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Strategic Insight

Developments in Connected Truck Market Shaping the Future of Logistics, Global, 2016

Telematics will be the Key Driver for Supply Chain Automation

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Key Findings

Trade will gravitate toward urban areas as cities emerge to account for over 50.0% of the global consuming class by 2025.

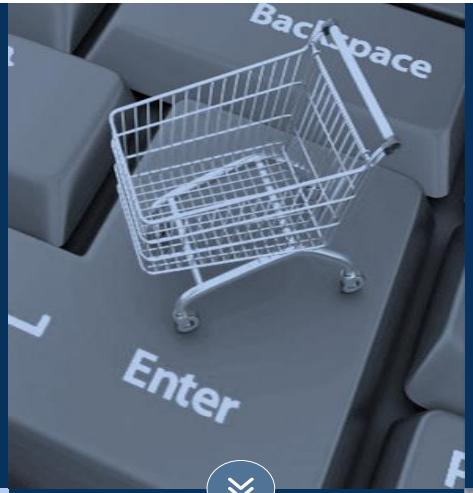
Connected Truck Market: Key Findings, Global, 2016

Urbanization

Urban logistic opportunity of $5.98 trillion by 2020

Connectivity and Convergence

>40 million trucks will be connected by 2022 – visibility transforming logistics providers' decision making



Bricks & Clicks

By 2025, ~ 20% of retail will be conducted through online Channels

New Business Models

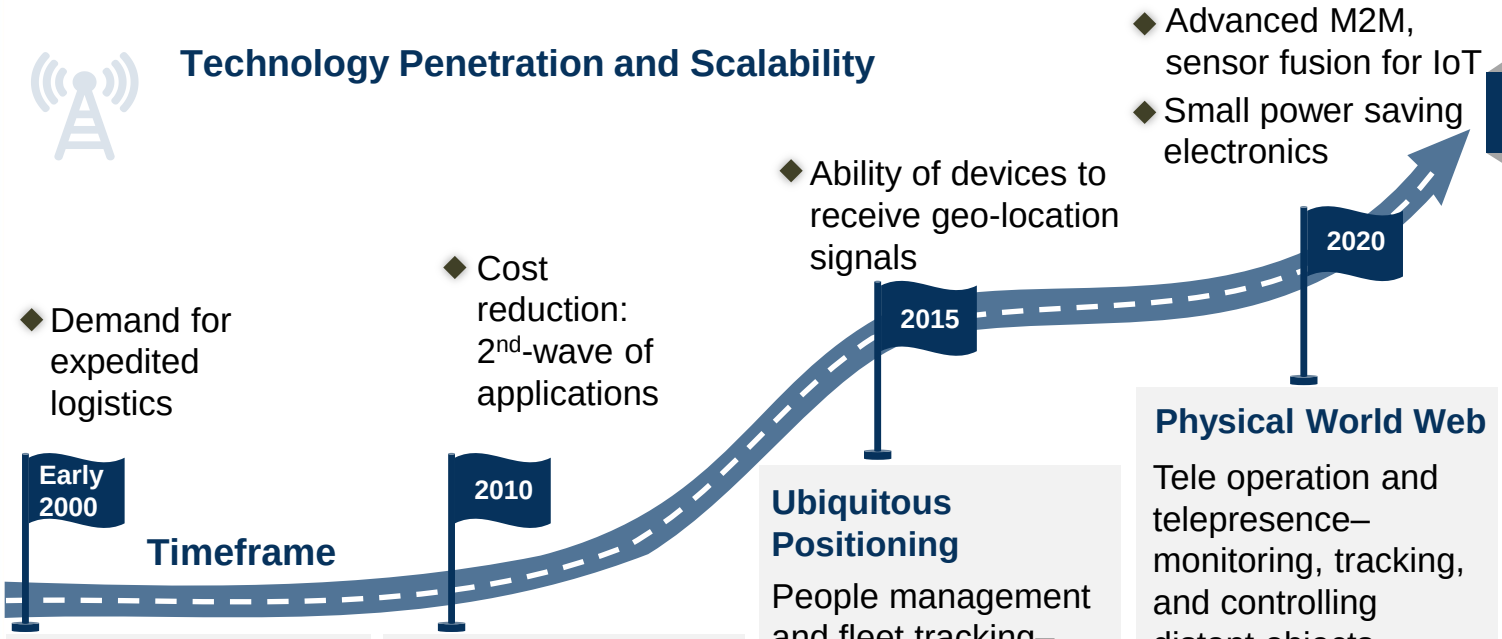
Uber for Trucks will generate more than $26.5 billion in revenue in 2025 (North America)

