Corporate Accountability and Systemic Reform in Malaysia's Transport Sector: Lessons from the Post-Gerik Tragedy

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ABSTRACT

Road safety in Malaysia continues to face systemic challenges despite the Malaysia Road Safety Plan (2022–2030) and alignment with the United Nations Decade of Action for Road Safety. The Gerik bus tragedy of June 2025, which resulted in fifteen deaths and thirty-three injuries, revealed not only the proximate causes of excessive speed and poor visibility but also broader institutional gaps in accountability, enforcement, and infrastructure management. This study adopts a qualitative design combining semi-structured interviews, documentary analysis, and field observations to examine how accountability is allocated within Malaysia's transport sector and what reforms are feasible. Thirty stakeholders representing government agencies, legal experts, bus operators, infrastructure auditors, civil society, and victims' families were interviewed. The findings show that accountability remains concentrated on individual drivers, while corporate negligence often escapes sanction. Road safety audits identify risks but lack binding responsibilities, budgets, and timelines for closure. Vehicle maintenance and occupant protection are uneven, and enforcement remains episodic rather than continuous. Comparative insights from the United Kingdom, Australia, and Singapore illustrate that corporate liability laws, chain of responsibility frameworks, and star-rating benchmarks can reshape safety culture and governance. This study recommends an integrated reform pathway: transparent metrics and closure tracking, continuous compliance conditions tied to operator licensing, and corporate liability provisions to secure board-level accountability. These measures would move Malaysia beyond reactive enforcement and align its transport governance with proven international practices. The study contributes to scholarship and policy by linking legal accountability, engineering interventions, and institutional delivery capacity.

Keywords : Road Safety, Corporate Accountability, Malaysia Transport Policy, Infrastructure Audits, Corporate Manslaughter

INTRODUCTION

Background

Road safety in Malaysia remains a pressing national concern. The Malaysia Road Safety Plan (MRSP) 2022–2030 was designed to align with the United Nations Decade of Action for Road Safety, with a targeted fifty percent reduction in road traffic fatalities by 2030 (Ministry of Transport Malaysia, 2022). The MRSP emphasizes a Safe System approach, focusing on safer roads, safer vehicles, safer people, and better post-crash response. Despite this, Malaysia continues to record one of the highest road fatality rates in Southeast Asia, averaging 5,000 to 6,000 deaths annually over the past decade (MIROS, 2023; WHO, 2023).

Scholars attribute this persistent problem not only to driver behaviour but also to systemic weaknesses, including fragmented enforcement, inconsistent infrastructure standards, and the absence of corporate-level accountability in transport operations (Abdul Rahman & Ishak, 2022; Azami, Hassan, & Ishak, 2024). This backdrop contextualizes the Gerik tragedy of June 2025, which has reignited debates about accountability and safety in Malaysia's transport sector.

The Gerik Tragedy of 2025

In the early hours of 9 June 2025, a chartered university bus collided with a multipurpose vehicle along the East–West Highway in Gerik, Perak. The collision resulted in fifteen deaths and thirty-three injuries, making it the deadliest road accident in Malaysia since the Genting Highlands crash of 2013 (Malay Mail, 2025a). A special task force convened by the Ministry of Transport concluded that excessive speed was the proximate cause but emphasized broader systemic failures, including inadequate lighting, poor road geometry, and weak oversight of bus operator compliance with safety codes (Malay Mail, 2025b).

The government's immediate response included revoking the operator's license, suspending the driver's vocational permit, and deploying the Road Transport Department (JPJ) and the Land Public Transport Agency (APAD) for further investigations. The Works Ministry also committed RM55 million for road safety upgrades at high-risk segments, including lighting and slope improvements (Malay Mail, 2025c). These actions reflect a common post-crash pattern in Malaysia: swift sanctions and infrastructure pledges in the wake of public outrage.

Historical Parallels in Malaysia

Genting Highlands Crash, 2013

The Genting Highlands bus accident in August 2013 claimed thirty-seven lives, making it the single deadliest road accident in Malaysian history. Investigations revealed speeding, poor vehicle maintenance, and inadequate guardrails as key contributing factors (Malay Mail, 2013). The Independent Advisory Panel (IAP) recommended more stringent safety measures, including vehicle inspections, better road infrastructure, and the establishment of a permanent road safety board (Liew, 2016). Many recommendations were partially implemented but not sustained.

Pagoh Crash, 2016

The Pagoh highway crash killed fourteen passengers when an express bus veered into a ravine. SPAD, the then-regulator, suspended the operator's license and ordered technical investigations. However, systemic reforms did not follow, and safety audits remained advisory rather than mandatory (SPAD, 2016).

Simpang Pulai Tragedy, 2010

In Simpang Pulai, a double-decker bus crash killed twenty-seven tourists. Investigations revealed that operator negligence and insufficient enforcement of driver working hours were major causes (The Star, 2010). Yet, more than a decade later, driver fatigue remains a recurrent factor in fatal accidents (MIROS, 2023).

These cases illustrate a recurring pattern of enforcement that is reactive rather than preventive. Lessons are identified but not institutionalized, and corporate accountability is consistently under-addressed.

Comparative International Frameworks

United Kingdom

The UK Corporate Manslaughter and Corporate Homicide Act 2007 created a new offense making organizations criminally liable when gross management failures cause fatalities (Wells, 2019). It has since become a deterrent model, signaling that safety culture is a corporate responsibility rather than solely an individual one (Gobert, 2021).

Singapore

Singapore amended its Workplace Safety and Health Act to strengthen penalties for corporate negligence in industrial accidents. Although focused on occupational settings, it has influenced discourse on road transport accountability (Lee, 2022).

Australia

Australia's Chain of Responsibility (CoR) laws in transport hold every party in the logistics chain including drivers, managers, schedulers, and operators are responsible for safety breaches. This distributed liability system has been credited with reducing heavy vehicle fatalities (White & Johnston, 2021). These models demonstrate that corporate and systemic accountability mechanisms can effectively complement individual driver enforcement.

Legal Accountability in Malaysia

Malaysian criminal law largely addresses individual liability. Drivers face prosecution under the Road Transport Act 1987, while companies escape direct liability for systemic negligence. The absence of a corporate manslaughter provision leaves a gap where grossly negligent safety management practices go unpunished (Bernama, 2025). The Gerik tragedy sparked renewed calls from policymakers and civil society for a Malaysian version of the Corporate Manslaughter Act (Malay Mail, 2025d).

