



4th Iran Automotive Industry International Conference

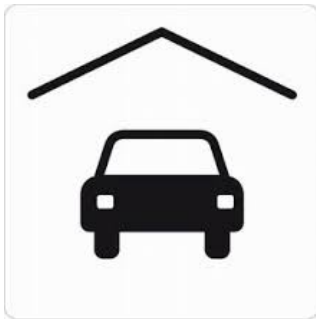
Influence of Vehicle inspection on roadworthiness,
environment and aftermarket activities



IT systems & services for management in automotive field

Hardware, software, services

Servers, ERPs, Middleware, software development & maintenance



IT systems & service for the Workshop

Hardware, software & services

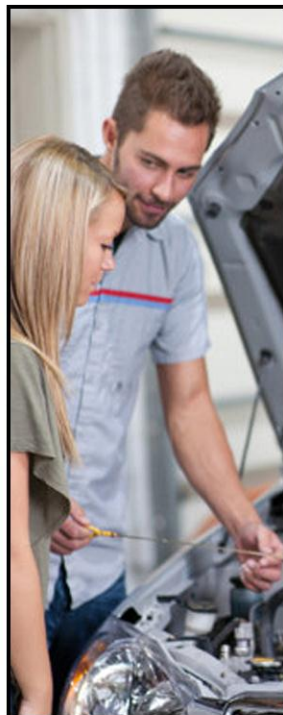
Intelligent solutions & services for Garage and Car Inspection



Embedded IT systems

Hardware & software

OEM Tier 1 & Aftermarket



DIRECTIVE 2014/45/EU OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL



On periodic roadworthiness tests for
motor vehicles and their trailers and
repealing Directive
2009/40/EC



Objectives of the European Union








- ❖ The Commission set out a 'zero-vision' objective whereby the Union should move close to zero fatalities in road transport by 2050.
- ❖ Towards a European road safety area: policy orientations on road safety 2011- 2020', the Commission proposed a further halving of the overall number of road fatalities in the Union by 2020, starting from 2010.

The vehicle inspection

- ❖ Periodic testing should be the main tool to ensure roadworthiness.
- ❖ Vehicles with malfunctioning technical systems have an impact on road safety and may contribute to road crashes involving injuries or fatalities.
- ❖ Vehicles with malfunctioning emission control systems have a greater impact on the environment than properly maintained vehicles.

- ❖ Subject matter: This Directive establishes minimum requirements for a regime of periodic roadworthiness tests of vehicles used on public roads.
- ❖ Scope: This Directive shall apply to vehicles with a design speed exceeding 25 km/h.

CHAPTER 1

Category	Description	
M1	Vehicles constructed primarily for the carriage of persons and their luggage comprising not more than eight seating positions in addition to the driver's seating position.	
M2 y M3	Vehicles constructed primarily for the carriage of persons and their luggage comprising more than eight seating positions in addition to the driver's seating position	
N1	Vehicles constructed primarily for the carriage of goods, having a maximum mass not exceeding 3,5T.	
N2 y N3	Vehicles constructed primarily for the carriage of goods, having a maximum mass exceeding 3,5T.	
O3 y O4	Trailers constructed for the carriage of goods or persons, as well as for the accommodation of persons, having a maximum mass exceeding 3,5T.	
L3e, L4e, L5e y L7e	Two or three-wheel vehicles with an engine displacement of more than 125 cm.	
T5	Wheeled tractors, the use of which mainly takes place on public roads with a maximum design speed exceeding 40 km/h.	

CHAPTER 2

GENERAL OBLIGATIONS - Responsibilities

1. Each Member State shall ensure that vehicles registered in its territory are periodically tested.
2. Roadworthiness tests shall be carried out by the Member State of registration of the vehicle, by a public body entrusted with the task by that Member State or by bodies or establishments designated and supervised by that Member State, including authorized private bodies.
3. Member States shall ensure that the responsibilities for keeping a vehicle in a safe and roadworthy condition are defined in national law.

Assessment of deficiencies

Kind of deficiencies	Explanation
Minor deficiencies	Having no significant effect on the safety of the vehicle or impact on the environment, and other minor non-compliances.
Major deficiencies	Major deficiencies that may prejudice the safety of the vehicle or have an impact on the environment or put other road users at risk, or other more significant non-compliances.
Dangerous deficiencies	Constituting a direct and immediate risk to road safety or having an impact on the environment which justify that a Member State or its competent authorities may prohibit the use of the vehicle on public roads.

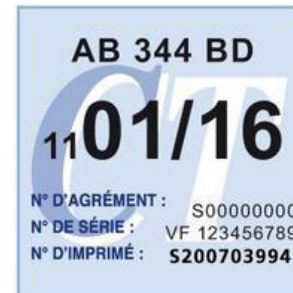
Follow-up of deficiencies

Kind of deficiencies	Follow-up
Minor deficiencies	The test shall be deemed to have been passed, the deficiencies shall be rectified (and the vehicle shall not be re-tested).
Major deficiencies	The test shall be deemed to have been failed. The Member State or the competent authority shall decide on the period during which the vehicle in question may be used before it is required to undergo another roadworthiness test. The subsequent test shall take place during a period defined by the Member State or competent authority but not later than two months following the initial test.
Dangerous deficiencies	The test shall be deemed to have been failed. The Member State or the competent authority may decide that the vehicle in question is not to be used on public roads and that the authorization for its use in road traffic is to be suspended for a limited period of time, without requiring a new process of registration, until such time as the deficiencies are rectified and a new roadworthiness certificate is issued testifying that the vehicle is in a roadworthy condition.



