

EPEX SPOT

Towards the *Internal Energy Market*

Olaf Islei – Head of UK Public and Regulatory Affairs

A European and an international success story

- Over 275 Exchange Members
- 529 TWh of traded volumes in 2016: 468 TWh on the Day-ahead market, 62 TWh on the Intraday market
- Societas Europaea headquartered in Paris
- EPEX SPOT created in 2008, roots going back to 2000
- Over 160 employees coming from 16 countries
- Offices in Amsterdam, Bern, Brussels, Leipzig, London and Vienna

Shareholder structure

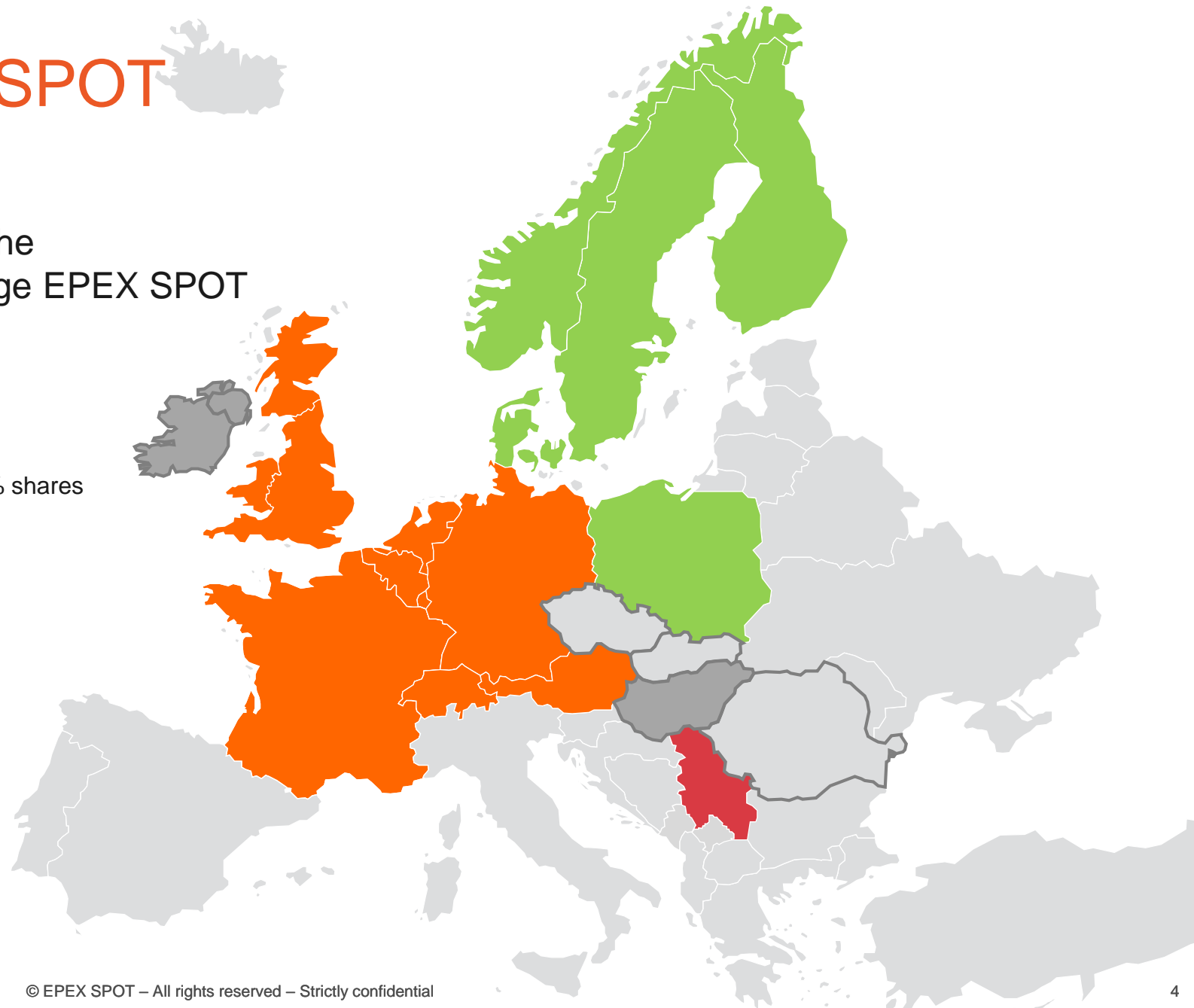


The markets of EPEX SPOT

Markets and services of the European Power Exchange EPEX SPOT

- Current EPEX markets
- Market Expansion
- Market operation services and 25% shares
- Market operation services
- Market coupling services

