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Message and Workflow Design Working Group

Introduction to Edig@s version 6

Jarle Rønnevik

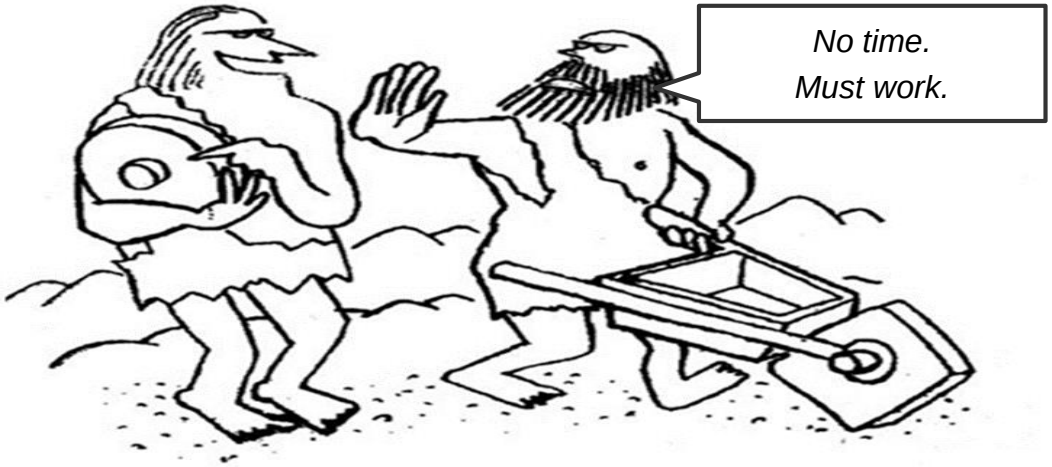
Equinor ASA

Introduction

- Edig@s Version 6
- Why create a new version
- What are the main changes?
- When will it be ready?

Edig@s version 6

Why create a new version of Edig@s?



Why Version 6?

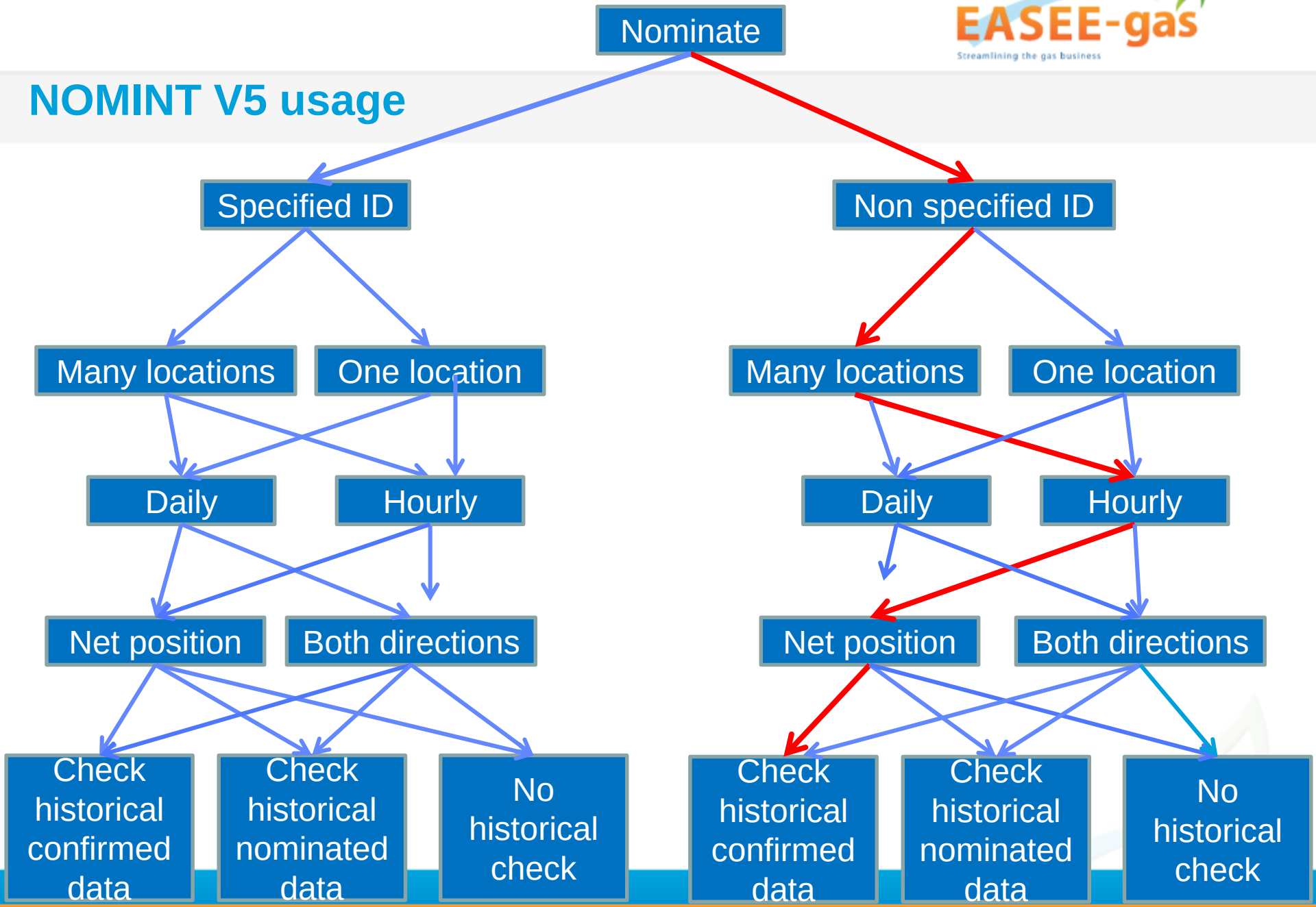
1. Harmonise message use (avoid different implementations of the same process)
2. Harmonise the core components and code lists
3. Review all processes because of market changes
4. Align with the harmonised role model (roles and processes)

1. Harmonise message use

- Ensure that message submissions do not require specific developments depending on the receiving party.

- Ensure that the document is not open to interpretation by being more explicit and by introducing decision tables.

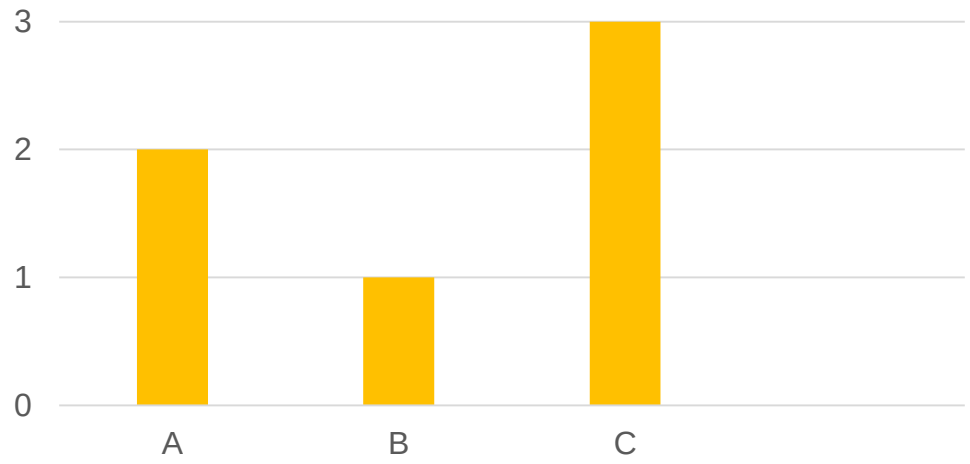
NOMINT V5 usage



Question and answers sent to 6 TSO's

If a BRP have a capacity of 20 GWH but nominate 22 GWH how will your system react (check responses)?

