

Study on the inclusion of eCall in the periodic roadworthiness testing of motor vehicles

-

First results of survey

Purpose of survey

- ▶ **To collect ideas and proposals for the test scenarios and the cost-benefit analysis**
- ▶ **To identify experts to take on board for further discussions**
- ▶ **Targeted stakeholders:**
 - ▶ Policy makers
 - ▶ Roadworthiness actors
 - ▶ etc.
- ▶ **17 questions**
- ▶ **Fields to provide justification and additional information**

Collected responses

- ▶ **28 completed responses**
- ▶ **19 roadworthiness experts, 1 policy maker, 8 “others”**
- ▶ **13 member states**

Introductory statements

- ▶ **93 % are familiar with the eCall concept**
- ▶ **100 % know that eCall is using 112**
- ▶ **62 % have already seen or tested an eCall system**

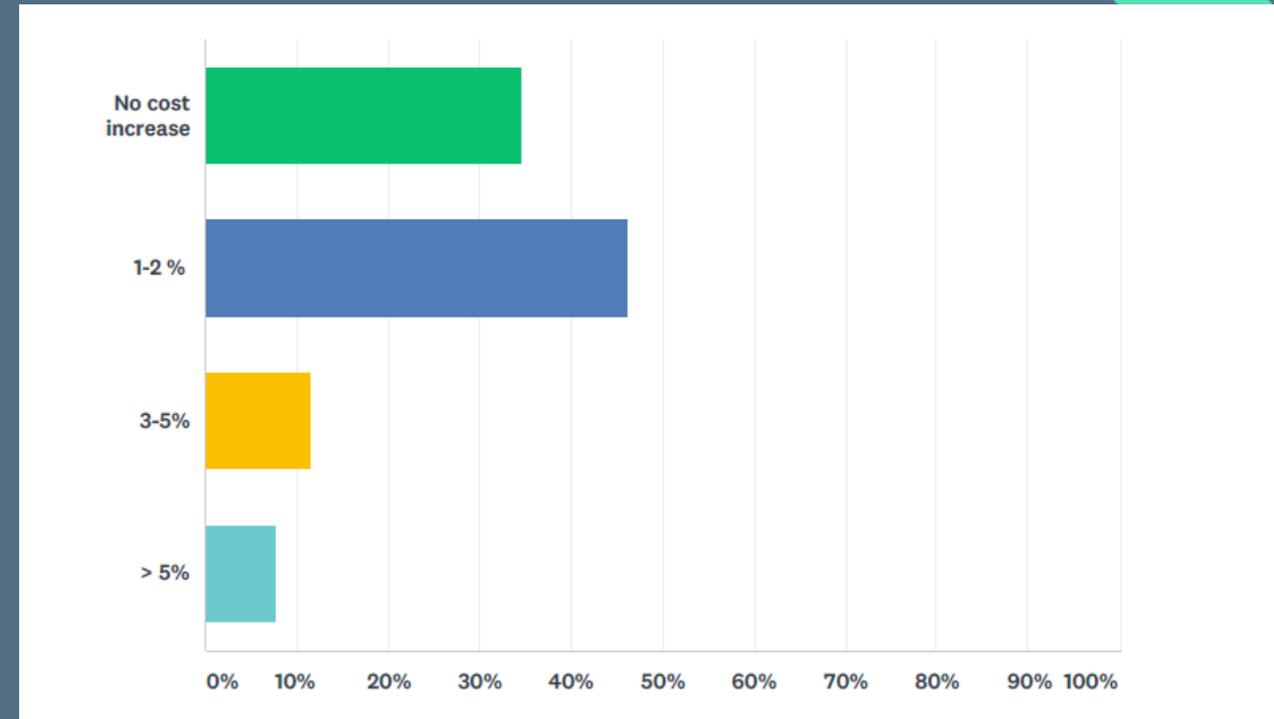
Should eCall system be tested during the periodic roadworthiness test ?

