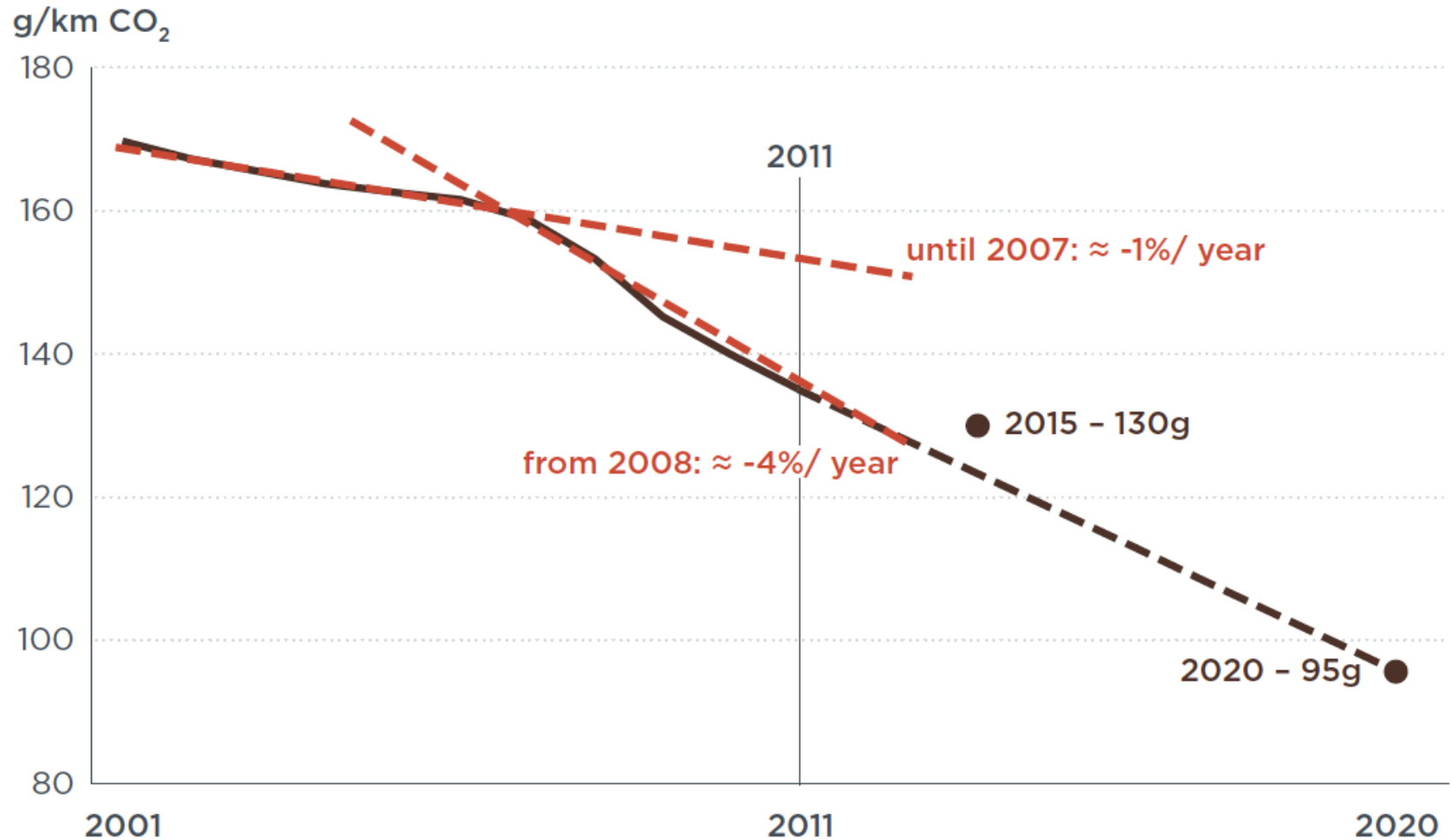


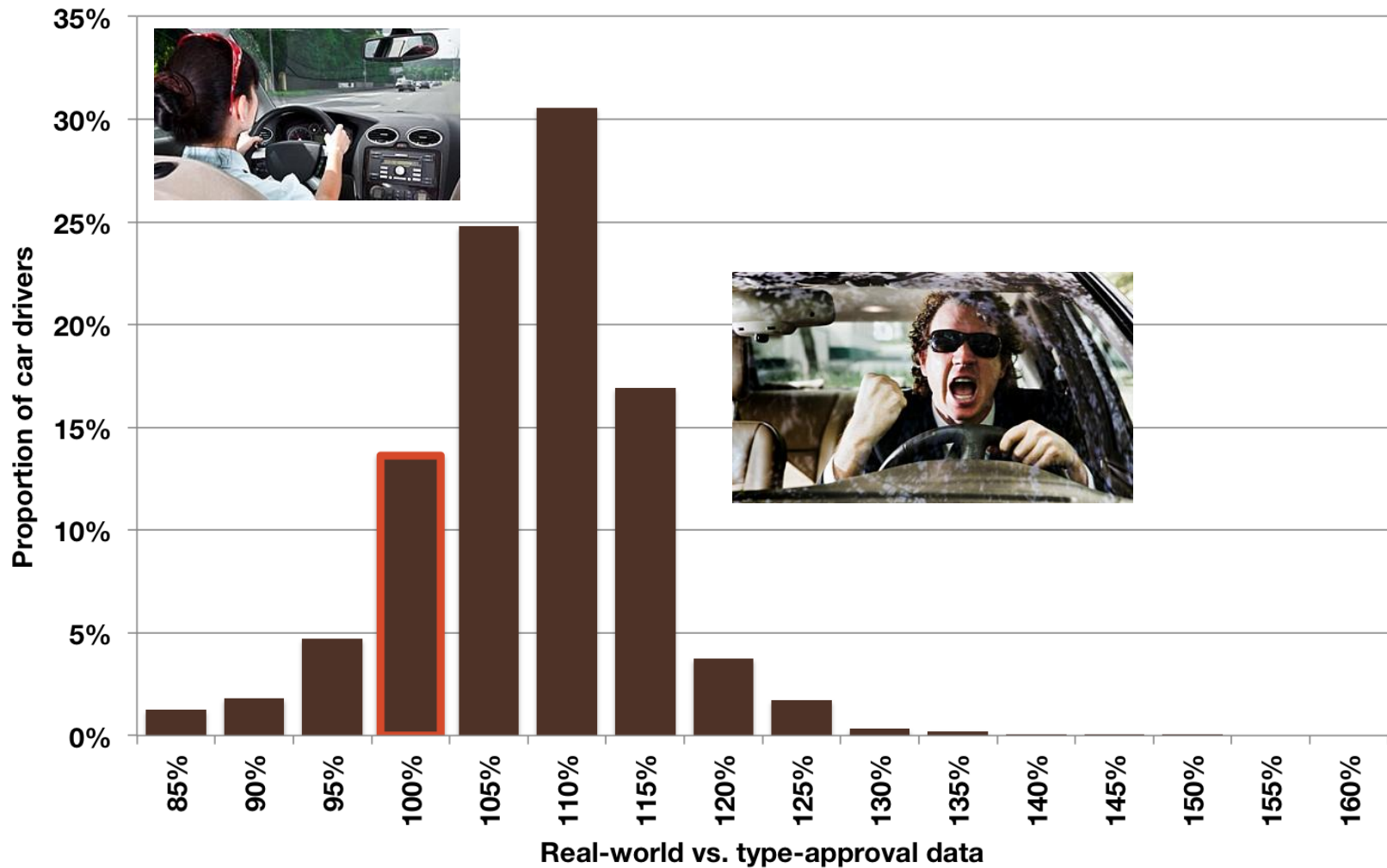
‘Real-world’ CO₂ emissions and fuel consumption of new cars

