

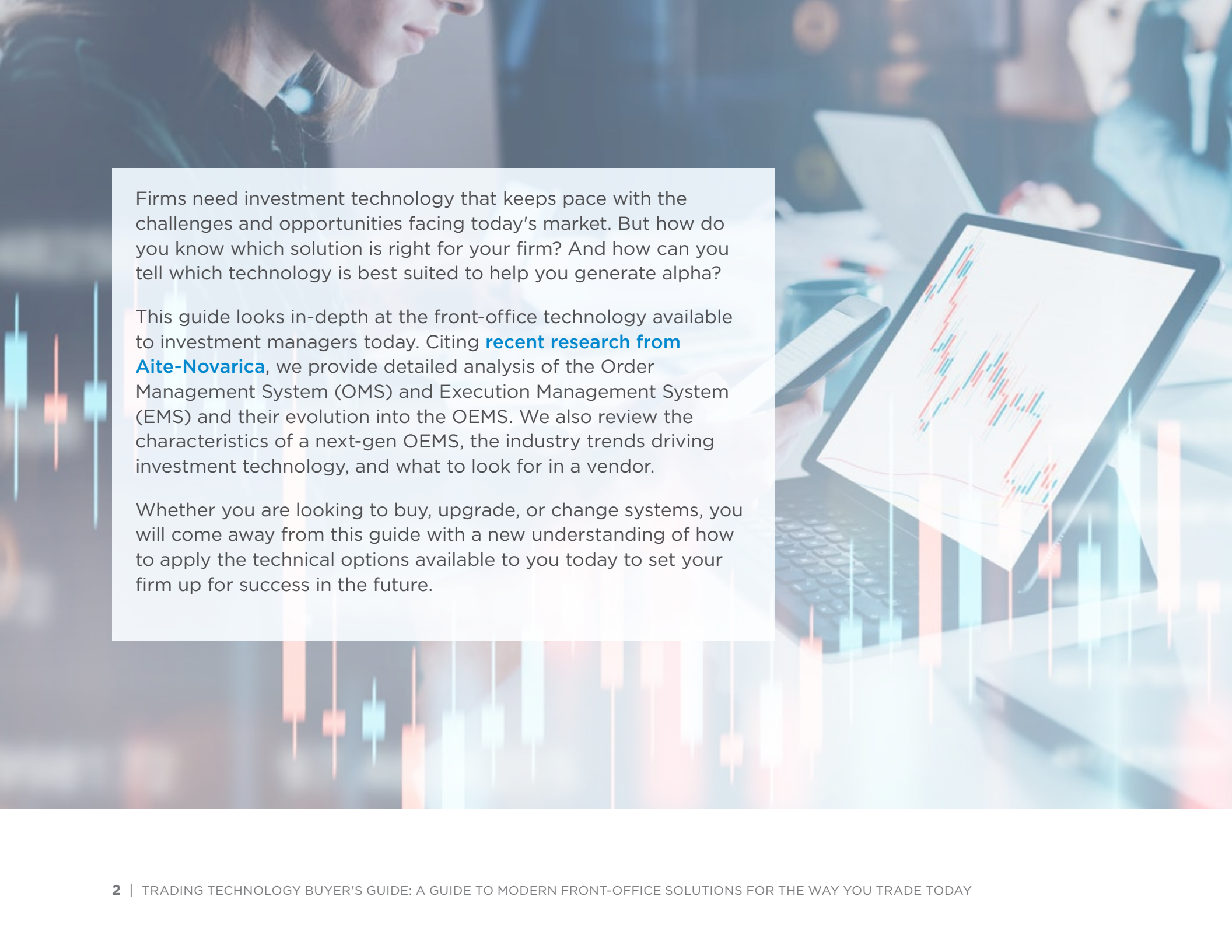


Trading Technology Buyer's Guide

A GUIDE TO MODERN FRONT-OFFICE SOLUTIONS FOR THE WAY YOU TRADE TODAY



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Firms need investment technology that keeps pace with the challenges and opportunities facing today's market. But how do you know which solution is right for your firm? And how can you tell which technology is best suited to help you generate alpha?

