REMIT data and technology

REMIT Forum 2021 – Special session

ACER - Market Integrity and Transparency Department

Tuesday, 26 October 2021 / 14.00 - 16.30 CET

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Agenda for this session

FIRST PART: INPUTS FROM ACER

Time	Content	Presenter
14.00 – 14.15	**REMIT DATA COLLECTION** State of play of transaction reporting guidance evolution and upcoming challenges on data collection.	Eleonora Nagali, Market Integrity and transparency department, ACER
14.15 – 14.30	**RRMs AND DATA REPORTING** State of play of data collection, RRM compliance monitoring.	Marketa Stuchlikova, Market Integrity and transparency department, ACER
14.30 – 14.45	**REMIT DATA FEATURES** Features of collected data and information, including data quality, processes and lessons learnt.	Iztok Zlatar, Market Integrity and Transparency department, ACER
14.45 – 15.00	**INFORMATION MANAGEMENT AND TECHNOLOGY** Introduction to how data and information is managed under REMIT. Insight into technology applied at ACER, data flows, the analytical capabilities and challenges ahead.	Georgios Katsikogiannis, Market Integrity and Transparency department, ACER

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Agenda for this session

SECOND PART: DEBATE WITH STAKEHOLDERS

Time	Content	Presenter
15.00 – 16.00	**PANEL DISCUSSION: REMIT data collection so far, expectations in the future**	**Moderator**: Volker Zuleger, Market Integrity and transparency department, ACER **Panellists:** Alexander McDonald, LEBA Christian Baer, Europex Karl-Peter Horstmann, EFET Rafael Gómez-Elvira González, All NEMO Committee Johannes Mayer, E-Control
16.00 – 16.30	**Q&A**	

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REMIT data collection

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Eleonora Nagali

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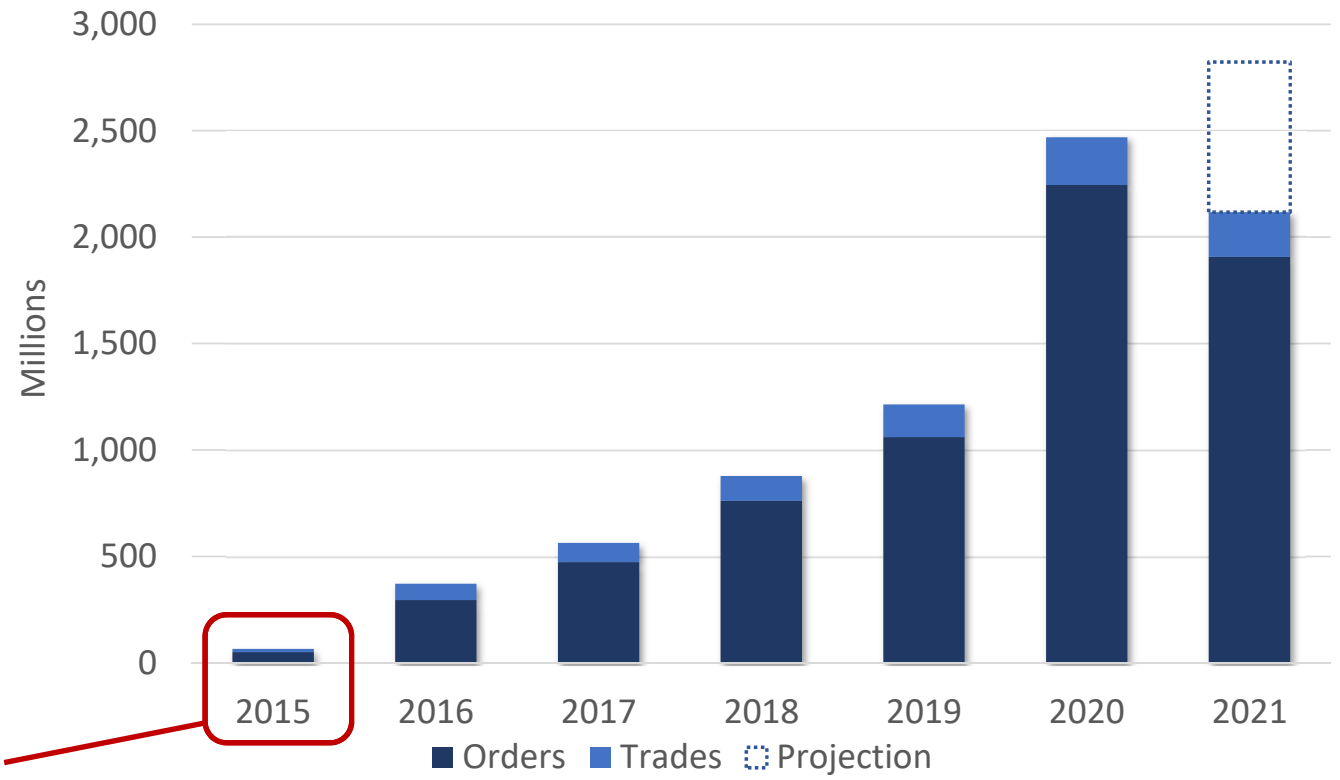
Transaction reporting trend



Data reporting go-live
7 October 2015

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Potential drivers

Automated trading

SIDC Single Intraday Coupling

Increased liquidity of trading closer to delivery

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ACER's focus in 2021

- Ensure an **efficient and reliable data collection**
  - Improve the monitoring of RRMs activity
  - Carry out horizontal data quality analysis (across OMPs), consider all reporting Tables
  - Deal with ARIS operation, support and development

- **Provide guidance** in line with the latest market design development
  - Yearly update of the Transaction Reporting User Manual (TRUM) and its Annexes
    - Last edition published in April 2021 including references to market coupling
    - Upcoming consultation in November 2021 focused on Table 4 data
    - Next consultation potentially in mid-2022

- Ensure that collected data are **suitable for market surveillance**
  - Finalize the ongoing interactions with SIDC NEMOs on SIDC data reporting

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Upcoming challenges

- Increased market design complexity, also driven by the evolution of EU Regulation
  - New products
  - New actors
- Market coupling expansion
  - Geographical
  - Market type (Intraday Auctions, Cross product matching)
- New ways of trading, new technologies
- Promote usage of REMIT data to increase the value of REMIT data

Revision of the REMIT Implementing Regulation?

