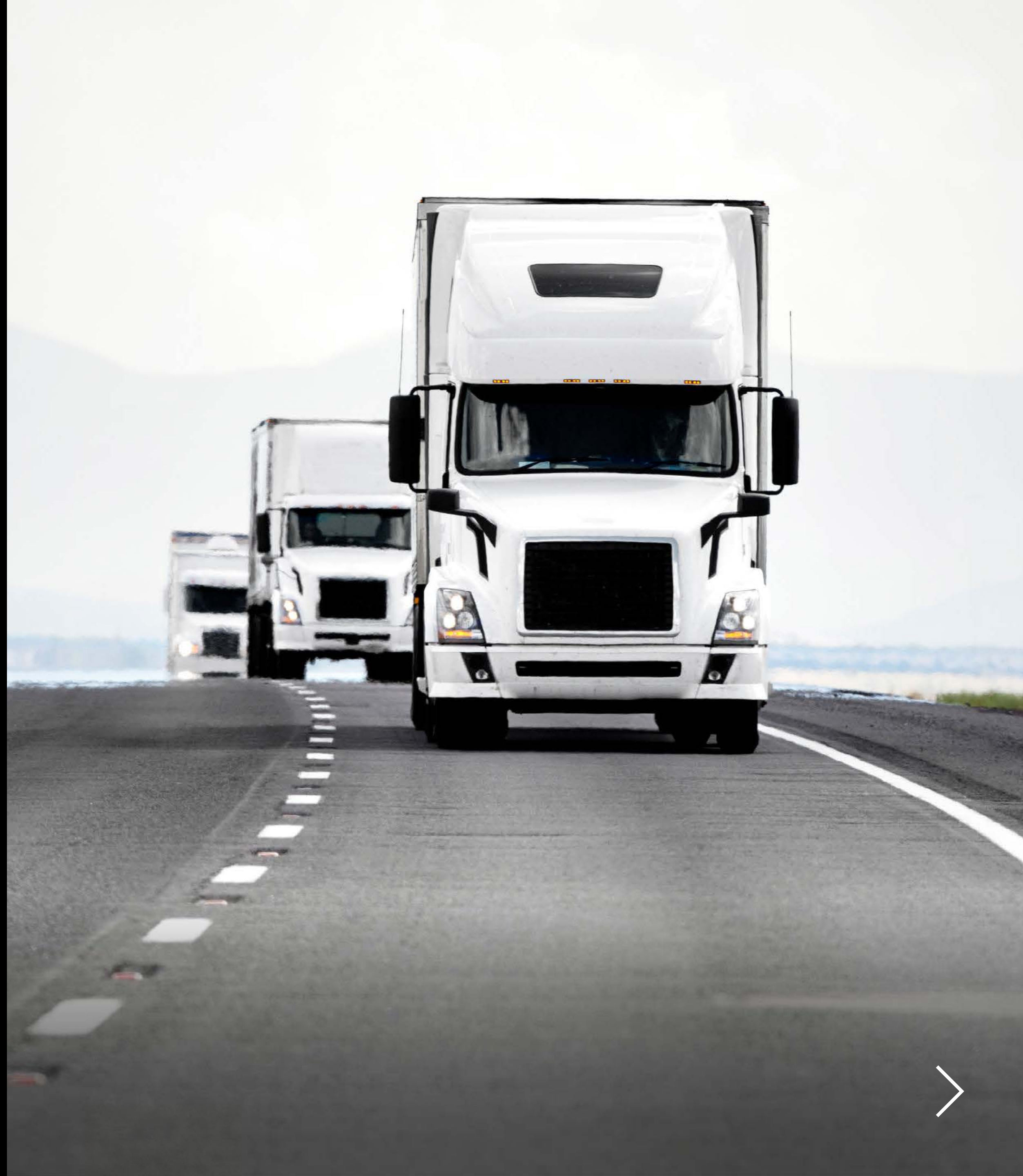


Enterprise Intelligence that moves you to a smarter future

Verizon's vision for the
transport and logistics
sector in Singapore

verizon^v



Driving innovation across the supply chain

Building resilient, self-stabilising ecosystems.

