

2016 Key Highlights

Global Medium Duty (MD)-Heavy Duty (HD) truck sales recovered by 5% over 2015 levels driven by demand recovery in China, India and Europe. VW's equity stake in Navistar marked the group's entry into North America

Recovery in China and India was Overshadowed by Weakness in the Americas

Truck sales recovery in China, India and Europe propelled global truck sales by 5 percent; Truck demand hit historical lows in South America as economic environment remains precarious in Brazil

2017 Top Predictions

As sales increases by 90,000 units in 2017, industry will increasingly focus on offering integrated service based solutions to fleets and owner-operators to maintain and grow margins

Value Truck Platforms Attracting Maximum Traction Globally

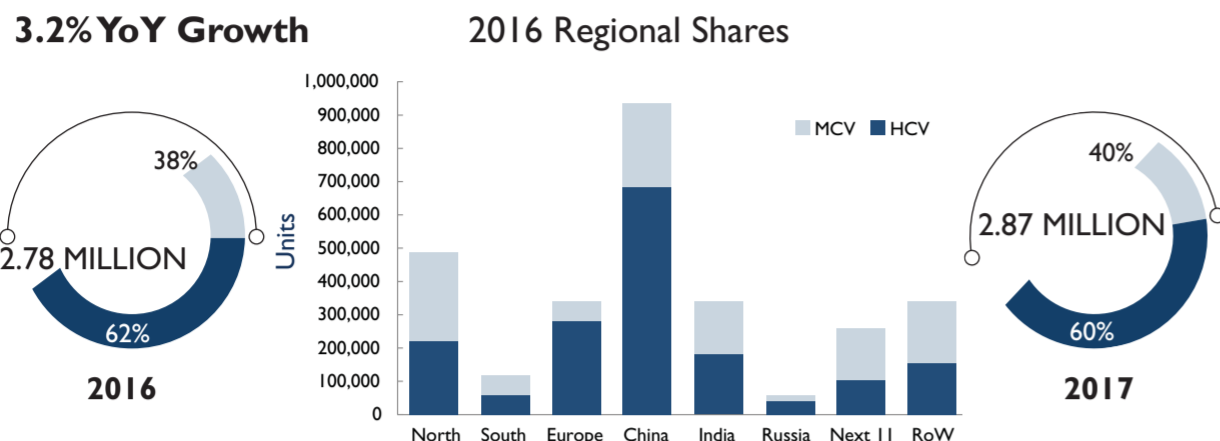
More than 60% of new platform development in the next 2-3 years is expected to be in the value trucks segment. This is largely driven by the growing demand for value trucks in emerging markets, especially China and India. A majority of the trucks built on such platforms is expected to fall in the price range of \$65,000-\$86,000

Global Medium and Heavy Truck Market Forecast 2017

Global MD-HD truck market is expected to absorb 90,000 additional units in 2017; MCV's share will increase by 2% on account of slumping demand in HD-heavy markets such as North America and Europe

