asset servicing times

Technology Annual 2021

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assetservicingtimes

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A new environment

The industry has never experienced a year quite like 2020, with the majority of the workforce moving to a work-from-home environment at short notice causing disruption for many.

The COVID-19 pandemic has seen the market become significantly more cost-conscious, anticipating volatility and future needs. Although technology has been embraced by many in order to transform and modernise legacy processes to keep costs down, some have warned against innovating for the sake of it.

In the 2021 Asset Servicing Times Technology Annual, we speak to industry experts about how the latest technology developments are transforming the market and improving the overall customer experience.

As the impacts of the pandemic play out, the annual looks at some of the key business challenges for 2021 and beyond. This includes the accelerating move to the cloud; digitisation and digitalisation; a data strategy ahead of a digitalisation strategy; the legacy technology debate and a big-bang approach; and, finally, distributed ledger technology, artificial intelligence and machine learning, along with application programming interfaces.

The annual also explores why managed services are increasingly becoming the preferred solution for many organisations and how technologies can help performance teams address and overcome their challenges while positioning themselves for long-term success.

You will find all the above and more in the latest Technology Annual.

I would like to say a big thank you to all our partners, whose sponsorship and help has been instrumental in putting this handbook together.

Becky Bellamy
Editor

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Leading the transformation of asset servicing

BNY Mellon's Roman Regelman discusses some of the bold steps providers should take to lead the transformation of the asset servicing industry

A new world of integrated platforms, transparency and technology has radically altered what is possible. With industry forces and current economic conditions weighing on asset managers and asset owners (already under significant pressure before COVID-19), the stakes now could not be higher. The question asset managers and asset owners should be asking themselves is to what extent are they ready for the future.

The answer depends on how ready their providers are. To deliver what's needed requires taking a different approach from the past, as well as a digital- and data-driven mindset and skillset. Providers must have the foresight and the talent, the infrastructure and the technological savvy. They're expanding beyond the traditional role of supporting operations to revolutionise the front, middle and back office. They look to marshal data for competitive advantage — to help more meaningfully gather assets, improve investment performance, access liquidity pools and other imperatives.

I'll share what we are seeing and hearing from our unique vantage point of serving many of the world's financial leaders, and discuss some of the bold steps providers should take to lead the transformation of the asset servicing industry.

Becoming orchestrators

The traditional role asset servicers have played in supporting operations is important to our clients. But it addresses only a small part of their needs.

Asset managers and asset owners are increasingly focused on managing and using data to drive competitive advantages that can offset fee and cost pressures. They also recognise the importance of improving the end-investor experience and addressing investors' demand for increased transparency. It's becoming clear that no single provider can deliver everything clients need while offering adequate choice and flexibility.

Asset servicing businesses must therefore become orchestrators of solutions and of information across investment processes. This could mean bringing together disparate data, and delivering modular and flexible solutions that enable clients to adapt, tailor or transform their businesses according to their priorities and needs.

Fundamentally, asset managers are looking for solutions across the investment continuum. They're looking for those solutions to be connected by data. And they're looking for choice, as clients all have different comfort levels regarding the components of technology and architecture they want to own or outsource. They expect that underpinning it all is a resilient, frictionless, operating model that lets them focus on their growth and serving their clients.

BNY Mellon OMNI is a great example of what the future can look like. It is an interconnected global network that brings together leading solutions and tools across the investment process. Clients can access them in a streamlined, frictionless, fully integrated ecosystem that includes our partners and parts of BNY Mellon beyond asset servicing. OMNI helps our clients power their growth through distribution, data and analytics; increase efficiency and resiliency; and drive agility so that clients use optimal technology and can act nimbly in an ever-changing landscape.

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Data as a competitive advantage

Data is a vital asset class for our clients. For many investment organisations, however, it's challenging to get to the point at which the realised value of data lives up to its promise.

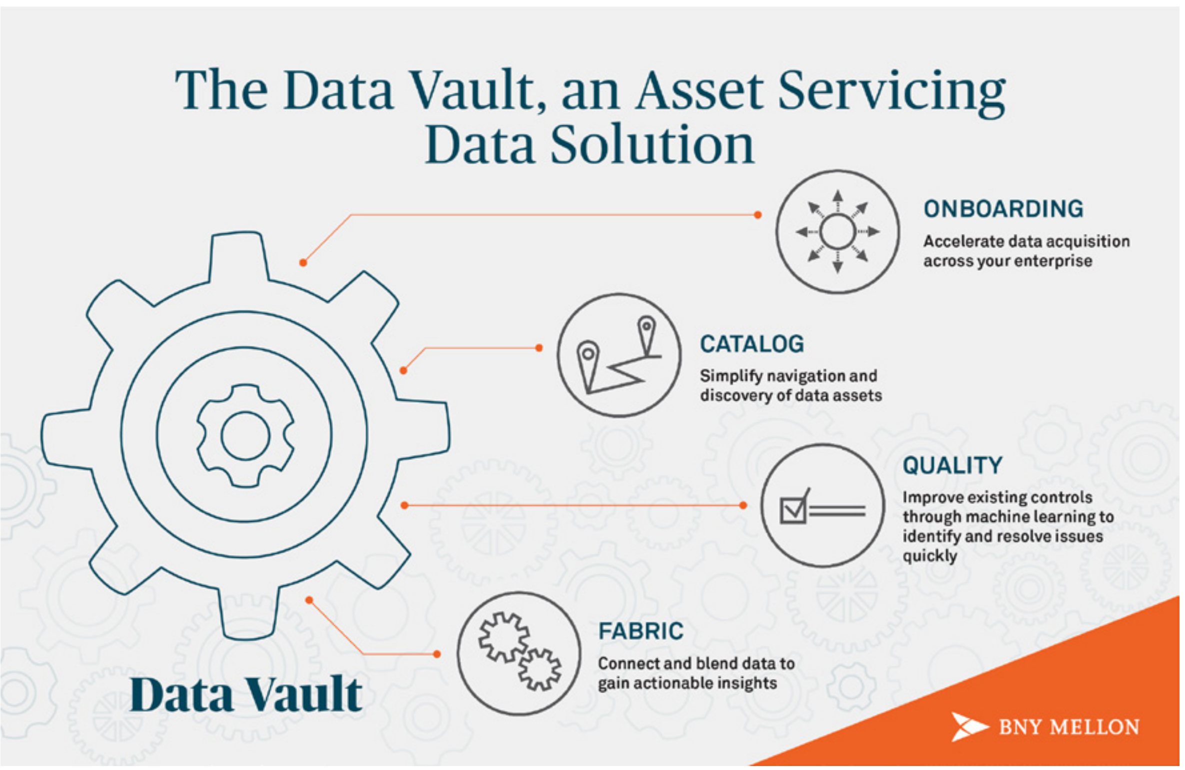
They lack the infrastructure and associated services that empower organisations to use data for competitive gains, and the underlying framework and tools for acquiring, analysing and managing data.

BNY Mellon has the advantage of having delivered client-centric data solutions to the market for more than 25 years through the Eagle software platform, which provides portfolio management, data management, investment accounting and performance measurement.

Last year, we combined the capabilities and resources of our Eagle product suite with a host of new and existing talent across the organisation, and created a new service with an expanded set of products known as data and analytics solutions.

Operating with the skill and agility of a fintech, data and analytics solutions is a powerful software and content offering built upon an open ecosystem. This structure enables us to collaborate with leading technology providers and equip our clients with tools for using data in the front, middle and back offices.

Clients looking to seamlessly integrate and process data will be leveraging our new Data Vault platform. One client adopting the platform is a large investment management firm on the lookout to buy smaller firms. Vault will allow them to store and access all their data — whether accounting, sales and marketing, advisory — in one place. BNY Mellon is helping them power a circle of capabilities that not only gives them tremendous operational leverage, but also an advantage in an ever-complex marketplace.



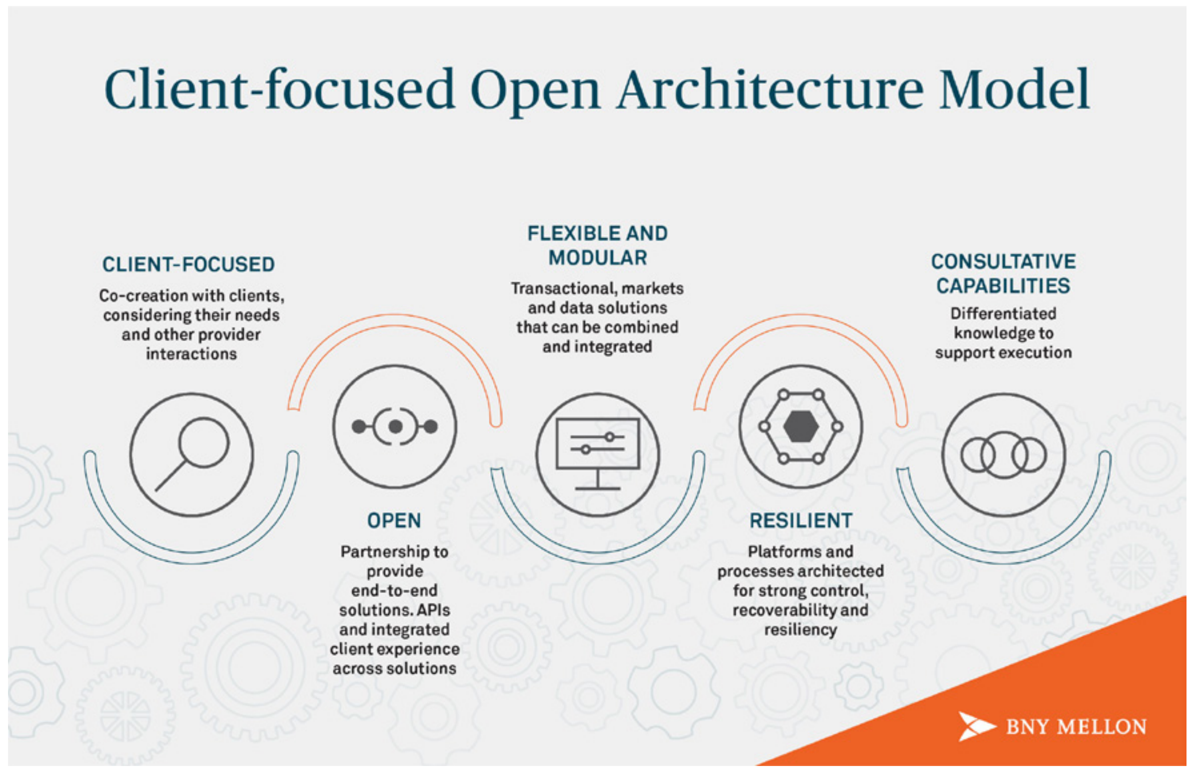
Open to more connections

Many firms engage in the same markets, but their strategies and needs reflect bespoke objectives. Innovation comes from many places, and no one firm will ever have a monopoly on good ideas. The implication for asset servicing is simple: Optionality is essential to success, but it can't come at the expense of efficiency. Clients need an open, flexible and modular platform that creates scale, while making it easier to incorporate a broad range of innovation across their investment lifecycle.

> ***"Innovation comes from many places, and no one firm will ever have a monopoly on good ideas"***

We were a pioneer in our open-architecture approach, and it's enabling us to engineer high-quality solutions for our clients while preserving client choice and independence. BNY Mellon OMNI allows clients to change their providers in an accessible and non-disruptive manner. For example, we have guided some of our asset manager clients through system consolidations where they were able to pick and choose the technology that best suits their go-forward strategy.

Our collaboration with Milestone Group has launched an innovative new suite of oversight and contingent net asset value (NAV) calculation solutions. By joining forces with BlackRock's Aladdin platform, Bloomberg and SimCorp Dimension, we enabled clients to select best-in-class tools to create a streamlined, frictionless, fully integrated ecosystem so they can invest and operate smarter. We are also joining with other industry players to address persistent pain points, such as proxy voting. This is the orchestrator role in action.



"The implication for asset servicing is simple: Optionality is essential to success, but it can't come at the expense of efficiency"

Digital opens new possibilities

Expect more standardisation and outsourcing. For instance, contrast the standardised accounting in the mutual funds industry with, say, private equity administration.

Not nearly as much is outsourced in private equity because there aren't as many standards and rules governing it. The same goes for asset servicing. Do managers think trading is an essential part of their alpha strategy? They don't. It's now a standardised, rules-based function and ripe for digitisation.

When an organisation understands the complex challenges facing its clients, it can digitise just about everything. If COVID-19 reinforced anything, it is the critical need to digitise every process and interaction. It happened in custody years ago, and it happened in accounting. We see digitisation transforming administration today. Going forward, we'll see just about every part of what was once in the realm of bespoke client service become automated.

A defining characteristic of the revolution underway in capital markets is the digitisation of everything. The algorithmic investing of beta and index products continues to be enormously popular. Even client sales and client service are benefiting from machines. We're implementing Microsoft Dynamics 365 as an end-to-end platform on which we automate inquiry routing and response, and incorporate machine learning and eventually AI, to facilitate better decision-making. We use this information to improve existing solutions and develop new products to address client needs.

Distribution is perhaps the most noteworthy function to be transformed by digitisation. BNY Mellon is reconfiguring our business in order to leverage our unique position across services and clients. For example, we're taking state pensions, health savings accounts and other personal savings programmes and integrating them with back-office administration and intermediary analytics.

We are also taking advantage of machine learning to help asset managers better understand predictive market demand drivers and sales momentum for mutual funds and exchange-traded funds in the US so they can gauge how to successfully gain market share.

Digitisation also provides us a great opportunity to develop our talent by challenging them to take the organisation forward.

Our culture evolves

At BNY Mellon, we recognise that we're no longer a core back-office operations provider. That era is over. That's why we're stretching ourselves to think bigger and become more creative, agile, digital and innovative. We also have what pure-play disruptors don't: a truly diverse, global team. In addition to all the other advantages, when it comes to innovation, a diverse team will typically have a higher awareness of bias issues and an inclusive perspective — which avoids building bias into algorithms.

