# How to achieve seamless, painless, end-to-end digitalization

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Delivering a smoother multichannel customer experience, taking advantage of API-based integration to broader market services and leveraging the insights available through big data are all common themes across financial markets participants today. However, the difficulty of developing a successful digitalization strategy that integrates to a firm's existing data strategy and architecture varies dramatically from enterprise to enterprise.

However, it doesn't take long to pinpoint the more apparent problems many companies share. In some cases, there will be lots of manual work in evidence of past choices that don't support the digital aspiration. Workarounds are often apparent in that more flexible, modern applications have been configured to do the heavy lifting for inflexible legacy technology. This could even be impacting the potential of core trading and risk systems as they manage messaging, mapping, data mastering and archiving in the absence of a cohesive set of solutions.

# **Keep it** lean

A no-nonsense remedial approach is to use systems and applications for the purpose they were designed. Keep your core trading and risk management systems lean so they can do what they are supposed to do.

Firstly, decouple integration. Point-to-point integration does the job, but locks you in. When you try to change, your systems are so closely coupled that a shift of application B directly affects application C.  Another consequence here — testing gets complicated. Often, you'll need to make changes at both ends. This can make system upgrades a nightmare.

# Occupy the **middle ground**

One of the most significant improvements is to implement some form of middleware; the exact size and shape varies depending on organizational size and complexity. The solution might be an enterprise service bus (ESB) or an Integration Platform as-a-Service (iPaaS) if you are working with on-prem and cloud-hosted apps. A more modern approach to integration will enable much better management of transformations, filtering and routing than old-school point-to-point.

If real-time streaming is a need for you, you might look at an open-source data integration and distributed event streaming platform like Apache Kafka. However, it may not be compatible with all your applications if you're supporting a legacy stack, so consider combining the two. You can use your ESB or iPaaS as an end point for the legacy and your streaming platforms for market and enterprise data.

# **Self-service** insights

Let's say you want to see the timing of cross-asset activity of a subset of clients or frequency of unusual funding requirements over time. The usual process of engaging technology, prioritizing, defining the requirement, building and testing can see any potential business advantage become a distant memory by the time the information is available. Imagine giving the business stakeholders the ability to quickly turn this around themselves in real time — the data is there, somewhere, but how can we unlock it?

Data warehouses and data lakes are key elements of a data-centric strategy. Consider implementing a data warehouse for structured data (e.g., reg reporting, inter-system files, end-user reports) and a data lake for unstructured data and underpinning advanced data pipelines. This offers the potential to provide business insights and to hand some capability back to your business users.

Then, when business users say "Right, we want to see what's been happening in this space over the last six months across the organization," the information is there, and with the right tools on top, it can be self-served. That way, you free up the focus of technology teams to do things only technology can do, and you allow users the opportunity to solve problems and avoid misinterpretations of the "Is this what you want? No, not quite" kind for themselves.

# The right **tool for the job**

The other worthwhile approach is to create a separate, purpose-built static and reference data repository. Often, we see multiple systems using the same reference data but with different versions built in various applications. Sometimes, all the data is being mastered and distributed from the trading and risk system, which might not have been designed for this purpose and often ends up holding, distributing and archiving data it's not even using.

The ideal situation is to have a centralized enterprise data management system (EDM) where your data is captured once and catalogued correctly. With the benefits of data provenance, lineage, and everyone consuming the same version of the data, you can reduce the need for reconciliation and many other problems caused by running multiple versions of the same data.

Although these moves won't solve all your problems — there's no silver bullet — they'll give you the tools for unwinding clunky workarounds as well as the ability to segregate applications so they do what they should be doing — freeing up your flagship trading and risk applications to do what they do best, while also opening the door to smoother, more predictable change.

# What does **technology actually do?**

When you stand back and consider the situation, technology is just an enabler. We need to focus on the business objectives, the needs of business stakeholders and support those via technology.

In some organizations, technology holds power and "the tail wags the dog" to the detriment of the business. The point is that everything needs to be business-focused, but in partnership with a knowledgeable and supportive technology team. Business users decide what they want and how they want to interact with the rest of the market. Then technology can provide the best solutions using available tools, but space must also be given for technology to advise in partnership with the business,

explore new technologies and maintain/upgrade the existing estate to be ready to move at the pace required.

And that's important. It's not uncommon to see organizations embark on a well-intentioned technology-led project with limited business value. Five years later, they're still toiling away, and everyone's waiting on "the project" while other requests pile up. For some, riding out the never-ending project is a dream, but in that time, millions have been spent and little delivered to the business. In contrast, having short-term objectives and deliverables that can plug into an adaptable technology ecosystem adds real value to the business.

# **Money talks**

The prioritization phase is interesting — there's always the louder voice in every organization. For example, if a new product is available and there's profit in it, it needs to be done. But other priorities often don't appear urgent until something goes wrong in that space. Particularly if we look at the post-trade world, where the front office may be moving at a speed that

post-trade cannot maintain. Things go wrong. Money and opportunities are lost.

Having an adaptable stack, using the right tools for the right job, provides a framework where you can achieve your digitalization objectives, be fast to market and maintain end-to-end process quality and control.

# About **the author**

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Anthony started working in back and middle office functions nearly 25 years ago before moving into technology delivery as a business analyst and project manager. Since then, he has lived and worked across the globe making a career in consulting and project delivery within capital markets. In that time, he has been involved in delivering highly complex projects for some of the biggest names in banking. In recent years his focus has been building out "as-a-Service" offerings which he sees as the natural progression for the way capital markets businesses consume complex applications. Anthony holds a bachelor's degree in commerce with majors in finance and accounting.

# Get in touch

If you'd like to learn more about achieving seamless digitalization, visit **luxoft.com/capital-markets** or **contact us**. We welcome the opportunity to share more insights and discuss how Luxoft can help you maximize the advantages of end-to-end digitalization for your organization.

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