Australian Flexible Pavement Association

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INDUSTRY FIRST

A Common Language for Safety Risk

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4	4,000+	6
Tier 1 contractors contributing data	Incident records in the national dataset	Consecutive quarters of comparable data

There is a human cost to the fragmentation of safety data that rarely gets named directly. The people who set up traffic management on Australian roads face a problem that no amount of high-visibility clothing fully resolves: the public often doesn't see them as people. Research presented at the 2024 AfPA-TMAA Safety Forum by QUT CARRS-Q Professor Narelle Haworth identified a troubling paradox, the very gear designed to keep workers visible can inadvertently dehumanise them in the eyes of passing motorists, contributing to the aggression and disregard that show up repeatedly in incident data. When the industry asked forum participants what they most wanted to change, the top answer was unambiguous: share data.

That response reflects a recognition that roadworker safety cannot be improved without first being understood, and understanding requires data that can be compared, aggregated and analysed across the industry, not just within individual organisations. Safety risk assessment has long been one of the most fragmented aspects of WHS management in the Australian road construction sector. Every organisation has its own risk matrix, its own definitions of likelihood, its own consequence scales, its own thresholds for what constitutes a "high" or "extreme" risk. The terminology varies. The scales differ. And as a result, comparing safety performance across organisations, or aggregating data to build a national picture, has been effectively impossible.

That has now changed. In what AfPA's CEO has described as a significant industry milestone, Boral, Colas, Downer and Fulton Hogan have collectively adopted the AfPA Safety Risk Matrix as a shared standard for classifying and reporting safety incidents. For the first time in the sector's history, competing organisations

are assessing risk against a single, agreed framework, one that maps each company's internal risk language to a common AfPA equivalent, enabling true like-for-like comparison of safety data at national scale.

> *"The matrix was developed out of necessity; we couldn't aggregate the data without it. But what we quickly realised is that the matrix itself has a value that extends far beyond the data initiative that created it.", AfPA National Health & Safety Committee*

Why Standardisation Has Proved So Elusive

The challenge of comparing risk assessments across organisations is well understood by anyone who has worked in WHS governance. A consequence rated "Major" under one company's framework may be equivalent to "Significant" or "Catastrophic" under another's. Likelihood descriptors, "Possible," "Likely," "Almost Certain", carry different implied probability ranges depending on the matrix in use. When Downer uses a numerical scale from 1 to 6 for consequence and Fulton Hogan applies qualitative descriptors across five bands, the outputs look different even when the underlying risk exposure is identical.

This fragmentation has meaningful consequences. It makes it difficult for principal contractors to assess subcontractor safety performance consistently. It limits the ability of industry bodies and regulators to build evidence-based policy from aggregated data. And it creates administrative burden for organisations that operate across multiple contracts or client relationships, each of which may require a different reporting format.

The AfPA National Health and Safety Committee encountered this problem directly when it set out to establish a national roadworker safety data initiative in 2024. The initiative aimed to pool de-identified incident and near-miss data from major member organisations to identify systemic risk patterns and build an evidence base for industry advocacy. The ambition was sound, but the data couldn't be compared without a common risk framework. Building that framework became the first order of business.

What the AfPA Matrix Does, and How It Was Built

The AfPA Safety Risk Matrix is a standardised 5x5 risk assessment framework combining a five-level likelihood scale, from Rare (<5% probability) through to Almost Certain (75-100%), with a five-level consequence scale ranging from Insignificant to Substantial. The intersection of these two dimensions produces a risk rating of Low, Medium, High or Extreme, providing a consistent basis for prioritising safety controls and reporting outcomes.

Critically, the matrix was not imposed from outside. It was developed collaboratively by the organisations that would use it, through a process of alignment that mapped each company's existing internal risk scales to AfPA equivalents. The matrix alignment process, documented in the AfPA Safety Data Matrix Toolkit, shows precisely how each organisation's likelihood and consequence descriptors correspond to the common standard. Downer's numerical consequence scores map across to AfPA's qualitative scale; Fulton Hogan's terminology aligns at equivalent threshold points; Boral and Colas follow a similar translation process.

The result is that each organisation retains its own internal risk framework, no one is being asked to overhaul established systems, while also generating data that is directly comparable to every other participant's. The AfPA equivalent rating sits alongside the company-specific assessment, enabling aggregation without disruption.

Why This Matters for the Sector

Until now, safety data in the Australian flexible pavement sector has existed in organisational silos. Individual companies have had access only to their own incident histories, making it impossible to distinguish between a genuinely safe operation and one that simply has a low reporting rate. The AfPA matrix creates the conditions for something that has never existed in this industry: a shared, national baseline against which every organisation can measure its own performance. The implications, for supply chain governance, for regulatory engagement, and for the commercial management of safety risk, are substantial.

