# Table of Contents

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>President’s Foreword</td>
<td>04</td>
</tr>
<tr>
<td>About CITA</td>
<td>11</td>
</tr>
<tr>
<td>Highlights, Projects &amp; Partnership</td>
<td>13</td>
</tr>
<tr>
<td>Events &amp; Webinars</td>
<td>27</td>
</tr>
<tr>
<td>Global</td>
<td>25</td>
</tr>
<tr>
<td>On the Horizon</td>
<td>37</td>
</tr>
</tbody>
</table>
Dear CITA Members, Stakeholders, and Friends,

The year 2021 was also heavily affected by the COVID-19 pandemic, but after almost two years we all learnt to handle with it and to turn it into a new normal.

The new normal is important, because road safety and environmental protection activities worldwide are much too crucial to be interrupted.

According to the WHO Global Status report, 1.3 million people die each year as a result of road traffic crashes worldwide. In addition, vehicle tailpipe emissions were linked to hundreds of thousands of premature deaths.

Even though some regions of the world will quickly introduce safer zero-emission vehicles, other regions will still have older technologies for decades.

Therefore, governments around the world must not relax their commitment to safer and cleaner vehicles and must meet the challenges of automotive technologies.

CITA, as an impartial partner, is more than able and willing to support any road safety initiative.

We dedicate our daily effort to improving vehicle safety and protecting the environment.

CITA provides a global forum for the exchange of best practices, cooperates with all relevant stakeholders, facilitates recommendations and capacitates authorities to improve inspection systems.

You will find in this annual report a comprehensive summary of the very interesting activities and events of CITA and the cooperation with stakeholders, and I am sure you will enjoy reading it.

Our new structure with Topic Areas and Task Forces operates very well, makes our work even more effective and delivers fast results.

I am very happy to see how committed and professional the experts of CITA members are in ensuring the lifelong compliance of vehicles and in meeting the new challenges of modern and digitalised vehicles with automated driving functions and alternative powertrains.

WE MAKE ROADS SAFER AND CLEANER, EVERY DAY, EVERYWHERE, IMPARTIALLY. RESPONSIBLY.

On behalf of the CITA Bureau Permanent and the CITA secretariat, I would like to thank all our members and partners for their committed work that make CITA so successful and all those who are dedicated to vehicle safety and environmental protection.

Gerhard MÜLLER
CITA President
WE MAKE ROADS SAFER AND CLEANER. EVERY DAY. EVERYWHERE. IMPARTIALLY. RESPONSIBLY.

WHO WE ARE
The worldwide association of authorities and authorized companies active in the field of vehicle compliance.

WE BELIEVE THAT SUSTAINABLE MOBILITY MAKES THE WORLD BETTER.

MISSION
We are the impartial partner that enables programs and policies for safe and clean vehicles.

VISION
We believe that sustainable mobility makes the world better.

We dedicate our daily efforts to improving road safety and protecting the environment.

We organise conferences and seminars on inspection methods, standards and equipment. We create awareness on quality control, assurance and accreditation.

We provide a global forum for best practice exchange. Our members find a unique place to share knowledge and participate in global vehicle compliance activities.

We facilitate best practice recommendations and draft international standards. For our members, we coordinate studies, research and investigations.

We provide training to stakeholders, capacitate authorities and facilitate on information systems used to improve inspection consistency and effectiveness.
Held for the first time in virtual mode, on 1 June 2021, the 20th CITA General Assembly saw the new “Road 2030” strategy and the new Articles of Incorporation officially approved.

The CITA BP together with the CITA Secretariat believe that by adopting the new strategy, we will all make CITA faster, more effective and more professional!
CORPORATE MEMBERS

EQUIPMENT & SERVICES SUPPLIERS
in alphabetical order

www.actia.com
www.airliquide.com
www.anche.cn
www.autocom.se
www.avidtest.com
www.beissbarth-online.com
www.capelec.fr
www.cosber.com
www.dekatitechnologies.com
www.maha.de
www.mustangdyne.com
www.snapon-totalshopsolutions.com
www.ten-automotive.com
www.vteq.es
www.3datx.com

MEMBERS
in alphabetical order

FULL MEMBERS | AFFILIATED ASSOCIATION MEMBERS
PROVISIONAL MEMBERS | AFFILIATED NON-ASSOCIATION MEMBERS

AFRICA
Lacvis Nigeria Limited - NIGERIA
MÁYELA - IVORY COAST
SICITA - IVORY COAST

CENTRAL & SOUTH AMERICA
SGS Argentina - ARGENTINA
Systech Chile Limitada - CHILE
TÜV Rheinland Andino S.A. - CHILE

NORTH AMERICA
APPLUS+ Technologies, Inc. - USA
DEKRA Automotive North America - USA

ASIA / AUSTRALASIA
Quality Inspection Services - JAPAN
RTA - Licencing Agency Dubai - UNITED ARAB EMIRATES

AFRICA
Lacvis Nigeria Limited - NIGERIA
MÁYELA - IVORY COAST
SICITA - IVORY COAST