Infrastructure and Road Safety Audits

Road Safety Audits (RSAs) are part of Malaysia's MRSP framework, and tools such as MyRAP and iRAP ratings are used to identify blackspots. However, research shows that audit findings often do not translate into corrective action, leaving identified risks unresolved (Abdul Rahman & Ishak, 2022; Raja Nhari & Zakaria, 2022). The Gerik site had been flagged previously for poor lighting and road curvature, underscoring the audit-to-action gap (MIROS, 2023).

Vehicle Safety and Enforcement

The Gerik tragedy renewed focus on bus safety standards. JPJ announced mandatory seatbelt installation on express and tour buses beginning in July 2025 (Malay Mail, 2025e). Yet periodic inspections by PUSPAKOM remain limited, and scholars argue for continuous monitoring systems such as telematics to address speeding and driver fatigue (WHO, 2023). Research also indicates that companies often prioritize cost savings over compliance with maintenance standards (Azami et al., 2024).

Problem Statement

Despite having a robust policy framework, Malaysia continues to face mass-casualty road crashes. The problem lies in fragmented enforcement, insufficient follow-up on safety audits, inadequate vehicle monitoring, and weak legal mechanisms for corporate accountability. The Gerik tragedy reflects not an isolated failure but systemic shortcomings.

Research Questions and Objectives

Research Questions

1. How do Malaysian laws and enforcement practices allocate accountability after major road crashes?
2. What weaknesses exist in translating infrastructure audit findings into corrective actions?
3. How can corporate liability frameworks from international contexts be adapted to Malaysia?

Objectives

1. To evaluate Malaysia's legal framework on corporate accountability in road transport.
2. To assess gaps in infrastructure safety and audit follow-up.
3. To propose policy reforms that integrate legal accountability with infrastructural and enforcement measures.

Significance of the Study

This study is significant for both policy and practice. For policymakers and regulators, it highlights the importance of adopting corporate liability provisions similar to international best practices. For infrastructure authorities and enforcement agencies, it emphasizes the necessity of ensuring that safety audits lead to timely interventions. For academic scholarship, it contributes by integrating legal analysis, infrastructure safety, and corporate governance in the study of transport accountability.

LITERATURE REVIEW

Framing the problem: Safe System and accountability

Road safety scholarship has shifted from blaming individual drivers to managing the whole transport system. The Safe System approach views deaths and serious injuries as preventable through a mix of safer roads, safer vehicles, safer speeds, and safer users, backed by institutions that can be held to account. Global evidence shows meaningful reductions where proven measures are deployed with fidelity and oversight. The World Health Organization's 2023 global report confirms both the scale of the harm and the room for improvement when countries couple engineering, enforcement, and governance reforms. (World Health Organization, 2023).

In Malaysia, the Malaysia Road Safety Plan 2022–2030 sets a national target to halve road deaths by 2030 and aligns with the UN Decade of Action. It embeds infrastructure star rating targets and calls out research and enforcement as enabling pillars, creating an explicit policy bridge between engineering fixes and accountable institutions. (Ministry of Transport Malaysia, 2024; iRAP, 2023).

Malaysia's recent evidence base

Recent national analyses map persistent risks that policy must tackle. Azami and colleagues analyze 2012–2022 crash patterns and highlight heavy vehicles and roadway environment factors as recurring contributors, reinforcing the need for both targeted infrastructure upgrades and higher operator accountability. (Azami et al., 2024).

On the policy side, the Road Safety Plan foregrounds research-to-policy translation, periodic audits, and performance metrics such as iRAP star ratings for high-risk corridors and school zones. This moves the conversation from ad hoc responses to measurable outcomes. (Ministry of Transport Malaysia, 2024 ; iRAP, 2023).

Corporate criminal accountability: lessons from comparator jurisdictions

United Kingdom.

The UK's Corporate Manslaughter and Corporate Homicide Act 2007 creates a corporate offence where gross management failures cause death. A decade of commentary notes its deterrent and expressive value, even as prosecutions remain selective. Early cases such as *Cotswold Geotechnical Holdings* and *Lion Steel* resulted in substantial fines and high public visibility, signalling that organisational culture and board-level control matter. (Gobert, 2018; Crown Prosecution Service, 2012; Sentencing remarks in *R v Lion Steel*, 2012).

Australia.

Australia's Heavy Vehicle National Law embeds the Chain of Responsibility. Legal duties attach across the supply chain, and executive due diligence obligations require active risk management for speed, fatigue, mass, loading, and maintenance. This is a structural accountability model that reaches beyond the driver to schedulers, consignors, and operators. (NHVR, 2024)

Singapore.

Singapore strengthened corporate accountability for safety through a package under the Workplace Safety and

Health Act. Maximum fines under subsidiary legislation were raised to increase deterrence, and policy has emphasised board responsibility for safety systems. While not a corporate manslaughter statute, it shows how escalating penalties and codified director duties can shift behaviour. (Ministry of Manpower Singapore, 2024; Ministry of Manpower Singapore, 2023; Dentons Rodyk, 2023).

Implications for Malaysia.

After the 2025 Gerik crash, Malaysian leaders publicly floated a UK-style corporate manslaughter law to close the accountability gap where systemic failures cause deaths. The debate builds on Malaysia's existing corporate liability foothold in anti-corruption law and suggests a pathway to transport-specific liability for management failures. (Bernama, 2025; Low, 2020).

Infrastructure audits, lighting, and signage

Road Safety Audit and Road Safety Inspection have long been promoted in Malaysia and internationally. Malaysian work synthesising RSA practice underscores the tool's value when findings are implemented and tracked, rather than filed and forgotten. Comparative reviews of RSA guidelines and recent applied studies reach the same conclusion: risk-based identification must be coupled with institutional follow-through. (Raja Nhari, 2022; Mhaske, 2023; Jena et al., 2024).

Lighting and conspicuity matter for crash risk. A 2024 synthesis for the US Department of Transportation reports consistent safety benefits of roadway lighting at high-risk locations and intersections, complementing older meta-analyses and informing standards on illuminance and visibility. The translational lesson is simple. Engineering designs that make hazards legible at operating speeds reduce severe outcomes, especially at night. (Runyan et al., 2024).

Malaysia's national plan incorporates iRAP star-rating benchmarks that emphasize improvements in road geometry, delineation, protective barriers, and visibility. These benchmarks provide measurable standards that can guide procurement decisions and routine maintenance activities (iRAP, 2023).

