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A realistic roadmap for bus CIOs:

From disconnected data to modular modernisation 2026

2026 Whitepaper

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The job of a bus CIO is getting harder.

Passengers expect more, budgets are tighter, and the systems underneath most operations were not built for what is being asked of them today.

Our recent Bus Tracker shows just how much passenger demand is building. **69%** of Brits think technological changes would improve their experience on the bus and make them more likely to use it.

Specifically, they want to see:

55%

want accurate live information about bus routes

51%

want to plan journeys that connect with other transport modes

52%

want more regular updates on fleet service and better in-fleet communication

53%

want to check bus occupancy levels in advance

50%

want to plan journeys online or via an app

Bus operators already have ample data from tracking systems, ticketing platforms, driver systems, maintenance tools and passenger information systems. In principle, they have everything they need to deliver these changes and take the bus from transport of last resort to preferred choice.

The issue is that this data is spread across disconnected legacy systems.

Platforms are often bought separately over the years, running on different architectures, using different standards, and in many cases unable to share information with each other at all. The insight passengers are asking for is already there in the data. Operators just cannot get to it, because the systems holding the data will not talk to one another.

Closing that gap is the central challenge facing bus operators today.

Most bus CIOs know their legacy systems are holding them back but there are a number of reasons why these systems stay in place:

01

Cost of change

Modernisation projects require significant capital investment in new platforms, data migration, integration and training. When existing systems still technically work, building a business case for an entire overhaul is difficult.

02

Risk of operational disruption

Legacy systems are familiar, which means teams know their quirks and their workarounds. Migrating raises fears around downtime, data loss or integration failures that could affect scheduling, fare collection and passenger information. The prospect of stranded passengers, missed routes or payroll problems creates strong incentives to stick with imperfect but known systems.

03

Organisational expertise and change adoption

around their existing systems, processes and workflows. But deep operational knowledge does not translate automatically into the technical capability to lead a major system overhaul. Transitioning normally requires retraining, redesigning workflows and coordinating across multiple departments, and these are rarely skills internal teams have in-house.

04

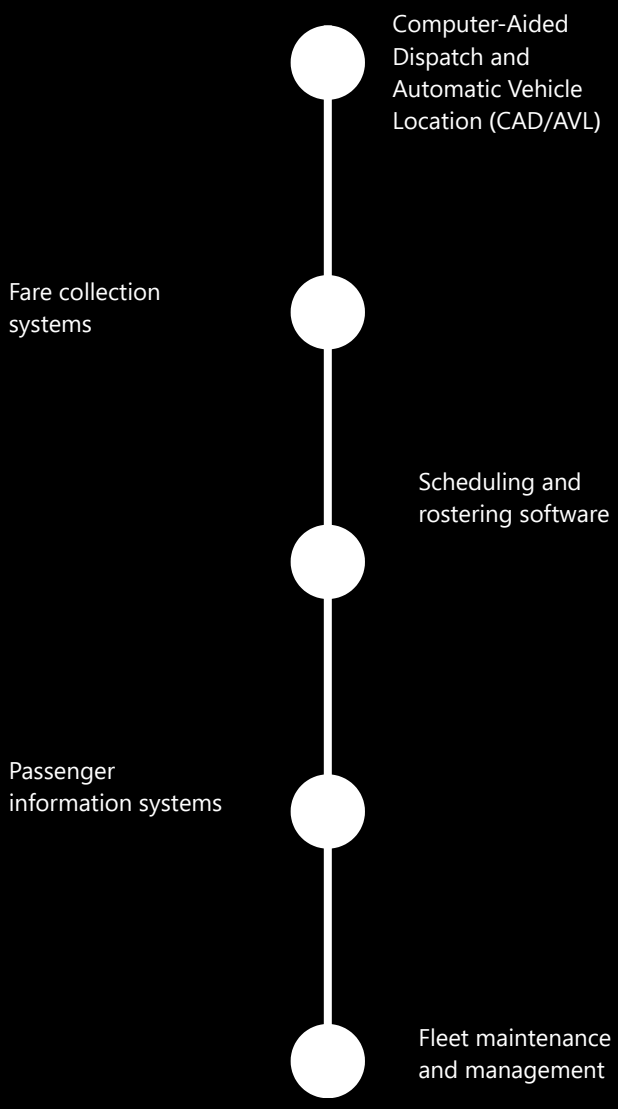
The fear of "rip and replace"

Many operators assume modernisation means tearing everything out and starting again. That assumption alone is enough to stop projects before they begin, because an overhaul on that scale sounds expensive, disruptive and high-risk. In reality, it is rarely the right approach.

These barriers are understandable, but they are also costly.

Leaving legacy systems alone is not a neutral choice.
The running costs keep climbing, cybersecurity risks get worse, and reliability and safety issues affect everything from scheduling to passenger experience to employee morale. The longer modernisation is delayed, the wider the gap becomes between what passengers expect and what operators can deliver.

