



Environmental Responsibility and Innovations in the European Asphalt Pavement Industry

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INTRODUCTION

Asphalt consists of
 $\pm 95\%$ aggregate and filler and $\pm 5\%$ bitumen



EUROPEAN ASPHALT PAVEMENT ASSOCIATION

Why do we need good infrastructure in Europe?

- Transport is fundamental to an efficient European economy.
- Freight transport is expected to grow by 80% by 2050, and passenger transport by more than 50%.
- Growth needs trade. And trade needs transport.
- Investments in transport infrastructure should contribute to achieve the goals of reduction of greenhouse gas emissions in transport by 60% by 2050.



RECLAIMED ASPHALT 2014

In 2014

Asphalt production in Europe 265 million tonnes

Available RA in Europe **50** million tonnes

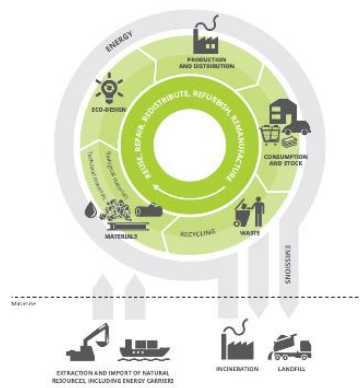
Recycling / reuse of available tonnes **> 80 %**

Re-used in Hot-Warm and Half warm Asphalt **57%**

2083 Asphalt plants fit for hot recycling (= **45 %**)

Circular economy

- Goal in 2020: Re-use & recycling C&D waste $\geq 70\%$. We
- Asphalt is 100% re-usable which fits perfect in the 'circular economy' – Reclaimed asphalt: Now $> 80\%$
- It might be the most reused material
- 90 or 95% of the pavements have an asphalt surface



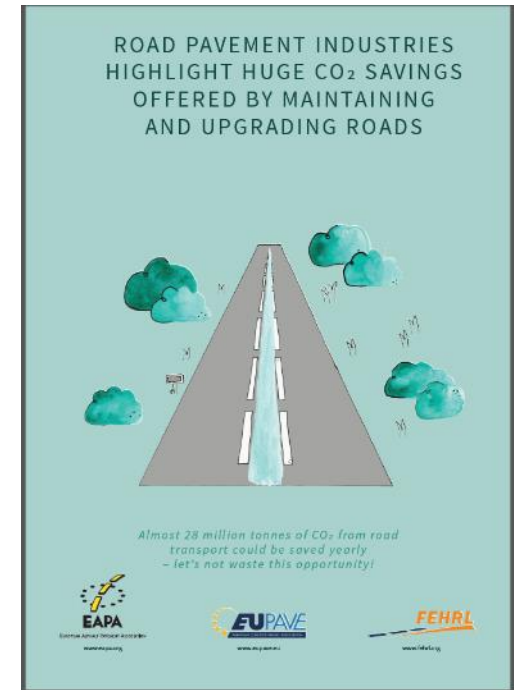
CO₂ reductions

- Sustainable development
- CO₂ emissions reduction in the transport sector
- CO₂ reduction in the asphalt industry



