



Open Day 2017

T7[®] Release 6.0 – main functional and technical features

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scope at a glance

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T7 Realease[®] 6.0 – scope at a glance

Regulatory,
functional and
technical
enhancements

1

Regulatory changes of the revised Markets in Financial Instruments Directive (MiFID II) and the associated Markets in Financial Instruments Regulation (MiFIR)

Cash markets:
XETR, XDUB, XVIE.
Derivatives markets:
XEUR, XEEE.

2

T7 enhancements for the derivatives markets

- A selective Request for Quote platform (RFQ)
- T7 entry service enhancements for complex instruments

Derivatives markets:
XEUR

3

T7 enhancements for the cash markets

- Xetra BEST
- Volume discovery order
- Designated Sponsor quote request

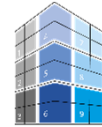
Cash markets:
XETR, XDUB, XVIE

4

Technical enhancements

- Replacement of the high frequency gateways with partition specific gateways (XEUR and XETR only)
- Adaptation of the member interfaces for the new functionality
- Separation of the member report manual for trading only reports for all markets.

Cash markets:
XETR, XDUB, XVIE
Derivatives markets:
XEUR, XEEE



MiFIDII / MiFIR implementation in T7^{®1)} (1/5)

Pre-trade controls and tick size regime

Pre-trade controls

Price collar check

- Prevents orders with a too large price difference to a reference price from entering the order book
- Covered by the existing T7 price reasonability check and extended price-range check

Maximum order quantity validation

- Prevents orders with a too large order size from entering the order book
- Covered by the existing user transaction size limit functionality for derivatives.
- **New for cash markets:** the new iceberg and volume discovery orders will be validated with the full order quantity.

Maximum order value validation

- Prevents orders with too large order values from entering the order book; **existing for cash, new for derivatives.**

Both for cash and derivative markets

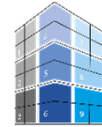
Tick size regime

Every year, at the end of March / beginning of April (starting 2019), ESMA will publish new liquidity bands which will be implemented by Deutsche Börse.

- In case of a tick size amendment for an instrument, the orders of the respective instrument are deleted. A new technical deletion reason will be introduced in T7.
- For shares, depository receipts and ETFs
- Upload of the liquidity bands in T7 is planned for 29.Dec.2017.

For cash markets only

1) Not included are features already provided by T7, like timestamps of the T7 system already provided in UTC (Coordinated Universal Time) or T7 cloud simulation to fulfil the regulatory requirement for certification and testing.



MiFIDII / MiFIR implementation in T7[®] (2/5)

Pre- and post-trade transparency

Pre-trade transparency

Eurex and Xetra to publish information about order book during continuous trading, unless certain waivers are granted

T7 to enhance [order book information](#)

- **New for derivatives:** The market depth will be enhanced to at least five for all products and will be provided via netted and unnetted market data.
- For cash market, the change has already become effective since T7 5.0.

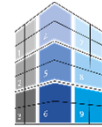
Both for cash and derivative markets

Post-trade transparency

New field “[Algorithmic trade indicator](#)”.

- **New for cash markets:** T7 will flag in market data the trades in equities, ETFs, ETCs and ETNs as algorithmic in the new field “Algorithmic trade indicator”, if at least one order or quote with an algorithmic identifier flag participates in the execution event.
- Not for derivatives.

For cash markets only



MiFIDII / MiFIR implementation in T7[®] (3/5)

Audit trail reporting

New parameters will be introduced and need to be filled by the trading participants on order and quote entry and modification in the T7 trading interfaces (ETI, FIX, GUI).

Client identification code

- ClientID, short (8-bytes) numeric code
- Mandatory for order entry and modification requests sent from an agent account
- May remain empty for orders sent with trading capacity proprietary (P) or market making (M).

Investment decision within firm – two new optional fields:

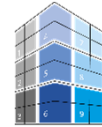
- Investment decision maker
 - Short (8-byte) numeric code
 - Mapped (by an internal Deutsche Börse AG interface) to the long alphanumeric value for investment decision within firm.
 - Filled with the algorithmic identifier or the short code for the person responsible for the order
- Investment decision qualifier
 - 1-byte
 - Business logic of the investment decision, by algorithm or human.

Execution within firm – two new parameters:

- Executing trader
 - Short (8-byte) numeric code
 - Mapped (by an internal Deutsche Börse AG interface) to the long alphanumeric value for the regulatory reporting
 - Filled with the algorithmic identifier or the short code for the person responsible for the order
- Executing trader qualifier
 - 1-byte
 - Business logic of the investment decision: algorithm, in case investment decision maker is represented by an algorithmic identifier or human.