CV Market: Medium and Heavy Trucks-Unit Shipment, Global, 2016 and 2017

3.2% YoY Growth



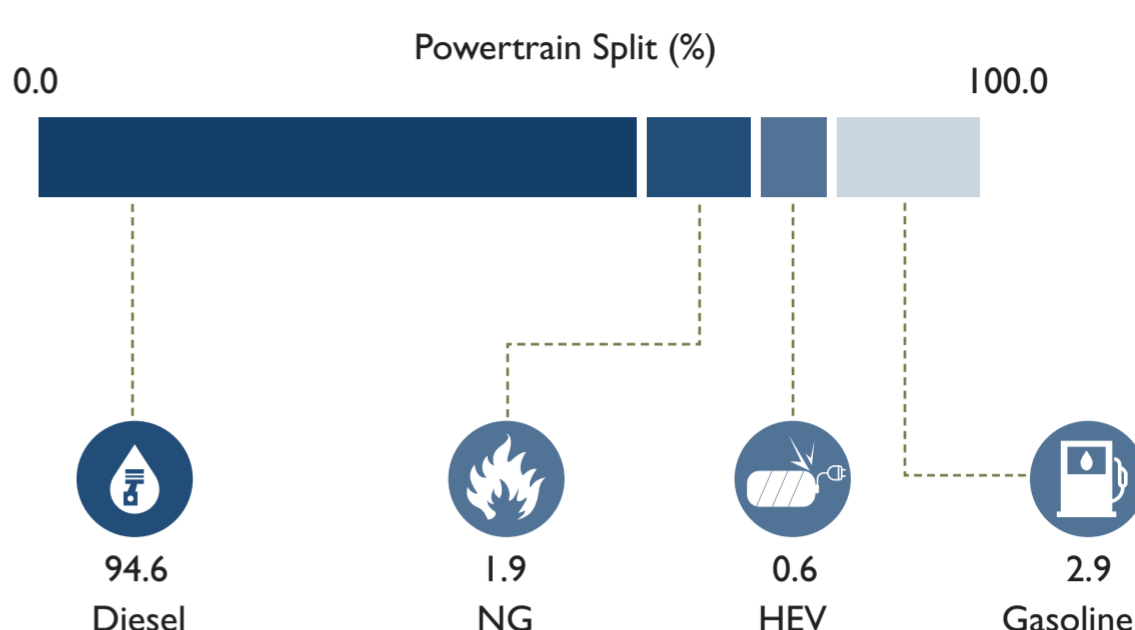
Next 11 includes the following countries: Egypt, Indonesia, Iran, Mexico, Nigeria, Pakistan, the Philippines, Turkey, South Korea, Vietnam, and Bangladesh.

MCV: 6T to 16T
HCV: 16T and above

Global MD-HD Truck Powertrain Technology Forecast

Diesel expected regain some of the lost market share to alternatives with diesel truck sales accounting for 94.6 percent of total sales in 2017 as opposed to 93.1 percent in 2016

CV Market: Powertrain Technology Split by Region, Global, 2017



Key Challenges for Trucking Industry, Global, 2017

Capacity underutilization, escalating operational costs, driver retention and rising GHG regulations are the key challenges that fleet managers face globally that can be addressed by digital technologies.