*Peter Mock
April 30, 2013
IEA, Paris*

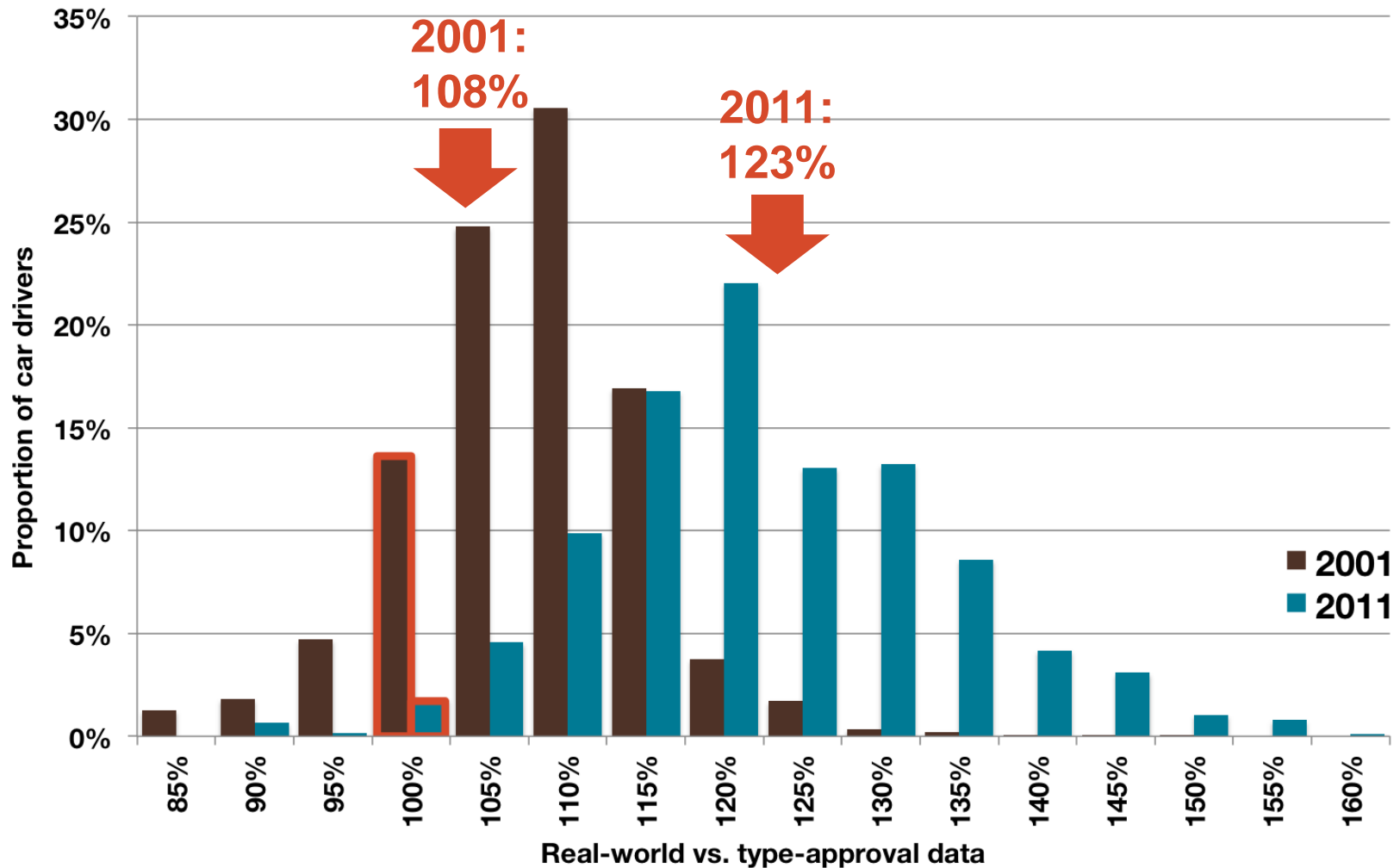
EU CO₂ regulation shows effect: