SET PLAN Conference 2015

Research, innovation and competitiveness for the Energy Union

PRODUCT INNOVATION AND ENERGY EFFICIENCY

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SESSION 4

Sustainable energy for transport – and the link to the strategic transport research and innovation agenda

Tuesday 22 September 2015

SUMMARY

1 tank out of 5 for passenger cars / 1 tank out of 3 for truck and bus

1 Technology challenges to reduce CO2 emissions from tyres

- The impact of tyres in CO2 emissions

Part of CO_2 emissions in the world linked to human activities*:

- ***Transport: 24%***
- ***Road Transport: 18%***
- ***Part of the tyre: 4%***

- From eco-design to recycling
- The labelling regulation

*IEA & ITF, 2013

- **From eco-design to recycling**
  Life cycle assessment of a passenger car tyre

Raw material
& tyre manufacturing
10.8 %

tyre distribution
< 1 %

Usage impact
(CO_2 + particulates)
92.6 %

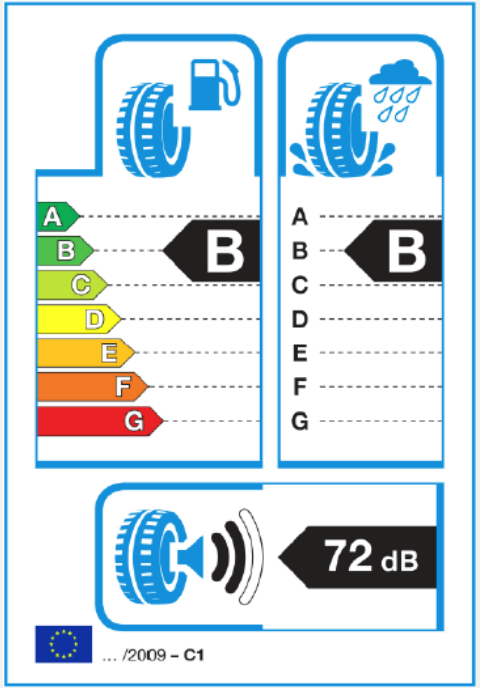
Scrap tyre
collection
< 1 %

Energy recovery

Material recovery

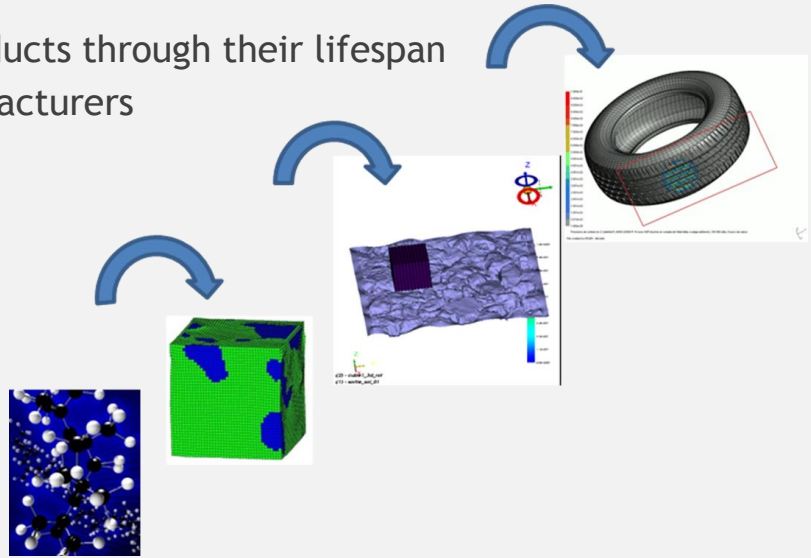
end of life impact
-3.4 %

- The labelling regulation

