



P L A T O

Turquoise Plato™

Collaboration. Innovation. Execution.



London

Stock Exchange Group

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“Plato Partnership and Turquoise share values and vision of an Open Access marketplace that delivers the best result on a continuous basis.”

Dr Robert Barnes, CEO of Turquoise

Turquoise Plato Partnership

Plato Partnership, a not-for-profit industry group of buy and sell-side firms who are collaborating to bring creative solutions and efficiencies to today's complex equity marketplace, has selected Turquoise, a leading pan-European MTF, as its Preferred Partner.

As partners, Plato Partnership and Turquoise will seek to develop increased efficiencies for the electronic execution of anonymous block trades in European equities, in response to growing demand from market participants, particularly buy-side firms.

The Cooperation agreement works as follows:

- Plato Partnership and Turquoise will jointly promote the use of Turquoise's award winning existing block trading services and will use these as the platform from which to deliver further functional enhancements for the benefit of all market participants.
- Turquoise will rebrand its Midpoint Dark Order Book, reinforcing the importance which both parties ascribe to their cooperation. The services will now be known as **Turquoise Plato™**.
- The parties will work closely together, inclusively, and on an Open Access basis, with the wider buy and sell-side community to develop and validate enhancements to the **Turquoise Plato™** market model that sets standards for marketplace excellence, including now and future best practice in electronic block trading.

Both the buy-side and sell-side members of Plato Partnership have a common objective to ensure a rational market structure for block trading under MiFID II, and collectively believe this would be best served via collaboration with existing venues.

“This partnership with Turquoise lays the foundations for Plato Partnership to drive forward future industry initiatives that will seek to increase efficiencies and simplify market structure for the benefit of market participants.”

Nej D'jela, Plato Co-Chair

“Plato Partnership is hugely important for the buy-side community. It provides a unique value proposition that considers the needs of the marketplace, provides for liquidity and reduces costs.”

