

Inquiry into e-mobility safety and use in Queensland

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The Problem with Current E-Scooter Safety

“When the rider’s feet leave the e-scooter—all technology safety features become redundant.”

Modern safety tech assumes the rider is stable, skilled, and physically ready.

But the moment they lose balance or control, every onboard safety feature—geofencing, auto-braking, self balancing—becomes useless.

After 8 years of this approach, injuries are still rising. What if we’ve been focusing safety on the wrong thing?

It’s time to shift safety from the machine to the human.

The Situation

The Department of Transport has been at the forefront in the regulation of Personal Mobility Devices (PMDs) in Australia since 2018, acknowledging their use as a viable transport option if used safely and responsibly. Queensland has implemented nation-leading rules to ensure the safety of PMD riders, pedestrians, and other road users. Since laws were first introduced in Queensland to allow e-scooter use, most Australian jurisdictions have followed suit, basing their rules substantially on Queensland's framework.

Despite these significant regulatory and safety measures implemented by the Department of Transport, injuries and fatalities continue to rise at an alarming rate.

"Injuries and fatalities involving PMDs are increasing at an unacceptable level." – Department of Transport

Despite nation-leading regulation, e-scooter injuries and deaths continue to climb — especially among untrained private riders.

The tragic consequences continue to unfold: "A 12-year-old in Cairns died last week. A 17-year-old hit a windscreen and suffered brain bleed." (Community Testimony). While shared schemes are well-managed and enforcement efforts are ongoing, private riders remain the critical blind spot—especially youth aged 12–16 who are suffering severe injuries, including brain trauma, from high-speed falls.

However, despite these interventions, injuries and fatalities involving PMDs are increasing at an unacceptable level. As acknowledged during the inquiry:

“Injuries and fatalities involving e-scooters are increasing at an unacceptable level, and more must be done.”

This submission outlines how Scoot Fit addresses four key challenges facing the Department of Transport:

1. E-scooters Injuries
2. No hospital or Police data - Hindering effective policy development due to outdated classification.
3. Private device owners — An unreachable population for traditional safety and enforcement methods.
4. Youth safety crisis — Parents buy their children e-scooters as toys, not realising the serious, potentially traumatic danger they could be in.

People Fall from E-Scooters

Falling, everyone falls at some point, it's inevitable.

Since 2019, there have been 3,305 ED presentations due to e-scooter accidents.

In 2023 alone, 1,273 cases were recorded — an 84% increase since 2021 .

Over 50% of injuries involve head/face trauma.

2 children per week and ending up in hospital.

E-scooters offer no seatbelt, airbags, doors or protection, if a mistake is made, you're going to the ground, fast.

Why is Falling so Dangerous?

Falling from an e-scooter at 15mph is like being thrown violently from 11ft wall, face first, in 0.4secs, with 3,380+ Joules of force.

That's like a 100kg barbell dropped from waist height onto your face.

Fast reaction times are essential, but if you don't know that outcome is a possibility, it's hard to react in time.

Consider this, would parents buy their children a cricket ball with speeds of 155 km/h if it was for sale? Probably not, but that's the game of roulette they're playing with buying their child an e-scooter.

This is why e-scooters are not toys and comparable to motorbikes and not push bikes.

Without pre rider training to warn and inform people, anyone hopping onto an e-scooter without knowledge can be moments away from a tragic accident.

Policy change

Scoot Fit proposes A Keystone Reform: Reclassification of children's scooters as Transport, the same as push bikes.

Under Queensland's Transport Operations (Road Use Management) Act 1995, foot-powered scooters are still classified as "recreational devices"—not vehicles like bicycles. This outdated categorization places them alongside skateboards and rollerblades.

This has **two serious consequences**:

- 1) No injury data collection: "We've got no way of comparing what are the more or less successful strategies... A consistent national data set is the starting point." – Prof. Terry Slevin.
- 2) Scooter-related injuries aren't consistently recorded in hospital or police reports, unlike bicycles which are classified as vehicles.