Proof of test

- ❖ Indication on the vehicle registration document
- ❖ A sticker
- ❖ A certificate



Minimum content of a roadworthiness certificate

Vehicle Identification Number (VIN number or chassis number).

Registration plate number of the vehicle and country symbol of the State of registration

Name of testing organisation or center and signature or identification of the inspector responsible for the test.

Vehicle category, if available

Odometer reading at the time of the test, if available.

EXEMPLAIRE REMIS A L'USAGER

N° D044611136

PROCÈS-VERBAL DE CONTRÔLE TECHNIQUE D'UN VÉHICULE AUTOMOBILE

NATURE DU CONTRÔLE: Visite technique périodique

DATE DU CONTRÔLE: 03/06/2011

N° DU PROCÈS-VERBAL: 11091306

REGISTRATION: 04 74 00 25 93

IDENTIFICATION DE L'INSTALLATION DE CONTRÔLE: N° D'AGREMENT: S001D009, NOM DU CENTRE: C.T.A. POZET FRÈRES, ADRESSE: 93 ROUTE DE LYON, 01600 TRÉVOUX, TEL: +04,74,00,25,93, Fax: +04,74,00,55,27

IDENTITÉ DU CONTRÔLEUR: 069953

Contrôleur: DEKRA POZET FRÈRES, 04 74 00 25 93, 01800 TRÉVOUX

IMMATRICULATION DU VÉHICULE (*)

Immatriculation	Date	Date 1 ^{er} mise en circulation
01	05/06/2007	05/06/2007

Genre: Monique, Type: MP, N° dans le type: 01800 TRÉVOUX, Energie: ES, Puissance: 7

Kilométrage inscrit au compteur: 88015, Désignation Commerciale du véhicule: LOGAN

PROPRIÉTAIRE: M. Prénom: FRANCIS, Domicile: Code Postal - Commune: 01

NATURE ET DATE DE LA PROCHAINE VISITE: VISITE TECHNIQUE PÉRIODIQUE AU PLUS TARD: 03/06/2013

RESULTATS DU CONTRÔLE: DÉFAUTS CONSTATÉS: DÉFAUT(S) A CORRIGER SANS OBLIGATION D'UNE DEUXIÈME VISITE: 4.1.1.1.1. FEU DE CROISEMENT: Réglage 1er pas: 0

MESURES	Av0	Av0	Ar0	Ar0
-POIDS (DAN)	770		593	
-FREIN DE SERVICE	Force 8/0(DAN)			
Force (E/E)	263	273	205	199
Équilibre	Avs3 % Ars2 %			
-FREIN STATIONNEMENT	Force (DAN)			
	6183		6171	
Efficacité	25 %			
-DISSYMETRIE (SUSPENSION)	Avs1 % Ars2 %			
-RIFAGE 1ER ESSEU (m/m)	-3,70			
-POLLUTION Essence	dépolluée CO Ratio:0,00, CO Acc:0,00 Lambda:1,000			
-POLLUTION Diesel	dépolluée CO Ratio:0,00, CO Acc:0,00 Lambda:1,000			
-RABAT. FEUX CROISEMENT	Gr:3,40, Dr:-2,00			

INFORMATIONS IMPORTANTES AU VERSO

Place and date of the test

Identified deficiencies and their level of severity.

Date of the next roadworthiness test or date of expiry of the current certificate, if this information is not provided by other means.

Result of the roadworthiness test.

Other information.

MINIMUM REQUIREMENTS

Facilities and Test Equipment

Facilities and equipment:

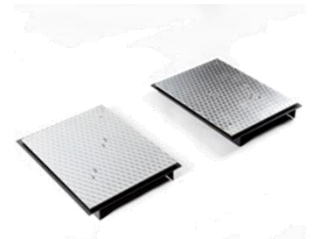
1. A test facility (with adequate space for the evaluation of vehicles which meets the necessary health and safety requirements).
2. A test lane of sufficient size for each test, a pit or lift and, for vehicles having a maximum mass exceeding 3,5 T, a device to lift a vehicle on one of the axles, equipped with appropriate lighting and, where necessary, with aeration devices.
3. A roller brake tester capable of measuring, displaying and recording the braking forces and the air pressure in air brake systems in accordance with Annex A to standard ISO 21069-1.
4. For testing vehicles having a maximum mass not exceeding 3,5 T, a roller brake tester in accordance with item 3, which may not include the recording of braking forces, pedal force and the air pressure in air brake systems and their display.



MINIMUM REQUIREMENTS

Facilities and Test Equipment

5. A deceleration recording instrument
6. Facilities for the testing of air brake systems, such as manometers, connectors and hoses
7. A wheel/axle load measuring device to determine the axle loads (Weighing kit)
8. A device for testing the wheel-axle suspension (wheel play detector) without lifting the axis
9. A Class II sound level meter, if sound level is measured



MINIMUM REQUIREMENTS

Facilities and Test Equipment

10. A 4-gas analyzer in accordance with Directive 2004/22/EC



11. Opacimeter device

12. One headlamp aiming device allowing the setting of the headlight to be tested in accordance with the provisions for the setting of headlights of motor vehicles (Directive 76/756/EEC).