- A. Accept 20 GWH but notify about the over nominated volume.
- B. Accept 22 GWH as over nomination
- C. Reject the nomination (0) but notify



2. Harmonise core components and code lists

The code lists have been inherited since version 3 without review. For Version 6 therefore they were reviewed to:

- Harmonise naming convention for codes
- Remove redundant codes from lists
- Move incompatible codes from code lists
- Create new code lists where necessary

3. Review all processes because of market changes

All processes were reviewed:

- To ensure alignment with the network codes
- To remove country specific requirements
- To introduce new processes where necessary (Balancing and reconciliation)

4. Alignment with the harmonised gas role model

Peter Meeuwis

Gasterra

4. Alignment with the harmonised role model

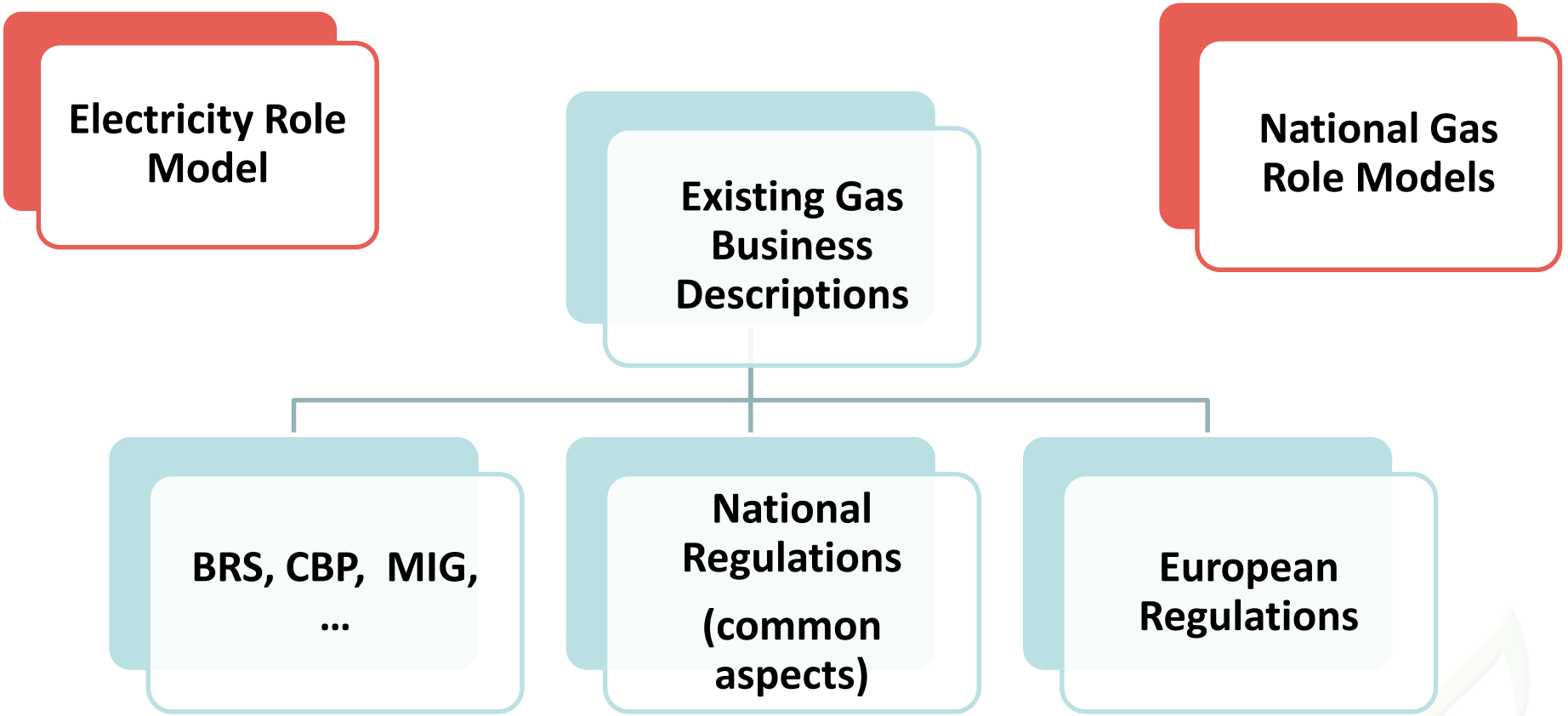
- Why a Harmonised Gas Role Model?
- Sources of information
- Define & assign responsibilities to parties
- Amount of roles determines amount of couplings
- Drivers
- Next Steps

Why a Harmonised Gas Role Model?

- Provide coherent terminology between regulatory definitions and commonly used gas market terms.

- Provide an overview of the common interactions within the gas market.

Sources of information



Define & assign responsibilities to parties

Definition

A role model contains a collection of roles that each represent a responsibility. Roles are assigned to parties.

Usage

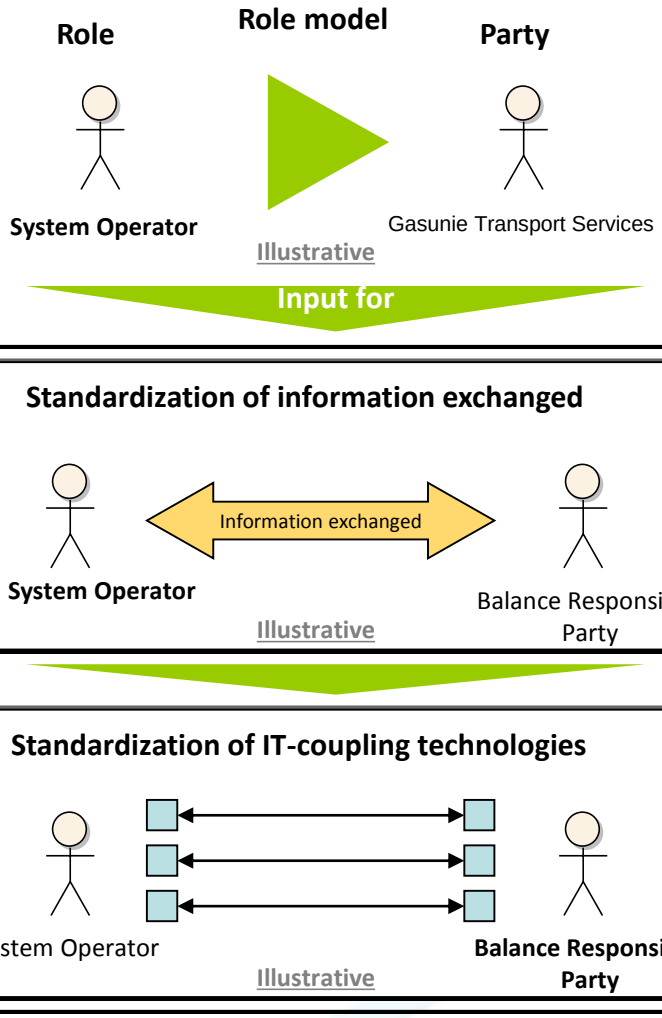
A role model is used to harmonize the **couplings** between the parties.
Couplings are the combination of the processes, transactions, messages and information services (interfaces and portals) required to deliver and receive (operational) information to and from a party

Interoperability

A role model is the first of three steps to minimize interoperability issues that prevent efficient cooperation, and synergies during and after mergers:

The three steps are:

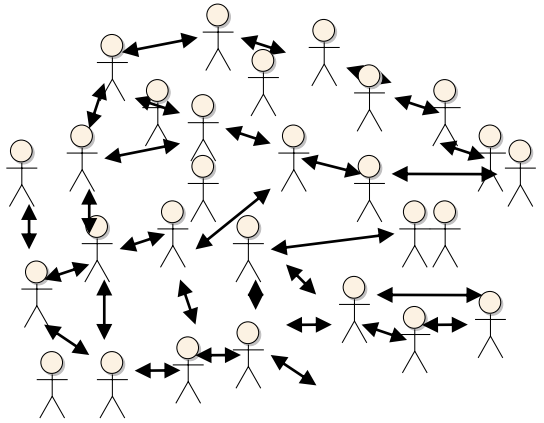
1) standardization of role model
2) standardization of information exchanged,
3) standardization of IT coupling technologies



