

CargoX

BLOCKCHAIN

WHAT IS THE PRICE AND DYNAMICS OF JUMPING ON THE BLOCKCHAIN WAGON?

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Blockchain is surely one of the biggest buzzwords driving the new wave of revolutionary digital solutions with a goal to transform the logistics industry and build trustworthy, laterally integrated solutions across the globe. Forward-thinking companies see it as the tool to integrate their complex supply chains, connect layers, and provide visibility up and down stream.

However, how can you make the right decision at the right time, without risking too much? How can we take the blockchain hype? And is it worth it?

AMAZON RAISING THE BAR HIGHER AND HIGHER

It is no secret that Amazon has been continuously breaking records in online sales and consumer goods – clear proof is found in the staggering sale of 175 million items on Amazon Prime Day in 2019. That figure alone is a powerful testament to how Jeff Bezos has already turned logistics upside down with fulfilment centres and

prime delivery. It seems like he has found the magic formula. But what is the secret equation?

It turns out their formula is much broader, deeper, and all-inclusive than people think – it integrates extremely efficient demand insights with production and supply chain operations, while also incorporating blockchain technology in some of its activities.

No wonder vendors and logistics providers are actively looking for opportunities to avoid becoming entrapped in Amazon's high-pressure, actively growing monopoly-like endeavour by trying to keep pace with it – or even get ahead.

WHAT CAN SHIPPERS AND TERMINALS DO?

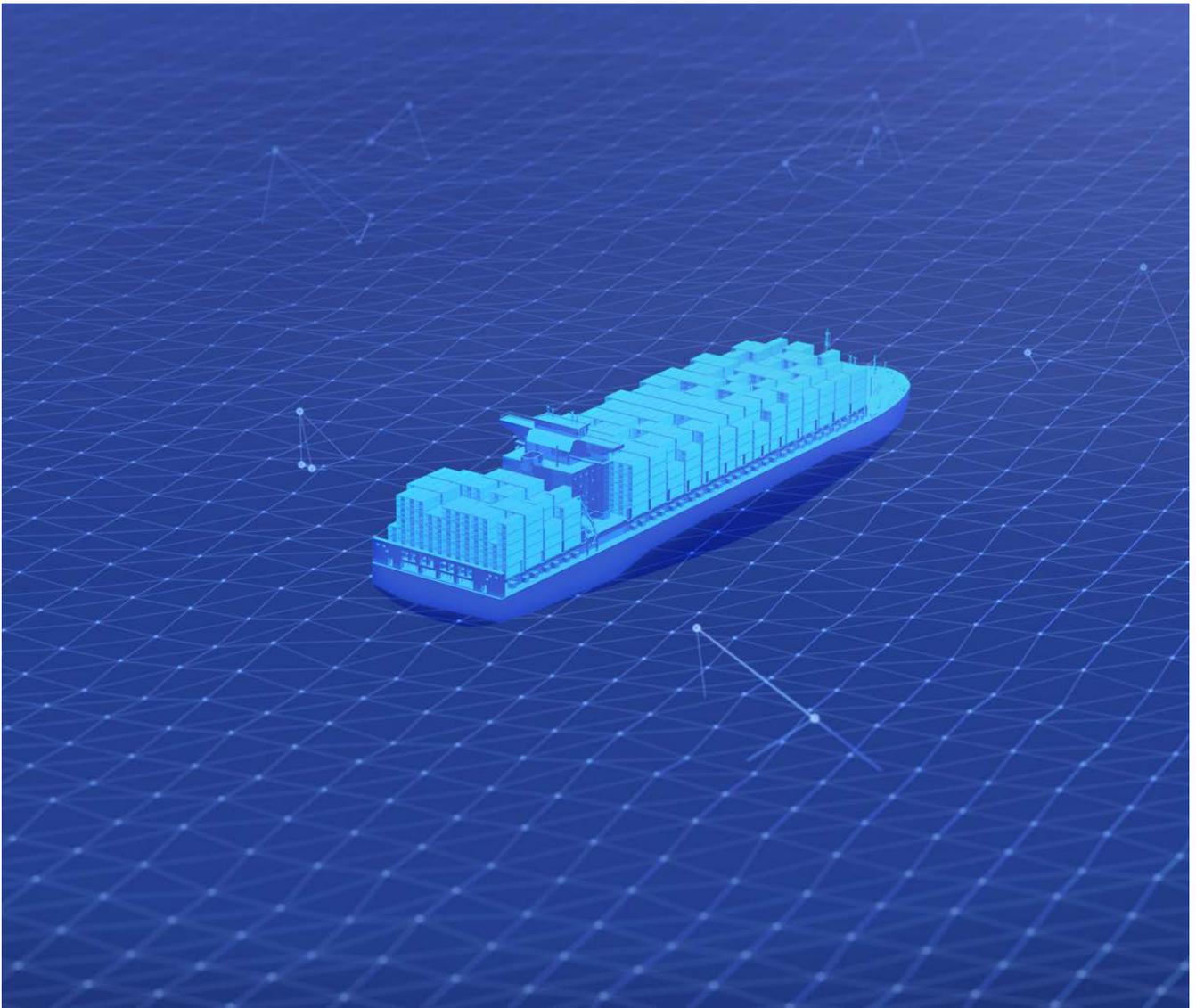
Supply chain players, among them shippers, terminals, and logistics hubs, are those trying hardest to crack the code of how to stay competitive against the agile behemoth and which technologies to use so as to strengthen their foothold and gain an advantage in the market.

