Blockchain & Distributed Ledger Technologies: Malaysia's Position

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Blockchain & Distributed Ledger Technologies is the latest subject of intense discussion and debate in many economies. Some countries plan to implement this in various sectors of the government, society and economy. Dubai for example, plans to have all its documents on Blockchain by 2020 as part of its Smart Cities implementation plans.

The term Blockchain is used generically, to cover "Blockchain and Distributed Ledger Technologies" (which are often quoted together) though there is a subtle distinction between the two.

So what exactly is Blockchain? Imagine two entities (e.g. banks) which need to update their user account balances when there is a request to transfer money from one customer to another. They need to spend a tremendous (and costly) amount of time and effort to coordinate, synchronise, message and check to ensure that each transaction happens exactly as it should.

Typically, the money being transferred is held by the originator until the recipient confirms that it has been received, With Blockchain, a single ledger of transaction entries that both parties have access to, one can simplify the coordination and validation efforts because there is always a single version of records, not two disparate databases.

"The Blockchain today is what the World Wide Web (www) was in 1992. Blockchain will impact all aspects of society just as the www has been impacted and engrained in today's economy, government and society, but within a shorter timeframe…."

The above quote is paraphrased from talks by several speakers in conferences and events in USA, Europe and elsewhere; videos on these events are also available on YouTube. Its significance is also alluded to in books, articles and reports from various sources and the message has intensified in the past 18 months.

This vision is profound and to ignore it and its implications, will be detrimental to the country. Just take a step back and take a look at where we are today, with the applications and functions available on the Internet and how these have covered all aspects of economic, government and social activities, in varying degrees of assimilation and critical use in different countries. Could we, 25 years ago in 1992 or even several years after that, have seen, imagined or envisioned what we have today? Did the general public at that time, foresee what we could do today with social media like Facebook and navigation applications like Waze or taxi hiring services like Uber?

As with anything new, there are at least two viewpoints. In the early 1990s, there were the visionaries and hopefuls who saw and evangelised the potential of the Internet. There were also the naysayers, who viewed it as a passing fad, like CASE (Computer Aided Software Engineering) technologies that were much talked about and had actual product offerings used by entities, in the 1980s.

The impact of the Internet today is forceful and has proved the naysayers wrong. It is an irony that there are still people who may not have heard or know about the www or the Internet although these are actually a part of their daily lives and things like social media, electronic banking and commerce, Internet of Things and smart cities are taken for granted.

In the same way, it may be that in the near future, we won't even be talking about Blockchain as it will already be part and parcel of our daily activities, in our interaction with the government, commercial entities and social networks. In fact, governments and commercial entities may be redefined and reengineered with completely new roles based on Blockchain. What those roles may be will be left to our imagination.

Central to the disruption potential of Blockchain is the notion of "Trust". Up to now, we MUST rely on specific entities to fulfill the 'middleman role' of 'Trust', whether this is Government services or the commercial entities such as banks, securities companies and other services sectors. However the Blockchain technology decouples the need for Trust to be centralised and concentrated at such institutions as it can be distributed across the established infrastructure provided by the Internet and other established technologies.

As a country, the choices before us are simple: To lead, to follow or be left behind. Unlike other technologies which can be implemented in isolation in companies and in countries, the interconnectedness of economies will naturally require countries to follow the leading countries implementing Blockchain to ensure they are still in the game to participate competitively in international trade and commerce. In plain layman's language, if we lag behind, we will follow what other countries have established, their technologies and their processes in order

for us to engage commercially with them. Just imagine this: If one of our neighbouring countries has taken a significant lead in Blockchain, we will, eventually, have to follow that country's rules or be left out in the cold.

The Internet and www success stories today in governments, economies and society at large, provide ample examples of lessons learnt, critical success factors, challenges of implementation, change management and the upsides and the downsides (misuse, security breaches, threats and vulnerabilities).

Smarter countries learning from the Internet, are not just watching Blockchain to "happen". From news reports, many countries are, in fact, actively discussing, proactively planning or making firm plans for the wide use of Blockchain. For example, as mentioned earlier, Dubai plans to have all its documents on Blockchain by 2020 as part of its Smart Cities plans.

Malaysia just cannot sit back and watch while all these are happening.

Blockchain has the potential to be used in very diverse areas as shown in the following table:

Class	Examples
General	Escrow transactions, bonded contracts, third-party arbitration, multiparty signature transactions
Financial Transactions	Stock, private equity, crowdfunding, bonds, mutual funds, derivatives, annuities, pensions
Public Records	Land and property titles, vehicle registrations, business licences, marriage certificates, death certificates
Identification	Driving licences, identity cards, passports, voter registrations
Private Records	IOUs, loans, contracts, bets, signatures, wills, trusts, escrows
Attestation	Proof of insurance, proof of ownership, notarised documents
Physical Asset Keys	Home, hotel rooms, rental cars, car access
Intangible Assets	Patents, trademarks, copyrights, reservations, domain names

Source: Blockchain - Blueprint for a New Economy by Melanie Swan (Oreilly 2015)

A more elaborate list of more than 80 areas where Blockchain can be potentially used, is available in the following link http://bit.ly/swanblock.

Blockchain has been below the radar of many jurisdictions. Recently, however, it caught the watchful eye of governments and regulators in several countries. While the technology is in various stages of development and implementation as well as the varied value-add options provided or to be provided by vendors, many countries already see the need to set Standards for some aspects of Blockchain.

These standards will include, among others, governance, auditability and traceability, risk management, security and privacy implementation. The International Organisation for Standardisation, ISO, has formed a new Technical Standards Committee, ISO/TC 307 on "Blockchain & Electronic Distributed Ledger Technologies" in the last quarter of 2016. Malaysia, represented by the Department of Standards Malaysia, is one of 16 countries participating in this committee, while 17 other countries will watch the developments as observing members.

It is expected that key Blockchain players and interested parties in Malaysia will participate in these Standards development activities at the ISO level through the local mirror committee TC/G/15, under the Department of Standards Malaysia. These players should include solution providers, regulators, trade associations and industry or the user community. Active participation will ensure we have the voice to influence the direction of Standards related to Blockchain and, at the very least, protect the interests of sovereign nations like Malaysia and similar sized economies.

Malaysia has to get its act together to make things happen or we will be left watching what happens. Even worse, we still be wondering what has happened. A national policy and strategic plan to address and capitalise on the potential of Blockchain in Malaysia is very necessary. ■

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Author's Biodata

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Editor's note: The author will be a speaker at the Kuala Lumpur Blockchain Conference on 8-9 April, 2017 (http://bloktex.com/speaker/abdul-fattah-mohd-yatim/).