32563 – ITPS Assignment 3
Block chain and Cryptocurrency: The Next Big Thing

Team: "*The Ethics Committee*"

Richa Vyas	12640304
Abhishek Dangi	12736625
Akshara Suresh	12731776
Lohit Ravindra	12795389
Shaily Talati	12638957
Shirapthi Koubla Mahendrababu	12523799

Table of Contents

Introduction

For the past several weeks, you've likely heard a portion of the accompanying terms on the off chance that you've focused on the universe of finance: Cryptocurrency, Blockchain, Bitcoin, Bitcoin Cash, and Ethereum. Be that as it may, what do they mean? What's more, why is cryptographic money suddenly so hot?

Blockchain

No term at present is more hyped, and more poorly understood than blockchain now days. Blockchain tech is entirely straightforward at its center. Basically, it's a mutual database populated with passages that must be confirmed and encrypted. Consider it a sort of very scrambled and checked shared Google Document, in which every passage in the sheet relies upon a consistent relationship to every one of its forerunners. Blockchain tech offers an approach to safely and proficiently make a carefully designed log of touchy action (anything from global cash exchanges to investor records).

Blockchains are computerized records or logs that record electronic exchanges that happen between two gatherings. As opposed to depending on an outsider go between (ex. PayPal, a bank, and so on.), the system by achieves understanding ("agreement") on which Records are real utilizing an accord method. By " legitimate," we imply that, for instance, Alice sends cash to Bob and does not spend the same computerized money twice (called a "twofold spend") or do whatever else malicious.

Blockchain's applied structure and basic code is helpful for an assortment of monetary procedures because of the potential it needs to give organizations a protected, computerized contrasting option to saving money forms that are commonly bureaucratic, tedious, paper-substantial, and costly.

Cryptocurrency

Cryptocurrencies are the "native" digital currencies that exist in blockchain systems or applications. Whereas the Bitcoin system's native cryptocurrency is bitcoin, Ethereum's is called *ether*.

All blockchains utilize their own local digital forms of money or require the utilization of real ones, for example, bitcoin and ether. There are around 1178 cryptographic forms of money available for use as of today.

(Coinmarketcap.com, 2017)

Digital currencies are basically quite recently computerized cash, advanced apparatuses of trade that utilization cryptography and the previously mentioned blockchain innovation to encourage secure and mysterious exchanges. There had been a few cycles of cryptographic money throughout the years, yet Bitcoin really push digital currencies forward in the late 2000s. There are a huge number of cryptographic forms of money drifting out available now, yet Bitcoin is by a wide margin the most prominent with Ethereum Following Closely. The advanced upheaval and the prevalence of bitcoin have influenced it to clear that Cryptocurrency's have turned into a significant possibility for effective source of investing.

Stakeholder Analysis

Stakeholders

A Stakeholders are group of people or individual or any organization which has an interest or concern in a policy or organization. Stakeholder could be classified in to various groups such as international actors, national actors, public sector agencies, non-profit organizations, for-profit organizations and users (Business Dictionary,2017).

Stakeholder Analysis

Stakeholder Analysis is a process of collecting and analyzing the information which could be used to determine whose interests should be taken while developing any policy. This could be implemented in three steps

- Identifying Stakeholders
- Prioritize Stakeholders
- Understanding Key Stakeholders (Rachel Thompson,2017)

Identifying Stakeholders

The Stakeholder's for Cryptocurrency are identified as below

- Academia
- Associations
- Investors
- Customers
- Freelancers
- Merchants
- Miners
- Speculators
- Traders
- Developers
- Researchers
- Lenders

Academia:
Universities which supports the growth of cryptocurrency by setting up research centers. For example, DCI (Digital Currency Initiative) helps the core developers of bitcoin.

Associations:
The companies that uses the technology so called "block-chain". For example, Australian Digital Currency Commerce Association (ADCCA) and UK Digital Currency Association (UKDCA).

Investors:
Investors are an Organization or common people who invest in cryptocurrency and do expect to gain profit from it.

Customers:
Customers are individuals who buy products or goods using cryptocurrency.

Freelancers:
Freelancers are group of growing people who wish to be paid in cryptocurrencies. They could be full-time employee or contractor.

Merchants:
The businessmen who use cryptocurrency.

Miners:
Miners are individual or group of people or companies who have the privilege to confirm the transactions. In a cryptocurrency network, only miners will handle the transactions, validate it and spread them across the network. For this activity, they are rewarded with token of cryptocurrency.

Speculators:
Speculators are the short-term investors. They take huge risks in hope of quick gains.

Traders:
Traders are people who buy and sell cryptocurrency. For example, agents.

Developers:
People who develop the core code.

Researchers:
Group of people involved in the research and development of blockchain.

Lenders:
Cryptocurrency lending cites which lends the cryptocurrencies to users for an agreed interest rate who use peer to peer transfer(stakeholdermap.com,2008).

Prioritize Stakeholders:

To analyze the priorities of each stakeholder we use a common approach suggested by Bryson is the Power/Interest grid.

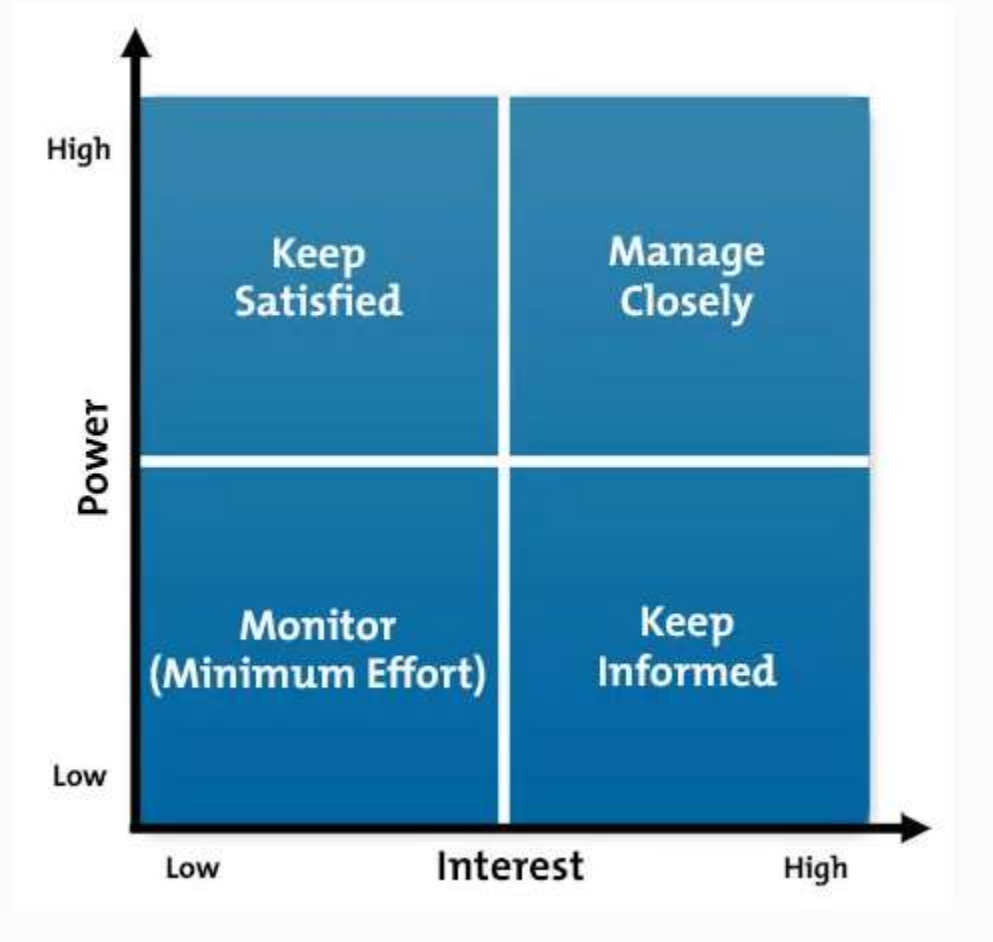

Fig 1: Power/Interest Grid of Stakeholder Prioritization (Mind Tools,2017)

- ✓ ***High power High Interested***: The Stakeholders who fall under this category are the Key Players and who take major decisions. These stakeholders should be fully engaged and consulted regularly.
- ✓ ***High power Less Interested***: The Stakeholders who are categorized under this quadrant should be kept satisfied.
- ✓ ***Lower power High Interested:*** Keep the people informed with enough information and ensure that there are no raising issues.
- ✓ ***Lower power Lower Interested:*** Monitor these people and provide them enough information (Bryson, 1995).

