Changing role of 3PL in today's tech-enabled value chain

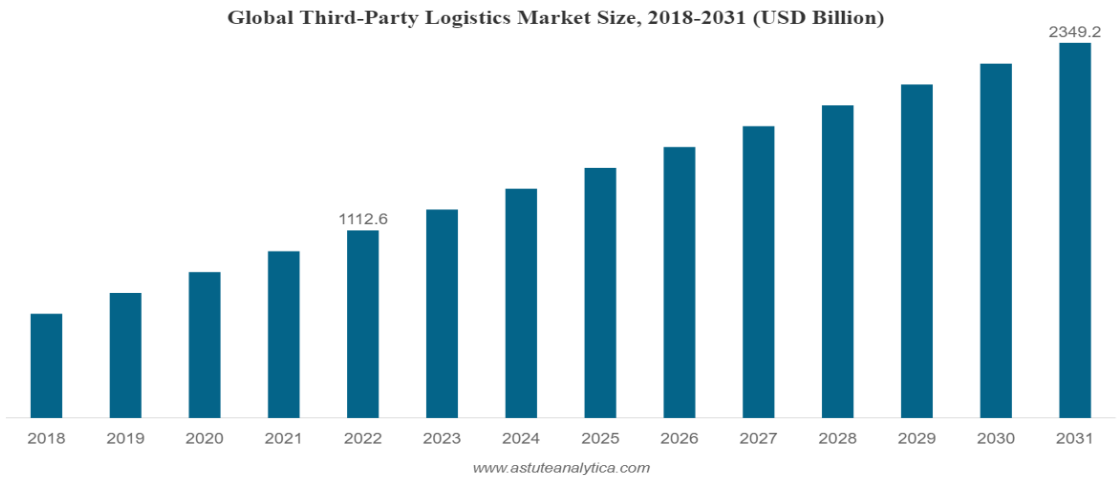
Nilay Gosavi

Head Logistics & Procurement-Phoenix Contact Middle East

Executive Committee- SCLG

Market Size and Trends

- Global 3PL market was valued at **$1.1 trillion** in 2022 and will grow at **CAGR 8.7%** during the forecast period largely driven by the **increased demand for integrated supply chain solutions** and services - ***Astute Analytica***
- UAE size is **$5.86 billion** & is anticipated to register a **CAGR of over 9.5%** during 5 year period
- Fragmented market: The Top Five 3PL Players Hold Less than **23%** Market Share
- The competition in the market is primarily driven by traditional factors such as ***price, quality of service, innovation, and customer service***.
- **Trends in the global 3PL market**
  - Automation
  - Adoption of data analytics
  - Sustainable practices
  - Digitalization
  - Cloud computing
  - Artificial intelligence (AI)



