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COMMISSION STAFF WORKING DOCUMENT

Additional analysis to complement the impact assessment supporting the

Review of the type-approval framework for motor vehicles

Proposal for a Regulation of the European Parliament and the Council on the approval and market surveillance of motor vehicles and their trailers

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1. INTRODUCTION

1.1. Context of the original impact assessment

When the news about the VW non-compliance case came out in September 2015, the Commission was already in the process of reviewing Directive 2007/46/EC which governs the current system for the type-approval of motor vehicles. A legislative initiative to this end was first announced in the 2011 Commission Work Programme and had been the subject of a Fitness Check, including background studies and extensive stakeholder consultations.

The main objective of the Fitness Check was to assess the effectiveness of the changes that Directive 2007/46/EC introduced in the type-approval framework. Back then, the overall conclusion was that the framework, in principle, is fit for purpose. However, a number of changes should be implemented in order to address certain systemic weaknesses which would help reduce more effectively the presence of non-compliant and unsafe automotive products on the internal market. However, the evidence available back then pointed to a relatively limited problem that was most severe in the automotive aftermarket.

The recommendations of the Fitness Check were the following:

(1) Market surveillance is an important missing element.

(2) The recall system needs to be clarified, in particular to ensure that vehicles recalled in one Member State are also recalled elsewhere. At the same time, the current safeguard procedures should be strengthened.

(3) The practical implementation of the type-approval requirements should be improved by harmonising and enhancing the approaches adopted by Member States' authorities and their technical services, and by clarifying their roles and responsibilities as well as their cooperation.

These recommendations and the feedback from the public and stakeholder consultations were used as an input for the original Impact Assessment and for formulating policy options to address the specific systemic weaknesses that were known at the time.

1.2. How did the context of the original impact assessment change?

The content of the original Impact Assessment was then further influenced by the problems with the implementation of the Mobile Air Conditioning (MAC) Directive 2006/40/EC in 2013. Especially the conditions under which the type-approval of existing vehicle types can be extended and how conformity of production can be assured moved to the centre of attention. As a result, the original Impact Assessment also addressed the need to improve the existing framework regarding these two issues.

The news about VW's non-compliance problems in September 2015 then raised the urgent question whether the policy options for addressing the specific systemic weaknesses in the original Impact Assessment could still be considered sufficient in the light of the new situation. Especially the scale of the problem (8.5 million affected vehicles), the expected gravity of the negative impact on public health, consumers and also on the company itself, resulted in a fundamental reassessment of

the potential risks that the EU's type-approval and market surveillance framework needs to manage. Another factor that contributed to the reassessment of the policy options following the VW case was the uncoordinated response of the 28 national type-approval authorities who independently authorise vehicles for sale in the entire EU at present, and who are also in charge of initiating recalls. The current system clearly proved deficient in dealing with a large situation of non-compliance such as the one encountered with VW. It also became clear that the need for a swift and closely coordinated response at the EU level clashed with the absence of effective means for the European Commission to get directly involved under the current rules. Even for obtaining the relevant information, the European Commission depended on the willingness of national authorities and vehicle manufacturers to cooperate.

This reassessment reconfirmed the importance of the policy options identified and selected in the original Impact Assessment, but also showed the need to adjust them substantially to achieve a significantly higher efficiency in remedying the identified systemic weaknesses. In addition, the reassessment identified an additional systemic weakness that results from the decentralised system of enforcement and develops and assesses policy options to make it more robust and harmonised by means of introducing a supervisory and coordination system at EU level. The envisaged adjustments to the preferred combination of policy options in the original Impact Assessment and introduction of the EU supervisory system aim at improving the type-approval system to the extent necessary that the risk of major non-compliance problems reoccurring in the future is significantly reduced. A schematic overview of the policy measures envisaged under the original Impact Assessment and under the additional analysis is provided in the table below.

Table 1: **Envisaged measures in the original impact assessment**

	Envisaged measures
Original impact assessment	• Better information exchange between type-approval authorities about type-approvals granted, amended, refused and withdrawn + to the Commission upon request. • Stricter performance and independence criteria for technical services (MS to restrict, suspend or withdraw the designation of their technical services if necessary) • Clarification of conformity of production requirements • Introduction of general market surveillance provisions to complement type-approval • Clarification of obligations of economic operators in the supply chain (for type-approval and market surveillance) • only one EU type approval may be issued for a type of vehicle • limitation of duration of validity of type-approvals + stricter criteria for granting extensions • EU level dispute settlement for non-compliance: if Member States do not agree on the compliance of a product, COM may shall be notified and take a EU wide decision

Table 2: **Envisaged measures in the additional analysis**

	Envisaged measures

Additional analysis	• Need for greater EU oversight by means of: o Joint audits of technical services + limited duration of their designation + rights of MS and COM to object to designation o Investigation power for the Commission to challenge competence of technical services. o Peer-reviews of type-approval authorities o Obligation for MS to review their market surveillance activities and to make them public o Creation of an Enforcement Forum • Greater financial independence of technical services (no longer directly paid by manufacturers) <u>Most directly linked to the VW case:</u> • Right for the Commission to carry out compliance verification testing and to take safeguard measures. • Clearer recall procedures, with greater involvement of Member States other than the one that that issued the type-approval • Stronger deterrents (including the right for the Commission to levy penalties)

1.3. What new evidence has become available regarding weaknesses in the EU type-approval system?

As explained above, the VW case highlighted and confirmed the systemic weaknesses of the type-approval framework that were already identified in the original Impact Assessment report. It also highlighted that the measures developed there to remedy these weaknesses would not be sufficiently effective in preventing similar major non-compliance problems from happening again in the future.

The purpose of this reassessment is therefore to establish whether there is a need for further adjustments to the already selected policy options in the original Impact Assessment report and to assess their impacts. It also aims at assessing the impact of the new policy option to introduce an EU supervisory mechanism. The objective is to identify adjustments to the selected policy options that have the potential to substantially improve their efficiency with regard to the potential contribution to:

– reducing the market share of non-compliant automotive products on the market, and

– avoiding the re-occurrence of major non-compliance problems in the future.

1.4. Scrutiny by the Commission Regulatory Scrutiny Board

The Regulatory Scrutiny Board of the European Commission assessed a draft version of the present additional analysis paper and issued its recommendations on 21 January 2016. In response to the recommendations, the new Sections 1.1 to 1.3 were added and additional elements were incorporated into the document.

2. CONTEXT

On 18 September 2015, the United States' Environmental Protection Agency (EPA) issued a notice of violation (NOV) of the Clean Air Act to Volkswagen. The NOV alleges that four-cylinder Volkswagen (VW) and Audi diesel cars from model years 2009-2015 include software that circumvents EPA emissions standards for certain air

pollutants, most notably for nitrogen oxides (NOx). According to EPA, the software used by Volkswagen is a "defeat device".

In the light of the above, on 25 September 2015[1], the Commission announced swift action on the EU internal market in three key areas:

(1) Clarification of the situation caused by the VW case through investigations by Member States, clampdown on fraud and rigorous enforcement of the rules. The Commission invited all Member States to carry out the necessary investigations at national level and report back;[2]

(2) Speeding-up the implementation of new test procedures that measure vehicle emissions in real driving conditions and provides better protection against deceitful applications;[3]

(3) Revision of the approval and surveillance system so that major non-compliance issues can no longer pass unnoticed and unpunished. It should be noted that this revision is fully complementary to the proposal on real driving emissions testing.

The issue was discussed in the Competitiveness Council of 1 October 2015[4], the Transport Council on 8 October 2015[5], and the Environment Council on 26 October 2015. Commissioner Bieńkowska invited the Member States' authorities to share information and report on their national measures in relation to the VW case to the Commission.

It was also debated in the European Parliament Plenary in Strasbourg on 6 October 2015. The EP on 27 October 2015 adopted a Resolution on emission measurements in the automotive sector[6], calling on the Commission to significantly strengthen the current EU type approval regime including more EU oversight, in particular with regard to the market surveillance, coordination and follow up regime for vehicles sold in the EU.

On 15 October 2015, in the framework of the meeting of the national type approval authorities and the Commission, the German type-approval authority (KBA *Kraftfahrtbundesamt*) informed that vehicles with diesel engines EA189 (Euro 3, 4 and 5) of the VW, Audi, Skoda and Seat brands were affected by non-conformities regarding "engine characters in conjunction with the particular emission stages". The KBA also informed that, from its "point of view the non-conformity is with regard to

1 http://europa.eu/rapid/press-release_STATEMENT-15-5713_en.htm
http://europa.eu/rapid/press-release_MEX-15-5722_de.htm

2 Further details about these investigations are provided in Annex 1

3 In response to the revelations that the established non-conformity was related to the use of a prohibited defeat device, the Commission took immediate action by accelerating the adoption of the legislation necessary to introduce real driving emissions (RDE) testing as part of the EU type-approval requirements. This RDE testing will substantially limit the risk of fraudulent manipulation of the emissions treatment system as it was done by Volkswagen, i.e. by only switching on the after treatment system to pass the laboratory emissions tests and switching it off when the vehicle is in normal operational driving conditions on the road.

4 http://www.consilium.europa.eu/en/meetings/compet/2015/10/01-02/

5 http://www.consilium.europa.eu/en/meetings/tte/2015/10/08/

6 http://www.europarl.europa.eu/sides/getDoc.do?pubRef=-//EP//NONSGML+TA+P8-TA-2015-0375+0+DOC+PDF+V0//EN

the use of a prohibited defeat device according to Article 5 of Regulation (EC No715/2007)" (Euro 5/6).[7]

Based on its findings, the KBA ordered a recall of the VW affected vehicles that it type-approved. The recall should start in 2016. The KBA also invited all other national type-approval authorities do the same for vehicles registered in its territories. Moreover, the KBA invited in particular those authorities that approved Audi, Skoda and Seat vehicles to "initiate the necessary measures" according to the safeguard clauses of the Framework Directive on type-approval (Art. 30 of Directive 2007/46). According to public information, recalls in all EU Member States would affect 8.5 million vehicles. Thus far, Volkswagen has set aside € 6.7 billion for the global recall of the affected diesel cars[8].

On 17 December 2015, the European Parliament decided to appoint an inquiry committee[9] that will investigate whether EU rules for emissions and the type approval were appropriately transposed and enforced at the Member States' level and whether the Commission has taken proper and effective action to oversee enforcement.

Strong calls were also made by a broad range of stakeholders, including national parliaments, consumer and environmental protection organisations, for the Commission to reinforce the type-approval system, in particular by ensuring adequate supervisory mechanisms for a correct and harmonised application of the type-approval procedures.

The European consumer association BEUC (Bureau Européen des Unions de Consommateurs) called upon the European Commission to put in place a robust market surveillance programme to restore trust amongst consumers[10].

The French Parliament (Assemblée Nationale) addressed to the Commission its opinion on the need for greater transparency and an equal level in the type-approval tests carried out by the Member States. It also calls upon the Commission and the Member States to study the possibility of setting up a European type-approval agency with a view to verify the respect of the type-approval requirements, in particular with regard to the emission limits.[11]

Transport & Environment, an environmental NGO campaigning for smarter, greener transport in Europe, also called upon the Commission to strengthen the European type-approval system to increase the consistency of its implementation and to strengthen the conformity checking at EU level.[12]

Four Members of European Parliament jointly wrote on 11 January 2016 to Commissioner Bieńkowska asking her to include in the proposals for the review of the type-approval framework a number of far reaching changes, including the

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7 http://www.kba.de/SharedDocs/Pressemitteilungen/DE/2015/pm_29_15_nachpruefungen_kba_pdf.pdf

8 http://www.volkswagenag.com/content/vwcorp/info_center/en/news/2015/10/PM_Q3.html

9 http://www.europarl.europa.eu/sides/getDoc.do?type=TA&language=EN&reference=P8-TA-2015-0462

10 http://www.beuc.eu/publications/beuc-x-2015-086_vw_emissions_test_scandal_demands_thorough_eu_response.pdf

11 http://www.assemblee-nationale.fr/14/pdf/europe/c-rendus/c0235.pdf

12 http://www.transportenvironment.org/press/eu-oversight-car-testing-will-stop-cheaters-and-deliver-emissions-reductions-road

establishment of an effective EU oversight of the work of national type-approval authorities to ensure they all work to one consistent quality standard. (Annex 1)

These calls have prompted the Commission to reassess the policy options it had already identified, assessed and selected in preparation of a review of the type-approval framework in the context of a legislative initiative that has been on the Commission work programme since 2011. The purpose of this re-assessment is to consider whether and to what extent further adjustments to the selected policy options could further improve the implementation and enforcement of the type-approval requirements, and to identify and to assess further additional policy options in response to the calls made upon the Commission to ensure adequate supervisory mechanisms for a correct and harmonised application of the type-approval procedures.

