T7 Release 13.0 – Xetra Midpoint

Cash Market Focus Call

10 September 2024

DEUTSCHE BÖRSE GROUP

Agenda

Overview & Introduction

Xetra Midpoint

ISV & Software Registration Process via Member Section

Enhancements of Short Code & Algo ID Solution

Further Changes & Enhancements

1 Overview & Introduction

T7 Release 13.0 in a nutshell

New Features & Enhancements	T7 Xetra XETR	T7 Börse Frankfurt XFRA
Xetra Midpoint	X	
Enhancements of the Short Code and Algo ID Solution	X	X
ISV and Software Registration Process via Member Section	X	X
Further Changes and Enhancements	X	X

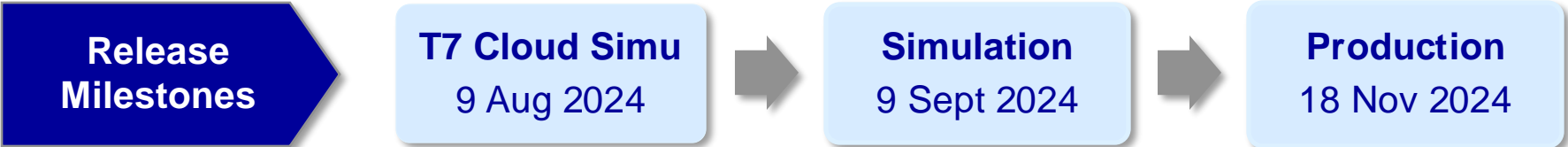**Backwards compatibility for trading interfaces** ➡ **No**

Backwards compatibility for market & reference data interfaces ➡ **No**

Introduction Schedule

	2024								2025		
Q2		Q3			Q4			Q1			
May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar

09.08. T7 Release 13.0 Cloud Simulation

T7 Release 12.1 Permanent Simulation 09.09. T7 Release 13.0 Simulation

18.11. T7 Release 13.0 Production

▲ Preliminary Release Notes - **Jun 2024**

▲ Documents for Cloud Simulation - **Aug 2024**

▲ Final Release Notes - **Aug 2024**

▲ Documents for simulation start - **Aug 2024**

▲ Documents for production start - **Nov 2024**

Release Milestones → **T7 Cloud Simu** 9 Aug 2024 → **Simulation** 9 Sept 2024 → **Production** 18 Nov 2024

Publication Schedule

T7 Release 13.0	Derivatives Markets	Cash Markets	Combined	2024					
				17.06.	07.08.	26.08.	06.09.	04.11.	15.11.
Preliminary Release Notes	x	x		v1					
Enhanced Trading Interfaces Manual, incl. XSD, XML Representation and Layouts			x		v1	v2		v3	
FIX LF Manual, incl. XSD, XML Representation and Layouts			x		v1	v2		v3	
Market-, Enhanced Order Book- and Reference Data Interfaces Manual incl. XML Fast Templates & FIXML Schema Files			x		v1	v2		v3	
Trader, Admin and Clearer GUI – User Manual	x	x			v1	v2		v3	
Final Release Notes	x	x				v1			
Extended Market Data Services Manual & Underlying Ticker Data Manual incl. XML Fast Templates			x			v1		v2	
XML Report Reference Manual, Modification Notes & XML Schema files			x			v1		v2	
Functional Reference			x			v1			
Functional and Interface Overview			x			v1			
Trader, Admin and Clearer GUI – Installation Manual			x			v1			
Participant and User Maintenance Manual	x	x				v1			
Cross System Traceability			x			v1			
Incident Handling Guide			x			v1			
Participant Simulation Guide			x			v1			
T7 Known Limitations for Simulation			x				v1		
Cash Market Instrument Reference Data Guide		x				v1			
Exchange Rules & Regulations		x						v1	v1
Market Models		x						v1	
T7 Known Limitations for Production			x						v1

- **Version 1**
- **Version 2 (optional)**
- **Version 3 (optional)**

- All documents are available on www.xetra.com under:

  Technology > T7 trading architecture > System documentation > Release 13.0

2   Xetra Midpoint

Xetra Midpoint: Dark pool integrated in global reference market for German equities

Maximize Liquidity
Xetra Midpoint enables participants to seamlessly trade selected equities & ETFs in dark order book, pegging orders to Midpoint and executing Dark-Lit Sweep to Xetra CLOB with zero latency

Matching Logic
Execution maximization based on volume-time priority. Protect your orders with MAQ (minimum acceptable quantity)

Price Improvement
Profit from significant price improvement by saving half the spread compared to aggressive CLOB orders

Confidentiality and Speed
With no pre-trade transparency, safeguard your intentions while enjoying zero latency connectivity to reference market Xetra

Efficient Reporting
Benefit from Separate Reporting MIC Codes & segment MICs under operating MIC XETR, ensuring streamlined reporting processes under MiFIR Reference Price Waiver*

Advanced Order Options
Benefit from order limits, IOC, FOK functionalities, empowering you with flexible trading strategies.

Concept

Trading Participant
Regular Order
Sweep Order
Midpoint Order (firm)
Xetra Midpoint
Sweep Order
dark
lit
Xetra CLOB
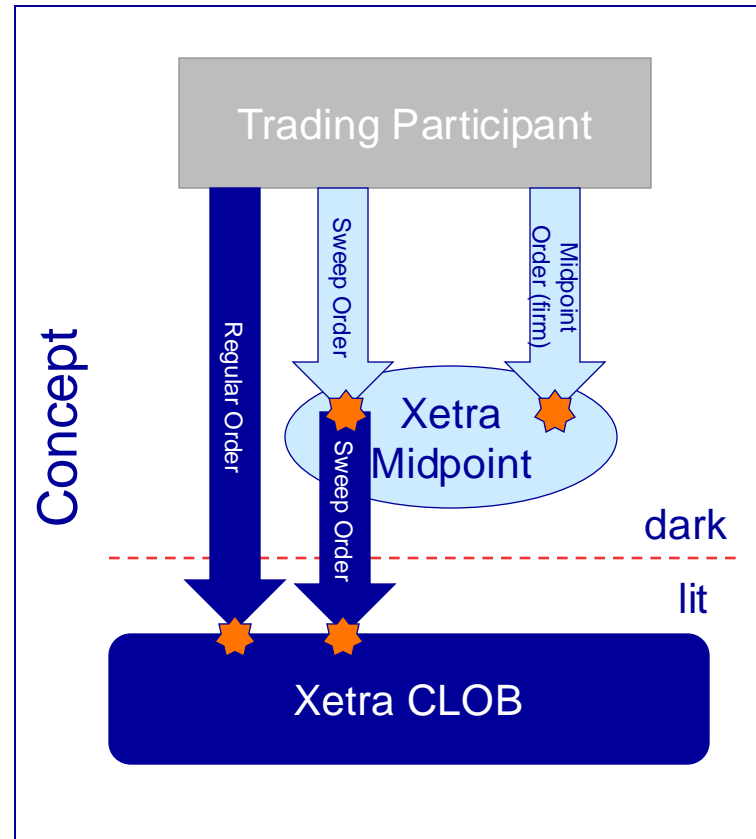
XETRA
Midpoint Commercials

- Pricing: Midpoint orders: 0.3bps
  Sweep orders: Standard pricing
- Attractive Incentives for launch phase (until end of 2026, tbd)

Be part of Xetra Midpoint as of **25 November 2024!**

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* ESMA approval pending

Midpoint Orders vs Midpoint Sweep Orders

Midpoint Orders

- Will be inserted into midpoint order book only
- Any remaining quantity is saved in midpoint order book
- Safeguard: Self-Cross Prevention
  - In case of a cross (SMP ID), sitting midpoint orders will be cancelled
- MAQ definition possible
  - Automatic adaption to remaining order quantity when MAQ exceeds remaining order quantity
- IOC / FOK available
- Order limits available (not restricted to ESMA tick size)

