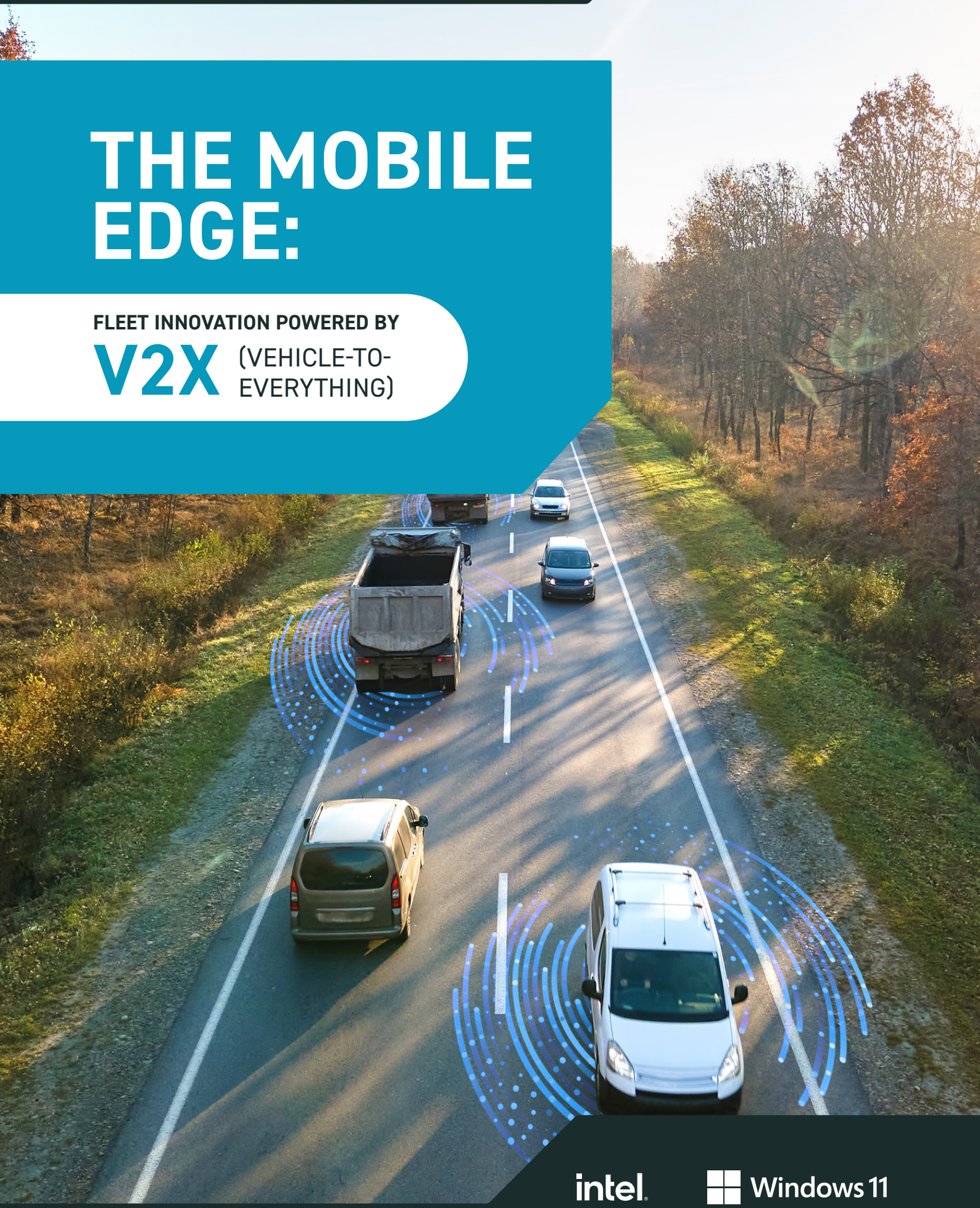
ERICSSON TOUGHBOOK

THE MOBILE EDGE:

FLEET INNOVATION POWERED BY V2X (VEHICLE-TO-EVERYTHING)



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INTRODUCTION:
THE AGE OF CONNECTED MOBILITY

Fleet vehicles are no longer just tools for transportation. They're evolving into powerful mobile workspaces-equipped to gather, transmit, and act on data in real time. As frontline teams in public services, utilities, and transport sectors face increasing demands, connectivity is becoming just as critical as fuel or equipment.

