



A European Green Deal

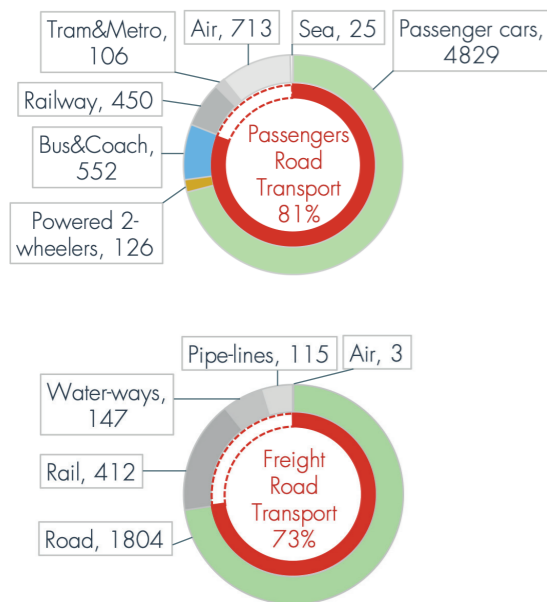
The asphalt industry's
contributions to climate-
neutrality and preservation of
Europe's natural environment

A scenic view of a winding asphalt road through a mountain valley. The road curves through a valley with brown, grassy slopes. In the background, there are dark, rugged mountains with patches of snow under a clear sky.

EAPA
Manifesto

It is global and European policy to reduce CO₂ emissions. The transport sector has been identified as one of the most CO₂ producing sectors. The goal of the incoming European Commission under the new head, Ursula von der Leyen, is a total saving of 55% of CO₂ by 2030 and not “only” the 40% target of the Paris agreement. Indeed, von der Leyen wants Europe to strive for more e.g. by being the first climate-neutral continent.

European roads support the transport of 81% of passengers and 73% of inland freight. As more than 90% of them are surfaced with asphalt, the European asphalt industry has the potential to become a key tool in such a process and is already active in various fields to target a climate-neutral future.



Passengers and inland freight transport by mode in EU-28 in 2016 (in billion pkm and tkm). Source EC

The main challenges, potential benefits and proposals of the Asphalt Industry for the new EU Administration can be classified within the following three main pillars:

1. Decarbonisation of road transport

The challenge: Road transport emissions have been generally increasing since 1990 and currently contribute about a fifth of the EU’s total emissions of CO₂. In recent years, the EU has set binding targets on cars and commercial vehicles, aiming to steadily reduce their emissions. To meet these targets, significant resources and economic support has been allocated from private and public sources to develop vehicles that progressively produce lower and lower

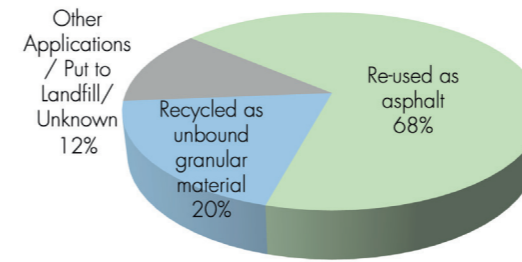
emissions. However, an additional route to produce significant reductions has been systematically ignored: the contribution of road itself.

Potential benefits: The road pavement surface can directly influence the fuel or electricity consumption of vehicles through the rolling resistance between the road and tyres riding over it. Various aspects of the quality and condition of the road will influence rolling resistance: evenness, rutting, potholes and deteriorated joints. Scientific studies have shown that proper maintenance to replace pavement surfaces that show “bad” or under-performing surface conditions by smooth road surfaces with “good” properties would lead to fuel use reductions and lower CO₂ emissions of up to 5%. This means that an upgrade of just one third of the road network of Europe by 2030 could lead to annual savings of 14 million tonnes of CO₂, or the equivalent to removing the emissions associated with 3 million cars. In addition, a well-maintained surface could also add range to electric vehicles and make them a more viable option. This would be only one of many potential benefits, such as reductions in traffic noise and travel time while increasing driving comfort, with savings in vehicle maintenance costs. Roads in good condition should not be left to deteriorate to a condition where they have negative environmental, societal and economic impacts.