type-approval emission levels are decreasing.



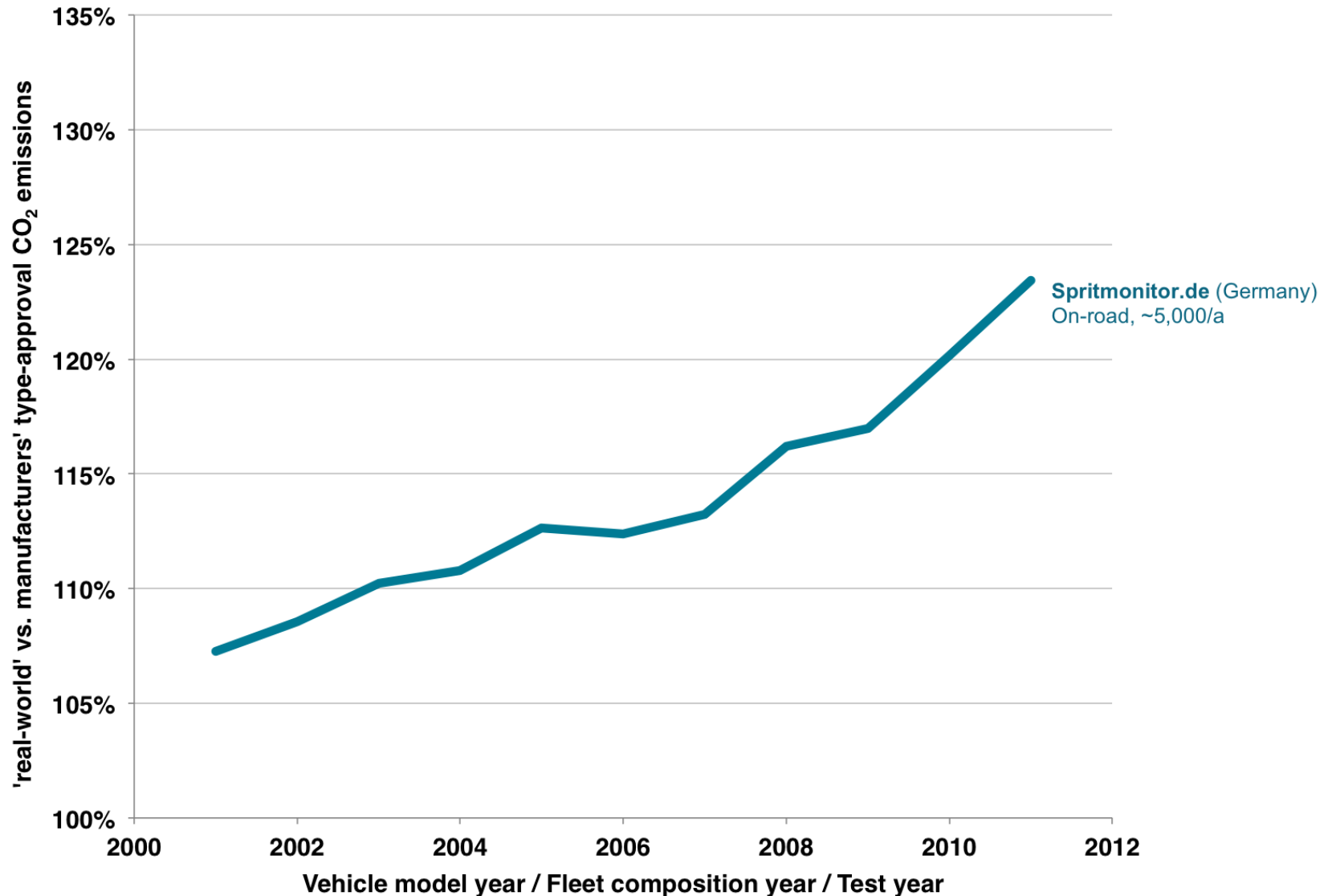
Everyone drives differently ...