Midpoint Sweep Orders

- Will first be tried for execution in the midpoint order book once
- Any remainder is forwarded to CLOB & treated like a regular order with possible restrictions provided
- No safeguard in midpoint trading, SMP definitions apply in CLOB
- All execution conditions & order restrictions available, only apply in CLOB
- MAQ definition not possible
- Modifications apply to CLOB only

- **Midpoint Orders & Midpoint Sweep Orders must also be MiFID II compliant**
  - **MiFID II validations will also be performed for these orders**

Midpoint Matching Algorithm

- Matching Trigger Events: Incoming Order, Change of Midpoint Price

- Prioritization: Volume-Time Priority under consideration of MAQ

- Execution principle: maximization of overall execution volume

Bid Time	Qty	MAQ	Midpoint Order Limit	Midpoint Order Limit	MAQ	Qty	Ask Time
10:00	100	100	9,90	M	75	75	10:01
10:05	100	100	M				
10:02	50	-	M				
10:04	25	-	9,90				

- Current midpoint price: 10,00 EUR

- Potential triggers:
  - Incoming Midpoint Sell Order (Market) with quantity 25, executed together with resting 10:01 sell order against 10:05 buy order
  - Change from midpoint price to 9,90 EUR leads to execution of 10:02 and 10:04 buy orders against 10:01 sell order

Dark Trading and Latency costs
DAX40 instruments at London MTFs
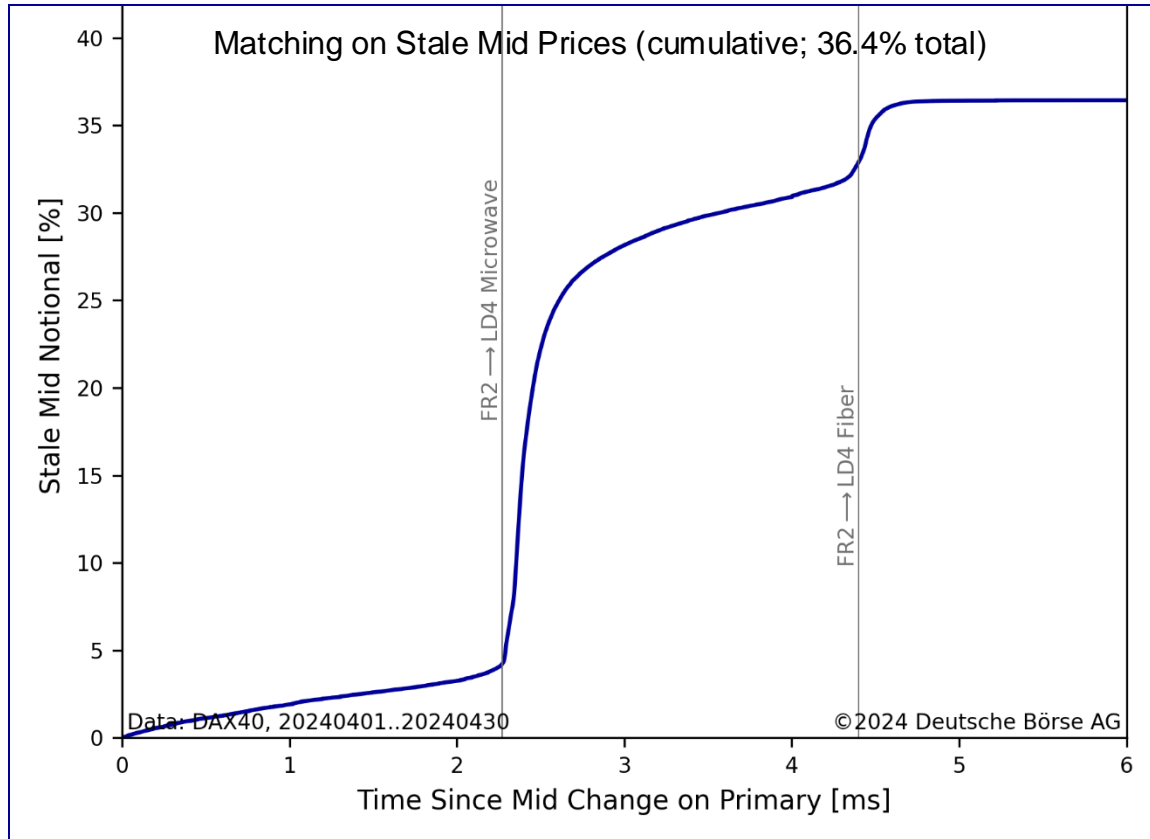
Data source: Refinitv