CENTRAL & SOUTH AMERICA
SGS Argentina - ARGENTINA
Systech Chile Limitada - CHILE
TÜV Rheinland Andino S.A. - CHILE

NORTH AMERICA
APPLUS+ Technologies, Inc. - USA
DEKRA Automotive North America - USA

ASIA / AUSTRALASIA
Quality Inspection Services - JAPAN
RTA - Licencing Agency Dubai - UNITED ARAB EMIRATES

AFRICA
Lacvis Nigeria Limited - NIGERIA
MÁYELA - IVORY COAST
SICITA - IVORY COAST

CENTRAL & SOUTH AMERICA
SGS Argentina - ARGENTINA
Systech Chile Limitada - CHILE
TÜV Rheinland Andino S.A. - CHILE

NORTH AMERICA
APPLUS+ Technologies, Inc. - USA
DEKRA Automotive North America - USA

ASIA / AUSTRALASIA
Quality Inspection Services - JAPAN
RTA - Licencing Agency Dubai - UNITED ARAB EMIRATES
<table>
<thead>
<tr>
<th>Topic</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>HIGHLIGHTS PROJECTS &amp; PARTNERSHIPS</td>
<td></td>
</tr>
<tr>
<td>RAG EUROPE</td>
<td>14</td>
</tr>
<tr>
<td>CITA GENERAL QUESTIONNAIRE 2020/21</td>
<td>18</td>
</tr>
<tr>
<td>REGULATION FOR THE BATTERIES OF ELECTRIC VEHICLES</td>
<td>19</td>
</tr>
<tr>
<td>INTRODUCTION OF PARTICLE COUNTING FOR PTI</td>
<td>20</td>
</tr>
<tr>
<td>SAFER AND CLEANER USED VEHICLES FOR AFRICA</td>
<td>22</td>
</tr>
<tr>
<td>CITA PROJECT IN TOGO</td>
<td>24</td>
</tr>
<tr>
<td>PARTNERSHIP AGREEMENT WITH EREG AND IAMTS</td>
<td>25</td>
</tr>
</tbody>
</table>
The Regional Advisory Group Europe (RAG E), chaired by Jann Fehlauer, has the task to advance the CITA objectives in their geographically defined region through regionally focused advice and activities.

But how is the structure of RAG E built?

New technological developments such as automated and connected driving have a major impact on road traffic and the regulatory framework. These developments are happening very fast, so that today’s structures must be flexible – in order to keep up with both current and upcoming developments.

We believe that RAG Europe needs more executive competence, while keeping up with the speed of all developments and changes that we are seeing today. In order to accomplish that, as well as meeting today’s needs regarding effectiveness and efficiency, we put our focus on Task Forces.

The previous structure consisted of 8 Working Groups, supplemented by 7 Task Forces.

The new structure of RAG Europe consists of two levels. The former Working Groups became Topic Areas, in which knowledge exchange and networking will take place.

The second level is the Task Forces, which work on specific topics with a clear focus and target.

All the Task Forces – which were only formed in 2020 – have already made a lot of progress thanks to their committed work and great dedication.

On 16 and 17 November 2021, in Brussels, after having maintained a social distance for a long time and organised numerous virtual meetings, the first RAG E Conference took place as a hybrid event. It was also the first time RAG E came together in the new structure to get an initial overview from the respective Topic Area and Task Force leaders, to highlight all achievements and current statuses.

There was also time for Q&A sessions and – most importantly – for socializing in-between the sessions by getting the chance to get together, thus making the most of the CITA network.

In total, 2021 has been a fruitful and instructive year.

RAG E is looking forward to 2022.
**TOPIC AREA C External Affairs**

CITA’s new Topic Area C launched its work at the beginning of 2021. Three meetings of the working group were held during the first year. Due to the ongoing global Covid-19 pandemic, these meetings took place online or in hybrid form.

Over 40 CITA members from all world regions have regularly attended the meetings. By actively involving the members through a questionnaire, they successfully identified the added value of an external affairs committee and agreed on an universal terms of reference for future activities of the group.

Specifically, the Topic Area External Affairs coordinates CITA’s advocacy activities across all regions, as well as towards international organizations. As such, it is the main focal point for advocacy activities, including:

- Articulating CITA’s positions on regulatory and policy developments;
- Engaging with stakeholders and policymakers to raise awareness on the benefits of the third party approach in the automotive sector;
- Monitoring and flagging policy developments to members.

Topic Area C publishes news reports about political and legal trends in the EU and UN as part of CITA’s bi-annual NewsRelease. In the committee meetings, key political developments for the interest of CITA and valuable for more detailed considerations in the Task Forces are identified.

In 2021, the topics specifically addressed concerned activities on “remote access to in-vehicle data” and “safety of automated driving systems”. Moreover, Topic Area C oversees activities of two Task Forces, TF Micro-Mobility and TF Roadworthiness Package.

Forging new alliances with relevant stakeholders remains one of CITA Bureau Permanent’s critical activities. With the support of TA-C, CITA took the opportunity to officially announce a partner effort with the International Alliance for Mobility Testing and Standardization (IAMTS) to develop recommended best practices for lifetime evaluation of automated driving systems.

