



**LONDON
STOCK
EXCHANGE**

An LSEG Business

TECHNICAL USER GROUP

7 May 2025



Agenda

Introduction

London Stock Exchange – Release 1.25.0

2025 Roadmap

Turquoise - Release 1.25.0

Turquoise/Luminex (Level) Partnership and Turquoise Plato Block
Discovery™

Q&A

LONDON STOCK EXCHANGE – NEXT FUNCTIONAL RELEASE 1.25



LSE 1.25 Release - Summary

Bandwidth limit increase for GTP Market Data Group B, Market By Order (MBO)

Introduction of Max Order Value for Auctions

Segment / Sector Updates

Bandwidth Increase for GTP Market Data Group B, Market By Order (MBO)

GTP has several different service lines, and each has its own bandwidth limitation value. At present, the MBO service for GTP Market Data Group B is set to 20Mbps. The release will see this increased to 40Mbps.

Market	Market Data Group	Description	Level 2 Incremental	Level 1 - Best Bid Offer	Level 2 (MBO) Market by Order	Level 2 (MBP) Market by Price	MiFID II Post Trade	Analytics Channels
LSE	A - a	FTSE 100	no limit	20	20	20	20	20
LSE	B - b	ETF/ETN/ETCs 1	no limit	20	40	20	20	20
LSE	C - c	Other Main Mkt Equity + Misc	no limit	20	20	20	20	20
LSE	D - d	ETF/ETN/ETCs 2	no limit	20	40	40	20	20
LSE	E - e	AIM	no limit	20	20	20	20	20
LSE	F - f	European	no limit	20	20	20	20	20
LSE	G - g	International	no limit	20	20	20	20	20
LSE	H - h	Fixed Income and Securitised Derivatives	no limit	20	20	20	20	20
LSE	J - j	ETF/ETN/ETCs 3	no limit	20	20	20	20	20

LSE Auction Maximum Order Value

CURRENT STATE

Maximum order value is the same in regular trading as it is in auctions for all Time in Forces (TIFs)

Service	TIF that can be used in regular trading - max order size	TIFS only eligible for an auction - max order size
FTSE 100	£150m	£150m
Everything else	£100m	£100m

FUTURE STATE

Maximum order value will be defined per instrument in two separate ways:

- Orders with a TIF that can only participate in **auctions** (OPG, GFA, GFX, ATC, GFS) will have a higher maximum order value than regular trading
- Orders with all other TIFs for **regular trading**

The table below shows the initial values assigned which will be updated in the business parameters and kept under review.

Service	TIF that can be used in regular trading - max order size	TIFS only eligible for an auction - max order size
FTSE 100	£150m	£600m
Everything else	£100m	£400m

Segment / Sector Updates

Removal of Redundant Segments and Sectors

Segment	SET2, SSMU, HGS1, HGS2 and HGS3
Sector	FF10, SO5, SO10, SO15, SO25, SMEU, SMEV, SMEW, SMEX, AIMF, AIMM, HG10, HG15, HG25, HGMO, HGQ1, HGNQ, SOIE and SOIU

Repurposing of Sectors

Trading Service	Segment	Sector	New Sector Name	New MIC Code
SETSQx	SSQ3	SQS3	SETSQx QTD MTF	XLOM
	SSQ3	SOSQ	SETSQx QTD MTF CLEAN	XLOM
	SSX3	SQSL	SETSQx MTF	XLOM
	SSX3	SOQX	SETSQx MTF CLEAN	XLOM
	SSX4	SOSX	SETSQx MTF	XLOM
	SSX4	SXSN	SETSQx MTF CLEAN	XLOM

LSE Release 1.25 – Key Information

Key Dates

Environment	Go-Live Date
CDS	23 April 2025
Production	June 2025*

Documentation

The updated London Stock Exchange GTP technical specifications for this release can be found in the Next Functional Release section of [Group Ticker Plant Technical Specifications | London Stock Exchange](#).

The revised DRAFT Millennium Exchange and TRADEcho Business Parameters for this release are available in the [Next Functional Release section of technical library; Technical library Securities trading resources | London Stock Exchange](#).

*subject to internal testing

2025 Roadmap

LSE XLON Instrument reference data file

- New technical configuration for accessing LSE XLON Instrument file some customers
- Access to current SFTP location limited to SEDOL licence holders only
- Production of a new XLON Instrument file without SEDOL content
- Any non-SEDOL Licensed customers that require access the daily XLON will have to target a new SFTP area.

TRADEcho

- Release covering FCA PS 24/14 changes scheduled for 1 December 2025
- CDS (UAT) available by no later than September 2025
- All specifications, including FIX, still in draft mode and will be shared in the weeks ahead of the CDS release
- Changes will impact Scope, Deferrals, Flags and FIX message Fields

CDS Launch of The Private Intermittent Securities and Capital Exchange System (PISCES)

- Configuration deployed to our CDS environment this week
- New GTP Market data channel P and a new MIC of XPVT
- More PISCES information can be found here: <https://www.londonstockexchange.com/raise-finance/equity/private-markets>
- LSE Service Announcements can be found here: <https://www.londonstockexchange.com/resources/service-announcements>

TURQUOISE & TURQUOISE EUROPE

– NEXT FUNCTIONAL RELEASE 1.25



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TURQUOISE & TURQUOISE EUROPE – NEXT FUNCTIONAL RELEASE 1.25

Turquoise Plato Uncross™ Random Timer Optimization

- Turquoise Plato Block Discovery™ – Faster delivery of Order Submission Requests
- Random Timer Event – Increase in frequency