- ▶ 96 % “Yes”
- ▶ Supporting statements:
 - ▶ eCall is a safety system to function over the entire life cycle of the motor vehicle
 - ▶ Misuse or malfunction can only be found if a test is done - in case of an emergency it might be too late. The driver should be able to trust that it works
 - ▶ With this system the emergency chain is faster in action
 - ▶ *Yes but not until an agreed testing protocol and a standard interface tool is available in all member states*

What would be an acceptable price increase to the cost of the test for the customers ?

▶ Supporting statements:

- ▶ *It should be made so simple, that the price increase would be reasonable*
- ▶ The additional cost is for most of the cases not important because of the mass of vehicles that are tested and the fact that it is done in parallel to some other tests
- ▶ Some impact in price is to be expected because of the additional time for the testing and new investments in the inspection facilities



Would it be acceptable to invest in roadworthiness centres or to equip mobile inspectors ?

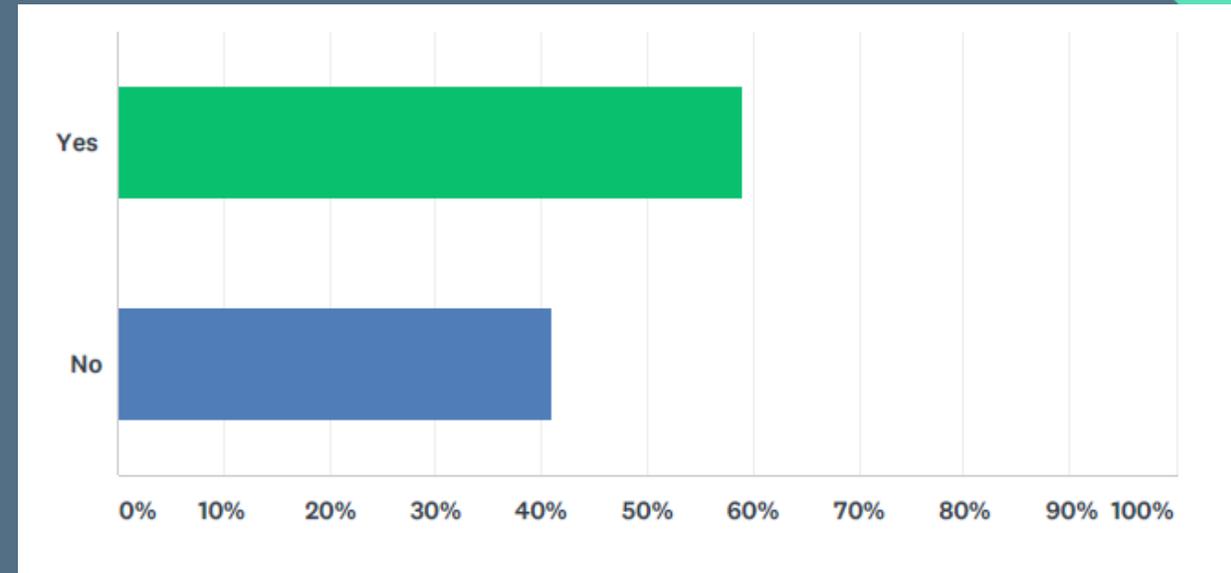
▶ Supporting statements:

▶ No:

- ▶ use of the existing generic scan-tool for the electronic vehicle interface

▶ Yes:

- ▶ Roadworthiness testing must adapt to technological innovation
- ▶ Effort is also needed for other systems on board in future
- ▶ It should be considered as a safety priority, therefore should be subsidised on the national level
- ▶ But only on a pilot basis. In Ireland PTI is carried out by private operators on behalf of the Authority.



Chance of (parts of) an in-vehicle eCall system to show faulty behaviour ?