This guide looks in-depth at the front-office technology available to investment managers today. Citing [recent research from Aite-Novarica](#), we provide detailed analysis of the Order Management System (OMS) and Execution Management System (EMS) and their evolution into the OEMS. We also review the characteristics of a next-gen OEMS, the industry trends driving investment technology, and what to look for in a vendor.

Whether you are looking to buy, upgrade, or change systems, you will come away from this guide with a new understanding of how to apply the technical options available to you today to set your firm up for success in the future.

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CHAPTER ONE

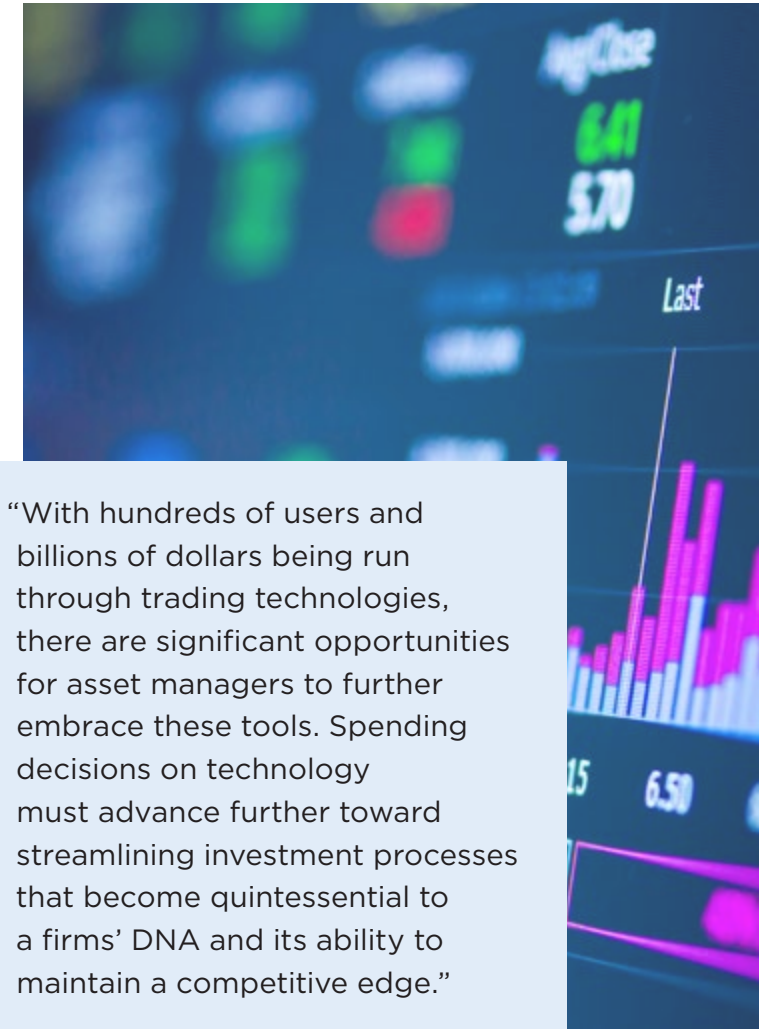
The Rise of the OMS and EMS

Launched in the mid-to-late 1980s, OMSs allowed asset management firms to track orders negotiated over the phone and improve paper-ticket-based recordkeeping. As the Financial Information eXchange (FIX) protocol matured in the early-to-mid 1990s, OMSs added features for electronic order routing to brokers, an expansion of their capabilities that allowed them to securely automate and streamline the order routing process.

EMSs hit the scene in the late 1990s with the rise of day trading. They were designed to help sell-side brokers and day traders participate in a fast-evolving electronic marketplace. Buy-side interest in EMS tools gained traction when vendors began offering global, multi-asset class platforms.