Amount of roles determines amount of couplings

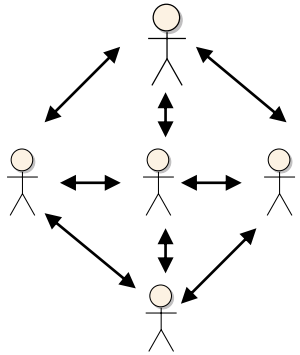
Many roles means:

- Large amount of couplings to be harmonized with all parties in the EU
- Very limited room for individual differences in each region
- Focus will be on a mixture of minor and major (market) couplings



Fewer roles means:

- Minimal amount of couplings to be harmonized with all parties in the EU
- Room for differences within each role in each region
- Focus will be on the major (market) couplings



Drivers 1/2

Encourages the use and implementation of a harmonized gas role model across EU

A **The trend of consolidation and intensifying cross-border cooperation of market areas in EU**

- Different standards for information exchange making access to (other) market areas and cooperation difficult to achieve for market parties and TSOs; it limits the ability to attract and export energy flows from and across different regions in the EU

B **The trend of cooperation/mergers between System Operators (and between *BRPs*)**

- The current different standards make cooperation and synergies difficult to achieve when partners need to uphold the current differences in each historical grown domains

C **BRPs who are involved in both E and G (which are required to be more efficient)**

- Market mechanics pushes the energy suppliers to be more operationally efficient. They have to manage E and G activities separately while many similarities exist, making synergies difficult to achieve

Harmonized role model between Electricity and Gas

Harmonized gas role model across EU

Drivers 2/2

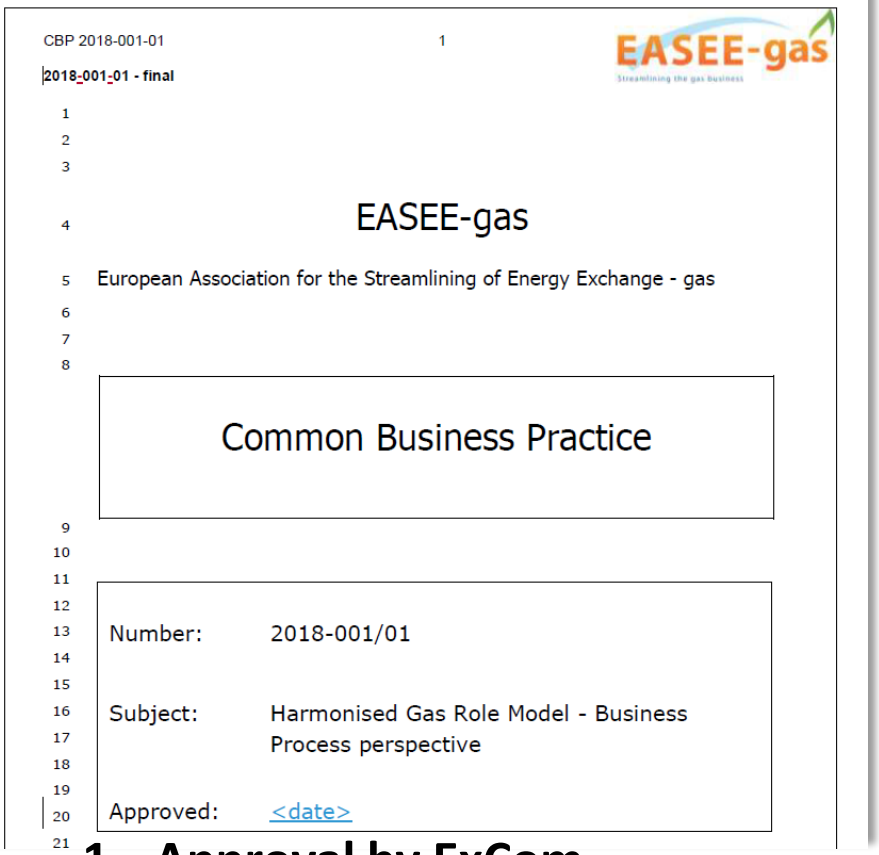
Push towards an updated and harmonized role gas model between E and G, and upstream/downstream

D **Downstream consumers that are becoming equal to (upstream) producers ('prosumers'); decentralization and diversification of production**

- The supply will diversify and decentralize in the future (Bio-gas, household solar/wind field producers, MicroWKK, storage) to local regions. Local distribution companies have to manage a system with local varying input and output, and deliver regional energy (administratively) to an integrated EU energy market.

Harmonized gas role model between upstream and downstream

Next steps



CBP 2018-001-01 1

2018-001-01 - final

EASEE-gas

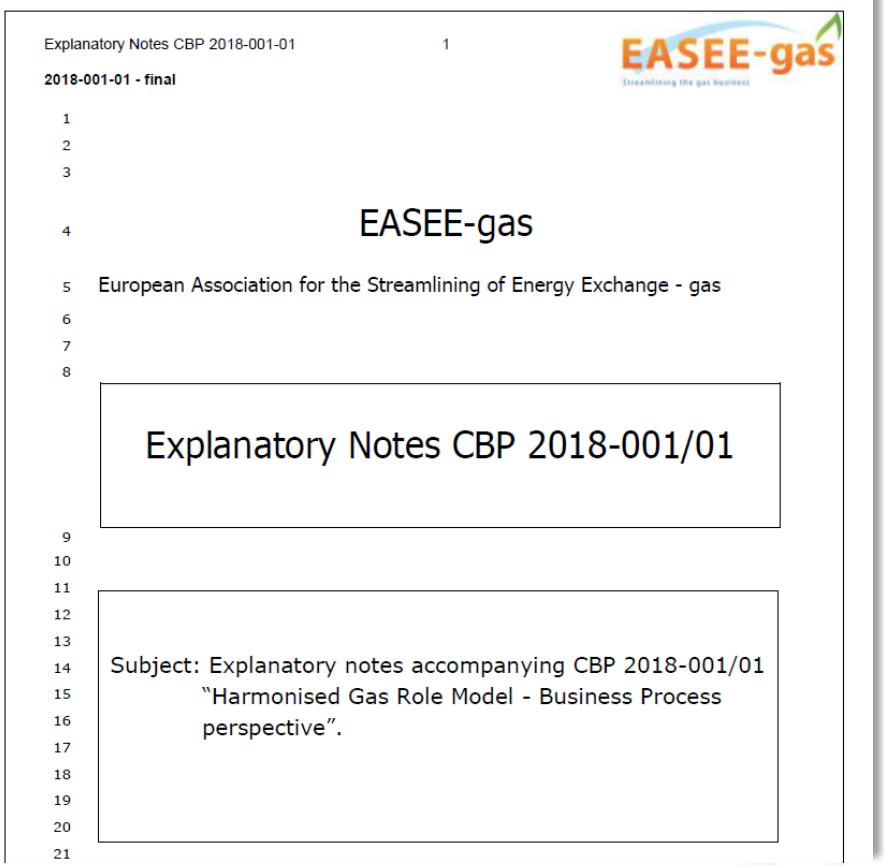
European Association for the Streamlining of Energy Exchange - gas

Common Business Practice

Number: 2018-001/01

Subject: Harmonised Gas Role Model - Business Process perspective

Approved: <date>



Explanatory Notes CBP 2018-001-01 1

2018-001-01 - final

EASEE-gas

European Association for the Streamlining of Energy Exchange - gas

Explanatory Notes CBP 2018-001/01

Subject: Explanatory notes accompanying CBP 2018-001/01 "Harmonised Gas Role Model - Business Process perspective".

1. **Approval by ExCom**
2. **Consultation among members**
3. **Publishing at EASEE-gas website of CBP & Explanatory Note.**

Final words

A role model is never finished.

But at a certain time ….

it needs to be ready.

What will change in Edig@s version 6?

