

Cross Border Intraday (XBID) Trading Solution Pre-launch Event

Brussels, 31st January 2018



Welcome to the

Cross Border Intraday (XBID) Trading Solution Pre-launch Event

Jean Verseille and Stefano Alaimo
Co-chairs of the Intraday Steering Committee

Agenda

TIME	AGENDA ITEM	PRESENTER
09:30 – 10:30	Registration, Coffee	
10:30 – 10:40	1. Welcome, introduction	Jean Verseille, Stefano Alaimo <i>Co-chairs Intraday Steering Committee</i>
10:40 – 11:00	2. Key note speech	Dr. Klaus-Dieter Borchardt <i>EC, Director Internal Energy Market</i>
11:00 – 11:20	3. Overview of XBID Project – background, history and challenges	Jean Verseille <i>Co-chair Intraday Steering Committee</i>
11:20 – 12:00	4. The XBID matching solution	Carlos Albendin <i>OMIE</i>
12:00 – 12:15	5. Overview of borders, market areas & products	Pietro Rabassi <i>Nord Pool</i>
12:15 – 12:40	6. Relevant information for market parties from Local Implementation Projects (LIPs)	Katja Birr-Pedersen <i>Energinet</i>
12:40 – 13:00	Q&A	Hosted by Jean Verseille and Stefano Alaimo
13:00 – 14:00	Lunch Break	
14:00 – 14:15	7. Explicit access on French-German border	Bruno Lemetayer <i>RTE</i>
14:15 – 14:30	8. NRA overview	Johan Roupe <i>Energimarknadsinspektionen</i>
14:30 – 14:50	9. Deutsche Börse' trading solution provider	Jens Rick <i>Deutsche Börse Group</i>
14:50 – 15:15	10. Member's trial period, go-live plan and next steps for readiness	Pierre Milon <i>EPEX Spot</i>
15:15 – 15:30	11. Future plan for XBID	Mark Pickles <i>TSO Project Manager</i>
15:30 – 16:00	Q&A	Hosted by Jean Verseille and Stefano Alaimo
16:00 – 17:00	Get together – drinks will be served	

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10:40-11:00

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- 11. Future plan for XBID**

Key note speech

Dr. Klaus-Dieter Borchardt

European Commission, Director Internal Energy Market

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Overview of XBID Project

Background, history and challenges

Jean Verseille

Co-chair Intraday Steering Committee

What is XBID?

XBID Project objective:

“Establish a common cross border implicit continuous Intraday trading solution across Europe, where all the cross border capacities are allocated...” *Quote from Request for Offer (RFO) Issued 2012*

“The system will accommodate the continuous matching of bids and orders from market participants in one bidding zone with bids and orders coming from its own bidding zone and from any other bidding zone where cross-zonal capacity is available. “

Shared
Order Book
(SOB)

Capacity
Management
Module
(CMM)

Shipping
Module
(SM)

XBID System – 3 main modules

The Single Intraday Coupling Mechanism defined in CACM

Benefits delivered by XBID

- Cross-border trading opportunity ‘within day’ across Europe on a harmonised platform.
- As the Intraday market develops it will enable increased optimisation of the use of generation - especially variable RES
- Will lead to welfare benefits
- Brings the whole European Intraday continuous market together and complements the existing Day Ahead market
- Capable of delivering a wide product range – 15 minutes, 30 minutes, hourly, block products etc.
- Wide range of orders types
 - Iceberg-enabled (they can be made into an iceberg)
 - Link-enabled (they can be linked)
 - Block-order-enabled (they can be combined into user defined blocks)
- Supports a wide range of contract types

Intra-day versus Day-ahead – What are the challenges?

Intraday

- Continuous trading close to real time
 - Increases system security challenges
 - Increases IT performance requirement
- Equal treatment / legal requirements between
 - Explicit and Implicit
 - Local trading solutions
 - PXs
- Pan-European solution

Day Ahead

(took 4 years to deliver)

- Single allocation each day with time to calculate results
- Evolution of existing solutions
- Implicit only
- Progressive implementation throughout Europe

XBID complexity

Competitive Environment

- Multi-NEMOs
- Range of providers of Trading Solutions
- Equal treatment

Demanding requirements

- 200k-800k orders/day – increasing exponentially (+ robotics)
- Calculations/routing/products
- Performance and processing capability

**Multi-party
Governance
- consensus**

Contractual Challenges

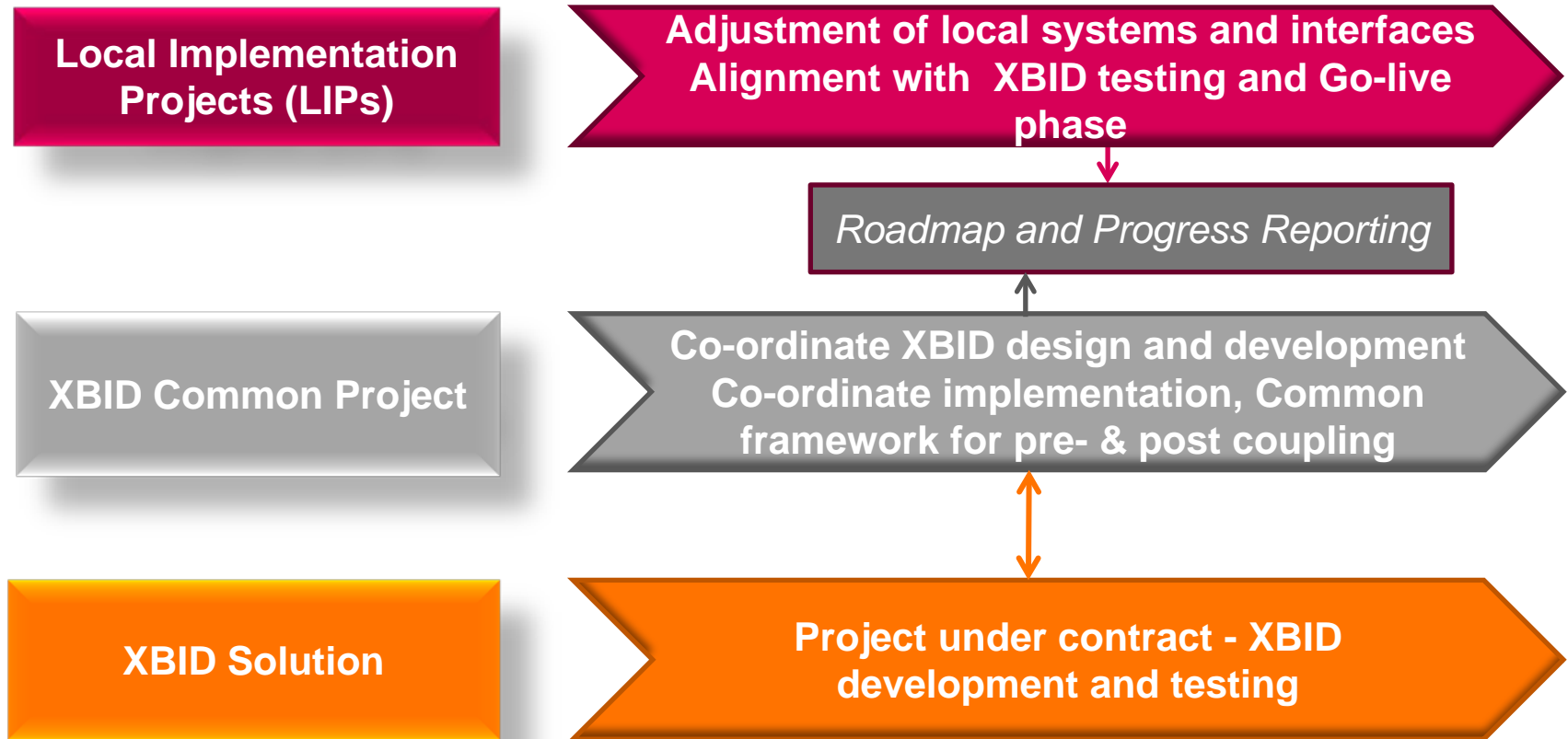
- Supplier/multi-client
- Operational organisation amongst NEMOs and TSOs
- Liabilities

Legislative /Regulatory

- Timescales
- Cost sharing and recovery
- Future strategic roadmap
- Changing environment during project with CACM implementation

Project Approach

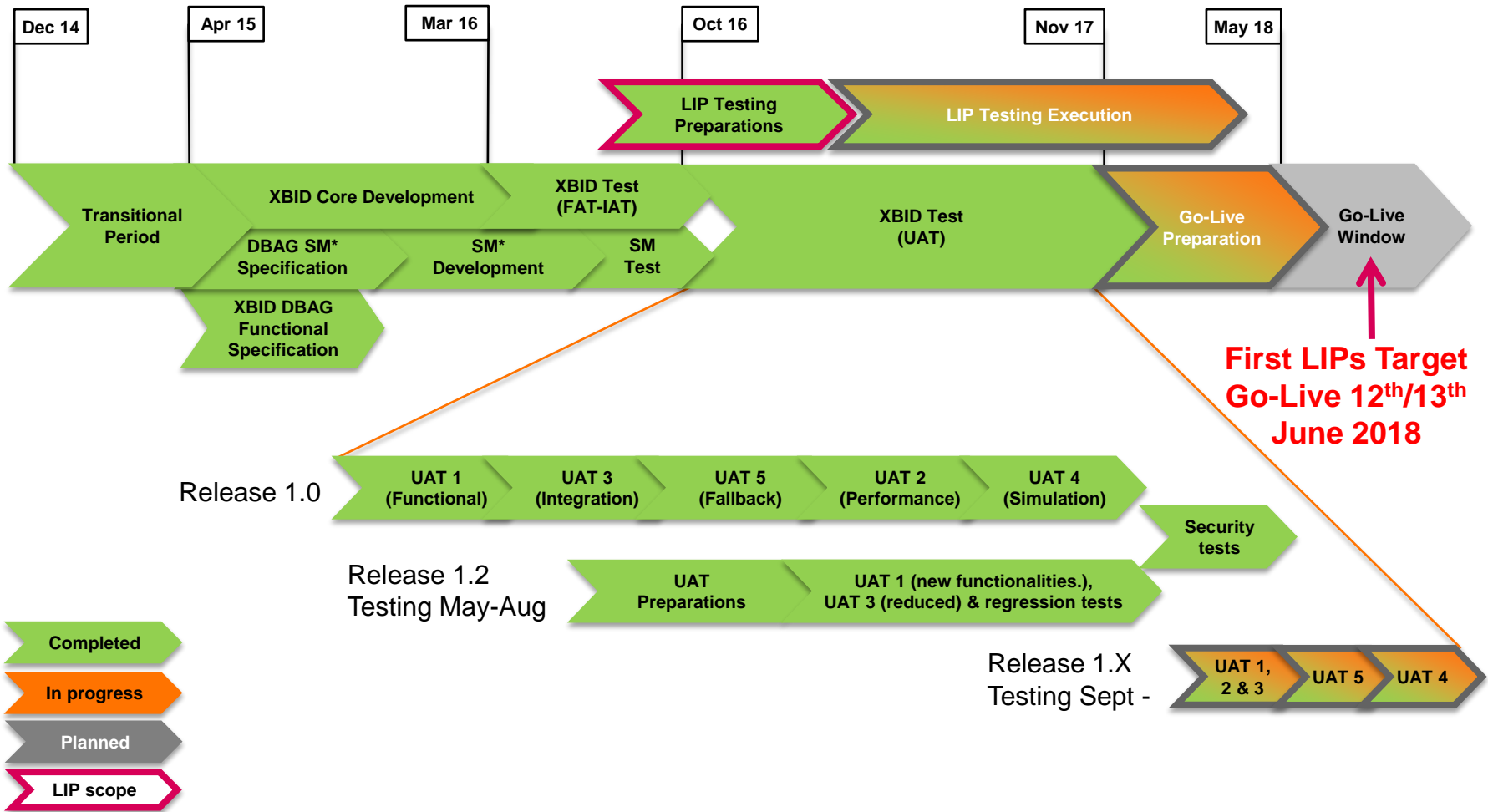
Delivery of XBID involves 3 areas of distinct focus:



Key Project Historical Milestones




And the Delivery Plan until Go-Live ...



*SM – Shipping Module

Countries coupled Intraday with XBID Go-Live

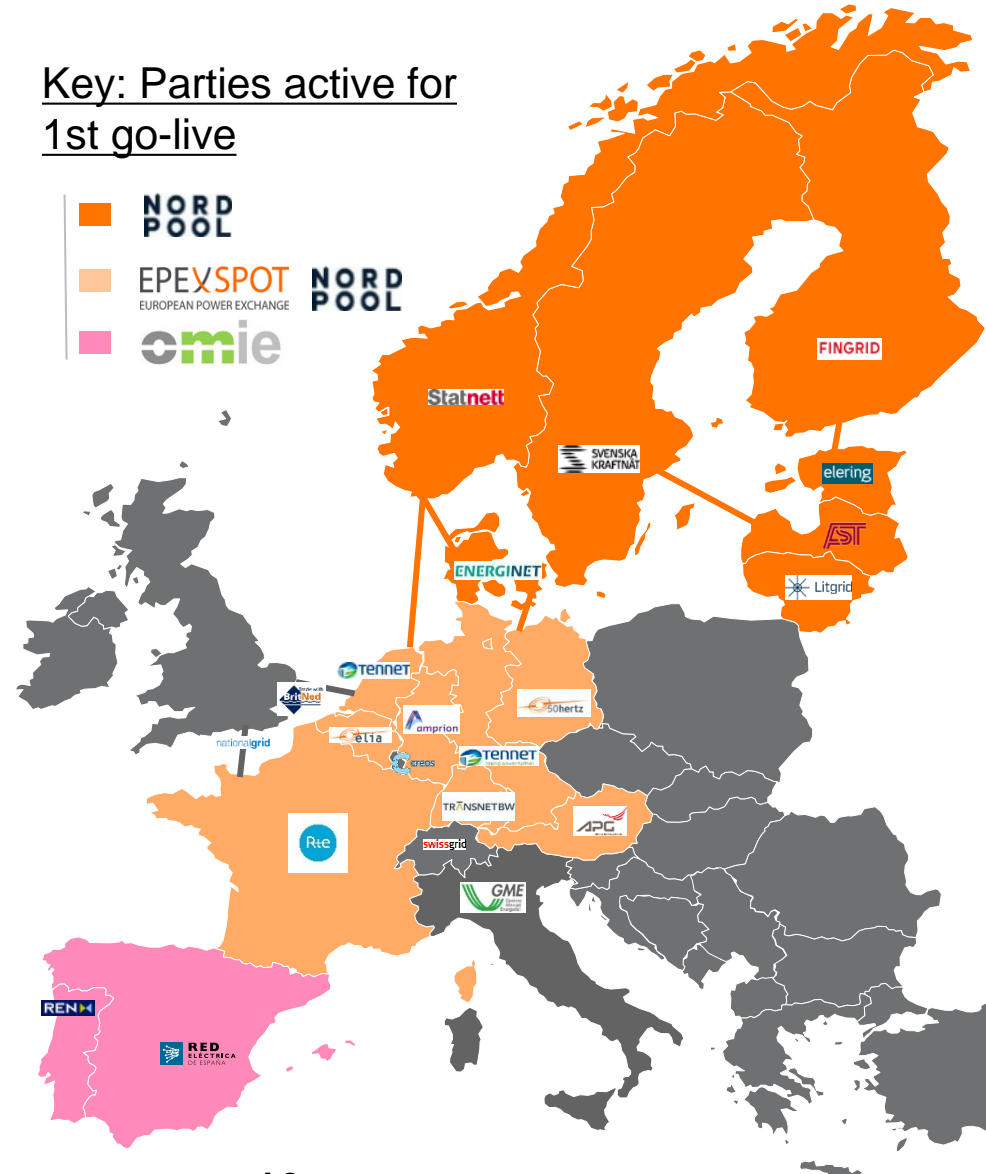
 =
Countries to
be coupled
in 1st go-live



Project parties

Initial project parties	NEMOs	EPEX Spot (including former APX and Belpex), GME, Nord Pool, OMIE
	TSOs	50 Hertz, Amprion, APG, BritNed, Creos, Elia, Energinet, Fingrid, National Grid Interconnectors, RTE, Statnett, Svenska Kraftnät, Swissgrid*, TenneT BV, TenneT GmbH, TransnetBW
Parties part of 1st go-live	NEMOs	EPEX Spot (including former APX and Belpex), Nord Pool, OMIE
	TSOs	50 Hertz, Amprion, APG, AST, Elia, Elering, Energinet, Fingrid, Litgrid, REE, REN, RTE, Statnett, Svenska Kraftnät, TenneT BV, TenneT GmbH, TransnetBW

Key: Parties active for 1st go-live



* Integration of Swiss borders is not going to be possible due to the intergovernmental agreement on electricity cooperation not having been reached by end of 2016 [CACM Article 1 (4) & (5)]. In consequence, Swissgrid left the project in January 2017.