13. A device for measuring the tread depth of tyres.

10. A device to connect to the electronic vehicle interface, such as an OBD scan tool

10. A device to detect LPG/CNG/LNG leakage



Calibration of the equipment



Unless specified otherwise by the relevant Union legislation, the interval between two successive calibrations may not exceed:

- ❖ **24 months** for the measurement of the weight, pressure and sound level.
- ❖ **24 months** for the measurement of forces.
- ❖ **12 months** for the measurements of gaseous emissions.

Competence of the inspectors



Before authorizing an applicant for a position as inspector to carry out periodic roadworthiness tests, Member States or competent authorities shall verify that that person:

- a. Has a certified knowledge and understanding relevant for road vehicles (mechanics, electronics...)
- b. Has experiences (initial training, appropriate examen, Certification of competence) to carry out roadworthiness inspection
ex. 3 years for the European Union

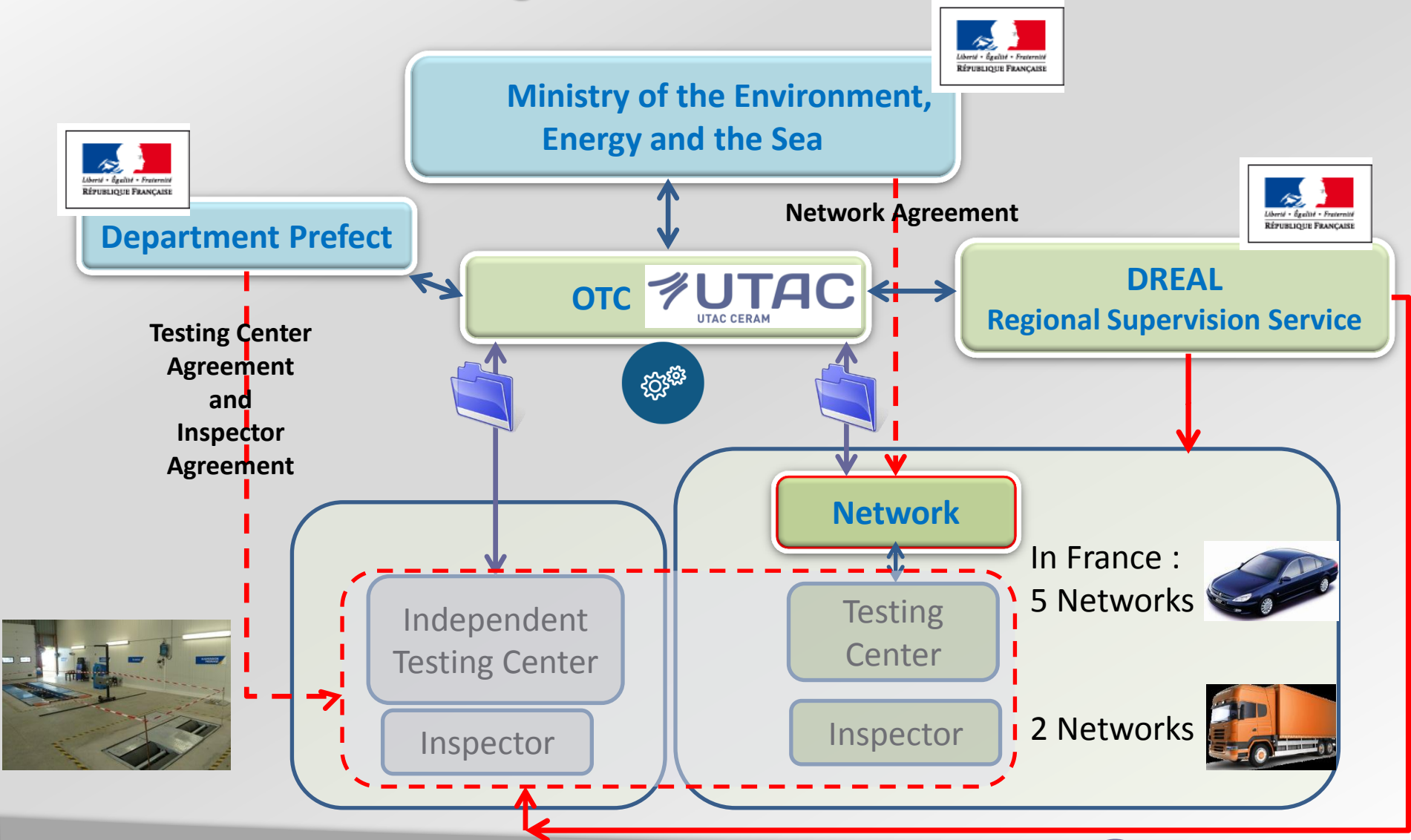
SUPERVISING BODIES



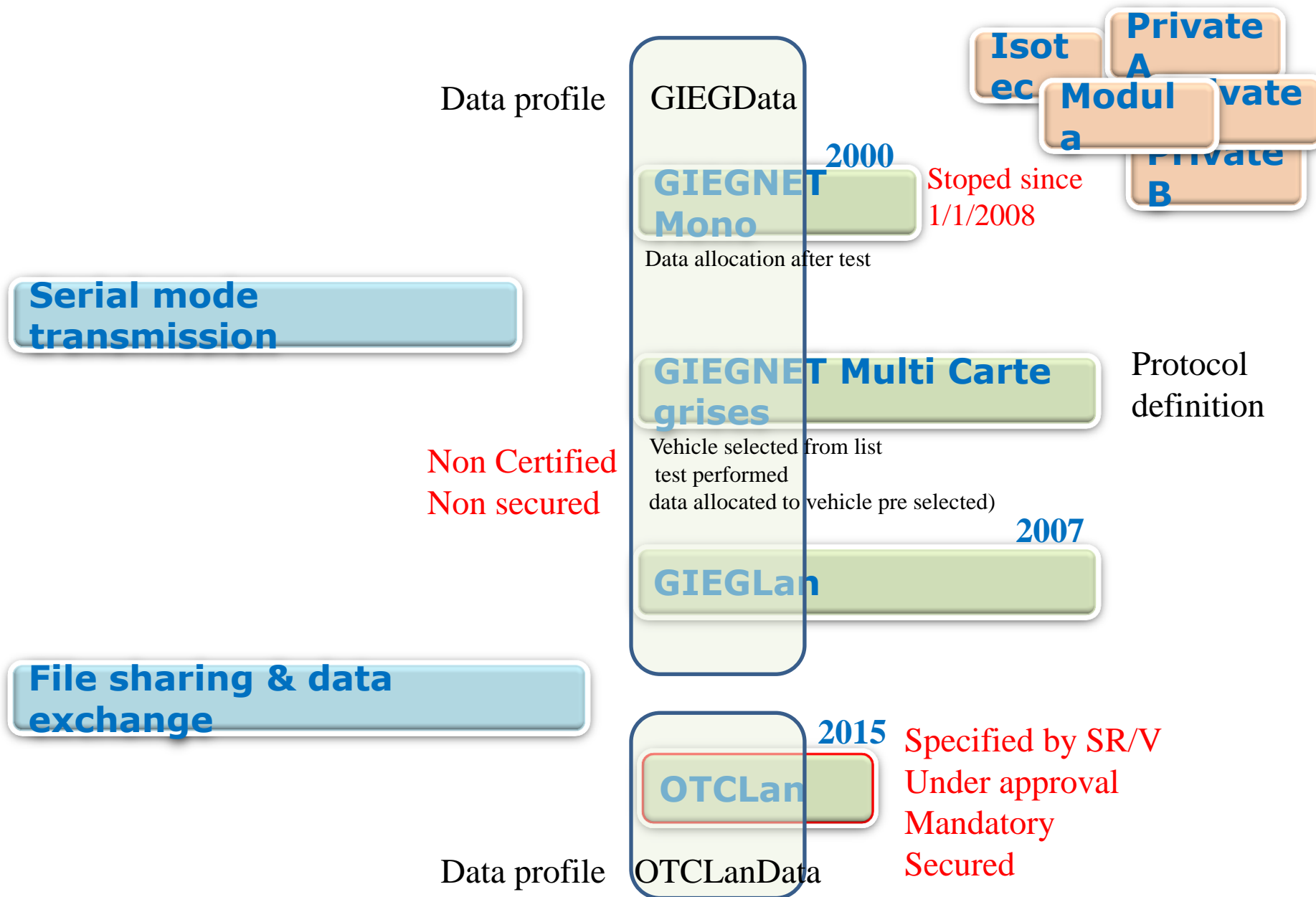
Rules and procedures concerning supervising bodies established by Member States in accordance with Article 14 shall cover the following minimum requirements:

- 1. Tasks and activities of the supervising bodies:**
 - a. Supervision of testing centers
 - b. Verifying training and examination of inspectors
 - c. Auditing
 - d. Monitoring, using measures such as the following (re-testing, appeals tests...)
 - e. Validation of measurement results of roadworthiness tests
 - f. Proposing the withdrawal or suspension of authorization of testing centers and/or of inspectors

