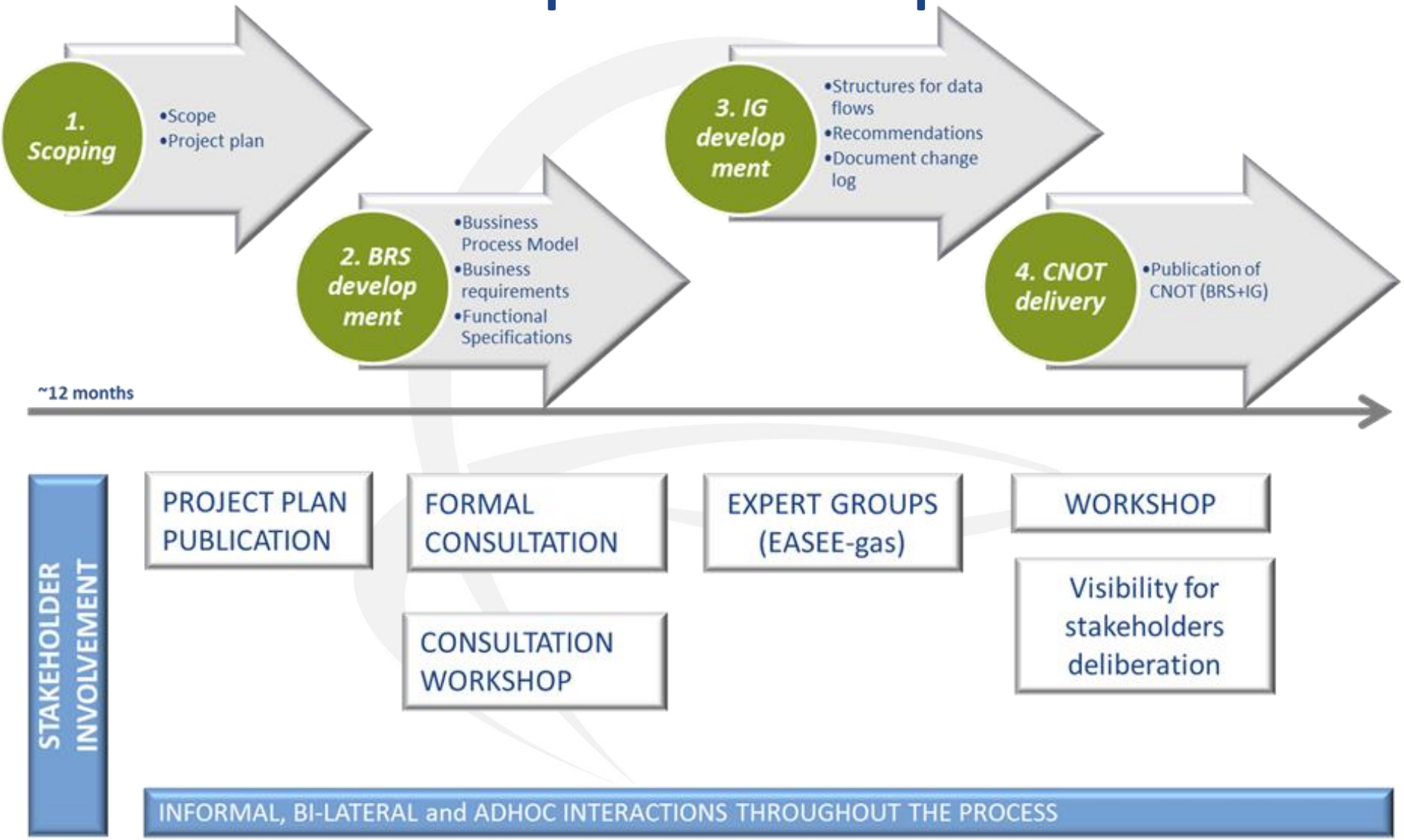


To ensure that DE solutions are ready when NC(s) has to be implemented

CNOT process objective

- To make clear and understandable rules for development of new CNOTs
- To indicate stakeholder‘s involvement
- To ensure transparency by publishing all the relevant documents on the ENTSOG website and organising Public Consultations
- To ensure that the data exchange solutions will be ready for implementation in due time

CNOT process description



PHASE I - Scoping

Activity

- Shall be **managed** by ENTSOG
- Based on relevant **NCs needs**
- Starts when relevant NC is submitted to ACER
- Shall be **announced** on the ENTSOG website
- Establish a dedicated Task Force

Timing

- Foreseen to take 3-4 months

Key deliverables

- **Project plan** including **scope**
- BRS **Task Force**
- **Publication** of the **scope** and project plan

Stakeholders' engagement

- Information about upcoming project
- Project plan including scope will be published

PHASE II – BRS development

Activity

- Shall be managed by ENTSOG
- Based on scope
- Based on Unified Modeling Language (**UML**):
  - Description of the Business Process Model
  - Development of business requirements
  - Functional Specification
  - Information model

Timing

- Foreseen to take max. 6 months

Key deliverables

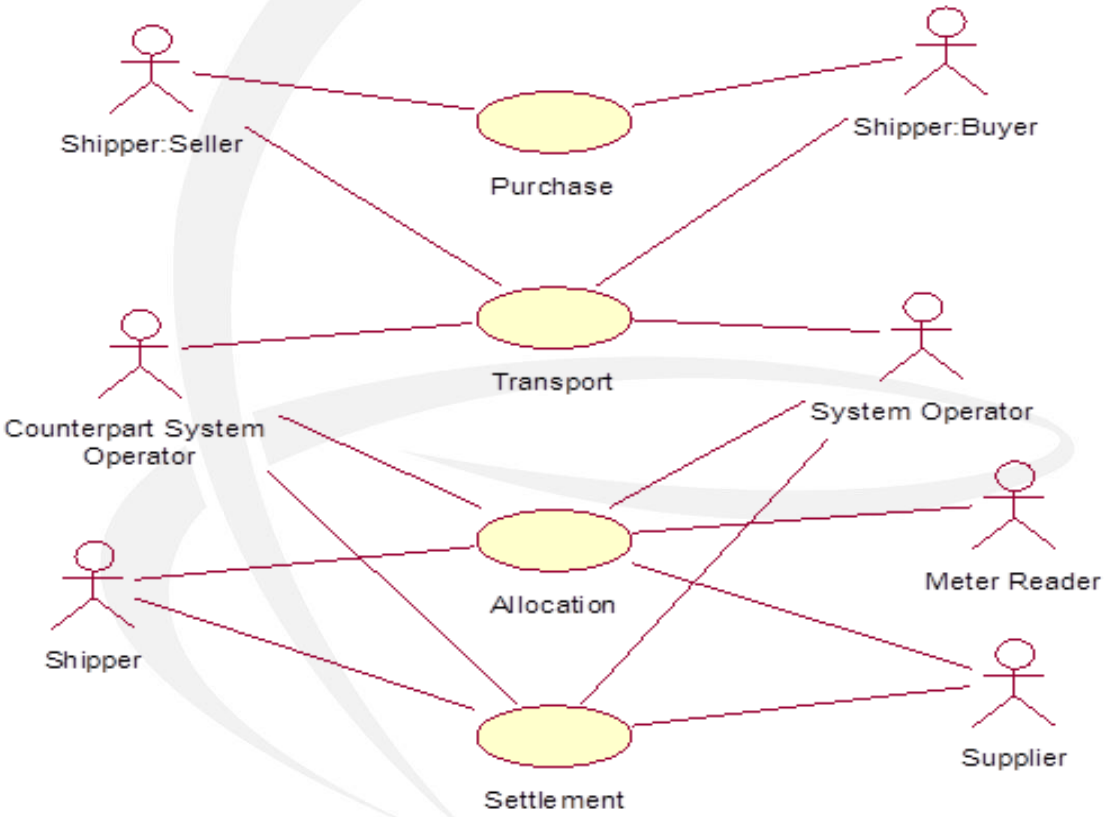
- Business Requirement Specifications
- Public Consultation report