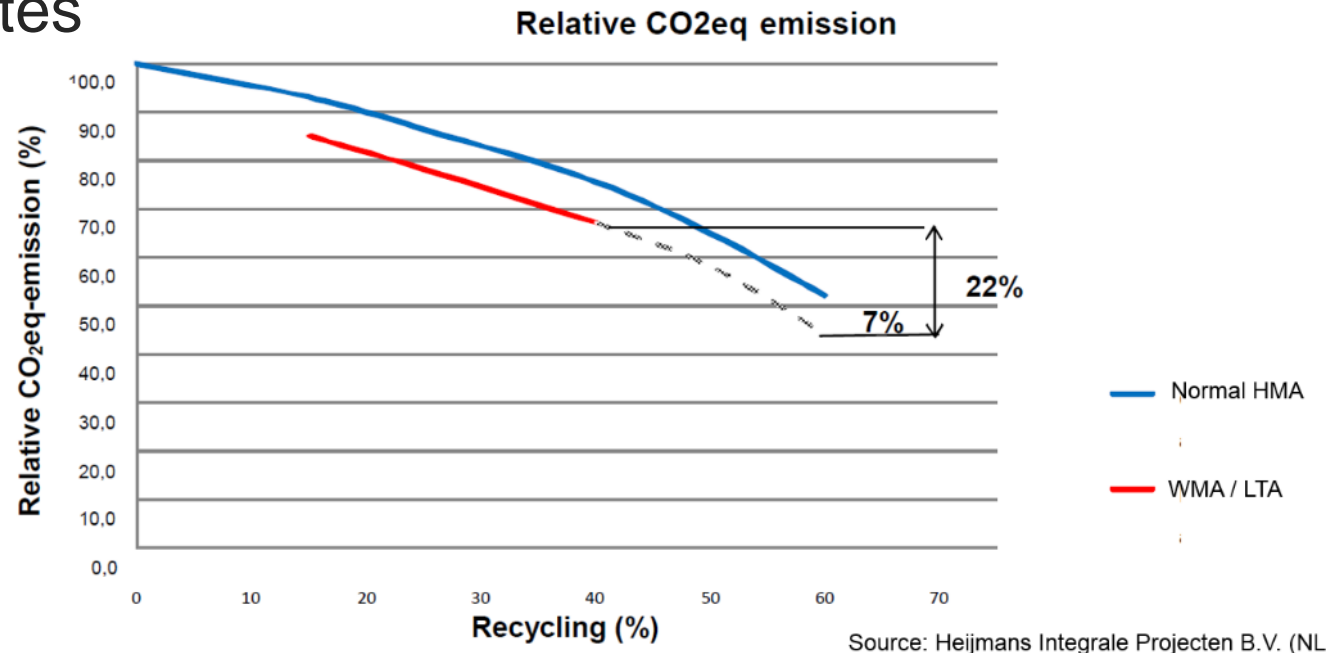
CO₂ emissions reduction in the transport sector

- Possibilities to reduce CO₂ emissions by cars and trucks by having well maintained smooth roads
- EAPA-EUPAVE-FEHRL paper
- Adequate road maintenance lowers rolling resistance (evenness)
- Surfaces with low rolling resistance (Innovations)

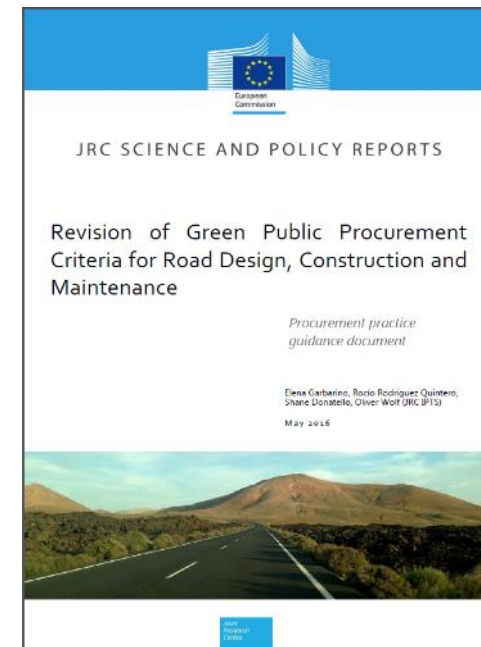


CO₂ reduction in the asphalt industry

- Reuse of asphalt
- Warm Mix Asphalt and the benefits of WMA
- Dry aggregates



- Innovation needed
- Contracts that stimulate innovation
- Better collaboration industry and road authorities (Conclusions E&E 2016)
- GPP criteria will stimulate innovation