Harmonisation

Henk Koorenhof

Gasunie Transport Services

A revised structure to reflect market requirements

1. Capacity Allocation ***(NC + BRS)***
   a. Capacity allocation initialisation
   b. Capacity allocation bidding and settlement
2. Exchange Trade
   a. OTC Trade Process
   b. Exchange trade process
3. Nomination and Matching ***(NC + BRS)***
4. Balancing and Settlement ***(NC)***
   a) Metering
   b) Allocation
   c) Balancing
   d) Settlement
5. REMIT and Transparency ***(Regulation)***
   a) Market transparency
   b) Regulator transparency

Make use of decision tables to clarify message content use

ATTRIBUTE NAME	
Class: [DocumentName]_Document **Attribute:** documentCode	List of document codes permitted within the message definition
Class: [codelist_Name] **Attribute:** [Codelist_Name]Code	List of [Codelist_Name] codes permitted for each document code

May also include specific rules

- The first row contains in the first column the identification of the message as well as in the second and following columns all the DocumentCode codes permitted.
- The second and following rows contains in the first column the identification of a codelist used in the message as well as in the second and following columns the codes that are permitted for the DocumentCode identified in the top of the column.

Make use of decision tables to clarify message content use

DocumentCode	14G	16G	94G	95G
	Imbalance notification	Reconciliation notification	Account position	Provisional allocation report
AccountCode	ZOC = Internal account ZOD = Supplier Account ZOE = Shipper Account ZOF = System Operator Account ZUI = Total Market Account	ZOC ZOD ZOE ZOF ZUI	ZOC ZOD ZOE ZOF ZUI	ZOC ZOD ZOE ZOF ZUI
BusinessCode	ZXJ = Opening Position ZXK = Closing Position ZXL = Transaction ZXM = Imbalance Z40 = Correction for imbalance.	ZXJ ZXK ZXL ZXM Z40	ZXJ ZXK ZXL ZXM Z40 not allowed	Z01 = Allocated. Z03 = Measured. Z02 = Nominated. Z04 = Confirmed. Z41 = Allocated maximum hourly gas flow. Z42 = Negative correction to allocated amount (decrease). Z43 = Positive correction to allocated amount (increase). ZFG = Consumption ZFH = Metered consumption ZFI = Profiled consumption
AccountDirectionCode	ZPD = Debit quantity. ZPE = Credit Quantity.	ZPD ZPE	ZPD ZPE	Z02 = Input quantity Z03 = Output quantity
StatusCode	03G = Estimated value. 04G = Provisional value. 05G = Definitive value. 21G = Value estimated by Network company, after consultation of other parties.	03G 04G 05G 21G not allowed	03G 04G 05G 21G not allowed	Not used

Different codes

Different codes

Recommendation for message identification

Many questions asked requesting a harmonised identification for messages

[Date][SEQUENCE]