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The XBID matching solution

Carlos Albendin

OMIE

XBID - Trading Solution

The XBID system is a trading solution designed to enable power exchanges to trade energy contracts seamlessly across different geographies in a transparent, efficient. It aims at creating an integrated matching platform based on the shared order book concept of trading module (SOB), the Capacity Management Module (CMM) and the Shipping Module (SM). The combined entity allows multiple exchanges in different geographies to trade cross border energy contracts continuously on a 24 by 7 basis on a centralised platform.

The trading Module (SOB) is a commodity trading system catering to the requirements of the energy markets. The trading system is designed to offer trading services to the members continuously. It supports a wide range of energy products and contract types.

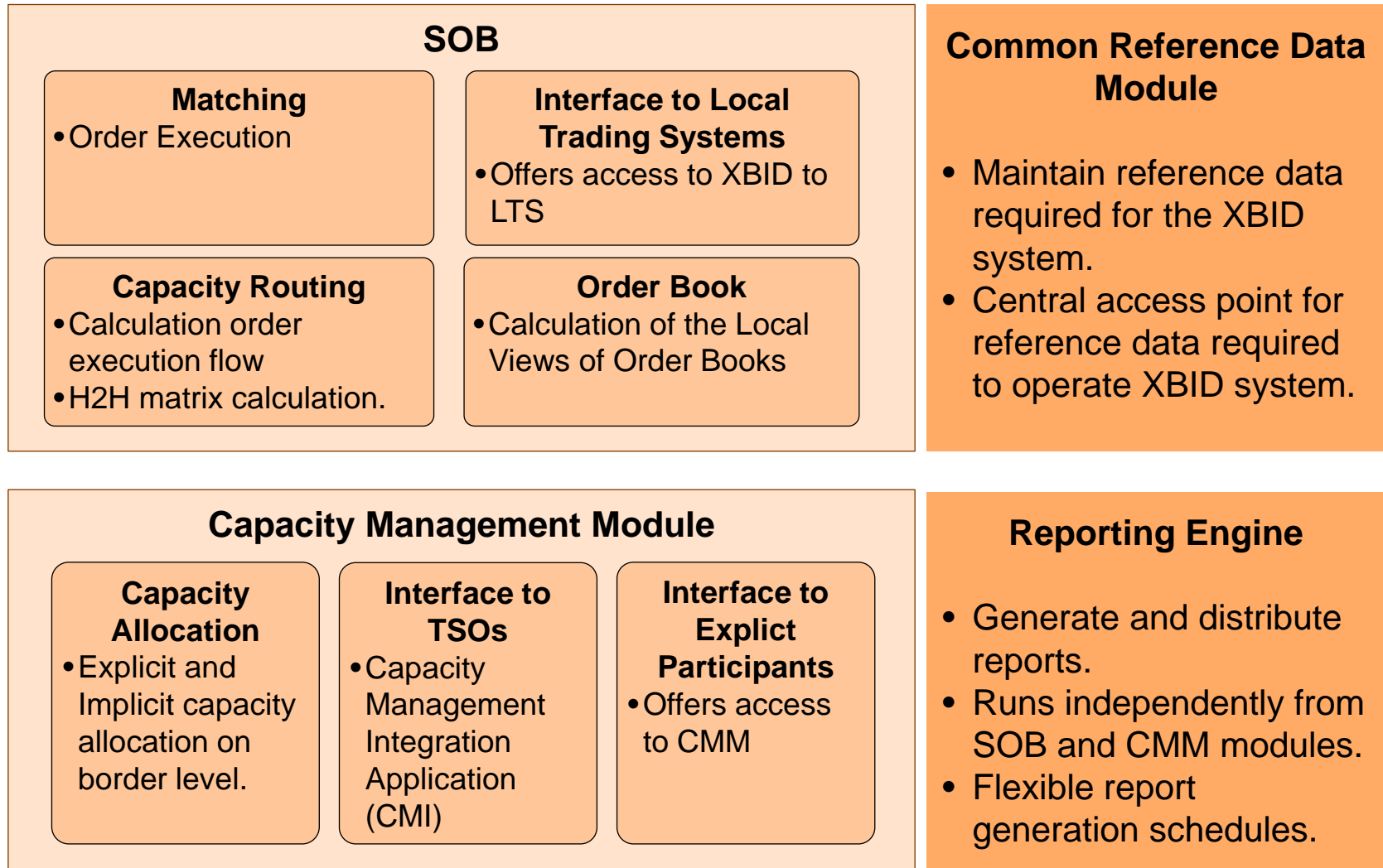
The Capacity Management Module (CMM) refers to a capacity allocation module which offers the ability to allocate cross border capacity to users continuously. CMM offers both explicit (standalone capacity requests by user entities) as well as implicit (triggered by trades generated in SOB) allocation.

The Shipping Module (SM) of the XBID Solution provides information from trades concluded within XBID to all relevant parties of the post-coupling process. The SM receives data from the SOB about all trades concluded:

- Between two different Delivery Areas (DA)
- In the same DA between two different Exchange Members

The data from the SOB and the CMM are enhanced with relevant TSO, CCP and Shipping Agent data from the SM and transferred to the parties at the configured moments.

XBID – Architecture



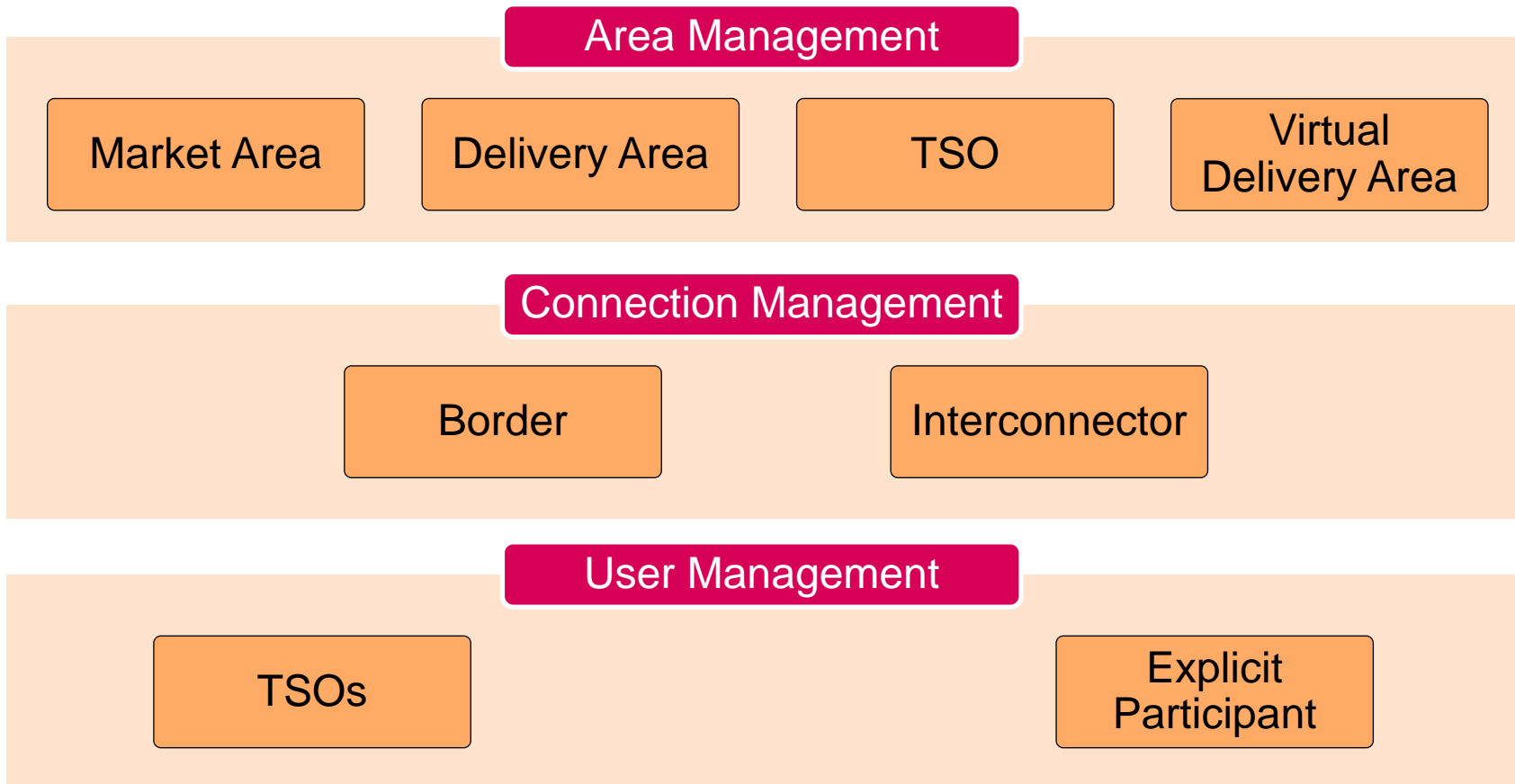
XBID – CMM. Capacity Management Module

The **Capacity Management Module** is a module in which cross border capacity between connected Delivery Areas is managed. CMM offering the following features:

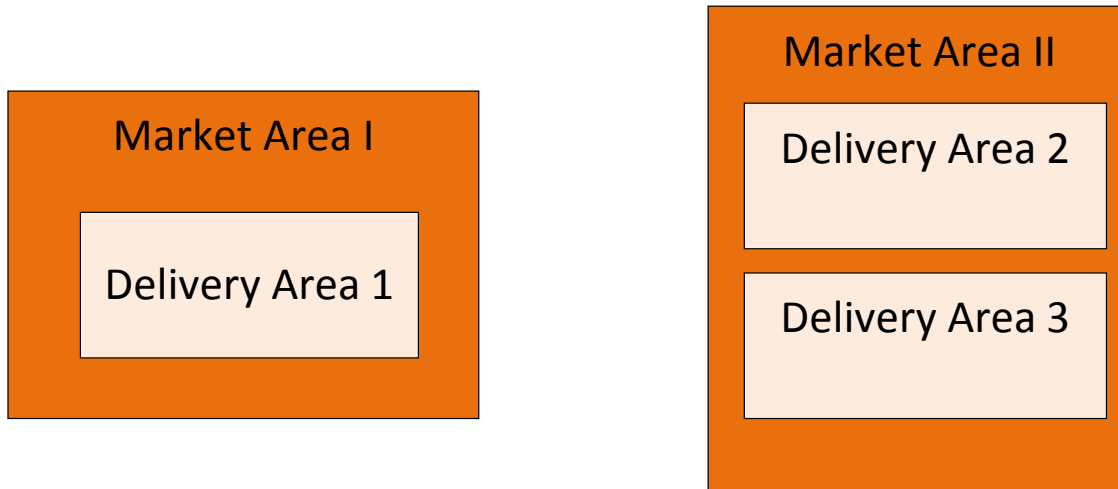
- A GUI to display all relevant information to monitor market activities, updated in real time.
- Upload of Capacity Information via email, SCP, SFTP, ECP, as well as the option to manually amend figures via the web-based GUI.
- 24/7 access to the service.
- Continuous, anonymous explicit and implicit allocation of network capacity.
- Direct connection to the XBID Trading Module for implicit allocation of network capacity.
- Public Message Interface and GUI for explicit trading.

XBID – CMM. Capacity Management Module

CMM supports separate (independent) configuration and administration of each functional entity:



XBID – CMM. Market Area / Delivery Area



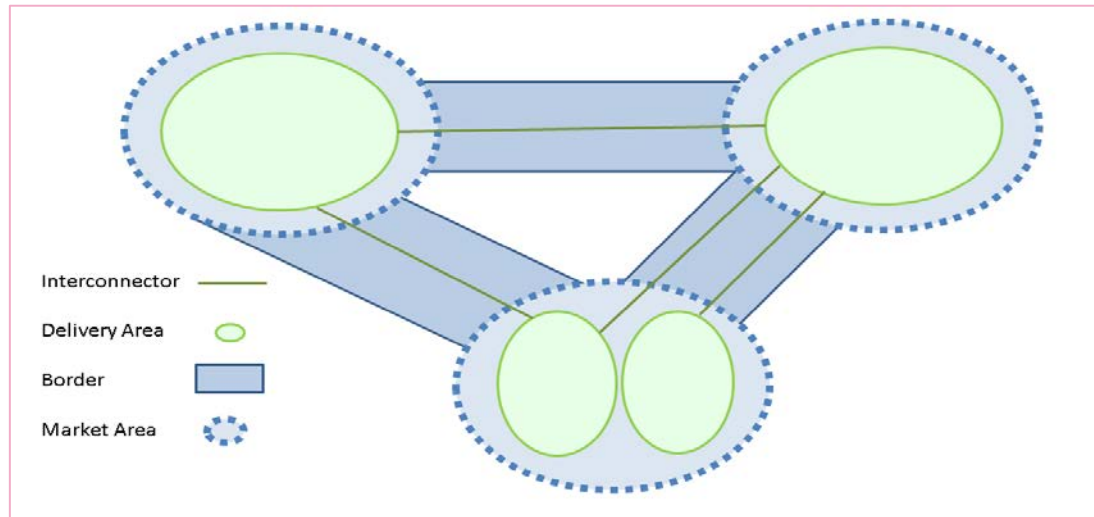
Market Area

- Represents a 'price area' in the delivery grid
- Can contain one or more Delivery Areas
- Transport capacity between Market Areas is subject to congestion

Delivery Area

- Represents an area in the delivery grid which is managed by one TSO
- Order entry is into a Delivery Area (from which a bought commodity is received, or to which a sold commodity is delivered)

XBID – CMM. Interconnectors and borders



Separate Configuration per Interconnector

- Opening and Closing Time,
- Capacity Resolution,
- Default Capacity,
- Ramping,
- Validity, etc




Interconnector
A connection
between two
Delivery Areas.