The Stakeholders of Cryptocurrency are categorized and displayed below Power/Interest grid

Fig 2: Prioritizing Stakeholders of Cryptocurrency/Block chain

Analysis Method:

In this section, we will discuss about the what will be the outcomes of cryptocurrency and block-chain technology? What kind of issues could arise in future due to the implementation. How to handle the ethical, social, cultural, legal and business issues caused by them? The approach used to analyze the issues and handle them are ***four-step approach*** because it is more elaborate, helps to find the solutions as well as prevent its occurrence in future.

- Evaluating the current situation
- Analyzing ethical and legal issues
- Providing solutions for current situation
- Preventing its occurrence in future

Step 1 – Analyzing the Facts of The Situation

1) What are the relevant facts?
2) Who are the stakeholders – i.e., who has an interest or stake in the outcome?
3) Examine the effects: who benefits? Who is harmed?

Step 2 – Isolate the Ethical and Legal Issues

1) Examine the legal issues: is anyone acting illegally?
2) Consult any official guidelines:
a) Does the organization have policies which apply to this situation?
b) Does the Australian Computer Society Code of Ethics apply?
3) Examine ethical possibilities:
a) Does the action violate the Golden Rule (you should treat others as you expect them to treat you)?
b) What are the duties and professional responsibilities of those involved?
c) What are the rights of those involved?
d) Are those involved following their own self-interest?
e) Are they following a utilitarian approach or instead a principled approach?
f) What decision would be consistent with past conduct (if this situation has arisen before)?
g) What decision maintains reaction of self-respect and the respect of others?

Step 3 Decide on Steps to Resolve the Current Situation

1) What are your options?
2) Which option(s) would you recommend?
3) Defend the legality and ethicality of your preferred option.
4) How would you implement this?

Step 4 Prepare Policies and Strategies to Prevent Recurrence

1) What organizational, technological, political, legal or societal changes are needed?
2) What are the consequences of your suggested changes?
a) What will be the benefits to the organization? Are they marketable? Do they further public relations?
b) What will be the costs to the organization?
c) Who benefits?
d) Who is harmed?
e) What obstacles might prevent your plan from working?
f) Do the changes support human rights and reflect common responsibilities? (UTS tutorial notes)

Conclusion:

Hence, we have used Bryson's Power and Interest grid to prioritize the major stakeholders of cryptocurrency and block-chain technology. The significance of analyzing stakeholder is that it aids businesses to structure their projects in initial stages and it also enhances the quality of the projects. We can use four-step approach to overcome or to identify solutions for legal, ethical and social issues related to Blockchain and cryptocurrency.

Ethical issues

In current place of activity, there is a huge impact in Block Chain and Cryptocurrency which changes the transaction process digitally. There are some issues that will be regarding ethics because the transaction is completely in a new way. A search that is being done on people's behavior is called as Ethics. In this category, we are going make a study on the ethical issues in Block Chain and Cryptocurrency, possible solutions to solve those issues have been discussed respectively.

Ethical issues in Block Chain & Cryptocurrency:

Although there is a lot of profit based on Bitcoins still there are drawbacks with its ethical issues. To administer its use government is struggling a lot, purchasers are now not caring for the legal protection when the usage of Bitcoin is being happened and there is a huge number of black market websites that are available because of Bitcoins. Whenever the latest technology is being emerged such kind of threats will arise so it will be left up to the citizens and lawmakers to decide and handle such kinds of complications.

Financial issues

Among people, financial collision is one which constitutes a huge impact on the citizens and the global economy. Such kind of financial issues will happen only because of gambling, Allowance of Drugs, Sponsoring to the terrorist activities (Bigari et al., 2016). Not only Gamblers even we tend to perform such kind of actions which lead to financial issues such as tax evasion, bribery, and corruption.

Solution:
In order to stop such kind of financial issues, we need to create awareness among people not to gamble and stop sponsoring for terrorist activities.

Corruption issue

Digitalizing the governance will become ease with block chain this helps everyone to make easy aspects of online transaction these kinds of activities will affect a lot of community and country where it is being happened. (Bigari et al., 2016)
Solution:
Such kind of corruption can be stopped by electing a good leader for the country who not only stop the corruption but also work for the betterment of the nation.

Human Error:

Block chain is a form of database, so there should be only quality information must be recorded in the block chain and since there are many number of users that are available the information that are not trustworthy because anyone in the world can have an account in the block chain database and their name or any of the owner information will not be mentioned properly this

helps lot of people to invest in various kind of activities such as investing in black markets, sponsoring to the terrorist etc. (Bigari et al., 2016). These things are happening because of the third-party allowance to the cryptocurrency where they give the freedom to their customers to have any name of their wish

Solution:
To overcome this issue the only solution will be having setup a separate domain that is being maintained by the government with a high security level of the database so that everyone will have an idea of where they are investing the amount.

Security Issues:

Crypto-currencies are one which is being invented to pay online without the help of bank since the transaction is happening through online it is considered as a subject of a hack. In recent times, there are about big hacks that have been happened which is said that about 135 million dollars and thousands of bitcoins are being stolen and various other hacks had happened in the past five years of time (Bigari et al., 2016).
So, because of this kind of acts that have been happened in this year can these crypto-currencies be replaced the answer is no because there are different types of currencies that are available but still all those types are stolen or counterfeit in some other way (Bigari et al., 2016). Similar to this even crypto currencies are such a kind of thing where it can be hacked by the peoples who are having a computer with internet connection and a bit knowledge of hacking techniques.

Solution:

Since it a matter of security issues it can be controlled by increasing tightening the security during the transaction is being happened and avoiding the unauthorized users or blocking them.

Black market issues:

As mentioned above since the transaction is happening without any middle man and happens directly between the customer and the product owner, the customer can buy any kind of products with the crypto currencies such as unregistered weapons supplies, hiring contract killers, illegal business such as drug distribution, prostitution etc. (Kara, 2016). Even though these things are happening through bit coins it cannot be stopped because crypto currencies are widely accepted though out the world and the main reason it cannot be stopped is it has a direct transaction process which other currencies doesn't have with it. So, all the illegal transactions will be made easy.

Solution:

Such kind of transactions and business can be stopped by having a law that makes a third man be in between the transaction process like a bank or an online portal which can save the transaction and know what the transaction is being happened.

Ethical Controversies:

There are lot of controversies that is being speculated with crypto currencies they are

- Bitcoins can avoid taxes because it is different from other currencies and the value of the currency will be fluctuating and not be same for a long time and one more reason is the transaction will be happening only through online so no one knows from whom or from where the currency is being transferred (Kara, 2016). So there are a lot of transaction is being happened through cryptocurrencies that will hide the fund from the government.

- A large-scale illegal market is being happened with the help of cryptocurrencies in the underworld which means with the help of these currencies lot of organizations is being supported for illegal activity. (Bogatov, 2017)

- No one can question what is being done by us, unlike the other currencies that are being made digitally. If an illegal transaction happens through PayPal one can question us where is money is transferred and for what reason but those things will never happen with cryptocurrencies.

