



MINISTRY OF HUMAN RESOURCES



ASEAN SAFETY AND HEALTH WORKERS SUMMIT 2025

"EMPOWERING INCLUSIVITY AND SUSTAINABILITY FOR A RESILIENT WORKFORCE"





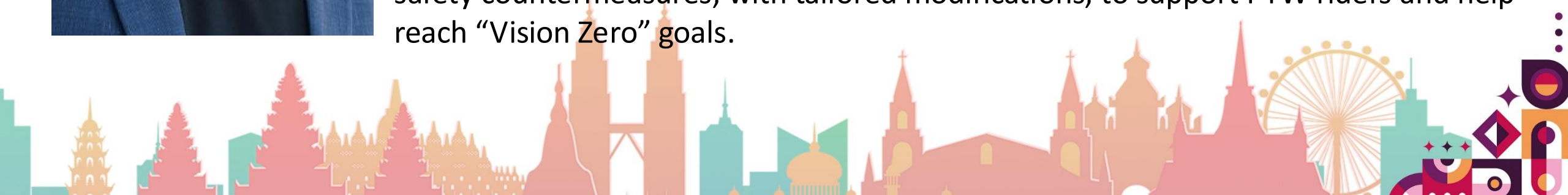
Speaker Profile

Rich Hanowski, PhD

**Founder & Chief Executive Officer
Motorcycle Safety Solutions (USA) and
Motorcycle Safety Solutions Asia (M) Sdn. Bhd.**



Dr. Rich Hanowski is the Founder and Chief Executive Officer at Motorcycle Safety Solutions (USA) and Motorcycle Safety Solutions Asia (M) Sdn. Bhd. With over 30 years of experience in road safety research, much of which has focused on safety and logistics technology for commercial vehicles, Hanowski is now focused on the challenging topic of Powered Two-Wheeled (PTW) safety. Utilizing scientifically valid technologies and approaches used in cars and trucks, Hanowski and his team are working to bring the benefits of these technologies to PTW vehicles. With over 1.35 million road deaths each year, and 93% of these deaths occurring in developing countries- where PTW vehicles are predominant- Hanowski is leaning on proven safety countermeasures, with tailored modifications, to support PTW riders and help reach “Vision Zero” goals.





Topic : “*Mitigating Risk to Employees that Commute via Motorcycle*”

Summary : For most Malaysian workers, the greatest daily risk they face is not *at* the jobsite, but during their commute *to/from* the jobsite. Companies with a strong safety culture support their staff while at the office, but what are they doing to support the safety of their staff during their daily commutes? Until very recently, limited technological countermeasures existed for motos that could mitigate a commuter’s crash risk. That’s now changed: Designed for low-capacity bikes, RideHawk™ supports the safety of workers that commute by moto to/from work. RideHawk™ also supports safety and logistics (via telematics, GPS) for companies that utilize motorcycles in their regular commercial operations (e.g., food/package delivery). As your company’s Occupational Health and Safety lead, what are you doing to keep your employees safe on their daily moto commutes to/from the workplace?

Keywords: motorcycle, moto, safety, safety culture, worker safety, delivery, commute





**ASEAN SAFETY AND HEALTH
WORKERS SUMMIT 2025**

"EMPOWERING INCLUSIVITY AND SUSTAINABILITY FOR A RESILIENT WORKFORCE"



Supporting Worker Health and Safety Beyond 9AM-5PM: Mitigating Road Crash Risk for Staff that Commute Via Motorcycle

Rich Hanowski, PhD

Founder & CEO

Motorcycle Safety Solutions Asia (M) Sdn. Bhd.

Motorcycle Safety Solutions (USA)

August 5, 2025



Presentation Overview

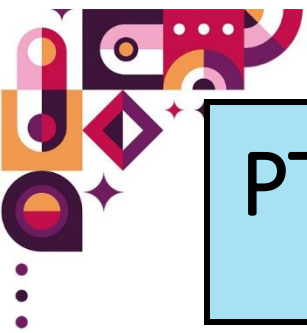
- Part 1: Context
 - Powered Two-Wheeled (PTW) Safety
 - Vision Zero
 - Company Responsibilities
 - Question for company OSH Specialists
- Part 2: Understanding Rider Behavior
 - MIROS Collaboration
 - IRF Award
- Part 3: Validated Technology
 - MCAS to MCAMS (RideHawk™)
 - Launch Malaysia company



Part 1: Context

- Powered Two-Wheeled (PTW) Safety
- Vision Zero
- Company Responsibilities
- Question for company OSH Specialists????