What It Means in Practice

The practical applications of the AfPA Safety Risk Matrix differ by organisational context, but the underlying value proposition is consistent: a common standard reduces administrative complexity and improves the quality of safety decision-making at every level of the supply chain.

Tier 1 Contractors, Supply Chain Governance, Simplified

Managing safety performance across a large and diverse subcontractor base is a significant administrative challenge. When each subcontractor uses a different risk framework, assessing and comparing their safety reporting requires constant translation. Adopting the AfPA matrix as a standardised proxy across the supply chain gives principal contractors a single, consistent view of risk from the workface to the boardroom, reducing WHS administration costs and enabling more defensible decisions about contractor selection and performance management.

Simply put: One risk language across your entire subcontractor base. Less administration. Clearer accountability.

SMEs & Subcontractors, A Benchmark and a Legal Foundation

For smaller organisations without the resources to develop and maintain their own bespoke risk frameworks, the AfPA matrix provides immediate access to a standard developed collaboratively by the sector's largest and most safety-mature operators. Adopting it establishes conformance to a national industry benchmark, and in the event of a WHS incident, that conformance matters. Demonstrating that your organisation assessed and managed risk against the highest collective standards of the industry is a meaningful contribution to any duty-of-care defence.

Simply put: Use the standard the Tier 1s built. Prove you took safety seriously, with the industry's best evidence behind you.

The Broader Industry, From Anecdote to Evidence

Perhaps the most significant long-term value of the AfPA matrix lies in what it makes possible at an industry level. With a common risk framework in place, incident data from across the sector can be aggregated, analysed and reported in a way that was previously not feasible. The results of that analysis are already emerging, revealing systemic patterns in how roadworkers are exposed to live traffic, which incident types carry the highest risk, and where the greatest opportunities for intervention lie. That evidence base, built on more than 4,000 incident records from six consecutive quarters of reporting, is precisely the kind of material that can shift policy conversations with road authorities and regulators from the anecdotal to the quantifiable.

Simply put: Industry-wide data creates industry-wide influence. For the first time, AfPA can bring national safety evidence to the table, not just industry sentiment.

An Achievement Worth Recognising

It would be easy to understate what has been achieved here. Agreeing on a common risk standard across competing organisations, each with established internal frameworks, different client relationships and varying reporting obligations, required a sustained commitment from senior safety professionals across Boral, Colas, Downer and Fulton Hogan. The fact that four organisations operating in direct competition with one another were willing to align on a shared safety language reflects both the maturity of AfPA's National Health and Safety Committee and a genuine recognition that some problems are better solved collectively than in isolation.

Road worker safety is one of those problems. The data generated since the initiative launched in mid-2024 is already demonstrating the value of that collective approach, revealing risk patterns that no single organisation's data could have surfaced, and building an evidence base that is beginning to inform conversations with road authorities about where and how worker protection can be strengthened.

The data initiative sits within a broader programme of AfPA safety activity that is gathering momentum. AfPA has now convened Safety Forums in Queensland, run in collaboration with the Traffic Management Association of Australia (TMAA), New South Wales, and South Australia, the last as part of the 20th AfPA International Conference in Adelaide in October 2025, where a dedicated National Safety Forum addressed exclusion zones, AI-driven safety innovations and the evidence case for stronger worker protection. Victoria and Western Australia are next in the series. Each forum generates commitments, on physical separation, on technology adoption, on procurement standards, that the data initiative is increasingly able to measure and track. The 21st AfPA International Conference in 2027 will mark the point at which this national programme of work is presented in full.

The AfPA Safety Risk Matrix is now available to all member organisations. For Tier 1 contractors, it offers a ready-made standard for supply chain safety governance. For SMEs and subcontractors, it provides access to the sector's highest collective benchmark. And for the industry as a whole, it is the foundation on which a genuinely national, evidence-based approach to road worker safety is being built.

> *A shared standard does not require anyone to abandon their existing systems. It simply ensures that what each organisation measures can be understood, and acted on, by everyone else in the sector.*

The AfPA Safety Risk Matrix and supporting resources, including user guides, audit templates and alignment tools, are available to AfPA members via the Safety Intelligence landing page at afpa.asn.au. For more information, contact the AfPA National Health & Safety Committee through enquiries@afpa.asn.au.

Data referenced in this article is drawn from de-identified incident records voluntarily supplied by AfPA member organisations for the period July 2024 to December 2025. Records are aggregated and no individual organisation's data is separately identifiable.