EGEA

EUROPEAN GARAGE EQUIPMENT ASSOCIATION

EGEA General Assembly

28th May 2014, Bologna

"Providing more influence, better information and stronger support to the Garage and Test Equipment Industry!"

MARKET STUDY FOR THE GARAGE EQUIPMENT

-Wolk & Leo Impact Consulting-

FINANCIAL SITUATION DATED END 2013 &BUDGET AND MEMBERSHIP FEES 2014

UPDATE ON GENERAL EGEA ACTIVITIES

NEW PTI ROADWORTHINESS DIRECTIVE 2014/45/EU!

New Directive 2014/45/EU: key elements

- **Legal form: Directive**
  - **to allow Member States to better adapt to their needs. The Member States are allowed to set higher test standards than those required by this new Directive**

- **This new Directive defines common minimum requirements**

- **Scope**
  - **Extension to 'heavy' L-category vehicles , T5-category vehicles and trailers**
  - **With opt out from motorcycle testing if road safety enhancement can be reached by other measures**

- **Possibility for additional high mileage vehicles testing (>160.000 km)**

New Directive 2014/45/EU: key elements

- **Exemptions for some vehicles**
  - Historic vehicles, vehicles covered by diplomatic immunity, vehicles used by armed forces, etc…
- **Provides for testing of electronic safety components**
  - Access to technical information for testing
  - Use of electronic vehicle interface for testing
- **Emissions:**
  - tailpipe testing up to Euro 5/V *or OBD when equivalence proved by Member States!!!*
  - OBD or tailpipe testing as of Euro 6/VI
- **Harmonised assessment of defects**

New Directive 2014/45/EU: key elements

- Annexes
  - Common minimum standards for test equipment
  - Common minimum standards for skills and training of inspectors
  - Common minimum standards for supervision of non –governmental test centres
  - Provides for detection and punishment of mileage fraud
  - Provides for mutual recognition of inspection certificates in cases of re-registration

New Directive 2014/45/EU: key elements

- **Next steps for the European Commission**
  - The Commission to examine feasibility, costs and benefits of establishment of an electronic vehicle information platform
  - Delegated acts for defined elements (vehicle category designation, test methods, …)
  - Implementing act on technical information from manufacturers for testing.

- **European Commission to report:**
  - 6 years after publication on level of harmonisation, scope, frequency, mutual recognition (re-registration), electronic vehicle information platform and need for updating the annexes
  - 5 years after publication on testing of L and O2 category vehicles

New Directive 2014/45/EU: key elements

- **Directive entered into force on May 20, 2014**
- **Transposition into National legislation**
  - **Transposition: 36 months after the entry into force**
- **Application**
  - **Application: 48 months after the entry into force**
  - **Different application dates for:**
    - Motorcycles (1.1.2022)
    - Equipment and supervision (5 years after the application, i.e. 9 years after the entry into force)
    - Risk-rating (5 years after the entry into force)

ROADWORTHINESS COMMITTEE MEETING ON MAY 20TH: BRIEF REPORT

Implementing acts & Work programme

- **20 May 2018:** implementing act on
  - Set of technical information necessary for the roadworthiness testing
  - Detailed rules for data format and access procedures
- **30 April 2019:** report on inclusion on light trailers and powered two-wheelers into scope of PTI
- **30 April 2020:** report on level of harmonisation, scope, frequency of testing, mutual recognition and VIP
- **30 April 2020:** report on inclusion of light vans and light trailers in scope of technical roadside inspection
- **20 May 2022:** report on harmonisation of risk-rating systems
- **Xx xx 20xx:** implementing acts on detailed rules regarding format for communication of data on roadside checks electronically between Member States and the Commission

Implementing acts on PTI technical info: timing

- **Now**: Start working now!
- **Autumn 2015**: Approval by the Roadworthiness Committee (Member States)
- **Early 2016**: Adoption and publication
- **20 May 2017**: Transposition
- **20 May 2018**: Application

Implementing acts on PTI technical info: EC WG

- **Commission Working Group on technical information to draft implementing acts on:**
  - **By October 2014: Set of technical information necessary for the roadworthiness testing**
  - **By June 2015: Detailed rules for data format and access procedures**

- **Intensive work program with monthly meetings**
- **Commission called for experts from Member States and stakeholders to join this WG**
- **First meeting of the WG on PTI technical info will be organised end of June/beginning of July 2014**