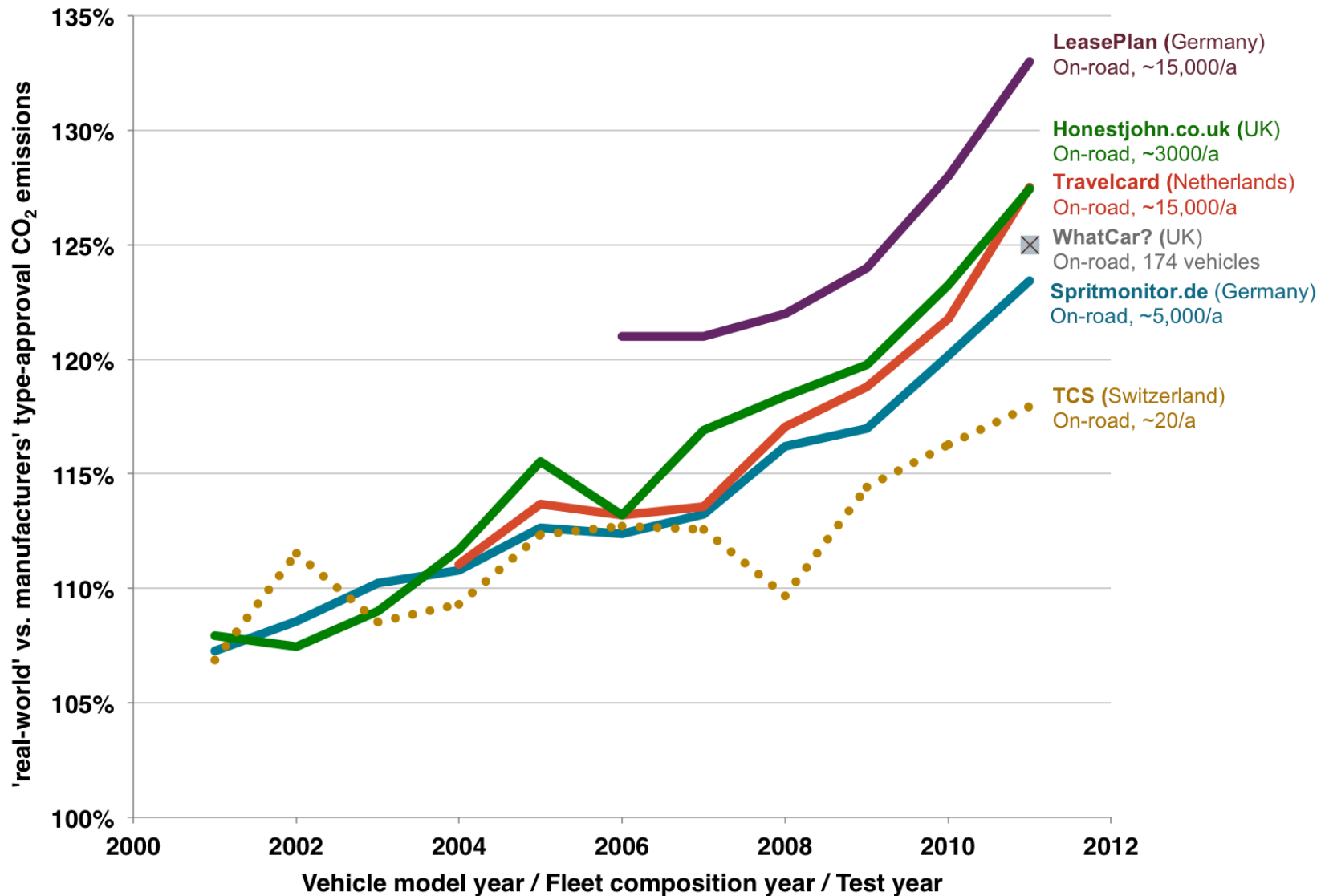
Everyone drives differently ...
... but aggregating data reveals clear trends.



