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Trade, Labor and EU Law Perspectives

How blockchain may affect practices in the supply chain – nowhere to hide!

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The term seems to have first arisen in the early 1990s with reference to an ‘open distributed ledger that can record transactions between two parties efficiently and in a verifiable and permanent way’ and was developed to serve as a ‘public transaction ledger’ for the bitcoin cryptocurrency.

Of course, blockchain no longer exists solely as a means to facilitate bitcoin transactions and in many ways it is more useful not to consider it in that context. In general terms, it is now used to refer to an electronic (or ‘digital’) means to facilitate a validated, secure and reliable transaction of any kind whether applying to transfers of money, financial interests or goods. Government is also vitally interested in the concept to guard against illegal activities, assure the provision of government services and to ensure that parties can have confidence in their own dealings, whether commercially or otherwise.

The purpose of this article is not to examine the technology behind bitcoin or blockchain but to

provide some commentary on the associated developments which make it relevant to all members of the supply chain, whether or not they are directly involved in its development. Some of that commentary is as follows, although that is by no means exhaustive. Ultimately, while detailed knowledge of all aspects is not required, some knowledge is useful and enables you to anticipate the potential impact on your business. That helps with an informed discussion when the time for engagement arises.

- Blockchain is more than a buzzword. It has theoretical and practical merit. As much as there seems to be many iterations of the concept, there is enough general consensus to support broader adoption of the concept.
- The concept has applications beyond the national or international supply chain which only supports its broader use. For example the secure recording of the movement of goods and the need for one step to be completed before the next takes place makes it a tool for recording transactions and ensuring that compliance ‘blocks’ are met. While this assists in verifying contractual steps have taken place it may also assist in ensuring your compliance with statutory obligations such as Chain of Responsibility. For example the production of a ‘Container Weight Declaration’ may be a block in the chain as well as a statutory obligation.
- In some cases it will draw upon practices and information already in existence or required to be reported. The reporting requirements to agencies at the border (for example) reflect a version of blockchain as reporting movement of goods at prescribed times in prescribed formats which also trigger payments to government.
- It is already being used in ‘test’ and ‘real’ transactions.
- It goes beyond ‘smart contracts’ and ‘single window’ concepts although they have a place as other digital means to record and facilitate transactions

Those supporting the development and adoption of the concept are major players including Banks, other financial institutions such as Stock Exchanges, food producers and suppliers, shipping lines, airlines and international freight forwarders. Government seems happy to endorse the concept albeit it will not be providing significant funds to develop the concept. This also supports the broader adoption of the concept to the point that it becomes compulsory.

- Many in the supply chain will have little or no choice but to accept and embrace the concept. While some of the obligations will be imposed on smaller operators, there will be benefits. At the least, agreement to the newer procedures will lead to contracts being confirmed more readily and for payments to then be made according to the contracts without delay.
- Most new initiatives in the supply chain can be expensive and difficult, however, so long as the concept is adopted and mandated by the main players in the supply chain and the government regulators to cover all stages of the supply chain, that will include all service providers.
- What will be required of a party in the supply chain will depend on their position in the supply chain and the services provided. For example the provider of road freight at the beginning or the end of a supply chain may be required to adopt specific new technologies or procedures dictated by the client, the financiers and other service providers. That could entail using new software and reporting stages of transactions within agreed times into ‘portals’ or ‘windows’ prescribed by the client which is thereby also disclosed to other parties to the transaction and perhaps to government. Billing may need to be done through that portal with payment dictated by compliance with these procedural requirements which will dictate changes in debt collection. Disclosure and reporting may include details of drivers and other employees involved in the movement of the goods, registration numbers of vehicles and links to GPS tracking of the vehicle as well as photographs of the goods on the vehicle and ‘as delivered’. The driver and other employees involved in delivery may be required to report the delivery of the goods at the same

time as the party receiving the goods reports receipt of the goods (which would dictate mobile devices being used).

- There will be frustrations at the new requirements and the likelihood that the obligations to engage with blockchain will also require all service providers to use prescribed ‘secure’ or ‘encrypted’ technologies and to report breaches of security. Service providers will need to ensure that data that they provide on work being undertaken including client and employee details is handled and protected in accordance with relevant privacy laws. The service providers will also need to engage with insurers and financiers to ensure that they understand and approve new procedures. The fact that other parties will be relying on the information lodged by a service provider to complete a chain creates liability if that information is incorrect or fails to be lodged properly.
- The new procedures will lead to additional costs which will need to be recovered in some way. Clients may not agree to increased charges saying it is merely a ‘cost to business’ to be borne by the company. The changes may also require additional internal training and perhaps new employees responsible for these obligations.
- Not only will there be frustrations at the apparent mystery of the new procedures, practices will change over time as systems evolve and legislation changes, especially in terms of handling of data and levels of security required.

Whilst knowledge of the details of these issues is probably not necessary for all parties, some level of general knowledge will assist in business planning and the ability to engage with customers. It is certainly a better attitude than merely stating that it won’t apply to small operators and hope the world won’t require change.

If you would like advice or assistance with any of the above issues, please contact [Andrew Hudson](#) or [Bethany Clark](#) of our Transport & Logistics Industry Group.

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