Enter Vehicle-to-Everything (V2X) a technology framework that enables vehicles to communicate with their surroundings, infrastructure, and digital systems. But this isn't about futuristic autonomous vehicles. It's about what's possible right now.

From live updates on field conditions to secure Wi-Fi for remote teams, connected vehicles are enabling faster decisions, smarter workflows, and more resilient operations. This isn't transformation for transformation's sake, it's a practical, future-ready shift in how essential services operate on the move.

> **"Innovation is taking two things that already exist and putting them together in a new way"**

Tom Freston, co-founder of MTV

V2X DEMYSTIFIED:
WHAT IT MEANS AND WHY IT MATTERS

V2X stands for **Vehicle-to-Everything**, and it's exactly what it sounds like: technology that enables a vehicle to communicate with its environment. That includes:

V2V VEHICLE-TO-VEHICLE:

Sharing real-time data between fleet units-for example, road hazards, location updates, or mission status.

V21 VEHICLE-TO-INFRASTRUCTURE:

Syncing with traffic signals, road sensors, or service depots to optimise routes and uptime.

V2N VEHICLE-TO-NETWORK:

Connecting with cloud systems, control centres, or live databases from anywhere.

V2D VEHICLE-TO-DEVICE:

Linking with mobile tech like phone, tablets or laptops, enabling screen mirroring, data entry, and diagnostics on the move.

This isn't just a technical trend, it's a powerful enabler for frontline operations. V2X technology allows field teams to operate smarter, safer, and more independently. Whether that's a repair crew receiving live updates on a broken pipe, or a highways team rerouting based on traffic data, V2X puts information where it's needed most: in the field, in real time.

INSIDE THE MOBILE COMMAND HUB

Imagine a connected field vehicle, not as a van or truck, but as a roving digital workspace.

The modern command vehicle is equipped with high-speed mobile connectivity-often delivered through dedicated vehicle routers that provide access to 4G/5G networks. These vehicles act as roaming Wi-Fi hubs, powering operations at remote worksites, roadside incidents, or inspection points.

Rugged field devices like tablets and laptops sync with vehicle-mounted screens for seamless control and collaboration. Teams can share data, file reports, or run diagnostics in real time without returning to base. In-vehicle displays can mirror device screens (even Windows 11 devices) creating a unified interface that makes complex workflows feel simple.

Connected vehicles can also support:

- **Pop-up operations centres** during major incidents or environmental events
- **Secure VPN access** back to central systems
- **AI-assisted diagnostics** for rapid field assessments
- **Edge computing** capabilities to process data locally when connections are weak

This is the new frontline: one where workflows, comms, and computing power travel with your people. And it's already happening across highways agencies, local councils, and utility fleets who are thinking beyond the dashboard.

The connected vehicle isn't an accessory, it's now a strategic asset.

SMARTER WORKFLOWS IN MOTION

Connectivity alone isn't the goal, it's what that connectivity enables that truly transforms operations. Connected vehicles unlock smarter, more agile workflows across a wide range of frontline services.

Picture this: a utilities crew receives a real-time alert about a fault. Instead of waiting for instructions from HQ, the onboard system suggests the fastest route using live traffic and weather data. On arrival, they access engineering schematics directly from the vehicle, log their inspection digitally, and upload site photos while still on location. No paperwork. No delays.

Highways and infrastructure teams can receive live updates about hazards or worksite changes. Dynamic job scheduling ensures the right team with the right skills is automatically deployed based on availability and location.

Other workflow benefits include:

- **Faster reporting and approvals** via digital forms submitted from the field
- **Condition-based maintenance** using real-time equipment monitoring
- **Remote collaboration**, where central teams provide live support to field technicians
- **Automated compliance tracking**, reducing admin burdens

In short, connected workflows mean less time wasted, fewer communication breakdowns, and a more responsive, empowered field force.