Stakeholders' engagement

- Formal public consultations
- Interactive stakeholders' sessions

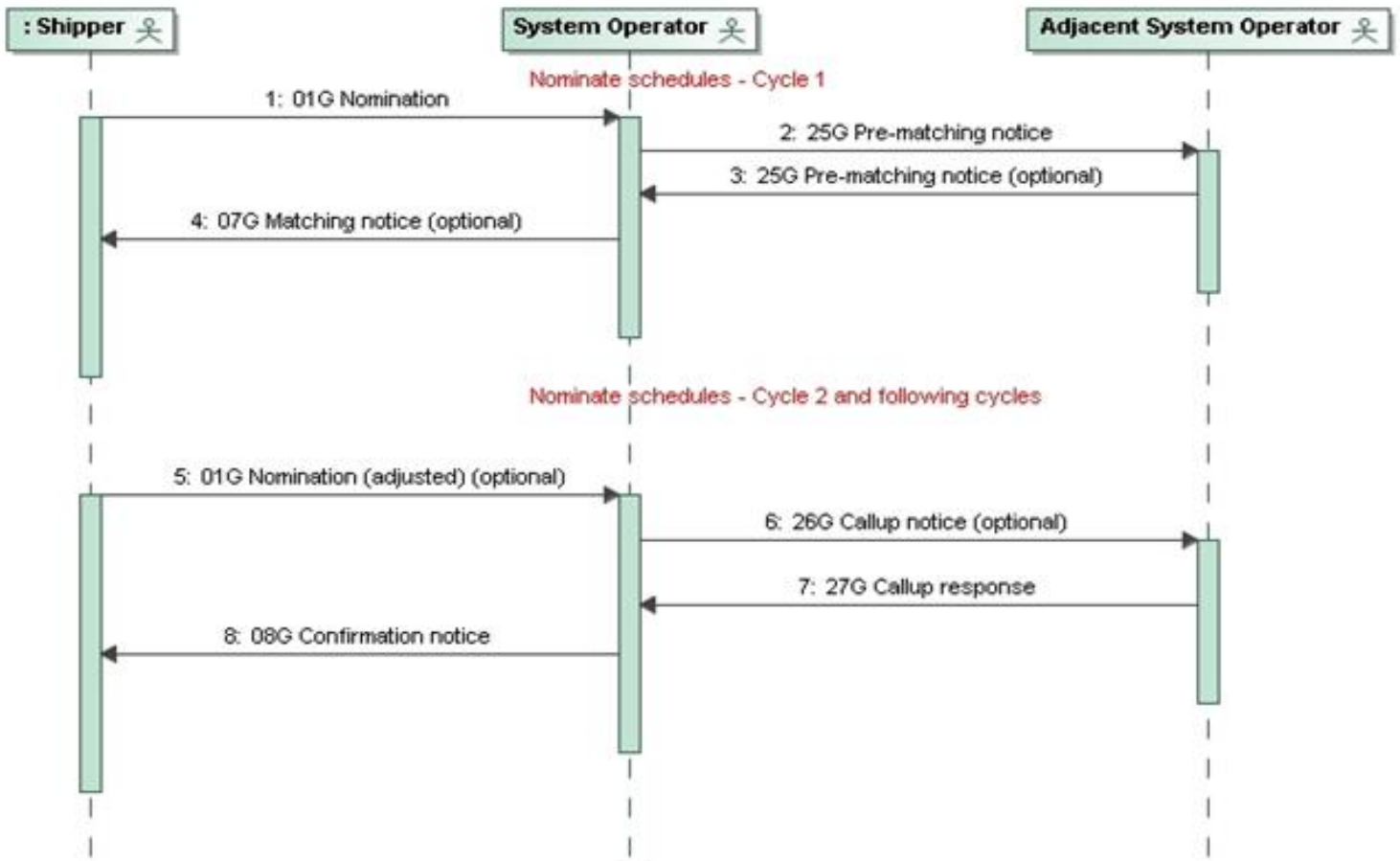
UML methodology

1. Define Use cases with use case diagrams - Example



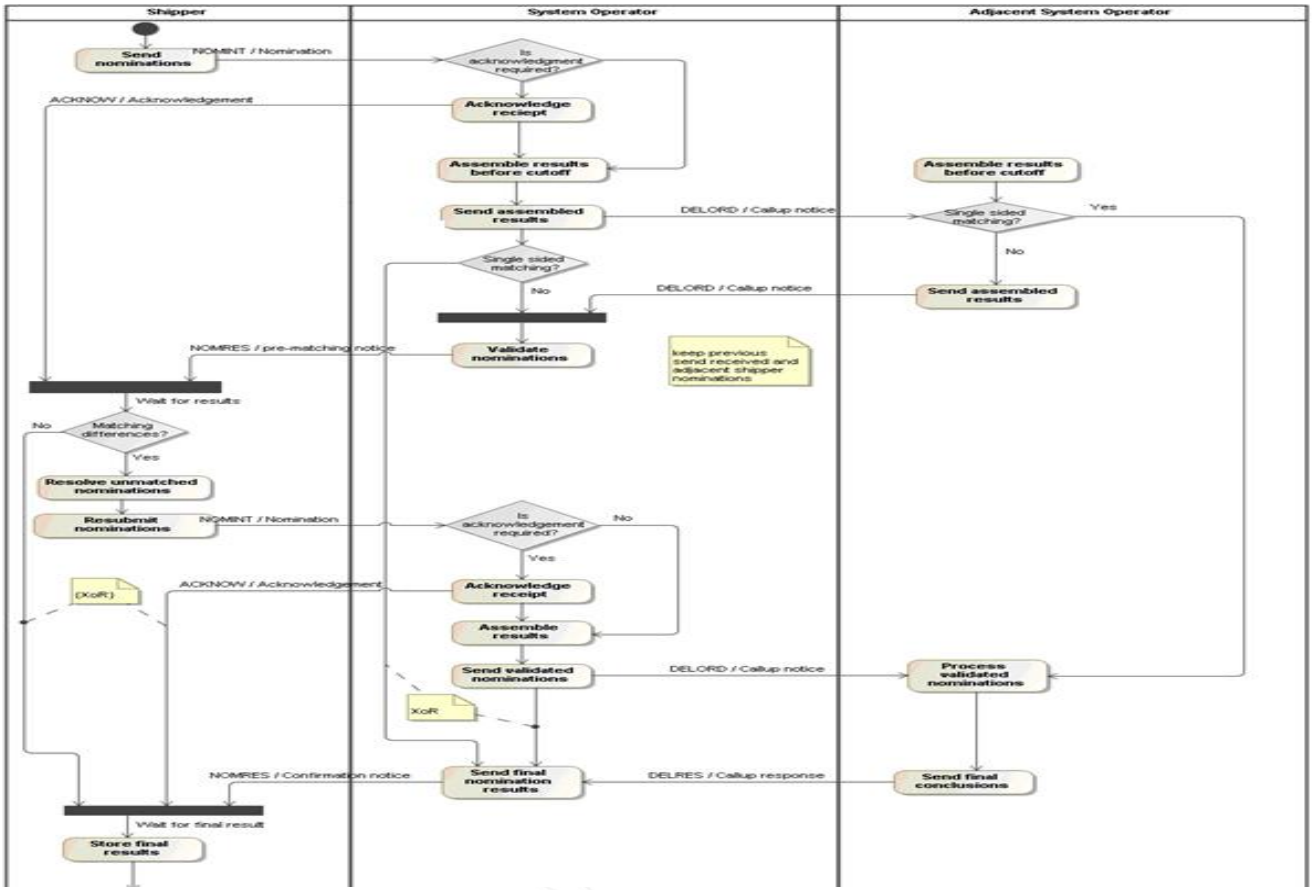
UML methodology

2. Identify operational sequences with sequence diagrams



UML methodology

3. Establish workflow with activity diagrams - Example



PHASE III – Implementation Guidelines development

Activity

- Shall be managed by ENTSOG and developed by Expert Group
- Development of detailed data format structures for every data flow
- Based on **Edig@s-XML** or equivalent **format**
- Define:
  - Detailed structured for data flow
  - Implementation requirements

Timing

- Foreseen to take 3-4 months

Key deliverables

- Implementation Guidelines
- Document change log
- Supporting documentation

Stakeholders' engagement

- Interactive stakeholders' workshop
- Expert Group

PHASE IV – CNOT delivery

Activity

- Shall be managed by ENTSOG
- Final CNOT documentation to be delivered and approved
- Final CNOT to be published on ENTSOG website

Key deliverables

- Final CNOT

CNOT development requires stakeholders' involvement as well as expertise (IT; NCs content)

Governance of future changes

Requirements for changes due to:

- New network code
- Amendment of existing network code
- Correction of identified errors
- Improvements in light of experience
- Developements/evolutions in technology

> Can be proposed by ENTSOG member or any stakeholder (by standarised form)

> It shall be motivated and explained

> In case ENTSOG does not accept the change the requesting party will be receive a motivated response

Document management and publication

- Officially validated documents will be published on ENTSOG website
- New releases will contain history log of changes
- Stakeholders shall be involved during the process to ensure completeness

Thank You for Your Attention

Monika Kaldonek
Adviser, System Operation

ENTSOG -- European Network of Transmission System Operators for Gas
Avenue de Cortenbergh 100, B-1000 Brussels

EML: Monika.kaldonek@entsog.eu
WWW: www.entsog.eu

FROM THE BRS TO THE XSD

Sophie JEHAES
EDIGAS-WG, EASEE-gas

Agenda

- Reminder: what is an EDIGAS document
- The process from BRS to MIG
- Additional information...

Reminder: what is an EDIGAS document - General

- EDI standard for the exchange of data via electronic means between parties involved in the gas industry.
  - Use XML format
- Edig@s Trademark
- Free of charge
- Developed and maintained by EDIGAS WG on behalf of EASEE-Gas association where all gas segments are represented

Reminder: what is an EDIGAS document - MIG

- MIG (Message Implementation Guidelines)
  - General Message Guidelines
  - Capacity Trading Process → auction process (NCs compatible)
  - Gas Trading Process (between shippers)
  - Nomination and Matching Process → NCs compatible
  - Settlement Process → allocation & balancing data)
  - Transparency Process → REMIT & LT UIOLI compatible
  - Balancing Process
  - Facility Setting Process
  - General Service Processes

what is an EDIGAS document – in a process 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

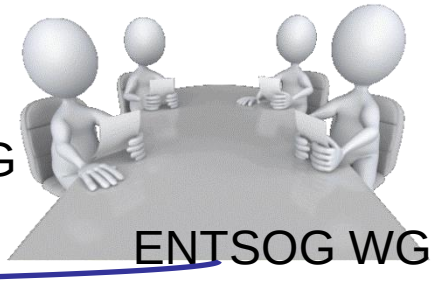
There must always be an Information Origin TimeSeries class.

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.

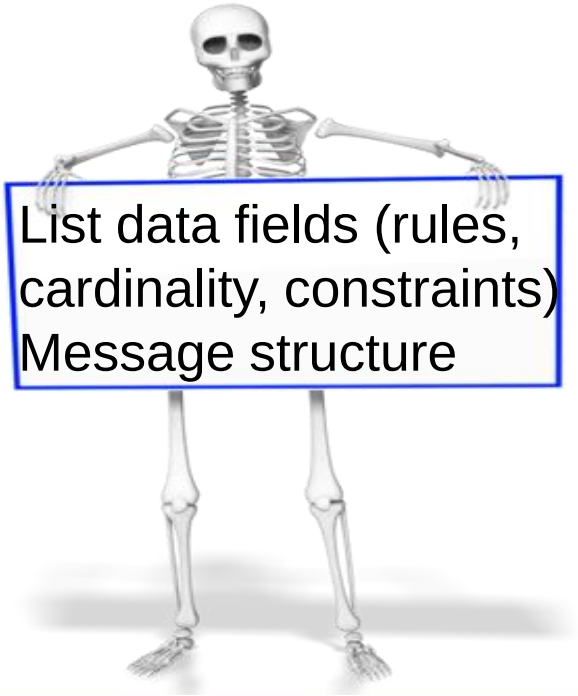
Process from BRS….

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

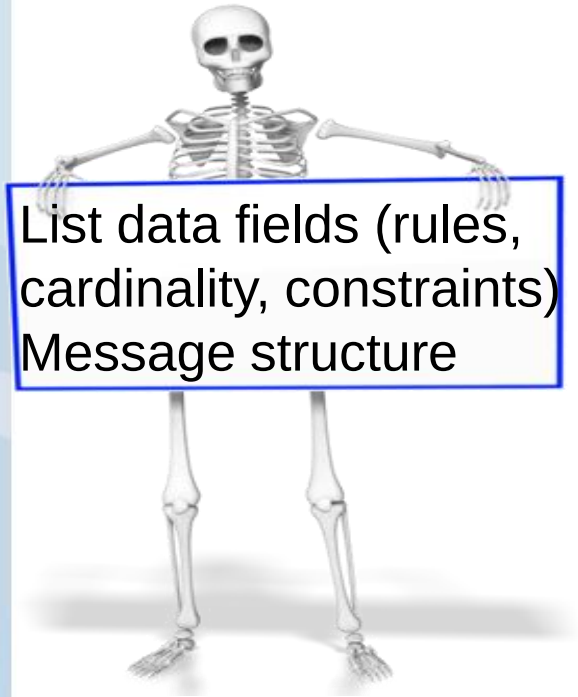


EDIGAS WG

ENTSOG WG

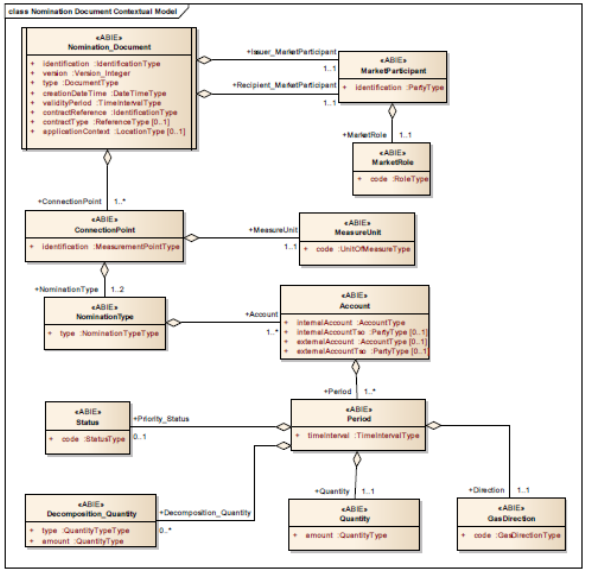


Process …. via the contextual model….

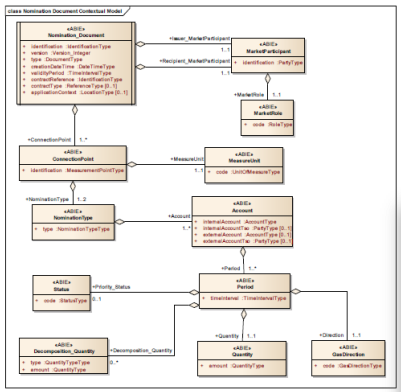


List data fields (rules, cardinality, constraints)
Message structure

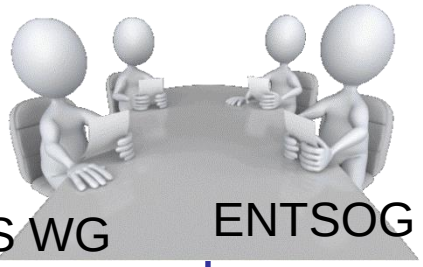
Development of the information model



Process …. to the MIG ….