- ▶ Supporting statements:

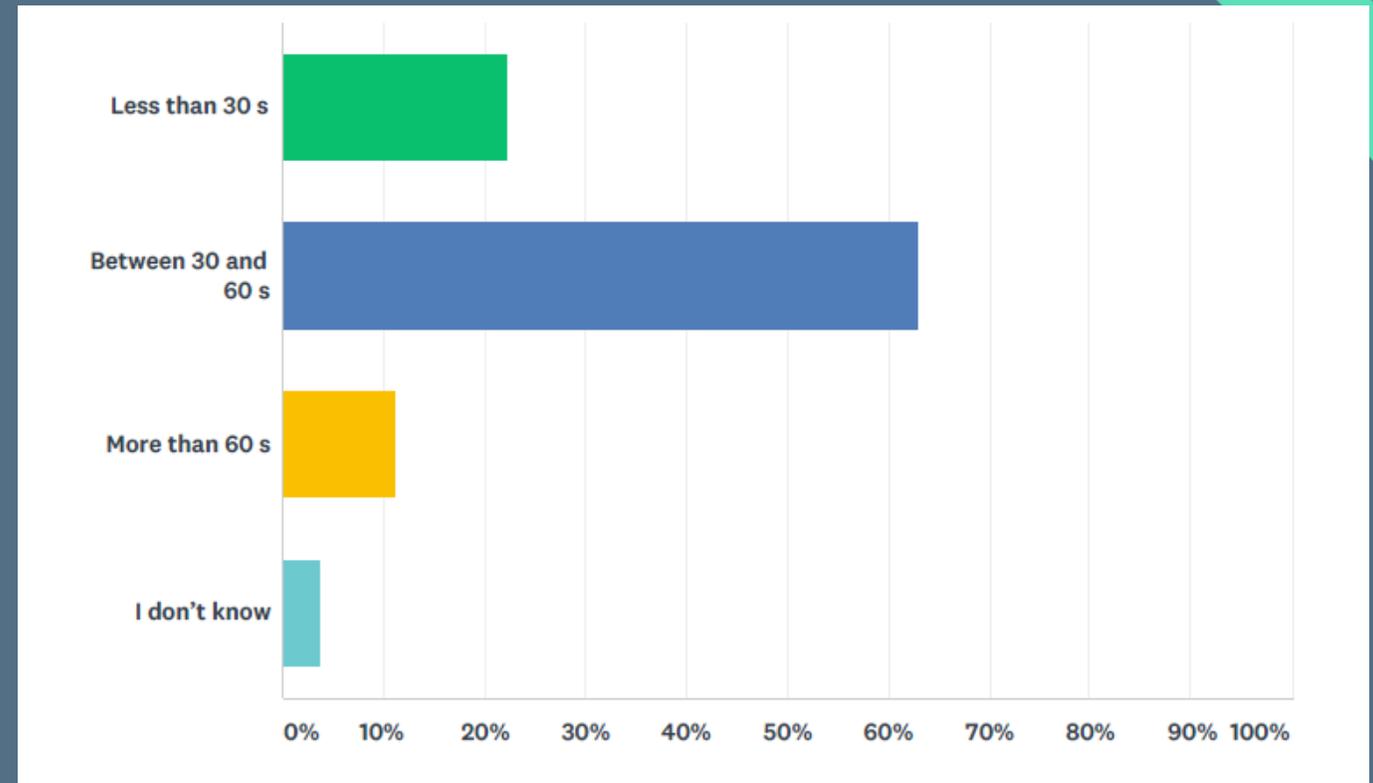
- ▶ No response: this is something new and cannot be really measured or benchmarked
- ▶ High to very-high:
 - ▶ The actual scientific evaluations show a failure on electronic components in correlation of time and use / as well as some not predictable influences
 - ▶ The maintenance in accordance with the manufacturers instructions of the car is decreasing from approx. year 7, therefore defects will be more frequent
- ▶ Low to medium:
 - ▶ We had a similar discussion about airbags 30 years ago... it turned out, the failure rate is low.
 - ▶ Benchmark with 2G/3G systems

	No Response	Low	Medium	High/Very high
5 years	4%	80%	12%	4%
10 years	4%	33%	42%	21%
15 years	16%	16%	21%	55%

What would be a reasonable execution time for an eCall test procedure ?