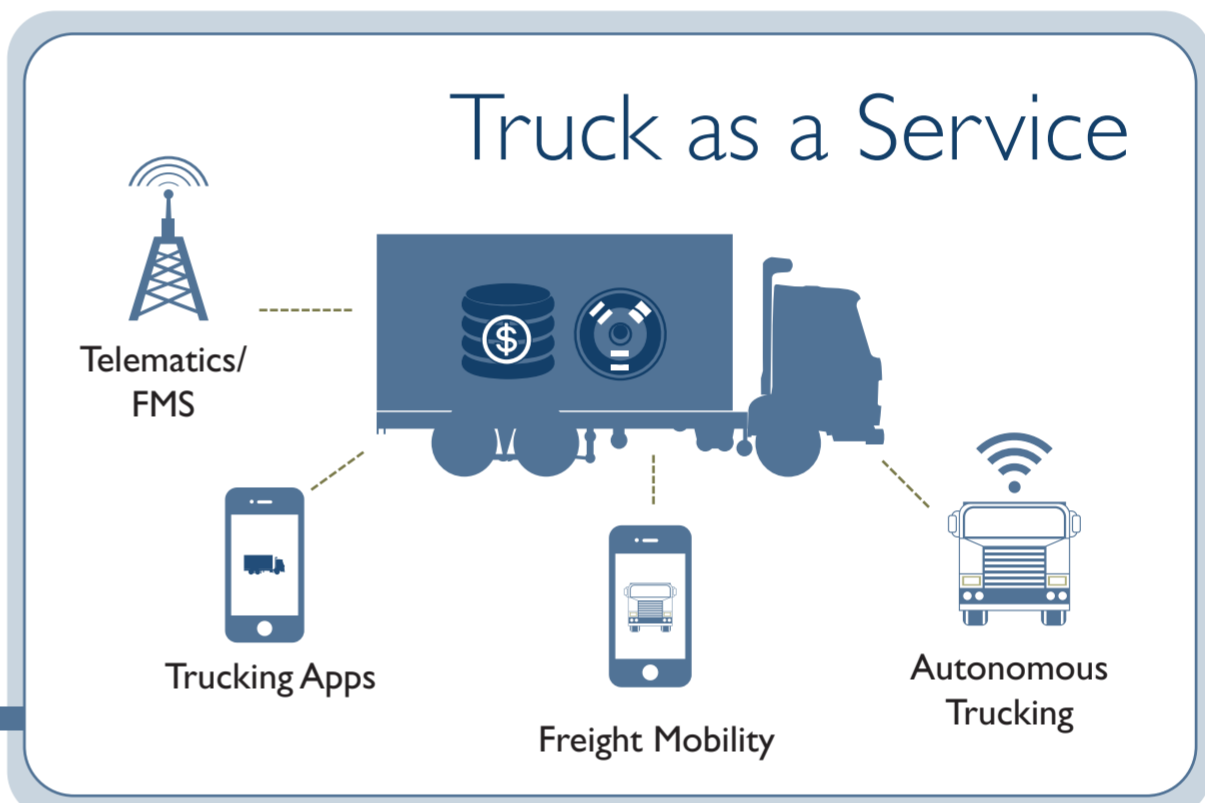
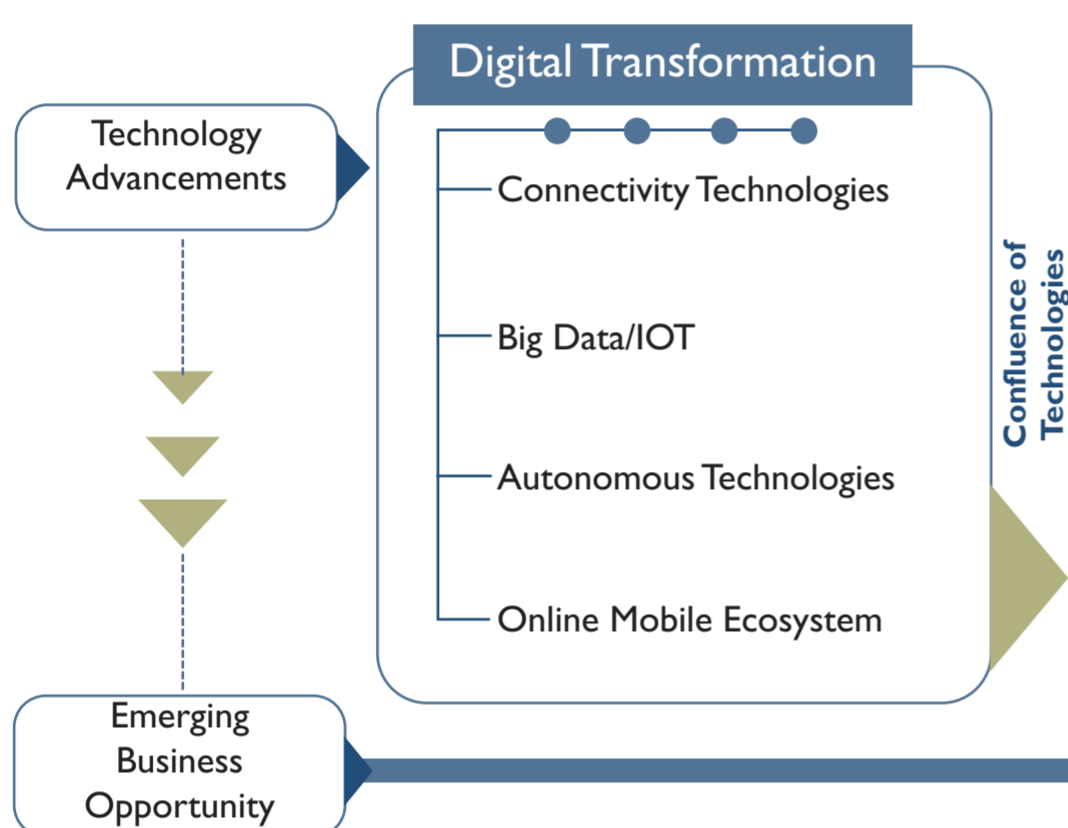
Trucking Challenges Propelling Digitalization