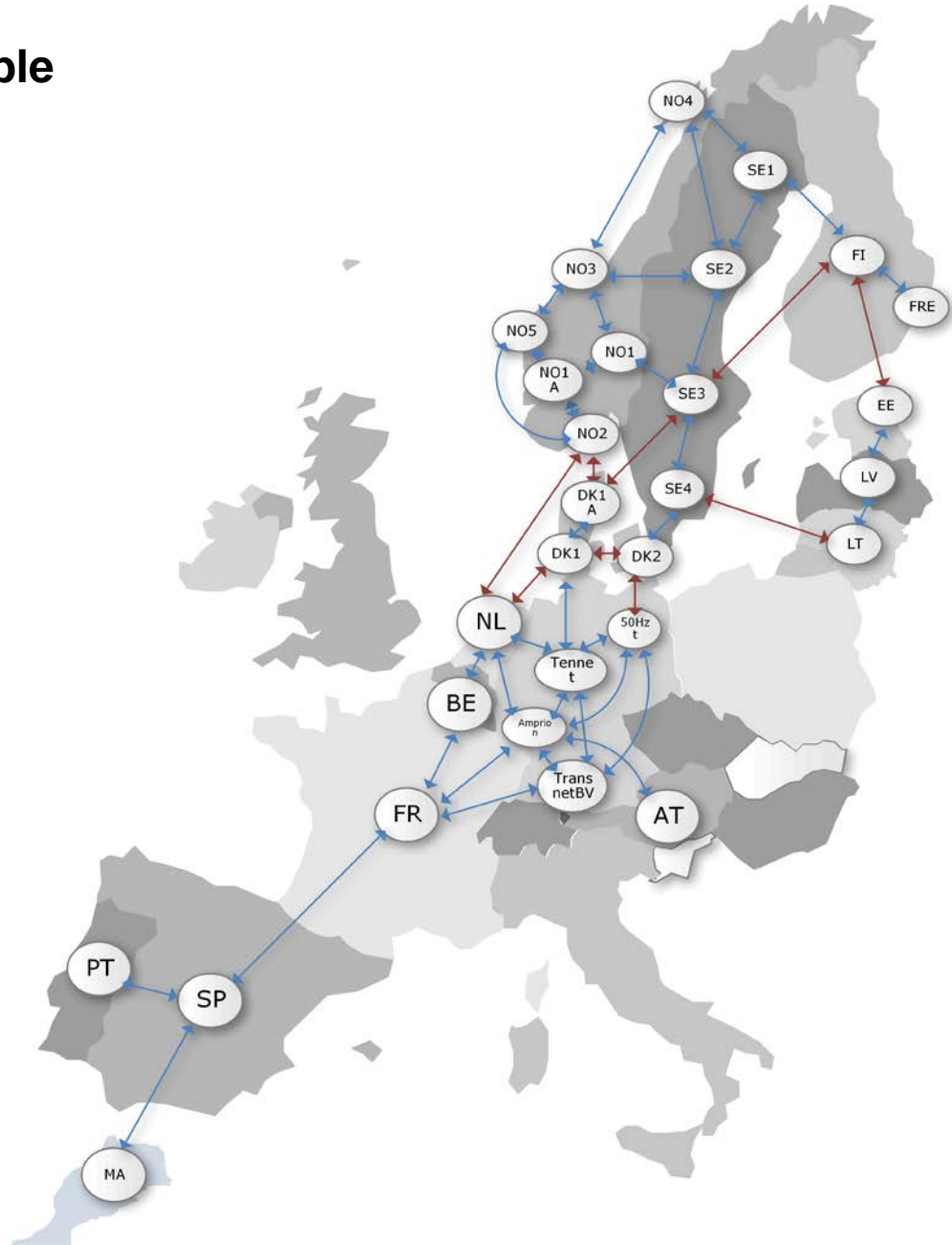
Common Configuration per Border

- Common ATC,
- Leading TSO,
- Validity, etc

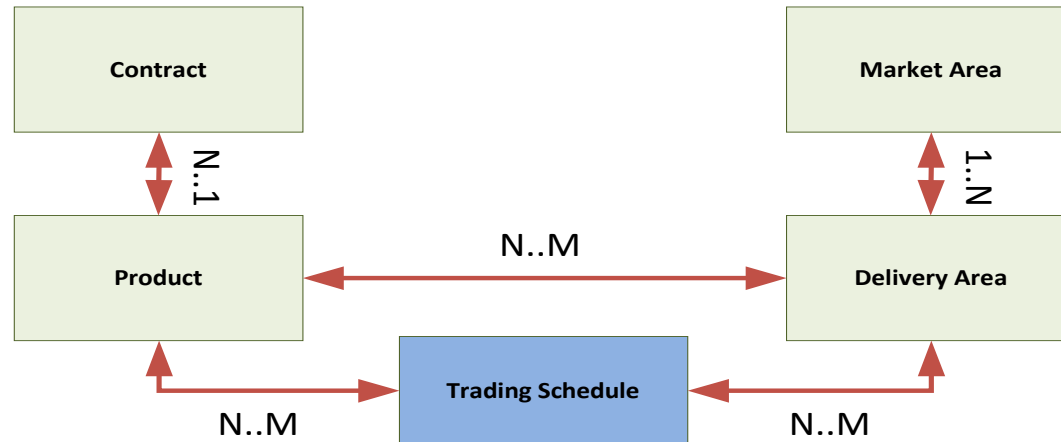
Border
A connection
between two
Market Areas.

XBID – CMM. Topology Example

Legend	
	Delivery Area
	IC
	IC ramp limit



XBID – Relation between products, contracts, delivery and market areas



Product

- Represents one unique set of trading features (e.g. hourly product, an hour)
- Defines the guidelines for generating the underlying contracts
- Products are made available for trading per delivery area, thus each delivery area can have a separate set of tradable contracts.

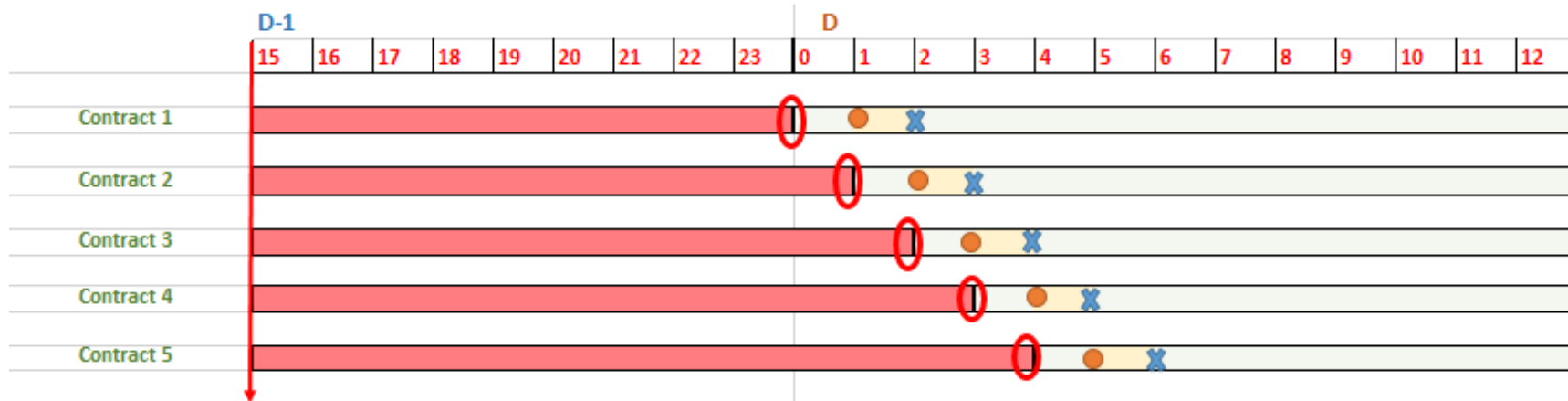
Contract

- An instance of a Product in time, an actual tradable instrument (e.g. the hour 11h-12h on 25 November 2017)
- With a predefined time of delivery
- Used by the trading member entities to enter into agreement to sell/buy a certain quantity
- Each product will have multiple contracts and each contract will belong to one and only one product.

Trading Schedule

- Defines when a contract opens and closes for trading
- Each delivery area will be assigned to some specific schedule (pre-defined).

XBID – Contract Life Cycle



- ↓ Contract Activation Point / Start of Trading
- Trading Maturity
- Contract Expiry Point / End of trading
- Start of Delivery
- Delivery Duration
- ✕ End of Delivery

- **Contract Activation Point:** This refers to the point of time that marks the beginning point of trading for the contract
- **Contract Expiry point:** This refers to the point in time when the contract expires or is no longer allowed to trade.
- **Trading Period:** Time interval where orders can be submitted.
- **Start of Delivery:** This is the point in time when the contract delivery starts
- **End of Delivery:** This is the point in time when the contract delivery ends.
- **Delivery Duration:** This refers to the time duration over which the commodity is delivered.

XBID – SOB

SOB

- Enters orders coming from LTS into a public order book
- Matches orders against the most suitable counter-orders (following price-time-capacity priority criteria)
- Initiates implicit capacity allocation

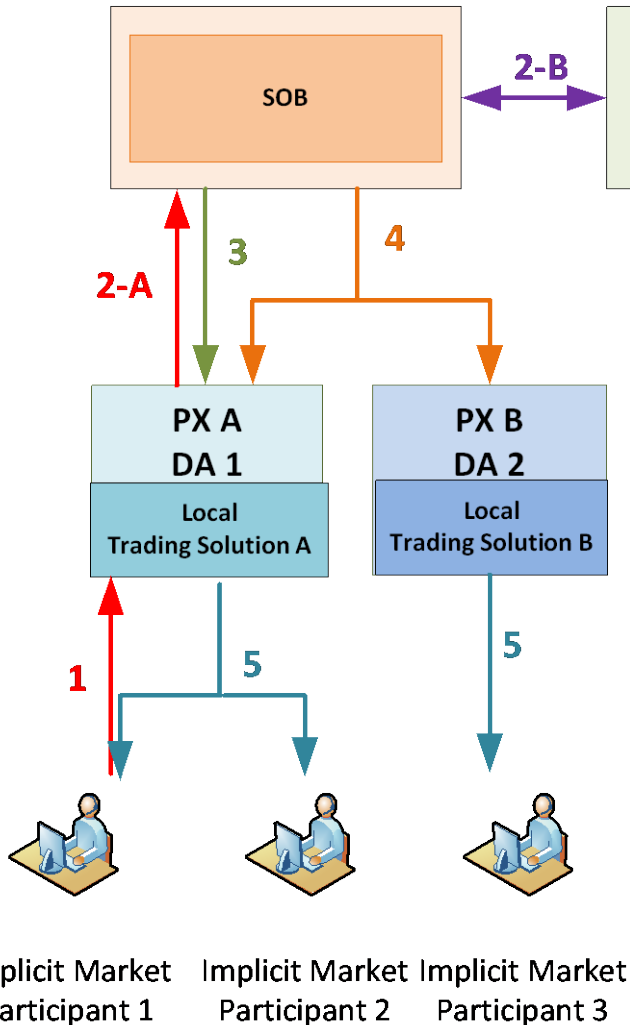
Price-time-capacity priority criteria

- Price: Orders are always executed at the best price
- Time: A timestamp (assigned at entry into SOB) is used to prioritize orders with the same price limit (earlier means higher priority)
- Capacity: Capacity should be available to make order execution possible

Order Book Views

- The SOB maintains a single **consolidated order book** for all orders that are entered for a contract
- CMM maintains two ATC values, one for each direction in that power could flow. Based on these two values the SOB module can calculate a customised **local view** for each contract and delivery area, which contains all the executable orders for the concerned area.

XBID – SOB. Order Book Update



Calculation of the local view of an order book is based on the following factors:

- The available transmission capacity.
- Orders entered for the contract.

1. New order entered
- 2-A. Trading Solution anonymized the order and forward to SOB
- 2-B. Update available capacity.

SOB validates if any orders in the local view of the order book can match and calculate the Local View for each DA

3. SOB send the result of order entry to trading solution
4. Local view of the updated order book is published via the PMI to the Trading Solution
5. Trading Solution publish new local view

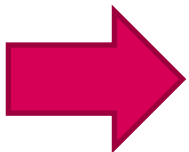
XBID – SOB. Local View Calculation

Order Book Calculation

- Local views will be enriched with cross-border orders if sufficient transmission capacity is available
- The same order can be displayed in multiple local views (depending on available transmission capacity)
- Cross-border orders in the local views will be displayed up to the available capacity; hence orders can be shown with partial volume
- An order is removed from all local views after full execution, deactivation or deletion
- Orders that cannot be executed in the selected area because of a PX dispute are not displayed

Rules for Order Book Calculation

- Orders from other markets are selected based on available capacity and price-time-priority
- Iceberg orders are displayed with their visible quantity and not with their total quantity
- AON orders can only be displayed with full quantity



Traders cannot see in which area the orders that they see in their local order book were entered

XBID – SOB. Cross Border Routing

Routing

- Transportation of power via the delivery grid requires a calculation of a route (sequence of delivery areas) through the power network
- Whenever multiple routes exist, the shortest path rule is applied to define the outcome of the routing process

Routing calculation is done for:

- Order Book Calculation
- Trade Flow Calculation

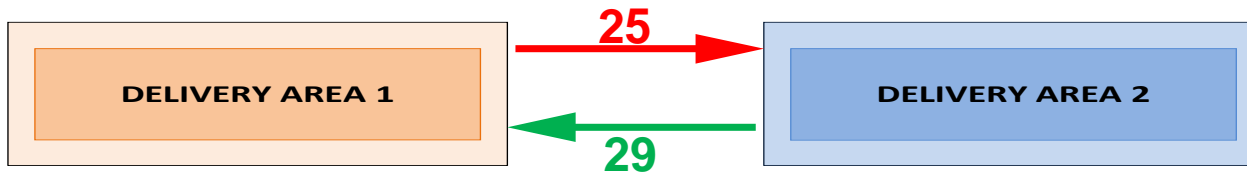
Shortest path rule:

- If more than one route with sufficient ATC is available, the shortest route (smallest number of delivery areas) is selected
- When the capacity of the first best route is depleted, the remaining quantity will be routed via the next best until either the full quantity has been transferred or no more routes with a positive ATC are available
- If more than one route fulfils the shortest path criteria, the system will select one of them in a deterministic manner

XBID – SOB. Local View Update based on ATC

CONTRACT A

Delivery Area 1			Delivery Area 2		
Price	Bid	Ask	Price	Bid	Ask
25		10	25		
24		50	24		35
23			23		10
22			22		50
19			19	40	
18			18	5	
17	40		17		
16	7		16		



CONTRACT A

Delivery Area 1			Delivery Area 2		
Price	Bid	Ask	Price	Bid	Ask
25		10	25		
24		50	24		35,25
23			23		10
22		29	22		50
19	25		19	40	
18			18	5	
17	40		17	29	
16	7		16		

XBID – SOB. Matching Process

- The XBID solution enables the trading of contracts between market areas only if there is capacity available.
- Matching of contracts either locally or cross border is always performed in compliance with the price-time-priority principle
- ICB matching example:

Orders in the order book:

times-tamp	name	type	b/s	qty	prc	pqty	ppd
1	I	ICB	sell	200	15€	50	1
2	Z	REG	sell	25	15€		
3	Y	REG	sell	25	16€		

Buy order is entered:

time-stamp	name	type	b/s	qty	prc	pqty	ppd
4	B	REG	buy	225	99€		

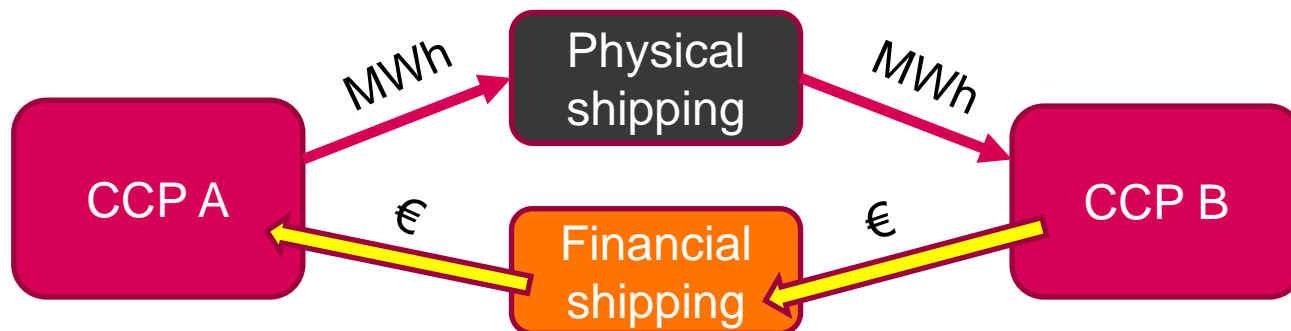
Trades



trade no.	buy order	sell order	qty	prc
1	B	I	50	15
2	B	Z	25	15
3	B	Y	25	16
4	B	I	50	16
5	B	I	50	17
6	B	I	25	18

XBID - Shipping Module

- Shipping is the process of transferring energy between CCPs within and across the delivery areas including the financial clearing. By definition, shipping does not apply to explicitly allocated capacities
- Physical shipping is the process to transfer energy between CCPs by way of nomination, without the financial clearing for the change of energy ownership.
- Financial shipping is the process of financial clearing for the change of ownership of the transferred energy between CCPs.