➡ **EGEA to call for experts within EGEA and WG2 Members!**

IMPLICATIONS FOR THE IMPLEMENTING MEASURES

Implementing acts: Emissions

- **Launch of new Sustainable Emission Testing (SET) by CITA in close collaboration with the Commission, because:**
  - **Follow-up project from first TEDDIE project for N1 and M1 vehicles**
  - **No significant improvement regarding air pollution especially in urban areas**
  - **There are findings that deterioration, faults and manipulation of emission control systems can only partially be detected with the current emission test procedures**
  - **Current thresholds and measurement procedures of emission tests are put into question because suitability for modern vehicles is limited and therefore the fault ratio is decreasingly continuously**
  - **OBD only not sufficient**

Implementing acts: Emissions

- To guarantee independent emission tests also in future, SET has to deal with the following topics:
  - Further development of the test procedures including meaningful measurement categories und updated thresholds.
  - Determination of suitable and cost-efficient devices.
  - Confirmation of the results of laboratory testing (TEDDIE) by field tests
  - Establishment of a transparent cost/benefit analysis
- A research in the context of NOx will not be part of this study
- EGEA Members participating in this study:
  - Maha, AVL, Capelec and Bosch

Implementing acts: VIP

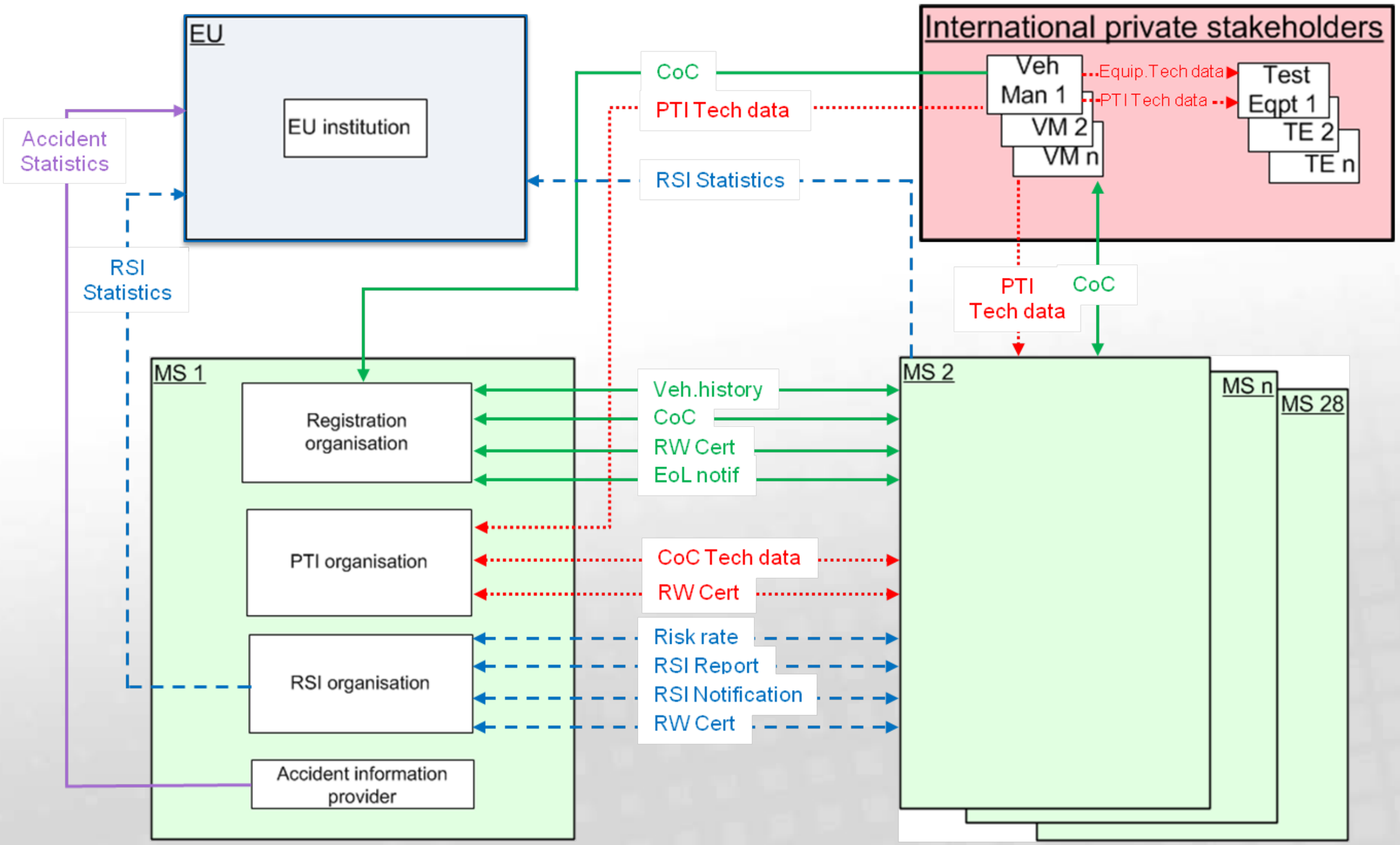
- Interim presentation of the feasibility study on the creation of the vehicle information platform by UNISYS at the last Roadworthiness Committee meeting