3. SCOPE AND PURPOSE OF THIS DOCUMENT:

This additional analysis paper responds to point (3) of the abovementioned Commission announcement of 25 September 2015. It should be noted, that the reinforcement of the type-approval system is a measure that would be taken in addition to the specific regulatory response the Commission has given to effectively prevent the future use of defeat devices (i.e. real driving emissions testing).

The focus of this paper is, therefore, on improving the implementation and enforcement of the framework for the type-approval of motor vehicles. This framework seeks to ensure that motor vehicles, their trailers, components, systems and separate technical units comply with all applicable safety and environmental performance requirements.

The efficiency of this framework depends on two aspects: the nature and timing of compliance verifications (ex-ante and ex-post), and he organisation and coordination of type-approval actions. Only the optimal combination of both aspects ensures compliance and guarantees that the safety and environmental performance requirements are respected. Therefore, all relevant elements of this framework are reassessed in this document.

The analysis paper looks into all elements, processes and procedures of the type-approval system that may be vulnerable to possible circumvention or insufficiently rigorous implementation and enforcement. It also tries to identify shortcomings in the post-market control provisions of the type-approval legislation which may lead to non-compliant products not being detected and remedied after they have been placed on the market.

The revelation of the VW non-compliance problems has been a trigger for the Commission to reassess whether the draft measures it was developing to improve the type-approval framework would be: 1. sufficient to ensure that the risk of major non-compliance problems occurring would be timely detected and prevented during the ex-ante controls of the type-approval procedure: 2. if for some reasons non-compliant products passed the type-approval controls unnoticed, would the selected options in the original Impact Assessment be sufficiently robust and effective in identifying non-compliant automotive products on the market; 3. and whether sufficiently strong remedial tools would be available to ensure that only compliant, safe and environmentally performing vehicles can circulate on the market.

The reassessment is also taking into account the calls that have been made upon the Commission by stakeholders (as referred to in section 2), in particular with regard to the request for introducing a greater EU oversight over the implementation and enforcement of the type-approval requirements.

The Commission was already in the process of reviewing the current system well before the news about the EPA Notice of Violation was released in September 2015. A legislative initiative to improve the system was first announced in the Commission Work Programme in 2011 and has been the subject of a fully-fledged fitness check, including background studies and extensive stakeholder consultation.

During this review process, problems emerged in 2013 in relation to the implementation of the Mobile Air Conditioning (MAC) Directive[13], which underlined the need and urgency to strengthen the type-approval framework for motor vehicles and in particular to enhance the procedures for extending type-approvals, safeguard clauses and vehicle recalls. The Commission recently referred the case to the ECJ.

The policy options identified and assessed at that time and the selected combination of these options focused, among others, on the following aspects:

– Introduction of market surveillance provisions (ex-post compliance verification controls) to complement the type-approval requirements (ex-ante compliance verification);

– Clarification of the recall and safeguard procedures, as well as the conditions for granting extensions to approvals for existing types of vehicle;

– Improving the enforcement of the type-approval framework by harmonising and enhancing the type-approval and conformity of production procedures applied by Member State authorities and technical services;

– Clarification of the roles and responsibilities of economic operators in the supply chain, and of the information exchange and co-operation between authorities and parties involved in the enforcement of the rules; and

– Enhancing the independence and performance of technical services.

These issues were addressed in the policy options identified, assessed and selected in the Impact Assessment report (IA report), which this document accompanies. The Impact Assessment Board scrutinised the IA report and provided a positive opinion on 28 March 2014. The benefits of the measures identified in the report were estimated to be in the order of € 656 million per year. This figure corresponds to the expected reduction of the market share of non-compliant automotive products in terms of their sales value (reduction by 15% per year). Taking into account the associated costs of € 130 million per year, the selected combination of policy options was considered as a good and cost-efficient response to the problems.

The purpose of this document is to complement the above mentioned IA report to consider, in the light of the established VW non-compliance problem, the further improvement of the type-approval system. It also attempts to quantify the possible additional costs and benefits of such adjustments.

[13] http://europa.eu/rapid/press-release_IP-15-6290_en.htm

All relevant information available at the time of writing is taken into account in the analysis. However, this information is predominantly of qualitative nature and only allows for a limited quantitative assessment, based on an extrapolation of the assumptions that have been made for the original IA report. The additional benefits of the adjusted policy options are, therefore, mostly assessed by applying a certain percentage increase to the effectiveness values used in the IA report. These values have been chosen in the IA report on the basis of outcome of the stakeholder consultation undertaken for that purpose.

The assumption applied in the original IA report was that the effectiveness of the initial policy options would be 50% in terms of reducing the market share of unsafe and non-compliant automotive products. For the purpose of the attempt to quantify the benefits of the envisaged adjustments to these initial policy options, the assumption applied is that the adjustment would increase this effectiveness from 50 to 75%, however limited only to the reduction of the market share of **non-compliant** automotive products. As the aim of the adjustments is to reduce the risk of non-compliance not being timely detected, prevented or remedied, the impact of possibly reducing also the market share of unsafe automotive products has not been assessed, as there is no evidence nor even indications that these adjustments would have that effect. Although this is relatively simplistic approach, it is the best available method under the given circumstances and deemed to be in line with the principle of proportionate analysis.

4. PROBLEM DESCRIPTION

While it is too early to assess the full impact of the VW case, due to the large scale of the breach of the EU type-approval legislation, the consequences of the substantial exceedance of exhaust emissions limits for the environment are obvious. Although it is difficult at this stage to precisely quantify the environmental damage caused by the exceedance of the exhaust emission limits, a conservative attempt for a preliminary estimate has been made. For the purpose of roughly estimating the order of magnitude of the environmental costs, the calculation methods used by the United States Environmental Protection Agency (US EPA) to establish their vehicle engine penalty policy[14] has been used as a yardstick. For violations of the defeat device prohibition, the EPA applies a maximum penalty of $3,750 per device. Applying this figure to the 8.5 million vehicles affected in the EU would represent at least[15] a monetised environmental harm of about €30 billion.

A detailed quantification of the impact on public health and the associated social costs in the EU is not yet possible. However, a recent study by the Massachusetts Institute of Technology[16] assessed the impact of the Volkswagen emissions control defeat devices on US public health. This study concludes that integrated over the sales period (2008–2015) the excess emissions are estimated to cause 59 premature

14 http://www.epa.gov/sites/production/files/documents/vehicleengine-penalty-policy_0.pdf

15 It should be noted that the EPA penalties start from the lower value of $3,750 per defeat device used, but that the overall fine can go as high as $37.500 per vehicle not complying with the exhaust emission requirements. In view of the uncertainties about the magnitude of the emissions exceedance (depending on the sources, they are estimated to be between 4 to 20 times higher than the permissible limits) no attempt can be made to apply the EPA calculation methods to estimate the possible environmental cost per car for exceedance of the emission limits.

16 http://dspace.mit.edu/handle/1721.1/99727

deaths in the US. When monetising premature mortality using EPA recommended data, this would represent a social cost of $450million over the sales period. It would not be scientifically sound to extrapolate findings from the US study to the EU. However, when taking into account that the affected fleet in the US represents about half a million vehicles and the one in the EU[17] around 8.5 million, the US findings certainly point to potentially very severe public health impacts in the EU.

Even in the absence of more precise estimates, the likely magnitude of the environmental and health impact makes it imperative to address the situation as a matter of urgency to avoid reoccurrence of such large scale non-compliance problems and their negative impacts. In addition, the public and political trust in the credibility and robustness of the regulatory type-approval system has been damaged by the fact that it failed to prevent and detect major non-compliance problems. Together with its limitations in ensuring effective, timely and EU wide remedial action, this has also seriously damaged consumer confidence.

It is therefore important to restore this trust and confidence of EU citizens and enterprises by means of actions geared towards establishing a stringent and well-functioning type-approval system. That is why the additional measures assessed in this document aim at addressing the overall robustness of the type-approval system in view of prevention and early detection of major cases of non-compliance. On this basis, adjustments to the policy options assessed in the IA report, but also going beyond these options are being considered to mitigate the identified weaknesses in enforcing and implementing the type-approval requirements.

Already at this stage, it is possible to identify the main elements of the type-approval system that may be particularly vulnerable and constitute the weakest link in the chain for ensuring a harmonised implementation and enforcement of the type-approval requirements.

The core element of the type-approval system is the **mutual trust between Member States with regard to the stringency applied in enforcing the type-approval requirements**, in particular for the tests and inspections that need to be carried out before issuing type-approvals. This decentralised system entails the risk that the weakest links in the chain (i.e. the Member States with the least stringent approach towards enforcing type-approval) could be targeted by applicants who want to cut corners. The policy options identified, assessed and selected in the IA report already included a number of ideas to limit this risk.

The potential scale of this problem cannot be quantified, but the fact that some Member States issue a high number of type-approvals without having a substantial automotive industry might point to a certain imbalance in the current system. Table 3 provides an overview of the number and share of type-approvals granted per Member State and the production output of their automotive industry. While some of the top listed Member States in terms of type-approvals also account for an important share of the production, others account for little or none.

[17] Using a multiplication factor of 17

Table 3: **Overview of type-approvals issued by Member States compared to production**

Country	Total number of type-approvals issued (2004 to 2009)	Percentage of type-approvals issued (2004 to 2009)	Percentage of total EU motor vehicle output[18]
Germany	**1209**	**23**	**33**
Luxembourg	**1002**	**19**	**0**
UK	**891**	**17**	**8**
France	**729**	**14**	**13**
Netherlands	**393**	**7.5**	**0**
Malta	**344**	**6.5**	**0**
Spain	**243**	**4.6**	**14**
Italy	**193**	**3.7**	**6**
Belgium	**76**	**1.5**	**4**
Ireland	**69**	**1.3**	**0**
Czech Rep.	**24**	**0.4**	**6**
Latvia	**18**	**0.3**	**0**
Hungary	**11**	**0.2**	**1**
Sweden	**9**	**0.2**	**0**
Romania	**5**	**0.1**	**2**
Lithuania	**5**	**0.1**	**0**
Poland	**-**	**0**	**5**
Slovak Rep.	**-**	**0**	**3**
others	**-**	**0**	**5**
Total	**5229**	**100**	**100**

This distribution may simply indicate that the technical and administrative capacity to carry out verification testing and to issue type-approvals is unevenly distributed in the EU and not always focussed in the main producer countries. However, it could also be related to differences in the stringency that type-approval authorities and their technical services apply, which could induce applicants to selectively apply for type-approval with those approval authorities who are likely to be the most lenient. Therefore, it is important, to ensure that the observed pattern it is not the result of unfair competition between national type-approval authorities and their technical services. In order to be able to better verify this in the future, more data from an improved monitoring of these bodies would be highly useful.

Another critical aspect of the current system is that **only the Member States that have granted a type-approval for the concerned products are entitled to decide on the corrective actions** to be taken by the economic operator, and to approve the corrective measures necessary to restore compliance. When these decisions are not taken, or when they are not taken timely enough or when they are not satisfactory, other Member States have under the current systems no means of redress as they cannot take safeguard measures against the non-compliant vehicles on their market, without involvement of the Member State that issued the type-approval. In the aftermath of the VW case, and despite the co-ordination efforts undertaken by the Commission, it appeared very difficult to obtain a harmonised and uniform response by all Member States, in terms of the actions judged necessary to address the non-compliance problem (see Annex 2). This demonstrates that the current type-approval system is not well equipped to address major non-compliance problems in a consistent and coherent manner across the EU. Therefore, additional changes need to

[18] Source: Impact assessment study report, RPA, Annex 9, p. A9-3

be considered, in particular with regard to the introduction of centralised supervisory and control mechanisms. Different options for doing so will be explored in this document.

Technical services are paid directly by manufacturers for carrying out type-approval inspections and tests on the manufacturers' vehicles. This entails a potential risk that commercial and financial pressure may be exercised and could negatively affect the independence and performance of the technical services. The policy options identified, assessed and selected in the IA report, aimed at strengthening the independence criteria for technical services, but did not address possible ways and means to increase their financial independence. Consideration should be given to changing the remuneration system for technical services to ensure a greater financial independence.

Finally, it appears that the **dissuasive nature of the penalties in the enforcement system has not been sufficiently strong** to deter fraudulent behaviour. This relates to sanctions/penalties in particular, together with weaknesses in the areas of market surveillance and safeguard clauses. In combination, these weaknesses appear to result in a situation where the risk of being detected and penalised may not be sufficiently dissuasive to prevent fraudulent behaviour.

