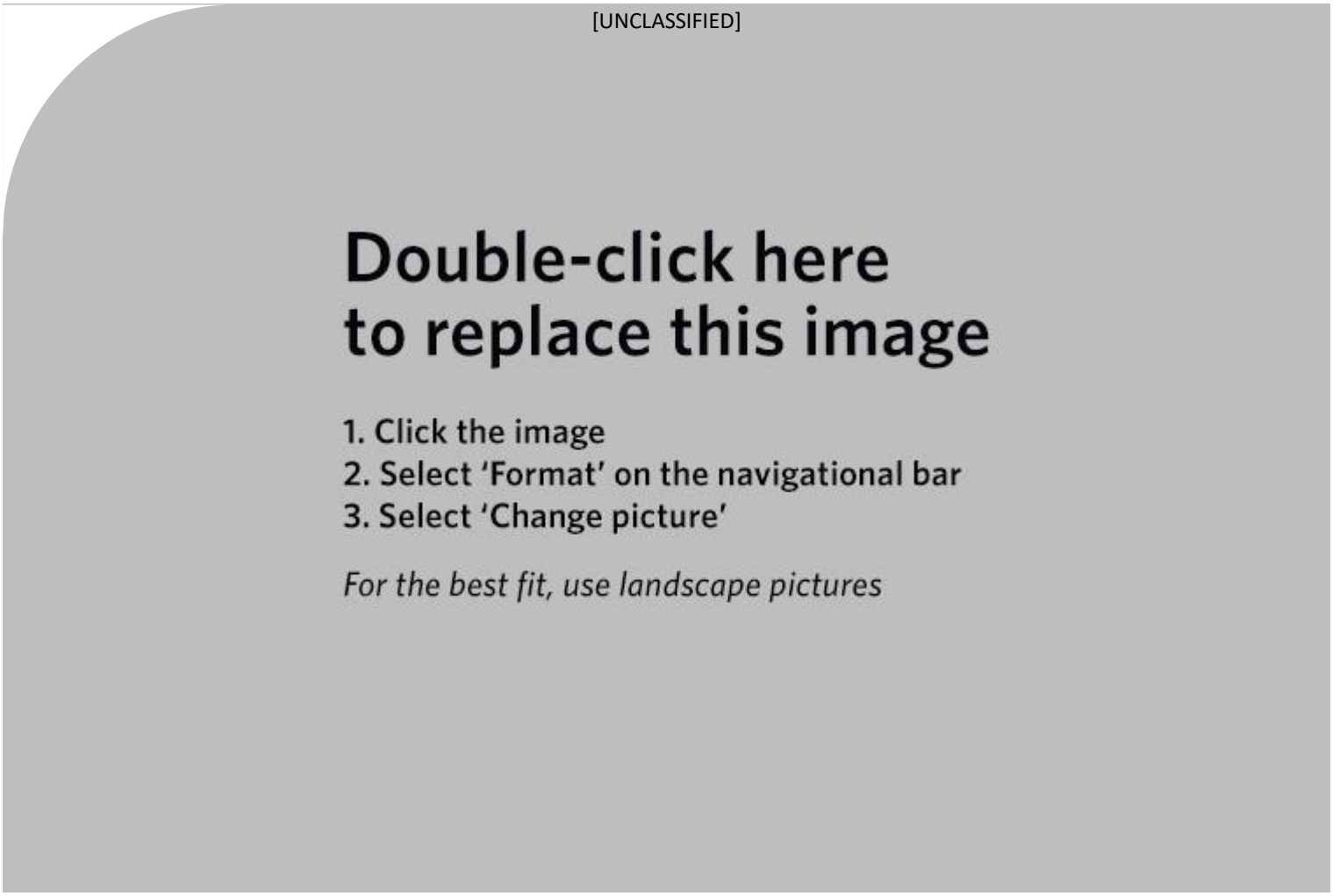


National guidance and requirements for joint performance monitoring and improvement in public transport contracts

Integrated Procurement Resource

NZ Transport Agency Waka Kotahi

8 December 2025

1.0

More information

NZ Transport Agency Waka Kotahi
Published [month and year]

ISBN [number]

If you have further queries, call our contact centre on 0800 699 000 or write to us:

NZ Transport Agency Waka Kotahi
Private Bag 6995
Wellington 6141

This document is available on NZTA's website at nzta.govt.nz

CONTENTS

1. Introduction

1.1. Purpose

This document sets out national guidance and requirements for performance monitoring of public transport operating contracts in Aotearoa New Zealand. It sets out a clear direction of travel towards a shared foundation for how we understand, measure, and improve the performance of public transport services. It establishes the essential building blocks to get there, tracing a line of sight from the frontline of service delivery through to national insights that shape policy and funding decisions.

The document aims to be useful for a wide range of users: from those new to the sector, to experienced practitioners.

1.2. Why monitoring matters

Public transport is a public good. It connects people to jobs, education, healthcare, and each other. It supports climate goals, economic development, and social inclusion. It is publicly funded because it delivers value to the whole of society, not just to those who use it.

Performance monitoring is how we ensure that public transport is delivering on its purpose. It is how we:

- Understand what's working and what's not
- Identify where improvements are needed
- Align day-to-day operations with long-term goals
- Build trust and accountability between partners
- Support better decisions from the depot to the boardroom, to the Beehive.

Done well, performance monitoring is not just a compliance exercise, it is a strategic tool for continuous improvement and maximising public value.

2. Guiding principles

Guidance and requirements in this document are grounded in a set of enduring core principles that reflect the nature of public transport in Aotearoa: a complex, dynamic system delivered through long-term relationships between many different organisations, each with an important role to play.

The principles are summarised below and expanded upon in the following subsections:

1. ***Dynamic system:*** *Public transport is best understood and managed as a dynamic system.*
2. ***Relational delivery:*** *Effective public transport depends on strong, long-term collaboration.*
3. ***Accountability and influence****: Each party is accountable for what they can directly influence and for using shared information to influence things beyond their direct control.*
4. ***Vertical integration:*** *Monitoring works best when aligned across local, regional, and national levels.*
5. ***Purpose driven:*** *Service performance expectations are most effective when they reflect the purpose and design of each service.*
6. ***Transparency:*** *Collaboration works best when all parties have access to the same information.*

2.1. Dynamic system

Principle 1: Public transport is best understood and managed as a dynamic system.

This principle recognises that public transport is not a collection of isolated services, it is a dynamic system made up of people, vehicles, infrastructure, data, funding, and governance. It is shaped by geography, policy, and public expectations, and it is constantly evolving.

To make this complexity manageable, we focus on three interdependent monitoring domains:

- **Outcomes in the public interest**: the broader social, environmental, and economic goals that public transport supports.
- **Good customer experience**: perceptions and experiences of passengers across the full end-to-end journey.
- **Delivery excellence**: the operational and organisational capability that makes everything else possible.

Figure 1 Monitoring domains

These domains are mutually reinforcing:

- You need delivery excellence to provide a good customer experience.
- You need a good customer experience to achieve outcomes in the public interest, and;
- Achieving outcomes in the public interest is what justifies public investment in delivery.

2.2. Relational delivery

Principle 2: Delivering public transport effectively relies on strong, long-term, and collaborative relationships.

This principle acknowledges that no single party controls the entire public transport system. Instead, delivering efficient and effective public transport is a shared responsibility, with interdependencies across multiple stakeholders.

For example, under the Land Transport Management Act (LTMA), public transport authorities are responsible for planning and delivering regional public transport networks. This requires long-term relationships with:

- Territorial authorities – for infrastructure and land use planning
- NZTA – for funding, national policy, and regulation
- Service providers – for the safe and efficient delivery of services

These parties rely on one another to achieve outcomes in the public interest, ensure a high-quality customer experience, and deliver operational excellence.

The nature of these relationships may vary depending on the context. For instance, they may be formalised through contracts with operators, or through collaborative agreements and joint planning with councils and NZTA. While the format may differ, the underlying principle remains consistent.

Relational delivery is a way of working that recognises shared responsibility and interdependence. It is particularly effective in complex and dynamic sectors like public transport, where success depends on:

- Long-term collaboration
- Shared information and common goals
- Joint procedures and decision-making
- Collective problem-solving and innovation
- Aligned investment strategies
- Trust and transparency
- Adaptability to change.

This approach contrasts with transactional delivery, which focuses on short-term or one-off exchanges.

Good relational delivery does not happen automatically. It can degrade over time and must be actively nurtured through:

- Clear roles and responsibilities
- Proactive monitoring and relationship management across all stakeholders
- Strong accountability mechanisms.

2.3. Accountability and influence

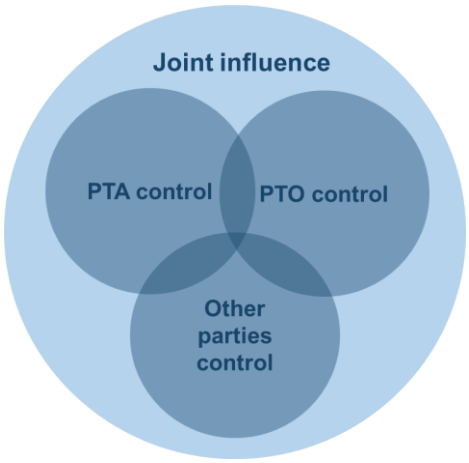
Principle 2: Each party is responsible for what they can control and can use shared information to influence what they cannot.

In a relational delivery context, public transport performance depends on many parties working together, each with distinct roles, responsibilities, and areas of influence. To be effective and fair, performance monitoring must reflect this shared reality.

At the heart of this framework is the principle of actionable accountability and influence. This means:

- Holding each party accountable for the things they can directly control, and
- Using shared information to jointly influence the wider system and factors beyond any one party's direct control.

Figure 2 Spheres of influence



2.3.1. Accountability

Public transport is shaped by many interdependent elements such as infrastructure, operations, customer behaviour, and external conditions. No single party controls the whole system. That's why accountability must be practical, targeted, and influence-based, not unrealistic.

This principle is especially important in the design of commercial incentives (e.g. bonuses and abatements) within operating contracts. For example:

- Operators should be incentivised for factors within their direct influence, such as ensuring the first trip departs on time or responding quickly to service disruptions.
- They should not be penalised for outcomes shaped by external factors such as corridor congestion or infrastructure delays, which they cannot directly influence.

For further guidance on incentives refer to Appendix D.

2.3.2. Influence

Performance monitoring is not just about administering incentives. One of its most important functions is to serve as a shared resource that can be used to jointly influence factors beyond any one party's direct control. When information is accurate, timely, and well-structured, it becomes a tool for:

- Identifying root causes of performance issues
- Coordinating responses across organisations
- Making the case for investment or policy change
- Influencing partners whose actions affect system performance

In this context, monitoring and performance information is a strategic asset that drives improvement across the entire system.

2.4. Vertical integration

Principle 3: Each party is responsible for what they can control and can use shared information to influence what they cannot.

An effective and efficient public transport system requires alignment across all levels, from frontline operations to national policy.

Vertical integration means being able to use the same indicators and performance measures across different organisations, geographic levels, and decision-making contexts. When done well, it creates a clear line of sight from day-to-day service delivery to long-term strategic outcomes.

When performance measures are vertically integrated, they:

- Support consistent decision-making across local, regional, and national levels
- Enable shared understanding of system performance
- Strengthen the case for investment by linking operational data to strategic outcomes
- Drive continuous improvement by connecting delivery excellence to broader goals

For example, a single measure such as punctuality, can serve multiple purposes:

- At the operational level, it helps operators manage on-time performance on a daily basis
- At the regional level, it identifies where improvements are needed (e.g. timetable changes and bus priority measures).
- At the national level, it provides an evidence base of policy development, funding allocation, and system-wide benchmarking.

Vertical integration ensures that monitoring information collected at the operational front line becomes a strategic asset that drives improvement across the entire system.

2.5. Purpose driven

Principle 5: Monitoring and performance expectations are most effective when they reflect the purpose and design of each service.

Public transport services are designed and delivered for different purposes, to meet different needs, in different places, for different people.

This principle recognises that monitoring and performance expectations must be tailored to the type and purpose of the service being provided. It provides a foundation for how services should be managed, monitored, and evaluated in a way that is fair, meaningful, and outcomes focused. At a high level:

- Patronage-oriented services aim to attract high ridership, reduce emissions, and shape urban form. These services typically operate in high-demand corridors with high frequency and speed.
- Coverage-oriented services aim to ensure access and equity, especially for the transport disadvantaged. These services may typically spread resources over larger geographic areas and operate less frequently but are vital for enabling access to essential services, social inclusion and economic wellbeing.

Each approach reflects a different public value proposition, and therefore requires different design choices, investment strategies, and performance expectations.

The monitoring approach and performance expectations should reflect the role and function of each service within the network. For example:

- A rapid service should be held to high standards for punctuality, and cost-recovery
- A connector service may prioritise geographic coverage and access, with more flexible expectations for patronage or cost recovery.

Applying the same performance expectations across all service types would be misleading and counterproductive. Instead, expectations should be differentiated based on the service's intended purpose and contribution to broader outcomes. This approach helps establish a clear line of sight between:

- The purpose of a service,
- The design of that service,

- The performance expectations applied to it, and
- The broader outcomes it is intended to support.

2.6. Transparency

Principle 6: Transparency is essential to collaboration, and all parties benefit from access to the same monitoring information.

In a relational delivery environment, transparency is not just a value, it is a practical enabler of trust, alignment, and joint action. When all parties have access to the same monitoring and performance information, they are better equipped to collaborate, solve problems, and make informed decisions.

This principle recognises that performance data is a shared resource, not a proprietary asset. It supports a culture where monitoring is not used to surprise or blame, but to build shared understanding and drive collective improvement.

When performance information is equally accessible:

- Partners can see the same picture of how the system is performing.
- Issues can be identified and addressed early and collaboratively.
- Decisions are based on evidence, not assumptions.
- Trust is strengthened, and conflict is reduced.

Transparency means more than just publishing reports. It means:

- Real-time or regular access to relevant data for all delivery partners
- Clear definitions and shared understanding of what is being measured
- Open dialogue about what the data shows and what it means
- Joint ownership of insights and actions.

This is especially important when performance issues arise. When all parties have access to the same information, they can work together to understand root causes and agree on the best response, rather than debating the facts.

3. Monitoring domains

3.1. Overview

Monitoring fosters stewardship across the public transport system, which includes services, infrastructure, people, vehicles, data, funding. It informs decision making at, the operational frontline, regionally and nationally.

To make this complexity manageable, we organise monitoring into three logical domains:

- **Outcomes in the public interest** — the broader social, environmental, and economic goals that public transport enables.
- **Good customer experience** — perceptions and experiences of passengers across the full end-to-end journey.
- **Delivery excellence** — the operational and organisational capability that makes everything possible.

These domains are mutually reinforcing:

- You need delivery excellence to provide a good customer experience.
- You need a good customer experience to achieve outcomes in the public interest, and;
- Achieving outcomes in the public interest is what justifies public investment in delivery

3.1.1. Domain awareness

While each stakeholder has a primary focus aligned with their responsibilities, it is important all parties maintain awareness of performance across all three domains. This is because the domains are interdependent, and effective performance in one area often depends on understanding and supporting the others.

Domain	Primary focus	Why broader awareness matters
Outcomes in the Public Interest	Central government, regional councils, policy teams	Operators and delivery partners need to understand how their work contributes to broader goals like emissions reduction, access, and equity. This awareness helps align day-to-day decisions with long-term public value.
Good Customer Experience	Public transport authorities, operators, customer service teams	Policymakers and funders need to understand how service quality affects ridership, public trust, and the system's ability to deliver on strategic outcomes.
Delivery Excellence	Operators, contract managers, asset managers	Councils and central agencies must understand the operational realities that enable or constrain service delivery. This ensures that expectations, funding, and policy are grounded in what is practically achievable, efficient and effective.

This approach reflects the principles of:

- Vertical Integration – aligning data and decisions across levels
- Transparency – ensuring shared access to performance information
- Relational Delivery – fostering mutual understanding and collaboration

By maintaining system-wide awareness, stakeholders can:

- Anticipate and resolve cross-domain issues
- Make better-informed decisions
- Strengthen the case for investment and improvement
- Build a shared understanding of what success looks like.

The following sections provide additional context for each domain.

3.2. Outcomes in the public interest

Public transport in New Zealand is regulated under the Land Transport Management Act 2003 (LTMA), which defines its purpose as contributing to:

"*an effective, efficient, and safe land transport system in the public interest.*"

This guidance document aligns with that legislative intent by recognising that public transport is not an end in itself, but a means to deliver broader societal outcomes in the public interest.

3.2.1. Transport Outcomes Framework

To help define outcomes, this document draws on the Ministry of Transport's Transport Outcomes Framework, which provides a shared understanding of what the transport system is ultimately trying to achieve. It identifies five outcome areas that all transport contributes to, including public transport.

The table below outlines some of the ways public transport contributes to these broader outcomes.