Validation of the information model



Edig@s Message Implementation Guidelines — III – Nomination and Matching

SECTION III

Nomination and Matching Process

Version 5.1

Edig@s

EASEE-gas/Edig@s Workgroup

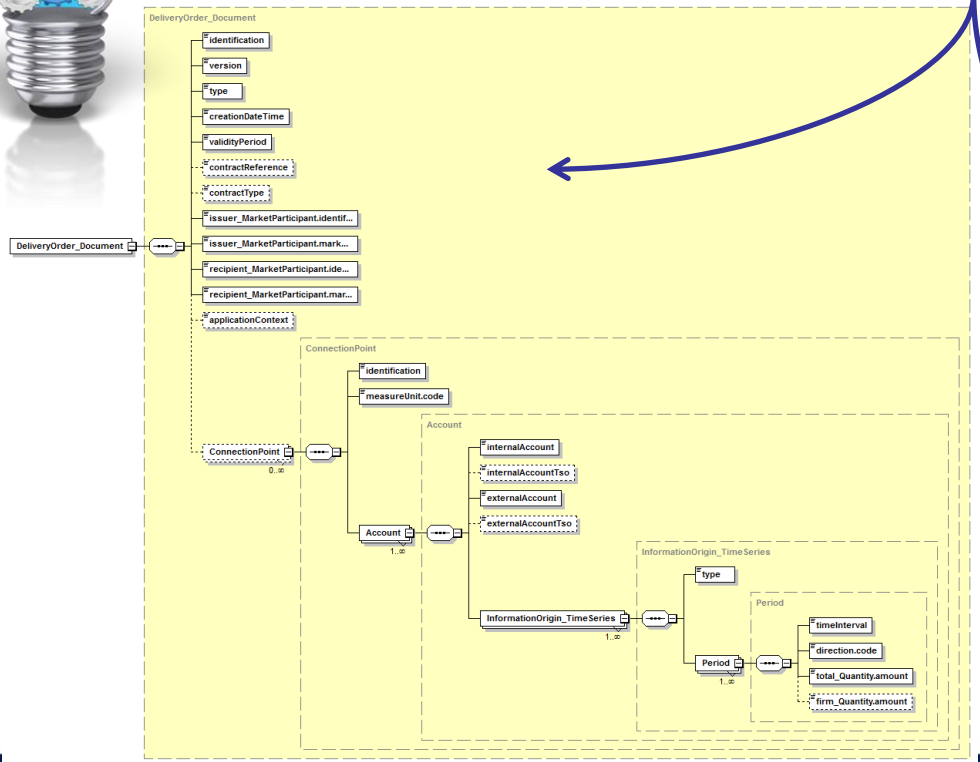
Document version: 2

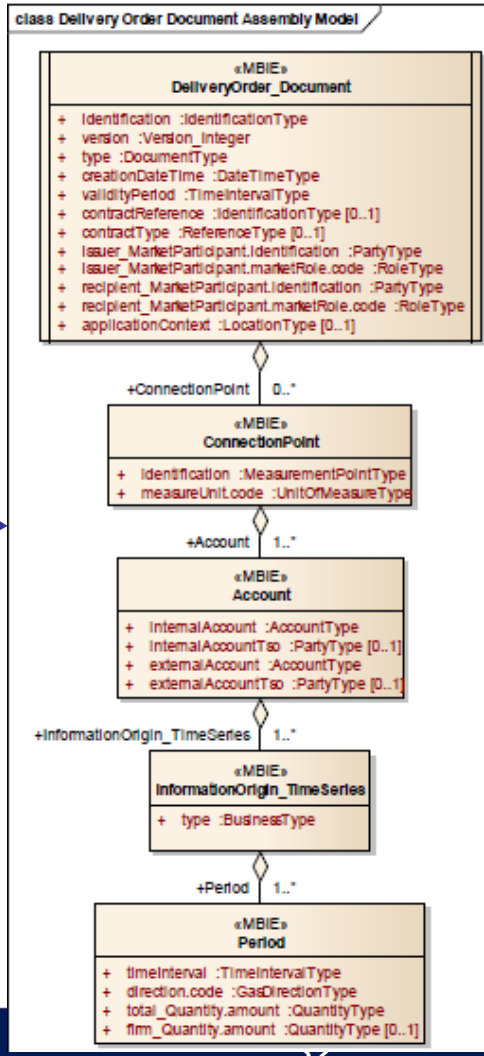
Version 5.1 / 2013-12-19 — III - 1

Preparation of the documentation

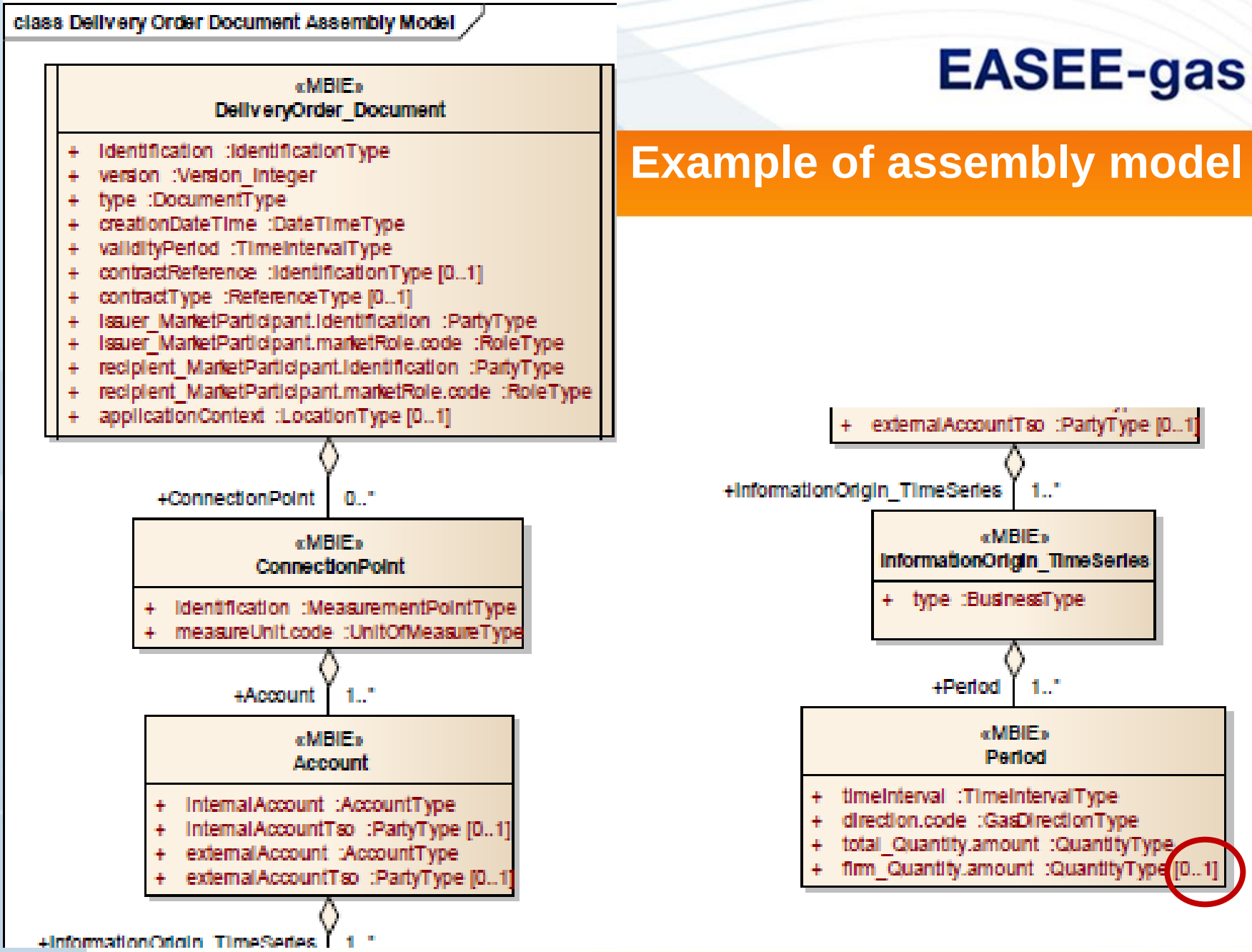
Process …. and to the XSDs….