Gap between 'real-world' and type-approval emissions is continuously increasing.



Gap between 'real-world' and type-approval emissions is continuously increasing.



Some flexibility is required for test procedure, but does not explain *increase* of the 'gap'.



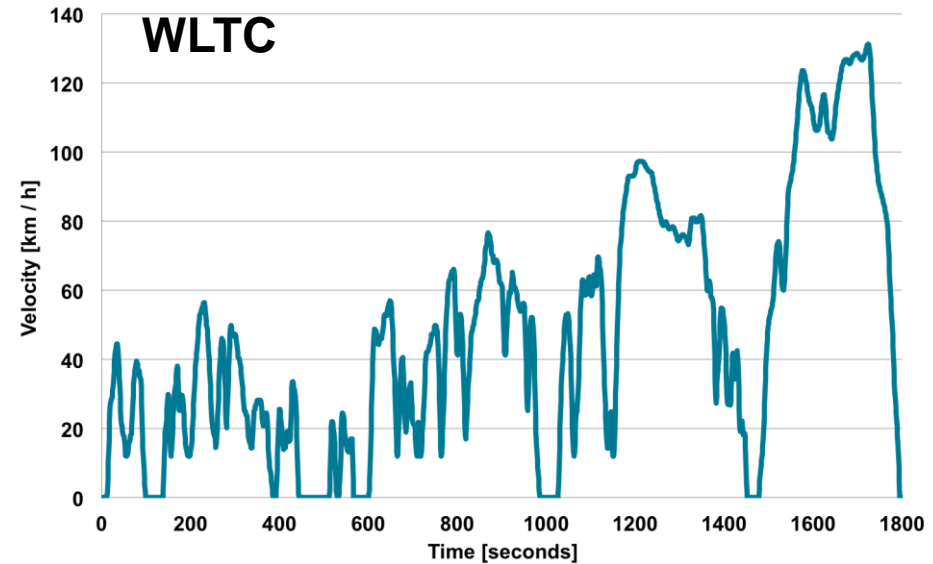
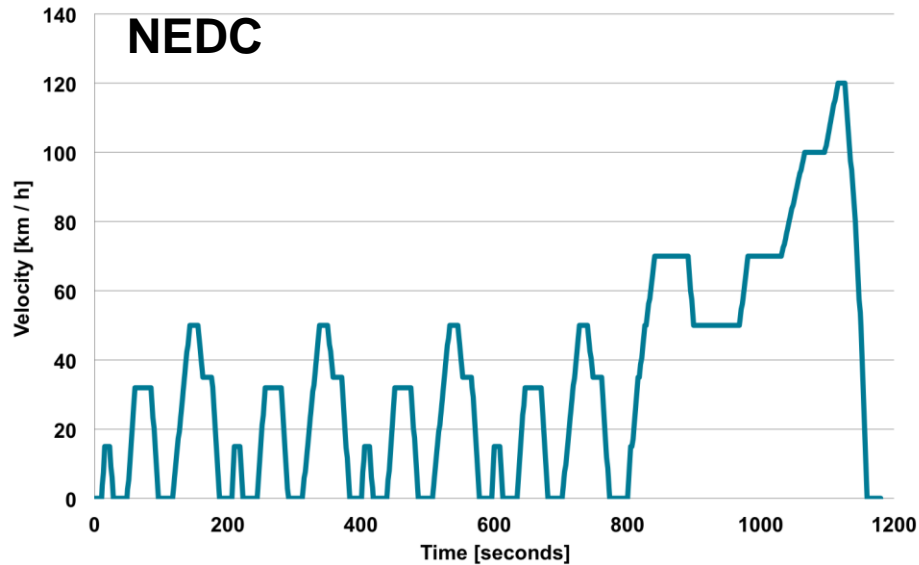
Increase of the 'gap' likely caused by a combination of reasons.