Supply chains need to speed up digitalization, and some companies are only taking their first digital steps, as they are still operating with excessive amounts of paper documentation and ad-hoc operational activities.

On the other hand, complex production software integrations, round-the-clock shipment tracking, sensors connected with the internet-of-things, and constant speed and cost optimizations – even with artificial intelligence, robots, and drones – are more needed than ever, so participants and customers are provided the best service, and service overview at all times.

It is not just consumers and manufacturers, there is also the need to optimize public customs and similar agency activities, to provide more efficient green-lane processing, and give them better insight at what type of cargo is arriving, where, and when, for whom and under what conditions.

The open question at the core is how terminals and shippers will achieve



360-degree visibility to ultimately compete with Amazon. All this, while Amazon is already working on autonomous ships and next-generation terminals to optimize resources, time and transactional costs.

GOOD SOFTWARE MATTERS

One part of the winning equation is modernizing software so that it is perfectly user-friendly, just like the everyday apps we use on our phones. The other part is not only the tight integration of information and a smooth processing flow, but also new components such as unimpeachable trust and efficient automation.

Automation in this sense is letting all participants better track incoming and outgoing goods, dynamically allocate human and technical resources, and also trust systems to handle information accordingly without the constant need for intervention by human supervisors – and, in a way, all participants can trust the software, sensors and robots will do a proper job.

WHERE DOES BLOCKCHAIN KICK IN?

There isn't just one blockchain – there are as many as you would like, and you can even start one yourself.

But the public knows two of them best – the virtual cryptocurrency Bitcoin is the most well-known financial implementation of blockchain technology, based on the academic work of two scientists named Stuart Haber and W. Scott Stornetta back in the 1990s. Corporations might only use Bitcoin either for speculative reasons or as a means of payment – but mostly they avoid it.

The other one, the Ethereum Network, or “world computer”, is completely separate from Bitcoin. Functionally it is an upgrade of the technology, and it enables the blockchain to carry its own secure software code – the so-called smart contracts enable the decentralized execution of complete programs, without error, and with complete historical auditability for all transactions performed.

It is worth noting that the Ethereum's

December upgrade paved the way for up to a 2000-fold increase in the network's throughput, which is consequently expected to slash transaction costs by a similar magnitude.

Ethereum is the one used in hundreds of use cases, as it provides the developers with rich possibilities on how to write, transfer, validate, and audit information flowing between systems, partners, sensors, and algorithms.

There is another kind of blockchain, called “private blockchain” (often hyperledger), that function as blockchains but are basically only configured so that a closed circle of users or entities can join (permissioned). For example, specific business partners might have access to a hyperledger – in this case companies often struggle to see the benefits, as using a simple server solution would sometimes be much more rational. This approach is mostly used in proprietary blockchain platform solutions.

HOW MUCH DOES BLOCKCHAIN COST FOR YOUR COMPANY?

Some blockchain solutions for the supply chain and port industry are overwhelmingly complicated and not really open, requiring massive investments in time to redesign company workflows and be integrated correctly into the environment.

And then there are specialised, laser-focused solutions that might resolve just one specific issue – such as sending the B/L, for example, and they work as a cloud solution, no server purchases required, and services are charged as they are performed.

BLOCKCHAIN FOR QUICK DOCUMENT AND INFORMATION TRANSFERS

Blockchain is by far the world's most trustworthy approach to information sharing, up to date. Transactions that are recorded in a public, digital, distributed ledger are auditable and the information is immutable, while the network is upheld by publicly available resources. This means that companies do not need to set up any servers or allocate operational cost, while still benefiting from secure banking grade data validity- for all participants.

The business details can be hidden or encrypted so that only the partakers can see them – but transactional events themselves are permanently and irrevocably timestamped, confirmed, and validated multiple times for good. Data forgery, loss, or theft are virtually impossible.

Even the traditionally stubborn logistics paper workflows can already be reduced or completely digitized – there are solutions such as CargoX Smart B/L that enable extremely secure blockchain-based Bill of Lading transfers, all approved by the most powerful P&I clubs, and the costs are drastically lower than compared to courier service deliveries.