The goal is to ensure automated driving systems remain safe and effective on the road for the life of the vehicle. This approach with IAMTS will be continued in 2022. In a joint white paper, both organizations will identify technical needs for safe performance of new mobility concepts in the market.

As part of the new CITA structure with 5 Topic Areas, the former Working Group 3 has been transferred to the new Topic Area E. The scope and contents are similar to the previous one.

**TOPIC AREA E Quality, Training & Confidence**

As part of the new CITA structure with 5 Topic Areas, the former Working Group 3 has been transferred to the new Topic Area E. The scope and contents are similar to the previous one.

TA E is dealing with Quality related issues such as quality measurements, quality management requirements, supervision, the role of authorities, third party assessments and accreditation. The focus is often benchmark, best practice, and implementation of legal requirements.

This sometimes includes interpretation of standards such as ISO 17020 or more detailed technical and theoretical aspects such as equipment management, calibration and methodology for measurement uncertainties and traceability.

Training and Competence of the vehicle inspectors is a key element to professional and high quality vehicle performance.

Therefore, training methods, contents and examinations are often covered in the meetings, as well as how to guarantee that each inspector always maintains the right competence and performance.

During the pandemic there was an emphasis on experiences using remote methods for training, supervision, and audits. Experience shows both challenges and interesting possibilities for the future.

The last major topic is Confidence. Vehicle inspections must always be conducted in an objective way so that every single vehicle owner, as well as the society, can rely on the outcomes of the vehicle inspections and be confident that they properly contribute to the road safety and the environment.

Therefore, CITA emphasizes the importance of impartiality and Antifraud, and these questions are discussed on a regular basis in Topic Area E. For instance, special focus has been given lately on providing information about the challenges in the post-Soviet region and possible ways to improve the situation.

Topic Area E also reports continuously on related activities and task forces, such as the CITA Task Force “AVIS scoring” and the joint Task Force CITA- EA for collaboration with the European Accreditation.

**TOPIC AREA D Environmental Protection Systems**

After the restructuring of CITA RAG Europe and under new management, Topic Area D had three meetings in 2021.

The basis for the work in 2021 was a survey among the CITA members on the desired focal points in this subject area. The focus was on the two topics of nitrogen oxides (NOx) and, in particular, the number of particles. For both areas there are partial very large efforts and activities in different countries and by different institutions.

The Netherlands, Belgium and Germany have made the necessary preparations and have already decided to introduce particle number measurement. From 2024 at the latest, this measurement will replace the opacimeter measurement on modern diesel vehicles. The introduction of this new measurement method is a necessary contribution to adapting the PTI to current vehicle technology.

Defects and manipulation of particle filter systems can thus be detected and repaired. Since road traffic makes the highest contribution to particle pollution in Europe, the introduction of regular monitoring is an enormously important contribution to health and environmental protection.

Due to the conflict of objectives between particles and NOx in a combustion engine, it makes sense to monitor these emissions in parallel in the future. However, due to the load dependency of NOx, testing under PTI conditions is much more difficult and a major challenge.

The two task forces “Emissions” and “NOx” linked to the Topic Area make a major contribution here. The experts in these groups bundle the activities and projects, sometimes carry out their own investigations and make suggestions and recommendations. Further investigations will be necessary.

In particular, to be able to detect manipulations. Here, access to on-board information can be very helpful and supportive.

This will keep us busy in 2022.
The CITA General Questionnaire 2020/21 is a survey covering the most relevant topics for Periodic Technical Inspection. Once collected and consolidated, these data provide an overview of the PTI system in the participating countries. The available data are presented in the form of a country card containing the information received for each country.

CITA General Questionnaire in figures:
- 63 questions covering a wide range of relevant topics for PTI
- 57 contacts representing CITA members have received the questionnaire
- 6 months for content preparation & validation
- 12 months for collecting the answers

A significant amount of data was required from each respondent, which meant an important effort to answer all the 63 questions.

Therefore, without the commitment of CITA members, who participated in the survey, this would not have been possible.

The survey is structured in 3 sections:

1. Identification (Questions 1-2) referring to respondent and company identification. This data will be anonymized due to data protection requirements.

2. General data (questions 3-15) the questions in this section refer to the national legislation and regulations, to the company’s profile and its field of activity.

3. Operational and quality (questions 16-63) being the most comprehensive section, it refers to several aspects including: quantitative data (number of inspection lines in the country, number of employees, number of vehicles inspected, etc.), qualitative data (rejection rate, reasons for rejections), operational (procedures, productivity, equipment), data management, quality, training, financial and others.

The files are available on the CITA website / member area.

NB for Members: If you want your country included or modify existing information, please get in contact with CITA secretariat (secretaria@citainsp.org).

Regulation for the Batteries of Electric Vehicles

In this position paper “PROPOSAL REGARDING THE REGULATION FOR THE BATTERIES OF ELECTRIC VEHICLES”, CITA recommends the essential aspects for the development of the regulatory framework for electric vehicle batteries, deeming it necessary to act as quickly as possible.

