



Blockchain Plays Key Role in Accounting Federation’s Vision

International Federation of Accountants offers comprehensive interactive tool

During my developmental years, decades ago, the emergence of “labor-saving” devices promised untold hours of leisure time just around the corner. The reality, looking back, has been a relentless and ever faster procession of increasingly powerful “devices.” But somewhere along the way, the promise of leisure time was replaced with the drive for greater and quicker productivity. To keep up and prosper requires continued learning and adapting to new technology and processes.

Addressing the urgency of these changing times, the International Federation of Accountants published in May, 2018, *A Vision for the Finance Profession and the Finance Function*. Focusing on customer needs, technology developments and related skill requirements, along with the importance of risk management, quality and ethics, the report is a useful resource for all accountants.

In the section on technology, Sam Peterson, Partner and Blockchain Leader for EY, describes Blockchain as follows:

- Blockchain is software, both a database and a network. It is a distributed ledger with no central authority (i.e. no single participant controls the blockchain) that keeps a record of each transaction that occurs across a network. All transactions are secured by encryption to prevent tampering.
- A transaction and record occur in one single event with automated validation of a record in a "block". This validation happens through a consensus algorithm (also referred to as a consensus protocol), which is an important mechanism to ensure data being added is properly validated.

The type of consensus algorithm to use is a key decision when setting up a blockchain. They can be very complex and require high computing power, which in turn consumes vast amounts of electricity. There are also less complex methods that use less power, but will impact on the speed of processing.

- Chained blocks form a ledger and each computer participating in the chain has access (via a key) to the complete ledger.
- Blockchains can contain smart contracts, which are a type of automation that attach a set of rules to a transaction through small programs that govern when and how transactions are processed. These could be legal agreements, but could also be other business processes.

While Peterson states that there is great potential for Blockchain, EY first applies a five-point test to determine applicability in any given situation:

1. Are there multiple parties in this ecosystem?
2. Is establishing trust between all of the parties an issue?
3. Is it critical to have a tamper-proof permanent record of transactions?
4. Are we securing the ownership or management of a finite resource?
5. Does this ecosystem benefit from improved transparency?

When good uses for Blockchain are identified, then other concerns need to be considered, such as regulatory, security, data privacy, scalability, cost and safeguarding of the private keys which provide access.

The report links to an interactive tool, *Blockchain: Impact on Business, Finance, and Accounting*, which provides practical information and additional links covering the fundamental concepts of Blockchain, developments and applications including examples, and the potential role of finance and accounting professionals for working with Blockchain.

The extensive prevalence of Blockchain development is detailed in a link to a YouTube presentation by futurethinkers.org, <https://www.youtube.com/watch?v=G3psxs3gyf8>, that describes examples from 19 industries and activities that will be specifically disrupted. The industries are:

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| 1. Banking and Payments | 6. Insurance | 11. Government | 16. Retail |
| 2. Cyber Security | 7. Private Transport and Ride Sharing | 12. Public Benefits | 17. Real Estate |
| 3. Supply Chain Management | 8. Cloud Storage | 13. Healthcare | 18. Crowdfunding |
| 4. Forecasting | 9. Charity | 14. Energy Management | 19. Most any industry that deals with data or transactions of any kind |
| 5. Networking and the Internet of Things | 10. Voting | 15. Online Music | |

The presentation illustrates almost three dozen start-ups and projects that are operating in this space.

The implications for accounting as listed in the interactive tool are:

- Fundamental shift from data held by a single owner to the lifetime open history of an asset or transaction
- Blockchain future allows full visibility on transactions with timestamp & audit trail across value streams
- Access and reporting tools could provide greater performance insights to various stakeholders in real time
- Programmable smart contracts reduce monitoring/enforcement
- The enhanced auditability and accountability in transaction data in a distributed ledger means that credibility and trust need not arise from a published set of financial statements

Additional details on this subject can be found at [A Vision for the Finance Professional and the Finance Function](#) and [Blockchain: Impact on Business, Finance and Accounting](#).

(<https://www.ifac.org/publications-resources/vision-finance-professional-and-finance-function>)

and (<https://www.ifac.org/publications-resources/blockchain-impact-business-finance-and-accounting>).