PTW Safety is a Significant Global Problem

- Worldwide, roadway fatalities account for over 1.35 million lives annually (WHO)
- 93% of these deaths occur in low- and middle-income countries
- Over 70% of world's Powered Two-Wheeler (PTW) fatalities occur in low- and middle- income countries
- PTW = scooters, mopeds, motorcycles, etc
- Beyond recommending helmet use, there is a lack of safety interventions to mitigate risk



PTW= Vulnerable Road User

- Design precludes barriers and many safety mechanisms found on cars
- When crashes occur, often fatal or severe injury
- 70 out of 100 roads deaths in Malaysia involve PTWs (WHO official quoted in 2023)
- Other countries with overwhelmingly high PTW crashes/fatalities
 - Indonesia (73.6%)
 - Thailand (83%)
 - Cambodia (73.5%)
 - Republic of Togo (71.6%)
 - Dominican Republic (67%)
 - Data from The Business Standard (1/19/2021)



The Star (2022)

“Vision Zero”: VisionZeroNetwork.org

- “Vision Zero is a strategy to eliminate all traffic fatalities and severe injuries, while increasing safe, healthy, equitable mobility for all.”
- Similar principles to Occupational Safety and Health Act/Initiatives in the workplace!
 - Ensure a safe work environment
 - Eliminate workplace hazards
 - Promote collaboration between employers and employees
- “Vision Zero: Combating Commuting Accidents in Malaysia”
- <https://visionzero.global/vision-zero-combating-commuting-accidents-malaysia>

TRADITIONAL APPROACH

Traffic deaths are **INEVITABLE**

PERFECT human behaviour

Prevent **COLLISIONS**

INDIVIDUAL responsibility

Saving lives is **EXPENSIVE**

VS

VISION ZERO

Traffic deaths are **PREVENTABLE**

Integrate **HUMAN FAILING** in approach

Prevent **FATAL AND SEVERE CRASHES**

SYSTEMS approach

Saving lives is **NOT EXPENSIVE**

Commuting Crashes: An OSH Director in Malaysia's Biggest Issue

- As the OSH lead for a company in Malaysia, your biggest safety issue often isn't what happens at the jobsite, but what happens to your employee on the way to and from the jobsite
- "In Malaysia, two-thirds of reported workplace-related fatal and serious injury incidents are the result of commuting crashes (especially those involving motorcyclists)" (Oxley et al, 2013)
- <https://pmc.ncbi.nlm.nih.gov/articles/PMC3861834/#sec18>



Company Responsibilities to Protect Workers

- The Occupational Safety and Health Act 1994 (OSHA) is the primary legislation governing workplace safety and health in Malaysia.
- It aims to ensure the safety, health, and welfare of persons at work and protect others from risks associated with work activities.
- The Department of Occupational Safety and Health (DOSH) (DOSH) is the government body responsible for enforcing the OSHA and promoting safe work practices
- **Core Principle:** To prevent risks and hazards at work and protect workers from harm.



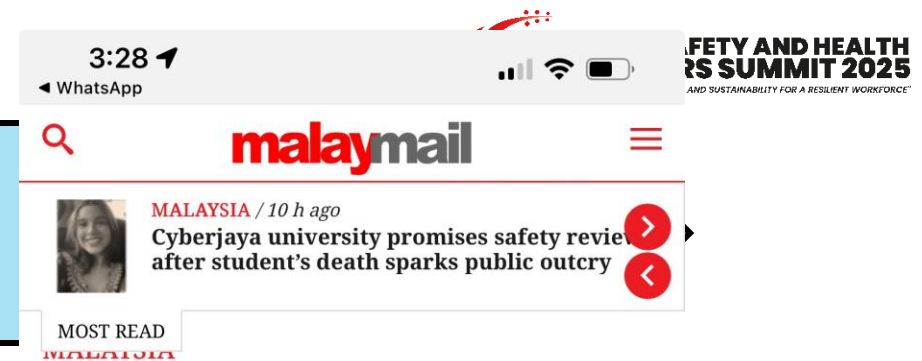
HR Ministry Plans to Protect Workers Beyond 9AM-5PM

“PUTRAJAYA, Feb 20 — The Human Resources Ministry (KESUMA) aims to introduce legislation for the Non-Occupational Accident Scheme (SKBBK) this year, its minister Steven Sim said.

He said the ministry is currently in the process of amending existing laws to pave the way for the scheme following approval from the Cabinet last year.

“SKBBK is not a new concept as it has been discussed for a long time, not only by previous governments but also by trade union members who see it as an important social security scheme.

“They recognise the importance of this scheme in providing protection not only when employees are at work but also in cases of accidents outside of working hours,” he told newsmen after attending a coordination meeting involving state executive councillors heading the human resources portfolio here today.”