5. PROBLEM DRIVERS

The overarching problem is the lack of detection and prevention of non-compliant automotive products (i.e. motor vehicles and their parts) in the market, indicating that there may be regulatory failures in the type-approval system that make it possible that non-compliance is not prevented and detected, and that as a result, non-compliant products can be placed on the internal market.

There are a number of underlying factors (so-called "problem drivers") that cause and exacerbate this overall problem. The IA report identified already five main problem drivers which have been reassessed with a view to identify to what extent their nature and scale may have changed since the original IA report. This re-assessment confirms that four of the problem drivers are particularly relevant for the established regulatory failure. (Drivers B, C, D and E). Problem driver A, by contrast, is considered not to be directly contributing to the existence of non-compliant products on the market (it rather is considered as a helpful tool to identify and hold economic operators accountable for the non-compliance). In addition, the view taken in the original IA report that automotive products originating from outside the EU would be one of the main problems, needs to be adjusted in view of the fact that a case of major non-compliance stems from a EU manufacturer. Furthermore, a new problem driver F has been identified, i.e. the lack of harmonised enforcement and implementation of the type-approval requirements. The table below provides an overview of all six problem drivers.

Table 4: **Overview of problem drivers and objectives**

Problem driver	**Objective**
A) Insufficient traceability of automotive products and lack of clarity about responsibilities of importers and distributors	Enhance the traceability of automotive products to enable action against non-compliant products and clarify the responsibilities of importers and distributors

B) Lack of clarity about the responsibilities and cooperation of enforcement authorities	Specify and clarify responsibilities of enforcement authorities to ensure effective and uniform action against non-compliant products
C) Varying degrees of stringency and quality applied by technical services	Ensure the quality of type-approval and conformity of production checks across the EU
D) Lack of clarity on rights and obligations of Member States' authorities in taking safeguard measures and in launching recall procedures	Ensure the effective and timely implementation of safeguard and recall procedures across the EU including clear rules on involvement of different authorities and cooperation between them
E) Weaknesses in the control procedures for ensuring conformity of production	Ensure that production models comply with the approved type
F) (New) Lack of EU co-ordination and supervision to ensure harmonised enforcement	Provide a level playing field and enable an effective response to a situation of non-compliance

The problem drivers B, C, D and E need particular attention, to ensure that the policy options designed to address them are sufficiently effective and efficient to prevent the reoccurrence of major non-compliance problems. For each of them, the preferred combination of policy options as determined in the IA report needs to be reassessed with the aim of identifying any adjustments that could be necessary to provide a more adequate response to the problem drivers and to increase the effectiveness of these policy options in reducing the market share of non-compliant automotive products. In addition, policy options in response to the new problem driver F need to be developed and assessed.

Problem driver A

Difficulties to trace the origin of non-compliant and unsafe products encountered on the market and lack of clarity about the respective responsibilities of economic operators involved in the supply chain for such products.

The reassessment of the policy option selected to address this problem driver resulted in the conclusion that this policy option does not need to be strengthened in the light of the objective to better detect and prevent non-compliance problems. It will, therefore, not be reconsidered in this document.

Problem driver B

Lack of clarity about the respective responsibilities of and the co-operation between the different authorities that may be involved in the enforcement of the technical harmonisation legislation for the free movement of motor vehicles (in particular type-approval-, market surveillance- and border control authorities) and the role of the Commission.

The IA report, which will be accompanied by this document, highlights under this problem driver that the current type-approval legislation focuses mainly on pre-market control procedures for type-approval and the conformity of production. As a result, it only defines and refers to type-approval authorities and the competent authorities for the assessment and designation of technical services. The lessons learned from the VW-case demonstrate that this may not be sufficient to prevent and detect non-compliance problems by means of the ex-ante controls of the type-approval procedure. Consideration should therefore be given to strengthening the already envisaged market surveillance provisions to ensure that additional, targeted compliance verification tests on vehicles already placed on the market are carried out.[19]

In addition, the VW case revealed that large scale non-compliance problems that seriously affect the entire EU market cannot be adequately addressed by Member States individually. After the VW case became public, there were slow and uncoordinated responses in different Member States creating confusion among the affected citizens. In fact, the responses the Commission received in reply to the questionnaire sent to the Member States did not provide a fully informative and coherent picture on their actions, and demonstrated the need for coordination of these actions and responses with a view to ensuring a harmonised and EU wide response to the situation of non-compliance (see Annex 2). Coordinated and harmonised action by all enforcement authorities in all Member States is crucial to maintain the confidence in the internal market for motor vehicles and to avoid distortion of competition. It is therefore essential that appropriate remedial action is taken across the EU against motor vehicles that do not comply with the type-approval requirement or represent a serious safety risk or harm to the environment.

The competence of the national enforcement authorities is limited to the territory of their Member State. Weaknesses in the organisation of enforcement in one single Member State can seriously undermine the efforts by others to keep non-compliant products from entering the market. Also when other Member States detect non-

[19] It should be noted that the United States' Environmental Protection Agency has come to a similar conclusion in response the detection of the use of defeat devices in cars on the US market. https://blog.epa.gov/blog/2015/10/epas-rigorous-auto-oversight-will-get-even-stronger

compliant automotive products on their market, they are under the current system entirely dependent on the remedial actions that are decided on by the Member State that issued the type-approval.

Where remedial action is required beyond the national border, enforcement authorities must be able to rely on cooperation and exchange of information with their colleagues in the other Member States. This needs to be properly coordinated to be effective. Such situation calls for considering ways and means for more oversight at EU level, and the role by the Commission in this, to ensure that EU wide remedial actions are taken to adequately address situations of non-conformity.

The absence or the poor functioning of such an exchange of information and cooperation hampers an effective and uniform enforcement of the automotive internal market legislation across the EU. The existing fora for exchange of information between type-approval authorities of the Member States[20] are mainly addressing issues related to the interpretation of the type-approval requirements and procedures specified in the legislation. They are not tailored and equipped to support and to ensure an effective exchange of information and cooperation between enforcement authorities on non-compliance issues, neither to ensure an adequate and harmonised implementation and enforcement of the type-approval requirements, in particular when it comes to preventing, detecting and/or remedying non-compliance problems.

Problem driver C

Divergence in quality of the type-approval and conformity assessment tasks carried out by technical services.

Technical services are key players in the type-approval process as they have to carry out the tests and inspections necessary for type-approval and to verify that manufacturers are producing their vehicles in conformity with the approved type by ensuring an adequate level of conformity of production. Varying degrees of stringency and quality standards applied by technical services in these fields are issues that have emerged from the public consultation and the ex-post evaluation study, and are considered to contribute substantially to hampering the harmonised implementation of the type-approval legislation.

Therefore, the policy options identified and selected in the IA report aim at strengthening the independence of technical services, but the reassessment of these policy options revealed the need for additional precautionary efforts to ensure that the independence and performance of technical services cannot be impeded by financial and economic pressures.

As already indicated in Section 4 (Problem description), there may be a need to assess whether adjustments to the designation procedure and remuneration system for technical services could contribute to further strengthen their independence and the quality of their performance.

Problem driver D

Lack of clarity and harmonisation in the post-market safeguard procedures and the provisions for the recall of vehicles.

[20] TAAEG (Type Approval Authorities Experts Group) & TAAM (Type Approval Authorities Meetings)

The limitations of the current safeguard clauses and recall provisions of the type-approval framework have become clear in the context of the Member States ' response to the VW case. They have appeared to be not sufficiently robust and flexible to offer effective remedial tools to the enforcement authorities in the Member States and to the Commission to take swift, effective, harmonised, EU-wide remedial action against non-compliant vehicles.

The current safeguard procedures are designed on the assumption that the type-approval authority that issued the approval for a type of vehicle would take timely and appropriate remedial action whenever the type of vehicle would be found not to comply with the requirements. Reassessment of this assumption is necessary, as well as the need to address also those cases where no such appropriate and timely remedial action would have been taken by the issuing type-approval authority. In particular, the rights and obligations of the other Member States and the role of the Commission in such cases may need to be clarified.

In this context, the current system of sanctions and penalties also plays an important role. It needs to be critically assessed whether the system, where the decisions on the application of sanctions and the level of penalties are taken at the level of individual Member States is sufficiently effective in discouraging fraudulent behaviour and circumvention of the rules. In particular the question if the current division of responsibilities results in effective, proportionate and dissuasive penalties for infringing type-approval rules needs to be asked.

Problem driver E

Shortcomings in the legal provisions for ensuring conformity of production.

The procedures for ensuring conformity of production (CoP) are an indispensable part of the overall type-approval process since they aim at ensuring that all vehicles are produced in accordance with the approved type. Therefore, they constitute a very important link between the ex-ante type approval procedure and the ex-post market surveillance activities, and – if properly specified and implemented – a powerful tool to minimise the risk of non-compliant products being placed on the market. This, in turn, would limit the need for restrictive post-market actions to remedy the problems associated with such products.

The current CoP provisions, however, give too much room for diverging interpretation and application. In particular, the weaknesses in the criteria for the assessment of the quality assurance system to be set up by the manufacturer, for the frequency of periodical audits and the possibility of unexpected visits to the manufacturers' premises to verify the conformity of production arrangements result in varying degrees of rigour applied by type-approval authorities and their technical services.

The current CoP provisions have also not succeeded in detecting and preventing the use of defeat devices in production vehicles. It is, therefore, necessary to assess to what extent further adjustments to the selected policy option would be necessary so as to contribute better to achieving the goal of early detection and prevention of non-compliances before vehicles are placed on the market. In this assessment, the role of the technical services and the responsibility of approval authorities should be taken into account. In view of the clear link to the problem drivers B and C, the need for better monitoring and supervision should also be assessed with a view to ensuring a correct and harmonised implementation of the CoP requirements.

Problem driver F (New)

Lack of EU co-ordination and supervision to ensure harmonised enforcement.

The discovery of major non-compliance problems on the EU market has demonstrated that the current decentralised system for implementation and enforcement of the type-approval requirements by the Member States may not be sufficiently effective. The lack of clear rules and procedures to ensure effective, coordinated and harmonised remedial action by the Member States is resulting in a patchwork of different reactions by the Member States. Some Member States have been very slow in reacting or did not take action at all (for an overview see the Appendix to Annex 2). This is also due to the fact that their rights and obligations to take remedial action against non-compliant products are not precisely defined in the current framework (see also problem driver D).

Furthermore, the role of the European Commission in the current safeguard procedures is limited which hampers effective and timely coordination and harmonised remedial action by all Member States. Addressing this failure appears vital for improving the system's capability of dealing with major non-compliance issues across the EU in a harmonised manner and to avoid distortion of competition.

Further adjustments to the policy options selected to address the problem drivers described above may help in contributing to remedy this failure. However, there is a need to consider whether this failure can be addressed completely, by clearly defining and, where necessary, strengthening the rights and obligations of the enforcement authorities in the Member States. Also the role of the Commission with regard to coordinating, supervising and complementing the national enforcement activities needs to be considered in this context.

6. OBJECTIVES:

6.1. General policy objectives

The overall objective for reassessing the policy options selected for the review of the type-approval system is to safeguard and strengthen the functioning of the internal market for motor vehicles, and to restore consumer's confidence in the system. This should be achieved by ensuring that all necessary mechanisms are in place for an effective and uniform application and enforcement of the requirements that any risk of non-compliance is prevented, detected and/or remedied as early as possible.

By means of strengthening the system of ex-ante controls (type-approval) and complementing these by post-market controls (market surveillance) it should aim at ensuring that all motor vehicles as well as systems, components and separate technical units intended for such vehicles which are placed on the EU market fulfil all the applicable requirements. This is necessary to guarantee a high level of safety and environmental protection to the EU citizen and to the society as a whole.

The market surveillance system needs to be designed to provide adequate procedures for remedying the situations where non-compliant automotive products, due to failures in the ex-ante controls, are nevertheless placed on the market. As such, the type-approval and market surveillance provisions are contributing to the general policy objectives of enhancing road safety and reducing pollutant and CO_2 emissions. Finally they should also aim at regaining consumer confidence in the EU regulatory framework and enhancing the competitiveness of the EU automotive

industry, by guaranteeing that a level playing field is maintained for all economic operators involved.

6.2. Specific policy objectives

Two specific objectives are envisaged with the re-assessment of the selected policy options and the assessment of further adjustments to these policy options:

– Ensure a better implementation and enforcement of the safety and environmental requirements governing the design and construction of motor vehicles and their parts and systems, in order to reduce the risk that non-compliance may not prevented, detected and remedied.

– Reduce the number of non-compliant automotive products on the market (by means of the above specific objective).