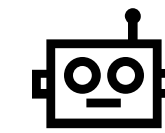
Transportation and logistics organisations like yours are under immense pressure. Supply chain disruption, a shifting regulatory environment and increasing client demands mean it's harder than ever to stay sustainable and profitable.

But dealing with these challenges doesn't necessarily mean a heavier workload or higher costs. Businesses at the leading edge are using technology to automate and connect processes across the supply chain. This Enterprise Intelligence enables siloed systems to 'speak' to each other, driving smarter insights, better functionality and faster decision-making.

Enterprise Intelligence can help you adapt to constant disruptions and meet the growing expectations of an increasingly savvy and demanding customer base.



Nearly three quarters of supply chain functions still rely on spreadsheets to manage processes. This makes human error a risk factor that can lead to major disruption!



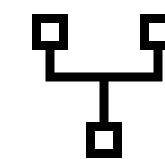
Digital transformation

Across the sector, every stage of the supply chain is being transformed to become more resilient and efficient. The goal is to create self-stabilising supply chains that can withstand the constant barrage of disruptions. And the focus of many Chief Supply Chain Officers (CSCOs) is balancing investment in human and automation capabilities to support the broader digital transformation roadmap.



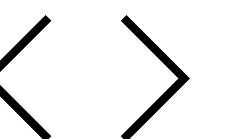
Transparency

With companies competing on shorter delivery times, clients now expect full visibility over when orders will arrive at their door. This transparency not only benefits end customers, but the companies providing these services. Supply chain management software gives you the ability to track the location of assets and equipment, the status of a job, driving behaviour, maintenance histories and more. And the value of these kinds of solutions is rapidly growing – the asset tracking and inventory management technology market is expected to grow to \$30BN globally by 2027.ⁱⁱ



Cyber security

As supply chains digitise, they become susceptible to cyber attack. 52% of APAC decision-makers ranked data privacy and security concerns as one of their top five challenges when implementing networking solutions.ⁱⁱⁱ No matter where you are on your digital transformation journey, taking proactive steps to prioritise online security and protect customer data is crucial to managing cyber security risk.



Challenges of today

Technology solutions can provide monitoring, analytical, and real-time reporting capabilities to achieve end-to-end visibility without having to drastically expand the workforce.

In many ways, CSCOs are also 'Chief Ecosystem Officers'. In addition to owning traditional functions such as planning, sourcing, manufacturing, and logistics, they are also responsible for risk management, corporate quality, customer experience, new product introduction, technology and environmental, social, and corporate governance (ESG).

Supply chain modernisation

90% of leaders expect to overhaul IT planning within the next five years, and 23% have already done so. Four out of five expect to, or are already using artificial intelligence (AI) and machine learning (ML) in planning, and a further 60% plan to do this in the future.^{iv}

Operational visibility

Efficient, well-oiled operations rely on leaders having full transparency over the supply chain ecosystem. Having an end-to-end, real-time view into product conditions, whether in storage or in transit, improves predictability and responsiveness.

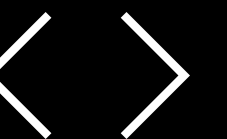
This makes it easier to be proactive about issues such as transportation delays, quality control, resource efficiency, and downtime.

Cyber security and risk

Supply chain cyber attacks have risen exponentially in recent years and are the norm across nearly every sector. According to Cyber security Ventures, there will be a new attack every two seconds by 2031.^v

And if guarding against external threats isn't enough, there are also insider threats to consider. Employees, suppliers, and partners can also sabotage supply chains, knowingly or even unknowingly. A Stanford University study found that 88% of data breaches are caused by human error.^{vi} And hackers are increasingly targeting suppliers who they see as stepping stones to higher value victims.

The breadth of these responsibilities, compounded by cost pressures and the sector undergoing so much change and volatility, means that CSCOs need to work smarter, not harder.



Industry benchmarks: How do you compare?

APAC senior leaders in transport and logistics are investing more into IT. Currently, companies in the sector are devoting 5% of revenue on IT,^{vii} and this is likely to grow as supply chains evolve.