Volatility:

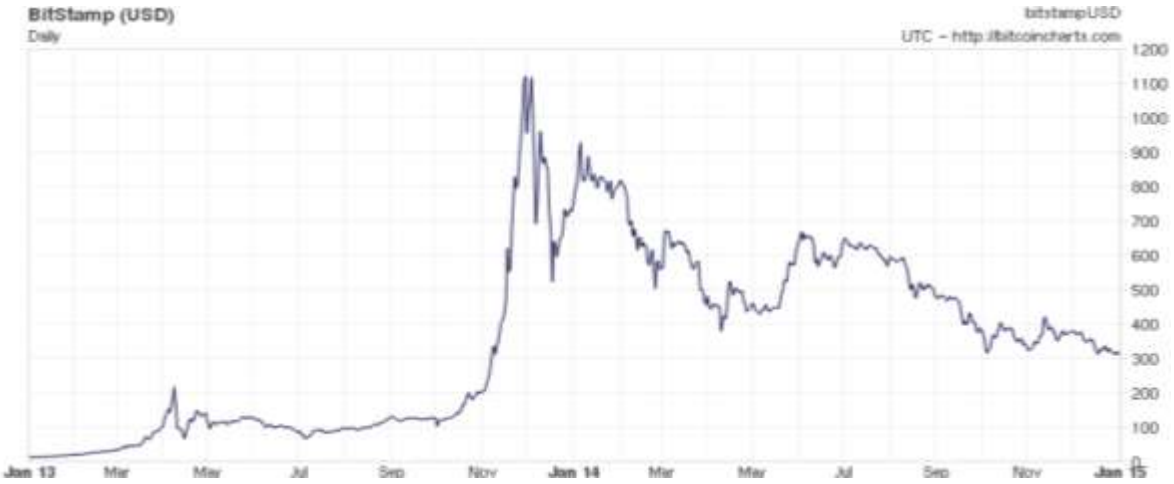

Figure.1, Price Chart of Crypto-Currency

This ethical issue has very less priority but according to me, it is considered as the most important issue among that too with such kind of currencies (Kara, 2016). The graph that is being provided below gives a clear picture of the bitcoin fluctuation we can clearly view that it doesn't be maintained stable, this could be the main reason for not attracting everyone due to its enormous number of fluctuations many afraid to buy the bitcoins which could make the heavy loss.

Legal Issues in Cryptocurrency and Blockchain

Legal Issues

Since Blockchain technology and cryptocurrency are a relatively new and disruptive in nature there are a whole list of legal issues that need to be handled carefully. With the increase in adoption of Blockchain and its related cryptocurrencies the value of each cryptocurrency has risen leading to more legalities. These legalities are at the world level and not at each jurisdictional level which further complicates the issue. Blockchain is the current hot topic which by far is the most advanced monetary regulation technology that has been developed whose sole purpose is to replace the centralized cash transactions by decentralized cryptocurrencies.

The various legal issues that are of the utmost importance now are listed below along with the solution to the issue:

Jurisdictional Issue

- Blockchain and cryptocurrencies have the power to cross boundaries set by jurisdiction because they work on a system of nodes whose location can be situated at any place throughout the world. (McKinlay et al., 2017)
- This feature of the blockchain results in a lot of confusion and complex issues with jurisdictional rights and regulations.
- Each jurisdiction is meant to have its own set of rules and regulations when it comes to setting up a contract and its principles. These rules tend to differ from jurisdiction to jurisdiction and results in lack of clarity as to which law is applicable now. (McKinlay et al., 2017)
- Conventionally if a bank is handing our transaction, we can question the bank and sue them for any sort of discrepancies in our transactions**.** But, Blockchain and cryptocurrencies have been designed to be decentralized and in such an environment we cannot hold anyone responsible during a fraudulent transaction
- Since each node is based off in a different location, we can't follow different laws for different nodes. At the same time, we can't set up different laws for each location the node is situated. (McKinlay et al., 2017)

- **Solution:**
  - **Jurisdictional issue is at forefront of playing a spoilsport for this wonderful technology as most jurisdictional powers are not ready to meet and solve this issue.**
  - **The need of the moment is the formation of a separate worldwide body in lines with the United Nations that governs blockchain and cryptocurrencies. The laws made by this body should be applicable throughout the world irrespective of any jurisdiction. (McKinlay et al., 2017)**

Liability issue

- When there is a technology like blockchain and cryptocurrency available to all in this open source world, there is a liability issue which pops up asking the below questions.

a) *Who is responsible for the functioning of the blockchain platform?*
Even though there are a lot of vendors who use Blockchain technology, the main risk users face is in the aspects related to the way Blockchain is operated and designed to work. Questions like, who is controlling this technology and can the functioning of this technology be stopped, if so how and who is going to do it, are the main liability issues. (McKinlay et al., 2017)

b) *Who is legally responsible in case of a malfunctioning blockchain?*
There is a huge chance of fraudulent and malfunctioning blockchain to pop up. This will pose a question as to who is responsible for this fraud. Since blockchain works on decentralized technology we cannot hold anyone legally responsible for any transaction that results in damage and loss. (McKinlay et al., 2017)

- **Solution:**
  - **To make sure liability is enforced we need to make sure there is someone accountable at each level of the transaction.**
  - **The main levels of transaction where liability needs to be enforced are**
    - **At the vendor-customer level**
    - **Between all the related parties, especially the affected ones. (McKinlay et al., 2017)**

Intellectual Property Issue

- Any technology that is expected to make money and large profits will face the intellectual property issue as more and more people start developing software using the same technology as their core.
- The case is no different when it comes to blockchain and cryptocurrencies. There are a lot of vendors out their adopting blockchain technology to their cryptocurrencies. The Intellectual Property Strategy needs to be set by these vendors to avoid lawsuits. (McKinlay et al., 2017)
- Back in the days all financial in institutions developed their IP within the system and made sure they don't disclose it to the outside world. They were the sole owners of the IP and patented it if needed.
- These same institutions are developing a lot of in house code trying to mimic blockchain or develop more proof of concept. This will lead to these institutions owning the IP in parts and this technology will suffer. (McKinlay et al., 2017)

- **Solution:**
  - **Open minded innovation practices are needed to counter the IP issue.**
  - **All organizations should team up to improve this technology and share their research to get more out of it. (McKinlay et al., 2017)**

Data Privacy Issue

- The main selling point of the blockchain technology and cryptocurrency is that the transactional data once generated cannot be modified or altered.
- This allowed for transparency and fair transactions.
- But with transparency a lot of data privacy issues popped up which resulted in a chaos especially in the banking and finance sectors.
- According to the law, the data related to the transactions need to be kept as a secret as part of banks confidentiality laws.
- This law is directly targeted by blockchain with its transparent transactions which anyone in the world can see and take note of.
- No bank would like their exact transactional data to be open to the world or to its competitors. (McKinlay et al., 2017)

- **Solution:**
  - **To tackle data privacy especially in the banking sector, new designs and solutions need to be generated that use blockchain and allow for a localized network of trusted users to gain access to the bank data.**
  - **Also, there can be separate encryption of those data which can be seen only by people with the encryption key. (McKinlay et al., 2017)**

Smart Contracts

- Blockchain and cryptocurrencies are based on the execution of "Smart Contracts".
- These contracts are lines of code that are executed on its own when the conditions related to the transaction are met.
- Since these contracts are executing by itself with no governance by any outside authority or middle men, or any kind of law or regulation, there is a lot of uncertainty related to blockchain technology. (McKinlay et al., 2017)
- The main issue is when there is a dispute between the two parties that are involved. What happens then? Who is going to resolve this dispute?

- **Solution:**
  - **The only way this issue can be tackled is by including a new provision in the smart contracts to resolve disputes.**
  - **This will allow for a peaceful resolution of the dispute by following the set of guidelines in the provision.**

Exit Assistance Issue

- Blockchain technology offered by various cryptocurrency vendors have access to all our personal data and transactional history.
- At the time of termination of the contract with the vendor, the user would want to be assured of a clear exit strategy where all the personal data has been handed over and the transactional data has been deleted from the servers.
- But no such strategy or assistance is in place. (McKinlay et al., 2017)

- **Solution:**
    - **A clear exit strategy and assistance protocol needs to be set up to handle all the exits. The protocol followed should automatically delete all the transactional history from the servers and hand over the personal data to the user during the termination of the contract. (McKinlay et al., 2017)**
    - **This allows for more confidence and trust in the system and technology.**

Taxation Issue

- Blockchain technology and cryptocurrency has allowed financial transactions to go undetected under the radar of the taxation department.
- Since there is no governing authority that monitors these transactions, huge transactions of money are not taxed.
- This has become a haven for tax defaulters to hide their money and use it for illegal purposes.