Source: Frost & Sullivan

Roadmap of Technological Advancements in Logistics

By 2020, IoT use cases will be characterized by advanced M2M capabilities and sensor fusion, which is expected to make the traditional supply chain models redundant.

Connected Truck Market: Technology Roadmap, Global, 2000–2020



Supply Chain Helpers

RFIDs for tracking pallets and containers, monitoring inventories, routing and loss tracking

Vertical Market Applications

Security, surveillance, food safety, transport and documentation management

Ubiquitous Positioning

People management and fleet tracking–location of people and day to day deliveries

Physical World Web

Tele operation and telepresence–monitoring, tracking, and controlling distant objects, deliveries

IOT Implications

- Monitoring asset / parcel status
- Automating business process for improved quality, lowering costs
- Measuring performance of assets
- Optimizing how systems, assets, and people integrate to work together
- Applying analytics to the entire logistics value chain

Source: Frost & Sullivan

Technology Transformations in Logistics

Real-time data, sensorization, and intelligent autonomous machines are the major technological trends expected to transform the logistics and supply chain industry.

Connected Truck Market: Technology Transformation, Global, 2016

	Now	Emerging
Application *New user interface in logistics*	EDIs	Mobile transportation management software (TMS) and warehouse systems through web service APIs and cloud computing
Future of M2M Communication Innovative logistics	RFIDs	Smart systems and M2M logistics technologies
Autonomous Systems *Mode of deliveries*	Smart deliveries–basic tracking using GPS, telematics	Driverless trucks, drone deliveries
Augmented Reality (AR) and Wearables *Postal supply chains*	Manual order picking in warehouse	Hands free / vision picking technology
Internet of Things *Sensorization of supply chain*	Low-cost sensors for basic communication	Integration of IoT, waerables, and cognitive tools for enhanced communication within the supply chain
Data 2.0 *Data is the new oil*	Reactive analytics	Predictive analytics and on-demand deliveries
Future of Robots *Robotics warehouse*	Traditional pick-ups and semi-automated machines	Mobile robots, human-robot collaboration

Vs.

Source: Frost & Sullivan

Transformational Shifts in Automotive Logistics Supply Chain

Strategic partnerships between OEMs and LSPs have resulted in a lean and connected supply chain.

Connected Truck Market: Transformational Shifts, Global, 2016

Current Scenario

Lacking appropriate supply chain management to meet changing scenario

- Managing supply chain capacity
- Supervising network design
- Administering risk management

Industry Impacts

- 15 to 20% increase in supply chain costs
- Losing market share from product launch delays

New Trends

- Structural shift from mature to emerging markets: Example: Vehicle assembly market to increase by 50% in the APAC region with China becoming the largest supplier.
- Shorter lifecycles (from 7-8 years to 4-5 years) forcing OEMs to re-vamp methodologies.
- Alternative channels and re-routing strategies in case of natural disasters.

Implications to Supply Chain

- Lean and resilient supply chain: Need for hybrid models balancing capacity, wastage, and costs
- Shift in supply chain flows in terms of production dynamics and changing sourcing—regional production systems and large national assembling + global buy-sell relations
- Redesigning in-bound transport and logistics arising from lowering finished good inventory levels: Strategy to build for actual demand as opposed to that of stock
- Multi-layered real-time visibility: On-ground sensor grids in local regions for continuous monitoring of supplier production, inventory, and in-transit goods

Opportunities in Logistics

- **Self-driving parcels: Futuristic solutions for fully automated goods delivery**
- **Multi-modal route service and traffic management capabilities, like managing congestion for instance**

Source: Frost & Sullivan