TRADELENS

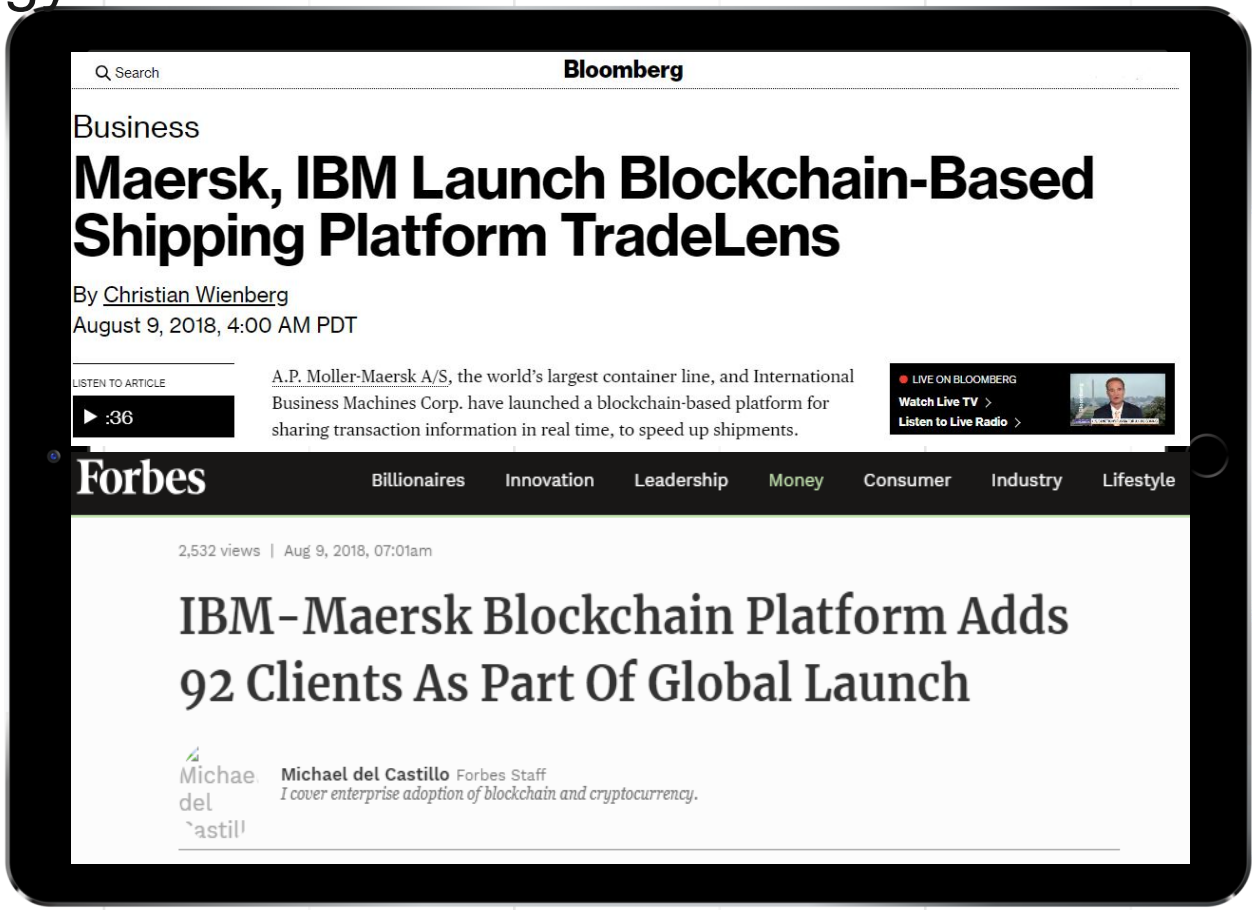
TRADELENS OVERVIEW

24-OCT-18

TRADELENS LAUNCHED AUGUST 2018

An open, neutral and global supply chain platform - based on blockchain technology