Earlier this year we combined our asset servicing business with our digital organisation, setting the direction for BNY Mellon's digital future. This infusion of talent and expertise is accelerating the business' digital and data transformation, preparing it to be future-ready and positioned to support clients' changing priorities and needs.

BNY Mellon knows that openness and a new focus on data will help us become even more relevant and impactful to the front offices

"As a company we have become even sharper, more systematic and data-driven, enabling the advancement of our asset servicing business"

of our clients. We've made strong progress on our mission to digitise our company — with even more exciting developments on the way.

As a company we have become even sharper, more systematic and data-driven, enabling the advancement of our asset servicing business.

Become future ready

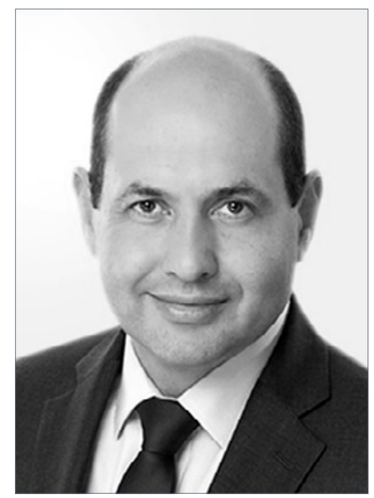
In this new world, every asset manager and asset owner faces a choice: choose a provider equipped to be that digital orchestrator, to support choice and flexibility, and to leverage data as a competitive advantage — or be left behind. I would encourage asset managers and owners to pose these questions:

- What does it take to transform every aspect of the business to succeed in a new digital reality?
- How much time does the business spend trying to integrate the front, middle and back offices?
- As the volume and scope of data continues to swell, is the business equipped to handle it?

At BNY Mellon, those questions are guiding our transformation. We've adapted our services and solutions so that our clients can thrive in an environment where the distinctions between office functions haven't just blurred; they've vanished.

There is no longer any need to compromise between asset servicing functions that are efficient and those that are resilient.

Clients can and will have both.



Roman Regelman
Senior executive vice president and CEO of asset servicing and head of digital
BNY Mellon

Embracing the power of technology

Maddie Saghir reports

Pictet's Rob Lowe highlights the importance of embracing the power of technology and modernising legacy processes particularly in the fund services space

How did the pandemic impact the fund services market?

I think we have gone past the point of comparing the impact on our businesses with anything experienced before. Operationally, resilience became the watchword for clients when exploring solutions with incumbent providers or in considering new relationships. As part of that decision-making process, business contingency plans became a moment of truth for the entire industry; none had been tested before on such a large scale. Some discovered the hard way that a centralised operational hub — or offshoring in countries not equipped to handle the rapid adjustment to teams working from home — became a real issue.

At Pictet, we decided many years ago to keep our operational value chain internal. This enables us to significantly reduce our reliance on external counterparties and to retain high processing standards. We were also able to implement business continuity planning (BCP) swiftly, most clients barely noticed any changes.

However, the initial lockdown period did come with obvious limitations in our ability to customise a small number of deliverables and progress on certain projects, but thankfully this was temporary. Our client engagement and problem-solving mindset enabled us to re-prioritise these requirements with clients as they, themselves, were adapting to operational challenges.

What opportunities can technology provide in this space?

The power of technology can – and should – be embraced. It can modernise legacy processes and translate data for the benefit of all parties. At Pictet, we are constantly investing in technology infrastructure and feedback to our online capabilities particularly vindicated this commitment. Our chief operations officer of technology and operations teams have prioritised dynamic interfaces with clients and 2020 has demonstrated that this approach is indispensable. Even the most traditional clients expect a modern IT infrastructure, high-performance e-banking, mobile applications, full access to markets with 24-hour trading capability and the possibility to integrate their portfolio management systems. The sky's the limit really when it comes to the power of technology within our ecosystem.

Technology can be a cost-efficient way of avoiding a 'one size fits all' approach. With the current environment of increasing costs linked to regulatory requirements and so forth, one can easily fall into the trap of standardising everything to make sure the costs are kept low. Leveraging on technology allows us to provide bespoke services whilst avoiding too much standardisation. Overall, we see technology as a valuable enabler when it is used for the benefit of our clients, for instance when it allows us to transform data into value-adding analytics for our clients or reimagine account opening processes.

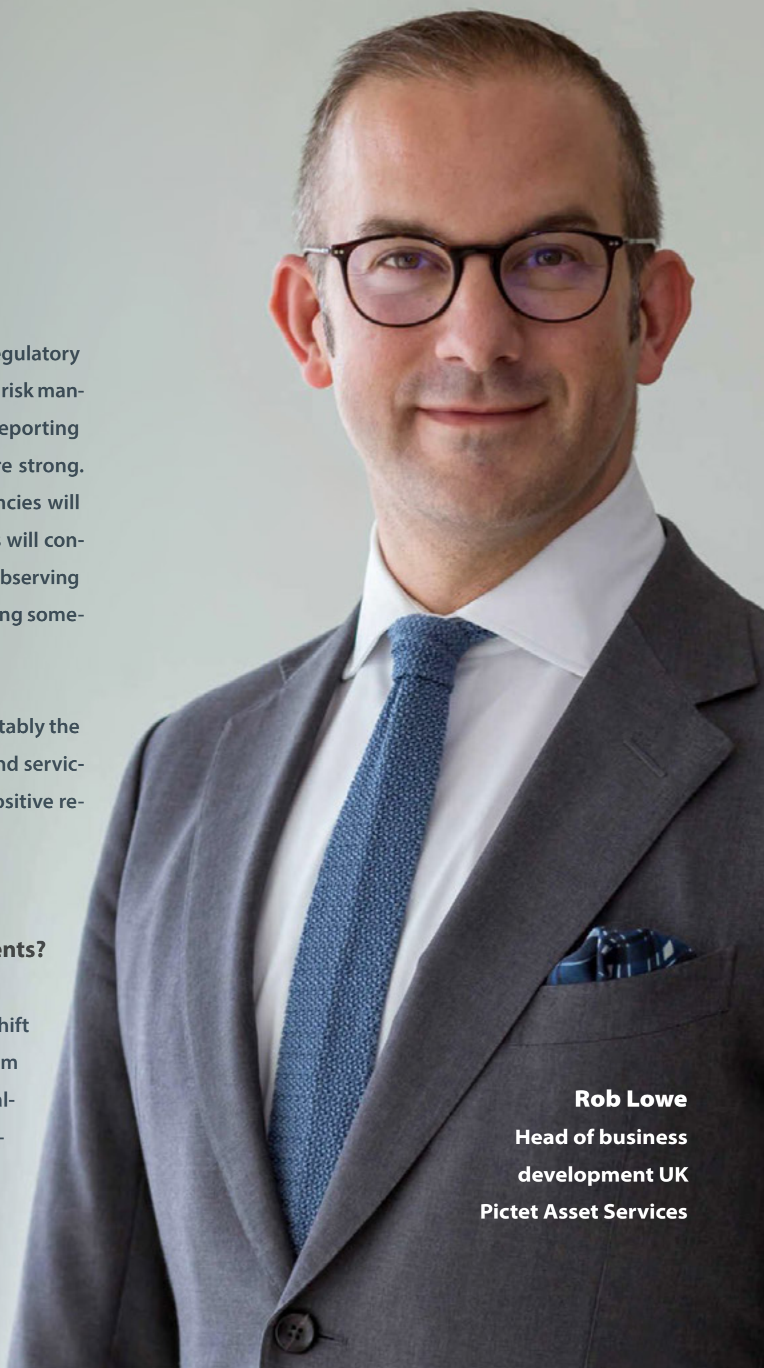
Do you believe the industry will see increased consolidation of providers?

In the current environment and within a changing regulatory framework, market participants need to invest in their risk management, customer relationship management and reporting tools, and make sure their processes and systems are strong. This comes with higher costs and therefore inefficiencies will become apparent, some providers will merge, others will consolidate their position in the industry, and we are also observing a refocus on delivering core competencies – retrenching somewhat from non-core strategies.

We are keenly observing private assets solutions – notably the trend that private equity managers have acquired fund servicing platforms. Will this strategy still offer the same positive return on assets in the coming years?

What trends are you currently seeing from clients?

In terms of investments, we are seeing a continued shift towards other asset classes: clients are moving away from plain vanilla securities towards private assets, typically illiquid, which offer a longer investment time horizon and decorrelation with traditional indices. Low or negative interest rates on cash and fixed income also



Rob Lowe
Head of business development UK
Pictet Asset Services

> *"The key risk, as we see it, is to fall into the trap of 'innovation for the sake of innovation'. It is easy to rush in to, say, digital enhancements without validating client need"*

favour private asset allocation for cash-rich investors, and now private equity or real estate have become part of a standard asset allocation for institutional clients who are more relaxed about lock-up clauses, reduced redemption frequency and gating. However, small size or first-time funds appear to be struggling, even with the right asset class or investment allocation.

In times of uncertainty, investors feel more comfortable with well-established brand names and the safety of large assets under management.

In terms of operations, transparency is expected — it is a positive for both manager and provider as it tends to lead toward clearer costs and performance benchmarking and deeper levels of trust. Technical discussions and solutions seem to be moving further up the value chain, too.

Are clients demanding more for less?

A fair response is that clients' expectations are evolving – especially when considering the competitive landscape and economic cycle. As mentioned previously, providers need to offer solid digital capabilities, improved data analytics (especially for fund distribution), to provide or enable regulatory assistance and to offer support on new products and services, e.g. environmental, social, and corporate governance (ESG). The market has evolved to a point where managers see asset servicers as an extension of their business. Clients also expect more tailored options to fit their needs, such as the unbundling of services or shared accountability for a new service or solution.

End clients or investors should always be the priority and transparency continues to be important; for example, regulatory costs on the provider should be openly discussed with the manager as these fees are typically absorbed by investors.

Where do the challenges lie?

The key risk, as we see it, is to fall into the trap of 'innovation for the sake of innovation'. It is easy to rush in to, say, digital enhancements without validating client needs. For Pictet, the ground rule of each endeavour is to 'get the basics right', even as those basics evolve.

Client relationships should be consultative and free from unnecessary distractions. If the market can continue to forge partnerships like this, we'll have the best chance of tackling the inevitable challenges of the future.

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PICTET 1805
Building Responsible Partnerships

From outsource to outcomes

SmartStream's Simon Byles discusses how leveraging the technology and comprehensive expertise of a domain dedicated proven managed service is increasingly becoming the preferred solution for many organisations

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What trends are you seeing within the managed services space?

The interest in managed services has never been greater. Client appetite, interest and more importantly clarity on their needs is at an all-time high. In the past, organisations explored managed services as a potential option, sometimes without full clarity to their needs or conclusive measurement of success, however, in more recent times, the managed services engagement has matured.

The clear need is for an outcome-based service arrangement which delivers operational excellence. Moving away from an outsource focus (of doing it as well, for less), to a strategic outcome-focus, where the service provider as the domain expert, partners with the client to deliver formalised business outcomes.

Last year was a record growth year for SmartStream's managed services. This year we are forecasting our growth to be more than 150 percent compared to 2019. New clients this year have ranged from small hedge funds to very large retail banks, and from large investment banks and asset managers to insurance companies.

Managed services are changing the current landscape as they provide the complete solution that delivers to defined outcomes. Our customers seek the most efficient and effective way of achieving these outcomes, achieving their business goals and realising their individually defined measures of excellence in areas across the middle and back office, such as reconciliations, corporate actions, fees and expense management, reference data, collateral and cash management. Furthermore, the COVID-19 pandemic has meant that organisations will continue to focus on both their immediate and long-term technology as well as operational resiliency and sustainability, and therefore a proven managed service solution remains firmly on the c-suite agenda.

Leveraging the technology and comprehensive expertise of a domain dedicated proven managed service, is not only recognised as a viable option, but it is increasingly becoming the preferred solution for many organisations.

"The consideration of a managed service, recognises the importance of resiliency and responsiveness in challenging times, instant scalability and sustainability in better times, and importantly the significant and continuous investment for future times"

Why would a company consider the use of managed services?

Securing and sustaining the highest quality of delivery requires expertise and continuous investment and improvement. Where certain activities are not central to the core business purpose of that organisation and do not provide a competitive advantage, but are vitally important in supporting the business, leveraging the right specialist managed service provider is a commercially astute consideration.

There is clear recognition that improvements can be achieved across all aspects of the business activity including raising service quality when leveraging comprehensive expertise, especially if the providers are proven in delivery of best practice services through leveraging their own best in class technology platforms.

The consideration of a managed service, recognises the importance of resiliency and responsiveness in challenging times, instant scalability and sustainability in better times, and importantly the significant and continuous investment for future times.

What are some of the challenges associated with managed services?

When engaging with a managed service provider, it's important that both parties understand the requirements with agreed service-level agreements (SLAs) to ensure sustainable business outcomes with the continuous commitment to improving and delivering operational best practices and cost benefits.

SmartStream is a domain expert, delivering through its award-winning technology and the best practice operational services. It remains dedicated to its areas of expertise, ensuring the very latest technology solutions are fully aligned with its accredited operational professionals.

Do you think we will continue to see growth within the managed services space next year?

SmartStream as mentioned has seen significant and continued growth in recent years due to the demand from its clients for managed services.

This has been driven largely by the firm's reputation and its ability to keep up with the rapid pace of change in the industry and to constantly respond with innovative technologies. Today, 70 of the top 100 banks around the globe rely on SmartStream's solutions which are more accessible than ever with a range of deployment options.

The COVID-19 pandemic continues to further focus the industry on the technology and processing resiliency of its operations. It has further crystalised the need for in-depth focus and investments in long-term resiliency and sustainability and the focus on the optimal model to deliver on key business objectives.

Our customers' decision to partner with SmartStream has been truly validated throughout COVID-19.