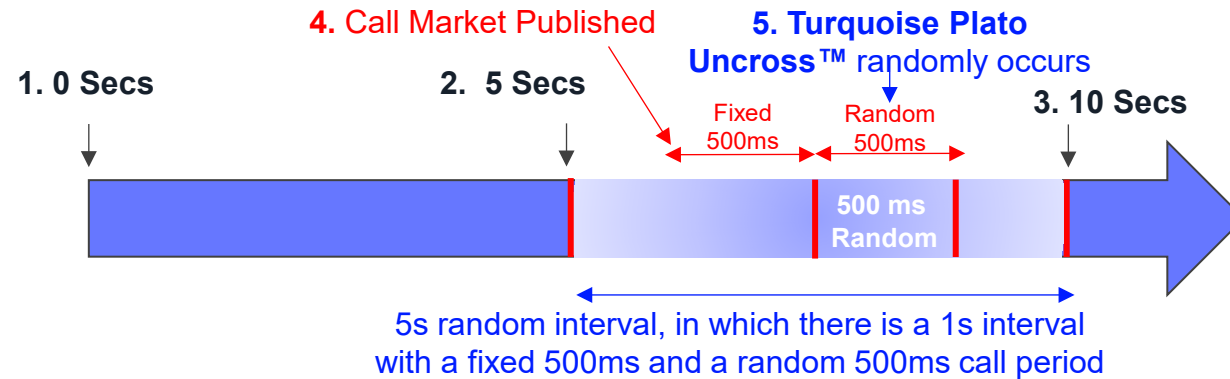
Turquoise Plato Uncross™ Random Timer event optimization

Enabling Immediate Execution in Turquoise Plato Uncross™ Random Timer Events

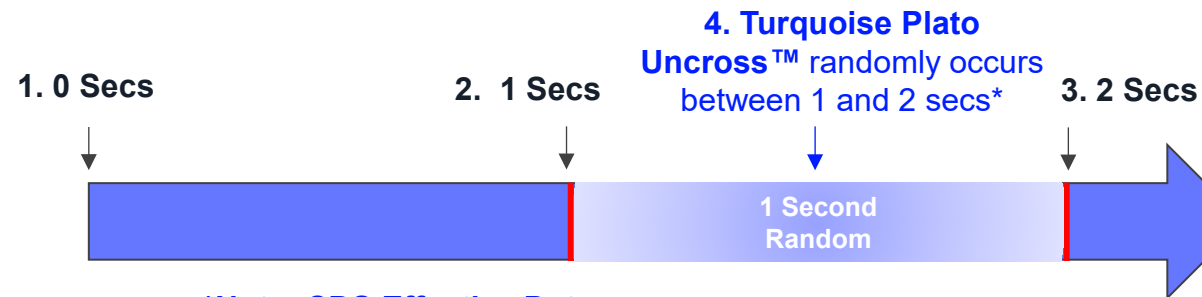
BUSINESS RATIONALE / BENEFIT

- ✓ **Faster Delivery** of Block Discovery Order Submission Requests with **no delay**
- ✓ **Increase Block Matching Opportunities** by removing the pause when Block Discovery matching stops, when scheduled timer events occur.
- ✓ **Increase the frequency of scheduled timer events** to match 'Uncross' orders more efficiently; whilst still delivering the highest quality execution (**low reversion**)

CURRENT STATE



FUTURE STATE



*Note: CDS Effective Date

The frequency of the Schedule Timing from 5 to 10 seconds to 1 to 2 seconds will be confirmed in a future Turquoise Notice.

- Call market message is published to advertise an Uncross in the 5s random period.
- Fixed 500ms Call Period + 500ms Random Period where uncross randomly occurs
- Block Discovery matching paused for up to 1 second (1,000ms) to allow Participants to respond to the Call Market and participate in the Turquoise Plato Uncross™ event, thus allowing us to honour the event, before starting another generated by a Block Discovery match.
- **Call Market will be decommissioned for Random Timer Uncross events; and will only be published when there is a Block Discovery match,**
- **Turquoise Plato Uncross™ events triggered by a Block Discovery BI/BDN match will remain the same**

Turquoise Luminex (Level) Partnership and Turquoise Plato Block Discovery™

- Client Block Indications, a new Manual Conditional Order Type for Buyside Traders
- Nominated Broker Model

Turquoise Luminex (Level) Partnership

Block Liquidity Solution



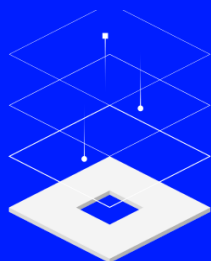
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Luminex

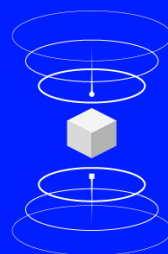
Combining the strengths of Turquoise as a longstanding pan-European MTF and Luminex as an established US ATS to deliver a new European block venue. Bringing together buy-side & sell-side liquidity to facilitate the execution of $\geq$ LIS blocks, providing the flexibility to select designated brokers based on existing relationship.