Generate assembly model and XSD

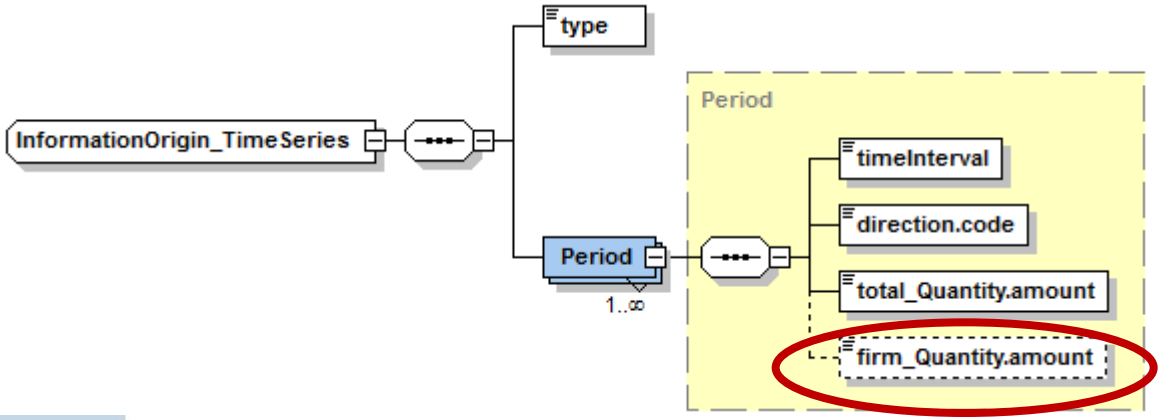




Example of assembly model

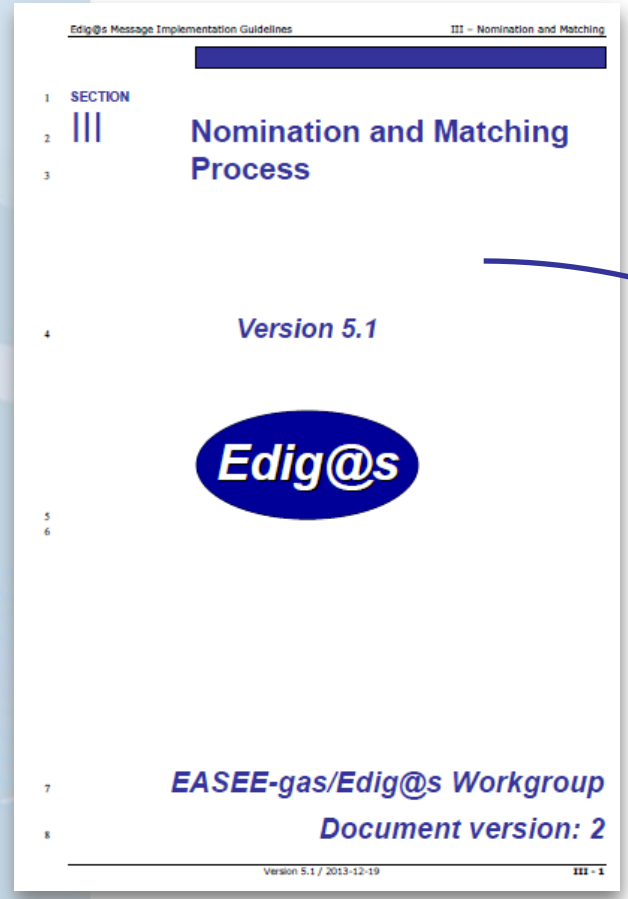


Extract of an XSD




```
<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 …. And finally the approval phase


Edig@s Message Implementation Guidelines III – Nomination and Matching

SECTION III

Nomination and Matching Process

Version 5.1

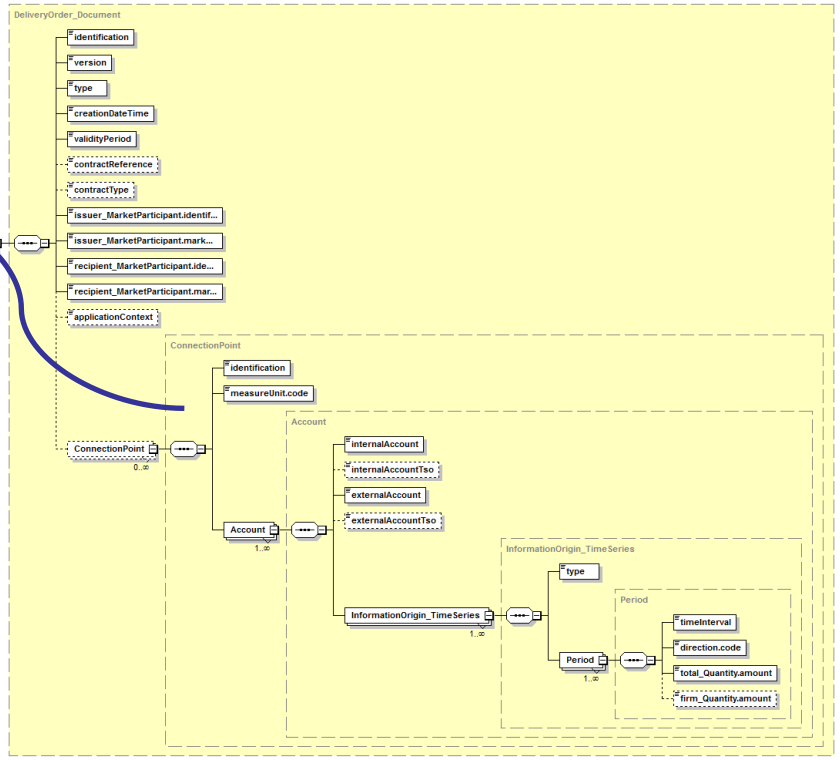
Edig@s

EASEE-gas/Edig@s Workgroup

Document version: 2

Version 5.1 / 2013-12-19 III - 1

Approval by EDIGAS WG & ENTSOG WG



Additional information

- Development for all gas segments
  - shipper, trader, TSO, LSO, SSO, producer, …
- Duration: 1 month → 1 year
- EDIGAS: Continuous development but stable process
- Strict change management procedure
- New version approximately every 4 years


Thank you


Q
&
A

Interoperability Network Code Data Exchange requirements WS

Stakeholders' Workshop

COFFEE BREAK ….

Brussels – 25 Feb 2014

Business Requirement Specifications

Nomination and Matching Procedures

Frederik Thure

Junior Adviser

25 February 2014

Basis for Nomination and Matching BRS

Business Requirement Specification for the Nomination and Matching Procedures, based on three Network Codes

NC BAL*

- Provides rules for the exchange of nominations and re-nominations at IPs
- Expected to be adopted by the European Commission in March 2014

NC CAM

- Includes obligation to allow single nomination for bundled capacity at IPs (Article 19.7)
- Adopted by the European Commission on 14 October 2013

NC INT*

- Provides rules on data exchange between TSOs and NUs at IPs and on the matching process
- Currently undergoing comitology process

*NC BAL and NC INT are not officially adopted by the European Commission at time of presentation (25 Feb 2014)

Aim of Business Requirement Specification

- Nomination and Matching BRS aims at specifying the rules and basic processes defined in the Network Codes in order to allow a harmonised transmission of information between market parties

- Serves as assistance in the implementation process of the Network Codes for TSOs and for network users

- While BRS is specifying the process, it will be supplemented by a technical message implementation guideline that provides specific data formats to be used in the nomination and matching processes

- While the BRS is being developed by the TSOs, the BRS and the message implementation guideline are not mandatory to implement as both documents are no legal act

- Even though specific roles for TSO have been defined in the BRS for illustration purposes, it is for the respective TSOs to decide on the role allocation and on how the nomination flows will be conducted

Nomination process in chapter IV of BAL NC

Chapter IV of the BAL NC (Articles 12 – 18) provides general rules for the submission of nominations at IPs from network users to TSOs:

- Standardised units to be used in nominations/re-nominations
- The minimum level of information that must be included in nominations/re-nominations
- Procedures for nominating at IPs (including deadlines, confirmations, etc.)
- Procedures for re-nominating at IPs (including deadlines, confirmations, etc.)
- Reasons for rejecting nominations/re-nominations

BAL/INT NC:
Defines general rules and minimum requirements to be applied in the nomination & matching process

Specified in:

Business Requirement Specification:
Defines detailed process for harmonised transmission of information between parties involved in the nomination & matching process

The processes defined in the NOM BRS are referring to nominations at interconnection points. Trade notifications in the context of gas title transfers at VTPs are not included in the processes described in this BRS.

Submitting nominations

Based on the provisions in the respective Network Codes, two different processes for submitting nominations are foreseen:

Single-Sided Nominations

- **Submitted only by one NU on behalf of both parties**
- **Only submitted to one TSO at the IP**
- **No distinction between bundled and unbundled capacity products**
- **No distinction between firm and interruptible capacity products**

Double-Sided Nominations

- **Submitted by both NUs individually**
- **Submitted to both respective TSOs at the IP (each NU submits to its "own" TSO)**
- **No distinction between bundled and unbundled capacity products**
- **No distinction between firm and interruptible capacity products**

Note: single- and double-sided nominations are not different message types but two possible specifications within the nomination message and can e.g. be included in one data flow

Role of TSO in nomination & matching process

In the context of double sided nominations:

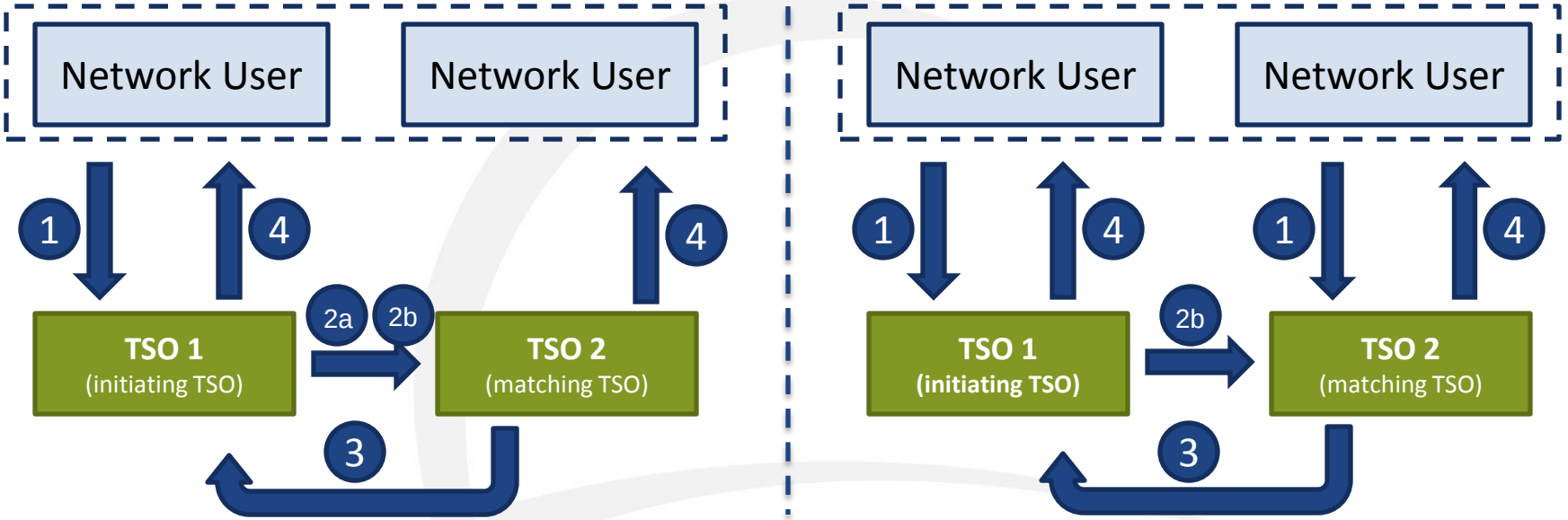
- **Both TSOs** at the IP receive corresponding nomination messages from the network users active in the respective systems;
- The **Matching TSO** performs the matching process based on processed quantities received by the adjacent TSO.

In the context of single sided nominations:

- One TSO is receiving a nomination message in the name of the network user active in his system and on behalf of the network user active in the adjacent system. This TSO shall be deemed as **Initiating TSO;**
- The adjacent TSO receives the single sided nomination messages forwarded by the Initiating TSO and performs the matching process. This TSO shall be deemed as **Matching TSO**.

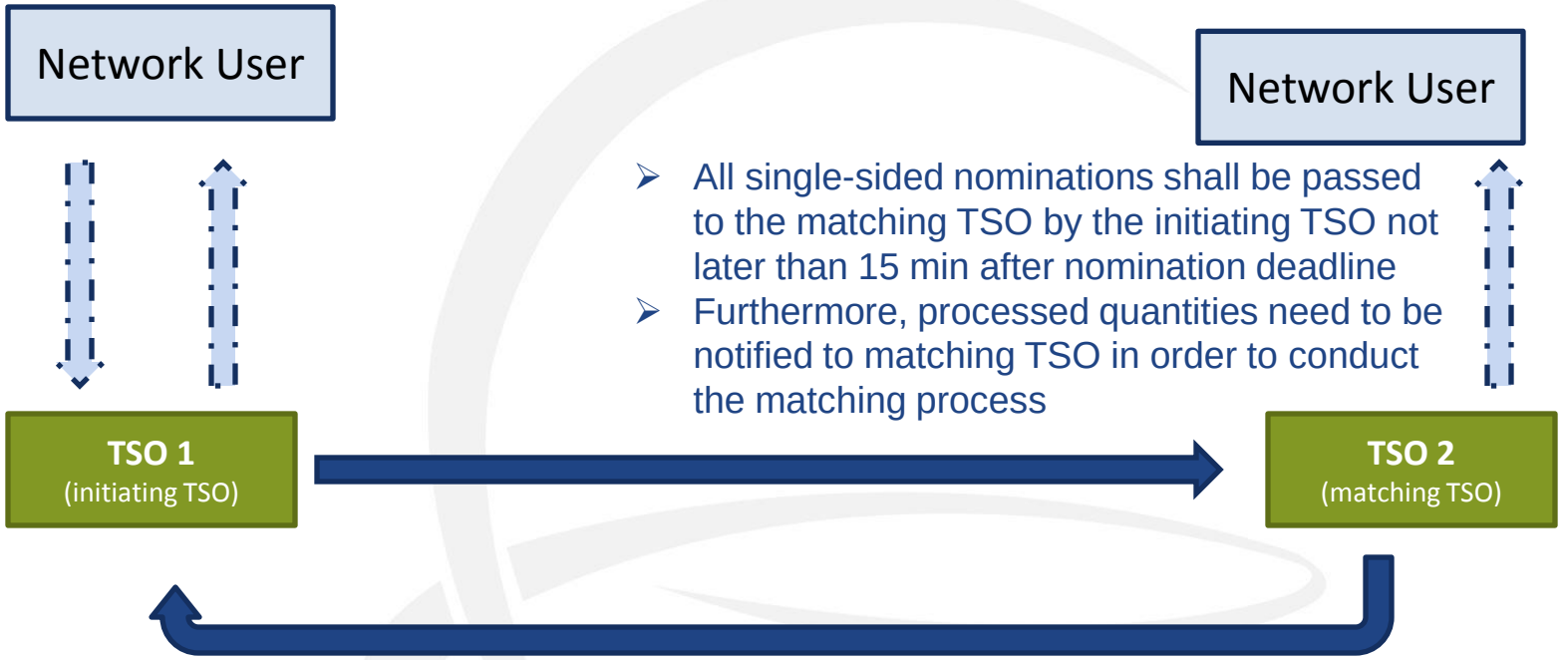
- **For clarification, the matching TSO can also receive a single-sided nomination and forward it to the adjacent TSO**
- **The TSOs involved in the matching process at an IP will dedicate the respective roles among each other and clarify the role distribution to network users**

Single-sided and double-sided nominations



	Single-Sided Nomination	Double-Sided Nomination
1	Nomination of transport at IP from NU to initiating TSO	Nomination of transport at IP from NUs to both respective TSOs at the IP
2	(a) Forwarding of single sided nomination and (b) information on processed quantities to matching TSO	(b) Information on processed quantities to matching TSO
3	Information about matching results from matching TSO to initiating TSO	Information about matching results from matching TSO to initiating TSO
4	Confirmation of transport from both TSOs to respective NU	Confirmation of transport from both TSOs to respective NU

Process of single-sided nominations

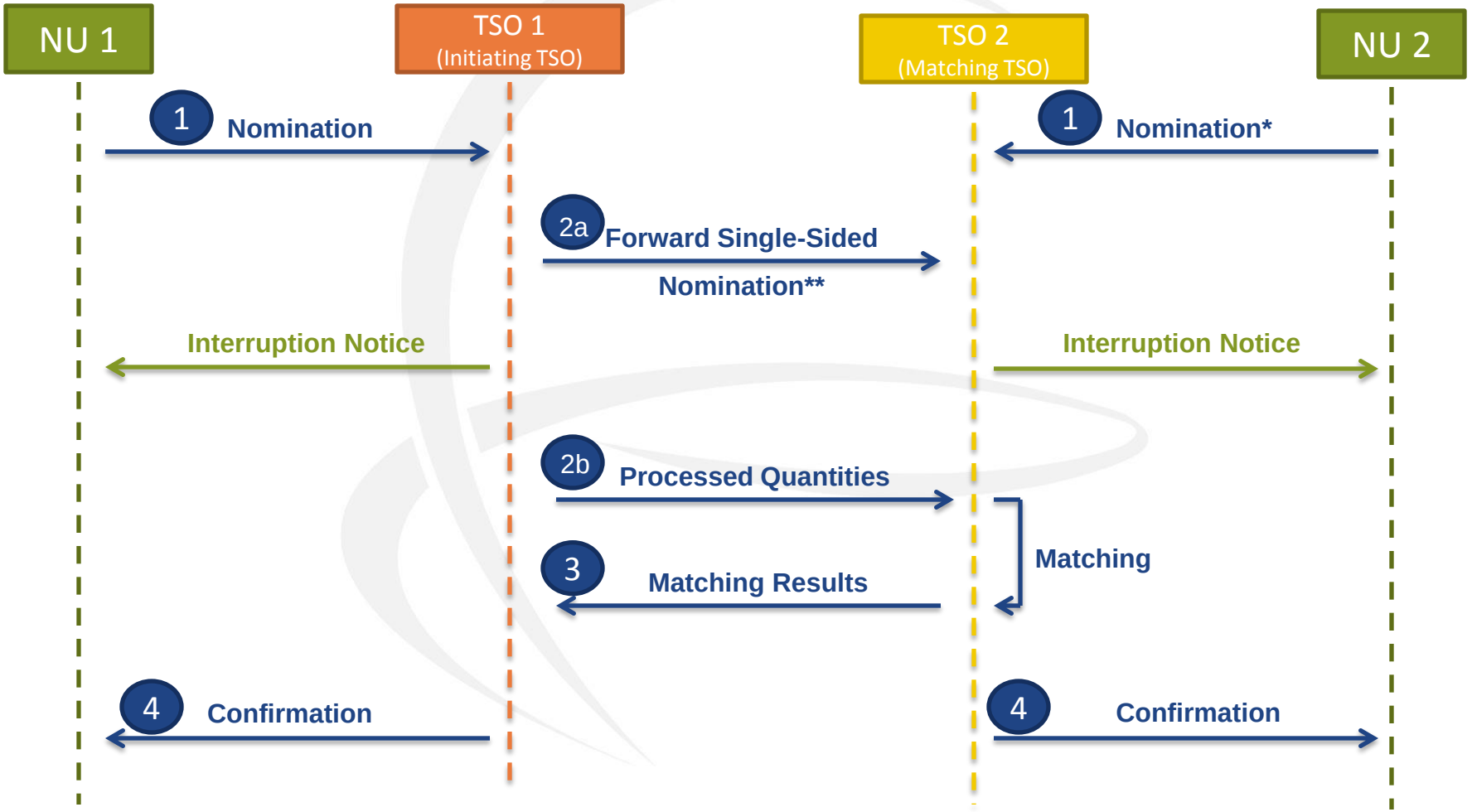


- All single-sided nominations shall be passed to the matching TSO by the initiating TSO not later than 15 min after nomination deadline
- Furthermore, processed quantities need to be notified to matching TSO in order to conduct the matching process

- Once all accepted nominated quantities are forwarded and processed quantities are transmitted, the matching TSO executes the matching process
- Results are transmitted to initiating TSOs as soon as matching has been finalised
- Also in case of single-sided nominations, each TSO informs the respective NU about confirmed quantities and possible interruptions

Nomination and matching process

The 5 mandatory and 1 optional information flows are:



*Not valid in case of single-sided nominations
**Not valid in case of double-sided nominations

1. Nomination flow

