How connected solutions are reshaping the truck industry

To be successful in the new era of smart and connected products, truck OEMs must transform from product-centric to service-centric companies.

The truck industry is under attack by non-traditional players seeking to grasp a piece of the value chain. The trend is a growing number of smart and connected products, sparked by the 3rd wave of IT-driven competition. These connected solutions are changing the truck-industry landscape as it opens up the playing field to new business models, alliances, and disruptive competitors. The million-dollar question is: Will the large multinational truck OEMs be able to innovate and adapt their business models to the new reality, or will the fast-moving new entrants win the race? To compete, OEMs need to transform from product-centric to service-centric companies, which will require new ways of working, strong partners, and different competencies. Those in the truck industry best adapting to the new connected technology, and transforming into service-centric companies, will be the most successful and profitable players in the future.

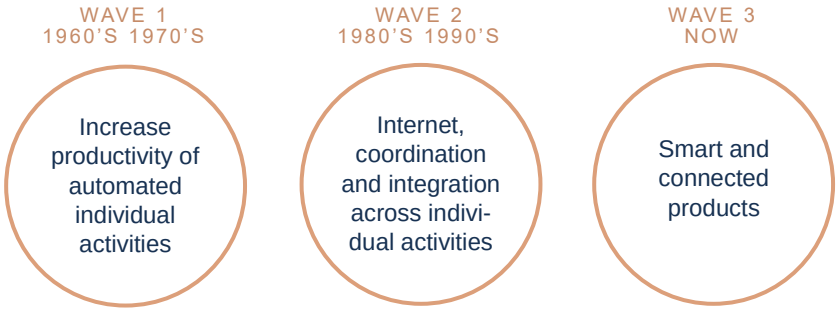
THE 3RD WAVE OF

IT-driven competition

There are 3 waves of IT-driven competition[1]. In the 1st wave, during the 1960s and 1970s, IT increased the productivity of automated individual activities, such as invoicing. Then, in the 2nd wave of the 1980s and 1990s, the internet was introduced, helping with coordination and integration of individual activities across the globe. Now, in the 3rd wave, connected products are being introduced.

Connected products are composed of 3 parts:

- Physical components: mechanical and electrical parts (e.g. truck engine or tires)
- Smart components: sensors and data storage (e.g. antilock braking system or rain sensors monitoring the windshield wipers)
- Connectivity components: ports, antennae, and protocols enabling wired or wireless connections with the product (e.g. trucks connected to the manufacturer to predict maintenance and improve uptime)



The waves of IT-driven competition

CONNECTED SOLUTIONS

offer new functions and capabilities

Connected solutions refer to products and services combined. The key functions include remote monitoring, control, and optimization. These functions can be stacked together for an autonomous product, which in the truck industry would be a truck that can drive and diagnose itself.

Connected solutions are here to stay and are currently impacting most industries. During the last decade, new connected products and services have been developed for the truck industry. Truck companies are still doing business by selling trucks and parts, but to step up the game, they are complementing the current business to include connected solutions and service sales.

Connected solutions are reshaping truck-industry structures by enabling more product differentiation and closer relationships between OEMs and their customers. It also opens the truck market to new competitors that provide services linked to connected products.

[1] Harvard Business Review, How Smart Connected Products Are Transforming Competition, Nov 2014

CONNECTED SOLUTIONS

within the truck industry

During the last decade, truck OEMs have developed many services driven by connected technology. The new services focus on enhancing **Uptime,** with solutions like dynamic service planning, remote diagnostics, and remote software download, as well as increasing **Productivity** through fleet management services.

Dynamic service planning

In traditional service planning, the schedule is based on mileage and/or time, as well as on truck application. With dynamic service planning, the schedule is instead updated based on the usage of the vehicle. This way, the truck won't be called in for maintenance until it needs it. There are two ways of getting the data to update the schedule – either it is read each time the truck is with a workshop technician, or read remotely via a telematics connection. Most OEMs offer dynamic service planning.

Remote diagnostics

With remote diagnostics, the health of the truck is monitored from a remote location, usually by specialists in a centralized facility. Remote diagnostics has proven to enhance repair accuracy and efficiency, by reducing the average diagnostic time at a service location by up to 70% and by lowering the average time of repair by up to 25%. Fleet managers or owner operators will be alerted to a problem before the truck goes down, and the workshop will have everything ready when the truck arrives. This saves time and money.