Connectivity
Sellside &
Buy-side Liquidity



Control
Nominated
Broker Model



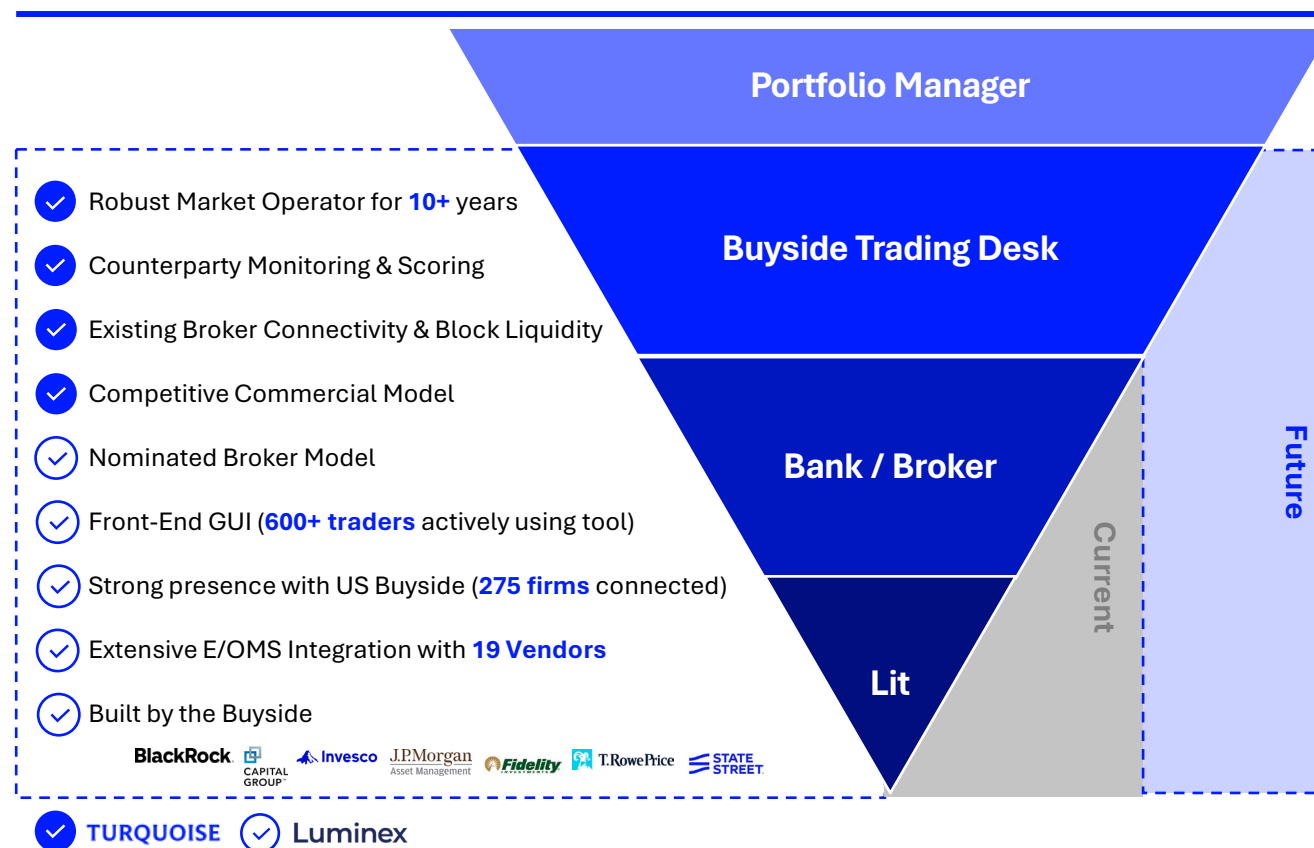
Cost
Competitive
Commercials

Luminex
Launched
2015

Level ATS
Merger
2022

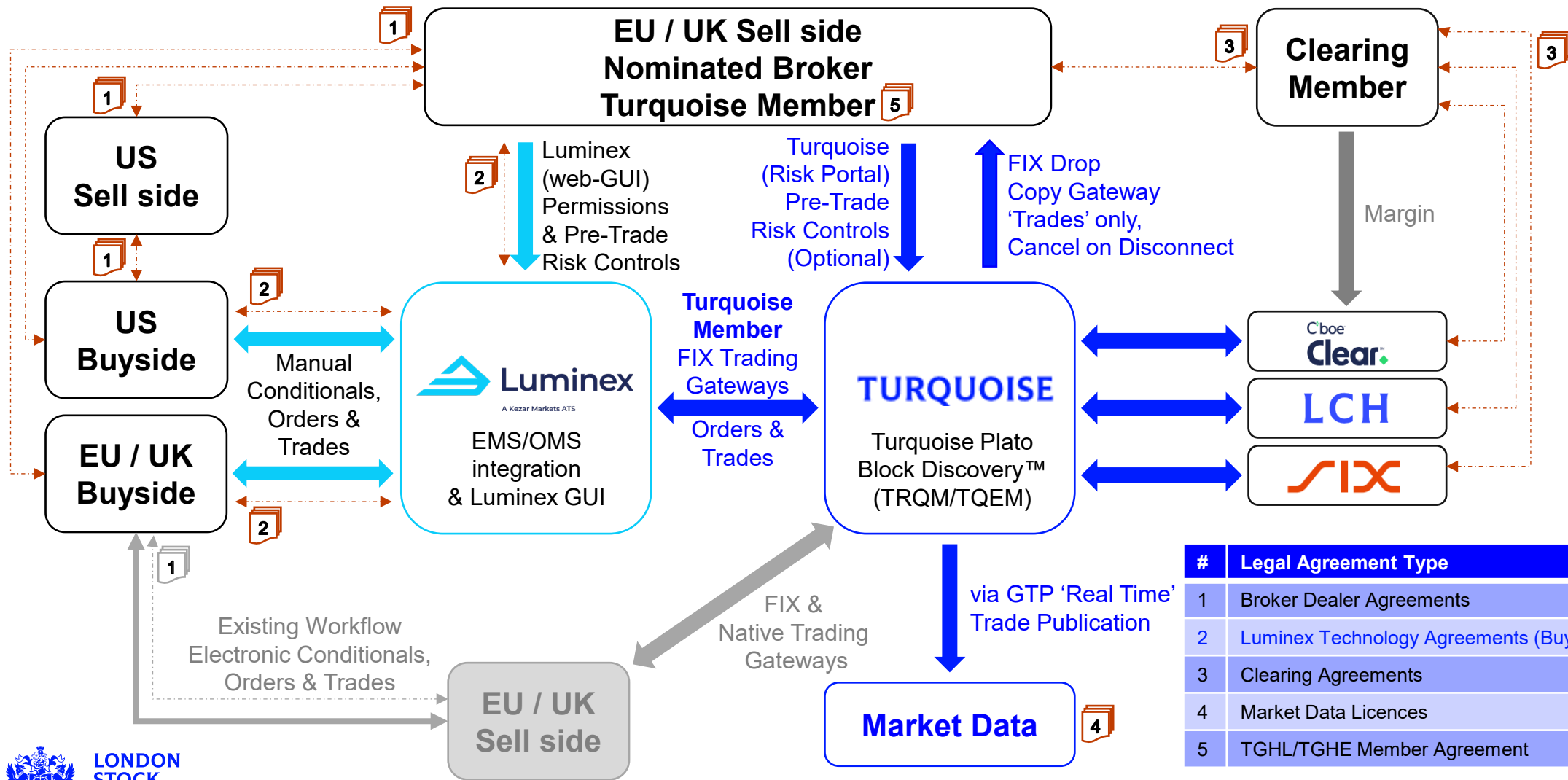
TURQUOISE
Luminex
Partnership
2025

