



2020 Global Blockchain Survey | Deloitte Insights

Manufacturing and the new blockchain paradox

How progressive executives can help improve the supply chain ecosystem

2020 has presented a notable paradox regarding blockchain investments that organizations plan to make across their manufacturing and supply chains in the next 12 months. In [Deloitte's 2020 Global Blockchain Survey](#), 42% of manufacturing executives reported significant investments in blockchain, but only 30% believe there is a compelling business case for blockchain use within their organizations. Why is there such a disparity?

On the surface, manufacturing and supply chain use cases often focus on efficiency at the operational level and generally don't require input from the higher echelons of organizations. Delving a bit deeper, for use cases to escalate to the C-suite, they must usually enable new business models that require more executive-level decision-making.

We believe there is great business potential beyond operational efficiencies that could change the way the industry works and how suppliers collaborate along the chain. This, in turn, can help build a new imperative for amplified C-suite engagement. Creating new business models by overhauling existing processes won't be easy and will likely require manufacturing executives to buy into the potentially transformative power of blockchain use cases—something that they haven't necessarily embraced so far.

Currently, manufacturing executives are more circumspect and are slower to adopt blockchain than their counterparts in other industries (such as banking and capital markets), who have more readily accepted blockchain in their operations. According to our data, positive sentiment in manufacturing lags behind overall survey respondents when it came to questions about how meaningful a role digital assets will play and whether there is a compelling business case for blockchain.

However, our experience shows that the manufacturing industry has, indeed, moved toward blockchain adoption, albeit in more deliberate and incremental ways.

Traditionally, manufacturing and supply chain executives have looked to blockchain and other distributed ledger technologies (DLT) to help improve efficiencies while reducing risk. Now, however, traditions are changing, as the focus appears to be shifting toward more holistic views about how business should be conducted. This is leading companies to focus less on using blockchain to solve specific problems and more on employing blockchain to address potential issues before they occur.

To move the needle further and faster in this direction, we believe organizations should adopt new governance models that can support their business imperatives, especially when relating to transparency. This goal, for example, follows a precedent in shipping, where blockchain initiatives are coalescing to create a new ecosystem that could modernize the broader industry.

In short, businesses appear to be changing their basic views about what blockchain can and cannot do and, more importantly, are revising their vision of how blockchain can provide effective redundancy and alleviate shortcomings in their supply chains, like those that have come to light during the COVID-19 pandemic. So, what will it take to get there?



Blockchain in a changing world

Recent global events have shown just how fragile worldwide supply chains can be and, ultimately, how costly they can be to repair. If parts aren't available when manufacturers need them, the delays affect both their bottom lines and their reputations with customers. As such, using blockchain to help increase redundancy throughout the supply chain can help save manufacturers time and money.

For example, in the event of a recall, an automotive manufacturer that is not effectively tracking its components might have difficulty tracing specific parts. This might require a recall of more vehicles than necessary at a significantly higher cost and at greater inconvenience for its customers, who must rearrange their schedules to handle unexpected and potentially unnecessary repairs and dealer visits.

Blockchain should be considered a core enabler for process improvements and not as a single, stand-alone solution. In general, it can help streamline data to improve security, integrity, and efficiency and to enhance customer satisfaction. Specifically, blockchain can help optimize the supply chain by employing layered solutions, including digital twins, artificial intelligence (AI), and Internet of Things (IoT) trackers enabled through 5G to help filter, register, and transmit massive volumes of data.

Digital twins are the fastest-maturing piece of the layered solution, allowing truly game-changing active track-and-trace capabilities over traditional parts or products. Businesses can follow relevant data to track products or physical components through various stakeholders in the value chain, from the supply chain to a digital representative, and all the way to after-sales processes. This offers full accountability for components, their sources, and end products.

Further, real-time communications with goods within the supply chain can be active throughout the manufacturing process. In terms of cross-border trade, the part can be "self-declaring" and automatically complete the value-added tax (VAT) settlement and other item-related tax issues.

Manufacturing use cases are advancing beyond efficiency toward more holistic, strategic, and progressive applications. Germany, for one, has established a federal strategy to investigate dozens of areas in which to apply blockchain solutions. The European Union is also focusing attention on blockchain service infrastructure to enable a single view of market data that can help standardize the tracking and tracing of products and goods flowing across Europe. China, too, recently enabled a regional version of network blockchain to create a blockchain infrastructure.

These types of regional initiatives offer significant potential to affect infrastructure, how business is conducted, future competitiveness, and other crucial roles.



Key takeaways

Blockchain can help create a single source of truth across the supply chain by increasing transparency, efficiency, and process speeds for those in the network. Our data illuminated a paradox between a belief in building an effective business case for blockchain use and how organizations are making actual investments in the underlying technologies. However, this should not be the case. Executives are well-positioned to close this gap by thinking beyond operational efficiencies and focusing on the broader benefits that blockchain can deliver.

And indeed, because supply chain is inherently a collaborative ecosystem that brings people and organizations together in common purpose, blockchain should serve as a natural solution in achieving supply chain strategic objectives. This is the primary reason that, despite a lingering “show me” sentiment about the technology among manufacturers, blockchain has emerged from a place of experimentation and abstraction and is firmly on the leadership radar.

Forward-thinking executives should give significant attention to how they can leverage blockchain solutions to increase customer satisfaction, enhance value systems, create new billing methods, and help enable suppliers to instantly react to quality issues. Such benefits are all within reach today. The current supply chain climate should create a new imperative to advance blockchain-enabled solutions to overcome commonplace difficulties. The stakes are too high, and the opportunities are too rich, to overlook chances for improvement.

Embracing blockchain solutions can not only help establish a new, progressive ecosystem, but can also increase collaboration and governance across the supply chain. With an eye toward the future, leading organizations have found that such thinking is helping the industry improve today's supply chain ecosystem. Now is the time for other organizations to step up and join the blockchain movement.

Authors

Rasmus Winther Mølbjerg

Director | Nordic Blockchain and
Digital Assets leader
Deloitte Denmark
rmoelbjerg@deloitte.dk

Jens Hermann Paulsen

Senior Manager
Deloitte Consulting Germany
jpaulsen@deloitte.de

Contributor

Linda Pawczuk

Principal | Global and US Consulting
Blockchain and Digital Assets leader
Deloitte Consulting LLP
lpawczuk@deloitte.com

About Deloitte

Deloitte refers to one or more of Deloitte Touche Tohmatsu Limited, a UK private company limited by guarantee (“DTTL”), its network of member firms, and their related entities. DTTL and each of its member firms are legally separate and independent entities. DTTL (also referred to as “Deloitte Global”) does not provide services to clients. In the United States, Deloitte refers to one or more of the US member firms of DTTL, their related entities that operate using the “Deloitte” name in the United States, and their respective affiliates. Certain services may not be available to attest clients under the rules and regulations of public accounting. Please see www.deloitte.com/about to learn more about our global network of member firms.