Outcome Area	Description	Public transport contribution
Economic Prosperity	*The transport system supports economic activity via local, regional and international connections, with efficient movements of people and products.*	• Reduces congestion and travel times • Connects people to employment and commercial centres • Supports efficient land use and urban productivity
Inclusive Access	*Inclusive access enables all people to participate in society through access to social and economic opportunities such as work, education and healthcare. To be inclusive, the transport system must be accessible to all people in New Zealand including those with disabilities, low-income earners, and people of different ages, genders and ethnicities.*	• Provides mobility for people who cannot or choose not to drive • Connects communities to essential services and opportunities • Supports equity by serving diverse user needs across demographics and geographies
Healthy and Safe People	*The system protects people from transport-related injuries and harmful pollution and makes physically active travel an attractive option.*	• Offers a safer alternative to private vehicles • Encourages walking and active travel through integrated networks • Reduces exposure to harmful emissions in dense urban areas
Environmental Sustainability	*The transport system transitions to net zero carbon emissions, and maintains or improves biodiversity, water quality and air quality.*	• Enables mode shift from private vehicles to lower-emission shared modes • Supports compact urban development • Reduces transport-related emissions and environmental impacts
Resilience and Security	*The transport system minimises and manages the risks from natural and human-made hazards, anticipates and*	• Provides alternative travel options during disruptions • Reduces reliance on fossil fuels

	adapts to emerging threats, and recovers effectively from disruptive events.	• Enhances system redundancy and adaptability

3.2.2. Line of sight from strategic outcomes to frontline monitoring

Although this guidance document does not prescribe how to monitor strategic outcomes directly, as that is addressed through other planning tools such as Regional Public Transport Plans (RPTPs) and Regional Land Transport Plans (RLTPs), it is essential to understand how these outcomes shape the rest of the monitoring system.

There is a clear and logical progression from high-level outcomes to day-to-day monitoring:

1. **Outcomes in the Public Interest** - Define what public transport is trying to achieve for society and provides the justification for public investment.
2. **Service Design** - The specific outcomes sought (which differ by location and context) inform whether services are designed to maximise patronage or ensure coverage, or a mix of both.
3. **Performance Expectations** - The purpose and design of a service shapes what "good performance" looks like (e.g. high frequency vs. broad access).
4. **Monitoring Approach** - Performance expectations determine what is monitored, how often, and by whom, especially at the operational level.

This line of sight ensures that practitioners responsible for monitoring are not just tracking numbers, they are contributing to a system that delivers real public value.

This shared awareness supports the principles of vertical integration, purpose-driven monitoring, and relational delivery, helping ensure that operational decisions are aligned with long-term public value.

3.2.3. Assessing effectiveness based on intended purpose

Being clear about the purpose of a public transport service is essential for assessing its effectiveness. A service can only be considered effective if it is demonstrably contributing to the outcome in the public interest that it was designed to support.

For example:

- A coverage-oriented service designed to improve inclusive access to essential service should be assessed based on its reach and inclusivity, it should not necessarily be expected to have high patronage or cost recovery.
- A high-frequency urban service aimed at reducing congestion should be evaluated on its ability to attract facilitate mode shift, improve travel times and should have higher patronage and cost recovery expectations.

This clarity ensures that:

- Performance expectations are fair and meaningful
- Monitoring approaches are aligned with service intent
- Operational decisions are grounded in the outcomes that matter most.

3.3. Good customer experience

Good customer experience is essential to the success of public transport. It is the bridge between operational delivery and achieving outcomes in the public interest. When people have a positive experience using public transport, they are more likely to keep using it; and to recommend it to others. This is critical for retaining existing passengers, attracting new ones, and ultimately achieving broader economic, environmental, and social outcomes.

3.3.1. Why it matters

- Customer experience drives patronage, which in turn supports broader outcomes.
- It reflects how well the system is working from the passenger's perspective, not just whether services are running, but whether they are usable, safe, and responsive.
- It provides a feedback loop between service delivery and public value.

3.3.2. What we monitor

This monitoring domain focuses on understanding the perceptions and experiences of passengers across the full end-to-end journey. It includes:

- Direct feedback from passengers (e.g. complaints, compliments, service requests)
- Proactive surveying of customer perceptions (e.g. safety, ease of use, comfort, reliability)
- Identification of unmet needs (e.g. accessibility barriers, service gaps, information issues).

Customer experience data should:

- Be integrated into broader monitoring
- Inform service improvements
- Support continuous learning and responsiveness.

3.3.3. Shared responsibility and influence

Customer experience insights often highlight issues that involve multiple parties or fall outside any one party's direct control, such as infrastructure quality, land use, or third party information systems. This reflects the principle of accountability and influence:

Each party is accountable for what they can directly control, and responsible for using shared information to influence what they cannot.

For example:

- Operators may not control the design of a bus stop, but they can report safety concerns raised by passengers and drivers.
- Councils may not manage service delivery, but they can use feedback to prioritise infrastructure upgrades.

In this way, customer experience monitoring becomes a shared strategic asset, not just a compliance tool, that supports collaboration, continuous improvement, and better outcomes.

3.4. Delivery excellence

Delivery excellence is about ensuring public transport services are delivered effectively and efficiently. It focuses on the operational and organisational capabilities that make services safe, reliable, and responsive, every day.

This is the core focus of this guidance document. It provides the most direct levers for performance monitoring and improvement, particularly through operating contracts and day-to-day management.

3.4.1. Effectiveness and efficiency

Delivery excellence is not about delivering a "gold-plated" service, it's about delivering services that are:

- **Effective** – achieving their intended design purpose and contributing to broader outcomes in the public interest (e.g. economic, social and environmental goals)
- **Efficient** – using resources wisely to maximise value for every dollar spent, including cost-efficient deployment of fleet, workforce, and infrastructure.

These concepts are distinct but complementary. A service can be:

- Efficient but ineffective — low cost, but failing to meet its intended purpose or deliver public value
- Effective but inefficient — achieving its goals, but at an unnecessarily high cost.

Delivery excellence is about balancing both, ensuring that services are achieving intended outcomes as efficiently as possible.

3.4.2. Vertical integration

To maximise the value of information and insights generated in the in the delivery excellence domain, it needs to be vertically integrated. When done well, vertical integration:

- Supports consistent decision-making across local, regional, and national levels
- Enables a shared understanding of system performance
- Strengthens the case for investment by linking operational data to strategic outcomes
- Drive continuous improvement by connecting day-to-day delivery to long-term goals

For example, a single metric such as on-time performance can serve multiple purposes:

- Operationally, it helps manage daily service reliability
- Regionally, it informs service planning and infrastructure improvements
- Nationally, it contributes to benchmarking, and informs policy development, and funding decisions

NZTA gives effect to this through a structured reporting approach, requiring nationally consistent monthly, quarterly, and annual returns from PTAs. The information collected is aggregated, it is not operator-specific and excludes commercially sensitive data.

This aggregated reporting is shared back with sector stakeholders, enabling them to assess relative performance, identify strengths, and potential areas for improvement.

3.4.3. Contract management and incentives

Monitoring information plays a critical role in contract management, ensuring that services are delivered in line with agreed commitments and that performance expectations are met.

Within this framework, incentives (including financial bonuses or abatements) are used to encourage high performance in areas where operators have direct influence. These mechanisms are not just about compliance; they are tools to drive improvement and accountability.

These areas are further detailed later in this document (refer Appendix D). While contract compliance and incentives are important, they should not overshadow the broader purpose of monitoring, which is to support learning, collaboration, and continuous improvement across all aspects of the system.

4. Data to insights

Overview

A key enabler of effective monitoring is the ability to transform raw data into actionable insights. This process underpins effective decision-making and continuous improvement across the public transport system.

The journey from information need to insight involves several stages:

- Data is collected from various sources (e.g. fleet, workforce, customer feedback)
- It becomes information when structured and organised
- With context and expertise, it becomes knowledge
- Finally, it becomes insight, integrated, understandable, and actionable

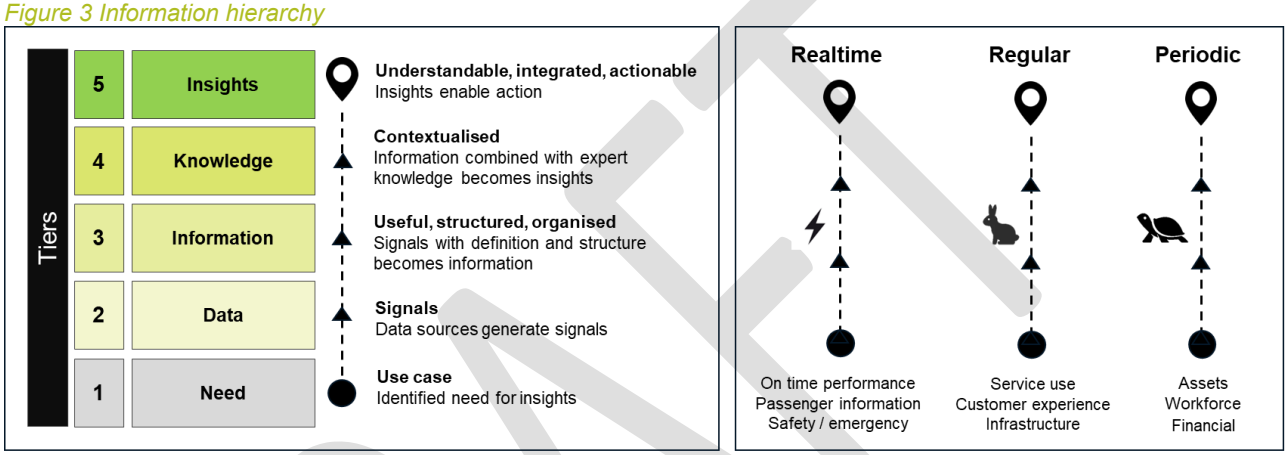
In the public transport sector, much of this transformation relies on the expertise at the operational front line, including both operators and PTAs. Their contextual understanding is essential for interpreting data meaningfully and identifying what matters most for service delivery.

This process also involves managing different types of information needs:

- Real-time or near-real-time insights are critical for operational responsiveness (e.g. service disruptions, on-time performance)
- Periodic insights support strategic planning and performance monitoring (e.g. asset condition, workforce wellbeing, cost efficiency)

Investing in and developing systems and capabilities that support efficient data-to-insight processing is key to minimising administrative burden and maximising focus on using actionable insights to drive continuous improvement.

Figure 3 Information hierarchy



People and technology

The transformation from data to insight is not purely a technical process. While systems and tools play a vital role, the effectiveness of insight generation depends heavily on the capability and capacity of people, particularly those with operational knowledge and contextual expertise. Their ability to interpret, question, and apply data meaningfully is what ultimately drives value.

At the same time, technology capability and capacity, including data infrastructure, integration, and automation, are essential to ensure that data is accessible, timely, and usable. Without the right tools and systems, even the most skilled people can be limited in their ability to generate and act on insights.

In practice, it is the combination of people and technology, each reinforcing the other, that enables a robust and responsive data-to-insight process. Strengthening both dimensions is key to reducing administrative burden and increasing the focus on using insights to support continuous improvement.

5. Monitoring Capability & Capacity

5.1. Capability & Capacity Spectrum

This spectrum aims to provides a common language for describing the monitoring capability and capacity across the public transport sector. It enables organisations to identify where their current capability sits and to plan future improvements. By having a common language, PTAs, operators, and central agencies can align expectations and make informed investment decisions in a collaborative way.

	Primary levels		Capability Levels	Benefits / challenges
Predictive	 These levels use automation and modelling to move from reacting to the past to proactively shaping the future.	9	**Predictive optimisation:** The focus shifts from explaining the past to anticipating the future, using data and forecasting to predict issues before they manifest.	**Benefits:** • Shifts from reactive to proactive, unlocking people capacity • Provides automated recommendations. **Challenges** • Higher cost and complexity • Requires advanced expertise and data governance • Risk of over-reliance; human oversight needed.
		8	**Automated solutions:** The system moves beyond diagnosis to generate automated evidence-based recommendations for action, such as timetable adjustments.	
		7	**Automated diagnostics**: Machine learning automatically analyses most available data to identify, issues, root causes and actionable insights.	
Diagnostic	 These levels are about integrating information and diagnosing the root causes of performance issues and turning data into actionable insights.	6	**Assisted diagnostics**: The integrated system begins to automate diagnostics and insights further freeing up people resources to implement actionable insights.	**Benefits:** • Enables root cause analysis • Integrates multiple data sources • Supports targeted improvements. **Limitations:** • Needs platform investment and people capability and capacity • Mostly retrospective insights, limited prediction.
		5	**Integrated analysis:** A single platform integrates diverse data sources to provide a complete view, allowing analysts to more efficiently investigate the "why".	
		4	**Manual diagnostics:** Analysts manually connect different datasets to understand the reasons behind performance outcomes.	
Foundational	 These capability levels focus on capturing basic performance data. At this level, information typically shows "what" happened but cannot easily explain "why".	3	**Systematic:** Data is used to systematically track and report on KPIs like reliability, passenger boardings and customer feedback.	**Benefits:** • Establishes performance baseline • Low cost, easy to implement. **Challenges:** • Siloed data, limited integration • Heavy manual effort • Cannot explain "why" issues occur.
		2	**Basic data capture:** Foundational data from AVL/GPS and ticketing systems is captured and often stored in different systems.	
		1	**Manual:** Monitoring is understood primarily through operator-supplied reports, direct human observation, and customer feedback logs.	

5.1.1. Strategic Direction and Practical Application

Not every region or contract needs to reach Level 9 on the capability spectrum. The appropriate level depends on scale, complexity, and context. However, NZTA's goal is to work with sector stakeholders to lift the minimum monitoring capability to Level 5 or above as the sector norm over time.

Level 5 is a critical threshold because it enables integrated analysis and turns raw data into actionable insights efficiently. This is essential for continuous improvement and for ensuring that public transport investment delivers value for money.

To achieve this in the long-term, NZTA will encourage shared capability and solutions across PTAs, including technology platforms and people expertise. This approach avoids duplicating NZTA investment in multiple systems, reduces complexity for operators working across regions, and encourages consistency in tools and processes. Conceptually a shared services model, may suit smaller PTAs, while larger PTAs could converge toward common platforms and standards over time.

While Level 5+ may become the sector baseline, there will and should be exceptions. For example, for small-scale services, a more foundational "trust but verify" approach (Levels 1–3) may offer the best value, as the cost of more advanced monitoring would likely outweigh the benefits. However, where PTAs already operate at Level 5 or above, adding smaller services to the same platform is likely to represent a low marginal cost and provide benefits, including:

- Consistent data across the network
- Simplified management and reporting
- Improved oversight for all services

5.1.2. The Case for Sector-Wide Collaboration

Capabilities at Levels 6 to 9 require significant investment and advanced expertise, which may be beyond the realistic reach of many if not all PTAs if working in isolation. A more effective approach may be to develop these capabilities collaboratively, for example by establishing a small number of specialised Centres of Excellence embedded within PTAs.

These centres would serve the wider sector, helping to drive progress and deliver benefits across all stakeholders, not just the host organisations. They could enable the sector to share costs, leverage collective strengths, and accelerate improvement beyond what any one organisation could achieve alone.

In addition, Centres of Excellence could act as catalysts for innovation by tapping into both domestic and international private sector expertise and innovation. By creating a focal point for collaboration, they can help the sector adopt emerging tools, methods, and technologies more quickly and consistently then might otherwise be possible.

5.2. Implications for Bus Operating Contracts

5.2.1. Overview

Monitoring capability and capacity are not just technical considerations; they shape how bus operating contracts are designed and managed. The level of monitoring influences:

- **Joint Planning -** How PTAs and operators collaborate to identify and plan improvements.
- **Incentives** - How performance expectations and financial levers are structured.
- **Partnering** - The depth of collaboration and trust required to deliver outcomes.

Because services vary in scale and complexity, monitoring cannot be one-size-fits-all. This this section outlines out two approaches aligned with the Data-to-Insight Capability Spectrum:

- **Basic Monitoring** – for simpler / smaller scale services.
- **Standard Monitoring** – the sector baseline for integrated analysis and proactive improvement.

5.2.2. Monitoring approaches

The two broad approaches are summarised as follows:

A. Basic Monitoring (Capability Levels 1–4)

This approach provides a practical, lower-cost option for services where advanced analytics are not warranted. It is built on simplicity and trust, using basic data capture, operator self-reporting, and spot checks to monitor performance. Collaboration is essential because data is limited issues are addressed through direct communication and reactive investigations when metrics signal a problem.

Contracts at this level embed joint improvement processes, but these are triggered less frequently and require deeper dives to understand root causes and clarify accountability. Incentives (abatement and bonuses) should be limited due to limited verification, and success depends on proactive relationship management.

B. Standard Monitoring (Capability Levels 5+)

This is the sector baseline for monitoring and is designed for services where integrated analysis and continuous improvement are essential. It uses shared platforms and diagnostic capability to move beyond “what happened” to “why it happened,” enabling proactive responses to emerging trends.

Contracts at this level formalise joint planning and improvement processes, supported by shared data and root cause analysis. Incentives and abatements are linked to verified insights, ensuring fairness and reinforcing accountability. This approach transitions relationships from reactive problem-solving to bother tactical and strategic collaboration, making it ideal for urban networks and high-value services where public value depends on evidence-based continuous improvement.