- UNISYS clearly explained that there is NO single technical solution and recommended two scenarios:
  - To create something completely new or improve existing systems already in place such as EUCARIS
  - For some data flow exchange, it could be done only between Member States and no need to have the VIP for these data flow exchange

Implementing acts: VIP – vehicle data

Vehicle data	**Registration**	**Certificate of Conformity (CoC)**
		End-of-Life
		Vehicle history
	Periodical Technical Inspection (PTI)	**CoC technical data**
		PTI technical data
		Equipment technical data
		Roadworthiness certificate
	Roadside Inspection (RSI)	**Risk rate**
		RSI report
		RSI notification
		RSI statistics
	Accidents	**Accident history**
		Accident statistics

Implementing acts: VIP – business flow



ACTIONS ON NATIONAL LEVEL BY EGEA MEMBERS

Implementation of Directive 2014/45/EU at national level

- **Key issues for action:**
  - **Emissions testing: OBD vs Tailpipe testing**
  - **Electronic certificate**
  - **Electronic interface/link to other test equipment (brake tester, headlamp tester, etc…)**
  - **Headlamp testing**

- **Tools to accompany the implementation – how to?:**
  - **Creation of EGEA implementation guide**
  - **Organisation of EGEA experts WGs**
  - **Each individual EGEA national association must monitor and accompany the national developments**

- **How to proceed with EU Member States with no EGEA members?**

EC STUDY ON A TEST FOR ELECTRONIC SAFETY COMPONENTS AT ROADWORTHINESS TESTS (ECSS)

ECSS Tender: updated report

- **State of affairs:**
  - WP4 now completed, with 1214 vehicles tested
  - Approximately 5% additional system failures were identified
  - Detailed analysis of all the test results is now being made
  - Detailed cost/benefit analysis is also being made with 'best and 'worst' case scenarios for software costs

- **Still some difficulties:**
  - Difficulties to demonstrate that a real efficiency testing is needed for ECSS testing
  - Difficulties to put aside completely the 'brake reference value' testing
  - Difficulties to define and access the technical info required for ECSS testing

ECSS Tender: updated report

- **Timescale:**
  - Very frequent telco's being conducted to finalise the report by end of May.
  - Final report to be presented to the European Commission at a full project participant's meeting on Thursday 03rd July.

- **Next steps and action:**
  - Final report to be finalised by end of May 2014
  - Some EGEA WG2 members have been invited to review it carefully as last opportunity for any comments
  - More EGEA members are very welcome to review it before end of May!

UPDATE OF EGEA WGS ACTIVITIES

EGEA Working Groups: Round-up

- **WG1** Vehicle Lifting Equipment: no update
- **WG2** Engine Diagnostics/Emissions/OBD (Harald and Sylvia)
- **WG26** PTI Tests for Electronic Safety Components – see PTI lobbying
- **WG4** Wheel/Tyre Service Equipment: no update
- **WG6** Braking/Suspension Testers (Frank)
- **WG7** Market Information/Exhibition (Wolk & Leo Impact)
- **WG8** Extraction and Filter Systems: no update
- **WG9** Mobile Air-Conditioning (MAC) Systems (Alessandro)
- **WG10** European Network Standard for PTI Equipment (Marco Le Brun)

WG2 ACTIVITY REPORT

RICARDO STUDY ON THE FUNCTIONING OF EURO 5

RICARDO Study on the functioning of Euro 5

- Directorate General for Industry and Enterprise (ENTR)
- Goal: to estimate the actual and potential effect of Euro 5 provisions in terms of contribution to:
  - Competition
  - Operation of the internal market
  - Derived environmental and safety benefits