Business Model Change: Truck as a Service

Digitization Enabling Industry Evolution towards Service/Solution Model

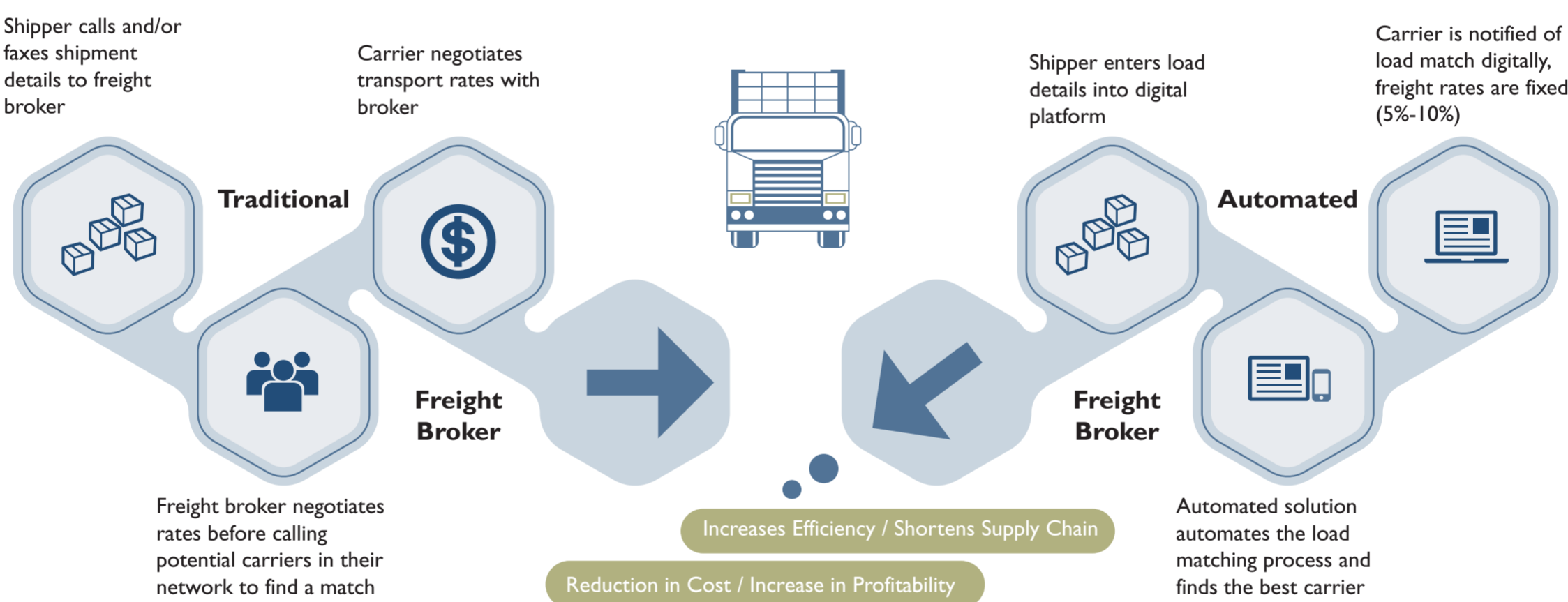
Confluence of technologies in the Industry Providing Platform for Various Stake Holders to Build Service and Solution Based Revenue Models



