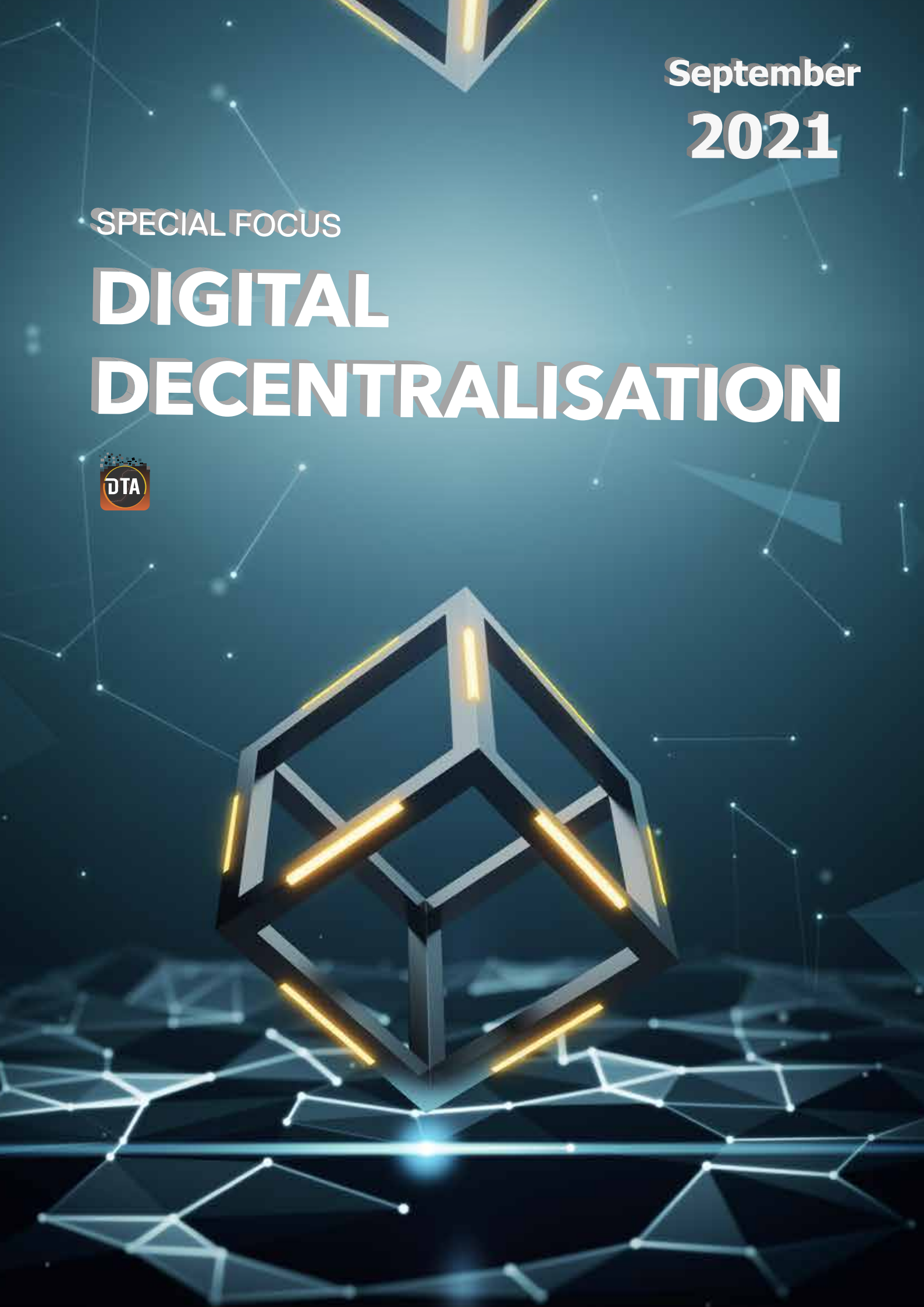
September

2021

SPECIAL FOCUS

DIGITAL DECENTRALISATION



Introduction

Blockchain technology has progressed from its use in cryptocurrencies to general applications that require its benefits. Many industries are now relying on blockchain for their various uses, particularly its digital decentralisation, due to its increasing promise of enhanced security and improved speed.