- TradeLens is built for the industry and offers benefits to trade participants from across the supply chain ecosystem
- Responding to industry feedback, Tradelens have released several iterations of the platform
- An Industry Advisory Board will be formed to help shape the platform and drive standards
- Maersk Line are an early adopter and will participate under the same terms as other ocean carriers
- Core platform components are available today under an Early Adopter program; Next release remains on target for Q4 2018



More than **$16 trillion in goods** are shipped across international borders each year

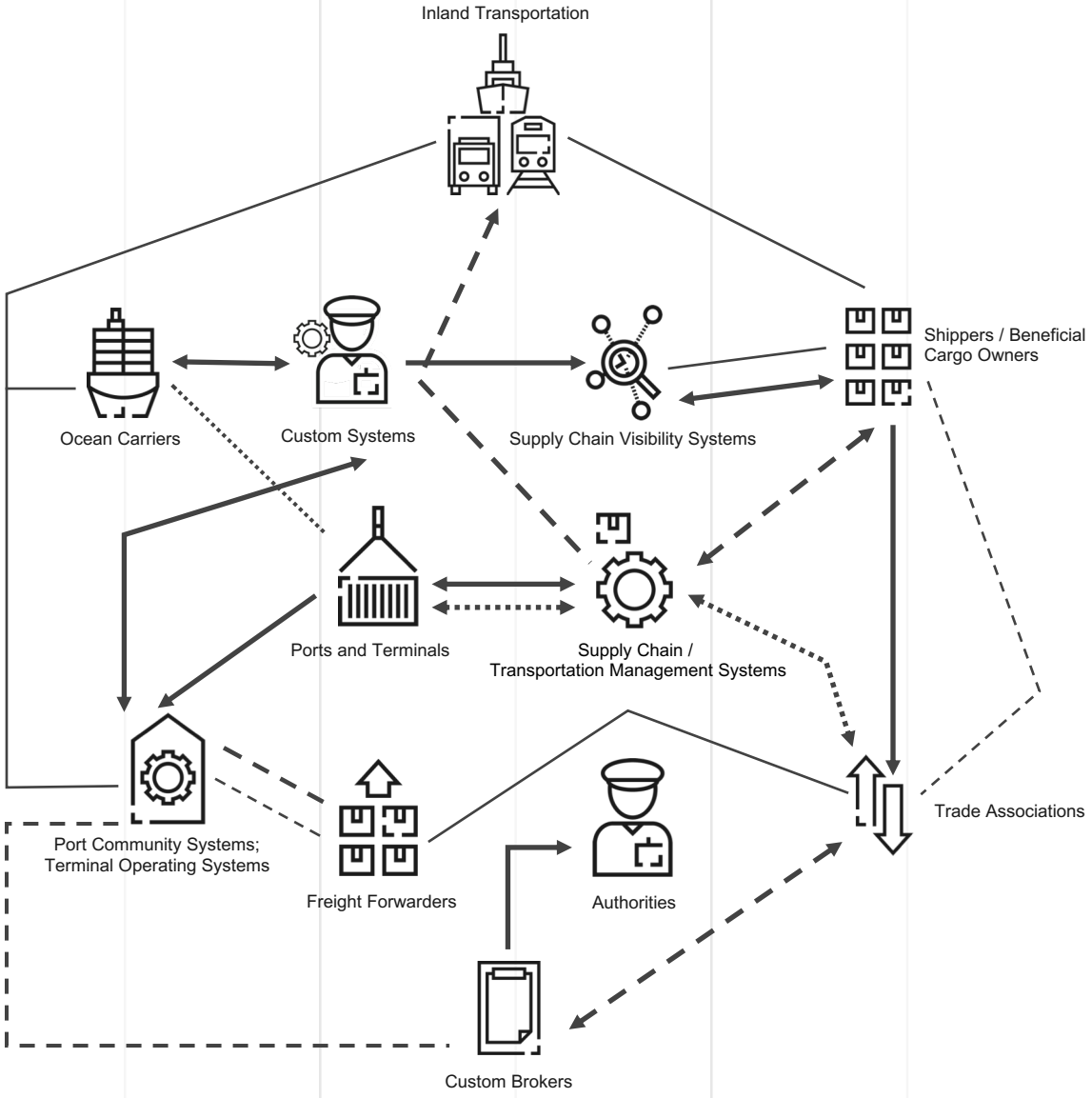
80% of the goods consumers use daily are carried by the ocean shipping industry

