Mega trends shaping the global off-road commercial vehicle industry
What is shaping the global off-road commercial vehicle industry?

The global off-road commercial vehicle (CV) industry is witnessing a transition in the operating and customer environment because of fast-changing regulations, rising industrial activity and the shifting demands of fleet owners and operators. Off-road CV manufacturers are also focusing on emerging markets, which are expected to spend US$6 trillion\(^1\) in infrastructure development between 2011–14. China is expected to remain the dominant region with 70% of global off-road CV production in 2016.

While the industry’s total production grew 7.3% (year over year) to 7.3 million\(^2\) units in 2011, it is estimated to grow at a compound annual growth rate of only 1.9% between 2011–2016. In terms of specific equipment, the global sales of construction equipment are estimated to touch US$137 billion\(^3\) by 2016, driven primarily by construction activity in China. Similarly, agricultural equipment sales are estimated to touch US$174 billion\(^4\), aided by sales in developing nations such as China, Brazil, and India, as they focus on mechanizing their agricultural sectors.

Companies must be able to answer the following five questions to determine how they will address new challenges and capitalize on emerging opportunities:

- How will the demand for equipment evolve?
- How will products need to adapt?
- How will business models need to adapt?
- What are the new market dynamics?
- What are the supply or value chain issues and implications?

In attempting to answer these questions, Ernst & Young has identified six megatrends that will impact the revenues, costs and profitability of participants in the global off-road CV industry.

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2. “Global Medium-term Outlook for Infrastructure Investment,” AMP Capital, 21st December 2011
OEMs increase R&D spend and focus on product technologies to meet changing regulations.
- Changing regulations on emissions, noise abatement and safety, lead to increase in industry’s R&D spend
- OEMs focus on efficient engine design and alternate powertrain to meet the stringent emission norms

Fleets demand automated products and value-added services to address a challenging operating and economic environment.
- Rising competition urges fleets to demand increased technology content, fuel-efficient engines and cost optimization
- OEMs manufacture ergonomically advanced equipment to help fleets overcome the issue of shortage of skilled labor

OEMs aim for operational efficiency to be competitive, amid diverse demand scenarios and a challenging macroeconomic environment
- OEMs witness varied demand while increasing global foothold, with focus on Brazil, Russia, India and China
- Challenging economic environment and rising fixed costs lead OEMs to adopt various production strategies

Rising operating environment risks force OEMs to adopt strategic sourcing and warranty management systems
- The industry is witnessing economic and regulatory risks such as forex challenges and uncertain regulatory impact
- OEMs are facing project scheduling issues and high costs owing to warranty issues

Suppliers collaborate with OEMs to enhance technology competency and diversify across the value chain
- Suppliers are moving plants closer to OEMs, while OEMs demanding prompt delivery from suppliers
- Rapidly changing regulations and the untapped potential of the aftermarket force suppliers to improve technology

Dealers consider inventory and order management techniques to tackle aging stock and high lead times
- Lead times of equipment differ owing to varied specialization and turnover rates
- Aging inventories and delay in equipment ordering delays are causes of concern for dealers

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<th>Key strategies for consideration of stakeholders</th>
<th>Off-road CV manufacturers</th>
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| Evolving demand for commercial vehicles | ► Investing in R&D to stay ahead of regulatory change.  
► Manufacturing remotely controlled equipment. | ► Collaborating with OEMs to ensure R&D for future vehicles  
► Support OEM in localization  
► Track changing regulations while developing a product | ► Opening dealerships closer to the customer, where the demand lies |
| Adapting products | ► Expanding powertrain to include hybrid equipment, etc.  
► Manufacturing sophisticated equipment in developed regions and others in developing markets  
► Offering value-added services like customer service measurement  
► Localizing to reduce product price | ► Building modularization into products  
► Increasing speed-to-market owing to the fast technology refresh rate | |
| Adapting business models | ► Diversifying into other businesses to overcome the risk of cyclicalities  
► Remanufacturing gaining relevance  
► Offering incentives to customers  
► Collaborating with suppliers to off load R&D capabilities | ► Focusing on unorganized aftermarket  
► Forming long-term supply agreements with OEMs  
► Offering VAS to customers | ► Dealers to adopt multi-brand business model.  
► Online distribution to reduce the waiting period |
| Preparing for new market dynamics | ► Collaborating with dealers to better understand evolving customer needs  
► Identifying new revenue opportunities amidst slowdown in emerging markets  
► Manufacturing ergonomically advanced equipment | ► Expanding global footprint to reduce logistics cost | ► Offering annual maintenance contracts (AMCs) to fleets to reduce maintenance costs  
► Training equipment operators on new technology equipment  
► Consolidating to meet rising demand for latest technology |
| Addressing supply/value chain issues | ► Following mixed-model assembly line strategy  
► Training manpower | ► Strengthening supply chain in emerging markets to cater to new local OEM demand | ► Devising methods to manage aging inventory  
► Don’t keep large inventory as OEMs provide the equipment |

This is an executive summary of a detailed analysis conducted by Ernst & Young’s Global Automotive Center. Please contact our automotive professionals (details at the end of this document) for more in-depth information.
For more information on the global off-road commercial vehicle industry mega trends

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