Over the years, batteries have been implemented into vehicles with very little regulation. This has led to issues in the roadworthiness inspections of electric and hybrid vehicles.

Binding requirements are necessary to allow the roadworthiness inspection of these batteries. In this sense, particularly the inclusion of EV batteries in Annex V of Regulation COM (2020) 798 final 2020/0353/COD, the obligation to provide the necessary data for inspection and strict third-party assessment and verification of compliance is crucial.

This requires a reliable, transparent, and standardized SoH or access to battery data and conditions.

The file is available for download on the CITA website / publications / position papers.
From 1 July 2022, all Belgian technical control centres will be equipped with devices to detect a defective or missing particulate filter on diesel vehicles.

Thus, after the Netherlands, Belgium will also introduce a systematic check of the performance of the particulate filter on diesel vehicles, which undergo an annual inspection.

Until now, the technical control centers that used opacimeters did not have the equipment to detect the absence or malfunction of the particulate filter.

But, by 1 July 2022, the technical control centers will be equipped with a particulate counter device to which diesel vehicles (cars and light commercial and light transport vehicles) will be subject.

This makes Belgium a pioneer in Europe in the fight against particulate filter fraud.

The new coordinated Belgian approach will avoid the “shopping for technical control”, since each driver will contact the control center of his choice.

In a first phase, all vehicles and vans fitted with a diesel engine of the Euro 5b standard and more recent (which must therefore be fitted with a filter) will be checked.

Ultimately, they would like to study the extension of this measure to trucks, buses and gasoline vehicles.
This project, funded by the United Nations Road Safety Fund (UNRSP) is led by the UN Environment Programme (UNEP) and UN Economic Commission for Europe (UNECE) and implemented together with key partners such as the Federation Internationale de l’Automobile (FIA) and CITA.

It provides a platform for major exporters, African importing countries and regional bodies to engage on the minimum standards required.

These regulations will have tremendous benefits with regards to road safety by reducing the number of deaths and injuries. A minimum set of operational safety features can lead to a 30% reduction in mortality and morbidity.

Aside from reducing fatalities, improved air quality, climate change mitigation, as well as economic opportunities for the continent will have significant health benefits.

Additionally, the project will serve as a model that can be replicated in other regions facing similar challenges by addressing key gaps in their national road safety systems.

To date, statistics show that more than 90% of road crashes take place in developing countries, with Africa having the highest road traffic fatalities, at an alarming 246,000 deaths per year.

As the African vehicle fleet is set to grow four to five times by 2050, the impacts on road safety are likely to rise exponentially.

It is estimated that about 80-90% of this growth will come from the import of used vehicles. A significant share of these imported used vehicles do not meet safety standards.

In the frame of the “Safer and Cleaners Used Vehicles for Africa” project, the United Nations Environment Programme (UNEP) released the first two CITA reports.

The two documents, both signed by Benny ÖRNERFORS – Beor Coaching and Consulting AB and Eduard FERNANDEZ – CITA Executive Director, are:

**USED VEHICLES INFORMATION SHARING SYSTEMS WITH DATA SUPPORT**

This report is an analysis of information sources, reference and benchmarks, and a proposal for an information-sharing system at the conceptual level.

A review of best practice and sources of information has been carried out with the main focus on light duty vehicles, category M1. Principles, in general, are applicable to other types and categories.

To improve the situation with a safer and more environmentally friendly vehicle fleet in African countries, requirements on the technical status of imported vehicles in the respective countries are essential.

As support of these import regulations, it is also important to set up exporting countries’ rules.

**USED VEHICLES INSPECTION AND MONITORING FRAMEWORK AND IMPLEMENTATION COMPLIANCE SYSTEM**

This report comprises the findings of the UN Road Safety Project “Safer and Cleaners Used Vehicles for Africa” project and establish a used vehicles inspection and monitoring framework and implementation compliance systems.

In addition, the key results and recommendations of “Establish used vehicles information sharing system with data support”, of the same project, are also given in this report.

In order to improve the situation with a safer and more environmentally friendly vehicle fleet in African countries, it is essential to impose requirements on the technical status of imported vehicles in the respective countries.

In support of these import rules, it is also essential to set up exporting countries’ laws.

Both reports are available on the CITA website.
The CITA project "Amélioration du système d’inspection technique des véhicules au Togo" went ahead as planned despite the pandemic crisis and is to be completed by the end of 2021.

The objective of the project is to provide the authorities responsible for transport policies with the necessary tools, knowledge, and best practices to improve PTI and vehicle approval in the Sub-Saharan African country.

The DTRF (Direction des Transports Routiers et Ferroviaires) is continuing the reform of the vehicles periodic technical inspection and approval system in Togo.

Training dedicated to the supervisory authority continue to be delivered as part of the project.

These sessions aim at laying the groundwork for the transportation authorities to contribute to a staggered implementation of the project’s deliverable.

Indeed, the implementation is set to continue after the end of the ongoing CITA project, and the local authorities will play an important role in ensuring continuity to the progresses witnessed up to this point.

PARTNERSHIP AGREEMENT

CITA has signed a partnership agreement with the Association of European Vehicle and Driver Registration Authorities (EReg) during the EReg general assembly.