Moving Turquoise up the Liquidity Waterfall



TURQUOISE

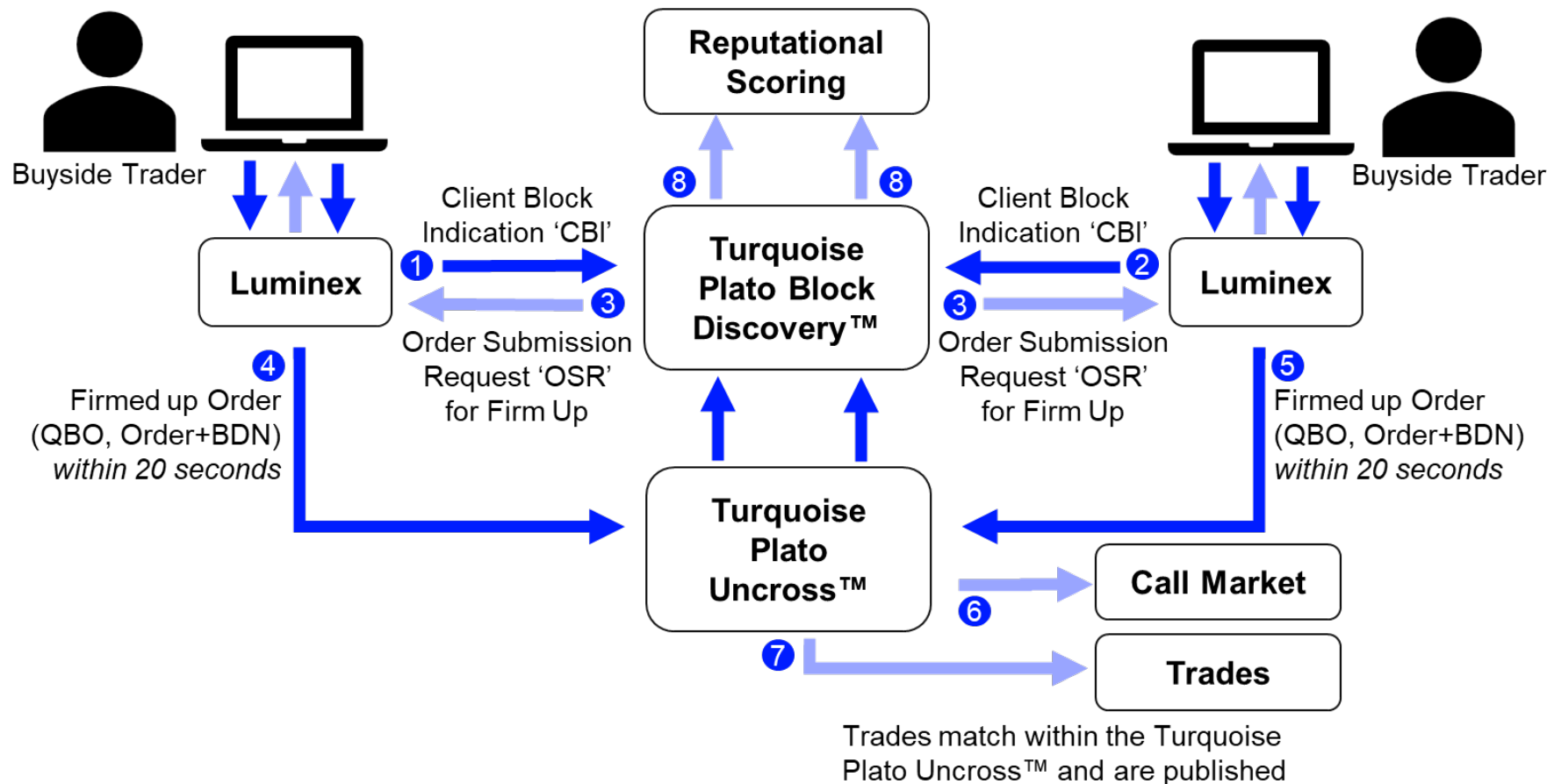
Nominated Broker Model Workflow, Including Legal Relationships



Turquoise Plato Block Discovery™ - Client Block Indications 'CBIs'

A New Manual Conditional Order Type for Buyside Traders (1)