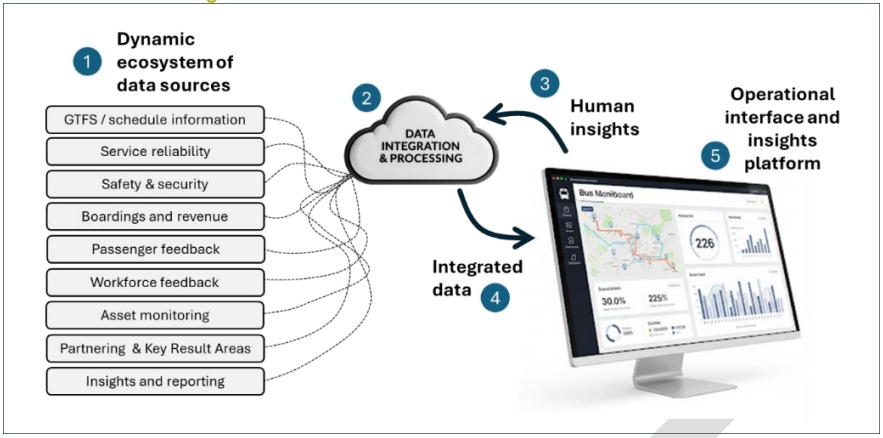
A shared monitoring platform is the key enabler of the Standard Monitoring approach (Capability Level 5+). It provides a single, integrated environment where PTAs and operators access the same information in real time, ensuring transparency and enabling collaborative, workflows and decision-making.

Crucially, the platform’s value comes from the combination of technology and practitioner knowledge. Technology provides the automation, integration, and diagnostic capability to process large volumes of data efficiently. Practitioner expertise adds the contextual understanding needed to interpret insights and turn them into meaningful actions. Together, they enable the efficient transformation of raw data into actionable insights that drive improvement.

By consolidating diverse data sources, the platform creates a clear line of sight from individual trips to regional and national performance, reinforcing vertical integration and reducing duplication across the sector.

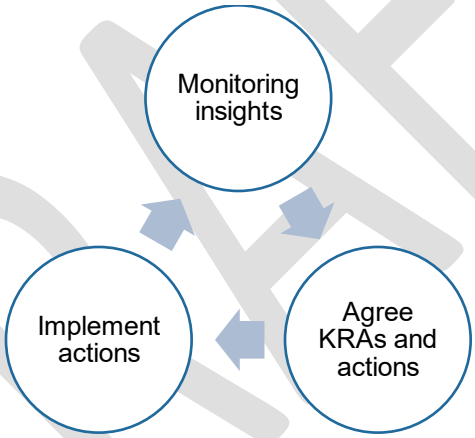
The following diagram provides a conceptual overview.

Figure 4 Standard monitoring overview



5.2.3. Joint Planning and Key Result Areas

Monitoring is most valuable when it leads to action. Key Result Areas (KRAs) provide a structured way to turn insights into improvement priorities, tailored to local context and agreed collaboratively between PTAs and operators. They form the bridge between monitoring outputs and joint action, creating a cycle of continuous improvement that reflects the principles of relational delivery, accountability and influence, and purpose-driven design.



KRAs should draw on multiple monitoring domains, including:

- Service Reliability – punctuality, cancellations, and causal factors
- Customer Insights – complaints, feedback, and satisfaction surveys
- Workforce – recruitment, retention, and wellbeing metrics
- Safety and Security – event data and perceptions of safety
- Efficiency and Effectiveness – cost, resource utilisation, and operational performance

KRAs are used to identify the most important issues and opportunities for improvement based on monitoring insights. Their purpose is to focus attention on what matters most, whether that is a single critical issue or several separate areas. The emphasis should be on prioritisation, concentrating effort where it will deliver the greatest value rather than spreading effort too thin.

KRAs should form a central component of business planning between PTAs and operators, confirmed and agreed in writing through mechanisms such as:

- Annual improvement plans
- Partnering forums
- Contract governance processes.

Each Key Result Area should be supported by three essential components:

1. **Clearly defined issue or opportunity**- Before actions can be agreed, the underlying issue or opportunity must be described in clear, specific terms. This ensures shared understanding of the problem and why it matters.
2. **Defined actions and responsibilities** - Practical, achievable steps should then be identified, with accountability assigned for what each party can control and shared influence where direct control is limited. Actions should be realistic and time-bound, with clarity on who does what.
3. **Expected impact and measurement** - For each action (to the extent relevant), define the intended outcome and how success will be measured. Indicators might include:
    - Operational metrics (e.g., improved punctuality, reduced cancellations)
    - Customer experience measures (e.g., satisfaction scores, complaint volumes)
    - Workforce indicators (e.g., retention rates, absenteeism)

Where actions cannot be implemented immediately, due to funding, policy settings, or third-party dependencies, good practice document the barriers and agree on an interim approach. This may include:

- Short-term mitigations to reduce impact
- Alternative actions that maintain progress
- Keeping the original action on the agenda for future implementation
- Joint advocacy or evidence-based influence to address systemic barriers.

6. Detailed Guidance and Definitions

While this document outlines the core principles, frameworks, and approaches for performance monitoring, the appendices provide the detailed and specific guidance necessary for practical, nationally consistent implementation.

They are intended to be regarded as standalone resources that define specific measures, categories, and approaches for key monitoring domains, and sit within a wider performance monitoring framework.

The following appendices provide the basis for nationally consistent approaches to:

- **Appendix A**: Safety Monitoring: Provides detailed and nationally consistent definitions, a coding framework for categorising event types and causal factors, and specific measures for inclusion in public transport operating contracts.
- **Appendix B**: Workforce Monitoring: Details the nationally consistent definitions and categories for monitoring key workforce metrics.
- **Appendix C**: Service Reliability Monitoring: Outlines nationally consistent definitions and monitoring categories for on-time performance and service reliability to ensure consistent measurement across the sector.
- **Appendix D**: Financial Incentives: Offers more detailed guidance on the design and application of financial incentives, including bonuses and abatements, within operating contracts to drive improvement and accountability.

APPENDIX A – SAFETY MONITORING

A.1 Purpose

A public transport system that is both genuinely safe and widely perceived as safe attracts more passengers and fosters a confident, capable workforce. In contrast, experiences of actual or perceived insecurity discourage patronage and increase operational risks and costs.

This appendix provides a nationally consistent framework for monitoring and reporting safety and security events in public transport environments.

A.2 Key concepts

A.2.1 Actual and perceived safety

Public transport safety includes both actual safety and perceived safety:

- Actual safety: refers to the objective risk of harm including incidents, injuries, and security breaches that occur within the system.
- Perceived safety: reflects how safe people feel when using or working in public transport environments shaped by personal experience, environment, and social context.

Both dimensions matter. A system can be statistically safe but still feel unsafe to users, especially those from vulnerable groups. Monitoring must therefore capture both event data and perceptions to support effective safety improvements.

Perceptions of safety are monitored separately through public, customer and workforce feedback mechanisms, which are not covered in this document. The balance of this document focuses on monitoring actual safety and security events.

A.2.2 Public transport environments

This document defines a nationally consistent framework for monitoring and reporting safety and security events across public transport environments.

At a high level, environments are organised into two domains:

- **Private domain environments:** Areas where public access is restricted, such as bus depots, stabling facilities, and secure or restricted zones within stations or interchanges (i.e., Protective Security Requirements 'Zone 2' areas).[1] These environments are particularly relevant to workforce safety.
- **Public domain environments:** Areas accessible to the public. These are further structured into:
    - **Catchments** – The journeys people make to and from public transport nodes.
    - **Nodes** – Locations where passengers board or alight services, such as stops, stations, and ferry terminals.
    - **Networks** – The vehicles and vessels used for travel between nodes.

[1] Protective Security Requirement (PSR) Policy Framework describes Zone 2 areas as "These are low-security areas with some controls. They provide access controls to information and physical assets where any loss would result in a business impact up to very high." Refer: https://www.protectivesecurity.govt.nz/assets/psr/PHYSEC-appendices.pdf

From the perspective of passengers, the workforce and the public generally, actual and perceived safety is shaped by what occurs, what is experienced, and how people feel across all of these environments.

Monitoring safety across these varied environments can be complex, requiring input from multiple stakeholders including operators, PTAs, councils, central agencies and other stakeholders. Each party has different responsibilities, systems, and areas of influence. To address this complexity, the framework adopts a federated approach.

A.3 Federated Approach

In this context, a federated approach refers to an approach where multiple independent organisations such as operators, PTAs, NZTA use their own platforms and processes to monitor and report on public transport safety but are connected through shared terminology and definitions that enable sector-wide insight.

Closely related is the concept of metadata, which refers to the structure of information. In public transport safety monitoring, metadata includes the fields, categories, and definitions used to describe events. It is the shared language and structure that allows different systems and organisations to define and interpret safety information consistently.

A federated model with shared metadata enables:

- **Local autonomy:** Operators and PTAs can configure systems to reflect local context, capability, and contract needs.
- **Shared understanding:** All stakeholders use the same event definitions, severity scales, and reporting fields.
- **Scalable alignment**: Systems do not need to be centralised or identical; they just need to speak the same language.
- **Collaborative improvement**: A shared evidence base, built on common terminology, supports joint planning, root cause analysis, and continuous improvement.

The balance of the document focuses on the structure and definition of safety information.

A.4 Key terminology, structure and definitions

A.4.1 Schema overveiw

To support consistent understanding, information regarding safety and security events is organised into five logical layers. Each layer builds on the previous one, progressively unpacking the event from a high-level category through to more detailed aspects. This facilitates different depths of understanding depending on the nature of the event and the need for detailed, actionable information.

Layer	Name	Description
1	**Event Type**	General nature of the event (e.g. personal safety or operational security).
2	**Event Classification**	Groups the event into a broad category to support consistent reporting.
3	**Event Sub-classification**	Provides a more detailed breakdown within the broader classification.
4	**Event Severity**	Classifies the level of harm or impact associated with the event.

5	**Context**	Captures relevant background or situational details that help interpret the event.

The following sections outline each of these layers, unpacking key language concepts and definitions.

A.4.2 Event type definitions

Safety and security events in public transport are grouped into two primary types, based on the nature of harm or risk:

- **Personal Safety and Security** – Involves the well-being of individuals (passengers, staff, or the public) affected by actions, environmental conditions, or health-related factors.
- **Operational Safety and Security** – Involves risks to systems, assets, infrastructure, or facilities that may impact service delivery, personal safety, or result in property loss or damage.

These high-level categories support consistent classification and enable the highest level of aggregate reporting and insight generation across the sector.

While these categories provide a useful starting point, the distinction is not always clear-cut. For example, a bus may perform an emergency brake to avoid a collision, an operational safety event. If a passenger then verbally abuses the driver, this introduces a personal safety dimension.

In such cases, the event is classified based on the instigating factor, in this case, the emergency braking, while the framework's sub-classification structure allows the personal safety aspect to also be captured.

To avoid double counting, each event is assigned a unique identifier. This ensures events can be analysed across all relevant dimensions (e.g. type, classification, sub-classification) while being counted only once in aggregated reporting.

For example, if 100 unique events are recorded, and 35 of them involve both personal and operational safety dimensions, the system may generate over 135 classification entries. However, because each event has a unique identifier, only 100 events are counted in total, preserving reporting accuracy while enabling richer insight.

A.4.3 Event classification and sub classification

This section defines the second and third layers of the safety monitoring schema, event classification and sub-classification. These layers provide a structured way to describe the nature of safety and security events in greater detail, supporting consistent reporting, analysis, and insight generation.

A.4.3.1 Primary classifications

Events are classified based on six primary classification categories:

1. **Harmful Interactions**
2. **Medical and Accidental Injuries**
3. **Vehicle-related Events**
4. **Infrastructure & Facility Hazards**
5. **Security Events**
6. **Vandalism & Property Damage**

Each category includes sub-classifications that describe specific incident types. For practitioners, applying should be straightforward. Most reporting systems should allow users to quickly select relevant options via checkboxes or dropdown menus, ensuring the context of an event is captured efficiently.

While a single event can have multiple classifications, each must be assigned a unique identifier to ensure it is counted only once in aggregated reporting. This supports multi-dimensional analysis without inflating event totals.

The benefit of multi-category classification is that it enables richer insights. For example, a practitioner can query a database to identify all events involving Threatening or Intimidating Behaviour, even if that was not the primary classification assigned. This flexibility supports deeper understanding of patterns, contributing factors, and areas for intervention.

The following tables outline the sub-classification definitions for each of the six primary event categories outlined above.

A.4.3.2 Sub classifications

There may be logical gaps and inconsistencies in the definitions proposed below. Feedback and suggestions for improvement are welcome and will inform ongoing refinement through sector engagement and iterative development.

1. **Harmful interactions**

   Harmful interactions can occur between any combination of customers, the workforce, and the public within public transport environments. These behaviours may range from minor nuisances to through to serious criminal behaviour.

Classification	Sub-classification	
Harmful Interactions - Behaviour or actions perceived negatively by others, ranging from annoyance and discomfort to feelings of vulnerability, distress, or physical/emotional harm.	**Low-level nuisance**	Loud talking, playing music without headphones, eating strong-smelling foods, or taking up excessive space.
	Disrespectful Behaviour	Abusive language, derogatory comments, or disrespectful body language.
	Invasive or Intrusive Behaviour	Unwanted touching, brushing, or standing too close to others.
	Threatening or Intimidating Behaviour	Verbal threats and harassment, aggressive posturing, or threatening actions.
	Serious Criminal Behaviour	Physical assault, criminal abuse, possession of a weapon or robbery.

2. **Medical and Accidental Injuries**

   Events classified and sub-classified under the umbrella of Medical and Accidental Injuries involve unintentional harm or health emergencies occurring in or around public transport environments, including medical events, slips and falls, and injuries related to overcrowding.

Classification	Sub-classification	
Medical and Accidental Injuries - Events arising from unintentional harm such as slips, falls, or sudden health events requiring urgent care (e.g. cardiac arrest, seizures).	**Medical Emergencies**	Sudden health events such as cardiac arrest, fainting, seizures, or diabetic episodes on or near public transport.
	Slips, Trips and Falls	Accidents on platforms, stairs, escalators, or inside vehicles, including during boarding or alighting.
	Crush Injuries	Harm caused by excessive crowding or forceful movement, especially during peak hours.

3. **Vehicle-related Events**

Events classified and sub-classified under the umbrella of Vehicle-related involve operational disruptions or safety risks resulting from events 'on the network' including collisions, derailments, emergency manoeuvres, or mechanical system failures affecting public transport vehicles.

Classification	Sub-classification	
Vehicle-related Events - Collisions, derailments, vehicle manoeuvres, and mechanical or system failures.	**Collisions**	Impacts between public transport vehicles and other vehicles, pedestrians, or infrastructure (e.g. poles, barriers).
	Derailments and Off-road Events	Trains leaving the track or buses veering off-road due to mechanical failure, operator error, or external factors.
	Sudden Vehicle Manoeuvres	Sudden braking or swerving to avoid hazards, or erratic or irresponsible driving (i.e. aggressive lane changes, rapid acceleration).
	Mechanical System Failures	Failures in critical systems such as brakes, doors, steering, or propulsion, occurring during service or boarding.

4. Infrastructure & Facility Hazards

Events classified and sub-classified under the umbrella of Infrastructure & Facility Hazards involve risks or disruptions within public transport environments arising from fires, hazardous substances, power or technology failures, structural damage.

Classification	Sub-classification	
Infrastructure & Facility Hazards - Fires, hazardous substance spills, power outages, and structural damage.	**Fires & Smoke Events**	Fires or visible smoke onboard vehicles or within stations, including electrical or rubbish bin fires.
	Hazardous Substance Events	Gas leaks, chemical spills, or exposure to toxic substances in vehicles or facilities.
	Technology & Power Failures	Failures in critical systems like signalling, lighting, or power supply, causing outages or loss of control.
	Structural Failures & Damage	Physical damage to infrastructure, such as broken glass, collapsed ceilings, or damaged platforms.
	Escalator and Lift Events	Malfunctions or accidents involving escalators or lifts, such as sudden stops, entrapment, or falls.

5. Security Events

Events classified and sub-classified under the umbrella of Security Events involve risk or disruptions related to trespassing in controlled environments and threats resulting from behaviour of dangerous individuals.

Classification	Sub-classification	
Security Events - Bomb threats, suspicious packages, armed individuals, unauthorised access,	**Bomb Threats & Suspicious Packages**	Reports or discovery of suspected explosives or threats targeting transport assets.
	Suspicious Individuals	Presence or reports of individuals with weapons or behaving threateningly

and emergency evacuations.	**Restricted Area Breaches**	Unauthorised access to areas not open to the public, such as control rooms or maintenance zones

6. Vandalism & Property Damage

Events classified under 'Vandalism & Property Damage'—including relevant subcategories—refer to events involving actual or potential harm to public transport infrastructure or vehicles through deliberate destruction or damage.

Classification	Sub-classification	
Theft, Vandalism & Property Damage - Graffiti, theft, tampering, and damage to vehicles, stations, or equipment.	**Graffiti or Tagging**	Unauthorised writing, drawing, or marking on vehicles, stations, or other property.
	Property Damage (Vehicles, Stations, Equipment)	Deliberate destruction or defacement of public transport assets, such as broken windows, seats, or ticket machines.
	Theft and Burglary	Stealing property from vehicles, stations, or staff, including fare revenue, equipment, or passenger belongings.

A.4.4 Severity

A severity scale is a critical component of safety and security event monitoring, as it reinforces the core purpose: to understand the degree of harm experienced by people within the public transport system—whether passengers, staff, or members of the public. Beyond this, a well-designed severity scale also helps contextualise events, supporting consistent classification and prioritisation of interventions.

A.4.4.1 Severity matrix

Feedback and suggestions for improvement are welcome and will inform ongoing refinement through sector engagement and iterative development.