The two associations agree to benefit their respective members in the pursuit of common goals and objectives through the exchange of information and programs, consultation and membership cooperation.

Mr. Gerhard Müller, the CITA President, and Mr. Servi Beckers, the EReg Chairman, have both expressed their enthusiasm in working together in the pursuit of common goals and objectives, to keep the roads safe and to contribute to sustainable mobility.

A Long-Term Goal to Develop Guiding Principles to Ensure Vehicles Remain Safe on the Road.

The International Alliance for Mobility Testing and Standardization (IAMTS) and CITA have announced a partnership to develop recommended best practices to ensure that automated driving systems remain safe and effective on the road for the life of the vehicle.

These practices should close “gaps in standards and regulations for successful global market access and identify technical needs for safe/secure performance in the market”

The partnership was launched at the IAA Mobility trade event in Munich on 9 September. The meeting was chaired by the Chairman of the IAMTS Executive Committee, Alexander Kraus, and the President of CITA, Gerhard Müller. They pointed out that confirming the roadworthiness of vehicles is a common goal worldwide, but that technological advances in mobility will add new challenges to “whole-life compliance activities”.

The work should take into account existing legislation, standards and guidelines and recommend solutions to fill regulatory or standardisation gaps to ensure the “safe and secure lifetime performance” of advanced mobility systems.
In keeping with tradition, CITA organises a meeting every six months in cooperation with the Presidency-in-Office of the EU Council to discuss current road safety and environmental protection issues.

**PORTUGUESE PRESIDENCY**

On 19 May 2021, CITA, together with ANCIA (Associação Nacional de Centros de Inspeção Automóvel), and in collaboration with the Portuguese Presidency of the Council of the EU, hosted a web-conference entitled “Inspection of Motorcycles”.

More than 200 participants from all over the world were able to participate at the event and listen the interventions from Mr. Paulo Areal, President ANCIA - Mr. Eduardo Feio, President of the Institution for Mobility and Transport who showed the results and the challenges of the technical inspection of vehicles in Portugal, and Prof. Wolfgang Schulz from the Zeppelin University of Friedrichshafen who presented a cost and benefit analysis on the inspection of mopeds in Spain.

According to the data published by ACEM (European Association of Motorcycle Manufacturers), the market in the EU grew by eight percent in 2019 compared to the previous year, and even by 4% in 2020 - despite the corona restrictions.

In total, over 1.1 million new motorcycles have been registered, which shows an impressive attractiveness of two wheelers, even though the use of motorcycles is the most dangerous mode of road travel in Europe.

In fact, in 2019, almost 6000 motorized two-wheeler users died in the EU, and the risk of death for motorcyclists is 20 times higher than for car drivers.

"To achieve utmost possible safety results of motorcycles, the roadworthiness instruments must guarantee safe and compliant vehicles during the whole life cycle. Impartial vehicle inspection plays a key role to improve road safety of two-wheelers and helps to reach the EU reduction targets of 50% for fatalities and injuries until 2030."

In addition, the periodic emission test of motorcycles supports to improve air quality especially in urban areas. Therefore, I am convinced that PTI must become mandatory for the EU" stated G. MÜLLER, CITA President.

Last 21 October, CITA organised its first conference on hybrid vehicles in cooperation with the Slovenian Presidency to address the safety issues of electric vehicles, including the importance of vehicle inspection.

The new GREEN DEAL, which sets clear targets for road traffic, namely a 55% reduction in car emissions by 2030 and zero emissions for new cars by 2035, is likely to lead to considerable growth in electric vehicles in Europe. In this sense, the European Commission estimates that the electric vehicle fleet should reach 30 million vehicles by 2030.

While on the one hand, zero-emission vehicles can help meet the challenges of climate change and are very positive for road transport, on the other hand, many new risks are emerging.

During the conference, we focused our discussion on reducing the risks associated with these vehicles, and the role of vehicle inspection in ensuring whole life vehicle compliance and road safety. We had the opportunity to share our experiences with colleagues and experts and to discuss different ways to improve road safety for electric vehicles.

The main themes of the conference covered aspects of risk analysis, the cost-benefit perspective, the need for vehicle type approval standards to take into account the fact that vehicles need to be inspected during their lifetime, and the impact of battery fitness on the price of used vehicles.

"I am convinced that we have to maintain the high level of safety and environmental standards also for electric vehicles during the whole life cycle, as we do for any other vehicle."

"CITA will keep on pushing for modern, meaningful and impartial vehicle inspections, regardless of the type of vehicle engine", said CITA President Gerhard Müller.

On 19 May 2021, CITA, together with ANCIA (Associação Nacional de Centros de Inspeção Automóvel), and in collaboration with the Portuguese Presidency of the Council of the EU, hosted a web-conference entitled “Inspection of Motorcycles”.