New: CBI vs CBI Event Model



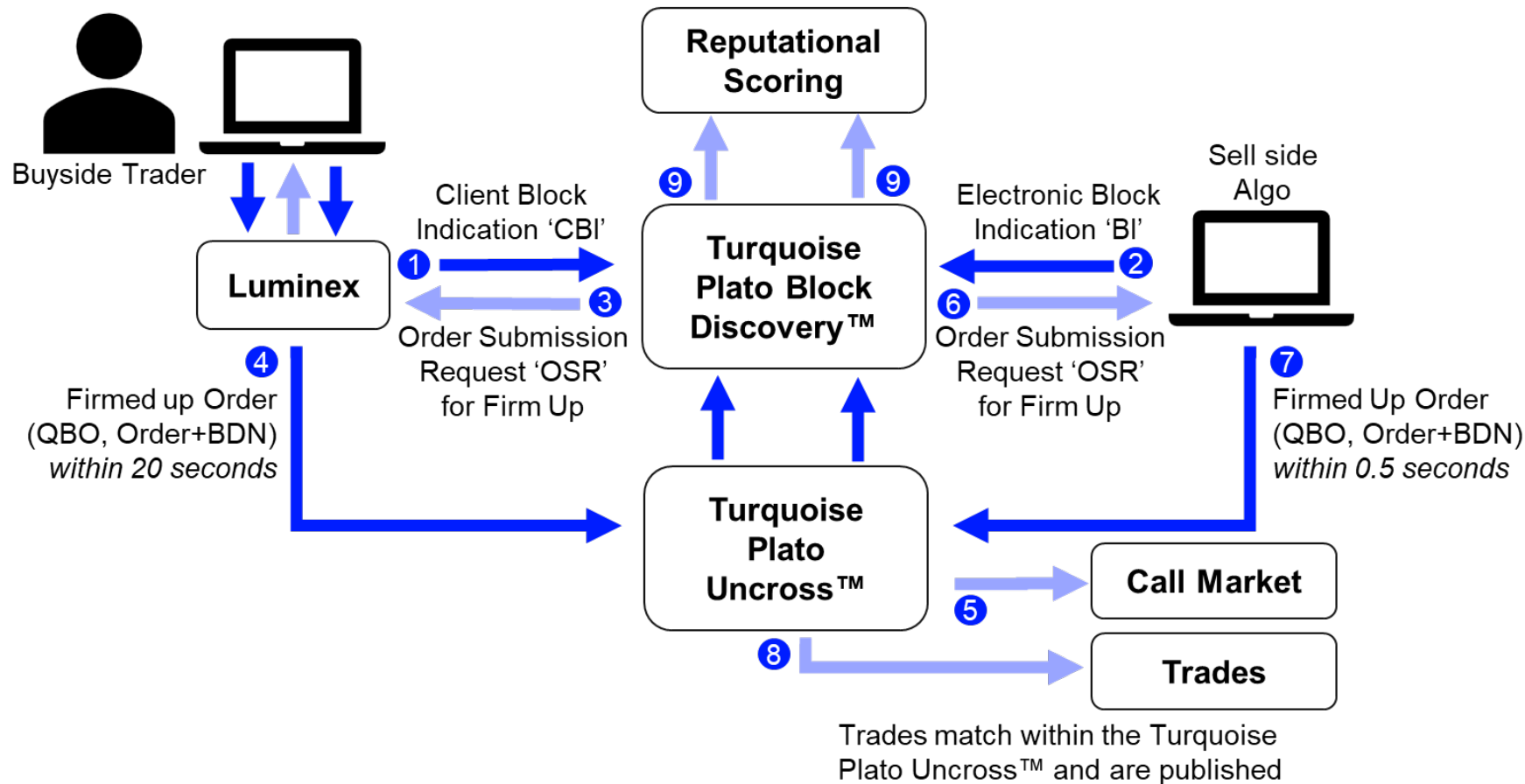
Key Features

- Block Liquidity, including Unique Liquidity (from Luminex Buyside).
- Buyside to Buyside block matching.
- CBIs must be equal to or greater than Large in Scale 'LIS'.
- Buyside Traders sent OSRs at the same time when there is a Block Discovery match.
- Buyside Traders have 20 seconds to manually firm up their Order after receiving an Order Submission Request (OSR).
- Block Discovery matches involving a CBI (vs CBI) never start a Turquoise Plato Uncross™ event.
- When both Buyside Traders firm up, Order+BDN vs Order+BDN match starts Turquoise Plato Uncross™ event.
- Buyside Trader's firm up behaviour is Reputationally Scored and monitored by Turquoise Market Supervision.

Turquoise Plato Block Discovery™ - Client Block Indications 'CBIs'

A New Manual Conditional Order Type for Buyside Traders (2)