Level	**People Harm** Impact on public transport passengers, employees, contractors and / or public.	**Disruptions** Impact on resilience and continuity of public transport services.	**Property And Asset Damage** Cost and functional impact to public transport vehicles, infrastructure or facilities.
1 – Minimal / Near Miss	Minor injury requiring only first aid; **OR** No harm, including Near Miss events; **OR** Experiences of brief discomfort.	Minimal disruption or delay **OR** No actual disruption, but potential existed.	Cosmetic damage to property or assets, with no immediate need for repair; **OR** likely cost of damage less than $1,000; **OR** No damage but potential for damage existed.
2 – Minor	Injury (physical or psychological) requiring medical attention but not requiring hospitalisation. (e.g., clinic visit, stitches); **OR** Experiences of short-term feelings of distress or vulnerability.	Short, localised disruption causing minor inconvenience to a small number of customers.	Minor damage requiring repair; **OR** likely cost of damage from $1,000 - $49,000.
3 – Moderate	Serious injury (physical or psychological) requiring hospitalisation or	Disruption affects multiple services. Often involves key routes or peak	Moderate damage requires immediate repair; **OR** Cost of damage from $50,000 - $99,000.

	equivalent medical treatment, but not life-threatening or permanent; **OR** Likely to experience on-going stress or anxiety (e.g., reluctance to travel alone).	services. Noticeable delays, detours or customer impacts.	
4 – Major	Severe, altering injury (physical or psychological) requiring hospitalisation or equivalent medical treatment, potential to be life-threatening or permanent; **OR** Likely to experience on-going, severe fear, stress or anxiety (e.g., fear and avoidance of public transport or the public realm).	Disruption across multiple key routes or modes. (e.g. high-frequency corridors or key interchanges). Significant customer impact.	Major damage requiring immediate repairs or replacement; **OR** Cost of damage from $100,000 - $999,000.
5 – Catastrophic	One or more fatalities.	Network-wide or widespread impacts causing severe travel disruption	Total loss of significant assets or infrastructure; **OR** Cost of damage more than $1 Million.

A.4.4.2 How To Use The Matrix

This matrix is used to classify the severity of *actual* events *after* they occur. The intended classification process is as follows:

1. An event occurs (e.g., a traffic accident, harmful interaction, or near miss).
2. The responsible personnel assesses the event's consequences against each of the three axes (People Harm, Property and Asset Damage, Disruptions).
   Note: Initial assessment of severity is based upon judgement by the responsible personnel but can adjusted once more detail is obtained.
3. The event is assigned a level (1-5) for each axis.
4. The event's final, official classification is determined by the highest severity level reached in any single axis.

For example, a serious passenger assault is classified:

- **People Harm:** Level 4 (Major) - due to severe psychological trauma and hospitalization.
- **Property Damage:** Level 1 (Minimal / Near Miss) - no assets damaged.
- **Service Disruption:** Level 2 (Minor) – vehicle evacuated and held for 30 minutes.

This event is officially classified as a **"Level 4: Major Event."**

A.4.4.3 Escalation and Reporting Thresholds

Severity can provide the basis for a PTA to define reporting thresholds and associated actions for managing safety and security events. For example, a PTA may specify that:

- Any **Level 1** event is recorded as an "Occurrence" or "Near Miss," with no additional reporting or follow up required.
- Any **Level 2** event is recorded as an "Incident".
- Any event classified as **Level 3 (Moderate) or higher** is an "Accident" or "Major Event" triggers immediate notification to senior managers and regulators, with fulsome investigation expectations.

A.4.5 Context

Capturing contextual information is essential for understanding the circumstances surrounding public transport safety and security events. It enables more actionable insights, supports targeted interventions, and strengthens the prioritisation of safety improvement initiatives.

Contextual data helps explain not just what happened, but why, where, when, and to whom. It also supports root cause analysis, trend identification, and informed decision-making across the sector.

The following table outlines examples of basic contextual information commonly captured during safety and security event reporting. While these fields support consistent data collection, contextual information need not be limited to these examples and may be expanded based on the nature and complexity of the event.

Information	Description
Time	The time event occurred.
Location	The specific site or area within the public transport system where the event occurred. This may include a street address, fleet number, platform, station zone, or location within a facility, or a combination depending on what is applicable.
Event Description	A description of what occurred, and if relevant, supporting resources (i.e. CCTV footage, testimonies). For lower-severity events, this may be brief; for higher-severity events, a more account is important.
People Involved	Individuals directly affected by and / or contributing to the event (e.g. passengers, staff, members of the public).
Causal Factors	Contributing conditions or behaviours (e.g. alcohol use, fatigue, environmental hazards, asset or infrastructure defects) that may have influenced the event.
Action Taken	Any follow-up actions or responses (e.g. medical assistance, service adjustments, security involvement).

A.5 Standardised Event Reporting Fields

To support consistent safety and security reporting across NZTA co-funded public transport services, all events should be recorded using a standardised set of reporting fields. These fields define how information is captured in computer-based systems, enabling it to be analysed, compared, and in many ways. The following outlines standardised reporting fields and associated guidance.

Field	Associated Fields	Purpose	Guidance
Unique ID Auto generated	N/A	Prevents double-counting and supports cross-referencing.	Assigned once per event, regardless of how many classifications apply.
Event type Dropdown list / check box	• Personal Safety • Operational Safety	Enables broad categorisation	Only one value can be selected per event. Used for high-level reporting; must not be modified without NZTA approval
Primary classification Dropdown list / check box	Seven categories	Classifies events into broad nationally consistent categories	Multiple classifications allowed per event. Primary classification must not be modified without NZTA agreement.

Sub-classification Dropdown list / check box	Various sub-categories nested under the six primary classifications	Enables granular categorisation.	Multiple classifications allowed per event. PTAs may add sub-classifications as needed if nested under and related to a primary classification.
Severity Dropdown list / check box	Severity rating per sub-classification (Levels 1–5)	Assesses impact level for of events.	Each sub-classification must be rated; highest severity used for aggregate reporting.
Event description Free text field, and ability to upload / reference supporting information i.e. reports, photos.	Written description	Provides essential context.	Should be concise but informative, especially for higher-severity events. Supporting information may include CCTV footage or local investigation files pertaining to the event.
Date & Time Date/time picker	Date/time picker	Records the date and time the event occurred.	Helps identify patterns and peak risk periods to inform interventions.
General Location Check box	On Vehicle / vessel At node In catchment Operational (not public)	Categorises the type of environment in which event occurred.	
Specific Location Lookup field and free text field	E.g. Site address, fleet number, station zone, etc.	Specifies where the event occurred.	Should be as precise as possible.
People involved Check box and free text field	e.g. Passenger, staff, public	Identifies individuals involved in the event.	Supports analysis of how safety and security events affect different groups, including passengers, workforce, and the public.
Causal factors Check box and free text field	e.g. Alcohol, fatigue, infrastructure defects, etc.	Describes the underlying causes or triggers of the event.	Supports root cause analysis and informs preventative interventions.
Action taken Check box and free text field	Free text field	Records any response or follow-up action taken after the event.	Enables tracking of resolution efforts and supports accountability and continuous improvement.

A.6 Requirements and guidance

Shared terminology is essential for consistent monitoring of public transport safety. It enables comparable sector wide data, trend analysis, benchmarking, and informed decision-making. The table below outlines requirements and guidance for applying the national safety and security classifications.

Requirements and guidance	
1	**Use of Nationally Consistent Classifications and Definitions** For all public transport activities co-funded by NZTA, PTAs must apply nationally consistent safety and security classifications, terminology, and definitions when recording and reporting events. Stakeholders **must** not add or modify Event Type or Primary Classification categories without written agreement from NZTA. However, where amendments are needed, stakeholders are encouraged to propose changes. Subject to NZTA's agreement, the national guidance will be updated, and the change will be made accessible to all sector stakeholders. Stakeholders **may** add any number of sub-categories as needed without prior NZTA agreement, provided they are nested within and related to a Primary Classification category.
2	**Contractual Alignment** PTAs **must** ensure that public transport operating contracts require the use nationally consistent safety and security classifications, terminology, and definitions when recording and reporting events.
3	**Event Identification and Severity Assessment** Each event **must** be assigned a unique identifier to prevent double-counting and enable multi-dimensional analysis. Events involving multiple classifications **should** have a severity rating assigned to each applicable sub-classification. When aggregating data, the highest severity rating across all sub-classifications must be used to represent the event for reporting purposes. This ensures accurate prioritisation and reflects the most serious impact associated with the event. Where relevant, assigned severity **should** be reviewed and updated to reflect any long-term impacts or new information.
4	**Minimum Contextual Data for Serious Events** Public transport safety and security events assessed as Moderate, Major or Catastrophic **should** have the following contextual information recorded as a minimum: • Time • Event description • Location • People involved • Action taken • Causal factors For Minor or Near Miss events, contextual information is encouraged. Where possible, capturing even basic context can support broader analysis and continuous improvement.

A.6 National Reporting

The following tables provide a format for aggregated regional safety and security reporting to NZTA for a given reporting period (e.g. quarterly).

A.6.1 Reporting total number of events

This table records the total number of unique safety and security events; each counted once regardless of how many classifications may apply to each. It provides essential baseline context for understanding the overall volume and severity of incidents across public transport environments.

⚠️ **Note:** Severity is assessed across three factors (harm to people, property damage, and service disruption). Information in this tables reflects the highest severity level reached across the three factors.

Public transport environments where event occurred		Total events	Number of events by severity (based on the highest severity level assigned to each event)				
			(1) Minimal / Near Miss	(2) Minor	(3) Moderate	(4) Major	(5) Catastrophic
Bus	Personal						
	Operational						
Rail	Personal						
	Operational						
Ferry	Personal						
	Operational						
At nodes / catchments	Personal						
	Operational						
Operational / not public	Personal						
	Operational						
Total							

A.6.2 Reporting reporting by operating environment and people harm

This table presents a breakdown of safety and security events by public transport mode, operating environment, and people impacted (passengers, workforce, public).

⚠️ **Note:** Figures reflect classification entries, not unique events. A single event can impact multiple user groups and have multiple classifications. Care is need when interpreting information as the number of classification entries can exceed the number of unique events that occurred.

Public transport environments where event occurred	People impacted	Total events involving passengers, workforce, or public	Number of events by severity (based on the highest severity level assigned to each event)				
			(1) Minimal / Near Miss	(2) Minor	(3) Moderate	(4) Major	(5) Catastrophic
Bus	Passenger						
	Workforce						
	Public						
Rail	Passenger						
	Workforce						
	Public						
Ferry	Passenger						
	Workforce						
	Public						
At nodes / catchments	Passenger						
	Workforce						
	Public						
Operational / not public	Passenger						
	Workforce						
	Public						
Total							

A.6.2 Reporting by operating environment and event classification

This table presents the number of classification entries by severity across different public transport environments and event types. It provides a aggregated view of how safety and security events are distributed across modes and operational contexts, offering insight into the types of risks encountered.

⚠ **Note:** Figures reflect classification entries, not unique events. A single event can have multiple classifications, offering broader insight. Care is need when interpreting information as the number of classification entries can exceed the number of unique events that occurred.

Environment	Events by Classifications Note: the total number of classifications may be higher than the total number of events, as a single event can have multiple classifications.	Total events by classification	Number of classifications by severity rating				
			(1) Minimal / Near Miss	(2) Minor	(3) Moderate	(4) Major	(5) Catastrophic
Bus	Harmful Interactions						
	Medical & Accidental Injuries						
	Vehicle-related Events						
	Infrastructure & Facility Hazards						
	Security Threats						
	Vandalism & Property Damage						
Trian (rail)	Harmful Interactions						
	Medical & Accidental Injuries						
	Vehicle-related Events						
	Infrastructure & Facility Hazards						
	Security Threats						
	Vandalism & Property Damage						
Ferry	Harmful Interactions						
	Medical & Accidental Injuries						
	Vehicle-related Events						
	Infrastructure & Facility Hazards						
	Security Threats						
	Vandalism & Property Damage						
At nodes / Catchments	Harmful Interactions						
	Medical & Accidental Injuries						
	Vehicle-related Events						
	Infrastructure & Facility Hazards						
	Security Threats						
	Vandalism & Property Damage						
Operational / not public	Harmful Interactions						
	Medical & Accidental Injuries						
	Vehicle-related Events						
	Infrastructure & Facility Hazards						
	Security Threats						
	Vandalism & Property Damage						
Other	All other events						

APPENDIX B – WORKFORCE MONITORING

B.1 Purpose

A sustainable and resilient bus driver workforce is essential for delivering reliable public transport and consistently good customer experience. These are key enablers for increasing patronage and enabling broader outcomes in the public interest.

While PTOs have primary responsibility as employers, PTAs and other stakeholders play a vital role in enabling a sustainable and robust workforce. This reflects a relational delivery approach, where success depends on long-term collaboration and shared responsibility.

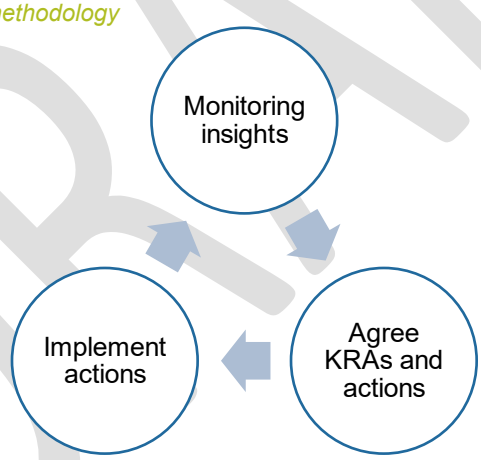
The following outlines a nationally consistent approach to monitoring workforce trends and prioritising initiatives relevant to regional and local context.

B.2 Method Overview

The approach aims to create a simple feedback loop. PTAs and PTOs use workforce monitoring insights to agree Key Result Areas (KRAs) and associated actions appropriate to local and regional context.

Monitoring is then used to assess implementation and refine KRAs on an annual basis or as otherwise needed through mechanisms built into bus operating contracts, such partnering forums and the joint annual improvement plans.

Figure 5 Workforce monitoring methodology



The following outlines the three key components:

- Monitoring
- KRAs
- Implementation

B.2.1 Monitoring

Workforce monitoring draws on two complementary sources of information:

- **Statistical information -** quantitative information reported by PTOs to PTAs at least annually, covering workforce composition, recruitment, retention, and key terms and conditions. This information, using nationally consistent definitions, provides a base for understanding trends over time.

- **Attitudinal information -** insights gathered directly from bus drivers via a nationally consistent survey and day to day feedback channels from bus drivers. This component captures workforce sentiment and lived experience, offering context that cannot be derived from numbers alone.

Both the statistical and attitudinal components use a core set of nationally consistent measure definitions and survey questions. These remain stable over time to support comparability and trend monitoring. PTAs and PTOs can and should add locally relevant content where needed.

Together, these sources provide a balanced view of workforce dynamics, combining key metrics with lived experience. This helps inform continuous improvement in a sector that is constantly evolving.

Because the core data is collected consistently across regions, insights can be anonymised and aggregated to show national trends. This enables an evidence base for sector-wide initiatives that individual stakeholders may not be able to pursue on their own.

B.2.2 Key Result Areas (KRAs)

KRAs are the focus areas that PTAs and PTOs jointly agree to prioritise based on workforce monitoring insights. They help turn information into action by identifying the most important issues and opportunities to address based on local and regional context.

KRAs can range from straightforward to ambitious. In some cases, they may focus on maintaining good practice where workforce monitoring shows strong levels of wellbeing and sustainability. In other cases, KRAs may target more complex or challenging issues that require sustained effort to achieve desired outcomes.

Some actions linked to KRAs may take time to implement or rely on other parties, funding, or decision-making processes. Even so, agreeing on KRAs helps ensure that effort is directed toward agreed priorities, even where implementation needs to be staged over time or has dependencies beyond the direct control of those identifying the KRAs.

KRAs should be reviewed and refined annually, or as needed, through mechanisms built into bus operating contracts, including partnering forums and joint improvement plans.

B.2.3 Implementation

Each Key Result Area (KRA) must be supported by:

1. **Clearly defined actions and responsibilities**

   Actions should be practical and achievable, with each party accountable for what is within their control and use shared information to influence outcomes beyond their direct control.

2. **Expected impact**

   For each action, PTAs and PTOs should briefly identify the expected impact and how this would be measured. This may be measured through improvements in:

   - Statistical indicators (e.g. retention rates, absenteeism, recruitment success)
   - Attitudinal indicators (e.g. driver satisfaction, engagement, wellbeing)

   Indicators provide a basis for assessing effectiveness over time. Monitoring should be used to confirm whether actions are having the intended effect, and to inform decisions about whether to continue, adapt, or discontinue specific initiatives.

3. **Approach for managing actions that cannot be implemented**

   Some actions may face constraints, such as funding, policy settings, or third-party dependencies, that prevent implementation despite best efforts. In these cases:

   - PTAs and PTOs should document the barriers

- Focus should shift to the next best alternative or interim approach
- Longer-term solutions should remain on the agenda, supported by joint evidence-based advocacy or influence where relevant.

B.3 Definitions – Bus Driver Workforce Statistical Information

This section outlines the core statistical indicators used to monitor the bus driver workforce across four key domains: demographics, recruitment and retention, work profile, and safety. These indicators provide a consistent evidence base for understanding workforce dynamics over time.

The purpose of statistical monitoring is to:

- Track changes in workforce composition, stability, and working conditions
- Identify emerging risks or opportunities for improvement
- Support informed decision-making and collaborative planning between PTAs and PTOs.

While statistical data offers valuable insights, it has limitations. It does not capture the full context behind trends, nor does it reflect individual experiences or motivations. For this reason, statistical monitoring should be complemented by attitudinal insights and local knowledge to build a complete picture of workforce health and sustainability.