HR Ministry to roll out accident insurance coverage this year for 24-hour employee protection outside of working time



Steven Sim said the scheme aims to provide protection for employees in cases of accidents outside of working hours.
— Picture by Yusof Mat Isa

*Planning your holiday getaway? Invest RM100 with **Versa** & grab **RM10 FREE** to kickstart your travel fund. Use **VERSAMM10** now!*

Question Time

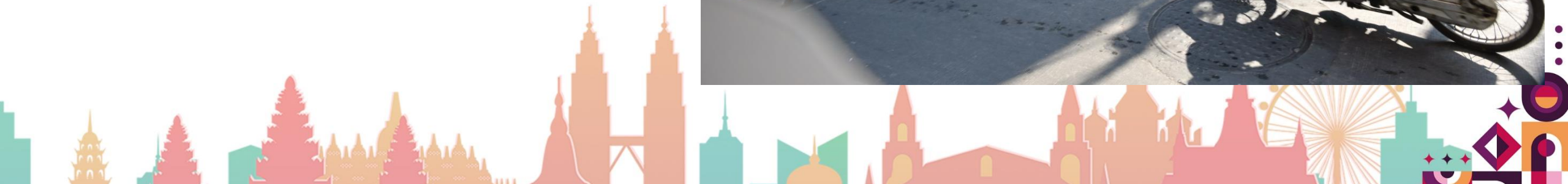
- What are you doing, as a company, to protect your employees as they commute to and from your work place?





Part 2: Understanding Rider Behavior

- Collaboration: MIROS, Plus, Virginia Tech Transportation Institute (VTTI)
- IRF Award (2023)



DEVELOPMENT & DEPLOYMENT OF A MOTORCYCLE COLLISION ALERT SYSTEM (MCAS) IN MALAYSIA

Rich Hanowski, Ph.D.

Project Lead: Mohd Khairul Alhapiz IBRAHIM

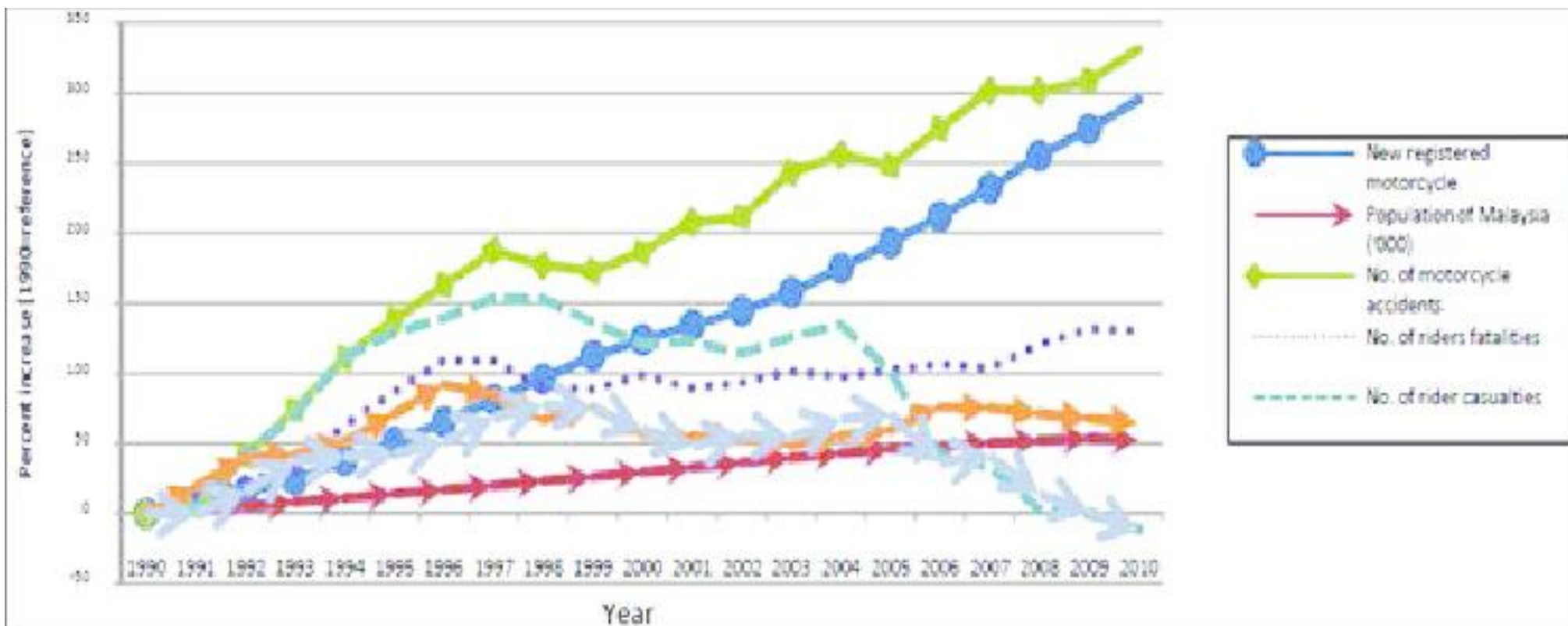
19 October 2023





Moto Sales and Crash Data in Malaysia

- Increase in PTW crashes in Malaysia is occurring as PTW sales skyrocket
- 500K sales in 2021, vs 720K sales in 2022 (Malaysia Transport Ministry)
- As PTW sales surge, likely to see more and more PTW-related road deaths in the coming years
- Data from Ma'arof and Omar (2016)