The OMS and EMS were initially built for specific tasks supporting discrete and siloed departments; however, today, firms face new challenges: [increasing adoption of global multi-asset strategies](#), changing regulatory and compliance requirements, and increased operational risk, which require modern investment technology that goes beyond siloed functionality to provide a fully integrated solution across all strategies.

The OEMS combines the best of the OMS and the best of the EMS into one seamless solution under one provider, streamlining operations, helping reduce cost and risk associated with onboarding and integrating an additional vendor, and empowering firms to keep pace with today's investment challenges and preparing them for what lies ahead.



“With hundreds of users and billions of dollars being run through trading technologies, there are significant opportunities for asset managers to further embrace these tools. Spending decisions on technology must advance further toward streamlining investment processes that become quintessential to a firms’ DNA and its ability to maintain a competitive edge.”

SPENCER MINDLIN

CAPITAL MARKETS TECHNOLOGY ANALYST
AT AITE-NOVARICA GROUP

CHAPTER TWO

Order Management System (OMS) vs. Execution Management System (EMS)

ORDER MANAGEMENT SYSTEM (OMS)

USERS:

Portfolio/Investment Managers, Traders, Trade Operations, Analysts, Compliance Officers

PRINCIPLE FOCUS:

Front- and middle-office functions

FUNCTIONS:

- ✓ Modeling/Rebalancing/What-if
- ✓ Allocations
- ✓ Order Creation
- ✓ Trade Execution
- ✓ Real-time Analysis
- ✓ Compliance

EXECUTION MANAGEMENT SYSTEM (EMS)

USERS:

Traders

PRINCIPLE FOCUS:

Front-office functions

FUNCTIONS:

- ✓ Execution
- ✓ Liquidity
- ✓ Market Data & Charts
- ✓ Tools specific to asset classes or workflows (futures ladder, pairs)
- ✓ Transaction Cost Analysis
- ✓ Speed

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CHAPTER THREE

What is an Order Management System?

The OMS is akin to the central nervous system of your investment operations. It sits at the center of your operational processes, providing connectivity to prime brokers, custodial firms, fund administrators, trading partners, and market and reference data suppliers.

The system should include reliable and robust functionalities that streamline the workflows of all important trading processes. Failure in one area of the OMS could have ramifications across the entire trade lifecycle and negatively impact your firm's success.

When looking for an OMS, here are the key capabilities you need to consider:

- Support for Multi-Asset Products and Strategies
- Portfolio Modeling Tools
- Accurate Record of Trade Activities and History
- Order Creation
- Real-Time Analytics
- Compliance at Every Stage
- Rules-based Order Routing
- Cyber Security
- Reputation and Reliability



Read on to learn more about each of these capabilities. >

Support for Multi-Asset Products and Strategies

Many asset managers have responded to market volatility by offering new multi-asset products and strategies, including fixed income and alternatives.

For these new products to be successful, your system must not only consolidate investment activities across asset classes into a single platform, but extend the same controls and workflows you know and trust for more traditional instruments to every asset class.

Portfolio Modeling Tools

In today's fast-changing markets, advanced portfolio modeling functionality is not just a nice-to-have – it's a requirement. Portfolio managers must fully understand the impact of their investment decision making.

Be sure your chosen OMS provides a complete picture of your portfolio, including what-if analysis, liquidity and exposure analysis, pre-and post-trade compliance, and event-driven performance analytics.

Accurate Record of Trade Activities and History

A detailed, accurate record of trading activity and history is critical to compliance and client reporting. Moreover, it gives portfolio managers and traders a way to analyze and evaluate positions at the end of the day.

Be sure the blotter function in your OMS can provide an accurate record of all trades made throughout the day and the relevant details of those trades. Your OMS should also track and report how each trade is allocated across portfolios, strategies, brokers, custodians, and prime brokers.

Order Creation

Accurate order creation is a prerequisite for trade execution. Look for an OMS that ensures each order has the data and identification needed to place a trade, including securities identifiers, order types, order sizes, order instructions, etc.

