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EDITORIAL THE MOBILITY REVOLUTION



Zero emission, zero accident. With these two goals, we are jumping in a new edge of the automotive industry. Electric, autonomous and connected vehicles are beginning to transform the way we consider mobility. It is a revolution which is coming sooner that we think.

At UTAC CERAM, our

engineers are always looking forwards. With an active commitment in regulatory groups (EC and UNECE), our experts were directly involved in the elaboration of the new WLTP regulation which has been adopted on September 1st.

As official Euro NCAP laboratory, UTAC CERAM is also very active in the definition of the Euro NCAP 2025 Roadmap.

Therefore, we are a partner of choice to support our customers in their development and product approval project.



Reinhard WIRTZ
Marketing Manager

SAVE THE DATES

November 29, 2017 | Versailles (FR)

ADAS & AUTOMATED VEHICLES

VEDECOM and UTAC CERAM are partners to propose a training course on ADAS & Automated vehicles.

The course addresses the issue of security and regulatory requirements for ADAS and self-driving vehicles.

This 4 hours theoretical module can be completed with a practical module on UTAC CERAM's proving ground.

All info and inscription at <http://www.vedecom.fr/>



June 02-03, 2018 | Linas (FR)

AUTODROME HERITAGE FESTIVAL

The weekend of the 2nd and 3rd of June will be dedicated to the Autodrome Heritage Festival. It is a must see for all lovers of classic cars and bikes.

All info and ticketing at www.parisautoevents.com



June 05-07, 2018 | Stuttgart (DE)

AUTOMOTIVE TESTING EXPO 2018

Automotive Testing Expo Europe will once again run at the Messe Stuttgart.

The show is the launch pad in Europe for new technologies within the area of automotive test, evaluation and quality engineering.

All info and inscription at <http://www.testing-expo.com/>



FOCUS

CONNECTED & AUTOMATED VEHICLES

From testing to homologation, UTAC CERAM is preparing the change

Around 2020, the first automated vehicles will be launched on the market. To prepare autonomous driving, over ten ISO TC22 standardization groups and three international regulation groups (UNECE WP29 ITS/AD & GRRF-ACSF) are working on the subject since 2014.

All regulations about automated vehicles should be officially released by end 2018 to beginning 2019.

A first regulation is planned in April 2018 for ADAS functions like auto-parking and level 2 autopilot.

In a next step, beginning 2019, the regulation for automated vehicles level 3 will be defined for highways or separated 2-way roads.

Connected vehicles and automated shuttles would be regulated later than 2020, because these technologies do not have a sufficient readiness level & reliability yet.

UTAC CERAM is already developing new tests

The forthcoming regulations will request about 15 new types approval tests. Some of them will be closed to AEB-, ACC-, LK-Euro NCAP tests, which are the latest references.

Over 100 tests are currently being defined for OEM's validation protocols. The tests pinpoint specific needs of automated driving.

These scenarios are including perception, decision, action, safety, legal, human and ethic aspects.

UTAC CERAM is a Euro NCAP accredited laboratory since 2001 and is very active in each working group. In June, Euro NCAP has launched two new working groups in order to define and reveal in 2018 the automated vehicles protocols and ratings for 2020-2021.

UTAC CERAM is expanding its proving grounds

As from autumn 2018, new autonomous driving and connected vehicle tracks will be built on UTAC CERAM's testing center.

These new facilities will be suitable for all connected and automated vehicles (passenger cars, shuttles, trucks,...).

The proving ground will simulate all driving conditions from highway to city, including parking and crossroads.

The tracks will have 3 countries specific markings, night lighting, tunnel, highway portal signals and will include outstanding equipments such as:

- Progressive connectivity solutions,
- IT infrastructures and data services,
- EV quick charging solutions.

UTAC CERAM is working on the 2nd generation of automated vehicles



AUTONOMOUS DRIVING LEVELS

Level 0	The vehicle is completely controlled by the driver (human).
Level 1	First driver-assistance level. Most functions are still controlled by the driver. Specific function can be done automatically by the vehicle (like steering and accelerating).
Level 2	At least one driver assistance system is automated, like cruise control or lane-centering. The driver must still always be ready to take control of the vehicle.
Level 3	The driver is able to completely shift safety-critical functions to the vehicle, under certain traffic or environmental conditions. The driver is still present and will intervene if necessary.
Level 4	The vehicle is designed to perform all safety-critical driving functions and monitor roadway conditions for an entire trip. However it does not cover every driving scenario.
Level 5	A fully-autonomous system that expects vehicle's performance to equal a human driver in every driving scenario.

UTAC CERAM is involved in European research projects BRAVE and MUSE on connected vehicles, cyber security, pedestrian and powered two wheeler tests.

The group is also working on many autonomous vehicles subjects with insurance companies and research institutes, as MAIF Foundation and VEDECOM.

UTAC CERAM is always looking ahead

Real testing won't be sufficient to play billion of scenarios with million of kilometers needed for automated vehicles safety demonstrations.

UTAC CERAM will also largely invest in simulation and different VIL testing solutions.

It confirms the UTAC CERAM unique position in Europe as exclusive technical service for all French type approval tests and as expert in regulation, standardization, Euro NCAP and R&D.