- **Solution:**
    - **Clear taxation protocols need to be added to the blockchain technology**
    - **Localized taxation strategies right at the beginning of the transaction will aid in proper governance of tax regulations.**

Laws Under Threat

A whole lot of Laws are affected by Blockchain technology and Cryptocurrencies. These laws are governed in Australia by the Federal Court of Australia which was created in 1976. (Federal Court of Australia, 2017)

The whole list of laws affected are:

- Banking Act 1959
- Anti-Money Laundering and Counter-Terrorism Financing Act 2006
- Australian Securities and Investments Commission Act 2001
- Financial Sector (Collection of Data) Act 2001
- Financial Sector (Shareholdings) Act 1998
- Financial Transaction Reports Act 1988
- Foreign Proceedings (Excess of Jurisdiction) Act 1984
- Income Tax Assessment Act 1936
- Jurisdiction of Courts (Cross-vesting) Act 1987
- Patents Act 1990
- Payments Systems (Regulation) Act 1998
- Personal Property Securities Act 2009
- Privacy Act 1988
- Tax Agent Services Act 2009
- Taxation Administration Act 1953
- Trade Marks Act 1995 (Federal Court of Australia, 2017)

Social Issue

Here in this section, we will be focusing on the **social issues of blockchain and bitcoins.**
A **social issue** is nothing but a problem which will influence a great number of individuals within a society.
There are positive as well as negative impacts on the society. There won't be a doubt about Bitcoin being an internet trend and is said to be the future currency but along with the advantages and the positive impacts on people and the society, there are various disadvantages and flaws associated with it.

Negative impact on society (negative social issues)

1. Complexity

   Blockchain technology includes a completely new vocabulary and it has also made cryptography more popular. But the technology is full of jargons and so it is very difficult for the society to learn and accept it for their daily use purpose. End-Users do not really wish to use Blockchain as it is difficult to use bitcoin in day-to-day life.
   According to Kris Henley who serves as a communications manager with the Digital Economy Centre at Surrey University warns us saying that Blockchain is much more complicated in real than thought of (Bloomberg, 2017). He further states that as Blockchain technology is resisted by the society in terms of acceptance, the potential of this technology is reduced. Further Pierron of Optimas believes that capital markets would not be simplified as believed with the use of Blockchain technology in processing the trades but instead it will increase the complexity (Bloomberg, 2017).

2. Unlikelihood of sufficient adoption

   The proper use of Blockchain and its implementation totally depends upon the people and the society using it. If the society uses the same implementation of technology, then the positive effects comes into picture but however, it is not clear that any solution of Blockchain other than the usage of bitcoin, will ever be able to reach this usage and popularity.
   Without the universal adoption of Blockchain technology, the practical implementation of Blockchain is in dilemma.

3. Performance Issues

   Updating all the registries used in Blockchain technology takes few hours. As Blockchain has peer-to-peer nature and is inherently distributed, all the transactions based on this technology get completed when everyone using this technology update their respective registry or say ledgers. And as mentioned, this may take up to few hours.

   People also question about the registry getting overburdened if the ledgers increased in numbers day by day. The Deputy CEO of ASX trading exchange named Peter Hiom says that Blockchain technology needs to improve a lot (Bloomberg, 2017). The delay in the transaction may also affect the performance. Furthermore, Pierron continues that this sort of delay prior to the assurance of the transaction being recorded will create anxiety and uncertainty amongst all the market participants (Bloomberg, 2017).

4. Immutable Blockchain ledgers- not an advantage always

   The immutability of the ledgers serves as a major advantage of the Blockchain as once the transaction is recorded by any member, it is impossible to delete it or rectify it. Thus, the chances of fraud and tampering cases reduces comparatively but there are other issues as well that outweighs this positive aspect.

   This feature of immutability of Blockchain may conflict the process of legal regulation. As per Open Data Institute, on considering the legal requirements and the needs of the users, digital ledger technologies are chosen (Bloomberg, 2017). Let us say, for instance, the immutable data stores do not allow the change and rectification in the stored data but at times it is an unacceptable property. The European Union under the 'right to be forgotten' demand the entire information removal but if the data stored in the center is unchangeable just like the Blockchain, then it would not be possible and thus will hinder the regulation (Bloomberg, 2017).

5. Cryptocurrencies are volatile in nature

   The price of the bitcoin, between the months January2013- November 2013, kept on increasing and decreasing drastically and these types of fluctuations in price makes it very difficult for the people involved in making business decisions as well as any financial decisions (Kh, 2016). This is the main reason of Cryptocurrencies not being used for the transaction and payment purpose. It is majorly used more as an investment rather than any means of a payment.

6. Energy consumption is more

   The miners of the bitcoin Blockchain network are attempting nearly 450 thousand trillion solutions per second to support the transactions. For this process, abundant amount of computer power is used (Song et al., 2016).

7. Cost

   Although Blockchain offers great deal of savings on transaction cost and time but the initial capital cost is very high.

8. Awareness is minimal

   People in the society have no much idea about the benefits of bitcoin and the Blockchain technology. So, it is very important to educate them and share knowledge with them which seems a difficult task when seen on a large scale. Because of this reason, people do not trust this technology and prefer using the traditional one.

9. In order to use this technology, new expertise in software and Blockchain would be needed.

Positive impact on society (positive social issues)

1. Empowered users
   All the users of this technology have the power of control of all their transactions and other information related to it.

2. Data is of high quality
   Blockchain data is complete, timely, accurate and available easily and widely. This will help the society in using this technology with ease.

3. Transparency and immutability
   All the transactions done in public Blockchain can be viewed by all the parties and thus it creates the transparency. Furthermore, the transactions done are immutable i.e. they cannot be reversed or deleted or altered.

4. Integrity of the process is assured
   Blockchain technology does not have a point of central failure as it is a decentralized system. As a result, malicious attacks could be withstood which will be beneficial for the society. Moreover, users can trust that all the transactions done will be as per the protocol commands and so there would not be any need of the third trusted party.

5. Transaction costs are lowered
   As there would not be any need of the third party intermediaries and other overhead costs, Blockchain technology will drastically reduce the transaction costs.

6. Transactions are faster
   All the transactions are added to a single public ledger and as a result the complication of using multiple ledgers is reduced. The interbank transactions used to take several days in order to process but the introduction of this technology can reduce the time for the transaction made to several minutes as they are processed 24*7 (Song et al., 2016).

7. Security
   Each and every transaction are verified within the network with the use of complex cryptography which is also verified. Thus, the information's authenticity is assured.

8. Auditability
   Each transaction is recorded indefinitely as well as sequentially. As a result, it will provide a permanent trial of an asset between the parties. In the case of verification of the authenticity of any assets, this technology is essential if the source data is an inseparable component.

9. Stop bribery
   As all the transactions would be recorded and as the transactions are immutable, the chance of bribery gets less.

10. As there would be use of smart contracts, the agency and all other coordinating costs would be eliminated.

Thus, as mentioned above, these were few negative as well as positive social issues of using Blockchain technology. Now considering the negative social issue, the feasible solution could be to provide education and knowledge to society regarding the benefits of using this technology. As a result, they could find it easy to adopt this technology.

Cultural Issues

Definition

Culture is defined as the set of custom, belief, ideology that is followed by a group of people(Kang 2017).
Different cultures have different belief systems about what constitutes morally right and wrong behaviour. Hence, there can't be a universal standard of morality check which sometimes creates issues related to culture.

Types of Cultural Issues

Cultural issues can be of two types:

1. **Individual**

Individual cultural issues can arise due to the following factors:

- Morality

As mentioned before each individual has a moral believe weather this technology of cryptocurrency recording our transactions should be adopted or not. It also questions an individual moral, weather to risk putting money in digital form.