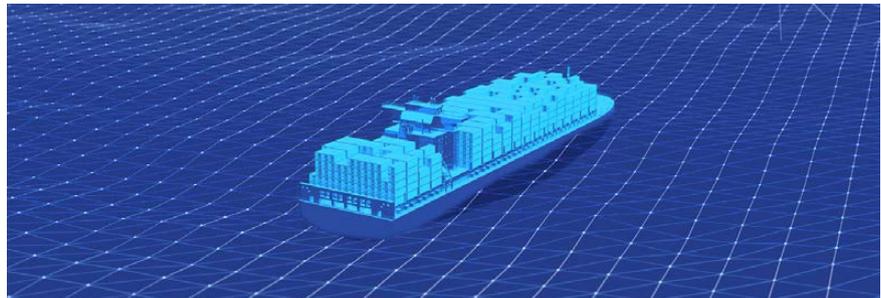
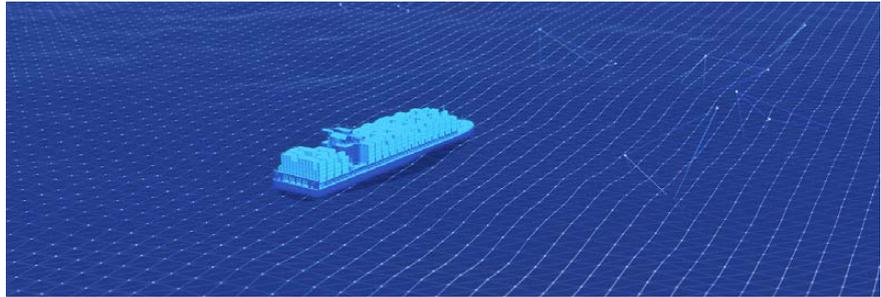
INTEGRATIONS ARE KEY

Warehousing, shipping, quoting, accounting and billing operations can already be tightly integrated to work in harmony and just provide managers with clear dashboard overviews and insights as to how the systems are performing – but data is too often still encapsulated in closed systems, and not shared transparently with partners. This is where good multi-party project planning is needed, and wrong investments can be astronomically expensive.

At the same time, there is a growing trend for systems to be open enough to accommodate any innovation that arises and still be useful in achieving strategic goals.

CONCLUSION

The diversity of blockchain services is already immense – wide platforms, marketplaces, and impeccable blockchain



document transfer services are already live and on the path of mass adoption.

What we should probably see in the world of supply chains is that ports will remain neutral and not commit themselves to any of the existing monolithic private blockchain platforms exclusively - as this would undermine their work's fundamental operating needs. Ports as the critical hubs of global supply chains will therefore feel the need to start using multiple solutions, and that will just emphasize the strategic importance for said solutions and services to be interoperable and integrated with each other, or light-weight for implementation.

For logistics service providers betting on the wrong blockchain solution with a big investment could prove to be a costly mistake, so the approach with small steps is recommended, preferably under the sponsorship of a board member responsible for digitization and modernisation.

Going forward, ports should evaluate available blockchain solutions from a business logic perspective and run as many pilots as possible, bearing in mind their need to remain open and transparent in all directions. Diving right in is the fastest path to gain experience and grow confidence – or just play with the innovation to figure out better what they want to expect from vendors.

One thing holds true – only public blockchain solutions offer all the given advantages of a true blockchain, as opposed to private blockchains, which are controlled by specific vendors, often from the ranks of ship line operators.

It yet remains to be seen what the final blockchain constellation will be. For sure it will not be dominated by a single player, but rather by a philosophy to include blockchain solutions of all sizes and shapes, private and public, intertwined and entrusted by each

other. Regulators worldwide remain open as to which architecture is preferred, though they still cheer for blockchain technology as the ultimate, global interoperability layer, accessible to all participants.

An open market with healthy and non-exclusive competition and improving omnidirectional visibility should be the final outcome- and that will be the true change everybody profits from. It should not be just about building new, semi-private data silos to hide in.

ABOUT THE AUTHOR

Simon Ručigaj is a digital transformation expert in charge of communications at CargoX. He has been a core team member from the beginning. Before that, he was a project and product manager in a real-time big data company, and a freelance digitalization and marketing consultant.

ABOUT THE ORGANIZATION

CargoX is a global company specializing in blockchain document transfer (BDT) solutions. The CargoX platform is secure, efficient and tamper-proof. It is based on the Ethereum public blockchain for transaction and ownership validation. BDT helps companies build trust in a trustless environment for logistics, manufacturing, finance, trading, energy, and services industries.

CargoX is focused on providing direct and quick benefits for users, clean workflows, a refined user experience, and future-proof, open architecture.