- Over 275 Exchange Members
- 530 TWh of traded volume in 2016



Market review 2016: Volumes and delivery zones

DE/AT/LU: 275 TWh

Thereof intraday: 41 TWh

Share in consumption: 50%

Delivery zones: 50Hertz, Amprion, APG, TenneT, TransnetBW



FR: 115 TWh

Thereof intraday: 4 TWh

Share in consumption: 24%

Delivery zone: RTE



NL: 36 TWh

Thereof intraday: 1 TWh

Share in consumption: 33%

Delivery zone: TenneT

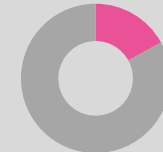


UK: 57 TWh

Thereof intraday: 13 TWh

Share in consumption: 17%

Delivery zone: National Grid



BE: 20 TWh

Thereof intraday: 1 TWh

Share in consumption: 24%

Delivery zone: Elia



CH: 26 TWh

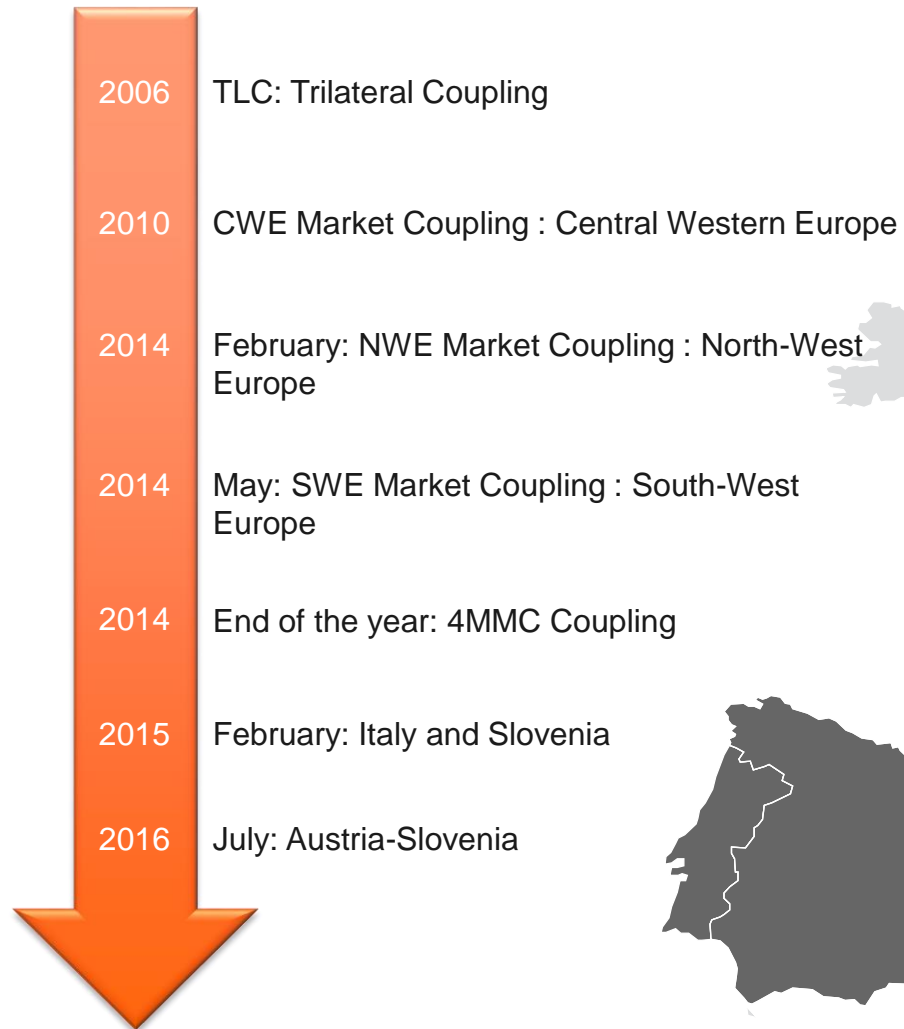
Thereof intraday: 2 TWh

Share in consumption: 43%

Delivery zone: Swissgrid

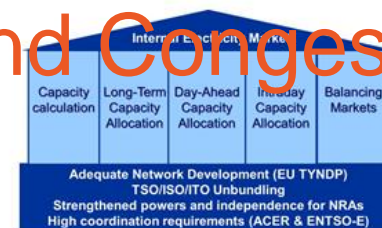


Market Coupling initiatives since 2006



Regulation on Capacity Allocation and Congestion Management

EU Target Model for Electricity Market Integration



CACM
Regulation

(EU) 2015/1222

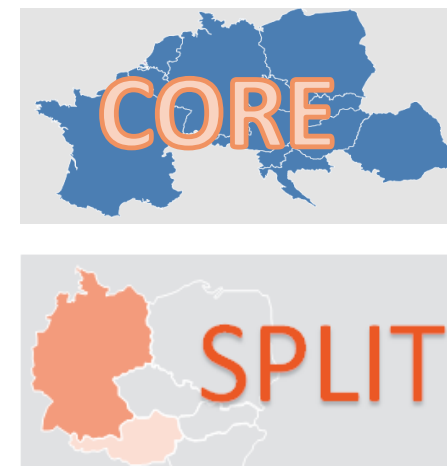
Day-Ahead Market Coupling



Intraday Market Coupling



Cross-border capacity calculation



NEMO
COMMITTEE

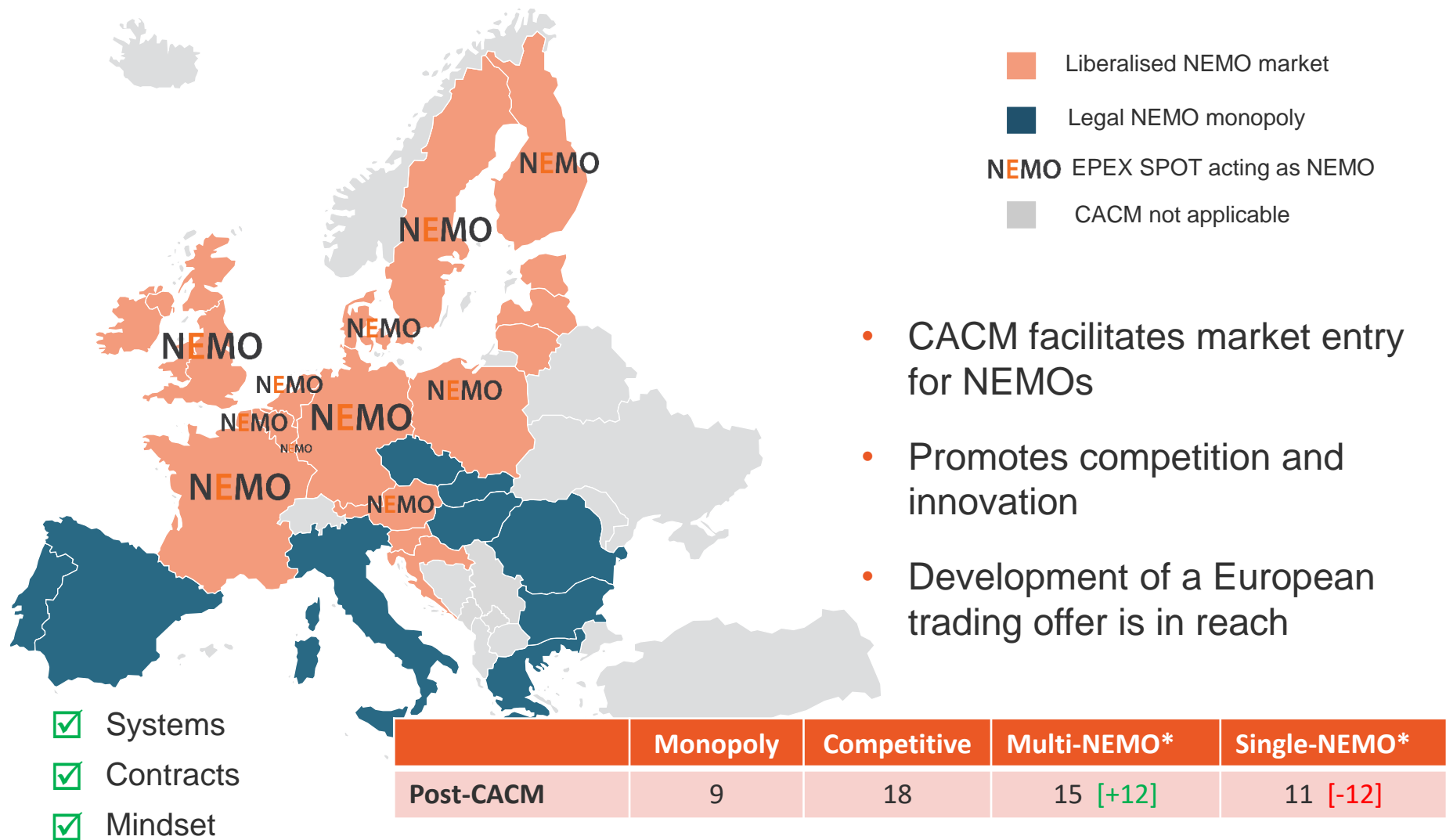
Power Exchanges designated as Nominated Electricity Market Operators [NEMOs]