We were pleased to hear from Ms Monika Pintar Mesarić, General Director, directorate of Land Transport from the Ministry of Infrastructure - Mr Philipp Troppmann, Policy & Legislative Officer with the European Commission, Directorate General for Mobility and Transport (DG MOVE) - Mr Frank Zajec, AMZS d.d. - Mr Al Markočič, METREL d.d. - Mr Arne Willerslev-Legard, Chair of the CITA Task Force Electric Vehicles - Mr Enrique Taracido Vazquez, Public Policy & External Affairs Applus+ Automotive - and Mr Ralph Schröder, Manager International Business Affairs from FSD, Germany.

"I am convinced that we have to maintain the high level of safety and environmental standards also for electric vehicles during the whole life cycle, as we do for any other vehicle."
The event focused on how to facilitate the safe adoption and consistent deployment of Personal Light Electric Vehicles (PLEVs) within road traffic. PLEVs are currently regulated in the EU as a personal consumer product and not as a road-going vehicle.

As such, their design and build, as well as their specific characteristics, are not assessed or regulated according to road-going standards. During the webinar, TRL presented a research conducted on behalf of the EU Commission on PLEVs; DVSA an E-scooter Inspections to MSVA Standards; TÜV SÜD gave an overview on the current situation in Germany. Finally VOI showed the point of view of an e-scooter operator.

In order to reduce the occurrence of traffic collisions due to driver negligence, the government has legislated on the mandatory installation of advanced driver assistance systems for large vans and freight vehicles, and is expanding the application to other vehicle types.

Depending on the vehicle’s operating environment or management conditions, problems that threaten driving safety may occur due to failures and malfunctions, such as ageing and miscalibration of the advanced driver assistance system.

A regular inspection plan is required for the safety management of a newly applied vehicle system, and research is being conducted as a national project. Unlike the test method using a diagnostic device that is being performed in the current testing environment, a test technology that can test the normal operation of the system will be created through the realization of a virtual driving environment that can satisfy the activation and operating conditions of the actual advanced driver assistance system.

In accordance with the conditions of the advanced driver assistance system installed in the vehicle, a simulation configuration that can be recognized by radars and camera sensors will be generated, and testing methods and technologies where vehicle behavior is measured during actual operation to confirm compliance.

This webinar was jointly held by CITA and Anche Technologies. Anche presented the legislation on vehicle emission control and an array of measures taken by China.

The focus is on the formulation and implementation of new and in-use vehicle emission regulations in China. Vehicle emission tests for type approval, end-of-life testing and in-use vehicles are considered with the aim of whole-life vehicle compliance.

Anche introduces the test methods, test requirements and characteristics of emission tests at various stages and the practice in China. ASM method, transient cycle method and lug down method are most widely used for in-use vehicle test in China.

By the end of 2019, China has deployed 9,768 test lanes of ASM method, 9,359 test lanes of simplified transient cycle method and 14,835 test lanes of lug down method for emission tests and the inspection volume has reached 210 million. In addition, China also has the most widely applied remote sensing monitoring systems for motor vehicles.

Up to 2019, China has completed the construction of 2,671 sets of remote sensing monitoring systems, with 960 sets under construction. Through remote sensing monitoring system (including black smoke capture) and road inspection, more than 371,31 million vehicles have been tested and 11.38 million non-standard vehicles have been identified.

Thanks to the measures mentioned, China has benefited greatly from its emission reduction policies. Anche has also accumulated rich practical experience and is willing to carry out intensive exchanges and cooperation with stakeholders in other countries, so as to realize the vision of improving road safety and environmental protection.

All presentations are available on the CITA website.
More than 80 participants logged on to the web event organised by CITA in collaboration with Applus+ Iteuve last Thursday, 9 September.

The objective of the webinar was to show the experience of purchasing a commercially available AdBlue tampering device, installing it in a Euro VI truck and verifying the results from both an OBD and emissions monitoring perspective.

The research was conducted by Applus Idiada in the vicinity of its headquarters near Barcelona, Spain.

The test checked the functioning of the truck’s OBD and compared the performances of the vehicle with and without the tampering device installed.

The OBD system monitored the emissions systems in accordance with homologation standards, while the device proved effective in eliminating all AdBlue consumption without triggering OBD alerts, fault codes or MIL lighting. NOx emissions have increased by almost 400%.

The experts emphasised the simplicity of the system, which only requires a constant voltage signal to be fed into the ECU to simulate the operation of the AdBlue injection pump. It was not even necessary to tamper the NOx sensor.

Remarkably, the cost of the tampering device could be recovered in about a week of international use of the track through AdBlue savings.

This test shows the urgent need for better design of certification standards, making falsification more difficult and coordination with inspection standards to facilitate its detection.

This webinar presented the findings from the first month of vehicle emissions data collected using the parSYNC® iPEMS system as part of the 3DATX Sponsored PTI Trial. The data were collected by OPUS at its site in Borås, Sweden. The current PTI test protocols and emissions checks, CO for petrol and smoke opacity for diesel, do not have the capability to measure particulate number (PN) and oxides of nitrogen (NOx) emissions from current technology vehicles. As a consequence, the current PTI program is unable to identify PN and NOx high-emitters.