RICARDO Study : methodology of the study

- Questionnaire to market operators on their experience with access to RMI and diagnostic information
- Field studies
- This methodology is structured in individual questionnaires targeting:
  - Repairers (available in 6 languages)
  - Parts suppliers/Spare parts distributors
  - Equipment manufacturers
  - Data publishers
- EGEA collaborated with Ricardo throughout the drafting phase of the questionnaires, dedicated to repairers and tool manufacturers

RICARDO Study : next steps

- <u>Deadline for feedback is May 31st</u>, therefore please circulate the questionnaires (if not yet done) and ensure that your members have replied to it!

- Final report expected to be finalised by 08. 2014

- Based on the final report the European Commission will publish a Communication to the EP and Council 10/11.2014

ECALL LEGISLATION: LATEST UPDATE ON STATE OF AFFAIRS IN BRUSSELS

A bit of background on eCall legislation…

- The Commission is planning to introduce the automatic eCall (emergency call) system into all new types of vehicles as from 2015.
- A three-fold legislative package has been proposed, to tackle all aspects of the eCall service:

In-vehicle part	**Proposal for a Regulation under the vehicle type-approval legislation**
Infrastructure part	Upgrading the PSAPs infrastructure in the framework of the Directive 2010/40/EU on the deployment of ITS in Europe
Telecom part	Recommendations to the MS targeting MNOs (mobile network operators) on the transmission of eCall

What is the threat?

- eCall introduces an in-vehicle telematics platform which **often shares the same basic hardware and software components** that can also be used for other telematics system functions, such as accessing vehicle RMI data.

- Currently, **only vehicle manufacturers** can access the full set of data when communicating 'on-line' with the vehicle.

- To remain competitive in the market, independent service providers need to be able to access this new wireless telematics communication to the vehicle and its data in **the same timescale** as the vehicle manufacturers.

  The on-line access to the vehicle has become a crucial timing issue!

What has been agreed in Brussels so far?

- The European Parliament has adopted its official position on the eCall Regulation in February 2014.

- The amendment adopted (Art.10a par.3) gives a **mandate** to the Commission to draft a legislative proposal on **"the technical requirements for an interoperable, standardised, secure and open-access platform"**, once the eCall legislation is adopted (= 2015 as forecast)

- This amendment will have to be discussed by the Commission, Council and Parliament in the trialogue, as from **September 2014**

How is EGEA affected?

- **In parallel to the discussions about obtaining a legal basis which will define in the futue the telematics access to the vehicle, the discussions (fight) about the future telematics technical solution has already started in different places:**
  - **VSG - Vehicle Station Gateway** (ISO Project)
  - **Euro VI Heavy Duty Vehicles legislation**, which includes 'remote diagnostic support' (595/2009 (EC) Article 3 (11))
  - **Intelligent Transport Systems** (ITS)

How is EGEA affected?