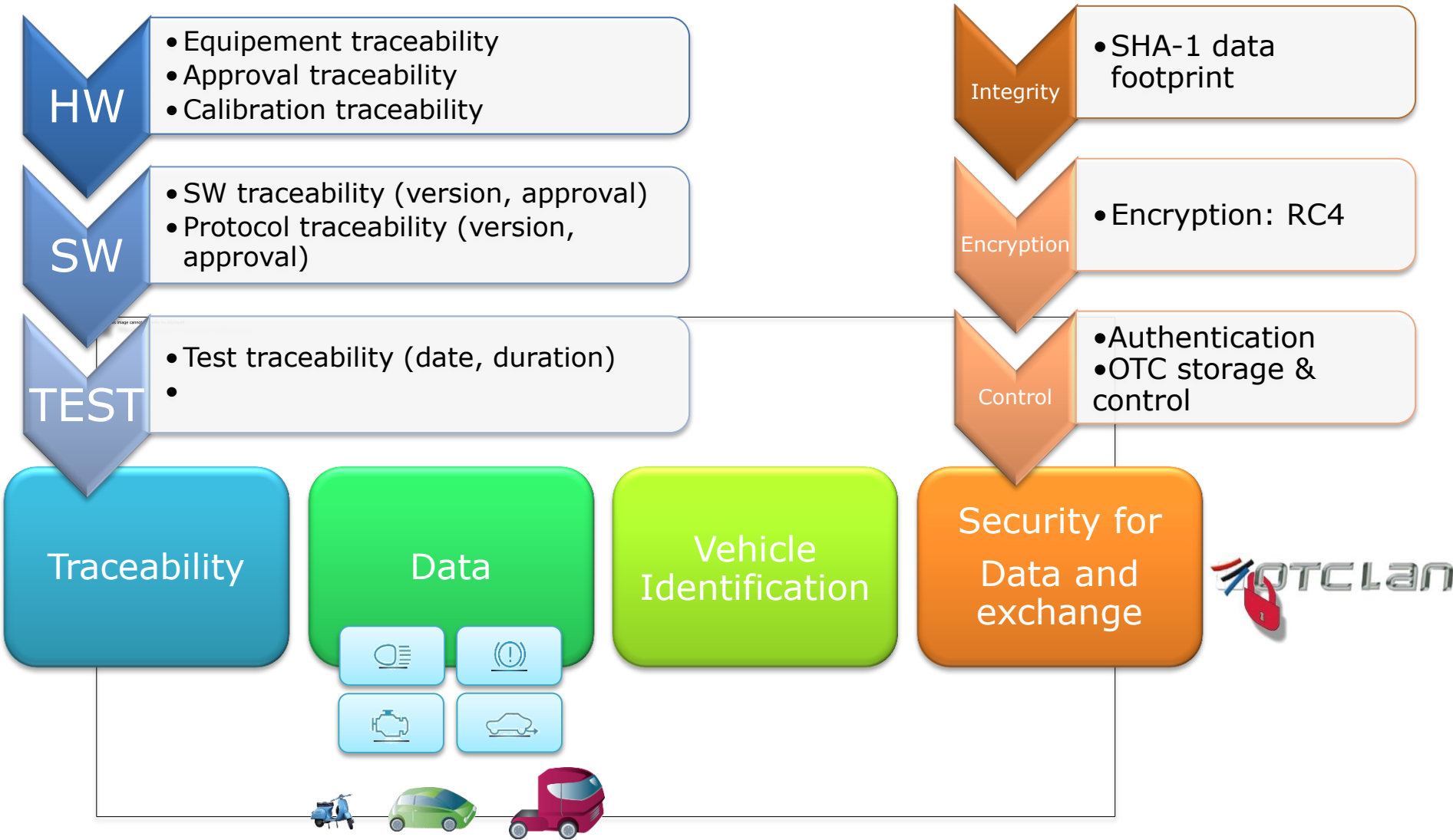
General Organization of PTI



HISTORY : FROM GIEGNET TO OTCLAN



OTCLAN : TRACEABILITY ET SECURITY



OTCLAN : TRACEABILITY ET SECURITY



- G Gas analyser
- O Opacimeter
- F Brake tester
- S Suspension tester
- R Side slip
- P Headlightbeam tester
- A Turning plate
- E EOBD reader
- D Decelerometer

And other ...

Open Specifications

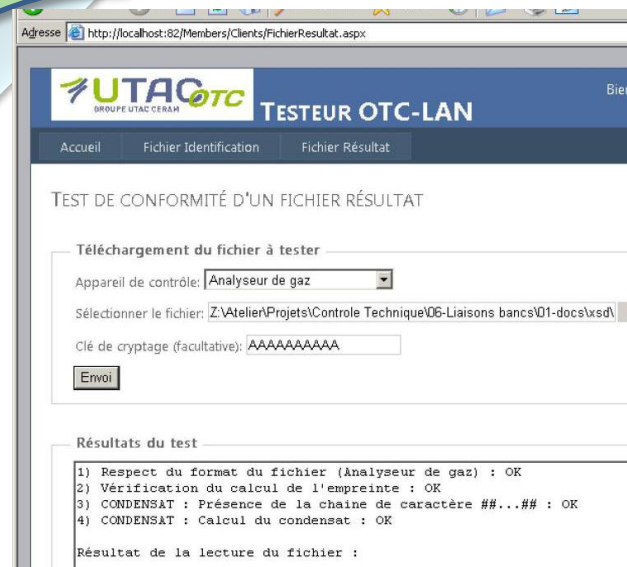


Approval:

- ✓ security
- ✓ Completeness
- ✓ compatibility
- ✓ Interoperability

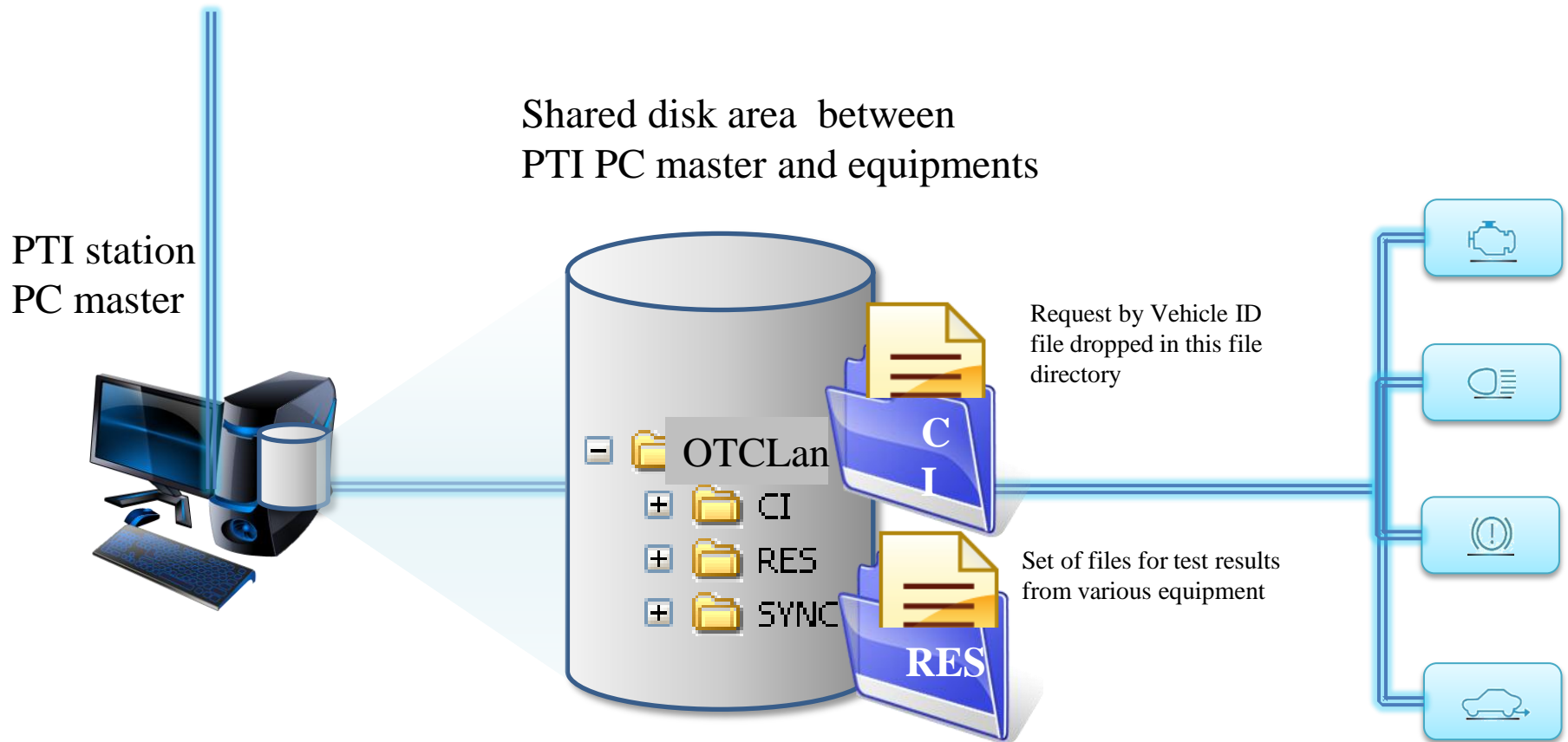


- On line tool
- ✓ Pre test
 - ✓ debugger

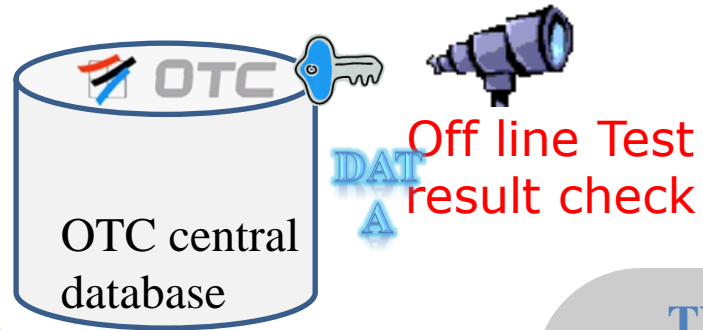


DATA TRANSMISSION: OPERATING

File sharing & data exchange



TEST RESULTS DATA EXCHANGE SCENARIO



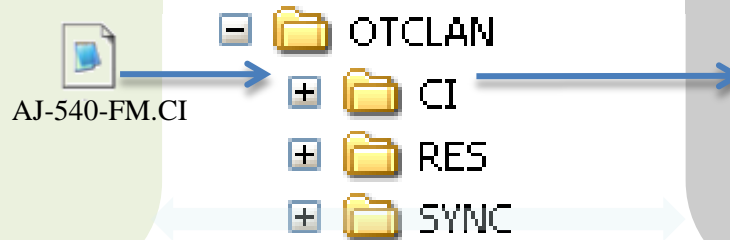
PTI SATION SOFTWARE
MGT



Data for test result check