New: CBI vs BI Event Model



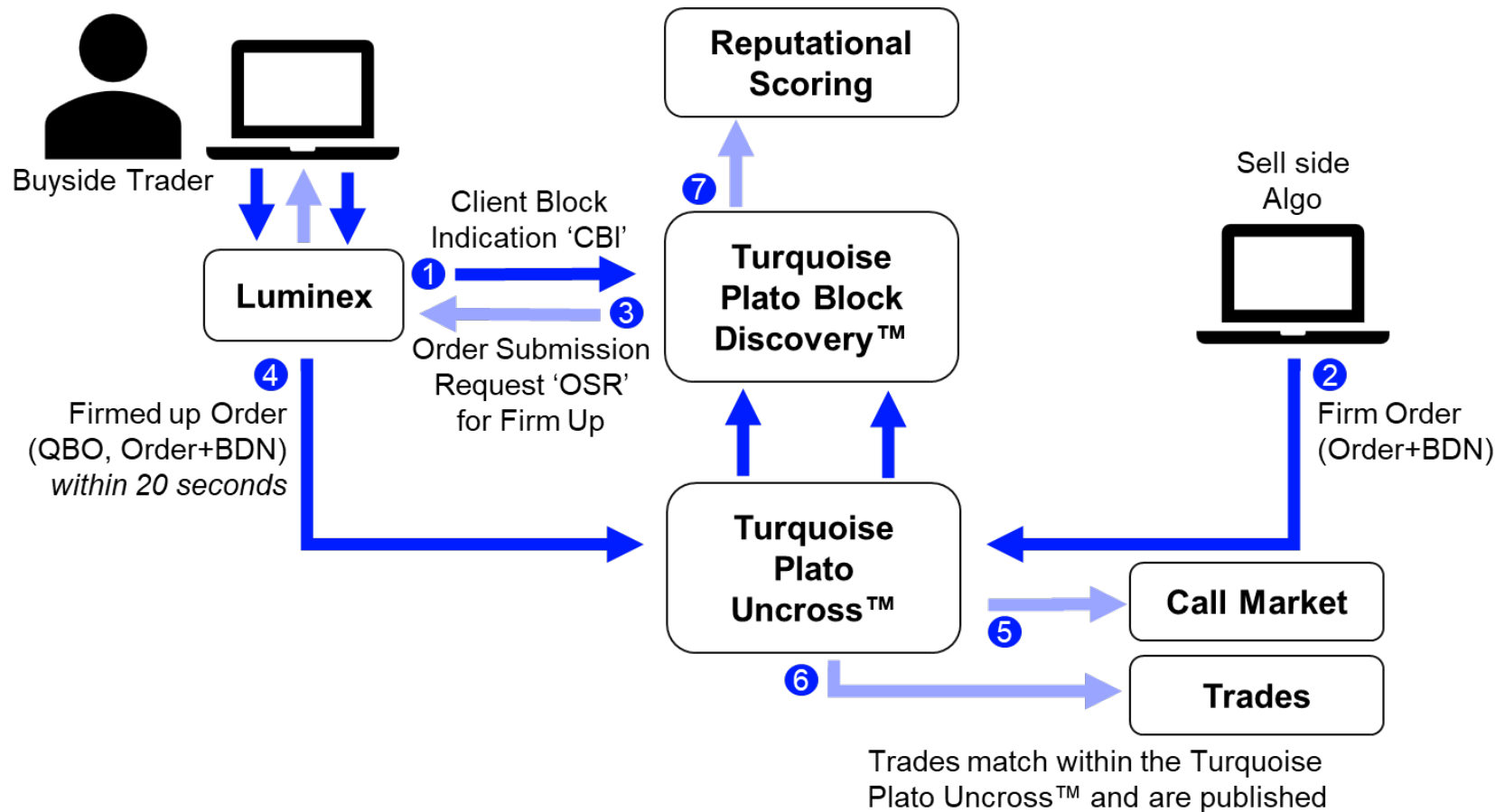
Key Features

- Buyside to Sell side block matching.
- BIs are opted in (default) to match with CBIs. BIs can opt out of matching with CBIs per User or per Order.
- BIs must be equal to or greater than Large in Scale 'LIS' to match with CBIs.
- Buyside Traders sent OSR first, following Block Discovery match, leaving BI resting and available for matching with other BIs (and eligible BDNs). BI receives OSR when CBI firms up.
- Block Discovery matches involving a CBI (vs BI) never start a Turquoise Plato Uncross™ event.
- When Buyside Trader firm up, Order+BDN vs BI match starts Turquoise Plato Uncross™ event.
- Buyside Trader's firm up behaviour is Reputationally Scored and monitored by Turquoise Market Supervision.
- No change to Reputational Scoring for BIs.

Turquoise Plato Block Discovery™ - Client Block Indications 'CBIs'

A New Manual Conditional Order Type for Buyside Traders (3)

New: CBI vs Order+BDN



Key Features

- Buyside to Sell side block matching.
- BDNs opt in to match with CBIs (and Bis).
- BDNs (leaves quantity) must be equal to or greater than Large in Scale 'LIS' to match with CBIs.
- Buyside Traders sent OSR, following Block Discovery match, leaving BDN resting and available for matching with other CBIs, BIs and BDNs.
- Block Discovery matches involving a CBI (vs BDN) never start a Turquoise Plato Uncross™ event.
- When Buyside Trader firms up, Order+BDN vs Order+BDN match starts Turquoise Plato Uncross™ event.
- Buyside Trader's firm up behaviour is Reputationally Scored and monitored by Turquoise Market Supervision.

Turquoise Plato Block Discovery™ Matching Logic

- Existing Matching Logic matches BIs/BDNs
- Matching of faster Block Indications 'BIs' and firm 'Order+BDNs' and will be prioritised over slower manual CBIs
- Extended matching phase for CBIs, with eligible BIs/Order+BDNs

Logic	Minimum Size Requirement	Matching Interactions	Matching messages
Existing	Remaining Quantity ≥ 25% LIS*	BI vs BI	
		BI vs Order+BDN Order+BDN vs Order+BDN	- BIs that match will receive Order Submissions Requests (OSRs). <i>BIs that fully or partially match will <u>not</u> expire; any remaining quantity will <u>not</u> be considered for matching with CBIs.</i>
New	Remaining Quantity ≥ LIS	CBI vs CBI	- Only CBIs that match will receive Order Submissions Requests (OSRs) immediately. <i>CBIs that fully or partially match will expire.</i>
		CBI vs BI (opted in) CBI vs Order+BDN	- CBIs matches with CBIs/BIs/BDNs do <u>not</u> start a Turquoise Plato Uncross™ event. - BIs that match will <u>not</u> get an OSR immediately; rests passively. The BI will get an OSR only when CBI firms up with QBI, Order+BDN and matches using Existing logic (above)

Turquoise Plato Uncross™ starts

- Call Market
- Order Submission Interval 500ms
- Random Uncross 500ms

*Subject to Double Volume Cap not suspending Reference Price Waiver usage (applies only to Turquoise Europe)

Turquoise Plato Block Discovery™ - Client Block Indications ‘CBIs’

Reputational Scoring / Tiering and Monitoring

Each conversion of Buyside Trader’s CBIs into firm QBOs is monitored, with Buyside Traders classified into Reputational Tiers. Buyside Trader’s Reputational Tiering is assessed weekly, based on each Buyside trader’s historic Event Reputational Scores.