- 1. Increasing application of 'test-cycle optimized' technologies**
- 2. Increasing use of 'flexibilities' in the test procedure**
 - 1. External factors changing over time**

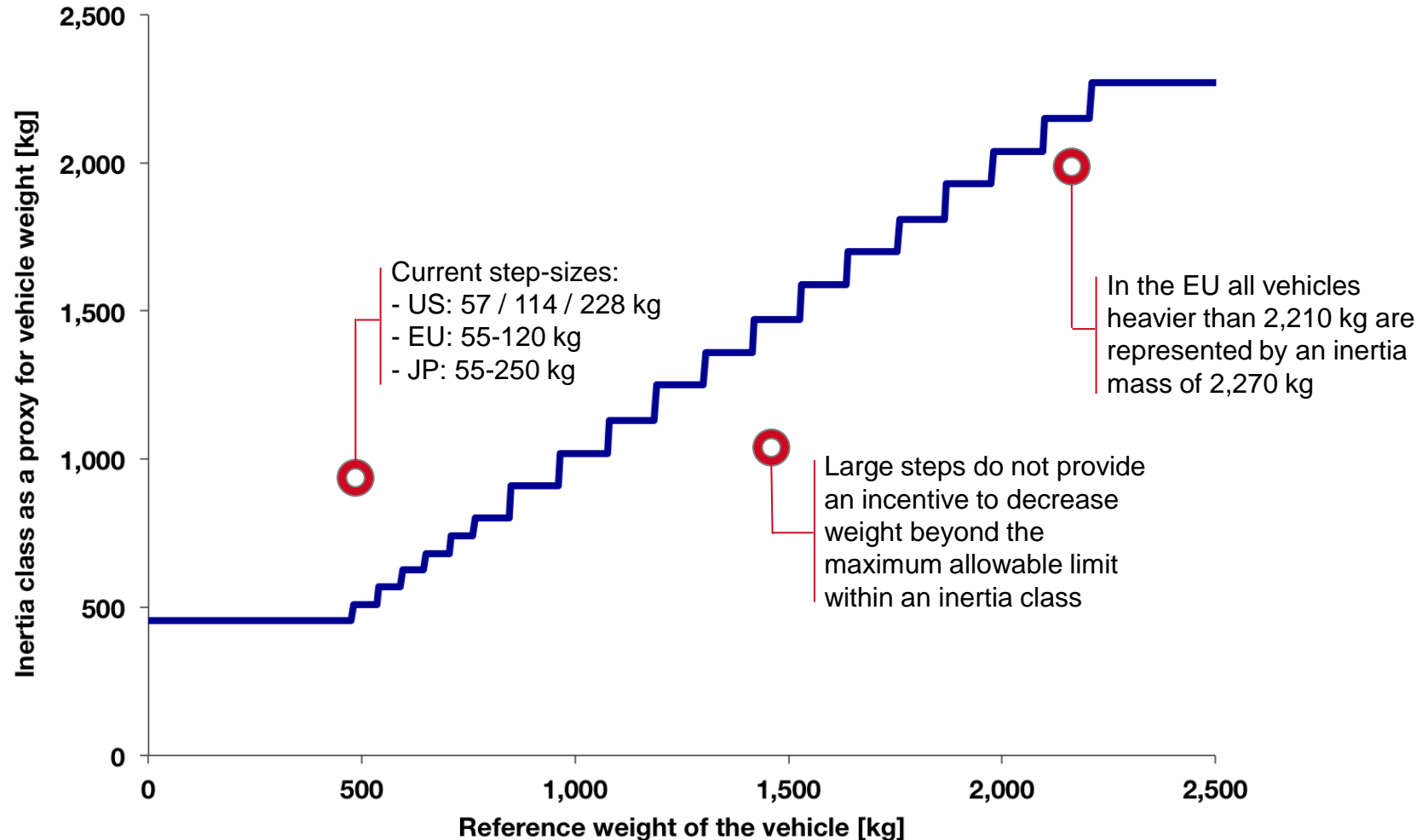
Consequences of the increasing 'gap' affect various stakeholders.