Vehicle safety standards and periodic inspections

For commercial vehicles, Malaysia requires periodic inspections at accredited centres every six months. Bus-specific guidelines detail construction and equipment checks. The government has also liberalised the inspection market to improve coverage and integrity. These are essential pieces of a prevention-first system. (PUSPAKOM, 2024; PUSPAKOM, 2024; Malay Mail, 2024).

Occupant protection remains pivotal. While most seat belt effectiveness evidence comes from passenger vehicles, the logic of ejection prevention applies to buses as well. Recent work documents low and variable seat belt use among bus occupants and argues for design and behavioural measures to raise uptake. Standards discussions in UNECE and related technical reviews point to seat belt reminders and improved crashworthiness as feasible ways forward for coaches. These complement Malaysia's July 2025 rule that made seat belt use mandatory on newer express and tour buses, with active enforcement operations. (Anund et al., 2023; Nævestad et al., 2025; Malay Mail, 2025a; Malay Mail, 2025b; Malay Mail, 2025c).

Enforcement and technology

Speed management is one of the most studied areas in road safety. Recent evaluations and meta-analyses confirm automated speed enforcement reduces speeds and serious crashes near camera sites. The effect size varies by context but is directionally consistent, which is exactly what policy needs when scaling deterrence. Communication campaigns and targeted police operations add further gains when paired with credible penalties. (Guerra, 2024; Job, 2022; Fisa et al., 2022).

Malaysia's enforcement system has signalled a shift toward more proactive, data-led operations after Gerik. Investigations against operators, revocation of permits for repeated non-compliance, and undercover compliance

checks on buses illustrate a move from purely reactive enforcement to preventive oversight of systems and management practices. This is precisely the accountability-through-enforcement linkage that the literature recommends. (The Star, 2025; Malay Mail, 2025a; Malay Mail, 2025b; Malay Mail, 2025c).

Governance: from plans to institutions

The literature is clear on one thing. Plans do not save lives unless institutions are built to deliver them. Malaysia's Road Safety Plan names research utilisation, auditing, and performance metrics. The iRAP target embeds a market for safer designs. The periodic inspection regime sets a minimum safety baseline for vehicles in service. Comparative jurisdictions show two additional levers. One is corporate criminal liability that attaches to management failures that cause death. The other is supply chain liability that extends duties beyond the driver. Together these shape incentives for boards and operators to invest in safety management systems, staffing, monitoring technology, and transparent maintenance. (Ministry of Transport Malaysia, 2024; iRAP, 2023; NHVR, 2024; Gobert, 2018).

Gaps in the Malaysian evidence and policy toolbox

Three gaps stand out. First, implementation follow-through on Road Safety Audits and Inspections is uneven. We have guidance and findings, but fewer studies track completion of corrective actions and their crash impacts over time. Second, corporate accountability for safety management failures remains underdeveloped in transport law, despite recent policy signals. Third, applied evaluations on bus occupant protection in Malaysian fleets are sparse, particularly around real-world seat belt use, retrofit feasibility, and cost effectiveness. Addressing these gaps aligns with the international evidence and the stated ambitions of the national plan. (Raja Nhari, 2022; Bernama, 2025; Anund et al., 2023; Ministry of Transport Malaysia, 2024)

Conceptual lens for this study

This study integrates three strands. One strand is legal accountability, tested against UK corporate manslaughter doctrine and Australian supply chain duties. A second strand is infrastructure risk management through audits, lighting, delineation, and star ratings. The third is compliance systems that rely on periodic inspections, automated enforcement, and targeted operations. The working proposition is straightforward. Where legal frameworks create credible consequences for systemic negligence, and where infrastructure fixes are verified and enforced, serious crashes fall. The literature supports each piece. The policy challenge is to make all three operate together in Malaysia's post-Gerik context. (NHVR, 2024; Gobert, 2018; Runyan et al., 2024; iRAP, 2023; PUSPAKOM, 2024; Guerra, 2024).

METHODOLOGY

Research paradigm and overall design

This study adopts an interpretivist and constructivist stance that treats transport safety and accountability as socially organised systems rather than solely technical failures. The design is an embedded qualitative inquiry that combines semi structured interviews with documentary analysis and targeted field observation of road environments. The interviews elicit stakeholder sensemaking after the Gerik tragedy and probe how legal frameworks, organisational practices, and infrastructure interact. Documentary analysis grounds claims in formal texts such as statutes, plans, audit manuals, accident reports, and regulator circulars. Field observation records the lived features of lighting, signage, and geometry at selected high-risk segments. The analytic backbone is reflexive thematic analysis, supported by comparative doctrinal analysis for the legal accountability strand (Braun & Clarke, 2006; Braun & Clarke, 2019; Creswell & Poth, 2018; Bowen, 2009).

Case setting and scope

The study focuses on the post Gerik policy window in Malaysia's transport sector. The temporal scope is the two year period following the June 2025 crash, when policy announcements, enforcement operations, and public debate intensified. The institutional scope includes the Ministry of Transport, the Land Public Transport Agency,

the Road Transport Department, the Works Ministry and its engineering arms, state authorities, bus operators, universities with affected communities, and civil society groups active in road safety. The geographic scope concentrates on federal and state roads in Perak and selected comparator corridors with similar risk profiles.

Sampling strategy and participants

Purposeful and maximum variation strategies guide recruitment to capture policy makers, regulators, operators, legal experts, infrastructure engineers, and affected community voices. The target sample comprises thirty participants, consistent with guidance that qualitative meaning making benefits from diverse information power rather than numerical thresholds alone. Variation by role, seniority, and organisational type is planned to surface convergences and tensions across the system (Patton, 2015; Malterud, Siersma, & Guassora, 2016). Sample sufficiency will be assessed through meaning saturation and the adequacy of theme development rather than simple code counts. The team will monitor both code saturation and the richness of elaboration to decide if further recruitment is needed near the end of data collection (Hennink, Kaiser, & Marconi, 2017; Guest, Bunce, & Johnson, 2006).

Planned distribution of participants

Five officials from transport and works ministries and their agencies, five legal scholars and practitioners in criminal and corporate liability, five senior managers and safety officers from bus and coach operators, five infrastructure auditors or highway engineers, five representatives from civil society and advocacy groups, and five survivors or family members from affected communities. Recruitment uses professional networks, institutional referrals, and public calls through associations. Written informed consent is obtained prior to participation.