Solutions are becoming more sophisticated too. Not only do supply chain organisations recognise that technology is a strategic imperative, but they are also exploring advanced technologies such as embedded advanced analytics (AA), data science, AI and robotics.

Future predictions

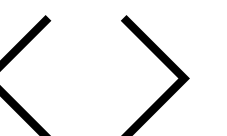
80% of companies will lose significant value because they failed to merge their digital supply chain twin and control tower initiatives^{viii}

85% are currently losing money due to supply chain problems stemming from outdated integration systems and customer service issues^{ix}

25% of supply chain decisions will be within intelligent edge ecosystems by 2025^x

IT spend

- Spend on digital transformation in logistics is expected to grow from US\$52.2BN in 2022 to US\$75.5BN by 2026^{xi}
- 61% of supply chain organisations say technology is a source of competitive advantage, with 20% investing in robotics^{xii}
- 63% of CIOs and IT executives in transportation and logistics will increase annual IT spend^{xiii}



Verizon: We'll build a solution just for you.

Verizon can help make your vision of a more resilient, self-stabilising future a reality, faster. As your transformation partner, we'll co-create a supply chain ecosystem that is connected, efficient, safe and secure.



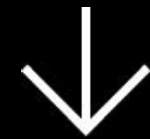
How we do it ...

Private 5G and edge computing



Faster delivery times

Verizon's 5G allows you to tap into technologies that can identify possible delivery delays (such as traffic congestion) and optimise transport routes. When used with edge computing and other emerging technologies such as AI and ML, 5G can also be used to more accurately predict when products will arrive on retail shelves.



Minimised losses

5G gives you the ability to label, track and record all shipments electronically, making stock management more accurate and preventing cargo from getting lost or stolen. This also gives manufacturers the ability to predict shortages and find alternative sources before the shortage can cause further disruption down the supply chain.



Real-time inventory visibility

5G and Internet of thing (IoT) sensors also enable the use of smart shelves so you can track inventory in real-time. A game changer for brick-and-mortar retailers, this technology helps predict when and how much to order to avoid product shortages and over-stocking.



Identity and access management

Prevent, or accelerate recovery from, security breaches with Verizon's identity and access management solutions, along with managed detection and response services. We can create a tailored, multi-layered approach to security that defends against supply chain attacks and can be overseen by a managed services provider.

Continues... < >

Multi-access edge computing (MEC) and 5G Ultra Wideband



Operational efficiencies

By adding MEC and 5G Ultra Wideband to supply chain management systems, retailers can automate just-in-time (JIT) production and delivery processes to locate products at any stage. They also help calculate ETAs more accurately by rerouting shipments in response to anticipated delays.