- Religion

Adoption of cryptocurrency also depends on religious beliefs. For example, Buddhists and Christians believe in digital money. Buddhists have even launched digital currency to get rid of corruption in their religion(SMITH 2017) and Christians are promoting to give a depth knowledge about Bitcoin(CARTER 2013). On the other hand, few religions like Indian do not support digital money as they believe in coin or paper money.

- Language

Language related issues are not applicable in this technology as it is in a digital form.

- Knowledge

Even though Blockchain technology was invented in 2008 still people lack in having knowledge about this technology till date which creates an issue.

- Decision making

In trusting and adopting any new technology, an individual need to take a personal decision whether to adopt it or not.
(Kang 2017)

2. Group & Organisation

Group & Organisation related cultural issues arise due to the following factors:

- Policy

Every country has its own government policies for technology, law and monetary. All these factor affects Blockchain technology which creates an issue.
For example, In USA, Special Assistant to the President for Economic Policy, National Economic Council of The White House, Adrienne Harris said "Consumer protection, investor protection, market protection and transparency are all things we seek to further in our work at the National Economic Council, throughout the administration and through the independent regulators as well. I don't think technology will change the goals. But our hope is there will be technologies that will help further those goals (Pagliocca 2016)."

- Principles and laws

Different group of people or governments have different principles and laws to adopt a technology. For example, the Islamic Financial Law does not accepts Bitcoin as a legal form of money (Southurst 2016).
(Kang 2017)

Cross-cultural issues in the workplace:

IT companies or any other workplaces face many kinds of issues related to cross-cultural differences which are stated as follows:

- Different cultural factors that arise in different work environments
    a. Religious beliefs and practices
    b. Historical factors
    c. Beliefs from an individual's upbringing
    d. Language barriers (Blackerby 2017)

- Global vs. Regional workplaces
    a. Different laws and regulations
    b. Ethical decisions can be different.
    c. Views on individual roles and responsibilities
    d. Work ethics and time zones are a factor. (Blackerby 2017)

- Outsourcing in different regions
    a. Ethics with labour laws
    b. Work/holiday schedules and time can be a problem
    c. Cultural differences and barriers

d. Company Examples (Apple, Google)(Blackerby 2017)

- Ethical dilemmas with cross-cultural environments
    a. Different factors and environments can shape our decisions, but ethical beliefs of doing the right thing should never be compromised (Blackerby 2017).

Blockchain Cultural Issues

Blockchain Technology faces mainly two types of issues:

1. Acceptance Issues
2. Privacy and Security Issues

Acceptance Issues

- Accepting a new technology

It is a common notion that people do not readily expect or trust in new technology. Founder at Bitswift, Paul Busch stated “Lack of trust and understanding the public has about a trust less systems (Blockchains). Putting trust into a system with no name or face for many people is "unreal," especially when they do not understand the technology. Also, the amount of bad press and attention Bitcoin gets will hinder and delay adoption.”(Author 2017).

- Bitcoin: A Bubble

Traditional investors believe bitcoin being a bubble due to previously witnessed bubbles. For example, USA Housing Bubble in 2008(Adeyanju 2017).

- Common universal currency

Blockchain or Bitcoin will be a common universal currency or standards to follow which can be a big challenge. For example, developed countries will not accept this technology like USA’s economy earns immersive revenue on currency exchange.

- Financial Transparency

Illegal transactions cannot be performed in blockchain technology. For example, people or countries who deal with illegal money will hesitate to accept this technology. Especially politicians of countries having a culture of corruption.

- Large energy consumption

Bit coins transaction is encrypted in a puzzle form which requires electricity(Staples et al. 2017). So, individuals and countries will not accept the technology as the different government has a different policy for the monetary system of the country.

Privacy and Security Issues

- Hesitation in storing personal data in the blockchain.

In Blockchain Technology, transactions are published globally. However, some data are very sensitive in nature which people would not be comfortable in displaying worldwide. For example, Financial or medical data. To solve this problem, we can encrypt the data in

blockchain, but it leads to another problem, i.e., if the decryption key is lost or stolen and published online. Then the data is decrypted forever as data cannot be altered in the blockchain (Matteo Cagnazzo 2017).

- The belief of Bitcoin being a fraud.

Many people believe that digital currencies will be the next era of advancement in the technical world, but they are worried about the security of the digital currency. For example, Jordan Belfort, the Wolf of Wall Street believes it being a fraud as he states that he has seen many people loss their money to hackers and Bitcoin is heavily targeted by hackers(Adeyanju 2017).

- Hacks and Thefts

As mentioned earlier, Bitcoin is the current hotspot for hackers, and it has also been hacked many times. For example, there was a multimillion dollar theft in Mt. Gox, a currently non-functioning bitcoin-to-currency exchange in 2011. Gox used to process 80 percentage of all Bitcoin-to-currency exchange transactions. Another example of theft Bitcoin suffered was by Bitfinex exchange, a Hong Kong based bitcoin exchange company which suffered a theft of 120,000 bitcoins in 2016, i.e., roughly $72 million(Adeyanju 2017).

Solution:

The blockchain is a life changing technology if successfully implemented and adopted. It currently has few flaws concerning security and trust which can be covered if a central bank creates and monitors the digital currency, Bitcoin with a robust and secure network which is extremely hard to hack.

Blockchain For Business

The Blockchain’s build-up has been rising exponentially, be that as it may, the greater part of the general population knows nothing about how Blockchain innovation functions, what is a smart contract and how it could be utilized. For this very reason, we chose to give a delicate prologue to Blockchain innovation in the business sector.

Financial Institutions

Issue

Financial services institutions such as banks will be tested by the amount they will twist their plans of action to oblige the immensity of the Blockchain. Their default position will be to just marginally open the entryway, hoping to let the same number of advantages drip in, with minimal measure of opening. The challengers (for the most part new businesses) will attempt to kick that entryway open however much as could be expected, hoping to rattle the big institutions off balance.
Banks will be Forced to get their hands messy and take in the new advancements specifically. They will likewise need to get their psyches messy and undertake rash decisions regardless of the possibility that the chances of them fizzling is very high. The more essential experience they secure at an early stage, the speedier they will have the capacity to advance from their underlying work to more historic endeavors.

Historical Aspects

To see how the Blockchain will influence money related administrations foundations, we should backpedal to their current history with the Internet, and furthermore take a glance at the appearance of FinTech (Financial Technology) organizations that offered contending administrations by grasping an innovation forward item approach in 1994, the internet or more specifically the Web arrived and with it the possibility to offer an option for the administration to be in front seat of the business. In any case, most banks pushed back on that advancement window, since they were settled in conveying administrations inside their retail branches, or by means of one-on-one business connections. They didn't see the Web as an impetus for greater change, so they adjusted the Internet at their own pace, and as per their own particular constrained suppositions. Quick forward to 2016, over 20 years into the Web's commercialization, and one could contend that banks just gave their clients Internet banking (with portable access with smartphones later), online stock broking, and online bill instalments. Actually, clients are not visiting off to the branch as regularly (or by any stretch of the imagination). While on the other hand FinTech development is going on; it was an aggregate reaction to banks' lacking in radical advancement with the technology.
Till 2015, By far more than $19 billion in wander subsidizing had fallen into FinTech new businesses. While numerous of them were centred around only a couple of well-known ranges: credits, Capital administration, and instalments. A few new businesses have gone similarly as offering full keeping monetary administrations by means of versatile Mobile only options, an approach that is speaking to twenty to thirty-year old. This demonstrates another type of banks can be made starting with no outside help, without inheritance stuff.

