



THE GREAT REWIRING: TECHNOLOGY TRENDS RESHAPING FINANCIAL SERVICES

A major asset manager recently showed us their alpha generation system- sophisticated algorithms processing alternative data and market signals to drive investment decisions. The challenge? This cutting-edge technology runs on infrastructure designed when trading happens by phone. This isn't an isolated case. Across the financial services industry, institutions find themselves in an increasingly untenable position: trying to compete in rapidly evolving markets while running on technology stacks that have calcified over decades.

The cost of maintaining these legacy systems isn't just financial. Our analysis shows that most financial institutions now spend upwards of 70% of their technology budgets simply maintaining existing systems. But the real price is paid for in missed opportunities and mounting risk. As markets move toward T+1 settlement and real-time processing becomes the norm, systems designed for T+3 settlement and end-of-day batch processing are reaching their breaking point.

Yet this crisis point arrives alongside unprecedented opportunity. Through our work with dozens of financial institutions and technology providers, we're witnessing the emergence of what we call **"The Great Rewiring"** - a fundamental restructuring of financial technology that promises to transform how institutions operate, compete, and grow.

This transformation combines several key advances: **cloud-native architectures that enable rapid scaling, artificial intelligence that automates complex processes, and composable design principles** that allow firms to assemble exactly the capabilities they need. Together, these technologies enable previously impossible capabilities- from real-time analytics across multiple asset classes to automated compliance monitoring that works. This applies to the entire financial services industry ecosystem – from banks, intermediaries to institutional asset and wealth managers. We will briefly touch upon each of these three areas and highlight some companies serving as catalysts to rewire the financial services technology stack, particularly in capital markets and wealth and asset management areas.

THE CLOUD-NATIVE FOUNDATION: BREAKING FREE FROM LEGACY ARCHITECTURE

The journey toward modern financial technology begins with a fundamental shift in how systems are built and deployed. Traditional financial technology stacks evolved through decades of accretion - layers of functionality added piece by piece, creating what one CTO described to us as "archaeological layers of code." Each layer represented a solution to yesterday's problems, but collectively they've created today's challenges.

The evidence of this accumulated technical debt is clear in our analysis of legacy platforms. The core architecture of many incumbent systems is more than two decades old, making them increasingly difficult to maintain and

nearly impossible to meaningfully upgrade. As the pool of engineers familiar with these systems continues to shrink, institutions face mounting operational risks.

According to our analysis of client systems, the impact becomes clear in how firms handle data. Data often remains buried in different silos across organizations, inhibiting the ability to leverage AI and machine learning effectively. This fragmentation makes it nearly impossible to implement modern alpha generation strategies that require rapid analysis of diverse data sets.

Modern cloud-native platforms fundamentally change how firms interact with their data. Where traditional systems treat data as a byproduct of trading operations, modern architectures place data at the center of investment workflows. **FINBOURNE's** approach illustrates this shift: instead of maintaining separate databases for different functions, they create a unified data model that spans the entire investment process. This means portfolio managers analyzing a position see the same underlying data as risk managers and operations teams - eliminating the time-consuming reconciliation processes that plague most institutions.

Deep Systems takes this concept further by treating data integration as a core capability rather than a technical challenge. Their platform doesn't just store data - it creates relationships between different types of information. Market data connects automatically to position information, which links to risk calculations and trading algorithms. When a portfolio manager wants to analyze a new trading strategy, they can immediately access all relevant data without waiting for technical teams to build new integrations or normalize different data formats. This fluid access to information changes how investment teams operate, enabling them to explore ideas and respond to opportunities that would be impractical to analyze in traditional systems.

The economic advantages are quantifiable. Consider the experience of a \$20 billion asset manager we recently advised. Their legacy middle and back-office systems required extensive manual intervention, creating operational bottlenecks and compliance risks. By adopting a cloud-native platform, they achieved a 40% reduction in total cost of ownership while simultaneously gaining capabilities that weren't possible with their previous architecture.

The platform's adaptability delivered strategic value beyond the cost savings, enabling rapid expansion into new products and markets. When they needed to add support for a new type of derivative product, the modular nature of their new platform allowed them to integrate the necessary functionality in weeks rather than months. This adaptability represents a fundamental shift in how financial technology serves business needs.

