



VALEO INTUITIVE DRIVING

Patrice Reilhac

Innovation & Collaborative Research Director
Valeo Comfort & Driving Assistance Business Group
Keynote Speech, AMAA, Berlin June 2013



Intuitive Driving Experience Study

OCTOBER 2012

PREMIUM OWNERS AND VOLUME OWNERS

**GERMANY
DÜSSELDORF**

**USA
LOS ANGELES**

**FRANCE
PARIS**

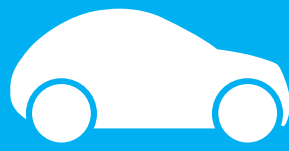
**CHINA
SHANGHAI**

Valeo

NATURAL

TECHNOLOGICAL

INTUITIVE DRIVING



Subconscious reaction

Anticipating Sensing

Natural instinct

Automatic reaction

Anticipating technology

Innovative

Sensing

Natural to use

Easy

SAFETY
AUTOMOTIVE
WORLD **PEACE OF MIND**
CONVENIENCE



Sensing + reacting technology

Emergency warning
Emergency reactions
Automated Driving

High usability
→ easy & clear

Head-Up Display
Voice control

Connected car
→ be informed
Smartphone integration
Internet
Intelligent combination of sources



AUTOMATED PARKING

AN EXAMPLE OF INTUITIVE DRIVING

Valeo



HMI (Human Machine Interface)

KEY SUCCESS FACTOR



**Valeo Solution Mapping :
Towards automated cars**

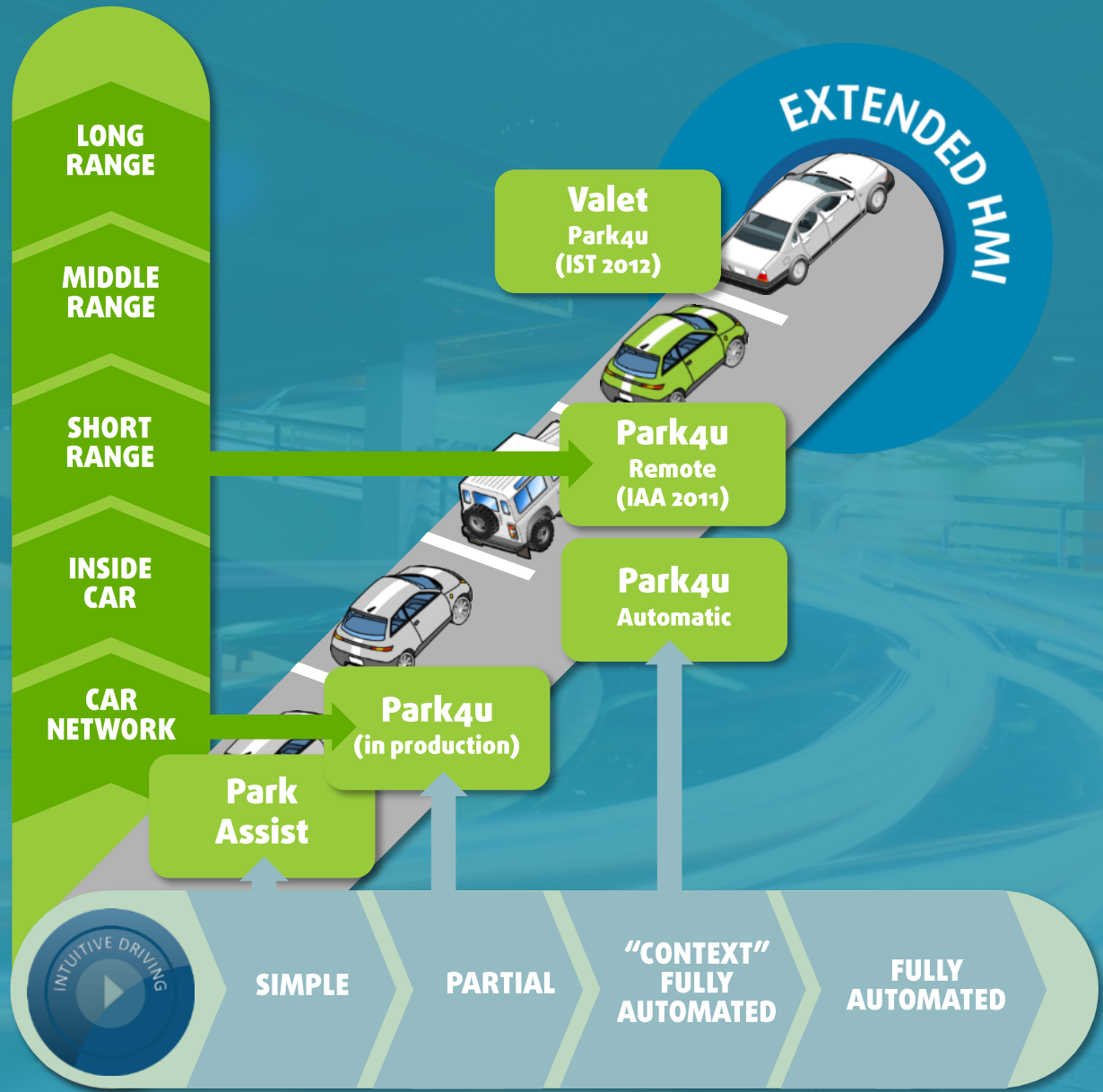
THE CONNECTED CAR

THE AUTOMATED CAR

Valeo
Solution
Mapping
Example:

parking

THE CONNECTED CAR



THE AUTOMATED CAR

Valeo
Solution
Mapping
Example:

Extended
HMI

THE CONNECTED CAR

PARK 4U REMOTE



INTUITIVE DRIVING

THE AUTOMATED CAR



Valeo
Solution
Mapping
Example:

the
situation

THE CONNECTED CAR

The network coverage is not 100%. Service interruption will occur



how to manage it?

The flow of information increases



How do we manage the take over back to manual driving?

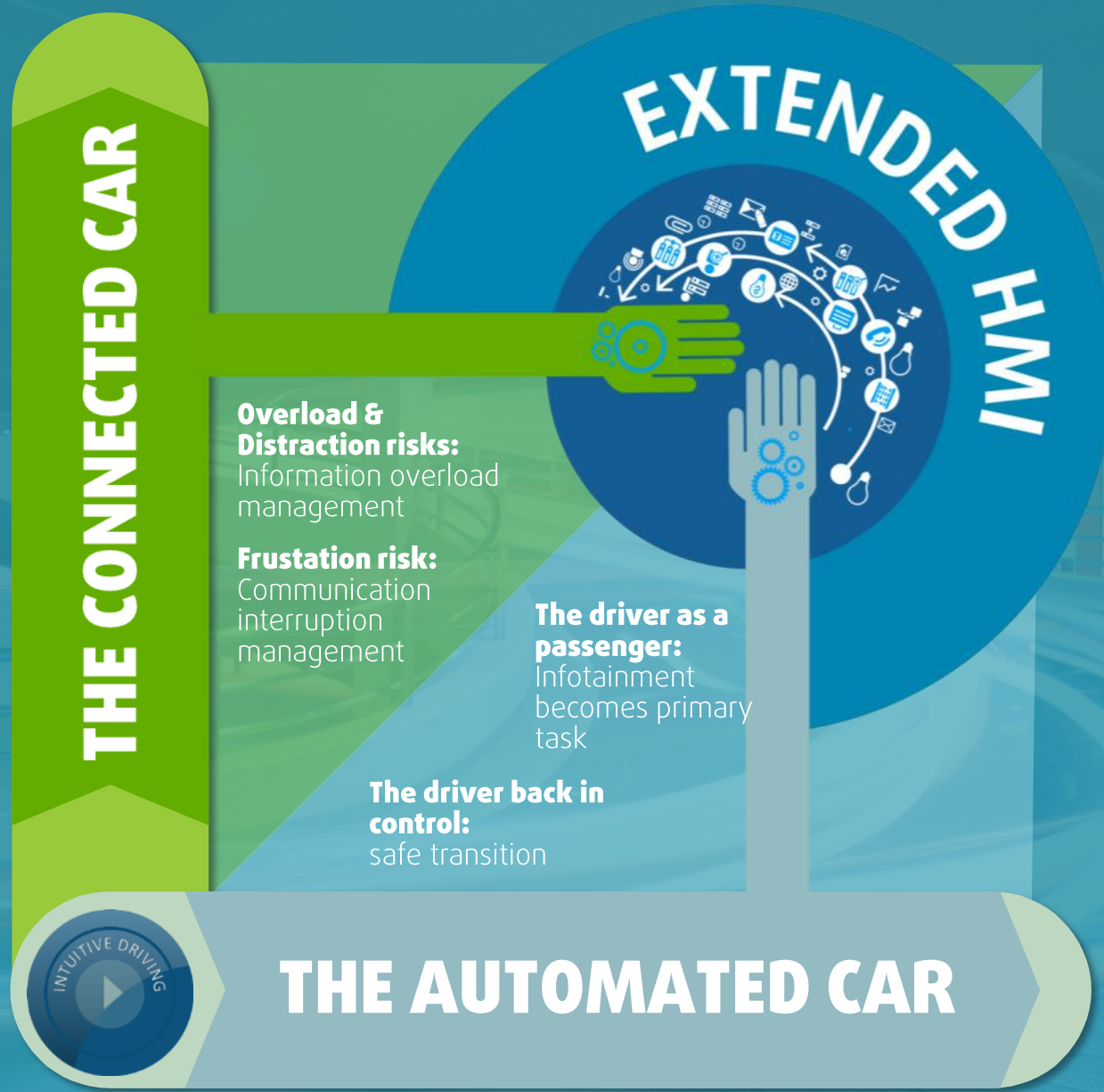
What is the end user doing during the full automated phase?