Files flushing

DATA

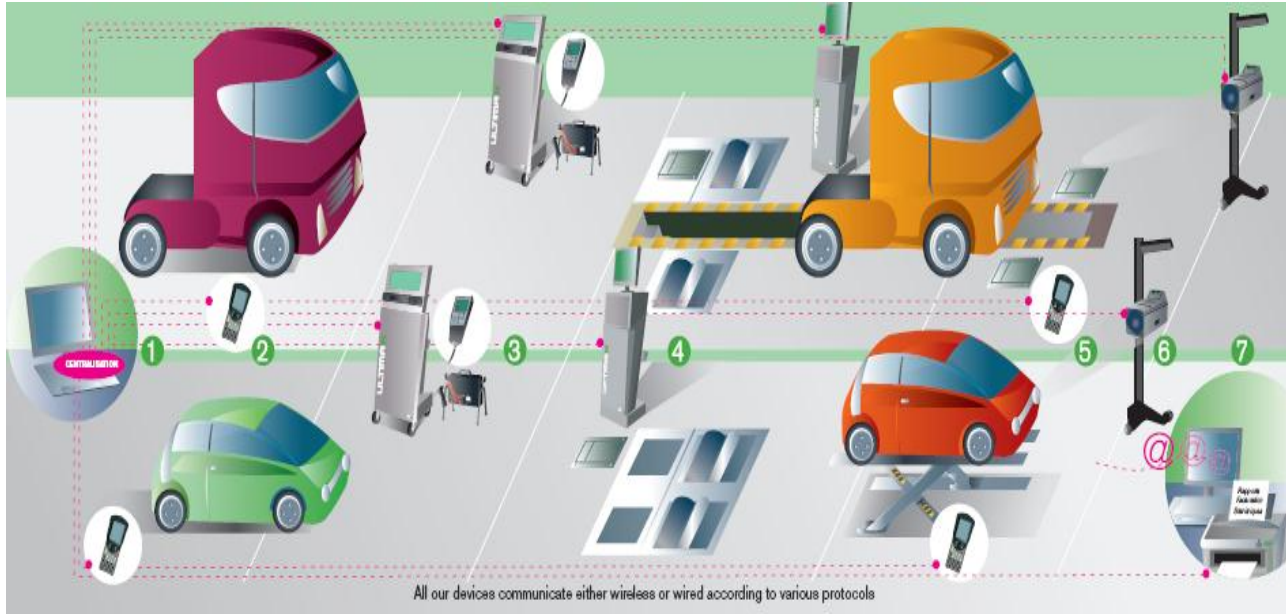


TEST EQUIPMENT



DATA

Vehicle Inspection Management



Gateway to
PTI National Agency

Report

Process Management

Data collection

Communication

Equipment

Solution for heavy duty and light vehicles

Software Management: Mono or multiple centers



● Test Phase



Vehicle Inspection – aftermarket activities' link (France, 2011)