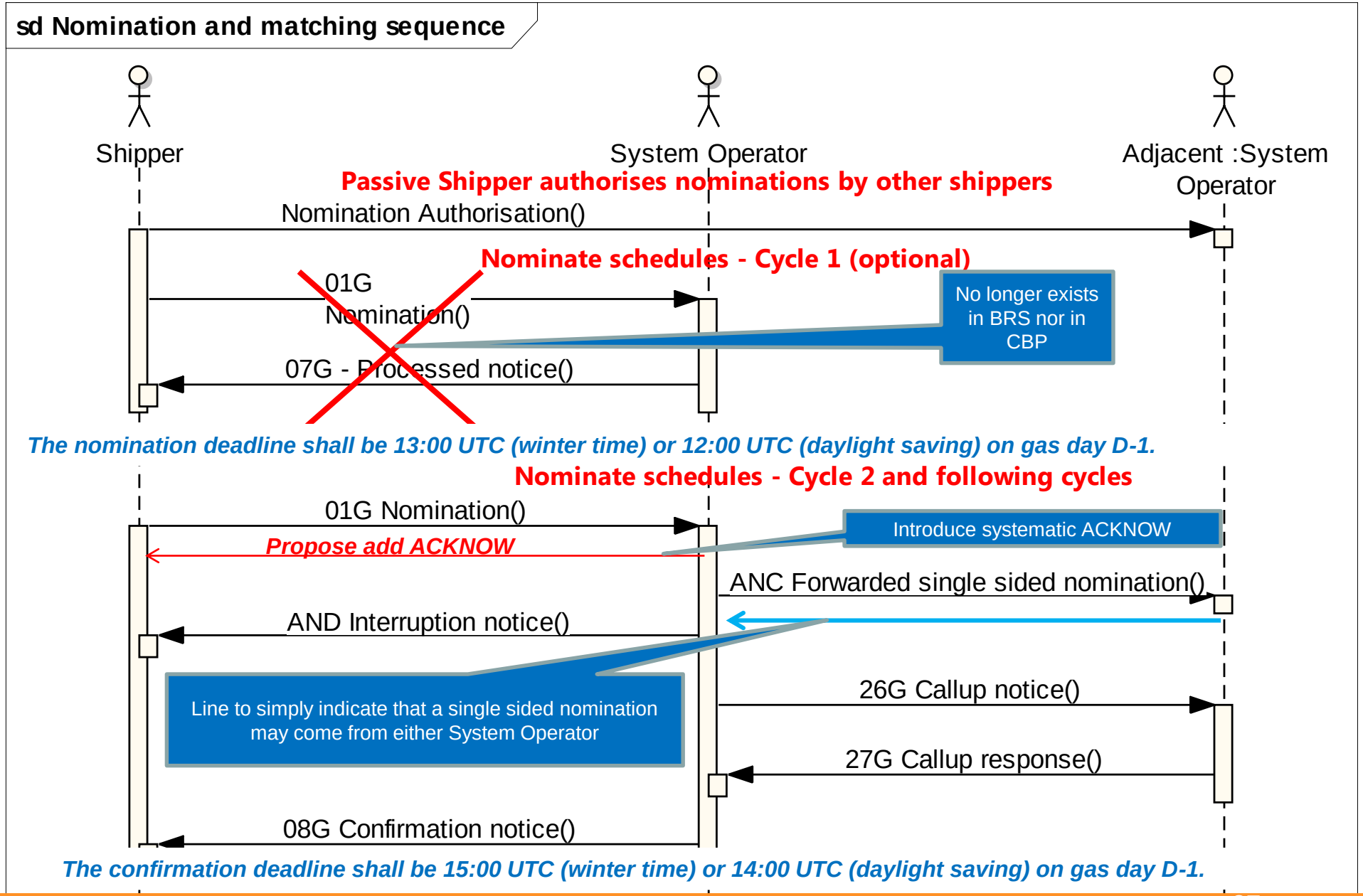
Where

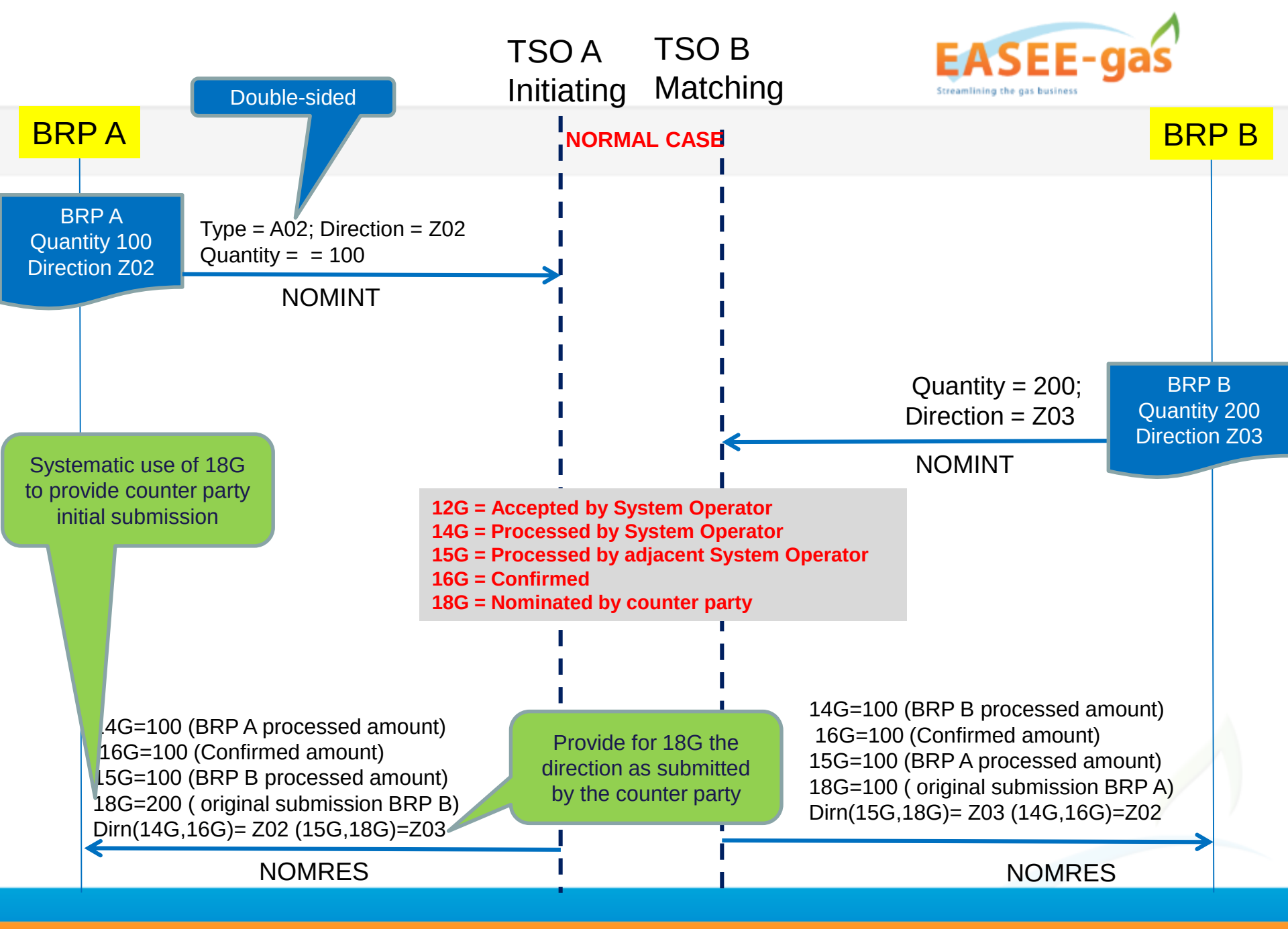
- DATE = YYYYMMDD – recommend the date that the first version of the message was generated by the sender
- SEQUENCE = 5 alphanumeric characters to uniquely identify a message. (i.e. 00001 or AAAAA)

The IDENTIFICATION MUST be managed within the SENDERs environment.

Note 1: Retransmissions of the same message MUST keep the original IDENTIFICATION and make use of the VERSION attribute in the message to indicate the new retransmission

Note 2: The receiver of a message must not check structure but only verify the uniqueness of the identification.


sd Nomination and matching sequence
Shipper
System Operator
Adjacent :System Operator
Passive Shipper authorises nominations by other shippers
Nomination Authorisation()
Nominate schedules - Cycle 1 (optional)
01G Nomination()
No longer exists in BRS nor in CBP
07G - Processed notice()
The nomination deadline shall be 13:00 UTC (winter time) or 12:00 UTC (daylight saving) on gas day D-1.
Nominate schedules - Cycle 2 and following cycles
01G Nomination()
Introduce systematic ACKNOW
Propose add ACKNOW
ANC Forwarded single sided nomination()
AND Interruption notice()
Line to simply indicate that a single sided nomination may come from either System Operator
26G Callup notice()
27G Callup response()
08G Confirmation notice()
The confirmation deadline shall be 15:00 UTC (winter time) or 14:00 UTC (daylight saving) on gas day D-1.


TSO A
Initiating
TSO B
Matching
EASEE-gas
Streamlining the gas business
Double-sided
BRP A
NORMAL CASE
BRP B
BRP A
Quantity 100
Direction Z02
Type = A02; Direction = Z02
Quantity = = 100
NOMINT
Quantity = 200;
Direction = Z03
BRP B
Quantity 200
Direction Z03
NOMINT
Systematic use of 18G
to provide counter party
initial submission
12G = Accepted by System Operator
14G = Processed by System Operator
15G = Processed by adjacent System Operator
16G = Confirmed
18G = Nominated by counter party
14G=100 (BRP A processed amount)
16G=100 (Confirmed amount)
15G=100 (BRP B processed amount)
18G=200 (original submission BRP B)
Dirn(14G,16G)= Z02 (15G,18G)=Z03
Provide for 18G the
direction as submitted
by the counter party
14G=100 (BRP B processed amount)
16G=100 (Confirmed amount)
15G=100 (BRP A processed amount)
18G=100 (original submission BRP A)
Dirn(15G,18G)= Z03 (14G,16G)=Z02
NOMRES
NOMRES

Processing requirements

A Nomination is submitted to a System Operator on a daily basis. The following rules must be respected:

- A nomination must be submitted for a single Balance Responsible Party internal System Operator account.
- The nomination must make reference to a single Connection Point.
- Any re-nominations shall be identified by the use of the document version number.
- All NOMRES documents must provide 18G

Choices to make – Nomination and matching process

- Transmit both directions or net quantities:

Both directions	Only net quantities
Pro: appropriate only when daily quantities matched with hourly quantities	Pro: No useless information in message, Pro: easier to validate

Harmonised approach: proposal to make both directions only when daily and hourly values are matched. In all other cases only net values should be allowed

Choices to make – Nomination and matching process

- When to send confirmation:

Every hour (even if no change)	Only after change of quantities or received nomint
Pro: repetitive-process	Pro: less messages

Systematic validation of historical data

To be resolved:

- Check that :
  - Historical data is confirmed data
  - Historical data is the last accepted nomination data
  - Carry out no checks

REMINDER: Cancel and replace principle

- If a message is received with a document identification that is the same as a previously sent document but with a version that is greater than the version in the previously sent document then the newly received document replaces the previously sent document and the previously sent document is cancelled.
- This is true for every Edig@s document.

e-Invoicing for gas

Electronic invoicing is becoming more and more prevalent for the automation of accounts payable where considerable savings can be obtained:

- Reduce the time, effort and cost involved in the paper-based invoicing process
  - Low error rate
  - Improved process – automatic validation
  - Increased staff productivity
- Facilitates European VAT audit and transparency requirements