Our proposal: To establish a common understanding among European National and Regional Road Authorities to include vehicle CO₂ considerations in road maintenance strategies and procurement policies and ensure a minimum state of maintenance of our road networks.

2. Sustainable construction and maintenance

The challenge: The main impact during the life of a road is the CO₂ emissions from vehicles riding on it. Hence, for a highly trafficked road, the embodied impacts of construction and maintenance are just 1 or 2 % (or even less than 1% for very high traffic volumes) of the total impact over, say, 30 years. Nevertheless, these impacts also include others, such as the exploitation of natural resources and the production of waste, which can conflict with the principles of circular economy and therefore, should not be ignored.



Uses of reclaimed asphalt from existing roads after the end of service life. Source: EAPA, Asphalt in Figures 2017

Potential benefits: The asphalt industry has been working towards reduction of production emissions for many years, by developing cleaner technologies, such as plants running on alternative and bio-fuels and notably through reduced-temperature asphalts (e.g. Warm and Cold Mix Asphalt). Using such processes and materials also promotes a healthier working environment for our workforce. But probably the greatest impact can be achieved by re-using reclaimed asphalt from existing roads to build and maintain new roads. The 100% re-usability and recyclability of asphalt has made it a highly re-used road construction material in the world, and it has already been demonstrated possible to build certain types of roads with 100% of only reclaimed material. Available data indicates that 68% of reclaimed asphalt is already being re-used in new asphalt for road construction and maintenance and an extra 20% is being recycled in unbound road layers and other Engineering applications in Europe. The industry continues to work to ensure that, when technically and economically viable, the re-use of existing road materials should always be a first option. Unfortunately, historical misconceptions of “new” is better than “re-used” and the misguided application of regulations (e.g. end-of-waste criteria) can still hamper their greater re-use.

Our proposal: To encourage and support National and Regional Road Authorities to stimulate demand for the use of sustainable solutions, which optimise the criteria of sustainability, circular economy and quality. Further, to set up regulatory plans, which encourage and facilitate the re-use of materials coming from existing pavements to build and maintain new and other existing roads.

3. Research and innovation

The challenges: Innovation and R&D should be the engine of road construction to deliver a safe and reliable road network, which meets all the environmental and sustainability targets highlighted above. However, innovation uptake and R&D investments are lower than in other sectors, such as the

automotive, even when the development of vehicles, without the reciprocal upgrading of the infrastructure, becomes highly inefficient. In the past, it has been possible to see the funding of huge research projects which addressed no real or practical needs of the highways sector (rather those of researchers) and, consequently, has led to no practical implementations. In many Member States the current regulatory framework and procurement practices for road construction and maintenance are based on inflexible specifications, and the award of contracts based on lowest initial cost only. In addition, Road Authorities can be reluctant to assume or share any risk on innovative solutions (while still demanding innovation per se), making it increasingly difficult for developments with potentially positive impacts on the sustainability of the road sector to finally reach the market.

Potential benefits: Innovative solutions that have been, or are being, developed in recent years have the scope to contribute to the maintenance and upgrade of EU road infrastructure. Such innovations will seek to deliver a more sustainable infrastructure, facilitate the adoption of new user technologies (e.g. electric, autonomous and high-capacity vehicles) and open the door for a rejuvenation of the Construction Sector. Stimulating innovation can come hand-in-hand with other digital technologies and make the sector more attractive for employment to young and multi-disciplinary talent.

Our proposal: To establish a common procurement understanding across the EU, which enables innovative, rather than lowest initial cost, solutions in tendering processes, with reasonable shared risk. Also, to set up balanced R&D Programmes developed and steered collaboratively by industry and road owners/operators with a focus on real needs, with reduced duplication of effort across the EU and to deliver real life solutions in real projects.

EU road infrastructure is surely one the most important of all public assets, consisting of 5.5 million km with an estimated value of over € 8,000 billion. They enable free movement of the vast majority of goods and people across the continent and beyond. Carbon-neutral, sustainable, innovative, efficient and of course safe, construction and maintenance of these valuable assets needs to be stimulated and supported to ensure that their past cost, current value and future worth are not compromised.



EAPA
Rue du Commerce 77
1040 Brussels – Belgium
www.eapa.org



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