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Overview of borders, market areas & products

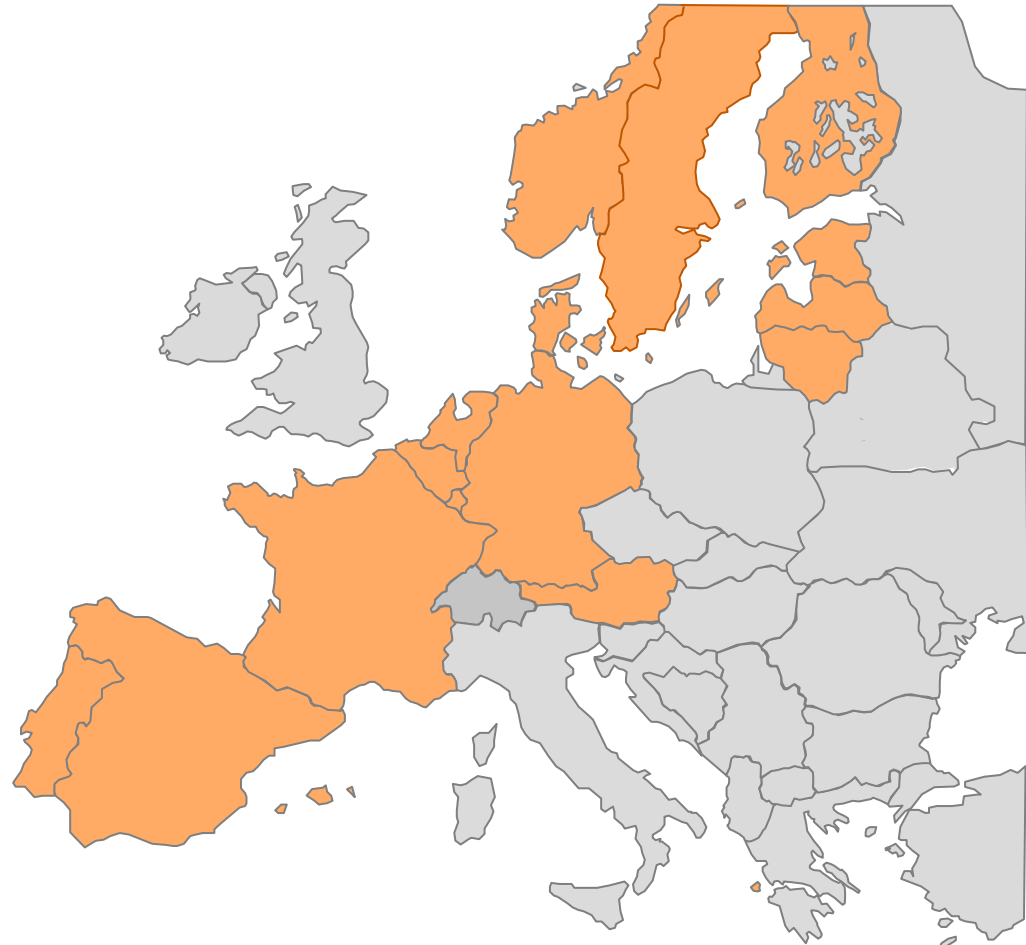
Pietro Rabassi

Director Central European markets, Nord Pool

- 1. Overview of established Market Areas as part of the 1st go-live**
- 2. Products offered in the XBID solution**
- 3. Contract life cycle for a Market Area (MA)**
- 4. Opening and closing times**

1. Overview of established Market Areas as part of the 1st go-live

Delivery Areas to be launched at first go-live
50Hertz Transmission GmbH
Amprion
Austria
Denmark West
Denmark East
Estonia
Elia System Operator
Finland
Finland-Russia Exchange Area
Lithuania
Latvia
Morocco Delivery Area
Netherlands
Norway 1-5
Portugal Delivery Area
France
Sweden 1-4
Spain Delivery Area
TransnetBW GmbH
TenneT TSO GmbH



NRAs have confirmed that explicit access is only on the DE/FR border

2. Products offered in the XBID solution

A. Overview

- XBID system supports the following products:
 - 15-minutes
 - 30-minutes
 - 60-minutes
 - Hourly User Defined Blocks
- Products are configured to the XBID solution per market area
- For specific product availability in different market areas see next slide

2. Products offered in the XBID solution

B. Details

		German TSO areas	Austria	France	NL & Belgium	Nordics & Baltics	Iberia
Size		Min vol. Increment 0.1 MW					
Price Tick		EUR 0.1 / 0.01** per MWh					
Price Range		-9 999 €/MWh to 9 999 €/MWh					
Products	15-min	X	X				
	30-min	X		X			
	Hourly	X	X	X	X	X	X
	User Defined Blocks*	X	X	X	X	X	
Notes		* Hourly blocks (not 15 or 30 min blocks) ** To be confirmed					

2. Products offered in the XBID solution

C. Order types

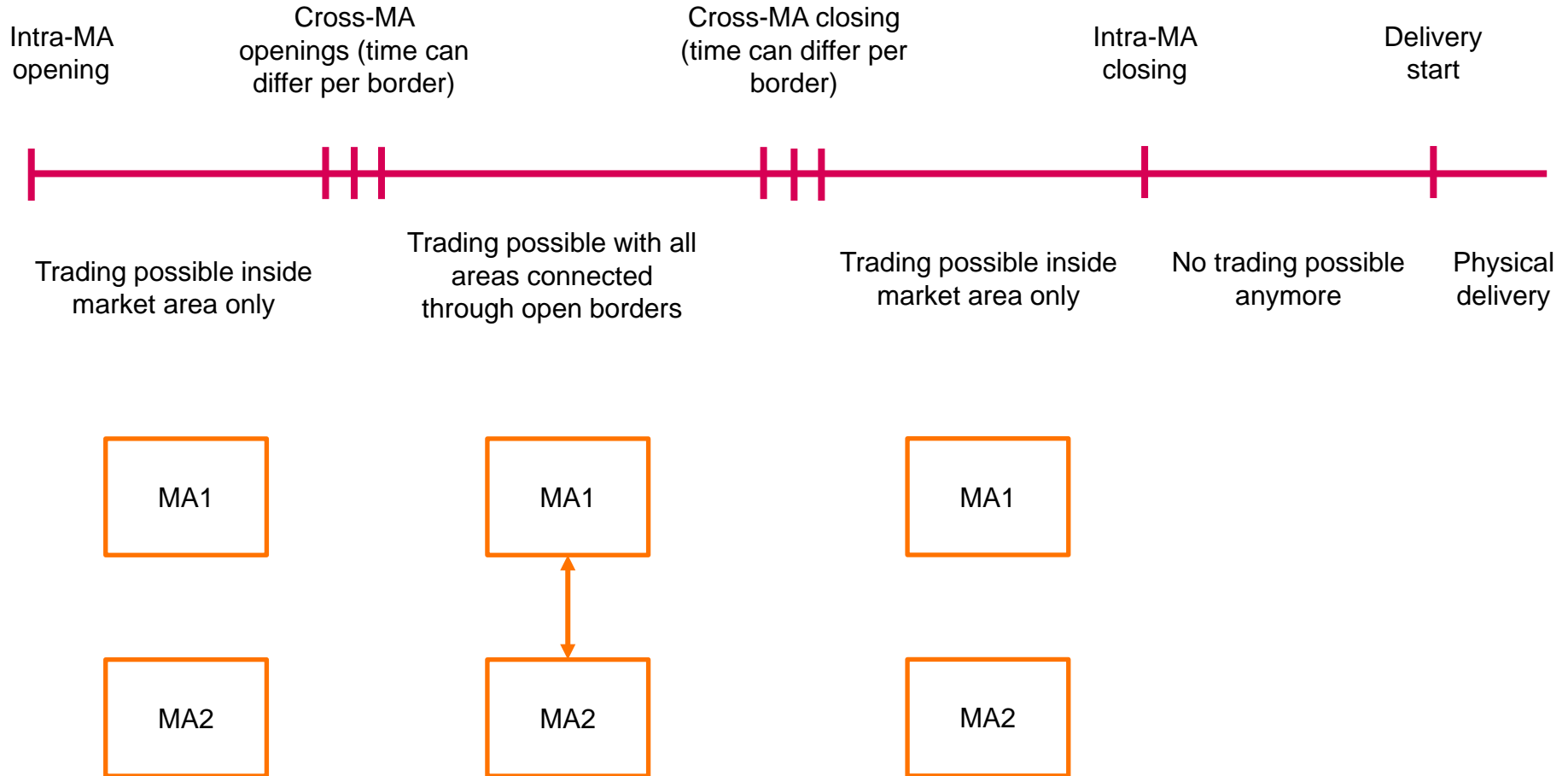
Order type	Execution Restrictions	Validity Restrictions	Predefined	User-Defined
Regular predefined	NON (None) IOC (Immediate-or-Cancel) FOK (Fill-or-Kill)	GTD (Good Till Date) GFS (Good For Session)	Yes	No
Regular user-defined block	AON (All-or-Nothing)	GTD (Good Till Date) GFS (Good For Session)	No	Yes
Iceberg	NON (None)	GTD (Good Till Date) GFS (Good For Session)	Yes	No
Basket Orders	None (1) Valid (2) Linked (3)	--	Yes	No

(1) Orders are processed as if they would have been submitted separately

(2) All orders in the basket are accepted or rejected

(3) All orders in the basket must be executed immediately with their entire quantity, all orders inside basket have the execution restriction "FOK"

3. Contract life cycle for a Market Area (MA)



4. Opening and closing times

A. Intra-MA

		German TSO areas	Austria	France	NL & Belgium	Nordics & Baltics	Iberia
Opening times	All products	18:00	15:00	15:00	14:00	14:00	14:00
Closing times	15-min	Delivery (D)-30 min	D-30 min				
	30-min	D-30 min		D-30 min			
	Hourly	D-30 min	D-30 min	D-30 min	D-5 min	D-60min*	D-60 min
	User Defined Blocks	D-30 min	D-30 min	D-30 min	D-5 min	D-60 min*	
Notes	* Finland and Estonia at D-30 min						

4. Opening and closing times

B. Cross-MA

	German TSO areas	Austria	France	NL & Belgium	Nordics	Baltics	Iberia ^{^^}
Opening times [^]	22:00 ^{**}	18:00	22:00	22:00	14:00 ^{**}	18:00 ^{***}	22:00
Closing times	D-60 min [*]						
Notes	<p>*Estlink Closing time D-30 min; for FR-DE, same GCT applies to both half hours of a given hour</p> <p>**DE-AT, DE-DK2 (Kontek) and DE-DK1 opening at 18:00</p> <p>***Pending decision by ACER to move it to 14:00 as is today</p> <p>[^]Pending regulatory approval at ENTSO-E / NRA level</p> <p>^{^^}The capacity will be released in several batches during the day</p> <p>Ramping constraint on (DK1-NO2, DK1-SE3, DK1-DK2)</p> <p>Cross-border contract resolutions:</p> <ul style="list-style-type: none"> - DE-AT border: 15 min - FR-DE border: 30 min - All other borders: 60 min 						

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12:15-12:40

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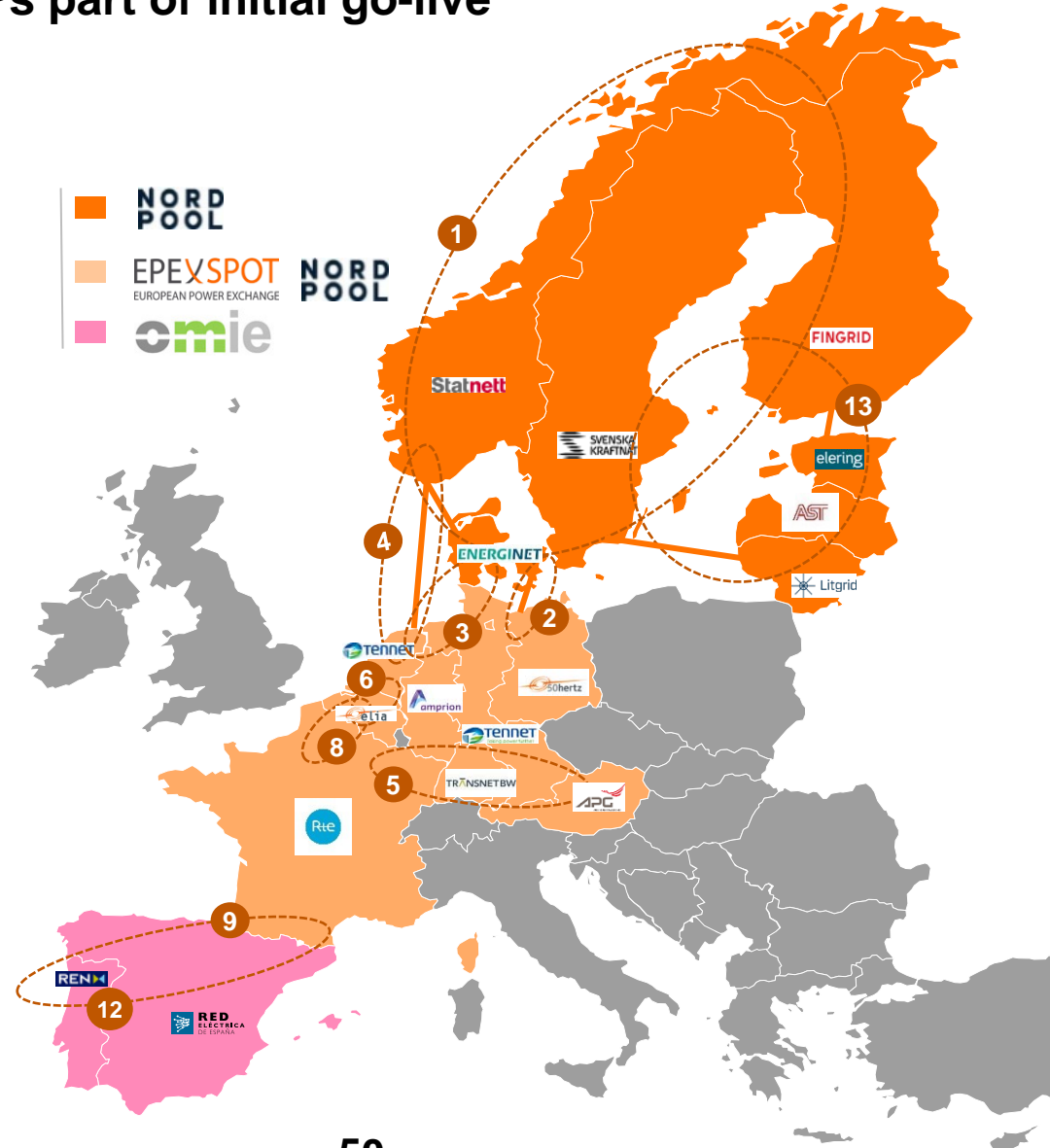
Relevant information for market parties from Local Implementation Projects (LIPs)

Katja Birr-Pedersen
Energinet

Overview TSOs, NEMOs and LIPs part of initial go-live

LIPs part of initial go-live:

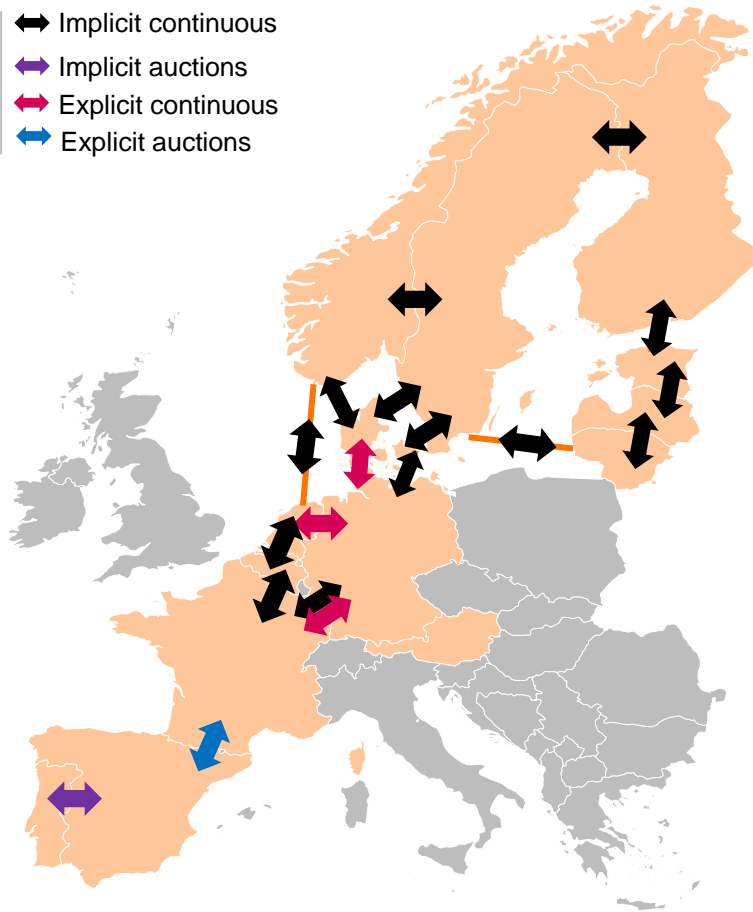
LIP		Participants
1	Nordic	Fingrid, Energinet, SvK, Statnett, Nord Pool, EPEX
2	Kontek	Energinet, 50Hz, Nord Pool, EPEX
3	DK1/DE, DE/NL	Energinet, TenneT NL& DE, Amprion, EPEX, Nord Pool
4	NorNed	Statnett, TenneT NL, EPEX, Nord Pool
5	FR/DE, DE/AT	Amprion, TransnetBW, APG, RTE, EPEX, Nord Pool, Tennet DE
6	NL/BE	Elia, TenneT NL, EPEX, Nord Pool
8	FR/BE	RTE, Elia, EPEX, Nord Pool
9 12	FR/ES& ES/PT	RTE, EPEX, OMIE, REE, REN, Nord Pool
13	Baltic	Elering, Litgrid, AST, Fingrid (Estlink), Svenska Kraftnät (NordBalt), Nord Pool