entsoe
Reliable Sustainable Connected

EUROPEAN
POWER
EXCHANGE

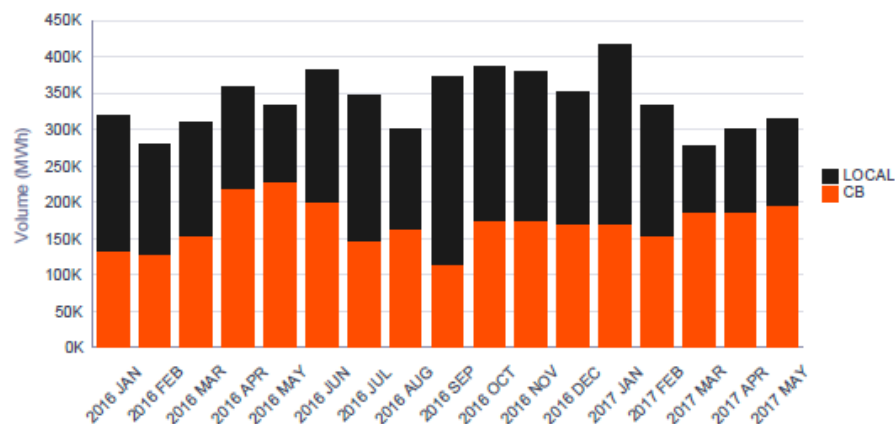
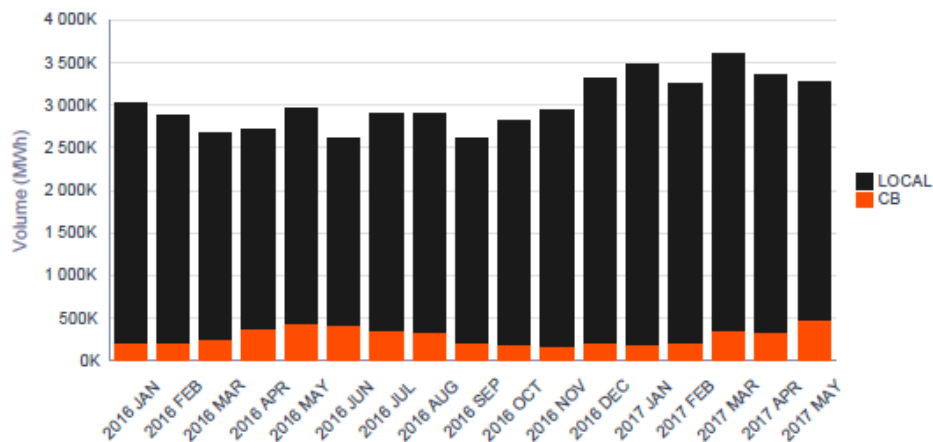
EPEXSPOT