21 % failed



18 millions inspections

3,8 millions repairs

Estimated TO : 1 330 M€



- Brake pads : 1 188 000 pairs



- Tire : 1 260 00 pairs



- Windshield : 68 000 units



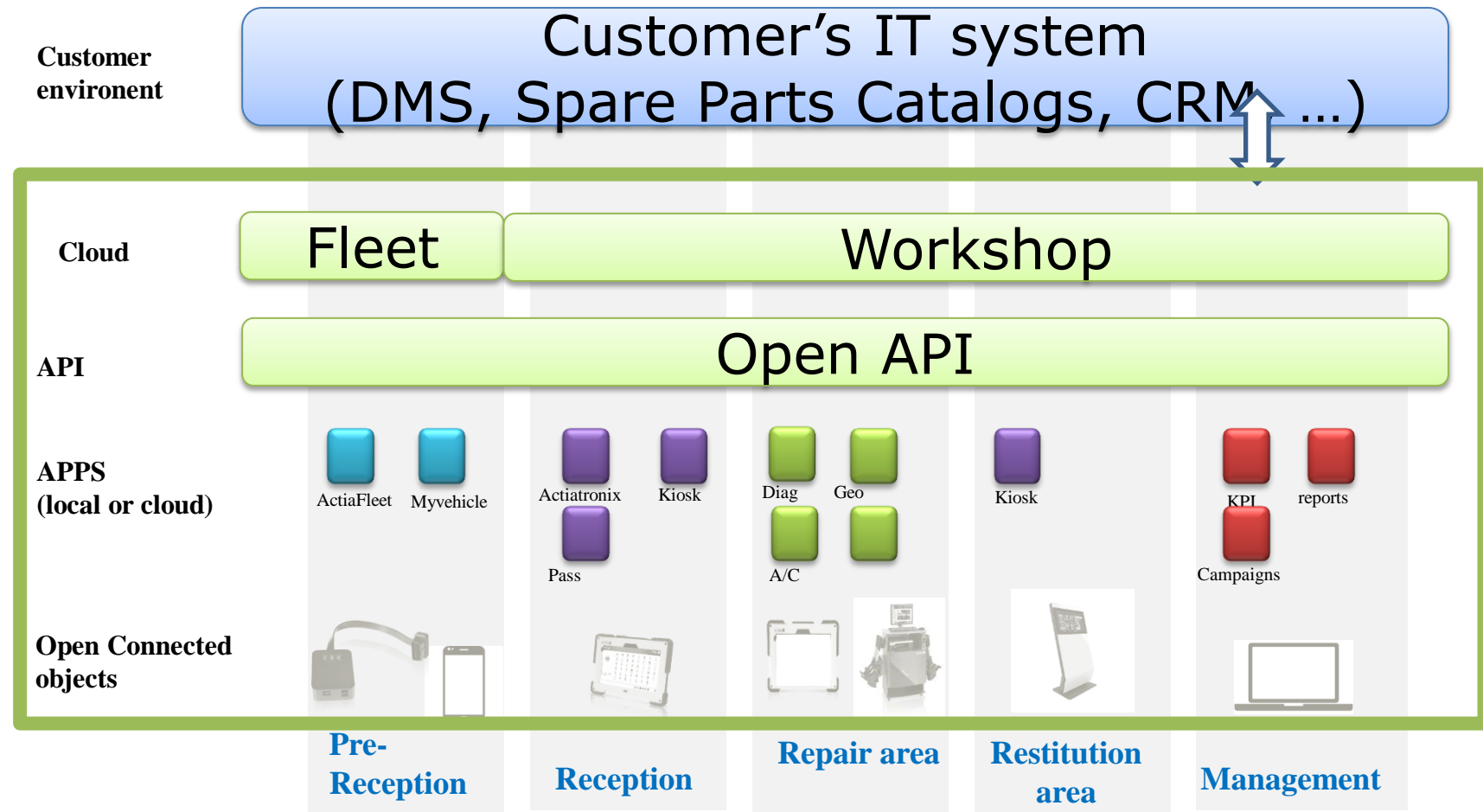
- Tailpipe : 199 000 units

IT solutions for Smart Workshop

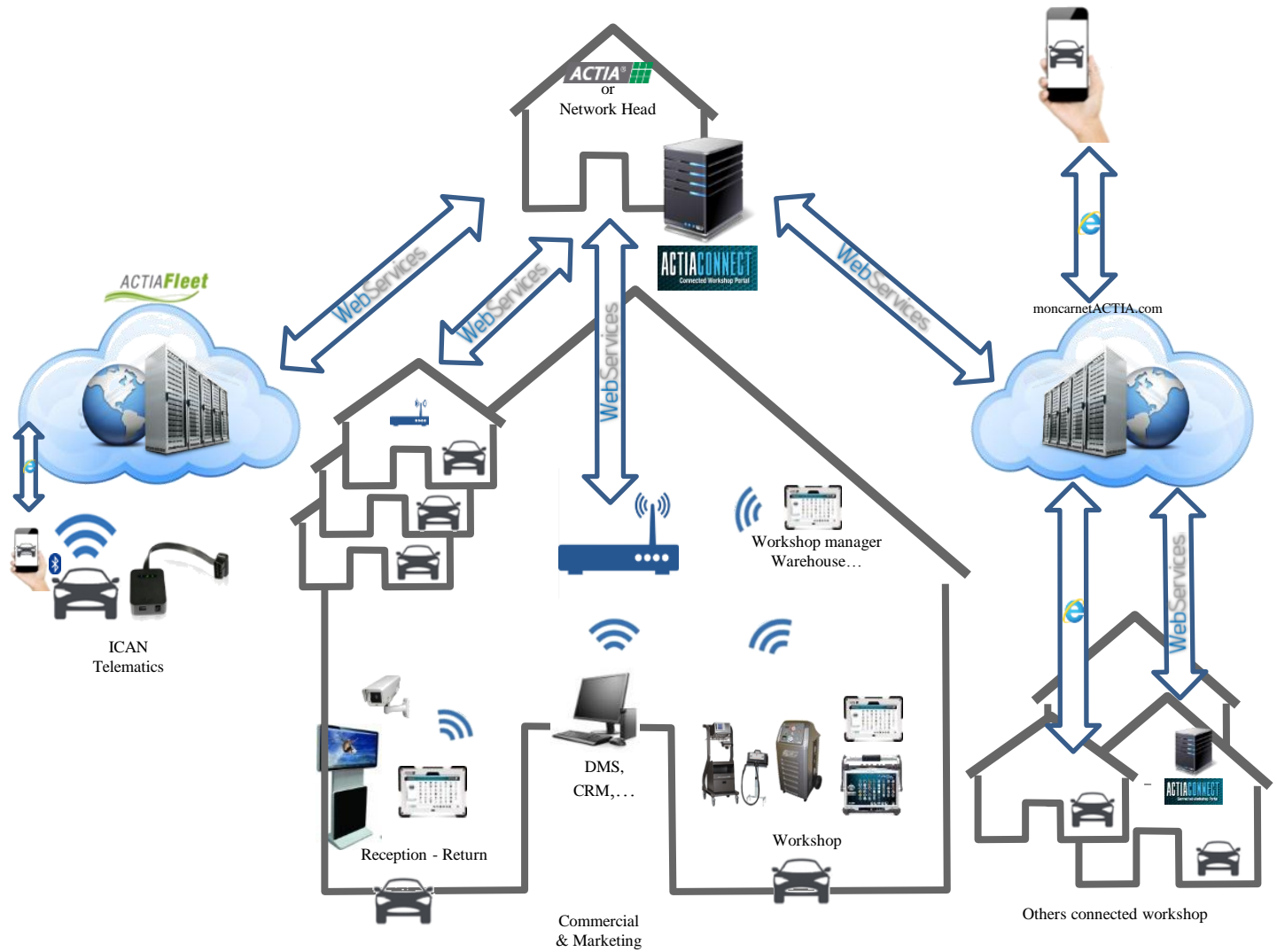


SMART WORKSHOP ECOSYSTEM

ARCHITECTURE MODELIZATION



ARCHITECTURE PRESENTATION



Thank you for your attention