- Chart shows cumulative notional value of DAX40 trades on dark venue (hosted on London data center) away from Xetra Midpoint vs. latency since Midpoint on Xetra changed

- In total, ca. 30% of notional is latency-arbitrated

- Stale prices are on average 2.6 bps from Xetra Midpoint

Xetra Midpoint will have no latency

Participants will NOT be exposed

to any latency costs!

Instrument Reference Data

	Deutsche Börse Group
T7 Release 13.0	
Market & Reference Data Interfaces Manual	Version 1

Tag	Field Name	Req'd	Data Type	Description
28913	MidpointTrading	N	Midpoint-Trading (enum)	Indicates whether the instrument is enabled for Midpoint trading. **Value / Description:** 0 — Disabled 1 — Enabled
28914	MidpointExecVenueID	N	string	Market Identifier Code (ISO 10383) used for reporting midpoint trades to the supervisory authority.

→ See "Instrument Snapshot Message", T7 Market and Reference Data Interfaces Manual Release 13.0

→ Respectively for other reference data sources, i.e. FIX, Static Instrument Files

- Midpoint trading indicator (enabled / disabled) is the result of
  - Instrument type check (equities, ETFs and depository receipts only)
  - Most relevant market check (Xetra only)
  - DVC suspension status check (only instruments that are currently not suspended on Xetra or EU-wide)

- New Midpoint reporting / segment MICs:
  - XEMA = (Xetra Midpoint) Regulated Market
  - XEMB = (Xetra Midpoint) Open Market
  - XEMI = (Xetra Midpoint) Scale

Order Entry and Modification

Tag	Field Name	Req'd	Len	Ofs	Data Type	Description
110	MinQty	N	8	64	Qty	Minimal Quantity that has to be executed in MidPoint matching.
30388	MidPointType	N	1	172	unsigned int	Midpoint order type. <table><tr><td>Value</td><td>Description</td></tr><tr><td>1</td><td>Midpoint order</td></tr><tr><td>2</td><td>Midpoint sweep order</td></tr></table>

→ See "New Order (single)" message, T7 Enhanced Trading Interface Cash Message Reference, Release 13.0

→ Respectively for order modifications, order deletion reports, order information messages, also in FIX, GUI

- 2 new fields for order entry and modification, re-use of existing order entry and order maintenance messages

- Modifications of MinQty lead to new time stamp (midpoint orders only)

- Modification of MidPointType not possible

- Xetra Retail trading capacities (RMO and RLP) not available for midpoint orders and midpoint sweep orders

Immediate Execution / New Order Response

Tag	Field Name	Req'd	Len	Ofs	Data Type	Description
378	ExecRestatement-Reason	Y	2	168	unsigned int	Code to further qualify the field Exec-Type (150) of the Execution Report (8) message.

Message Body (1x) — ExecRestatementReason (378):

Value	Description
101	Order add accepted
102	Order modify accepted
105	IOC Order accepted
107	FOK Order accepted
181	Ownership Changed
114	Order has been changed to IOC
205	Midpoint Sweep order changed to regular order

Tag	Field Name	Req'd	Len	Ofs	Data Type	Description
574	MatchType	Y	1	173	unsigned int	The point in the matching process at which this trade was matched.

MatchType (574):

Value	Description
4	Auto-match incoming order
5	Cross Auction
7	Call Auction
11	Auto match resting order
14	Continuous Aution
12	Auto match at midpoint

FillsGrp (n):

Tag	Field Name	Req'd	Len	Ofs	Data Type	Description
1443	>FillLiquidityInd	N	1	208	unsigned int	Indicates whether the order added or removed liquidity. Required only for execution reports generated for fills.