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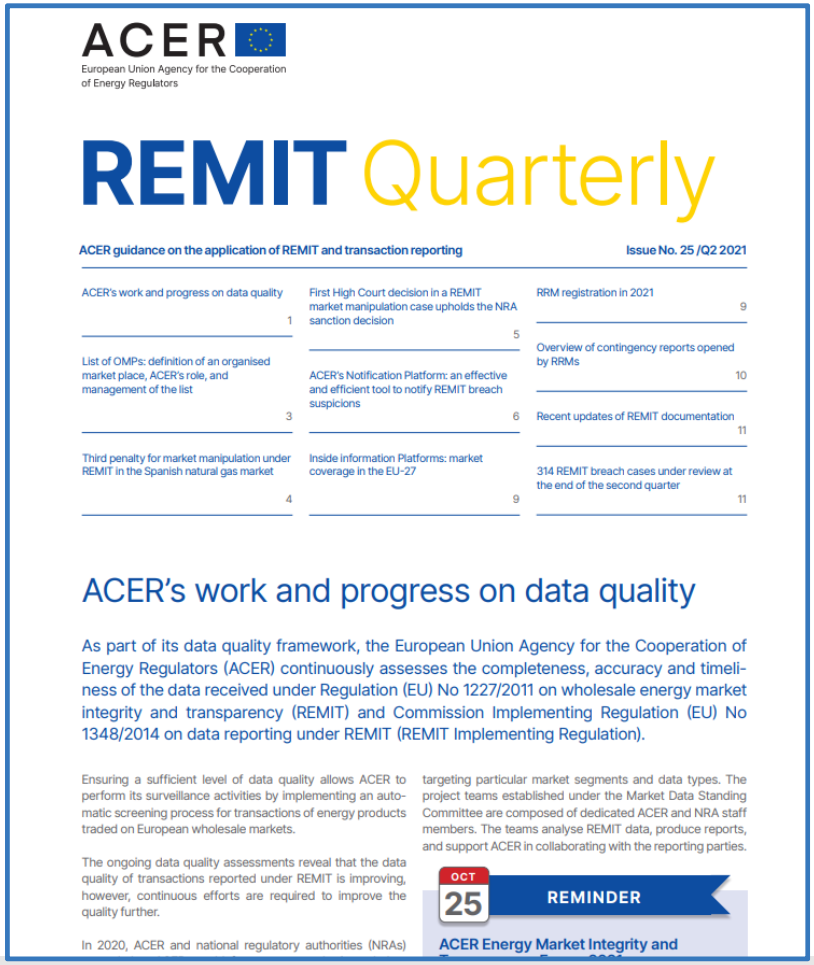
REMIT Quarterly



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REMIT Quarterly

ACER guidance on the application of REMIT and transaction reporting — Issue No. 25 /Q2 2021

ACER's work and progress on data quality 1
List of OMPs: definition of an organised market place, ACER's role, and management of the list 3
Third penalty for market manipulation under REMIT in the Spanish natural gas market 4
First High Court decision in a REMIT market manipulation case upholds the NRA sanction decision 5
ACER's Notification Platform: an effective and efficient tool to notify REMIT breach suspicions 6
Inside information Platforms: market coverage in the EU-27 9
RRM registration in 2021 9
Overview of contingency reports opened by RRMs 10
Recent updates of REMIT documentation 11
314 REMIT breach cases under review at the end of the second quarter 11

ACER's work and progress on data quality

As part of its data quality framework, the European Union Agency for the Cooperation of Energy Regulators (ACER) continuously assesses the completeness, accuracy and timeliness of the data received under Regulation (EU) No 1227/2011 on wholesale energy market integrity and transparency (REMIT) and Commission Implementing Regulation (EU) No 1348/2014 on data reporting under REMIT (REMIT Implementing Regulation).

Ensuring a sufficient level of data quality allows ACER to perform its surveillance activities by implementing an automatic screening process for transactions of energy products traded on European wholesale markets.

The ongoing data quality assessments reveal that the data quality of transactions reported under REMIT is improving, however, continuous efforts are required to improve the quality further.

In 2020, ACER and national regulatory authorities (NRAs) targeting particular market segments and data types. The project teams established under the Market Data Standing Committee are composed of dedicated ACER and NRA staff members. The teams analyse REMIT data, produce reports, and support ACER in collaborating with the reporting parties.

OCT 25 REMINDER

ACER Energy Market Integrity and

- Published on a quarterly basis
- Latest updates on:
  - Data analysis/data quality
  - Surveillance activity
- Updates on:
  - Latest REMIT documents publication
  - Suspicious REMIT breach cases
  - Registered reporting mechanisms activity

REMIT Quarterly – documents (acer-remit.eu)

Subscribe to the ACER Infoflash

Thank you!

More info?

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ACER website: www.acer.europa.eu

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RRMs and data reporting

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Marketa Stuchlikova

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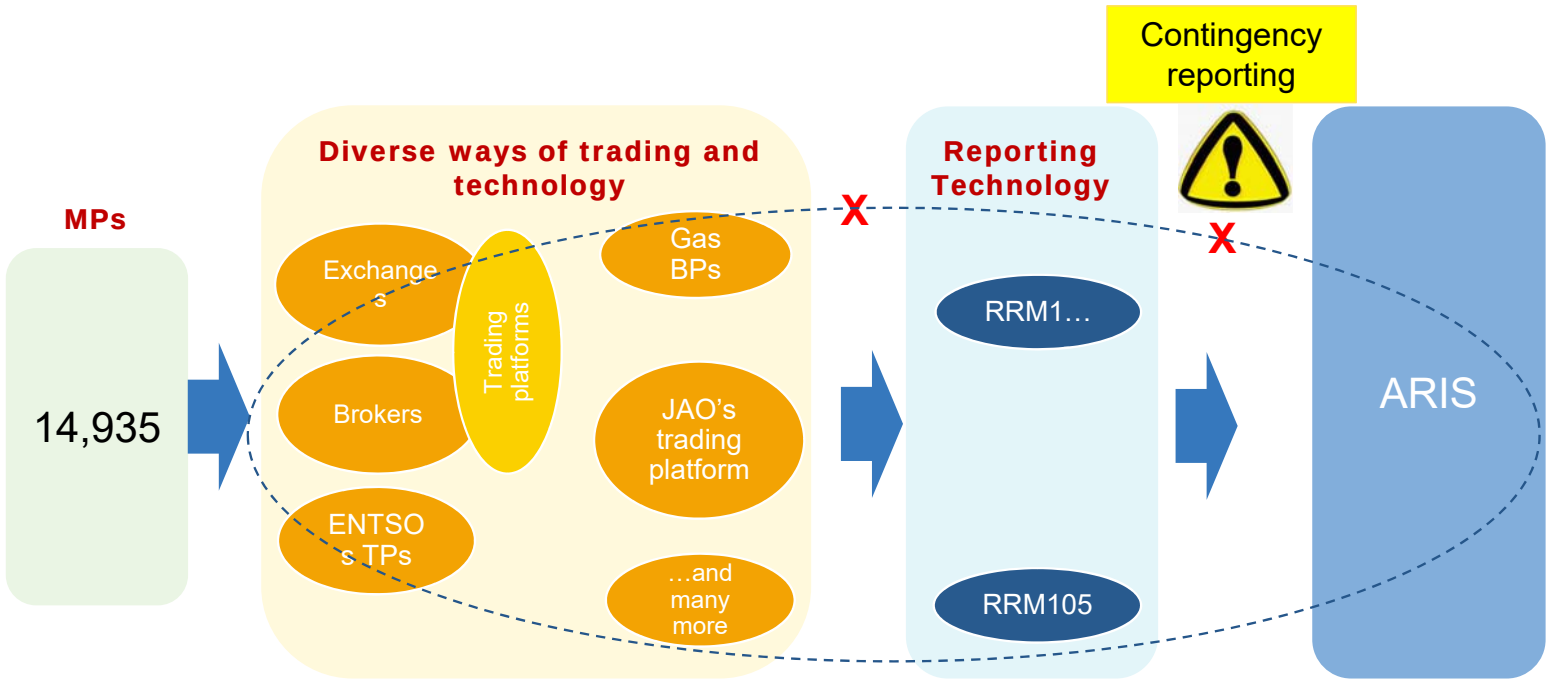
REMIT reporting cycle