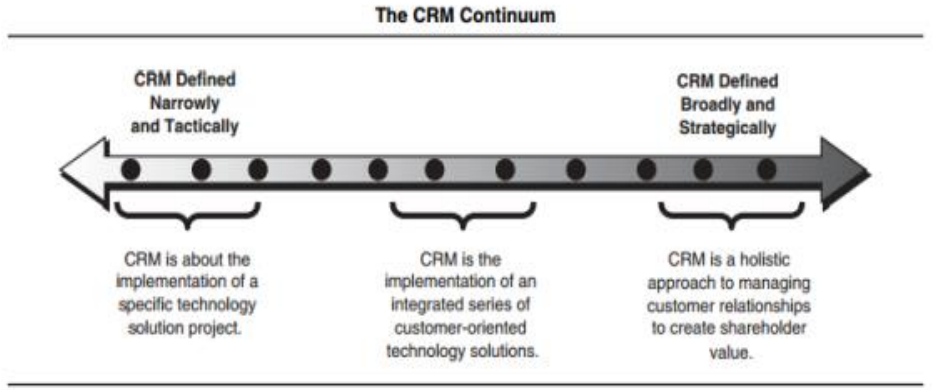
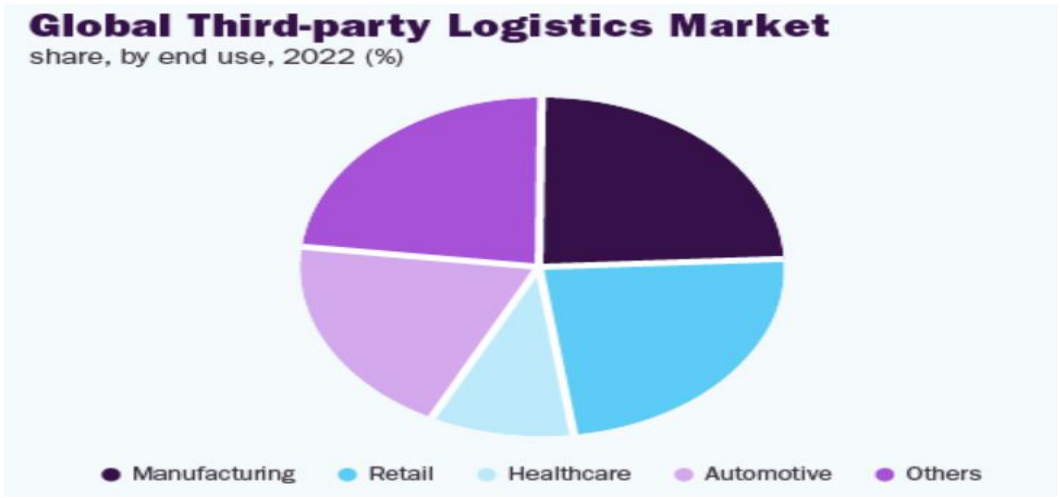
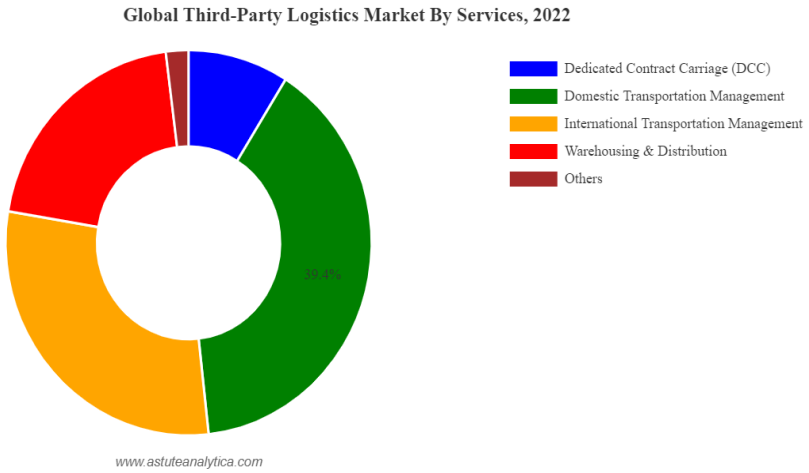


Figure 2. The CRM continuum (Payne and Frow, 2005)