B.3.1 Monthly reporting

Indicator	Measures	Value	Reporting
Workforce Safety	Refer to Appendix A.		

B.3.2 Quarterly reporting

Quarterly reporting provides a strategic overview of workforce capacity and alignment with service delivery needs. It helps identify gaps between actual staffing levels and operational targets, supporting recruitment planning and providing context for contract performance monitoring.

Indicator	Measures	Value	Definition
Actual Workforce	Full-Time bus drivers		Actual number of bus drivers employed who operate public bus services contracted by a PTA. Refer to Technical Note 1 for further definition
	Part Time bus drivers		
	Total		
Target Establishment	Full-Time bus drivers		Target number of bus drivers employed to reliably and sustainably operate public bus services contracted by a PTA. Refer to Technical Note 2 for further definition
	Part Time bus drivers		
	Total		
Workforce Gap	Total gap #		Difference between Actual and Target number of bus drivers. Refer to Technical Note 3 for further definition
	Percentage gap %		
Absenteeism	Monthly absenteeism rate %		Absenteeism rate of bus drivers who operate public bus services contracted by a PTA. Refer to Technical Note 4 for further definition

B.3.3 Annual reporting

Annual reporting provides a comprehensive view of the driver workforce over the financial year (July–June), supporting strategic planning, contract performance monitoring, and sector-wide benchmarking. It is designed to balance the need for meaningful insight with administrative efficiency, by requiring data to be reported once annually, while still enabling useful trend monitoring over time.

It encompasses two distinct types of reporting:

- **Snapshot Reporting**: Captures a point-in-time view of workforce characteristics as at the end of the financial year (typically June). This includes measures such as pay rates, shift profiles, and hours worked, which reflect the status of the workforce at a specific moment.
- **Cumulative (Annualised) Reporting:** Summarises activity across the full 12-month period, such as the number of drivers who commenced and exited employment.

Measures are organised into three indicator groups:

- **Workforce Profile** - Tracks demographic characteristics such as age, gender, and right to work status, helping to monitor diversity, equity, and long-term workforce sustainability.
- **Pay and Work Profile** - Focuses on key terms and conditions of employment, including hours worked, shift structures, and pay rates. These measures help assess the quality and efficiency of working arrangements.
- **Recruitment, Retention, and Transfers** - Monitors workforce movement into, within, and out of the sector. This includes new hires, internal transfers, and exits, providing insight into workforce stability, recruitment effectiveness, and turnover trends.

While annual reporting offers valuable high-level insights, it may not capture short-term fluctuations or operational nuances. It should be used alongside other information and be interpreted within local context.

B.3.4 Indicator group 1 – Workforce profile

Indicator	Measures	Value	Definition
Age Profile	Less than 18		Number of bus drivers by age bracket who operate public bus services contracted by a PTA.
	18 to 44		
	45 to 64		
	65 to 74		
	75+		
	Total		
Gender	Female		Number of bus drivers by gender who operate public bus services contracted by a PTA.
	Male		
	Other		
	Total		
Temporary Right to Work	Total number of drivers		Number of bus drivers who operate public bus services contracted by a PTA with a temporary right to work in NZ (e.g. temporary work visa).
	Percent of total driver workforce		

B.3.5 Indicator group 2 – Pay and work profile

Indicator	Measures	Value	Definition
Total Workforce Hours	Total in-serve hours		Total number of paid hours across all drivers who operate public bus services contracted by a PTA.
	Total out-of-service hours		
	Total hours		
Pay Rates	Base Rate		Hourly rates paid to bus drivers that operate services contracted to a PTA. Refer to Technical Note 5 for further definition
	Average Rate		
Shift Profile	Total Shifts		Number of bus drivers by shift type for a nominated 7-day survey week who operate services contracted by a PTA.
	Total Straight Shifts		
	Total Split Shifts		

	General Split Shifts		Refer to Technical Note 6 for further definition
	School-Related Split Shifts		
Hours per Week	Less than 30 hours per week		Total number of bus drivers for a nominated 7-day survey week who operate services contracted by a PTA. Refer to Technical Note 7 for further definition
	Between 30 - 45 hours per week		
	More than 45 hours per week		
Span of Hours	8 hours and less		Total number of shifts for the reporting period for drivers employed to operate public bus services contracted by a PTA. Refer to Technical Note 8 for further definition
	> 8 hours up to 12		
	> 12 hours up to 15 hours		
	> 15 hours		

B.3.6 Indicator group 3 – Recruitment, retention and transfers

Indicator	Measures	Value	Definition
Commenced employment	Part time		Total number of bus drivers by recruitment category who commenced employment to operate public bus services contracted by a PTA during the 12-month period from (government financial year). Refer to Technical Note 9 for further definition
	Full time		
	Total		
Recruitment source	Domestic - New to sector		
	Domestic - From within sector		
	Overseas - New to sector		
	Total		
Ceased employment	Part time		Total number of bus drivers who ceased employment that were operating public bus services contracted by a PTA during the 12-month period from July to June. Refer to Technical Note 10 for further definition
	Full time		
	Total		
Retained within sector workforce (where known)	Moved to different PTO - no change PTA / PTO contract		
	Moved to different PTO – due to change PTA / PTO contract		
Exited sector workforce (where known)	Moved to different industry		
	Retired		
	Other		
	Unknown		

B.4 Technical notes

1. Actual Workforce

This indicator captures a point-in-time snapshot of the total number of drivers employed to operate public bus services contracted by a PTA as at the nominated survey date. The count includes both full-time and part-time drivers, as reported by the contracted operator to the PTA, and is grouped as follows:

- **Full-time** – Drivers working 30 or more paid hours per week
- **Part-time** – Drivers working less than 30 paid hours per week

This measure provides a baseline for understanding workforce capacity and is used in conjunction with Target Establishment to assess workforce sufficiency and identify any gaps.

2. Target Establishment

This indicator captures the number of drivers required to reliably and sustainably deliver public bus services contracted by a Public Transport Authority (PTA). It reflects the workforce needed to meet scheduled service levels without compromising driver wellbeing or operational resilience.

- **Reliably operate** means having sufficient drivers available to recover from typical service disruptions and refers to the absence of service cancellations or service level reductions due to driver availability.
- **Sustainably operate** means being able to deliver services in a manner that is sustainable for bus drivers on an ongoing basis, with respect to factors such as working hours, fatigue and the ability to take leave and attend training opportunities

This indicator is used alongside Actual Workforce to assess workforce sufficiency and calculate the Workforce Gap.

3. Workforce Gap

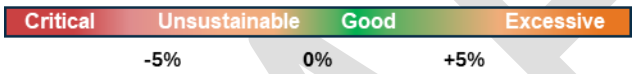
This indicator calculates the percentage difference between the number of drivers currently employed (Actual Workforce) and the number required to reliably and sustainably operate services (Target Establishment). It provides a simple metric to assess whether the workforce is under- or over-supplied relative to operational needs.

- **Formula:** Workforce Gap % = ((A-B) / B) x 100

  Where:

  A = Actual Workforce

  B = Target Establishment
- **Interpretation**
  - Negative value = shortfall (fewer drivers than needed)
  - Positive value = surplus (more drivers than needed)
  - Target = gap value close to 0% but not below
  - Gap spectrum (indictive guide only)



4. Absenteeism

This indicator measures the proportion of scheduled workdays lost due to unplanned absences among drivers employed to operate public bus services contracted by a PTA. It helps assess workforce availability and operational resilience.

- **Formula:** Absenteeism Rate (%) = A / B × 100

  Where:

  A = all unplanned absence days for a reporting period.
  B = the total possible workdays for all employees in the same period.
- **Definition:**
  - Unplanned absences - includes sick leave and unexplained absences.
  - Planned absences - such as annual leave, training, and statutory entitlements. These are excluded from the Absenteeism Rate calculation.

This measure should be interpreted alongside other indicators such as workforce size, shift structure, and wellbeing insights to understand underlying potential causes and potential impacts.

5. Pay rates

Pay rate indicators provide insight into the hourly earnings of bus drivers operating services contracted by a Public Transport Authority (PTA). Two complementary measures are used:

- **Base Hourly Rate** - The minimum hourly rate a bus driver is paid exclusive of any other benefits such as allowances, penal rates and KiwiSaver contributions.
  - Benefits
    - Clearly defines the minimum wage a driver is paid.
    - Useful for assessing compliance with minimum wage requirements.
    - Provides a consistent benchmark across contracts and regions.
  - Limitations
    - Excludes additional earnings such as allowances, penal rates, and bonuses.
    - Does not reflect the actual earnings or total compensation received by drivers.

- **Average Hourly Rate -** The average hourly rate paid across the workforce, inclusive of all direct payments such as allowances and penal rates paid directly to drivers.
    - **Formula:** Average Hourly Rate = A / B

      Where:

      A = All direct payments made to drivers during the reporting period.

      B = Total paid hours worked by drivers during the same period.
    - Benefits
        - Reflects the average hourly earnings across the workforce.
        - Accounts for additional benefits such as allowances and penal rates.
        - Provides a comparable benchmark across contracts and regions.
    - Limitations
        - Influenced by roster patterns, and other variable factors.
        - Can vary significantly across bus drivers.

6. Shift profile

This indicator captures a point-in-time snapshot of the structure and distribution of shifts worked by bus drivers operating services contracted by a PTA.

Definitions

- A **shift** is a scheduled period of work assigned to a driver on a given day, which may consist of one or more work periods.
- A **work period** begins when the driver signs on for duty and ends when they sign off, including all authorised breaks (paid or unpaid) as defined in the driver's employment agreement.
- **Shifts** are classified as:
    - **Straight Shift**: A shift where the unpaid break between working periods is less than two consecutive hours. The entire shift is treated as a single continuous work period.
    - **Split Shift**: A shift that includes a Split Period of two or more consecutive unpaid hours between distinct working periods. During the Split Period, the driver is not required to be present and has no duties or responsibilities. Each portion of work before and after the Split Period is treated as a separate work period.
- **Split shifts** are further classified as:
    - **General Split Shifts**: Not directly tied to school transport schedules; typically arise from general service patterns.
    - **School-Related Split Shifts:** Scheduled specifically or substantially to align with school transport demand (e.g. morning and afternoon school runs).

Measures:

- Total Shifts - All shifts worked during the reporting period.
- Total Straight Shifts - Shifts with unpaid breaks <2 hours.
- Total Split Shifts - Shifts with unpaid breaks ≥2 hours.
- General Split Shifts - Subset of split shifts not linked to school services.
- School-Related Split Shifts - Subset of split shifts linked to school services.

Ratios:

- Straight Shift Ratio (%) = (Straight Shifts / Total Shifts) × 100
- Split Shift Ratio (%) = (Split Shifts / Total Shifts) × 100
    - General Split Shift Ratio (%) = (General Split Shifts / Split Shifts) × 100
    - School-Related Split Shift Ratio (%) = (School-Related Split Shifts / Split Shifts) × 100

7. Hours per Week

This indicator captures a snapshot the total paid hours worked by each bus driver during a nominated 7-day survey week, for services contracted by a PTA.

Definition

Total paid hours:

- Includes
  - In-service driving time,
  - Paid breaks
  - Paid out-of-service duties (e.g. depot tasks, training)
- Excludes:
  - Unpaid breaks
  - Split periods
  - All other unpaid time

Measures

The indicator is grouped into three measure categories being the number of drivers that worked:

- Less than 30 hours per week
- 30 to 45 hours per week
- More than 45 hours per week

Benefits

- Provides a comparable benchmark across networks and regions.
- Combines with other information can offer insight into workforce preferences and by context which varies by location and type of services being provided.

Limitations:

- Preferences and operational requirements vary by context
- The measures do not account for unpaid time, such as split periods or standby time.
- It reflects a snapshot and may not capture seasonal or roster-based variations unless tracked over time.

8. Span of hours

This indicator captures a point-in-time snapshot the total duration of a driver's working day, from first sign-on to final sign-off, including all paid and unpaid breaks for a nominated survey period. It provides insight into the overall spread of time a driver is engaged with work-related duties, regardless of whether they are actively driving, on break, or in a split period.

Definition

Span of Hours = The total time between a driver's first sign-on and final sign-off on a given day, inclusive of:

- All work periods
- Paid and unpaid breaks
- Split periods (≥ 2 hours where the driver is not required to be present)

Formula: Span of Hours = A - B

Where:

A = Time of final sign-off.

B = Time of first sign-on

Measures:

Total number of shifts grouped by span duration for a nominated survey period:

- 8 hours or less
- More than 8 hours up to 12 hours
- More than 12 hours up to 15 hours
- More than 15 hours

Benefits

Useful for understanding:

- The length of the working day from a shift design and driver perspective.
- The impact of scheduling practices on fatigue, wellbeing, and operational efficiency.
- The distribution of shift lengths across the network, region and nationally.

Limitations

- This indicator reflects shift duration, not actual hours worked or paid.

- It includes non-working time, such as unpaid split periods, which may inflate the perceived workload.
- It reflects a snapshot and may not capture seasonal or other variations unless tracked more frequently over time.

9. Commenced employment

This indicator tracks the number of bus drivers who commenced employment during the financial year (July–June) to operate services contracted by a PTA. It provides insight into recruitment activity, workforce inflow, and the source and type of new hires, supporting workforce planning and sector-wide benchmarking:

- Employment Type: Full-time and part-time
- Recruitment Source: Domestic (new to sector or from within sector), and overseas

Definitions:

- **Commenced employment - By Employment Type**

  Total number of drivers who began employment during the reporting period, grouped by:
  - Full-time
  - Part-time

- **Commenced Employment – By Recruitment Source** (where known)

  Total number of drivers who commenced employment during the reporting period, grouped by:
  - Domestic – New to Sector: Recruited from outside public transport sector providing bus contracted by a PTA
  - Domestic – From Within Sector: Previously employed by another public transport operator to provided bus serves contracted by a PTA
  - Overseas – New to Sector: Recruited from outside New Zealand

Benefits:

- Provides insights into recruitment activity and the source and type of new hires
- Provides a comparable benchmark across networks and regions.

Limitations:

- Reflects headcount, not full-time equivalent (FTE), so may not indicate actual capacity added.
- Does not assess retention or long-term workforce impact.

10. Ceased employment

This this indicator tracks the number of bus drivers who ceased employment during the financial year (July–June) who were employed to operated services contracted by a PTA. It provides insight into workforce outflow, retention, and sector mobility, helping identify turnover trends and inform retention strategies. The measure is reported by:

- Employment Type: Full-time and part-time
- Exit Destination: Whether the driver remained in the sector or exited entirely

Definitions:

- **Ceased Employment – Employment Type**

  Total number of drivers who exited employment during the reporting period, grouped by:
  - Full-time
  - Part-time

- **Retained Within Sector Workforce** (where known)

  Drivers who remained in the public transport sector, grouped by:
  - Moved to Different PTO – No Change in PTA/PTO Contract
  - Moved to Different PTO – Due to Change in PTA/PTO Contract

- **Exited Sector Workforce** (where known)

  Drivers who left the public transport sector, grouped by:
  - Moved to Different Industry

- Retired
- Other
- Unknown

Benefits:

- Provides insights into recruitment activity and the source and type of new hires
- Provides a comparable benchmark across networks and regions.

Limitations:

- May not capture all reasons for exit, especially if data is incomplete or unknown
- Reflects headcount, not FTE, and does not indicate the impact on service delivery
- Should be interpreted alongside recruitment and tenure data for a full workforce lifecycle view

B.5 Overview – Attitudinal Survey

A nationally consistent attitudinal survey is currently under development by Waka Kotahi NZ Transport Agency. The survey will apply to all bus service contracts co-funded by the Agency, specifically those where operators are contracted by Public Transport Authorities (PTAs) to deliver public bus services. The survey will be designed in consultation with PTAs and operators to ensure relevance, practicality, and consistency across the sector.

All new bus service contracts co-funded by NZTA must include a clause requiring participation in the national attitudinal survey. The survey will be conducted on a regular basis and is intended to complement—rather than replace—any internal initiatives undertaken by operators for their own business purposes or in accordance with their wider organisational policies.

PTAs will be responsible for executing the survey in partnership with their contracted service providers, within a nationally consistent time window. Operators will be responsible for enabling access to the survey and actively promoting participation among the relevant workforces.

PTAs and operators will jointly be responsible for using the insights to identify Key Result Areas (KRAs) and respective actions as part of joint planning initiatives, if and when warranted. NZTA will be responsible for using aggregated and anonymised insights to facilitate and coordinate national initiatives and KRAs with sector stakeholders, if and when warranted.

To protect privacy and manage potentially commercially sensitive information:

- Individual respondents will not be identified.
- Survey data will be aggregated and anonymised at the regional level and then collated nationally.
- Operator-specific results will not be published at regional or national levels.

Further guidance on survey content, administration, and reporting will be subject to engagement and consultation in due course.

APPENDIX C – SERVICE RELIABILITY MONITORING

C.1 Purpose

Service reliability is a cornerstone of public transport performance. It directly affects customer experience, operational efficiency, and public trust. This appendix outlines nationally consistent definitions, measurement categories, and reporting expectations to ensure reliable and comparable monitoring across all bus operating contracts co-funded by NZTA.

C.2 Key Concepts

Service reliability encompasses two core dimensions:

- Trip Reliability – Whether the scheduled trip was delivered as intended.
- Punctuality – Whether the trip adhered to its scheduled time or service headway.

C.3 Method Overview

Monitoring service reliability and punctuality involves three core elements: trip states, trip reliability and trip punctuality.

