

Initiatives and Approaches to Small-sized Mobility

- Various issues need to be considered to promote transportation policy, in addition to traffic safety.

Traffic Safety

- Enhancing traffic safety
(National Target: less than 2,500 fatalities in 2020)

In addition,

Climate Change

- Promoting low CO₂ emission cars

Depopulation

- Aging society
- Public transportation/urban planning policy

Lifestyle Shift

- User needs and preferences in “moving”

etc.

- Research and experimental demonstrations have been done relating to safety requirements, as well as user needs and preferences in small-sized mobility (especially two-seater car).

Business

Delivery



Home daycare etc.



Tourism

Tour in islands and sightseeing spot



Excursion around hot spring areas



Daily Use

Car-sharing in cities




Rent-a-car in suburbs and islands



- Any small-sized car (two-seaters) needed to comply with the safety requirements of M₁/N₁ before Sep. 2020 (except special cases).
- MLIT has amended/deregulated vehicle safety requirements, suitable for small-sized car (two-seater), effective from Sep. 2020*.

* This safety regulation does not impose any additional restrictions or modifications on any existing cars in the market.

Safety requirements applicable to small-sized car (two-seater)

Maximum Vehicle Speed	60 km/h
Rated Power	Over 0.6 kW
Maximum Dimensions	$L \leq 2.5\text{m}$, $W \leq 1.3\text{m}$, $H \leq 2.0\text{m}$
Deregulated Requirements* (*Comparison with M ₁ /N ₁)	<ul style="list-style-type: none"> ✓ Frontal crash test (R94, R137) speed: 40km/h ✓ Pole side test (R135): Not required etc
Other Safety Requirements	<ul style="list-style-type: none"> ✓ ODD: Highways are not allowed ✓ Body marking is required ✓ Mass-production (type approval) only 

Frontal Crash Safety

- Average speed on city roads (non-highways)
- Experiments on usage of small-sized mobility
- Accidentology (small-sized mobility (one-seater) and M₁/N₁ (kei-car))
 - Almost the same possibilities in offset collisions and full-wrap collisions (around 40% for each)
 - Accident coverage: crash speed at 40km/h can cover most of the crash accidents.
 - Safety level: relatively equivalent (same safety level) with M₁ (kei-car), considering actual fatalities and severe injuries

Pole Side Impact


- Limiting maximum vehicle speed
- Mandating ESC
- No accidents reported (small-sized mobility (one-seater))

Other Crash Safety

- Side impact and Rear impact: required considering not dependent on own vehicle speed
- Pedestrian safety: required considering the importance of VRU protection

Other Safety Requirements

- **ODD**: Not allowed to run on highways
(*Minimum speed limit is 50km/h)

 Not Allowed



- **External HMI**: Body marking on the backside of vehicle is required.



- **Type approval only**: Quality management (ex. completion inspections) is required for OEMs.