



Technology Investment in 2021 and Beyond

White Paper

A large, glowing white '2021' is positioned on the left side of a dark blue background. To its right, a hand is shown reaching out and touching a vertical data visualization. This visualization consists of several concentric, glowing white circles and lines, resembling a futuristic interface or data stream. The background is filled with soft, out-of-focus blue and red light spots, creating a high-tech, digital atmosphere.

2021

If one was to have asked the CIOs of most financial institutions about their top spending priorities for 2021 and beyond, just a few short months ago, the answers received would be very different to those given today. It may seem like a lifetime ago, and for many, a completely different one. At the beginning of 2020, the top priorities for most would have been regulation, followed closely by operational efficiency improvements as drivers for cost-cutting. These undoubtedly remain priorities, but as we emerge from lockdown and gaze warily at the post-Covid landscape confronting us, there are fresh new challenges to address, and new priorities to balance alongside these existing drivers.



Remote working is likely to continue on in the foreseeable future. Whilst the majority of firms have adapted swiftly to the new working environment, tactical solutions will now need to be transitioned to permanent infrastructure and arrangements. Those firms that already supported flexible and remote working were able to leverage a natural advantage over their less-prepared peers in the market. This is the new normal, and every organization will need to make significant changes in their businesses and operations if they are to thrive going forward.

As we look ahead to 2021 budgets, what are the areas in which technology investment will need to be deployed by firms wishing to maintain a competitive edge? The

need for automation is greater than ever – as a driver of operational efficiency, as a means of better managing risk in organizations, and as a tool for reducing the dependency on large office environments. Greater cloud adoption and use of software as a service can facilitate better scalability and resilience, not only from a technology deployment perspective, but also in terms of the ability to quickly connect to new markets for price discovery and execution. Frontier technologies such as artificial intelligence and machine learning (AI / ML) and distributed ledger technology will also play a more significant part, going forward, in our financial markets infrastructure.

Enabling the workforce of the future



As we've seen, most firms have made the tactical transition to remote working at scale. At best, we will see a gradual return of some employees to office premises over the course of the year. Given the challenges involved in reorganizing office space to support this, plus the sheer logistical constraints associated with access to buildings, such as elevator capacity, there will be many employees who will simply have to stay put in their current remote working environments. How can this be translated into a longer term, collaborative working environment that maintains required standards of security?

Firms will need to invest in more collaboration tools. Virtual conferencing software currently allows for limited forms of collaboration such as screen sharing. We are going to need more and better ways of creating shared online workspaces for employees, such as virtual whiteboards. Development and cultivation of client relationships will also require new and innovative ways of hosting fully participatory events online, above and beyond the passive consumption of online webinars and content.

Managing risk and accessing liquidity

In times of exceptional volatility, how do firms ensure that they are able to access the pricing data and liquidity that they need, both in order to service their client requests and to manage their own risk? How do they rapidly scale their systems to support increased volumes of trading, whilst minimizing fixed infrastructure costs? The ability to leverage cloud technology, and a cloud-based community of market participants, is a key differentiator for any firm. With cloud deployments of in-house systems, firms can rapidly scale up resources to support high volumes and throughput without impacting their latencies, and can then release these resources when they are no longer needed. This effectively creates unlimited headroom for any trading system, at a variable cost - a concept unimaginable in the past.

Cloud-based providers of services such as market data and exchange connectivity have been able to offer their clients rapid access and connectivity to new markets, with no new technology deployment required beyond configuration. This is essential, at a time when



technology teams are working remotely and under constrained circumstances, and deployment windows are minimal and high-risk. Last but not least, participants in cloud-based networked communities can easily connect directly to each other. Given the demonstrable benefits experienced during the crisis by those already on the cloud, it's clear that acceleration of cloud adoption will be high on the technology spending agenda for many.

The new landscape of sales and trading

Pre-Covid-19, sales and trading have always been the key functions that nobody believed could be undertaken remotely, given the stringent regulatory requirements for supervision and surveillance of these activities. And yet, remarkably, we have seen that it is possible. Regulators have had to adapt too – balancing their concerns around market abuse with the imperative need to ensure market integrity and stability in a period of unprecedented volatility and uncertainty. It is clear, however, that there is no light touch being taken here.