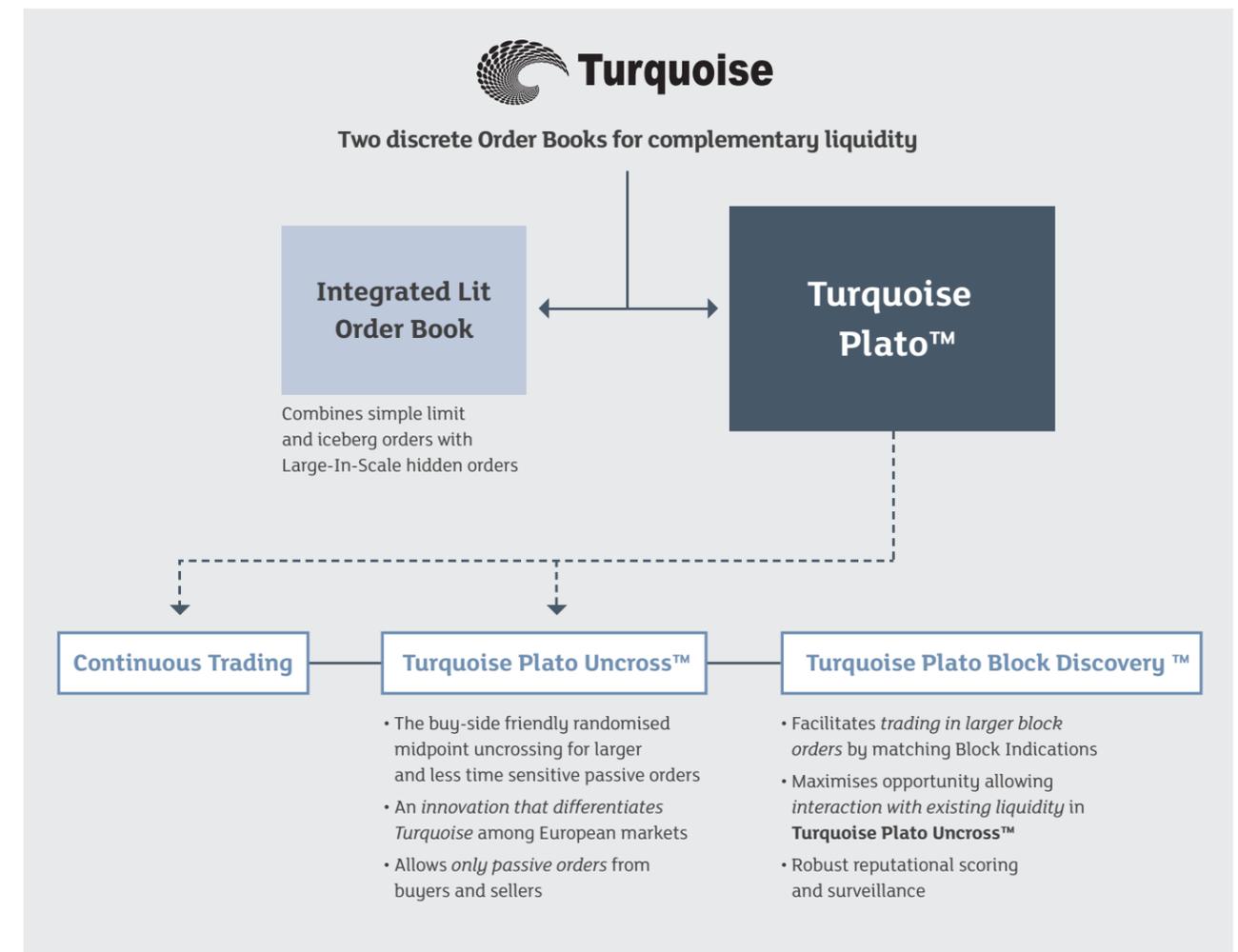
Mike Bellaro, Plato Co-Chair

Turquoise Plato™

Turquoise Plato™ is the new name of the current Turquoise Midpoint Dark Order Book

Turquoise Plato™ is a Price-referencing Order Book:

- Matches orders pegged to the midpoint of the Primary Market Best Bid and Offer of the respective European Exchange
- Size priority and user-defined Minimum Execution Size (MES) are key features: Size priority in the matching logic is different to traditional time priority of other public Order Books.



Turquoise Plato Uncross™

Turquoise Plato Uncross™ takes place anywhere between 5 and 45 seconds throughout the trading day, the frequency of which is determined by the liquidity of the underlying security.

Turquoise Plato Uncross™ is an innovation that differentiates Turquoise from other European equity markets; Buy-side friendly, randomised, midpoint uncrossing, for larger and less time-sensitive passive orders.

Turquoise Plato Uncross™ only allows the matching of passive orders. The duration of resting period and random timing nature of Turquoise Plato Uncross™ provides a fair and level playing field since no participant can initiate a trade with an aggressive order. With no preference to time sensitive persistent flow where an aggressor can initiate and choose the exact millisecond of execution; the result is participants in Turquoise Plato Uncross™ can rest larger orders for longer to achieve better execution quality.

Key benefits of Turquoise Plato Uncross™:

- Participants benefit from **size priority** in the matching logic of the Turquoise Plato™, which leads to improved fill rates for larger block orders and reduces the impact of interacting with smaller orders, therefore enhancing the attractiveness for institutional flow.
- Participants can define their own **Minimum Execution Size (MES)**, and each individual trade must match or exceed the MES, thereby reducing the end to end cost of trading by removing the post trade inefficiencies of being filled by a number of smaller orders.

Buy-side friendly, randomised, midpoint uncrossing, for larger and less time-sensitive passive orders.

Event summary:

- A** Start of random timer for Turquoise Plato Uncross™ event to occur between 5 and 10 seconds.
- B** Turquoise Plato Uncross™ occurs randomly at 8.7 seconds (within random uncrossing period of 5 and 10 seconds).
- C** Start of next random timer for Turquoise Plato Uncross™ event to occur between 5 and 10 seconds.
- D** Points A to C above are repeated, with a new random Turquoise Plato Uncross™ period.

A Start of first Turquoise Plato Uncross™ for liquid security



B 1st Turquoise Plato Uncross™ occurs

8.7

C Start of second Turquoise Plato Uncross™



2nd Turquoise Plato Uncross™ occurs

6.3

D Start of third Turquoise Plato Uncross™



Turquoise Plato Block Discovery™

Turquoise Plato Block Discovery™ provides mechanism for brokers to interact with existing liquidity in Turquoise Plato Uncross™ – benefits from randomised timing, protected from interaction with time sensitive flow.