While 'outsource' providers have requested revisit of SLA's given their service challenges, on the contrary SmartStream has received the full appreciation of its customers, for continuing to provide unimpacted services to market-leading benchmarks, remaining completely committed throughout to an outcome-focused delivery relationship.

This global situation and the maturing recognition of the business value provided by the right partner, will ensure next year and beyond, the increasing recognition and relevance of managed services.

What work is SmartStream doing within its managed services department?

The keyword is invest. We continually invest in our technology, we have a research and development programme in all of our development centres, and more recently we set-up an innovations lab, made up of a talented team of data scientists and mathematicians to pilot new technologies on behalf of our customers.

Just in the last year, we made significant announcements with the launch of our artificial intelligence (AI) and machine learning (ML) technologies, which are truly game changing for the industry.

To ensure we remain the respected provider of choice, we are continuously talking to our customers and working with industry practitioners to ensure we are not only fully serving and addressing the current business challenges, but building the roadmap to meet those ahead.

We are also investing in cloud-native solutions, and more importantly, they include AI/ML technologies.

"We continually invest in our technology, we have a research and development programme in all of our development centres, and more recently we set-up an innovations lab, made up of a talented team of data scientists and mathematicians to pilot new technologies on behalf of our customers"

The innovations team developed a solution called SmartStream Air, within a year they have launched version 2.0 and this technology is now being integrated into all of our solutions so that our customers can also increase operational efficiencies without having to retire technologies. Our latest AI solution is called Affinity, it uses observational learning to identify user action patterns across significant data sets.

Affinity understands the actions taken, replicates where accurate, offering transparency to improve actions, ultimately realising cost/efficiency and accuracy business benefit gains.

All of these advances are being deployed by managed services, which means that our clients can see immediate returns within their business without the need of investing in costly IT projects, which may or may not come to fruition.

Why is technology so important within the managed services sector?

The scalability of any business process is critical. Ensuring the services are fundamentally supported and enhanced by technology solutions is key to this.

During times of market volatility, the scalability of business models have proven to be critically dependent on technology and with staff working from home many businesses simply wouldn't be able to function.

The latest cloud-based SmartStream technology, which has real-time scalability, has proven itself time and time again, ensuring service levels meet and exceed customer's benchmarks.

As the accredited operators of our own technology, we know our successful delivery is the optimised combination of the scalable, capable and resilient technology and comprehensive expertise.

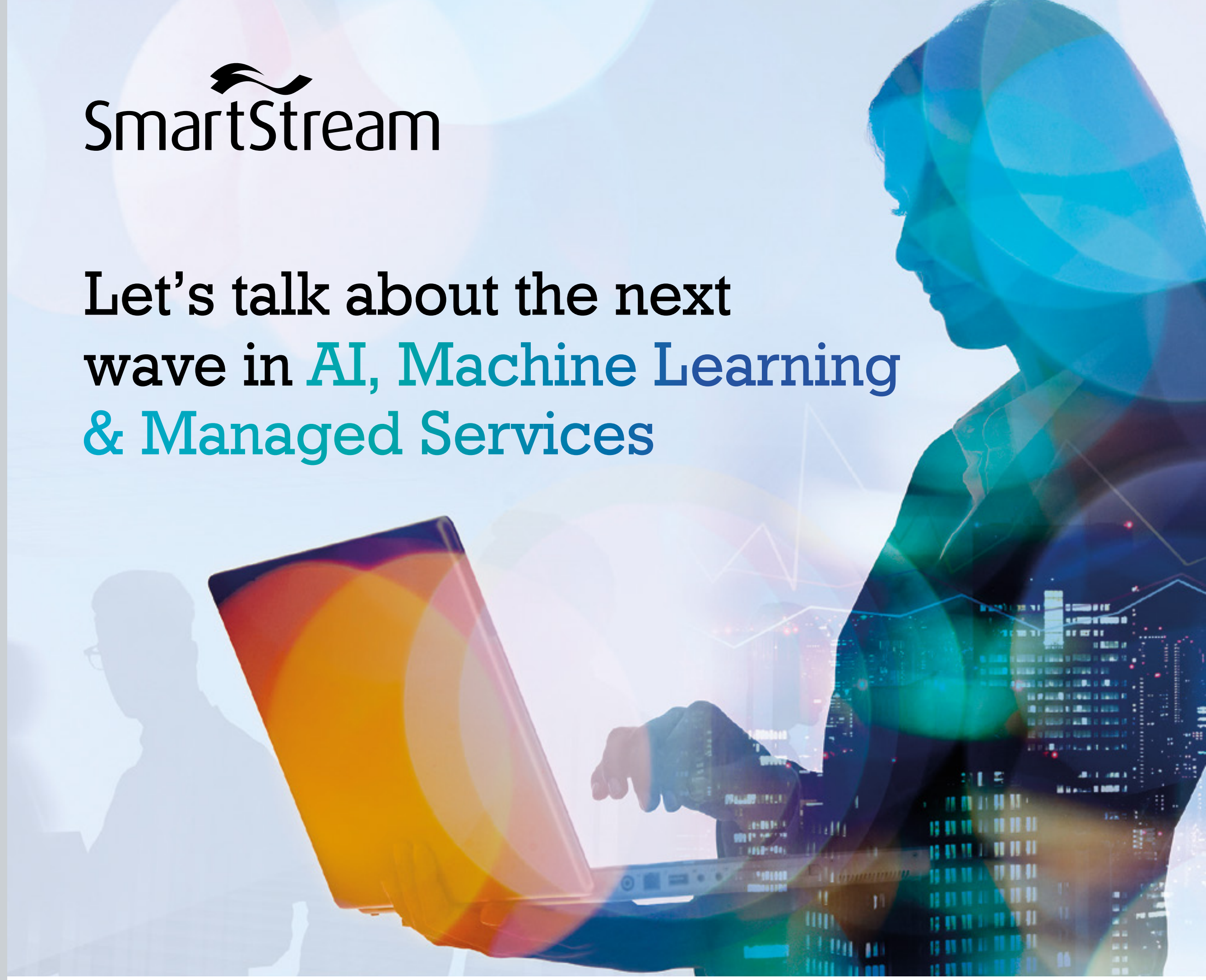
Over the next five years, how do you see the managed services space expanding?

SmartStream has a diverse range of clients, ranging from tier 1 institutional banks through to small hedge fund managers, and we are confident that managed services will continue to grow and evolve as the fully-recognised go-to solution standard for the industry. The broadest adoption is with cloud-based solutions, working with our clients it's common for us to work with their own internal cloud strategy teams as this moves further up the strategic agenda, this is a big cultural shift, but a necessary one for if they are to survive and thrive. The topic of AI and machine learning will evolve to enhance the managed services offering and capabilities, providing business insight, greater transparency and further leveraging the expertise to continuously meet and proactively deliver targeted business outcomes.

Over the next five years, SmartStream will continue to be at the forefront of the industry and remain the trusted partner to our growing customer base, we will be investing in new technologies and leveraging our accredited experts to deliver next-generation solutions with lasting benefits.

"Over the next five years, SmartStream will continue to be at the forefront of the industry and remain the trusted partner to our growing customer base"

Simon Byles
Global head of business development for managed services
SmartStream



SmartStream's fully integrated suite of solutions and platform services for middle- and back-office operations are more relevant than ever – proven to deliver uninterrupted services to critical processes in the most testing conditions. Their use has allowed our customers to gain greater control, reduce costs, mitigate risk and comply with regulations.

With AI and machine learning growing in maturity, these technologies are now being embedded in all of our solutions and can be consumed faster than ever either as managed services or in the cloud.

Simply book a meeting to find out why over 70 of the world's top 100 banks continue to rely on SmartStream.

info@smartstream-stp.com
smartstream-stp.com

Retooling the investment management industry's performance yardstick

Kate Maryniak, Lance Gardiner and Richard Mailhos discuss how new technologies can help performance teams address and overcome their challenges while positioning themselves for long-term success

Performance has always been the industry's yardstick for measuring investment effectiveness

Whether for a single security, a fund or portfolio, an asset class, a strategy, or for a firm-wide look, asset managers need to capture the right data and then accurately calculate, analyse and report on their performance and risk exposure.

This reality won't change any time soon. What has changed; however, is the size, scope and complexity of the performance measurement task, and what it takes to manage performance effectively. Many performance teams are straining under the weight of this ever-growing responsibility. In the past, these teams had fewer sources and far lower volumes of data.

They could manage with siloed views of performance, had more time to produce reports, and fewer people to whom to send them. Today performance teams are facing an entirely different task. To meet increasing front office demands, they need to provide near real-time reports that include performance and risk exposure analyses for all asset classes and across all customer types.

They need to produce reports for various internal audiences and external constituencies, such as regulators. Then there is the need to do all of it quickly, accurately and cost-effectively – even though many teams are still using legacy systems and outdated tools. In this paper, we highlight the growing criticality of performance reporting to an investment management firm's operations and the changing demands on performance teams.

We spotlight some of the more important and pressing challenges these teams are facing in today's complex, global and rapidly evolving investment business landscape. Lastly, we outline how new technologies can help performance teams address and overcome their challenges while positioning themselves for long-term success.

Increasing data, complexity and stakeholders, with less time: how technology can help meet these challenges

The overarching problem faced by many firms and their performance teams is a persistent lack of enterprise-wide visibility into asset performance and risk exposure. Front office teams expect their middle office performance teams to generate and validate rate-of-return performance numbers and risk analyses that they can trust and rely on. Market data shows that consistently achieving this goal remains an ongoing challenge for many performance teams.

During a recent Financial Technologies Forum webinar entitled 'Performance Teams Under Pressure', we asked participants to name the top operational challenge that performance teams need to navigate today.

More than 40 percent of respondents cited "timely delivery of accurate performance data to various stakeholders" as their top challenge. What clients, front office staff, regulators and other stakeholders want today are single, 'clean' datasets that cover all asset types and classes. They want that clean and normalised data to fuel the robust return calculation and risk assessment engine, and for the results to be made available to sophisticated analytics systems. They also want performance and risk workflows and processes to encompass the entire investment lifecycle.

Lastly, and most importantly, they want the results delivered quickly and cost-effectively so they can use the resulting business intelligence for maximum effect. That includes populating reports, informing client conversations, validating investment strategy adjustments, justifying new fund ideas, and more.

As the gatekeepers of this information, performance teams strive to meet these arduous requirements. For many teams, it's a tall order and sometimes they miss the mark. Let's examine some of the main reasons why this situation exists and persists.

Enterprise data management challenges abound

High-quality and high-capacity data management capabilities are must-haves for all investment firms today. Many firms claim to have these capabilities, and that these capabilities underpin their data-driven investment strategies and decisions.

Too often, those claims are merely aspirational. A look behind the curtain at many firms shows that they are still struggling to address and overcome their enterprise data management challenges. Contributing factors include:

- **More volume according to estimates from the World Economic Forum, by 2025 humans will be generating 463 exabytes of data each day worldwide:** For those unfamiliar with the term, an exabyte is equal to one quintillion bytes – or one billion gigabytes. The financial services industry is one of, if not the largest contributor. Handling the sheer volume of data is a challenge in and of itself.

- **More sources:** Stakeholders want full views that include the basics as well as integrated performance results and risk exposure analysis covering all lines of business and all asset classes. That requires a unified and cohesive approach, but in many firms, data 'ownership' and management still reside at the departmental level.

- **More slices:** Another major challenge is handling performance calculations for many clients, in different operating regions – each with its own measurement requirements – and for a growing and changing roster of investment vehicles, fund types and asset classes. It is a difficult task when firms are managing diversified asset pools that include alternatives and other nonmarketable investments, like derivatives, private equity, real estate and structured products.

Even more complexity is introduced when firms try to synch up the varied methodologies they use to meet the unique requirements of each asset class.

How technology can help

To get a better handle on their data and the operational challenges posed, most have implemented data warehouses, and more recently, data lakes. Data warehouses are central repositories of disparate historical and current data from different sources that has been transformed, normalised and highly structured. Relational database technologies are used as the foundation of many data warehouses because they excel at running high-speed queries against structured data. But due to all the structure applied, data warehouses tend to offer up 'packaged' views of an organisation's data that may not be easily applicable in all cases in which it is needed.

Data lakes are different in that they are repositories of data stored in its natural or raw format. They typically include raw copies of the data from source systems, including unstructured material such as emails, PDFs and other documents. They also can include semi-structured, structured and binary data. Big data technologies usually underpin data lakes because they are highly adaptable and can handle any data type or structure. They also can scale easily to handle very large volumes of data.

Data warehouses and data lakes are both useful – even essential – tools. They can be deployed side-by-side to give performance teams a 'best of both worlds' approach to performance and risk analytics. In addition, investment firms tend to have highly skilled data professionals on staff, so building new or enhancing existing data warehouses and lakes are well within reach. There also are numerous software vendors that presently provide high-quality, commercially available enterprise data management solutions. It is also worth mentioning that to stretch beyond the confines of 'packaged' views of an organisation's data, there are a plethora of self-service business intelligence (SSBI) platforms available, offering capabilities such as visual exploration of extensive time series data sets, interactive dashboarding and innovations such as AI-driven explanation of data points and natural language query processing.

We see a trend for financial technology vendors to partner with such SSBI platforms and this is starting to open new vistas for clients looking for deep insight into their data.

Multiple books of record: ABORs, IBORs and Now PBORs

Investment management firms have long relied on the accounting book of record (ABOR) to keep track of their activities and results. However, due to the limitations of ABORs, most firms have added an investment book of record (IBOR).

Now, with enormous increases in the complexity of capital markets, and the pressing demands of clients, regulators and internal stakeholders for more performance, risk and business intelligence to be delivered faster, lots of firms are adding yet another book – the performance book of record (PBOR). It's important to understand these books, the differences between them, and why firms need all of them today.