By reducing barriers within the international supply chain, global trade could **increase by nearly 15%,** boosting economies and creating jobs[1]

1) The World Economic Forum: Enabling Trade Valuing Growth Opportunities 2013

GLOBAL TRADE IS HIGHLY INEFFICIENT AND BURDENED BY PAPER-BASED PROCESSES

- Data trapped in organizational silos
- Different perspectives on transactions
- Manual and time-consuming processes
- Clearance processes subject to inefficiencies



THE TRADELENS PLATFORM

Digitizing the global supply chain

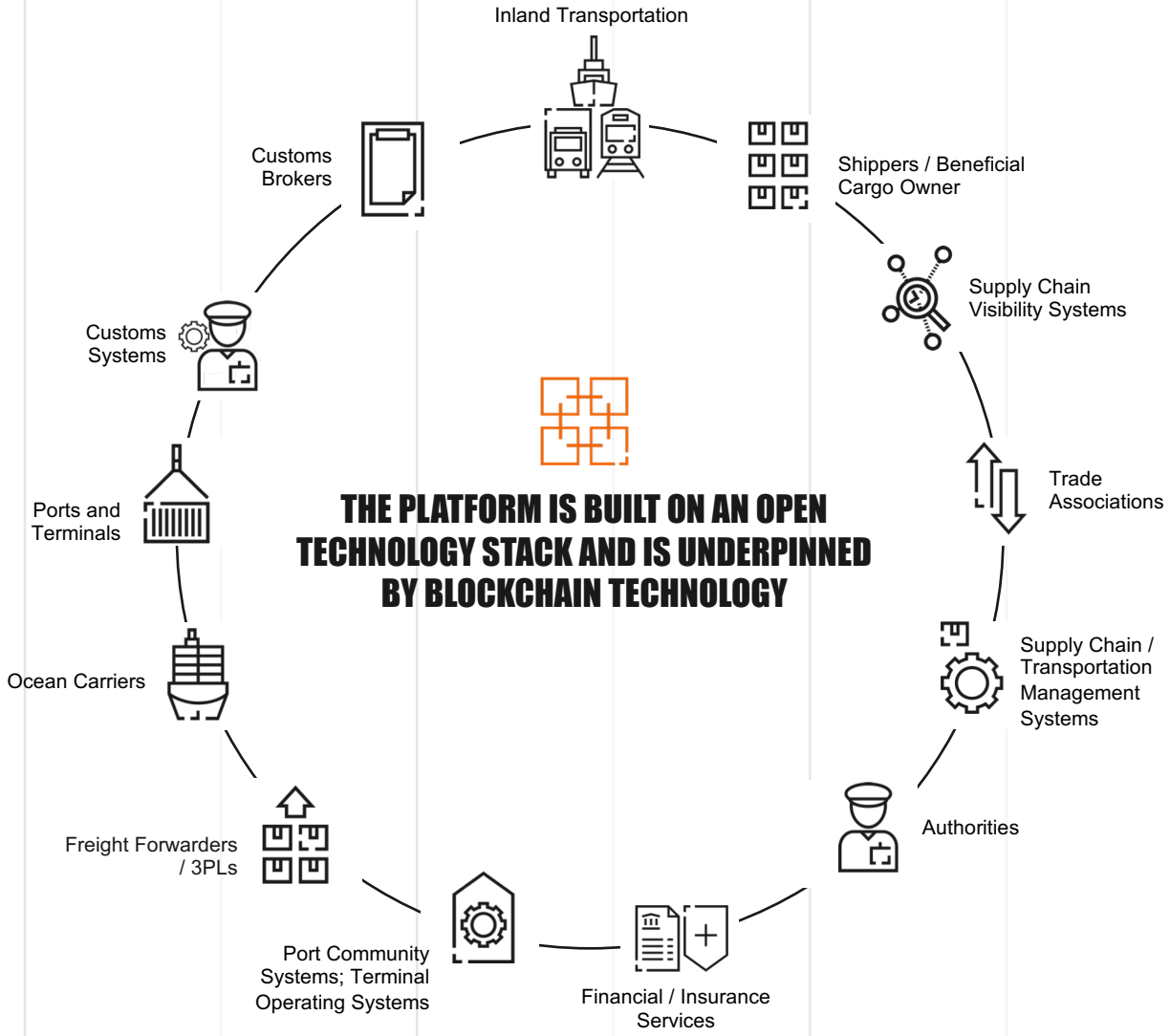
What does it mean?

