THE SCALERS

INDUSTRY CLOSEUP

DIGITAL DIRECTION:
Supply chain and logistics

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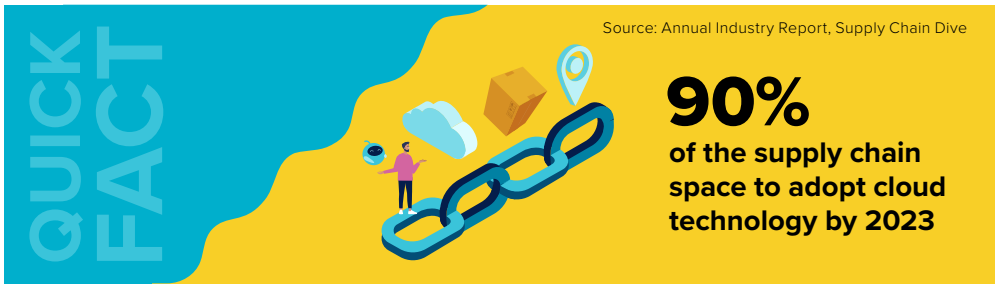
Introduction

Supply chain and logistics operations have evolved significantly thanks to recent advancements in technology. And, these improvements will likely continue for many years to come. The enormous growth of online shopping — exacerbated by the Covid-19 pandemic — has led to wide-scale digital transformation of the sector. Due in large part to major players such as Amazon and Alibaba, logistics companies have been and continue to be pushed to become faster, more efficient, and more versatile.

Technology leads the way

Following other industries into the digital revolution, there's been adoption of new technologies for both external and internal processes — as well as culture changes as leaders grasp the need to stay competitive in a new frontier.



65% of logistics and supply chain executives say it's necessary to update existing models and add flexibility to business operations in order to:

- **Reduce costs**
- **Meet shifting consumer demand**
- **Ensure omnichannel delivery**

Visions of the future

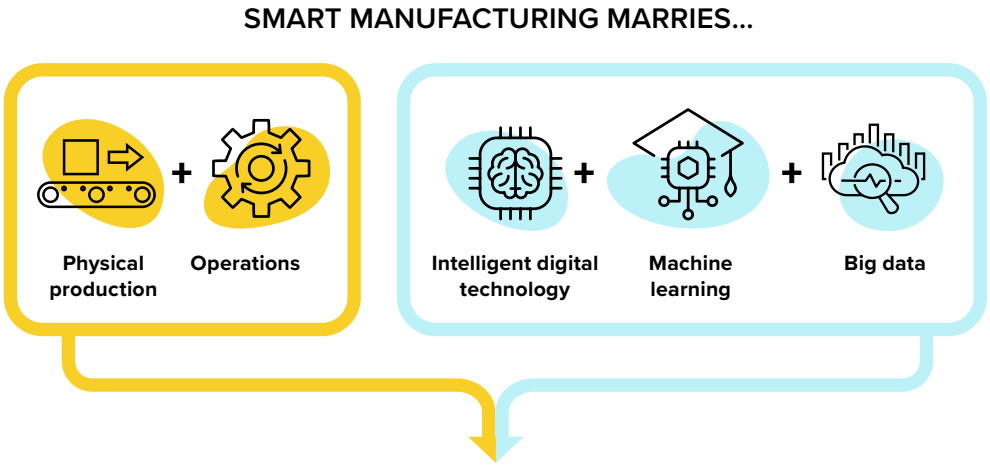
With autonomous vehicles and drone technology, the space will change dramatically as visions resembling science fiction become a reality. However, this isn't a long way off or merely conceptual. As an example, **self-driving technologies are now being adapted for the trucking sector due to the ongoing shortage of drivers**. Additionally, Peloton has been working on a truck platooning system that may help companies reduce operational costs.

Introducing Industry 4.0

A fourth industrial revolution has begun to emerge. One of the biggest disruptors to traditional freight and logistics, **smart manufacturing is transforming the way in which supply chain and logistics businesses operate**, centred around:

The smarter way to manufacture and fulfil

While every company and organisation operating today is different, they all face the same challenge — the need for interconnectivity and access to real-time insights across processes, partners, products, and people.



Say hello to smarter supply chains

Digital transformation of supply chains is proven to drive growth, mitigate risk, and optimise costs, but requires strong alignment between business

and your supply chain strategy to succeed. The team is stronger and more collaborative as a result of embracing this evolution. How? **Leveraging real-time data and analytics helps operators, managers, and executives to make better decisions** while managing day-to-day responsibilities.

Predictive analytics, connected machinery, and automation allows organisations to address maintenance and supply chain issues before they metastasise.

Embracing Industry 4.0 allows organisations to:

Trim costs

Increase profit

Drive growth

by optimising all aspects of operations through the power of real-time insights

It's the smarter way to manage supply chain and logistics

Source: Harvard Business Review

CASE STUDY

ACCELERATED TRANSFORMATION: A TESCO CASE STUDY

By reacting to the pandemic with positive change, many enterprises accelerated the digitalisation of their customer and supply-chain interactions by several years.