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Registration of reporting parties

Article 11(1) of Commission Implementing Regulation (EU) No 1348/2014 (REMIT Implementing Regulation) tasks ACER to register reporting parties who comply with the technical and organisational requirements for submitting data on the basis of ACER's assessment whether reporting parties comply with the requirements to:

(a) ensure the security, confidentiality and completeness of information,

(b) enable the identification and correction of errors in data reports,

(c) enable the authentication of the source of information,

(d) ensure business continuity.

ACER registers reporting parties who comply with the requirements specified in ACER's requirements for registered reporting mechanisms as **Registered Reporting Mechanisms (RRMs)**. Since data submission is a continuous activity of RRMs, ACER has to continuously monitor compliance of RRMs.

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RRM Compliance Monitoring

- Why?
  - To ensure security, availability and operational reliability of ARIS and maintain high quality of submitted data
- How?
  - Risk based approach
- Legal basis:
  - Article 11(1) of the REMIT Implementing Regulation: the Agency shall assess whether registered reporting parties comply with the technical and organisational requirements for submitting data, which are defined in the ACER's RRM Requirements document
  - Articles 7(1) and 8 of REMIT: ACER shall collect the data for assessing and monitoring wholesale energy markets as provided for in Article 8 of REMIT.
  - Article 12(1) of REMIT: ACER is obliged to safeguard the operational reliability of ARIS and to ensure the confidentiality, integrity and protection of the information received pursuant to Article 8 of REMIT

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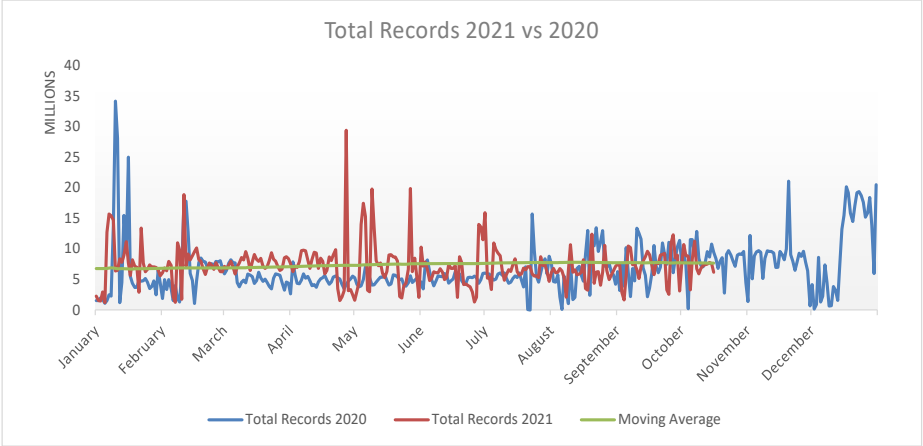
RRM Compliance Monitoring metrics

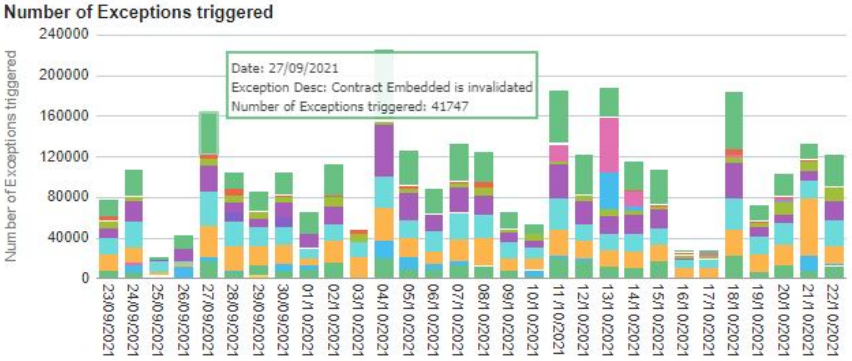
- Actively reporting RRMs and data types monitoring
- RRM file submissions, statuses and success rates
- Data submission channels used
- Ration of errors to data
- Validation rules statistics
- Contingency statistics (events, updates, duration..)



RRM Files Status

Date	Status	Status Description	Number of Files
23/10/2021	Invalid Schema Validation Failure	Failure during the Schema Validation Phase	87
	Naming	Tier1: Naming Convention Validation Done	7
	Tier2 Partial Success	Tier2: Partial Success for Validation Rules	37
	Tier2 Phase2	Tier2: Elaboration Phase2	898
	Tier2 Success	Tier2: Data validated successfully	7,509
	Tier2 to DWH	Tier2: Data moved to DWH for validation	1
23/10/2021 Total			**8,539**

Analyze - Edit - Refresh - Print - Export



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Registered reporting entities

RRMs	
No. of RRM Applications received in 2021	66
No. of RRMs registered in 2021	0 (5 technical re-registration due to Brexit)
Average no. of working days RRM applicants are in the 2nd ID stage (action pending on the RRM)	> 3 months
No. of terminated RRMs in 2021:	17
RRM applicants in last stages of the registration	3

Inside information platforms (IIPs)	
No. of IIP applications received in 2021	1
No. of IIP applications received during 2020-2021	27
No. of IIPs registered in 2021	8
No. of platforms registered	11 IIPs, 4 TPs for gas 11 IIPs, 4 TPs for electricity