On-book: both for cash and derivative markets.

Off-book: Eurex only; not for the cash markets, not for EEX.



MiFIDII / MiFIR implementation in T7[®] (4/5)

Market making handling

The Exchange will provide a **liquidity provider framework**, describing the obligations of liquidity providers and the corresponding incentives.

A new **liquidity provision indicator** will allow flagging of orders and quotes used in a liquidity provision activity.

The applicability of the market making regulations for an instrument will be indicated by a new instrument parameter **Market Making Obligation** flag.

New regulatory relevant states of market conditions for market making: **normal market conditions**, **stressed market conditions** and **exceptional circumstances**.

--> no market making obligations during exceptional circumstances.

On-book: both for cash and derivative markets.

Off-book: Eurex only; not for the cash markets, not for EEX.

Stressed Market Conditions

- Significant short-term changes in price and volume.
- On **product level (for derivatives)** and **instrument level (for cash) level**.
- Communicated via T7 market data interfaces.

Exceptional circumstances

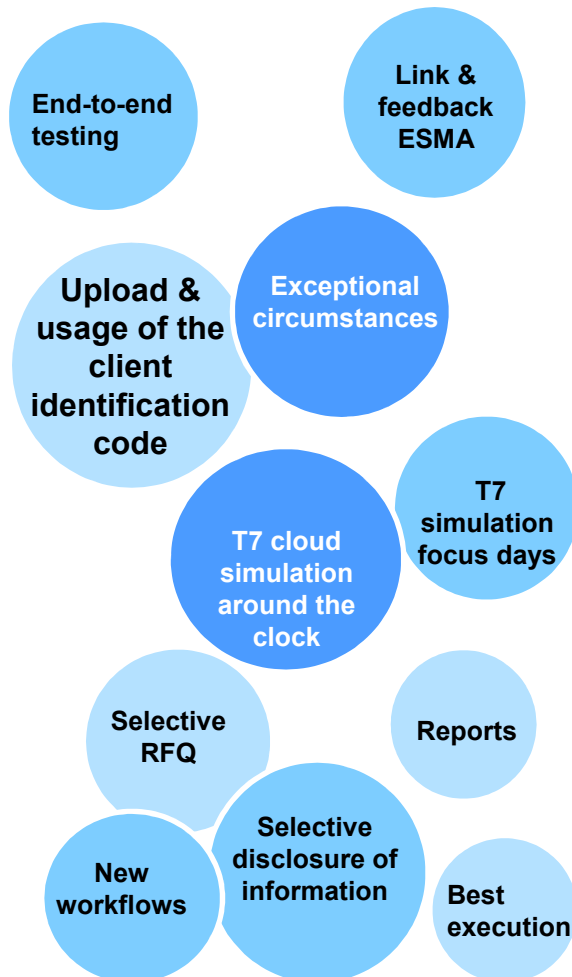
- Extreme volatility, war, industrial action, cyber sabotage.
- Declared by the Management Board with simultaneous effect for the whole market.
- For a period of one hour. Extended until the end of the business day if the criteria are repeatedly breached.
- End as soon as the triggering conditions are no longer met. End automatically at the end of the business day.
- Published via news messages (Xetra and Eurex websites, T7 GUI and ETI); not via T7 market data interfaces.

MiFID II implementation in T7® (5/5)

Member simulation,
25 September

T7 6.0 launch, 4 December

MiFID II launch, 3 January



Derivatives markets

- Existing orders will **not** be deleted.
- The MiFID II attributes will be converted at release introduction, e.g.:
 - Client ID is set to “Null”, i.e. not filled
 - Liquidity provision indicator is set to “No liquidity provision”
 - Investment ID and qualifier are set to “Null”
 - Execution ID and qualifier are set to “Null”
 - Order event (code) is set to “Null”
- Trading participants shall maintain the new attributes with the first order modification and previous to 3 Jan 2018, according to their requirements.

Cash markets

- On 29 Dec 2017
 - Existing orders will be deleted at the end of the day.
 - Liquidity bands will be uploaded in T7.