6.3. Operational policy objectives

Avoid reoccurrence of major non-compliance problems and prevent non-compliant motor vehicles, systems, components and separate technical units intended for such vehicles being placed on the EU market, and to withdraw them from the market, by:

– Specifying the respective responsibilities of the different authorities involved in this process, and coordinating their activities with a view to ensure effective and uniform action against non-compliant products across the EU market and the equal treatment of economic operators in the enforcement of the requirements;

– Increasing the credibility of the type-approval tests and inspections by enhancing the financial independence of technical services, and the criteria for their designation and for effectively monitoring their performance;

– Ensuring reliable and high-quality type-approvals procedures, including the conformity of production arrangements;

– Organising effective market surveillance with targeted compliance verification testing of vehicles already placed on the market, with a view to improve the knowledge and insight on the nature and extent of the problem of non-compliant products on the market, in order to better targeting strategies and remedial action;

– Ensure proper monitoring and supervision of the above implementation and enforcement activities, including enhanced penalty provisions as a deterrent against infringing the type-approval requirements.

7. REASSESSMENT OF THE SELECTED POLICY OPTIONS

Building on the policy options already selected for addressing the problem drivers identified in the IA report, this reassessment addresses the possibilities and needs to further adjust these policy options with a view to increase their effectiveness and efficiency, in particular with regard to remedying the implementation and enforcement weaknesses in the current type-approval system and with the aim to ensure that possible non-compliance risks can be prevented, detected and/or remedied in a timely manner. An overview of how the identified policy options and their possible adjustments relate to the relevant problem drivers is given in Table 5.

Table 5: **Overview of policy options and their possible adjustments**

Problem driver	**Selected policy option in the impact assessment report**	**Possible adjustments to the selected policy option**
B) Lack of clarity about the responsibilities and cooperation of enforcement authorities	Option B.3: Specify the role of the different authorities involved in the enforcement of the type-approval legislation + establish clear procedures for information exchange and co-operation between them	Establishment of an Enforcement Forum to ensure proper information exchange and to coordinate the co-operation between enforcement authorities Development of harmonised market surveillance strategy consisting of sufficient and targeted compliance verification tests on vehicles already placed on the market
C) Varying degrees of stringency and quality applied by technical services	Option C.3: Clarify and strengthen the requirements technical services have to comply with to be entitled to perform type-approval testing and verification of conformity of production.	Introduction of a supervisory mechanism on the assessment and designation of technical services by means of joint audits, including also a regular monitoring of their performance before their designation can be renewed. Increase the financial independence of technical services by changing the remuneration system for their type-approval activities (national type-approval fee structure)
D) Lack of clarity in safeguard measures and recall procedures	Option D.3: Include legal provisions to specify the role of and interaction between the different authorities involved in post-market safeguard measures and recall actions.	Extension of the right to take safeguard measures and to order recalls in case of serious non-compliance to all Member States and the Commission Extension of penalties to economic operators for infringing the type-approval requirements to include also technical services
E) Weaknesses in the procedures for ensuring conformity of production	Option E.3: strengthen the assessment of quality management systems for production, and product related controls through inspection and testing, under surveillance by the competent authorities.	Monitoring of the respect of the CoP verification requirements by technical services (included in the envisaged system of joint audits of technical services)
F) (New) Lack of EU co-ordination and supervision to ensure harmonised enforcement		2 new policy options: 1) maintaining the decentralised enforcement system but with more rights for the other Member States to take precautionary measures and including better EU oversight (supervisory system, managed by the Commission, to monitor and steer the national type-approval and market surveillance activities). 2) replacing the decentralised

		enforcement system with a centralised system that would take over the responsibilities of Member States and be in charge for EU wide type-approval and market surveillance activities (EU Type Approval and Market Surveillance Agency)

7.1. Problem driver B: lack of clarity about the responsibilities & cooperation of enforcement authorities

Option B3: The selected regulatory option in the report envisages to better specify the role of the different authorities involved in the application of the type-approval legislation and to establish clear procedures for information exchange and co-operation between them to effectively mitigate the presence of non-compliant products on the market.

The re-assessment of this policy option has resulted in identifying a possible adjustment to reinforce this policy option by setting up an appropriate mechanism to ensure proper information exchange and to improve the co-operation between national authorities. This supervisory system should result in an EU-wide and harmonised strategy in the fight against non-compliance.

To coordinate the supplementary activities stemming from the above adjustments to policy option B3, it should be envisaged to set up an Enforcement Forum, chaired by the Commission, in which the authorities of the Member States would participate to exchange information, develop enforcement strategies, and coordinate harmonised enforcement projects. This Enforcement Forum would also be used to co-ordinate and evaluate the joint audits of technical services and the peer-reviews of type-approval authorities (see Section 8.2).

In addition, to address the other driver identified in section 4 for problem B, there is a need to consider the development of a harmonised market surveillance strategy, which by means of sufficient and targeted compliance verification tests on vehicles already placed on the market, to be carried out by Member States and by the Commission, would provide the appropriate tools for verifying whether or not the ex-ante controls of the type-approval procedure have failed to prevent and detect he risk of non-compliance.

The selection of these adjustments to the selected policy option for addressing problem driver B has been based on the identification of best practices established in other EU product harmonisation legislation to ensure adequate safety and environmental protection (notably medical devices).

7.2. Problem driver C: varying degrees of stringency and quality applied by technical services

The regulatory Option C3 selected in the impact assessment report would consist of developing legal provisions to clarify and strengthen the requirements technical services have to comply with to be entitled to perform type-approval testing and verification of conformity of production. These provisions would in particular aim at

clarifying the criteria governing the technical independence (e.g. technical services are not allowed to be the designer, manufacturer, supplier, installer, purchaser, owner, user or maintainer of the vehicles or devices tested) and their financial independence (e.g. the remuneration of the top level management and assessment personnel is not to depend on the number of assessments carried out or on the results of those assessments).

The reassessment of the effectiveness of this policy option has demonstrated the need to further increase the financial independence and performance criteria for technical services, and the need to introduce supervisory mechanisms on the assessment and designation of technical services, including also a regular monitoring of their performance before their designation can be renewed. This supervisory mechanism would be based on joint audits, involving the participation of at least three Member States' authorities and the Commission.

To strengthen their financial independence, the system of remunerating technical services for their type-approval activities would be changed: their fees would be administered by the type-approval authority that designated them, instead of technical services being directly paid by the manufacturers as is currently the case. This would require Member States to set up a national type-approval fee structure, to which the manufacturers applying for type-approval would have to pay for all related type-approval services rendered (i.e. those rendered by the type-approval authority and the technical service designated by it for carrying out the type-approval tests and inspections). By changing the remuneration of technical services, their financial independence from manufactures would be increased substantially.

The national fee structure to be set up by the Member States would also take into account the costs for the post-market compliance verification testing that the Member States will have to carry out as provided for in the adjustment measures to strengthen policy option B3.

7.3. Problem area D: lack of clarity in safeguard measures and recall procedures

The impact assessment report concludes that the best way to address this problem driver is the selection of the regulatory option D3. This selected option envisages amendments to the existing type-approval legislation by including provisions to specify the role of and interaction between the different authorities involved in post-market safeguard measures and recall actions. It also envisages measures to improve the cross border information exchange and cooperation between national enforcement authorities (i.e. type-approval authorities, market surveillance authorities, border control authorities).

In addition, changes to the current provisions on safeguard measures would be introduced, in line with the two step approach of Decision 768/2008/EC establishing a common framework for the marketing of products[21] and as already incorporated in the type-approval legislation for motor cycles[22]. Under this approach, Member States (or their approval authorities) would be required to inform the Commission and other Member States of safeguard measures taken where they consider that the established non-compliance is not restricted to their national territory.

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21 http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2008:218:0082:0128:EN:PDF

22 See in particular Chapter XII of Regulation (EU) No 168/2013 (Articles 46 to 53)

The reassessment of the selected policy option resulted in the conclusion that these measures should be pursued and further strengthened to become a more effective tool for enforcement. The right to take safeguard measures and to order recalls in case of serious non-compliance should be extended to all Member States and the Commission, rather than continue to be limited to the Member State that issued the type-approval.

In addition, the penalties that Member States have to apply to economic operators for infringing the type-approval requirements should be extended to address also cases where it would appear that the technical services have a shared responsibility for the non-compliance. The Commission would also have the right to levy penalties when either its independent compliance verification tests or the Union safeguard clause demonstrates that economic operators and/or technical services have failed to comply with their obligations under the type-approval legislation.

These adjustments to strengthen option D3 are considered essential to ensure that sufficiently strong deterrents are in place to make sure that economic operators refrain from trying to circumvent the rules and can be held accountable for placing non-compliant automotive products on the market. They also aim at ensuring that technical services rigorously verify the respect of the type-approval requirements by the economic operators.

7.4. Problem driver E: weaknesses in the procedures for ensuring conformity of production (CoP)

The impact assessment report selected regulatory option E3 to address this problem driver. This option envisages developing binding provisions to clarify and strengthen the CoP requirements. These binding provisions should enhance the assessment of quality management systems for production, and product related controls through inspection and testing, under surveillance by the type-approval authorities and their technical services. The current provisions for ensuring CoP should be improved by incorporating the concept that the quality assurance system of the manufacturer has to be assessed by the type-approval authority (or an accreditation authority acting on its behalf) based on the detailed quality assurance system documentation to be approved by that authority.

The re-assessment of the selected option has confirmed the importance the CoP procedures have in contributing to the detection of non-compliance and in preventing that production vehicles do not conform to the approved type and therefore risk being non-compliant. To ensure a proper implementation and enforcement of these CoP provisions, the peer-review system to audit technical services should also cover their responsibility to verify regularly and thoroughly whether the manufacturer is respecting all the conformity of production requirements.

7.5. New problem driver F: lack of EU co-ordination and supervision to ensure harmonised enforcement

The recent occurrence of major non-compliance problems has demonstrated that the current decentralised system for implementing and enforcing the type-approval requirements has not been effective in preventing, detecting and remedying such problems. While the need for swift and coordinated remedial action across the EU in such major non-compliance cases has become obvious, the current system does not provide the appropriate tools for organising and co-ordinating these actions. The current provisions fail to address the need for clear procedures and defining the

respective responsibilities of the national enforcement authorities and their interaction at EU level. The Commission has no formal role in this process. As a result, the powers for coordination and intervention by the Commission are limited and completely dependent on the goodwill of the Member States to cooperate in the investigations. The central role in this process under the current system is for the Member State that has issued the type-approval for the product, with very little possibilities for the other Member States to intervene and to take the necessary precautionary measures in their territory against these non-compliant products. This regulatory failure has to be addressed urgently. The envisaged adjustments to the selected policy options as described above may to some extent help in contributing to address this regulatory failure. However, there is a need to assess whether additional policy options could contribute to address this failure more completely.

Basically there are two options considered (apart from the status quo, i.e. continue with the current type-approval system without any changes).

The first option would consist of maintaining the decentralised enforcement system (whereby Member States remain responsible for the implementation and enforcement of the type-approval and market surveillance requirements), but with extended rights for the other Member States to take precautionary measures and better EU oversight to ensure a proper coordination and harmonisation of these measures. This may require setting up a robust verification and supervisory system to monitor and steer the national type-approval and market surveillance activities. This supervisory system would be managed by the Commission, with extensive powers to intervene quickly and effectively to remedy any weaknesses or problems in the implementation and enforcement of the type-approval and market surveillance requirements at the Member State level.

The second option would consist of replacing the decentralised system with a centralised system that would take over the responsibilities of Member States and be in charge for EU wide type-approval and market surveillance activities (EU Type Approval and Market Surveillance Agency – ETAMSA).

Both options will be assessed further on in Section 8.5.

7.6. Instruments for the policy options

Each of the identified adjustments to increase the effectiveness of the selected policy options are considered to be fully in line with the proportionality principle as they envisage addressing the regulatory weaknesses of the current type-approval system. They are also consistent with the overall policy objectives set out for the re-launch of the single market strategy, in particular with regard to ensuring stronger market surveillance, and by taking due account of the principles and boundaries of the horizontal framework for the marketing of products, in particular Regulation (EC) No 765/2008.

To enhance the harmonised implementation of the type-approval requirements by the Member States, and in line with the principles of smart regulation, it is envisaged to replace the current Framework Directive 2007/46/EC by a Regulation, directly applicable in the Member States.