Truck-Struck Crashes

- Collaboration in Malaysia, with MIROS, began in 2017
- Research focused on looking at truck and motorcycle crash data in the USA and Malaysia (compare and contrast)
- Identified a large subset of PTW crashes in Malaysia that we termed “truck-struck”
- In this scenario, a PTW will strike the back of a large truck; often at night when a truck is in the “break down lane”
- [Hanowski, R.J.](#), Soccolich, S., Camden, M.C., Schaudt, W.A., Vilela, J.P., Ibrahim, M.K.A., Solah, M.S., and Kassim, K.A.A. (2021). *Truck struck rear-end crashes: Problem scope and an area of opportunity*. Proceedings of Heavy Vehicle Transport & Technology, HVT16, Qingdao, China (online).



Identifying Causal Factors

- Why would so many motorcycles run into the back of trucks and other vehicles?



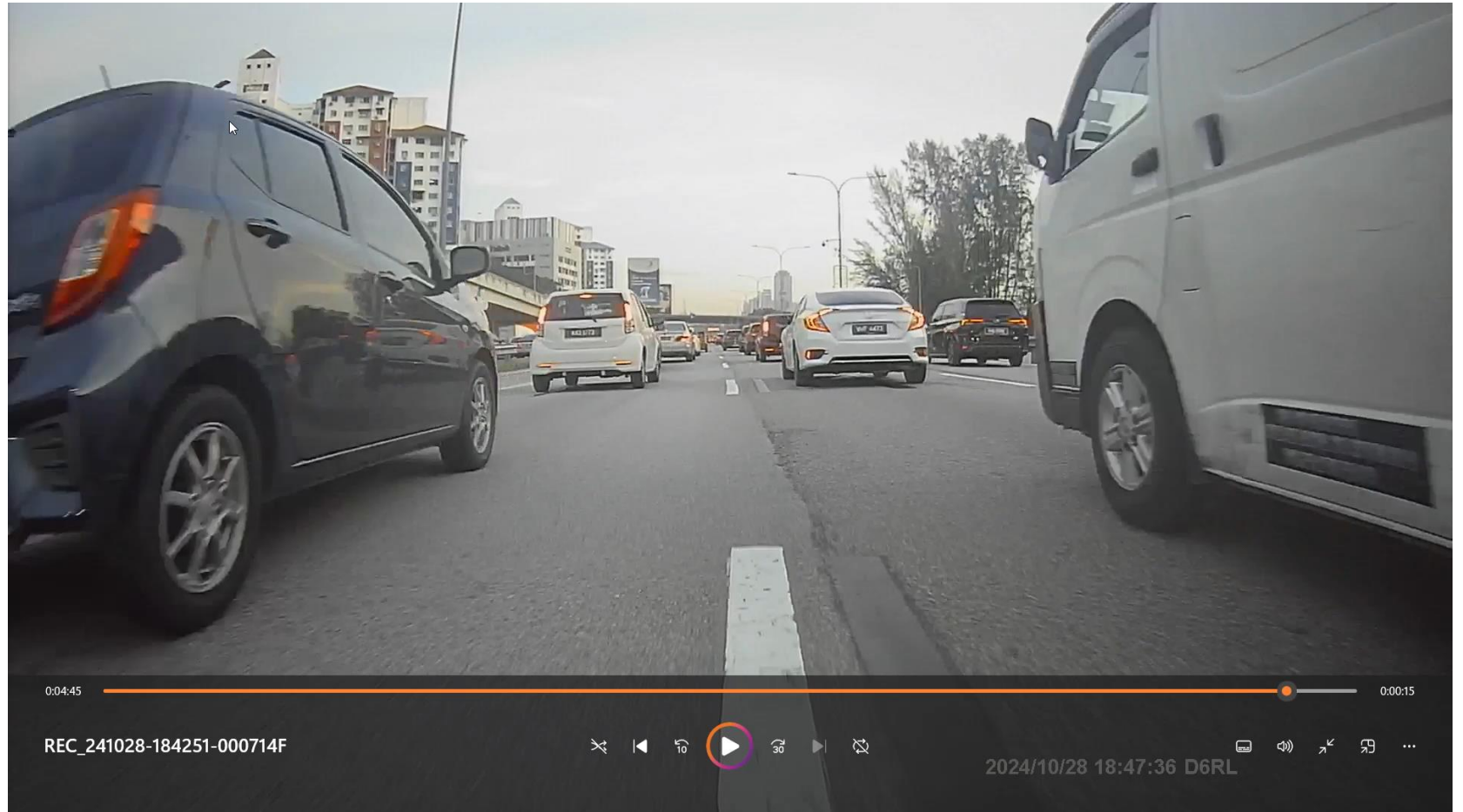
Phuket News
22/9/22

Malaysia- Example of a NEAR CRASH

Lane Filtering



Lane Splitting



THE DEDUCTION / PROBLEM STATEMENT


- The victims were not aware of the hazards until **it was too late**
- Lack of “Situational Awareness”, leading to no reaction, or delayed reaction
- Taking an “Engineering” or “Systems” Approach:
 - How can we support a rider’s **Situation Awareness?**




