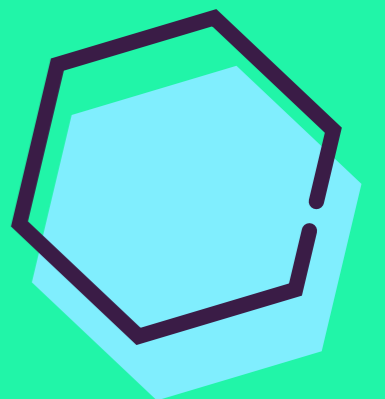
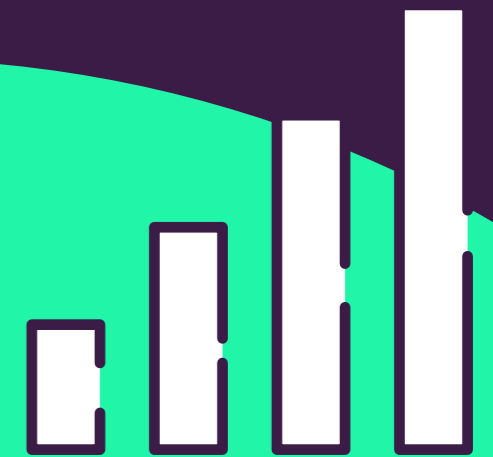




Equity Trading Systems

A guide for sell-side firms.



So you're thinking about changing your trading system. Like many sell-side firms, you might be faced with the prospect of replacing a system that you've used for many years.

While the requirements remain broadly the same, increasing market volatility has placed more emphasis on connectivity, reference and market data, regulatory reporting and risk management.

In this guide, we'll take you through the things to consider when moving from one trading system to another to help you start the right conversations and make an informed decision.

Put the 'why' before the 'what'

The first step is to be clear about your objectives. Why do you want to make the switch to a different system? Record all the outcomes deemed as essential to your business - this is critical to ensure a nice smooth transition.

Before you even begin to assess the technology and options available, consider how you will approach the change - do you want a 'big bang' change, or would you prefer a staged roll-out?

There are pros and cons to each. Business continuity could be affected by a 'big bang' approach if post-implementation fixes are needed to smooth things out. On the other hand, a staged roll-out can mean using your legacy and new systems in parallel for a little while, which can be costly and you'll need to consider any impact on your clients.

The best approach for your business will be dependent on your team structure, architecture, business focus and appetite for risk - all things that your technology partner should discuss with you.

FIX connections, regional changes and memberships to exchanges should also be part of the decision-making process. No matter what approach you take, ensure that all dependencies, whether internal or external, are identified, considered and discussed with your technology partner, and the desired outcomes agreed from the outset to avoid any dreaded scope creep.

What to look for in a trading system

So what should you look for in a system and how can you best compare one from another? Here's a summary of the main features you should expect as a minimum.

Connectivity

Start by asking your technology partner or providers about the connectivity that their solution provides. With more sell-side firms expanding their trading business into new markets and exchanges, and the need to meet greater demand from clients for FIX connectivity, it's a significant part of any trading system.

Reference data

Thanks to MiFID II's introduction of the requirement to disclose the legal entity identifier (LEI) for each underlying investor entity and demand from clients to change their fee structures, the ability to provide sufficient reference data cost-efficiently is a critical aspect of any new trading solution.

Regulatory reporting

Already mandated in Europe, the landscape for regulatory reporting of trades and transactions continues to be critical, you'll want to make sure the functionality to produce the necessary reports is built into the system.

Risk management

With risk management of continued focus for sell-side firms and risk departments expecting ever more timely and granular data on trades, a trading system must be able to provide risk departments with better access to and visibility of trading activity. This must also include the functionality to allow risk parameters to be defined for automated trading decisions and risk calculations made, as well as the ability to include any number of external data fields.

Order management

Order management is one of the most functionally-dense areas of a trading system and the one you'll probably use most. It's important to make sure the user-interface - the way it looks and works - is user-friendly.

Intraday P&L

The ability to calculate and display intraday P&L is an increasingly desirable capability for sell-side front offices as margins tighten, so any system must be able to capture all relevant details.

Market data

Check your technology partner's ability to provide market data. Some provide their own, others don't but can provide it to the system via an API from an external source.

