CAN COLLABORATION AND BLOCKCHAIN SERVE AS CATALYSTS FOR SUPPLY CHAIN INNOVATION?

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If the global supply chain is going to see greater innovation and improved efficiencies, collaboration between emerging start-ups and established logistics and shipping companies is critically important. This article will explain what The Worldwide Supply Chain Federation (WSCF) has learned and why there's a need for such collaboration. First of all, here is how the WSCF came to be.

The WSCF was founded following a series of summits in 2017 that sought to bring 'buyers' and 'builders' together in order to network and discuss their shared supply chain-related problems. Ultimately,

the goal is to nurture and grow the world's foremost open, global, multidisciplinary community of people devoted to building the supply chain networks of the future.

It has now grown to become a truly open and supportive coalition of grassroots communities focused on technology and innovation in the global supply chain. As well as start-ups, these communities count mature companies, academics from research institutions, early stage technology venture capitalists (and other late stage investors), journalists, regulators, professional service providers

and all other supply chain stakeholders among their number.

The WSCF's approach has uncovered a counterintuitive conclusion about what is required to drive the adoption of new technologies, such as blockchain, in the global supply chain: The culture problem might be more difficult to solve than the technological problem. This is because successful implementation of blockchain-based supply chains require established companies in mature industries to do business with each other, as well as with start-ups, in a way that is different from
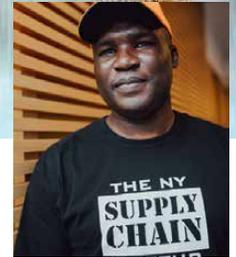
standard practices.

IDENTIFYING THE CHASM

On the one hand, executives at established companies know the business problems in supply chain operations for which they desperately need new innovations. However, they typically do not have sufficient time to meet their daily responsibilities at work and scour the globe seeking out new technologies and innovations. Moreover, their companies might not be plugged into the right communities to find such innovations through traditional RFP processes.

They also tend not to have a very good sense of how much emerging technologies have matured or appreciate their potential to accelerate collaboration. Such executives are known by some as 'buyers'. These are individuals and organizations who want to buy new technology innovations for supply chain operations.

However, founders of software startups that are creating new supply chain innovations tend to understand the technology well, but they lack a deep, nuanced, and practical understanding of the business problems that 'buyers' face. As well as that, they lack a sufficiently mature understanding of the value proposition they must offer if they are to win large-scale market adoption. These are known as 'builders' - individuals and organizations who are developing new technological innovations and models for supply chain operations.

For this conversation to make sense, it is critical that we first share a common understanding of what is meant by 'supply chain.' The definition used for this paper from the 4th edition of Martin Christopher's Logistics & Supply Chain Management: Creating Value-Adding Networks. Christopher defines a 'supply chain' as: "A network of connected and interdependent organizations mutually and cooperatively working together to control, manage and improve the flow of materials and information from suppliers to end users."

THE DAWN OF THE AGE OF OPENNESS

Why are companies like Amazon, Apple, Airbnb, Microsoft, Alibaba, Google, JD.com, Uber and others, posing a threat to companies in traditional industries? Why are startups that many people have never heard of beginning to attack and threaten companies in mature, established industries that one may have considered immune from such threats as recently as even just half a decade ago?

It is because the above companies, as well as many others that have been omitted understand the importance of business models that are built on open ecosystems rather than proprietary value chains owned by a single company. Using the internet and other maturing software-enabled technologies as the foundation, these companies are launching demand-side and supply-side attacks on industries that have become accustomed to relatively sanguine competition among well-established companies.

That raises the question: What is an ecosystem? Quite simply, a business ecosystem has three main characteristics:
- First: It is a network of networks.
- Second: The focus of the ecosystem orchestrator must be on enabling and facilitating the creation and trusted exchange of value, between all participants of the ecosystem.
- Third: The creation and exchange of value must occur in a way that increases the aggregate well-being of the entire network over time.

When executed well, platforms and ecosystems give rise to powerful network effects. Network effects matter because, in the most extreme cases they can lead to winner-take-all outcomes. At best, they lead to winner-take-most situations.

Any blockchain for supply chain application is attractive because it promises to bring data, network effects, distributed computing and security together in a powerful combination that has not been possible before.

THE RESULTS ARE EARLY, BUT THE SIGNS LOOK PROMISING

As already stated, the WSCF's effort is almost entirely grass-roots driven and there have been promising results in the past 24 months. A key lesson has been the need for a product that connects all supply chain participants end-to-end. This product should ideally be built on blockchain as it would need to allow several independent parties to collaborate with one another while providing each of them with anonymity for certain aspects of their interactions.

For example, customs agencies around the world might demand special access rights to enable them monitor international trade transactions happening under various national regulatory jurisdictions. Around about the same time the WSCF reached this conclusion, Maersk and IBM released the first details of TradeLens, a blockchain-based collaborative platform designed to drive greater innovation in the supply chain.

Maersk and IBM were present at a WSCF summit in April 2018 and were joined by many other major stakeholders, including EY, Mstate, Celsius Networks, Algorand and TigerTrade. The key topic of discussion was what it would take to take blockchain out of the lab and into the real world supply chain. A general consensus was that blockchain-based supply chain applications must be interoperable with the older technologies that businesses have been built upon until this point.

Platforms and ecosystems work well because they allow each participant to play to its unique strengths while relying on its ecosystem partners for capabilities that it does not have in-house. This is not an issue that has mattered for shipping companies in the past. But, it is becoming more of an issue now, and it will continue to become a more acute problem in the future as BCOs (beneficial cargo owners) demand more sophisticated services from shipping companies.

Those shipping companies who do not partner with others to meet their customers' demands stand the risk of losing those customers to shipping companies that come to grips with platform-and-ecosystem-driven competition more quickly.

ABOUT THE AUTHOR

Brian Laung Aoaeh writes about the reinvention of global supply chains from the perspective of an early-stage technology venture capitalist. His background covers the gamut from scientific research, data and statistical analysis, to corporate development and investing.

ABOUT THE ORGANIZATION

The Worldwide Supply Chain Federation is a global network of communities focused on supply chain, innovation, and technology. The community has more than 1,900 members in New York City, and more than 2,600 members around the world, with active chapters in New York City, and Charleston, South Carolina.

ENQUIRIES

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