Remote diagnostics is offered by almost all OEMs. It is a relatively new service that has only been in the market for a few years. The level of parameters that can be monitored vary between the OEMs, but the solution is continually being improved and more components are being added.

"This way, the truck won't be called in for maintenance until it needs it"

Remote software download

Truck software is constantly updated and a truck typically needs to be in the workshop to get the new software, which can be a big disturbance. With telematics the software can be remotely updated, saving customers downtime.

No OEMs offer remote software download, but most are working on a solution to be launched in the near future.

Roadside assistance

When unplanned stops happen, every minute of downtime is money lost for the truck owner. Roadside assistance is about getting to the broken truck wherever it stands and fixing the problem. When a driver calls in for a breakdown, the operator can pinpoint the exact position and access the truck's diagnostic codes. A service vehicle is then dispatched with the right mechanic, tools, and spare parts for the job. With a connected truck, the whole repair process can be faster and more efficient.

Almost all OEMs offer roadside assistance, though some are more advanced. In some cases, they bundle this with a service agreement.

Fleet Management Services

A telematics-enabled fleet management system allows real-time surveillance of trucks. The fleet owner can view vehicle information like location, fault codes, fuel consumption, driver behavior, and more. This gives the fleet owner total control over the trucks and the possibility to improve productivity.

All truck OEMs offer fleet management systems, and this is currently the most mature service.

OVERVIEW OF CONNECTED SERVICES OFFERED BY MAIN TRUCK OEMS IN EUROPE IN 2015

	Dynamic Service Planning	Remote Software Download	Remote Diagnostic	Roadside Assistance	Fleet Management System
	✓	✗	✓	✓	✓
MAN	✓	✗	✓	✓	✓
SCANIA	✓	✗	✓	✓	✓
IVECO	✗	✗	✓	✓	✓
DAF A PACCAR COMPANY	✓	✗	✓	✗	✓
VOLVO	✓	✗	✓	✓	✓
RENAULT TRUCKS	✗	✗	✗	✗	✓

THE COMPETITIVE LANDSCAPE IS CHANGING AND

new players are entering

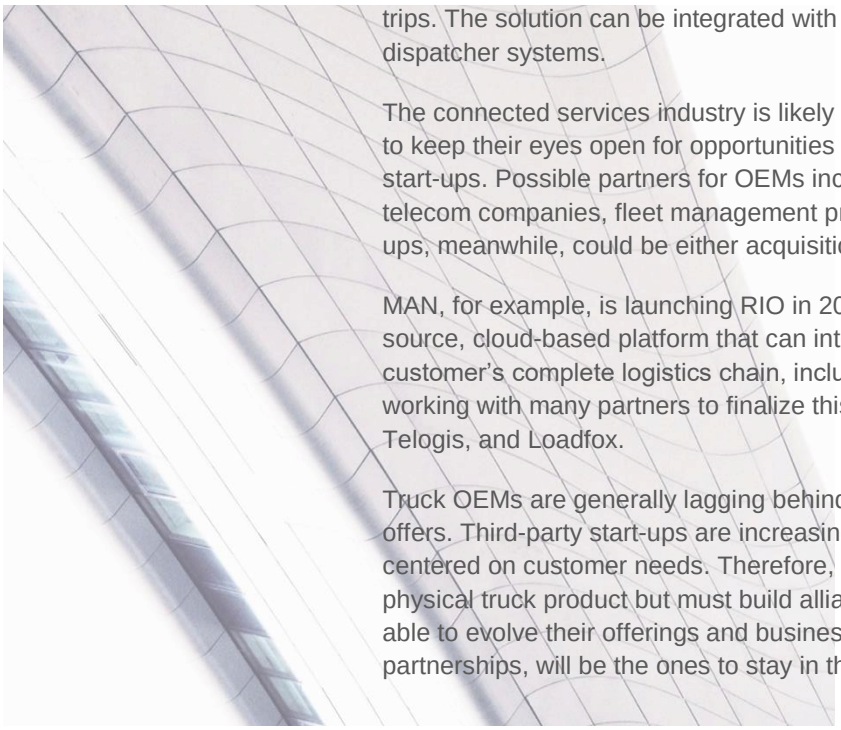
The connected services market for commercial vehicles will be a $245bn ecosystem by 2025[2]. More players are competing for a share of this market as they introduce new solutions to connect the customer with their vehicle, supply chain operations, and data. These new players include both existing businesses within the truck value chain – OEMs, parts suppliers, and trailer manufacturers – as well as start-up or third party providers.