A wider scope for integrated markets development and competition



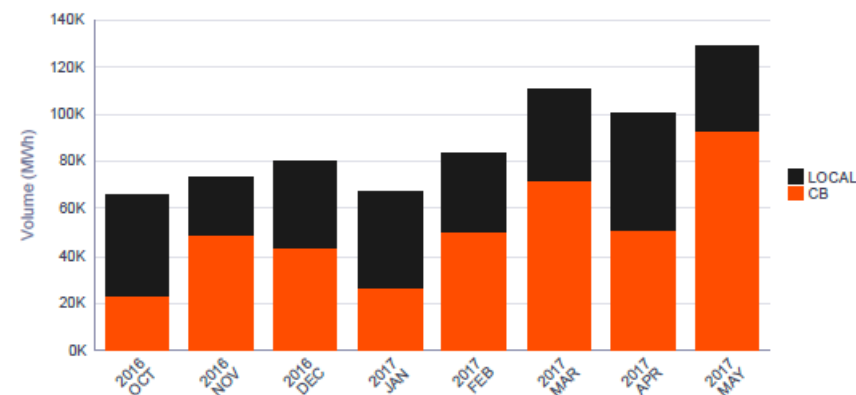
Intraday liquidity has been increasing steadily on ALL markets

Evolution of DE Intraday Continuous volumes



Highlights:

- Volumes on ALL IDM markets keep increasing
- In Germany local volumes account for the bulk of trading (>80%).
- Implicit cross border trades are possible on EPEX SPOT with Germany, Austria, Switzerland and Belgium and the Netherlands
- **Volumes that have been growing most are NL and BE volumes since the change of trading system and connection to the other markets**