Information classes	Description	Remarks
Document Header	Provides information concerning the identification of a nomination	
Connection Point	Identifies the connection point	Multiple connection points in one message possible
Nomination Type	Indicates whether a single-sided or double-sided nomination is send	
Internal Account	Identifies the account used for a transmission that is managed by the receiving TSO	Multiple internal accounts per connection point possible
External Account	Identifies the account used for a transmission that is managed by the adjacent TSO	Multiple external accounts per internal account possible
Period	Identifies the time period for which the nomination is provided	A gas day in standard nominations
Direction	Identifies whether an input or output to the system of the receiving TSO is nominated	
Total Quantity	The quantity nominated	

2a. Forward nomination flow

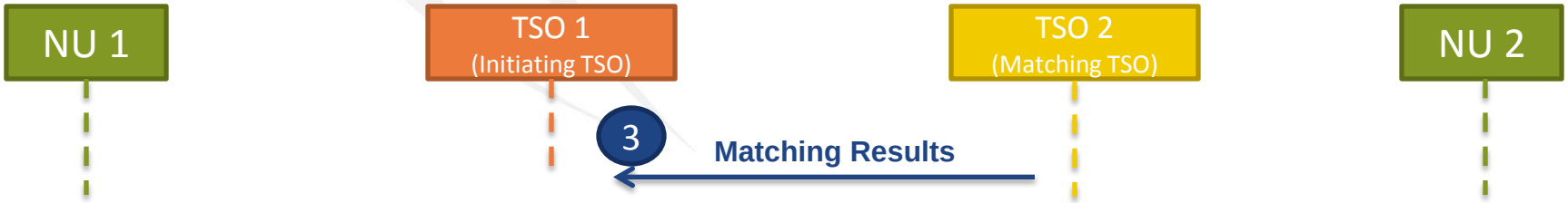
Information classes	Description	Remarks
Document Header	Provides information concerning the identification of a single-sided nomination flow	
Connection Point	Identifies the connection point	All messages for a given connection point are gathered together without loosing individual information
Internal Account	Identifies the account used for a transmission that is managed by the submitting TSO	Multiple internal accounts per connection point possible
External Account	Identifies the account used for a transmission that is managed by the receiving TSO	Multiple external accounts per internal account possible
Period	Identifies the time period for which the nomination is provided	A gas day in standard nominations
Direction	Identifies whether an input or output to the system of the submitting TSO is nominated	
Total Nominated Quantity	The quantity nominated	

2b. Matching submission information flow

Information classes	Description	Remarks
Document Header	Provides information concerning the identification of a matching flow	
Connection Point	Identifies the connection point	Multiple connection points in one message possible
Internal Account	Identifies the account used for a transmission that is managed by the initiating TSO	Multiple internal accounts per connection point possible
External Account	Identifies the account used for a transmission that is managed by the matching TSO	Multiple external accounts per internal account possible
Period	Identifies concerned time period	
Direction	Identifies whether an input or output to the system of the initiating TSO is nominated	
Nominated Quantity	The quantity nominated	optional
Processed Quantity	Quantity processed by the initiating TSO	

3. Matching results information flow

Information classes	Description	Remarks
Document Header	Provides information concerning the identification of a matching results flow	
Connection Point	Identifies the connection point	Multiple connection points in one message possible
Internal Account	Identifies the account used for a transmission that is managed by the matching TSO	Multiple internal accounts per connection point possible
External Account	Identifies the account used for a transmission that is managed by the initiating TSO	Multiple external accounts per internal account possible
Period	Identifies concerned time period	
Direction	Identifies whether an input or output to the system of the matching TSO is nominated	
Confirmed Quantity	The confirmed quantity for the nomination	
Nominated Quantity	The quantity nominated as received by the matching TSO	optional
Processed Quantity	Processed quantity as carried out by matching TSO	



4. Network User confirmation information flow

Information classes	Description	Remarks
Document Header	Provides information concerning the identification of a confirmation information flow	
Connection Point	Identifies the connection point	Multiple connection points in one message possible
Nomination Type	Indicates whether a single-sided or double-sided nomination was sent	
Internal Account	Identifies the account used for a transmission that is managed by the submitting TSO	Multiple internal accounts per connection point possible
External Account	Identifies the account used for a transmission that is managed by the adjacent TSO	Multiple external accounts per internal account possible
Period	Identifies concerned time period	A gas day in standard nominations
Direction	Identifies whether an input or output to the system of the submitting TSO is nominated	
Confirmed Quantity	The confirmed quantity in relation to nominated quantity	
Processed Quantity	The individual processed quantities of both TSOs	
Nominated Quantity	The quantity nominated by the NU to the adjacent TSO	Only if provided by adjacent TSO and not in the context of single-sided nominations

Interruption flow

Information classes	Description	Remarks
Document Header	Provides information concerning the identification of an interruption flow	
Connection Point	Identifies the connection point	Multiple connection points in one message possible
Nomination Type	Indicates whether a single-sided or double-sided nomination is affected	
Internal Account	Identifies the account used for a transmission that is managed by the TSO applying the interruption	Multiple internal accounts per connection point possible
External Account	Identifies the account used for a transmission that is managed by the adjacent TSO	Multiple external accounts per internal account possible
Period	Identifies the time period specified in the nomination	
Direction	Identifies whether an input or output to the system of the interrupting TSO was nominated	
Interrupted Quantity	The quantity nominated reduced in compliance with the interruption	

What comes after the BRS?

- BRS defines what type of information that needs to be exchanged between the involved parties in the nomination and matching process

- In order to harmonise the information transmission in the nomination and matching process, a message implementation guideline needs to be produced

  - Message implementation guideline defines concrete message types to be used for the information flows defined in the BRS

  - Message implementation guideline produced by EASEE-GAS in co-operation with ENTSOG will complete the CNOT

BRS on CAM and CMP

25 February 2014

Sophie Jehaes

Fluxys

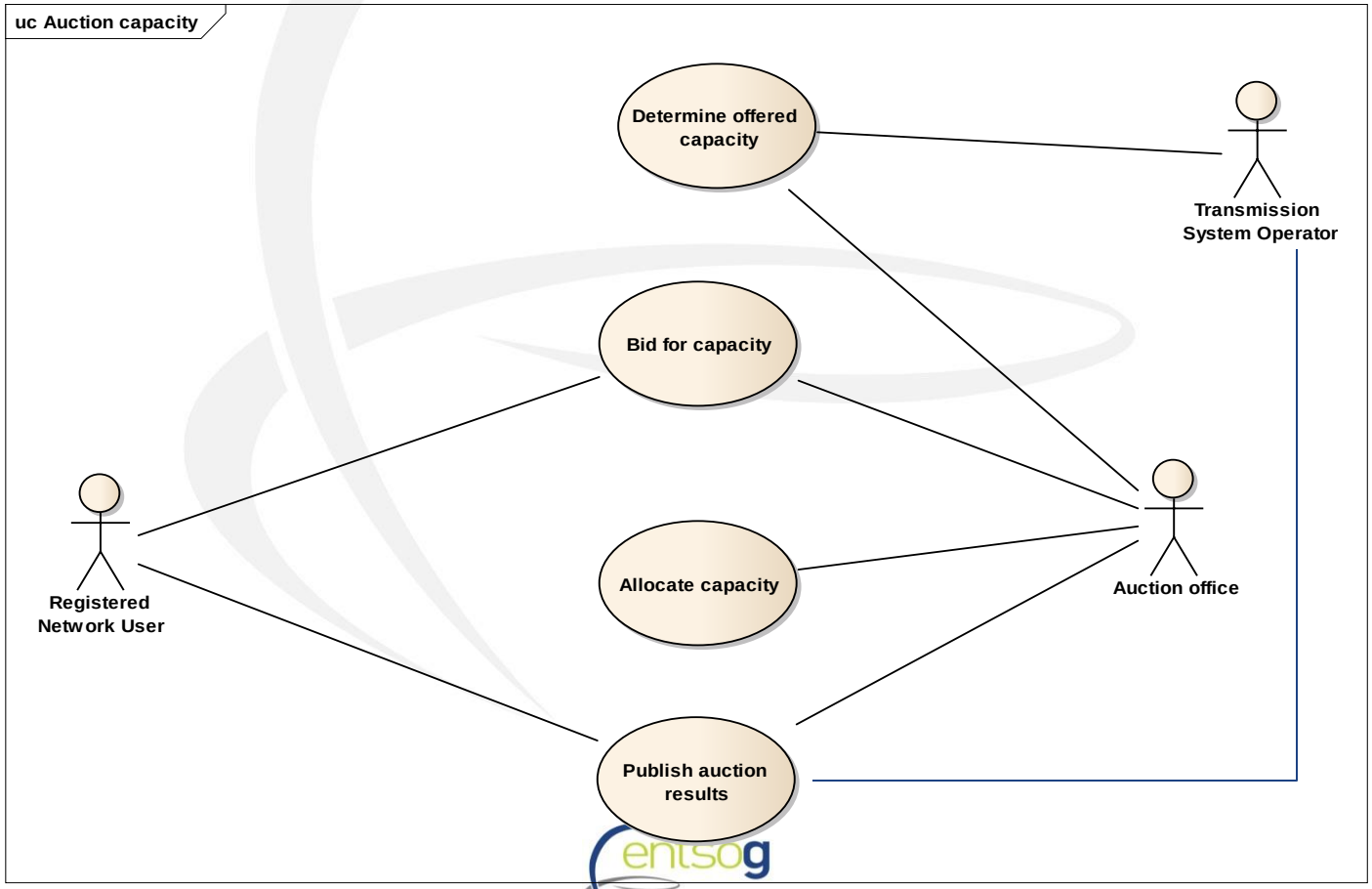
Agenda

1. Overview of content CAM BRS per process
2. Need of scope extension
3. Further process
4. Questions/discussion

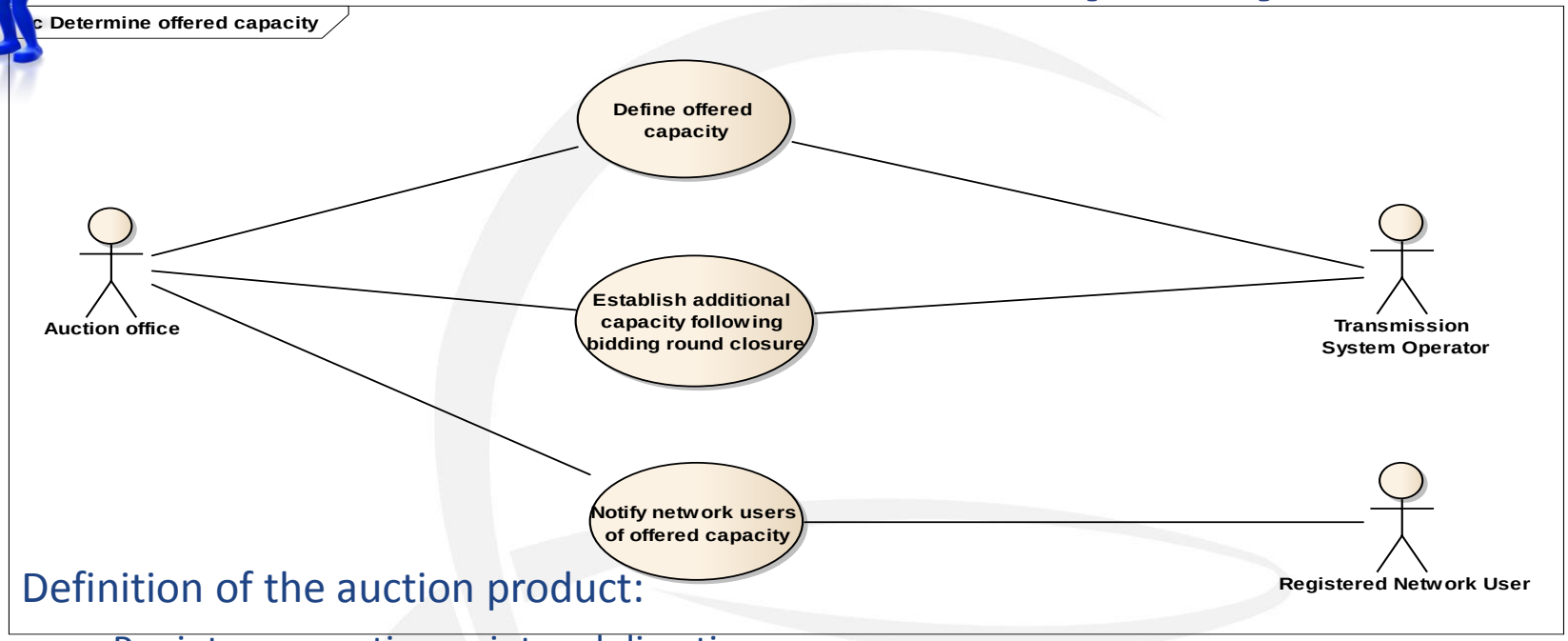
Overview of content CAM BRS

Covers auction mechanism for primary capacity as described in NC CAM

Content related to data exchange: list of actors; use cases; sequence diagrams; workflow diagrams; definition and list of the main attributes



Determine offered capacity



Definition of the auction product:

- Per interconnection point and direction,
- Per TSO pair if applicable
- Per availability type: firm, interruptible
- Per span period: yearly, seasonal, monthly, day-ahead, within-day
- Per capacity type: bundled, unbundled
- Per auction period

May decide or not to let auction platform how to bundle the product / management of competition

Indication of reserve price, large/small step price if applicable

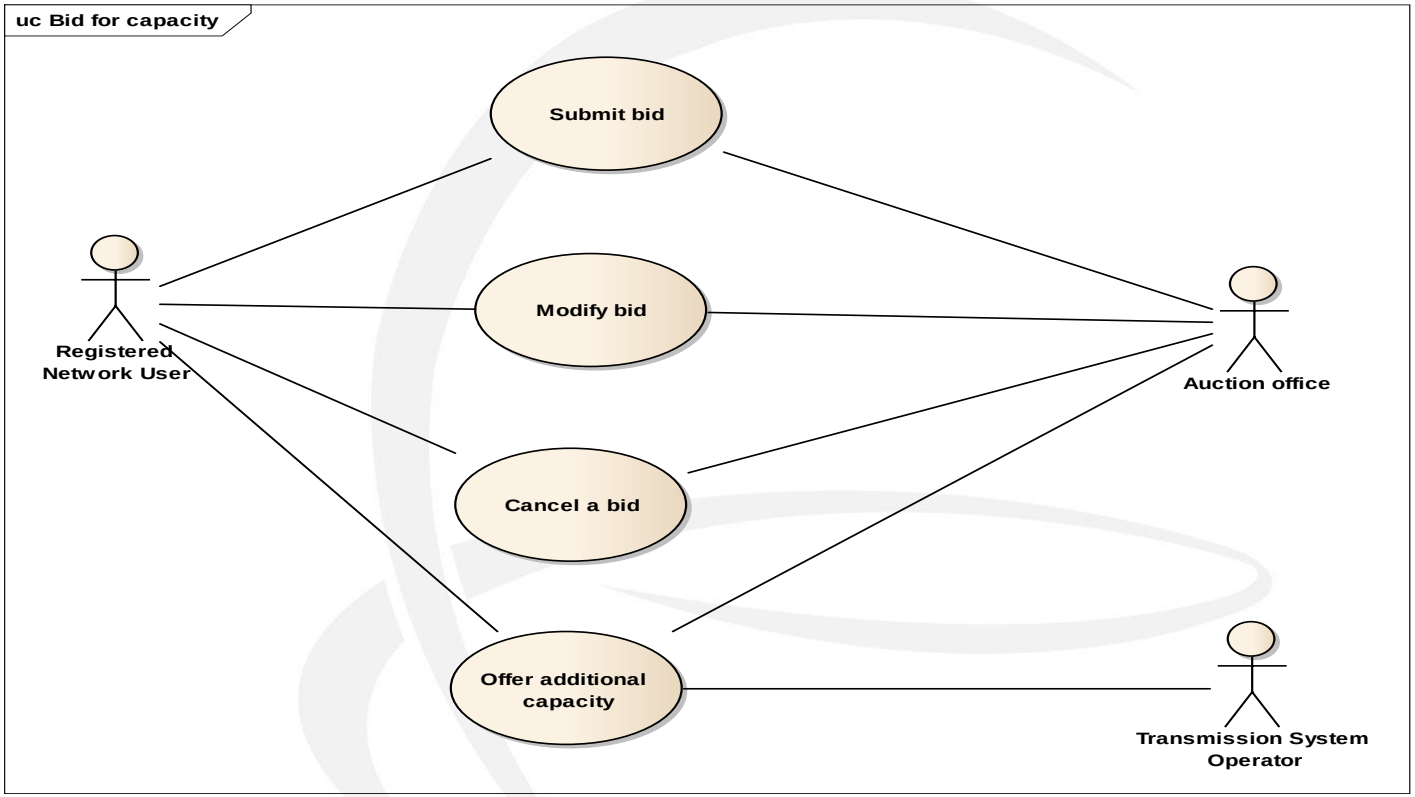
Translation to EDIGAS