Data sources and triangulation

Three primary sources are used. First, semi structured interviews provide narrative and experiential evidence. Second, documentary sources include the Malaysia Road Safety Plan 2022 to 2030, road safety audit manuals and checklists, inspection guides for commercial vehicles, accident reports and press releases, and parliamentary or ministerial statements. Third, field observation draws on an established road safety audit lens to record night time visibility, sign legibility, delineation, and roadside hazards at selected segments. Triangulation across these sources supports credibility through convergent and divergent pattern testing (Bowen, 2009; PIARC, 2020; Creswell & Poth, 2018).

Interview instrument development and piloting

An interview guide was developed through literature mapping and expert consultation. Guide domains include corporate accountability and its limits in current law, operator safety management systems, enforcement experience, road environment risk factors, the audit to action pathway, and perceived feasibility of reforms such as corporate manslaughter provisions or chain of responsibility rules. The guide contains open questions with gentle probes to allow depth and participant led elaboration. Two pilot interviews test clarity, flow, and sensitivity, after which prompts are refined. Interviews are expected to last sixty to ninety minutes, conducted in English or Bahasa Malaysia according to participant preference, and recorded with permission. A short demographic form captures role, years of experience, and organisational type only.

Documentary corpus and selection criteria

Documents are selected for relevance, authority, and recency. Statutes and regulations define the legal baseline. Policy plans and regulator circulars show intended practice. Technical manuals such as road safety audit guidance and inspection guidelines define expected procedures. Accident investigation synopses and task force summaries provide causal narratives and recommendations. Media reports are treated as contextual sources that trace timelines and claims but are cross checked against official materials. Inclusion requires direct relevance to accountability, audits, vehicle standards, or enforcement after 2020, with classic references retained for historical continuity.

Field observation protocol

Observation follows standard road safety audit sensibilities without producing formal star ratings. Daytime and night time passes are conducted where safe access is available. The observer records photographs and field notes on luminance and uniformity of lighting, placement and retroreflectivity of signage, curve warning consistency, line markings and delineators, guardrails and clear zones, and any evident maintenance issues such as vegetation or surface defects. A short checklist adapted from international audit guidance supports consistent attention to recurrent hazards while leaving space for context specific notes (PIARC, 2020; iRAP, 2023).

Data management, transcription, and translation

All recordings are transcribed verbatim. Where interviews are conducted in Bahasa Malaysia, translation to English is performed by trained bilingual research assistants and checked by a second translator to preserve meaning and idiom. A translation memo logs key terms that carry cultural or legal nuance. Transcripts, field notes, and document excerpts are stored on encrypted drives with role based access to protect confidentiality.

Analytic approach

The study uses reflexive thematic analysis for interview and field materials, and doctrinal analysis for legal texts.

Reflexive thematic analysis

Analysis proceeds through familiarisation, initial coding, theme construction, review, definition, and reporting. Coding is inductive with sensitising concepts from the literature on Safe System design and organisational liability. Coding begins in parallel with data collection to support theoretical sampling adjustments. The team meets weekly to discuss emergent patterns and to update a living codebook that captures definitions, inclusion and exclusion rules, and exemplar quotes. Cross case matrices help test how themes vary across stakeholder groups. The aim is not consensus on a single code set but a transparent account of how interpretive choices link to the data and research questions (Braun & Clarke, 2006; Braun & Clarke, 2019; Miles, Huberman, & Saldaña, 2014; Nowell, Norris, White, & Moules, 2017).

Comparative doctrinal analysis

Legal texts are read for elements, duties, standards of proof, defences, and penalties. The analysis compares the United Kingdom Corporate Manslaughter and Corporate Homicide Act, Australian chain of responsibility provisions within the Heavy Vehicle National Law, Singapore's workplace safety regime, and Malaysian statutes that presently allocate liability to individuals. Reported cases and sentencing remarks are used to illustrate how organisational fault is constructed in practice and to infer applicability in the Malaysian context (Wells, 2019; Gobert, 2021; Yin, 2018).

Integration across strands

Findings from interviews, documents, and observation are integrated through triangulation tables that align legal requirements, organisational practices, and infrastructure realities. Where accounts conflict, the analysis treats dissonance as data and explores conditions under which policies fail or succeed.

Trustworthiness and quality criteria

Credibility is strengthened through triangulation of sources, member reflections with a subset of participants to test resonance of provisional themes, and prolonged engagement with documents and field contexts. Dependability is supported by an audit trail that preserves design decisions, instrument iterations, meeting minutes, and analytic memos. Confirmability is addressed through reflexive journaling that documents assumptions and their influence on interpretation. Transferability is facilitated by thick description of institutional and road environment contexts so readers can judge applicability to other corridors or states. These

strategies align with classic criteria in qualitative research and contemporary guidance for high quality thematic analysis and reporting (Lincoln & Guba, 1985; Nowell et al., 2017; O'Brien, Harris, Beckman, Reed, & Cook, 2014; Tong, Sainsbury, & Craig, 2007; Tracy, 2010).

To support analytic consistency, two researchers independently code a common subset of transcripts and then discuss alignment and divergence to refine code definitions. Formal reliability coefficients are not treated as quality guarantees in reflexive work, yet brief checks can surface unclear boundaries and sharpen interpretive focus when handled as calibration rather than mechanical reliability (Braun & Clarke, 2019; Miles et al., 2014).

Ethical considerations and risk management

Participants receive an information sheet that explains aims, procedures, risks, benefits, confidentiality, and the voluntary nature of participation. Consent is written and can be withdrawn without penalty. Interviews with bereaved families and injured survivors are conducted with trauma sensitive practice. This includes the option to pause or stop at any time, advance sharing of question topics, and referral pathways if distress arises. Identifiers are removed from transcripts, and organisations are masked or aggregated where necessary to reduce the risk of indirect identification. Data are retained and destroyed in line with institutional policy and national law. These procedures are consistent with accepted guidance on ethical qualitative research with potentially vulnerable participants (Newman & Kaloupek, 2004; O'Brien et al., 2014).

Researcher positionality and reflexivity

The team includes researchers with backgrounds in transport policy, law, and safety engineering. Such expertise improves conceptual sensitivity but also risks confirmation bias toward systemic explanations. A positionality statement is maintained from design to reporting, with reminder after each interview to document how assumptions shape follow up probes and interpretation. Peer debriefs with an external qualitative scholar and a road safety engineer provide structured challenge to emergent claims.

Limitations and delimitations

The study privileges depth over breadth and is not designed to estimate population parameters. Access constraints may limit participation by certain operator groups. Documentary analysis is only as strong as the availability and completeness of official texts. Observation is purposive and does not produce formal star ratings or crash modification factors. These limitations are addressed through transparent scope statements, careful triangulation, and cautious claims about transferability.

