

THE FUTURE OF THE AUTOMOBILE

Gilles LE BORGNE

Executive Vice president for Quality and Engineering



CONFERENCE SIA – ESTACA, 8th November 2017

A FAST-CHANGING WORLD



A DEEP MUTATION



A digital and connected world



Green Planet



Globalization



Increasing urbanisation



From possession to use

IMPACTING THE AUTOMOBILE WORLD

GROUPE PSA ENGINEERING : THE CORE TECHNO STRATEGY **PUSH^{TO}PASS**



CLEAN-TECHNOLOGIES

ICE RANGE FULLY OPTIMIZED WITH BEST IN CLASS EMISSION CONTROL



SCR TECHNOLOGY



PURE TECH GASOLINE
ENGINE

ELECTRIFICATION PROGRAMS



7 PHEV BY 2021



5 NEW BEV BY 2021

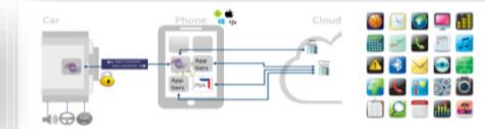


SMART VEHICLES CONNECTED AND AUTONOMOUS

AGILE FAST TECH DEVELOPMENT



2016
FULL MIRRORING



2018
INFOTAINMENT
OVER THE AIR



2020
FULL CAR
OVER THE AIR

A ROBUST ADAS ROADMAP READY FOR AUTONOMOUS DRIVING



2018
AUTOMATED DRIVING
"HANDS ON"



2020
AUTONOMOUS DRIVING
"HANDS OFF"



> 2021
AUTONOMOUS CARS
"EYES OFF"



CLEAN TECHNOLOGIES

PSA GROUP ENGAGED FOR A DURABLE MOBILITY

A SOLID TRACK RECORD
IN BRINGING
CLEAN TECHNOLOGIES
TO THE MARKET

ELECTRICAL
VEHICLE



1995

DIESEL
HDI



1998

DPF



2000

STOP
& START



2004

GASOLINE
THP



2006

HYBRID4



2012

GASOLINE PURETECH

DIESEL BLUE HDi FOR ALL OUR DIESEL ENGINES



2015

2016

2017

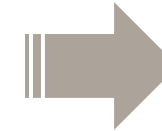
CATEGORY :
1,0L TO 1,4L



Gen. I : 2013
Gen II : 2017



Gen. I : 2013
Gen II : 2017



PSA GROUP
LEADER OF EFFICIENT
TECHNOLOGIES

CO₂ EUROPEAN LEADERSHIP :
102,4 G/KM (END 2016)