- ▶ Supporting statements:

- ▶ the test is always done in combination with other part of the vehicle inspection so the extra time is minimized – and the overall efficiency is good
- ▶ Whereas (21) of 2014/45/UE-Testing during the life cycle of a vehicle should be relatively simple, quick and inexpensive, while at the same time effective in achieving the objectives of this Directive (30 s)



Do we need new test methods for testing eCall beyond what is in the directive 2014/45/EU?

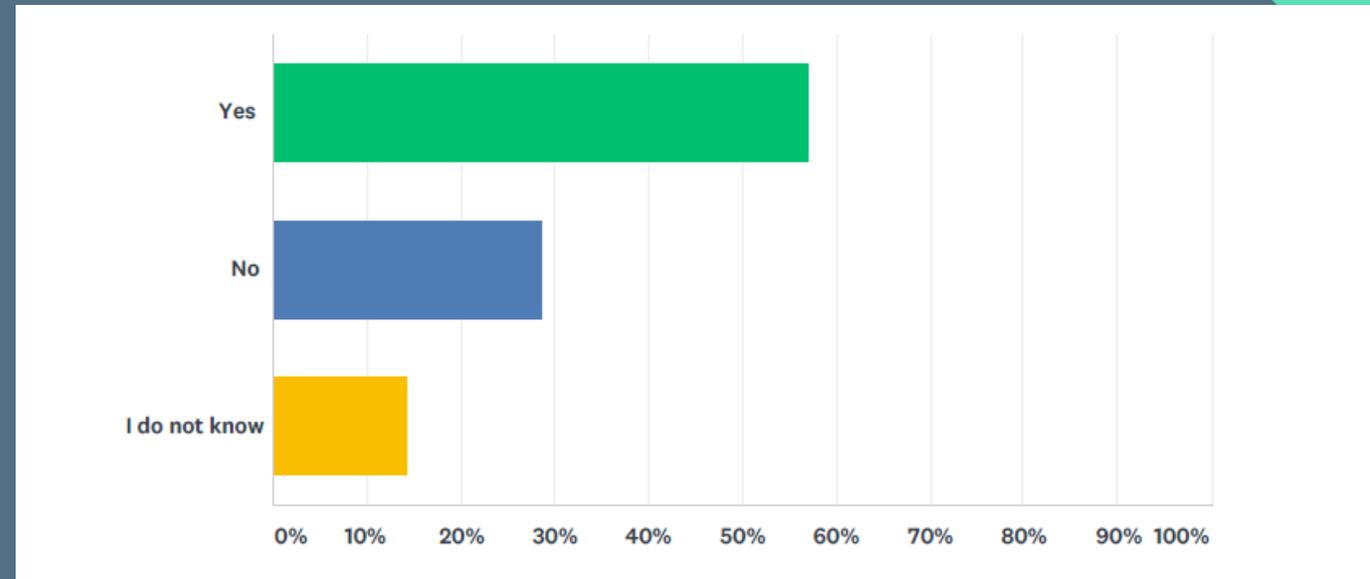
▶ Supporting statements:

▶ No:

- ▶ The test method "using the electronic vehicle interface" should be sufficient

▶ Yes:

- ▶ The introduction of new test methods seems acceptable. The merits of new test methods would need to be balanced with cost to public and test duration
- ▶ There should be specific testing methods for eCall. Especially to check the function of the system
- ▶ In our opinion, eCall should be tested via OBD, as a part of ePTI