The ABOR is a baseline of sorts. It supports basic back- and middle-office functions, such as generating daily net asset value data, and day-to-day fund administration, transfer agency, and custodial services, as well as client and regulatory reporting. An ABOR is focused on costs, on total net asset value, and on charts of accounts. It's critical for determining cash positions, conducting reconciliation and for closing periods. Generally, ABORs are processed on a T+1 basis, meaning that trades are recognised as a part of their funds and net asset values (NAVs) are calculated one business day after trades are executed. An ABOR supports performance returns at the total fund or portfolio level, and updates are applied to current holdings and open periods.

The IBOR goes further, providing users with broader, more granular and more real-time views of performance and risk data. IBORs are focused on market price and on start-of-day and even intra-day positions. They support performance returns at the individual position level, with updates applied to historical holdings or open periods. IBORs help teams overcome problems like tool proliferation. That happens when a firm has one system for handling the active management of equities, another for fixed income, and still others for over-the-counters, derivatives, alternatives, foreign exchange and structured products. Then there's the data from outsourcing partners like sub-advisors. IBORs roll up all of this disparate data in a centralised storehouse of all the information required to produce firm-wide reports on risk exposure, performance, attribution, and reports for regulators and other stakeholders.

> *"Data warehouses and data lakes are both useful – even essential – tools"*

The PBOR is focused on fair market valuations and non-held benchmark constituents. PBORs typically use trade dates and are benchmark-aligned. They support the generation of performance return calculations and risk assessments at the sub-position and underlying exposure levels. They also offer compositing and highly advanced analytics and modelling. As for the datasets included, PBORs form a superset of all relevant data, including investment information, integrated performance results, risk exposure analysis, reference data and adjusted data, (for example, notional economic exposures and alternative valuations), plus a variety of external benchmark and peer data. PBORs can stretch to cover all lines of business and all asset classes – including alternatives and other non-marketable investments, such as derivatives, private equity, real estate and infrastructure funds.

Essentially, PBORs provide transparency and visibility into all investments covering all facets of performance and risk analysis. They are designed to be single, cohesive and efficient systems providing unified views of data lineage, data processing and calculation methods across a firm's unique array of investment vehicles, strategies and asset allocations, as well as its roster of investment managers.

Unfortunately, given the pace with which markets are evolving, both the ABOR and IBOR are falling short of expectations. The ABOR serves its purpose in generating official return calculations, and the IBOR enables in-depth performance, attribution and risk analysis. Today's front-office teams expect more, so middle office teams need to deliver more; hence the growing popularity of the performance book of record or PBOR.

How technology can help

Generally, ABORs lack the speed, context and accessibility necessary to support decision making for the front office, and decision-making support for the back and middle offices. Today, top vendors provide modernised accounting and investment systems. Some are labelled as PBORs. More carry labels such as 'Performance and Risk Analytics' solutions. Furthermore, in the quest to achieve high levels of data quality as the foundation for investment decision-making, modern systems are often reinforced by effective data management tools and services which assist in maintaining the quality of the data and closing data gaps without disruption to daily operational workflows. Whatever they are called, these systems offer real- or near real-time performance, sophisticated enterprise data management capabilities, fast and accurate performance calculations, advanced analytics for risk exposure and other metrics, data enrichment functionality and powerful yet intuitive report-generation features. They also can aggregate and normalise data from external sources. To that end, the right accounting system can serve as an effective IBOR solution for mid- or smaller-size firms without the significant resources to implement and support a complex, dedicated solution

Conclusion

The investment management industry is at an inflection point. More and more data is being generated, and that data is being enriched, analysed and reported on with more speed, granularity and breadth than ever before. While performance is still performance, and risk is still risk, the yardsticks the industry uses to capture, measure and understand all of this data are fundamentally changing. In performance and analytics, the new must-haves include not only faster, more accurate, and more comprehensive data management and analysis, and intuitive report generation, but also transparency and visibility into all relevant workflows and processes. This moment has arrived because many firms have taken their existing investment infrastructures as far as they can go.

As their performance requirements continue to grow and change, gaps are widening between what legacy systems can handle and what performance teams need to deliver. To remain competitive, many firms need to modernise key parts of their investment operations, including their performance and analytics systems and processes. Whether they develop their new resources in-house or leverage commercially available solutions from top vendors, the key goal is digital transformation. The time has come for firms to start moving away from their legacy systems and toward flexible, scalable and automated cloud-based systems. It's the most effective way for firms to position themselves for long-term success and growth. While these are major changes, the good news for investment firms is that there are market-tested and proven ways now available to help them make the transition. The first step is recognising the need for a new yardstick.

> ***"While performance is still performance, and risk is still risk, the yardsticks the industry uses are changing"***

Kate Maryniak
Head of product management
Confluence

Lance Gardiner
Product manager, reporting solutions
Broadridge

Richard Mailhos
Principal consultant
Meradia

Asset servicing, redefined

Fenergo's Kevin O'Neill examines how a digital investor's lifecycle management approach can enable asset servicing firms to drive cost efficiencies and enhance service quality

For many asset servicing firms, digitising the investor lifecycle is a journey that needs to be undertaken in close collaboration with their clients. The ability to seamlessly integrate with their client's infrastructure and exchange information on a real-time basis ultimately creates more alignment between the asset servicing firm and the asset manager, resulting in a frictionless investor experience.

When we consider the investor onboarding journey, it is important to think of the end-to-end impact, from account opening, client due diligence and investor outreach across the stakeholder value chain.

To generate maximum efficiencies, there are three core objectives that transfer agents and fund administrators should keep in mind:

Empowering the investor for greater operational efficiency

Today's investor expects a fast and frictionless service experience at every stage of the onboarding journey and throughout the lifecycle. By providing digital self-service channels, transfer agents and fund administrators can empower their client's clients to self-serve at their own convenience, without waiting for office hours or appointments. Investors can easily support their onboarding application by uploading the required data and documentation via the portal. Additional value-added services, including digital identity and verification and eSignatures, can help automate and expedite the capture and verification of identity information and documentation, powered by a rules-based workflow. This generates greater efficiencies for the asset servicing firm by relieving the back-office of manual data input and verification and eliminating the risk of human error with a rigorous automated verification process.

Streamlining the end-to-end onboarding process

Straight-through processing and end-to-end journey orchestration

When designing a best practice approach to digital investor onboarding, the primary goal should be to automate and enable straight-through processing where possible, particularly for low-risk investors. With an end-to-end digital investor lifecycle management solution, asset servicing firms can benefit from an application programming interface (API)-first ecosystem that supports a managed-by-exception approach.

The onboarding case can be digitally directed through all internal approval processes across the middle and back office – from account origination, compliance, legal to account opening. This is achieved with an integrated, rules-based workflow along with seamless integration with front-office systems to automate the consumption, processing and internal routing of client and investor information.

Compliance by design

Asset servicing firms can further automate the regulatory compliance process with a robust regulatory rules engine that accurately calculates the exact anti-money laundering (AML)/know-your-customer (KYC) rules and other regulations (derivatives, tax, market reform rules etc) in scope based on particular inputs from the investor portal, including client entity, jurisdiction, funds used etc). From here, it assigns a classification and an appropriate client risk rating to the legal entity, which dictates the appropriate level of client due diligence required. Both the investor and compliance team benefit from swift indication of the exact data and documents required to fulfil multi-jurisdictional regulatory obligations.

In terms of automated screening and risk assessment, asset servicing firms can gain a true picture of complex investor structures and identify beneficial owners with legal entity hierarchies that further summarise the nested relationships of parent/child associations for enhanced auditability. This is enabled by integration with a range of industry data and AML screening providers.

Beyond the investor onboarding experience, regulatory change management can often be slow, reactive and time consuming in many organisations.

By leveraging a community-driven regulatory solution, transfer agents and fund administrators can benefit from a robust risk governance framework that delivers futureproofed, industry-aligned compliance.

Centralised client data

Data is the lifeblood that powers efficient investor journeys across the lifecycle. With a 'one and done' model, asset servicing firms can internally connect all data repositories to create a centralised, shared view of both the client and investor. This encourages re-use of existing data and documentation across business lines and jurisdictions, subject to local data privacy rules, for future investor onboards, cross-sell, upsell and regulatory purposes.

Kevin O'Neill
Global head of asset management and asset servicing
Fenergo

Intelligent document automation

The client due diligence (CDD) process involves a significant amount of document collection to create an investor profile that accurately depicts and measures the risk each individual investor may pose to the asset servicing firm.

Optical character recognition (OCR) and machine learning technologies can help alleviate the pain of document processing and client due diligence during the onboarding process and subsequent account maintenance with automatic data extraction and validation of prospectus documents.

Event-driven client due diligence

KYC is an ongoing process and doesn't cease once the investor has been onboarded. Investor risk ratings change as their circumstances change, requiring transfer agents and fund administrators to remain vigilant throughout the investor lifecycle. Asset servicing firms can improve ongoing due diligence throughout the investor lifecycle by moving from periodic reviews to an event-driven process. An automated digital KYC solution can help streamline this by delivering real-time data monitoring against enhanced due diligence (EDD) requirements, prompting intervention only if attention is required by the compliance team. Features including trigger event management, automated document refresh and the processing of updated client information for accuracy ensure ongoing compliance and enable resources to focus their efforts on high-risk cases.

Providing transparency and full oversight of client and investor activity

A key pain point for many asset servicing firms is the limited management information on service status they can provide to clients and investors. This lack of visibility and oversight creates frustration across the entire stakeholder value chain, resulting in sub-optimal service quality.

To improve investor and client transparency, organisations must consider a digitally-enabled solution that can provide real-time insights and reporting. For the investor, this entails communication via the digital self-service portal on the progress of their onboarding case, as well as alerts for data and documentation.

In terms of the asset servicing/client relationship, this real-time reporting is delivered via dashboards. This includes an executive view which provides a global snapshot of client and investor activity and key trends across the business. The second operational view delivers business insights on efficiency and performance across numerous global operational centres. The final client relationship dashboard assists transfer agents and fund administrators with their day-to-day operations by providing a full overview of their investors, cases, processes, and tasks. By providing improved management information visibility, the entire asset servicing operation can benefit by moving from a reactive, manual approach to reporting to a proactive, digital approach.

Conclusion

As of today, asset servicing firms have not reached the level of digital maturity expected by asset managers. The objective for organisations should be to move towards a digitally enabled omni-channel model for every stage in the investor lifecycle. There is a huge opportunity for asset servicing firms to work with expert technology partners to be able to deliver the seamless service and consistent regulatory compliance that their clients need and expect. In an evolving industry landscape, the future belongs to the asset servicing firms who can transform their client and investor onboarding experience into a frictionless, value-added service that delivers greater transparency while reducing operational costs. Over the next few years, asset managers will expect their asset servicing partners to significantly improve their digital self-service capabilities and compliance controls, while providing faster access to assets.

A digital investor lifecycle management approach can enable transfer agents and fund administrators to drive greater cost efficiencies and enhance service quality by automating front-to-back office processes across the investor lifecycle and delivering a full 360 client and investor view.

What lies beneath

Simon Shepherd, CEO of MYRIAD Group Technologies, discusses the themes hidden within the big talking points of 2020

The broad sweep of challenges facing the financial services industry in Q4 2020 has never been more daunting: the second wave of COVID-19 entailing more country-wide lockdowns, the presidential election in the US and of course for the UK – and Europeans alike – the as yet unknown impact of Brexit.

Articles we have published this year have sought to link the underlying impact of meeting, or not meeting, these challenges with the use of our software platforms. Some of these changes are truly structural and long-term and while our eye might be on the next three, six or 12 months, strategic planning has to look at three- and five-year time horizons and perhaps even longer.

Banking and financial services has for some time been seen as something of a pariah for the wider population, fuelling huge growth in asset prices and then reaping vast rewards, but for the very few for whom this is true, it does not reflect the fact that the vast majority are 'not guilty' in that respect. While the COVID-19 crisis will undoubtedly lead to job losses in banking and related financial services, it is equally true that as an industry, banking could be seen as being in one of the better places to weather the storm.

One by-product of the shake-out is that many banking roles can be conducted from home. The big reveal has been just how many people enjoy working from home and how productivity has been unaffected. But this comment depends on how you define productivity, because some of the deeper challenges that have manifested themselves – access to data, time to turnaround tasks, liaison with colleagues, collaboration, innovation and most importantly execution – have been seriously compromised by these harder-to-address challenges.

Dealing with the obvious big theme, a second wave of the virus is striking all economies at largely the same time and magnitude, despite various European governmental efforts. We certainly have to look to our friends in Asia to understand how better to tackle these outbreaks in the future. So while the pandemic has at times dominated the news agenda to the exclusion of everything else, it is obvious that this was not just a three-month challenge but it looks much more likely to be a three-year challenge and possibly even longer than that.

Picking your way through the morass of topics in virtual conferences is certainly a new challenge for interested professionals, but one of the key business challenges for 2021 and beyond is how to replace the qualities of a physical meeting. We suspect that much of the business written in 2020 was probably in train by the time the virus struck and might spill into new business next year in 2021, largely based on existing contacts and established business cases already in place. But what about 2022? Our current focus is closing the deals we see in our pipeline for 2021 and, perhaps more importantly, protecting what we need to achieve in 2022 by working very hard on that two- to three-year timeline, right now.

Before addressing the hidden themes, these are what we see as the main concerns in the Industry for 2021: an effective vaccine for COVID-19; the accelerating move to the cloud; digitisation and digitalisation; a data strategy ahead of a digitalisation strategy; the legacy technology debate and a big-bang approach; and finally the bucket that is distributed ledger technology (DLT), artificial intelligence (AI) and machine-learning, and application programming interfaces (APIs).

Dealing with each in turn means we begin with COVID-19: even if there is a vaccine, the shift to homeworking is now a fact for many and for a significant proportion, it is likely to be permanent. The hidden theme here is collaboration, innovation and how they happen. The benefits of the physical whiteboard session have gone and understanding how best to engineer a requirements document, how to hire, train and encourage a culture (all of which are in some sense collaborative) remotely, is a very serious challenge going forwards. Where such collaboration strays into non-core activities, like banks trying to build software solutions, the answer is: leave it to the experts. If it was difficult to engineer inhouse solutions pre-COVID-19, it is not any easier since the virus impacted the global economy.