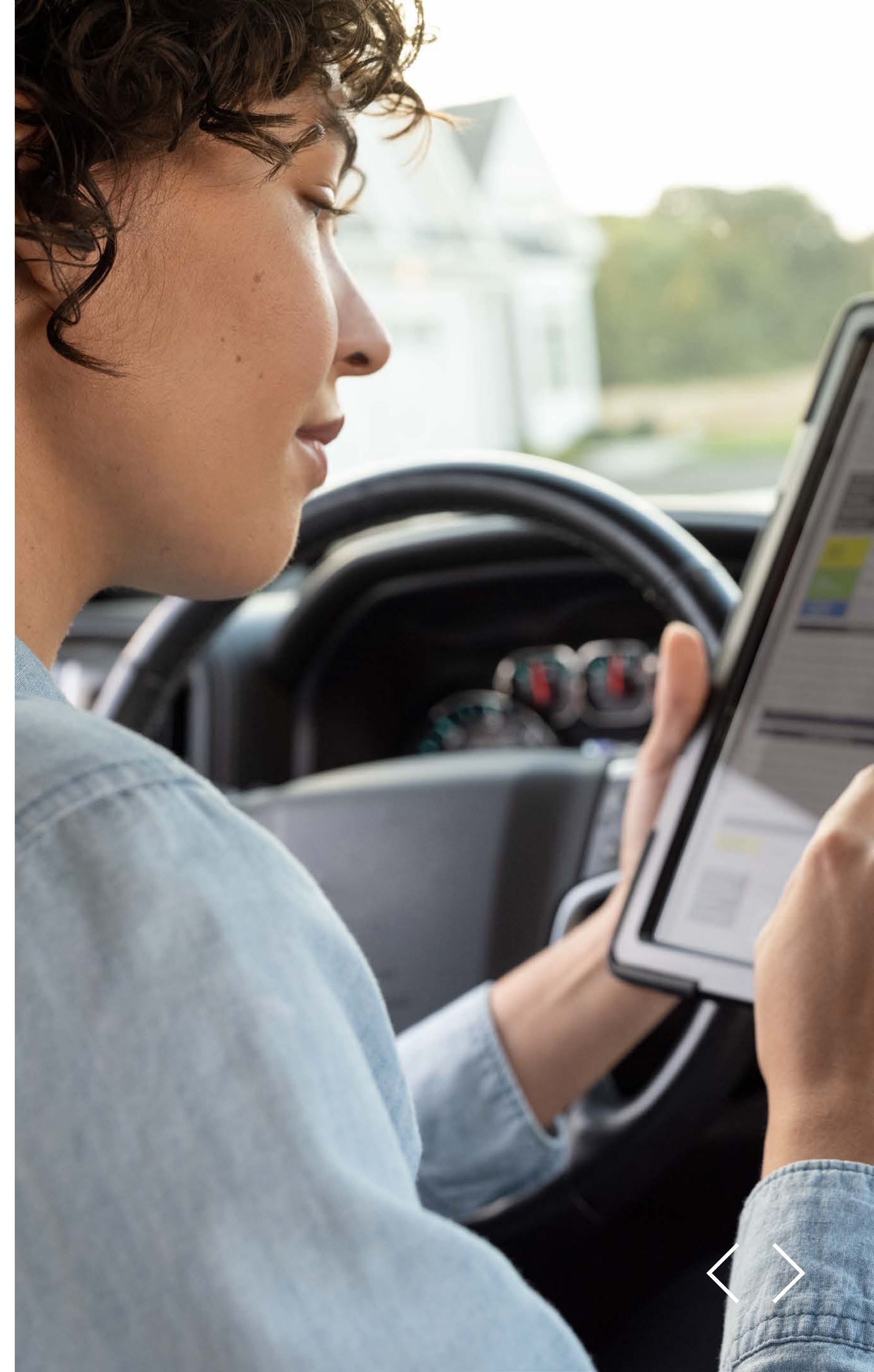
Other benefits include using metadata analysis to reduce shrinkage and maintain the condition of goods in transit. They can also help you to meet fulfilment obligations if products are damaged by finding alternative sources and transport options.



Product movement

Augmented reality (AR) and virtual reality (VR) can enhance the capabilities of MEC and 5G Ultra Wideband to enhance the movement of products through the delivery chain. The solution provides deep visibility into location and ETAs and also optimises just-in-time manufacturing and staff resourcing. Other benefits include:

- Reduced downtime by aligning production and delivery schedules
- Increased efficiency through automated ordering and defect identification
- Faster truck and pallet loading and unloading
- Reduced environmental impacts by streamlining processes



How it all comes together



TATE & LYLE

Challenge

A global food and drink supplier needed a new, transport-agnostic infrastructure to drive global expansion plans.

Solution

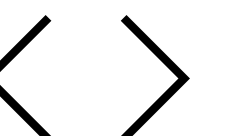
A managed software-defined wide area network (SD-WAN) solution with intelligent routing control. Verizon installed remote circuits to maintain performance, even in isolated, hard-to-reach locations.

Results

Cut costs by over 10% through getting more value out of redundant network resources.

Increased application performance by automating the routing of traffic according to network quality and requirements.

Enabled global expansion with the seamless addition of endpoints in remote areas across 28 countries.



How it all comes together



Challenge

A leading manufacturer of three-phase transformers required a smarter, more flexible infrastructure to support global growth. The legacy multiprotocol label switching (MPLS)-based network did not offer end-to-end visibility across applications, making it impossible to optimise performance.

Solution

Deployment of a managed SD-WAN solution with intelligent routing control.