8. ANALYSIS OF IMPACTS OF THE ENVISAGED ADJUSTMENTS TO THE SELECTED POLICY OPTIONS

It should be noted that this analysis of impacts for the envisaged adjustments to the selected policy options is mainly based on a qualitative rather than a quantitative approach. The main reason being that no data could be collected to build a quantitative assessment and to draw reasoned conclusions. The second reason is that the main objective of this initiative is to improve the effectiveness of the current legal framework by streamlining and enhancing procedures and processes, rather than by introducing new safety and environmental requirements. Also for the original Impact Assessment it has proven difficult to quantify in a reliable manner the impact of such procedural changes. Nevertheless, an attempt for a basic quantitative assessment has been made to indicate the rough order of magnitude of the benefits resulting from the envisaged adjustments to the selected policy. However, as already mentioned at the end of section 3, these estimates are building on assumptions about the likely improvement the envisaged adjustments could generate in the effectiveness of the selected policy options in terms of the possible reduction of the presence on the market of non-compliant products. Therefore, the benefit estimates are not sufficiently precise and robust to be used as a basis for comparison with the cost estimates for the selected policy options and their adjustments.

8.1. Problem driver B: lack of clarity about the responsibilities & cooperation of enforcement authorities

The envisaged adjustments to the regulatory option as described in Section 7.1 would provide increased legal clarity for enforcement bodies regarding their responsibilities and a better coordination of enforcement activities through the Enforcement Forum. Clear rules on information exchange and cooperation are absolutely necessary to ensure effective and harmonised EU wide enforcement. The need to establish a supervisory system will be discussed separately in the assessment of the new problem driver F (Section 8.5).

8.1.1. Affected stakeholders

(1) National authorities: Stronger cooperation with other Member States and the Commission. This may require national authorities to adapt their organisation and working procedures accordingly, possibly with the need to increase their resources, in particular for carrying out ex-post compliance verification testing, as well as for their participation in the Enforcement Forum and the peer-reviews (see assessment for problem driver C). Better coordination between Member States could however also mean cost reduction, if the Member State granting the type approval is no longer the only entity that is charged with following-up.

The costs associated with the better information exchange could be minimised by using the existing European Type Approval Exchange System database (ETAES)[23].

[23] The cost associated to setting up an electronic database for the exchange of type-approval information was already assessed in a feasibility study commissioned by the UNECE in June 2006 based upon the already existing European Type-Approval Exchange System (ETAES) database.

(2) European Commission: Need to establish and manage the Enforcement Forum, to steer the peer-review system and carry out independent compliance verification testing.

(3) Manufacturers: will be affected by the post-market compliance verification testing carried out by the Member States and the Commission.

8.1.2. Benefits

The envisaged complementary measures to better address this problem driver will result in substantially more effective enforcement results and a reduction in the market share of non-compliant products.

The Impact Assessment report on the selected policy options used as a basis for this criterion the assumption that the measures would be effective (50% reduction of the market value of non-compliant products). For the purpose of assessing the benefits of the envisaged adjustments, in combination with the initially selected policy option, it is assumed that the overall effectiveness will increase from high to very high (75% reduction of non-compliant products). The resulting benefit will be that the yearly rate of reduction of non-compliant products will increase from 15% per year to 22.5% per year. For problem driver B this would increase the **estimated monetised benefit** from € 94 million per year (for the initially selected policy option) to at least **€ 141 million per year** in terms of reduction of the market share of non-compliant products. It should be noted that the approach taken in this document for the estimation of benefits from reducing non-compliance is very conservative, as it is based on the lowest estimates used in the impact assessment of the selected policy options. This is a very prudent approach, which may underestimate the real benefits, especially as avoidance of possible environmental harm due to non-compliance and avoidance of consumer hassle (other than avoided opportunity costs of the time related to recalls) cannot be quantified.

The benefits from the selected policy option in terms of reducing the number of vehicles to be recalled and the associated cost savings have been estimated to represent a monetised value of € 7.2 million per year[24]. The envisaged adjustments to this policy option are expected to increase the effectiveness by 50% with a resulting additional cost saving of € 3.6 million per year. In combination, the selected policy option and its envisaged adjustment would generate a **total estimated benefit of € 10.8 million per year by reducing the number of vehicles to be recalled and the associated recall costs**.

[24] The impact assessment study estimated that on average the administrative and logistic cost for a manufacturer to recall a vehicle would be around € 250 (which does not include the costs for the new parts or components that may be needed)

8.1.3. Costs

The cost for the affected stakeholders is estimated as follows:

(1) National authorities: The need for increasing their resources to cope with the selected policy option for addressing problem driver B is estimated to generate an increase equal to the need that was identified in the IA report for transposition of the EU legislation nationally. This estimated cost of **€ 28 million per year** has been based on an **increase of human resources** representing on average a cost of € 1 million per year per Member State (representing on average the cost of 8 employees full-time equivalent). In view of the fact that the revision of the type-approval legislation is envisaged to take the legal form of a Regulation and not a Directive as anticipated in the Impact Assessment study, the estimated amount of € 28 million per year foreseen for transposition could be redeployed to cover the estimated need of increasing national authorities' human resources to comply with the envisaged adjustments to the selected option for addressing this problem driver. In addition, the costs for carrying out compliance verification testing is estimated to be in the same range as the cost estimate for the compliance verification testing carried out by the Commission (see Section 8.5), i.e. on average € 6.5 million per year per Member State, representing a total of **€ 182 million per year**. The overall cost for national authorities as a result of the envisaged adjustments to the selected policy option is, therefore, estimated to be in the order of € 210 million/year, with the understanding that the increase in human resources needs will be covered by the € 28 million/year that were foreseen for transposition.

(2) European Commission: The estimated costs for the European Commission to establish and manage the Enforcement Forum, to steer the peer-review system and carry out independent compliance verification testing are covered in Section 8.5, where the options for greater EU supervision and control are assessed.

(3) Manufacturers will be mainly affected by the post-market compliance verification testing carried out by the Member States and the Commission. Compared to the initially estimated costs for manufacturers to comply with the selected policy option (€ 90 million per year), the envisaged adjustments to this policy option would create an estimated cost increase of about €10 million per year[25], resulting in an **overall estimated cost of € 100 million per year for the combination of the selected policy option in combination with its envisaged adjustment**. Overall, a more effective enforcement of the type approval rules will induce manufacturers to comply with them, as the chances of non-compliance being detected will increase.

[25] The costs for manufacturers resulting from their involvement in the post-market compliance verification testing and inspections is estimated to be in the order of € 10 million per year, covering the making available of vehicles for these test and inspections (based on an upper estimate assuming up to 400 vehicles to be made available per year representing an average value of € 25,000 per vehicle). See § 7.5.1.3.

8.2. Problem driver C: varying degrees of stringency and quality applied by technical services

8.2.1. Affected stakeholders

(1) Technical services: will be subject to additional administrative burden and financial costs in relation to the envisaged audits carried out jointly by a number of Member State authorities with involvement of the Commission and renewal of their designation The information obligations for technical services are to a large extent based on standard reference provisions of the NLF decision 768/2008 (Annex I, Art. R28), and should therefore not result in significant administrative impact on technical services.

(2) National authorities: the stricter criteria for assessing, designating, monitoring and auditing technical services and for setting up the fee structure for collecting from the manufacturers the fees related to type-approval activities performed by the technical services and by the national authorities may result in national authorities having to adapt their organisation and working procedures accordingly. This could possibly entail the need to increase their resources, in particular for carrying out the audits through the peer-review system.

(3) Manufacturers: may be confronted with higher type-approval fees resulting from the additional costs incurred by national authorities for collecting the fees and for auditing the technical services.

(4) European Commission: will need to steer and participate in the peer-review system with the Member States for auditing the technical services.

8.2.2. Benefits

The strengthening of the criteria for technical services to ensure a high performance level in the execution of the type-approval testing and inspections will result in more reliable and harmonised verification and respect of the type-approval requirements. Ensuring greater independence from the manufacturer will also reduce the potential risk of a conflict of interest. The envisaged peer review mechanism for the auditing of technical services will be an incentive for those services to continuously provide state of the art services in delivering a robust verification of compliance with the type-approval and conformity of production requirements by the manufacturers. It is also expected to offer some scope for learning from good practice examples. Experience with a similar peer review mechanism of conformity assessment bodies in the field of medical devices legislation has been positive and has even resulted in underperforming conformity assessment bodies no longer providing services.

The impact assessment report used, as a basis for estimating and monetising the associated benefits of the selected policy option, the assumption that the measures would be effective (50% reduction of the market value of non-compliant products). For the purpose of assessing the benefits of the envisaged adjustments, in combination with the to the selected policy option, it is assumed that the overall effectiveness will increase from high to very high (75% reduction of non-compliant products). The resulting benefit will be that the yearly rate of reduction of non-compliant products will increase from 15% per year to 22.5% per year. For problem driver B this would increase the **estimated monetised benefit** from € 125 million per year (for the selected policy option) to **€ 187.5 million per year** (for the combination of selected policy option and their envisaged adjustments) in terms of reduction of the market share of non-compliant products.

Additional benefits can be expected from the effectiveness of the envisaged measures and the resulting decrease in the number of vehicles to be recalled and the associated cost savings. These have been estimated in the Impact Assessment report to represent a monetised value of € 13.6 million per year for the selected policy option. The envisaged adjustments to this policy option are estimated to increase the overall effectiveness by 50% with a resulting additional cost saving of € 6.8 million per year. In combination, the selected policy option in combination with the envisaged adjustments aimed to increase the performance of technical services in detecting and preventing non-compliance with the type-approval requirements are estimated to generate **benefits of € 20.4 million per year by reducing the number of vehicles to be recalled and the associated recall costs**.

8.2.3. Costs

The cost for the affected stakeholders is estimated as follows:

(1) Technical services:

The envisaged adjustments to the selected policy option aim at improving the performance and independence of technical services will result in additional administrative burden and financial costs, in particular in relation to the envisaged audits that will be carried out jointly by a number of Member State authorities with involvement of the Commission and for the renewal of their designation. These additional costs for the envisaged adjustments are assumed to quadruple the estimated costs for the pre-VW measures. **The overall cost for technical services as a result of the envisaged combination of the selected policy option and the envisaged adjustments is therefore estimated to be in the order of € 12 million per year** (+/- € 50,000 per year per technical service).

(2) National authorities: the estimated costs for national authorities to implement the stricter criteria for assessing, designating, monitoring and auditing technical services and for setting up the necessary structure for collecting from the manufacturers the fees related to type-approval activities performed by the technical services and by the national authorities are included in the estimated costs for increasing the human resources as described in Section 8.1.3. (1). The costs for national authorities associated with their participation in the joint audits of technical services (travel costs) are covered in Section 8.5.1.3. (3) below.

(3) Manufacturers: it is estimated that the potential increase in type-approval fees that may result from the additional costs incurred by national authorities for collecting the fees and for auditing the technical services will not be significant. The impact assessment study carried out to assess the impact of the selected policy option has demonstrated that the type-approval costs to manufacturers only represent 0.05% of their turnover, or putting this against profit margins (assuming a very conservative average profit margin of around 3% of the retail price) the increased type-approval cost would reduce profits only marginally if they cannot be passed on to consumers. Therefore, the increase in type-approval fees due to the stricter criteria for technical services and their regular auditing would not have a significant impact on the costs of operation for automotive companies.

(4) Consumers are not expected to be significantly impacted by the increased type-approval cost incurred by the manufacturers. The impact assessment study carried out on the selected policy option has demonstrated that the type-approval costs per vehicle sold in large series represent only € 5 to € 15 per car. It is, therefore, not a substantial cost and even if it the cost increase would be passed on to the consumer, this would not be significant compared to the total price of the car.

(5) European Commission: the estimated cost for the Commission to steer and participate in the peer-review system with the Member States for auditing the technical services is addressed in Section 8.5.

8.3. Problem driver D: lack of clarity in safeguard measures & recall procedures

8.3.1. Affected stakeholders:

(1) National authorities: the envisaged improvements in the safeguard and recall procedures would extend rights and obligations to all Member States instead of limiting them to the Member State that issued the type-approval as is currently the case. Member States should already have the necessary resources in place, because the current system already requires these resources to order recalls or impose safeguard measures if serious safety risks and/or the risk of serious environmental harm are detected. The envisaged extension of the safeguard procedures to also cover cases of non-compliance is not expected to have a significant impact on the already existing resources of the national authorities.

(2) Manufacturers who are complying with the rules should not be impacted by the envisaged improvements of the safeguard measures and recall procedures. Only those who may attempt to cut corners and save money by ignoring or circumventing the safety and environmental requirements will incur costs from the safeguard measures, recalls ordered and sanctions applied for rectifying and compensating the non-compliance problems caused by them.

(3) European Commission: the impact on the Commission stemming from having more rights and obligations as a result of the improved safeguard and recall procedures is expected to be limited and non-significant, certainly in comparison with the impact of the newly envisaged supervisory role for the Commission as described in Section 8.5.