Main functional enhancements for Eurex

Selective Request for Quote platform

Negotiation platform for off-book transactions, based on the necessary data to prove Best Execution, while also streamlining the current voice-driven market

- Fixed income options in a first step
- New T7 ETI requests:
 - Open Negotiation Request;
 - Update Negotiation Request;
 - Enter Quote Request;
 - Hit Quote Request;
 - Update Deal Request
- Eurex Trader GUI: streamline the process of entering TES trade for both requestor / broker and respondent / market maker

TES enhancements

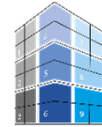
It will be possible to enter leg trade prices for TES trades in complex instruments.

- ETI requests and broadcasts are enhanced with an instrument leg price group containing the pair of leg instrument identifier “LegSecurityID” and “LegPrice”: enter / modify TES trade; TES broadcast; approve TES trade broadcast; TES trade upload broadcast.
- T7 Trader GUI: TES block trade entry.

Delta validation for option volatility strategies

A stricter validation for the delta neutrality of options volatility strategies in on-book trading

- On-book trading of an options volatility strategy only when the delta of the underlying leg compensates the delta of options legs in the concerned strategy within a predefined range at the time of the creation of the strategy
- Creation of options volatility strategy for TES trading remains unchanged.



T7[®] Selective Request for Quote platform



- User who sends a RFQ to the service and thereby starts the negotiation event.
- Owner of the negotiation event.

- Target user of a negotiation event.
- Owner of the quote as response to the negotiation event.

Negotiation event workflow

1. The requester sends an SRFQ request to the SRFQ server, that starts an SRFQ negotiation event.
2. The SRFQ informs all the involved parties, i.e. the requester and all targeted respondents about the start of the SRFQ negotiation event. Respondents receive details about the RFQ.
3. The respondents provide quote using SRFQ quote entry request. The requester gets all the information about each quote.
4. Based on the quotes received, the requester can decide to target a specific quote from the respondent by providing the quote price and the required quantity along with the identifier login name of the respondent. In case the SRFQ quote is of type firm, then the order results in a final SRFQ deal, otherwise it results in a pending SRFQ deal. The deal workflow is started as soon as an SRFQ deal is generated.

1) Selective Request for Quote



Main functional enhancements for the cash markets

Xetra BEST

- Guarantees an execution price better than the price within the current order book by routing customer orders from flow providers to specific other market participants acting as Best Executors.
- Eliminates the problem of partial executions as all orders are executed against the Best Executor's quote in their full size.
- T7 ETI and Xetra trader and Admin GUI.
- Resulting trades are flagged in the EOBI, EMDI and MDI messages and included in the trade volume report.

Volume discovery order

- Offers access to hidden liquidity and combines the benefits of an iceberg order with those of a midpoint order
- Besides the execution of an iceberg order in the open order book, volume discovery offers the possibility to execute it at midpoint in the dark order book.
- T7 ETI and Xetra trader and Admin GUI.
- Resulting trades are flagged in the EOBI, EMDI and MDI messages and included in the trade volume report; new match type: "VDO Midpoint".

Designated Sponsor quote request

- Request for Quote (RFQ) specifically to the Designated Sponsors of an instrument.
- Participants will have the possibility to decide who will be informed about their RFQ: all participants, or market makers and Designated Sponsors, or only the Designated Sponsors.
- RFQ request message in T7 ETI will be enhanced with the receiver scope of the RFQ.
- Published via T7 MDI.

Partition specific gateways

Setup with two PS gateways per partition requires participant applications to be able to switch from one to the other gateway (fail-over mechanism) in case of gateway failure. Join focus day in simulation!

Background information

In order to address the latency variance between the trading participants' installations and the exchange matching engine, as well as statistical advantages in the current gateways set-up, partition specific (PS) gateways will replace the existing high frequency (HF) gateways and will allow routing only to a specific partition. Sessions may log in to only one PS gateway at a time and have to specify the partition ID in their initial connection request.

Stepwise roll-out approach

HF and PS gateways will be offered in parallel during the transition period:

- Step 1 – After the launch of T7 Release 6.0 a PS gateway will be offered in parallel to existing HF gateways for a single partition. PS gateways are then introduced for other partitions.
- Step 2 – Traffic to partitions that are served by PS gateways will be blocked on HF gateways.
- Step 3 – After all partitions have undergone steps above, HF gateways will be removed.

LF gateways will stay in place and allow routing to all partitions.

Rollback approach

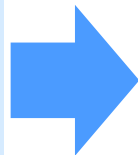
- Will only be needed if problems occur in step 2, i.e. after traffic to partitions is blocked on HF gateways.
- Intraday rollback in that case would need a “rolling restart” of all HF gateways.
- In any case, partitions may be reached via LF gateways and GUI.

