KNCAP 2023 Roadmap

Strategy of 2023 KNCAP Roadmap | 2019-2023

Submitted by the expert from the Rep. of Korea

Informal document GRSP-63-22
(63rd GRSP, 14 - 18 May 2018, agenda item 26 (a))

Strategies

- Protection of passengers who are relatively less safe
- Strengthening the protection of VRU
- Promoting the deployment of ADAS

* Revising existing test protocol and Introduction of new test items

Category 1: Crash Protection

Category 2: Pedestrian Protection

Category 3: Accident Prevention

Category 4: Rating system

Advisory Committee

- Consider Technology development plan of makers
- Share data among stakeholders
- Feasibility, Applicability
- Opinions of experts

2019-2023 KNCAP Roadmap

Establish Reasonable Assessment Plan by considering technology trends, real world accidents, and foreign countries: NCAP Development of KNCAP 2023
Crash Protection
Submitted by the expert from the Rep. of Korea

Development strategy

Revise assessment method for reflecting real world accidents

Consider new technologies and world NCAP trends

Comprehensive assessment for combination of Passive and Active safety

Revise Existing Items

**TASK 1**  
Full Frontal  
- Female passenger in 2nd row seat (2019)  
- Increase penalty (Modifier)

**TASK 2**  
Offset Frontal  
- Apply Car-to-Car crash replacing offset frontal (2022)  
- Increase penalty (Modifier)

**TASK 3**  
Side Impact  
- Increase weight and speed of moving barrier (2020)

**TASK 4**  
Pole Side Impact  
- Include head/thorax/abdomen/pelvis injury criteria (2020)

**TASK 5**  
Whiplash  
- Static evaluation of passenger in 2nd row seat (2018)

Consider New Items

**TASK 1**  
Car-to-car Protection | 2022  
- European test method (speed 50km/h car-to-moving barrier)  
- US test method (Small overlap / Small oblique)  
- THOR dummy

**TASK 2**  
Far-side passenger protection | 2022  
- European test method (driver oriented)  
- US test method (driver–passenger interaction)  

Source: ESV Conference 2017, 17-0168  
Source: ESV Conference 2011, 11-0343  
Source: theengineer.co.uk
Pedestrian Protection
Submitted by the expert from the Rep. of Korea

Revise Existing Items

**TASK 1**
Expand WAD | 2022
- Expand WAD considering bicycle riders
- Review feasibility/applicability using simulation

**TASK 2**
Advanced PLI | 2023
- Use Advanced PLI with high Bio-fidelity
- Produce Japanese’s Prototype
- Possible evaluation of upper leg

**TASK 3**
Study Thorax Evaluation
- Search studies in Europe
- Consider Joint research with vehicle makers

Source: crash.tech 2012, O Zander

Source: IRCOBI Conference 2016, IRC-16-98
Development strategy

Consider commercialization of autonomous vehicle of Level 3 by 2020

Consider new technologies and Fade out existing items

Convergence of assessment technology: Development of multidimensional comprehensive assessment technology

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**Revise Items & New Items**

**TASK 1**

**Fade out Existing Items | 2020**
- Abolish braking due to wide AEBS application
- Abolish roll-over due to mandatory ESC application (evaluate only SSF)

**TASK 2**

**Revise Existing Items | 2020**
- Revise offset test protocol Introduce Articulated dummy
- Include evaluation for bicycle riders

**TASK 3**

**Consider New Items | 2022**
- Add new item for ESF (Emergency Steering Function) evaluation
- Develop comprehensive evaluation scenario reflecting real world accidents
- Evaluate autonomous system (AEBS+ESF, ACSF Cat. E+AEBS)
Night Safety
Submitted by the expert from the Rep. of Korea

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Consider New Items

**TASK1: AEB–Low Luminance Assessment | 2022**
- Review Euro NCAP Assessment Protocols
- AEB: Development & Application of Low Luminance Assessment Protocols

**TASK2: Lighting System Performance | 2023~**
- Consider the introduction of IIHS Assessment Method
- Review Euro NCAP Assessment Protocols
  *Need to develop an assessment protocol suitable to the domestic environment

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**Night and obscure lighting | Euro NCAP**

- National Accident Data from Germany (2008–2010)

![Night time crash accidents with pedestrians show the high injury severity](source: carhs.de)

- Most pedestrian accidents at night occur with light sources (2018 Euro NCAP)

![Source: carhs.de]
## Mid-to-long term planning
Submitted by the expert from the Rep. of Korea

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<th>Field</th>
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<th>Revised, Added</th>
<th>2017</th>
<th>2018</th>
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