



PORT COMMUNITY CONNECTIVITY

PLATFORMS AND LANDSIDE

CONTAINERCHAIN

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In my last technical paper in The Journal of Ports and Terminals on Container Logistics 4.0, I identified platforms and data ecosystems as one of the foundational pillars for digital transformation and new value creation in logistics and shipping. In this paper, I take a more focused look at the evolution of digital platforms across the container logistics supply chain and the importance of their connectivity to port, terminal, and landside logistics operations.

PERSONALIZED DISRUPTION

Over the past few years, tech giants such as Alibaba, Amazon, Apple, eBay, Facebook and Google, as well as younger disruptors like AirBnB and Uber, have graphically demonstrated the power of platform technology to connect multiple consumers and producers via digital applications. Processing multiple interactions and transactions at unprecedented scale, speed, and scope. These major digital platform economies are continually mining

the vast quantities of data generated to optimize operations and enable 'mass personalization'.

In the B2B space, platforms present a unique way to conduct business, while they grow exponentially in size and importance, providing unparalleled opportunities for value creation. The World Economic Forum's Digital Transformation Initiative predicts that platform-driven interactions will enable approximately two-thirds of the US\$100 trillion value at stake from digitalization by 2025. To survive in the new digital economy, enterprises will either need to embrace platform connectivity, or risk falling dramatically behind in the fast-moving push toward more collaborative supply chain efficiency.

PORT COMMUNITY SYSTEMS

Ports and landside connected supply chains are, of course, essentially physical platforms and ecosystems in themselves. They are physical nodes where a complex

web of private and government entities converge to interact and transact the business of international trade. It comes as little surprise then that the port sector was one of the first to develop the concept of information sharing platforms with the launch of the first EDI-based port community systems (PCS) in Europe back in the late 1970s and early 1980s.

A neutral and open electronic platform enabling intelligent and secure exchange of information between public and private stakeholders to improve the competitive position of seaport and airport communities, a PCS typically facilitates both B2G and B2B transactions, providing a standardized system to process data related to exports, imports, transshipments, consolidations, hazardous cargo and maritime statistics reporting. In many parts of the world, regulatory and trade process compliance is a core function. Increasingly today, PCS also form part of larger government trade facilitation, simplification and digitalization

initiatives through 'Single Window' and e-Trade programmes.

Whilst traditionally PCS's play a key role in facilitating the flow of cargo and information through ports, they tend to be limited in their connectivity with landside and hinterland ecosystems. Additionally, they too often focus on promoting the importance of information capture over providing practical digital applications that incentivize users to share information in real-time as part of solving the operational problems that create inefficiencies in the supply chain itself.

Practical digital platform applications that seek to reduce landside congestion and pollution, optimize facility utilization, expedite tri-modal traffic flows to, from, and within port areas, share information in real-time allowing proactive operational planning amongst participants (whether it be shippers, 3PLs, hauliers and other inland operators such as dry ports) are evolving rapidly and are all aimed at unlocking trapped value created by today's inefficiencies. The importance for the industry to connect these often-independent platform applications to a PCS is a critical evolution required to deliver the true benefits of digitization to the container logistics supply chain.

PORTS LEADING THE WAY

Major port centres including Antwerp, Hamburg, Los Angeles, Long Beach, Rotterdam, Singapore and others, plus shipping line and global terminal operators looking to get more embedded in the supply chain 'beyond the gate', are embarking on digital initiatives to capture, harvest, pool and share more data in more collaborative, real-time ways, with maritime and landside logistics stakeholders.

The Port of Rotterdam's CFO recently said that investing in soft digital infrastructure is now as important as the physical infrastructure itself. PSA International, the operator of the Port of Singapore and an international network of terminals, has laid out its vision to work with customers and partners on improving E2E cargo flow with new solutions that "exploit the opportunities which digitalization offers, taking advantage of the fact that PSA already operates at key nodes of global trade and supply chains." Other multinational terminal groups have also expressed their intent to get closer to shippers and provide more inland connectivity, intelligence and value added digital services.

These enterprise and geographic-centric initiatives are crucial as is their connectivity to digital landside logistics (LL) platforms. Designed to optimize the movement of containers from port gate to door and back again, LL platforms connect the ecosystem of cargo owners, landside logistics providers and transporters, marine



terminals, shipping lines, inland depots/ports, and warehouses/DCs.

Singapore has recently provided two significant examples of this strategic direction under its National Trade Platform – with plans to connect over 10,000 of its existing registered users to a single independent Transport Integrated Platform (TRIP) that has already connected a large majority of the landside containerized supply chain, and in doing so, delivered significant operational and economic benefits to its stakeholders.

BEYOND THE PORT

Independent B2B LL platforms offer a critical path for the myriad of SME players that make up a significant number of any inland cargo community – many still with limited-to-no digital resources – to get connected to the network and in some cases, access digital business applications and processes to improve their day to day operations via adopting a digital industry 'baseline'. They also provide the central 'link and structure' to connect and enable emerging technologies such as Internet of Things (IoT) real-time tracking and sensors, blockchain / distributed ledgers, analytics, and artificial intelligence (AI) that can exponentially improve data quality and value to the benefit of all the platform participants.

But to extract maximum mutual value from the emerging platform economy – and avoid simply replacing current data silos and outdated manual processes with new digital divides – stakeholders, owners and operators of PCS's and independent LL platforms must work out how to collaborate and communicate on a local, regional and cross-border basis.

Interoperability via APIs and standardization of messaging flow are key, enabling a network made up of a system of systems to be created. Equally important are the rules of engagement and governance within and between different (and possibly competing) data ecosystems, as well as between private and public-sector interests.

KEY TAKEAWAY POINTS

Balancing out platform competition and collaboration, international and localized solutions, closed and open offerings and free market choice against regulatory oversight is a very difficult challenge, but not one that can be avoided if we all want to reap the benefits of digital collaboration.

One thing is certain, the technology is on hand to address enduring supply chain stakeholder concerns about fulfilment inefficiencies, lack of coordination and poor visibility. But approaching the upcoming inevitable proliferation of digital platforms and offerings from an earlier mindset will not get us to where we want to go. As Einstein said: "We can't solve problems by using the same kind of thinking we used when we created them." Coordinated discourse between market players and policymakers is therefore crucial as we enter the next wave of digital development and application of technology to drive operational and economic efficiency across the container logistics supply chain.

ABOUT THE AUTHOR

Chris Collins is the Chief Operating Officer of Containerchain, a digital operations and collaboration platform provider to the landside container logistics community.

ABOUT THE ORGANIZATION

Dedicated to simplifying operational processes, improving customer service levels, and driving down the cost of moving containers from port-to-door, Containerchain's platform and products provide real-time paperless information exchange, automation of manual processes, proactive operational planning tools, total container movement visibility, and real-time synchronized connectivity across the supply chain.

ENQUIRIES

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