Tier	Weekly average Reputational Score of Buyside Trader
1	66 and above
2	In-between 33 and 66 Default tier applied to all new Buyside Traders
3	Traders with 33 firm up rate

Note: Existing Reputational Scoring functionality for BIs remains as-is and is not changing.

A valid QBO will rest within the Turquoise Plato Uncross™ for a minimum of 22 seconds (from the OSR timestamp) and receive a score of Reputational Event Score of 100.

- Manually firmed up QBOs (linked to a CBI), will always be as marketable as the OSR sent. i.e. Same Limit Price and MES.
- Automatically firmed up QBOs (linked to a CBI), may have a tighter Limit Price (equal to or more marketable than the Turquoise Plato Block Discovery™ match price); else the Buyside Trader is instead invited to manually firm up.

A Buyside Trader’s failure to send a valid QBO in response to an OSR results in a zero (0) Reputational Event Score. This can happen for 2 reasons:

- Buyside Trader “Declines” trading opportunity. Order goes to the Turquoise Luminex holding tank (default); or is held for a defined period (e.g. 5 minutes, default/customisable) before being resubmitted as a CBI.
- Trader Times Out (after 20 seconds). After a timed pause (e.g. 10 seconds, default/customisable), the Order is resubmitted as a CBI. After 3 timeouts (default/customisable), the Order will be placed in the Turquoise Luminex holding tank or is held for a defined period (e.g. 5 minutes, default/customisable) before being resubmitted as a CBI.

Turquoise Plato Block Discovery™ - Client Block Indications 'CBIs'

Optionality for Block Indications 'BIs' to match with CBI Block Liquidity

BUSINESS RATIONALE / BENEFIT

- ✓ **Flexibility for existing BI users** to interact with new block liquidity from CBIs; or opt out from matching with CBIs
- ✓ Opt out flexibility available for FIX and Native Trading Users at:
 - ✓ User level
 - ✓ Order message

FUTURE STATE

With the introduction of CBIs in Turquoise Plato Block Discovery™, BIs will have the opportunity to match with CBIs.

By default, BIs will be opted in to match with CBIs.

BI Matching with CBI	Default	To Opt out
User level	BI opted in to matching with CBI	Contact your Technical Account Manager or Technical Account Management Team
Order message	BI opted in to matching with CBI	See table below

FIX Tag 27010 PassiveOnlyOrder	Value	Meaning
	0 (default)	If user parameter is set up to match with CBIs, then the BI will be allowed to match with CBIs.
	50	BI opt-out of matching with CBI.

Turquoise Luminex (Level) Partnership

- Nominated Broker Model
 - Luminex Pre-Trade Risk Controls
 - FIX Drop Copy Gateway “Trades Only”, including Cancel on Disconnect

Turquoise Luminex – Nominated Broker Model

Luminex Pre-Trade Risk Controls / Turquoise Drop Copy Gateway

Luminex Pre-Trade Risk Controls per Buyside Firm (via Luminex web GUI) (set up by Nominated Brokers)	Definitions
Buy Notional*	Total Notional allowed for Buy “Orders/Trades” (excludes Conditionals) for today
Sell Notional*	Total Notional allowed for Sell “Orders/Trades” (excludes Conditionals) for today
Gross Notional*	Total Notional allowed for Buys and Sells “Orders/Trades” (excludes Conditionals) combined today
Order Notional*	Maximum Notional allowed on any single “Firmed Up Order”
Max Percentage (%) of ADV 20	Maximum Percentage (%) of 20-day ADV “Firmed Up Order”
*Note: Notional values can be set in Nominated Broker’s chosen “Base Currency” (e.g. USD or GBP or EUR or CHF etc...)	
Max Order Quantity	Maximum Order Quantity on any single “Firmed Up Order”
Alert 1 and 2, % of Gross Notional	Email alert thresholds when Gross Notional reaches set levels
Restricted Instrument Lists*	Restricts all Buyside Firms from trading in a Restricted Instrument

*Includes Restricted Instrument File Upload Service. Specification available on request.

Turquoise Drop Copy Gateway (TGHL/TGHE) Risk Monitoring of Trades	Definitions
Drop Copy Gateway, including Cancel on Disconnect functionality	If the Drop Copy sessions disconnects for longer than a pre-configured time, it will result in the suspension of trading services for all associated Users (TraderIDs).

Note: Nominated Brokers should they wish to do so can also opt-in to use Turquoise Risk Controls i.e. set up Per User / TraderID, as defined within:

https://docs.londonstockexchange.com/sites/default/files/documents/turquoise-risk-controls-technical-description-v1_16.pdf

Turquoise Luminex – Nominated Broker Model

Turquoise FIX Drop Copy Gateway 'Trades Only' Service

Nominated Brokers (Turquoise Members) supporting Buyside firms will only receive 'Trade' details via a new 'Trades Only' FIX Drop Copy Gateway service. No Order information will be sent, with order-related fields either not being sent or being over-ridden.

