A changing mindset: The new normal for blockchain use cases

As arguably the authoritative voice on DLT in our industry, Yuval Rooz, chief executive officer and co-founder, Digital Asset, shares implementation best practices for a sector which grasps the concept and benefits of blockchain, but still needs to understand how to best put it to use.

For all the talk of the transformative possibilities of distributed ledger technology (DLT), there has been relatively little discussion of leading practices for implementing it. To put it another way, more stakeholders in financial services get the why of blockchain, but fewer people know how to best put it to use.

Such conversations are imperative as DLT is being implemented more widely and within critical capital market infrastructures. The following insights are based on the experience of my firm, Digital Asset, in successfully deploying blockchains for different purposes in a range of critical environments. It's important to note that many of these leading practices are based on proven techniques for implementing old-school technologies. However, there are important distinctions that reflect the unique power of DLT and the extraordinarily high stakes surrounding its use in critical market infrastructure.

Thinking differently about innovative tech

The first implementation best practice involves a shift in mindset. DLT and smart contracts are unique innovations, so organisations should "think different" relative to implementation. When deploying DLT to underpin large trading platforms, failure is simply not an option. Thus, the degree of planning and testing will need to be an order of magnitude higher than when updating conventional tech platforms.

The volume alone – trillions of dollars worth of transactions on a daily basis – is almost mind-numbing. But the complexity of these transactions is increasing rapidly, as are the expectations for processing speed, cost efficiency and transparency. Post-trade management is now expected to match the speed of pre-trade transactions. Real-time has become the baseline. All of these expectations must be accounted for in implementation plans, starting with requirements definition.

The range of stakeholders is another unique factor in projects involving core infrastructure. Each market participant uses these platforms in different ways and for different parts of its business. The impact of DLT and smart contracts on all of these stakeholders and for every type of interaction must be mapped carefully. This is critical because with these new technologies, it is not just the functionality being replaced or enhanced—it is the entire workflow between stakeholders, i.e., the workflows that dictate how different stakeholders in a system interact, how stakeholders use new systems functionality, how data is created and used, and so on.

For its initial DLT project, a large European infrastructure formed a working group, including both technologists and business executives and representing more than a dozen different stakeholders. Through a series of interactive workshops, the team conducted a full impact assessment and gathered and prioritised a comprehensive set of requirements. The goal was to understand both what customers view as the platform's must-have capabilities and features in the near term and what they'd like to see in the future.

This inclusive and iterative process helped de-risk not only the deployment of the new digital platform, but also prepared the constituent organisations for

the necessary integration work on their own legacy systems. That ripple effect – the need for blockchains to connect to the diverse legacy systems used by all market participants – is a critical consideration for successful DLT implementations and part of what makes these projects so much different from, say, updating back-end finance systems for even the most complex global enterprise.

Focusing on objectives and outcomes

The European project also benefited from a strategic focus. Prompted by a regulatory requirement for paperless issuance and settlement, the exchange saw an opportunity to transform a high-cost and error-prone process. The goal was to create a digital platform that made it faster, easier and cheaper for counterparties to share records of value. The working group identified the challenges to achieving the goal and determined that DLT – specifically, a digital registry to enable automation of all issuance, custody and settlement and asset servicing processes – was the best technology for the job.

Such a deep and detailed knowledge of what business problem is being solved is a hallmark of all successful blockchain projects. It's tempting to think that an organisation is innovating simply by implementing DLT to continue doing things the way they've always been done. The most transformative applications address specific issues and deliver value via repeatable use cases.

Proving out the value

Agile development methodologies and test-and-learn models have become more common because they help de-risk IT projects and, ultimately, produce better outcomes. They are definitely well suited to the world of DLT. Moving steadily through clearly defined milestones is even more important when implementing new technologies. That's true on several dimensions, from identifying integration issues sooner to building trust with stakeholders and positive momentum for implementation teams, which will surely feel themselves to be under great stress.

Prototyping, piloting and proofs of concept are also extremely useful in the world of DLT. Digital Asset worked together with a leading FinTech on a solution that digitises and automates repurchase agreements, another highly manual and paper-based transaction. A pilot showed how a single, real-time view of the entire trade lifecycle with automation of repo agreement terms could increase efficiency, minimise failures and disputes, and reduce costs. Further, the prototype clarified adjustments that would be necessary to scale the solution.

An Asian exchange took a similarly phased approach in collaborating with several large financial institutions on a proof-of-concept for the development of DLT-based dematerialised deposits. The initial focus was on the dematerialisation of securities certificates for structured warrants leveraging smart contracts and a scalable distributed ledger platform.

Here again, despite pressure to go all-in on blockchain, the exchange started small and addressed one targeted need. In other words, it didn't try to do too much too fast. And now it has a strong foundation to expand its digital capabilities. The Goldilocks principle definitely applies to DLT: too much change too fast can be disruptive, but not taking on enough change or delaying too long could lead to missed opportunities.

Getting practical on project management

Thinking differently about DLT also pertains to budgets and timelines, largely because these projects involve so many different stakeholders—and in some cases these stakeholders are competitors—working together on a cross-market solution. The involved organisations will likely have their own in-flight legacy projects underway and it's unlikely their strategies, budgets or timelines will align with the requirements necessary to implement an entirely new technology. Funding models should reflect these complexities.

Comprehensive communication, engagement and education efforts help ensure stakeholders know what's coming and are prepared for the unexpected – even inevitable – delays and budget shifts. Project timelines should account for necessary modifications that will arise. Built-in scenarios and dependencies should focus on the most likely complications. By engaging early and often with stakeholders, you'll have insight into what these will be. And testing cycles should never be shortened or compromised in order to hit a target date.

Lastly, a commitment to working together – collaboratively and productively – when inevitable issues occur benefits everyone. Not every glitch can be solved simply by throwing more budget or bodies at the problems. And nobody wins when finger-pointing is the default reaction to delays or budget complications.

New techs need new implementation approaches

Our track record in supporting infrastructure providers and other leaders in financial services has taught us that the unprecedented power of DLT dictates fresh thinking and updated implementation strategies. That's not to say the technology is immature or that deploying it is inherently risky; in fact, DLT is more than ready for prime time, as the experience of multiple stock exchanges has shown.

Rather, DLT is still new to many organisations and their technology departments. Because DLT functions in fundamentally different ways to standard technology, business sponsors and project teams must recognise what's fundamentally different about it – both as a technology and in terms of its value creation opportunities.

High-functioning IT organisations will know to move forward with caution and humility when it comes to powerful new technology. And the implementation practices I've shared here will help more organisations implement DLT and smart contracts for maximum benefit. As these proven techniques become industry standards, the already compelling business case of DLTs and smart contracts will become even clearer and more achievable.

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