FillLiquidityInd (1443):

Value	Description
2	Removed Liquidity
101	Removed Liquidity Midpoint
5	Triggered Stop Order

→ See "Immediate Execution Response" and "New Order Response", T7 Enhanced Trading Interface Cash Message Reference, Release 13.0

→ ExecRestatement Reason contained in both messages
  - ExecRestatement Reason "205" only relevant for Sweep Orders (if order is entered in CLOB)

→ MatchType and FillLiquidityInd only for execution messages
  - MatchType "12" (auto match at midpoint) only if all fills generated by incoming order are in midpoint book, otherwise (if in both, midpoint book and CLOB) MatchType is "4" (auto-match incoming order)

→ FillsGroup part includes FillLiquidityInd field, multiple instances reported per each filled resting order
  - "101" for immediate execution in midpoint book
  - "2" for immediate execution in CLOB (Sweep Orders only)

→ In case of Sweep Orders, Execution Response or New Order Response is sent only once after full processing of order across both midpoint book and CLOB

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Book Order Execution

Tag	Field Name	Req'd	Len	Ofs	Data Type	Description
574	MatchType	Y	1	173	unsigned int	The point in the matching process at which this trade was matched.

Value	Description
4	Auto-match incoming order
5	Cross Auction
7	Call Auction
11	Auto match resting order
14	Continuous Aution
12	Auto match at midpoint

FillGrp (n)

Tag	Field Name	Req'd	Len	Ofs	Data Type	Description
1443	>FillLiquidityInd	N	1	200	unsigned int	Indicates whether the order added or removed liquidity. Required only for execution reports generated for fills.

Value	Description
1	Added Liquidity
100	Added Liquidity Midpoint
4	Auction
5	Triggered Stop Order
6	Triggered OCO Order
7	Triggered Market Order

→ See "Book Order Execution", T7 Enhanced Trading Interface Cash Message Reference, Release 13.0

→ Only relevant for Midpoint Orders resting in Midpoint book (sweep orders transferred to CLOB are treated like "normal" orders (i.e. without any Midpoint Type)

→ MatchType "12" in general Message Body

→ FillsGroup part includes FillLiquidityInd field
  → "100" for passive execution resting midpoint order in midpoint book

Trade Notification

Tag	Field Name	Req'd	Len	Ofs	Data Type	Description
574	MatchType	N	1	256	unsigned int	The point in the matching process at which this trade was matched. The value 3 (reporting from recognized markets) represents trades entered by Market Supervision

Value	Description
3	Confirmed Trade Report (reporting from recognized markets)
4	Auto-match incoming order
5	Cross Auction
7	Call Auction
11	Auto match resting order
12	Auto match at midpoint
14	Continuous Aution
15	Retail

Tag	Field Name	Req'd	Len	Ofs	Data Type	Description
20473	RootParty-IDExecutionVenue	N	4	497	Fixed String	Market Segment Identification Code Valid characters: \x20, \x22-\x7B, \x7D, \x7E

→ See "Trade Notification", T7 Enhanced Trading Interface Cash Message Reference, Release 13.0

→ MatchType "12"

→ RootPartyIDExecutionVenue contains relevant Xetra Midpoint Segment MIC

- XEMA – Regulated Market
- XEMB – Open Market
- XEMI - Scale

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Market Data

Tag	Field Name	Req'd	Data Type	Description
277	> TradeCondition	N	Trade-Condition (set)	**AW = Last Auction Price** cannot be combined with any other value and has its own entry in order to convey the auction type through *TrdType (828)*.

XR = Retail price is used to report prices resulting from Retail orders (applicable for cash market products only).

BB = Midpoint Price is used to report prices resulting from midpoint orders (applicable for cash market products only).