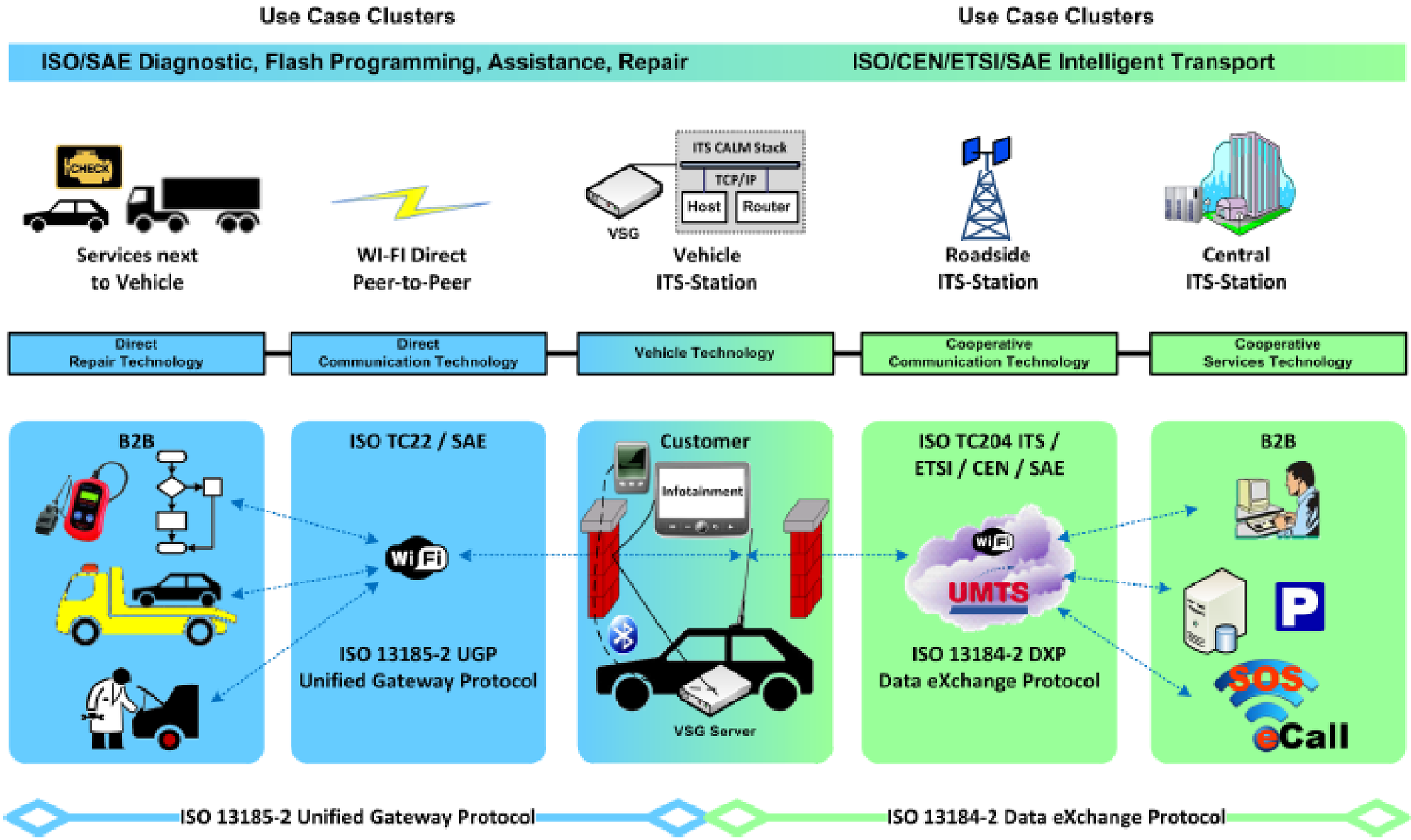
- **The challenges are:**
  - **Will *independent* communication with the vehicle be possible in the future?**
  - **Will all communication be routed via the VM server and can our business then be monitored and profiled by the VMs?**
  - **Will there just be a 'lower level access' to the vehicle using mobile devices and a reduced set of vehicle data?**
  - **Will the telematics platform be standardised to enable IOs to write and implement applications in the vehicle?**
  - **Will EGEA have the ability to both read and write data to and from the vehicle in a future telematics system?**

UPDATE ON 'VEHICLE STATION GATEWAY'

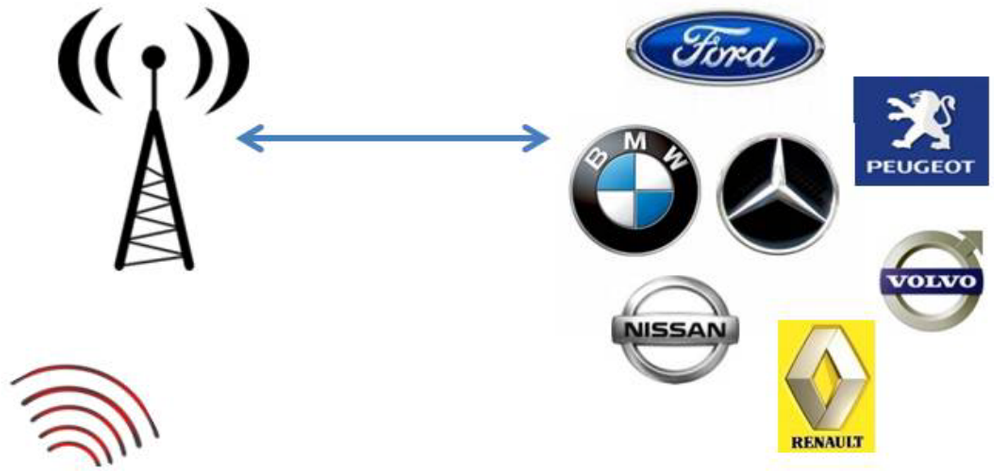
VSG: Background – a reminder….