Connects the ecosystem
Brings together all parties in the supply chain - including traders, freight forwarders, inland transportation, ports and terminals, ocean carriers, customs and other government authorities, and others - onto a Blockchain-based platform with a secure permission and identity framework

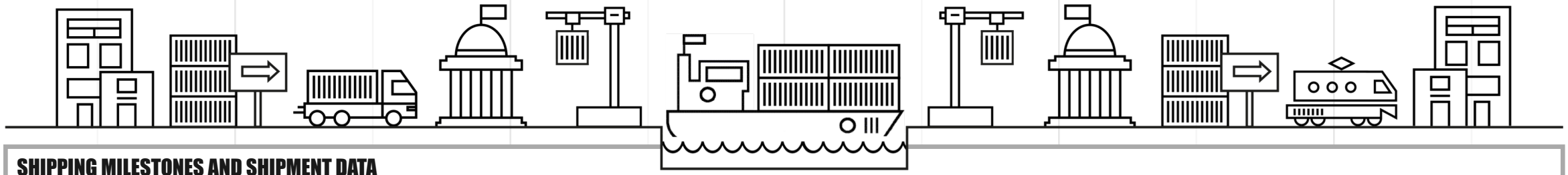
Drives true information sharing
Provides for the seamless, secure sharing of real-time, actionable supply chain information across all parties to a trade - encompassing shipping milestones, cargo details, trade documents, the structured data embedded in trade documents, customs filings, sensor readings, and more

Fosters collaboration and trust
Enables the digitization and automation of the cross-organization business processes integral to global trade, including import and export clearance, with Blockchain ensuring secure, auditable, and non-repudiable transactions

Spurs innovation
Lays the foundation for ongoing improvement and innovation through an open, non-proprietary API, the use of standards and promotion of interoperability, and the launch of an Applications Marketplace that parties can use to build and deploy TradeLens-powered applications for themselves, their partners, and their customers



BCO / NVO | FFW / CHB / 3PL | Inland Transportation | Customs / Government Authorities | Ports / Terminals | Ocean Carriers | Ports / Terminals | Customs / Government Authorities | FFW / CHB / 3PL | Inland Transportation | BCO / NVO



SHIPPING MILESTONES AND SHIPMENT DATA

- Start container tracking
- Empty container picked up from depot
- ETA empty container at stuffing site
- ATA Empty container at stuffing site
- Container stuffing completed at inland location
- VGM submitted
- Container sealed
- ATD Packed container from stuffing site
- Estimated gate in for packed container at terminal export
- Gate in full at terminal export
- ETD packed container from export terminal
- Packed container loaded
- Export documentation cleared
- Container ready to load
- ATD packed container from export terminal
- ETA packed container at import terminal
- Temperature update
- Estimated discharge time for packed container at import terminal
- Import documentation cleared
- Container selected for inspection
- ATA packed container at import terminal
- Packed container discharged at import terminal
- Estimated gate out of packed container from terminal import
- Gate out packed container from terminal import
- ETA packed container at stripping location
- ATA packed container at stripping location
- Seal removed
- Packed container stripped at inland location
- Empty container ready for pick-up
- Empty container picked up from stripping location
- ATA empty container at depot
- Container tracking ended