When the pandemic began in the early months of 2020, Tesco — one of the largest British supermarket brands — was facing unforeseen challenges. It had been classified as an 'essential' retailer, and as a result its stores faced a huge increase in visitation alongside an unprecedented rise in demand for online shopping.

In response, they doubled capacity for online orders to over 1.5m a week. They opened an urban fulfilment centre, a small automated warehouse, within every capable store. Their online sales increased 72% during the pandemic, but they could have easily missed the opportunity had they not risen to the challenge. Many enterprises accelerated the digitalisation of their customer and supply-chain interactions by as much as three to four years.

Heading down the digital highway

To arrive at ‘destination digital first’ organisations can’t remain static. However, there’s no evidence to suggest that the supply chain and logistics industry is staying still — though change isn’t occurring at the same rate as in other spaces. We’ve identified four key facilitators of digital transformation in the sector that will help shape the space in the years ahead.

1 Smart Automation

In the new wave of digitalisation sweeping through sectors, automation is a key component. Analysts predict that by 2026, the market is forecast to be approximately €9bn, with software representing nearly €7.3bn. With diversified IOT (Internet of Things) coming to the fore in leading supply chain practices, this is made possible.

The IOT is being used extensively in data collection for **fleet management, driver-behaviour analysis, route optimisation, real-time location tracking**, and monitoring storage conditions.

2 Artificial Intelligence (AI) and Machine Learning (ML)

When the business is generating masses of data, it requires highly capable technical infrastructure in place to leverage it properly. By embedding AI and ML into their existing operation, **leading**

supply chain players have achieved new levels of efficiency and effectiveness.

AI when in sync with machine learning can make route planning and scheduling decisions, for example, in a millisecond that would take significantly longer if handled by a human. Additionally, with total automation emerging as the final destination for supply chain and logistics, AI and ML are a must have for anyone who wants to remain in play.

3 Blockchain technology

Blockchain is a transformational technology that may prove to be instrumental in wholescale changes in the sector across a wide spectrum of services due to its decentralised nature.

For businesses that want to **improve shipment visibility and increase trust within the sale and transportation of global cargo**, blockchain tech provides secure data distribution and validation technology.

4 Connected and autonomous vehicles

On-board GPS, driver drowsiness detection, and fuel level sensors are already a reality in the logistics space. However, continued **technological advancement is expected to give rise to unmanned delivery solutions** such as drones, aimed at automating short-haul delivery services and facilitating same-day delivery to remote areas.

Eventually, truck drivers will be replaced by self-driving vehicles. Once this type of technology has been perfected, it will provide a safer solution due to the elimination of human error.

To slay the giant or borrow his bow?

Embracing digitalisation helps organisations to build resilience in the face of disruption waves caused by giants like Amazon — enhancing competitiveness. Amazon in particular has optimised supply chain and

logistics to a tremendous degree, pushing smaller players to invest in tech and solutions that facilitate the optimisation of their own operations to stay in the race. In essence, systems and processes need to be in place to **give a similar level of service to customers as they'd expect from Amazon, or third parties who utilise their fulfilment and distribution networks**.

Whether it is:

Robotic loaders

Advanced parcel tracking

Self-driving trucks

... logistics companies need to be ready for change.

Conclusion

Ultimately, supply chain and logistics organisations **must emulate the major players and embrace wholescale digitalisation of processes** or get left behind.

But how?

- **Invest in Industry 4.0 technology**
- **Replace legacy tech with cloud-native architecture**
- **Build a digital-first internal culture**
- **Become a technology-driven business**
- **Obtain elite development talent**

With software development being so important, but with engineering skills shortages in Western Europe and North America taken into account — it's about finding the right solution to meet specific transformation requirements. For technology leaders, offshoring used to be about finding a price they couldn't get at home, whereas today it's about finding the skills and people they can't get at home.

SOURCES

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Digital Transformation In Logistics Industry, European Business Review, March 2021

What is Industry 4.0—the Industrial Internet of Things (IIoT)?, Epicor

How Disruption Accelerated Digital Supply Chain Transformation, Harvard Business Review, August 2021

Supply Chain Digital Transformation, Gartner, May 2020

Why The Scalers?

From 5 to 100+ engineers, we build world-class development teams in Bangalore.
Beat the tech talent shortage at home and accelerate your innovation.

- **Elite development talent** sourced from the top 1% in Bangalore
- **Fully managed operations** — we do your heavy lifting
- **A focus on cultural alignment** and buy in to your vision and mission
- **Your developers** are 100% dedicated to you
- **On-demand scaling** as and when you want to increase capacity
- **100% customer retention** since founded 250% average yearly teams' growth
- **European organisation combined** with Indian engineering talent
- **Proven model** = Offshoring that (finally) works!

Put simply, it's the smarter way to go offshore.

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Go offshore with The Scalers.

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