(Mougayar, 2017)

Solution

This kind of locale backdrop is essential. Blockchain may take after an indistinguishable direction from FinTech up to this point, transforming decent footings into critical footholds or completely fledged organizations. Some Blockchain based new companies are as of now gradually assaulting torments focusing inside the money related administrations, offering answers for existing players, while others are following a helpful procedure to prepare kinds of shared foundation or administrations arrangements. Different new businesses are imagining the unimaginable by disregarding business holders, and offering new answers for a whole new Financial market.
The individuals who didn't learn from history are sentenced to rehash it. In the event that banks don't adjust more drastically than they did with the Internet, they will endure the results. On the off chance that FinTech was tied in with testing banks' Payments frameworks, blockchain guarantees to keep on unbundle the banks, as well as appears to be determined to upset an entire range of customary inter-institutional relations, from cross outskirt of multinational banking to even clearing them in their own yards.

Conclusion

Since we are optimist, we believe in a third result. Banks and the whole budgetary administrations industry may choose to truly rethink themselves. In that hard to accomplish situation, there will be champs and washouts, and parts of the general portion would contract—yet it may develop more grounded in the long haul.
Blockchains won't flag the finish of banks, however advancement must penetrate quicker than the Internet did in 1995– 2000. The early blockchain years are developmental and essential since they are preparing justification for this new innovation, and whoever has prepared well will win. The solid won't kick the bucket. Banks ought not just observe the blockchain as a cost funds lever. It is particularly about finding new open doors that can develop their best line.

ICO (Initial Coin Offering)

An ICO is like a stock IPO, however as opposed to purchasing partakes in the organization, financial specialists are purchasing Digitalized "tokens" utilized on cryptocurrency money stages. Organizations based on blockchain, a computerized database for recording monetary exchanges and different sorts of arrangements, fund-raise by offering these tokens, which can commonly be utilized to pay for merchandise and ventures on their stage, or just buried as a Investment. Digital Crypto tokens are another advantage class, controlled by cryptographic money systems like Bitcoin and Ethereum. The part has pulled in twisted financial specialist premium this year, giving these e-coins preposterously swelled valuations that have roused unlimited correlations with the "dotcom" period, Currently, the aggregate market estimation of every single virtual cash had flown by past $170 billion, up from just shy of $20 billion toward the start of the year.
Many activities have all in all raised more than a billion dollars through "introductory coin offerings" (ICOs). There are presently tokens financing each possible undertaking: Computerized

promoting (Basic Attention Token, adToken). Parody (PonzICO), Decentralized distributed storage (FileCoin, Storj). There's even one for dental specialists (DentaCoin). Further, in a photograph freshly presented on Instagram, Floyd May-weather, the boxer, sits on a private stream encompassed by piles of dollar bank notes, touting the offer of tokens for a forecast showcase called Stox—a minute some observed as confirmation that ICO build-up had achieved crest kookiness. (Why Big Business Is Racing to Build Blockchains, 2017)

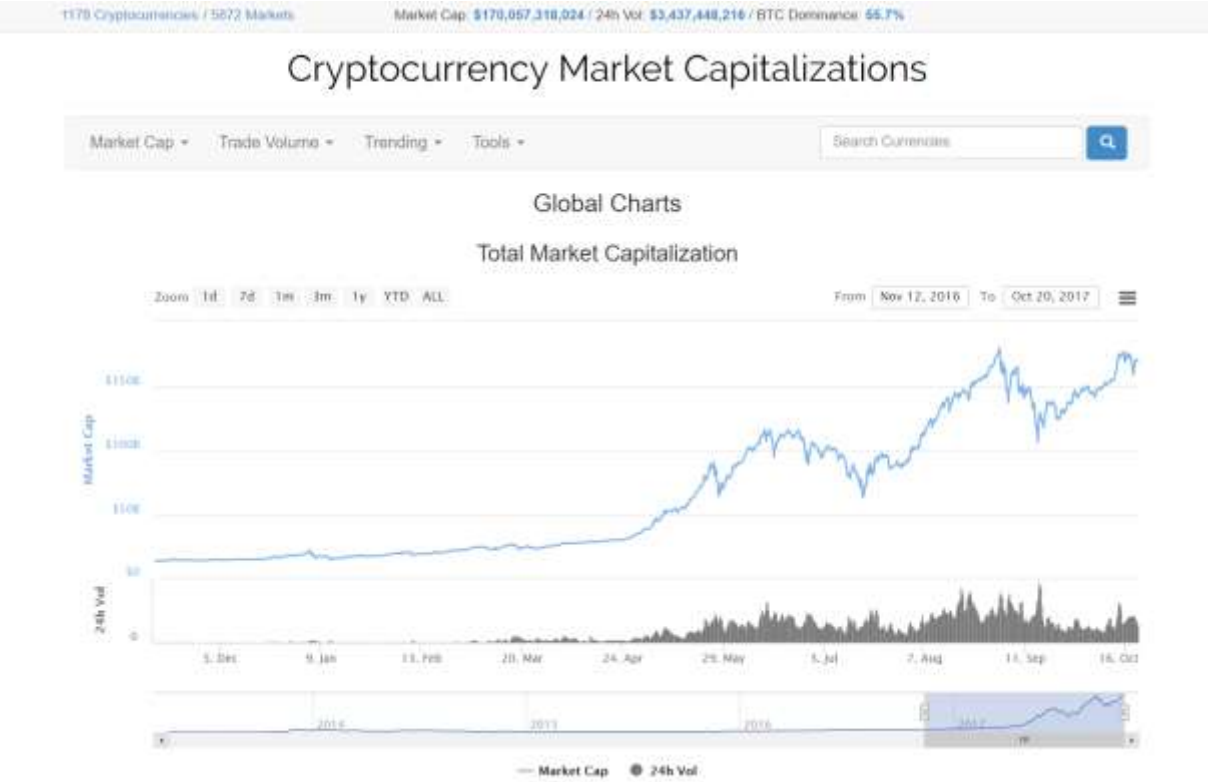

Fig: Cryptocurrency Market Capitalization (coinmarketcap, 2017)

Issues

Fraudsters regularly attempt to utilize the bait of new and developing advances to persuade potential casualties to put their cash in tricks. These fakes incorporate 'pump-and-dump' and market control plans including traded on an open market organization that claim to give presentation to these new advancements.

The nonappearance of lawful rules in the operation of these ICOs has brought about more than a couple of Scams. This is not really irregular for a completely new, unregulated field; in any case, would-be financial specialists, in any case, think that it’s hard to recognize potential open doors from snatch the-cash and-run plans.

The SEC (US Security and Exchange Commission) have also issued a Warning regarding these (Pump and Dump) ICO Ponzi Schemes and have advised the investors to stay careful when investing as there is a grain danger of losing all of one’s investments. Lately, some governments such as china and Korea have even put a temporary ban on these ICO’s until there is a mutual

ground found with some strict regulations imposed on these ventures. (SEC.gov | Investor Alerts and Bulletins, 2017)

Solutions

Similarly, as with any venture, nothing in the Initial Coin Offering space can be anticipated or demonstrated with supreme assurance. Investigation of the group, style and nature of administration, and even some essential administrative bookkeeping information isn't accessible in generally case. Does this mean ICOs are generally awful? Obviously not.
According to our Knowledge there are some Dimensions which can be applied by both investors and ICO Organizers as well as the government. According to our researcher the following aspects should be researched well for a healthy scam free cryptocurrency funding platform:

- Product Dimension
- Digital coins Dimensions
- Mapping up the ICO Space
- Start-up Characteristics
- Operational Transparency
- Business Model Relationships
  (Kontegna, 2017)