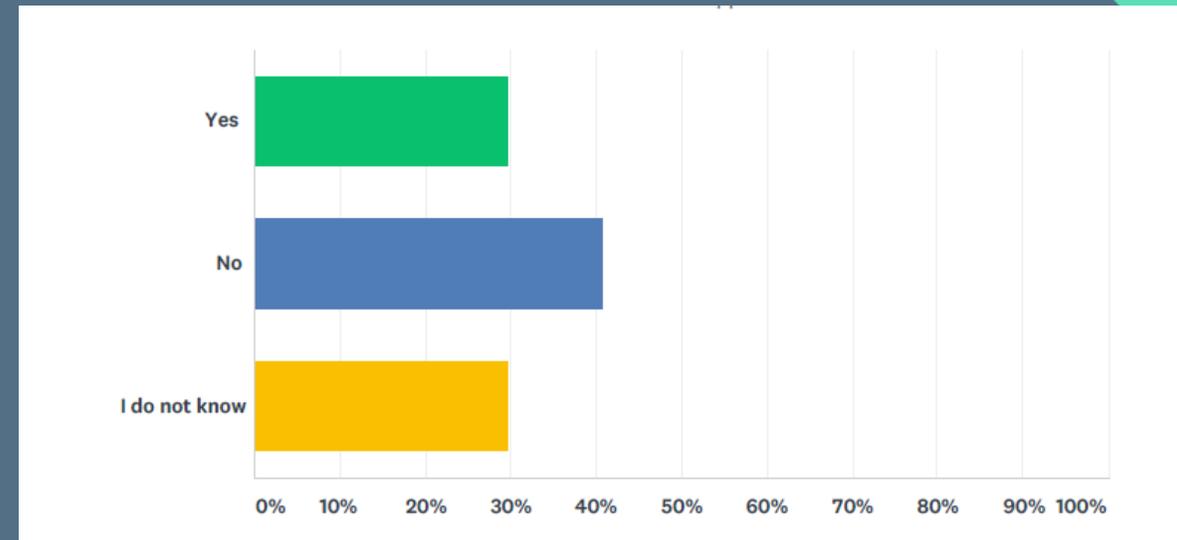


Is the manufacturer specific self-diagnosis of eCall is reliable and trustworthy as a potential test method?

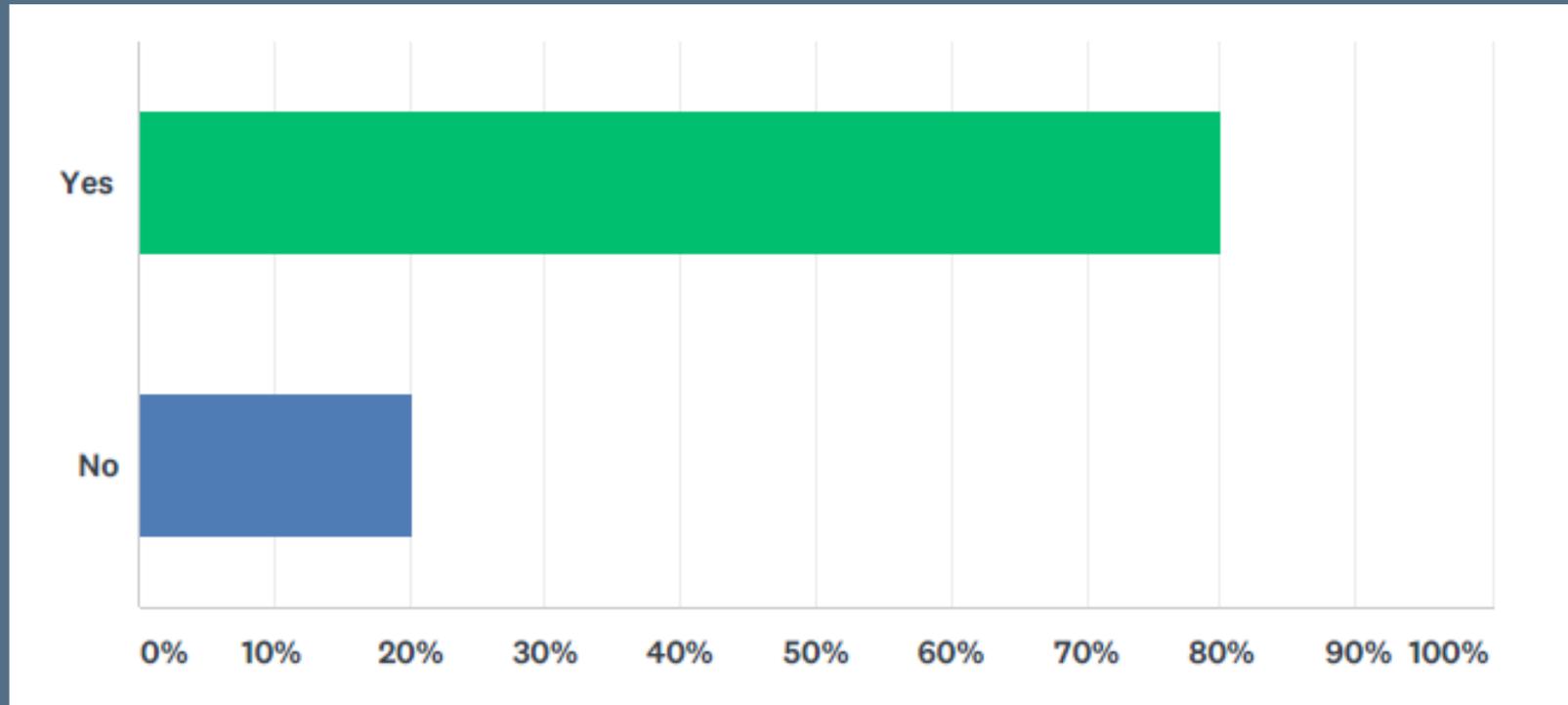
▶ Supporting statements:

▶ No:

- ▶ self-diagnosis is limited to electrical failures. It does not cover audio-components
- ▶ As the system can fail, self-diagnosis too or the system can be good and the self-diagnosis not
- ▶ Roadworthiness testing should be independent from the manufacturer in order to be efficient.
- ▶ Because the system only recognizes the errors specified by the manufacturer. If another error occurs, it cannot be logged by self-diagnosis. But it should be a part of the eCall test method
- ▶ *But could be included as part of a more global test method*

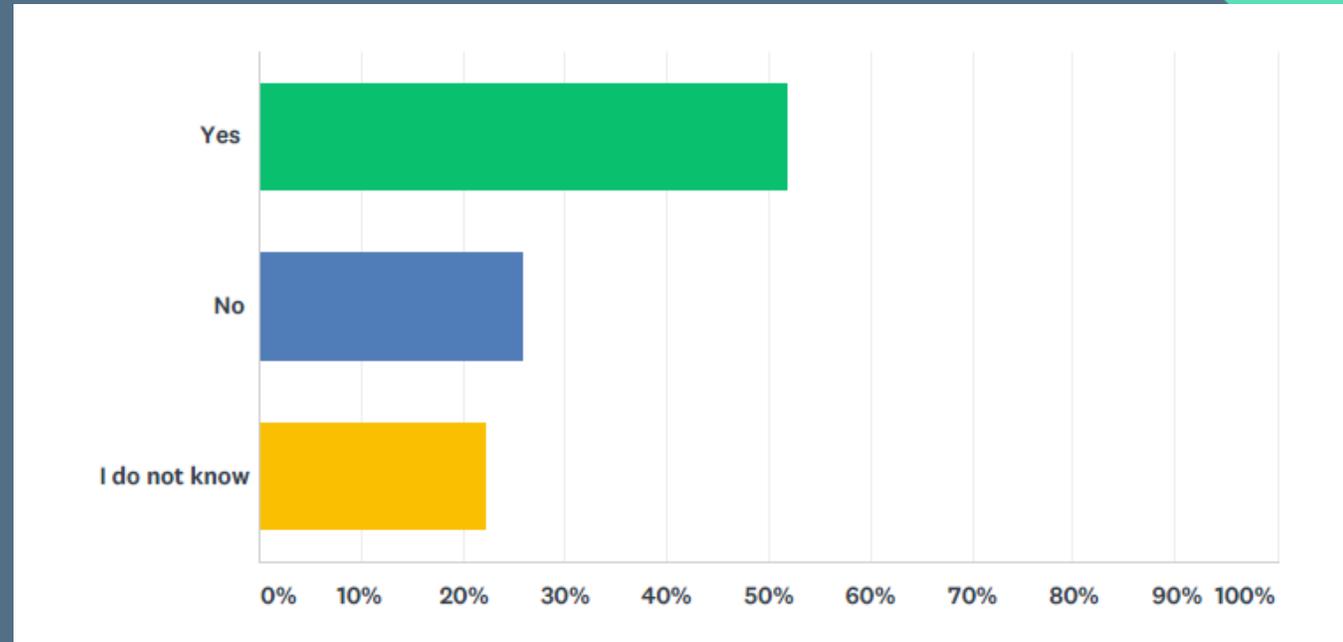


Should self-diagnosis be part of the eCall test method?



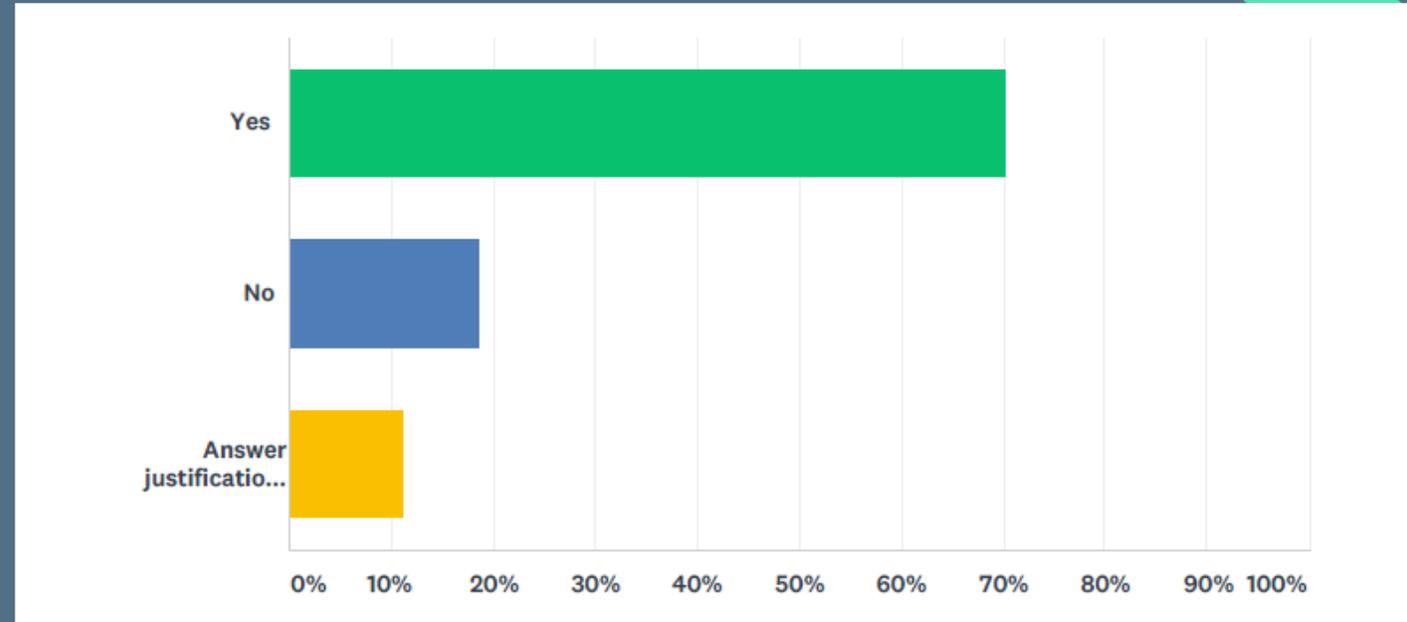
Should the eCall test include a check on the accuracy of the Minimum Set of Data ?