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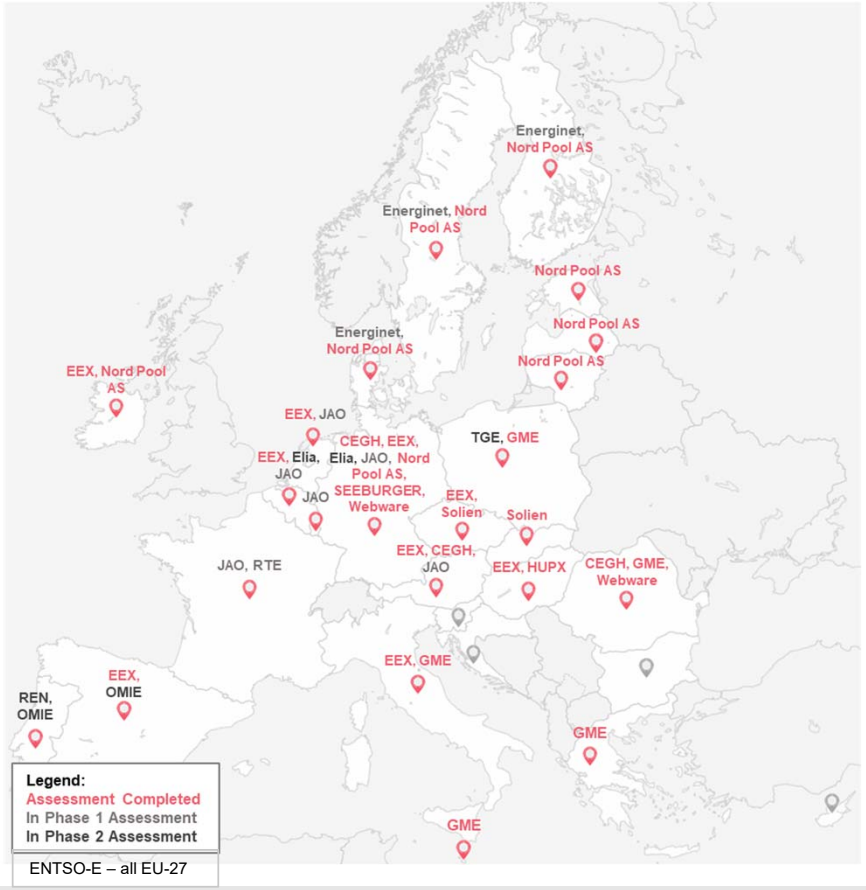
Market Coverage of Inside Information & Transparency Platforms

ELECTRICITY



ENTSO-E – all EU-27

GAS

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More info?

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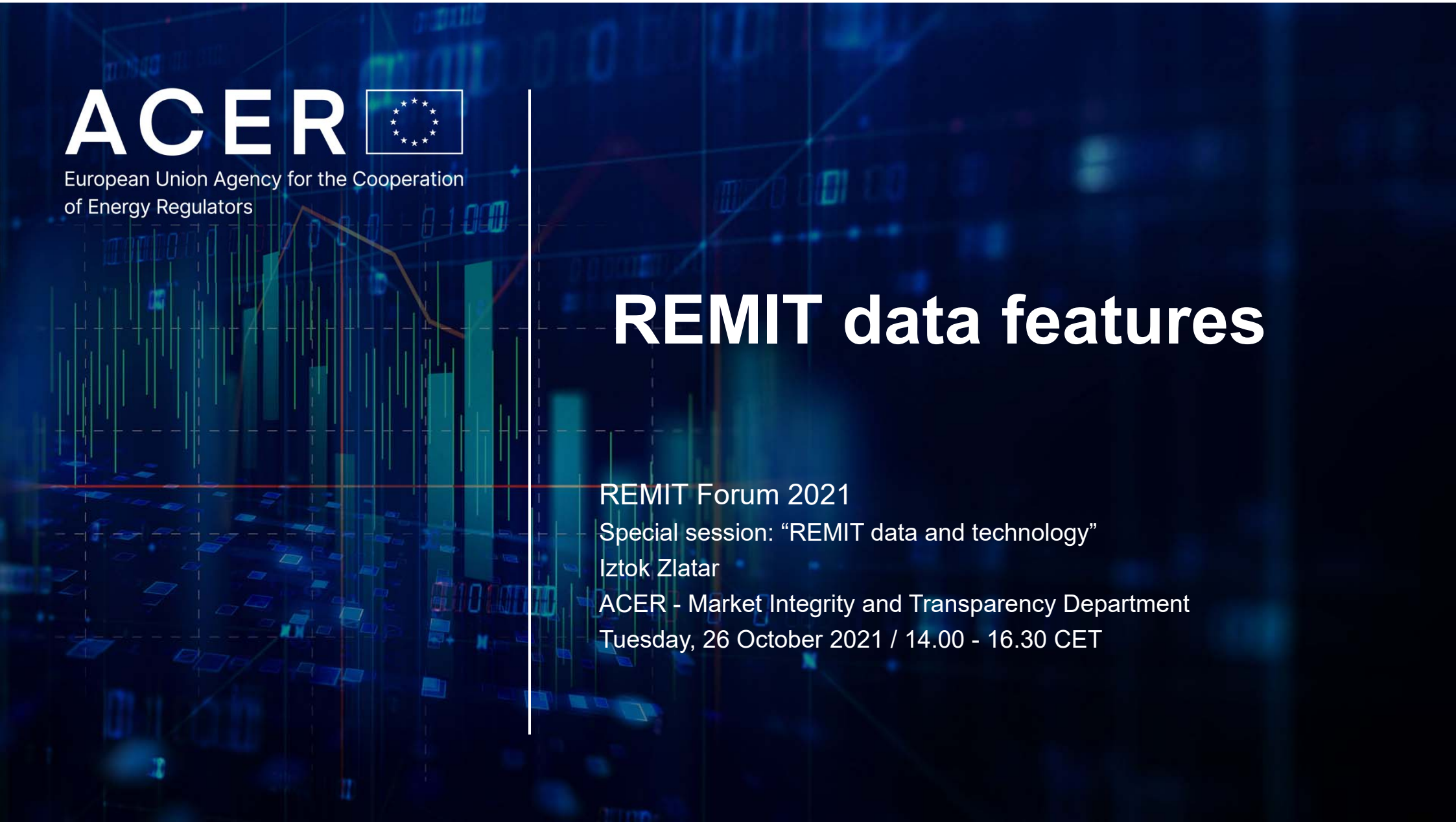

REMIT data features

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Iztok Zlatar
ACER - Market Integrity and Transparency Department