8.3.2. Benefits

The expected benefits from the improved safeguard and recall procedures are difficult to quantify. They should result in reduced harm from serious safety and environmental risks and from non-compliance problems if they are sufficiently effective and harmonised EU-wide. In this context, it is important to keep in mind that these remedial measures should be rather the exception than the rule. The measures envisaged to address the other problem drivers are expected to be sufficiently effective so as to avoid that the safeguard and recall measures would need to be used frequently. However, in the case where major non-compliance problems, safety risks and/or environmental harm would arise, it is of utmost importance that these procedures are clear and efficient to guarantee swift and effective remedial action across the EU. Therefore, these important procedures will have also to be considered when assessing the level of EU coordination and supervision as described in Section 8.5.

8.3.3. Costs

The improved safeguard and recall procedures are not expected to generate any significant costs for the affected stakeholders.

8.4. Problem driver E: weaknesses in the procedures for ensuring conformity of production

8.4.1. Affected stakeholders:

(1) Manufacturers: manufacturers already respecting the conformity of production requirements that are currently in place should not be significantly affected by the strengthening of the procedures for verifying the compliance with the requirements. Sample inspections and testing are already foreseen in the current type-approval system, and the regular verification audits carried out by the type-approval authorities or their designated technical services should not create significant additional burden as such audits already have to be covered by the manufacturer's quality assurance management system.

(2) National authorities and technical services: have already under the current type-approval system the obligation to monitor and verify regularly whether the manufacturer correctly implements the conformity of production arrangements that have been approved as part of the type-approval process. They may be affected if they have minimised their efforts under the current obligations, which they will no longer be able to do under the strengthened criteria for ensuring compliance. The auditing of technical services (see Section 8.2) will also cover their performance in verifying and ensuring the respect of the CoP provisions by the manufacturers. The additional cost incurred by these audits is addressed in Section 8.2.3.

8.4.2. Benefits

The benefits of the selected policy option for addressing this problem driver, as quantified in the IA report, were ranked to be the most significant in terms of reducing the market share of non-compliant products (see table in Section 9.2.1). It reflects the importance of proper implementation and enforcement of the CoP in detecting and preventing non-compliance problems. Therefore, further strengthening the criteria for the verification of the compliance with the CoP requirements is envisaged to contribute even more effectively to the detection of non-conformity problems during the production process. This would reduce the risk that production vehicles differ from the approved type (which was one of the problems encountered with the implementation of the MAC Directive[26]). Better implementation and stricter surveillance of the CoP requirements is expected to increase significantly the effectiveness of the actions by enforcement authorities to detect and prevent non-compliance problems.

The impact assessment of the selected policy option for addressing this problem driver used as a basis for estimating and monetising the associated benefits the assumption that the measures would be effective (50% reduction of the market value of non-compliant products). For estimating the benefits of the envisaged adjustments to this policy option, in combination with the selected policy option, the same assumption is used as for problem drivers B and C, namely that the overall

[26] http://europa.eu/rapid/press-release_IP-15-6290_en.htm

effectiveness will increase from high to very high (75% reduction of the market value of non-compliant products), resulting in an increase of the yearly rate of reduction of non-compliant products from 15% per year to 22.5% per year. This would increase the **estimated monetised benefit** from € 250 million per year (for the selected policy option) to **€ 375 million per year** (for the combination of the selected policy option and its envisaged adjustments) in terms of reduction of the market share of non-compliant products.

Additional benefits can be expected from the increased effectiveness of the envisaged measures in terms of the likely decrease in the number of vehicles to be recalled and the associated cost savings. These have been estimated in the IA report to represent a monetised value of € 13.2 million per year for the selected policy option addressing problem driver E. The envisaged adjustments to this policy option are estimated to increase the overall effectiveness by 50% with a resulting additional cost saving of € 6.6 million per year. In combination, the selected policy option and its adjustments aiming to increase the performance of technical services in detecting and preventing non-compliance with the type-approval requirements are anticipated to generate a total **estimated benefit of € 19.8 million per year by reducing the number of vehicles to be recalled and the associated recall costs**.

The increased efficiency of the CoP requirements in detecting and preventing non-compliant vehicles from entering the market will also avoid the associated environmental harm caused by non-compliant vehicles on the market. While it is not possible to assess this quantitatively, it should be clear that when the strengthening of the CoP measures would prove to be successful in avoiding non-compliance with the exhaust emission requirements, the environmental benefits would be considerable.

8.4.3. Costs:

As indicated in Section 8.4.1 the costs associated with the better implementation and enforcement of the CoP requirements are estimated to be non-significant. The additional costs stemming from auditing the performance of technical services in ensuring a proper verification of the CoP requirements are addressed in Section 8.5 where the options for the greater EU supervision and control are assessed.

8.5. Problem driver F: lack of EU co-ordination and supervision to ensure harmonised enforcement

8.5.1. Option 1: Maintaining the decentralised system for the implementation and enforcement of the type-approval legislation by the Member States but complemented with an EU supervisory system.

This option envisages maintaining the decentralised system (whereby Member States remain responsible for the implementation and enforcement of the type-approval and market surveillance requirements), but ensuring a greater EU oversight by setting up a robust supervisory system to monitor and steer the national type-approval and market surveillance activities. This supervisory system would be managed by the Commission, with the power to intervene quickly and effectively to remedy any weaknesses or problems at national level with the implementation and enforcement of the type-approval requirements.

8.5.1.1. Affected stakeholders:

(1) Manufacturers: manufacturers may be affected to the extent that they may be requested to make vehicles available for compliance verification testing and inspections.

(2) National authorities and technical services: the way they might be affected by the obligation to carry out compliance verification tests has already been covered in Section 8.1.1. The impact of the participation of Member States authorities in the Enforcement Forum and the peer-review mechanism with joint audits of technical services is described respectively in Section 8.1.1. and Section 8.2.1.

(3) European Commission: the European Commission will be affected by new tasks related to establishing and managing the Enforcement Forum, to steer and coordinate the peer-review system and to carry out independent compliance verification testing.

8.5.1.2. Benefits:

The impact assessment of the selected policy options did not address this new problem driver. In an attempt to quantify the benefits of the envisaged supervisory system with its three main pillars, it is assumed that the supervisory system will increase the effectiveness of the selected policy options for addressing problem drivers B, C and D by 50%. This would result in an **estimated monetised benefit of € 117 million per year** in terms of the contribution of the EU supervisory system to the reduction of the market share of non-compliant products.

Increased effectiveness the EU supervisory system would lead to less vehicles being recalled. In an attempt to quantify these benefits, it is assumed that the supervisory system will increase the effectiveness of the adjustments to the selected policy options for addressing problem drivers B, C and D in reducing the number of vehicles to be recalled by 50%. This would result in an **additional estimated benefit of € 8.5 million per year** resulting from further reducing the number of vehicles to be recalled and the associated recall costs.

The estimated increased effectiveness of the EU supervisory system in detecting and preventing non-compliant vehicles from entering the market will also avoid the associated environmental harm caused by non-compliant vehicles being placed on the market. Avoided recalls would also reduce consumer hassle (beyond time spent) associated with recalls, which cannot be quantified.

8.5.1.3. Costs:

The **costs for manufacturers** resulting from their involvement in the post-market compliance verification testing and inspections is estimated to be **in the order of € 10 million per year**, covering the making available of vehicles for these test and inspections (based on an upper estimate assuming up to 400 vehicles to be made available per year representing an average value of € 25,000 per vehicle). Although the vehicles will maintain a certain market value after being tested and inspected (i.e. on the second hand market), this is not taken into account in this estimate, with a view to ensure that there is a sufficiently large margin left to cover other associated costs manufacturers may incur (logistic arrangements for the testing and inspections and the administrative follow-up of the compliance verification process).

The costs for the Commission in relation to the establishment and co-ordination of the EU oversight system are estimated as follows:

1) Enforcement Forum:

a) Staff for the establishment and management of the Enforcement Forum for the co-ordination of enforcement activities with the Member States; on the

assumption of +/- 20 meetings of the Forum per year: 2 FTE (+/- € 0.2 million per year);

b) Reimbursement of Member States representatives to participate in the meetings of the Enforcement Forum (+/- 20 meetings per year): +/- € 0.5 million per year.

2) Compliance verification testing:

Costs for running the Commission's independent compliance verification testing by independent laboratories (JRC): based on an estimated 130 vehicles tested per year on average, including necessary investments, equipment, running costs for the tests and staffing needs (9 FTEs) total: € 8.7 million/year.

3) Peer review system with joint audits of technical services:

a) Staff to organise and participate in 'joint assessments' of technical services; 250 in total, to be audited every 5 years; thus 50 audits per year (1 per week) = 2 FTE. These are the same 2 posts as under 1) a);

b) Reimbursement of Member States representatives to participate in the 'joint assessments' of technical services; 50 audits per year, on average minimum participation of 3 Member States /audit = +/- € 1.3 million per year.

Total costs for the Commission to set up and operate **the supervisory system would be around € 10.7 million per year** and would be covered through re-deployment.

8.5.2. Option 2: Centralise the type-approval system through the creation of a EU Agency

As mentioned in section 2, several calls have been made on the Commission to consider abandoning the current decentralised system for the implementation and enforcement of the type-approval legislation by the Member States and to replace it with a centralised system through the creation of an EU Type-Approval and Market Surveillance Agency (ETAMSA). As this option has only recently gathered momentum and was previously not considered a proportionate response to address the shortcomings of the EU's motor vehicle type-approval system, only very limited data and evidence is available against which the effects of this option could be examined. The following assessment is, therefore, of mostly qualitative nature.

8.5.2.1. Affected stakeholders:

(1) Manufacturers are affected to the extent that they would now be subject to centralised type-approval testing and would no longer enjoy the freedom to choose a technical service. As to the cost of individual type-approvals, it is likely that they would be roughly comparable to the current level.

(2) National authorities and technical services would be severely affected by this option. National type-approval authorities would lose an important part of their current competences to the new agency and the business model of technical services would change.

(3) The European Commission would be affected by new tasks related to establishing, funding and managing the new EU agency.

8.5.2.2. Benefits

The centralised type-approval system **would drastically reduce the risks that are associated with the decentralised system** in its current form. It would eliminate the possibility for type-approval shopping and ensure the harmonised application and

enforcement of type-approval requirements across the EU. By doing so, it would guarantee a level playing field for all manufacturers of automotive products and reduce the safety and environmental risks that are often associated with non-compliant products.

The creation of a centralised agency would also **facilitate a timely and effective response to a situation of non-compliance** and would eliminate the need for a complex system of information exchange and coordination by reducing the number of relevant entities.

8.5.2.3. Costs and non-pecuniary disadvantages

The **costs for setting up an agency will be at least 4 to 5 times higher** than the supervisory system described under Option 1. Compared to the estimated costs of € 9 million per year for the supervisory system envisaged under Option 1, the estimated costs for setting up and operating an agency would be in the order of magnitude of at least around € 40 to 50 million per year. These figures are derived from the 2014/2015 estimates for the contribution from the EU budget to agencies that have similar roles and responsibilities as the ETAMSA would have, in particular the European Maritime Safety Agency (EMSA) and the European Aviation Safety Agency (EASA). These 2014/2015 estimates are summarised in graph 1.1.6 below. It is understood that the responsibilities of these two agencies go beyond the equivalent of type-approval in the maritime/aviation sectors. However, while for instance EASA also carries out other activities than certification of aircraft, it should be taken into account that there is a limited number of aircraft manufacturers and of new aircraft models every year. In the car sector, a larger number of manufacturers develop a higher number of new car models every year, due to shorter development cycles. In light of this, the comparison of costs seems reasonable overall.

The **MFF 2014-2020 constrains the evolution of agency resources**. The evolution of decentralised agency staffing and appropriations over the years 2014-2020 is guided by two overall constraints: on the one hand, the indicative envelopes for agency expenditure by heading embedded in the MFF 2014-2020; on the other hand, the objective of reducing staffing levels in agencies by 5 % over 5 years[27]. The setting up of a new agency would not be compatible with the above constraints.

