Blockchain is the technology behind Bitcoin and works as a distributed ledger or database system, running on millions of devices which can be used by anyone, that:

- Records transactions
- Establishes identities
- Validates contracts
- Safely stores technology

Blockchain does not require integration with a bank account or credit card. It ensures integrity and trust between strangers using code. It is difficult for fraudsters to hack.

How is it different from Paypal and other online payment systems?
- Technical – a ledger using a backend database
- Business – a mechanism to exchange value between peers (business to business; person to person) e.g. OpenBazaar where instead of visiting a website, software is downloaded and installed on a computer which directly connects to others doing likewise. There are no fees and the currency is Bitcoin.
- Legal – it can validate contracts without people being present
- Privacy – people’s online identity (public, private or anonymous) is owned by themselves and not by the provider of email, internet engine or social media groups

Blockchain and the financial services sector

Initial perceived benefits of Blockchain for the financial services sector include:
- Reducing transaction costs and complexity
- Increased transaction speed and security
- Enabling financial transactions for those who do not have bank accounts

Technical, legal and business uses:

- **Technical** – a ledger using a backend database
- **Business** – a mechanism to exchange value between peers (business to business; person to person) e.g. OpenBazaar where instead of visiting a website, software is downloaded and installed on a computer which directly connects to others doing likewise. There are no fees and the currency is Bitcoin.
- **Legal** – it can validate contracts without people being present
- **Privacy** – people’s online identity (public, private or anonymous) is owned by themselves and not by the provider of email, internet engine or social media groups

Opportunities

Innovations are being developed including:
- **Peer to peer sharing economies** such as co-operatives to be formed and controlled by themselves, therefore not needing the sharing aggregators to take a margin
- **Digital identity** e.g. birth certificates, passports, social security: Blockchain uses an embedded trust component, meaning someone doesn’t need to appear physically to prove who they are
- **Property ownership** – Blockchain uses a time stamp which cannot be changed, unlike a database, and could be the record keeper for all property and subsequent transactions
- **Healthcare** through medical records ensuring that only certain people can see certain aspects of the record
- **Smart contracts** - software programs that execute complex transactions and make them easier to enforce for example in the music industry where the artists’ intelligent songs which have smart contracts included, enabling the artist to be paid before the music is streamed.
- **Predictive markets**
- **Intellectual property** – every industry, from people, manufacturing, services to conglomerates, can be protected from piracy
- **Agency** - coordination and overhead costs can be reduced
Boardroom Questions

1. Have we considered what areas of our business can use Blockchain technology: whether that is IP, contracts, transactions etc?
2. Could Blockchain be a disruptor to our business?
3. Will our customers and suppliers benefit from our using Blockchain and can we support them in the transition, ultimately leading to greater margins?
4. Are any of our competitors, suppliers or customers using Blockchain? What has been the impact to their business and ours?
5. What are the risks of implementing Blockchain to our current and future business?
6. Do we have a strategy in place to assess, review and implement Blockchain and if so, who is responsible?
7. What are the costs in time, resource, legal and finance to implement?

Actions for the Board to consider

- Appoint a senior management person to be responsible for reviewing the implications of Blockchain to our business
- Provide an overview of how our clients, suppliers and competitors might use Blockchain
- Report back to the Board to give an update and the possible scenarios involving the different areas of the business and benefits
- Consider the review, suggest recommendations and plan ongoing reviews

What are the possible risks?

- **Not understanding** how Blockchain can affect your business or industry
- **Investing too early**, perhaps when your customers or suppliers are unaware
- **Your competitors taking the first advantage** thereby reducing their costs and pricing

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