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REMIT data features

2
Commodities

4
REMIT Tables + Fundamental data

>500
Delivery points or zones

2.5bn
Transactions reported per year

80+
Listed OMPs

10+
Contract types

>14k
Registered Market Participants

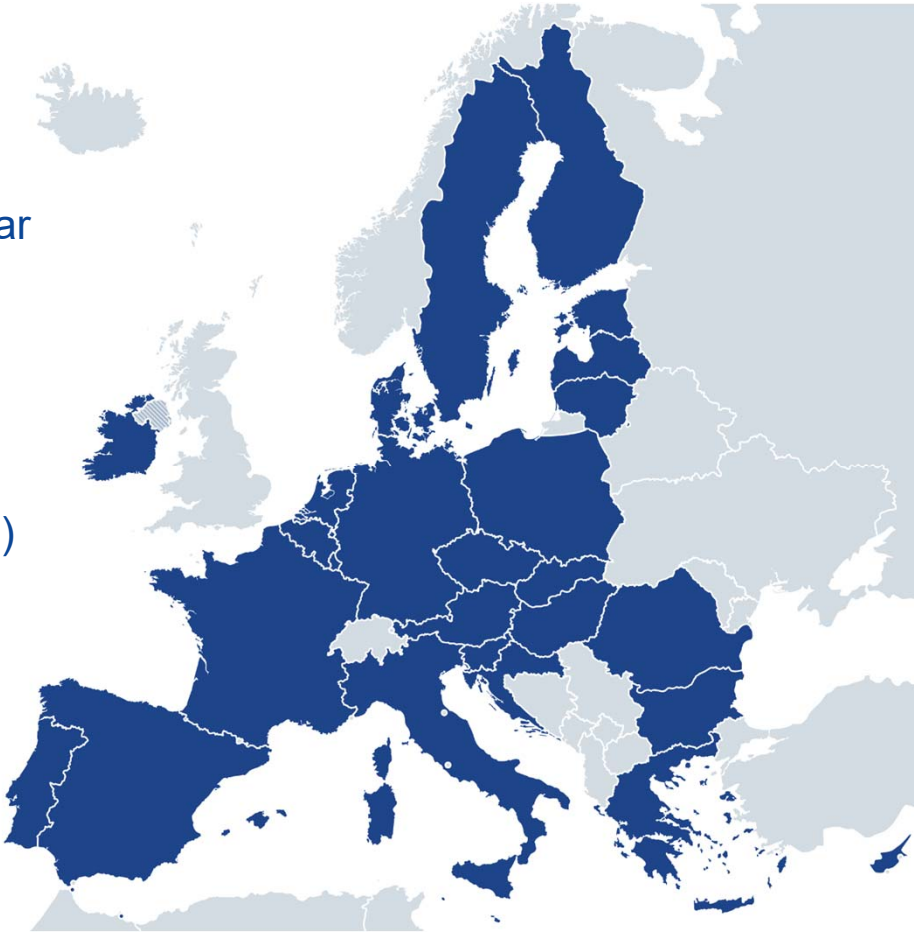
105
Reporting entities (RRMs)

174
Pages of TRUM + 7 Annexes

11
XML schemas

5
Lists

28
NRAs



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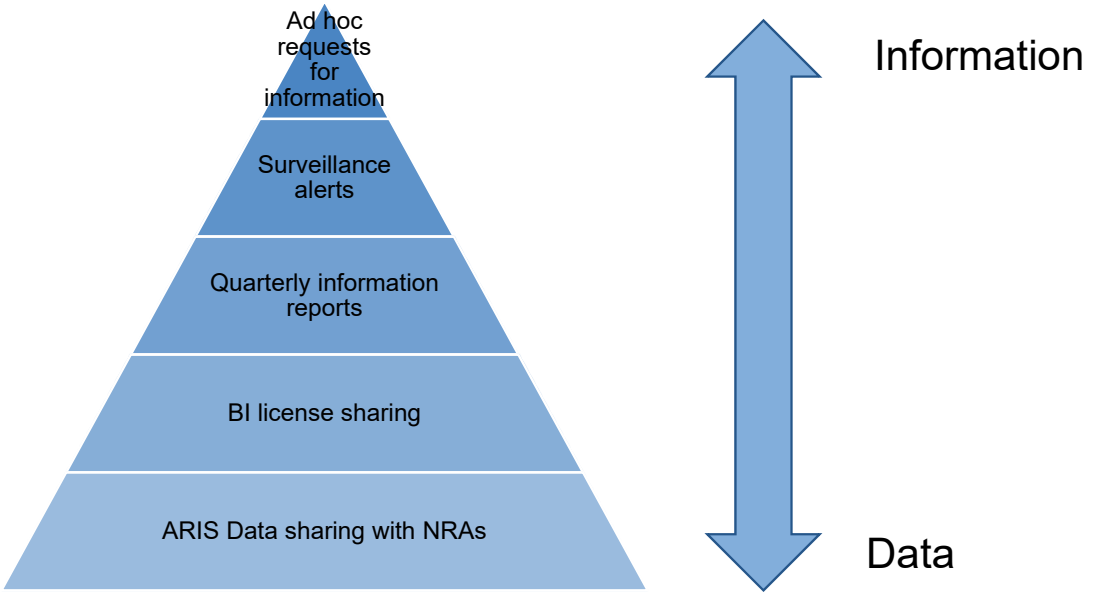
How REMIT data is used

- Highly automated surveillance at ACER and NRAs
- Analysis of STRs
- Data sharing on daily basis with NRAs
- Information sharing
  - on quarterly basis with NRAs
  - on ad hoc basis with NRAs
  - on ad hoc basis with other institutions
- If required, the data is made available to all ACER teams
- Research work with JRC



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REMIT data features

- The most comprehensive dataset related to EU wholesale energy market
- Data collected is well structured, however…
- Data quality is not perfect:
  - Validity
  - Completeness
  - Timeliness
  - Accuracy
  - Consistency

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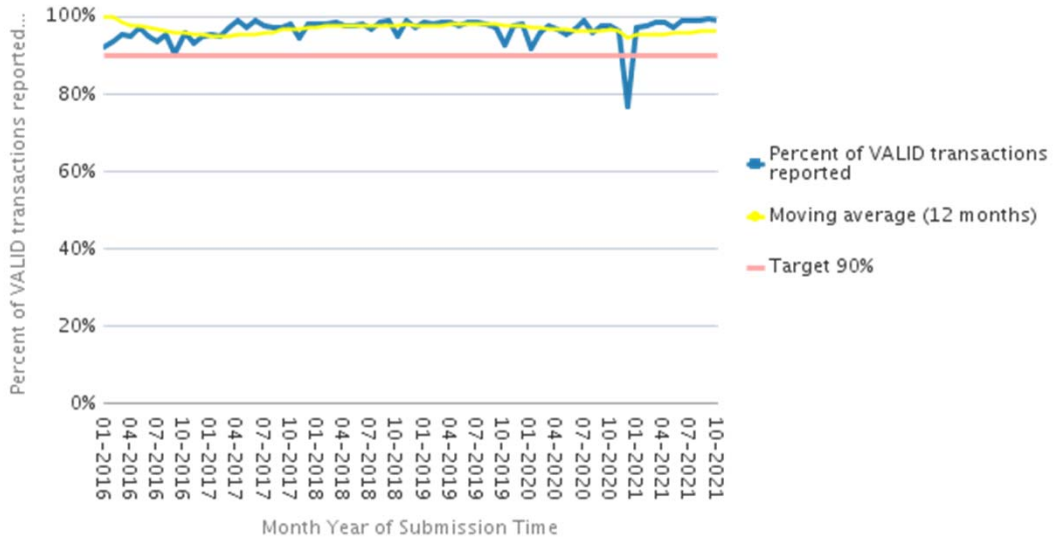
REMIT data features

- The most comprehensive dataset related to EU wholesale energy market
- Data collected is well structured, however…
- Data quality is not perfect:
  - **Validity**
  - Completeness
  - Timeliness
  - Accuracy
  - Consistency