A good OMS will also enable you to generate and automatically allocate orders in a single screen with asset class-specific workflows and build order allocations based on fund groups.

Real-Time Analytics

Some, but not all, OMSs can analyze trade executions. Look for technology that can generate real-time insight on your performance and risk and that offers configurable views to monitor exposure, portfolio positions, stock performance, loss metrics, and cash positions.

Your OMS must provide a complete, up-to-the-minute picture of where your firm stands so you can make the most of every trade.

Compliance at Every Stage

The OMS is an indispensable compliance tool for an investment firm.

At a minimum, an OMS must provide a holistic view of pre-, post-, and intra-trade compliance. Your OMS should also be able to analyze investment parameters and perform automated checks at every level: Security, portfolio, asset class, strategy, and trader.

This not only ensures compliance with government regulations but allows you to apply firm-imposed rules, such as cash positions in a particular fund, limits on commissions, and investor mandates.

Other OMS communication and workflow features can also contribute to compliance by keeping traders, managers, and compliance officers connected with up-to-date, accurate data.

Rules-based Order Routing

Your OMS should offer customizable, automated solutions to enhance your day-to-day trading activities. One such tool is rules-based order routing, which allows you to auto-route low-touch orders using pre-defined rules, freeing up your time for more "high-touch" trades.

To further improve the speed and accuracy of your trades, look for an OMS with configurable "trade in a click" features. These "Quick Send" buttons ensure speed to market, keeping you from missing out on investment opportunities.

Cyber Security

Cyber threats are a genuine concern for your business and your clients. As such, you want to be sure that any OMS vendor you work with can keep your data safe and confidential.

Certification by the International Standard Organization (ISO) is the best indication that you are working with a [vendor that is up to the task](#). Ask if your vendor is ISO 27001 certified. And if you are working with cloud-based technology, be sure they conform to ISO 27017 Cloud Security and ISO 27018 Cloud Privacy standards.

To dive deeper into the relationship between your vendors and your firm's security, including key considerations for ensuring vendor adherence to industry cyber security best practices, download our whitepaper, *Staying Safe: [Cybersecurity Best Practices](#)*.

Reputation and Reliability

A lot is riding on your investment technology. That's why it is critical to choose an OMS vendor with an expert, dedicated service team that can support your investment in technology at every stage. Be sure to choose a vendor with the depth and breadth of experience necessary to understand your operation and what you want to achieve with the technology.

For an in-depth look at the market changes driving renewed focus on vendor service, as well as a framework for assessing your current vendors' service model, [check out this blog](#).

CHAPTER FOUR

What is an Execution Management System?

As today's markets continue to fluctuate, traders are again turning to the EMS to support their active trading strategies and help them stay ahead.

As a guide, here is what to look for in an EMS:

- Command of Complex Trade Data
- Flexible Trade Automation
- Fast and Streamlined Access to Liquidity
- Tightly Integrated Compliance
- Best Execution and Transaction Cost Analysis (TCA)
- Scalable and Reliable
- SaaS Delivery and Future-proof Architecture
- Quick and Personalized Service



Read on to learn more about each of these capabilities. >

Command of Complex Trade Data

A key strength of the EMS is its command of complex trade data. As a baseline, only consider an EMS that provides access to in-depth, real-time market data and insights that allow you quickly respond to changing market conditions.

Flexible Trade Automation

Cumbersome or manual trading workflows slow down your process and may cause you to miss opportunities.

When choosing an EMS, look for a system with automated trading capabilities. These auto-trading features free up your time so you can focus on high-touch orders that require the deft touch of a trader.

Next-level EMSs have even more advanced trade automation features, such as algo wheels and “hot keys” that enable single-click execution based on your preferences.

Fast and Streamlined Access to Liquidity

The EMS you choose should provide multi-broker, centralized access to an extensive execution network to ensure your liquidity options are not limited to specific partners or brokers. Breadth and depth of liquidity are key.