- ▶ Supporting statements:
 - ▶ No:
 - ▶ If the vehicle manufacturer added wrong data, it would make sense to check and correct once and not every year
 - ▶ Yes
 - ▶ at least the GPS signal should be tested
 - ▶ The correct set of data is a very important item – for the whole function of eCall
 - ▶ MSD provides very important information to PSAP



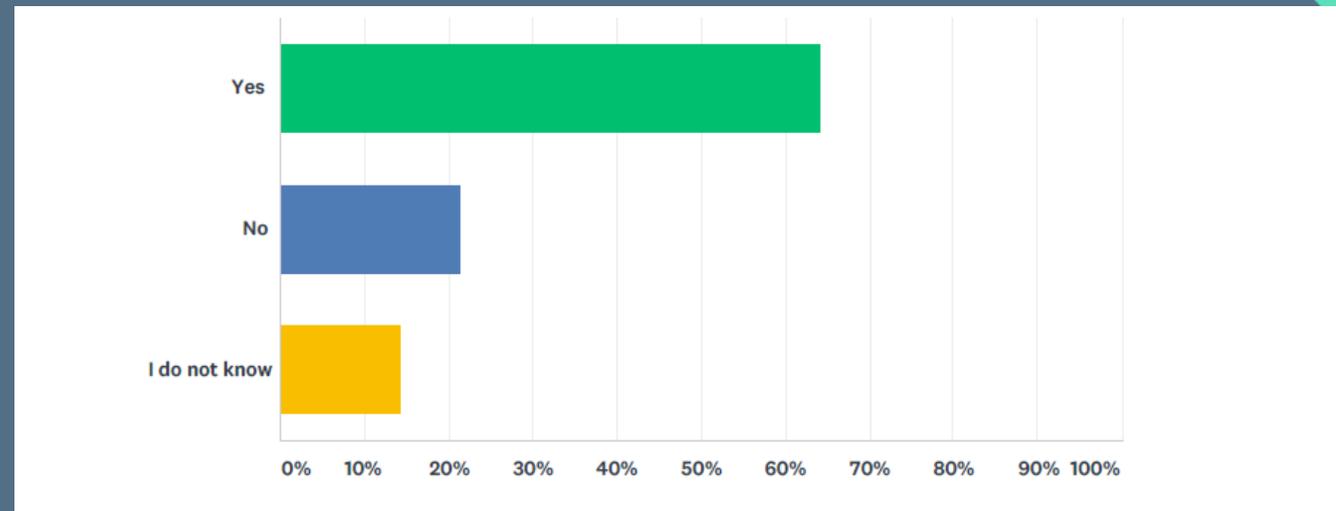
Should the check of audio components be part of the eCall test?

- ▶ Supporting statements:
 - ▶ This would add time to the test and divert inspectors from other safety related items
 - ▶ If yes, a self test routine must be installed, as a part of ePTI



Do you think that an integrity test of the software-version of the eCall system should be part of the test ?

- ▶ Supporting statements:
 - ▶ Yes:
 - ▶ check if the eCall system is not deactivated or manipulated
 - ▶ This sounds good in theory but unless all the data from the manufacturer is available via a scantool it is pointless
 - ▶ Need for a DB of approved SW versions per unit type
 - ▶ No:
 - ▶ Software version should be checked, and might be more appropriate as manufacturer check rather than at PTI



Tentative summary

- ▶ **One common test method across Europe**
- ▶ **Test method should not take much more than 1 minute**
- ▶ **Combine existing procedures (vehicle interface, self-diagnosis, etc.) with new tests to check:**
 - ▶ **MSD**
 - ▶ **Potentially audio components**
- ▶ **Take into account ePTI work**
- ▶ **Keep cost for the customers low**