Compared to the supervisory system described under Option 1, the setting up of an Agency would have a number of non-pecuniary disadvantages:

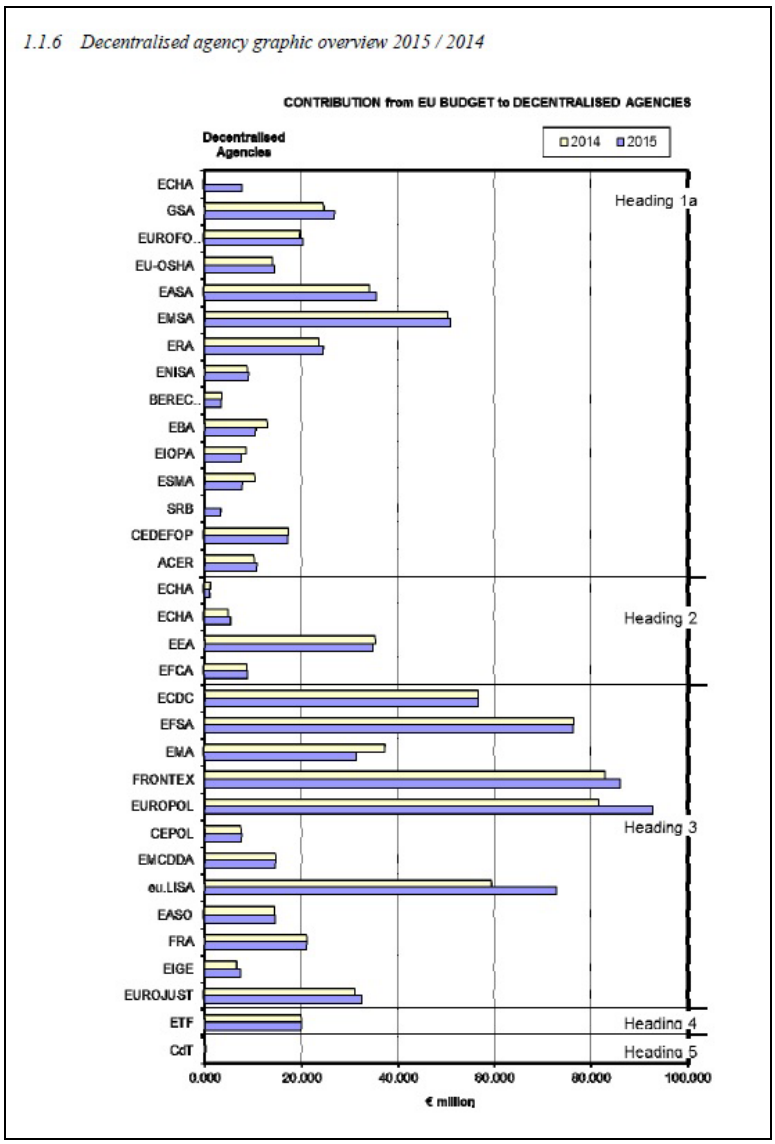
It would take considerably longer to establish an agency. This would result in the undesirable situation that during several years the current decentralised system without enhanced EU supervision would continue to exist, unless transitory measures are introduced. Timing will also be negatively impacted by the budgetary constraints of the MFF 2014-2020 (see point 3).

Replacing the existing infrastructure in the Member States (type-approval authorities, technical services and testing laboratories) with a centralised agency would also go beyond what is strictly necessary to tackle the problem and could be seen as disproportionate. While the VW case exposed weaknesses of the decentralised system in its current form, there is no evidence that a decentralised system as such cannot deliver the desired improvement. The supervisory system proposed under

[27] COM(2013) 519 final - Programming of human and financial resources for decentralised agencies 2014-2020

Option 1 would respect the principle of subsidiarity and would likely result in a comparable level of harmonisation in the implementation and enforcement of the type-approval legislation.

Chart 1: **Contribution from EU budget to decentralised agencies**



Source: COM(2014) 300 - Draft General Budget of the European Commission for the financial year 2015, Working Document Part III - Bodies set up by the European Union and having legal personality and Public-Private Partnership

Automotive type-approval also requires a highly specific set of skills and people with sufficient expertise in this domain are usually not readily available in the labour market. To quickly staff an EU agency, this expertise would need to come from the existing pool of experts in the national type-approval authorities and technical services. It is difficult to predict to what extent the necessary staff could be hired from this pool and to what extent this would compromise the timeline for the new agency to become operational. Abandoning the decentralised type-approval system could result in considerable job losses in the technical services and their laboratories. These losses would probably be partly offset by hiring staff for the agency, but it is highly unlikely that the same number of jobs could be maintained.

In view of the above constraints and disadvantages which clearly seem to outweigh the advantages, Option 2 is discarded.

9. COMPARING THE SELECTED POLICY OPTIONS AND THEIR ENVISAGED ADJUSTMENTS

9.1. Summary of the qualitative assessment of the impacts of the selected policy options and their envisaged adjustments

Complementing the selected policy options with the envisaged adjustments is expected to increase the overall effectiveness of the type-approval framework. As such it will generate substantial benefits for society, but with a higher cost to regulators than the selected policy options on their own[28].

Table 6: **Summary of the qualitative assessment of the selected policy options with and without their possible adjustments**

Envisaged measures	*Selected policy options in the impact assessment report*	*Selected policy options in the impact assessment report with further adjustments*
Effectiveness	moderate	very high
Timeliness	low	high
Responsiveness to political & public expectations	low	high
Estimated benefits for society	moderate	high
Estimated costs for:		
Member States	moderate	high
Commission	moderate	high
Technical services	moderate	high
Manufacturers	moderate	moderate

9.2. Comparison of impacts of the selected policy options and their adjustments in terms of estimated reduction of the market share of non-compliant automotive products and reduction in environmental harm and avoidance of recall costs

9.2.1. Estimated reduction of the market share of non-compliant automotive products and decrease in the probability of a large magnitude fraud event with large social costs

The reduction of the market share of non-compliant products is the yardstick used to estimate the effectiveness of the envisaged measures in terms of achieving better implementation and enforcement. The selected policy options could, based on the estimates, reduce the value of the market taken up by non-compliant products by €656 million per year. The combination of these policy options with their envisaged adjustments could increase this benefit to approximatively € 1 billion/year. The estimated benefits for the selected policy options and their adjustments to address the identified problem drivers in terms of reducing the share of non-compliant products on the market, the number of reduced recalls and associated cost avoided is summarised in the table below.

The additional measures assessed in this document will significantly increase the chance of non-compliant products being detected and therefore act as a strong

[28] The differences between this qualitative assessment and the one in the original Impact Assessment Report are due to the effect of the envisaged adjustments to the selected policy options. They do not stem from a re-appraisal of the originally selected options.

deterrent to manufacturers to try to avoid compliance with the rules. Therefore the environmental harm stemming from non-compliant products will also be avoided. While it is not possible to assess this quantitatively, it should be clear that the environmental benefits of avoiding a major non-compliance with the exhaust emission requirements case are considerable. Especially, the additional pollutant emissions that resulted from the VW case and their negative impact on air quality can be assumed to be significant due to a very high number of affected vehicles. However, this effect cannot be quantified yet precisely.

The additional costs incurred by manufacturers are unlikely to increase the prices to final consumers. Even if full pass-on is assumed, the costs of type approval per vehicle should stay roughly in the same range as indicated in the impact assessment of the selected policy options (€ 5-15 for large volume passenger cars). At the same time, the measures would reduce the costs to consumers associated with recalls (opportunity cost of time as presented in the table below, fuel costs of driving to the garage etc.) by promoting compliance.

Table 7: **Estimation of the monetised benefits of selected options and their envisaged adjustments for the problem drivers identified**

Estimation of the monetised benefits of selected options and their envisaged adjustments for the problem drivers identified							
	Problem driver A	**Problem driver B**	**Problem driver C**	**Problem driver D**	**Problem driver E**	**Problem driver F**	**TOTAL***
Market value reduction of non-compliant products							
Selected policy options[29]	188	94	124	-	250	-	**656**
Envisaged adjustments to the selected policy options	-	47	62	-	125	117	**351**
Total	188	141	186	-	375	117	**1,007**
Avoided costs to consumers by reduced number of vehicle recalls							
Selected policy options	-	7.2	13.6	-	13.2	-	**34.0**
Envisaged adjustments to the selected policy options	-	3.6	6.8	-	6.6	8.5	**25.5**
Total	-	10.8	20.4	-	19.8	8.5	**59.5**
Estimated total benefits							**1,066.5**
* in € million/year							

[29] See Impact Assessment report which this document is accompanying

9.2.2. Estimated costs for implementing the selected options and their envisaged adjustments

The estimated value of the main costs for implementing the selected policy options and their envisaged adjustments, as well as their combination is summarised in the table below.

Table 8: **Summary of costs estimates for implementing the selected options and their envisaged adjustments**

Summary of costs estimates for implementing the selected options and their envisaged adjustments (€ million/year)							
	Problem driver A	Problem driver B	Problem driver C	Problem driver D	Problem driver E	Problem driver F	Total*
Indicative costs to manufacturers							
Selected policy options[30]	90	-	-	-	-	-	90
Envisaged adjustments to the selected policy options	-	10	-	-	-	-	10
Total	90	10	-	-	-	-	100
Indicative costs of market surveillance by Member States							
Selected policy options	-	10	-	-	-	-	10
Envisaged adjustments to the selected policy options	-	182	-	-	-	-	182
Total	-	192	-	-	-	-	192
Indicative costs of implementation & enforcement by Member States							
Selected policy options	-	-	-	-	-	-	-
Envisaged adjustments to the selected policy options	-	-	-	-	-	28	28
Total	-	-	-	-	-	28	28
Indicative costs for technical services							
Selected policy options	-	-	3	-	-	-	3
Envisaged adjustments to the selected policy options	-	-	9	-	-	-	9
Total	-	-	12	-	-	-	12
Indicative costs for EU to monitor and supervise							
Selected policy options	-	-	-	-	-	-	-
Envisaged adjustments to the selected policy options	-	-	-	-	-	11	11
Total	-	-	-	-	-	11	11
Indicative overall cost estimates of implementing the selected policy options in combination with their adjustments							343
* in € million/year							

10. CONCLUSIONS

Despite the high degree of uncertainty about the robustness of the estimates made for the benefits the selected policy options could generate, and the need to make some extrapolation assumptions on the effectiveness and costs for their envisaged adjustments, one can nevertheless conclude that overall, the estimated costs of implementing the selected policy options with their adjustments are at least an order of magnitude lower than the estimated benefits. The preferred overall policy option is, therefore, to complement the selected policy options that have been identified as the most cost-efficient ones in the IA report by the adjustments identified in this complementary analysis document.

11. MONITORING AND EVALUATION

The same key indicators as identified in the original Impact Assessment Report would be used for the envisaged adjustments to the selected policy options.

These would be complemented by the following specific key indicators to measure the success of the additional measures envisaged by these adjustments:

– Number of technical services audited, and the impact of e audits on the designation of these technical services (ration of extensions, suspensions and withdrawals)

– Number of vehicles subject to ex-post compliance verification testing and the resulting actions from these actions (ration of number of vehicles confirmed to be in conformity, number of vehicles showing non-compliances, number of vehicles recalled as a result of the outcome of the compliance verification testing)

– Changes in the patterns for the manufacturers' selection of the type-approval authorities and the associated designated technical services for obtaining type-approvals as a result of the changes in the remuneration system.

The type-approval framework has been substantially updated in 2007 with Directive 2007/46/EC, followed by a simplification exercise in 2009 with the General Safety Regulation No 661/2009. The fitness check on this framework, carried out in 2013, has demonstrated that a reasoned review of all the framework provisions was not possible due to a number of transitional provisions not yet having entered fully into force and the lack of experience with regard to the implementation of the newly introduced provisions. The lesson to be drawn from this is that a next review would only make sense if sufficient time is allowed for building the necessary experience to collect relevant evidence of the effects the selected policy options and their envisaged adjustments will generate (i.e. at least 5 years after its entry into force).

12. TRANSPOSITION AND ASSISTANCE ISSUES

A central role for assisting Member States in implementing the selected policy options and their envisaged adjustments will be given to the Enforcement Forum, in which the Commission and Member States will develop strategies for implementing the new measures, with view to ensure the highest degree of coherence and consistence in their implementation.

Budgetary allocations will made in the EU budget to cover the costs of participation of Member States in the meetings of the Enforcement Forum, as well as for their

participation in the joint audits of technical services and the peer-reviews of national type-approval authorities. In addition, technical assistance to Member States will be provided by JRC to harmonise the procedures for carrying out ex-post compliance verification test on vehicles already placed on the market.

ANNEX 1 JOINT LETTER OF 11 JANUARY 2016 BY MEPS PETER LIESE, MATTHIAS GROOTE, GERBEN-JAN GERBRANDY AND CATHERINE-BEARDER

Brussels, 11 January 2016

Dear Commissioner,

We are writing to outline our demands for the future reform of Europe's testing system in light of your current work on the review of Directive 2007/46/EC establishing the type-approval framework for motor vehicles.

The recent emissions scandal lay bare the inadequate and weak testing system in place in many Member States and the urgent need to make that framework more transparent, accountable and effective. It is deplorable that there is no consistent data exchange mechanism today – not even for the Commission – on what vehicles are type-approved where and to what standards, nor any clear obligation on national type-approval authorities (TAA's) to test production cars or launch investigations. The current system of leaving all implementation of Directive 2007/46/EC to Member States has thus clearly failed.

