

AV Architectures

Defining the line between Vehicle & Driver

CAR AND DRIVER[®]

1955

“Every moving vehicle or combination of vehicles shall have a **driver**”

Convention on Road Traffic 1968

"**Driver**" means any person who **drives** a motor **vehicle** or other vehicle (including a cycle), or who **guides cattle**, singly or in herds, or flocks, or draught, pack or saddle animals on a road.

Convention on Road Traffic 1968

in the future who is the **driver**?

in **motorsport** it's clear...

AI software **drives**

robotic vehicle platforms are **driven**

Driver	ADA Sporting Regulations (Rules of the Road)	UNECE WP1 Convention on Road Traffic (Rules of the Road)
Vehicle	ADA Technical Regulations	UNECE WP29 Agreement concerning the Establishing of Global Technical Regulations for Wheeled Vehicles...

three conceptual layers

Driver
Human and/or Software

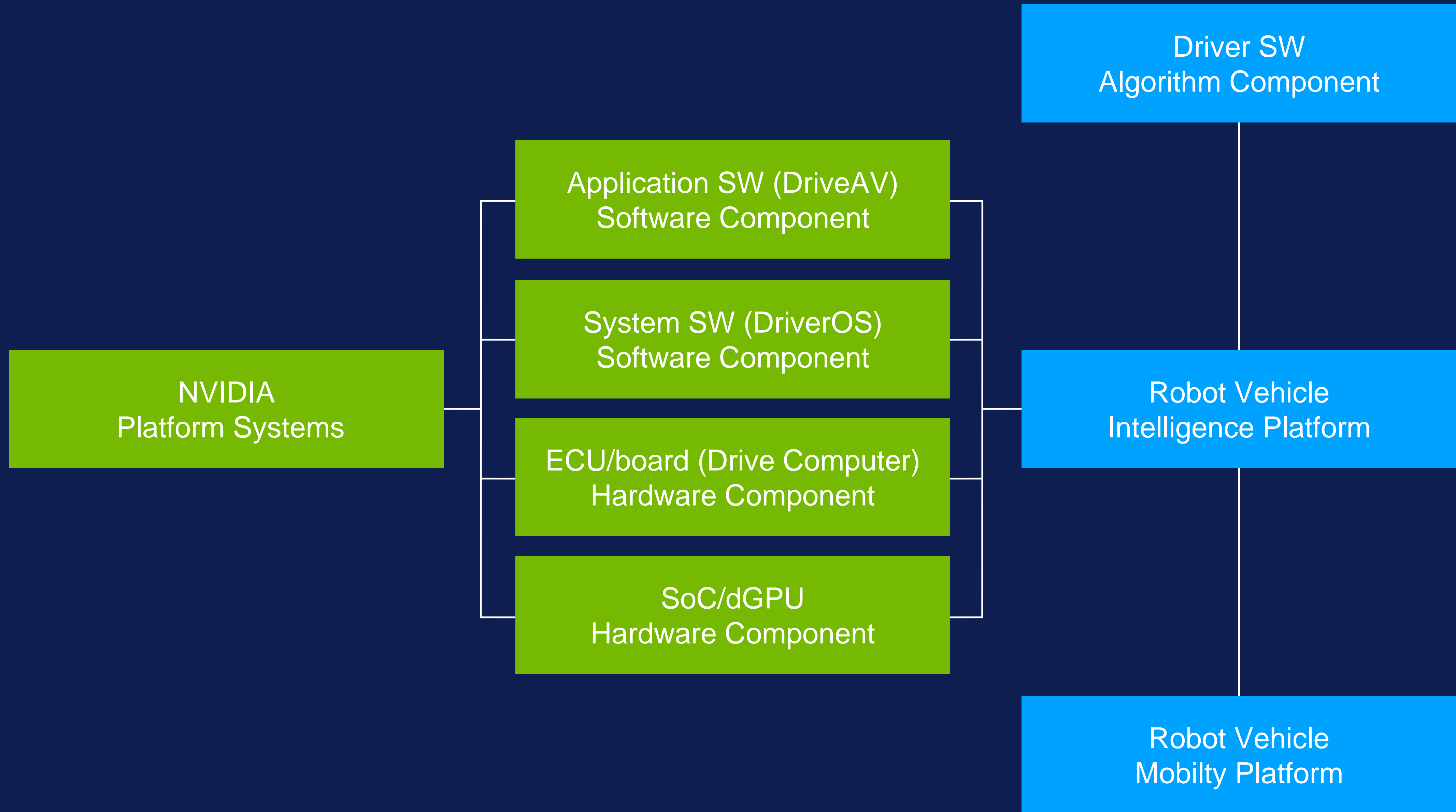
Perception, Behavioural Planning, Decision
(see, think, act)