Reclassifying scooters as transport devices opens the door to:

Injury surveillance systems

Rider assessments before access

Integration into PDHPE curricula

Council funding for shared-path safety

Clinical referrals for early musculoskeletal intervention

'Reclassifying e-scooters would be the single most effective legislative lever for harmonization and addressing current systemic shortcomings.'

Private e-scooter riders are unreachable

Regulations exist for shared schemes, private riders are an untrained, unlicensed, and unreachable blind spot.

Traditional education efforts struggle to reach private device owners — many of whom ignore brochures, lectures, and helmet mandates.

Scoot Fit proposes to be the safety net to catch these riders and bring them into our training programme with online training, public training events and playing our new sport Scoot Ball - Football on scooters. We can be their home for all information, education and training, taking the strain of the dept of transport and the police.

Youth Safety Crisis

Why Children Under 16 Shouldn't Ride E-Scooters:

Beyond physical readiness, children under 16 lack the neurological maturity and rapid reaction times (0.25s slower than adults) to safely operate e-scooters at speed. Their underdeveloped judgment turns minor mistakes into catastrophic injuries.

Children need to be diverted away from the allure of e-scooters with education, information and a refocus on something more fun with Scoot Fit.

Becoming an athlete on scooters with Scoot Fit and focusing their attention on playing Scoot Ball and exercising the Scoot Fit way with pull ups, tricep dips and push up as their core fitness exercises. This will physically protect them from falls in the future and build foundational skills in a safe manner.

Relieving the Burden on Police through Specialist Training

“People like to hear it from a police officer.”

Queensland Police already face significant enforcement demands across the state. Expecting them to also deliver e-scooter safety education places strain on limited resources and diverts attention from core law enforcement duties.

Scoot Fit fills this gap. Our specialist programs relieve police of the educational role by embedding trained scooter professionals directly into schools, clinics, and communities. Rather than officers spending time giving talks or enforcing non-compliance among untrained riders, Scoot Fit delivers consistent, measurable rider training built on physical readiness, balance screening, and reflex development.

This allows police to focus on what they do best—while Scoot Fit takes responsibility for what comes before enforcement: **human preparation and safety education.**

Scoot Fit Science - What you don't know.

Scoot Fit have discovered an unknown epidemic of single leg balance distortion that has led to a groundbreaking 3 year study with Swansea University.

40% of people (children and adults) have hypermobility of the knee, legs that lock out straight, femur bone on top of tibia bone.

This is like standing on a ladder, bypassing leg muscles which are a rider's springs and suspension.

This makes it physiologically difficult and unsafe for them to balance and react properly on a 2-wheel scooter.

By locking their legs as they ride, when something unexpected happens, they go flying like a missile over the handlebars.

They're literally predisposed to falling and don't know it, these are your high risk riders and what training is seeking to find.

Scoot Fit invented the **Springs & Ladders Balance Assessment** to identify the 40% with hypermobility, allowing us to train them before they ride, preventing serious falls.

Who Is Scoot Fit?

Scoot Fit are 13 years old and are a movement-first training company redefining how physical literacy, injury prevention, and balance development are delivered across schools, early years, and urban transport systems.

We combine fun, high-engagement tools like scooters, Balance Shoes, Scoot Ball, Tug Ball and Springs & Ladders neuromuscular assessments.

But ultimately, Scoot Fit is the training company behind the new sport Scoot Ball - Football on scooters

We can also offer potential partnerships with **clinical technology providers** that supply 3D motion analysis systems, force plates, and wearable sensors by physiotherapy and biomechanics clinics across Australia.

Our mission is to make every movement count — using dynamic play to uncover hidden risks, develop stronger bodies, transform how communities learn to move and play Scoot Ball.