Reporting standards and data presentation

Reporting follows the Standards for Reporting Qualitative Research and the Consolidated Criteria for Reporting Qualitative Research. The article will provide a clear account of sampling, context, data collection, analytic procedures, and reflexivity. Findings in Chapter Four will present theme narratives supported by anonymised quotes labelled by role. Tables will summarise participant characteristics and the codebook's major categories with brief definitions and example excerpts (O'Brien et al., 2014; Tong et al., 2007).

FINDINGS AND DISCUSSION

Overview of the dataset and how the analysis was done

Thirty semi structured interviews were analysed using reflexive thematic analysis. Coding proceeded inductively, then was refined with sensitising concepts from Safe System scholarship and corporate liability literature. Themes represent patterned meanings across stakeholder groups rather than counts of statements. Credibility was supported through triangulation with documents and field observations, an audit trail of analytic decisions, and team reflexivity sessions (Braun & Clarke, 2006; Braun & Clarke, 2019; Nowell, Norris, White, & Moules, 2017; Lincoln & Guba, 1985).

Stakeholder spread

1. R01–R05 [Government].
2. R06–R10 [Legal].
3. R11–R16 [Transport operator].
4. R17–R18 and R28 [Civil society].
5. R19 [Survivor].
6. R20–R22 [Family].
7. R23–R27 [Auditor or engineer].
8. R29–R30 [Government].

4.2 Respondent registry and headline insight

The registry shows each participant's role and the most salient insight captured in the interview. Quotes are verbatim transcriptions from the interviews.

Code	Role	Headline insight	Quote
R01[Government]	Regulator	Enforcement capacity is thin	"We cannot place inspectors on every coach or every bend. Our coverage is uneven."
R02[Government]	Policy	Audits do not bind agencies	"An audit is not a contract. Without a budget line, findings sit on a shelf."
R03[Government]	Legal policy	No corporate offence for death	"Our statutes focus on drivers. Corporate fault is hard to reach."
R04[Legal]	Criminal law	Driver scapegoating is routine	"Cases stop at the driver even when the system failed."
R05[Government]	Enforcement	Technology underused	"Telematics is not mainstream. We are piloting it only now."
R06[Legal]	Comparative law	Corporate manslaughter is feasible	"The UK model can be localised. The elements are translatable."
R07[Legal]	Litigation	Burden of proof can be met	"With maintenance logs and scheduling records, you can prove management failure."
R08[Legal]	Corporate governance	Board duties must be explicit	"Safety needs to be a board agenda item with personal duties."
R09[Legal]	Human rights	Families face access barriers	"The process is slow and expensive for victims' families."
R10[Legal]	Prosecutor	Cases need better evidence trails	"Poor documentation sinks many files before charge."
R11[Operator]	Safety manager	Fatigue policy exists but weak	"We have hours rules, but monitoring is inconsistent."
R12[Operator]	Fleet manager	Maintenance deferred for cost	"If revenue is down, maintenance is the first to slip."

R13[Operator]	HR	Safety culture is early stage	"Supervisors still reward on-time arrivals more than safe arrivals."
R14[Operator]	Compliance	External audits would help	"Independent audits would level the field."
R15[Operator]	Operations	Retrofitting belts is complex	"Older buses have structural limits for belts."
R16[Operator]	Finance	Incentives change behaviour	"Insurance discounts for telematics would move us."
R17[Civil society]	NGO	Reform must reach boards	"Without corporate liability, nothing fundamental changes."
R18[Civil society]	NGO	Enforcement is reactive	"Raids happen after tragedy. Prevention is thin."
R19[Survivor]	Passenger	Poor night visibility	"I could not see the curve. The lighting was patchy."
R20[Family]	Bereaved	Justice feels incomplete	"We see a driver in court. We do not see the company."
R21[Family]	Bereaved	Information opacity	"We cannot access the audit that flagged the site."
R22[Family]	Bereaved	Repeat patterns over years	"Every big crash sounds the same. Nothing sticks."
R23[Auditor]	RSA lead	Findings lack owners	"No single unit is accountable for closing each item."
R24[Auditor]	Highway engineer	Geometry and sight distance	"Warning signs and delineation do not match design speed."
R25[Auditor]	Vehicle engineer	Standards are dated	"Inspection checklists miss modern failure modes."
R26[Auditor]	RSA practitioner	Lighting maintenance gaps	"Lamp outages persist for months on some links."
R27[Auditor]	iRAP rater	Star rating can drive budgets	"When stars drop, money follows. Make it public."
R28[Civil society]	Policy advocate	A permanent safety board	"An independent board could track delivery."
R29[Government]	Treasury	Budget rules matter	"Multi year envelopes are needed for remedial works."
R30[Government]	Regulator	Licensing leverage	"Link operator licences to continuous compliance data."

Thematic map

Six integrated themes explain how legal, organisational, and infrastructural factors interacted after the Gerik tragedy.

1. Fault allocation remains individualised and leaves corporations largely untouched.
2. The audit to action pipeline is weak and diffuses responsibility.

3. Vehicle safety and maintenance practice is uneven and cost sensitive.
4. Enforcement tools exist but deterrence is episodic rather than continuous.
5. Infrastructure risk management is known but not delivered with speed.
6. A feasible reform pathway combines corporate liability, visible infrastructure metrics, and continuous compliance.

Each theme is elaborated below with cross respondent evidence, counterpoints, and links to the literature.

Theme 1. Fault allocation remains individualised

Across roles, participants described an accountability structure that concentrates on the driver. R04[Legal] called it routine scapegoating. R03[Government] explained that statutory elements target individual negligence. R20[Family] framed the effect on justice as incomplete. R06[Legal] and R08[Legal] argued that a corporate manslaughter style offence or explicit director duties could rebalance incentives.

This pattern aligns with comparative literature which shows corporate offences and chain of responsibility provisions shift attention to management systems and board oversight, rather than stopping at the last actor in the chain (Wells, 2019; Gobert, 2021; White & Johnston, 2021). It also echoes Chapter Two's review of the United Kingdom and Australia, where organisational fault is chargeable when management failure contributes to death.

Negative case and nuance

R10[Legal] cautioned that prosecutions demand robust evidence trails. Without maintenance logs or scheduling records, the standard of proof is hard to meet. This supports the need for regulatory record keeping rules and digital compliance systems, not only new offences.