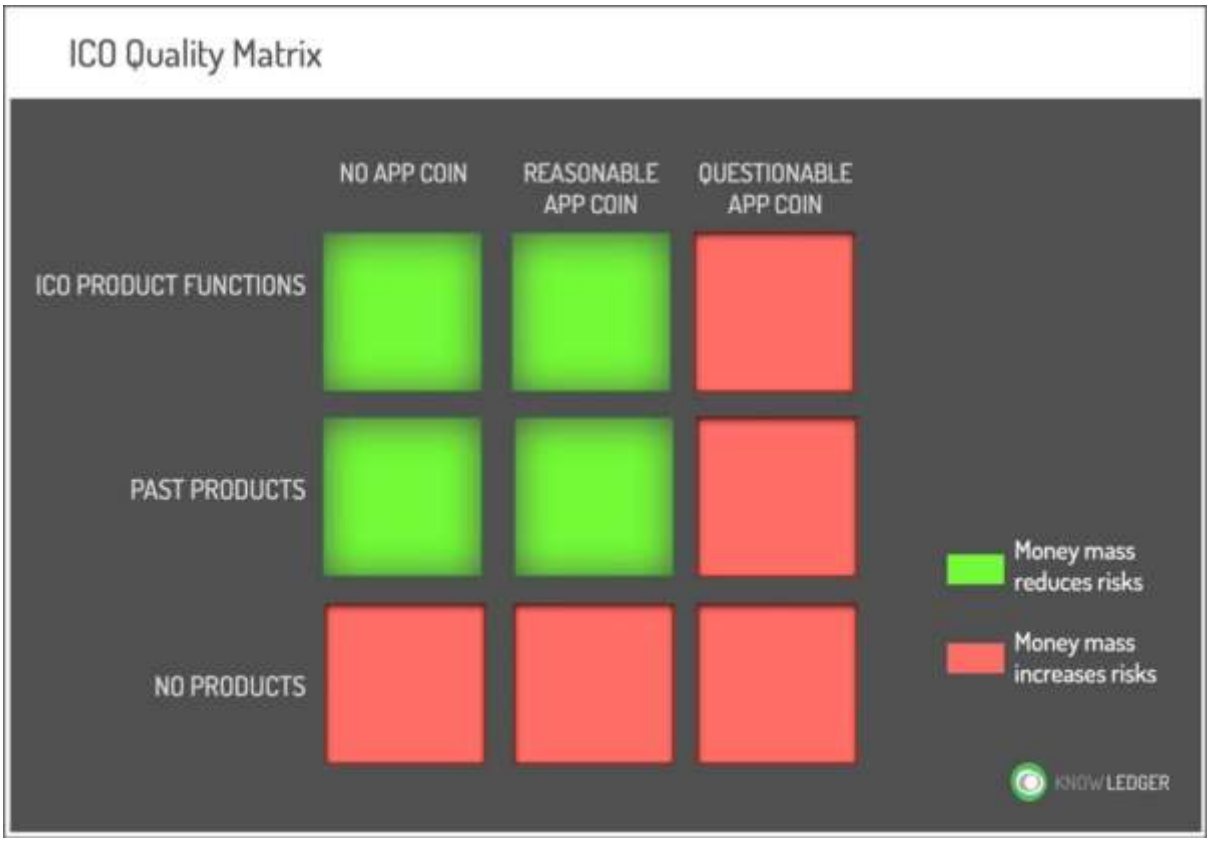

Fig: Quality matrix (Kontegna, 2017)

Conclusion

Look past the ICO free for all, and one can see another paradigmatic move roused by that same bookkeeping advancement. Occupant organizations in incalculable ventures, from fund to vitality to medicinal services to nourishment, are peeling back the layers on this growing innovation, seeing the possibility to trim costs, share and secure data more proficiently, and release new items at phenomenal speed. Also, it's been done as such realizing that one day their survival might be in question: Having seen what the coming of computerized, cloud, and versatile did to laggard organizations, nobody wants to be the poorly Left behind.

Blockchain for better Business Perspective (Supply chain Management):

Unarguably there is no industry where the guarantee of blockchain tech—or its risk—is more evident than in Finance, but contradicting it a whole new aspect of other blockchain Business tending use cases are surfacing every day.

Issue

From an Experiment Conducted by Walmart, it was found that in order to track the origins of a single packet of mango slices takes about 18 hours and 26 minutes to get an answer and for that too Walmart had to pull out every package of mango off from their shelves, as in such a scenario all the related organisations such as Farmers, Distributors and even Walmart itself is running blind. Since than Walmart were trying to find what they call "Holy Grail of food traceability". Though Being very sceptical about Blockchain they decided to give it a try partnering with IBM for a trial Run of Their Hyper Ledger Fabric, A blockchain based Solution. The same test of shipment tracking was conducted and Surprisingly the time taken by whole Process was recorded to be found only 2 Seconds. Evidently, the difference between two seconds and six-plus days can be decisive.

Conclusion

Yet, with regards to a Supply chain network, Blockchain is much more than a crisis measure: The granular, secure records in the framework could help forestall misrepresentation, and give a simple to-use interface for officials to watch the stream of merchandise, and in addition for controllers to look under the hood for things that are more important.
"This was not tied in with pursuing the sparkly coin," Walmart says. "There were business challenges we were endeavoring to understand."
Different organizations are currently investigating blockchains' potential for their coordination's. Maersk, the Danish delivery goliath, has begun testing a blockchain to track its shipments and facilitate with traditions authorities. Airbus, the French air ship creator, is hoping to utilize blockchains to screen the numerous intricate parts that meet up to make a stream plane. Daimler, the German automaker, is exploring comparative conceivable outcomes for its vehicles.
The potential doesn't stop with unmistakable merchandise like windshield wipers or Mangoes, many organizations and governments figure blockchains could enable them to collect alter safe frameworks for putting away essentially any sort of information. BAE Systems, the British guard

temporary worker, is investigating sharing cybersecurity danger information on a blockchain. Also, Accenture has collaborated with Microsoft and a United Nations gathering to construct a blockchain for computerized personality, particularly helpful for displaced people who need official records.

Health-Blocks (My own Blockchain Solution)

In One of my subject (Enabling Enterprise Information System), I created a Prototype as an alternate Solution for Paper based EHR (Electronic Health Record) System. In my Prototype, I made a decentralized Ethereum Blockchain Based Prototype in which any Internet citizen can deploy their own health wallet free of charge that can be used in hospitals for creating a health profile including tests, prescriptions, results and reports. The Service could also be used for revolutionizing the Pharmacy and Health Insurance Sector. According to my research Up to a 5% of the wellbeing spending could be diverted to a superior use by utilizing my Blockchain answer for EHR System.
(Abhishek, 2017)

Conclusion

Blockchain and other distributed ledger innovations have an assortment of positive highlights and can be connected to endless enterprises and uses to enhance proficiency, security, and operations. Cryptographic forms of money, for example, bitcoin and ether are required to execute exchanges and work the systems. They are additionally investable resources and sold to general society to raise capital. In that capacity, they constitute another type of crowdfunding and startup gathering pledges. Blockchain digital forms of money are likewise another kind of option venture, one that isn't yet SEC-controlled and that can posture dangers to unwise financial specialists.

Most industry onlookers concur that we are in the beginning of a total rebuilding of various procedures and operations to be decentralized and on the Blockchain. "This resembles the Internet in the 1990s". The day is not far when we will see real use cases of Blockchain framework as mainstream apps. We can comfortably assume the next big thing such as Facebook or google is going to be based on cutting edge Blockchain technology.

This report discusses about all the aspects related to blockchain with respect to the various kinds of issues and discusses them in detail. Where ever necessary we have provided the solutions to these issues. Furthermore, blockchain technology and cryptocurrency are here to stay and the sooner these issues are addressed the better it is for the organizations and users associated with it.

References

Adeyanju, C. 2017, *Why Traditional Investors Tend to Think That Bitcoin Is a Bubble*, The Cointelegraph: future of money, viewed 15 October 2017, <https://cointelegraph.com/news/why-traditional-investors-tend-to-think-that-bitcoin-is-a-bubble>.

Author, G. 2017, *Major Challenges to Blockchain Mainstream Adoption: Industry View*, The Cointelegraph: future of money, viewed 10 October 2017, <https://cointelegraph.com/news/major-challenges-to-blockchain-mainstream-adoption-industry-view>.

Blackerby, K. 2017, *32563 IT Professionals and Society Lecture 2: Introduction of IT Professional Practice*, PowerPoint Presentation, UTS Sydney, UTS Online Subject 32563, viewed 11 October 2017, <https://online.uts.edu.au/webapps/blackboard/content/listContent.jsp?course_id=_32214_1&content_id=_2227437_1&mode=reset>.