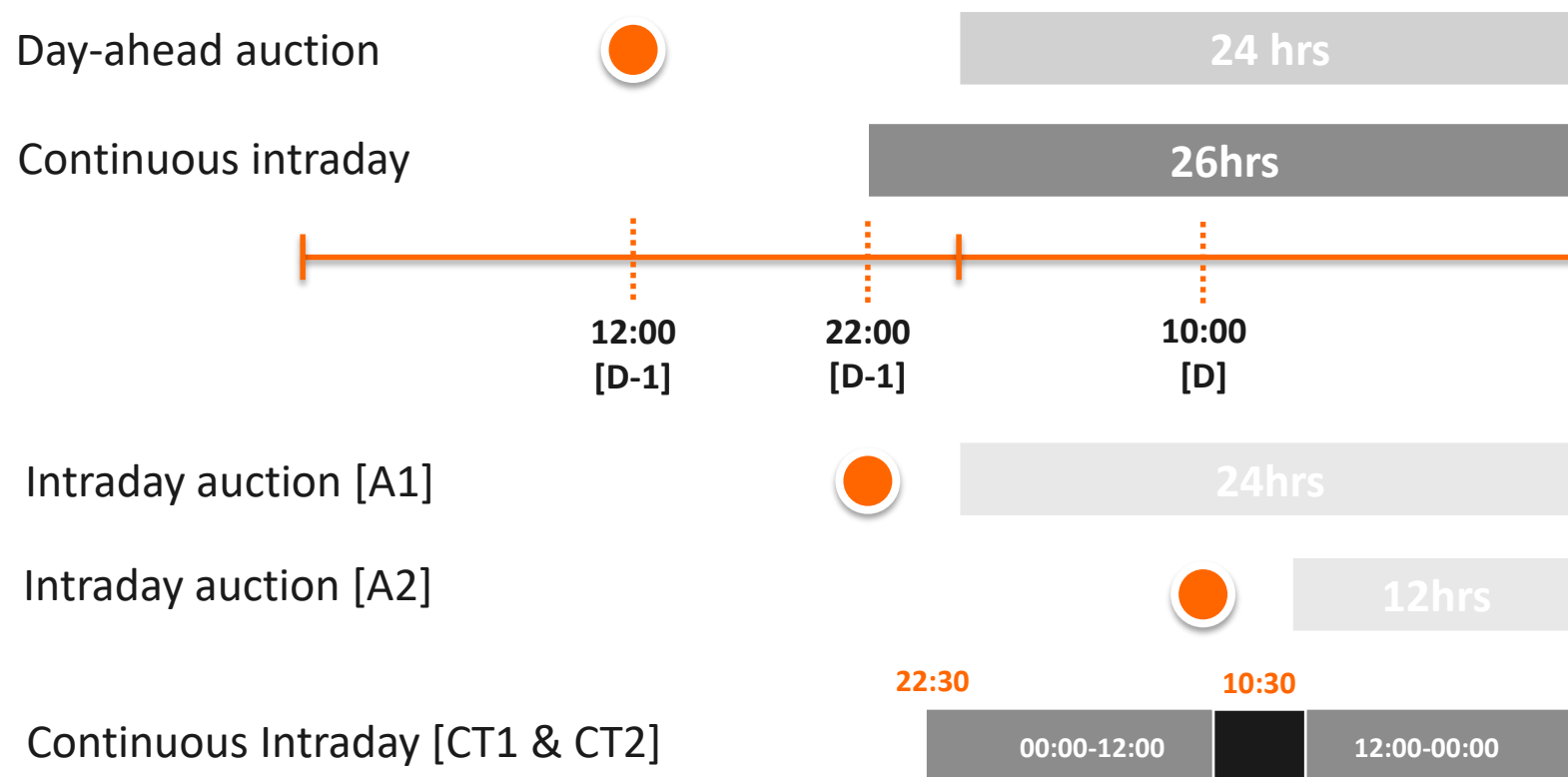


Complementary Intraday Auctions: Aligning on the future European model

- The **IBWT region** and **Iberian region** have submitted their proposal for a CACM Complementary Intraday Auction
- The **GB Regional project** is also preparing an interim Intraday Auction proposal between GB and Ireland.
- Core design topics of the Complementary Intraday Auctions relate to :
 - **The number of auctions** and their **implementation phasing**
 - **The capacity recalculation process**
 - **The timing of the auctions**
 - **The technical solutions used**
- For EPEX, the design of such Intraday auctions should ensure :
 - **Minimal disturbance** of the existing intraday market solutions
 - **Sufficient liquidity** to be allocated to these auctions
 - **Cost-efficiency** by aligning to the enduring capacity pricing design and technical solution

Intraday capacity pricing

European Target Model v1.2.4



- An opening auction could make sense, with additional capacity
- Auctions may be able to manage more complexity than continuous
- The proposed solution may be too complex

Core region



CORE

- Sixteen TSOs (and ten NEMOs)
- Coordinated cross-border capacity calculation and re-dispatching
- Plan to implement flow-based by June 2019 [source: ENTSO-E]

CORE CCR obligations stemming from guidelines and network codes currently into force

CCR: decision 17/11/2016

NC/ GL		Art.no	CCR OBLIGATION	MILESTONE	17.12.2016	17.01.2017	17.02.2017	17.03.2017	17.04.2017	17.05.2017	17.06.2017	17.07.2017	17.08.2017	17.09.2017	17.10.2017	17.11.2017	17.12.2017	17.01.2018	17.02.2018	17.03.2018	17.04.2018	17.05.2018	17.06.2018	17.07.2018	17.08.2018	17.09.2018	17.10.2018	17.11.2018	17.12.2018	17.01.2019	17.02.2019				
DA	20.2	Common Capacity Calculation Methodology for DA	sep.17	TSO method design	Consultation	NRA Approval	Implementation																												
	27.2	Setting up Coordinated Capacity Calculator	jul.18	TSO method design																															