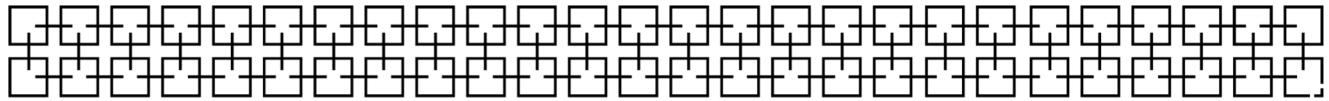
Not exhaustive list of milestones managed by platform

STRUCTURED AND UNSTRUCTURED DOCUMENTS

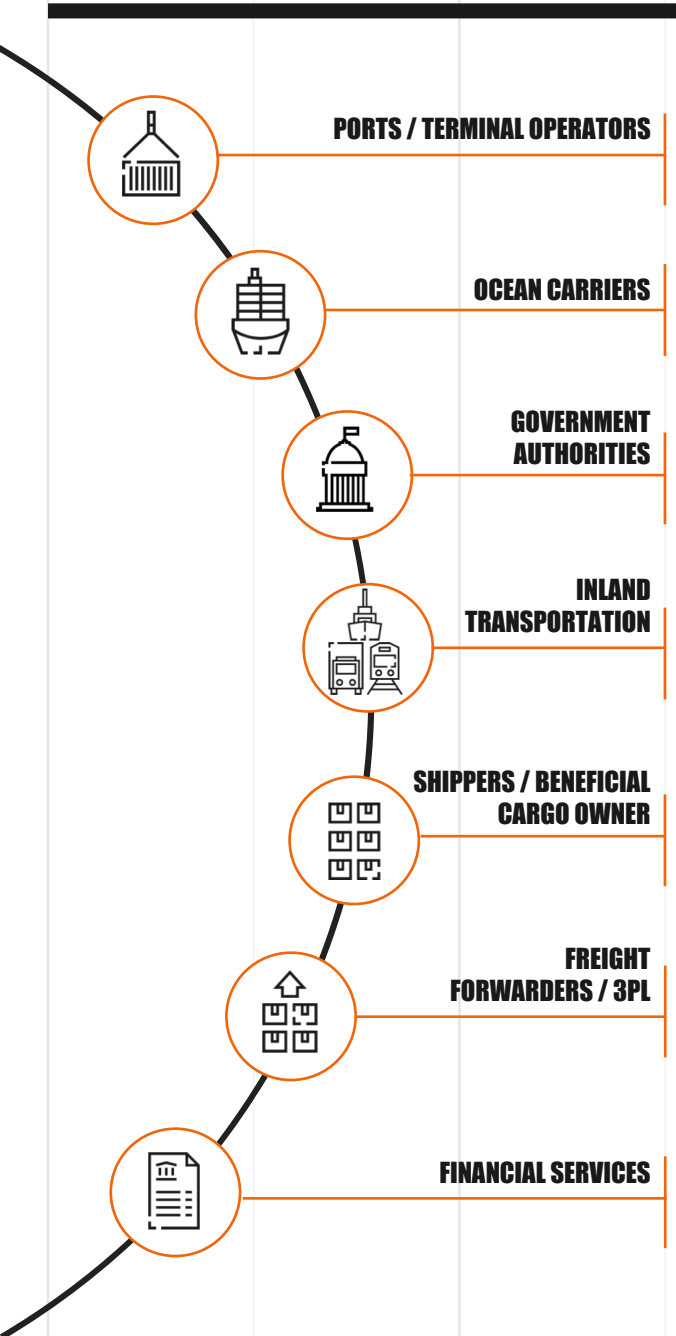
- Packing List
- Bill of Lading
- Export Documentation
- Advance Declaration
- Pre-Paid Invoice
- Certificate of Origin
- Shipping Instructions
- ISF
- Geography Specific Certificate
- Dangerous Goods Declaration
- Cargo Specific Certificate
- Customs Clearance
- Commercial Invoice
- Import Documentation