Following increasing evidence of greater levels of market manipulation and sharing of insider information, the UK's Financial Conduct Authority (FCA) published Market Watch 63 on 27th May 2020. In it, the FCA set out its expectations of market conduct in the current context of increased capital-raising events and alternative working arrangements. Firms must continue to ensure that they are able to demonstrate full compliance with all aspects of the Market Abuse Regulation, particularly given the

current situation and the opportunities that it creates for unscrupulous behaviour. Firms are also still expected to maintain full compliance with regulations such as MiFID II, with its requirements around capture of voice and other communications between sales teams and clients, leading up to the execution of a trade.

Market surveillance is a mammoth undertaking for most firms. Data comes from many sources and exists in many formats: trading systems, chat transcripts and voice recordings. This is where the use of AI / ML techniques can have a transformative impact. Natural language processing enables voice data to be automatically transcribed and digitized, and then processed in a standard format alongside other electronic communications. Firms can also augment and make more effective use of their supervision and surveillance teams and allocate their time to higher-value activities. Instead of monitoring for suspicious activity, they can be alerted when suspicious activity arises.

Taking voice trading to the next level

The challenge for many has been the translation of a closely supervised and monitored trading floor, to an environment in which traders are operating from their homes. Many large banks have already implemented sophisticated, integrated surveillance mechanisms across all of their sales and trading systems and communication channels. This model will now need to be implemented by other financial institutions as well.

In some asset classes, such as bonds and interest rate derivatives, we witnessed a dramatic increase in voice trading during periods of high volatility, particularly for large volumes and notional sizes. Automation of the sales-trader workflow has enabled sales desks to maintain pace with the influx of requests for quotes. We've heard examples in which the use of chatbots for RFQ response has enabled salespeople to better prioritize their time and direct communications, alerting them when intervention is required. The need for human interaction remains strong, and nothing can compare to relationships and trust built over time. Technology, in this instance, can help to supplement the strength of those bonds, by focussing the time and energy of salespeople where it is needed the most.



After the trade is done

The post-trade landscape has long been ripe for automation, and this is an area in which frontier technologies will arguably have the most transformative impact, particularly in the area of derivatives processing. The complexity of derivatives contracts has long been a blocker to greater automation of life-cycle events. Organizations such as the International Swaps and Derivatives Association (ISDA) are actively working on standards for encoding derivatives contracts through their Common Domain Model (CDM) initiative. Natural language processing now provides the capability to take existing derivatives contracts and convert them to machine-readable, standardised formats.

We are not far off from having the ability to execute derivatives trades with contracts that are fully digitized. The technology and platforms already exist for counterparties to share a single view of their derivatives contract, with full automation of all post-trade events and cash flows. The result? A huge decrease in operational costs and streamlining of operational teams to focus on the higher-value activities around exception management and client relationships. Distributed ledger technology (DLT) sits at the core of these systems, and integration into existing systems and infrastructure is going to be a crucial requirement for firms wishing to benefit from these massive efficiency improvements. It's not just about integration, though – to fully leverage the wider capabilities offered by DLT, such as real-time settlement, firms need to start thinking now about the wider changes to their infrastructure that will be required to support increased digitization.



A multiplier effect to the benefits

For CIOs looking at how to prioritize their technology spend over the coming 12-24 months, the new drivers and requirements do not need to compete with existing ones. As we've seen, the introduction of new technology can greatly augment a firm's capabilities and enable it to streamline its operations and reduce costs. Acceleration of cloud adoption enables the reduction of fixed infrastructure costs and paves the way for a more agile technology function that is more responsive to the needs of the business. Enhanced automation and data processing capabilities can be leveraged to meet regulatory requirements. With a joined-up technology strategy, firms can experience multiple benefits from a single stream of work.



What can IPC offer?



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IPC recognizes that the necessity for operating efficiently and effectively – remotely – is critical too. We remain laser-focused on enabling traders and other staff to maintain business continuity and continuing our critical role to ensure that the capital markets function smoothly. With nearly 5 decades of experience and being a beacon of stability during periods of crises, we are an important partner to our customers and other industry leaders during this difficult time.

Our diverse partnerships and open architecture reflect the value that we place on working together. We value partnerships with many of the firms that our clients use to connect with one another. In addition, participants in IPC's Connexus Cloud are connected to a community of **110,000+ users** in nearly **7,000 capital market participants** around the globe, across **750 cities** in over **60 countries**. It is the power of this community to connect and collaborate, and to shape the financial services industry of the future, that we would like to share with our customers.

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