Tightly Integrated Compliance

Compliance looms over every market, but in fast-moving markets with high volumes, compliance becomes even more challenging.

Your EMS should integrate compliance into every stage of your workflow so you can keep the trades flowing without worrying about whether you are in compliance.

Best Execution and Transaction Cost Analysis (TCA)

With trades moving quickly, knowing if you are trading efficiently can be challenging.

Here again, the EMS can be valuable. Choose an EMS with built-in best execution tools, like charting and market fragmentation. And ask if your EMS integrates with third-party TCA providers that can ingest your data and provide valuable insight into execution and performance.

Scalable and Reliable

To get your trades to market, a dependable EMS is critical. So, when choosing or replacing your EMS, select a vendor with a proven history of reliability.



Execution Management System vs. Order Management System:

Selecting the System for Your
Firm's Needs

Also, ensure that the system will grow as the needs of your firm grow. Your investment in an EMS will not pay off if you must replace your solution every time your needs change – and they certainly will.

SaaS Delivery and Future-proof Architecture

Look for a vendor offering their solution via public or private cloud. Cloud deployment eliminates the need for expensive infrastructure, enables real-time mission-critical support, and provides operational efficiencies across the firm.

You should also choose a vendor with a proven history of continued product and functionality enhancements with an open architecture for connectivity through APIs. Selecting such a vendor future-proofs your technology investment and ensures your business is ready for what comes next.

Quick and Personalized Service

EMS availability is mission-critical, so when considering vendors, be sure to look beyond just the technology. **Ask potential providers what level of service and support they offer**, when they are available, and how fast they answer your call.

Most importantly, you want a vendor with a sense of urgency and the expertise and experience needed to resolve issues quickly when they arise.

CHAPTER FIVE

Six Trends Driving Next-Gen Investment Technology

1. EXPANSION OF ELECTRONIFICATION

Electronification has expanded well beyond equities to markets like listed derivatives and foreign exchanges. Firms trading these asset classes want technology that can increase speed to market and decrease risk by mirroring their experience with the equities market: a consistent, front-to-back, straight-through processing workflow.

2. INCREASING RISK & COMPLIANCE REQUIREMENTS

As compliance requirements and investor mandates continue to increase and change, firms must address and manage compliance holistically and monitor and alleviate risks in real-time. Maintaining this level of compliance across disparate trading systems and data warehouses is challenging, leading many investment managers to seek systems that can support multiple asset classes and investment strategies.

3. MORE TECH-SAVVY BUYERS

Younger, more tech-savvy traders are replacing older trading heads at the buy-side trading desk. These sophisticated users are more open to using technology and innovation to support their efforts and are reaping the benefits as they trade in more complex markets, including fixed income, derivatives, and digital assets.

4. GROWING EMPHASIS ON REAL-TIME RISK MANAGEMENT

Risk management was once a middle-office function handled after the trade was completed. But now, a growing emphasis has been placed on meeting pre-trade risk and compliance.

As a result, firms are seeking unified technology that offers integrated risk management capabilities across the entire trade lifecycle.