TOMORROW : A GLOBAL PORTFOLIO OF TECHNOLOGY FOR SUSTAINABLE MOBILITY

PERFORMANT ICE & ALTERNATIVE POWERTRAIN OFFERS



GASOLINE ENGINES
OPTIMIZATION



DIESEL ENGINES
OPTIMIZATION

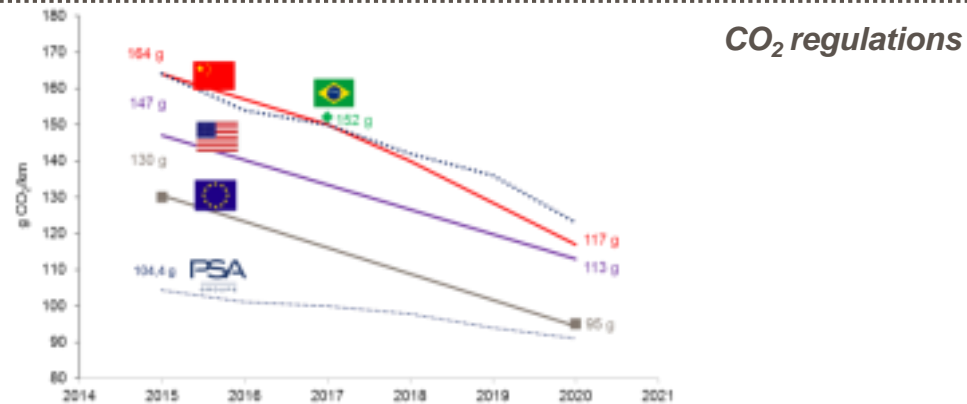


PLUG-IN HYBRID



ELECTRIC VEHICLE

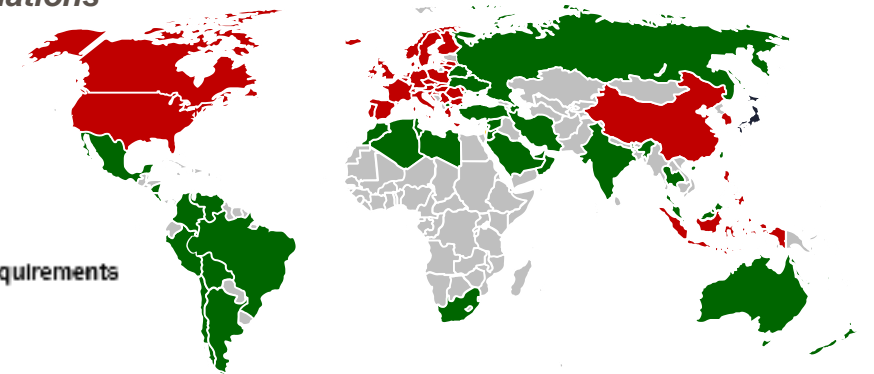
REACH 2020 CO₂/KM TARGET & REDUCE POLLUTANTS EMISSIONS (CAFE: 91g CO₂/km)