Freight Mobility

Why Digital Freight Brokerage

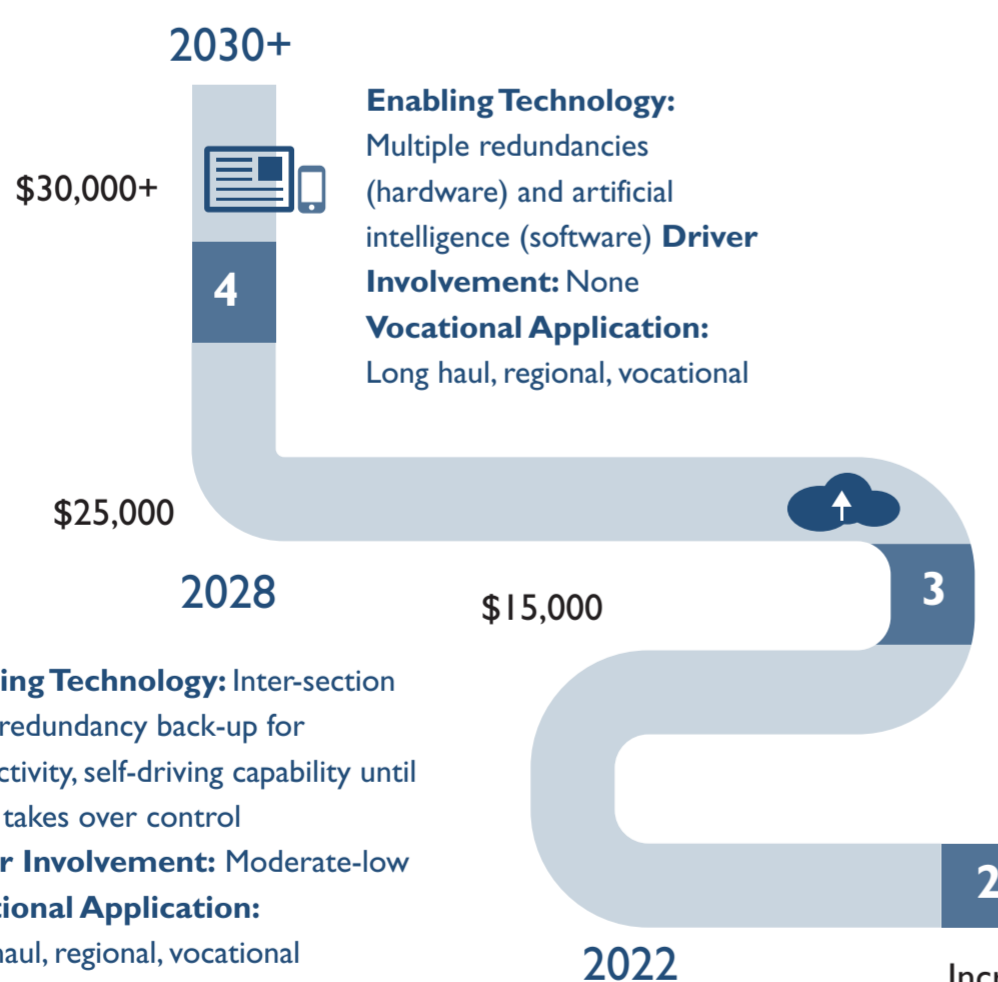
Freight brokerage can be automated using digital technologies thereby driving greater transparency between shippers-carriers and supporting d-hoc and planned freight demands at lower brokerage rates



Autonomous Trucking

Levels of Automation

In 2017 OEM Focus Will be Primarily on Platooning and Level 3 Automation



CV Market: Levels of Automation, Global, 2016-2030+

Platooning

Enabling Technology: V2X:V2V+V2I, DSRC, integrated safety systems (ISS), cameras, sensors, ACC

Driver Involvement: Moderate

Vocational Application: Long haul, regional, vocational

Enabling Technology: Electric power steering (EPS), electric braking systems (EBS), electronic throttle control, ACC, ADAS