Share of valid records of transaction collected (monthly):



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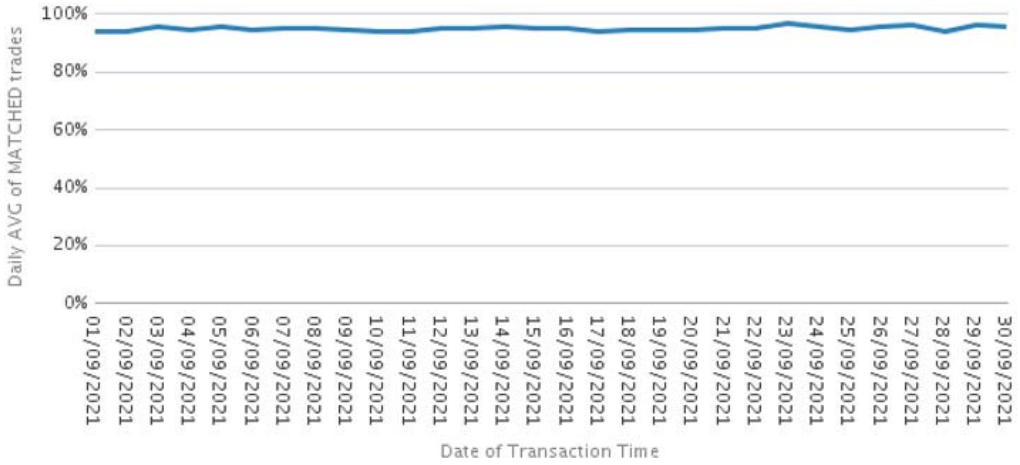
Trade matching B/S SIDC:



+ Out of 15k MPs registered 9,5k reported..

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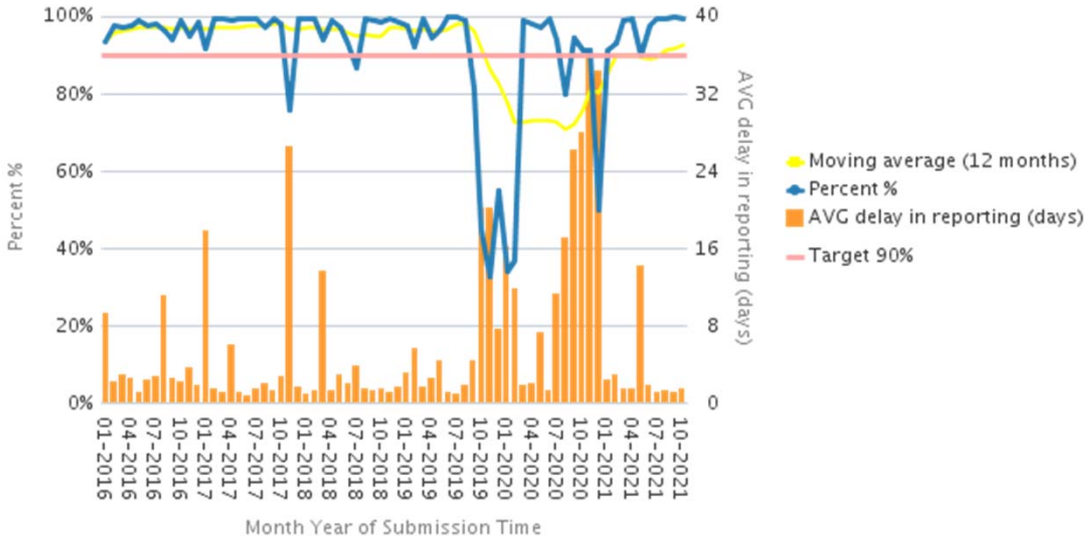
  - Accuracy
  - Consistency

Share of Table1 data type records reported on time:



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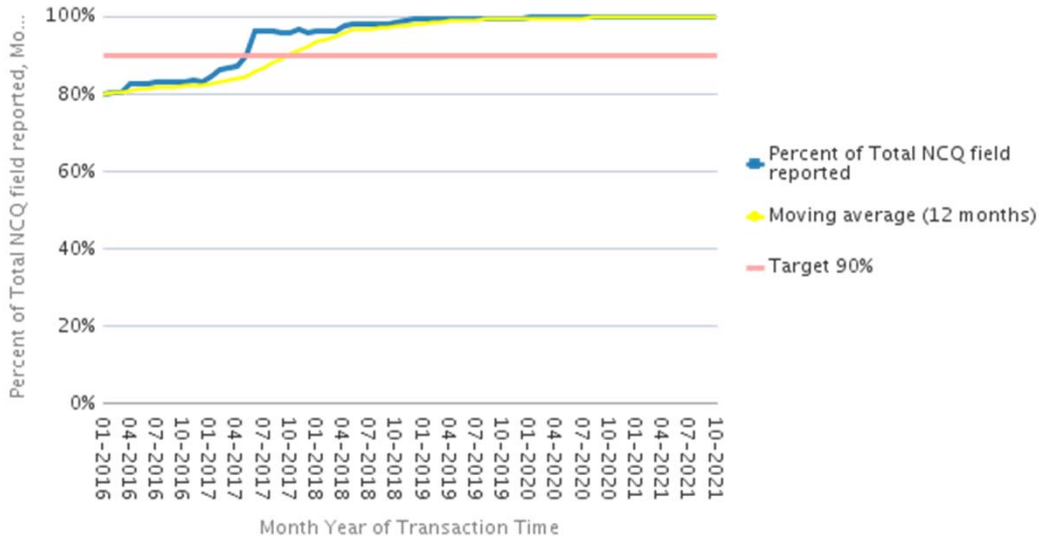
Trade Contract Name field reported (monthly):



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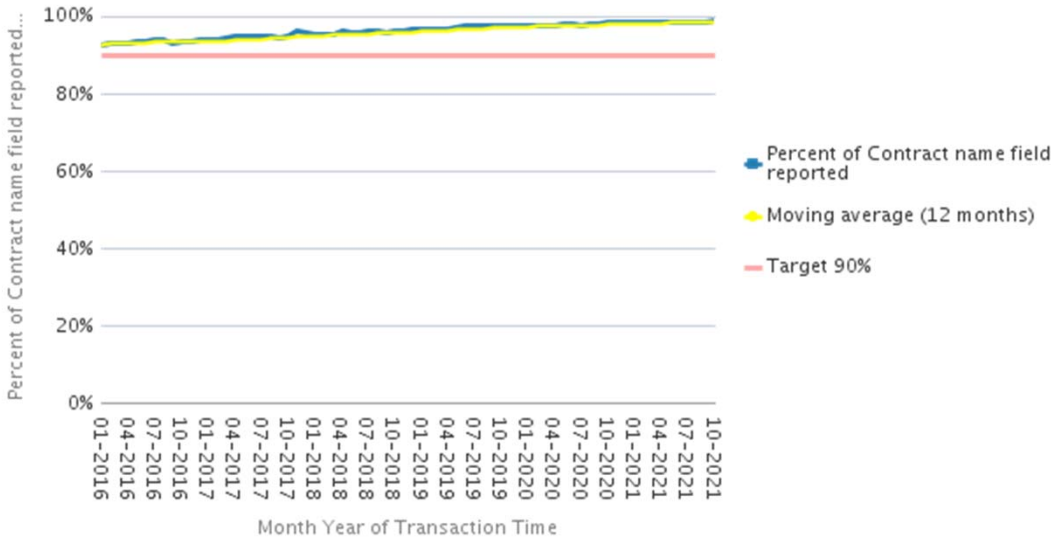
Trades Total NCQ field reported (monthly):



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  - Timeliness
  - Accuracy
  - **Consistency**

Broker market segment – Table 1
Market coupling segment – Table 1
Gas transportation – Table 4

- Different understanding of required data quality
  - When is data good enough for a particular purpose?
  - With the responsibility with market participants, can the data ever be good enough?