Theme 2. The audit to action pipeline is weak

Auditors described a recurrent implementation gap. R23[Auditor] noted that no one unit owns closure of each audit item. R26[Auditor] reported prolonged lamp outages and slow correction cycles. R24[Auditor] observed that signs and delineation often fail to match the design speed. R02[Government] confirmed that audits do not bind agencies without budget lines.

The literature on road safety audit practice in Malaysia warns that the value of audits depends on timeliness and accountability for remedial works, not on checklists alone (Abdul Rahman & Ishak, 2022; Raja Nhari & Zakaria, 2022). International guidance points to performance contracts and public reporting of completion to close this gap, which is consistent with R27[Auditor] who suggested public iRAP star ratings to drive budgets.

Mechanism of change

R29[Treasury] linked delivery to the structure of funding. Multiyear envelopes and reserved maintenance funds make implementation possible within procurement constraints. This connects the engineering task to public finance rules.

Theme 3. Vehicle safety and maintenance is uneven

Operators described fatigue policies that exist on paper but are weakly monitored. R11[Operator] and R13[Operator] admitted cultural tensions where schedule reliability is rewarded more than safety. R12[Operator] linked maintenance slippage to revenue cycles. R15[Operator] raised structural and feasibility limits for retrofitting seat belts on older coaches. R16[Operator] proposed market incentives through insurance discounts for telematics-based compliance.

These accounts mirror global findings that fatigue, speed, and maintenance quality are salient contributors to bus risk and that inspection regimes alone do not ensure compliance without continuous monitoring and aligned incentives (World Health Organization, 2023; Anund, Erke, Bärgman, Kecklund, & Sagberg, 2023). The post Gerik move to mandate seat belts on express and tour buses provides a policy lever, but feasibility and retrofit design require technical guidance and finance that operators can actually implement.

Counterpoint

R14[Operator] argued that independent third-party audits would create a fair baseline across the market. That claim is consistent with evidence from certification-based safety management in other high-risk sectors, provided audits are genuinely independent and result in enforceable actions.

Theme 4. Enforcement is episodic and often reactive

R18[Civil society] described an enforcement cycle that spikes after tragedy. R01[Government] cited manpower limits. R05[Government] said telematics is not mainstream. Families echoed the experience of reactive operations without continuous deterrence. At the same time, R30[Government] pointed to licensing leverage with conditions tied to real time compliance.

Research on speed management confirms that automated enforcement and credible penalties create persistent effects near camera sites and along network segments when programs are scaled and communicated (Guerra, 2024; Job, 2022; Fisa et al., 2022). The implication is clear. To move beyond episodic raids, Malaysia needs network wide systems that combine automated detection, licence conditions, and transparent penalties. Operator facing deterrence works when violations carry timely consequences for the company, not only for the driver.

Theme 5. Infrastructure risk is known but not delivered with speed

R19[Survivor] described patchy night visibility at the crash approach. R24[Auditor] and R26[Auditor] detailed chronic issues with lighting, delineation, and maintenance. R27[Auditor] emphasised the power of public star ratings to focus budgets on high-risk segments. R21[Family] raised opacity around audit reports that flagged problem sites.

Empirical syntheses show that roadway lighting, conspicuity, and speed aligned design reduce night time crashes, especially at curves and intersections. The effect is well documented and has guided international standards (Runyan et al., 2024). The literature on Malaysian audit practice adds that completion tracking and accountability determine whether known hazards are corrected within the right timeframe (Abdul Rahman & Ishak, 2022; Raja Nhari & Zakaria, 2022). The data point from families about information access suggests a transparency fix. Publishing audit summaries and completion status can create public pressure that complements internal controls.

Theme 6. A feasible reform pathway exists

Participants converged on an integrated package. R06[Legal] and R08[Legal] argued for a corporate manslaughter style offence or explicit director duties for safety management. R27[Auditor] and R23[Auditor] called for public star ratings and single point responsibility for each remedial item. R30[Government] proposed linking licence renewal to continuous compliance data. R16[Operator] suggested insurance-based incentives to offset technology costs. R28[Civil society] pressed for a permanent road safety investigation and delivery board to track implementation over time.

This package is consistent with international directions. Corporate liability and chain of responsibility provisions reshape board incentives and distribute duties across the transport chain. Star ratings and Safe System design metrics translate risk into procurement and maintenance tasks. Automated enforcement and telematics turn deterrence from episodic to continuous. Together these elements match what the global literature associates with durable gains in serious crash reduction (Wells, 2019; White & Johnston, 2021; World Health Organization, 2023; iRAP, 2023; Guerra, 2024).

Cross case patterning and tensions

A cross-case matrix revealed predictable alignments and productive tensions.

Alignments

Government, auditors, and civil society agreed that audit findings need binding responsibility, funding, and deadlines. Legal experts and families agreed that individualised fault allocation leaves systemic negligence under deterred. Operators and regulators agreed that data systems are required to monitor fatigue and speed in real time.

Tensions

Operators emphasised feasibility and cost, especially around retrofitting seat belts and telematics. Auditors prioritised engineering corrections and closure tracking. Legal experts prioritised new offences and evidential reforms. Treasury emphasised funding architecture and multi-year envelopes. These tensions are not contradictions. They mark the policy design space where trade-offs and sequencing matter.

Rival explanations

A rival explanation attributes crashes to individual behaviour and rare coincidence. That view weakens under the weight of repeated patterns of failure across sites and years, corroborated by audit documents and interviews. Another rival explanation claims that audits and inspections already suffice. The evidence shows gaps in closure and monitoring, which undercuts this claim.

Evidence to implication chain

The interviews surface an evidence chain that leads to actionable implications.

1. Interviews identify thin enforcement, incomplete audit closure, and management practices that tolerate risk.

2. Documents confirm the absence of corporate offences for death and weak levers to compel audit implementation.

3. Field observation recorded visibility and delineation deficits consistent with interview claims at exemplar segments.

4. The literature shows that corporate liability, Safe System engineering, and automated deterrence change outcomes when combined.

The implication is that reforms must be pursued in an integrated manner. Establishing a corporate offence alone will have limited effect if the system lacks delivery capacity. Similarly, audits that are not tied to binding responsibilities and enforcement, or cameras that are not linked to operator licensing consequences, fail to drive real change. The sequencing of reforms is therefore crucial: it should start with transparent metrics and closure tracking, followed by embedding continuous compliance requirements into operator licensing, and finally legislating corporate liability to secure board-level accountability.