Value	Description
U	Exchange Last
R	Opening Price
AX	High Price
AY	Low Price
AJ	Official Closing Price
AW	Last Auction Price
BD	Previous Closing Price
XR	Retail
BB	Midpoint Price

→ See "Depth Snapshot Message" and "Depth Incremental Message" in EMDI / MDI, T7 Market and Reference Data Interfaces Manual, Release 13.0

→ Trade Condition "BB" for Midpoint trades (also for EOBI messages "trade report", "trade reversal" and "instrument snapshot")

▪ Following Midpoint information will be available in T7 GUI Market view:
→ LstMidpointPrc (like LstPrc)
→ LstMidpointQty (like LstQty)
→ LstMidpointTime (like LstTime)

Order Book

**No pre-trade transparency.
It's a Dark Pool.**

3 ISV & Software Registration Process via Member Section

Envisaged Solution

1 ISV Registration App

30 Sep – 20 Dec 24

Registered ISVs & TP register their software:

- Software name
- Cloud / Hosted / On-Prem
- Software type
- Supported Markets, etc

3 Software Selection App

Trading Member only
14 Feb – 13 Jun 25

A drop-down menu will be made available where TPs must select software usage when ordering FIX LF/ETI sessions
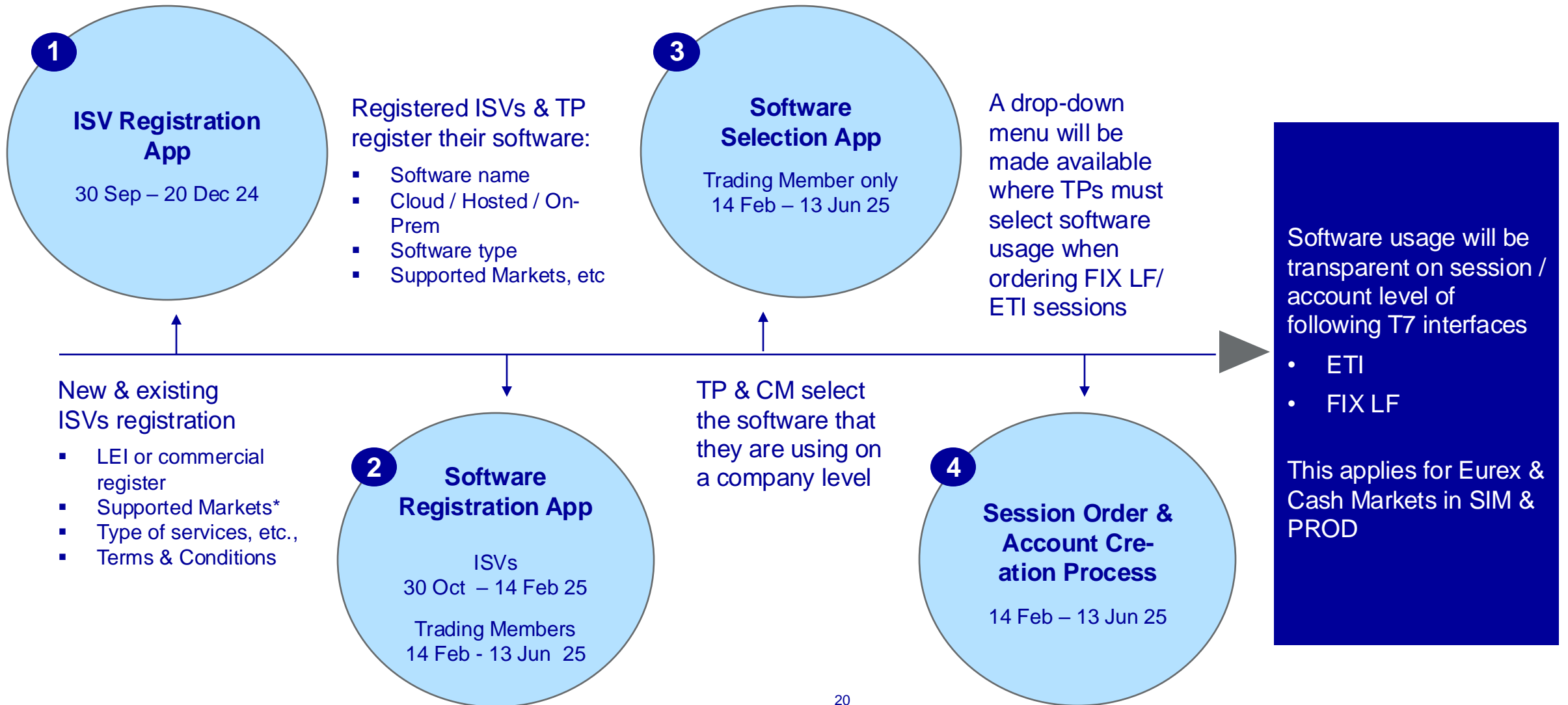
New & existing ISVs registration

