



SafetyCube

## Accident Scenarios

Prepared by SafetyCube participants

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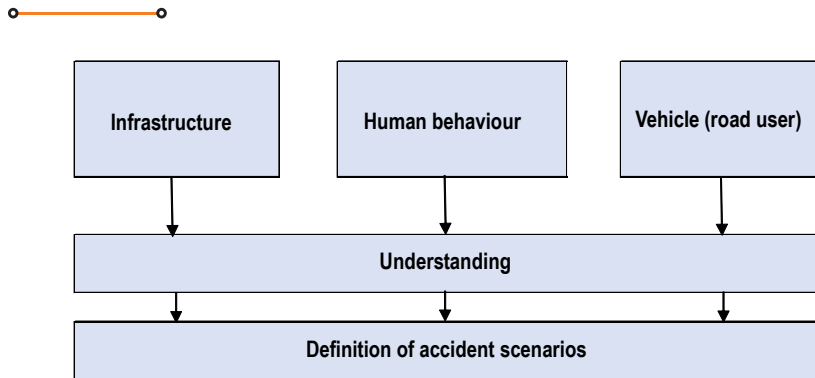
## SafetyCube Accident Scenarios



- One Entry Point of DSS

The background of the end user is  
influencing the point of view

## SafetyCube Accident Scenarios



## Accident Scenarios

- — ○
- Types of interest:
    - background of end user
    - risks
    - measures
    - passive safety
    - active safety
    - ...
  - Example:
    - single vehicle accident,
    - leaving the road,
    - object collision



Source: DEKRA Road Safety Report

## Accident Scenarios Main Groups



Scenarios prepared for accident level

- Run-off the road
- Object in carriage way
- Head-on collisions
- Rear end collisions
- Junction accident (no turning)
- Junction accident (turning)
- Railway level crossing
- Others

## Accident Scenarios Main Level – Run-Off The Road



- Main level  
+ Sub level

\* involved road user(s) (incl. 1 + 'x' involved parties)

x = 0, 1, 2, 3, ...

Main Level	Sub level	Scenario no.	car/truck...	motorcycle	bicycle	pedestrian	tram
Run-off-the-road	leaving nearside - with rollover	1.1	X				
	leaving nearside - with object collision (tree, pole, wall, ...)	1.2	X	X	X		
	leaving nearside - with collision with other road user	1.3	X	X	X	X	
	leaving nearside - without rollover / object collision	1.4	X	X	X		
	leaving farside - with rollover	1.5	X				
	leaving farside - with object collision (tree, pole, wall, ...)	1.6	X	X	X		
	leaving farside - with collision with other road user	1.7	X	X	X	X	
	leaving farside - without rollover / object collision	1.8	X	X	X		

# Accident Scenarios Main Levels 1 - 4

Main Level	Sub level	Scenario no.	car/truck...	motorcycle	bicycle	pedestrian	tram
Run-off-the-road	leaving nearside - with rollover	1.1	X				
	leaving nearside - with object collision (tree, pole, wall, ...)	1.2	X	X	X		
	leaving nearside - with collision with other road user	1.3	X	X	X	X	
	leaving nearside - without rollover / object collision	1.4	X	X	X		
	leaving farside - with rollover	1.5	X				
	leaving farside - with object collision (tree, pole, wall, ...)	1.6	X	X	X		
	leaving farside - with collision with other road user	1.7	X	X	X	X	
	leaving farside - without rollover / object collision	1.8	X	X	X		
Object in carriage way	parked vehicle	2.1	X	X	X		
	lost load	2.2	X	X	X		
	domestic animals	2.3	X	X	X		
	wild animals	2.4	X	X	X		
	other (e.g. fallen tree)	2.5	X	X	X		
Head-on collisions	front to front (overtaking)	3.1	X	X	X		X
	front to front (unintended lane change stable)	3.2	X	X	X		X
	front to front (unintended lane change instable)	3.3	X	X	X		X
	other	3.4	X	X	X		X
Rear end collisions	standing vehicle	4.1	X	X	X		X
	breaking vehicle	4.2	X	X	X		X
	driving vehicle	4.3	X	X	X		X
	lane changing vehicle	4.4	X	X	X		X
	other	4.5	X	X	X		X

# Accident Scenarios Main Levels 5 - 8

Main Level	Sub level	Scenario no.	car/truck...	motorcycle	bicycle	pedestrian	tram
Junction accident – no turning	participant required to yield crossing from nearside road	5.1	X	X	X	X	X
	participant required to yield crossing from farside road	5.2	X	X	X	X	X
Junction accident – turning	farside turn - other participant in direction (following or overtaking)	6.1	X	X	X		X
	farside turn - other participant in opposite direction	6.2	X	X	X		X
	farside turn - other participant from other road	6.3	X	X	X		X
	farside turn - both participant farside turning	6.4	X	X	X		X
	farside turn - pedestrian/cyclist on sidewalk	6.5	X	X	X	X	X
	farside turn - other	6.6	X	X	X		X
	nearside turn - other road user in direction	6.7	X	X	X		X
	nearside turn - other road in opposite direction	6.8	X	X	X		X
	nearside turn - other road user from other road	6.9	X	X	X		X
	nearside turn - pedestrian/cyclist on sidewalk	6.10	X	X	X	X	X
nearside turn - other	6.11	X	X	X		X	
railway level crossing	with barriers	7.1	X	X	X	X	X
	without barriers	7.2	X	X	X	X	X
other accident	side collision with other participant oncoming	8.1	X	X			X
	side stripe collision with other participant in same direction	8.2	X	X			X
	falling two-wheeler without leaving the road and without collision with another participant	8.3		X	X		
	falling occupant (bus, tram) without collision	8.4	X				X
	pedestrian crossing at straight stretch	8.5	X	X	X	X	X
	pedestrian walking on the road	8.6	X	X	X	X	X
	U-turn	8.7	X	X	X	X	X
	reversing	8.8	X	X	X	X	X
	dooring	8.9	X	X	X		X

# Accident Scenarios Summary



- Is one possible 'Entry Point' for the DSS
- Interest of the end user
- Scenarios prepared for accident level
- 8 main levels + 46 sub levels
- Numerous combinations of involved road users



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Accident Scenarios  
Questions?



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