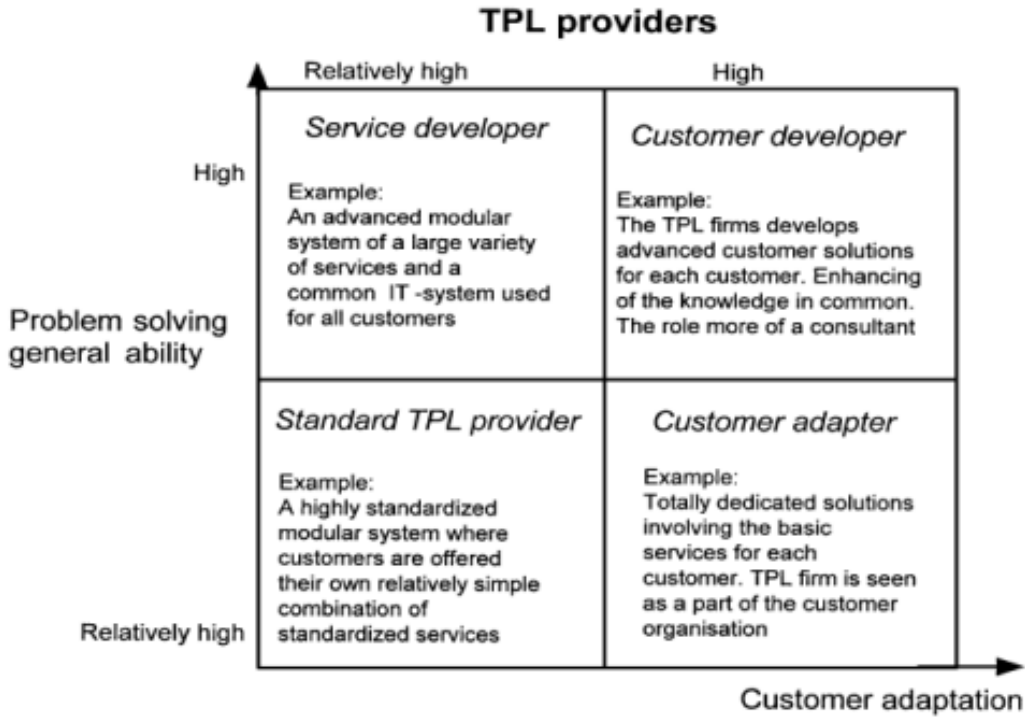


Figure 1. The classification of TPL provider (Hertz and Alfredsson, 2003)

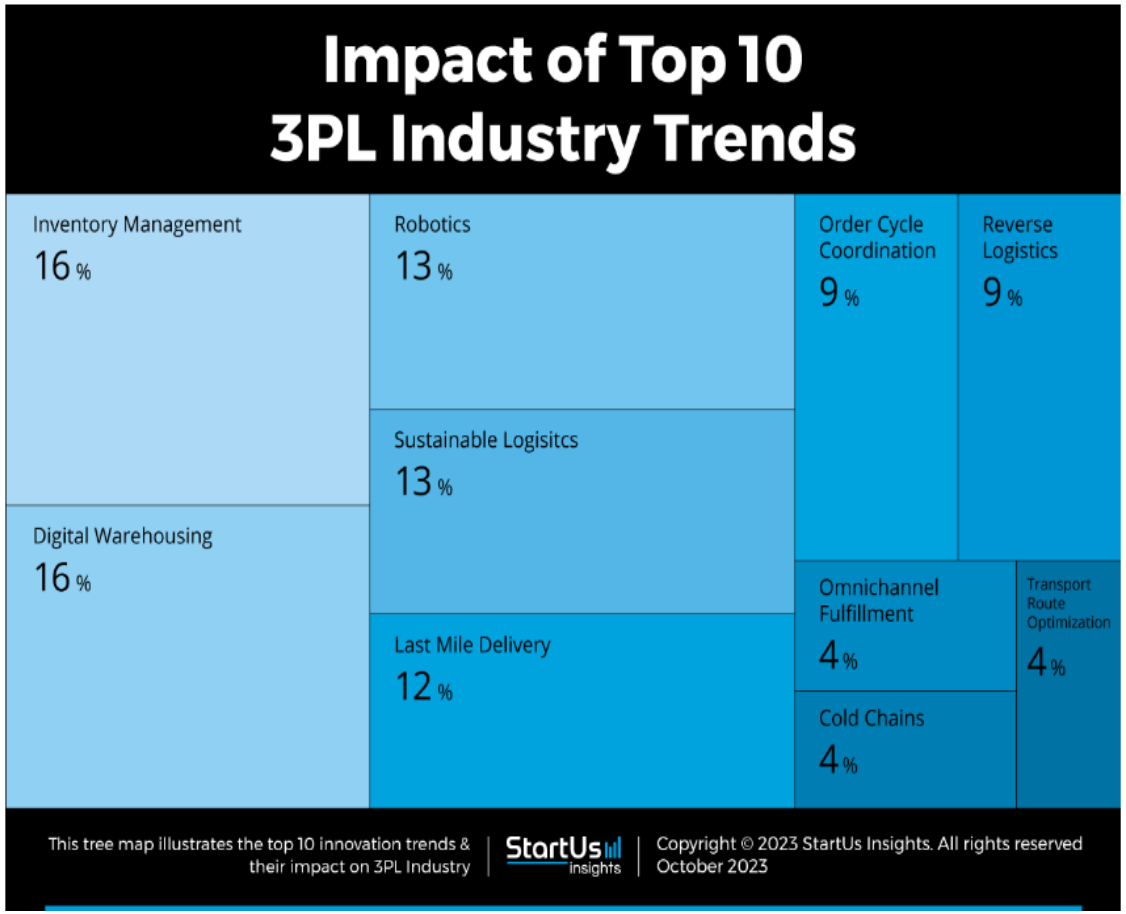
Figure 2: Outsourcing relationships.