MCAS SYSTEM TEST AND DISCUSSION SESSION AT HONDA MALAYSIA



MCAS Project Entry in 2023 IRF GRAA (Winner in **TECHNOLOGIES** category)

ABOUT ADVOCACY TRAINING EVENTS FELLOWSHIPS NEWS AWARDS KNOWLEDGE MEMBERSHIP

IRF Global Road Achievement Awards: Showcasing Global Industry Excellence



The International Road Federation's Global Road Achievement Awards (GRAA) is a one-of-a kind competition to recognize innovative road projects and exemplary people that place the road industry at the forefront of worldwide social and economic development.

Instituted in 2000, the Awards have distinguished more than 185 programs, projects and products from around the world. Today, the Awards are recognized as a prestigious industry accolade in their own right, but they also serve to remind a much wider audience that the mobility everyone takes for granted would not be possible without the talent and commitment of our industry. By showcasing new technologies and creative solutions, they also serve as an accelerator of progress and new ideas.

IRF views the awards as an important way to promote road innovation around the world and will make substantial efforts to see that the awarded achievements receive maximum worldwide publicity, including a presentation of a crystal trophy at the IRF Annual Awards Dinner and recognition in industry publications.

- International Road Federation (IRF) Award ended up being the capstone for the MCAS project
- With no path to commercialize through MIROS (due to COI with government staff), project ended



Part 3: Validated Technology

- MCAS to MCAMS (RideHawk™)
- Launch Malaysian B2B company



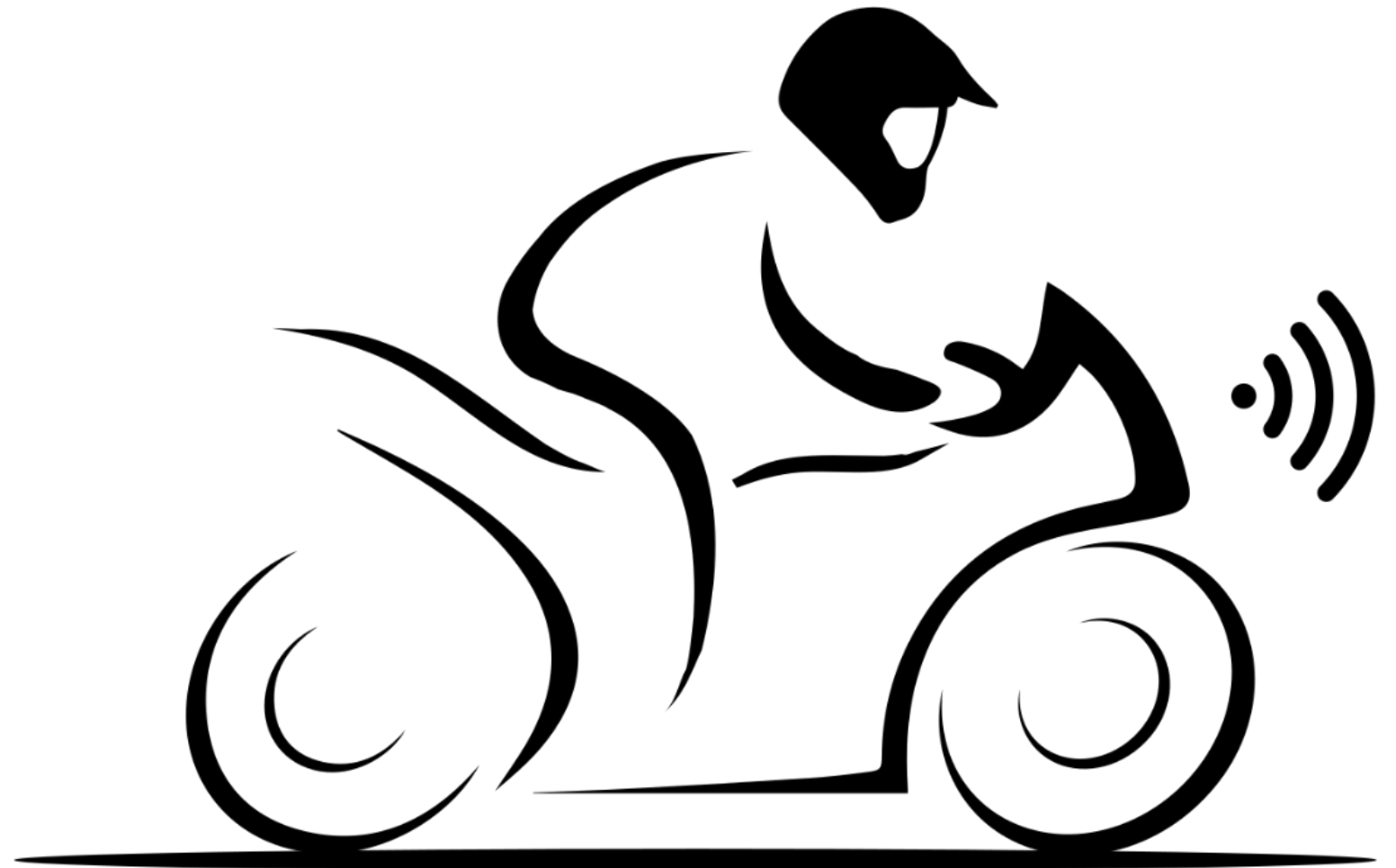
Motorcycle Collision Alert and Management System (MCAMS), RideHawk™