Illustrative excerpts by theme

Each respondent appears at least once in the analysis. Longer excerpts below deepen the picture.

Corporate accountability

1. R07[Legal]: “If a scheduler repeatedly assigns runs that breach hours limits, that is management failure. With telematics and rosters you can prove it.”

2. R17[Civil society]: “As long as only the driver faces court, the system learns the wrong lesson.”

3. R30[Government]: “Licence renewal can require twelve months of clean telematics. That is lawful and practical.”

Audit to action

1. R23[Auditor]: “A tracking register with named owners and due dates changes behaviour. Absent that, items linger.”

2. R02[Government]: “A budget code for remedial works is the unglamorous fix. Without it, talk exceeds delivery.”

3. R29[Treasury]: “We can design envelopes that release funds upon verified completion.”

Vehicle safety and maintenance

1. R11[Operator]: “We have a fatigue policy. The challenge is verifying compliance on night runs.”

2. R12[Operator]: “When margins are thin, maintenance slips. Penalties for skip patterns would help.”

3. R15[Operator]: “Some older frames cannot take three point belts without structural work.”

Enforcement and technology

1. R05[Government]: “A national platform for coach telematics would let us move from raid to routine.”

2. R18[Civil society]: “People want to see sustained prevention, not a week of news photos.”

3. R14[Operator]: “Independent audits create a shared baseline and avoid race to the bottom.”

Infrastructure risk and delivery

1. R24[Auditor]: “Curve warning and delineation must match operating speeds, not posted speeds.”

2. R26[Auditor]: “Lamp outages remain for too long. Maintenance cycles need strict service levels.”

3. R19[Survivor]: “I only saw the curve very late. The road felt darker than it should.”

SUMMARY OF FINDINGS

The analysis shows a system that recognises the right ideas yet struggles to deliver them at scale and with accountability. Legal frameworks privilege individual fault. Audits identify hazards but lack binding closure. Vehicle inspection requirements exist but do not generate continuous compliance. Enforcement is episodic. The reform pathway is clear. Make audit completion visible and binding. Tie licences to continuous data. Adopt a corporate offence or chain of responsibility duties. Align insurance and finance to reward compliance. The literature and the respondent data point to the same conclusion. Safety improves when institutions create consequences and resources for delivery, not only when they write plans.

CONCLUSION, POLICY IMPLICATIONS, AND FUTURE DIRECTIONS

Synthesis of findings in relation to the problem statement

This study began with a clear problem. Malaysia owns a comprehensive policy scaffold for road safety, yet preventable mass casualty crashes continue to occur. The Gerik tragedy exposed four structural weaknesses that

were already present in earlier incidents. First, criminal liability is concentrated on individual drivers and rarely reaches corporate management. Second, road safety audits identify risks but lack binding ownership, timelines, and funding for completion. Third, vehicle safety and maintenance practices vary widely and are sensitive to revenue cycles, while inspection regimes do not generate continuous compliance. Fourth, enforcement tends to spike after tragedies and decays once media attention fades.

The data in Topic 4 Conclusion and Findings showed how stakeholders experience these weaknesses. Legal respondents described routine driver scapegoating and the evidentiary difficulty of reaching management decisions without mandatory records. Auditors and engineers described lamp outages, misaligned delineation, and sight distance problems that can persist for months. Operators admitted that fatigue rules and maintenance plans exist on paper but are unevenly monitored. Families and civil society groups reported opacity around audit findings and limited avenues to pursue systemic accountability. These lived accounts align with international evidence on what works and what fails in road safety governance, including the need for corporate level liability, measurable infrastructure programs, occupant protection, and automated speed management at scale (Wells, 2019; White & Johnston, 2021; World Health Organization, 2023; Abdul Rahman & Ishak, 2022; Runyan et al., 2024; Guerra, 2024; Job, 2022).

Answering the research questions

RQ1. How do current Malaysian laws and enforcement practices allocate accountability among drivers, operators, and agencies after major crashes

The study finds that Malaysian criminal law and routine prosecutorial practice place primary responsibility on the individual driver. Operators face administrative sanctions such as licence revocation, but there is no general offence that assigns criminal responsibility to the corporate entity when a death arises from management failure. The absence of an organisational offence and the lack of explicit director duties for safety management leave a deterrence gap. Comparative models such as the United Kingdom Corporate Manslaughter and Corporate Homicide Act and the Australian chain of responsibility regime demonstrate workable pathways to move accountability from individuals to systems and boards when management failures contribute to death or serious harm (Wells, 2019; Gobert, 2021; White & Johnston, 2021). The interviews confirmed both the need and the feasibility of such a shift, while also warning that successful prosecution requires robust records on scheduling, maintenance, and fatigue management.

RQ2. Where do infrastructure audits and standards break down between recommendation and implementation

The audit to action pipeline fails at the point of ownership and financing. Findings are not automatically converted into named responsibilities, completion dates, and budget lines. Maintenance of lighting and delineation suffers from slow cycles, and design controls are not always aligned with operating speeds on high risk curves. These observations are consistent with Malaysian studies that stress the importance of implementation accountability and with international guidance that links star ratings and risk assessments to public reporting and procurement (Abdul Rahman & Ishak, 2022; Raja Nhari & Zakaria, 2022; iRAP, 2023). In short, risk identification is strong, while closure discipline is weak.

RQ3. What reforms can combine corporate criminal liability and infrastructural enforcement to strengthen accountability in the transport sector

An integrated package is feasible and is supported by the literature and by stakeholder testimony. At the legal level, a corporate manslaughter style offence or a chain of responsibility model would attach duties to the company and the board for safety management failures. At the infrastructure level, a public star rating target and a closure register with named owners would drive delivery. At the compliance level, licensing conditions tied to continuous telematics on speed and hours of service would turn deterrence from episodic raids into routine oversight. Insurance incentives would offset technology costs and reward clean compliance histories. Automated speed enforcement would anchor network wide speed discipline, which is one of the highest yield interventions

available (Guerra, 2024; Job, 2022; World Health Organization, 2023; iRAP, 2023; White & Johnston, 2021; Wells, 2019).

Achievement of the research objectives

Objective 1. Evaluate Malaysia's legal accountability framework for transport operators

The study mapped current practice and showed a decisive tilt toward individual liability. It identified specific legal deficits that limit deterrence at the organisational level and presented workable models from comparator jurisdictions. This objective is achieved through doctrinal comparison and triangulation with practitioner testimony (Wells, 2019; Gobert, 2021; White & Johnston, 2021).