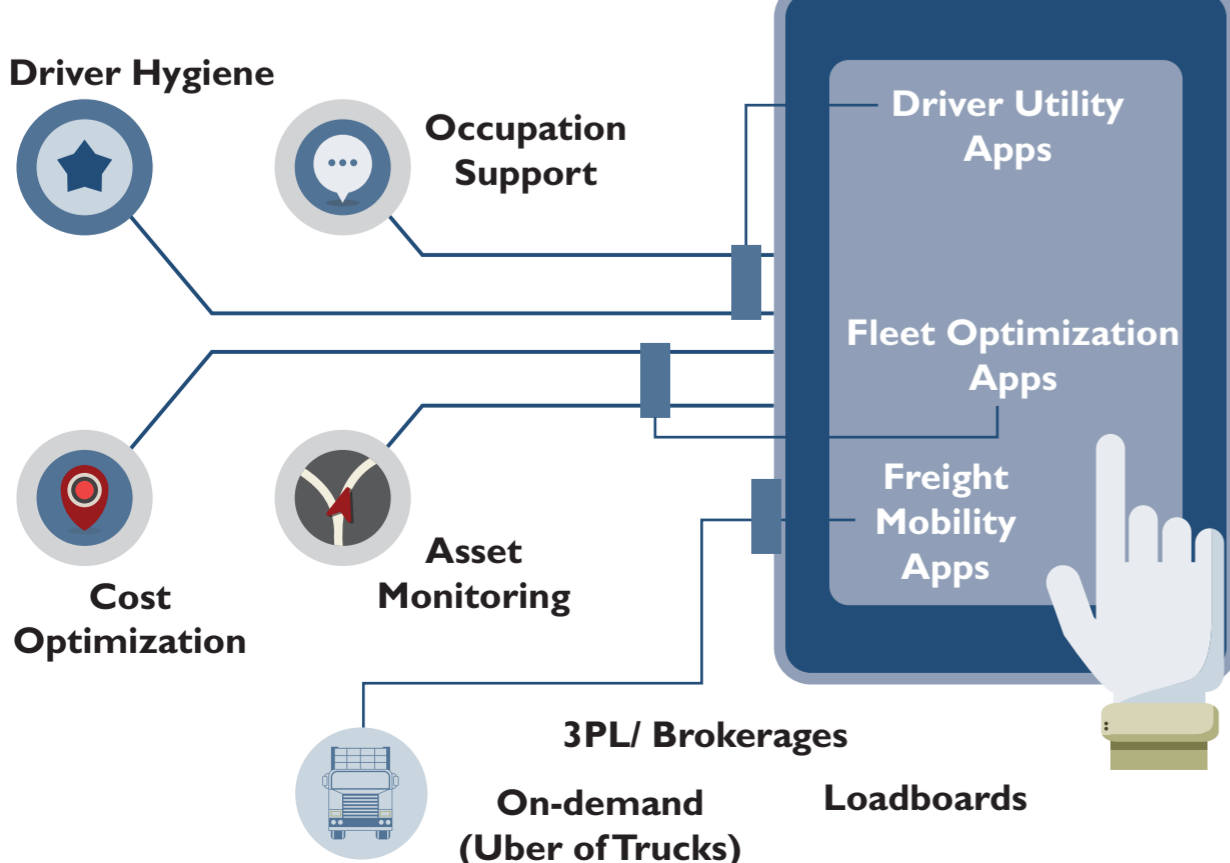
Driver Involvement: High

Vocational Application: Long haul, regional, vocational

Trucking Apps

What are the Services Mobile Apps can Offer?

Big Data and applications such as traffic prediction, sensors and terrain/weather mapping, ITS through mobile integration and social media integration will make decision making faster and proactive rather than reactive.



Truck of the Future

- Eco-friendly
- Fuel-efficient
- Connected
- Business-ready
- Crash-free
- Driver-friendly
- Autonomous