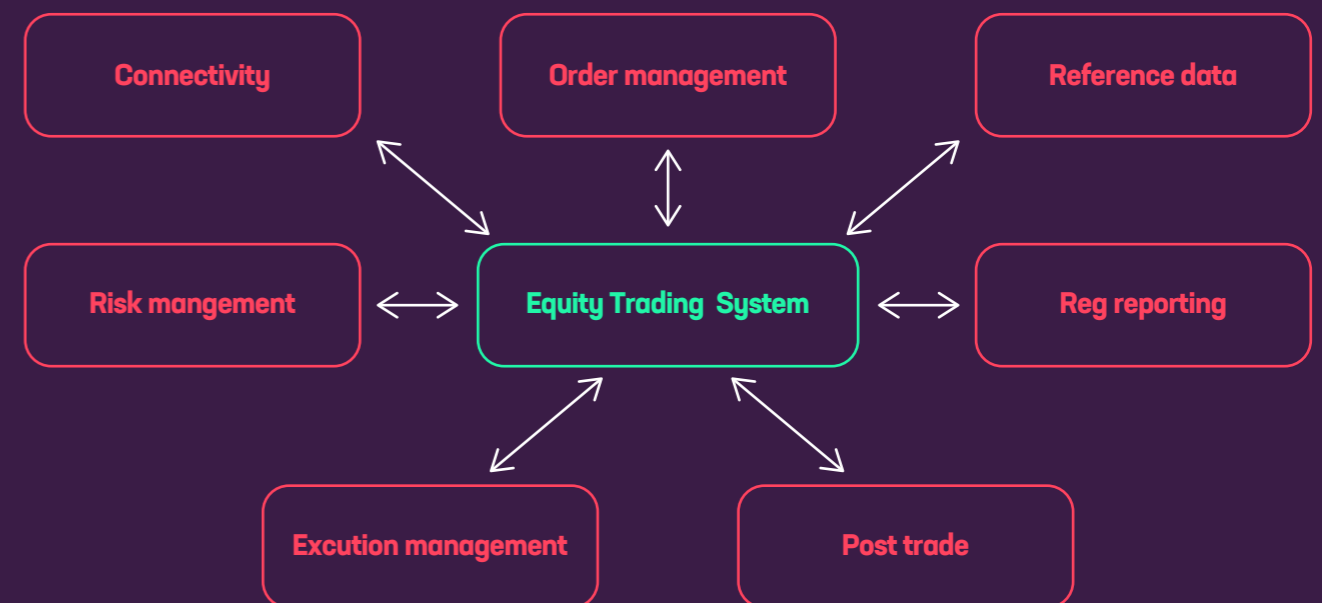
Post trade / Middle-office

Most users now expect post trade/Middle-office functionality from their trading system to help deal with and automate regulatory reporting, removing the need for separate systems and processes.

Infrastructure & architecture

Finally, there's the technology partner's infrastructure & architecture to consider. Client support, development, latency and service levels have all become major factors in a firm's decision-making process.

Considerations when implementing a new equity trading system



Buyer's checklist

Over the next few pages we have provided a handy checklist, that you can use, covering the key functional and non-functional aspects you'll want to consider when assessing a new system.

Whether you are considering a bespoke or 'out of the box' solution, having the opportunity to configure a trading system to meet the way you work will mean you get more value from your investment, because you won't be paying for functionality that doesn't support you in the right way.

Connectivity

- | | | |
|--|--|--------------------------|
| Exchange Connectivity | Can the appropriate exchanges be connected to the system? | <input type="checkbox"/> |
| FIX Connectivity | How easy is it to switch over both inbound and outbound FIX connections for brokers, clients and exchange mnemonics? | <input type="checkbox"/> |
| Algorithms | Can the system connect to the required external broker algos? | <input type="checkbox"/> |
| Central Trade Manager (CTM) | Can the solution connect to the external electronic trade confirmation service CTM? | <input type="checkbox"/> |
| Open API's | Can the solution integrate or partner with data sources and downstream platforms (e.g. back-office settlement and clearing) via real-time API's or batch-based interfaces? | <input type="checkbox"/> |
| Broker | Is it possible to connect to an external broker for Direct Market Access (DMA)? | <input type="checkbox"/> |
| Transaction Cost Analysis (TCA) | Does the system include both pre-and post-trade analysis? | <input type="checkbox"/> |
| Clearing/Back-Office | How does the system connect to back-office service providers and clearing houses? | <input type="checkbox"/> |

Reference data management

Corporate Actions	Can the system manage issues relating to static data and corporate actions, and can it automatically update instrument static data per corporate action?	<input type="checkbox"/>
Tickers	Is the system able to support and map to multiple vendor tickers?	<input type="checkbox"/>
Client Data	Is client reference data pertaining to the calculation of taxes, levies and additional fees held for all major markets?	<input type="checkbox"/>
LEI	Does the system hold an LEI database or facilitate the record-keeping of LEI's?	<input type="checkbox"/>
Security File	Does the system hold a Security Master File?	<input type="checkbox"/>