- MCAMS was developed based on the successful demo of Motorcycle Collision Avoidance System (MCAS) in **Malaysia**
- MCAS is a Forward Collision Warning (FCW) **only** technology
- MCAMS utilizes FCW to address a prominent crash configuration (Truck-Struck) and adds **(i) telematics solution, (ii) safety scores and training tips, and (iii) a back-end fleet management system** (often referred to as “On-Board Management System”, OBMS)
 - OBMS is a prominent technology with truck delivery fleets
 - Unaware of any OBMS application to moto delivery fleets



Smart Safety.
Reduced
Risk.



***MOTORCYCLE SAFETY
SOLUTIONS***

Our mission is to make roadways safer for everyone

- **Providing affordable, scientifically validated technologies designed to protect riders and reduce risks.**
- **Empowering riders with life-saving advancements, we are redefining safety standards worldwide and driving a positive impact on road safety.**

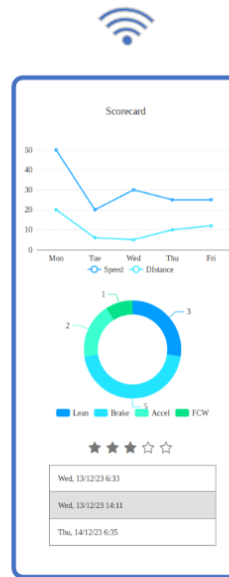
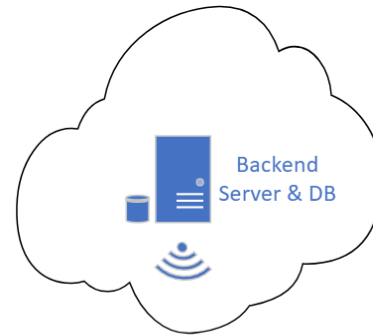


RideHawk™

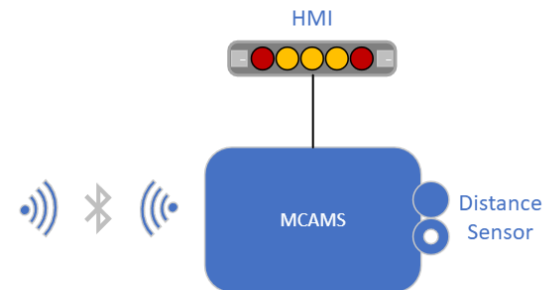
- **Technology bundle includes bike hardware, mobile app and fleet platform access**
- **Rider feedback, safety score and risk identification**
- **Fleet platform for analytics and rider performance tracking, and asset tracking (telematics, GPS).**



Connected and Real-Time Riding Data Collection



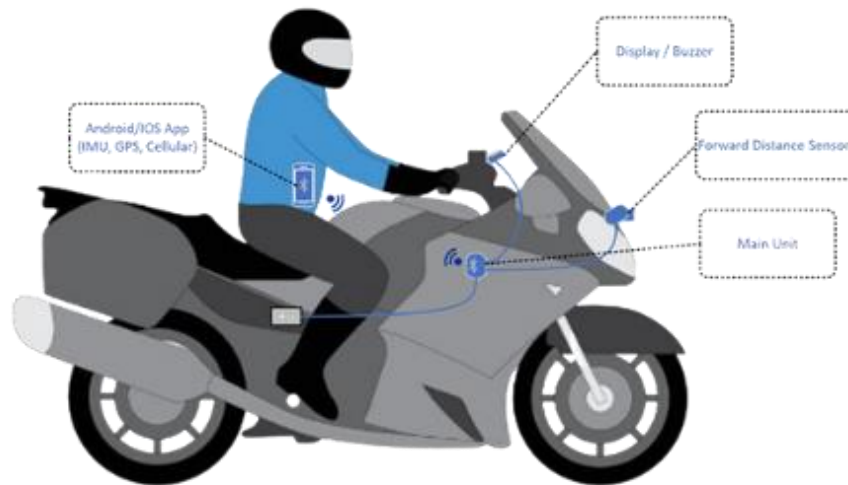
Rider's Mobile Device



RideHawk™

Easy Installation

- Fits most bikes
- Hardware installation by MSS trained technician
- Installation and activation in ~ 60 minutes



