Director Institute Member Spotlight:
Isaac Balbin

Isaac Balbin is a PhD graduated professional electrical engineer and a successful entrepreneur. He has developed a number of novel RFID tags, leading to two separate patents, and sold a startup he founded to an ASX listed company. His current project is Parsl, a revolutionary supply chain technology company that he founded in 2017.

Parsl will be a technology that completely disrupts how the modern supply chain operates. Using blockchain technology to record and verify transactions, smart-packaging to physically track inventory item by item and a number of other cutting-edge technologies, Parsl is able to deliver a supply-chain record that is verified, immutable and completely secure. When properly implemented it gives the ability to have full transparency at every level of the supply chain, giving accountability and visibility to an aspect of business operations that traditionally has massive problems with both.

The first industry he is implementing Parsl technology is in the legal cannabis industry. This is an industry that has huge problems with transparency, law enforcement, compliance and regulations - all problems that Parsl technology is perfectly positioned to solve.

Other areas that Isaac has a high level of experience with include NFC, RF/microwave circuits/systems, blockchain, microwave antenna design, eos, fractals, printed electronics, cryptocurrency, business intelligence, virtual reality, augmented reality, wearables, fintech, platform development, innovation, education, startups, entrepreneurship, entertainment, privacy, logistics, robotics, drones, fractals, business intelligence, project management, and social media marketing.

Contact Issac via https://www.linkedin.com/in/dr-isaac-balbin/ and Isaac@Parsl.co

Isaac is here to help demystifying blockchain, the technology that is set to change business and lives.

Have you heard of blockchain technology?

Whether you have or you haven't, the reality is it is out there and if you're making decisions in the business-world you can't afford to ignore it.

Unfortunately, it isn't an easy technology to understand. It is highly technical, and even seasoned technology veterans can struggle to properly come to grips with it. But trust me when I say blockchain technology is going to eventually be a part of all of our lives in the same way that the internet is.

That doesn't mean that we all need to understand how the internet works on a technical level, but everyone in business, particularly company directors, need to understand how the internet relates with the businesses that we lead. You couldn't form a coherent strategy for your business if you didn't have at least some idea of how to use it, and the same concept applies to blockchain.

BLOCKCHAIN
What Directors Need To Know

What is Blockchain?

Let's start with the basics: what exactly is blockchain and why is it so important? Before we provide a direct answer to that, let's discuss some problems that currently exist by taking a trip back through the history of commerce.

In the good old days of business, we used a logbook to record all the sales that had taken place. While running the shop, we would record each and every transaction where goods were sold in the ledger in our logbook. We would also record all the expense payments that we made in the same ledger. In this way, at the end of any time period we could go back and inspect the ledger to determine a full accounting of what had happened in the business. For each transaction the medium of exchange was cold hard cash, so we received it for every sale, and we gave it over for every purchase or payment we made.

If we were successfully running our business, then we would take all of our profits at the end of each business cycle and deposit them in the bank. Each time we deposited money into the bank, an entry was made in the bank's ledger recording the transaction. If we ever needed to take money out of the bank, then similarly an entry would be made in the bank's ledger recording the transaction. This process allowed the bank to know at any time how much money we held in our account.

Then, as time went on, we got slightly more sophisticated and instead of directly trading cash, we could use the bank as a middleman for paying our suppliers. When we needed to make a payment to a supplier, we can contact the bank (by phone or via digital means such as a website or an app) and request the bank to

make a payment to our supplier. The bank would check it's ledger to verify that we had enough funds in our account, and once that is confirmed, the bank updates it's ledger with the transaction details. The supplier is then able to withdraw funds at any time from the bank.

What happened here is that both we and our supplier trusted the bank to manage the movement of money. No physical exchange of currency occurred. The only thing that happened is that the bank's ledger was updated. However, neither party actually own or manage the ledger. This is something the bank has full control of and this means that if anyone at the bank is corrupt, then all of our money is at risk.

But what if we could do the same thing with a ledger that wasn't owned by anyone? This is what blockchain can deliver. It's a method of cooperation between multiple participants in a network without any single party owning the ledger.

Centralised System

Why is it so good?

Now that we have a better idea of what blockchain is, let's talk about what kind of features it can deliver. The first is something that was apparent in the example just described, which is the ability for networks to cooperate without a centralised trusted authority. This delivers operational efficiencies for everyone in the network and reduces the costs of doing business.

Additionally, because the blockchain ledger is public, it is visible and verifiable by everyone and anyone. This means that the data stored in the blockchain is transparent. Consumers are beginning to expect more and more transparency in products and services that they purchase and blockchain is the most trustworthy way to deliver that transparency.

The reason for that is that the data that is stored in a blockchain is immutable. Immutable means that the data can never change, so that once it is verified and added to the chain, it can never be altered.

Additionally, because of the way that data is added to the chain, it is much more secure than data stored in traditional databases. This is primarily because in a traditional database a hacker can change the data that is stored in it, whereas in a blockchain the data cannot be changed.

That's not saying that blockchains have no risks at all. Just like any system, there are ways to attack a blockchain, as for example a 51% attack. A 51% attack is something that traditional blockchains (like the bitcoin blockchain) are vulnerable to. It means that an attacker has managed to gather and harness more than 51% of the computing

power of the entire network. However, it raises the single point of failure in a traditional system to a point where more than half of an entire network would have to be part of a nefarious activity for it to succeed. This has not happened in the entire history of Bitcoin, for example, and there are advances in blockchain platforms (like EOS) that make such an attack redundant.

So it's just a digital currency then? Why do I need to understand it for business?

We've spent most of this time in this article discussing the usage of blockchain to produce currency use cases, but there are many more use cases of blockchain that are just as, if not more important.

For example, blockchain may be used to record health data for people that is secure, private, but accessible to appropriate parties like doctors and hospitals.

Blockchain can also be utilised within a supply chain to provide secure provenance information for products, as well as counterfeit prevention.

Blockchain can also be used to enable secure identity applications, particularly for licensing and registrations and for many other applications too numerous to mention here.

Essentially blockchain technology is able to strengthen any business operation that could benefit from greater transparency, more security more reliable data collection or more agile access to information.

Blockchain isn't a fad, it is a technology that has the potential to disrupt every industry that we know of, as well as create new ones that we don't. Companies need to get on board with the disruptive wave that is coming, or risk being left behind and overtaken by competitors that are more strategic in their approach. Don't let the same thing happen to companies under your stewardship that happened to Borders Bookstores who refused to ride the digital wave that the internet brought. Don't wait to be disrupted, rather, be a part of the disruption.

Decentralised System