OUTSOURCING RELATIONSHIPS

	Low Criticality	High Criticality
High Scope	• Managed Services • Contractual Relationships	• Full Outsourcing • Strategic Relationships
Low Scope	• Out-Tasking • Non-Strategic Transactions	• Co-Managed Services • Partnerships

Note: Adapted from Sanders et al. (2007).

Trends and UAE focus



UAE Highlights for 3PL industry

- Government policies, initiatives and investment benefits
- Ecommerce plays a vital role in driving the market and is expected to account for 7.0% of total retail spending in the current year
- Automated material handling, GPS and RFID enabled devices increases demand for logistics services
- Modernization of ports, freight terminals and smart solutions in customs and free zones
- Growing integration of logistics with technology further fuels growth in this sector

Research and Markets

- **Inventory Management**
- ***IoT sensors, predictive ML*** and ***cloud-based inventory management*** are addressing the bottlenecks in modern logistics processes through real-time inventory tracking, automated reconciliation processes, and predictive stock-level optimization
- **Digital Warehousing**
- ***Automated storage and retrieval, augmented reality-based quick item location, real-time analytics, digital twin***. This maximizes space utilization and enhance the accuracy and speed of order processing, improving operational efficiency
- **Robotics**
- Addresses issues by ***integrating with advanced sensors*** to streamline inventory handling and minimize human effort. ***Cobots*** work alongside humans to enable faster picking processes while ensuring a high degree of precision. Besides, advanced sorting robots equipped with **machine vision identify, pick, and sort items** at speeds surpassing human capabilities.

- **Sustainable Logistics**
- Implementing innovations such as ***eco-friendly packaging materials*** sourced from biodegradable or recycled origins, thereby minimizing landfill contributions. ***Electric and hybrid vehicles*** reduces greenhouse gas emissions.
- Additionally, sustainable warehouse designs emphasize ***energy efficiency and use renewable energy*** sources to reduce the carbon footprint of storage operations. Through these sustainability-focused innovations, the 3PL industry is minimizing its environmental impact and also aligning with the growing demand for green supply chain practices.
- **Last Mile Delivery**
- ***Electric cargo bikes*** and delivery ***drones*** are circumventing traffic issues and ensuring on-time deliveries with a reduced carbon footprint. ***Smart locker systems*** facilitate recipients to collect flexibly, reducing the amount of failed deliveries.
- ***AI-empowered software*** also pinpoints delivery windows by sifting through real-time traffic metrics to keep consumers informed and improve first-time delivery success rates.

- **Omnichannel Fulfillment**
- Solve complexities through ***advanced software platforms*** that facilitate real-time inventory visibility across all channels. They ensure synchronized stock levels through electronic data interchange (***EDI***) systems to ensure timely and accurate omnichannel order processing.
- ***Predictive analytics*** tools forecast demand variations across channels to enable proactive inventory allocation. ***Unified communication systems*** further ensure consistent brand messaging and customer service.
- **Cold Chains**
- ***Advanced temperature monitoring systems***, equipped with IoT sensors provides real-time tracking and alerts, ensuring that products remain within desired temperature thresholds during storage and transport.
- Systems use ***AI-driven predictive analytics*** to identify potential temperature breaches based on external factors like weather patterns. New packaging solutions maintain stable internal temperatures for extended durations.

- **Transport Route Optimization**
- Use data from ***traffic patterns, roadworks, and disruptions*** to reduce the impact on delivery efficiency and customer satisfaction.
- **Advanced software platforms** combine AI and machine learning to analyze **real-time traffic conditions and historical data** to determine the most efficient and time-saving routes. These systems also dynamically adjust routes in real-time based on emerging disruptions or changing priorities. Additionally, they **reduce carbon footprints** by optimizing fuel consumption and promoting sustainable operations

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