The economic implications of this architectural transformation are equally profound. Our analysis of implementations across multiple institutions shows that cloud-native platforms typically deliver a 2.5x reduction in total cost of ownership over five years compared to traditional approaches by enabling precise allocation of technology resources. Firms can now scale capabilities based on actual demand and direct investments toward competitive differentiation.

In the traditional model, institutions faced large upfront investments in hardware and custom software, followed by ever-increasing maintenance costs. Cloud-native architectures invert this pattern, allowing firms to start small, scale as needed, and direct resources toward differentiated functionality rather than basic infrastructure. This shift from capital expenditure to operational expenditure represents a strategic advantage that allows institutions to

respond more quickly to market opportunities. When opportunities emerge, they can deploy new capabilities without the delays of traditional infrastructure planning and procurement.

THE INTELLIGENCE LAYER: TURNING DATA INTO DECISIONS

While cloud architecture provides the foundation, the true transformation of financial technology is happening at the intelligence layer. Modern platforms use artificial intelligence to redefine how institutions process information, automating complex analysis that would overwhelm traditional manual systems.

The scope of this change becomes clear when examining how modern platforms handle data quality. Traditional approaches relied heavily on manual reconciliation and rule-based matching, consuming enormous resources while still leaving significant room for error. Today, platforms like Automated Data are achieving over 90% matching precision without manual tuning, with semantic understanding accuracy exceeding 96%. This step-change in capability enables firms to operate in entirely new ways. Where manual processes created hard limits on what firms could analyze or monitor, automated intelligence expands the scope of possible operations.

Consider surveillance and compliance monitoring. According to [Eventus](#), industry professionals report that 90% of surveillance alerts they encounter are false positives. Their platform addresses this challenge by automatically resolving 85% of alerts, allowing compliance officers to focus their expertise on the most complex and important cases. The system's supervised machine learning techniques are deployed specifically for order manipulation detection, with additional AI tools enhancing market abuse prevention.

The intersection of alpha generation and risk management exemplifies how deeply AI is transforming investment operations, while leveraging existing data infrastructure. Consider how fixed income traders traditionally analyzed opportunities: they'd focus on a subset of securities they knew well, relying on experience and manual analysis to spot potential trades. [AskNewt's](#) platform fundamentally changes this dynamic. Where human analysts might track a few hundred bonds, machine learning systems continuously analyze patterns across the entire fixed income universe, spotting correlations and market inefficiencies that emerge across different sectors, maturities, and credit qualities.

This capability becomes particularly powerful when combined with modern risk management systems. [ZeroBeta's BlueShift](#) platform shows how real-time analytics reshape trading decisions. Instead of waiting for end-of-day risk reports, portfolio managers can now understand the full impact of potential trades before execution. When market conditions shift suddenly, they can rapidly test different hedging scenarios and understand exactly how proposed changes would affect their overall risk profile. This dynamic interaction between analytics and risk management creates a more responsive investment process, where firms can act on opportunities while maintaining precise control over their exposures.

THE OPERATING MODEL TRANSFORMATION

These technological advances are enabling - and requiring - fundamental changes in how financial institutions operate. Global banks and broker dealers have historically built internal technology solutions that over time have become high risk, resource intensive, and cost heavy to maintain. The traditional model of building everything in-house or relying on monolithic vendor platforms is giving way to what we call the "composable enterprise."

This new model allows institutions to assemble capabilities from multiple sources while maintaining coherent operations. Rather than choosing between building and buying, firms can focus their internal resources on truly differentiating capabilities. Meanwhile, more technology components are becoming commoditized, such as connectivity and market data. This creates an opportunity for institutions to optimize their operating models by selecting best-of-breed solutions for commodity functions across their technology stack.

The transformation is particularly evident in how institutions can now approach trading infrastructure. Where firms once faced a stark choice between building custom systems or adopting rigid vendor platforms, modern architectures enable a more nuanced approach. **Quod Financial's** multi-asset O/EMS platform demonstrates how trading infrastructure can evolve to combine traditional high-touch capabilities with automated execution, while seamlessly spanning multiple asset classes. By integrating front-to-middle office functionality into a unified platform, their architecture consolidates multi-asset operations into a single streamlined workflow that reduces complexity while improving control and visibility. The result is not only greater operational efficiency but also enhanced ability to enter new markets and adopt new strategies without rebuilding core infrastructure.