Regulatory reporting

OATS Reporting*	Can the system report all relevant trading activity to FINRA's Order Audit Trail System (OATS) by 7am T+1?	<input type="checkbox"/>
Trade Reporting	Does the system meet the requirements for timely trade reporting to the appropriate source?	<input type="checkbox"/>
	Does the system offer the appropriate link to an Approved Reporting Mechanism (ARM) to meet the MiFID II requirement for transaction reporting?	<input type="checkbox"/>
Transaction Reporting for UK & Non-UK Business	Does the system facilitate reporting responsibilities for non-UK markets and exchanges?	<input type="checkbox"/>

*where applicable

Risk management

Access & Visibility	Can profiles be set up with different levels of access to prevent users from being able to change static data or trade data on a T+0 and T+1 basis?	<input type="checkbox"/>
	Is there a risk management window to visualise the complete trade controls environment, including all real-time and static limits?	<input type="checkbox"/>
	Can the audit trail show the full lifecycle of an order or child order, and does it detail changes, cancel / amends and controls?	<input type="checkbox"/>
	Is the system able to impose real-time, dynamic hard cash limits?	<input type="checkbox"/>
Audit Trail	Can the system identify stocks marked as being on a 'watch list'?	<input type="checkbox"/>
Limits	When a client is approaching a hard limit, can the system generate popup windows to alert the user?	<input type="checkbox"/>
Alerts	Can the system provide risk limit warnings configurable to each defined client?	<input type="checkbox"/>
	Are the definitions for the alert received clear to the user?	<input type="checkbox"/>

Order management

Alerts	Can the system generate an alert/pop-up when auto-accept is on and a new trade has come through?	<input type="checkbox"/>
Audit Trail	Can users access up to and at least 90-days of core trade data?	<input type="checkbox"/>
	Is a full audit trail retained, with details including when an order was created, at what price, what changes were made to that order, time of changes and by whom?	<input type="checkbox"/>
Auto-accept	Can users toggle order auto-accepting functionality on or off?	<input type="checkbox"/>
Book Structure	Can the system support multiple entities with segregated underlying book structures?	<input type="checkbox"/>
Cancel / Amends	Can front-end users be limited to T+0 post-trade amendment?	<input type="checkbox"/>
Broker / Market Fill	Does the system notify front-end users of all broker/market fills?	<input type="checkbox"/>
Layout	Can brokers manage parent and child orders, with separate windows within the system for parent, child and routed orders?	<input type="checkbox"/>
	Can the user track single stocks across multiple screens?	<input type="checkbox"/>
	Does the system support a VWAP monitoring tool that can present an amalgamated single view of the VWAP for a particular stock on all UK exchanges and on all European exchanges?	<input type="checkbox"/>
	Does the system show full level 2 market depth for selected stocks in the interface?	<input type="checkbox"/>

Order management continued

Commissions	Can the system allow a flexible scaling commission rate that is specific to clients and volume?	<input type="checkbox"/>
Indication of Interest (IOI)	Can the system automatically update IOIs based on the fills being received?	<input type="checkbox"/>
Monitoring	Can the user drill down into an order and view FIX / TAG messages within the user interface?	<input type="checkbox"/>
Workflow	Is the trade type indicator configurable both at account-level and on a per-trade level?	<input type="checkbox"/>
	Can parent order modifications or cancellations be propagated to child orders?	<input type="checkbox"/>
	Can a user allocate a child order that breaches order limits on the parent order without having to cancel and replace the original parent order?	<input type="checkbox"/>
	Does the system apply controls to the modification of child orders based on parent orders?	<input type="checkbox"/>
	Can the user book manual trades?	<input type="checkbox"/>
	Can FIX orders be modified?	<input type="checkbox"/>
	Can orders be aggregated? When the underlying part of the order is routed can the remaining balance be released?	<input type="checkbox"/>
Order Routing	Can orders be routed from one region to the other?	<input type="checkbox"/>

Execution management

Configurable Order Routing	Can static orders be routed to exchanges and liquidity venues based on parameters?	<input type="checkbox"/>
Indication of Interest (IOI)	Can the user create an IOI from scratch?	<input type="checkbox"/>
	Can a user create IOI based on an existing order?	<input type="checkbox"/>
	Can the system refresh an IOI based on available quantity?	<input type="checkbox"/>
	Can a live IOI be updated based on fills received?	<input type="checkbox"/>
Hot Keys	Can the user set up specific order routing hotkeys and share these with the book or desk to which they belong?	<input type="checkbox"/>
Crossing	Can orders be crossed?	<input type="checkbox"/>
	Can crossing at the midpoint be set as a minimum requirement?	<input type="checkbox"/>
Trade Management	Can users configure the user interface for GTC- and GTD-orders so that when they roll over to the next day?	<input type="checkbox"/>
Algorithmic Trading	Can users map proprietary algorithms provided to third-party clients on a DMA basis to the algorithmic strategies of the DMA providers?	<input type="checkbox"/>