While we recognize that there are many improvements that you are already considering in your current discussions, we would like to call on you in particular to include the following changes:

- There should be effective EU oversight of the work of national TAA's to ensure they all work to one consistent quality standard. This must include audits of the work of authorities; and conformity checks on new and low mileage vehicles in normal driving to verify emissions are consistent with certified values
- Commercial relationships must end between vehicle manufacturers and Testing Services and TAA's. Organisations involved in approving vehicles must be genuinely independent
- The Commission must have the power to disqualify, for a specified period, national TAA's and testing services from providing services as part of vehicle approvals where serious or consistent failure is found
- In the interest of the EU Single Market, the European Commission should in the future levy penalties for non-compliance with EU vehicle legislation
- The European Commission must be informed of all approvals being issued. Any requests for exemptions or extensions to approvals must be agreed jointly by the European Commission and TAA
- The new law should spell out clear, binding and quantitative obligations on national TAA's such as the exact amount of conformity of production and in-use compliance tests they need to carry out annually
- To provide transparent publicly available information about the approvals being issued and the outcomes of all testing both for initial type-approval and performed as part of conformity checks. This shall include the results of audits and checks performed by the Commission.

In the aftermath of the emissions scandal, we have a unique opportunity to put in place an effective and robust testing system that would avoid the current weaknesses. This is needed to restore the loss of confidence in Europe's car regulations and maintain the dominant status of EU automotive regulations globally that provides a significant competitive advantage to the European car industry.

We call upon you to take the above points into account and looking forward to working with you when the proposals come for our consideration early next year.

Yours Sincerely

Peter Liese MEP

Matthias Groote MEP

Gerben-Jan Gerbrandy MEP

Catherine Bearder MEP

CC: Vice-President Jyrki Katainen

Gwenole Cozigou, Director-General, DG Growth

Joanna Szychowska, Head of Unit C4, DG Growth

ANNEX 2 LETTERS AND REQUESTS FOR INFORMATION SENT BY THE COMMISSION TO MEMBER STATES

Requests and letters sent by the Commission	**Sent on**	**Deadline for replies**	**Replies by MS by 04.01.2016**
Request by the Head of Unit of Automotive and Mobility Industries, to the members of the Type-Approval Authorities Expert Group (TAAEG) for information available regarding the enforcement of the existing type-approval requirements	8 October 2015	End of October 2015	17 Member States have sent replies (AT, BE, BG, CZ, DE, ES, FR, IRE, IT, LUX, LV, MT, NL, PT, RO, SE, SI);
Letter by Commissioner E. Bieńkowska to Ministers of the Competitiveness Council, Transport Ministers and Environment Ministers requesting information on national investigation measures regarding VW.	14 October 2015	End of November 2015	22 Member States have sent replies (AT, BE, BG, HR, CZ, DE, DK, ES, FR, FIN, HU, IRE, IT, LT,MT, NL, NO, PT, RO, SE, SI, SK); (for summary of the replies, see Appendix)
Letter by Commissioners E. Bieńkowska and M. Arias Cañete regarding irregularities in determination of CO_2 levels	5 November 2015	End on November 2015	12 Member States have sent replies (BE, LT, SI, ES, SE, UK)
Letter by Director of Industrial Policy and Economic Analysis Department to the members of TAAEG and TCMV about measures Member States plan to undertake based on Article 30.3 of Directive 2007/46 regarding vehicles not in conformity with the approved type	22 October 2015	3 November 2015	10 Member States have sent replies (BE, CZ, FR, HU, IT, LUX, NL, RO, SK, UK);

APPENDIX: INFORMATION ON NATIONAL INVESTIGATIONS ON POSSIBLE NON-COMPLIANCE WITH THE EXHAUST EMISSION REQUIREMENTS

On 15 October 2015, in the framework of the meeting of the national type approval authorities and the Commission, the German type-approval authority (KBA *Kraftfahrtbundesamt*) informed that vehicles with diesel engines EA189 (Euro 3, 4 and 5) of the VW, Audi, Skoda and Seat brands were affected by non-conformities regarding "engine characters in conjunction with the particular emission stages". The KBA also informed that, from its "point of view the non-conformity is with regard to the use of a prohibited defeat device according to Article 5 of Regulation (EC No715/2007)" (Euro 5/6).[31]

Based on its findings, the KBA ordered a recall of the VW affected vehicles that it type-approved. The recall should start in 2016. The KBA also invited all other national type-approval authorities do the same for vehicles registered in its territories. Moreover, the KBA invited in particular those authorities that approved Audi, Skoda and Seat vehicles to "initiate the necessary measures" according to the safeguard clauses of the Framework Directive on type-approval (Art. 30 of Directive 2007/46). According to public information, recalls in all EU Member States would affect 8.5 million vehicles.

On 3 November 2015, Volkswagen announced it had also discovered irregularities in the CO_2 emission levels of a number of engines (1.4, 1.6 and 2.0-liter diesel engines) produced starting in 2012. Up to 800,000 cars could be affected.

In reply to these new revelations, the Commission invited Volkswagen to speed up its internal investigation to clarify without delay what kind of CO_2 emissions irregularities were found, what had caused them, which cars were affected, where they were registered, and what measures the group would undertake to remedy the situation. In addition, Commissioners E. Bieńkowska and M. Arias Cañete jointly asked Member States in a letter of 5 November 2015 to widen their investigations to establish potential breaches of EU law in the context of the certification of official fuel consumption and CO_2 emission values.

The above investigations are still ongoing.

The table below summarises the replies the Commission received from Member States on the actions undertaken.

The Commission is currently verifying whether all Member States put in place effective, proportionate and dissuasive penalties to sanction infringement of the type-approval rules. The purpose of that verification is to assess the need for further adjustments to the penalty provisions.

MS	What measures have the relevant authorities taken to launch the necessary investigations at national level regarding, among others, type-approvals that were granted to the concerned vehicles as identified by Volkswagen?	Have type approvals been granted?	How many vehicles were fitted with defeat devices?	Have the Member States launched any specific action regarding the manufacturers concerned, according to Article 30 of the Framework Directive 2007/46/EC and what were those actions?	Are Member States aware of vehicles, including from other manufacturers, other than the ones already identified by Volkswagen, which would not be in compliance with Regulation (EU) No 715/2007?	What type-approval tools are appropriate for investigating the kind of situations that we are now confronting and correctly enforce the European law?	What market surveillance tools are appropriate for investigating the kind of situations that we are now confronting and correctly enforce the European law?	Should the current legal framework, notably Regulation 715/2007/EC on Euro5/6 and the Framework Directive 2007/46/EC, be improved in this respect?	Regulation (EU) No 715/2007 on Euro5/6 in its Article 13 requires Member States to establish penalties for the breach of the Regulation. Commission would like to ask Member States to provide information about their national measures implementing this obligation, in particular about the level of penalties as well as information about the application of this provision.	Several studies have shown significant and growing divergence between current test cycle CO2 measurements - New European Drive Cycle (NEDC) - and those being observed in real world driving. Are the Member States aware of such divergences?	What measures are the Member States taking to ensure that such divergence does not result from unlawful practices?	In case unlawful practices from manufacturers are uncovered, what are the measures envisaged to ensure compliance with the legislation?
Austria	None since AT has not granted any Euro 5/6 type approvals	No		Supervise KBA actions for registered vehicles in AUT via the AUT system for recall	Not yet		Harmonised provisions are missing how the market surveillance shall be conducted	Action in case of non-conformity.	5000 Euro	Yes	None	
Belgium	Explanation from VW requested	No	414889	No	No	RDE	Mandatory Market Surveillance	WG on improvements	Art 3-5 Law of 21 June 1985	Yes	None	RAPEX, Art 3-5 Law of 21 June 1985

Bulgaria	Questions to company representatives						No penalties to economic operators	incorporating market surveillance principles in the framework Directive would be beneficial but with taking full account of the basic principles of type-approval system				
Croatia	Questions to VW importer; created a commission consisting of different stakeholders to decide on how to proceed	No	30000	Received information about KBA actions	No	Still analysing						
Czech Republic	Ordered testing of SKODA vehicles (EURO 5 and 6) according to KBA rules	No	230000	Only testing	No	RDE	To review		1,85 mil. Euro max.	Yes	Common approach needed	
Cyprus												
Denmark	None; following the situation	No		No	No				withdraw TA, fines, up to 4 months prison	Yes		Expects improvements with WLTP
Estonia												
France	Launched an investigation of 100 cars from different manufacturers. With assistance from JRC	No	967585	No action except of the investigation	No	Endow COM and JRC with more initiative power to control, investigate and penalize; protocol for revealing DD		Need for appropriate and harmonized penalties		Yes	About to introduce WLTP, representative driving conditions	
Finland	None; following the situation	None		Not at this stage	Not at this stage	Independent spot checks	Closer coordination		Against importers: obligation to recall and repair vehicles; withdrawal of vehicles	Yes	Market surveillance, CoP	
Germany	Yes, extensive measurement programme	Yes		Asked for detailed action plan and schedule. (recall)	Not for the moment, but investigating	Review effectiveness	Review effectiveness	Review Defeat devices and re-testing (ISC) provisions	Partial revocation to annulment of TA, criminal charges possible			
Greece												
Hungary	Questions to company representatives.	None		No, pending more info	Not yet, asking other reps	RDE/ ISC will improve			According to 715/2007			

	No answer yet.											
Italy	Testing campaign for M1 5b Diesel vehicles, compare results with RDE tests	Yes	650000	Awaits info from KBA	not at this stage	RDE		Incorporate market surveillance	Info previously provided to COM	Yes	WLTP, verification of emissions during homologation and COP testing	Withdraw TA, in single cases criminal penalties for business fraud
Ireland	None since Ireland was not involved in the approval of any of the vehicles identified by VW	No		No	Not yet, asking other reps		Include PEMS testing	OBD improvements, no self-certification	Implemented in national laws	Yes	Welcomes new measurement in regulation	
Latvia												
Lithuania	Yes- damage to environment	No	7000	No, observing	No		Recalls/withdrawals as in L-cat. Market supervision strengthened	Improvements are needed	Note and limit of time to remove, invalidate CoC, Cancel TA, Up to 6 months no this type of vehicles,	Complaints from users		
Luxembourg												
Malta	Contacted KBA and local importers of VW			Not yet; awaiting info from KBA	No	RDE	Coordinated enforcement - like PROSAFE	RDE	Product Safety Act part IV (fine and possible imprisonment)			
Netherlands	Letters to manufacturers.	Yes - to 22 manufacturers but none to VW group		Awaiting info from KBA	No info. but JRC, TNO AECC studies have shown divergences in NOx emissions	Manufacturer should declare that vehicles comply with RDE under all valid conditions; Currently TAAs can only withdraw TA.	Need to apply MS also for LDV	Market surveillance in FWD	2 yeas prison, max 19500 Euro under economic offence violation	Yes, also noticed by consumers. In major part this is attributable to the use of 'flexibilities' by manuf. Especially PHEV SUVs show large divergence	TNO does independent road load measurements and discusses with manuf.	
Norway	In touch with the importer in Norway and KBA		175000	Withdraw end-of-series vehicles	No	Spot checks; search for DD			Re-evaluation of taxation for registration of new vehicles to make sure they comply with national environmental law	Yes	Affected vehicles to be modified; criminal prosecution in case of unlawful practices	Expects improvements with WLTP
Poland												

Portugal	High-level WG to evaluate impact; questions to representative of manufacturers; may promote additional tests	No		No	No	Need more info from ongoing investigation		Improvements are needed	1) If natural person- 600-3000 euro; 2) If legal person- 1200-6000 euro			
Romania	Inter-ministerial Commission created; TAA asked VW for information	No	105000	Art 30 not appropriate; asked DE for official info	No	RDE		Improvements are needed	6 750 euro/vehicle, penal law for false declaration	Yes	None	
Spain	Questions to Technical Services about TAs to SEAT, requested information from other manufacturers	SEAT TA	680000	Stop end-of-series vehicles for all VW group	No	Current framework is sufficient, RDE is necessary		Incorporate market surveillance in Directive 2007/46/EC	600 000 Euro max.	Yes	Enforce Conformity Production, RDE and WLTP should improve the situation	Withdraw TA, fines, recall vehicles
Sweden	None	No	225000	No	No			Clarify definition of Defeat Devices (DD)	National legislation probably does not apply to manufacturers abroad	Yes	RDE	
Slovak Republic	No; waiting for further information	No		No	No			Review test to ensure detection of DD	2000-16 597 EUR	Only info from publications		
Slovenia	No, but in contact with KBA		Awaiting KBA info on recall	No	No	Satisfied with the recall procedure		RDE	In the Motor Vehicle Act			
UK												