The two groups of players have distinct approaches in tackling this market. OEMs and suppliers are each introducing their own branded service packages tailored around their specific products. Recognizing that customers then have to juggle multiple portals, third party providers tend to offer a more comprehensive solution to address customers' full supply-chain and business needs. This is a shift from just remote vehicle management toward holistic fleet and driver management. Furthermore, many start-ups are offering connected solutions in the form of free or subscription-based applications, which can be especially attractive for smaller fleet owners that are otherwise unable to invest in telematics.

Some examples of disruptive start-ups in the key service areas are:

Driver / fleet optimization: Automile (Sweden, Norway, USA), providing fleet managers and drivers with real time trip information and accident alerts via a self-installed OBD adapter.

Digital freight brokerage: Quicargo (Netherlands), providing on-demand matching between shippers and carriers to reduce empty cargo space on return trips. The solution can be integrated with in-house fleet management and dispatcher systems.



The connected services industry is likely to continue to consolidate. OEMs need to keep their eyes open for opportunities to acquire, partner with, or invest in new start-ups. Possible partners for OEMs include traditional suppliers, but also telecom companies, fleet management providers, and big data specialists. Start-ups, meanwhile, could be either acquisition targets or partners.

MAN, for example, is launching RIO in 2017. The aim is to provide an open-source, cloud-based platform that can integrate the different 'data islands' in a customer's complete logistics chain, including competitor vehicle data. MAN is working with many partners to finalize this offer, including Continental, TomTom, Telogis, and Loadfox.

Truck OEMs are generally lagging behind other players in connected service offers. Third-party start-ups are increasingly pushing full service solutions centered on customer needs. Therefore, OEMs can no longer focus only on the physical truck product but must build alliances and adapt. Those who are best able to evolve their offerings and business models, and secure strategic partnerships, will be the ones to stay in the game.

[2] Frost & Sullivan, Start-ups Disrupting Global Connected Truck Market 2016–2017, Dec 2016

TRUCK OEMs NEED TO TRANSFORM FROM

product-centric to service-centric companies

The introduction of telematics and connected solutions into the trucking industry is here to stay. Those who can adapt to the new competitive landscape will be the ones to increase their revenue growth and profitability. OEMs need to make the switch from being product-centric companies to being service-centric companies, which Fortos defines as Service Transformation.

The **product-centric** model – used by truck manufacturers for decades and still the most common model today – focuses on the truck, its features, manufacturing efficiency, and the sales and aftermarket.

Characteristics of product-centric companies include:

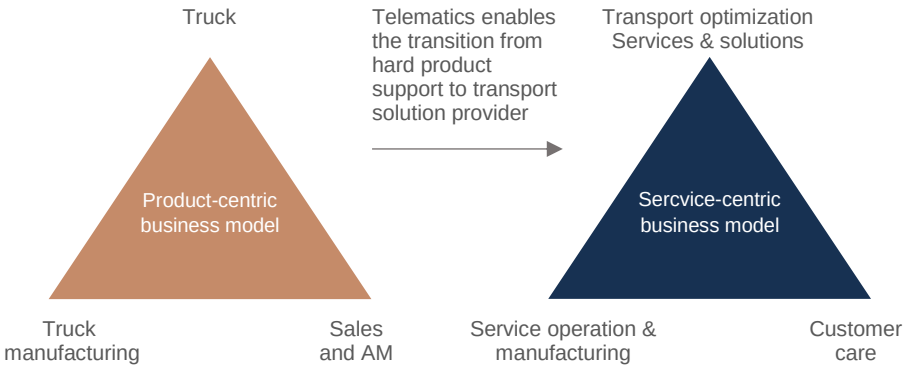
- First sell the truck, and services are promoted after
- Use telematics as an enabler to build brand loyalty
- Use big data mainly for internal analysis

The new model, which is **service-centric**, is a model that emphasizes optimized transport (enabled by services and solutions), service operation & manufacturing and customer care. In this model the customers and their operations are in focus instead of the truck. All features and services are developed with the customer in mind.

Service-centric companies commonly:

- Sell services and solutions prior to selling the truck
- Use telematics to optimize maintenance cost and intervals
- Use big data to prove efficiency and performance

Telematics is a key enabler of this service transformation, as it allows connection to the truck for maintenance, monitoring, and diagnostics. The targets for service-centric businesses will be increased truck availability and trouble free utilization measured in operating mileages.