It is therefore important to update the PTI test, and the use of integrated PEMS (iPEMS) solutions in a new PTI procedure (NPTI) to achieve this is an appealing solution. At the Borås site, an engine idle PN test and two different NOx tests (one dynamic acceleration test and one stationary high idle test) are being performed on a growing number of vehicles.

Initial findings are promising, with high repeatability for individual vehicles and a wide range of results between vehicles, indicating good sensitivity of the equipment and protocol to vehicle emission levels. As the number of vehicles tested increases, 3DATX will further investigate into the effectiveness of the protocol and be able to assess thresholds for pass/fail criteria.

In the second PTI test webinar sponsored by 3DATX and supported by CITA, the vehicle emissions database was expanded to over 160 vehicles, a four-fold increase since the first webinar in February 2021. During the event, an updated test protocol was presented, as well as preliminary NOx thresholds for the stationary and dynamic tests, and a comparison of CO and NP between the improved test and the standard PTI test was made.

In detail, this update included:

1. A proposed enhanced PTI test protocol for gaseous and particulate emissions from gasoline and diesel fueled vehicles. In this enhanced protocol, the emission tests are performed in 70% less time than the protocol presented in the first webinar.

2. A preliminary threshold for nitrogen oxides (NOx as NO + NO2) emissions to identify malfunctioning or tampered emissions aftertreatment devices. Three types of emissions thresholds are discussed - normal idle, stationary high RPM, and short driving acceleration - and based on which tests are permitted in a country, one or more metric could be used.

3. A comparison of carbon monoxide (CO) and particle number (PN) results from the enhanced PTI protocol with the current PTI based CO and smoke opacity data, respectively.

LKA SYSTEMS ENSURING WHOLE-LIFE COMPLIANCE

During this event, the outcome of the work undertaken by TÜV Rheinland with the support of CITA, and the TRL’s involvement in the Lane Keeping Assistance System (LKA) were presented.

The results of this research, presented by Dr. M. Schubert from TÜV Rheinland, could be used to develop approaches that enable the whole vehicle life functionality of safety systems and to determine what level of action is justified to address ADAS systems during PTI.

All presentations are available on the CITA website.
The Global Plan has been developed by the World Health Organization and the United Nations Regional Commissions, in cooperation with the United Nations Road Safety Collaboration partners and other stakeholders, as a guidance document to support the implementation of the Decade of Action for Road Safety 2021-2030 and its objectives.

UN General Assembly Resolution 74/299 declared a Decade of Action for Road Safety 2021-2030, with the target to reduce road traffic deaths & injuries by at least 50% during that period.

**SAFE SYSTEM APPROACH**

**WHAT TO DO?**

- National transport & land-use planning
- Safe road infrastructure
- Safe public transport
- Safe road use
- Post-crash response

**HOW TO DO IT?**

- Large frameworks
- Safety management
- Road development

**WHO TO DO IT?**

- Government
- Private sector
- Road safety
- Industry
- NGOs

**COMMISSION IMPLEMENTING REGULATION (EU) 2021/392**

This document lays down detailed rules on the procedures for the monitoring and reporting by Member States and manufacturers of CO2 emissions data from new passenger cars and light commercial vehicles, as well as data on the actual CO2 emissions and fuel or energy consumption of these vehicles in real-life conditions.

In order to establish the procedure for verifying CO2 emissions of in-service vehicles in accordance with Article 13 of Regulation (EU) 2019/631, it also provides for the reporting by means of the Member States’ vehicle inspection network.

These provisions highlight the role of vehicle inspection in contributing to Green House Gases policies and show the benefits of standardization of vehicle electronics and communications to streamline compliance processes.

**COMMISSION DELEGATED DIRECTIVE (EU) 2021/1717**


Member States shall adopt and publish, by 27 September 2022 at the latest, the laws, regulations, and administrative measures necessary to comply with this Directive.

The plan outlines what is needed to achieve the target of a 50% reduction in road traffic deaths and injuries over this period and calls on governments and partners to implement an integrated approach to safety.

The Safe System approach – a core feature of the Decade of Action – recognizes that road transport is a complex system and places safety at its core. It also recognizes that humans, vehicles, and the road infrastructure must interact in a way that ensures a high level of safety.

The plan’s recommendations draw on proven and effective interventions and best practice in road trauma prevention and provide a comprehensive overview of actions to implement and strengthen Safe Systems.

These recommendations are not prescriptive but can be used to develop national road safety action plans tailored to local contexts, available resources and capacities.

As part of the actions to ensure vehicle safety, it is recommended that high quality, harmonized safety standards are maintained throughout the vehicle life cycle through independent assessment programs.

systems for cars. The shortcomings and new safety needs to be updated due to periodic vehicle inspections (fraud).

These current EU rules on measures to combat mileage (such as ABS or air-bags, and electronic safety components) testing; mandatory controls of equipment to be used during technical roadside inspections of commercial vehicles and vehicle registration documents. To increase the safety and to reduce the deaths and serious injuries on Europe’s roads, the package introduced since 2018, is composed of three directives, focused on periodic roadworthiness tests, technical roadside inspections of commercial vehicles and vehicle registration documents.