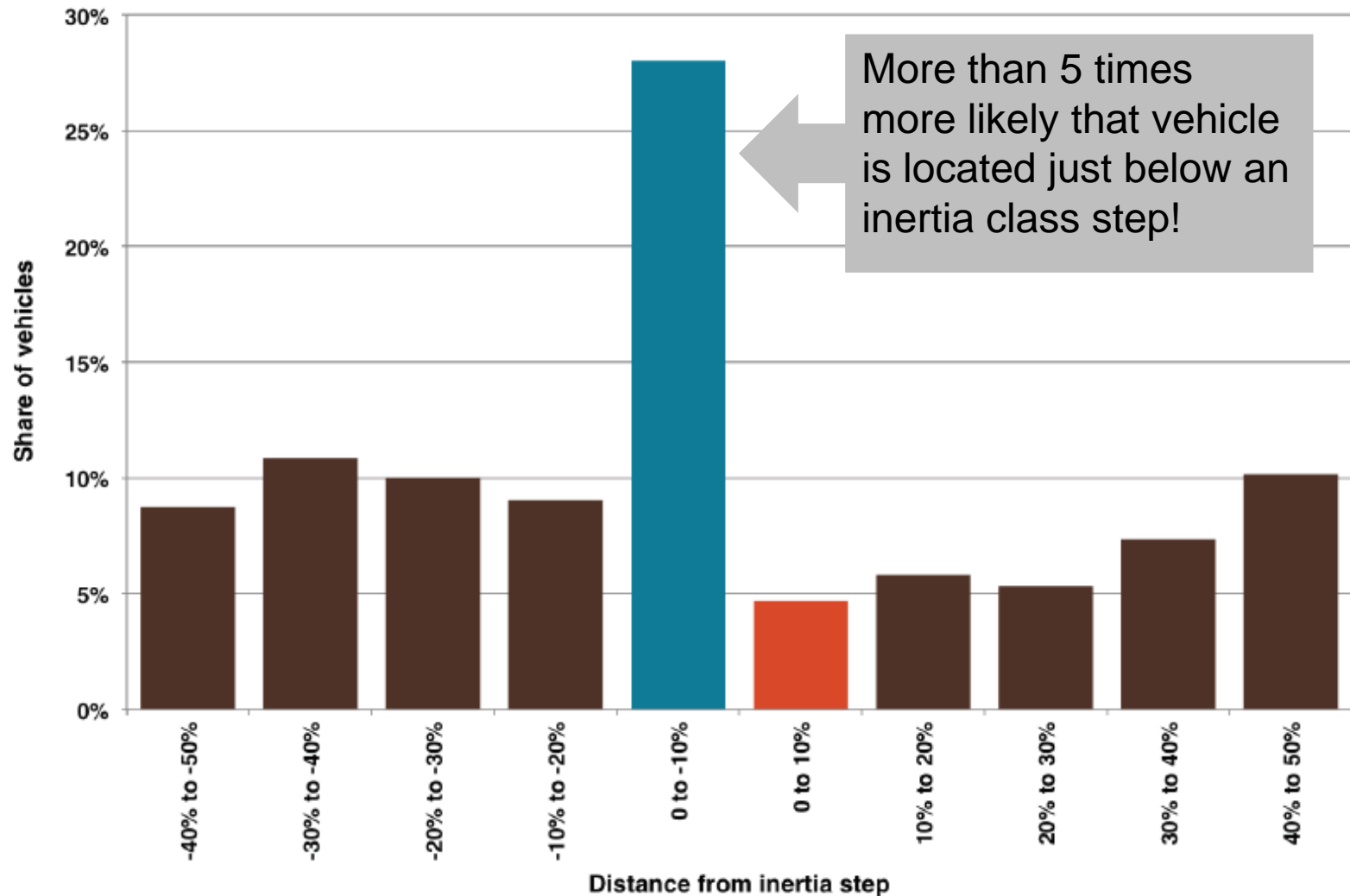
New test cycle will include more realistic driving patterns ... but nobody is perfect.



Improvements in test procedure include step-less inertia approach.

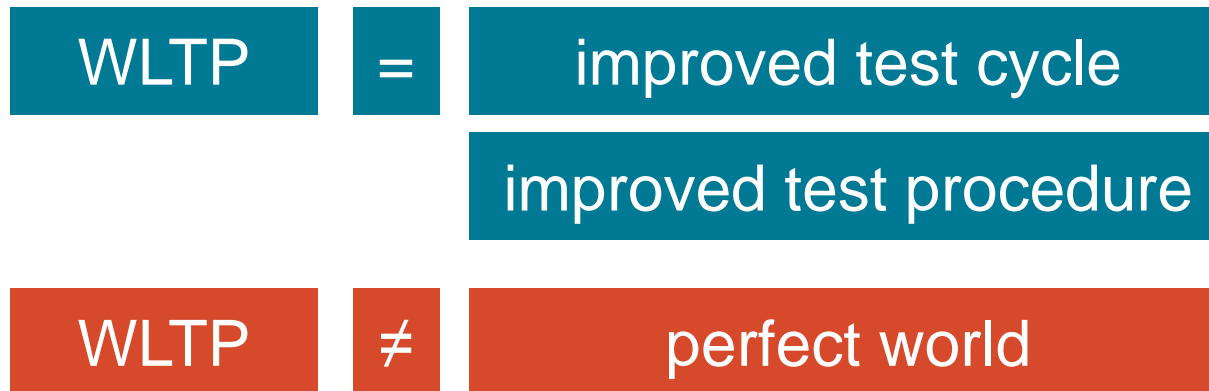


Improvements in test procedure include step-less inertia approach.