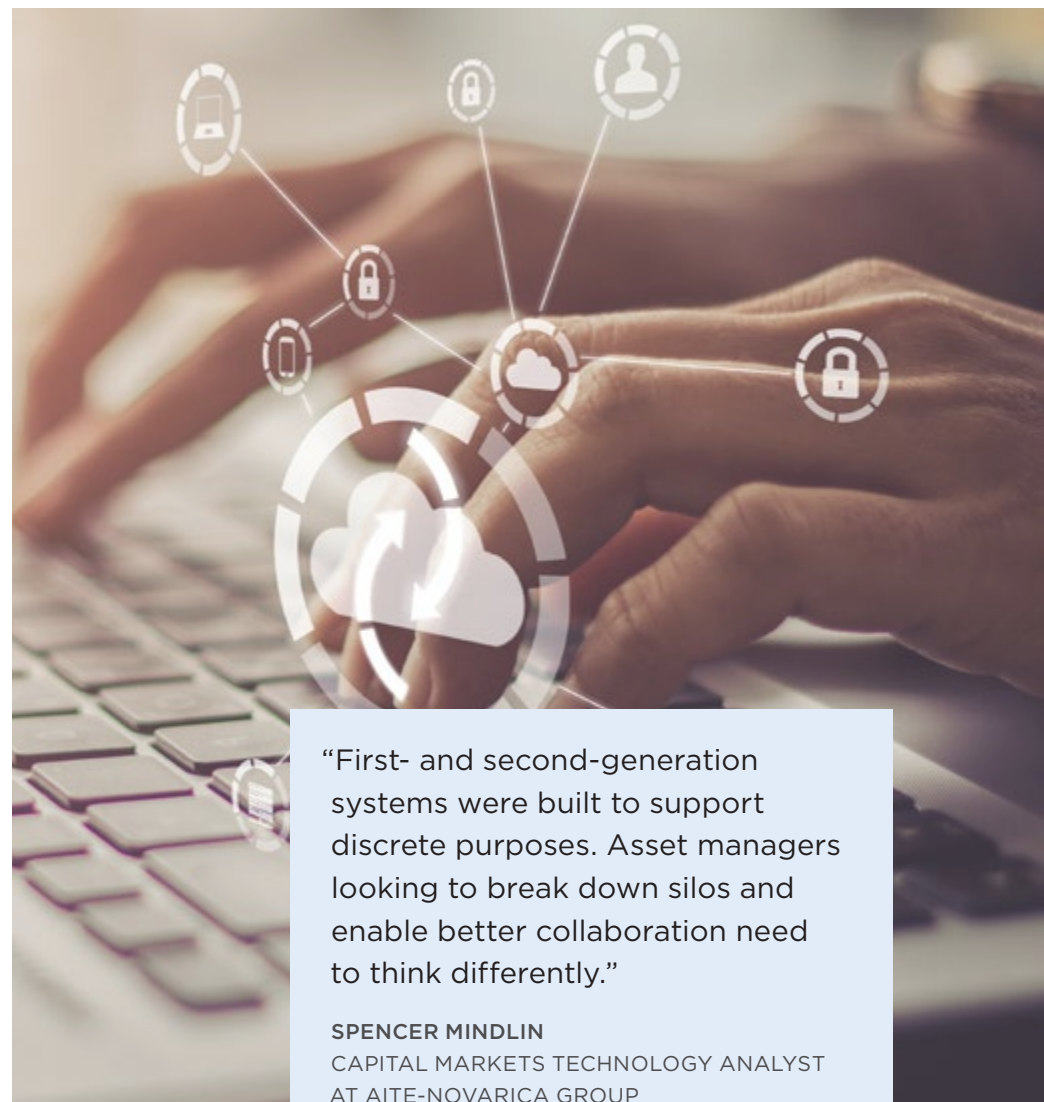
5. NEXT-GENERATION AUTOMATION

Technological advances have allowed the value of the OMS to move beyond just streamlining and automating manual tasks into key areas of front-office decision support. Today, many decisions previously left for the buy-side trader are being programmed directly into the OMS. Advances in automation and decision support impact many OMS users, especially compliance and operations personnel, portfolio managers, and, of course, buy-side traders.

6. MANUAL PROCESSES LEADING TO OPERATIONAL RISK

As firms expand their investment strategies beyond the highly automated equity markets into more complex markets, such as fixed income and derivatives, trading desks are under increasing pressure to reduce operational and regulatory risks associated with manual processing.

As a result, these firms are pressuring investment technology providers to offer solutions that accommodate their evolving needs.



“First- and second-generation systems were built to support discrete purposes. Asset managers looking to break down silos and enable better collaboration need to think differently.”