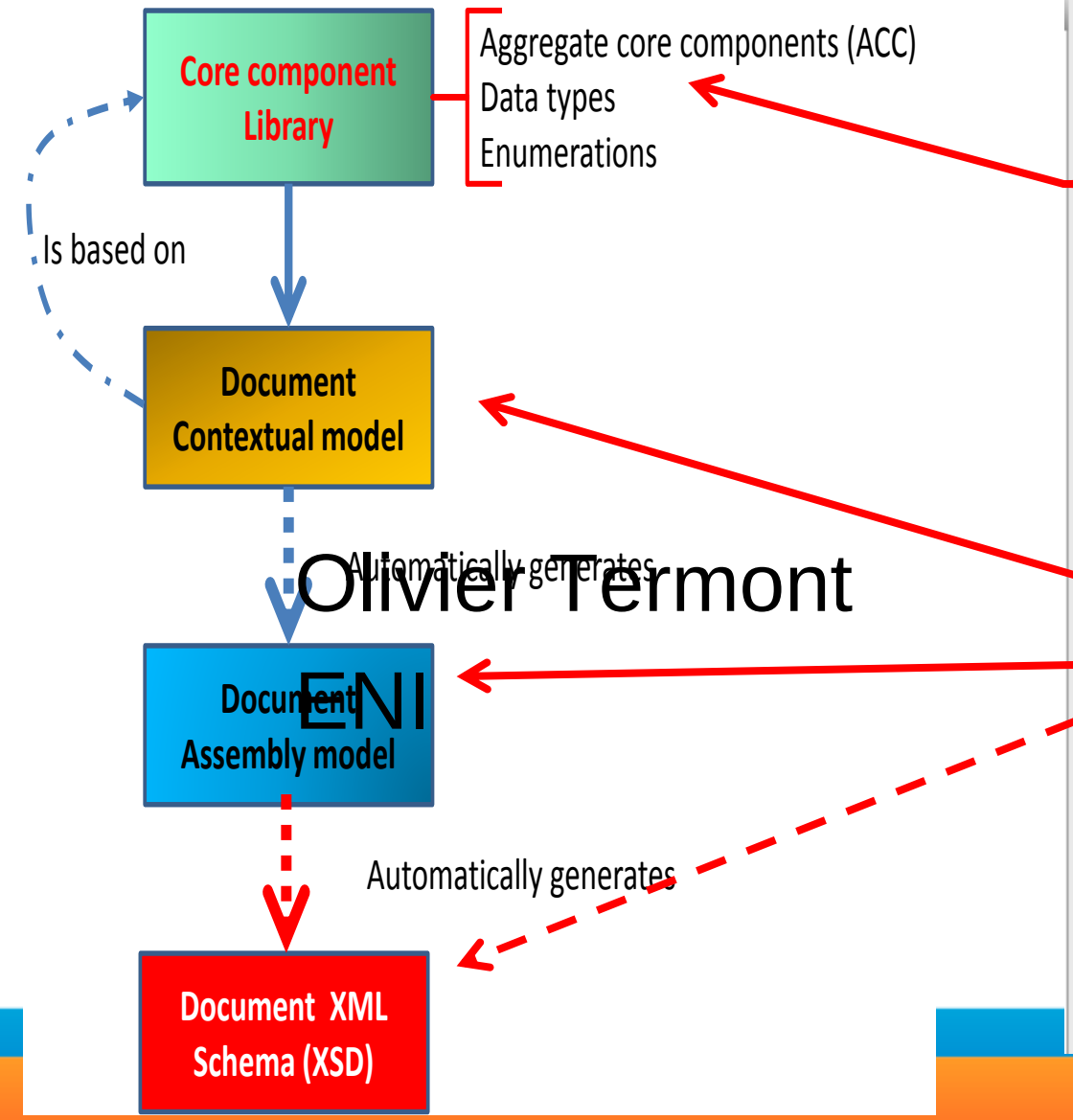
Proposal to develop Edig@s Invoice message using the **ISO/IEC 19845 (**UBL) standard invoice boilerplate.

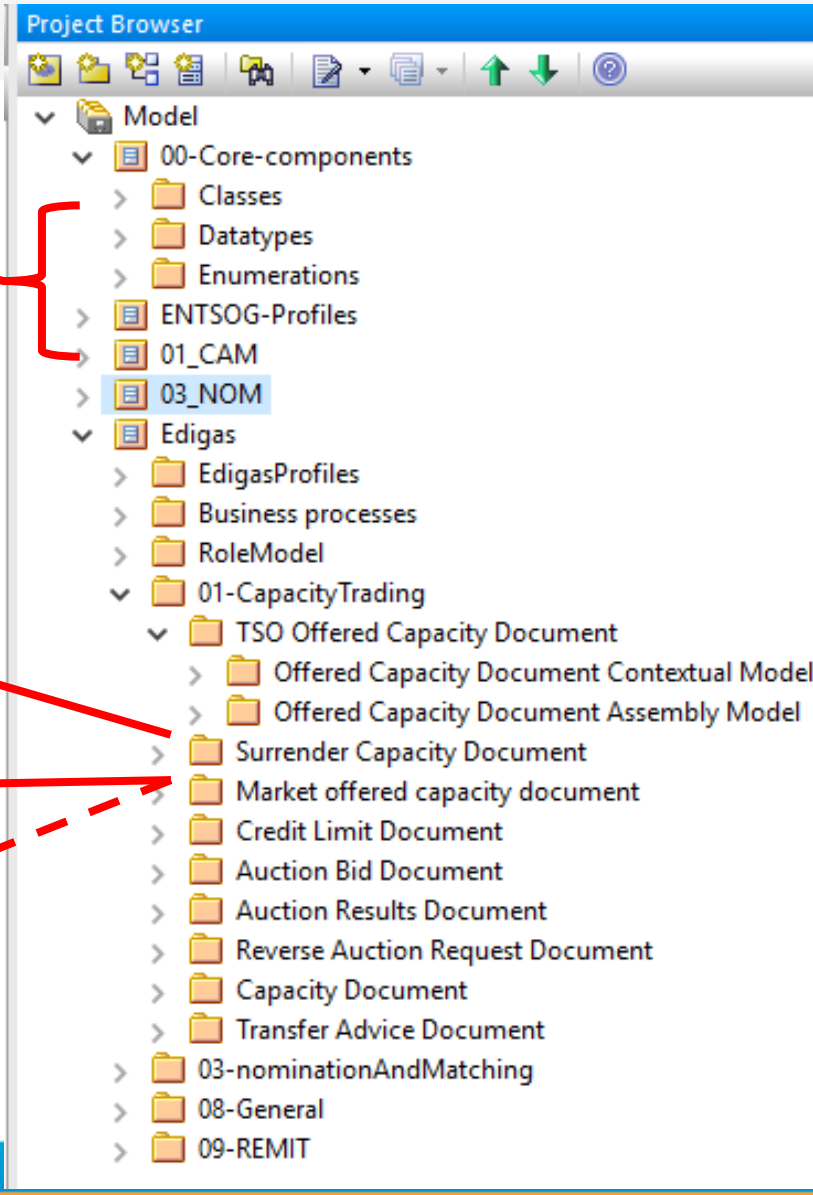
Code lists

Olivier Termont

ENI

Core component use and structure





Olivier Termont

ENI

Codelist harmonisation for codes

All codelist attributes harmonised to

- Attribute name = xxxxCode
- Datatype = xxxxCodeType
- Codelist name : xxxxCodeTypeCodeList

Remove redundant codes from codelist

Including codes that are not used.

Example: Account Direction - removed

- Credit quantity outside limits
- Credit quantity inside limits
- Debit quantity outside limits
- Debit quantity inside limits

- Redundancy such as “Inside/outside” in the above codes are not required for version 6

Remove incompatible codes

Measurement Type List

For example removed

- Connection point
- Route
- No location specified

Unit of measure typelist

- Removed all codes relating to meteorological, physical and chemical properties (not units of measure)

Create new code lists

Created codelists for:

- Meteorological Property Code Type Codelist
- PhysicalPropertyCodeTypeCodelist
- ChemicalCompoundCodeTypeCodelist

These properties were initially in the Unit Of Measure Type List.

Deleted code lists

Deleted the following code lists:

Other means to implement if necessary

- Capacity Market Type List (codes to indicate primary or secondary market)
- Capacity Type List (codes to indicate bundled or unbundled – moved as an indicator in the Quantity class)
- Characteristic Type List (used only in the case of one TSO)

Never used

- Category Type List (no existing codes)
- Country Type List (no used)
- Settlement Type List (code to indicate physical or financial settlement)

Code lists

All Code List changes were approved by the EASEE-Gas community.