Alain PIPERNO
Autonomous Vehicles Expert

REGULATION **VEHICLE EMISSIONS**

An historic turn for vehicle emissions

September 1st, following respectively 8 years and 6 years of intense work, WLTP (Worldwide Harmonized Light vehicle Test Procedure) and RDE (Real Driving Emissions) regulations are about to revolutionize the pollutant and fuel consumption light duty vehicles approval, initially adopted in 1970. These procedures are aiming to reduce efficiently NOx and fine particles emissions in cities, as well as reducing the gap between type approved CO₂ emissions/fuel consumption and in-use values. This regulatory development is a drastic change in the automotive world:

technically, economically and strategically.

UTAC CERAM group has actively been involved in the elaboration of these regulations since the very beginning, thanks to:

- *the contributions of its experts to the regulatory groups in Brussels (EC) and Geneva (UNECE), in the field of testing and administrative procedures,*
- *the testing campaigns carried out to strengthen the relevance of its proposals.*

The implementation of the test and administrative procedures has

Transition from NEDC to WLTP in 3 steps



1 September 2017

New vehicles: WLTP approved
Existing models: NEDC approved

1 September 2018

All vehicles: WLTP approved
End-of-series: NEDC approved

1 September 2019

All vehicles: WLTP approved

mobilized UTAC CERAM experienced teams since 2014.

The group has therefore been able to support and advise the manufacturers and suppliers to step into this new technical age.



Céline VALLAUDE
International Expertise Regulation
Department Manager

HOMOLOGATION **NOT PRODUCT DESIGN REQUIREMENTS**

Often overlooked homologation requirements

Some homologation requirements are often overlooked by manufacturers as they don't have a direct impact on the product conception.

Conformity Of Production (COP)

COP is an audit performed by a notified certification organism (like UTAC CERAM) to check the procedures put in place by the manufacturer to ensure each vehicle or component complies with the homologation.

An initial evaluation is made before the first vehicle homologated

delivery, then a follow-up every 3 years.

Operator's Manual

Mandatory information has to be displayed in the operator's manual. They are indicated in the regulation 1322/2014 article XXII.

Last year, there was an update on:

- *Vehicle maintenance,*
- *Power take off,*
- *Lift.*

The manual must be delivered in the language of the country of destination.

Repairs and Maintenance Information (RMI)

This regulation is the access obligations to Vehicle OBD and Vehicle Repair and Maintenance Information to all repair workshops.

R&S vehicles do not need to comply to OBD requirements when the on board electronics do not impact the road safety equipment.

Product Recall

A manufacturer shall make sure its production always complies with the homologation and does not present any serious risk.

In the event a serious

risk is identified, a manufacturer must:

- *warn the approval authority,*
- *take decisive actions to eliminate the risk,*
- *recall the vehicles to take corrective action.*

To avoid any inconvenience, make sure not to overlook these homologation requirements during the vehicle conception.



Felix GARRAD
Off-road Vehicles & Coachbuilders
Market Manager

NOMINATION

EURO NCAP ELECTS NEW CHAIRMAN

Pierre Castaing: President and Chairman of the Euro NCAP Board of Directors

Leuven - The members of Euro NCAP have elected Pierre Castaing as President and Chairman of the Board of Directors for the next two years.

Pierre Castaing succeeds Andrew Miller, retired Chief Technical Officer at Thatcham Research, who resigned from the post. Castaing is originally an aeronautical engineer, but has worked in the field of personal protection and vehicle safety for over three decades. He has served as a member of Euro NCAP's Board of Directors since 2000, representing the French MoT.

He is presently Head of Regulatory Affairs for the UTAC CERAM Group, having held that position since July 2012, following previous roles as Head of Passive Safety Unit and Head of Safety Department at UTAC in Linas-Monthéry.

He brings a wealth of experience to Euro NCAP, having monitored and steered many regulatory developments in Geneva and Brussels and having worked closely with the automotive industry and national authorities on road safety.

'I am delighted to be given the opportunity to be the President of the world-leading consumer

organisation Euro NCAP and I am looking forward to working with the Board members to implement the organisation's ambitious plans' says Pierre Castaing. *'Euro NCAP has an important role in the promotion of innovative safety systems in new vehicles sold in Europe, thanks to its ability to continually adapt its requirements, encouraging industry to reach the best achievable level of safety in an affordable way.'*

Announcing the nomination, Secretary General Michiel van Ratingen says: *'I have*

worked for many years with Pierre as a Euro NCAP Board member and congratulate him for having been appointed to take over this important role. I am confident that Pierre's longstanding experience in vehicle safety will be a great benefit to the organization and help us deliver the next roadmap.'



Pierre CASTAING
Department Manager
Regulatory Affairs

ACTIVE SAFETY

MUSE PROJECT

Active Safety for Motorcyclist Protection

As a pioneer in the motorcyclists protection, UTAC CERAM has launched an European scale project in collaboration with various actors of the European automotive and motorcycle industry: MUSE (Motorbike Users Safety Enhancement).

This collaboration will

enhance the compilation of European accidentology data, the evaluation of the best systems to address PTW accidents and to develop test protocols to assess them.

In collaboration with UTAC CERAM, 4activeSystems will be in charge of the



development of a common European Motorcyclist Target (EMT).

The other MUSE project

partners are : Renault, VW, BMW, FCA, Subaru, Honda, Autoliv, ZF-TRW, Valeo, Bosch and Denso.



Rodrigo NUNEZ MIGUEL
ADAS Project Manager

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