C.3.1 Trip States

Each scheduled trip can be assigned one of the following states:

- **Scheduled** – Listed in the official timetable.
- **Operated – Sighted** – Confirmed as operated by a vehicle tracking system
- **Operated – Unsighted** – Known to have run but not tracked by a vehicle tracking system
- **Cancelled** – Did not run or ran less than 5% of its route.
- **Short-Run** – Started but did not reach the final stop.
- **Completed** – Origin to final stop successfully delivered.

These states form the basis for calculating cancellation rates, short-run frequency, and overall trip delivery

C.3.2 Reliability Attributes

A trip is considered “reliable,” when the following attributes have been achieved:

- Trip correctly logged into RTI and ticketing systems
- On-time departure from first stop
- Correct vehicle type and size
- Route and stops adhered to (no skipping stops or short running unless authorised)

These components reflect key customer-facing attributes of a reliable trip.

C.3.3 Punctuality

Punctuality is a key measure of service reliability and a highly visible aspect of customer experience. It reflects whether services run on time, either according to a published timetable or at regular intervals and is often the first indicator passengers use to judge service quality.

Because public transport services vary in purpose, design, and frequency, it is important punctuality is measured using methods that are appropriate to the specific service type. This helps to ensure that performance expectations are:

- Fair - reflecting what is reasonable given the service context.
- Meaningful - aligned with how passengers actually experience the service.
- Actionable - supporting continuous improvement and accountability.

Two nationally consistent methods are used to measure punctuality:

- Stop Punctuality — for lower-frequency, timetable-based services.
- Excess Wait Time (EWT) — for higher-frequency, turn-up-and-go services.

Each method is outlined below, including how it works, why it matters, and how it supports broader monitoring and continuous improvement.

a. Stop Punctuality (Lower-Frequency Services ≤4 buses/hour)

Stop punctuality is the standard method for measuring on-time performance on lower-frequency routes, where buses run less frequently and passengers rely on published timetables to plan their journeys. In these contexts, even small deviations from the timetable, especially early departures, can result in missed trips, long waits, or disrupted connections for passengers.

This method focuses on whether a bus departs bus stops within an acceptable time window relative to the scheduled time. It provides a simple, intuitive measure of punctuality that aligns with passenger expectations and supports operational management:

- **On Time**: Departs between 59 seconds early and 4 minutes 59 seconds late.
- **Early**: Departure 1 minute or more before scheduled time.
- **Late**: Departure 5 to 14 minutes 59 seconds after scheduled time.
- **Very Late**: Departure 15 minutes or more after scheduled time.

b. Excess Wait Time (Higher-Frequency Services ≥5 buses/hour)

On high-frequency routes, passengers expect buses to arrive regularly, typically every few minutes, without needing to consult a timetable. In this context, the spacing between buses (headways) is more important than adherence to exact scheduled time at stops.

Excess Wait Time (EWT) is a method used to measure how well this expectation is met. It focuses on the actual wait time experienced by passengers and compares it to what they would expect based on the scheduled frequency.

EWT is particularly useful because it captures the real-world impact of irregular service, including delays, gaps between buses, and cancellations, all of which can significantly affect passenger experience. How it works:

- **Scheduled Wait Time (SWT):** The average time a passenger would expect to wait based on the scheduled frequency. For example, if buses are scheduled every 10 minutes, the SWT is 5 minutes (10 / 2 = 5).
- **Actual Wait Time (AWT):** The average time passengers actually wait, based on observed service delivery.
- **Excess Wait Time (EWT)** = AWT – SWT

Example: If buses are scheduled every 10 minutes (SWT = 5 mins), but due to delays and gaps the actual average wait is 15 minutes, then:

- **EWT** = 10 minutes (5 - 15 = 10)

Services with well manged headways will have an average EWT close to zero, representing good customer experience.

C.4 Reliability Monitoring – Definitions and Context

Service reliability encompasses two core dimensions:

- Trip Reliability – Whether the scheduled trip was delivered as intended.
- Trip Punctuality – Whether the trip adhered to its scheduled time or service headway.

Reliability monitoring provides a structured way to understand whether public transport services are being delivered as planned. It supports operational management, service planning, contractual oversight, and system-wide improvement. This section introduces key definitions and outlines how reliability can be monitored at different levels, from individual trips to national performance, and for different purposes.

C.4.1 Key Definitions

To monitor reliability consistently, it's important to define the core elements of a public transport trip:

- **Trip:** A single scheduled journey from origin to destination, listed in the official timetable. Each trip is the basic unit of service delivery and reliability monitoring.
- **Route:** A defined path that a trip follows, typically made up of multiple stops and timing points. Routes are the building blocks of a public transport network.
- **First Stop:** The origin point of the trip, where the journey is scheduled to begin. This is a key reference point for punctuality and contractual performance.
- **Timing Points:** Designated stops along the route used for operational control and performance measurement. These are typically used to assess punctuality and runtime consistency and often form the basis for contractual KPIs.
- **Last Stop:** The final stop of the trip, where the journey is scheduled to end. Monitoring arrival at the last stop supports assessment of trip completion and a trip runtime.
- **All Stops:** Every stop along the route, including timing points and intermediate stops. Monitoring at all stops provides a more complete picture of customer experience and service delivery.

Insert image:

C.4.2 Monitoring Structure

Reliability can be monitored at multiple levels, each building on the one below:

A. **Trip-Level Performance -** Captures whether each scheduled trip was delivered as planned, including trip states (e.g. completed, cancelled, short-run and punctuality). This is the foundation of reliability monitoring.

B. **Route-Level Performance -** Aggregates trip-level data to assess how reliably a specific route is operating over a given period (e.g. day, week, month, year). Useful for identifying persistent issues and focus areas for improvement.

C. **Network-Level Performance -** Combines route-level data to assess the reliability of entire public transport networks within a region. Supports strategic planning, benchmarking and investment prioritisation.

D. **Regional Performance -** Aggregates network-level data across all services in a region. Used for regional reporting, benchmarking, continuous improvement

E. **National Performance -** Combines regional data to provide a system-wide view of reliability across Aotearoa. Supports policy development, national benchmarking, and continuous improvement.

This layered structure supports vertical integration of monitoring allowing performance data to be aggregated from the trip level all the way to national insights. It also enables monitoring to serve different purposes, from tactical service adjustments to strategic investment planning nationally.

C.4.3 Monitoring for Different Purposes

Reliability data serves different functions depending on the audience and use case:

A. **Customer Experience Monitoring**
Where technology allows, monitoring reliability across all trips and punctuality at all stops provides an accurate reflection of what passengers actually experience. This includes whether buses arrive and depart reliably throughout the journey, not just at key timing points.

B. **Improvement Planning and Optimisation**
Network planners rely on reliability and punctuality data to optimise timetables, assess runtime variability, and identify where infrastructure improvements may be needed

C. **Contractual Oversight -** Monitoring punctuality at first stops and timing points is typically used to assess operator performance against contractual KPIs and for applying financial incentives (e.g. abatements or bonuses) for factors within the operators influence.

D. **Strategic and System-Level Insights**
Aggregated reliability data supports broader decision-making, including investment prioritisation, policy development, and benchmarking across, networks, regions and operators.

C.5 Monitoring Systems

Effective reliability monitoring depends on what is measured and how it is measured. This section outlines good practice for monitoring systems, including the use of vehicle tracking, data integration, diagnostic tools, and shared operational interfaces that support continuous improvement and collaborative delivery.

C.5.1 Good Practice in Monitoring Systems

1. **Automated Vehicle Tracking**

   A core component of reliability monitoring is the use of a vehicle tracking system that automatically compares actual trip delivery against the published schedule. This enables consistent, objective, and scalable monitoring of trip states and punctuality.

   To function effectively, vehicle tracking systems must be supported by three key ingredients:

   - **GPS Feeds**: Accurate location data from onboard systems (see below for further context).
   - **GTFS Schedules**: Up-to-date General Transit Feed Specification (GTFS) data, including vehicle block information that links trips to specific vehicles.
   - **Accurate Trip Assignment**: Accurate log-on data confirming which driver and vehicle are assigned to each trip, information is typically sourced from real-time ticketing system data feed.

   Together, these elements ensure that trips are correctly matched to their scheduled journeys, enabling reliable monitoring and reducing the number of unsighted or misclassified trips.

2. **Multiple GPS Feeds**

   Good practice includes using more than one GPS feed to provision real-time information and support vehicle tracking. This improves data quality, increases trip sighting rates, and provides redundancy in case of system failure.

   Common sources include:

- **Ticketing systems**
- **Real-time information systems** (e.g. RTI feeds)
- **Telematics systems** installed by operators (e.g. onboard vehicle systems)

Multiple feeds allow for cross-validation and help ensure that trips are accurately recorded, even when one system fails or underperforms.

3. Shared Operational Interface

A key enabler of collaborative monitoring is a shared operational interface that allows both PTA and operator representatives to access the same information, in real time and for historic performance assessment.

- Real-time visibility supports joint operational decision-making, especially during service disruptions or peak periods.
- Historic performance data, categorised by causal factor, enables structured reviews and supports joint planning and continuous improvement.

This shared interface reinforces the principles of transparency, relational delivery, and accountability and influence, ensuring that all parties are working from a common evidence base.

Insert image:

4. Root Cause Assessment Functionality

Root cause assessment is essential for understanding why reliability falls short of expectations, not just what happened, but why it happened. This functionality transforms raw performance data into actionable insights that drive continuous improvement and support joint planning between PTAs and operators.

Root cause analysis can be time-consuming and resource intensive. To address this, good practice centres on leveraging technology to streamline and simplify the assessment process, ensuring that only relevant trips are flagged and that investigation workflows are efficient and intuitive. At a high level, key enablers include:

A. **Intelligent Trip Flagging -** The system should automatically flag only those trips that fail one or more key performance indicators (KPIs) and require further investigation. In most cases, this represents a small proportion of total trips, allowing staff to focus their efforts where it matters most.

B. **Integrated Workflow for Assessment -** Flagged trips should be presented within a diagnostic platform that supports quick and structured review. Key features include:

   - **GPS playback** to visualise the actual trip path, timing and other key trip information.
   - **Dropdown menus or checkboxes** for selecting common causal factors (e.g. congestion, missed login, vehicle substitution)
   - **Free-text fields** for additional context where needed
   - **Bulk assessment functionality** to group related trips affected by the same event (e.g. roadworks, timetable misalignment)
   - **Known Issue Tagging** where a known issue is already identified, such as a timetable issue awaiting resolution, the system should allow that issue to be automatically associated with all affected trips. This avoids duplication of effort and ensures consistent attribution until the issue is resolved (e.g. when a new timetable is implemented).

Root cause assessment functionality enables the system and operations to address both:

- **The "what"** - identifying which trips failed reliability KPIs
- **The "why"** - understanding the underlying causes

This dual capability results in **actionable insights** that drive:

- Joint planning initiatives
- Continuous improvement
- Targeted investment and operational changes

By embedding this functionality within a shared monitoring platform, PTAs and operators can work from a common evidence base, reinforcing the principles of transparency, relational delivery, and accountability and influence.

C.6 People effort

While technology can significantly reduce the manual burden of reliability monitoring, human input remains essential, particularly for validating flagged events and supporting continuous improvement. This section provides indicative guidance on the level of effort required to operate a system with automated trip tracking and root cause assessment functionality.

C.6.1 Indicative guidance for estimating effort

Based on real-world experience from a mid-sized urban network, the following estimates can be used as a general guide:

- **Flag Rate**: Approximately 8–12% of scheduled trips are flagged for review.
- **Manual Review Time**: Each flagged event typically requires an average of 2–3 minutes of human input.
- **Effort per 10,000 Scheduled Trips:**
    - **Flagged Events**: ~800 to 1,200 per year
    - **Total Review Time**: ~27 to 60 hours per year
    - **Indicative Resourcing**: ~0.015 to 0.035 FTE (based on 1,800 annual working hours)

This rule-of-thumb allows PTAs and operators to estimate the resourcing required based on their own trip volumes.

Applying the across the national trip volume suggests a total sector-wide effort of approximately 30 to 60 FTEs across both PTAs and operators to undertake reliability monitoring with route cause assessment.

To help put this into context, as of 2025:

- Approximately 8 million scheduled bus trips are delivered annually across services co-funded by NZTA and PTAs.
- These trips account for around 120 million in-service kilometres each year.
- Services are operated by a workforce of roughly 5,000 bus drivers, across a contracted fleet of about 2,700 buses.
- The combined annual expenditure by PTAs and NZTA on bus services is approximately $800 million.

This scale highlights the importance of investing in systems and processes that support efficient and effective reliability monitoring. When implemented well, these systems drive:

- Improved customer experience, supporting patronage and fare revenue growth
- Reduce operational inefficiencies and enable better utilisation of existing resources

In this context, reliability monitoring that efficiently produces actionable insights and drives continuous improvement can more than pay for itself through improved operational performance.

C.6.2 Resourcing Split and Roles

While both PTAs and operators contribute to monitoring, the primary assessment effort typically resides with operators, who should be responsible for:

- Reviewing flagged trips
- Providing operational context and supporting rationale
- Classifying root causes and contributing to improvement actions

PTAs typically provide an oversight and coordination function, including:

- Validating analysis outputs
- Facilitating joint planning and improvement initiatives
- Ensuring consistency and transparency in reporting across operators

The FTE requirement for PTAs should be lower than that of operators.

However, it is important to avoid a resourcing imbalance between PTAs and operators. Effective relational delivery depends on both parties' having sufficient capability and capacity to engage meaningfully with the monitoring system, interpret insights, and collaborate on improvement actions. A well-balanced approach ensures shared ownership of performance and supports a culture of continuous improvement.

C.7 Nationally Consisent Causal Factor Approach

C.7.1 Context

While most scheduled trips on any given day will typically be delivered reliably and punctually, a subset is likely fall short of reliability KPIs and be flagged for review.

Insert image

Understanding why these trips failed a reliability KPI is essential for turning performance data into actionable insights and driving meaningful improvement.

To support consistent, transparent, and actionable root cause assessment, this section introduces a nationally standardised causal factor framework. The framework enables all parties, PTA, operators, and central agencies to work from a shared evidence base when analysing service reliability issues.

By consistently classifying the underlying causes of reliability KPI failures, this approach supports:

- Continuous improvement through targeted interventions
- Fair and consistent contractual oversight
- Collaborative planning and investment decisions
- System-wide benchmarking and learning

C.7.2 Framework

The framework aims to be both nationally consistent and flexible, providing a robust national structure while allowing for local customisation. It also supports smart filtering, ensuring that users are presented with the most relevant causal factors based on the type of KPI flag, streamlining the assessment process.

Causal factors are grouped into four broad categories that reflect of reliability and punctuality outcomes:

- **Planning and Scheduling -** Covers issues with timetables, driver rosters, and vehicle schedules, key to ensuring services are realistically planned.
- **Operational Delivery -** Relates to day-to-day service execution, including vehicle readiness, driver availability, and depot-based factors.

- **Operating Environment -** Includes external disruptions like roadworks, congestion, weather, and passenger-related delays, often outside direct control of operators and PTAs.
- **Technology and Digital Systems -** Captures failures in systems like GPS, ticketing, and real-time information that affect service tracking and visibility.

Within each category, there are headline factors that remain consistent across all regions. Under each headline, PTAs and operators can define any number of additional causal factors to reflect local operating conditions, contract-specific nuances, or known issues.

Insert image – illustrative example

To strike the right balance between national consistency and local relevance:

- The broad categories and headline factors must remain standard across all regions.
- PTAs and operators are encouraged to add localised causal factors within this structure.
- The accountability column should be tailored on a contract-by-contract basis, reflecting local roles and responsibilities. For example, accountability for a charging infrastructure fault may lie with the operator in one region, but with the PTA or a third party in another, depending on asset ownership.

C.7.3 Automated short listing

Importantly, practitioners should not need to manually search through the full list of potential causal factors. When a trip is flagged for a reliability issue, good practice is for the system to automatically present a shortlist of the most likely causes, based on the nature of the KPI flag. For example:

- Trip state flags (e.g. unsighted) might surface a shortlist such as:
  - *GPS Blind Spot*
  - *Driver Login Error*
  - *Vehicle Breakdown*
- Punctuality flags (e.g. early, late) surface a shortlist such as:
  - *Insufficient Runtime*
  - *Weather Event*
  - *Traffic Congestion*

The shortlist approach makes attribution faster and more accurate. If the correct cause is not included in the shortlist, users should be able to easily access the full list and search or browse by category to find the appropriate attribution.

C.7.5 Casual coding

To enable effective monitoring, causal factors (e.g., timetabling) should be linked to a unique code. To ensure consistency across the sector, NZTA will develop and maintain a national register of causal factor codes for practitioners to select from when defining causal factors. This approach balances regional specificity with national consistency, ensuring that practitioners draw from a single source to support shared understanding.

The register will be dynamic and informed by operational practices: sector practitioners can and should define additional causal factor sub-codes where needed, provided these are communicated to NZTA.

NZTA's function will be to maintain the register, ensuring it remains accurate, up to date, and accessible. It will not approve or decline codes.

C.7.6 Causal factor tables

The following tables outline suggested causal factors for use in reliability monitoring. Each table corresponds to one of the four broad categories.

These tables provide a structured starting point. The broad categories and headline factors are consistent nationally, while PTAs and operators can add additional causal factors under each category to reflect local context and as needed.

1. Planning and Scheduling

This category captures issues related to the design of timetables, driver rosters, and vehicle schedules. These factors often fall under the control of PTAs and operators and are critical for ensuring that services are realistically planned and resourced.