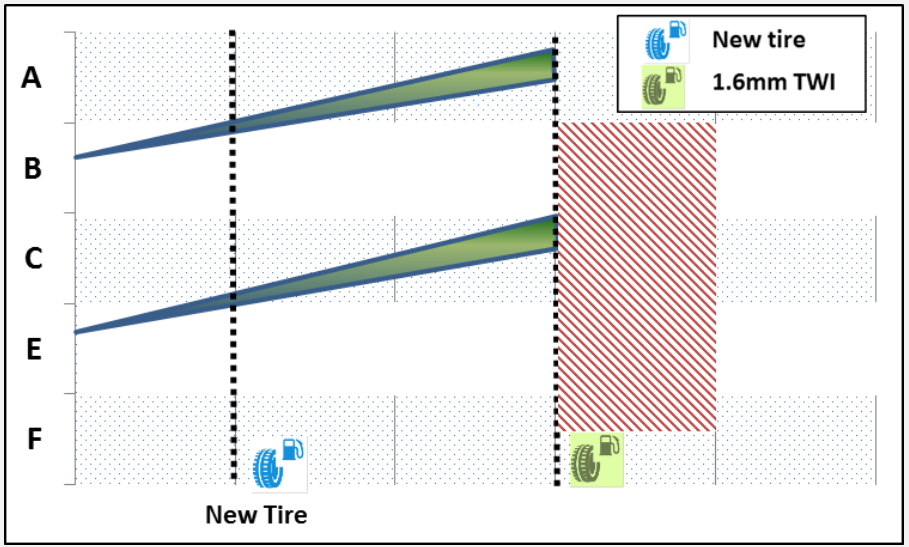


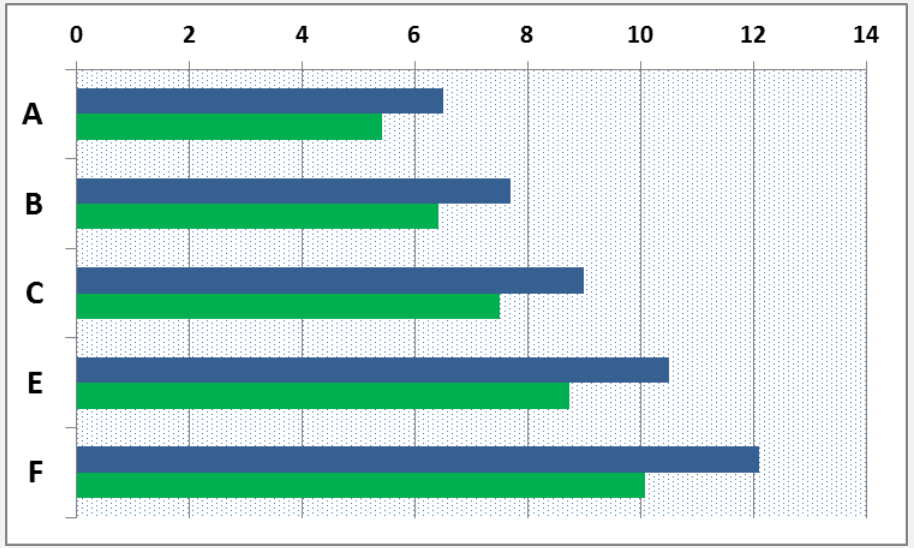
2 Moving forward to more energy efficient tyres

- **The use of new technology tools**
- The holistic approach: quality of products through their lifespan
- The collaboration with vehicle manufacturers



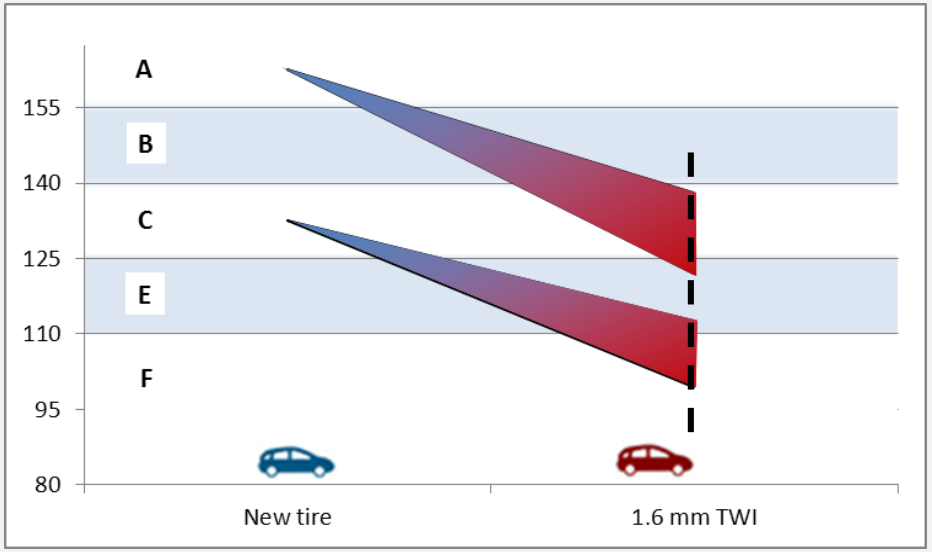
- **The holistic approach: quality of products through their lifespan**
  Fuel efficiency of worn out tyres is near 20% better than for brand new tyres

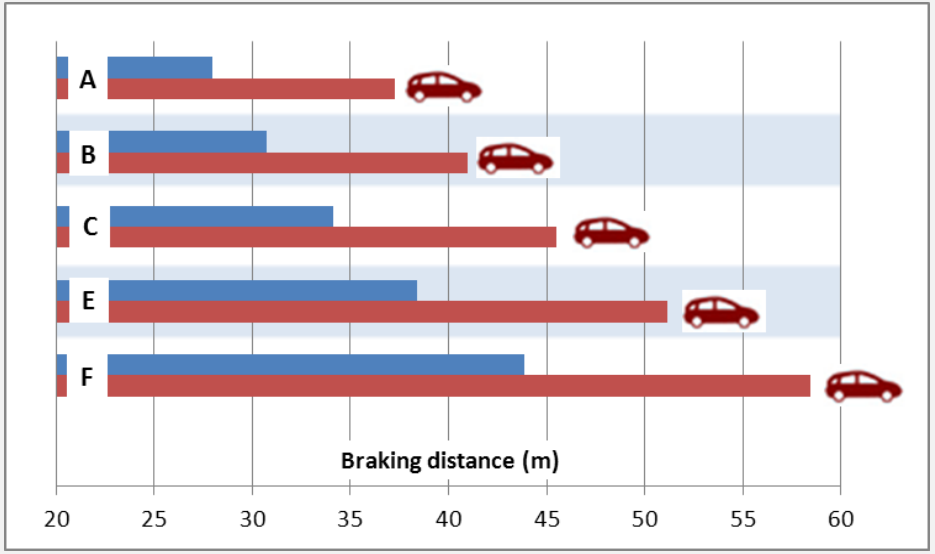




TWI means tread wear indicator

- **The holistic approach: quality of products through their lifespan**
  Wet grip performance on 1mm of water of worn out tyres is 15% to 30% less than wet grip performance of brand new tyres





Michelin internal study on wet braking test (80km/h to 20 km/h with 1 mm water depth) - TWI means tread wear indicator

3 R&D path to continue developing high quality energy efficient products

- The need for the right talents
- New ways of working through open innovation
- How can the EU foster those needs for a competitive research?

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