To increase the safety and to reduce the deaths and serious injuries on Europe’s roads, the package introduced minimum frequency for Periodic Technical Inspections of vehicles and a minimum list of items to be tested as well as equipment to be used during testing; mandatory controls of electronic safety components (such as ABS or air-bags, and measures to combat mileage fraud).

These current EU rules on periodic vehicle inspections need to be updated due to the emerging implementation shortcomings and new safety systems for cars. This resolution on the road safety aspects of the Roadworthiness Package acknowledges that the implementation of the EU rules has helped to improve the quality of the periodic technical inspections, thus contributing to road safety.

However, MEPs call on the EU countries to make the exchange of information on roadworthiness testing and odometer readings easier, stressing the development of a new Vehicle Information Platform could expedite information sharing.

In addition, EU citizens should be better protected from fraud and receive full information on the history of their cars, therefore Transport MEPs want information on accidents and the frequency of significant malfunctions to be also shared amongst the EU countries. The decline in the number of roadside inspections of commercial vehicles over the past six years and the cut in national budgets for road safety enforcement is a very worrying trend, the text says. It calls on the EU countries to step up their efforts to reach 5% minimum inspection target (share of registered vehicles on their territory) as committed back in 2018.

The text also advocates conducting the roadside inspections for two- or three-wheel vehicles as motorcyclists are considered vulnerable road users, and the fatality among them decreases the slowest among all vehicles users in the EU.

New cars will have to be equipped with the new advanced safety and driver assistance systems from 2022. The report calls on the Commission to include them, as well as eCall, a lifesaving emergency call device, within the scope of future periodic vehicle checks. MEPs also ask the Commission to consider within the upcoming revision of current rules to include new modes of transport – e-scooters, one-wheels or hoverboards.

This document is the result of a long cooperation between EA and CITA, and their working group which included experts in the field of motor vehicle inspection and accreditation bodies. The aim of this paper is to provide guidance with a view to harmonizing the application of conformity assessment - requirements for the operation of various types of bodies performing inspection (ISO/IEC 17020:2012) in the field of vehicle inspection. The ISO 17020, entitled “Conformity assessment - Requirements for the operation of various types of bodies performing inspection”, is the internationally recognized standard for the competence of inspection bodies.

This paper is intended for use by accreditation bodies assessing vehicle inspection bodies for accreditation as well as by vehicle inspection bodies seeking to manage their operations to meet the requirements for accreditation.

It avoids addressing information that is specifically addressed in ILAC P15 and is not intended to subtract from or add to the requirements of the standard.

The document highlights the importance of the best practices developed and published in the CITA Recommendations, which provide guidance on the methods and principles important for vehicle inspection, and how its experience should be taken into account by all inspection bodies.

The Commission Delegated Regulation (EU) 2021/1958 of 23 June 2021 supplementing Regulation (EU) 2019/2144 of the European Parliament and of the Council by laying down detailed rules concerning the specific test procedures and technical requirements for the type-approval of motor vehicles with regard to their intelligent speed assistance systems and for the type-approval of those systems as separate technical units and amending Annex II to that Regulation was published yesterday (17 Nov. 2021) in the Official Journal of the EU.
Dear CITA Member,

We need to stay optimistic after another challenging year, where the hopes of overcoming the pandemic are yet to be accomplished. And I firmly believe that we have objective reasons to look at 2022 confidently.

From an internal point of view, this year we will fully consolidate our new “Route 2030” strategy, with the new categories of membership and our new arrangements at full steam.

Our new Topic Areas and Taskforces are starting to deliver first results and becoming the platform for our members to spread their views and knowledge.

2022 will be the year of the consolidation of the Decade of Action for Road Safety 2021 – 2030, proclaimed by the United Nations’ General Assembly in September last year.

As much necessary as challenging, the target is to reduce the road transport carnage by 50% at the end of the decade.

Our endeavours to guarantee compliant vehicles are instrumental to achieving that goal. We are the actors to ensure good new vehicles, good 2nd hand vehicles and good in-use vehicles.

Our traditional scope of activity, aiming for safer and cleaner vehicles, is being enlarged. Greenhouse effect gases will become more present in our activities by monitoring actual CO2 emissions, defining the checks of the state of health of batteries and ensuring that benefits accrued from new energies will be kept, in a reasonable way, during the entire life of vehicles.

The European scenario is thrilling too. The Green Deal and the Sustainable and Smart Mobility Strategy are shaping the future of European’s road transport.

More precisely, the evolution of the Roadworthiness Package, the Euro 7/VII emissions standards and the development of the General Safety Regulation will impact our work in the following years.

We will persist in developing our activities in Africa, consolidating them in Central America, and expanding them to South America and Asia.

At the same time, we look forward to obtaining the most of our strategic alliances signed with crucial stakeholders like ErReg and IAMTS.

I hope 2022 will be the year we can meet in person again to continue pushing to make roads safer and cleaner. Every day, everywhere, impartially and responsibly.

Eduard FERNANDEZ
CITA Executive Director
WE MAKE ROADS SAFER AND CLEANER
Every day. Everywhere. Impartially. Responsibly.