THE AUTOMATED CAR

Valeo
Solution
Mapping
Example:

Extended
HMI





AUTOMATED PARKING

THE 1ST STEP TOWARD AUTOMATED DRIVING



Valeo

Automated Parking as the 1st step toward Automated Driving

DRIVING EXPERIENCE STUDY – OCTOBER 2012

HIGHLY ATTRACTIVE

Clear benefit / some improvements needed

Limited benefit and / or major improvements needed

LOWER ACCEPTANCE

AUTOMATED PARKING



EMERGENCY BRAKING



AUTOMATED DRIVING – TRAFFIC JAM



AUTOMATED DRIVING – HIGHWAY



AUTOMATED DRIVING STARTS FROM LOW SPEED ONWARDS



THE HIGHER THE SPEED, THE LOWER THE CURRENT ACCEPTANCE OF AUTOMATION

Valeo



ACTIVITIES

WHILE DRIVING

Valeo

DISPLAY OF INFORMATION

Head-Up Display is highly attractive during automated driving mode: in front of the driver, eyes on the road, large screen

Valeo Solution Mapping : Towards automated cars

THE CONNECTED CAR

CONNECTIVITY

WIRELESS



**SAFE
TRANSITION
DRIVER AS A
PASSENGER
DRIVER
MONITORING**



SIMPLE

PARTIAL

**"CONTEXT"
FULLY
AUTOMATED**

**FULLY
AUTOMATED**

THE AUTOMATED CAR

VALEO VISION: INTUITIVE DRIVING

THE THREE PILLARS RELEVANT TO INTUITIVE DRIVING

DRIVING & PARKING

Front Multi
Function Camera
Laser Scanner

Park4U Remote
360Vue 3D

Emergency
braking

REMOTE ACCESS & CONTROL

InTouch (eCall)

Telematic Control Unit

Bluetooth
Smart Remote

Passive Entry
Passive Start



Driver
Monitoring
Camera

Steering
Wheel
Switches

Head-up Display

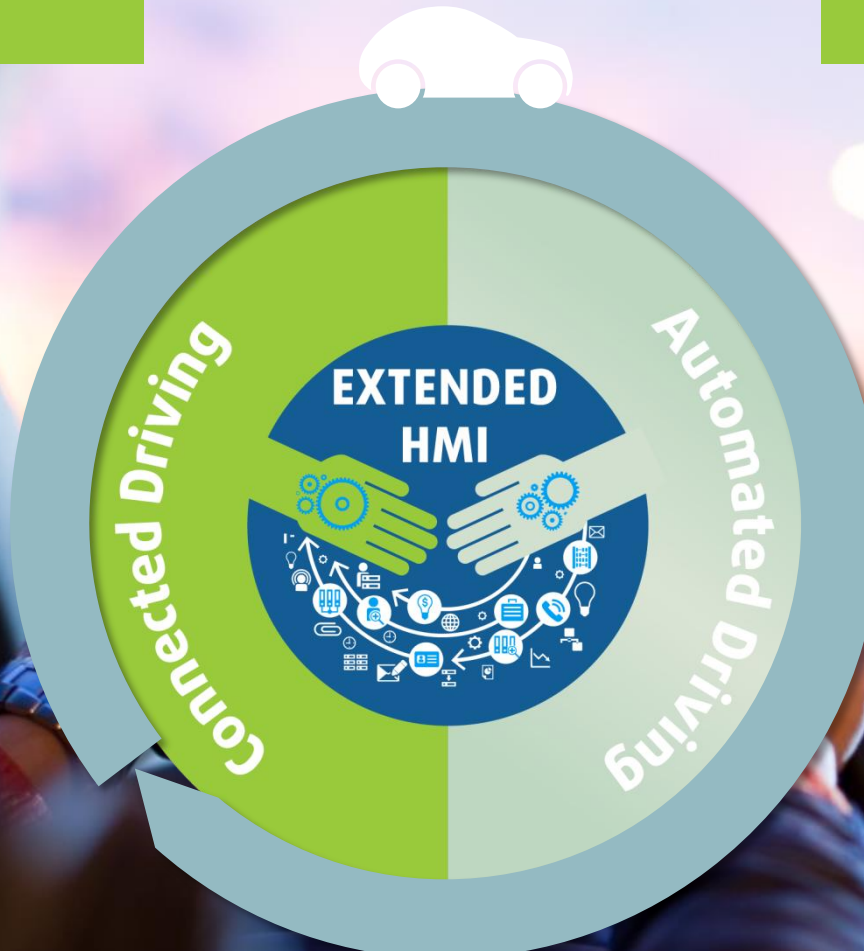
Top Column
Module

eSkin lite
(Touchscreen)

DISPLAY, CONTROL & CONNECT

**BECAUSE WE
ARE CONNECTED ...**

**... WE NEED
AUTOMATION ...**



... TO TRAVEL SAFELY.





= VALEO INTUITIVE DRIVING

**CONNECTED
DRIVING + EXTENDED
HMI + AUTOMATED
DRIVING**



INTUITIVE DRIVING

Secure
Affordable
Fun
Efficient

Valeo