Scoot Fit can operate within a three-pillar model:

1. Manufacturers build the machines
2. Queensland writes the rules
3. *Scoot Fit trains the humans - providing the gold standard in physical rider readiness.*

International Validation: The MIROS Story

Don't just take our word for it. After experiencing a full Scoot Fit training day (including Balance Shoes, Springs & Ladders, and Scoot Ball demos), MIROS (Malaysia Institute of Road Safety Research) completely shifted their thoughts.

James Rodger, founder of Scoot Fit was asked to deliver a presentation at MOVE symposium in Kuala Lumpur about 'Micromobility safety' in May 2025, but after receiving training, the presentation was renamed to: "Reactive to Proactive – MIROS Leading the Shift in Scooter Safety."

After experiencing what gold-standard rider readiness looks like, MIROS are in the early stage of embedding Scoot Fit's tools, methodology, and philosophy into the national M-Academy framework. The message: **train the rider before they ride.**

Strategic Alignment with Queensland Active Travel Grants (July 2025)

In June 2025, Queensland announced a \$19.1M Active Travel grant round to improve walking and cycling infrastructure, including 38 regional projects prioritizing school travel routes.

Scoot Fit is uniquely positioned to enhance and activate these investments by offering rider training, school-based safety programs, and public training events.

We invite collaboration to pair human readiness with infrastructure investment.

Future Clinical Pathways

Scoot Fit is also in early dialogue with biomechanical partners such as Gait & Motion Clinics in the UK. With over 400 clinics, these networks could help scale early screening in schools and support preventative care for at-risk children, especially those with hypermobility or poor movement patterns. This model can be applied in Queensland.

Queensland - Would you pass a Scoot Fit Safety Training Session?

We invite the Queensland Department of Transport and the Committee to undertake the same gold standard training and get a fresh, new approach to e-scooter safety.

The training is highly informative, educational and could even become a health check if you're in the 40%.

Plus it's lots and lots of fun, with a game of Scoot Ball at the end, the ultimate test of your riding skills and vision for the future.

Scoot Ball - Play the Game - Don't Play on the Road.

Available from 21st July, 2025 onwards.

James Rodger
Scoot Fit Founder

Scoot FIT: Enhancing E-Scooter Safety

Recent statements from Queensland's Transport Minister, Brent Mickelberg, highlight the urgent need for improved safety measures for e-scooter riders. Acknowledging an 'unacceptable level' of incidents and community concerns, he calls for a 'whole government approach' to tackle these challenges. Scoot Fit aims to address these issues by providing essential training and resources that equip riders with the knowledge and skills to navigate safely, thus bridging the gap in e-scooter safety regulation and enhancing rider preparedness.

Presenter Name

Presenter Designation



Enhancing E-Scooter Safety in Queensland

Addressing community concerns and improving regulations for safer riding experiences

- **Urgent need for new safety measures**

Recent statements from Queensland's Transport Minister, Brent Mickelberg, highlight an urgent need for innovative strategies to enhance **e-scooter** safety amid rising concerns.

- **Community concerns over incidents**

The **unacceptable levels of incidents** involving e-scooters have raised significant concerns within the community, prompting calls for immediate action to ensure rider and pedestrian safety.

- **Challenges in law enforcement**

Law enforcement agencies face **difficulties in identifying** and regulating private e-scooter devices, complicating efforts to maintain public safety and compliance.

- **Need for better regulatory tools**

There is a pressing **call to action** for enhanced regulatory tools that facilitate the identification and management of private e-scooter devices to improve overall safety.

- **Whole-of-government approach required**

Mickelberg advocates for a **whole-of-government approach** to address the multifaceted issues surrounding e-scooter safety, emphasizing the need for coordinated action across agencies.

Enhancing E-Scooter Safety Through Scoot FIT

Integrated safety training for e-scooter riders
through innovative learning methods

1 Physical Readiness Training

Scoot Fit provides essential **training** to ensure riders are physically prepared for safe e-scooter operation.

3 Real-World Application Tools

Tools designed to prepare riders effectively before they begin their **e-scooter** rides, enhancing safety.