Code	Causal factor	Description	Accountability
TRF	**Timetabling**		
TRF 1.1	Insufficient Runtime	Runtime does not reflect operating conditions	e.g. PTA
TRF 1.2	Insufficient Layover	Not enough time between trips	e.g. PTA
TRF x.x	*Custom...*	*Additional factors as needed by region / contract*	TBC
TRF x.x	Other	Any other timetabling related issue	TBC
SRF	**Workforce and Vehicle Scheduling**		
SRF 2.1	Driver rostering	Driver rostering / scheduling issue or error	e.g. Operator
SRF 2.2	Vehicle blocking	Vehicle blocking / scheduling issue or error	e.g. Operator
SRF x.x	*Custom...*	*Additional factors as needed by region / contract*	TBC
SRF x.x	Other	Any other driver or vehicle scheduling related issue	TBC

2. Operational Delivery

These factors relate to the day-to-day execution of services, including infrastructure readiness, vehicle availability, and driver related factors.

Code	Causal factor	Description	Accountability
IRF	**Infrastructure related factors** (off-network infrastructure e.g. bus depots)		
IRF 1	Bus Charging	Fault with bus charging infrastructure	e.g. Operator
IRF 2	Bus Depot	Issue with depot impacting service delivery	e.g. Operator
IRF x.x	Custom...	Additional factors as needed by region / contract	TBC
IRF x.x	Other	Any other timetabling related issue	TBC
VRF	**Vehicle Related Factors**		
VRF 1	Bus Breakdown	Mechanical fault	e.g. Operator
VRF 2	Bus Damaged	Bus damaged impacting service delivery	e.g. Operator
VRF 3	Flat Battery	Flat or inadequate battery charge impacting service	e.g. Operator
VRF 4	Incorrect Bus	Incorrect bus deployed to trip impacting service	e.g. Operator
VRF x.x	*Custom...*	*Additional factors as needed by region / contract*	TBC
VRF x.x	Other	Any other vehicle related issue impacting service	TBC
DRF	**Driver Related Factors**		
DRF 1	Absence	Driver no show for scheduled trip	e.g. Operator

DRF 2	Lateness	Driver late to commence trip	e.g. Operator
DRF 6	Driver Error	Erro impacting reliability, punctuality or trip tracking	e.g. Operator
DRF 7	Medical Event	Driver related medical event or emergency	e.g. Operator
DRF x.x	*Custom...*	*Additional factors as needed by region / contract*	TBC
DRF x.x	Other	Any other non-safety driver related issue	TBC
RRF	**Trip Recovery Related Factors**		
TRRF 1	Trip Recovery	Sacrificed trip reliability for punctual next departure	e.g. Operator
TRRF x.x	*Custom...*	*Additional factors as needed by region / contract*	TBC
TRRF x.x	Other	Any other driver or vehicle scheduling related issue	TBC

3. Operating Environment

This category includes external and environmental factors that can disrupt service delivery, such as roadworks, traffic congestion, weather events, and passenger-related delays. These are often outside the direct control of any single party.

Code	Causal factor	Description	Accountability
ERF	**External Disruptions**		
ERF 1	Roadworks	Causing delays or diversions impacting service	e.g. Joint
ERF 2	Traffic Accident	Traffic incident impacting but not directly involving bus	e.g. Joint
ERF 3	Weather Event	Severe weather conditions impacting service delivery	e.g. Joint
ERF x	*Custom...*	*Additional factors as needed by region / contract*	TBC
ERF x	Other	Any other external disruption impacting delivery	TBC
CRF	**Corridor / Infrastructure Related Factors**		
CRF 1	Bus Stop Issue	Issue with bus stop placement or design	e.g. PTA
CRF 2	Route Alignment	Issue with bus route alignment / delay hotspot	e.g. PTA
CRF 3	Traffic / Congestion	Abnormally high corridor traffic / congestion	e.g. Joint
CRF x	*Custom...*	*Additional factors as needed by region / contract*	TBC
CRF x	Other	Any other corridor related issue impacting services	TBC
PRF	**Passenger Demand Related Factors**		
PRF 1	High Demand	Delay due to abnormally high passenger numbers	e.g. Joint
PRF 2	Customer Assistance	Delay due to extra passenger assistance provided	e.g. Joint
PRF x	*Custom...*	*Additional factors as needed by region / contract*	TBC
PRF x	Other	Any other passenger demand related issue	TBC
SSRF	**Safety and Security Related Factors**		
SSRF 2	Harmful Interaction	Incident involving workforce and / or passengers	e.g. Joint
SSRF 3	Incident at Facility	Delay due to safety / security incident at PT faciality	e.g. PTA
SSRF 4	Bus Crash	Accident or incident directly involving bus	e.g. Operator
SSRF x	*Custom...*	*Additional factors as needed by region / contract*	TBC
SSRF x	Other	Any other safety or security related issue	TBC

4. Technology & Digital Systems

This group addresses failures in the digital infrastructure that supports service delivery and monitoring, including GPS tracking, ticketing systems, and real-time information feeds. These issues can affect both the visibility and accuracy of reliability data

Code	Causal factor	Description	Accountability
TDRF	**Data System Failure**		
DSRF 1	GTFS Error	Incorrect or outdated data affecting bus tracking	e.g. PTA
DSRF 2	Ticketing System	Ticking system failure affecting bus tracking	e.g. PTA
DSRF 3	RTI System	RTI system failure affecting bus tracking	e.g. PTA
DSRF x	*Custom...*	*Additional factors as needed by region / contract*	TBC
DSRF x	Other	Any other timetabling related issue	TBC
SRF	**Vehicle Tracking Related Factor**		
VTRF 1	GPS Blind Spot	Driver rostering / scheduling issue or error	e.g. PTA
VTRF 2	Driver Login Error	Incorrect trip login affecting accurate trip tracking	e.g. Operator
VTRF 3	Vehicle blocking	Vehicle blocking issue affecting accurate trip tracking	e.g. Operator
VTRF x.x	*Custom...*	*Additional factors as needed by region / contract*	TBC
VTRF x.x	Other	Any other driver or vehicle scheduling related issue	TBC

C.8 Measures and Reporting

C.8.1 Purpose

Practitioners from both PTAs and operators will have real-time access to these measures via the shared operational interface. This platform allows users to view performance at the individual trip level, or to aggregate data by route, unit / contract level as needed, supporting day-to-day operations, joint planning, and continuous improvement.

The following provides guidance for aggregated reporting intended for external audiences, such as NZTA. These measures support consistent national reporting, benchmarking, and strategic oversight across all co-funded services.

A. Trip States, key attributes and causal attribution

Trip state and key attributes measures provide a foundational view of service delivery within a given reporting period (e.g. day, week, month, year). Inevitably some trip will not be operated as intended, causal attribution offers some insight into why.

Measure		Total Trip Count	Percentage %		Causal attribution				
			Total %	Calculation Basis	Planning & Scheduling	Operational Delivery	Operating Environment	Technology Systems	Other
Trip States									
Scheduled Trips	*Total number of trips planed for the reporting period.*	*e.g. 30,000*	n/a	Total count of scheduled trips	*n/a*				
Sighted Trips	*Trips with correct tracking data confirming they ran.*		%	% of scheduled trips	*n/a*				
Unsighted Unknown	*Trips with no tracking data confirming whether they ran.*		%	% of scheduled trips	%	%	%	%	%
Operated Unsighted	*Trips known to have run but were not tracked.*		%	% of scheduled trips	*n/a*				

Cancelled Trips	*Trips that did not run or ran less than 5% of their route.*			%	% of scheduled trips	%	%	%	%	%
Short-Run Trips	*Trips that started but did not reach the final stop.*			%	% of operated sighted trips	%	%	%	%	%
Completed Trips	*Trips that started at the origin and reached the final stop.*			%	% of operated sighted trips	*n/a*				
Key Trip Attributes										
Correct Vehicle	Trips operated with the correct vehicle type and size.	Correct		**%**	% of total sighted trips	n/a				
		Incorrect		**%**		%	%	%	%	%
Trip Login Accuracy	Driver and vehicle correctly assigned in tracking system	Correct		**%**	% of total trips	n/a				
		Incorrect		**%**		%	%	%	%	%
Stop Adherence	Trips where all scheduled stops were served	All stops served		**%**	% of total sighted trips	n/a				
		Stops missed		**%**		%	%	%	%	%
Kilometres Operated	Actual kilometres operated vs scheduled.			**%**	% of scheduled kilometres	n/a				
Notes:										

B. Punctuality and causal attribution

Punctuality measures assess whether trips were on-time, early or late compared to their scheduled times within a given reporting period (e.g. day, week, month, year). Inevitably some services run early or late, causal attribution offers some insight into why.

Measure		**Points of assessment**	**Count / %**	**Causal attribution** For early, late or very late departures / arrivals				
				Planning & Scheduling	**Operational Delivery**	**Operating Environment**	**Technology Systems**	**Other**
Total count – total number of departures / arrivals where punctuality was assessed at bus stops								
Total number of departures / arrivals sighted at bus stops		**First stop**	e.g. 30,000	n/a				
		Timing point						
		All stops						
		Last stop						
Punctuality - % of total departures / arrivals that were on-time, early, late or very late								
On-Time	**Departures**	**First stop**	e.g. 95%	n/a				
		Timing points	%					
		All stops	%					
	Arrivals	**Last stops**	%					
Early	**Departures**	**At first stop**	%	%	%	%	%	%

		At timing points	%	%	%	%	%	%
		At all stops	%	%	%	%	%	%
	Arrivals	**At last stop**	%	n/a				
Late	**Departures**	**At first stop**	%	%	%	%	%	%
		At timing points	%	%	%	%	%	%
		At all stops	%	%	%	%	%	%
	Arrivals	**At last stop**	%	%	%	%	%	%
Very Late	**Departures**	**At first stop**	%	%	%	%	%	%
		At timing points	%	%	%	%	%	%
		At all stops	%	%	%	%	%	%
	Arrivals	**At last stop**	%	%	%	%	%	%

Definitions

- **On-Time** - Departures (all stops) and Arrivals (last stop only) are considered on-time if they occur between 59 seconds early and 4 minutes 59 seconds late.
- **Early** - A trip is early if it departs (at any stop) or arrives (at the last stop) 1 minute or more before the scheduled time.
- **Late** - A trip is late if it departs (at any stop) or arrives (at the last stop) between 5 minutes and 14 minutes 59 seconds after the scheduled time.
- **Very Late** - A trip is very late if it departs (at any stop) or arrives (at the last stop) 15 minutes or more after the scheduled time.

B. Punctuality - Excess Wait Time (Higher-Frequency Services ≥5 buses/hour)

Measure	Definition	Calculation Basis	At First Stop	At Timing Points	At Last Stop	At All stops
Average EWT Ratio*	Average wait divided by scheduled wait (AWT: SWT ratio)	Ratio	x.x	x.x	x.x	x.x

Notes

*This indicates how much longer, on average, passengers are waiting than intended. For example, 1.5 would mean passengers waited 50 percent longer than intended. Definitions:

- **Scheduled Wait Time (SWT):** The average time a passenger would expect to wait based on the scheduled frequency. For example, if buses are scheduled every 10 minutes, the average SWT is 5 minutes.
- **Actual Wait Time (AWT):** The average time passengers actually wait, based on observed service delivery.
- **Excess Wait Time (EWT)** = AWT – SWT
- **EWT Ratio** = AWT / SWT

APPENDIX D – PRICED INCENTIVES

D.1 Purpose of priced incentives

Priced incentives are a core mechanism for managing performance and driving continuous improvement in public transport operating contracts. They include:

- Abatements are deductions from operator payments for underperformance.
- Bonuses are additional payments to operators for or delivering on agreed goals.

They help align operator behaviour with public value by rewarding high performance and discouraging underperformance in areas within the operator's control.

From a financial perspective:

- Abatements represent a cost to operators and a saving to funders.
- Bonuses represent an income to operators and a cost to funders.

This dual nature means incentives must be carefully designed to:

- Encourage high performance and accountability.
- Avoid financial instability for operators.
- Remain affordable and justifiable for funders.

This appendix provides nationally consistent guidance for the design and application of priced incentives in contracts co-funded by NZTA. It aims to support:

- Fair and effective contract management
- Continuous improvement in service delivery
- Alignment with broader monitoring and planning frameworks
- Transparency and shared accountability between stakeholders
- Unintended outcomes

It is important that Priced Incentives be developed and understood as part of a wider performance management approach that includes monitoring, reporting, joint planning, and graduated enforcement mechanisms.

D.2 Principles

The design and application of priced incentives must reflect the following principles:

A. **Targeted to Operator Influence** - Incentives must relate to factors that operators can reasonably influence.

B. **Transparent, Measurable, and Fair** - Incentives must be based on clearly defined measures, or events. Both parties should have access to the same data and understand how incentives are calculated and applied.

C. **Aligned with Shared Goals -** Incentives should support joint planning and continuous improvement. They should reflect shared priorities between PTAs and operators, such as improving customer experience and value for money.

D. **Financially Sustainable -** Abatement levels must be sufficient to drive action but not so severe as to threaten the financial viability of contracts. Likewise, bonuses must be sufficient to drive action while also being affordable for funders.

E. **Integrated with Monitoring Capability -** The incentive approach must align with the monitoring model and capability level of the contract and participating parties. More advanced monitoring capability and capacity enables more targeted and nuanced incentive structures.

D.3 Types of Incentives

The following briefly outlines types of incentives that must be include bus operating contracts co-funded by NZTA. Subsequent sections provide more fulsome guidance and requirements.

D.3.1 Bonuses

Bonuses are financial incentives used to reward operators for going beyond expectations or achieving agreed improvement targets. They are designed to support continuous improvement and public value by encouraging excellence in areas where operators have direct influence.

All bus operating contracts co-funded by NZTA must include a bonus framework that can be activated and deactivated over the life of the contract. Further guidance is provided in the section xx below.

D.3.2 Abatements

Abatements are deductions from operator payments designed to discourage underperformance in areas within the operator's influence. For all public transport operating contracts co-funded by NZTA, the abatement framework must include provisions for:

- Timely and accurate information
- General contractual commitments
- Service reliability

The are outlined further as follows.

Timely and Accurate Information Abatements

Operators play an essential role in the provisioning and management of information. As the frontline deliverers of public transport services, they are typically best placed to observe, interpret, and report on service delivery. Information from operators is key foundation of performance monitoring, joint planning initiatives, and continuous improvement.

To reflect the importance of this role, contracts must include abatement mechanism for failures to provide timely and accurate information. This includes:

- Not submitting required data within agreed timeframes.
- Providing incomplete, inconsistent, or inaccurate information.
- Failing to meet agreed standards for data quality and reporting.

By applying financial consequences to poor information practices, this mechanism ensures that operators prioritise their role in enabling timely and accurate information, which is foundational to partnering and relational delivery.

General contract commitments

Operators make a range of contractual commitments beyond day-to-day service delivery and information provision. To support fair and proportionate enforcement, contracts must include an abatement mechanism that enables PTAs to respond meaningfully in the event these commitments are not met. This mechanism provides a structured option for addressing unresolved issues, particularly where dialogue has not led to resolution, but where termination would be disproportionate or undesirable.

Abatements in this category:

- Should only be applied in association with a notifiable event, and
- Only where the operator has failed to remedy the issue within the agreed timeframe or process.

While operators may perceive these abatements as punitive, their purpose is to provide a clear and credible incentive to resolve issues before they escalate further. In the absence of such a mechanism, the only remaining enforcement option may be termination, which is rarely in the interest of either party.

Service reliability abatements

Service reliability abatements incentivise consistent day-to-day delivery of services. These are linked to expectations within the direct influence of the operator and include factors such as:

- Trips being operated as scheduled.
- Avoiding early departures or excessive lateness.
- Using the correct vehicle type and size (where specified in contracts).
- Logging trips correctly in real-time and ticketing systems (where specified in contracts).

This mechanism helps ensure that operators are consistently focused on delivering reliable, punctual, and visible services to passengers.

Nationally consistent guidance for service reliability abatement forms as key component of this document, with detailed guidance provide in section D.5 below.

D.4 Avoiding Unintended Outcomes

Incentives, including both abatements and bonuses are intended to drive performance, accountability, and continuous improvement. However, if not carefully designed and calibrated, they can create unintended outcomes that can undermine important factors such as good customer experience, workforce wellbeing, and broader public value.

D.4.1 Design Considerations

To help avoid unintended outcomes, PTAs should give particular consideration to the following factors when developing contracts and incentive frameworks:

- **Public value**: Ensuring incentives encourage behaviours that improve customer experience, service quality, and broader outcomes in the public interest, not just technical compliance with performance measures.
- **Proportionality and calibration**: The financial value of an incentive (whether an abatement or bonus) should be proportionate to the significance of the issue or opportunity it relates to. Incentives should also be calibrated relative to one another to avoid unintended behaviours or trade-offs.
- **Workforce implications**: Incentives should be designed to avoid inappropriate pressure on frontline staff, particularly bus drivers, and detract from wellbeing or job satisfaction.
- **Genuine improvement**: Bonus payments should be linked to measurable outcomes that would not have occurred without additional effort or collaboration beyond what would otherwise be expected from the operator in accordance with contract terms and tender bid commitments.

These considerations generally apply to all incentive types and are expanded upon in other sections of this appendix where relevant to specific mechanisms or monitoring approaches.