The move to the cloud is a reality; it is more secure, it is more robust from a business continuity planning (BCP) disaster recovery perspective, it permits instantaneous expansion in capacity and the move to cloud-native applications is now an irreversible trend. But the hidden theme is core technology and its difference to desktop technology. Many financial institutions are striving to

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> *"Bad data, no matter how well-organised, will always compromise the most efficient of processes"*

recreate legacy core technology in the cloud, while simultaneously trying to upgrade or re-platform it, to keep pace with what is going on around them. Another hidden theme here is to stop reinventing the wheel (particularly while that wheel is still turning) and to progress radically towards better desktop applications, cutting out the need for the traditional heavy-lifting (define, design, develop, deliver, deploy) of a project. Move, almost immediately, to secure desktop delivery of the applications your staff and counterparties need.

This introduces a third hidden theme: digitisation. But is it digitisation or digitalisation? The difference is that digitisation is the process of converting information from a physical format into a digital one, whereas digitalisation describes the process that leverages digitisation, or digitised data, to improve business processes. This links into putting a data strategy ahead of a 'digital' strategy: getting your data right – accurate, clean, correct – is the precursor to any re-engineering of process-driven strategy.

Organising that good, clean data in a coherent way, keeping it secure and yet making it available to all those who need 'transparency' is the next step. Bad data, no matter how well-organised, will always compromise the most efficient of processes. So digitisation should precede digitalisation and a strategy around good, clean data is the starting point for the digitalisation of your processes.

A recent conference panellist boldly observed that "technology represents fear": fear of the unknown and a shift in working practice; fear of substitution and replacement; fear of adoption and adaptation; fear of misuse and abuse, and fear of making the wrong choices. The business case that permits the shift to value-added activity and away from manual processing or re-keying of data, or error investigation and manual remediation, is the business case that needs to be adopted in today's world. The hidden theme here is that the temporary changes put in place in the spring of 2020 are becoming permanent and, as manual processing and access to physical documents when working remotely is no longer possible, the need for clever desktop solutions has become pressing.

The lower the impact, the more "non-core" yet secure these desktop solutions are, requiring no local implementation or the involvement of centralised IT teams, the better. Adopting a phased approach and not big bang, de-risks the move anyway, but the pick-a-project-and-do-it-in-the-cloud approach by way of a proof-of-concept is to be highly recommended. Business cases that needed more than the obvious operational efficiency gains and commercial benefits of a project are now being realised, because of the sheer practical benefits of having secure, remote access from your desktop or even personal device.

By way of a conclusion, we hardly ever hear about 'robotics' these days, certainly in the context of banking and financial services. The fad word of three or four years ago has now been replaced by talk of artifical intelligence, DLT, and sometimes application programming interfacels as the new "new technologies" we all need to embrace. It is almost as though the language used obscures what is really going on, which is not overnight change but a steady evolution of how things are done. The securities services banker who looked over her or his shoulder five years ago at the looming advent of DLT is almost certainly still in post and will still be in post in five more years' time.

The perceived looming disaster that was DLT and the pan-Industry loss of jobs has simply not materialised and nor will it; the evolution of DLT as a usable technology was always going to be slowed by inertia at the very Institutions it is supposed to have threatened. Big banks will buy proven solutions and not engineer them themselves and this points to the perhaps less hidden theme of this article: accessing good, clean data securely in a post-pandemic world, using proven solutions whilst sitting at your desktop and working remotely, is the way the world is going, no matter what your discipline.

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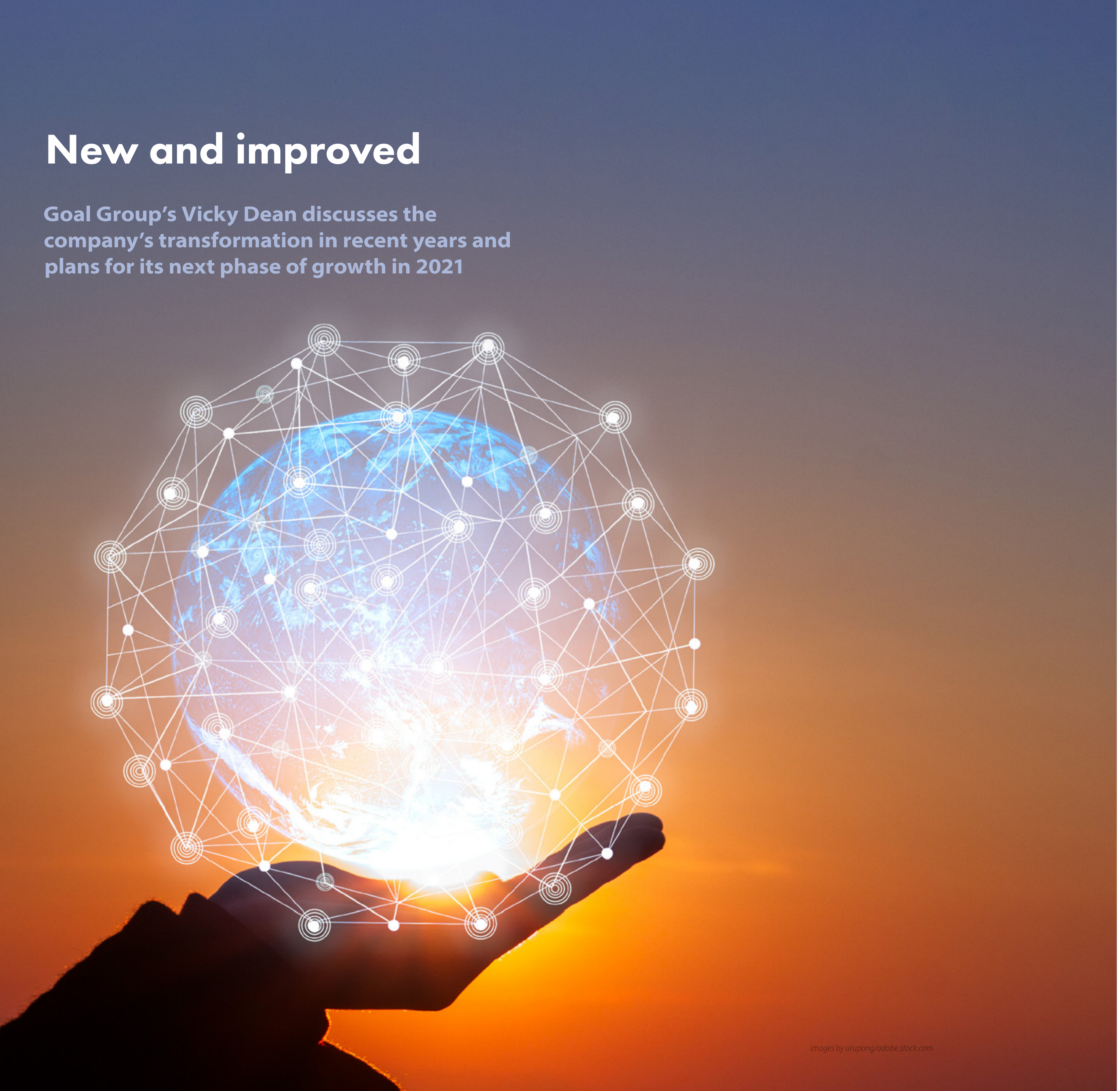

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New and improved

Goal Group's Vicky Dean discusses the company's transformation in recent years and plans for its next phase of growth in 2021

Goal Group has been established for over 30 years and is a market leader in securities class actions recoveries and withholding tax reclaims. With global coverage and a local presence, we use proprietary market-driven software to facilitate and automate our services.

Back in the 90s, Goal took the decision to remove the manual, laborious process associated with filing claims and develop our own software. Using a variety of IT specialists and programmers, our flagship reclaim software, Global Tax Reclamation Solution (GTRS), was born. Three decades later, GTRS is still going strong, but will soon be the last of our applications to be replaced with an exciting, modern, innovative cloud-based solution, to be launched in 2021.

In recent years, Goal has undergone a phenomenal transformation into the digital age, moving away from burdensome, complex, on-premise, legacy infrastructure and technologies to cloud-based, streamlined, efficient, secure applications. In this article, we will explore how the team at Goal has revolutionised the services provided to our global client base.

A change is coming

Goal previously had an internal IT team in place, but it became apparent that we were continually struggling to both maintain and improve our operations. The cost and time involved in building a new skill set in-house led to us exploring the option of outsourcing to a third-party specialist equipped with the skills and know-how to streamline our IT operations and pave the way for a complete modernisation of the infrastructure that underpins our core services.

In 2014, we chose to partner with UK-based BJSS, a world-class business technology consultancy, following an internal review of the applications, infrastructure and internal management. As our managed service provider, they have helped us to enable our company's long-term digital transformation, resilience, and growth.

The first area to be addressed was the legacy nature of our infrastructure that we felt was constraining our ability to enhance client experiences, overhaul processes, shorten our sales cycle and mitigate business risk more effectively. Transforming our infrastructure and service management would help us to deliver optimal performance in a multitude of areas, not least business continuity, regulatory compliance and business growth. This, in turn, would strengthen our competitiveness in today's market and demonstrate our commitment to our existing clients and prospective clients, across the globe.

The road to revolution

BJSS commenced by taking on Goal's IT service management, using the BJSS Enterprise Agile approach, starting with a minimum viable service concept which began by resolving minor service issues in the early phases. They then moved on to continuously improve the service over three phases, enhancing our applications, back-up and storage policies and rationalising our systems.

From this basis, it was time to move on with modernising all services. This would prove to be fundamental to our digital transformation, ability to compete in the fintech space, and ultimate growth.

One of the key building blocks of our wider digital transformation programme was migrating all of our applications and data away from the legacy on-premise systems and onto the cloud. This cloud migration generated several benefits, including:

- **Improved efficiency and agility:** By operating entirely in the cloud, user experiences have improved, and staff can now securely access the company's applications and data remotely
- **Significant cost savings:** By decommissioning the legacy estate, we have saved a considerable amount of money in running and time costs. BJSS also continually works with us to manage and optimise cloud services and fees
- **Enhanced disaster recovery:** Crucially, the cloud migration helped to reduce our disaster recovery time from six weeks to just one day, which proved critical during the pandemic. It has also removed the vulnerability associated with having on-premise systems

In addition to migrating to the cloud, Goal initiated the development of a piece of cloud-native software, known as ADRoit. This new proprietary computer software has been the catalyst for our growth in recent years.

Servicing the Depositary banks and DTCC participants, ADRoit is the platform we provide enabling elections to be made on programs related to American depositary receipts (ADRs). Within one year, ADRoit captured 7 percent of the US ADR market. Then, six months later, thanks to its modern, seamless, efficient, cloud-based architecture, our market share grew to over 25 percent.

Countering COVID-19 and moving forward

Thanks to the forward-thinking and planning of Goal and BJSS and a successful transfer of the working environment into the cloud, we were able to quickly and effectively transition into a complete remote working model at the start of the COVID-19 pandemic. This was a critical business continuity requirement that has ensured the continuing success of our company even during the unprecedented disruption.

Not only have we been able to provide business as usual, without any issues or degradation in service level, we have also continued to brainstorm on other projects and initiatives that will take us even further forward. This includes further updates and improvements to our current systems as well as the complete redevelopment of the final part of our suite of products.

GTRS, launched in 1993, is a market-leading, automated withholding tax reclaim solution for the financial services community. It facilitates and automates the withholding tax reclaim process, and is currently a server-based software installed using the traditional licence and maintenance model.

Next year, this will be transformed into another modern, cloud-based application that will continue to assist with calculation of rates and completion of forms, but with enhancements and new features. Our team has been working hard to ensure we capture all core elements of the current offering, but the brand-new concept and design will provide an even higher level of functionality, while being modern, simple and seamless.

Along with the finalisation of the GTRS project, we are also in the process of redeveloping the client portal, which again, will provide another enhanced user experience to keep us competitive and current and attuned to modern client needs.

Straight-through processing (STP) from our applications to the portal will provide our clients with real-time data and extensive reporting capabilities, segregated by client, allowing them to monitor their claims closely. We pride ourselves on being a personable organisation that leverages automated solutions so we are able to dedicate more of our time to building relationships and listening to our clients, which we consider to be an integral part of continuing to build our business.

Summary of success

Streamlining and modernising our operations has enabled us to significantly improve both our client and employee user experience. This was a key enabler for the company to take on new markets and launch further expansions and enhancements to our current service offerings.

Through the partnership with BJSS, we have been able to:

- Streamline and modernise all infrastructure and applications
- Migrate all applications and data to the cloud
- Develop, maintain and improve new cloud-based software such as GTRS and ADRoit, which has enabled us to exponentially grow our market share, in less than three years
- Develop an IT architecture that allows all employees to securely access all applications, services and data over the internet – regardless of location — to ensure business continuity. This has proven invaluable during the COVID-19 pandemic

This radical transformation has seen Goal evolve from an up and coming organisation that was constrained by our legacy infrastructure, to a leading fintech that is thriving in the digital age and set for a new phase of growth in 2021. Due to our success and the scale of the work we have put into this transformation, Goal and BJSS was shortlisted as a finalist at the Computing Cloud Excellence Awards 2020 in the category of 'Best Cloud Project'.

"Streamlining and modernising our operations has enabled us to significantly improve both our client and employee user experience"

Vicky Dean
Director of sales and relationship management
EMEA and global director of withholding tax sales
Goal Group of Companies

An investment worth making

Maddie Saghir reports

Aristides Protopapadakis of SYSTEMIC highlights the technology-related challenges faced by modern money managers and service providers

Regulatory reporting is obviously very high on the agenda of all money managers. What are the main challenges in this area today, and what is your approach to address them?