Decentralisation in itself is not a new concept. Three network architectures are typically considered when developing a technological solution: centralised, distributed, and decentralised. While blockchain technologies frequently use decentralised networks, a blockchain application cannot be classified solely as decentralised or not.

Decentralisation, on the other hand, is a sliding scale that should be applied to all aspects of a blockchain application. In addition, it is possible to provide better and more equitable service by decentralising resource management and access in an application.

Not only that, but decentralisation can also improve data reconciliation. Companies exchange data with their partners on a regular basis, and this data is typically transformed and stored in each party's data silos, only to resurface when it is required to be passed downstream. Each time the data is transformed, the possibility of data loss or incorrect data entering the workstream is introduced. Every entity has access to a real-time, shared view of the data thanks to a decentralised data store.

This makes operations and transactions much more transparent. In fact, various industries are now leveraging digital decentralisation for benefits such as fraud prevention and financial efficiency.

In this month's Special Focus, we'll look at what else digital decentralisation can do in various industries and how it will play out in the future digital landscape.

Happy reading!

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CATHERINE LIAN
Managing Director
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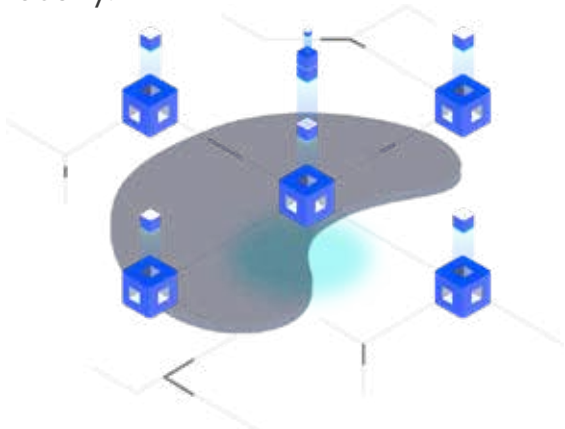
1. The blockchain hype seems to have waned over the past few years. In your view, is blockchain technology still relevant or important today? Why?

COVID-19 has disrupted every system around us. In the wake of supply chain disruptions, many have reiterated the need for more transparency and visibility across the supply chain. This is where Blockchain technology plays an important role as a useful business tool.

Blockchain can help solve several foundational business problems, from how we collaborate with other organisations to ensuring that we can trust the data we are looking at. These movements toward greater trust, greater transparency, greater decentralisation, and personal ownership of your data can have far-reaching implications in every industry.



The benefit of Blockchain is about improving the end-to-end visibility of any asset – whether it's food, or even the data powering AI models – from provenance to final disposition. There are already markets being disrupted, like ticket sales, food safety, identity management and more, that are beyond hype and being used in real-world applications today.

2. What are some of the use cases of blockchain/decentralisation technology that more businesses should know about and adopt?

In Malaysia, IBM collaborated with Royal Malaysian Customs Department (RMCD) to use the blockchain-enabled 'TradeLens' platform to modernise the shipping processes, create greater transparency and enhance customer satisfaction.

TradeLens is a digital global trade platform that enables more efficient and accurate container tracking and information sharing among platform members. The TradeLens platform, jointly developed by A.P. Moller – Maersk and IBM, digitises the voluminous, time consuming paper-based shipping processes. With TradeLens, authorities will now be able to receive shipping data as soon as containers leave the port of origin.

The blockchain technology inside the TradeLens platform promotes trust among trading partners as the record of all transactions is shared within the network and permissioned parties can access the data in real-time.

TradeLens will give RMCD more time to prepare for the arrival of shipments. This will enable more efficient and thorough fraud and forgery inspection as well as a more consistent and transparent revenue collection process.

3. What decentralised technology/ solution does your company provide, and how does it help businesses address their existing challenges?

IBM is the recognized world leader in enterprise blockchain, ranked #1 by both Juniper Research and HFS Research. IBM Blockchain Platform offers the most advanced, production-ready blockchain solution on the market today.

IBM has convened game-changing blockchain-based ecosystems that easily collaborate IBM Blockchain Platform and makes it easy for organisations to quickly build, operate, scale and govern blockchain networks of their own.