10 PS gateways are planned for Eurex derivatives and 10 for Xetra. Not for EEX derivatives, Vienna Exchange and Irish Stock Exchange.

Marketplace-specific calendars

Four international marketplaces set up in T7®

- Eurex / EEX derivatives
- Xetra Frankfurt
- Vienna Exchange
- Irish Stock Exchange



Marketplace specific calendars will enable...

- high flexibility towards the system, e.g. some marketplaces on T7 may be available for trading, while at the same time other marketplaces may be closed due to a public holiday.
- minimisation of the operation efforts on customers' side.

As a consequence,...

- T7 will not distribute any data (e.g. broadcasts, reference data, reports) for these marketplaces.
- participants of exchanges that are closed on a certain day will not be affected by the fact that other exchanges are open for trading on the same day.

First 2 dates: 30 March (Good Friday) and 1 May 2018 – trading for Irish Stock Exchange has to be available and not for the rest of the marketplaces on T7.

T7® Release 6.0 is **not** backwards compatible

T7 ETI interface

will move to version “6.0”. ETI version “5.0” will no longer be supported, i.e. T7 ETI will not be backwards compatible to the ETI version for Release 5.0.

T7 FIX interface

will not be backwards compatible to the FIX interface for Release 5.0.

T7 market and reference data interfaces

will not be backwards compatible to the Release 5.0 respective interface versions.

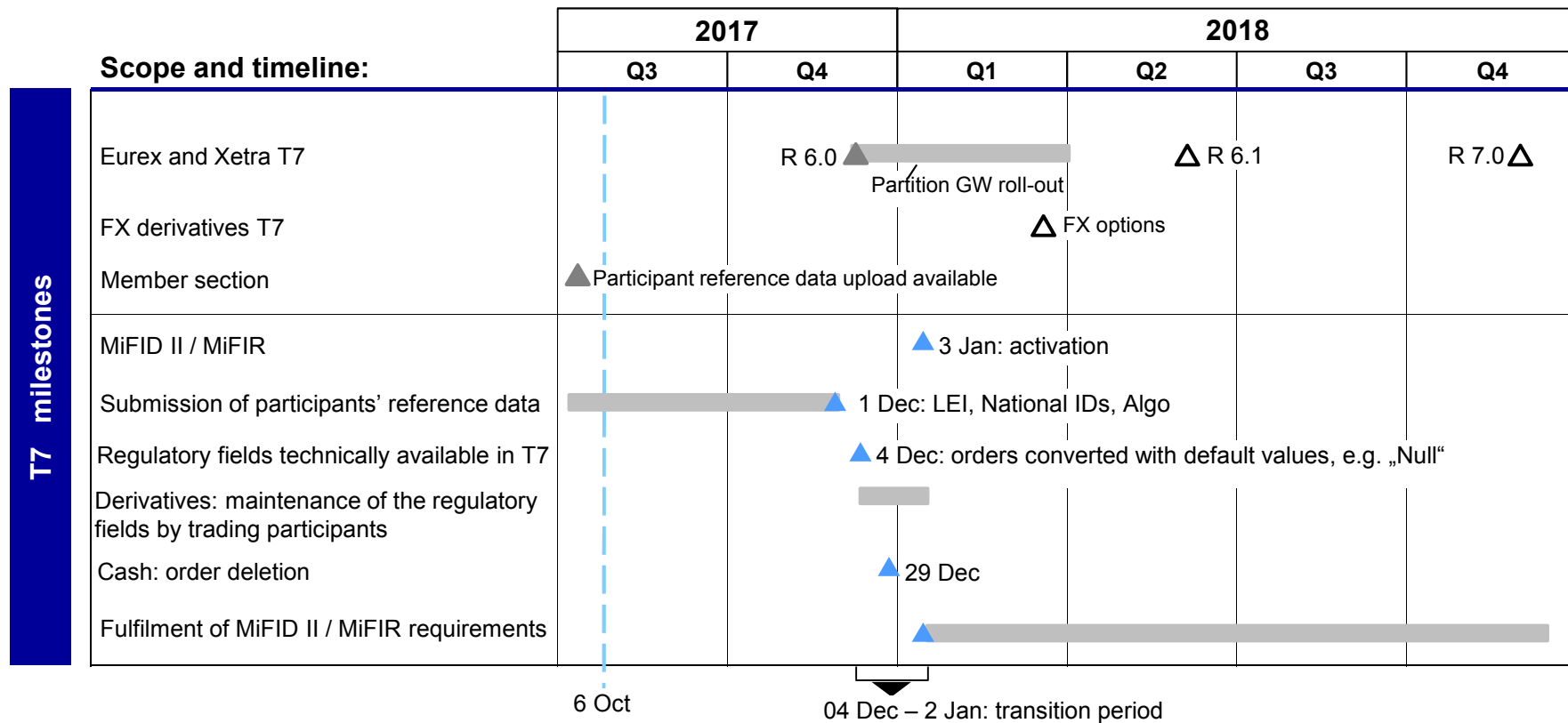
T7 reports and “T7 Trading Reports Reference Manual”