The implications for market expansion are particularly significant. As institutions seek to diversify into new asset classes or strategies, they no longer need to build comprehensive infrastructure for each new initiative. **Beacon's Platform** demonstrates how firms can confidently enter new markets with cross-asset risk management capabilities and integrated development tools – adding flexibility and customization capabilities alongside existing risk systems. Their unified data model streamlines risk management across portfolios while creating consistent workflows. When combined with elastic compute services, this enables firms to scale operations and manage increasing trade volumes efficiently. By providing structured workflows and analytics, modern platforms bring institutional-grade capabilities to traditionally underserved markets.

While specific solutions may not fully replace existing trading technology, modular and extensible solutions enable a new model of business operations. This shift is particularly evident in how firms approach innovation. Traditional technology stacks required firms to make large, risky bets on new capabilities. The composable approach allows for more controlled experimentation. A hedge fund we recently advised was able to test a new trading strategy by integrating specialized analytics into their existing workflow, validating the approach before making larger investments.

This ability to "test and learn" represents a fundamental change in how financial institutions can evolve. The economic implications of composable architectures extends throughout business operations. Our analysis shows firms have reduced their product launch and market entry timelines by 40-50%. The ability to rapidly assemble and test new capabilities reduces innovation risk and cost. Firms can evaluate market opportunities with minimal upfront investment, scaling successful initiatives while limiting exposure on unsuccessful ones.

For financial institutions considering their technology strategy, the path forward requires careful consideration of several factors:

1. **Assessment and Prioritization:** The first step is understanding where legacy technology is creating the greatest constraints on business objectives. This isn't just about identifying pain points - it's about understanding where modern capabilities could create competitive advantages. We typically see firms begin with middle and back-office functions where the combination of operational efficiency gains and risk reduction creates compelling business cases.

2. **Architecture and Integration:** Moving toward composable architecture doesn't require wholesale replacement of existing systems. Many firms begin by creating modern data layers that can bridge legacy systems and new capabilities. This approach allows for gradual transformation while delivering immediate benefits in areas like real-time analytics and risk management.
3. **Vendor Selection:** The emergence of specialized providers requires a new approach to vendor selection. Rather than seeking single platforms that do everything, firms need to evaluate how different capabilities can be combined effectively. Our framework focuses on identifying vendors with strong core capabilities and proven ability to integrate within broader ecosystems.

LOOKING AHEAD

The financial services industry is entering a period of unprecedented technological change. The combination of real-time processing requirements, market complexity, and competitive pressures is making traditional approaches to technology unsustainable. At the same time, the emergence of cloud-native, intelligent, and composable platforms is creating new possibilities for how firms operate and compete.

Success in this environment requires more than just adopting new technologies - it requires rethinking how technology enables business strategy. The firms that thrive will be those that can effectively leverage modern platforms to create differentiated capabilities while maintaining operational excellence and regulatory compliance.

The great rewiring of financial technology is underway, for many reasons driven by business trends impacting technological adoption, such as:

- Equitization of new (digital) assets
- Deluge of alt data and the need to drive insights quickly
- Focus on private markets and need for operational efficiencies to enable private market transactions
- Shift to passive investing and need to extract alpha in active investing
- Industry interest in using AI to drive competitive advantage

The questions for financial institutions are no longer about whether to transform, but how to do so most effectively. Those that move thoughtfully but decisively to embrace these changes will find themselves well-positioned to capture the opportunities ahead while managing the risks that come with any major transformation.

For most institutions, the journey will be gradual, but the planning must begin now. The gap between modern capabilities and legacy constraints will only widen, making it increasingly difficult for firms relying on traditional approaches to compete effectively. The good news is that modern platforms and architectural approaches make it possible to transform incrementally while delivering real benefits at each step.

The future of financial services will belong to institutions that can effectively combine stability and innovation, leveraging modern technology to create sustainable competitive advantages while managing costs and risks effectively. The great rewiring isn't just about updating technology - it's about creating organizations (with aligned operating models and culture) capable of continuous adaptation in an increasingly dynamic market environment.