Means of cross-zonal capacity allocation

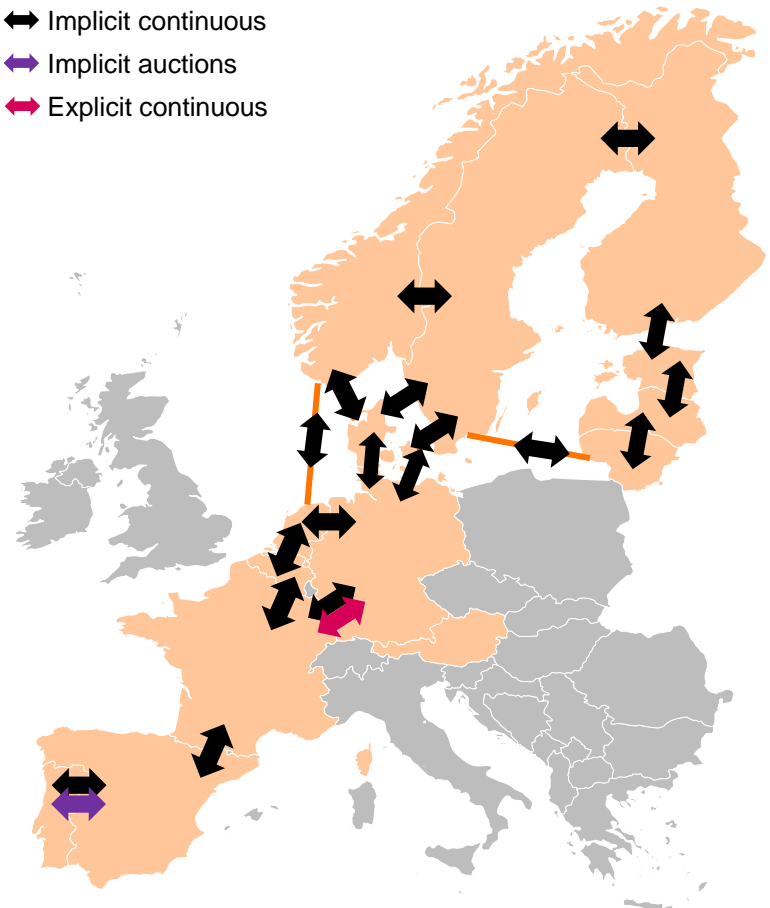
Today

- ↔ Implicit continuous
- ↔ Implicit auctions
- ↔ Explicit continuous
- ↔ Explicit auctions



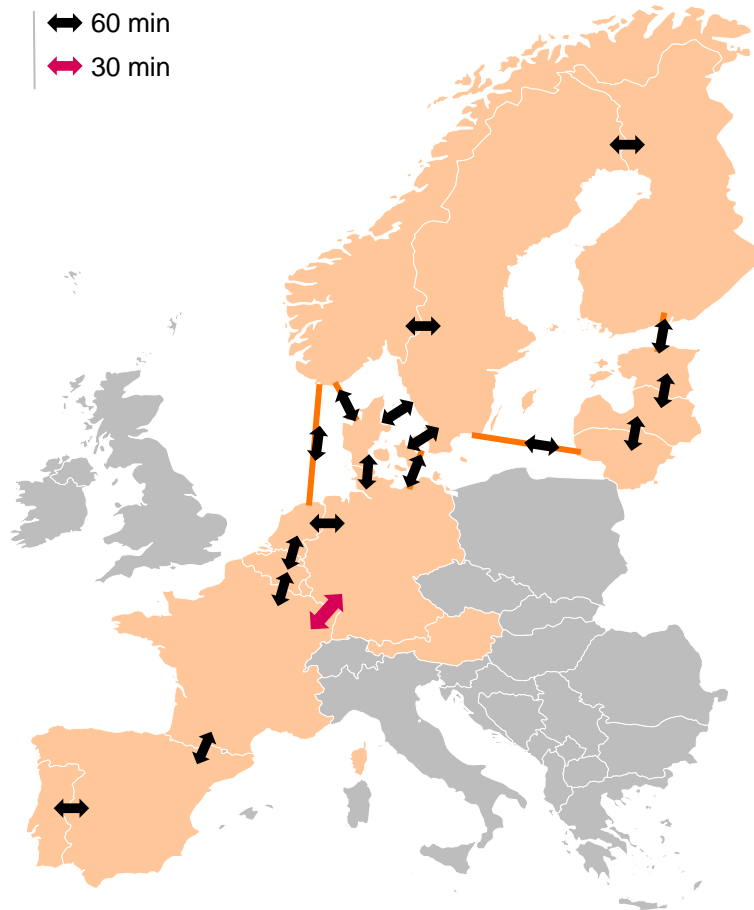
As of 13.06.2018

- ↔ Implicit continuous
- ↔ Implicit auctions
- ↔ Explicit continuous



Granularity offered cross-zonal capacity and imbalance settlement periods

**Cross-zonal capacity:
No changes to today**



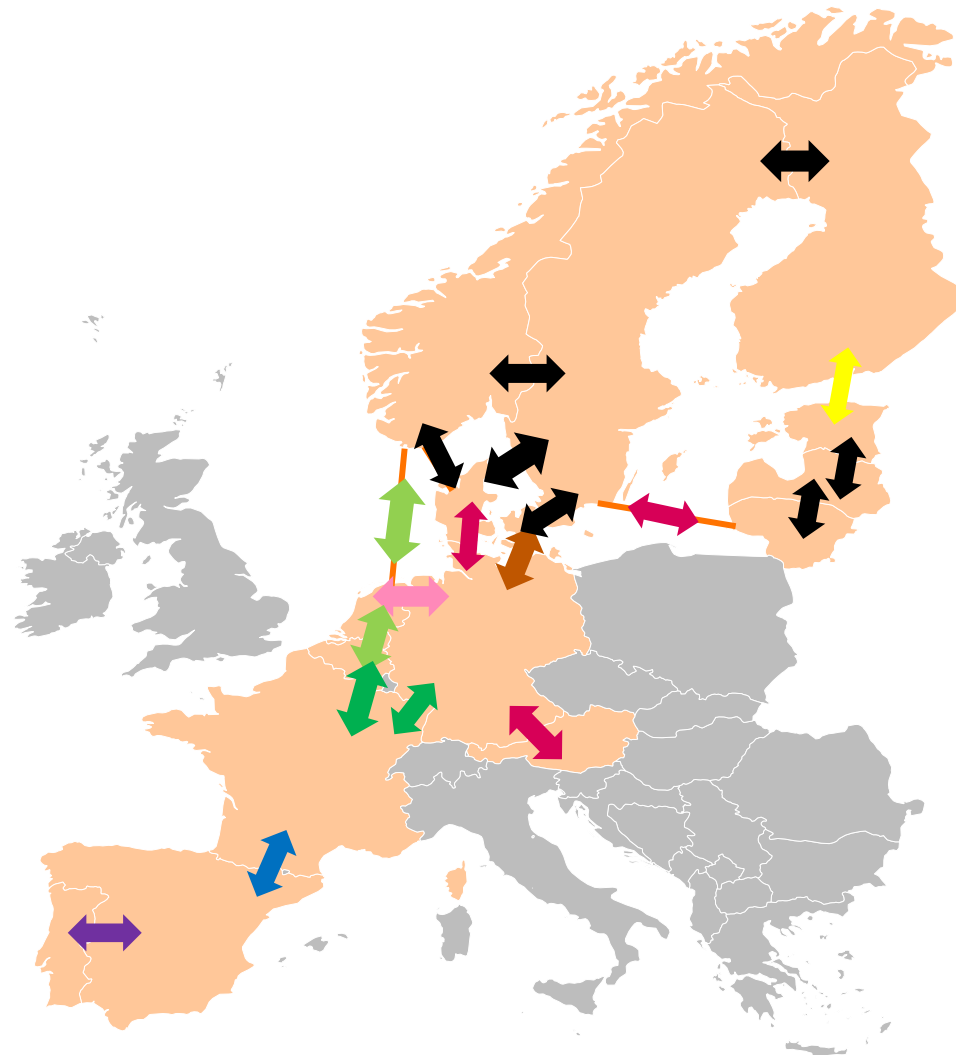
**Imbalance settlement periods:
No changes to today**



Gate opening (GOT) and gate closure (GCT) times today

Today

- ↔ GOT 14:00 D-1 GCT H-60min D
- ↔ GOT 18:00 D-1 GCT H-60min D
- ↔ GOT 21:00 D-1 GCT H-70min D
- ↔ GOT 14:00 D-1 GCT H-60min D
- ↔ GOT 15:30 D-1 GCT H-60min D
- ↔ GOT 21:05 D-1 GCT H-60min D**
- ↔ GOT 21:00 D-1 GCT H-60min D
- ↔ GOT₁ 16:15 D-1, GOT₂ 11:15 D*
- ↔ 6 Implicit auctions run by OMIE (2 in D-1, 4 in D)*
- ↔ GOT 14:00 D-1 GCT H-30min D



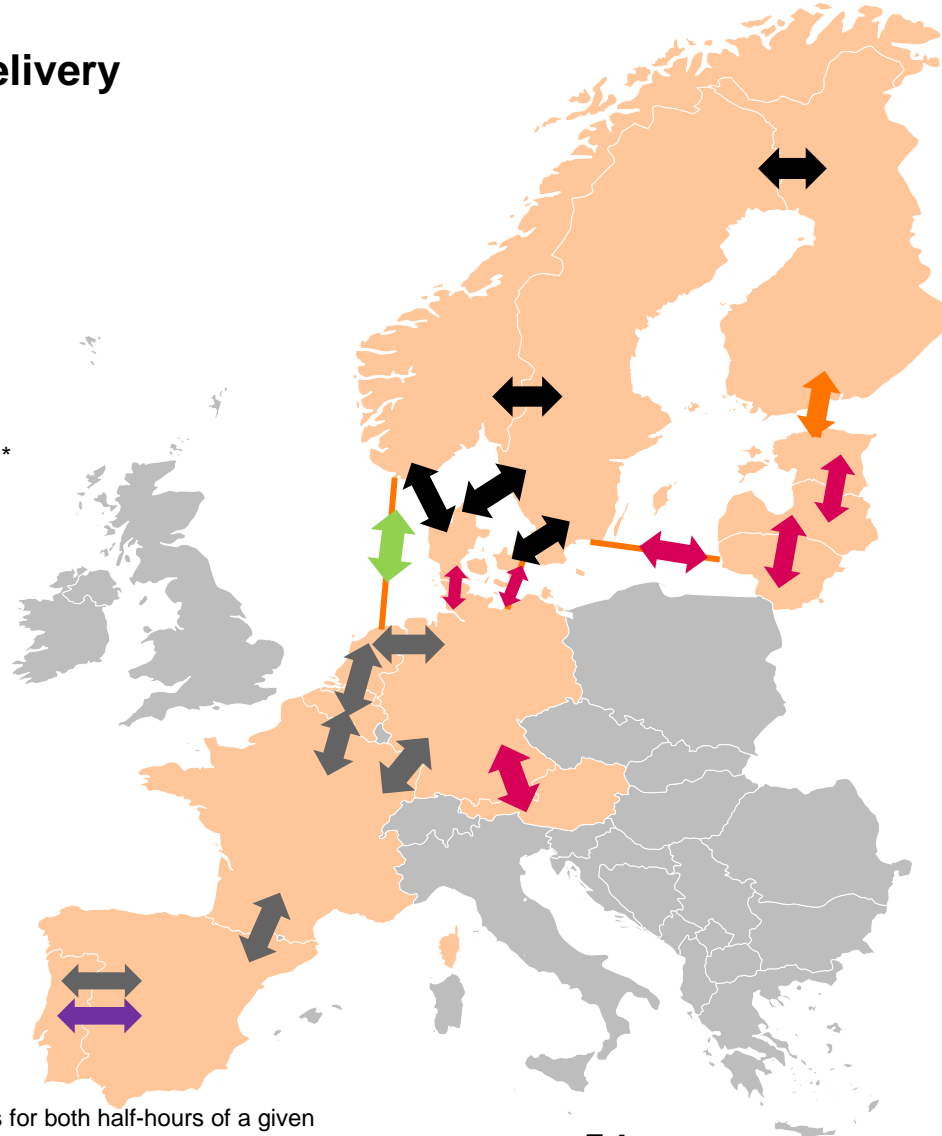
* GCT dependent on delivery hour

** For DE-FR border, the same GCT applies for both half-hours of a given hour, cf. detailed slides on DE-FR

Gate opening (GOT) and gate closure (GCT) times as of 12.06.2018

As of 12.06.2018 (for delivery on 13.06.2018)

- ↔ GOT 14:00 D-1 GCT H-60min D
- ↔ GOT 18:00 D-1 GCT H-60min D
- ↔ GOT 18:00 D-1 GCT H-30min D
- ↔ GOT 21:00 D-1 GCT H-60min D
- ↔ GOT 22:00 D-1 GCT H-60min D**
- ↔ 6 Implicit auctions run by OMIE (2 in D-1, 4 in D)*



* GCT dependent on delivery hour

** For DE-FR border, the same GCT applies for both half-hours of a given hour, cf. detailed slides on DE-FR

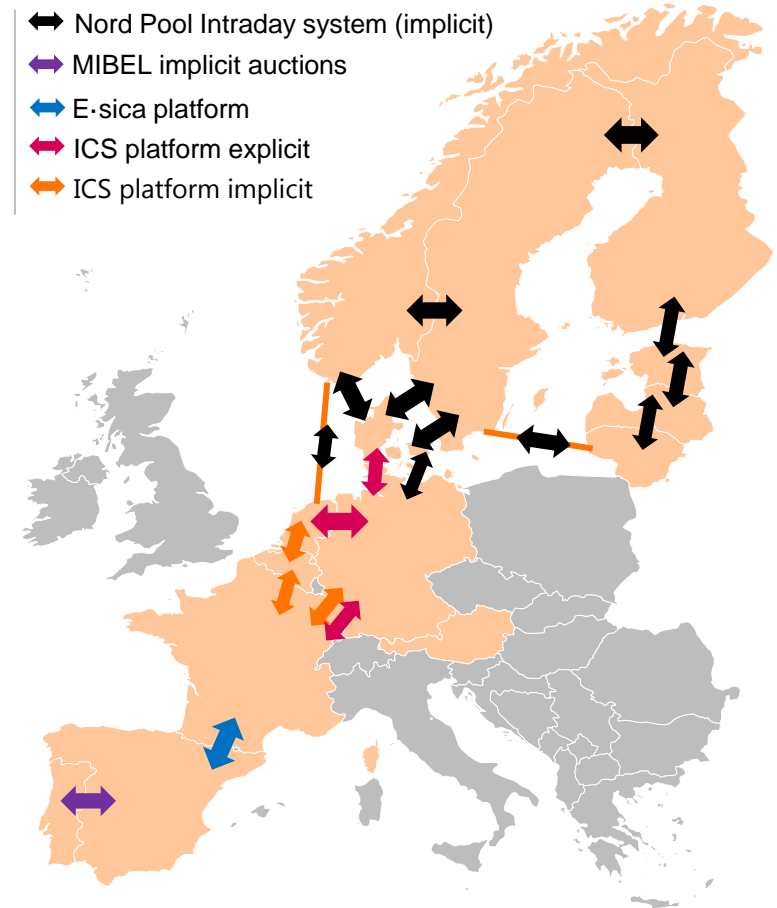
Fallback

- In case of failure of the XBID solution the intraday market trade would still remain possible internally within each bidding zone, provided local trading is offered by the NEMOs.
- Sufficient measures have been taken to achieve a high XBID solution availability
- There will be no fallback option for any of the borders that participate in the first go-live of XBID.