- Several new reports and updates of the existing reports.
- New structure of the T7 reports manual.

Detailed information about the changes in ETI / FIX / market and reference data interfaces / reports and enhancements in T7 Release 6.0 is provided¹⁾ as interfaces documentation on the Eurex and Xetra websites.

1) Latest updates for the simulation versions as of the communication calendar for T7 6.0.

T7[®] releases 2017-2018 and MiFID II / MiFIR activation



- T7 6.0: member simulation started on 25 September 2017. T7 cloud simulation available since 28 August 2017.
- T7 6.1: member simulation intended date for 16 April 2018. Production intended for 18 June 2018. Member communication to follow.
- November 2018 launch date (among others C7[®] R 5.0 & T7 R 7.0) working assumption: 26 November 2018

▲ - Planned release △ - Intended release ▲ - Milestone

Outlook 2018

T7[®] Release 6.0 post-production

- EEX: migration of the Powernext market to T7
- Stepwise migration from HF to the PS gateways
- Migration of the FX options from T7 to T7 / FX

T7 Release 6.1

- Eurex: enhancements of the SRFQ service.
- Preparation of multiple CCP capability for cash market.
- EEX: decaying products; migration of the American energy derivatives market Nodal to T7
- Enhancements of multi-market functionality, e.g. market place - specific rollover
- It is expected that the changes in the T7 Release 6.1 will have little impact on members though changes to the member interfaces are possible.