Pollutants regulations

2018
Regulatory requirements

- High
- Moderated
- None



POWERTRAIN AT THE FOREFRONT OF TECHNOLOGY

2017 : Groupe PSA Launches

NEW INTERNAL COMBUSTION ENGINES

Euro 6d temp

Compliant with RDE factor of 1,5
3 years in advance



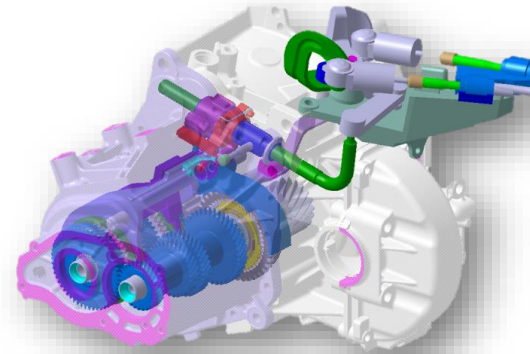
New Diesel Engine
1.5 BlueHDi 130 hp



New Petrol Engine
3 cyl. PureTech

NEW TRANSMISSIONS

offering the highest level of Driving Comfort

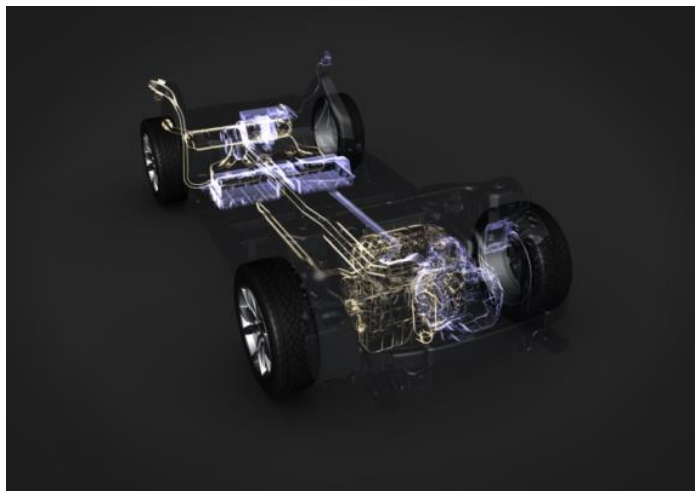


New digitally designed
BVM6 manual
transmission



New **EAT8 automatic**
transmission

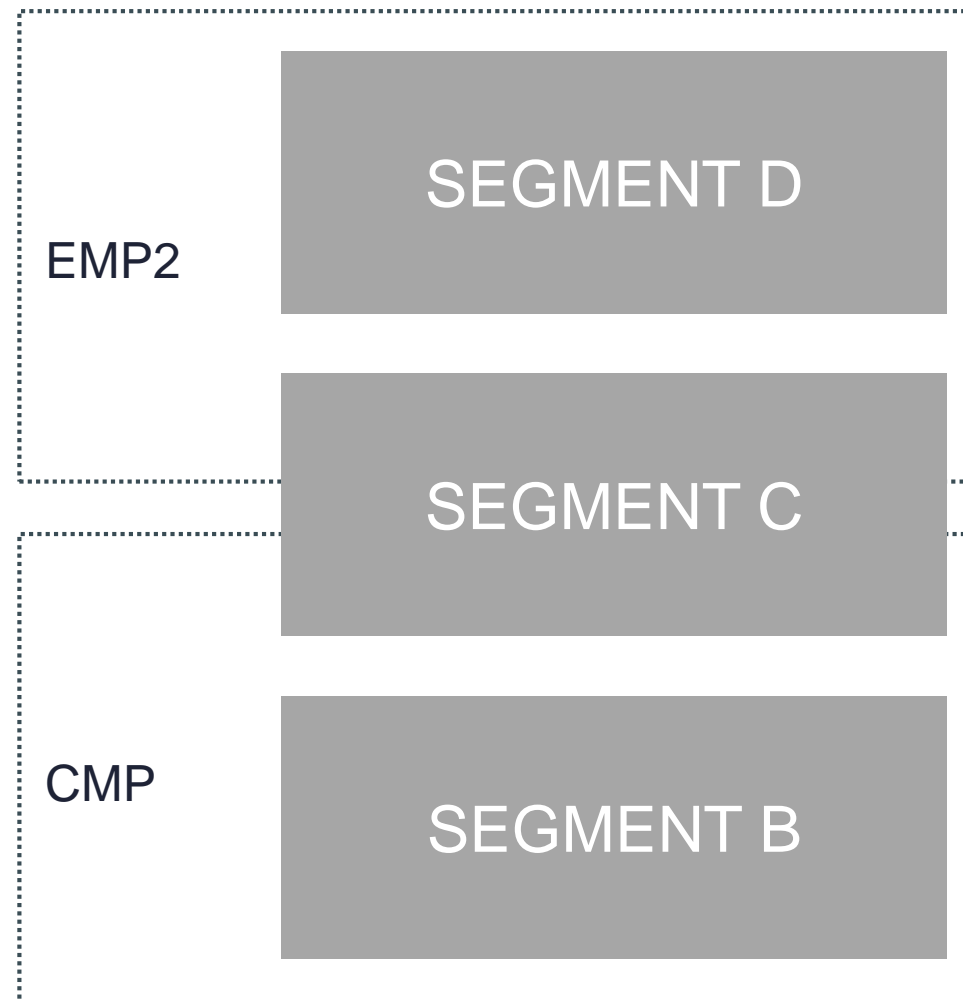
80% ELECTRIFIED CORE MODELS BY 2023, THANKS TO AN INGENUOUS PLATFORM STRATEGY



Plug-in hybrid
60km of range
7 models by 2021



New-generation
of electric vehicles
450km of range
5 models by 2021





SMART VEHICLES

CONNECTED AND AUTONOMOUS

CONNECTED AND COMMUNICATING CARS

Since 2003