Robust reputational scoring to prevent misuse of the system

Turquoise Plato Block Discovery™ explained

- Turquoise Plato Block Discovery™ facilitates the trading of larger block orders by matching block Indications. On identifying potential matches, the service will require participants to send firm qualifying block orders to Turquoise Plato Uncross™, maximising available liquidity for customers of both services
- Existing users of Turquoise Plato Uncross™ can also elect to explicitly 'opt-in' a firm resting order for Turquoise Plato Block Discovery™ thereby increasing the opportunity to match in size subject to MES and improve available liquidity for both services
- Robust reputational scoring and surveillance will monitor the conversion of Block Indications into firm orders to optimise the use of the service
- Turquoise Plato Block Discovery™ system defined minimum indication size of 25% Large-In-Scale, size priority in the matching logic and user defined minimum execution size in the Turquoise Plato™ also encourages larger sized orders and further improves execution quality
- Participants of Turquoise Plato Block Discovery™ need to be a member of Turquoise MTF, where all trades are matched, and they need to sign a separate Service agreement.

“Turquoise Plato Block Discovery™ facilitates the trading of larger block Orders by matching Block Indications.”

Integrity of Turquoise Plato Block Discovery™

Surveillance mechanisms ensuring execution quality

Turquoise Plato Block Discovery™ Service is an explicit opt-in on an Order-by-Order basis

- Request to firm up, Order Submission Request (OSR) contains no explicit information about nature or identity of the counterparty Order. Receipt of an OSR only implies Participant could match against its Minimum Execution Size.

Automated Reputational Scoring Event Reputational Score is calculated each time an OSR is sent

- Firm Qualifying Block Order must be at least “as tradable” as original Block Indication to which OSR related i.e. same stock and side with Limit Price no more passive than Block Indication and MES no higher than on BI. Must also have valid Time in force and Execution Instruction be sent within the permitted time
- Initial Event Reputational Score of 50% assigned to each firm Qualifying Block Order (the firm up)
- Up to 50% then added based on Quantity of firm Qualifying Block Order relative to that of related BI at time OSR generated, for maximum Event Reputational Score of 100%
- Failure to submit Qualifying Block Order will result in reputational scoring of zero.

Composite Reputational Score maintained based on last 50 OSRs sent

- Automatic exclusion from service if user's Composite Reputational Score falls below a pre-defined threshold
- Re-admittance to service only permitted once reason for exclusion identified and remedied