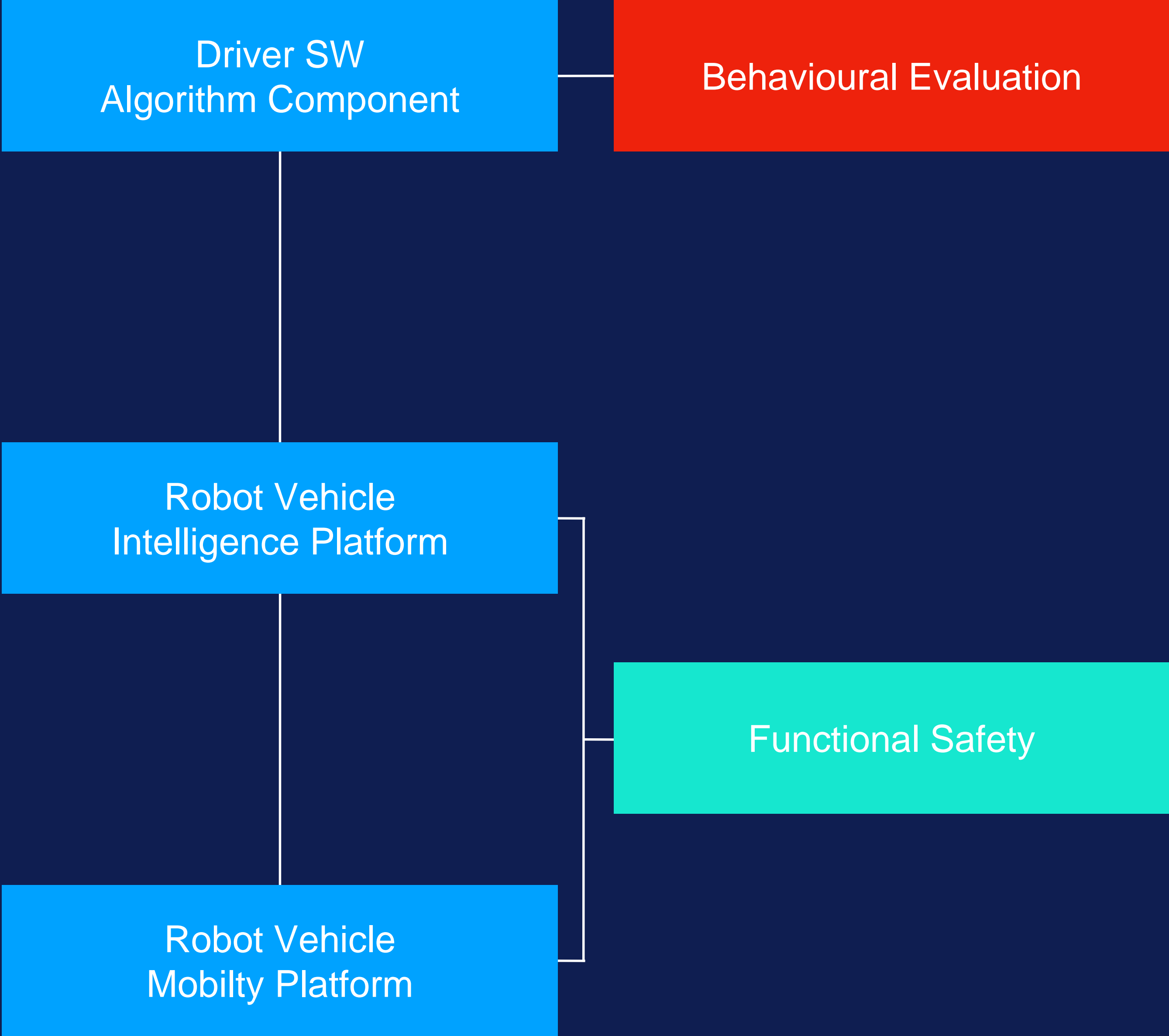
Robot Vehicle
Intelligence Platform

Sensors, Compute, Communications,
operating system, AV frameworks

Robot Vehicle
Mobility platform

Chassis, powertrain, passive safety, active
safety, X-by-wire actuators







but...




WAYMO



URBAN
AUTOMATED
DRIVING

DAIMLER BOSCH

#urban_automated_driving

SAE INTERNATIONAL J3016 SEP2016

3.2 AUTOMATED DRIVING SYSTEM (ADS)

The hardware and software that are collectively capable of performing the entire DDT on a sustained basis, regardless of whether it is limited to a specific operational design domain (ODD); this term is used specifically to describe a level 3, 4, or 5 driving automation system.

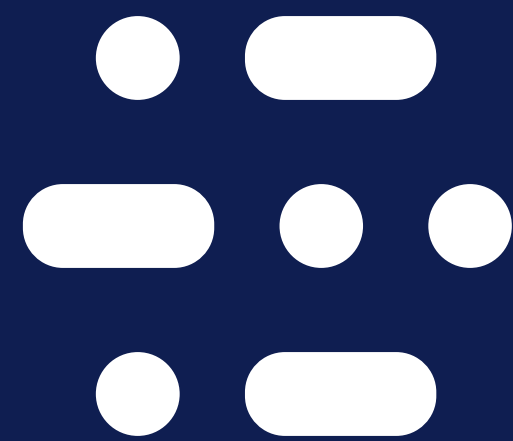
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3.5 DRIVING AUTOMATION SYSTEM or TECHNOLOGY

The hardware and software that are collectively capable of performing part or all of the DDT on a sustained basis; this term is used generically to describe any system capable of level 1-5 driving automation.

Global Forum for Road Traffic Safety (WP.1) resolution on the deployment of highly and fully automated vehicles in road traffic

(a) “Automated driving system” refers to a vehicle system that uses both hardware and software to exercise dynamic control of a vehicle on a sustained basis.



AUTONOMOUS
DRIVERS
ALLIANCE

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