Groupe PSA pioneer of
Emergency call

- ▶ 2 millions connected cars



2016
Full Mirroring &
Connected Navigation

- ▶ MirrorLink, Apple CarPlay™
Android Auto, TOM TOM

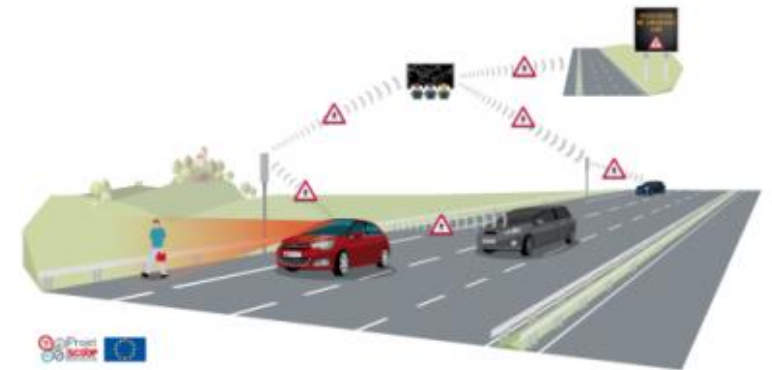


2018
Infotainment over the air

- ▶ Data business
- ▶ Car sharing

2020
Full car over the air

- ▶ Car to Car
- ▶ Car to Infrastructure



AGILE FAST TECH DEVELOPMENT

AUTONOMOUS CAR : THE AVA PROGRAM



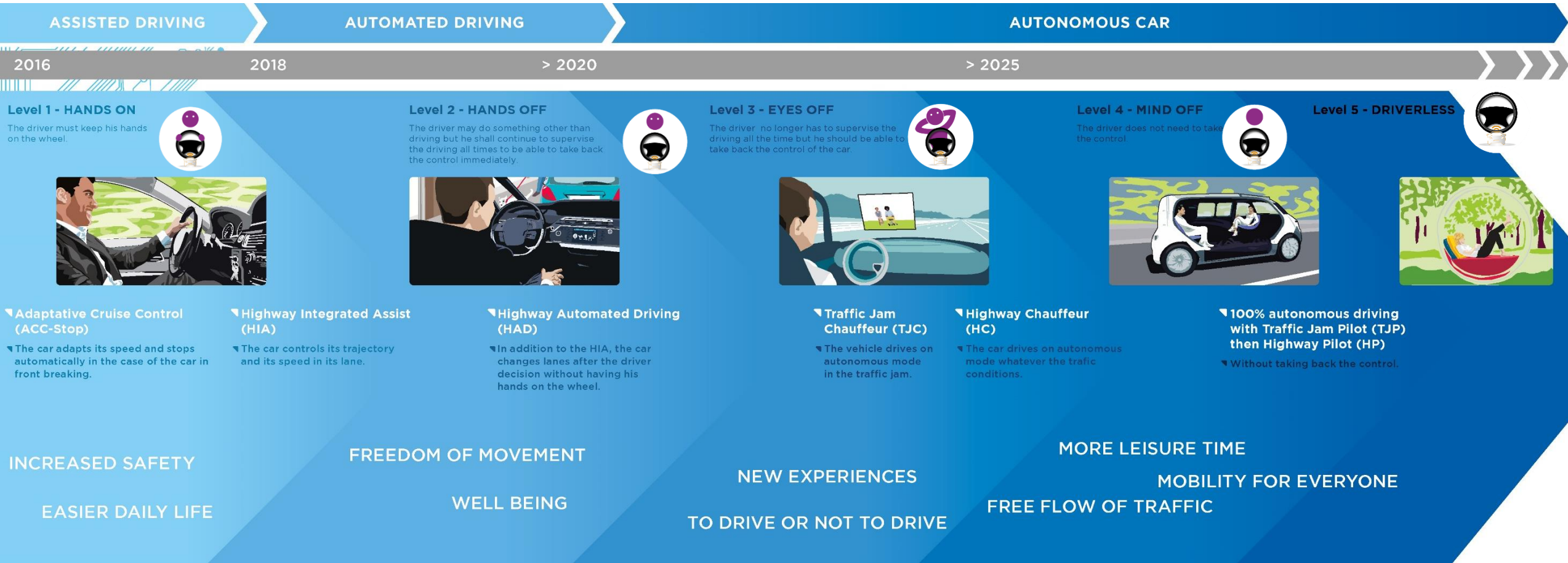
INCREASED SAFETY
FREE TIME RECOVERY
EASIER LIFE



A LARGE SET OF ADAS FEATURES
FROM PARTIAL AUTOMATION... TO AUTONOMOUS DRIVING



AVA PROGRAM ROLL-OUT



AUTONOMOUS CAR : GROUPE PSA EXPERTISE

20 PROTOTYPES IN TEST IN-HOUSE OR WITH PARTNERS

- ▶ 12 LICENSES PLATES FOR PSA AUTONOMOUS CARS

**150 000 KM DRIVEN IN AUTONOMOUS MODE - LEVELS 2,3 & 4
ON EUROPEAN ROADS**



EXPERIMENTATIONS WITH “NON-EXPERTS” DRIVERS (FROM MARCH 2017)