Rollback

- Rollback is defined as situation where the XBID Steering Committee is forced to decide to stop operations of the SIDC and to return to the situation before Initial Go-Live.
- Each Operational Party shall for its own decide how to organise at the local level, the consequences of such Rollback.
- Rollback option is available up to 2 months after go-live.
- Decision and initiation of rollback need to be done within 2 months after go-live.
- Rollback solutions are equal to the current intraday solutions implemented at the various borders.

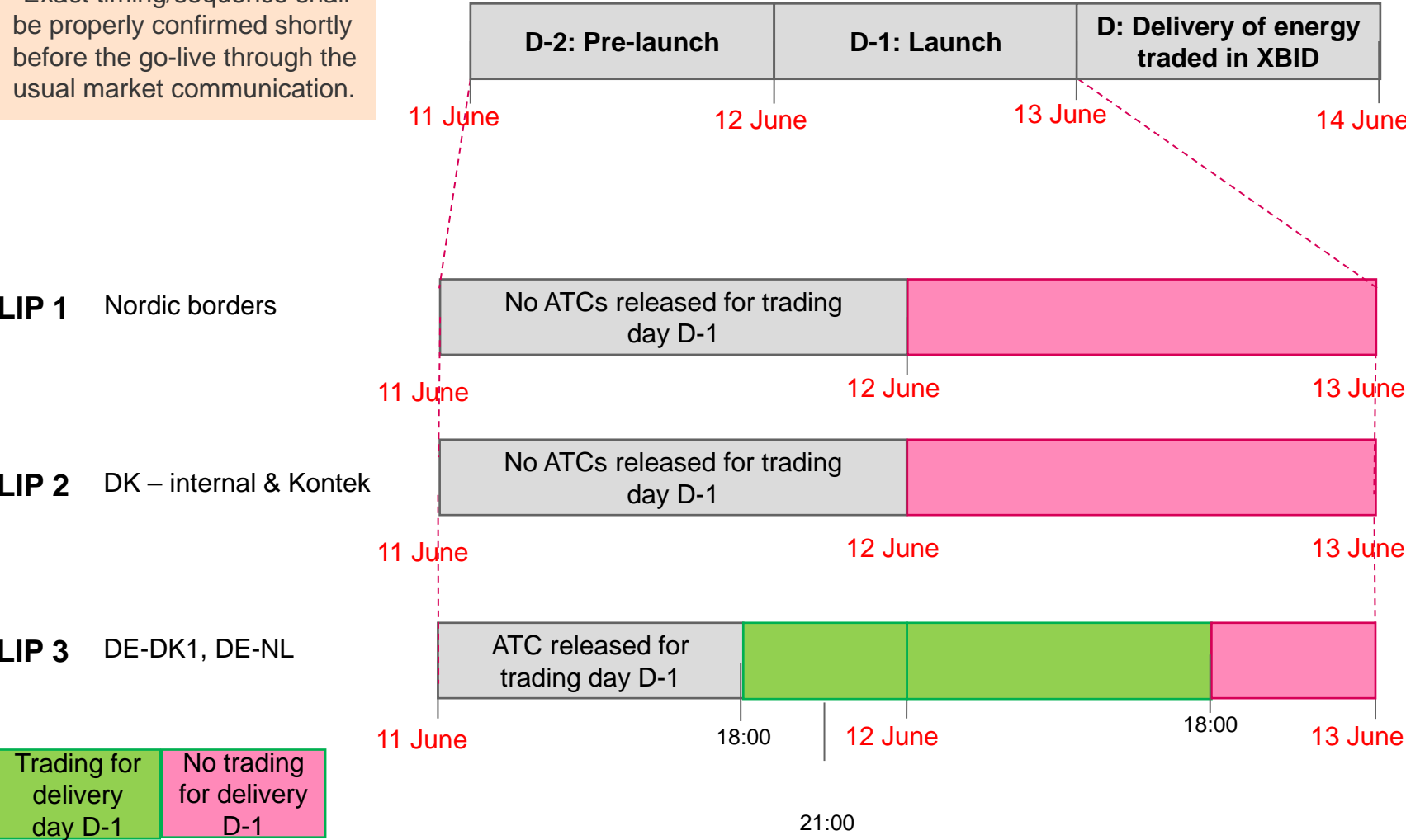
Rollback situation is equal to current solutions



Cross-border trading possibilities for D-1 delivery (tentative)*

1/3

*Exact timing/sequence shall be properly confirmed shortly before the go-live through the usual market communication.

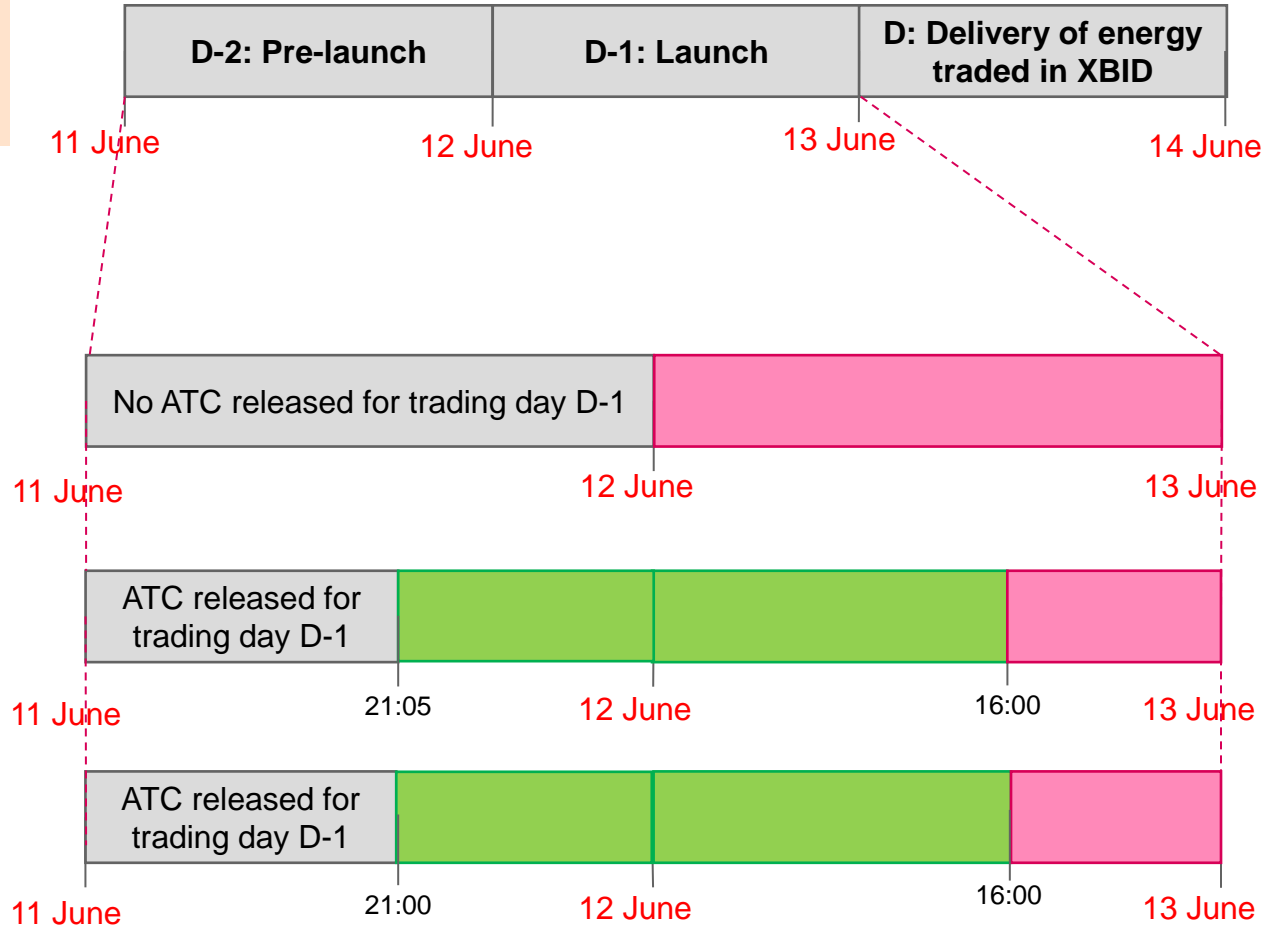


Trading for delivery day D-1 (Green)
 No trading for delivery D-1 (Pink)

Cross-border trading possibilities for D-1 delivery (tentative)*

2/3

*Exact timing/sequence shall be properly confirmed shortly before the go-live through the usual market communication.



Trading for delivery day D-1	No trading for delivery D-1
------------------------------	-----------------------------

Cross-border trading possibilities for D-1 delivery (tentative)*

*Exact timing/sequence shall be properly confirmed shortly before the go-live through the usual market communication.



LIP 8 BE-FR



LIP 9&12 FR-ES



LIP 13 Baltic
(only for Baltic AC internal interconnectors, for the DC interconnectors with Nordic, the Nordic LIP 1 approach applies)



Trading for delivery day D-1	No trading for delivery D-1
------------------------------	-----------------------------

Q&A



Lunch Break
13:00-14:00

Agenda

14:00-14:15

- 1. Welcome, introduction**
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- 4. The XBID matching solution**
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- 9. Deutsche Börse' trading solution provider**
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- 11. Future plan for XBID**

Explicit access on French-German border

Bruno Lemetayer

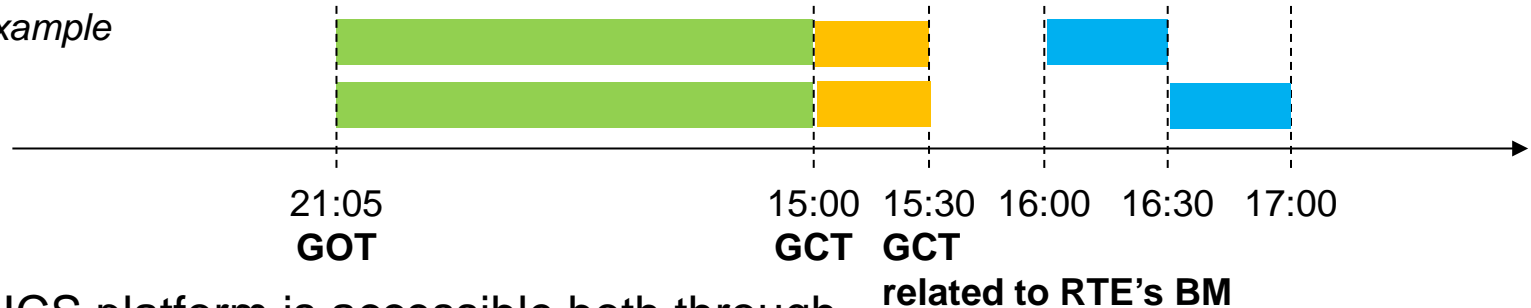
RTE

Explicit access on FR-DE border

1-Background - current technical setup before XBID go-live

- Intraday FR-DE capacities are currently allocated both implicitly and explicitly through the ICS platform
- Explicit allocation is also used for RTE's Balancing Mechanism
- GCT (or "Neutralization Lead-Time") is
 - 60min for explicit and implicit allocation
 - 30min for explicit allocation concerning RTE's Balancing Mechanism
 - Same GCT applies to both half hours of a given hour

Example



- ICS platform is accessible both through
 - an user interface
 - an API that allows automatic exchanges of XML messages (setup directly with ICS provider with costs)

Explicit access on FR-DE border

2-Background - current contractual setup before XBID go-live

- Participants to the current mechanism on FR-DE border must sign:
 - The “IFD” Intraday market rules
 - The nomination rules with relevant TSOs
 - “Access Rules for Imports and Exports on the French Public Power Transmission Network”, with RTE
 - Balancing agreement (“Bilanzkreisvertrag”) in Germany, with at least one involved German TSO (Amprion and/or TransnetBW)

Explicit access on FR-DE border

3.1-New technical setup with XBID

- Explicit allocation will be managed by CMM
 - same GCT
 - also used for transactions of RTE's Balancing Mechanism
- CMM is accessible both through
 - an user interface: functionalities are almost identical as ICS
 - Technical documentation [available on RTE's / Amprion's website]
 - an API that allows automatic exchanges of XML messages
 - Technical documentation [available on RTE's / Amprion's website]
 - Setup done through TSOs (TSOs remain SPOCs for the border)
- Link to RTE's webpage: http://clients.rte-france.com/lang/an/clients_traders_fournisseurs/services_clients/inter_france_allemande.jsp

Explicit access on FR-DE border

3.2-Requests type

- Capacity requests can be sent to the CMM
 - for one or more Hours of delivery
 - and/or one or more Half-Hours of delivery
- 3 types of request
 - Immediate Or Cancel: request can be partially accepted
 - All Or Nothing: request cannot be accepted partially
 - All Contracts Equal (for multiple contracts only): minimum capacity value available across all the contracts is allocated to all

Explicit access on FR-DE border

4-Path towards go-live

- Updated rules
 - IFD, Import/export Rules (RTE)
 - Amendments to the Rules have no impact on the validity of the acceptance already signed by the Participants
- Member's trial period
 - Managed along within whole trial phase (cf. topic 9)

Explicit access on FR-DE border

5-New contractual setup with XBID

- Same setup as today:
 - “IFD” Intraday market rules (*amended version*)
 - See consultation opened on RTE’s website
 - Published on RTE and Amprion website
 - Nomination rules with relevant TSOs
 - “Access Rules for Imports and Exports on the French Public Power Transmission Network”, with RTE (*amended version*)
 - See consultation opened on RTE’s website
 - Published on RTE website
 - Balancing agreement (“Bilanzkreisvertrag”) in Germany, with at least one involved German TSO (Amprion and/or TransnetBW)
 - Published on Amprion website

Agenda

14:15-14:30

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ACER



Agency for the Cooperation
of Energy Regulators

XBID Pre-launch event

Johan Roupe
Energimarknadsinspektionen

31/01/2018

- Almost there!
- Obligations under CACM GL

Agenda

14:30-14:50

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Deutsche Börse' trading solution provider

Jens Rick

Deutsche Börse Group

Deutsche Börse Group

XBID Pre-Launch Event

Brussels, 31. January 2018



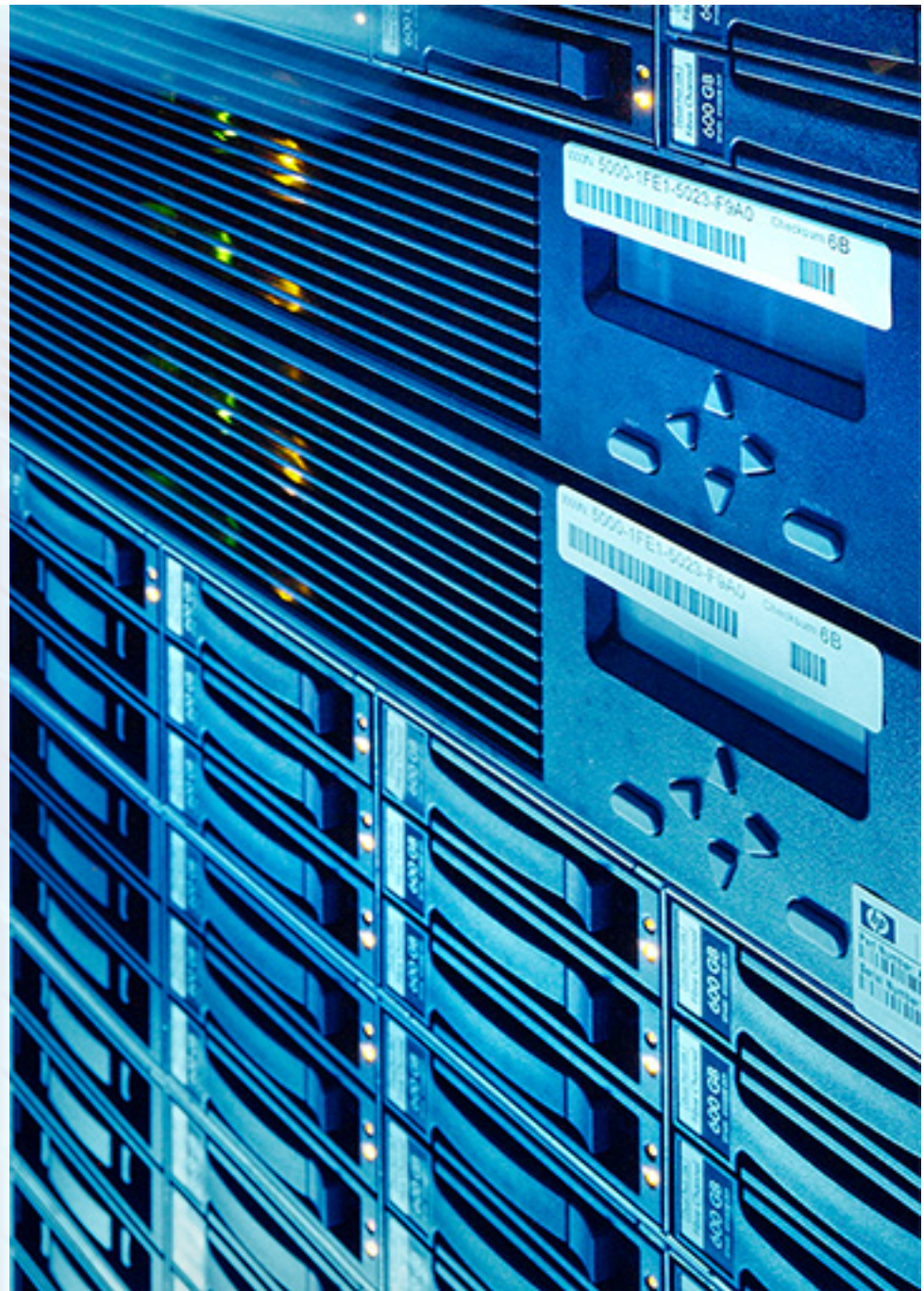
Deutsche Boerse Group - Facts

- Admission of securities
- Trading
- Clearing and settlement
- Custody services of securities
- Collateral and liquidity management
- Regulatory services
- Indices and market data
- IT services