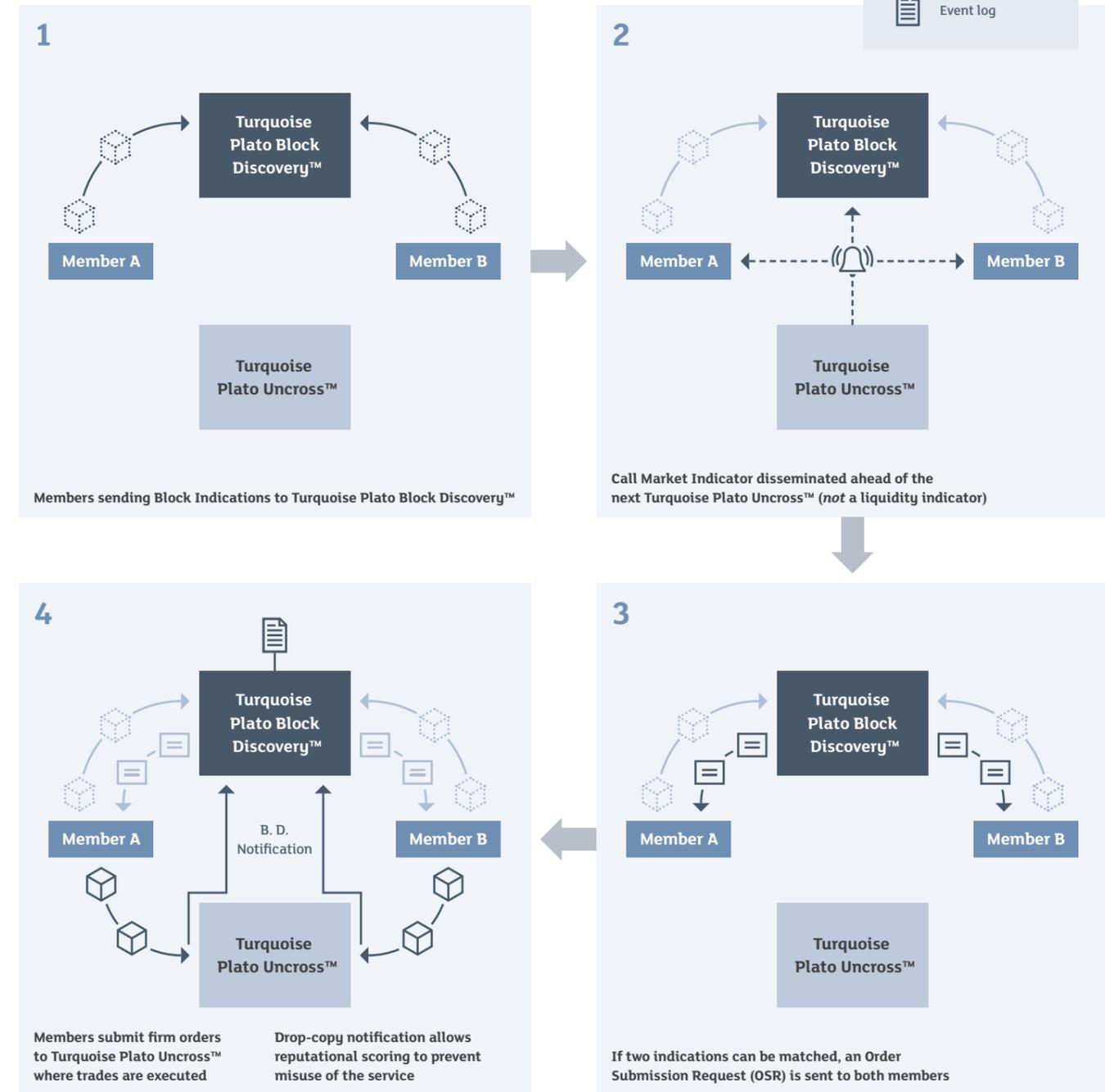
Surveillance undertaken by LSE

- Monitoring of price movements ahead of Turquoise Plato Uncross™ events
- Suspected manipulation of Reference Price will be referred to FCA

How Turquoise Plato Block Discovery™ works

Key

- Block Indication
- Order Submission Request
- Firm order
- Call Market Indicator
- Event log





About Plato Partnership

Plato Partnership, a not-for-profit industry group representing the buy and sell-side, has come together with a vision of improving market structure in Europe. The group's key aims are to reduce trading costs, simplify market structure, and to act as a champion for end investors.

Central to this vision is Plato Partnership's Market Innovator (MI3); a research fund which will sponsor academic research and analysis that will identify ever better ways of executing trades, as well as lowering the cost and improving the quality of the broad range of processes required to support the execution lifecycle.

Plato Partnership will work with industry partners to achieve its goals and objectives, and put its research findings into practice.

Members of Plato Partnership include Axa Investment Managers, BlackRock, Deutsche Asset Management, Fidelity International, Franklin Templeton, Norges Bank Investment Management, Union Investment, Barclays, Bank of America Merrill Lynch, Citi, Deutsche Bank, Goldman Sachs, Morgan Stanley, and UBS. Firms currently undergoing the membership process include J.P. Morgan.

For more information, please visit www.platopartnership.com or @PlatoMarkets.

About Turquoise

Turquoise is the European multilateral trading facility majority owned by London Stock Exchange Group in partnership with the user community. With a single connection, members can trade shares, depository receipts, ETFs, and European Rights Issues of 19 European countries with an Open Access model that allows members to choose among 3 interoperable CCPs to clear these trades. Members include banks, brokers, specialist trading firms and retail intermediaries.

Turquoise features two electronic orders book services. Turquoise Integrated Lit combines simple limit and iceberg orders with Large In Scale hidden orders. Turquoise Midpoint Dark, renamed **Turquoise Plato™**, prioritizes orders by size and allows users to configure Minimum Execution Size; it features two distinct mechanisms, each executing at the midpoint of the Primary Market Best Bid and Offer: continuous matching and **Turquoise Plato Uncross™**, an innovation that provides randomised uncrossings during the trading day, ideal for larger and less time sensitive passive orders. **Turquoise Plato Block Discovery™** matches undisclosed Block Indications that execute in **Turquoise Plato Uncross™**.

For more information, please visit:

www.tradeturquoise.com, @tradeturquoise or www.linkedin.com/company/turquoise

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London Stock Exchange Group believes investors and organisations should be free to choose where to list, trade, clear, settle and benchmark. That's Open Access.

Those who rely on the markets agree, from the world's largest asset managers and investors to sell-side participants and trade associations. European lawmakers have now spoken: Open Access will be implemented as law in the years ahead.

It's a philosophy and approach to business that defines our Group and all its businesses: from LCH to FTSE Russell, from Turquoise to MillenniumIT, and from UnaVista to ELITE. Our customers demand it. We are delivering it.

Find out more:
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