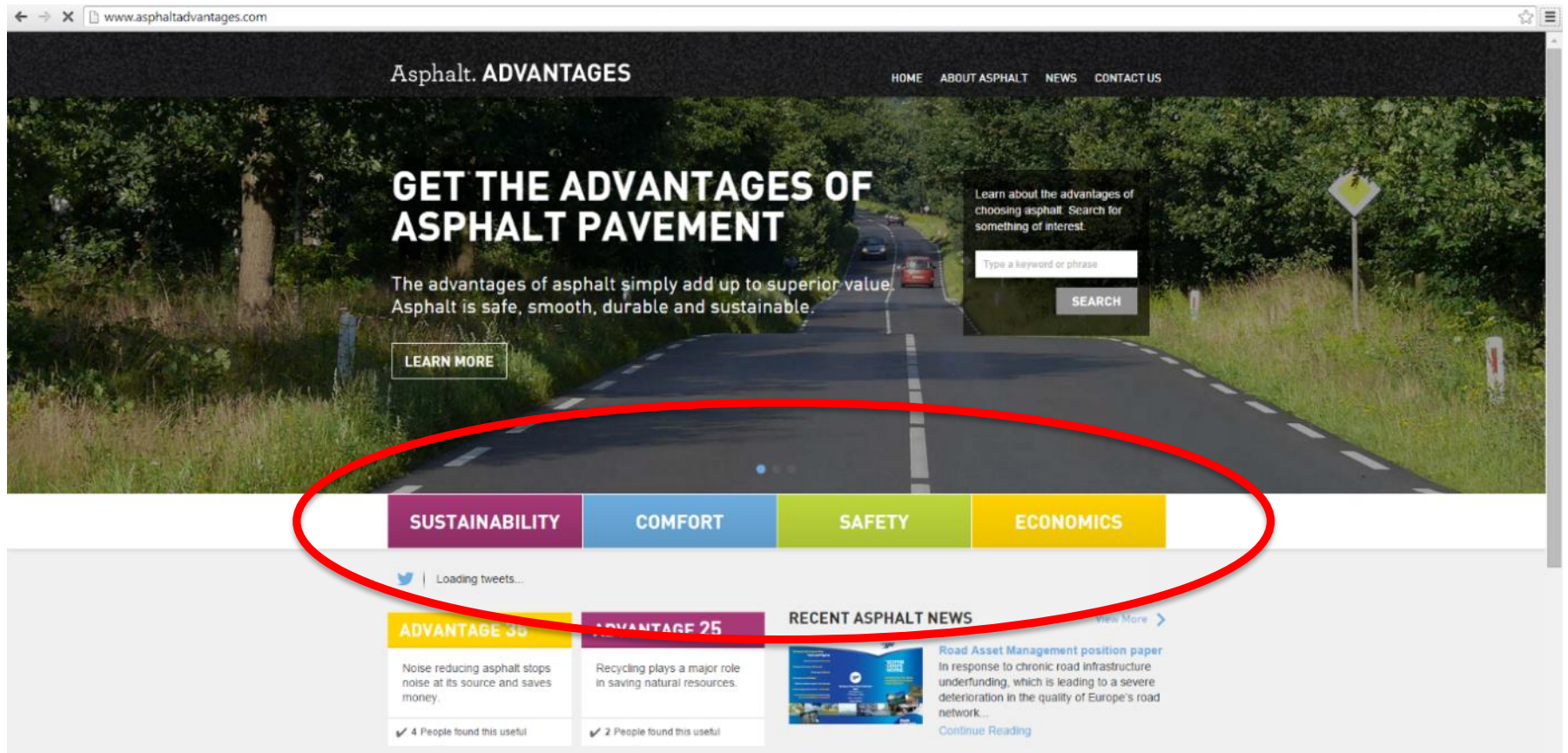
RESPONSIBILITY AND INNOVATIONS

- Noise and safety
- Porous asphalt
- Adequate maintenance (for motor drivers)
- Minimum requirements road surfaces (friction, evenness)
- Coloured asphalt for separation road use





ASPHALT ADVANTAGES



4 Themes for the Asphalt Advantages

Conclusions / conclusions E&E Congress 2016

We have the technologies:

- to recycle at every level, up to 95%
- to lower CO₂ of traffic and the asphalt produced / paved
- to use high tech equipment with IT technology for paving

We need a good contracting system

- to implement the innovations we have available
- to build asphalt roads in a sustainable way
- to show what we can.

Outlook for the following discussion

- Thilo Juchem, Vice President UEPG, will address sustainability for the aggregate industry and the environmental responsibility of UEPG
- Open debate
- Summary by Mike Southern, Eurobitume



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