D.4.2 Design approach for bonus mechanisms

All bus operating contracts co-funded by NZTA must include a bonus mechanism that can be activated and deactivated over the life of the contract. The following provides high level guidance for the development of bonus mechanisms in bus operating contracts.

To ensure fairness, effectiveness, and alignment with relational delivery principles, bonuses must be structured around jointly agreed Key Result Areas (KRAs). These are specific improvement goals identified through monitoring and planning processes and agreed between the PTA and the operator.

For example, a KRA might be to r*educe driver-related passenger complaints to fewer than 10 per 10,000 boardings over a six-month period."*

If the agreed target is achieved, a bonus payment may be applied.

Key characteristics of bonus-linked KRAs:

- Targeted to operator influence - focusing on areas the operator can directly control or improve.
- Time-bound and measurable - with clear baselines, targets, and monitoring methods.
- Jointly agreed and reviewed - through annual planning or other collaborative processes.
- Reset and refocused periodically - to reflect progress and identify the next most useful focus area for improvement.
- Tailored to local context - enabling flexibility and innovation in how incentives are applied, while maintaining alignment with a nationally consistent approach.

Bonuses are not automatic. They must be:

- Agreed through joint planning processes.
- Linked to measurable achievements.
- Affordable for funders, with capped amounts and clear justification for public value.

This approach aims to ensures that bonus payments are meaningful, transparent, and aligned with continuous improvement goals of both parties with a particular focus on enhancing customer experience and value for money.

D.5 Service Reliability Abatements

D.5.1 Approaches to Applying Service Reliability Abatements

The following outlines two high level approaches to service reliability abatements being:

- The threshold method
- Root cause attribution method.

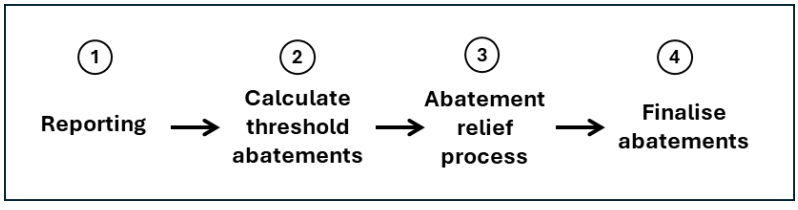
By way of summary, NZTA excepts new bus operating contract to adopt the root cause attribution method where the prerequisite technology enabler and people capability are capacity are in place or anticipated to be development within the term of the operating contract.

The methods can be summarised as follows:

A. Threshold Method

Under the threshold method, abatements are applied when performance falls below a predefined level (e.g., <95%). The threshold is typically set to acknowledge that achieving 100% is unrealistic and to account for variable factors that may be outside the operator's control or direct influence. The method predates the advent of technology systems that can now be used more efficiently to assess trips and more accurately attribute causal factors associated with KPI flags.

Typical steps in threshold-based method



B. Root Cause Attribution Method

Under the root cause attribution method, abatements are applied only when a KPI failure is attributed to a cause within the operator's direct influence. This approach ensures fairness and supports continuous improvement by focusing accountability on factors the operator can reasonably control.

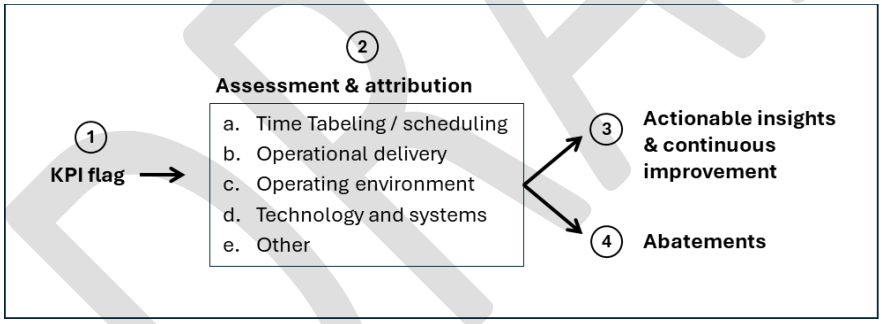
In practice, many KPI flags are triggered by factors outside the operator's control, such as infrastructure issues, congestion, or weather events. The attribution process uses structured assessment tools within shared monitoring systems to quickly and efficiently determine the root cause of each KPI flag. This enables more granular and precise attribution, based on predefined categories and accountability assignments set out in contract documentation.

Unlike the threshold method, which applies abatements based on aggregate performance levels, the root cause attribution method assesses each KPI flag individually. The concept of thresholds does not apply. Instead, the system identifies specific failures and attributes them to the appropriate party whether the operator, the PTA, or a third party, based on agreed roles and responsibilities.

Importantly, the root cause attribution method is built on top of a broader monitoring process that identifies KPI failures regardless of whether they result in abatements. This ensures that performance data can be used not only for enforcement, but also for joint planning and continuous improvement, with the latter being the primary benefit.

In contrast, the threshold method can result in significant time and effort being spent on negotiating and justifying abatement relief, which can divert time and effort away from resolving underlying issues and improving outcomes for passengers. The root cause attribution method shifts the emphasis from potential dispute resolution to insight generation, supporting a more constructive and outcome-focused approach to contract management.

Typical steps in root cause attribution method



D.5.2 Transition to root cause attribution overtime

NZTA aims to work with all PTAs to progressively lift monitoring capability for all co-funded contracts to Level 5 or above over time. The primary driver for this transition is the ability of advanced monitoring systems to generate actionable insights that support continuous improvement, enhance customer experience, increase public transport usage, and improve value for money.

While not the primary driver, a key benefit of this uplift is that it enables the use of the root cause attribution method for applying contractual incentives. This approach aligns with relational delivery principles by ensuring that performance incentives are applied fairly, only when failures are within the operator's control.

Put another way, even if root cause attribution were not used, NZTA would still support the uplift to Level 5 and above capability due to its broader benefits. However, the ability to apply incentives more precisely and fairly reinforces the case for this transition.

The following section outlines a nationally consistent approach for applying service reliability abatements using the root cause attribution method.

D.6 Route Cause Attribution Method - Detailed Guidance

This section outlines the technology enabler, attribution logic, and pricing methods that underpin a nationally consistent approach to the root cause attribution method.

D.6.1 Technology enabler

To enable fair and targeted abatements, the monitoring system needs to support automated KPI flagging structured causal factor attribution, and shared visibility. This ensures that performance issues are addressed constructively and that operators are only held accountable for factors within their direct influence, while the broader insights can but used for joint planning and improvement initiatives .

Key characteristics of enabling system:

- Automatically flag trips that fail reliability KPIs (e.g. unsighted, short-run, off-route, early departure, late departure, late arrival).
- Enable operator-led root cause assessment using structured attribution categories.
- Support targeted PTA review and validation of operator assessments.
- Aggregate insights to inform both abatement decisions and continuous improvement planning.
- Provision a shared operational interface (web-based solution) that enable efficient workflows and visibility for real-time and historic information.
- Abatements are only applied to failures within the operator's control as pre-agreed by the PTA and operator in relevant contract and tender documents.

D.7 Assessing KPI flags

When a KPI is flagged, the system automatically presents a shortlist of likely causal factors based on the nature of the KPI flag. For example:

- Unsighted Trip → GPS Blind Spot, Driver Login Error, Vehicle Breakdown
- Late Departure → Insufficient Runtime, Traffic Congestion, Weather Event

This streamlines the attribution process and improves accuracy, and the many cases attribution can be undertaken in a manner of seconds.

Causal factor tables are outlined in Appendix B. and are designed to be nationally consistent while enabling for local tailoring. It is structured into four standard categories:

1. Planning & Scheduling – e.g. insufficient runtime, driver rostering errors
2. Operational Delivery – e.g. vehicle breakdowns, driver absence
3. Operating Environment – e.g. roadworks, congestion, weather events
4. Technology & Digital Systems – e.g. GPS blind spots, ticketing system failures

Each category includes headline factors that remain consistent across all regions. PTAs and operators can define any number if additional custom causal factors within this structure to reflect local operating conditions, or contract-specific nuances.

D.8 Assignment of Accountability

Each causal factor is assigned one of the following accountability types:

- **PTA** – Factors within the PTAs responsibility (e.g. timetabling)
- **Operator** – Factors within the operator's responsibility

- **Joint** – Shared accountability, often for external factors outside the direct influence of either party but for which both parties need to respond / manage
- **Other** – Third-party or context-specific responsibility.

Importantly, accountability for each causal factor is pre-agreed and forms part of the contract design. The Causal Factor Tables used in root cause assessment should be embedded in the contract and form the basis upon which the contract was tendered. The assignment of accountability needs to be contract-specific and reflects roles and responsibilities which can differ by contract and locations. For example, a charging infrastructure fault may cause service delays and be attributed to the operator in one region, but to the PTA in another.

The following table provides some indicative examples.

KPI Flag	Root Cause Attribution	Assigned Accountability
Cancelled Trip	Bus breakdown	Operator
	Driver absence	Operator
	Severe weather event	Joint
Unsighted Trip	GPS blind spot PTA	PTA
	Driver failed to log in correctly	Operator
	Real-time tracking system failure	PTA
Early Departure	Driver departed too early	Operator
Late Departure	Insufficient runtime	PTA
	High passenger boarding demand	Joint
	Traffic accident	Joint

Under this approach, the system can generate insights into factors influenced by different parties, supporting relational delivery and actionability. Abatements apply only to root cause factors within the operator's control, which typically account for a relatively small portion of total KPI flags. This acknowledges that there are often many factors affecting service reliability that lie outside the operator's direct influence.

D.9 Abatement Pricing

D.9.1 Methods

Abatement pricing defines the financial value of an abatement. Two primary methods should be used:

- Fixed Value Abatement – Where a set dollar amount is applied per KPI.

  Example:

  - $100 abatement for each cancelled trip
  - $50 abatement for each short-run trip

- Proportional Value Abatement – Where a dollar amount proportional to the value / cost of a specific trip is applied.

  For example, a per Trip Value can be derived as:

  $$\text{Trip Value} = (\text{Total Contract Cost} \,/\, \text{Total Contract Kilometres}) \times \text{Trip Length (km)}$$

  This approach establishes a relationship between the financial impact of the abatement and the actual cost to the PTA of the trip.

The abatement may be further refined by applying a percentage of the trip value, based on the significance of the issue.

While the calculation may appear complex, modern monitoring systems handle this seamlessly, simplifying the workflow for practitioners. The system automates trip value calculation and applies the correct pricing method based on KPI type and attribution.

Contracts can use both pricing methods. The following table provides an illustrative example.

KPI Flag	Pricing Method	**Abatement Value** (where root cause is attributed to the operator)
Cancelled Trip	Proportional Value	100% of trip value
Short-Run Trip	Proportional Value	50% of trip value
Unsighted Trip	Fixed Value	$75 per occurrence
Late Departure	Fixed Value	$50 per occurrence
Early Departure	Fixed Value	$50 per occurrence
Incorrect Vehicle	Proportional Value	25% of trip value

D.9.2 Limits

To ensure abatement mechanisms are effective without undermining operator viability, pricing limits must be clearly defined in contracts and consistently applied.

Financial Sustainability

Abatement levels must be sufficient to drive performance improvement, but not so severe as to threaten the financial sustainability of contracts. Contracts must include abatement caps being the maximum total abatement per reporting period (e.g. per month) that can be applied. These limits help balance accountability with financial resilience.

Punctuality Abatement Limits

For punctuality-related abatements (e.g. early or late running), only one abatement can be applied per trip, regardless of how many stops are affected.

For example, if a trip is late at multiple timing points due to the same causal factors within the operators influence, the abatement is applied once, not cumulatively. This avoids disproportionate penalties and unintended incentives and simplifies administration.

If a trip is subsequently cancelled or short run then the higher abatement levels for those KPI should superseded and not be applied in addition to any punctuality abatements that may otherwise be applicable.

Multiple Reliability Abatements for Distinct Breaches

Notwithstanding the above, in some cases, a single trip may breach more than one Priced KPI, each linked to a distinct contractual obligation and separate root cause. Where these breaches are independently attributable to factors within the operator's control, multiple abatements may be applied.

For example:

- A trip runs late due to driver absence → punctuality abatement may apply
- The same trip was also operated with the incorrect vehicle type → a separate abatement may apply

In this case, both abatements are valid because they address different aspects of performance and are supported by separate root cause attribution. This approach ensures that:

- Each breach is assessed on its own merit
- Operators are accountable for the full scope of service delivery
- Incentives remain aligned with continuous improvement across all relevant performance elements.

D.10 Key design considerations

D.10.1 Strategic vs Avoidable Cancellations and Short-Runs

In some cases, cancelling or short-running a trip may be the best operational decision, for example, to prevent cascading delays into subsequent trips. These decisions should be made collaboratively and transparently, with shared understanding of the trade-offs.

To distinguish between strategic and avoidable cancellations or short-runs, contracts should define and monitor standby capacity, such as spare vehicles and standby drivers, required to reliably deliver services.

Guidance:

- If the operator has provided and fully utilised the agreed standby capacity, a cancellation or short-run may be deemed the least bad option and in the broader public interest, and not subject to abatement.
- If the operator has not provided or utilised the agreed standby capacity, the cancellation or short-run should be deemed avoidable, and abatement should apply.

This approach ensures that operators are not penalised for making sound operational decisions under constrained conditions, while maintaining accountability for resource provisioning and delivery.

D.10.2 Encouraging Good Customer Service

Under the root cause attribution method, delays caused by good customer service can result in punctuality KPI flags and should not attract abatements. For example, this may include but is not limited to:

- Assisting passengers with mobility needs or cognitive impairments.
- Responding to safety concerns or disruptive behaviour.

These actions reflect public value and inclusive access and should be encouraged in contract design and operational practice.

D.10.3 Workforce Perspective

While abatements are applied at the operator level, poor incentive design can lead to indirect and inappropriate pressure on the workforce, particularly on bus drivers. This can include:

- Feeling obligated to rush or avoid assisting passengers.
- Experiencing stress or reduced job satisfaction due to unrealistic expectations.
- Being unfairly blamed for systemic issues beyond their control.

These outcomes are counterproductive. They can degrade customer experience, increase turnover, and undermine the goals of the incentive regime.

It is important that operators ensure internal management practices do not unduly pressure. Incentives should be addressed at the organisational level, with a focus on training, support, and continuous improvement for staff where needed.

PTAs also have a critical role in carefully designing incentive frameworks to avoid unintended workforce impacts. This includes ensuring that incentives do not penalise good customer service and that they reflect the operator's actual ability to influence outcomes.

D.10.4 Contract Pricing Risk

Excessive or rigid abatement structures can attract a risk premium in contract pricing. A more tailored approach, one that reduces exposure to abatements while still holding operators accountable, can foster more competitive pricing and better long-term value.

The following outlines three potential design approaches for consideration when developing new bus operating contracts:

A. Always on abatements

Under this approach service reliability abatement are always turned on and constantly applied to KPI failures within the influence of the operator. This ensures an ongoing incentive for constantly good delivery. However, it may also attract the highest contract pricing risk premium.

B. Conditional Activation

Under this approach service reliability abatement are turned off by default and only activated if there is an increase in KPI failures attributable to the operator. For example:

- Abatements may be activated if failure rates exceed an agreed threshold for a defined period (e.g. one week).
- Once performance returns to acceptable levels for a sustained period (e.g. one month), abatements can be deactivated again.

This approach provides a clear incentive for operators to maintain performance to avoid abatement activation while still providing PTAs with a tool to address under performance if needed. Because the abatement exposure is reduced for operators it may also reduce the likelihood of risk premiums being factored into contract pricing.

C. Tiered Activation

Under this approach some abatement categories are “always on”, such as:

- Punctuality at first stop
- Short-running
- Trip cancellations

Other categories are off by default (e.g. vehicle type) and can be activated if needed. This tiered approach allows PTAs to focus incentives where it matters most.

NZTA recommends the tiered activation approach as it offers the greatest potential to strike a balance between risk, contract affordability, minimising unintended outcomes and operator accountability.

In all cases, the underlying root cause attribution framework and process must remain active. Even when abatements are turned off, attribution data must continue to be collected and reviewed to support continuous improvement, joint planning, and evidence-based decision-making.

D.10.5 Maintaining Integrity in Root Cause Attribution and Information Provision

The effectiveness of the root cause attribution method, and the broader monitoring approach it is ancillary to, relies heavily on the timely and accurate provision of information by operators. This includes correctly assigning causal factors to KPI flags and ensuring that data used for performance monitoring is complete, consistent, and reliable.

There is a risk that financial incentives, particularly abatements, may encourage operators to assign causal factors to non-abated categories, even when the correct attribution would fall within an abated category. This undermines the integrity of the monitoring system and can have serious broader implications including:

- Reduced ability for PTAs to accurately update timetables, develop infrastructure, and improvement network design.
- Compromised evidence for funding decisions and strategic planning.
- Erosion of trust and transparency between PTAs and operators.

Given the critical role of accurate information provision in enabling continuous improvement and shared accountability, contracts must include both priced and non-priced incentives to maintain high standards.

This may include:

- Periodic PTA review of attribution accuracy, with structured oversight and feedback mechanisms.
- Abatements for missing or inaccurate information, with multipliers applied where misattribution is detected.
- Abatement reductions or bonuses for consistently timely and accurate information provision.
- No cap on abatements related to information quality, as these failures are easily avoidable and directly within the operator's control.
- Graduated enforcement for persistent issues, including cure plans and call-in rights.

This approach helps ensures that the monitoring system remains a trusted source of insight and a strategic asset for improving public transport delivery.