Legacy modernisation in bus operations is really about connecting a handful of core systems that were not designed to work together:



For many operators, these systems were bought separately over the years from different vendors, and they now struggle to communicate with each other or with newer platforms. Some cannot export key data at all.

Connecting them is possible, but the approach will vary depending on which legacy systems are in place and what data they are able to export and share. What it takes is the right expertise, a clear integration strategy and a modular approach that works with what is already in place.

The answer is a bimodal IT approach. This splits technology work into two distinct modes that run in parallel.

Mode 1: Protect the operational core

This stream focuses on the heavy internal systems that take time to update properly, such as CAD/AVL platforms, scheduling engines and fare collection infrastructure. Change control stays rigorous, upgrades happen in planned maintenance windows and stability is the primary metric. The goal is to make incremental, low-risk improvements while upskilling the internal team to carry the work forward.

Mode 2: Accelerate passenger-facing innovation

This stream is about prioritising the easy wins that make passengers feel like operators are ahead of the curve. Real-Time Passenger Information improvements delivered through cloud-based platforms can be deployed in weeks rather than years. This can improve the passenger experience without the risk and expense of replacing entire systems. Success for this mode is measured by passenger response.

The power of this bimodal approach is that operators can keep their legacy dispatch system running the daily operation while layering modern platforms on top to transform passenger engagement. It directly addresses the disconnect between the time it takes to replace legacy systems and passenger appetite for change.

A REALISTIC ROLLOUT

Any rollout should be guided by one principle: passengers experience improvements, not disruptions.

That means choosing technologies and deployment approaches specifically because they can be rolled out without taking vehicles out of service during operating hours.

Cloud-based platforms offer the clearest advantage here. When data processing happens remotely rather than on the vehicle, there is no need to install or configure complex onboard computers.

Beyond that, there are a number of principles to guide a smooth deployment:

- Use existing maintenance windows to install monitoring equipment, and start with pilot vehicles to test the technology before fleet-wide deployment
- Run new systems in parallel with existing operations and avoid abrupt switchovers
- Start the rollout on lowerfrequency routes where the stakes of early issues are lower
- Schedule intensive work during low-demand periods
- Train staff before passengers see any change
- Communicate proactively if changes do affect passenger experience
- Build in fallback options so that any issue can be rolled back without passenger-facing disruption
- Recognise that some older buses may present specific challenges and handle this proactively
- Monitor the rollout itself, tracking installation times and early results
- Learn and refine as you go, taking an iterative approach to speed up installation and improve accuracy

Successful modernisation projects need clarity about where internal expertise ends and specialist support begins.

Bus operators know their routes, passengers, schedules and operational platforms inside out, and this knowledge is invaluable for defining what success looks like. But understanding what technology should achieve is different from knowing how to implement, integrate and troubleshoot complex systems. Those are specialist skills that bus operators rarely have in-house.

The most effective approach structures teams around complementary strengths. Internal staff own the operational requirements and day-to-day management, while external partners like Getronics handle the complex technical work, the implementation and the integration. A good partner will also build the skills internal teams will need to run and evolve the new systems once they are in place, to future-proof operations for the long term.

When this partnership works, passengers simply notice that arrival predictions have become more accurate, that their app has improved functionality, or that the operator seems to respond more quickly to service disruptions. That seamless experience is the result of deliberate choices: selecting technology suited to phased deployment, running parallel systems during transition, building in fallbacks, using maintenance windows effectively and training staff thoroughly.

For any CIO weighing up the case for modernisation, the question is not really about the technology.

It is about whether the organisation can deliver the service passengers are asking for. The systems are only a means to that end.

Approached well, modernisation does not have to be disruptive or high-risk. Operators already have the data they need, and a bimodal approach makes it possible to protect the operational core while delivering visible passenger-facing improvements in parallel. A phased rollout keeps service steady throughout, and the right partners can bring the specialist expertise operators do not have in-house while building capabilityfor the long term.

What matters most is keeping service at the centre of every decision. Operators who measure success by operational outcomes and passenger experience are the ones who get this right. For any operator looking to bridge the gap between disconnected data and modular modernisation, the first step is a thorough assessment of your current digital foundations. Understanding what data you already have, where the gaps are, and which passenger-facing improvements are the priority, is the foundation for everything else.

Getronics has built a data readiness assessment specifically for bus operators. It takes no more than 10 minutes to complete and will help you evaluate your infrastructure against the requirements for modular modernisation.

Every operator's starting point is different. If you would rather talk it through, our Travel and Transport specialists are here to help you assess your current setup and build a business
case that works for your organisation.

Modernisation is a real opportunity for UK bus operators, and the time to start exploring it is now

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