- LEI or commercial register
- Supported Markets*
- Type of services, etc.,
- Terms & Conditions

2 Software Registration App

ISVs
30 Oct – 14 Feb 25

Trading Members
14 Feb - 13 Jun 25

TP & CM select the software that they are using on a company level

4 Session Order & Account Creation Process

14 Feb – 13 Jun 25

Software usage will be transparent on session / account level of following T7 interfaces

- ETI
- FIX LF

This applies for Eurex & Cash Markets in SIM & PROD

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*Supported markets for ISV Registration and Software Registration apps are ECAG, EFAG, EXR, Cash Market, and EEX/ECC

4 Enhancements of Short Code & Algo ID Solution

Short Code and Algo ID solution 2.0

Upload functionality

- The file format (fields) of the SC & Algo ID upload files will change.

- The file name will no longer include the trading day but the calendar day of the upload day (incl. weekends).

- eForm enhancements with new values; TR report download option; TR160/162 report display & error correction functionality.

Data processing

- The preliminary file content validations will no longer lead to rejections of the upload file on CUE level.

- The data submitted will be processed in sequence, first records received will be processed first and subsequent records will be processed using the regular logic.

- The FIFO logic allows for intraday processing of data and the provision of intraday reports.

- The new correction functionality is the basis to close gaps in the reporting where SCs were not registered until T+1 EOB.

Short Code and Algo ID solution 2.0

Data feedback

- Intraday TR reports will be provided, in addition to the EoB reports.

- New TR169 report will be introduced.

- The structure of current TR reports will change to reflect the intraday data processing.

Historical data clean-up

- The new correction functionality will be used to enable a historical correction wave to close reporting gaps that occured in the past.

- The historical correction exercise will start in February 2025 and must be completed until February 2026.

- Reporting data starting from February 2020 will be analyzed and gaps must be closed using the new correction functionality.

- New TR170 and TR171 reports will provide each exchange participant with the data sets that need to be corrected during the historical correction phase.

5 Further Changes & Enhancements

Further Changes & Enhancements

Usage of TLS 1.3 for ETI LF and FIX LF

- Due to improved security features, an upgrade to Transport Layer Security (TLS) version 1.3 is highly recommended for all participants' ETI LF and FIX LF gateway connections.

- At a later point in time after T7 Release 13.0 introduction, TLS version 1.2 will no longer be supported, and version 1.3 will become mandatory.
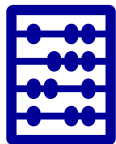
SenderCompID in EMDI packetHeader will be extended

- The size of the SenderCompID in the EMDI packetHeader will be increased from one to two bytes to extend the supported number range.

RDF files available on the Common Report Engine (CRE) on Saturdays

- RDF files for Monday (respectively the next business day after the weekend) will be created and made available on the Common Report Engine on Saturday, in addition to the creation of the file on Sunday evening/Monday morning.

Improved statistics for XML report PM700 Xetra Retail Liquidity Provider

- Statistics in XML report PM700 Xetra Retail Liquidity Provider will be improved. New numbers will be introduced, e.g. about the relative strength of a Retail Liquidity Provider (RLP), the Retail Liquidity Provider's ranking among all Retail Liquidity Providers, or the median Retail Market Organization (RMO) order size.

Questions & Answers

If you have questions or comments, please send an e-mail to
client.services@deutsche-boerse.com

Thank you!

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GROUP

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