SPENCER MINDLIN
CAPITAL MARKETS TECHNOLOGY ANALYST
AT AITE-NOVARICA GROUP

CHAPTER SIX

The Characteristics of a Next-Gen OEMS

Let's look at how these and other drivers are at play in the features characteristic of today's next-gen OEMS and how firms are leveraging these solutions to get ahead.



Seamless Integration and Unified Dataset

While EMS and OMS are both robust solutions on their own, realizing the true benefit of a combined system requires complete integration, not a patchwork approach.

When done right, an integrated OEMS creates a streamlined front-office experience that shares a single, centralized source of truth. These types of solutions are created by going beyond simple FIX integration to leverage the source code of both the OMS and EMS.

For traders and portfolio managers seeking to deploy complex trading strategies, real-time front-office synchronization allows them to know exactly where their positions and trades stand at any given time, helping them generate investment ideas fast and quickly turn them into reality in the market.

A unified, next-gen OEMS is critical not just to the front office but downstream as well, benefitting compliance, operations, accounting, and other middle- and back-office functions. Working with one dataset across the firm provides greater efficiency and visibility and ensures higher accuracy.





Switching Investment Technology Systems?

Ask these questions first.



Strong Compliance Functionality and Complete Audit Trail

Compliance is a priority as firms trade across asset classes, jurisdictions, and investment strategies.

When an order is initiated in a next-gen OEMS, the compliance engine seamlessly begins applying its rules and logic. And should that order be modified somewhere along the trade lifecycle by a portfolio manager, trader, or trade support, the change is instantly evaluated and updated throughout the system to ensure compliance.

This holistic and integrated approach saves time and enhances speed to market by limiting necessary manual intervention. Moreover, it provides a critical audit trail.



Configurable Views of Real-time Data

Big data sets and high-performance analytics engines provide the data trading desks need to improve portfolio management and trading. But all too often, the amount of data and analytics asset managers and traders must consider and incorporate into their strategy is overwhelming and difficult to synthesize.

Next-generation OEMSs not only provide real-time portfolio and market data but do so in a way that is configurable and digestible. Traders can view the data they need exactly when they need it—enabling them to make better, data-based decisions.

CHAPTER SEVEN

Choosing an OEMS Vendor: Investment Technology Recommendations

If you're looking to implement a next-gen OEMS, ensure it offers all of the vital functionality of both an OMS and EMS detailed in this guide, as well as embodies the characteristics of a next-gen OEMS outlined in the previous section.

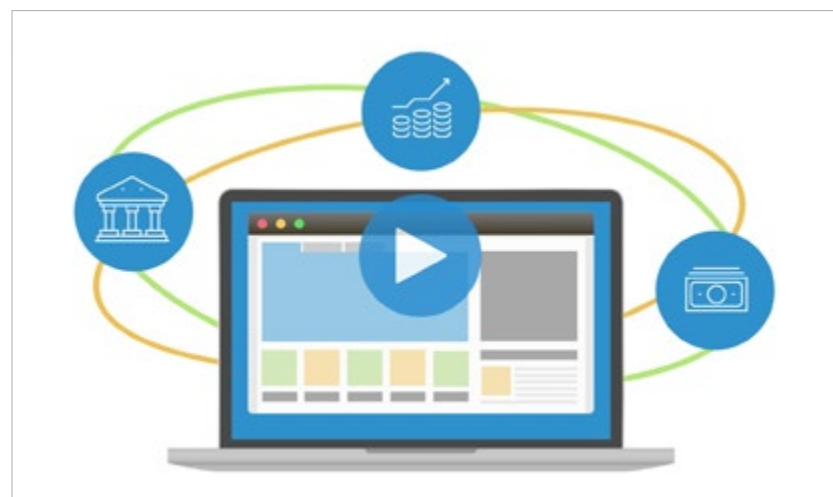
Transparent Pricing and Low TCO

As you make decisions about which technology is right for you, you need to think beyond the proposal price.

If a solution has expensive upgrades, requires custom enhancements, or needs to be replaced, the total cost of ownership (TCO) will far exceed the low initial investment.