- **Background:**
  - Initially established to protect the in-vehicle networks from 'unauthorised access' via internally or externally connected test equipment, especially through the 16 pin connector.
  - Intended to protect secure access to a vehicle's electronic systems using a protected in-vehicle interface which is only accessible remotely (UMTS, Wi-Fi, Bluetooth) or through a restricted on-board connection, but where only **pre-authenticated** communication would be permissible, based on **pre-defined use cases**.
  - ISO project (ISO 13815), but without any legislative mandate.

VSG: Schematic



Access to the vehicle data will be controlled



*examples

IOs' access could be restricted to pre-defined use cases and no plug-in devices will be possible

VMs could be able to access all vehicle data, both directly in the workshop, or through telematics

VSG: Threats for EGEA

- **"The VSG will de-couple the link between external/internal test equipment and in-vehicle communication."**
  - "Unauthorised" tools will not be able to communicate with the vehicle
  - The in-vehicle networks will no longer be visible externally, regardless of whether the connection is wired or wireless
  - The VSG concept introduces a communication firewall on all interfaces

- **Impacts on EGEA:**
  - Current OBD port could become data-limited (even just EOBD only).
  - Reverse engineering could be blocked.
  - Use Case cluster-specific VSG data configuration (i.e. only authentic-cated test equipment with appropriate configuration) would be allowed to be installed.

What did we do?

- EGEA joined forces with AFCAR and our US colleagues from ETI and AAIA

- Common EU-US independent aftermarket industry presentations at VSG meetings!

EU and US approach

- **Before a common position was agreed, we clearly had different approaches in the EU and in the USA on a possible solution for all aftermarket players.**

- **Key differences:**

1. **Configuration of the VSG to allow IO applications to be written and installed in the vehicle (AFCAR).**
2. **The use of nomadic devices to support IO applications and act as the interface between the driver, the vehicle and a remote service support. (AAIA)**
3. **The ability to access vehicle data at the same level as the VMs. (AFCAR)**
4. **Re-configurable SIM card to allow alternative destinations of data transmission to be selected by the driver. (AFCAR)**

Telematics - Agreed AFCAR & USA approach

Re-configurable transmitter/receiver

IO and VM application level

Standardised open vehicle interface (API)

e.g. ISO 14229 UDS

ECU 1

ECU 2

ECU 3

ECU 4

ECU 5

ECU 6

MOST

HS-CAN

Free customer choice

Aftermarket Services Server

AM Service Provider 1

AM Service Provider 2

AM Service Provider n

Remote Diagnostics

Diagnostic tool

Emission tool

... tool

All VM Customer Services

VM customer choice

Vehicle Manufacturer Server

Remote Diagnostics

Telematics functions

... tool

Vehicle Manufacturer Server

VM Service Provider 1

VM Service Provider 2

VM Service Provider n

VSG: Update from last meeting in Berlin (last week)

- VSG has changed compared to its initial goals:
  - VMs have proposed a new work item (NWIP) to TC22 for an 'extended vehicle' that would route all data through the VM servers.
  - Alternative proposal to create the vehicle station gateway (VSG) but for 'remote diagnostics' only.
  - Proposal to place VSG into the ITS (TC204) discussions.
  - Depending if any of the above are rejected by ISO, then VSG could collapse, or could continue, but with a different scope.

NEW ACTIVITY ON REMOTE DIAGNOSTIC SUPPORT FOR HEAVY DUTY VEHICLES (HDV)

HDV Remote Diagnostic Support: Background

- There is a legal mandate that supports 'Remote Diagnostic Support' for HDV vehicles in the Euro VI legislation (EC 595/2009) which is increasingly important to provide services to vehicle fleet operators.
  - Vehicle manufacturers refused to address the issue.
  - Therefore AFCAR went to the EC Commission and asked for arbitration.

- The European Commission confirmed that VMs and AFCAR must address the issue within the current work of CEN on standardisation of Repair and Maintenance Information. (ISO 18541-5)

What was our approach?

- **Prepared our case, arguments and for the meeting with the EC and prepared basic principles for future multi-brand Aftermarket telematics access to the vehicle.**

- **This was based on:**
  - A **definition** of the wording of the legislation
  - The **basic principles** of what IOs need to offer competetive services

Basic principles - 1

- The vehicle owner/operator should be **able to choose** what amount and depth of data is exchanged with whom and how the data is transmitted to perform a specific service.