Multiple regulations require reporting on a vast amount of data of inherently different nature. For example, the Money Market Funds Regulation (MMFR) and Alternative Investment Funds Directive (AIFMD) both require descriptive information relevant to the fund manager, invested assets, as well as calculated risk information.

The diversity and sometimes complexity of assets as well as processing tasks has led to specialisation and to co-existence of different sub-systems handling different needs for specific asset classes (for example equities, interest rate instruments, derivatives, private equity, etc) and processing needs (for example, investment accounting, risk management, limits management).

Given that many money managers utilise different subsystems for different tasks, such reporting requires interfacing with each sub-system in order to retrieve the required information and to merge it together in a single report. This is not merely an IT task; it is common that each system has a different representation approach so human interpretation is often required in order to link identical objects.

In this context, regulatory reporting is typically a multi-step process:

- Gathering of information relevant to the manager and assets, ideally in an automated manner from each sub-system
- Matching of collected attributes across sub-systems to make sure that the information related to each entity is complete
- Execution of risk and other calculations where needed
- Integrity checking and reconciliation
- Production of the report in the form required by the regulator (typically XML form)

But wouldn't it be great if a central database existed within the portfolio manager's or service providers organisation containing all needed information? This is precisely the purpose of our RiskValue investment management platform: To act as a rich data warehouse, complete with both raw data and derived risk calculations. So, for our customers the risk reporting process is no more than extraction of needed data and re-formatting on the output form prescribed by the regulator.

And of course, the benefits of such a system go well beyond regulatory reporting. The portfolio manager and service provider can monitor investment limits, internal risk reports, calculate valuations, profit and loss, fees, performance and other computations produced by other systems (for example fund accounting), act as a backup to any failed service provider, and many more.

The lack of standardisation typically inherent in alternative asset classes, causes serious difficulties for the development of systems capable of addressing the risk management needs of both financial and different alternative asset classes. How has SYSTEMIC managed to develop such a system?

Risk calculations for financial portfolios often involve complex modelling in order to calculate sensitivities to different risk factors, and potential losses under statistically adverse scenarios (i.e. value-at-risk and stress tests). On the other hand, there is usually substantial research and documentation in order to design a system for performing required calculations. In addition, a good design hopefully will allow us to replicate these calculations to other portfolios as well. But it is true that for real assets things are different. The calculations involved are usually less complex but each portfolio and each asset typically requires its own approach for any risk calculation to make sense. Overall, the same high-level risks need to be calculated, for example, operational, market, credit, counterparty risks, but more thinking needs to take place in each case, both for deciding on the appropriate modelling/measurement approach and also for finding the data needed for calculations.

> ***"At SYSTEMIC we have invested heavily in designing a platform ready to accept a vast amount of asset classes and descriptive information separately for each asset class"***

At SYSTEMIC we have invested heavily in designing a platform ready to accept a vast amount of asset classes and descriptive information separately for each asset class. To this effect, we designed a separate environment for a large number of alternative asset classes including all possible characteristics that might be needed for any calculation to take place. For example, these may include detailed characteristics of real estate investments, private equity investments and many others.

This design approach is very different from an approach of treating investments as 'generalised objects with attributes'. The latter is less costly to implement, and might be sufficient for an accounting system, but it will have serious limitations when performing risk calculations.

So again, the difficulty with alternative assets is more relevant to data organisation and availability rather than running complex algorithms, although a thorough understanding of the underlying business and investment objectives are absolutely necessary. But once you have figured out the most relevant risk model to apply, you need to have the right data in place to feed your algorithms. So, we placed special emphasis in developing a system with an extra-rich data universe, and figuring out how to complete it regularly in an automated manner since the early stages of any customer implementation.

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> *"During the pandemic the market has understandably become significantly more cost conscious, anticipating volatile markets and needs"*

In the current pandemic environment, where physical meetings are discouraged, how do you approach new customer on-boarding and know-your-customer (KYC) issues, from a systems point of view?

Even before the pandemic, there was a clear market need for a web portal facilitating the remote onboarding process. So, we were already prepared for such a system automating and controlling the submission of documents by the customer, subsequent management by the portfolio manager while carrying out KYC-anti-money laundering verifications and completing the approval processes in a custom manner.

Following the pandemic, this system has gained popularity as it allows our customers to continue accepting new customers within the current heavily regulated environment, and growing their business with personnel working from home or remote offices.

As a natural extension of this system, we added new functionality to it allowing investors and managers to remotely view numerous dashboards, profit and loss statements, limits reports and many others.

It appears that in the current pandemic environment, more investment managers and service providers are seeking to outsource a number of processes including risk management and regulatory reporting. Other than systems, do you also offer such services to your customers?

Yes, we do. For many years we have been offering risk management services on an outsourced basis. This involved our assistance in setting up a proper risk management process (including formal documents submitted to the authorities) relevant to the fund manager and the fund itself, and subsequently proceeding with the tedious tasks of data collection (usually from the administrator), reconciliation, risk calculations, limit checking, and risk reporting. Both financial and alternative funds are on the agenda, the latter offering more challenges particularly to managers with limited experience in a new asset class. During the pandemic the market has understandably become significantly more cost conscious, anticipating volatile markets and needs. In this context, many chose to keep to a minimum the number of fixed personnel, and prefer to outsource as many 'non-core' tasks as possible to other specialised service providers like ourselves. In our view, this approach makes a lot of sense for our customers as they can free up resources for investment management tasks without the headache of risk management and regulatory reporting.

Aristides Protopapadakis
CEO
SYSTEMIC

Lessons to be learned

T-Scape's David Baxter suggests the changes under the Shareholder Rights Directive II could serve as a platform on which the industry can build better processes

What feels like a very long time ago (circa 2005), while attending one of the many conferences of the time, a panellist was questioned as to what he could do to improve corporate action processing efficiencies?

The panellist being questioned was a representative of a well-known UK registrar.

The audience consisted of custodians, third party administrators, fund managers, investment banks and others.

Prior to the question being raised the discussion had largely centred upon the problematic nature of processing corporate actions and the proposition that if the issuing company's agent, in this case the registrar, could provide corporate action data in a standardised structured format the world would be a much better place.

It was eXtensible Business Reporting Language (XBRL) and the tagging of key data elements that was being pushed as the answer to achieving this.

Addressing the issue the panellist asked a few questions of his own, receiving responses as he went. It went something along the lines of:

Panellist: *"Who will be responsible for the tagging of the data that is to be issued?"*

Response: *"Well that would be you, Mr Registrar."*

Panellist: *"Who will be paying the cost of performing the tagging?"*

Response: *"Well, that would be you too, Mr Registrar."*

Panellist: *"And who will benefit most from the work that you have kindly given me to do, using my resources and at my cost?"*

Response: *"Well, that would actually be all of us Mr Registrar."*

The conversation continued with the panellist asking just how the market would benefit, the reply being that if a level of interpretation could be removed from the process, then processing errors could be reduced and financial losses avoided.

Panellist: "Oh I see. You are incurring financial loss because I am not announcing corporate actions in the way that you'd like me to. I understand. So let me ask, given that you're laying the issue at my feet, what is the scale of the losses you have incurred?" Aside from the murmurs and awkward shuffling it was evident that the likelihood of any of the audience opening up about losses due to corporate action errors was well, very unlikely.

And that was about as close as we've been to meaningful issuer engagement. Aside from XBRL not being the answer, the only other conclusion (or rather consensus) among the audience was that, while we (the market) should be sorting this out ourselves to ensure the regulator doesn't come down on us, having such regulatory involvement is probably the only way we'll ever get round to doing something.

Let's fast-forward to 3 September 2018, when the European Commission bound all member states to a regulation that would come into force on 3 September 2020 regarding 'shareholder identification, the transmission of information and the facilitation of the exercise of shareholders rights'. To translate this into corporate action speak, it focuses on two specific processes. The first relates to a company's ability to understand who its shareholders are at any point in time (ideally within a 24-hour window), through the issuance of a shareholder identification disclosure (SID) request. The second serves to remove inefficiencies within the existing process to ensure company-meeting announcements reach shareholders in order that they can exercise their right to vote. To facilitate both of these 'the transmission of information' would ideally be performed using the ISO 20022 standard. It's fair to say that while 'disclosures' and 'meetings' don't readily spring to mind when we think of corporate actions, they are the first to be affected by regulation and as such can provide us with an idea of the impact regulation can have on the process.

Let's fast forward again to the here and now, being approximately two months since the implementation of what's more commonly referred to as the Shareholder Rights Directive II (SRD II), and take a look at where we are at. For sure, we knew that the market wasn't ready. That was evident from the failed attempt in April of this year to have the European Commission defer the implementation of SRD II until 3 September 2021, citing COVID-19 as the primary reason for the market being somewhat ill prepared. This was further evidenced when, just prior to implementation date, attempts were made by the same post-trade parties to have any penalties for lack of compliance waived until 3 September 2021. Additional reasons to COVID-19 were put forward, including the proposition that the regulation itself wasn't actually a regulation but rather a market infrastructure project. The post trade groups may have a point, but why wait until the week of implementation to raise it. In short though, the market just wasn't ready. Let's however, put this to one side for now and turn our attention to the regulation itself and what's being played out. If we dig a little deeper it is evident that some of what has been proposed in the regulation hasn't been thought through fully. In places it is less than consistent, and in some areas not detailed enough to be fully understood.

By way of example, let's look at SID, and the communicating of shareholder identities to a requesting company. It sounds like a fairly straightforward exercise, but the reality is somewhat different. To begin with the requesting company or the agent (registrar) working on its behalf, may not be equipped to handle the data when it arrives. In such circumstances the task of collection, aggregation and presentation is outsourced to a third party organisation, known simply as the recipient. The last intermediary will pass shareholder information to this recipient. Now, given there may be no existing relationship between sender and receiver and given the highly sensitive nature of the data being exchanged would it be unreasonable to have expected some method by which a recipient's credentials could be verified to be included as part of the process? Presently there isn't anything in the process that facilitates this. The expectation presumably being that you either trust in the accuracy and immutable nature of the data being passed from one intermediary to the next, or you introduce your own process of verification, i.e. telephone/email the company to confirm requests had been made and confirm details of the recipient. Yes there's a flag that can be set verifying 'that the request or information transmitted originates from the issuer' but

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is that good enough, a single flag? In the wider corporate action process today we have a process called data cleansing. It exists because it is recognised that mistakes are often made. Given that it's the same protagonists in play for SRD II, do we merely accept the data for what it is, bypassing any form of verification? That seems odd. As does introducing a new process that is dependent upon manual intervention. Surely that isn't the way forward either. But, continuing with the same example, let's look at the act of communicating the information itself. Provision for three methods of communication have been defined: SWIFT, email and URL. These are not mutually exclusive and as such all three can be populated. This is fine given that the capabilities of the sending party are unknown but wouldn't it have made sense to include a 'preferred method of communication' that an application like iActs for example, could use to automatically deliver information according to that preferred method? Remember, the format of each, whilst (in theory) based upon ISO 20022 will be nuanced according to the communication type. So a disclosure packaged for SWIFT, for example, will be different to one packaged for email. It's also worth pointing out that whilst the goal is to use ISO 20022 to enable a 24-hour turnaround, the regulation stipulates that as long as it's machine-readable format then that's fine too and you don't need to adhere to the 24-hour turnaround. This seems a little odd. But getting back to the 'preferred communication method' it is left to the technologists to define new rules to determine how best to communicate the information. In this particular example it's a fairly straightforward exercise, but the point is that it might have been avoided completely with a little more thought up front.

These are just a few of the issues that could and maybe should have been exposed a long time ago, but are only just now coming to light as the market scrambles to be compliant. The disappointing thing is that the regulation has been out there for a while, it's not like the regulator has just sprung this on us. But maybe that's the issue, that the change has been regulatory driven rather than market driven and hence the sluggish response from the market. Which comes back to the original thoughts at that conference all those years ago about the market rather than the regulator taking a lead. Perhaps if the market had taken a more proactive role in defining a better way of processing corporate actions the need for regulator intervention and the issues now coming to light would have been avoided. It's not like the technology or expertise wasn't or isn't there, it is, at T-Scape and companies like it. To be masters of our own destiny has to be better than being forced into action by the regulator. So maybe there's a lesson to be learned going forward as hopefully, the changes under SRD II serve as a platform upon which we can build better processes that a) make use of the new levels of engagement between company and shareholder, b) extend beyond European equities and perhaps most importantly c) improve processes across the gamut of corporate actions not just disclosures and meetings. Or, of course, we could just wait for the regulator to give us another kick!

"To be masters of our own destiny has to be better than being forced into action by the regulator"

David Baxter
Managing director
T-Scape

Delivering certainty in uncertain times

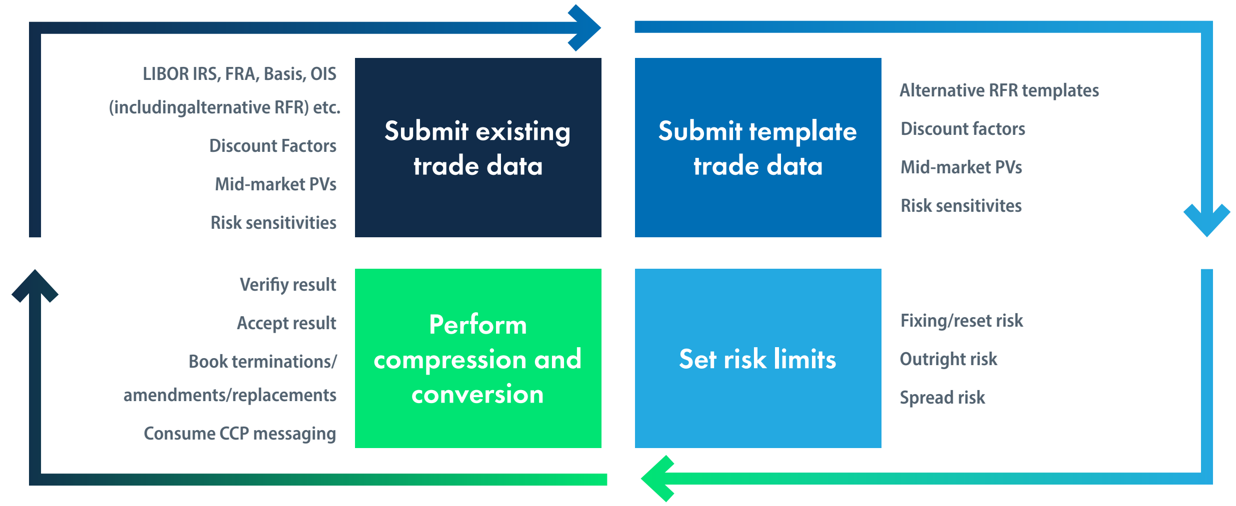
TriOptima explains how it combines the reduction of gross notional exposure and the conversion of net risk exposure to deliver outsized results, partnering its portfolio compression network with core net ICE Libor over-the-counter swap portfolios

triReduce's benchmark conversion service offers users an iterative approach to mitigating uncertainty about the future of ICE Libor swaps. Swap market participants can proactively reduce both their gross and net exposure to the ICE Libor benchmark at the same time as increasing their adoption of the alternative reference rate for each respective currency. This service will be provided for trades cleared in all major central counterparties (CCPs) as well as for ICE Libor-referencing trades held in non-cleared portfolios.