Deutsche Boerse Group - A Leading Market Infrastructure Provider

- Worldwide, more than 30 markets are currently operated using Deutsche Börse Group technology
- Energy Section combines dedicated business, process and technology know-how on Energy Markets
- Designs, implements and operates Integrated Power Market solutions
- Lends all its expertise and commitment to maintaining and operating XBID



DBAG and XBID

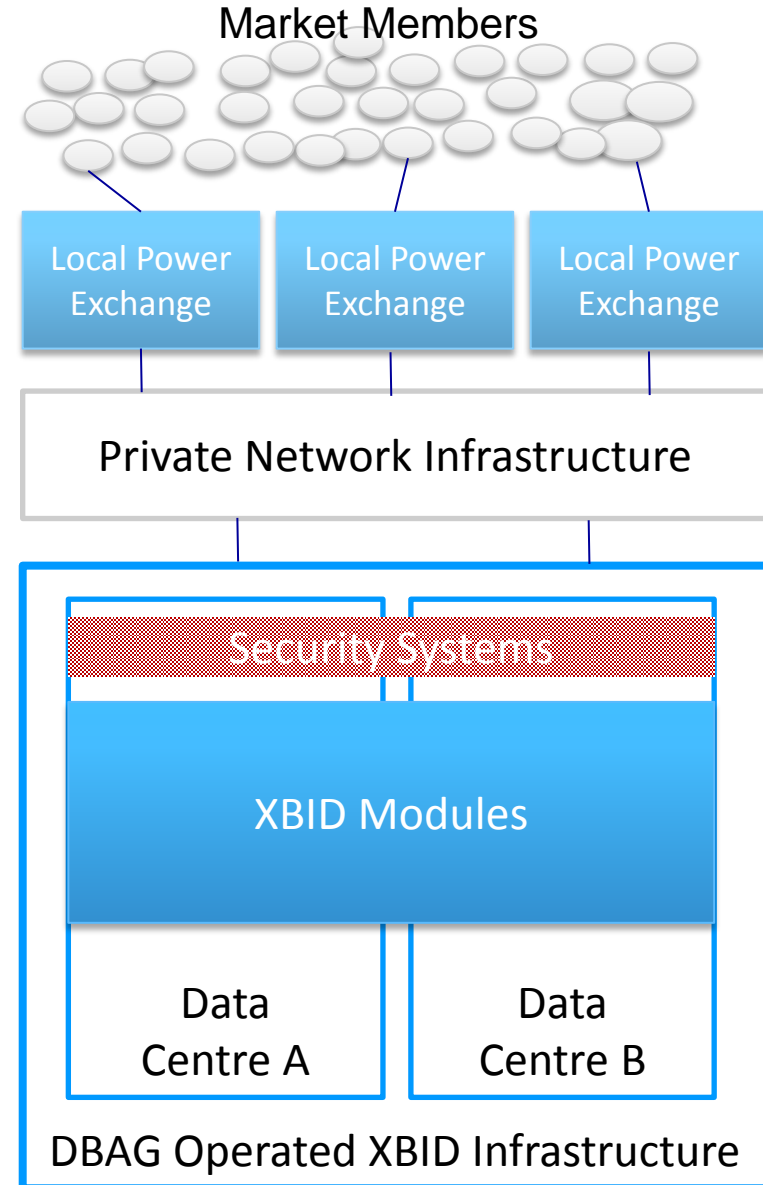
- Selected XBID technology provider
- DBAG, together with the XBID Project Parties, has been working hard to make XBID a reality
- A challenging, dynamic and unique project has required exceptional efforts and investments
- DBAG is committed to continued support of the XBID initiative



XBID

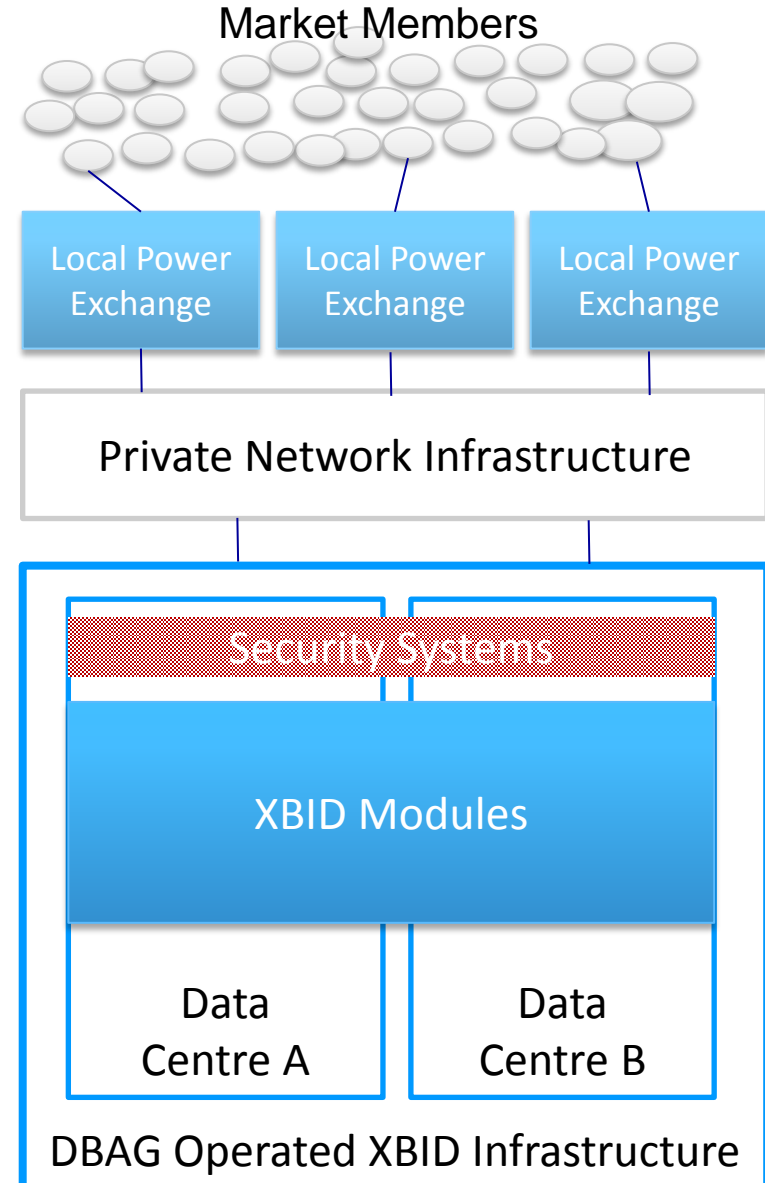
XBID's Technical Architecture

- The central XBID infrastructure has been developed by DBAG to the specification and requirements of the XBID consortium
- XBID is operated and maintained by a specialized team of IT experts
- Built with flexibility and extensibility in mind
- Network design, API and central processing are carefully designed to ensure Equal Treatment between all Local Power Exchanges
- The XBID infrastructure is flexible to accommodate future requirements and growth



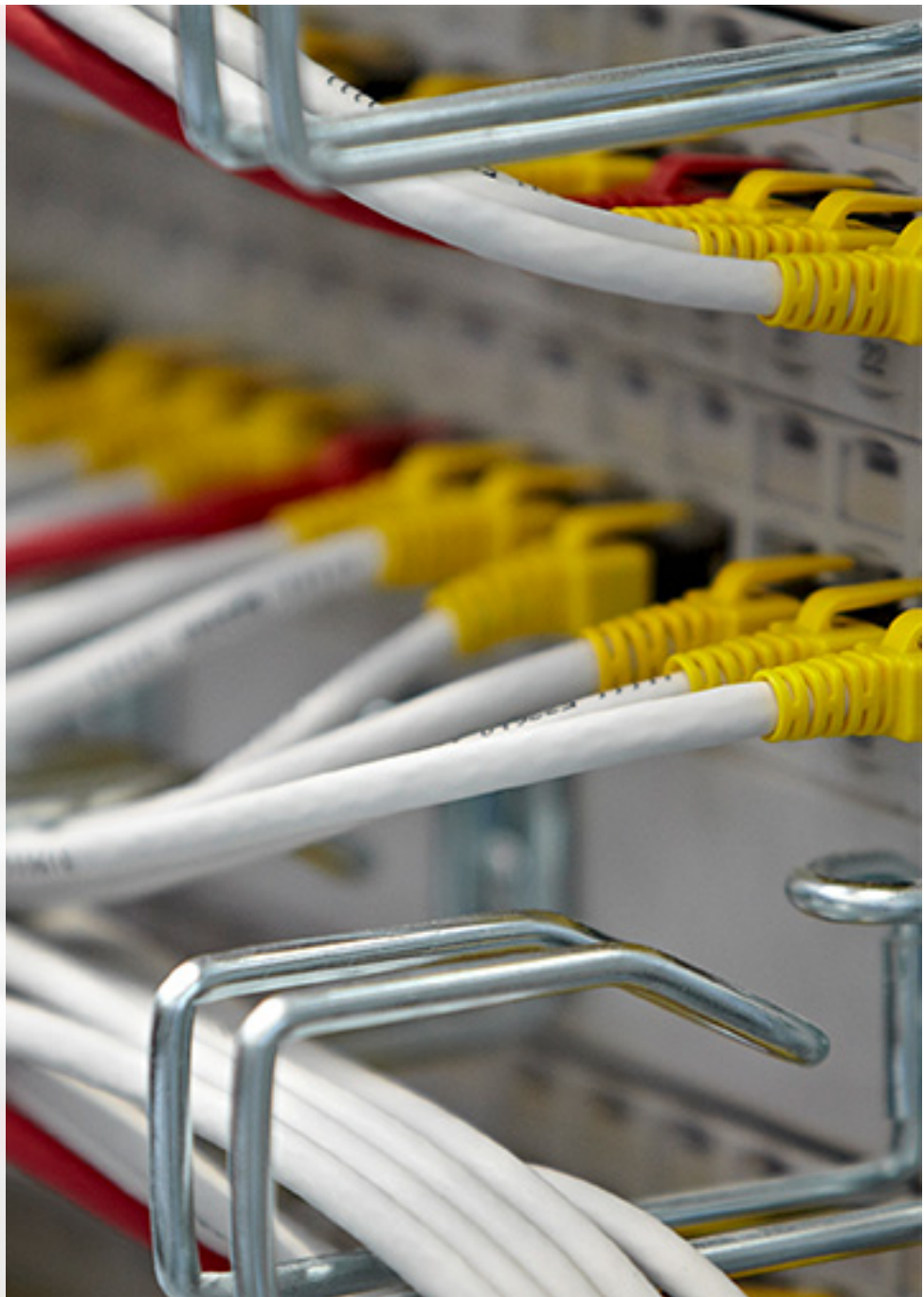
XBID's Focus on Reliability

- Two independent data centres interconnected through a redundant dark fibre network
- Mutual system redundancy of all server and network components
- Mixture of active/active and active/passive mode in hot-standby
- Continuously applied backup and disaster recovery services
- DBAG owns the software and infrastructure
- The chosen architecture allows local markets to remain functional during a potential unavailability of the central component



Safety and Security

- Regular Source Code analysis
- Periodical vulnerability scans
- DDoS protection
- Intrusion detection
- Secure communication throughout
- Hardened infrastructure
- Dedicated MPLS networks for critical XBID communication



XBID's Joint Quality Assurance Process

- The quality of the XBID solution is assessed jointly by DBAG and the Project Parties
- Managed against pre-defined internal and external Quality Gate Thresholds
- The XBID Solution must pass all quality gate thresholds as part of the quality assurance process
- Project Parties and DBAG have been adamant in ensuring high-quality solution

PX and TSOs define requirements
and approve specifications

DBAG Development Tests
1st DBAG internal Quality Gate

Manual Functional Tests
2nd DBAG Internal Quality Gate

Automated Regression Tests
3rd DBAG Internal Quality Gate

Non-Functional Tests
4th DBAG Internal Quality Gate

Factory Acceptance Tests with PXs and TSOs
1st PX & TSO Quality Gate

Customer Acceptance Tests
2nd PX & TSO Quality Gate

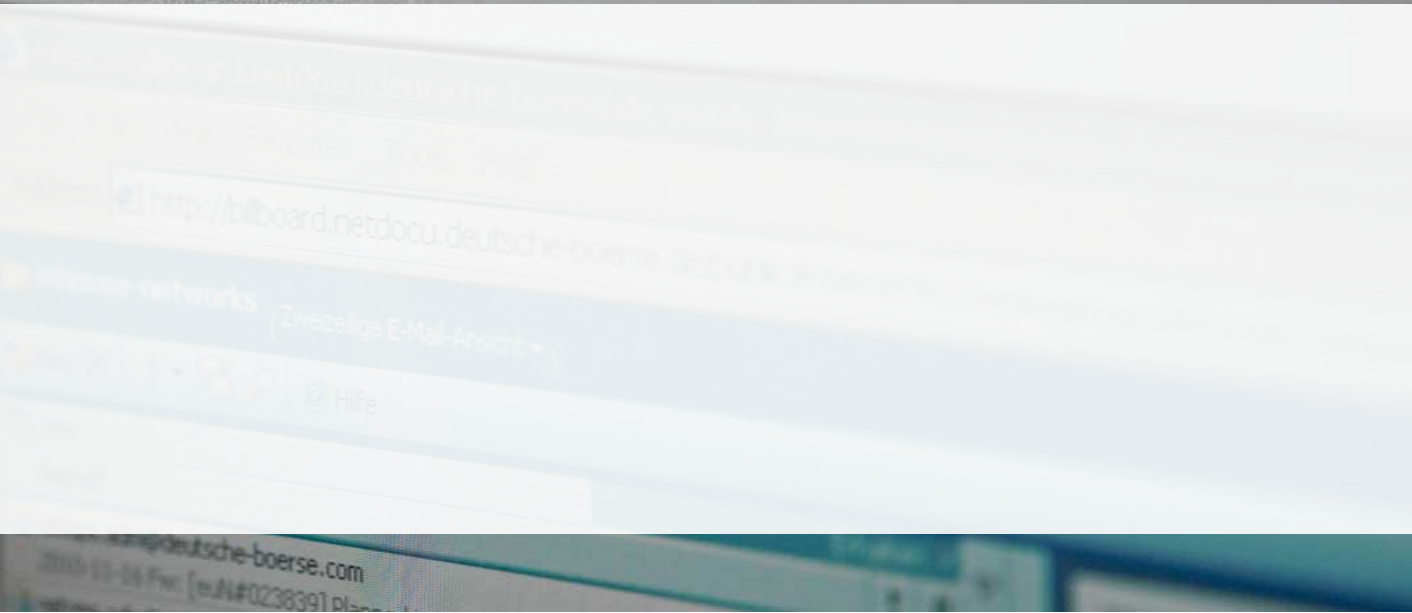
Local Implementation Projects
Market Member Simulation



DEUTSCHE BÖRSE
GROUP



Thank You!