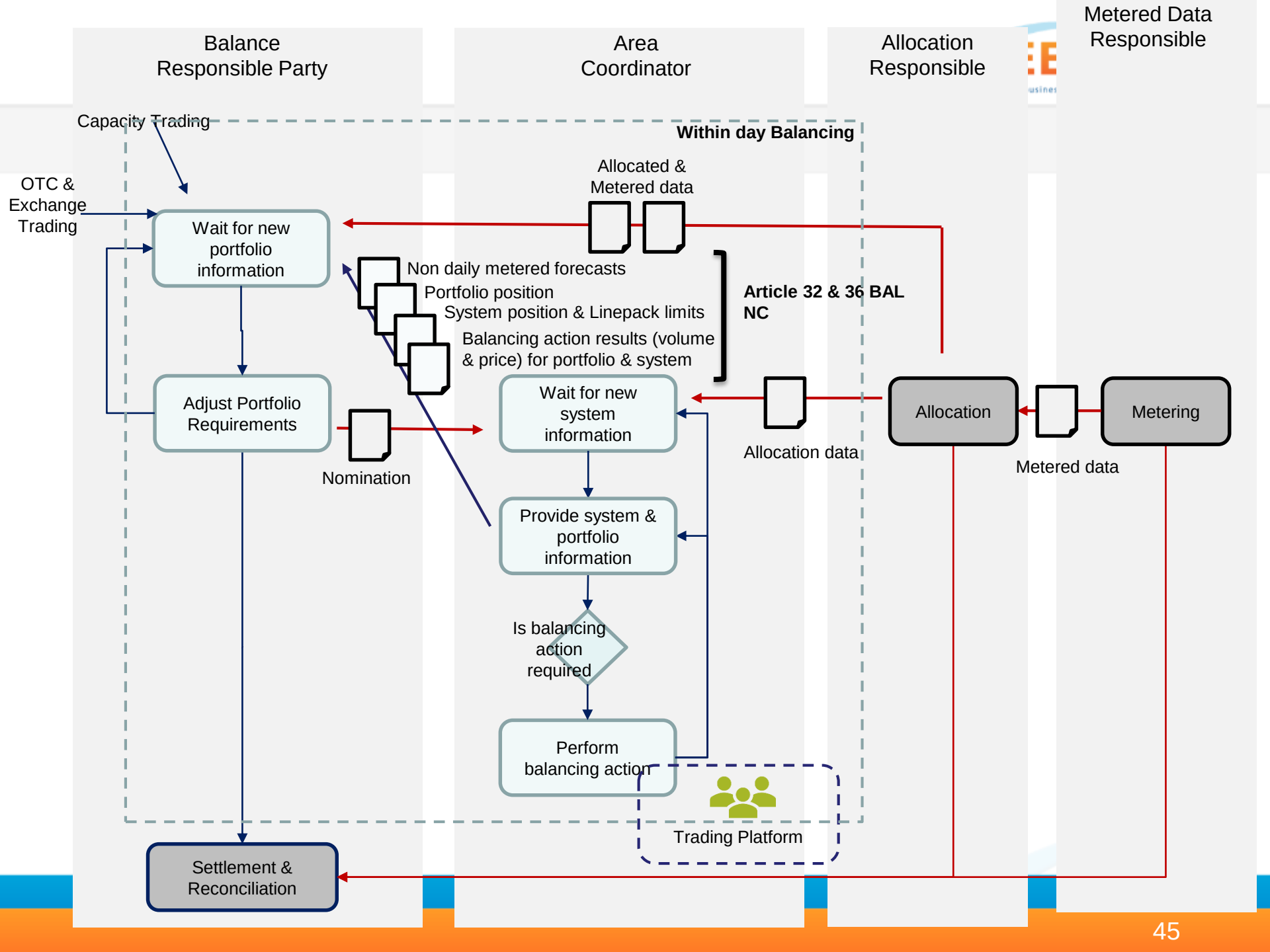
Svetlana Pozdycheva

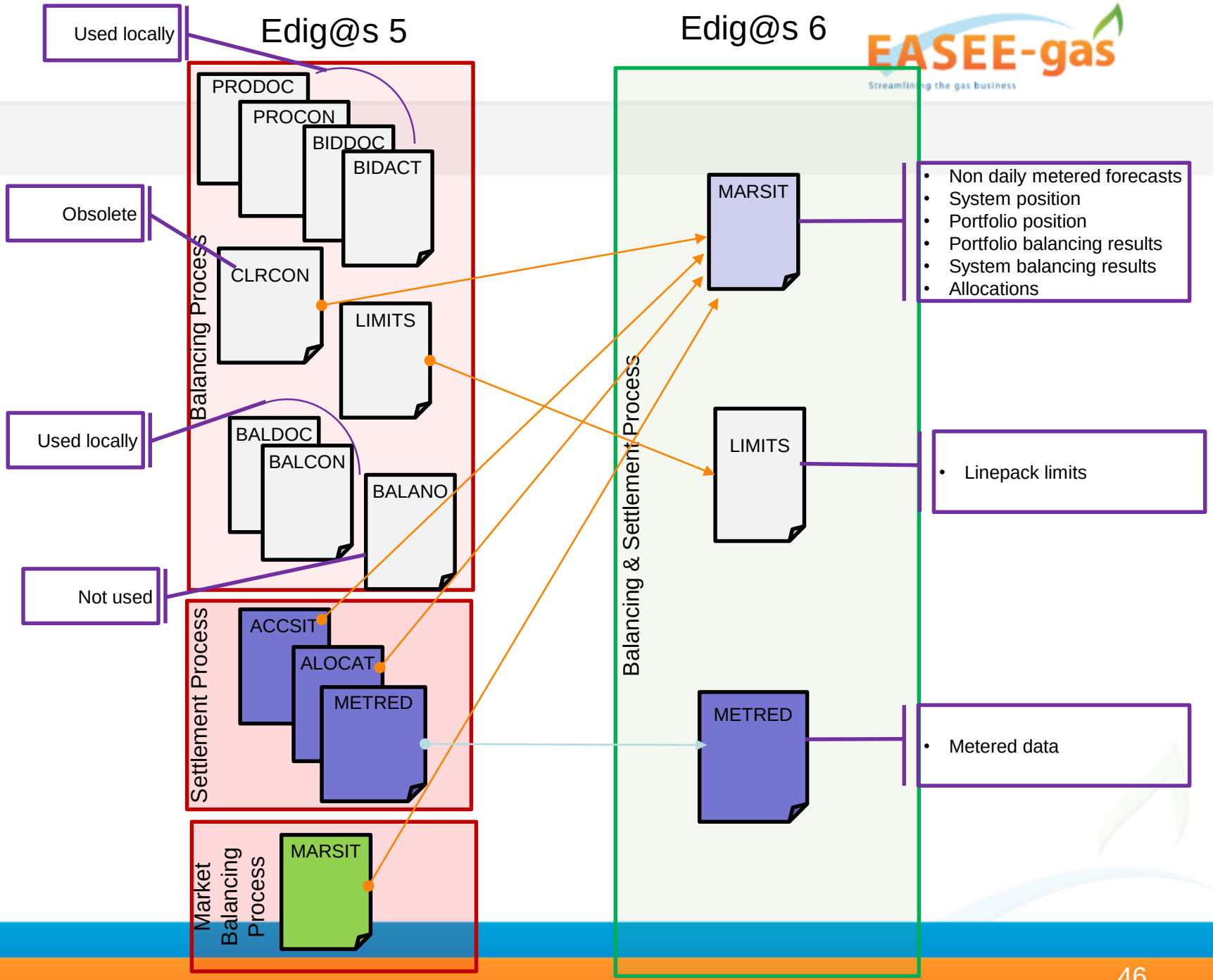
Engie

Introduction

The Balancing process described in Edig@s 5 is not in compliance with the current market situation and NC BAL obligations :

- Locally managed messages
- TSO specific balancing processes
- Difficulties to respect NC BAL, article 32 & 36 on information provision


Balance Responsible Party
Area Coordinator
Allocation Responsible
Metered Data Responsible
Capacity Trading
OTC & Exchange Trading
Within day Balancing
Allocated & Metered data
Wait for new portfolio information
Non daily metered forecasts
Portfolio position
System position & Linepack limits
Balancing action results (volume & price) for portfolio & system
Article 32 & 36 BAL NC
Adjust Portfolio Requirements
Nomination
Wait for new system information
Allocation data
Allocation
Metering
Metered data
Provide system & portfolio information
Is balancing action required
Perform balancing action
Trading Platform
Settlement & Reconciliation