A single process, in which participants retain control of the transition within their portfolios, is key to managing the change in your own mid-market valuations. By ensuring all compression and conversion takes place iteratively and at each firm's own valuations, the service brings clarity to discussions about how to adopt alternative risk-free rates (RFRs) in swap portfolios.

Reviewing the data requirements

To better understand what is required, the image below illustrates triReduce's benchmark conversion service. As they do today, participants will submit their existing swap portfolios, where it is likely they will have existing ICE Libor- and non-ICE Libor-referencing trades, including alternative RFRs. This enables the service to compress where possible and convert into the alternative RFR where compression is not possible.



Participants will provide discount factors and their own mid-market valuations, as well as any measures of risk they would like to control through the process for their existing trades and for additional template trades.

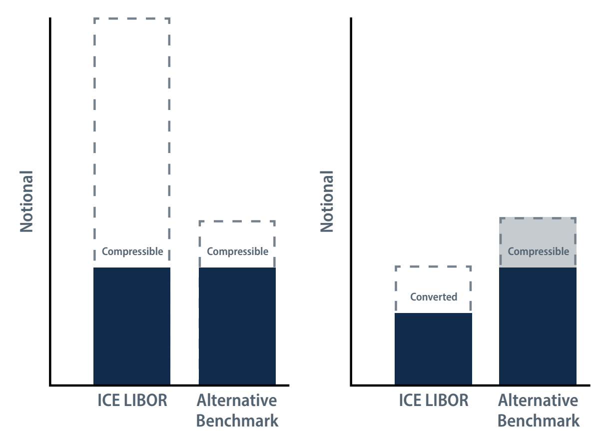
These template trades are a standard representation of alternative RFR trades that will be used to establish additional liquidity at specific maturities to facilitate the conversion.

With this information and the corresponding risk-based limits that participants define, triReduce's benchmark conversion service will return a proposal of fully terminated, amended and replacement trades that reduce exposure to ICE Libor transition in a controlled manner.

Once accepted by each participant within a finite window of time, the proposal is passed on to the CCP for processing in the case of cleared trades.

Reduced ICE Libor over-the-counter swap exposure

The result is a reduction in ICE Libor swap exposure achieved through a simultaneous reduction of gross notional exposure and conversion of net risk exposure.



TriOptima combines these two objectives and delivers outsized results by bringing together its world-leading portfolio compression network and new participants with core net ICE Libor over-the-counter swap portfolios (see image above).

Ensure your readiness to take control of the ICE Libor transition for your over-the-counter swap portfolio by contacting your local TriOptima office or emailing benchmarkconversion@trioptima.com to discuss benchmark conversion. Or, to find out more about benchmark conversion or to watch our webinar, click here.

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The challenges continue

Although some changes around MiFID II have been positive, Alan Dzhanaev and Nicolas Nicolaou of Point Nine explain that the market continues to struggle with adopting the right regulatory reporting process, having a quality control and correct treatment of regulatory technical standards

After almost three years since the second Markets in Financial Instruments Directive (MiFID II) implementation was entered into force the clarity to the best market practice is not achieved by parties obligated to transaction reporting. Although some changes have been positive, the market continues to struggle with adopting the right regulatory reporting process, having a quality control and correct treatment of regulatory technical standards.

According to the recent request made by Nick Bayley "Duff & Phelps to a Freedom of Information (FOI)", 546 firms admitted that there were errors or a general lack of quality in their transaction reports. Despite the attempts to bring clarity to the market, such as holding meetings and publishing news content and updates on 'Market Watch', regulators continue to struggle with getting firms to understand how to produce high-quality reports.

The Financial Conduct Authority's (FCA) Market Watch 'Newsletter on market conduct and transaction reporting issues' brought some light on the common errors and omissions used by reporting parties without validation errors from their approved reporting mechanism (ARM) or any regulatory reporting service providers. Furthermore, regulators are trying to highlight the importance of the unreported transactions, what is the immediate underlying and the importance of the systems and control functions within the reporting firm.

The shortest ever Market Watch 64 has clearly stated that a UK-based firm and ARM would need to comply with the changes to their regulatory obligations by the end of the transition period on 31 December 2020.

Although the majority of the market issues are similar, regulators aren't providing firms with the best possible approaches or solutions to minimise reporting risks or poor data quality. Investment managers are able to analyse the quality of reported transactions by requesting them from the FCA's market data processor system, but only 682 firms have done it, according to the data obtained by Duff & Phelps. This is one of the biggest challenges and obstacles that the industry faces.

Considering that the transaction reports submitted by almost 15 percent of the total UK-based firms with an obligation to MiFID II had errors or omissions in them can be misunderstood. At first glance, this appears that the remaining 85 percent of firms are submitting perfect reports, however, report quality could be significantly worse than those with errors and/or omissions.

One of the biggest issues we see is a breakdown in communication between regulators and corporations. Regulators claim that regulatory reporting errors and omissions are not reaching the appropriate contact at the report submission firms. In fact, according to a Cappitech survey, almost 70 percent of the respondents said that they never received any errors or omission reports from the regulator.

"One of the biggest issues we see is a breakdown in communication between regulators and corporations"

The European Market Infrastructure Regulation (EMIR) which mandates to report all derivatives to Trade Repositories is not looking greater than the MiFID transaction report. The latest statistics from the European Securities and Markets Authority's (ESMA) Supervision – 2018 Annual Report and 2019 Work Programme present only 86 percent of pairing trades and 40 percent of matching in accordance with legal officer Enrico Gagliardi from ESMA. This rate after six years since the implementation is extremely low. We believe that the majority of the matched trades are due to the delegated reports, which are widely used for algo trading or high-frequency trades on derivatives products.

Furthermore, the matched reports could have errors and omissions which were validated by trade repositories. Therefore, the delegating party may not be aware of the potential misuse of the information in the report itself.

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> *"The regulatory reporting process became a headache for the industry, specifically the allocation of appropriate resources to implement in-house solutions"*

Nevertheless, regulators are using received data to produce the ESMA annual statistical report on EU derivatives markets from EMIR. However, we strongly believe that the accuracy of the produced market structure and market trends are riddled with errors and omissions by submitting firms.

As a result, we may see that the overall figures in terms of the transactions and outstanding volume have expanded to 66 million open derivative transactions (covering trades and positions). Overall, these accounted for a total outstanding amount of approximately €735 trillion, which includes both over-the-counter and exchange-traded derivatives, and presented an 11 percent increase from the €660 trillion for Q4 2017.

The increasing volume of regulatory reporting and feedback for quality improvements from national competent authorities (NCAs) are not enough to meet industry needs.

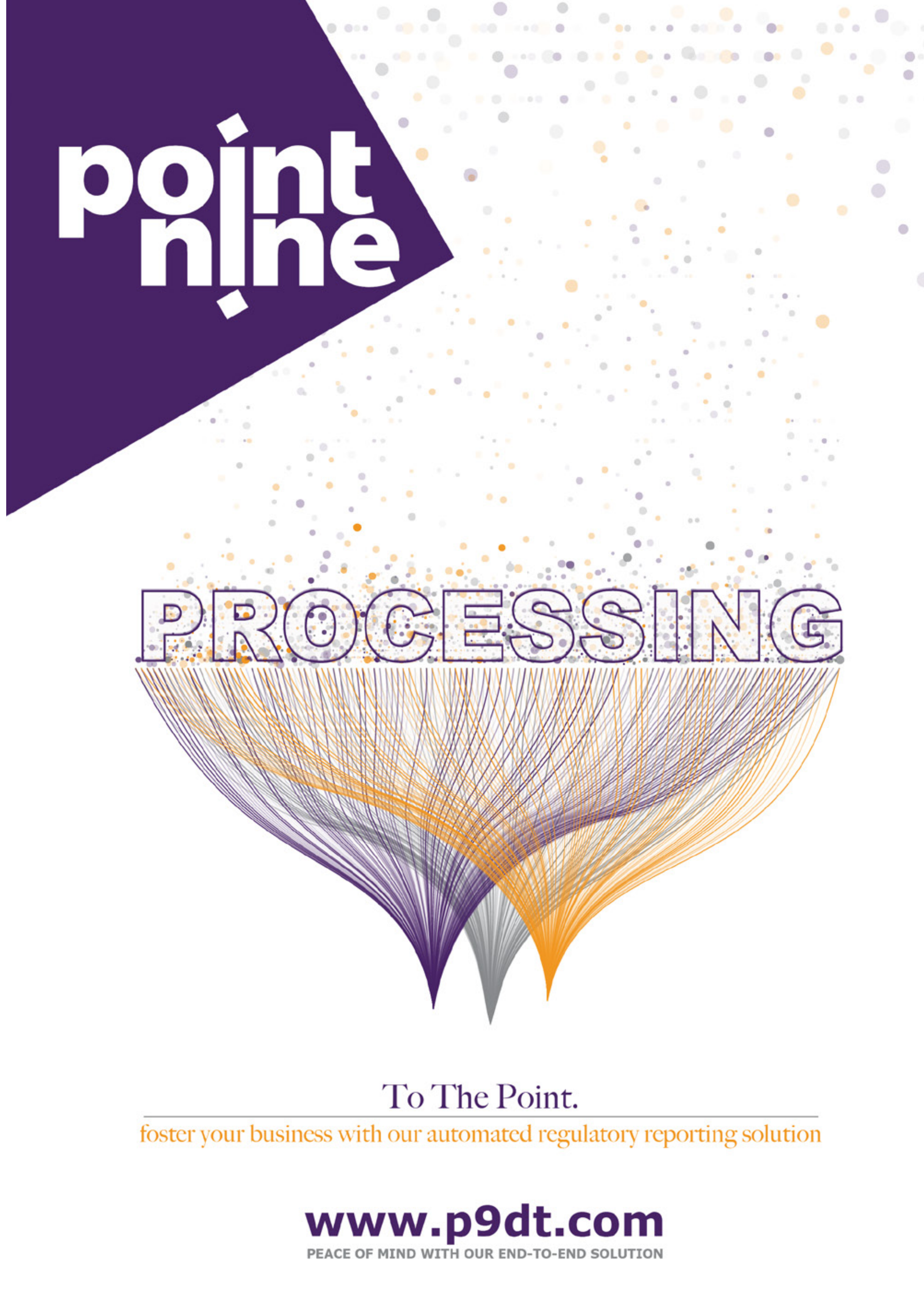
Needless to say, the regulatory reporting process became a headache for the industry, specifically the allocation of appropriate resources to implement in-house solutions as well as ongoing controls and maintenance.

Despite the gained experience on the previously implemented regimes, the complexity of the reporting process and the number of the fields to be provided and matched to the other counterparties and the interconnections between different message types is making it difficult to control and overview.

Point Nine Data Trust is one of the leading regulatory reporting solution providers. We are equipped with in-house proprietary technology to provide customers with a complete solution to all customers and regulators for different types of reporting requirements, and a solution that is also flexible, adaptable, and easy to implement.

Alan Dzhanaev
Client success manager
Point Nine

Nicolas Nicolaou
Business and data analyst
Point Nine



Lost value

Matt Ruoss of SCORPEO explains what value FTSE 100 investors could be missing on corporate action elections

For every action, there is an equal and opposite reaction. However, for the vast majority of asset managers who opt to not make any decisions on voluntary corporate actions, inaction simply leads to lost value.

Every year, there are dozens of voluntary corporate actions, where shareholders are required to make an election. In the case of scrip dividends, this means choosing between receiving a payment in cash or stock. For rights issues, this means opting to purchase more shares.

If a shareholder doesn't actively make an election, then a default selection is automatically made. For scrip dividends, this means receiving the cash payment.

Cash is the suboptimal option in many cases. This has been especially true for the Financial Times Stock Exchange Group (FTSE 100 stocks. Our analysis of scrip dividends issued by FTSE 100 companies from 2011 to 2019 found that the stock option was ultimately more valuable in 140 of 243 – or 57.6 percent – of the instances recorded.

Our analysis has consistently shown that, when the stock is the more lucrative option, the majority of managers and investors still choose cash.

This is especially true with FTSE 100 stocks where, on average, 65 to 70 percent of shareholders make suboptimal elections.

Why are we putting so much emphasis on the FTSE 100? Because, out of all UK equities, FTSE 100 shares represent the vast majority of the total missed value with voluntary corporate actions.

Between 2011 and 2019, UK equity shareholders lost out on approximately $2.61 billion through suboptimal elections where the stock was optimal.

The total FTSE 100 missed value in these instances was about $2.14 billion – or 82 percent of the total for all UK equities. That's just for the UK. This multi-billion dollar figure grows exponentially when factoring in other popular indices, such as the Dow Jones, S&P,

> *"When the stock is the more lucrative option, the majority of managers and investors still choose cash"*

NASDAQ, DAX, CAC, Nikkei and Hang Seng. Additionally, this figure doesn't incorporate the lost value from rights issues.