But to unlock these benefits at scale, a few hurdles need to be overcome.

> **"In real life, strategy is actually very straightforward. You pick a general direction and implement like hell"**
>
> Jack Welch, former CEO of GE

CHALLENGES TO OVERCOME

While the promise of connected vehicles is vast, achieving it at scale means addressing some real-world challenges.

1 CONNECTIVITY BLACK SPOTS

Even with growing 4G and 5G coverage, rural and remote areas can still suffer from patchy signal. Mobile routers and edge computing can help bridge the gap—but for critical workflows, offline-first functionality is essential. If AI tools are involved, high-performance edge devices with built-in NPUs (Neural Processing Units) become a key requirement.

2 INTEGRATION WITH LEGACY SYSTEMS

Many public and utility organisations rely on older infrastructure and software, often essential to day-to-day operations. For example, field engineers working with legacy monitoring equipment still need access to serial ports, something most consumer devices simply don't support.

3 PROCUREMENT AND FUNDING CYCLES

Fleet upgrades and tech investments often span multiple budget years. Long-term planning and modular deployment models can help ease adoption.

4 CYBERSECURITY AND DATA PRIVACY

With more devices and systems online, securing sensitive data-especially in the public sector-is critical.

5 CHANGE MANAGEMENT

Perhaps the most underestimated challenge. Field teams need intuitive interfaces and strong training to make new tools stick.

Overcoming these hurdles takes more than just deploying new tech, it requires alignment across IT, fleet managers, operations leads, and frontline teams. Organisations making the biggest strides often lean on partners with hands-on experience solving these challenges in the field. The right guidance can turn complexity into clarity, and transform connectivity into real operational impact.

WHAT'S NEXT:
SCALING V2X

The future of fleet connectivity lies not in isolated pilots, but in wide-scale adoption that reshapes how entire organisations operate.

As the building blocks of V2X become more available-5G coverage, robust mobile devices, interoperable platforms-barriers to scale begin to fall. The most forward-looking organisations are already beginning to roll out connected vehicle frameworks across multiple departments, linking everything from emergency response teams to maintenance crews.

WHAT'S NEXT?

- **Cross-agency integration**
  Public services, utilities, and transport bodies sharing data to enable joined-up response.
- **Predictive operations**
  Using historical and real-time data to forecast outages, schedule maintenance, and pre-emptively deploy teams.
- **Autonomous fleet support**
  Building the V2X foundation that will eventually support semi-autonomous or remotely assisted vehicles.
- **Environmental impact tracking**
  Vehicles feeding live emissions or energy use data back to sustainability dashboards.
- **Policy-driven tech investment**
  Leadership aligning funding decisions with long-term connectivity outcomes.

Scaling V2X isn't just about more devices or faster networks-it's about changing the mindset from static infrastructure to fluid, responsive systems that move with the needs of modern services.

> **"When you're finished changing, you're finished"**
>
> Benjamin Franklin

READY TO LEAD THE V2X SHIFT?
TAKE OUR 2 MINUTE V2X READINESS CHECK

Modernising your fleet starts with a clear understanding of where you stand—and where the biggest opportunities lie.

Take our 2-minute V2X Readiness Check to get a personalised score based on your current systems, workflows, and innovation mindset.

You'll receive:

- A custom readiness score tailored to your organisation
- A snapshot of your strengths and priority areas
- Practical recommendations to guide your next steps

Start the Assessment

WHERE WILL YOUR FLEET GO NEXT?

V2X isn't just a tech upgrade-it's a strategic opportunity to rethink how field operations are delivered. Whether you're managing road crews, utility teams, or mobile inspectors, connected vehicles can unlock new levels of efficiency, safety, and responsiveness.

This guide is just the beginning. In the coming weeks, we'll explore real-world use cases, success stories, and practical steps to bring connected mobility to life in your organisation.

Stay connected. The future of fieldwork is already in motion.

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