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Data quality assurance strategy

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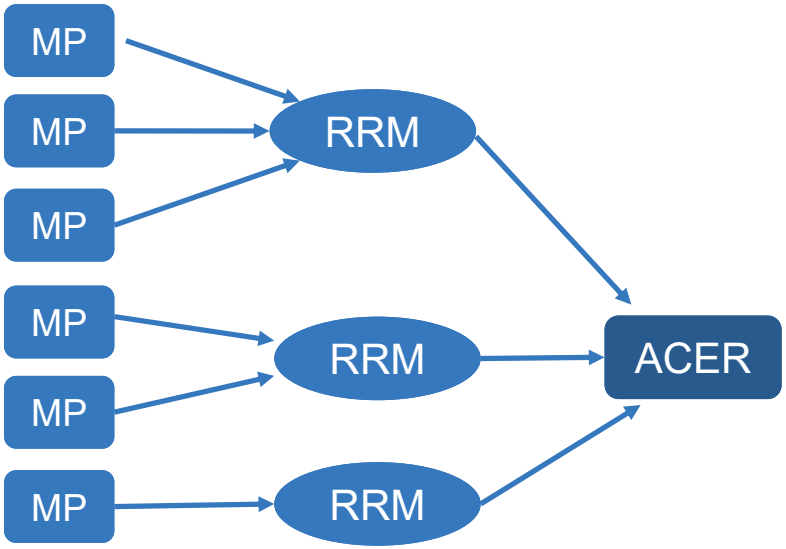
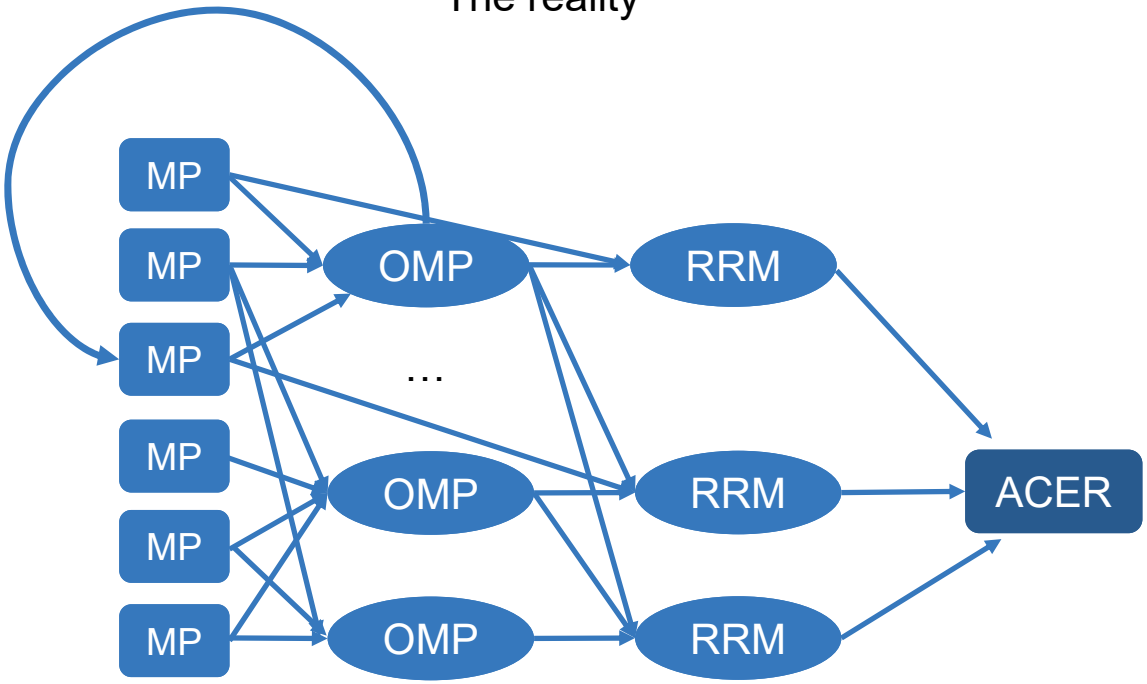
Does the reporting regime facilitate data quality?

The idea



The reality



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Data quality lessons learn and issues

- Lessons learnt:
  - DQ assurance is a resource consuming exercise + incl. burden for stakeholders
  - Source-individual approach is time consuming
  - Validation rules are important but are complex to implement
  - Master data management is very important
  - Reporting guidance is key but never perfect
- Issues:
  - Fragmented reporting - large number of OMPs and RRMs
  - Complex contracts, evolving landscape
  - Sensitive information
  - Correction cycles at reporting parties

Thank you!

More info?

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Information Management and Technology

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Content

- Introduction to ARIS
- Evolution of REMIT Information Management Systems
- Sneak peek into ARIS data collection and data sharing solution
- Data collection management over the years
- Challenges ahead

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Introduction to ARIS

- **REMIT Portal**: Central point of entry to ARIS and other REMIT applications. Central hub for REMIT information & documentation
- **RRM Registration**: Dedicated ARIS module to support the RRM Registration Process workflow
- **CEREMP**: Centralised European Register of Energy Market Participants
- **DCI**: Data collection and reporting systems with three options for provision of XML files (Web GUI, Web Services, SFTP) Annex I
- **IIP**: Market participants shall publicly disclose inside information
- **NP**: Reporting of suspicious transactions according to Articles 15 and 16. Notification of events according to Articles 3(4)(b) and 4(2) of REMIT
- CMT: Secure system for the cooperation and information exchange with NRAs on potential REMIT breach cases