The realisation of value may not occur as quickly with rights issues as they do with scrip dividends, but shareholders that opt not to exercise their right to purchase additional shares may see the value of their holdings become diluted.

What this tells us is that asset managers and shareholders stand to gain – or lose – the most by paying closer attention to voluntary corporate actions around the major indices.

What's behind the missed value?

No asset manager wants to leave easy money on the table, especially as passive managers continue attracting the lion's share of inflows. So why is this happening?

A lack of awareness is the primary reason. Corporate actions are largely viewed as an operational consideration, one that stands to lose money if managed inefficiently but otherwise not adding to the bottom line.

Many managers have yet to realise the amount of money that's at stake. Additionally, other managers may not think it's worth doing the analysis or dedicating the resource.

For one manager, looking at one single decision, the missed value may be no more than a couple thousand dollars across their investor pool. That number is relatively small, but again, this is happening across dozens or even hundreds of issues. In an environment where active managers are fighting hard for every basis point, leaving cash on the table seems imprudent.

Regulatory and jurisdictional restrictions can also play a part. For example, index trackers may not be mandated to take anything other than cash to avoid weighting errors.

Another reason is that corporate actions analysts can be stretched beyond capacity. This was especially true throughout the pandemic. Analysts typically have busy workloads, even when the markets are calm. Yet when volatility kicked up at the start of the pandemic, many analysts were redeployed to handle more seemingly pressing needs.

Concurrently, several companies undertook rights issues to help shore up their capital. It wouldn't be surprising if it turns out that many asset managers missed an opportunity that they would have otherwise leapt on if they had the resources to analyse the value.

It's important to acknowledge this because asset managers may be in for an increase in voluntary corporate actions, if the aftermath of the 2008/09 financial crisis serves as a bellwether. Conditions in 2009 were similar to what we saw back in March and April. Almost every asset class plummeted and balance sheets were squeezed, forcing many companies to swiftly raise capital.

Back then, we saw a jump in voluntary corporate actions, such as scrip dividends and rights issues. This was especially true among energy companies, who were hurt by persistently low oil prices. Offering shares in lieu of the typical per-share payments was beneficial to companies who were temporarily cash-strapped. The same trend happened in 2014, after a sudden oil price crash.

It took about six months after the fall of Lehman for the wave of scrip dividends to kick in. This partially explains why we didn't see a similar increase in scrip dividends earlier this year. If oil prices continue to remain low and debt issuance becomes difficult, a scrip issue will be more appealing to many energy companies.

Making the pivot

There's another reason why it's important for asset managers to address their approach to voluntary corporate actions: fiduciary duty.

If managers are foregoing analysis and elections of these corporate actions, it wouldn't be a stretch for investors to claim that these decisions aren't being done in their best interest. Regulators, especially in the US, have been keeping a close eye on proxy voting and governance in recent months. The second Markets in Financial Instruments Directive (MiFID II) has also pushed managers to disclose their elections on certain events, which opens the door to greater scrutiny from investors. Between meeting fiduciary responsibilities and realising maximum value for shareholders, asset managers have multiple catalysts for taking a more active approach to voluntary corporate actions.

The first step towards a meaningful shift is awareness. Asset managers must better recognise what's at stake. It's also good to understand how strained analysts are, even as the market continues its recovery. When dividends were cut, many of these notices weren't shared in a way that would be easily picked up by corporate actions processing platform. Per media reports, some companies notified shareholders via memos announcing the cancellation of annual general meetings. This would require analysts to track down and verify the information.

Analysing the value inherent in voluntary corporate actions is something that processing platforms don't do. They're primed to automatically capture and track standard corporate actions and drive the appropriate workflows, but this doesn't extend to those where an election must be made. That said, there are complementary solutions which do the analysis and recommend the favourable course of action. The process of examining and electing a voluntary corporate action can be mostly automated. Internal controls are relatively simple to put in place. Adding these capabilities to existing corporate actions processing workflows can have the dual upside of maximising the value captured through optimal elections and reducing the burden placed on analysts. This ensures that resources aren't redirected away from other revenue-generating activities.

In what could be another turbulent year, FTSE 100 companies are sure to have their share of voluntary corporate actions. Oil markets remain sluggish and, for many companies, revenue streams will be weakened as a result of new lockdowns. Yet, investor scrutiny on fund performance will remain strong. So if adding 30 or 50 basis points to annual performance can be as easy as playing a more active role in analysing voluntary corporate actions, why wouldn't managers want to capture that value? In a highly competitive marketplace – especially one where the vast majority of UK equity managers have exposure to the FTSE 100 – the potential basis point gains are very meaningful.

> *"Between meeting fiduciary responsibilities and realising maximum value for shareholders, asset managers have multiple catalysts for taking a more active approach to voluntary corporate actions"*

Matt Ruoss
CEO
SCORPEO

Confluence

Confluence is a global technology solutions provider delivering innovative products to the worldwide money management industry that meet asset manager and service provider performance, reporting, analytics, risk and data needs. With the recent acquisition of StatPro, Confluence offers its clients a broader range of data-driven managed investment solutions, including post-trade regulatory and shareholder reporting, performance and attribution, portfolio analytics, asset data services and data management, delivering a full technology suite to the front, middle and back office. Headquartered in Pittsburgh, PA, Confluence services over 400 clients in 39 countries, with locations across Europe, North America, South Africa, Australia and Asia.

For more information, visit **www.confluence.com.**

Fenergo

Fenergo is the No. 1 provider of Digital Client and Investor Lifecycle Management technologies in the world. With 100 percent focus on financial services, Fenergo delivers technologies that can transform how financial institutions can manage and serve their clients and investors throughout their lifetime with the firm.

Fenergo Client and Investor Lifecycle Management for Asset Servicing enables firms to drastically reduce onboarding times, minimise investor effort, and digitally transform front-to-back office operations.

We enable asset servicing firms to deliver a truly optimised, efficient and transparent investor journey – from initial investor onboard through to any and every touchpoint in the investor lifecycle. Fenergo delivers a consistent regulatory-driven workflow and fully centralised client and investor data, enabling firms to reduce manual effort, achieve consistent KYC and AML processes and provide greater client and investor satisfaction.

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Goal Group

Goal Group is the leading global provider of withholding tax reclamation and securities class action recovery services.

For over 30 years, they have helped the world's largest financial institutions and the global investment community fulfil their fiduciary duty to reclaim excess tax on cross-border income, and seek legal redress for shareholders who have suffered financial losses due to corporate mis-management and/or unlawful behaviour.

Goal's automated end-to-end tax reclaim services are available on an outsourced basis, in-sourced as licensed software (GTRS), and through the ADRoit platform for US Depositary Banks. ADRoit+ facilitates withholding tax relief for downstream subscribers who hold Depositary Trust Company (DTC) securities.

For all of its services, Goal performs calculations and completion of forms and documentation, to provide their clients with the complete claim package.

With a worldwide network, Goal delivers global coverage, locally to their clients. With state of the art cloud-based, automated technology, they are a leading FinTech organisation.

The company monitors in excess of $8 trillion in client assets worldwide. Clients include five of the top ten global custodians and six of the top ten global fund managers.

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MYRIAD Group Technologies

MYRIAD Group Technologies provides technology solutions that span the full spectrum of client engagement and network management. Our products address the complete lifecycle management of counterparty relationships of any nature. From client onboarding and ongoing due diligence through to network and cost management, we deliver technology that supports governance, mitigates risk, underpins compliance and helps control costs, using organised data, documentation and straightforward processes and procedures across the board.

Pre-onboarding, client onboarding and lifecycle management processes are performed through Embus, whilst MYRIAD delivers multiple network management support solutions at the other end of the value chain. CODUDE exclusively and entirely manages the end-to end due diligence cycle, utilising standard and non-standard questionnaires, all in one place. Enabling teams to support operational excellence through collaborative technology, the production of reportable intelligence and generating economy of effort are central to the value that we deliver to our clients.

www.myriadgt.com

Building Responsible Partnerships

Pictet Asset Services

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www.group.pictet

Point Nine

Point Nine is an industry leader in post-trade processing and regulatory reporting. Founded in 2002 as Point Nine Financial Technology, working with both buy-side and sell-side firms to help them address the ever-expanding challenges of post-trade processing and regulatory reporting currently offering technology and services to more than 140 customers across the globe including hedge funds, asset managers, brokers, and banks.

Point Nine, is a team of industry experts that specialises in regulatory reporting, equipped with proprietary cloud-based technology designed to help customers fulfill their regulatory reporting requirements, streamline their processes for storing, processing and submitting data from various sources. The flexible architecture of our product includes multifunctional portal features that have the ability to report customer activities in real time.

What makes Point Nine stand out from its competitors is our ability to access data from various systems, including customers' in-house solutions. Our architecture has an automated way of fetching, receiving or submitting enriched data while helping the increased accuracy testing, perform advanced regulatory reconciliations, testing reference data and having a proper control framework.

Aside from the quality of our service/product, Point Nine aims to become a driving force of market change and reform. Our team is our strength. We are proud of our team's industry knowledge and are committed to keeping up with the latest changes in regulations. We are smart, fun, and driven, however, we also take our community involvement and responsibility seriously. We are dedicated to giving back to the community, including other businesses, supporting local charities, and helping people reach their utmost potential while collectively securing a sustainable future. Cultivating potential drives how we lead and empower our team, how we build our product and services for clients, and how we engage with the community at large which sets us apart from the competitive landscape.

www.p9dt.com

SCORPEO

SCORPEO helps asset managers and owners capture the full value from their corporate actions decisions.

Every year, hundreds of millions of dollars are lost through sub-optimal elections on voluntary corporate actions, such as scrip dividends. SCORPEO's analysis tools help managers quickly and easily identify the value within these elections and empower them to make the decisions that maximise value for shareholders. By facilitating optimal elections, SCORPEO enables institutional investors and asset servicers to satisfy fiduciary requirements, help improve fund performance and potentially increase returns to investors.

SCORPEO's technology is optimal for asset managers, pension funds, custodians and securities services providers alike. It integrates seamlessly into existing portfolio management and asset servicing architecture. It enhances the operational efficiency of corporate actions teams and workflows, reducing cost and risk.

For more information on how you can maximise the value of your corporate actions, please visit **www.scorpeo.com**

SmartStream

SmartStream is a recognised leader in financial transaction management solutions that enables firms to improve operational control, reduce costs, build new revenue streams, mitigate risk and comply accurately with regulation. By helping its customers through their transformative digital strategies, SmartStream provides a range of solutions for the transaction lifecycle with AI and machine learning technologies embedded—which can be deployed in the cloud or as managed services. As a result, more than 2,000 clients—including 70 of the world's top 100 banks, rely on SmartStream Transaction Lifecycle Management solutions to deliver greater efficiency to their operations.

www.smartstream-stp.com

SYSTEMIC RM S.A.

Systemic is a software developer providing investment and risk management solutions to financial institutions since 1999. RiskValue investment management platform, the cornerstone of Systemic's software solutions, offers a technological environment for client firms to uniquely integrate back, middle, and front office operations, financial risk management, regulatory reporting, and compliance requirements. RiskValue is used today by leading financial institutions, fund managers, insurance companies, wealth managers, broker-dealers, and asset servicers.

The strengths

A single system spanning across Back, Middle, and Front Office: RiskValue software platform addresses the complete cycle of investment management operations by offering an extra-powerful core with optional modular components, without the need for separate implementations, data sharing across different systems, and repetitive training.

Complete instrument and asset class representation: RiskValue has been designed from the ground up to address every possible need across the entire investment universe. It natively accommodates all attributes and specifications for each financial instrument and allows it to address specialised needs across multiple asset classes, from exchange-traded securities to exotic derivatives and even alternative asset classes.

Customisation: Experience has shown that no two client firms are identical. Systemic is prepared to adapt its systems in different environments from small to large, from vanilla to complex, as required.

A system that grows together with you: Thanks to the unified platform, each client firm can start with what it currently requires and add further functionality going forward.

www.systemic-rm.com
info@systemic-rm.com

TriOptima

2000+ firms globally use triResolve, the market leader for portfolio reconciliation, collateral management and repository reconciliation. triResolve Margin provides an exception-based, end-to-end collateral solution with complete coverage for all phases of UMR. triCalculate provides SIMM sensitivity and IM calculations.

triReduce is the leading multilateral compression service running cycles across OTC IRS currencies, FX, credit and commodities. triReduce's benchmark conversion service will assist the market in the conversion to new RFRs, expandable to all IBORS/ CCPS. triBalance – a multilateral risk mitigation service - reduces systematic risk and optimises the cost of bilateral as well as cleared IM exposures. TriOptima is now part of CME Group.

As the world's leading and most diverse derivatives marketplace, CME Group (www.cmegroup.com) enables clients to trade futures, options, cash and OTC markets, optimise portfolios, and analyse data – empowering market participants worldwide to efficiently manage risk and capture opportunities.

CME Group exchanges offer the widest range of global benchmark products across all major asset classes based on interest rates, equity indexes, foreign exchange, energy, agricultural products and metals.

info@trioptima.com
https://www.cmegroup.com/services/trioptima.html

T-Scape

T-Scape is a financial technology company providing financial institutions with high quality software solutions that decrease risk, improve service levels, deliver transparency and reduce costs. It's flagship application, iActs, is transforming the corporate action process by providing tools that enable active engagement with front office participants such as credit analysts and portfolio managers. The company takes a holistic approach to development, and actively promotes creativity through collaboration and understanding. This approach has seen iActs extend beyond corporate actions to support other areas where processing inefficiencies exist. It enables T-Scape to deliver solutions that can be easily adapted, that can keep pace with a continually changing regulatory-led business landscape, and that will continue to serve the needs of tomorrow as well as that of today.

www.t-scape.com