

Workplan

already exists
in regulation
(UNR 21)

new

exists for
other load
cases (GTR 9)

Demonstrators for
"proof of concept"

Levels of virtual
crash testing

UN R137

UN R21

Level 1

Level 2

Level 3

ATD for
vehicle
validation
Compare tests
and
simulations of
the same load
case

HBM for
kinematic
assessment
Evaluate if
head contact
occurs for
different body
shapes

HBM for
robustness
assessment
(analyse relative
changes)

HBM for
injury
assessment
Evaluate
injury risks
for different
body shapes

ATD for
kinematic
assessment
Evaluate if
head contact
occurs for 5F,
50M, 95M
shapes

ATD for
injury
assessment
Evaluate
injury risks
for different
body shapes