BERTHA

Driver Behavioural Model development to make autonomous vehicles safer and more human-like

berthaproject.eu

THE BERTHA PROJECT

BERTHA's main goal is to develop a scalable Driver Behavioural Model (DBM), based on probabilistic modelling, covering physical, cognitive, and emotional domains, including personal, cultural, and contextual factors.

Following a human-in-the-loop approach, this model will allow for more human-like connected autonomous vehicles, thus increasing road safety and promoting their social acceptance.
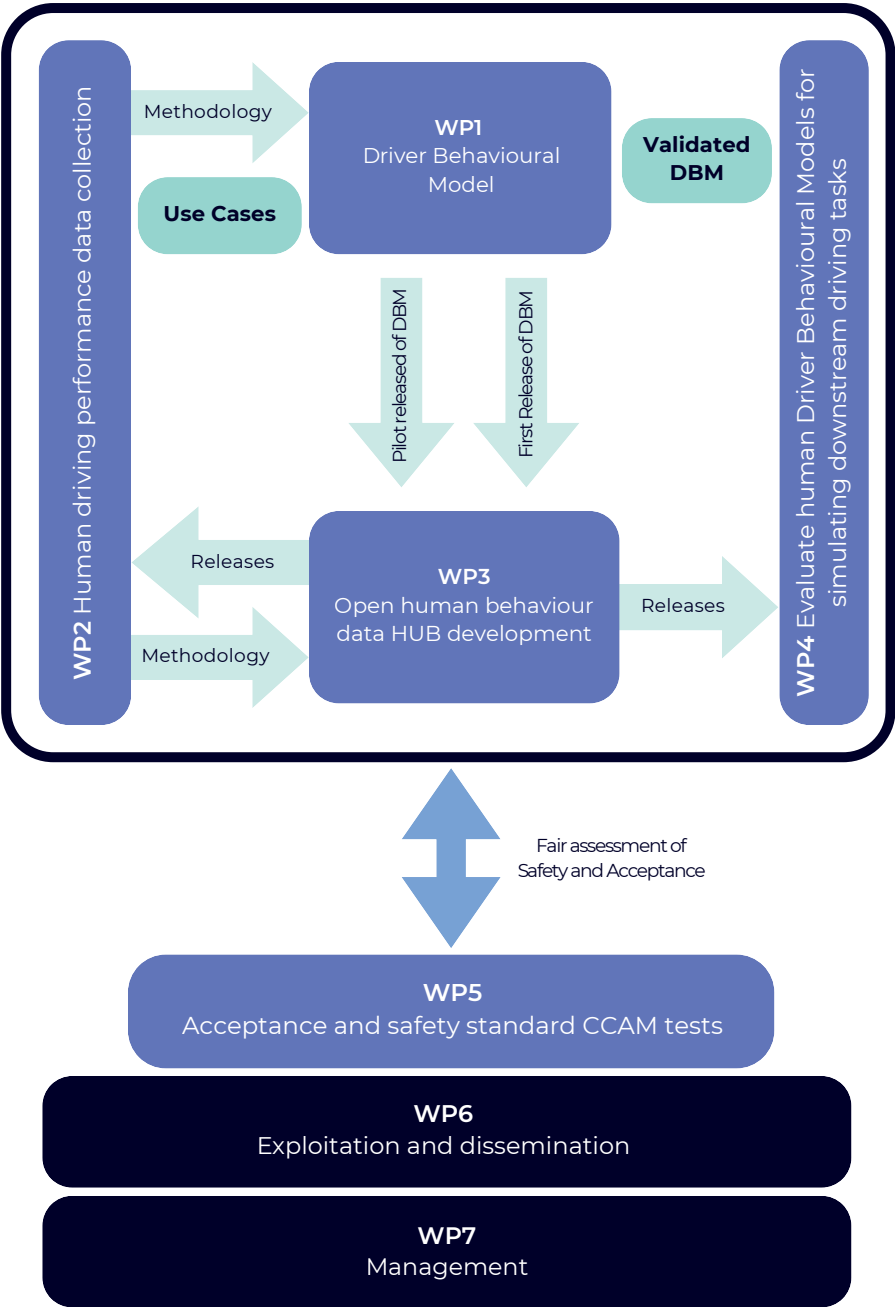
The DBM will be implemented on an open-source HUB for its industrial validation and future scalability. Moreover, it will be translated into CARLA, an open-source driving simulator for research on autonomous vehicles.

A set of interrelated demonstrators will be implemented to show the DBM approach as a reference for developing more human-like autonomous vehicles.

BERTHA puts forward a new disruptive model to overcome present shortcomings in the industry of Cooperative, Connected & Automated Mobility (CCAM) in regards to the human perspective.

WORKPACKAGES

WP2 Human driving performance data collection

Methodology

Use Cases

WP1
Driver Behavioural Model

Validated DBM

Pilot released of DBM

First Release of DBM

Releases

WP3
Open human behaviour data HUB development

Methodology

Releases

WP4 Evaluate human Driver Behavioural Models for simulating downstream driving tasks

Fair assessment of Safety and Acceptance

WP5
Acceptance and safety standard CCAM tests

WP6
Exploitation and dissemination

WP7
Management

Project consortium

IBV — INSTITUTO DE BIOMECÁNICA DE VALENCIA

Europcar Mobility Group

Université Gustave Eiffel

AIT — AUSTRIAN INSTITUTE OF TECHNOLOGY

fi group by epsa

CVC — Centre de Visió per Computador

Continental Engineering Services

Capgemini engineering

smart eye

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Cidaut

VORTEX CoLab