The revolution in logistics

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Logistics is a growing market highly related to global GDP, globalization and trade exchanges

Global logistics market growth
In € BN, CAGR in % p.a.
World GDP in TN €

Note: Not included are inhouse contract logistics, other transports like project logistics and non-containerized sea freight (bulk). FF includes the forwarder and the carrier controlled parts.

The logistics industry will experience rapid change over the next years – digitalization is a major challenge and opportunity alike

**Trends**

- Near-shoring, automation and new technologies trigger a shift between transport modes primarily in favour of Land Transport
- Customers and regulators increasingly require industry/customer-tailored end-to-end logistics service offerings
- Asia is the #1 growth driver, accounting for >60% of total growth through 2020; Africa and Middle East provide selected opportunities for market growth plays
- “Parcelization” of transport flows impacts the whole Transport & Logistics value chain and triggers disintermediation of existing value chains
- By 2030, 85% of all logistics businesses will be hybrid- or fully digital; new models, e.g. E-Forwarding, Autonomous Fleet Mgmt., Virtual Warehousing arise
- New entrants and former suppliers or clients carve out lucrative elements of the logistics value chain by exploiting digital technologies
- Incumbents (e.g. DHL, K+N) face competition from “Fast Movers” (e.g. XPO, DSV, CJ) that use M&A to boost their organic growth plans
- Continued consolidation in carrier industries (Ocean, Land, Air) through alliances and mergers result in tighter capacity management on the side of carriers

**Implications for incumbents**

- Review Business unit/target industry mix
- Develop integrated logistics service offering
- Align regional portfolio with growth markets
- Align operations to smaller lot sizes and ensure “last mile” competency
- Digitalize core business and participate in new models
- Develop “Coopetition” strategies with new players
- Review positioning in industry consolidation play
- Develop capacity management competencies

**Sources:** Oliver Wyman

Focus of following pages
Digitalization in the transportation industry is impacting the entire value chain

1. **Online freight platforms**
   - E-forwarding
   - Marketplaces (carrier-to-carrier) and load matching platforms (shipper-to-carrier)

2. **Maritime**
   - Vessel/asset tracking
   - Route optimization
   - Ship-to-ship/ship-to-shore communication

3. **Land transport**
   - Autonomous linehaul trucking solutions
   - Self-driving enabling technology
   - Mobile solutions for drivers/fleets
   - Fleet management solutions
   - Alternative commercial vehicle tech

4. **Warehousing**
   - Virtual warehousing
   - Automation/robotics for warehousing
   - Wearables supporting warehouse services

5. **Last-mile delivery**
   - On-demand delivery platforms
   - Urban delivery incl. station solutions
   - Autonomous last-mile delivery (drones, robots)

6. **Integrated Logistics**
   - Integrated (e-commerce) logistics solutions

7. **Supply chain visibility and steering**
   - Transport management systems (TMS)
   - Supply chain tracking (incl. last mile)
   - Inventory management
   - Big data analytics

8. **Security/Transparency/Risk mgmt**
   - Product provenance (e.g., w/ blockchain)
   - Risk management
   - Asset tagging, incl. sensors

9. **Financial services**
   - Financial blockchain solutions
   - Supply chain payment platforms
   - Trade financing solutions

Note: Total funding by cluster extrapolated/estimated
Source: Crunchbase, CB Insights, Oliver Wyman

Initial start-up engagement (total funding < $50M)
Emerging start-up engagement (total funding between $50M - $200M)
Strong start-up engagement (total funding > $200M)
Conventional forwarding business models will be widely replaced by digital and hybrid business models until 2030, thereby (re-)defining success factors.

### Digital forwarding revenues

<table>
<thead>
<tr>
<th>Year</th>
<th>Conventional models</th>
<th>Semi-digital models</th>
<th>Fully-digital models</th>
</tr>
</thead>
<tbody>
<tr>
<td>2015</td>
<td>~15%</td>
<td>~55%</td>
<td>&lt;5%</td>
</tr>
<tr>
<td>2030</td>
<td>~30%</td>
<td>~55%</td>
<td>95%</td>
</tr>
</tbody>
</table>

**Comments**

- Requires new analytical/digital capabilities, e.g.
  - Forecasting/dynamic adjustment of operations
  - Value-add services, e.g. in tracking and tracing, fleet mgmt., SCM benchmarking, etc.
  - Complete client ERP/TMS system integration
- New factors become critical for market competitiveness, incl.
  - Customer Journey understanding
  - Speed and scalability
  - Short release cycles for new applications
- Solution competency for complex transport services remains a core competency

Sources: Oliver Wyman
Digitalization is significantly changing and shaping the logistics competitive landscape requiring established and new players to adapt their businesses.

**LOGISTICS COMPANIES**
- More investments into digital business models
- Digital Transformation of the core business

**E-COMMERCE GIANTS**
- Leveraging E-Commerce volumes to support backward integration
- Digitalization of logistics
- Mix of partnership and in-house investments

**CARRIERS**
- Direct sales via digital platforms – vertical forward integration
- Optimization of asset-heavy core business using digitization

**START-UPS**
- Focus on asset-light, data-based business models
- Disintermediation of the logistics value chain

Sources: Oliver Wyman
While incumbents and start-ups digitalize the Transport & Logistics core business, new data-driven logistics business models emerge.

| DIGITAL MARKET PLACES | • Matching  
|                       | • Optimization of utilization and routing  
|                       | • Value-added services for truckers/carriers |
| E-FORWARDING          | • Focused on standardized transport services  
|                       | • Optimized UI/UX  
|                       | • Automation of logistics processes |
| DATA-BASED SERVICES   | • Data infrastructure for SME logistics providers  
|                       | • Commercialization of logistics data, e.g. insurances |
| ASSET-LIGHT DISTRIBUTION | • ”Uber for Freight”  
|                         | • Intermodal last-mile distribution |
| AUTONOMOUS TRUCKING    | • Booking platforms for Platooning  
|                         | • Fleet management for autonomous trucks |
| DIGITAL WAREHOUSE     | • Capacity management across multiple warehouses (on-demand)  
|                       | • Automation of contract logistics services |
Logistic companies are required to focus on digitalizing the core business and simultaneously developing new business models.

**Transformation of the Core Business**

**Development of New Business Models**

**Two-Speed Digitalization**

Sources: Oliver Wyman
Logistics players will have to develop new digital competencies in order to ensure competitiveness of the business.
Rail will have to deal with technology driven, disruptive productivity gains in road transport.

Core upcoming road technology innovations:
- Gigaliners ¹ (≥ 60 tons, 157 m³ volume)
- Self-driving trucks
- Fuel-efficient engine technologies
- Connectivity platforms and marketplaces for clients, freight forwarders, carriers

Challenges for rail:
- Significantly longer innovation cycles in rail (25–30 years) than in road transportation (~5 years)
- Need to change a complex system with a lot of players involved

¹ Technically, the solution is available now. Effective launch of production and, hence, industrial maturity, is dependent on approval by national regulatory bodies.

Source: Oliver Wyman analysis
Rail and Road transportation will converge in the future

Core upcoming road technology innovations

Future Similarities

- Scheduling of platoons
- Booking platforms for slots on platoon
- Operating model infrastructure
  - Electrification
  - Traffic control centers
  - Signalling systems
  - Datanetworks
  - Network of connected sensors
  - ...

Electrification of trucking

Source: Siemens

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