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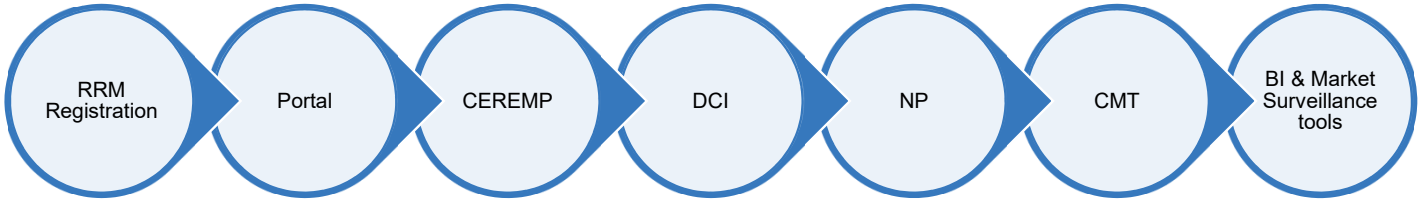
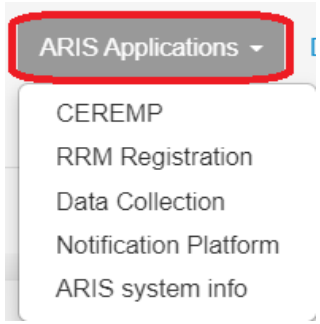
Evolution of REMIT Information Management Systems

- ACER REMIT Information System ("ARIS") including all platforms and applications within REMIT Portal
- NRAs using CEREMP as national registration platform
- Stakeholders' questions since the beginning of 2015
- Focus on development and deployment of IT systems for registration of market participants, data collection and data sharing, and for the effective monitoring of wholesale energy markets
- Involves the collection and screening of data to identify instances of possible market abuse and to notify such cases to NRAs who are responsible for investigation and enforcement; ACER will also be responsible for coordinating investigations





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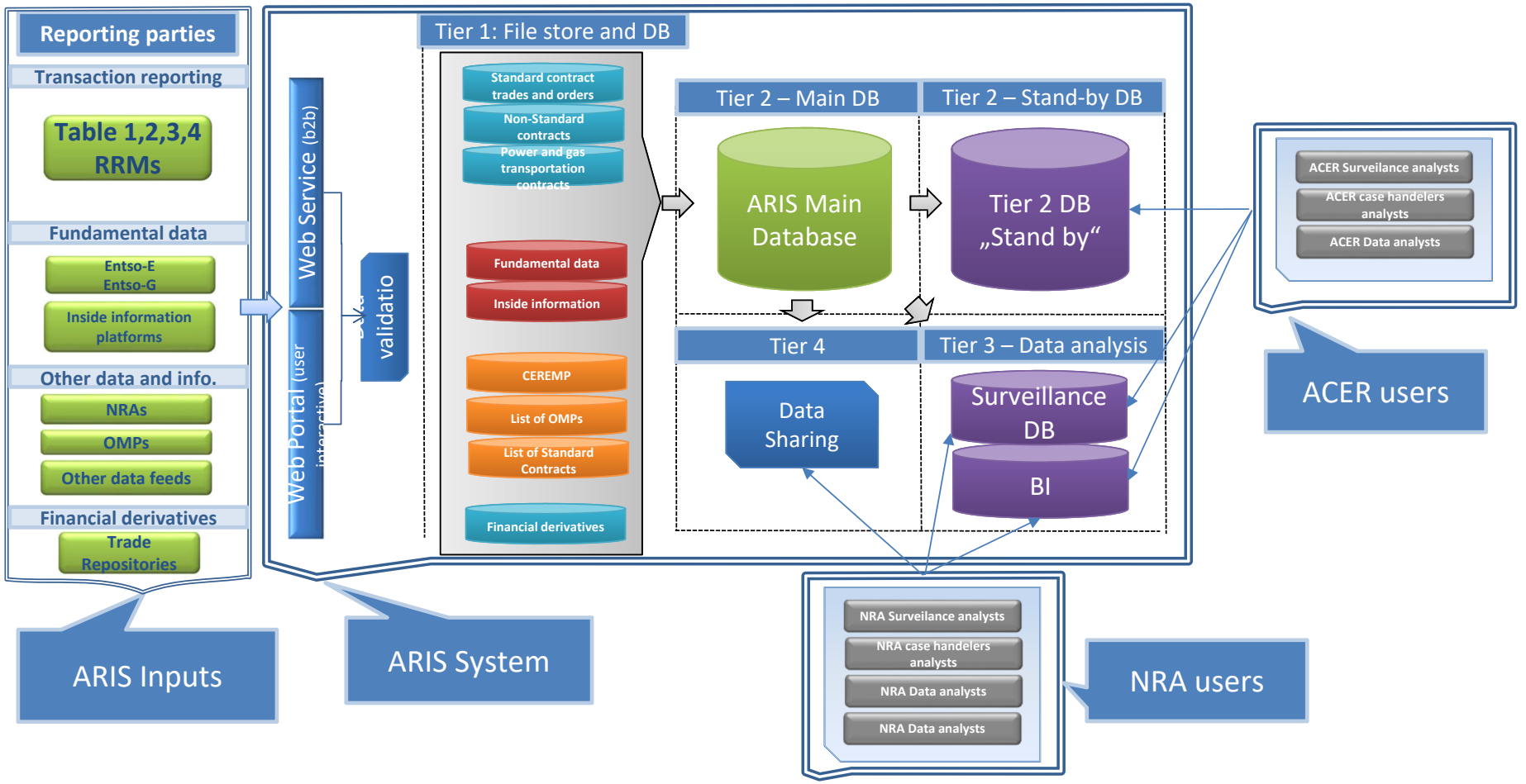
"Sneak peek" into ARIS



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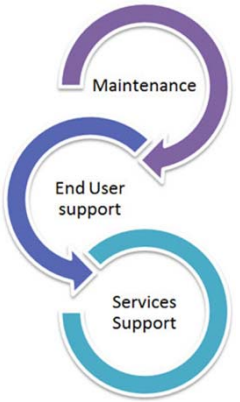
Data collection management over the years

- Operations & support
  - ARIS system availability 24/7
  - ITIL-based service management; leverage support and operational best practices for incident, change and problem management
  - Proactive monitoring of the systems and applications; KPIs
  - Rapidly identify and resolve issues with various IT supportive tools and methods

- Development
  - Continually optimize mission-critical ARIS environments
  - Improving the operations, support and development with problem avoidance and closer coordination of all changes
  - Design for experience; respond to service needs for capacity, performance, availability, recoverability and security
  - PM2 Project Management Methodology developed by the European Commission



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Challenges ahead

ARIS Next-Generation

REMIT data

- New data types
- Improve data quality
- Handling the increasing data growth (aggregate, manage, create value)
- Data security (smooth and secure data collection & sharing)

Business model evolution

- Data-driven predictive models
- Promote usage of REMIT data to increase the value of REMIT data, e.g. for transparency purposes
- Facilitate the reporting obligations for market participants

Technology innovations

- Technical debt
- Digital transformation, modernize applications and proper specialized tooling
- Cloud computing initiatives
- Keep up with constant technology evolution to ensure IT Service Continuity

Thank you!

More info?

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