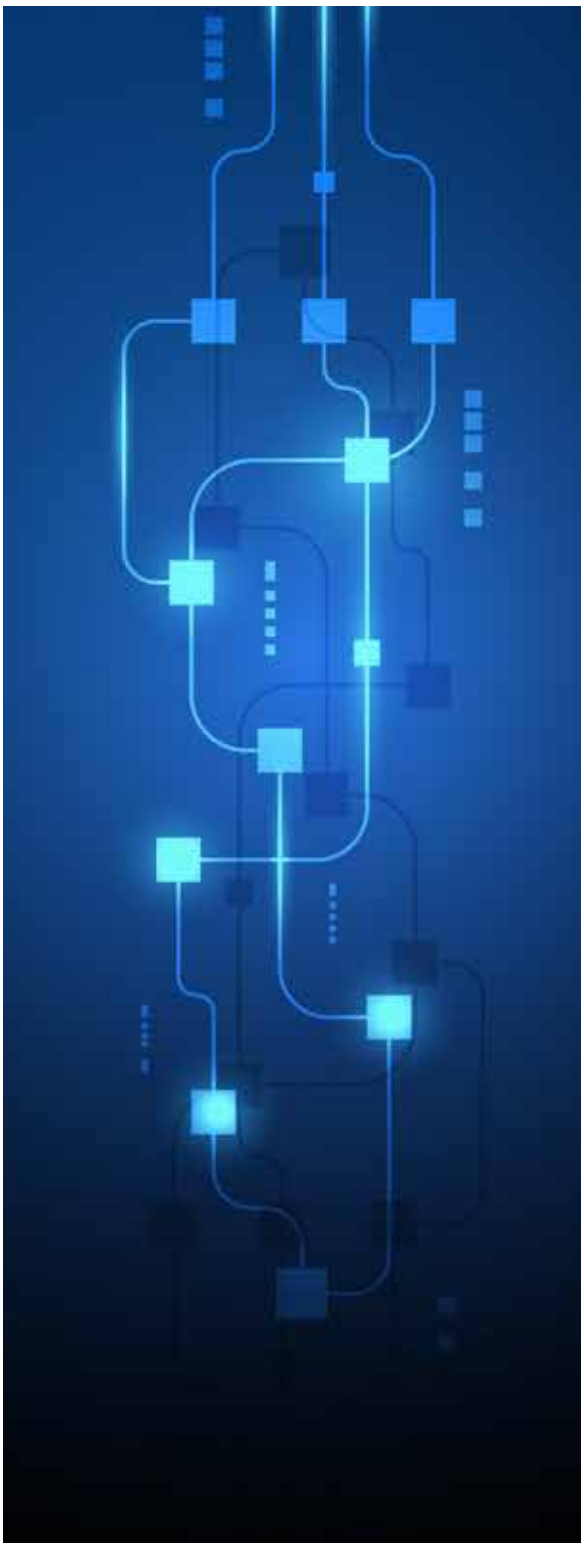
IBM blockchain is permissioned and enterprise-ready, allowing clients of any size to seamlessly integrate blockchain into every facet of their organisation. IBM Blockchain Platform offers multi-cloud support, allowing organisations to run their networks using any cloud they wish. These advantages combine flexibility and the ability to iterate rapidly with the resources and experience of a large company.

4. In your view, what does the future hold for decentralised technologies? Will they replace or complement the way we work and do business with technology?

According to Gartner, Blockchain will support the global movement and tracking of USD 2 trillion of goods and services annually by 2023. In fact, the advantages of Blockchain adoption again include more flexibility and more transparency. This has become critical as more enterprises push for digital transformation.

If you are trying to do multi-party integration with security and privacy, and you need to do it quickly in a way that is going to have a rapid business impact, then blockchain is a suitable technology to pursue that business goal.

Blockchain is another way to help manage the complexity that comes with using different cloud services. Blockchain plays a critical part because it allows integration automation and multi-party integration. Blockchain has gone from a future thought to a current thought.



WadzPay

ANISH JAIN
Managing Director & CEO
WadzPay

1. The blockchain hype seems to have waned over the past few years. In your view, is blockchain technology still relevant or important today? Why?