We are Focused on Three Verticals (Use-Cases)

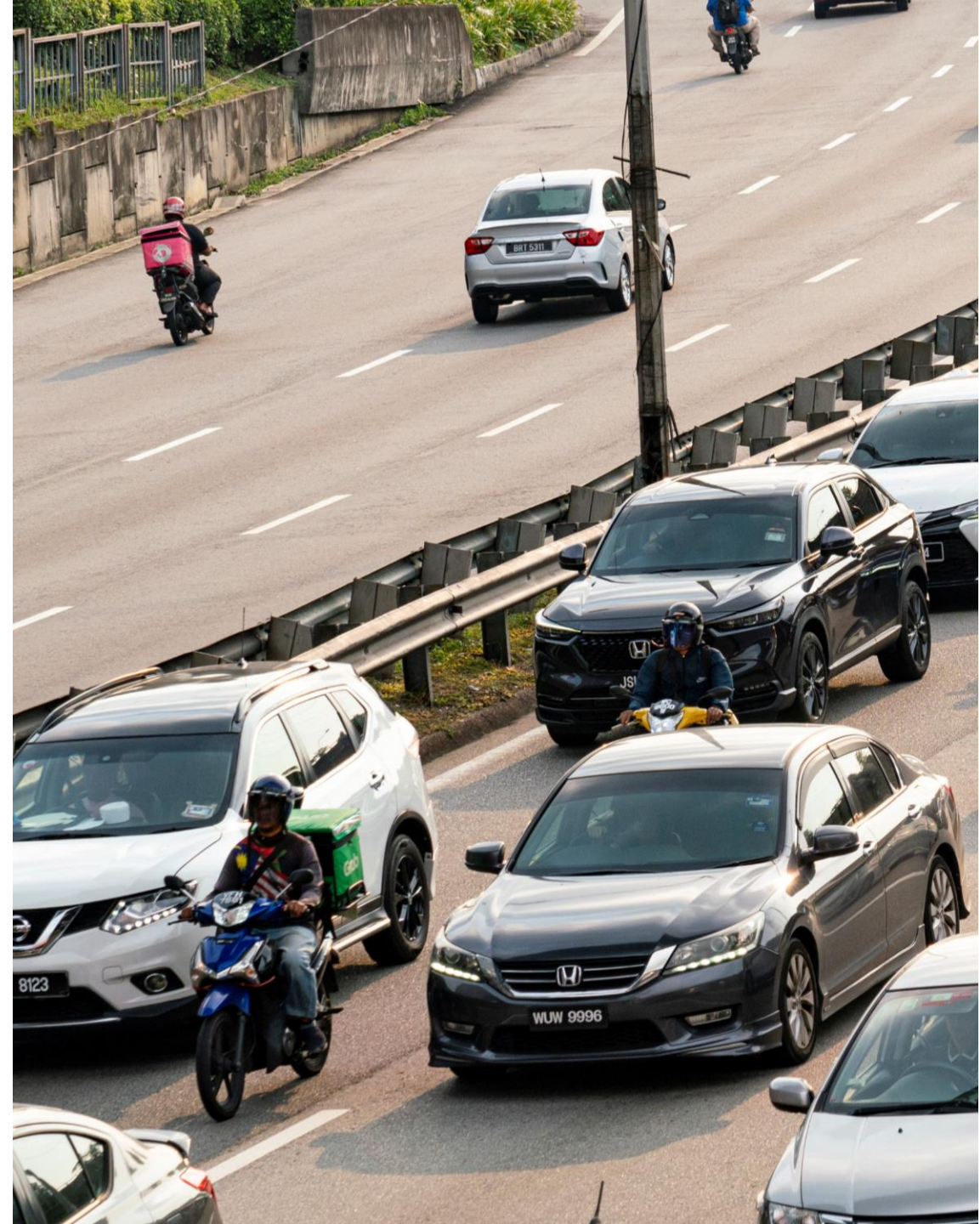
- 1. Last-mile delivery and ridesharing (e-hailing) services**
 - Companies that use motorcycle fleets for commerce/delivery
- 2. Workplace commuters**
 - Companies that want to mitigate the risk of their workers who commute via motorcycle
- 3. Training (new riders, new hires at delivery companies)**
 - Tailored training based on riding performance



RideHawk™

Helping Fleet Operators

- **Crash risk reduction**
- **Identification of risky drivers**
- **Rider retention**
- **Performance tracking**
- **Rider safety training**