Intraday P&L

Position Keeping	Can users see an aggregated net figure of the day in the P&L as well as the stock breakdowns?	<input type="checkbox"/>
	Can users see stock exposure in the stock-specific position and monitor live market pricing?	<input type="checkbox"/>

Post Trade / Middle Office

View	Does the system support a tabular view/query window to pull up different windows?	<input type="checkbox"/>
Confirmations	Can trade confirmations made via CTM be sent as Block or Allocation?	<input type="checkbox"/>
	Can standard and customised templates be set up?	<input type="checkbox"/>
	Is the system able to switch off confirmation on a per-trade basis?	<input type="checkbox"/>
Fee Calculations	Can complex fee transactions for non-UK markets such as France, for example, be correctly catalogued?	<input type="checkbox"/>
Give-ups	Can the user enter a GIVE UP broker and then it be reported to an internal or external source, such as Traiana?	<input type="checkbox"/>
Pricing	Can the user mark an order with Net Price and calculations of fees included?	<input type="checkbox"/>
Cancel / Amends	Can the middle-office team amend or adapt a trade that has already been booked?	<input type="checkbox"/>
Commission & P&L Calculation	Can commission charging rules be loaded and edited in the system?	<input type="checkbox"/>
Alerts	Are alerts generated for failed transaction and trade reports?	<input type="checkbox"/>

Market making

Exchange Connectivity	Can clients specify direct exchange connections?	<input type="checkbox"/>
MM Logic	Does the system include market-making logic, quote management and quote protection?	<input type="checkbox"/>
Risk Controls	Does the system include pre-trade risk controls, limit monitoring and alert levels?	<input type="checkbox"/>
Risk Management	Does the system include position keeping and risk management tools, and real-time in-depth P&L?	<input type="checkbox"/>
RSP Connectivity	Does the system offer connectivity to RSP networks?	<input type="checkbox"/>
RSP Quoting	Does the system offer the functionality of an RSP quoting engine?	<input type="checkbox"/>
Quoting	Can the user control quoting obligations to exchange on an ad hoc basis?	<input type="checkbox"/>
Limits	Can the user control single stock and book limits?	<input type="checkbox"/>
Orders	Can the user fill client orders from a proprietary book structure?	<input type="checkbox"/>

Market making continued

Stock	Can the user mark stock as market-making quotable stock?	<input type="checkbox"/>
Book Structure	Can the system define books from proprietary to client business and enable a two-way process?	<input type="checkbox"/>
Trade Advertisement	Can users create a Trade Advert based on orders executed in the system?	<input type="checkbox"/>
	Can users create Trade Advert based on specific client order?	<input type="checkbox"/>
	Can users send Trade Adverts intraday?	<input type="checkbox"/>
	Can users manage the distribution lists for trade adverts including external vendors?	<input type="checkbox"/>

Market data integration

Entitlements	Does the system support management and tracking of market data entitlements?	<input type="checkbox"/>
Reference Data	Does the system allow all users to access reference data and symbology data from all sources?	<input type="checkbox"/>
Trade Data	Does the system suppress data upon client request if required to facilitate the clients trading model?	<input type="checkbox"/>
Market Depth	Does the system provide full and delayed L1 & L2 market depth?	<input type="checkbox"/>

Infrastructure & architecture

Support	Is there a defined release management process?	<input type="checkbox"/>
	What level of quality and robustness can the technology partner provide?	<input type="checkbox"/>
Deployment	Will the technology partner support the system installation?	<input type="checkbox"/>
Disaster Recovery Site	Where is the DR Site?	<input type="checkbox"/>
	Does the DR Site run a separate data centre?	<input type="checkbox"/>
	Is the DR site on independent Network and Power sources?	<input type="checkbox"/>
Infrastructure	Is the system on-premise, hosted or SaaS?	<input type="checkbox"/>
Service Levels acceptable?	How resilient is the system and are the service levels	<input type="checkbox"/>
	What options does the technology partner offer with regards to redundancy?	<input type="checkbox"/>

Perform better every day

Like any major change, moving to a new trading system is a daunting prospect. But swapping out your tired, old legacy trading system to one that's better suited to your vision and the way you want to work will significantly improve your business' performance every day. We hope this guide has helped you step closer towards making that a reality.

For faster, smarter trading, market data and connectivity for institutional traders, including remarkably versatile order management software, talk to Iress.

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