CARTER, J. 2013, 'What Christians Should Know About Bitcoin (Part 1 of 3)', ACTON INSTITUTE, ACTON INSTITUTE POWERBLOG, <http://blog.acton.org/archives/53206-what-christians-should-know-about-bitcoin-part-1-of-3.html>.

Kang, D.K. 2017, *INFORMATION TECHNOLOGY PROFESSIONAL AND SOCIETY (32563): Lecture week 7*, Power Point Presentation, UTS Sydney, UTS Online Subject 32563, viewed 9 October 2017, <https://online.uts.edu.au/bbcswebdav/pid-2417846-dt-content-rid-10413718_1/courses/32563-2017-SPRING-CITY/lec%207.pdf>.

Matteo Cagnazzo, C.W. 2017, 'SECURITY AND PRIVACY IN BLOCKCHAIN ENVIRONMENTS', *dotmagazine*.

Pagliocca, T. 2016, *Exploring Blockchain's Impact on Policy and Risk Management*, DTCC, DTCC Connection: News & Perpectives, viewed 20 October 2017, <http://www.dtcc.com/news/2016/april/19/exploring-blockchain-impact-on-policy-and-risk-management>.

SMITH, O. 2017, *Buddhists launch digital currency to banish corruption from religion*, Creative Agenda Group, THE MEMO: RELIGION, viewed 20 October 2017, <https://www.thememo.com/2017/08/29/buddhists-launch-digital-currency-to-banish-corruption-from-religion/>.

Southurst, J. 2016, *What Does Jewish Traditional Law Think of Bitcoin?*, Bitcoin.com, Bitcoin News, viewed 20 October 2017, <https://news.bitcoin.com/jewish-tradition-law-bitcoin/>.
Staples, M., Chen, S., Falamaki, S., Ponomarev, A., Rimba, P., Tran, A., Weber, I., Xu, X. & Zhu, J. 2017, 'Risks and opportunities for systems using blockchain and smart contracts. Data61', CSIRO), Sydney.

Rachel Thompson, Mind tools, "Stakeholder Analysis", 2017, viewed on 4th October 2017, https://www.mindtools.com/pages/article/newPPM_07.htm
Stakeholdermap.com "Stakeholder Analysis, Project Management, templates and advice" ,2008, viewed on 5th October 2017 < https://www.stakeholdermap.com/bitcoin-stakeholders.html>

Bryson, J. (1995) Strategic Planning for Public and Nonprofit Organizations (rev. edn), San Francisco, CA: Jossey- Bass. Latest edition Strategic Planning for Public and Nonprofit Organizations: A Guide to Strengthening and Sustaining Organizational Achievement (Bryson on Strategic Planning).

Analyzing ethical dilemma, UTS tutorial notes, https://online.uts.edu.au/bbcswebdav/pid-2227482-dt-content-rid-9825482_1/courses/32563-2017-SPRING-CITY/ITPS%20Tut%20wk4%283%29.pdf

Business Dictionary, "Stakeholder",2017, viewed on 3th October 2017http://www.businessdictionary.com/definition/stakeholder.html

Ashley B. Lannquist. (2017, june). *Blockchains, Cryptocurrencies & the New Decentralized Economy: Part 1—A Gentle Introduction*. Retrieved from blockchainatberkeley.blog: https://blockchainatberkeley.blog/blockchains-cryptocurrencies-the-new-decentralized-economy-part-1-a-gentle-introduction-edcb4824b174

Coinmarketcap.com. (2017, october 19). Retrieved from coinmarketcap: coinmarketcap.com

Ethereum. (2013). Retrieved from Ethereum Project: ethereum.org

[1] William Bigari, Hector Quintero & Matt Ausloos, Joseph Jackson. (2016), *CryptoCurrency - Ethical Issues - cryptocurrencies widespread usage*, viewed 17 Oct. 2017. <https://sites.google.com/view/cs395/ethical-issues>.

[2] Kara (2016), *The Ethics of Bitcoin that is relatively new and why usage has not yet been adopted*, viewed 17 Oct. 2017. <http://sevenpillarsinstitute.org/case-studies/the-ethics-of-bitcoin>.

[3] Dmytro Bogatov (2017), *Social Issues – Bitcoin Problems that arises whenever a new technology enters the world, and how citizens decide how to handle difficulties*, viewed 19 Oct. 2017. <https://sites.google.com/site/bitcoincurrencyofthefuture/social-issues>.

John McKinlay, D.P., John McGonagle,Jessica Sanders (née Turner) 2017, *Blockchain: background, challenges and legal issues*, <https://www.dlapiper.com/en/uk/insights/publications/2017/06/blockchain-background-challenges-legal-issues/>.

Acts which Confer Jurisdiction 2017, FEDERAL COURT OF AUSTRALIA, <http://www.fedcourt.gov.au/about/jurisdiction/acts>.

Bauerle, N., *What are Blockchain's Issues and Limitations?*, 2017, <https://www.coindesk.com/information/blockchains-issues-limitations/>.

Bloomberg, J. 2017, 'Eight Reasons To Be Skeptical About Blockchain', *Forbes*.

Don Tapscott & Tapscott, A. 2016, 'The Impact of the Blockchain Goes Beyond Financial Services', *Harvard Business Review*.

Iansiti, M. & Lakhani, K.R. 2017, 'The Truth About Blockchain', *Harvard Business Review*.

Kh, R. 2016, *The Biggest Problems With Cryptocurrencies, and How They Can Be Solved*, 2017, <https://www.engadget.com/2016/09/30/the-biggest-problems-with-cryptocurrencies-and-how-they-can-be/>.

Marshall, A. 2017, *Blockchain Powers Shift To Decentralization In Media*, 2017, <https://cointelegraph.com/news/blockchain-powers-shift-to-decentralization-in-media>.

SONG, W., STONE SHI, VICTORIA XU & GILL, G. 2016. *ADVANTAGES & DISADVANTAGES OF BLOCKCHAIN TECHNOLOGY* [Online]. Available: https://blockchaintechnologycom.wordpress.com/2016/11/21/advantages-disadvantages/ [Accessed 2017].

Treagust, S. 2017, '6 BUSINESS BENEFITS OF BLOCKCHAIN', <http://blog.ifsworld.com/2017/06/6-business-benefits-of-blockchain/

Abhishek. (2017).

Ashley B. Lannquist. (2017, june). *Blockchains, Cryptocurrencies & the New Decentralized Economy: Part 1—A Gentle Introduction*. Retrieved from blockchainatberkeley.blog: https://blockchainatberkeley.blog/blockchains-cryptocurrencies-the-new-decentralized-economy-part-1-a-gentle-introduction-edcb4824b174

coinmarketcap. (2017, october 18). *coinmarketcap.com.* Retrieved from coinmarketcap.com: https://coinmarketcap.com/charts/

coinmarketcap.com. (n.d.). (coinmarketcap.com, Producer) Retrieved from coinmarketcap: https://coinmarketcap.com/charts/

Coinmarketcap.com. (2017, october 19). Retrieved from coinmarketcap: coinmarketcap.com

Ethereum. (2013). Retrieved from Ethereum Project: ethereum.org

Kontegna, L. (2017, April 11). *Blockgeeks*. Retrieved from Blockgeeks inc.: https://blockgeeks.com/how-not-to-be-scammed-by-a-initial-coin-offering/

Mougayar, W. &. (2017). The Business Blockchain. In W. &. Mougayar, *The Business Blockchain.* John Wiley & Sons, Incorporated.

SEC.gov | Investor Alerts and Bulletins. (2017, August 28). Retrieved from US Securities and Exchancge Comission: https://www.sec.gov/oiea/investor-alerts-and-bulletins/ia_icorelatedclaims

Why Big Business Is Racing to Build Blockchains. (2017, August 22). Retrieved from Fortune.com: http://fortune.com/2017/08/22/bitcoin-ethereum-blockchain-cryptocurrency/