Agenda

14:50-15:15

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Member's trial period, go-live plan and next steps for readiness

Pierre Milon
EPEX Spot

- 1. Market Trial**
- 2. Go-live sequence**
- 3. Rollback**

Market Trial (1)

What is the purpose of the Market Trial ?

- The Market Trial gives the Market participants the opportunity to connect via the Local Trading Systems of the NEMO's to the new XBID System in order to familiarize with some changes that are introduced with the implementation of this new XBID system. This is also an opportunity for Market participants to test their interface to the LTS in combination with the XBID System.
- Market Trial will also include explicit allocation on FR-DE border
- The Market Trial will be conducted in production-like conditions, meaning that following items are configured in accordance with the foreseen go-live configuration:
 - product range
 - product naming and product scheduling
 - cross-border capacities publication times,
 - coupling perimeter.
- Post-coupling activities like nominations are out of scope of the Market Trial.

Market Trial (2)

Practicalities

- Two periods: from 26th February until 2nd of March and 14th May until 18th May
- All NEMOs will approach their customers in order to clarify practicalities of the trading system used for this trial period, e.g. for:
 - connectivity
 - credentials
- All Market participants will be in contact with their respective NEMO in case support is needed.
- Explicit allocation (FR-DE)
 - Market participants are invited to approach Amprion and RTE
 - Connectivity tests (API) will be facilitated and communicated to the interested parties
- During the Market Trial, operational messages corresponding to foreseen scenarios will be sent by the respective NEMOs.
- NEMOs support will be proposed only during working hours [9am – 5pm].
- Market Participants are invited to send questions if any or report on system behaviour to the respective NEMOs.

Market Trial (3)

- **Detailed scenarios**

- Normal day scenario the configuration for the market trial will include all borders that will be coupled at go-live. (see next slide). This will be the opportunity to perform testing against production-like products and get used to different layers of matching: Local Trading System or XBID, depending of the scenario tested
- Trade recall and cancellation mechanism. For and between the NEMOs offering the service, NP and EPEX, harmonized operational timings will be used
 - Max time to request a recall after trade : 5mins
 - Admin reaction time: 15mins
 - Time before trading ends and delivery starts: 20mins
- Incident cases: closure of interconnectors in XBID, closure or market area in XBID, XBID down. Specific messages will be communicated, specific local NEMO processes in local trading systems might be proposed.

2. Go-live sequence

Local markets

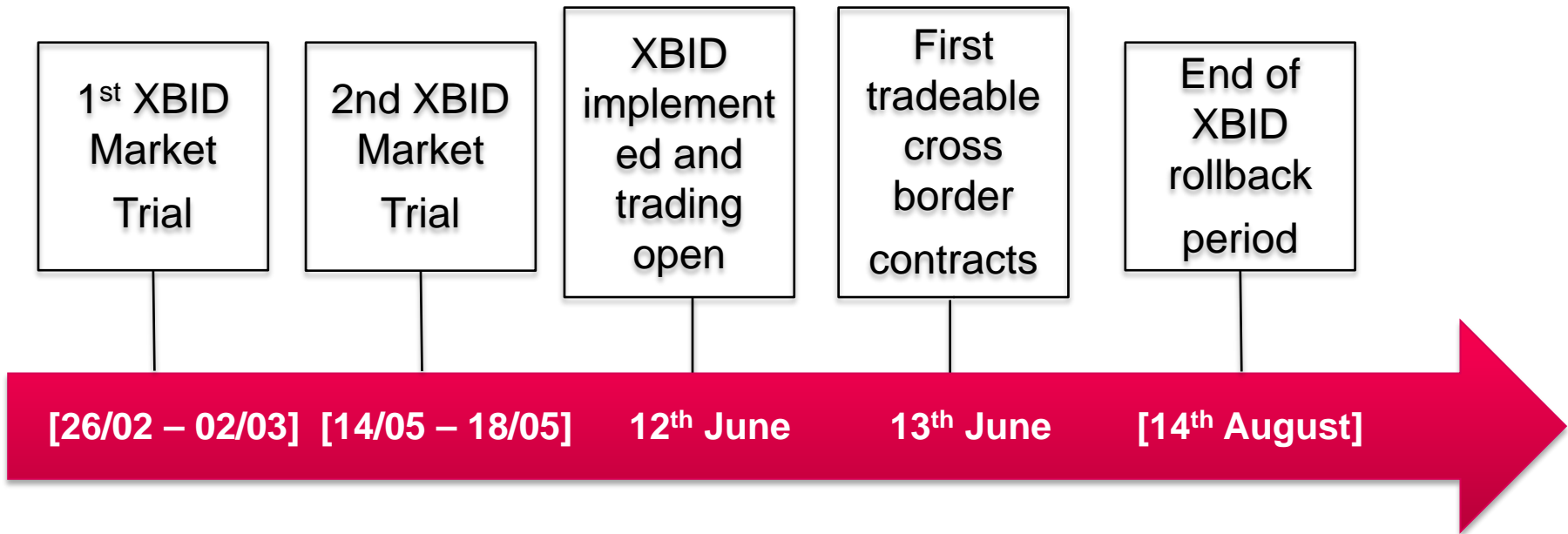
- Each NEMO will communicate on the potential down times of its local markets.
- First tradeable local contracts in local trading systems could be available earlier than the start of cross-border capacities allocation.

Cross-border markets

- XBID is targeted to be implemented on the **12th June 2018** and first tradeable cross-border contracts will be for the **13th June 2018 [00:00-01:00]**
 - NB. The detailed launch plan and checklists are still being worked on, detailed information on the duration of the migration, downtimes of 'old' and 'new' platforms are still being investigated.
 - Downtimes will be limited as much as possible but there is a risk that there will be no cross border allocation possible for one day.
- Capacities will be published according to the timings defined by the relevant TSOs on a border per border basis.

3. Summary

- **Timeline**



Agenda

15:15-15:30

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Future plan for XBID

Mark Pickles

TSO Project Manager

XBID Go-live..... is just the beginning!

- The 1st XBID go-live marks a significant milestone



- But it is only the beginning and now we need to:
 - 1. Further enhance and improve XBID usability
 - 2. Deliver the 2nd Wave LIPs
 - 3. Develop and deploy changes foreseen for the short term or which are already ‘in progress’ such as Losses on DC cables and further development of the Shipping Module
 - 4. Develop and deliver a strategic roadmap to deliver remaining CACM requirements
- We also need to ensure that the project governance after go-live oversees both the day to day operations of XBID as well as the future development of the system

1. Enhance and improve XBID usability

- Project Parties have identified a number of ideas to further enhance XBID. These include:
 - Extended monitoring of XBID - ACER Monitoring request to Interim NEMO Committee
 - Possibility to recall/cancel all related trades at once
 - Enhanced Shipper 2.0
 - Additional screen in the Shipping Module which to assist TSOs during the Verification of Scheduled Exchanges....etc.
- It is envisaged that there will be a maximum of 2 releases each year when improvements/changes will be deployed to XBID
 - Changes will be subject to extensive testing before implementation



2. 2nd Wave of LIPs

- This is planned for Spring/early Summer 2019. A delivery plan is in place and tracked
- There will be Pre-launch communications













LIP 14

Part of the 2nd Go-live wave

	Slovenia – Italy		
	Austria – Italy		?
	France – Italy		?
	Slovenia - Austria		?

LIP 15

Part of the 2nd Go-live wave

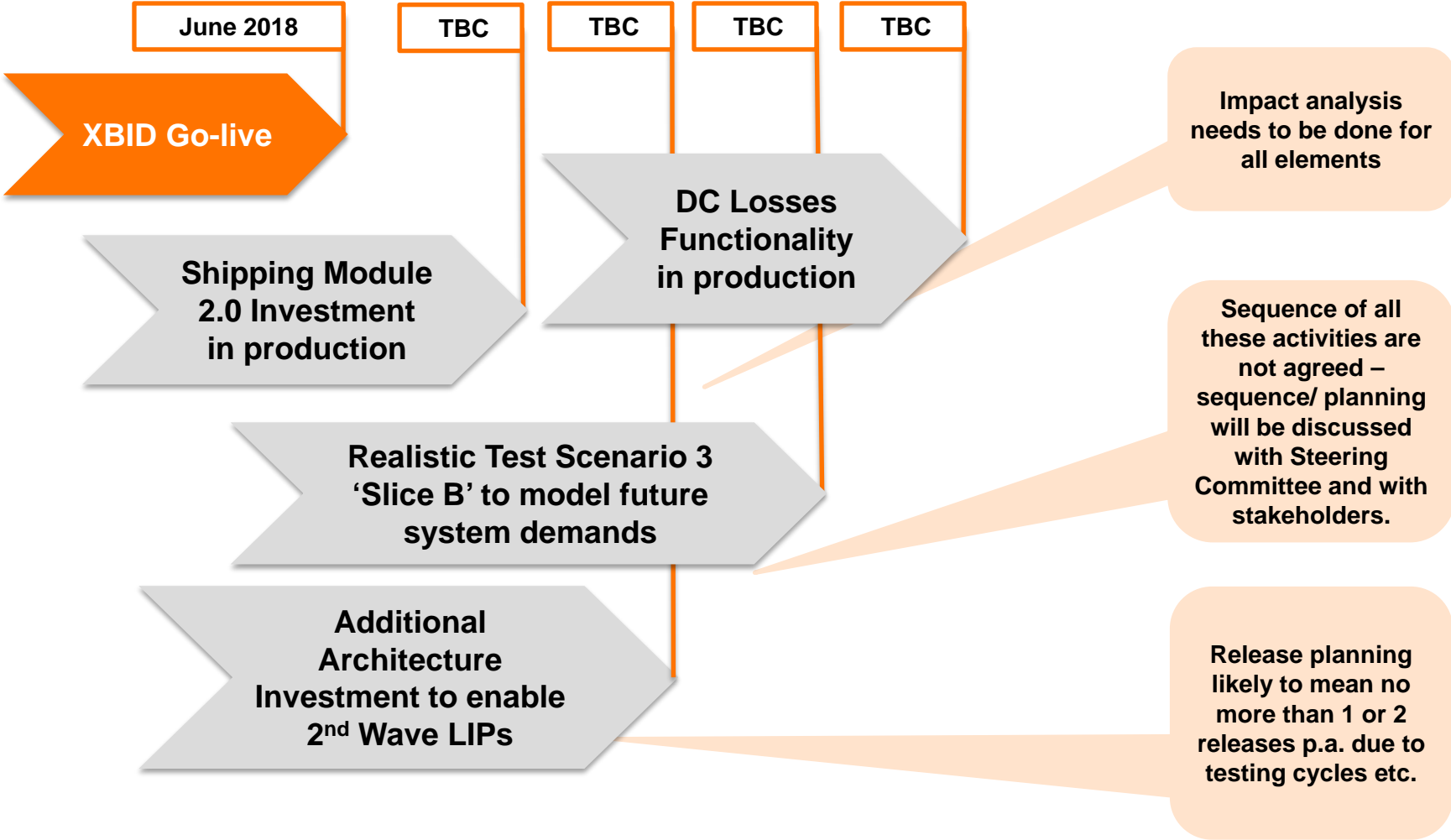
	Germany-Czech Republic		
	Austria - Czech Republic		
	Austria – Hungary		
	Croatia-Hungary		
	Hungary – Romania		
	Slovenia – Croatia		
	Slovenia - Hungary		

LIP 16

Part of the 2nd Go-live wave

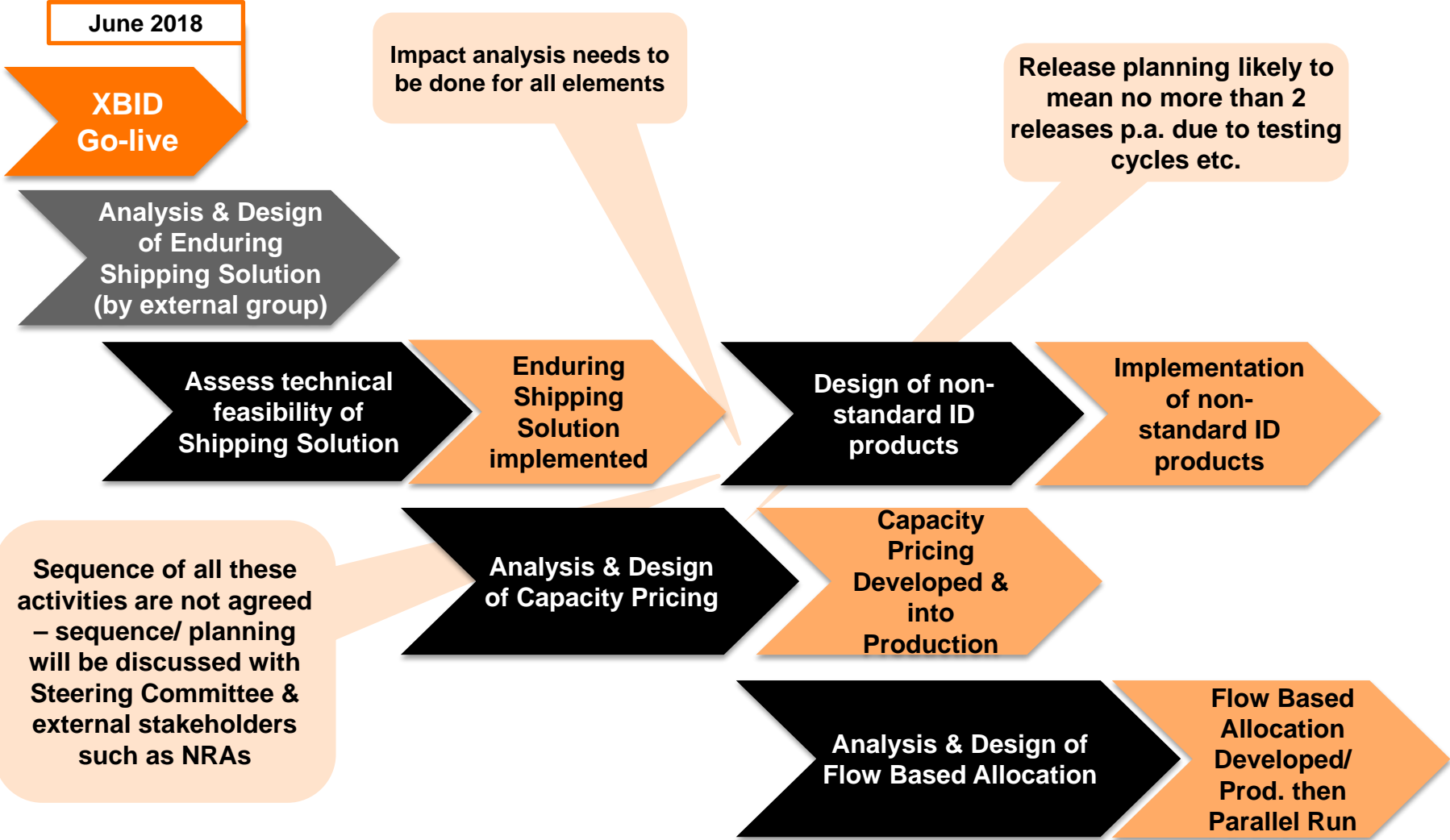
	Poland-Lithuania		
	Poland-Sweden		

3. Illustrative “Shorter Term” changes. Sequence must be prioritised/agreed with stakeholders



*SM – Shipping Module

4. XBID Strategic Roadmap – Illustrative “Longer Term” sequence of developments to be prioritised/agreed with stakeholders



XBID Governance

- From go-live XBID will be managed:
 - **1. Operationally**
 - OPSCOM will be established
 - Incident Committees will be mobilised in the event of an incident
 - **2. Further Development**
 - Steering Committee comprising all parties who have signed the Intraday Operational Agreement
 - Annual budget and agreed priorities
 - Responsible for development of short, medium and long term strategic roadmap
 - **NEMOs and TSOs agree that governance for DA and ID should be merged in the future**



Q&A



Thank you very much for your attention!

We will send you a copy of today's slides

**You are welcome to stay for the get
together 16:00-17:00**

A safe journey home...