Telematics enables the transition from product-centric to service-centric business model.

NEW CRITICAL COMPETENCES ARE

needed for service transformation

Making the switch from a product-centric to a service-centric company will be a major challenge for all truck OEMs. For decades, the traditional business model has been built around producing the best possible truck. In the new service-centric model, there will be new, different, and not-yet-developed competencies required for success.

OEM **basic competencies** needed to stay in the game:

- Fleet Management System
- Vehicle data access
- Telematics communication
- Big data platforms
- Data analytics
- Portal design

OEM **key competencies** that can create a competitive advantage:

- Customer operations understanding
- Data quality management
- Vehicle diagnostic competence
- Telematics-enabled design
- Service process deployment
- Telematics-enabled product improvement and warranty management

The key to success for truck OEMs will be to secure the commodity competencies and to develop and recruit the key competencies.

Conclusion – looking forward

Looking forward, connected solutions will only continue to grow in relevance. OEMs are offering some telematics-based services today but need to seek out new ways of providing customers what they need. This requires a service-centric business model, strategic partnerships, and new critical competencies. Only those who can embrace the service transformation and evolve will succeed in this new era of connectivity.

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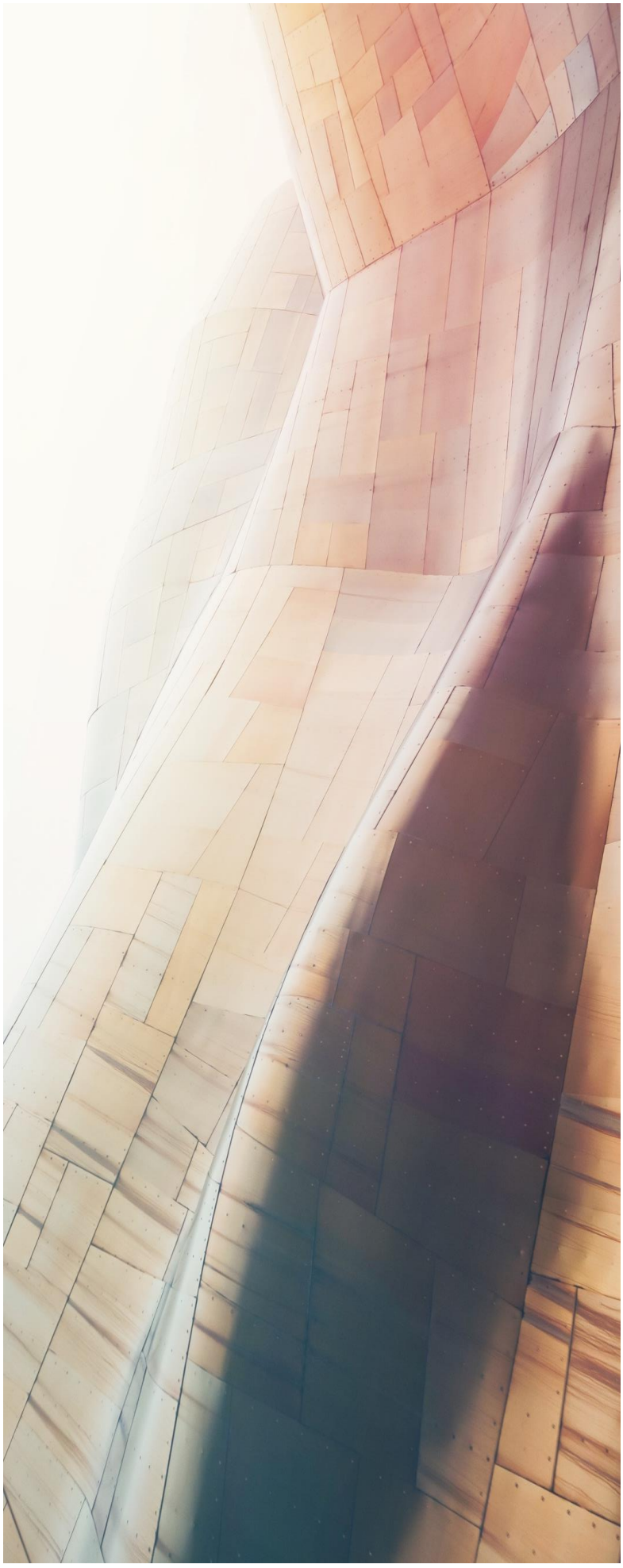

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