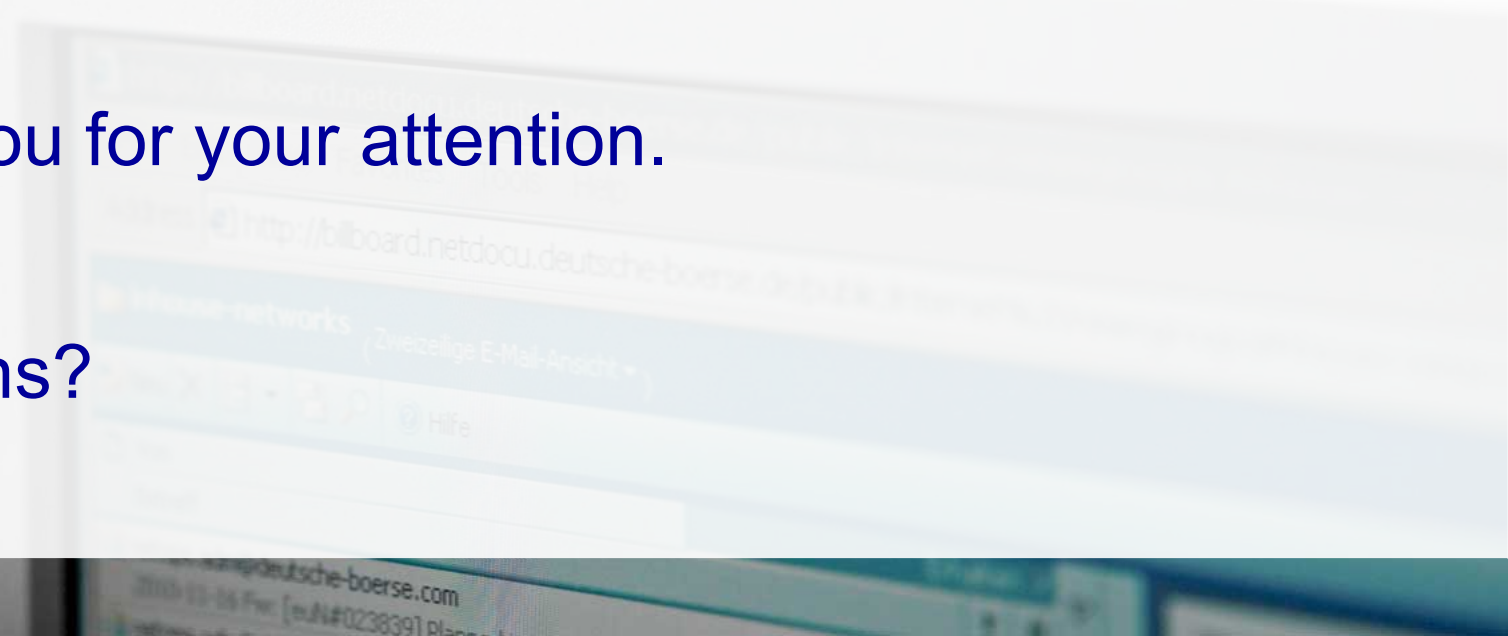
T7 Release 7.0

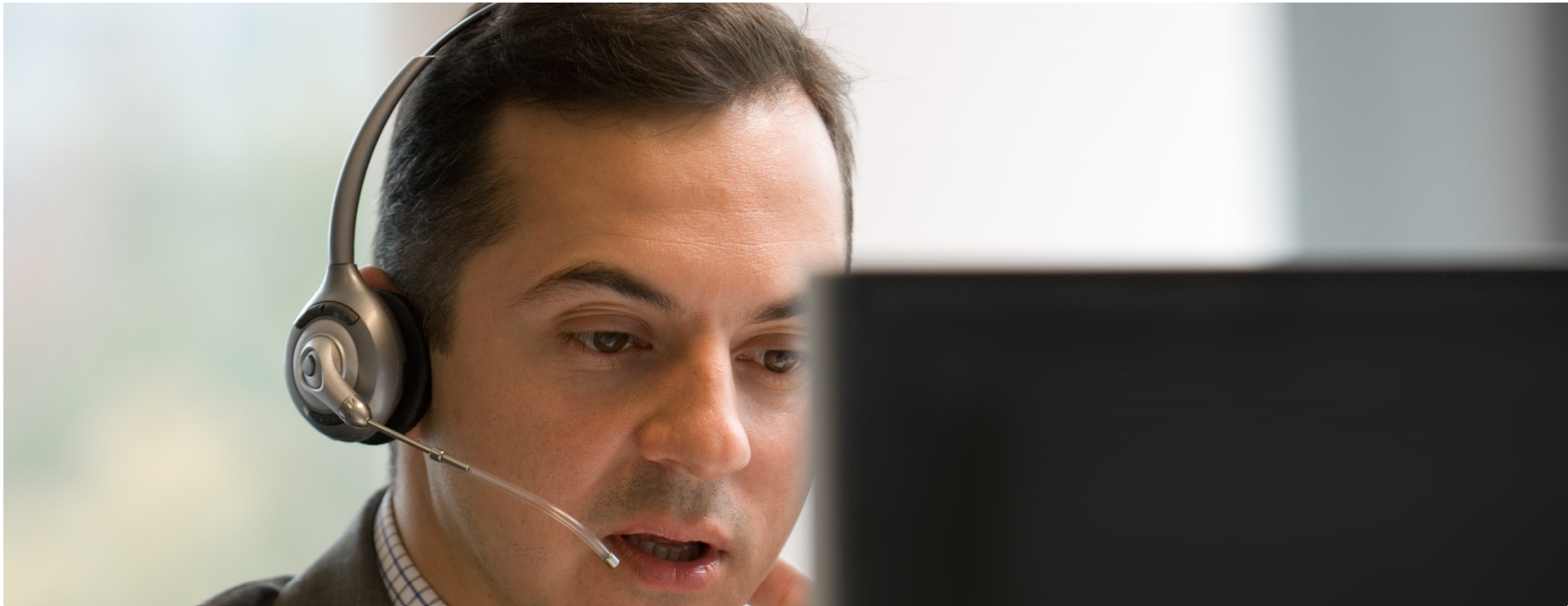
- Eurex and EEX: functional and technical enhancements of the T7 trading platform including the preparation for significantly longer trading hours for derivatives
- Xetra: preparation of cash market migration step 2 - bonds and issuer model for migration of further partner exchanges to T7, TES and selective RFQ platform for cash markets
- Migration of Börse Frankfurt and Börse Frankfurt Zertifikate to T7 is currently not foreseen with T7 7.0.



Thank you for your attention.

Questions?





For further questions, please contact your Technical Key Account Manager via your VIP number or via cts@deutsche-boerse.com

Regarding functional MiFID II questions, please contact the customer readiness team via customer.readiness@deutsche-boerse.com