```
<?xml version="1.0" encoding="UTF-8"?>
<OfferedCapacity_Document xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xmlns="urn:easeegas.eu:edigas:capacitytrading:offeredcapacitydocument:5:1">
<identification>PRODDAT123</identification>
<version>1</version>
<type>AMV</type>
<creationDateTime>2013-11-28T13:05:20Z</creationDateTime>
<validityPeriod>2013-11-29T05:00Z/2013-11-30T05:00Z</validityPeriod>
<issuer_MarketParticipant.identification codingScheme="305">21X-BE-A-A0A0A-Y/issuer_MarketParticipant.identification>
<issuer_MarketParticipant.marketRole.code>ZSO</issuer_MarketParticipant.marketRole.code>
<recipient_MarketParticipant.identification codingScheme="305">PRISMA</recipient_MarketParticipant.identification>
<recipient_MarketParticipant.marketRole.code>ZUJ</recipient_MarketParticipant.marketRole.code>
<status.code>62G</status.code>
<ProductIdentification_Document>
        <contractReference>001621</contractReference>
        <contractType>ZSD</contractType>
        <ConnectionPoint>
                <identification codingScheme="305">21Z000000000010F</identification>
                <timeSeries.type>ZEM</timeSeries.type>
                <quantity_MeasureUnit.code>KW1</quantity_MeasureUnit.code>
                <price_MeasureUnit.code>KW1</price_MeasureUnit.code>
                <capacityType.code>ZEO</capacityType.code>
                <currency.code>EUR</currency.code>
                <availability.type>Z06</availability.type>
                <reserve_Price.amount>0.2152597699355236</reserve_Price.amount>
                <period.timeInterval>2013-11-29T05:00Z/2013-11-30T05:00Z</period.timeInterval>
                <period.direction.code>Z02</period.direction.code>
                <period.direction.quantity.amount>14859363</period.direction.quantity.amount>
                <period.direction.quantity.type>ZXO</period.direction.quantity.type>
        </ConnectionPoint>
</ProductIdentification_Document>
</OfferedCapacity_Document>
```

Comparison table BRS - MIG

Business Requirements Specification	Edigas Message Implementation Guidelines Capacity Auction Process					
	Data Item Group	Applicability of the Group (min)	Applicability of the Group (max)	Data Items	Applicability of the Items	Comments
TsoOfferedCapacity	Offered Capacity Document (OFFCAP)					
	OfferedCapacity_ Document	1 (mandatory)	1 (mandatory)	identification	Mandatory	
				version	Mandatory	
				type	Mandatory	code = AMV = System Operator offered capacity
				creation Date Time	Mandatory	
				validity Period	Mandatory	
				issuer_MarketParticipant identification - coding scheme	Mandatory	
				issuer_MarketParticipant market Role code	Mandatory	code = ZSO = System Operator
				recipient_MarketParticipant identification - coding scheme	Mandatory	
				recipient_MarketParticipant market Role code	Mandatory	code = ZUJ = Auction Office
				application Context - coding scheme	Dependent	
				status code	Mandatory	this item was forgotten in BRS
InterConnectionPoint	ConnectionPoint	1 (mandatory)	1 (mandatory)	Identification - coding scheme	Mandatory	
StandardCapacityProductType				time Seris Span Period	Mandatory	
UnitOfMeasure				quantity_Measured Unit code	Mandatory	
				price_Measured Unit code	Mandatory	
CapacityType				capacity Type code	Mandatory	
				currency code	Mandatory	this item was forgotten in BRS
				currency Exchange Rate	Dependent	
AvailabityType				availability type	Mandatory	
FlowDestination				to_Market Area area	Dependent	
				from_Market Area area	Dependent	
				target Tso_MarketParticipant identification - coding scheme	Dependent	
				bidding Round_Characteristic sequence	Dependent	not used in case of (AMV) System Operator offered capacity
ReservePrice				reserve_Price amount	Mandatory	
PriceSteps				large Step_price amount	Dependent	might only be used in case of ascending clock auction
				small Step_price amount	Dependent	might only be used in case of ascending clock auction
Period				period Time Interval	Mandatory	
				period rate	Dependent	split factor of premium between TSOs
				period direction code	Mandatory	this item was forgotten in BRS to identify the direction in case 2-directions interconnection point
CapacityAmount				period direction quantity amount	Mandatory	
expressed in 3.3.1.1.1 from BRS				period direction quantity type	Dependent	to be used if the bundled quantity can not be auctionned as unbundled product

Bid for capacity



Per auction ID, per bidding round ID: bid quantity and bid price (in uniform price auctions only)

Identification of the bidder

Possible to indicate the nomination shipper accounts

Possible to re-use interruptible capacity for a certain auction

Possible to indicate min quantity (in uniform price auctions only)

Auction results

From the auction platform to the TSO/Network User

Indicate :

- The status of the auction/bidding round
- Premium price, clearing price depending on auction type (ascending/clock)
- The auction quantity results
