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**Advancing
Free Trade for Asia-Pacific
Prosperity**

Developing Guidelines for Motorcycle Crash Data Collection and Reporting in the APEC Region

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The Challenge (1): Different stakeholders need different info.



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Who is
at-fault

Police
Officer

How to prove
efficacy?

Infrastructure
deficiency?

Traffic
Engineer

How to reduce
crash severity?

Medical
Personnel

Road
Safety
Industry

The Challenges (3):

High R&D costs for potential countermeasures



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- 1. The challenge:** what countermeasures should be first implemented to reduce motorcycle crashes?
 - 1) Are they effective?
 - 2) Are the results transferable across APEC economies?
- 2. The consequence:** high R&D costs and the return on safety investment is not maximized

This Concept Note:

Coherent crash data collection and reporting



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1. To improve the accessibility and transferability of motorcycle crash data among different stakeholders, not only within each APEC economy but also among APEC economies as a whole.
2. To develop guidelines regarding with what “minimum set” of data elements should be included when updating crash report forms, with special emphasis on those data elements needed for motorcycle safety decision-making purposes.

From Research to Practice:

Factors influencing crash occurrence and severity



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	Human factors	Vehicle design	Roadway infrastructure
Pre-crash (crash prevention)	<ol style="list-style-type: none">1. Driver education2. Driver training program3. Safety campaign	<ol style="list-style-type: none">1. Motorcycle design2. Safety device	<ol style="list-style-type: none">1. Roadway geometric design2. Traffic control device
Crash (injury prevention during the crash)	<ol style="list-style-type: none">1. Use of helmet	<ol style="list-style-type: none">1. Crashworthiness design2. Crash protective design	Forgiving roadside design: clear zone design, roadside hazards (trees, utility poles)
Post-crash (life sustaining)	<ol style="list-style-type: none">1. Emergency response; 2. Reduce economic impact because of both the loss of lives and that of quality of life		

Basic Crash Data Structure



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**Crash
Level**

Crash_i

**Vehicle
Level**

**Veh_{i1}
(car)**

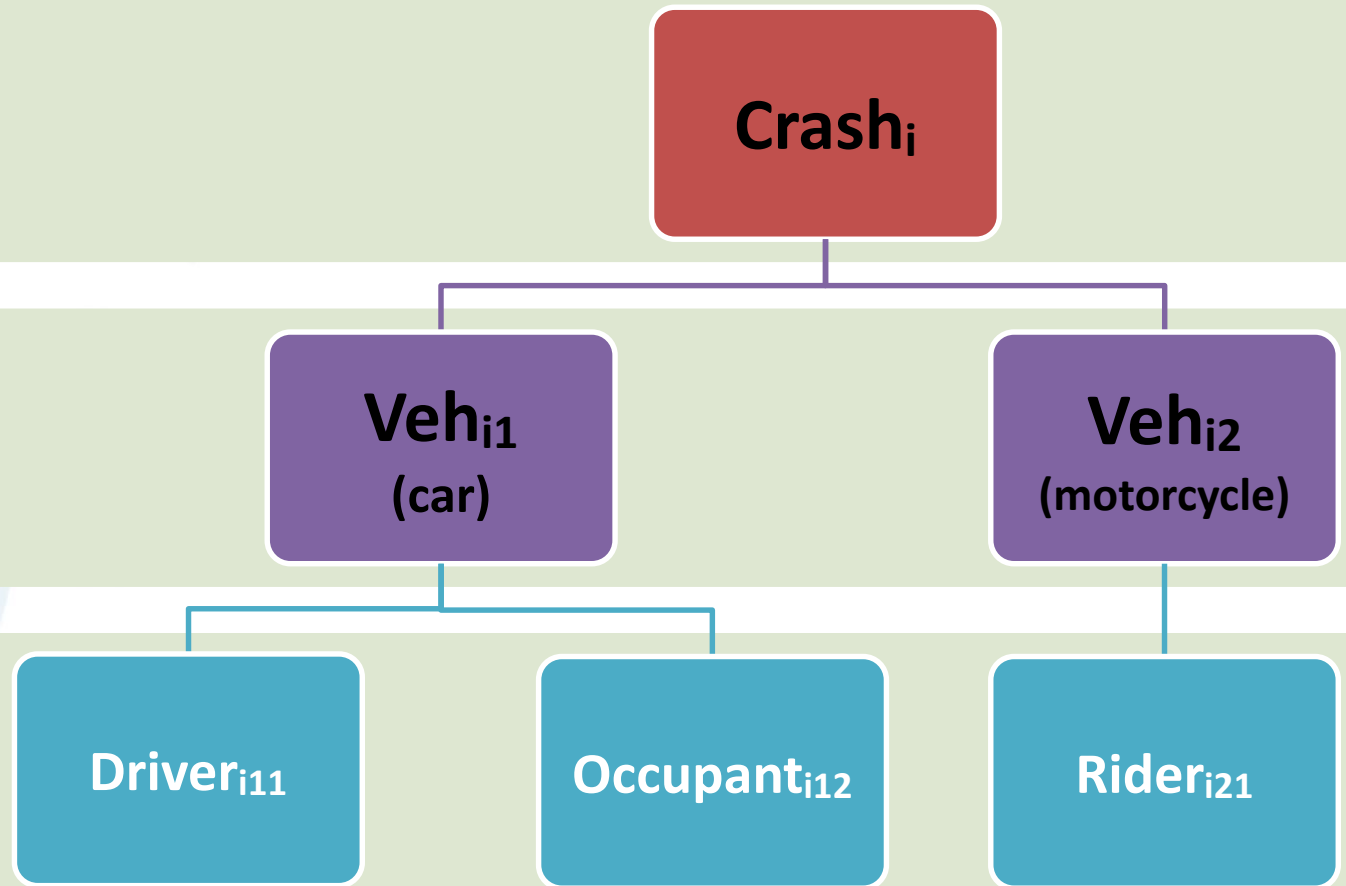
**Veh_{i2}
(motorcycle)**

**Person
Level**

Driver_{i11}

Occupant_{i12}

Rider_{i21}



Examples of Data Elements Desired for Motorcycle Safety Decision-Making Purposes



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- **Crash level:**
 - Location, date and time,
 - Roadway surface condition
 - Types of collision
- **Vehicle level:**
 - Vehicle type
 - Traffic control device type
- **Person level:**
 - Age, gender
 - Person type
 - Use of helmet
 - Violation code
 - Alcohol or drug involvement

We Need Your Help!

How Do We Work Together?



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1. Report the numbers of motorcycle fatalities and injuries
2. Share each economy's current Traffic Accident Report form, including variable definitions
3. A comprehensive literature review on what data elements are desired for motorcycle safety decision making purposes
4. Chinese Taipei will host a workshop on discussing on a “minimum set” of standardized data elements that can be used to describe a motorcycle-related crash on any crash report form



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Questions?

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