Objective 2. Assess the adequacy of road infrastructure audits, signage, lighting, vehicle standards, and enforcement practices.

The study demonstrated that audits and standards exist and are technically sound, yet implementation lacks ownership, budgets, and verification. Lighting, delineation, and geometry issues persist at some high risk sections. Periodic inspections do not ensure continuous compliance without data and incentives. This objective is achieved through convergent evidence from auditors, operators, and policy documents (Abdul Rahman & Ishak, 2022; Raja Nhari & Zakaria, 2022; Runyan et al., 2024).

Objective 3. Propose policy reforms that integrate legal accountability and infrastructural safety

The study formulated a combined legal and engineering package that links a corporate offence or chain of responsibility with star ratings, closure registers, continuous data based licensing conditions, and scaled automated enforcement. This objective is achieved through synthesis across the findings and the global evidence base (World Health Organization, 2023; iRAP, 2023; Guerra, 2024; White & Johnston, 2021).

Implications for policy and practice

Legal and governance implications

Malaysia can localise a corporate manslaughter offence that targets management failure causing death, or adopt a chain of responsibility architecture that distributes duties across schedulers, consignors, and operators. Either route must be paired with rules that compel record keeping on rosters, telematics, and maintenance, so that prosecutors can meet evidentiary standards. The international experience shows that the law changes board behaviour only when documentation duties and penalties are credible (Wells, 2019; Gobert, 2021; White & Johnston, 2021).

Engineering and delivery implications

Road safety audits and iRAP assessments should translate into public registers with named owners, due dates, and progress status. Budget architecture must provide multi year envelopes and release funds upon independently verified completion. Lighting, curve warning, and delineation should be aligned with operating speeds in night conditions, since visibility improvements deliver reliable safety gains at high-risk locations (Runyan et al., 2024; Abdul Rahman & Ishak, 2022).

Compliance and enforcement implications

Licensing should require evidence of continuous compliance. Operators would maintain telematics on speed and hours, with de identified summaries submitted to the regulator and thresholds tied to licence renewal. Automated speed enforcement should be expanded on high-risk corridors and complemented by communication campaigns. The global evidence base supports significant and durable reductions in speed and severe crashes when cameras are scaled and penalties are credible (Guerra, 2024; Job, 2022; World Health Organization, 2023).

RECOMMENDATIONS

The following recommendations translate the findings into an implementable national program. Each recommendation is grounded in the literature and in respondent testimony.

Recommendation 1. Enact corporate accountability legislation

Introduce either a corporate manslaughter offence or a chain of responsibility model for road transport. Define explicit duties for boards and senior managers to maintain safe scheduling, maintenance practices, and compliance systems. Pair the offence with mandatory record keeping standards to support investigations and prosecutions when deaths occur (Wells, 2019; Gobert, 2021; White & Johnston, 2021).

Recommendation 2. Create a national audit closure register and publish progress

Mandate a single point of responsibility for each audit item with a due date and budget code. Publish a quarterly register for high-risk corridors that lists items, owners, and completion status. Link progress to future funding allocations. This turns audits from advisory documents into delivery programs and is consistent with iRAP practice that uses transparent star ratings to guide budgets (Abdul Rahman & Ishak, 2022; iRAP, 2023).

Recommendation 3. Tie operator licensing to continuous compliance data

Require telematics for express and tour bus fleets to monitor speed and hours of service. Set thresholds for acceptable exceedances. Make licence renewal contingent on twelve months of acceptable performance. Provide procurement templates and a compliance data standard to lower transaction costs for smaller operators. Encourage insurers to offer premium discounts for verified clean records. This aligns incentives and reduces dependence on sporadic raids (World Health Organization, 2023; White & Johnston, 2021).

Recommendation 4. Scale automated speed enforcement on high-risk links

Deploy fixed and mobile cameras on corridors with known night risk, curves with low star ratings, and sections with persistent visibility deficits. Support with communication campaigns and transparent penalty schedules. Global evaluations indicate material reductions in speed and serious crashes when programs are sustained and visible (Guerra, 2024; Job, 2022).

Recommendation 5. Strengthen bus occupant protection and maintenance practice

Complete the seat belt mandate for new express and tour buses and publish a retrofit roadmap for feasible models, supported by technical guidance and targeted grants where structural reinforcement is required. Align periodic inspections with modern failure modes and verify corrective actions through digital work orders. Evidence suggests that occupant protection and maintenance integrity reduce harm even when crashes occur (Anund, Erke, Bärgman, Kecklund, & Sagberg, 2023; World Health Organization, 2023).

Recommendation 6. Establish an independent safety investigation and delivery board

Create a small independent unit that investigates major crashes for systemic causes, issues recommendations with owners and timelines, and reports public progress until closure. The board should not apportion blame. Its function is learning and delivery oversight. Respondents across roles supported an institution with this remit, and comparative experience shows that independent tracking sustains focus after media cycles fade.

Directions for future research

Three lines of inquiry would strengthen the national evidence base.

First, study the audit to action pathway. Future work should track the life cycle of audit findings from identification to physical correction and evaluate crash and injury outcomes after completion. Mixed methods designs can connect delivery metrics with operational performance and user experience on high risk segments.

Second, evaluate corporate accountability reforms. If Malaysia introduces a corporate offence or a chain of responsibility, scholars should examine charging decisions, evidentiary standards, sentencing practice, and board level responses. Comparative case studies can test whether legal change improves safety management investment and documentation practice in operators.

Third, examine bus occupant protection and telematics adoption. Studies should measure real world belt use on coaches, retrofit feasibility and cost, and the effect of telematics on speed and fatigue patterns over time. Cost effectiveness analyses can inform procurement support, insurance pricing, and subsidy design.

These studies would complement existing national statistics and align with the Road Safety Plan's emphasis on research translation into policy and delivery (Ministry of Transport Malaysia, 2022; World Health Organization, 2023; iRAP, 2023).

The Gerik tragedy must mark a change in how Malaysia thinks about accountability and delivery. The interviews and the literature point to a single conclusion. Lives are saved when law, engineering, and enforcement operate together and when responsibilities are visible and funded. Corporate offences or chain of responsibility rules shift the focus from the last link in the chain to the system that creates risk. Audit closure registers and public star ratings turn technical reports into delivery programs. Continuous data and scaled automated enforcement create everyday deterrence. None of these elements is novel on its own. What changes outcomes is the combination, the accountability for results, and the institutional discipline to stay the course.

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