Results

Increased productivity through traffic routing automation.

Enabled business growth through the automatic addition of endpoints.

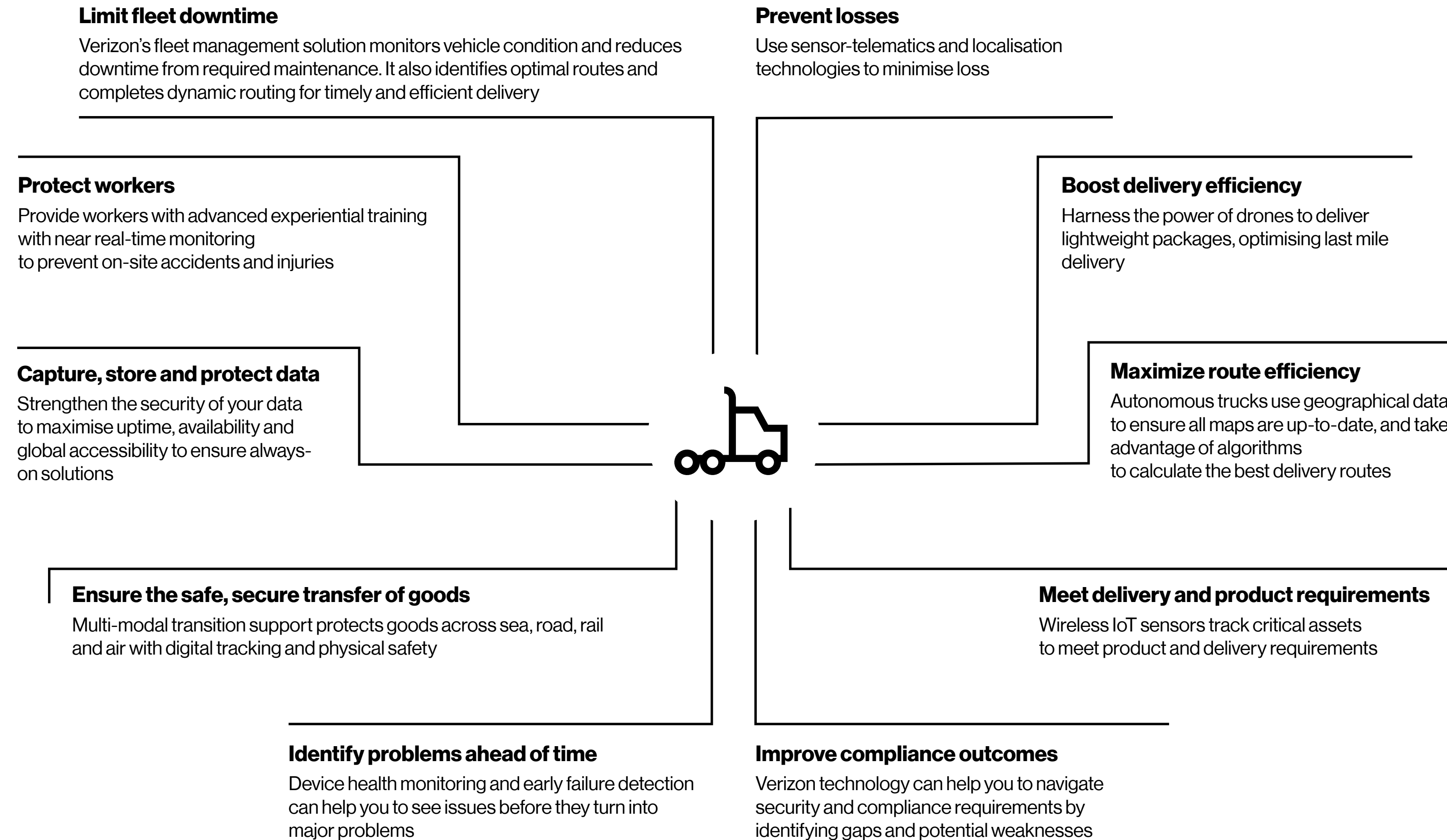
Reduced costs through better utilization of redundant network resources.