RideHawk™

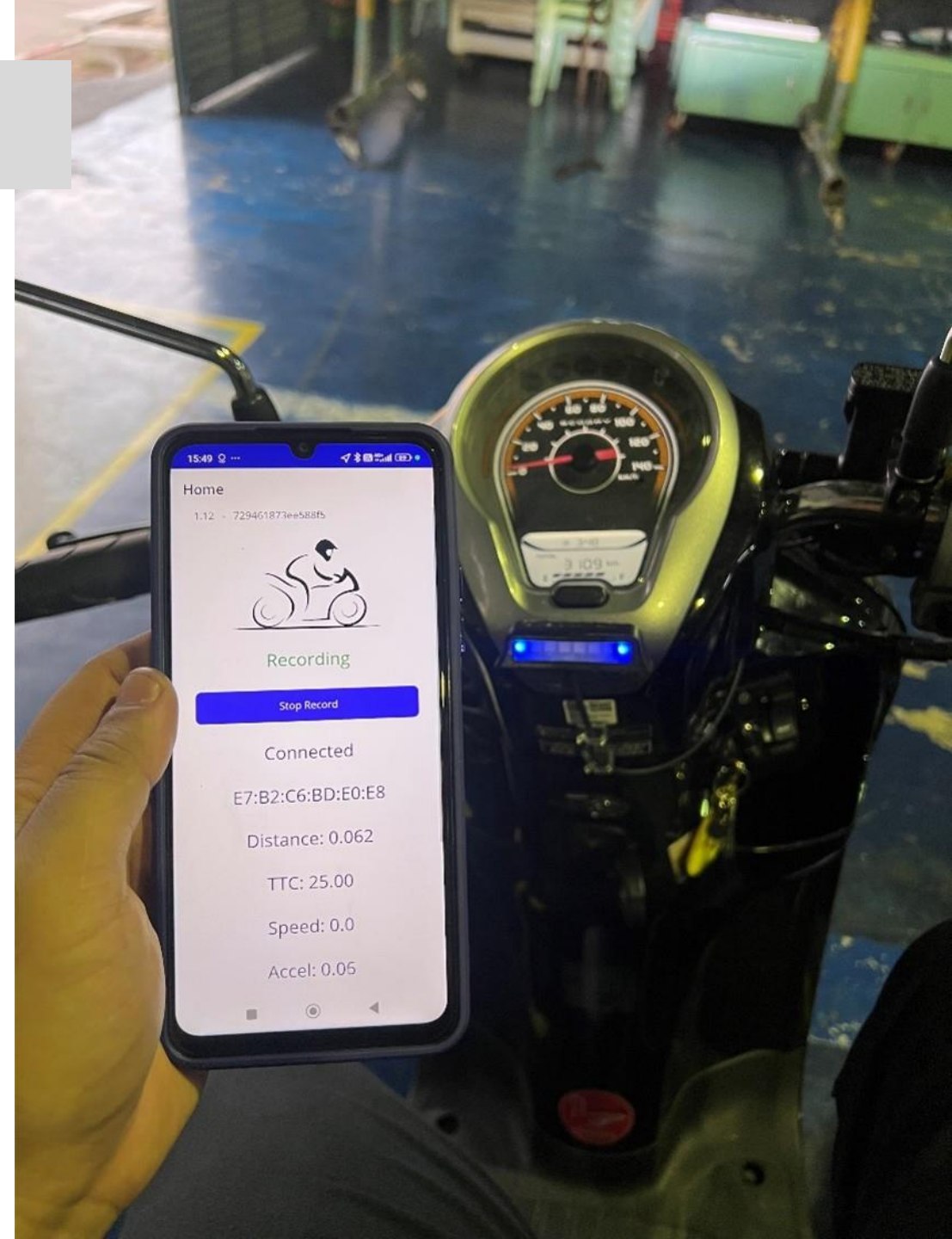
Keeping Riders Safe

- **Realtime hazard alerts during ride**
- **Post-ride feedback using mobile app**
- **Rider safety score and measurement over time**



Current State

- **Goal: Commercial launch mid-2025**
(We are here now!)
- **Data-driven development approach was key!**
- **ASEAN Pilots in 2024-2025**
 - **Indonesia**
 - **Malaysia**
 - **Thailand**
 - **Vietnam**
- **SIRIM Certification (in development)**
- **MDEC Status (pending)**
- **Sales Process and Distribution Channels (in development)**
- **Manufacturing (in Malaysia)**





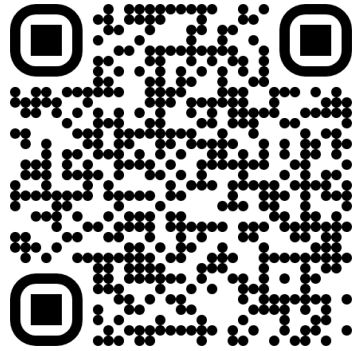
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Let's Work Together to Keep Your Employees Safe!

- Moto crashes are a growing problem
- Government programs aimed to protect workers both at work and outside of work are growing
- Limited options to mitigate risk for riders (often, the **greatest daily risk** your employees will face)
- RideHawk™ was developed to support companies in mitigating the risk inherent to riding motorcycles
- RideHawk™ was designed to support the OSH goals of companies that use motos:
 - As part of their business operations (e.g., delivery)
 - As a common commuting practice of their employees



Contacts



Scan to learn more

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THANK YOU

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