



Our Manifest for the digital age Providing supply chain visibility with the use of Blockchain technology

Koopman

Koopman is an innovative logistics service provider in the market segment of Finished Vehicle Logistics. We serve OEM customers with distribution from factories/harbour terminals to dealers, as well as aiding fleet owners (leasing companies/rental companies) with their remarketing processes. With terminals in the Netherlands, Belgium and Germany we cover an important part of the European market. Our fleet of 360 car carriers serves our customers with an estimated 1M cars transported per year.

Developments in our Industry

Major changes are taking place in the Automotive Industry today. OEM's are facing significant challenges in the area of technology (electric cars, connected cars) and are seeking new business models for the future. Significant funding is required to make these fundamental changes in their eco-system. Fleet owners are improving margins by taking advantage of the

internet to remarket directly to European customers, rather than using traditional local sales processes.

... and challenges in the Supply Chain processes

Fundamental changes are needed in the Finished Vehicles Supply Chain processes to drive the required double digit cost reductions OEM's are looking for. In an industry where driver shortage and therefore transport capacity will remain a key issue for the future, the traditional process of tendering will not deliver the value that is needed for the break-through that is needed. Focus on tendering in the past years and lack of IT- investment have resulted in a situation where the lack of supply chain visibility is a significant issue for OEM's that cannot be solved easily.

Fleet owners generally only manage local/national logistical processes, whereas their business model is to transact/sell and manage on a regional /European level. With no (IT) infrastructure

at hand, they suffer from the same visibility issues as OEM's and struggle to manage their processes in the most cost-effective way. This industry suffers from significant issues like VAT and ODO-meter fraud, causing Billions of Euro's of damage in Europe alone.

Scattered, paper-based transactional processes

Transactional processes at OEM's and Fleet Owners are all paper-based, therefore scattered (no single database), costly (FTE's involved) and error-prone. CMR process, invoicing, damage reporting, are all still executed by people shifting (often) handwritten documents from desk to desk, with process times of week and weeks.

Unlocking value through digitalisation

Full digitalisation of the integral supply chain is now within reach, and is a necessity for those who want to make fundamental gains in value creation for their businesses.

A digital supply chain will deliver end-to-end visibility. And visibility creates possibilities for network re-engineering, the fundamental enabler for the significant cost-reduction the industry needs to achieve.

Supply Chain costs are not only the costs of physical transactions, significant more value is captured in the current inefficient, because scattered, cash-to-cash cycle and related transactional processes.

Digitalising for example the delivery process of vehicles (electronic CMR) will result in millions of euros in savings to the Industry by providing real-time, accurate information on the location of vehicles, on damage registration and on liability involving hand-over and ownership (e.g. VAT fraud).

Digitalising current invoicing, import and export processes and all other administrative processes will also bring enormous savings. A significant number of staff at OEM's and suppliers are currently involved in cumbersome invoicing and payment processes, often based on the limitations of legacy systems. Major improvements can be made in this area, by innovative digital processing.

The vision of Koopman in the digital age

Koopman believes digitalisation is key to fundamental value creation for the supply chain processes of its OEM and Fleet Owner customers. We also believe that we, as a supplier to the Industry, are able to deliver that digitalisation and related services, to the benefit of our customers.

We aim to deliver integral supply chain digitalisation, which will not only provide the all-important visibility, but which will also deliver services that will enable our customers to achieve their break-through objectives.



We believe that blockchain can greatly accelerate our goal of providing significant added value to our customers. Therefore we have decided to invest in it and to become the “first mover” in the market segment of Automotive Finished Vehicles and Remarketing Supply Chain.

We aim to provide a digital infrastructure that is supplier-independent and therefore can be used by all OEM's and Fleetowners for all their supply chain processes.

Blockchain: The VIN-based ledger as a key to value creation

Koopman, together with partner IBM, is investing in blockchain technology, creating a VIN-based ledger as a basis for providing supply chain services. In this blockchain environment the VIN (the unique serialnumber of a car) can be traced throughout the supply chain, from its birth (production) to its final destination (the dealer or consumer). And for Remarketing processes: from seller to buyer.

During its journey through the supply chain all relevant data can be added to this unique VIN record: its geographical position, any damage that has occurred, transactional information (e-CMR) and also technical data (upgrades, mileage, configuration changes etc.)

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Blockchain data, by its nature, cannot be changed. As a consequence, relevant documents (e-CMR, bill of lading, technical data) can be used as legal documents. By using “smart contracts” in a blockchain infrastructure and based on the legal/immutable status of the data, processes like invoicing can be automated, significantly reducing administrative efforts.

Supply chain data captured in a blockchain infrastructure, create end-to-end supply chain visibility in a Finished Vehicle or Remarketing Supply Chain. Data can be made visible for selected audiences, varying from dealer (when does my car arrive) to

authorities (has this vehicle been exported), providing relevant digital information to all stakeholders in a supply chain.

How this technology will create additional value to the industry in the future

In the Fleetowners remarketing Industry VAT-fraud and mileage fraud are major issues in the Remarketing Industry in Europe. Millions of vehicles are sold cross-border in Europe every year and authorities struggle to control these transactions.

A study by the European parliament of November 2017* indicated that the economic damage in the EU as a result of mileage fraud might be between 5-10 Bn Euros per year. The same report indicates that blockchain applications could be a solution to this problem, as mileage readings (ODO meter) could be captured and stored with the VIN in the ledger, maintained in a blockchain environment. Buyers of a car can therefore be sure of the correct mileage of the vehicle they buy.

VAT fraud on used cars in Europe also creates very significant economic damage. Blockchain provides protection against this type of fraud. Following the VIN through the supply chain, the actual location of transfer of goods can be accurately identified, along with the ID of the receiver of the goods (in the e-CMR data). Sellers of used vehicles cross-border can be assured they

do not incur any risk of being held responsible for illegal transactions.

In the OEM Finished Vehicle Industry

As vehicles move through the supply chain, upgrades/repairs/technical activities take place. Keeping records of these with the VIN in the blockchain ensures that a secure track & trace record can be maintained. In case a recall of the vehicle should be necessary, access to the blockchain data will provide relevant information quickly.

Now that many cars are equipped with tracking devices, theft is becoming less attractive, so focus is already shifting to theft of expensive car parts. Registering the relevant identification numbers of parts on the VIN record will enable authorities to quickly identify stolen parts and make theft less attractive.

*[http://www.europarl.europa.eu/RegData/etudes/STUD/2017/602012/IPOL_STU\(2017\)602012_EN.pdf](http://www.europarl.europa.eu/RegData/etudes/STUD/2017/602012/IPOL_STU(2017)602012_EN.pdf)