The following order-related fields will not be sent:

FIX Tag	Field Name	Field Description
103	OrdRejReason	Code specifying the reason for the reject. Always populated if ExecType (150) is Rejected (8) and in certain cases for expirations (ExecType = C).
58	Text	Text specifying the reason for the rejection, cancellation or expiration.
18	ExecInst	Applicable to the Turquoise Plato Order Book™ only. Indicates if the order should participate in the Turquoise Plato Uncross™ Only or in Continuous trading Only or both.
59	TimeInForce	Value submitted with the order.
126	ExpireTime	Value submitted with the order.
1084	DisplayMethod	Whether the order is a reserve order
110	MinQty	Minimum Quantity of the order.
44	Price	Value submitted with the order.
27010	PassiveOnlyOrder	Value submitted with the order.
27012	ReputationalScore	Reputational Score for the BI Participant at the time of the Turquoise Plato Block Discovery™ match.

The following order-related fields will be over-ridden:

FIX Tag	Field Name	Field Description / Value sent in 'Trades Only' Execution Report
39	OrdStatus	Current status of the Order 2 – Filled (Applicable to both Partially Filled and Fully Filled Orders)
151	LeavesQty	Quantity available for execution 0
40	OrdType	Value submitted with the Order 0 – Not Applicable
38	OrderQuantity	Value submitted with the Order 0
1138	DisplayQuantity	Quantity displayed in the Order Book 0

BookingType (FIX Tag 775) is being introduced for Nominated Brokers to support their downstream settlement activities:

FIX Tag	Field Name	Values
775	Booking Type	0 = Regular Booking 1 = CFD (Contract for Difference) 2 = Total Return Swap

Logic for populating FIX Fields for Nominated Brokers

- BookingType(775)
- AccountType(581)
- OrderCapacity(528)

Field	BookingType (FIX Tag 775)	Account Type (FIX Tag 581)	Order Capacity (FIX Tag 528)
Default	0 = Regular Booking	Client (1)	AOTC - Any other trading capacity (A)
Optional	1 = CFD (Contract for Difference)	House (3)	DEAL - Dealing on own account (P)
Optional	2 = Total Return Swap	House (3)	DEAL - Dealing on own account (P)

BookingType (FIX Tag 775) is being introduced for Nominated Brokers to support their downstream settlement activities.

The above table summarises the default logic that will be available to Nominated Brokers; and if needed rules **can be customised as part of the onboarding process**.

For example:

If a Nominated Broker only expects to receive the Default values (never BookingType(775) '1' or '2'), Turquoise will work with Luminex as part of that Nominated Brokers onboarding to implement these rules.

Logic for populating FIX Party ID Fields for Nominated Brokers

- PartyRoles(452)
- PartyID(448)
- PartyIDSource(447)
- PartyRoleQualifier(2376)

Party Roles (FIX Tag 452)	Party ID (FIX Tag 448)	Party ID example	Party ID Source (FIX Tag 447)	Party Role Qualifier (FIX Tag 2376)	Provided by
FIX Trader Group ID (76)	TXXXLUMFG01 / EXXXLUMFG01 *T for TGHL, E for TGHE	TXXXLUMFG01/ EXXXLUMFG01	D	<i>Not provided</i>	Nominated Brokers set up FIX Trading sessions via Member Portal and advise Luminex.
Client (3)	Mandatory - Short Code (from 4 to 4294967295)	123456	P	23 = Firm/LEI	Nominated Brokers set up short codes for each client (legal entity)
Executing Trader (12)	Mandatory - Short Code (from 4 to 4294967295)	123456	P	24 = Natural Person	Buyside traders are set up as users. Luminex to assign a short code for each trader (common for all)
Investment Decision Maker (122)	Default - 0 as not expected to be provided	0	P	<i>Not provided</i>	Buyside do not provide hence 'None'

Note: FIX Trader ID (452=100) not used.

Turquoise Luminex – Nominated Broker Model

Nominated Broker Onboarding Check List

- Legal Agreements
 - Luminex Technology Agreement
 - *Assumptions (Agreements/Licences are likely to be in place already):*
 - *Broker Dealer Agreements (with Buyside / Sell side clients)*
 - *Turquoise Membership (TGHL/TGHE), Client Facilitation Non-Display Market Data Licences & Clearing Arrangements (as Member of CCP or via General Clearing Member)*
 - Turquoise Member Portal (TGHL/TGHE)
 - Set up logical connectivity (FIX Trading & FIX Drop Copy sessions)
 - *Clearing arrangements from existing set up (FIX Trading), likely to be in place already*
 - Set up Cancel on Disconnect (FIX Drop Copy)
 - Integrate Turquoise “Trades Only” (FIX Drop Copy) service into Risk System
 - Luminex web GUI
 - Users to be set up
 - Permission trading access & set up pre-trade risk controls for Buyside clients (direct or indirect via broker)
 - Set up any restricted instruments via GUI/file submission (restrictions apply to all Buyside Clients)
 - Customer Conformance and UAT testing (with Turquoise/Luminex) as applicable
-
- **CDS effective Live Date was 11 April 2025**
 - **Target Production effective Go Live Date (September 2025 *tbc*), subject to Regulatory Approval**

Related Documents / Contact Us

References

Turquoise Notice

Next Functional Release 1.25.0 Notice

Found under
[Turquoise Notices](#)

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28 April 2025

Resources

Updated Service Descriptions, along with updated Interface Specifications associated with the release

- Turquoise Trading Services Description
- Turquoise Plato Block Discovery™ Trading Service Description
- TQ201 Trading Gateway (FIX 5.0)
- TQ301 Trading Gateway (Native)
- TQ203 - Drop Copy Gateway (FIX 5.0)
- Reject Codes

Found under
Equities Trading > Turquoise Document Library
> [Next Functional Release](#)

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Contact Us

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Thank you

Q&A



LSEG



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