- Winning bid identification
- Description of the auction product
- If available the nomination shipper accounts

Possible to get information per bidding round

Need of scope extension

- CMP measures to be covered:
  - Oversubscription process: TSO offers more than max firm available capacity
  - buy-back scheme: TSO needs to re-cover (=buy-back) some of the firm capacity that was sold to shippers due to nominations above technical capacity
  - Firm day-ahead use-it-or-lose-it mechanism: by limiting the re-nomination rights
  - Surrender of contracted capacity: shippers want to resell their capacity
  - Long-term use-it-or-lose-it mechanism: NRA takes back « never » used capacity of a shipper
- Extra CAM measures to be covered:
  - Credit line management: credit line check during auction process
  - Secondary market capacity trading: exchange of capacity rights between shippers

Further process

A new Task Force is setup (CAP WG + TSAIG)

High level planning

Oct 2013 - Feb 2014

Preparation stage

- Identification of DE need by business area
- Project planning by TSAIG
- BOA approval + creation of CMP-BRS TF
- Publication of scope & project plan

Mar – Sep 2014

Develop BRS

- CMP-BRS TF work
- ....
- WGs and BOA approval
- Stakeholder session and consultation
- BOA and GA approval

Oct 2014 - Feb 2015

Develop IG

- CMP-BRS TF work (w/ EASEE-gas)
- WGs and BOA approval
- Stakeholder expert sessions and consultation
- BOA and GA approval
- Publication of CNOT


Thank you
Q
&
A

Interoperability Network Code Data Exchange requirements WS

Stakeholders' Workshop

Stakeholders' views

Brussels – 25 February 2014

Interoperability Network Code Data Exchange requirements WS

Stakeholders' Workshop

LUNCH TIME ….

Brussels – 25 Feb 2014

ENTSOG AS4 Project

Overview

Pim van der Eijk

AS4 ENTSOG Consultant

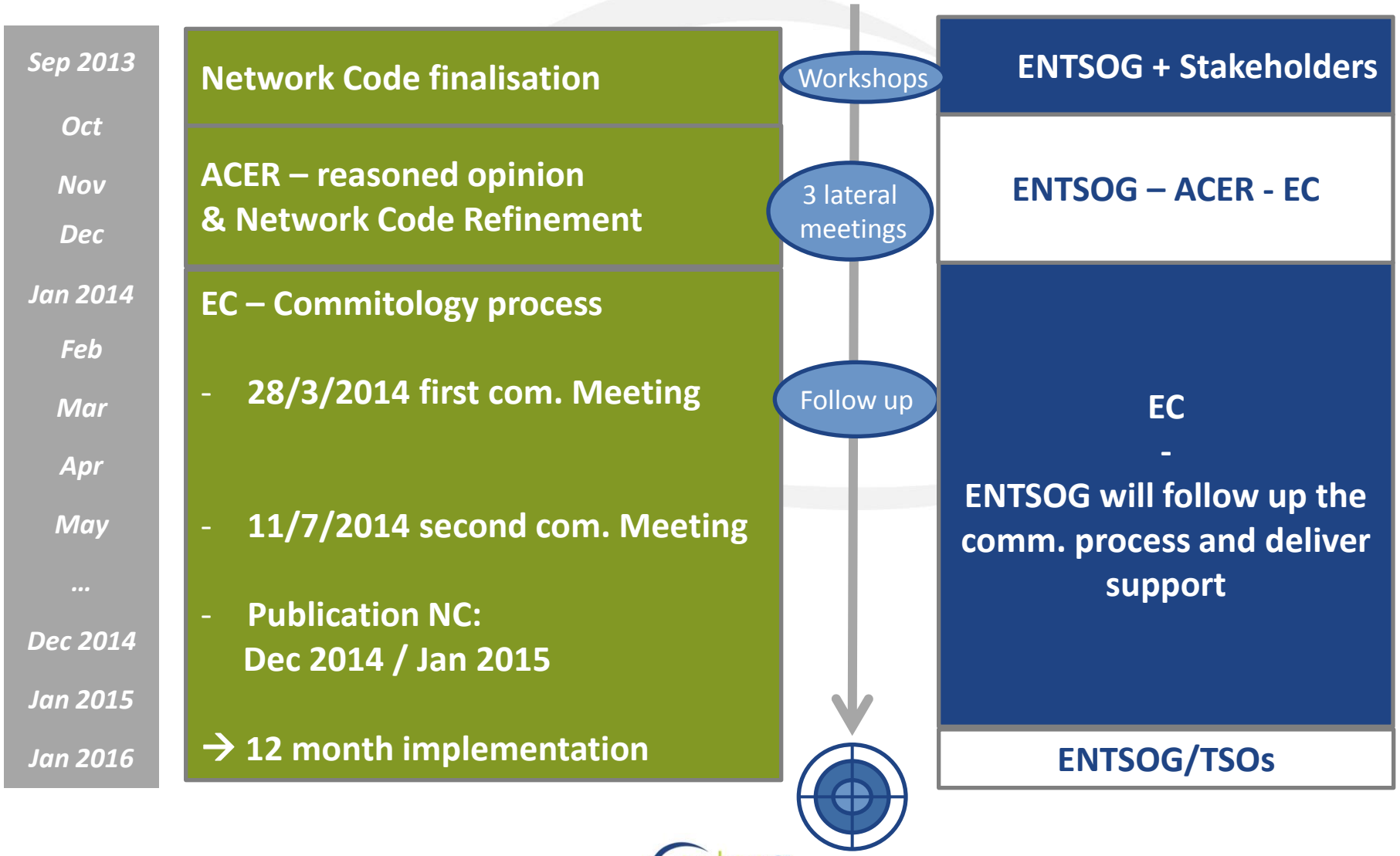
Brussels, 25 Feb 2014

Agenda

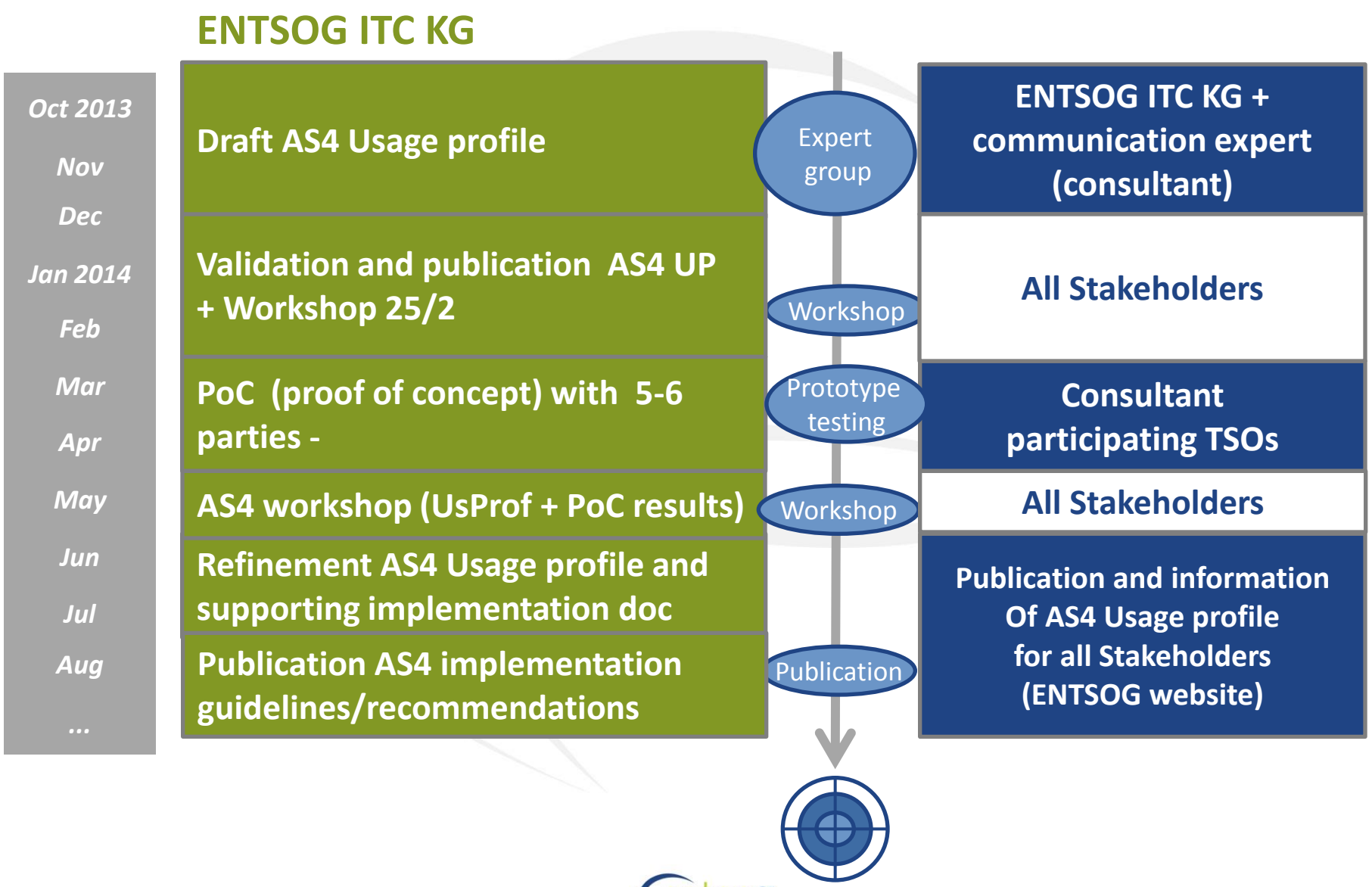
- Status - Network code Interoperability and Data Exchange + AS4 development
- Why AS4?
- AS4 overview and profile
- AS4 proof-of-concept
- Short-term actions

NC INT Development Status

Activities

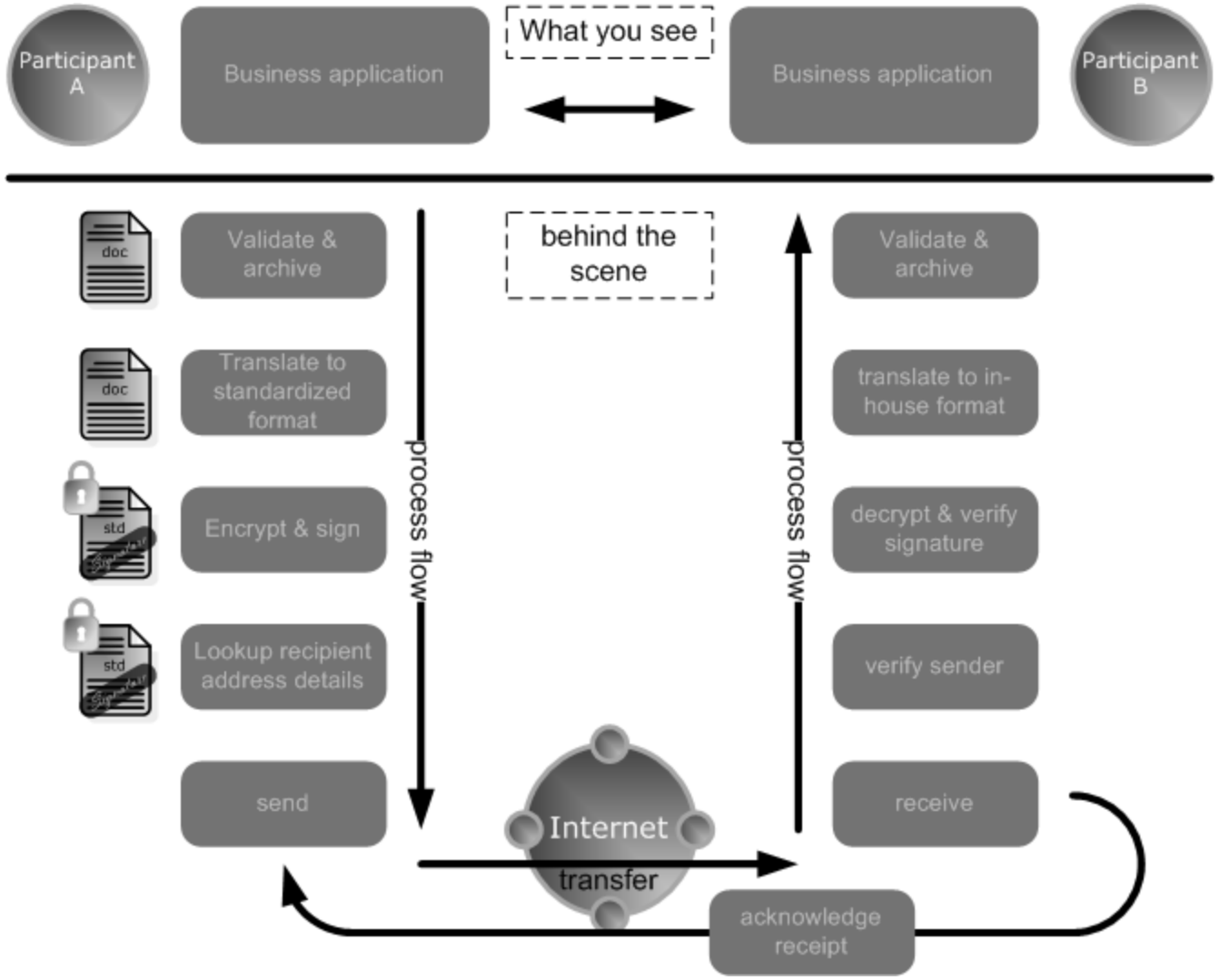


AS4 Development Process



Why AS4?

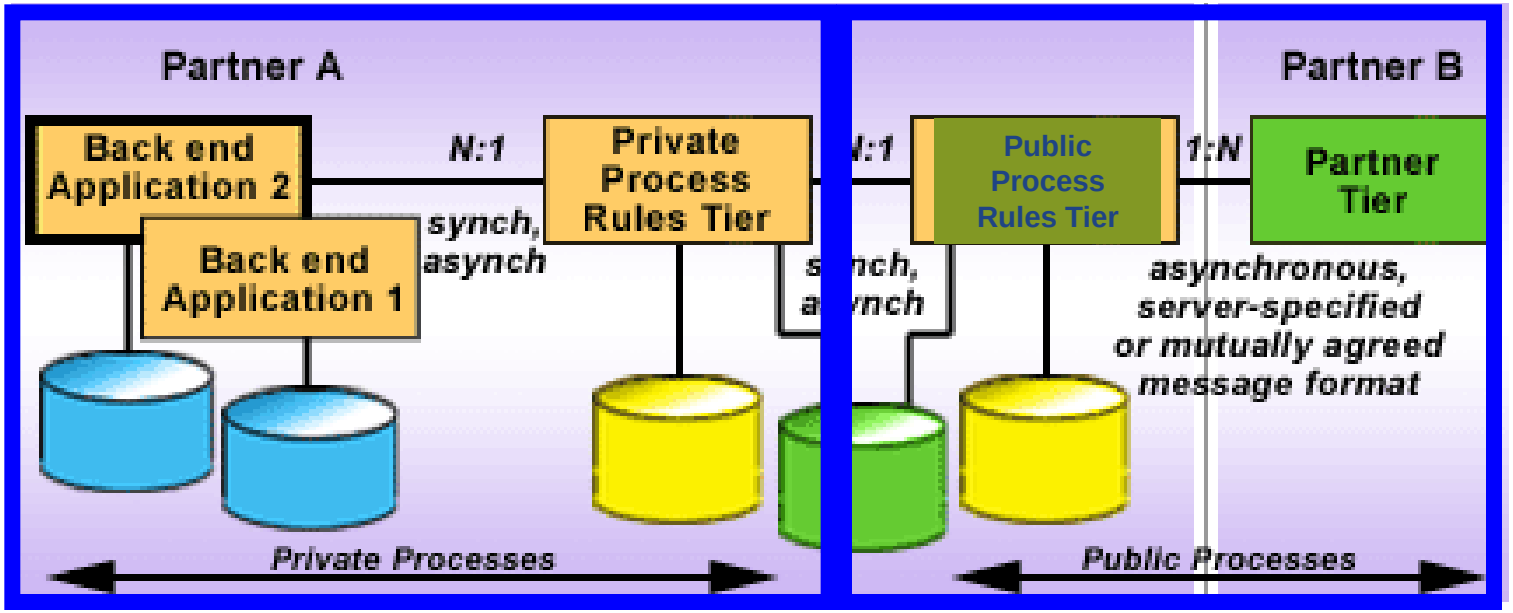
End-User Perspective



B2B Integration

- Document-based B2B:
  - Organizations synchronize their business processes at specific agreed process steps
  - Synchronization involves exchange of information as structured documents
  - Information produced and consumed by business applications
  - Standardized structure and format of content (EASEE-gas XML schemas)
- Complementary to other exchange paradigms
  - Portal-based communication allows end-users to access remote functionality
  - Direct communication allows partner application to invoke remote application functionality

B2B Architecture



Enterprise Application Integration, Workflow Management

Participation in e-business (e-Government) collaborations

IBM Patterns for e-Business http://www-106.ibm.com/developerworks/patterns/

B2B Requirements

Support fully automatic processing

- Structured business content
- Structured metadata to express purpose and requested processing

Security

- Protect integrity and confidentiality of content
- Authenticate identity of sender and receiver

Reliability

- Guaranteed once-and-only once delivery

Open Standard

- Mechanism should be independent of specific vendor products
- TSOs should be able to procure solutions in a competitive environment

AS4 Overview and Profile

ebXML

Technical and semantic interoperability

Modular, cohesive set of B2B standards developed from 1999

- OASIS, ISO and UN/CEFACT
- ISO 15000 standards since 2004

OASIS ebXML standards support

- Secure reliable messaging, rich metadata
- Choreographed business collaborations
- Partner agreements and management
- Registry functionality

One component is ebXML Messaging (ebMS)

High Level Capabilities

Message Header with Business Metadata

- Identifies Business Partners, Transaction Semantics, Context, Agreement, Properties, Payloads

Reliable Message Delivery

- At-Least-Once, At-Most-Once, In-Order delivery

Secure Messaging

- Digital Signature and Payload Encryption
- Support for Non-Repudiation of Origin & Receipt

Flexible Packaging using SOAP and MIME

- XML, EDI, multimedia payloads
- Multiple payloads per message

Transport Protocol Mappings

- HTTP and SMTP

ebXML Messaging Standards

ebXML Messaging version 2.0

- OASIS Standard (2002), ISO 15000-2 (2004)

ebXML Messaging version 3.0

Part 1: Core Specification

- OASIS Standard (2007)

ebXML Messaging version 3.0

Part 2: Advanced Features

- OASIS Committee Specification (2011)

AS4 Profile of ebMS 3.0

- ***OASIS Standard (2013)***

ebXML Messaging Standards

B2B exchange protocol based on Web Services

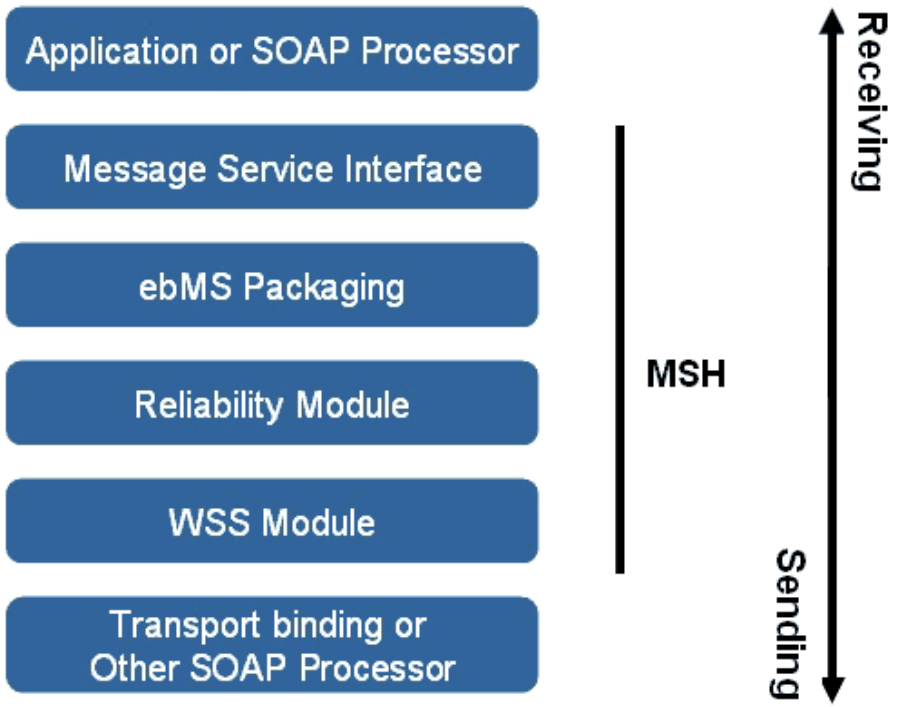
B2B header and envelope

SOAP, WS-Security

Reliable Messaging