- ▶ 1ST CARMAKER TO OBTAIN THE FRENCH AUTHORIZATIONS

A GLOBAL PARTNERS ECOSYSTEM

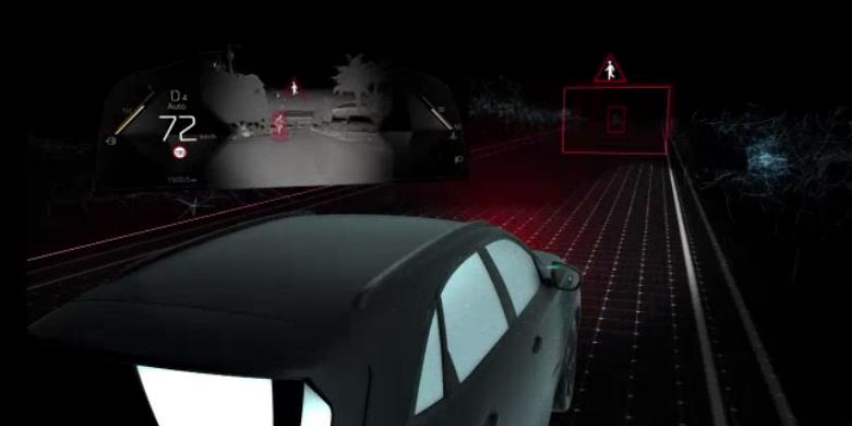


QUALITY & ENGINEERING

ADAS WAVE 2 : LAUNCHED ON DS7 CROSSBACK



DS CONNECTED PILOT



DS NIGHT VISION



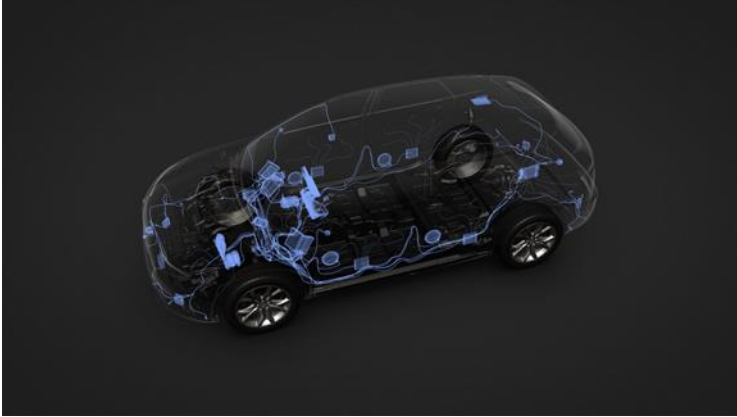
DS DRIVER ATTENTION MONITORING



DS PARK PILOT

NEW ELECTRONIC ARCHITECTURE,

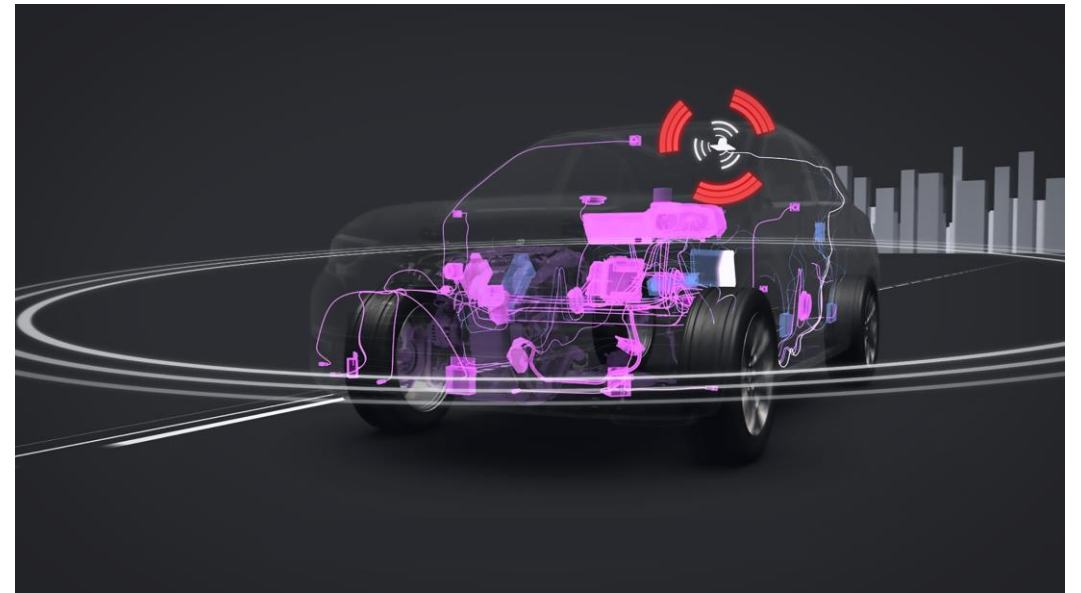
THE NEURAL SYSTEM OF THE CONNECTED AND AUTONOMOUS CAR



- **NEA** will fit Groupe PSA's carlines as of 2020
- Designed for **Autonomous & Connected Vehicle** maximizing operational safety and data protection

- **Smartly engineered :**

- ▶ MODULARITY
- ▶ SCALABILITY
- ▶ MULTI-BRANDS, MULTI-POWERTRAIN, WORLDWIDE



GROUPE PSA ENGINEERING



WE DESIGN UNIQUE AUTOMOTIVE EXPERIENCES



QUALITY & ENGINEERING

THE FUTURE OF THE AUTOMOBILE

Gilles LE BORGNE

Executive Vice president for Quality and Engineering