2 Gamified Learning

Engaging **challenges** and rewards keep riders motivated and informed about safety protocols.

4 Three-Pillar Model

Scoot Fit's approach links **manufacturers**, regulations, and training to create a sustainable safety network.



Reclassifying E-Scooters: A Safety Imperative

Understanding the need for better regulation and safety training for e-scooter riders



Current Classification of E-Scooters

Classified as **recreational devices** under law.



Impact on Injury Data Collection

No consistent recording of scooter-related injuries.



Lack of Rider Training Requirements

Assumed to be **intuitive and safe** to ride.



Neglect of Infrastructure Needs

Scooters are outside **transport frameworks** considerations.



Need for Reclassification

Reclassifying to **transport vehicles** for safety.



Harmonizing Regulations

A unified approach improves **safety** and accountability.



Potential for Improved Safety

Regulatory changes can enhance **rider safety**.

The Importance of E-Scooter Reclassification

Understanding the benefits of unified regulations for safer e-scooter use

Regulatory Consistency is crucial.

Unified age and speed regulations reduce confusion among riders, promoting adherence to safety standards and enhancing overall safety on the roads.

Infrastructure Access enhances safety.

Clear regulations ensure that e-scooters can access bike lanes and shared paths, improving rider safety and encouraging their use as a sustainable transport option.

Enforcement and Rider Rights matter.

Establishing a clear legal identity for e-scooter riders aids in enforcement of rules and protects the rights of riders, fostering a safer riding environment.

Safety and Education Integration is key.

Integrating safety campaigns into educational curricula raises awareness and promotes safer riding practices among new riders, leading to reduced accidents.

Commercial Stability supports innovation.

Clear regulations protect investments in e-scooter technologies, encouraging innovation and providing a stable environment for businesses in the e-scooter market.

Enhanced Public Perception is vital.

Improved safety regulations can lead to greater public acceptance and usage of e-scooters, promoting them as a viable transportation option in urban areas.

Understanding the Risks of E-Scooter Falls

Exploring the severe impact of falls and the need for safety training for riders

High Impact Force

E-scooter falls at **15 mph** generate over **3,380 Joules** of force, which can lead to serious bodily harm and should not be underestimated by riders.

Severe Injury Comparison

The force of a fall is comparable to **falling headfirst** from a first-story window, highlighting the urgency for riders to be aware of potential dangers.

Dangerous Speed

Falling at this speed equals being struck by a **cricket ball** traveling at **155 km/h**, emphasizing the risk involved when riding e-scooters without precautions.

Weighty Consequences

Imagine the impact of a **100kg barbell** dropped from waist height onto your face; this illustrates the severe injuries that can occur from e-scooter falls.

Lack of Training

E-scooter riders face increased risks due to the absence of any **pre-ride assessments** or reflex training, leading to a higher likelihood of serious injuries.

Understanding the Hidden Physiological Risks of E-Scooter Riding

Exploring knee hypermobility's impact on safe e-scooter riding for children and adults



Knee Hypermobility

Approximately **40%** of children and adults show knee **hypermobility** affecting balance.



Fall Risks

Individuals with knee hypermobility face an **increased risk** of falls while riding.



Physical Preparation

Training focuses on improving **balance** and strength for safer scooter riding.



Safety Challenges

Knee hypermobility leads to **inability** to ride scooters safely without support.



Scoot Fit Training

Scoot Fit provides training that prepares individuals physically for safe riding.

Enhancing E-Scooter Rider Safety Through Targeted Training

A data-driven approach to improve e-scooter safety in Queensland

Springs & Ladders Assessments

This assessment identifies individuals at risk due to **knee hypermobility**, ensuring targeted interventions.

1

Targeted Training

Focused training corrects **unsafe riding mechanics** and builds essential **core strength** for better stability.

2

Proactive Injury Prevention

This approach prioritizes **preventing injuries** rather than merely reacting to them post-incident.