- IOs need to be **able to access** the vehicle and the in-vehicle data independently from the VM in a standardised way.

- Be **able to make multi brand competitive offers** in an un-monitored way.

Basic principles - 2

- **All IOs need the same access conditions as the VMs in terms of:**
  - **same contents** (not only static but dynamic vehicle-specific data)
  - **same latency** (timescale)
  - **same capacity to read and write information** to be able to offer competitive independent remote diagnostic support services and thus allow fleet owners, operators or managers to be able to choose competitive multi brand services.

Basic principles - 3

- **Independent, competitive and full remote diagnostic support must include the three interdependent key processes of:**
  - Remote Notification Service (RNS)
  - Remote Diagnostic Information Service (RDI)
  - Remote/workshop Repair and Maintenance Service (RMS)

- **IOs must be able to combine these 3 processes!**

Summary

- VSG lacks any legal mandate and does not have a common agreement about the definition of 'remote diagnostics' from either the VMs or the Aftermarket.
- VSG may develop into just an in-vehicle gateway ('super–OBD port') defined as ISO 13815.
- VSG may not include the wider communication requirements for remote access to vehicle data or only allow data to be accessed via the VM server.

- HDV Remote Diagnostic Support is legally mandated, but does not yet have any agreed 'basic principles', framework, timeline, detailed use cases or implementation strategy as part of ISO 18541-5.
- There is significant potential overlap of both possibilities, but in both cases, the VMs would like to restrict IO remote access to vehicle data and there is not yet a clear understanding of how either will develop.

WG9 ACTIVITY REPORT

Activities for the HFO R1234yf Service Station

- WG9 met on the 7th May
- Discussion about the state of affairs with HFO1234yf and the result of the JRC report. Mercedes has started work on a specification for a CO2 Service station, we should apply the same process as we have done for HFO 1234yf, however, this is not immediate as 2017 is the predicted date for this technology
- Discussion on the result of the meetings with Osborne Clark about the EGEA Label
- Drafting of a business plan for the EGEA label
- Further work on the best practise and the inclusion of the refrigerant analyser

Activities for the HFO R1234yf Service Station

- A decision from the EGEA Board is now sought to go forward with this worthwhile initiative of the EGEA Label
- Continue work on the Best Practice
- Analyze the feasibility and complete the business case for the EGEA Label
- Next meeting planned for July depending on the Board decision for the EGEA Label
- Realization of the WG9 Website
- Budget planning
- Define new work items for the WG

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Certified to MAC Equipment specification

WG10 ACTIVITY REPORT

EGEA WG10 Activities

Meetings

- 8 face-to-face meetings and several small group WebEx since June 2013
- Next meeting planned for July 8th in Plochingen (Stuttgart)

- **Results: ENC – "EGEA Net Communicator"**
  - List of use cases and requirements
  - High-level architecture
  - Draft statement of work

- *Technical specification of the ENC interface, including definition and description of services and data, to allow manufacturers of ENC clients to connect to the EGEA Net*
- *Technical specification of the ENC server interface*
- *ENC server software (as source code or in binary format for Windows and Linux)*
- *Conformance test plan*
- *Conformance test suite (also as source code)*
- *Implementation guideline*
- *Schedule*
- *Documents will be publicly available (not necessarily free of charge to cover the costs)*
- *Support to developers of ENC Clients (equipment manufacturers, DMS and PTI application developers), Monday-Friday, 8:00-17:00 CET, in English*
- *License terms*

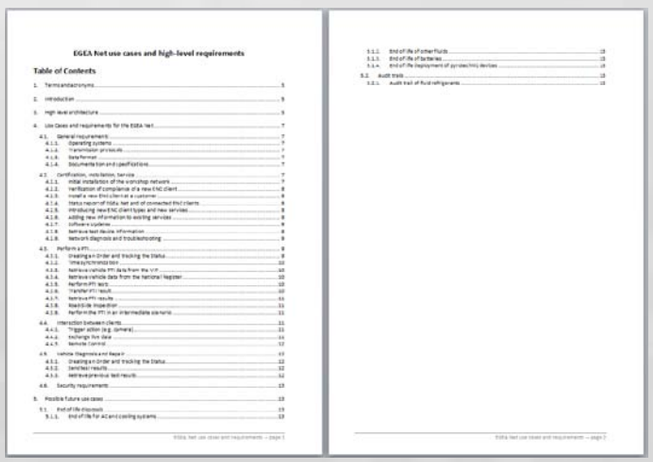
To be quoted separately:

- *Conformance test plan for the ENC server*
- *Conformance test suite for the ENC server (also as source code)*
- *Technical specification of the ENC server with details to allow independent development of compliant ENC server*
- *ENC client platform module for integration in the devices (as binary or as source code in different languages: C#, Java, C)*

Not to be quoted at present:

- *Connection to the VIP for vehicle PTI data retrieval*
- *Certification activities*

Troubleshooting and support to PTI centers will be responsibility of the equipment manufacturers or PTI application and DMS providers.


EGEA Net use cases and high-level requirements

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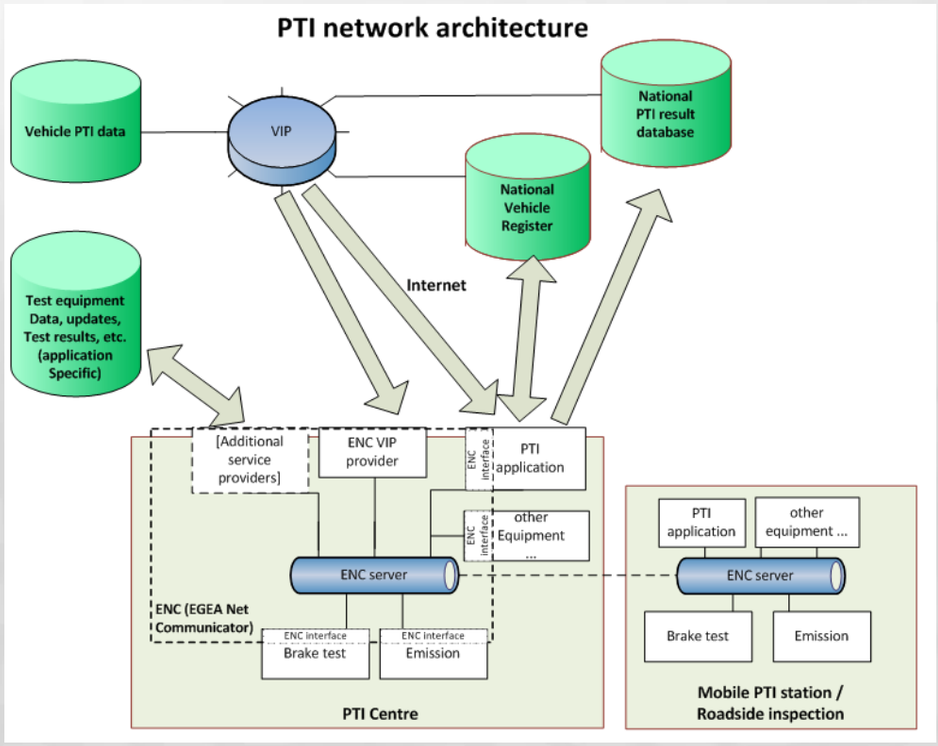

Outcome from previous WG10 meetings

- **Ongoing activities**
  - **3 solutions are being quoted based on the SOW:**
    - one from Actia based on XML Web services technology
    - one from Axonet based on current Asanetwork
    - one from Axonet based on current technology (node.js, REST/JSON based web services etc.)
  - **Budget plan for project funding: waiting for the quotes above**
  - **Business model: who will distribute the new standard documents and software? under which terms? who will provide support and maintenance? one or many ENC servers?**
  - **Legal aspects and responsibilities: use of the "EGEA" name in the certification of clients and network implementations**

Liaisons

- **CITA WG5 (Information Systems)**
  - Antonio Multari is in both groups and presented the activities of EGEA WG10
  - they are interested in collaborating with us
- **UNISYS**
  - winner of the tender bid of the EC for the feasibility study on the "Vehicle Information Platform" (VIP)
  - members of WG10 met with UNISYS 4 times
  - EGEA has been included in the stakeholders list and contributed to the VIP study replying a specific questionnaire
- **EUCARIS**
  - existing system for the exchange of all transport related information, operational in 28 countries
  - they believe that the PTI / RSI should use the same system
  - they are interested in collaborating with the EGEA WG10

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Thank you

"Providing more influence, better information and stronger support to the Garage and Test Equipment Industry!"