Connectivity for commercial vehicles –
the need for an open platform
Commercial vehicles customers such as fleet operators are very interested in connectivity, seeing it as a way to achieve more efficient processes and reduced costs (and increasingly to improve driver productivity and comfort). However, most commercial vehicle fleets are multi-brand, and fleet operators cannot realize the benefits of connectivity if they need to use a different system to manage each brand. As well as adding individual connectivity features, therefore, commercial vehicle OEMs should consider developing an open platform that can be used to manage multiple brands. Customers and other OEMs could be allowed to put their own services on the platform and it could become a medium for data sharing. An OEM that develops such a platform successfully would gain competitive advantage because it would be the first point of contact for customers and would have access to a range of valuable customer data. A single, collaborative approach to planning and implementation can enable both the creation of value through individual services and the creation of the open platform.

Commercial vehicles customers want connectivity – and a way to manage it

In our paper Connected Vehicle: Making the vehicle a node on the network, we discussed how consumers in the digital landscape want their cars to streamline their lives – something that to a large extent depends on the cars being connected to their home, office, club and other entities.

Operators of commercial vehicle fleets want connectivity too, but their priorities are somewhat different. They expect increased efficiency, reduced costs, improved processes, and integration into the company’s legacy systems. For example:

• Drivers should be able to get the information needed for a trip instantly displayed in the vehicle.
• The fleet operator should be aware of each vehicle’s status and able to schedule maintenance when it is not in use.
• Information about goods being transported should automatically be available to all relevant systems.
• Goods should be constantly controlled and monitored, with options to change the environment – for example, to adjust the temperature in the van.
• Safety systems equivalent to those in the home, such as emergency buttons, should be available in the vehicle.

For commercial vehicles, there is an important extra requirement, though – one that poses a challenge as well as bringing a number of opportunities. This is the need for an open platform. In the case of private cars, most services are built for an individual driver or car, with little need to interact with other vehicles or brands. By contrast, the customers for commercial vehicles are people like fleet managers, who need to manage multi-brand fleets. In order to optimize logistics, they need a single view of the fleet, regardless of brand. That can’t be done by using a different portal or platform for each brand in the fleet. What the fleet operators need is a single platform to control the whole fleet.

A platform like this needs to be open in order to manage the different brands. But once there is an open platform, there is the option of making it available to customers and partners, to put their own services on the platform, or swap data with it. That does mean some loss of control by the OEM, but we believe the disadvantages are outweighed by the advantages. For example, the OEM who owns the platform:

• No longer needs to develop all their own services, or do so with just a small partner group.
• May also get access to whole new data sets by agreement with partners.
• Can gain competitive advantage by linking their brand to a platform that’s highly attractive to customers.
• Owns the point of contact with the customer – potentially the most important benefit of all.

This means that OEMs in the commercial vehicles market face special opportunities and challenges – those of creating an open platform that can be used by various OEMs and service providers to give fleet operators this single view of their entire fleet.

Of course, one OEM couldn’t develop this type of platform singlehandedly. They need to work with partners who can contribute interfaces and specialist services. For example, a software company might contribute an app for monitoring the
cold chain, enabling a supermarket (say) that is waiting for a delivery of temperature-sensitive goods to find out how near the truck is and get delivery bays ready to take charge of the goods at the appropriate time. By integrating complicated logistics information in a form that’s easy to understand, an app like this could provide a very compelling proposition for OEMs’ customers (and their customers), and of course it’s something that only really works if it’s applied to an entire fleet rather than just a single brand.

Challenges of developing connectivity services

Commercial vehicle OEMs face many of the same challenges we noted in connection with manufacturers of private cars. These include:

• The need to find new ways to extract insights from data, as discussed in our paper Connected Insights: Transforming Data into Competitive Insights

• The need for new development, support and administration processes, to accommodate the much shorter lifecycle needed for services (see figure 1).

• The need for a strong business case: OEMs need a better understanding of market requirements in different geographies, and of how costs can be defrayed.

Regarding the last point, the business case should be understood not only in terms of what connectivity means for the OEM itself, but also with respect to the potential for providing an open platform, as discussed above. Most of the available services are still focused on a closed system where the OEM is responsible for the end-to-end delivery. Once we start to think in terms of an open platform for managing a multi-brand fleet, we open up the possibility for enabling partners and customers to extend the services provided and build up their own services.

Please refer to our papers Connected Vehicle: Making the vehicle a node on the network and AutomotiveConnect: Commercial Vehicles for more ideas about the current and future state of vehicle connectivity.

Figure 1: Traditional service development versus connectivity service development

<table>
<thead>
<tr>
<th>Commercial Vehicles</th>
<th>Development - 5-6 years, model cycle - 5 years</th>
</tr>
</thead>
<tbody>
<tr>
<td>Consumer electronics</td>
<td>Development and production lifecycle - 5 months</td>
</tr>
<tr>
<td>Services</td>
<td>Development - 5 weeks</td>
</tr>
</tbody>
</table>

Source: Capgemini
A central part of the business case for developing a platform like this is that it potentially gives the developer access to extremely valuable information – for example, if you can see that another brand’s trucks are giving problems or need replacing, tremendous sales opportunities open up. Creating this scenario clearly requires careful attention to the terms and conditions of participation in the platform, as well as to its architecture. In addition to the opportunity to gain information, the business case should also recognize the opportunity to sell extra products and services via the platform (for example, the cold chain app discussed earlier), potentially generating additional revenue streams as well as forging links with new customers. The way Google has used its search engine to create new opportunities indicates the possibilities open to an OEM with a market-dominating platform.

Planning the transformation

Before launching service offerings, all OEMs need to ask themselves questions like:

- Which services should we offer?
- How can we differentiate ourselves?
- How can we get to where we want to go?

In addition, however, commercial vehicle OEMs have an extra, and very important, question to address:

- What partners do we need, and how can we convince them to join our platform?

The partners may include other OEMs and parts vendors, but also third-party software developers and service providers. The OEM who will own the platform will have to find ways to incentivize its targeted partners to join this particular ecosystem rather than a rival one. This is likely to be partly a question of building up a critical mass of partners contributing important services, and hence a large customer base. For example, if the platform included the app for managing the cold chain, it could attract even customers who do not use the OEM’s brand of vehicle.

Having answered these questions, the OEM then has to create a business model (figure 2) for generating value through ongoing services for the OEM, the partners, and the customer, and work out how to move towards it.

Figure 2: Making the vehicle a node on the network

Source: Capgemini
**Recommended implementation approach**

Implementation should begin with cross-functional workshops to identify:

- Services required, relating them to the overall business model
- Deliverables needed to get each service running, and to ensure the service can scale to meet future needs
- Architecture and processes to offer an open platform for partners and customers
- Responsibilities for each deliverable, depending on the deliverable type
- Activities required to complete the deliverable
- Partners who could participate in the development and implementation of an open platform

The approach taken must generate an up-to-date, prioritized service portfolio that focuses subsequent development on company strategy and market demands. It enables departments that may previously have had difficulty working together – as well as external partners – to collaborate in a common process, creating a rounded view of the market that benefits all stakeholders. Please refer to Connected Vehicle: Making the vehicle a node on the network for more details of our recommended implementation approach.

**Next steps**

Capgemini has extensive experience of applying these approaches with leading automotive companies, and understands the need to ensure that they are sustainable in the long term. We are also experienced at constructing and orchestrating multi-stakeholder ecosystems. Please contact us to find out more about how we can help you develop connectivity services or create an open platform for developing them collaboratively.
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