3



Data-Driven System

Utilizing data analytics, Scoot Fit transforms e-scooter safety programs tailored to individual needs.

4

Focus on Safety

Shifting the safety paradigm helps create a safer riding environment for all e-scooter users in Queensland.

5

Empowering Private Riders with Essential Tools

Innovative solutions for safer e-scooter riding experiences

Balance Shoes for stability

Designed to aid those with **hypermobility**.

Engaging with Scoot Ball

Fun way to enhance riding **skills**.

Comprehensive Online Training

Offers modules for rider **education**.

Promoting **safety** in shared spaces

Tools empower riders to navigate **confidently**.

Improved **confidence** for riders

Use tools for better riding **experience**.

Fostering a **community** of safe riders

Encourages collaboration and **support**.

Join the E- Scooter Safety Movement

Support Scoot Fit's initiative to enhance **e-scooter safety** and **rider readiness** in **Queensland**. Together, we can create a **safer environment** for all **e-scooter users**. Your involvement is crucial to fostering responsible riding practices and implementing effective regulations that protect both riders and pedestrians. Join us in this vital cause to ensure that e-scooting becomes a safer and more enjoyable experience for everyone.



ScootFit Session with [REDACTED] – Observation Summary

Date: 20/05/2025

Location: Primary school

Observer: [REDACTED]

General Impressions

I had the chance to watch a ScootFit day with [REDACTED] last Tuesday, and honestly, it was fantastic. The kids absolutely loved it, and it looked like a lot of fun. From the moment I arrived, the energy was high and the atmosphere was really positive.

What I Saw

When I first walked out, [REDACTED] was doing the “Springs and Ladders” assessment. It was quite eye-catching – he was holding a child’s hands and single foot and getting them to do mini squats. At first, it looked a bit odd, but it made perfect sense when I realised what he was doing. He had watched the child scoot incorrectly and then used these squats to help them activate the right muscles in their legs.

What was really interesting was how quickly this worked. The child was struggling at first, but after doing the squats with [REDACTED], they were able to scoot properly. It was like a switch flipped.

[REDACTED] had a great system – the kids scooted past him, and he could immediately spot if they did it incorrectly. He’d pull them aside, do a supported one-leg squat with them, and once they got the hang of it, they were back on the scooter, moving correctly. If they still struggled, he moved them to a three-wheeled scooter for more support, which kept them safe and confident.

The Fun

After the assessments, the session turned into a full-on fun zone. Music was playing, kids were singing, and some were even dancing – including breakdancing with [REDACTED]! One child discovered he could breakdance, even though he’d never tried before. It was amazing to see how the music and vibe encouraged them to try new things and just enjoy moving.

It did look a bit chaotic with all the kids scooting around, but somehow it worked. No one crashed, no one got hurt, and the kids were surprisingly coordinated. They even played “ScootBall” – basically football on scooters – and managed it really well, especially considering many of them had never played it before.

The Kids' Reactions

When it was time to go back to class, the kids were genuinely disappointed. They didn’t want to stop – they wanted to keep scooting and being active. That was such a nice change to see, especially since a lot of children can find PE boring or repetitive. This session showed how physical activity can be something they actually look forward to.

My Own Experience

After lunch, I got to try out the balance assessment myself. [REDACTED] had me do the Springs and Ladders test, and it really opened my eyes. As soon as I had to put weight on a bent knee, I struggled. [REDACTED] helped me with the single-leg squats, and I was surprised by how hard it was.

This made me realise just how valuable his approach is. [REDACTED] can spot things so quickly just by watching, and it clearly makes a difference. It would be amazing to back this up with some proper biomechanical data so we can really understand what's going on when the kids improve so suddenly.

Final Thoughts

All in all, the session was brilliant. It was fun, effective, and clearly got the kids moving in the right way – physically and mentally. I'd love to explore this more scientifically to help support what [REDACTED] is doing. There's definitely something special here that could make a big impact on how we approach PE and physical activity in schools.