Improved visibility through a centralized dashboard.



Smart transport and logistics

Achieve logistics excellence with a suite of Verizon-enabled solutions in a single ecosystem



The value Verizon adds

- Increased speed, efficiency, and quality across the transport network
- A better end user experience by reducing process complexity
- Improved partner relations by integrating technologies between partner systems
- Stronger connectivity across the ecosystem using automation, critical asset tracking and sensor-based solutions



A strong local presence

Verizon has built a strong presence in Singapore. We employ a dedicated local team who operate from three locations – SGP Science Park, Mapletree Anson and an innovation centre at Ocean Financial Centre OFC. Our offering spans cyber security, advanced communications, secure network services, professional services and media.

Verizon takes security seriously. Here are some of our local and global capabilities:

Singapore

Managed Security Services

Advanced Security Operations

Autonomous Threat Hunting

DDoS Shield

Network Threat Advanced Analytics

Software Defined Perimeter

Ethernet access – Private IP

Private 5G

Partner Access – Starhub/Singtel

Secure Cloud Interconnect with
AWS/Microsoft/Google/Alibaba

Global

ISO 27001

ISO 27002

Payment Card Industry Data Security Standard
(PCI DSS)

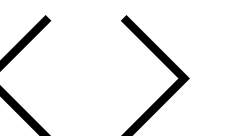
National Institute of Standards
and Technology Cybersecurity
Framework (CSF)

National Institute of Standards
and Technology SP 800-53

CSA Cloud Controls Matrix

Cybersecurity Capability Maturity Model

Control Objectives for Information Technologies
(COBIT)





Our global strength

When you choose Verizon, you'll not only benefit from dedicated local resources, but our global capabilities too. This combined strength gives you unrivalled connectivity and protection from cyber threats.

99%

of Fortune
500 companies
as customers

9

security operation
centers (SOCs)
globally

150+

countries

2,400+

certifications and
training for security
team members each
year

34TN

raw logs processed
each year to protect our
customers and minimise
threat

We are also a globally recognised:

- Gartner Magic Quadrant Leader (Network Services and Managed IoT Connectivity Services)
- Omdia Global IT Security Services Leader
- Unified communications as a service (UCaaS) leader for enterprise



Next steps

Let's take our partnership to the next level with an initial executive briefing.

Verizon can help you progress towards your smart future – no matter where you are on your journey.

We can also organize one of our Connected Future Workshops to help you define your future vision. By following a tried and tested framework, we can help you:

- Learn what industry leaders are implementing
- Walk through your transformation agenda
- Brainstorm opportunities
- Create a roadmap
- Decide on next steps

Contact us:

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Singapore



- i. [Demand forecasting in supply chain technology | McKinsey](#)
- ii. [\\$30 Billion Asset Tracking and Inventory Management Solutions Market – Global Trajectory & Analytics, 2012-2019 & 2020-2027 – ResearchAndMarkets.com | Business Wire](#)
- iii. [\\$30 Billion Asset Tracking and Inventory Management Solutions Market – Global Trajectory & Analytics, 2012-2019 & 2020-2027 – ResearchAndMarkets.com | Business Wire](#)
- iv. [Demand forecasting in supply chain technology | McKinsey](#)
- v. [Ransomware Will Strike Every 2 Seconds By 2031 \(cybersecurityventures.com\)](#)
- vi. [The Psychology of Human Error 2020 – Tessian](#)
- vii. [2022 Tech Spend Pulse – IT Spending Survey | Flexera](#)
- viii. [How Supply Chain Technology Will Evolve in the Future \(gartner.com\)](#)
- ix. [How Supply Chain Technology Will Evolve in the Future \(gartner.com\)](#)
- x. [How Supply Chain Technology Will Evolve in the Future \(gartner.com\)](#)
- xi. [The Worldwide Digital Transformation Spending in Logistics Industry is Projected to Reach \\$75.5 Billion by 2026 \(prnewswire.com\)](#)
- xii. [How Supply Chain Technology Will Evolve in the Future \(gartner.com\)](#)
- xiii. [IT Spending by Industry | Flexera Blog](#)