It pays to choose modern, next-generation technology that can expand to meet your business needs as you grow rather than a simple solution that will require costly work down the line.

Learn more about calculating the TCO of your investment technology in the video to the right, and for a more in-depth look, [check out this blog](#).



[Click here to watch our video](#) ▶

Configurable, Flexible Solutions

Look for a technology solution that is highly configurable, one that allows you to customize and automate views and workflows, saving time and increasing speed-to-market. Also, ensure your technology offers the option to add functionality as the needs of your firm evolve.

When it comes to flexibility, SaaS technology is key. SaaS delivery reduces the costs associated with installed solutions because there are no elaborate hardware configurations, multiple line connections to brokers or exchanges, or required internal support and maintenance.

Modern, Mobile Technology

Central to today's modern technology is API connectivity. Through vendor-neutral connections to third-party applications, APIs give you plug-and-play access to the functionality you need when you need it, enabling you to build **your own customized investment ecosystem**.

As we learned during the pandemic, mobile is no longer a “nice to have” feature. Today, mobile is critical to the way we do business. Be sure your technology can provide access to critical functionality, like compliance, trading, and portfolio management, from any mobile device.

Support for Your Business Needs Now and in the Future

To ensure a potential vendor will be able to meet your firm's needs, take a look at their current client constituency. Different providers have offerings catered to different users. For instance, a specialized service for a proprietary trader may not be relevant to a large asset management firm. Find a vendor with relevant experience in businesses like yours.

Additionally, ask the vendor about their Managed and Strategic Services offerings. Whether or not you need these solutions now, selecting **a technology partner with skilled and experienced services teams** who can **help execute a specific project** or with whom you can **co-source recurring middle- and back-office tasks** can save you time and money.

Crypto and Digital Asset Capabilities

From cryptocurrencies to NFTs, digital assets continue gaining traction among asset managers and hedge funds. It's time your investment platform offers a solution to manage institutional digital asset operations in a way that looks, feels, and operates like the ones you know and use to manage more traditional asset classes.

Also, make sure your technology offers an open, broker-agnostic framework that lets you access the trading venues you need to stay ahead. Choose technology that enables you to trade large crypto orders through tight integrations with leading institutional digital asset execution platforms.

Additionally, look for an advanced trading engine and a crypto-specific trading window to give you access to institutional liquidity and trading tools for dynamically managing positions, portfolios, and trading risk across digital currencies.

A True Technology Partner

Finally, your OEMS provider should be a true technology partner.

An OEMS can bring great value to your firm but realizing that value requires a technology vendor that invests in your success at every phase of the relationship – from implementation and deployment to support of ongoing growth.

“Aite-Novarica Group asked clients to rank their vendor across indicators such as features and functionality, user interface and user experience, ease of implementation and integration with in-house or third-party systems, ease of upgrades, and support for customization. Currently, SS&C Eze is among the vendors that lead the pack.”

SPENCER MINDLIN

CAPITAL MARKETS TECHNOLOGY ANALYST AT
AITE-NOVARICA GROUP

CHAPTER EIGHT

SS&C Eze - Modern Technology for the Way You Trade Today

From trading and compliance to cost reduction and workflow optimization, clients report that SS&C Eze's OEMS technology has helped them transform their businesses.

With over \$40m invested annually in R&D, Eze continues to innovate to meet firms' evolving needs.

And our efforts don't stop at software. Our client-first approach extends to every touch point, and with [over 500 service experts worldwide](#), clients are always able to speak to someone who knows them, their business, and their workflows.

Learn how our industry-leading technology and service can help you achieve your investment and organizational goals today and in the future.

More and more firms are optimizing operations & getting ahead with a single technology vendor for all their OEMS needs.

Ready to join them? See firsthand the impact partnering with SS&C Eze can make for your firm.



Contact us or visit our website for more information on SS&C Eze's technology and services. Let's discuss how we can help you optimize operational performance.

For more information, visit
ezesoft.com

