

## Lecture ten: Future Trends in Logistics

### Text 10.1:

The Fast technological progress and a growing focus on sustainability are shaping the future of logistics. Autonomous vehicles, including self-driving trucks and delivery drones, are poised to revolutionize last-mile delivery by decreasing labour costs and enhancing delivery efficiency. Blockchain technology delivers enhanced transparency and security in supply chain transactions, allowing more efficient tracking and management of goods. Further, the Internet of Things (IoT) plays a significant role in logistics, with connected devices providing real-time data on the condition and location of goods. Sustainability is another critical trend, with companies increasingly adopting green logistics practices to minimize their environmental impact. This includes employing energy-efficient transportation modes, optimizing routes to reduce fuel consumption, and implementing green warehousing practices such as renewable energy sources and eco-friendly packaging materials. As these trends evolve, they are expected to drive significant improvements in logistics operations' efficiency, reliability, and sustainability, positioning the industry for a more innovative and environmentally conscious future (Gong & Cullinane, 2018; Xu & Shiina, 2018).

### Related Terms:

- **Autonomous Vehicles** (المركبات الذاتية القيادة): Self-driving vehicles that can operate without human intervention. (Macmillan Dictionary, n.d.; Gong & Cullinane, 2018).
- **Delivery Drones** (الطائرات بدون طيار للتوصيل): Unmanned aerial vehicles used to deliver goods. (Xu & Shiina, 2018; Macmillan Dictionary, n.d.).
- **Blockchain Technology** (تقنية سلسلة الكتل): A decentralized digital ledger that records transactions securely. Or a system in which a record of payments made in cryptocurrency is maintained across several computers that are linked (Gong & Cullinane, 2018; Xu & Shiina, 2018; Oxford Advanced Learner's Dictionary, n.d.).eg1. from oxford dict: a.b. 'Most of the new platforms are powered by blockchain technology'.eg2. 'Regulators will examine the blockchain to check on crypto trading'.
- **Internet of Things (IoT)** (إنترنت الأشياء): A network of physical devices linked to the internet, collecting and sharing data. (Waters, 2007; Macmillan Dictionary, n.d.).
- **Sustainability** (الاستدامة): Practices that minimize environmental effect and foster long-term ecological balance. (Gong & Cullinane, 2018; Cook, 2006).

### Real-World Examples:

- A. Tesla is developing autonomous electric trucks that seek to decrease transportation costs and emissions, enhancing the sustainability of long-haul freight transport.
- B. UPS employs delivery drones for last-mile delivery in remote areas, enhancing delivery speed and decreasing costs.
- C. Walmart utilises blockchain technology to improve the traceability of its food SC, ensuring the safety and quality of products while diminishing the risk of contamination.