I would disagree with the premise that blockchain hype has decreased over the past few years. In identifying whether there is hype, we can look at Google search data, as well as the growth of communities on platforms such as Reddit, trading volume, and finally adoption. Since November, 2020, there has been considerable interest in blockchain. Cryptocurrencies, one application of blockchain technology have seen record search volumes and this interest has sustained since the peak last November. Some groups on Reddit have over 3.5 million members. Trading volumes are also eclipsing all periods, including the last significantly-hyped timeline of late-2017. The total market cap is also at almost USD 2 trillion, more than double from 2017.

Payment giants such as Mastercard and VISA, as well as many other corporations, are adopting digital currencies, while also looking for novel applications of blockchain technology. One only needs to search the job market to see that there is still a hiring frenzy in this field.

Hype aside, blockchain is both important and relevant, as it can pave the way for safety, security, efficiency, as well as low-cost data organisation. Some businesses have remodelled themselves and put blockchain at their core.

2. What are some of the use cases of blockchain/decentralisation technology that more businesses should know about and adopt?

It's easy to get lost in the news within this industry which tends to focus on digital currencies and their pricing actions, compared to their utility. In reality, there are countless use cases that blockchain and decentralisation technology can fuel.

Before elaborating, it is important to note that blockchain does not have to be decentralised. There are various benefits for decentralised blockchains and the industry has mentally linked the word decentralised with blockchain. But there are also numerous applications of centralised ledgers. For example, electronic voting systems (such as those in the case of elections), could be centralised. Internal company systems may also not see benefits in becoming decentralised, as this will improve the efficiency for updates, the stability of the network and can be more affordable/less resource intensive. With many Central Bank Digital Currencies in development or in testing, these currencies are likely to be centralised (as we have seen in China).

Use cases of blockchain technology can include:

Acceptance: Elon Musk initially announced that Bitcoin can be used to pay for TESLA vehicles. The more high-visibility products can be purchased through digital currencies, the greater the adoption drive and impact on the market.

Payments: Mastercard and VISA will be processing transactions using digital currencies; blockchain can be perfect to enable secure payments systems.

Remittance: transferring funds to friends and family overseas is a very common use case. Compared to existing products in the market targeting foreign workers, which often require people to queue up in the midst of a pandemic and pay exorbitant fees, blockchain-based payment systems can eliminate both of these pain points.

Supply chain monitoring: ensuring that the correct product arrives from point A to point B, while also enabling traceability for food safety (for example, you could scan a QR code to understand where each of the ingredients used in a candy bar were sourced from). Renault moved its supply chain system from pen and paper-linked databases, to a blockchain, which has enabled immense efficiencies in keeping records for each component and ensures greater compliance to regulations.

Ticketing: in the post-Covid world, where contactless ticketing is preferred, blockchain can enable secure ticket issuance, while also preventing scalping, by linking the ticket to a specific person or device.

These are just some of the examples about the exciting use cases, that blockchain technology enables.

3. What decentralised technology/ solution does your company provide, and how does it help businesses address their existing challenges?

Payments systems are fragmented. The world of credit cards, banking, online payments processors, fiat, digital currencies and emerging Central Bank Digital Currencies are built around different technologies and systems, and do not easily interchange with one another. To give you a very simple example: you can't send funds from your credit card to someone else's bank account overseas, as these operate on entirely different infrastructure.

This is where WadzPay comes in. We believe in an interconnected world, where payment methods and technologies become secondary and user experience primary. We have created the infrastructure that will ensure interoperability between different technologies and their underlying protocols.

Some of the challenges faced by existing businesses (and consumers) are:

- A large proportion of the world is still underbanked/unbanked, keeping them off the financial grid and limiting their access to financial services that have now become an expectation in many of our lives.
- The post-COVID world has accelerated the shift towards a cashless society, yet alternate payment methods can incur high fees and slow settlement times for merchants; some of these fees may in turn be passed to consumers.

CBDCs will soon start launching and gaining adoption at a rapid rate, however, cross-border acceptance is not something that is likely, as it requires cooperation between hundreds of countries, as well as compatibility between very different technologies that enable CBDCs.

There are countless use cases where we are actively trying to simplify payments for all, and pave the way to a new interconnected payments world of the future.

4. In your view, what does the future hold for decentralised technologies? Will they replace or complement the way we work and do business with technology?