"Processing modes" for configuration

Push and Pull



AS4 – an interoperable profile

Functionally similar to older standards, but

- Based on more modern Web Services technology
- Provides enhancements for SMEs (client only endpoints)

Profile ebMS 3.0 by

- Reducing options and filling in details (e.g. for Receipts)
- Not using modules with known complexity and interoperability issues, e.g. WS-ReliableMessaging
- Adding some AS2-like features (like Compression)

Three Conformance Profiles

- Subsets mapping to classes of product implementations

ENTSOG AS4 Profile

Objectives

- Support exchange of EDIG@S XML documents and other payloads.
- Support business processes in the gas sector
- Leverage experience gained with other B2B protocols, such as AS2 as described in the EASEE-gas implementation guide.
- Provide security guidance based on state-of-the-art best practices, following recommendations for “near term” (defined as “at least ten years”) future system use.
- Provide suppliers of AS4-enabled B2B communication solutions with guidance regarding the required AS4 functionality.

Profiling AS4

Selecting an AS4 Conformance Profile

- AS4 defines three “Conformance Profiles”
- ENTSOG profile is based on “ebHandler”

Profiling the ebHandler Feature Set

- Following the structure of ebMS 3.0 Core
- Detailed information for product vendors and for production selection

Defining a Usage Profile

- Guidance for implementation and operation teams at TSOs

AS4 Conformance Profiles

- Selection of ebHandler Conformance Profile
- Feature review of ebHandler Conformance Profile
- Usage Profile

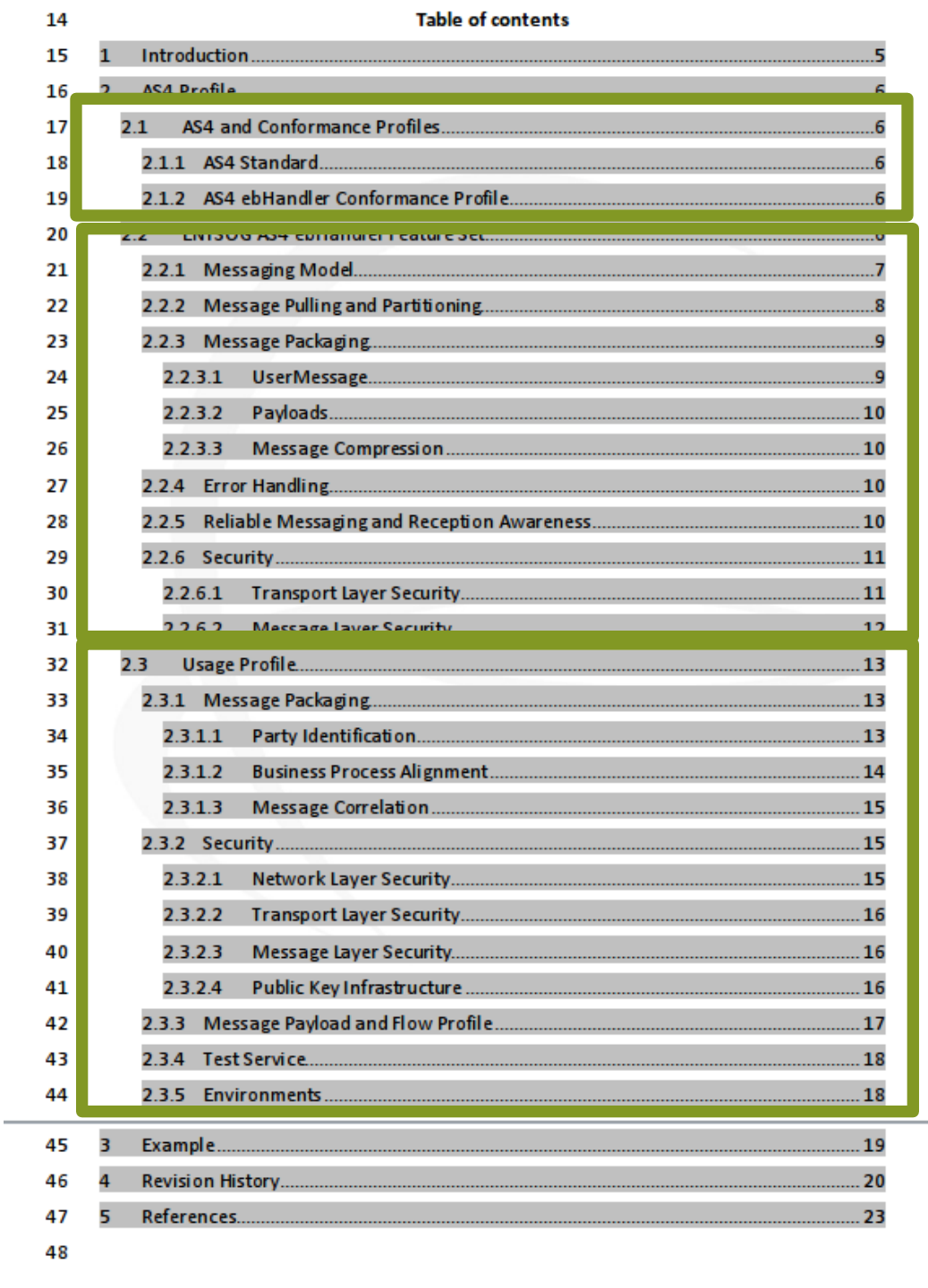


Table of contents

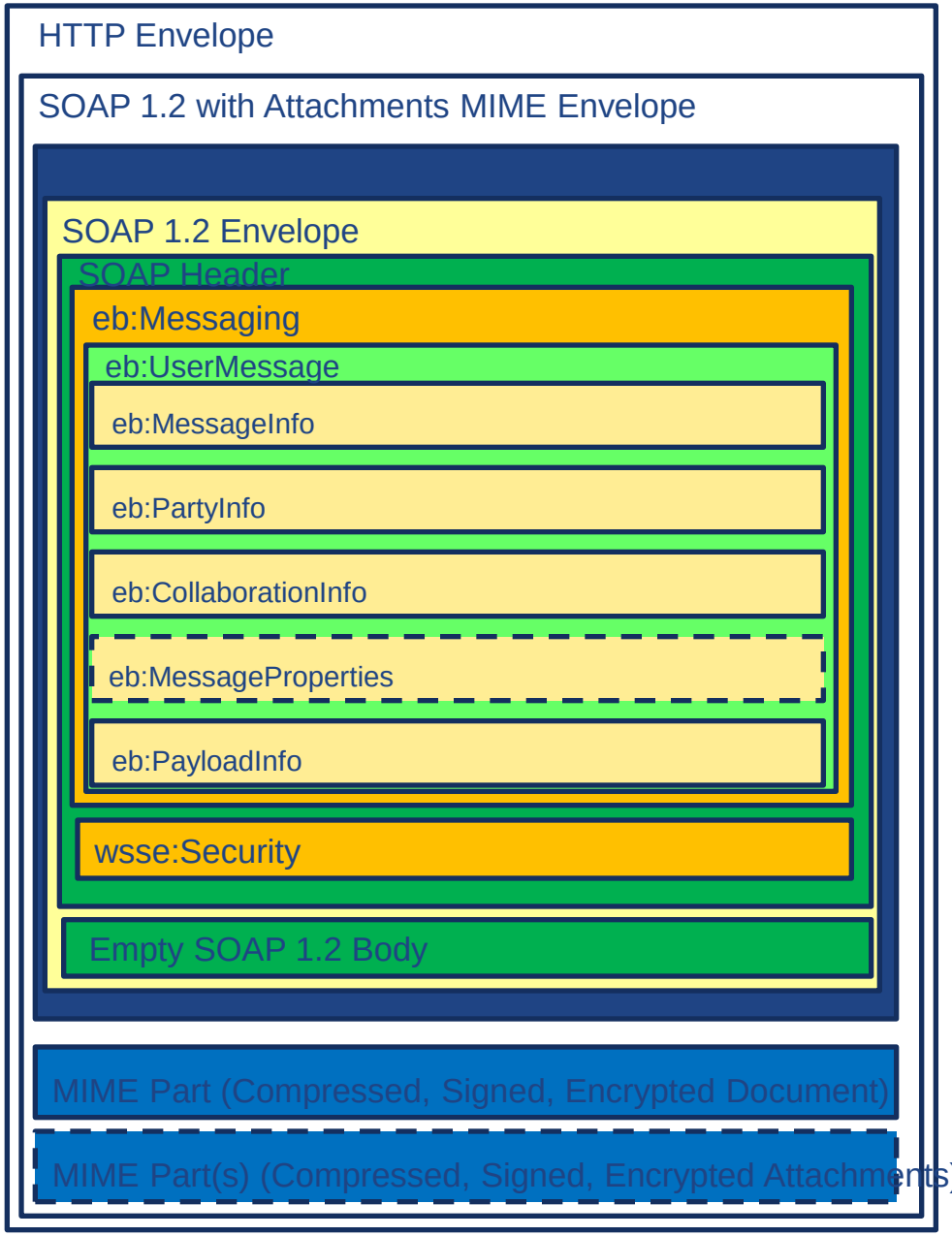
ebMS 3.0 Packaging

AS4:

- SOAP 1.2 with Attachments
- SOAP Header with Messaging extension headers

ENTSOG Profile:

- No content in SOAP Body
- Main business document in separate MIME part
- Optional adjunct payloads
- All payloads compressed, signed and encrypted



Proof-of-Concept

Objectives of Pilot

Objectives:

- Validate (and if needed, fine-tune) the ENTSOG AS4 profile parameters
- Demonstrate interoperable exchange of AS4 messages among multiple organizations using multiple products (or prototypes)
- Functionality

Out of scope:

- Exhaustively test AS4 conformance and interoperability, including all corner cases
- Certification of solutions
- Security issues e.g. MITM and replay attacks
- Other functional tests e.g. message content validation…

Test Setup

Multiple TSOs, multiple countries, multiple AS4 products

- Oracle, Software AG, Tibco, custom.
- Enagas (Spain), Gasconnect (Austria), Gas-system (Poland), SNAM (Italy), National Grid(1) (UK)
- Test matrix setup

A dozen scenarios, progressively building up complexity

(1) Testing with NG delayed with few months

Test scenarios

Core B2B features

- Packaging, metadata
- Compression

Security

- Transport layer security
- Message layer signing and encryption

Reliable messaging

- Retries, receipts

PoC Content

Three phases

- Preparation
- Execution
- Reporting / adjusting AS4 profile

Matrix test connecting

- Different organizations
- Using products from multiple vendors
- Increasingly complex requirements

Short-term Actions

Preparation Phase

ENTSOG

- Define PoC scenarios, test configurations, data, testing methodologies, tooling
- Distribute data to participants
- Coordination

Participating TSOs

- Obtain and configure AS4 products
- Deploy and configure test environments

Interoperability Network Code Data Exchange requirements WS

Stakeholders' Workshop

Stakeholders' views

Brussels – 25 February 2014

Interoperability Network Code Data Exchange requirements WS

Stakeholders' Workshop

COFFEE BREAK….

Brussels – 25 Feb 2014

Interoperability Network Code Data Exchange requirements WS

Stakeholders' Workshop

CLOSING REMARKS….

Brussels – 25 Feb 2014

Conclusions

- **CNOT Process:** Process in line with INT NC requirements; Stakeholders' feedback required through Public Consultations on-line form on ENTSOG website (until 14 Mar)
- **BRS Nominations and Matching**: BRS to be finalised and transformed into MIG; Stakeholders' feedback required through Public Consultations on-line form on ENTSOG website (until 14 Mar)

- **BRS CAM and CMP:** BRS process for CAM and CMP extensions has started → next step Stakeholders WS & Public Consultations → May 2014

- **AS4 Usage Profile:** Stakeholders' feedback to be given through e-mail exchange interoperability@entsog.eu

- **AS4 Proof of concept:** Currently only TSOs to be part of PoC, depending on number of parties able to participate it can be extended to external parties and PoC period may be prolonged

- All the material will be published on the website (presented materials, list of participants, notes)

Thank You for Your Attention

ENTSOG -- European Network of Transmission System Operators for Gas
Avenue de Cortenbergh 100, B-1000 Brussels

EML:
WWW: www.entsog.eu