Edig@s 5
Edig@s 6
EASEE-gas
Streamlining the gas business
Used locally
Obsolete
Used locally
Not used
PRODOC
PROCON
BIDDOC
BIDACT
CLRCON
LIMITS
BALDOC
BALCON
BALANO
ACCSIT
ALOCAT
METRED
MARSIT
Balancing Process
Settlement Process
Market Balancing Process
Balancing & Settlement Process
MARSIT
LIMITS
METRED
Non daily metered forecasts
System position
Portfolio position
Portfolio balancing results
System balancing results
Allocations
Linepack limits
Metered data

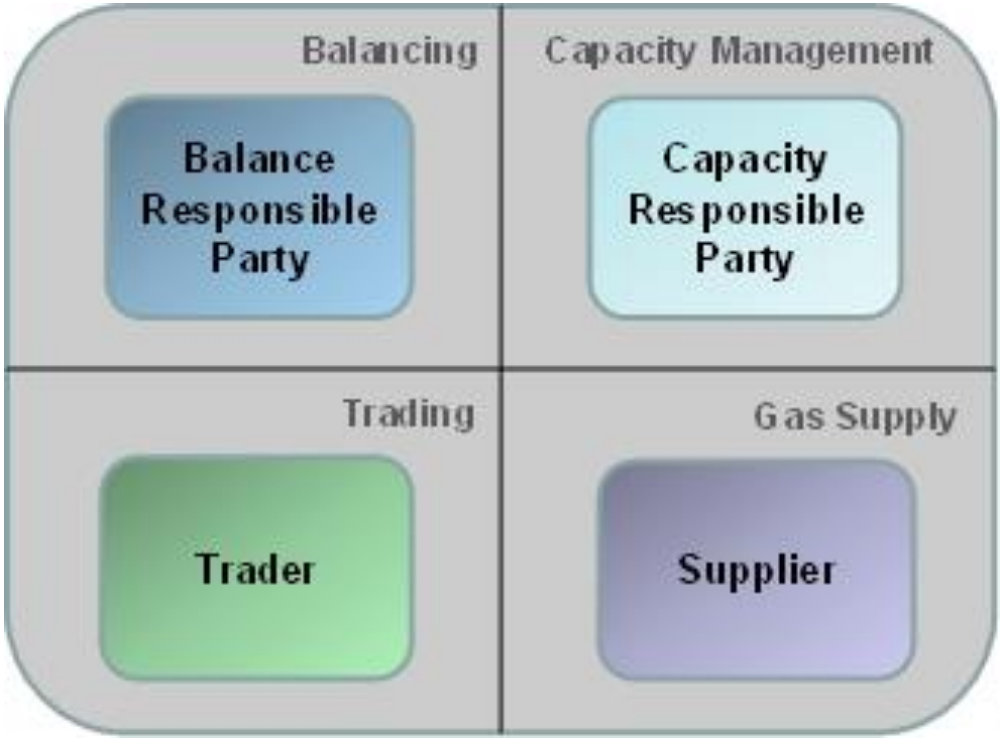
Harmonised Gas Role Model

Jarle Rønnevik
Equinor ASA

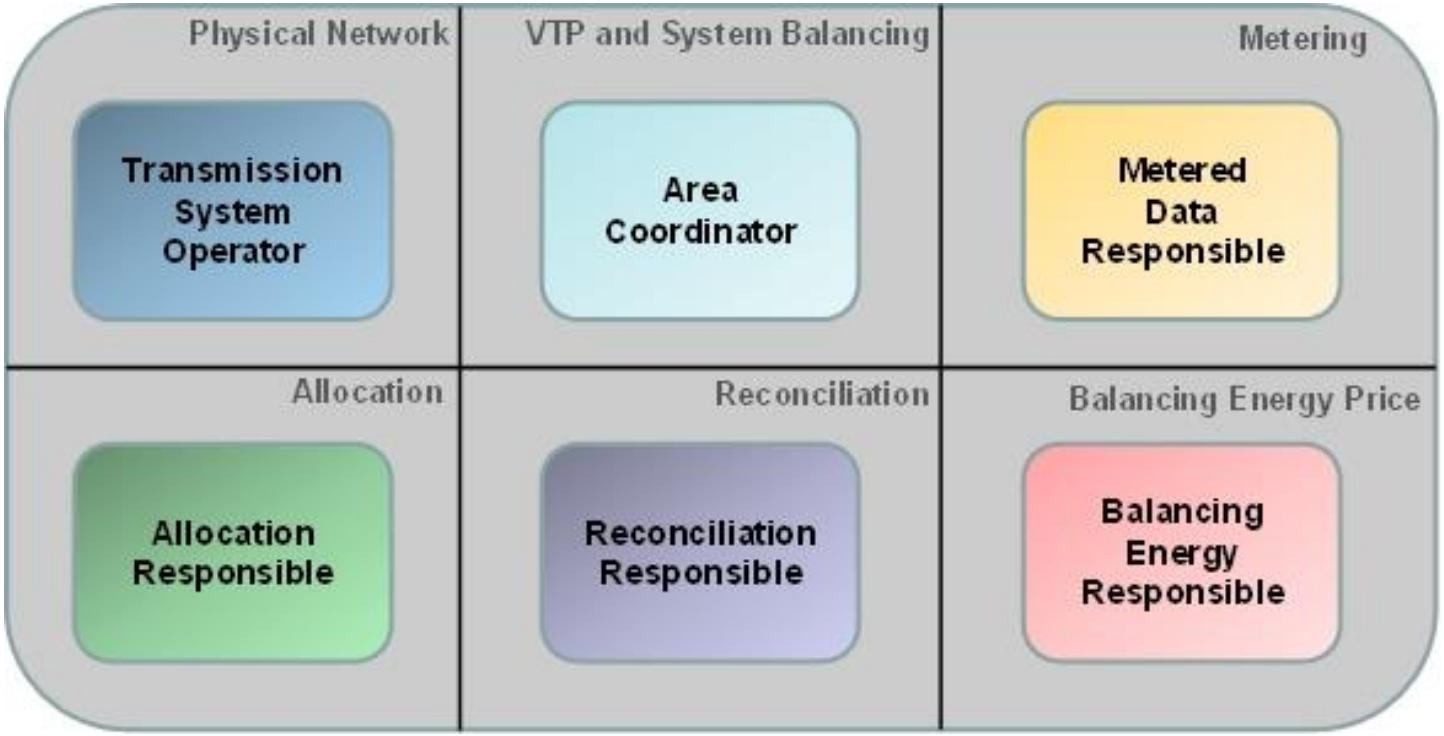
Align with harmonised role model

- **Align the roles as defined in the role model**
- **Align the business processes covered by the role model with the implementation guidelines**

Where to find former “Shipper” / “Network User” in the role model



Where to find former “TSO” in the role model



When

Jarle Rønnevik

Equinor ASA

When should Edig@s version 6 be available?

Planned to be available in the second quarter of 2019

Implementation for 2022

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Technology Standards Working Group Communication party – configuration management

Dirk Serruys (Fluxys)
Chairman of the EASEE-gas TSWG

Context

- AS2 and AS4 communication requires management of configuration parameters
- Exchange of these parameters is cumbersome, highly manual, error prone and sometims lead to unsecure situations (e.g. Exchange of private certificates by e-mail). Typically, target systems need to be updated manually upon reception of new configuration parameters
- ENTSOG is developing a standard for exchange of configuration parameters in band of AS4

Proposed solution

- Creation of a centralised repository where companies could organise their portfolio of communication parties wich their respective configuration parameters that can be accessed interactively and/or automated
- Each company would be responsible of keeping its configuration data correct and in return could access the data of the companies in its portfolio

Value proposition for members

- **Increased efficiency:**
  - We expect less errors in configuration management as a result of the automation
  - Portfolio management would become easier
- **Increased security**
  - Less secure communication through e-mail can be avoided

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Thank you for your attention

For more information:

www.easee-gas.eu