Not exhaustive list of documents managed by platform

TRADELENS BLOCKCHAIN BUSINESS NETWORK



TRADELENS PLATFORM



PORTS / TERMINAL OPERATORS	**Provide** information about the disposition of shipments within the boundaries of the port / terminal	**Benefit** from pre-built connections to shipping lines and other actors, end-to-end visibility across shipping corridors, and real-time access to more information to enrich port collaboration and improve terminal planning
OCEAN CARRIERS	**Provide** information about the disposition of shipments across the ocean leg	**Benefit** from reduced customer service and network integration cost, less revenue leakage, and less mis-declared cargo due to a digital audit trail of end-to-end shipment events and source documents
GOVERNMENT AUTHORITIES	**Provide** information about the export and import clearance status for shipments into and out of the country	**Benefit** from more informed risk assessments, better information sharing, less manual paperwork, and easier connections to national single window platforms
INLAND TRANSPORTATION	**Provide** information on the disposition of shipments carried on trucks, rail, barges, etc.	**Benefit** from improved planning and utilization of assets (e.g., less queuing) given real-time access to end-to-end supply chain events for shipments
SHIPPERS / BENEFICIAL CARGO OWNER	**Engage** with the platform as a consumer of shipping information and means to streamline clearance	**Benefit** from a streamlined and improved supply chain allowing for greater predictability, early notification of issues, full transparency to validate fees and surcharges, and less safety stock inventory
FREIGHT FORWARDERS / 3PL	**Provide** the transportation plan, inland transportation events, information on intermodal handoffs, and document filings	**Benefit** from pre-built connections to the ecosystem, improved tools for customs clearance brokerage function, and real-time access to the end–to-end supply chain data to improve effectiveness of track-and-trace tools
FINANCIAL SERVICES	**Engage** with the platform as a consumer of supply chain information	**Benefit** from access to a definitive, real-time, and immutable source of information for trade finance and trade insurance

PLATFORM TECHNOLOGY

TRADELENS AND BLOCKCHAIN

Blockchain addresses the underlying challenges inherent in collaborating across a distributed, fragmented supply chain ecosystem

SHARED LEDGER

Append-only distributed system of record shared across business network

A network of industry participants maintains a distributed, permissioned ledger with copies of document filings, relevant supply chain events, authority approval status, and full audit history; every change results in a new, immutable block

SMART CONTRACT

Shared business logic governing what transactions may be written to the ledger

Cross-organizational business processes, such as import and export clearance, are pre-programmed and built into Blockchain and distributed to and executed on the network, preventing any member from changing the business logic

PRIVACY

Ensuring appropriate visibility; transactions are secure, authenticated and verifiable

Cryptography enables permissioned access so only the parties participating in a specific shipment can submit, edit or approve related data

TRUST

Transactions are endorsed by relevant participants

Information such as documentation filings and authority approvals can only be changed if endorsed by the parties taking part in the shipment; full audit history maintained on the Blockchain

THE ECOSYSTEM AS OF OCTOBER 1, 2018

Ports, Terminals & Operators
48

Shipping Lines
4

Government Authorities
8

Charles Wellins, President & Chief Operating Officer, Flexivans

"A much-needed, open, neutral and consistent standards-based solution for our industry"

Inland Providers
4

Shippers & Others
41

Events on Platform
200M

* The current onboarding status of individual members varies

TRADELENS

THANK YOU

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IBM