As per my response to a previous question, implying that decentralised technologies could replace business technologies, is somewhat a misnomer. When it comes to doing business, whether it's for internal IT systems, database management, or even email, decision makers should perform a cost vs., benefit analysis, and carefully compare features between all technologies available to them. Hybrid systems may also be considered.

Double-clicking on payments, we complement the 'old world' to integrate it with the 'new', and vice versa. There are many use cases where fiat may continue to be king, while in others, digital currencies, whether centralised or decentralised, will become the norm. Change takes time and ultimately the market decides which technology will become adopted. We will be at the forefront of this change.

Blockchain Association Singapore

CHIA HOCK LAI
Co-Chairman
Blockchain Association Singapore

1. The blockchain hype seems to have waned over the past few years. In your view, is blockchain technology still relevant or important today? Why?

I would rather reframe that the blockchain hype has been replaced by pragmatism and optimism as the use cases become clearer and utility value becomes stronger.

In the enterprise realm, the trustless and traceability properties of blockchain established themselves particularly well as an alternative infrastructure in supply chain, cross-border payments and trade finance, where multiple large scale production use cases have been implemented. As an alternative asset class, digital assets have been quickly adopted by institutions as a hedge to inflation, and this is reflected in its burgeoning market cap of USD2T. As an alternative finance or decentralised finance (DeFi), whereby there is no need for a financial intermediary in the provision of financial services, adoption has exploded as evidenced by the Total Value Locked (TVL) more than tripled to above USD80b since the start of the year. Last but not least, the rise of non-fungible tokens (NFT) in use cases like digital art, collectable and gaming has accelerated the adoption of blockchain by consumers.

2. What are some of the use cases of blockchain/decentralisation technology that more businesses should know about and adopt?

Here are some of the common use cases:

Traceability
Blockchain provides transparency and an immutable audit trail, important for supply chain which needs to allow multiple players (importers, exporters, customs, shippers etc) visibility on chain of custody as goods move from one point to the other. For example, the TradeLens platform, jointly developed by Maersk and IBM, is underpinned by blockchain technology and supports the efficient, transparent, and secure exchange of information to help foster greater collaboration and trust across the global supply chain.

Tokenisation
By tokenising assets onto blockchain, it allows fractionalisation, hence making once illiquid assets like real estate more accessible and liquid. This tokenisation is now very popular in converting arts and collectables into NFTs and traded easily between creators and investors. For example, the Singapore-based InvestaX has launched its exchange, offering end-to-end solutions for the issuance, trading and custody of digital securities for real estate, private equity and other alternative investments.

Decentralisation
Replacing centralisedintermediaries with smart contracts has led to more efficient transactions at lower costs. The growing DeFi sector is one such use case, disintermediating traditional financial intermediaries in credit, insurance, asset management and

derivative markets. For example, Aave, the largest DeFi lending protocol with more than USD $16 billion in cryptocurrency assets locked, is planning to launch Aave Pro, which will operate segregated permissioned pools of 'whitelisted' users that have passed Know Your Customer (KYC) protocols. This removes one of the key roadblocks to regulated institutions participating in DeFi.

Financial Infrastructure
Atomic transactions coupled with automation enabled by smart contracts makes blockchain a popular choice as financial trading exchanges, as it could power end-to-end flow from trading to settlement. One such use case is Australia Stock Exchange (ASX) is the replacing its ageing clearing and settlement system called CHESS with a blockchain-based system.

3. What decentralised technology/ solution does your company provide, and how does it help businesses address their existing challenges?

Blockchain Association Singapore is a non-profit organisation setup to support the growth and development of the blockchain & digital assets industry. We advocate for the responsible application of blockchain technologies, connect our members with one another and engage key stakeholders, including consumers and regulators, on various topics on blockchain & digital assets.

4. In your view, what does the future hold for decentralised technologies? Will they replace or complement the way we work and do business with technology?

Decentralised technologies has matured tremendously over the past few years and will continue to do so, demonstrating the potential impact that could be similar to what the internet has had on the digital economy. Having said that, it is neither a hammer looking for a nail nor the solution for every problem. There will be business use cases that will do better than conventional solutions, but I reckon the most effective use cases will be those that it is used in combination with other technologies such as AI, IoT, cloud computing and 5G.