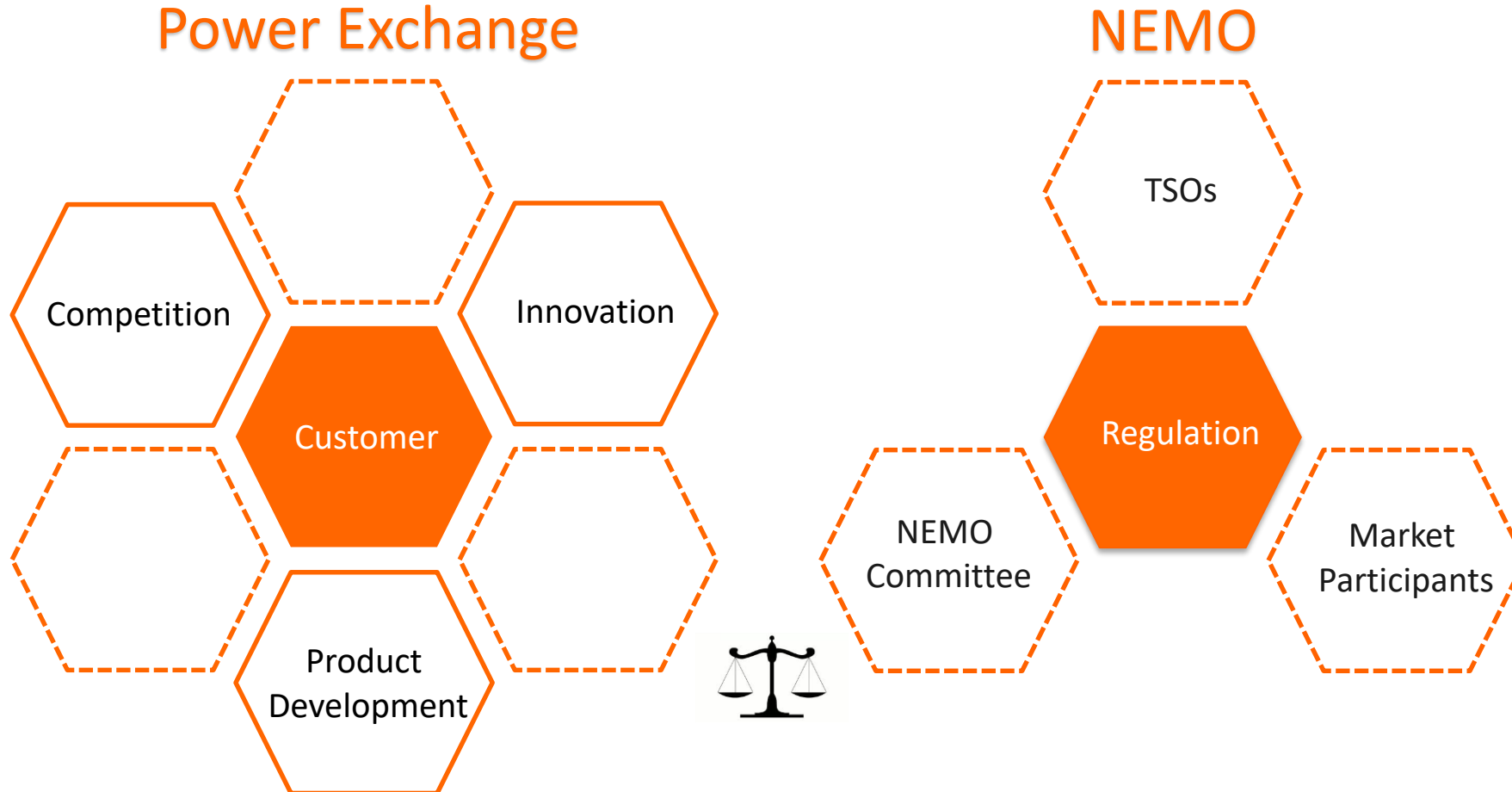
LEGEND			
			TSO develop
			NRA's and MP's Consultations
			NRA Approval
			Implementation

SPLIT

- Fifteen years as the EU's biggest and most liquid power market
- May 2017, regulators announced that:
 - the bidding zone will be split from 1 October 2018 (within Central West EU)
 - 4.9 GW of cross-border capacity will be available
 - Additional capacity from 2022/24

EPEX SPOT will play a key role in these processes

Finding the right balance



- Regulation is not the best approach to foster competition and innovation
- We need to maintain the customer focus of market development
- EPEX SPOT is more than just a NEMO

Conclusion

- Competitive, liquid European power market is within reach
- Governance framework for target model implementation and development
- Implementing the CACM Regulation will have a material impact
- Important challenge, to maintain customer centred market development
- EPEX SPOT is working towards a pan-European trading offer

Thank you for your attention!

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