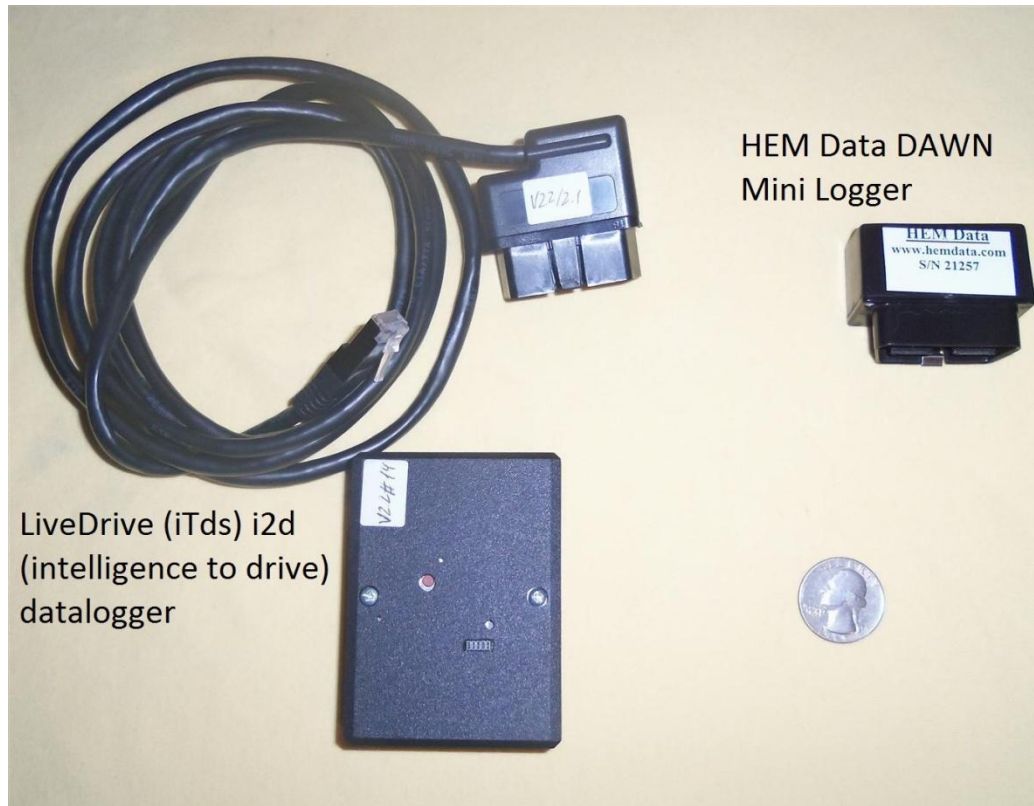


Source: ICCT working paper 2011-05 → <http://www.theicct.org/focus-inertia-classes>

Issues that are not addressed by the WLTP will need to be tackled at regional level.



Mini-dataloggers allow systematic collection and analysis of on-road fuel consumption / CO₂



Phase 1 scoping study:



Phase 2 full-scale study:

- **partners and funding needed!**

Key messages:

- 1. 'Gap' between type-approval and on-road CO₂ is increasing.**
- 2. WLTP will solve some of the issues, but not all.**
- 1. Dataloggers for a systematic analysis of the 'gap'.**

www.theicct.org

Detailed technical studies

Summary and briefing papers

Newsletter

WORKING PAPER 2012-18

SERIES: CO₂ REDUCTION TECHNOLOGIES FOR THE EUROPEAN CAR AND VAN FLEET, A 2020-2025 ASSESSMENT

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THE INTERNATIONAL COUNCIL ON CLEAN TRANSPORTATION

Summary of the EU cost curve development methodology

Authors: Dan Heusler (Heusler Engineering Services), John German, Peter Mock, Anup Bandivdekar (ICCT)

Keywords: Vehicle technologies, passenger cars, lightcommercial vehicles, CO₂ reduction

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A technical support document

House gas standards proposed

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any Traffic Safety Administration

the major standards for 2012-2015

on Emission Standards and Corporate

IN THE EUROPEAN FLEET 2015

AUTHORS: Dan Heusler is principal at Heusler Engineering Services, a senior advisor at the ICCT. Anup Bandivdekar is the ICCT's passenger vehicle program lead, and Peter Mock is managing director of the ICCT's European office. Address correspondence concerning this paper to peter@theicct.org.

ABOUT THIS SERIES: The ICCT has compiled detailed data on the CO₂ reduction potential and associated costs of vehicle technologies for the European light-duty vehicle fleet (passenger cars and light commercial vehicles). The analysis incorporates extensive vehicle simulation modeling as well as a detailed low-down cost assessment. Papers in this series summarize the underlying methodology, input data, the results of the project.

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EUROPEAN VEHICLE MARKET STATISTICS

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