Neues aus Brüssel und Europa

Dr. Carsten Karcher, Secretary General
European Asphalt Pavement Association

20. November 2024, KIT-ISE, Karlsruhe

Content

- The European Asphalt Pavement Association (EAPA)
- The hot topics and new challenges for the asphalt industry in Europe

The European Asphalt Pavement Association (EAPA)

The European Asphalt Pavement Association (EAPA)

- EAPA is a non-profit association, founded in 1973 and nowadays based in Brussels, Belgium EAPA represents the majority of the European asphalt paving industry

Ralf Pomp

Slovenko Heningman

EAPA's mission

- EAPA is the voice of the Asphalt Paving Industry in Europe and works to ensure that the use of asphalt, as the optimum choice for the construction and maintenance of the vital European road infrastructure, is fully appreciated, promoted and implemented.

Dr. Carsten Karcher

Secretary General

Dr. Breixo Gómez-Meijide

Technical Director

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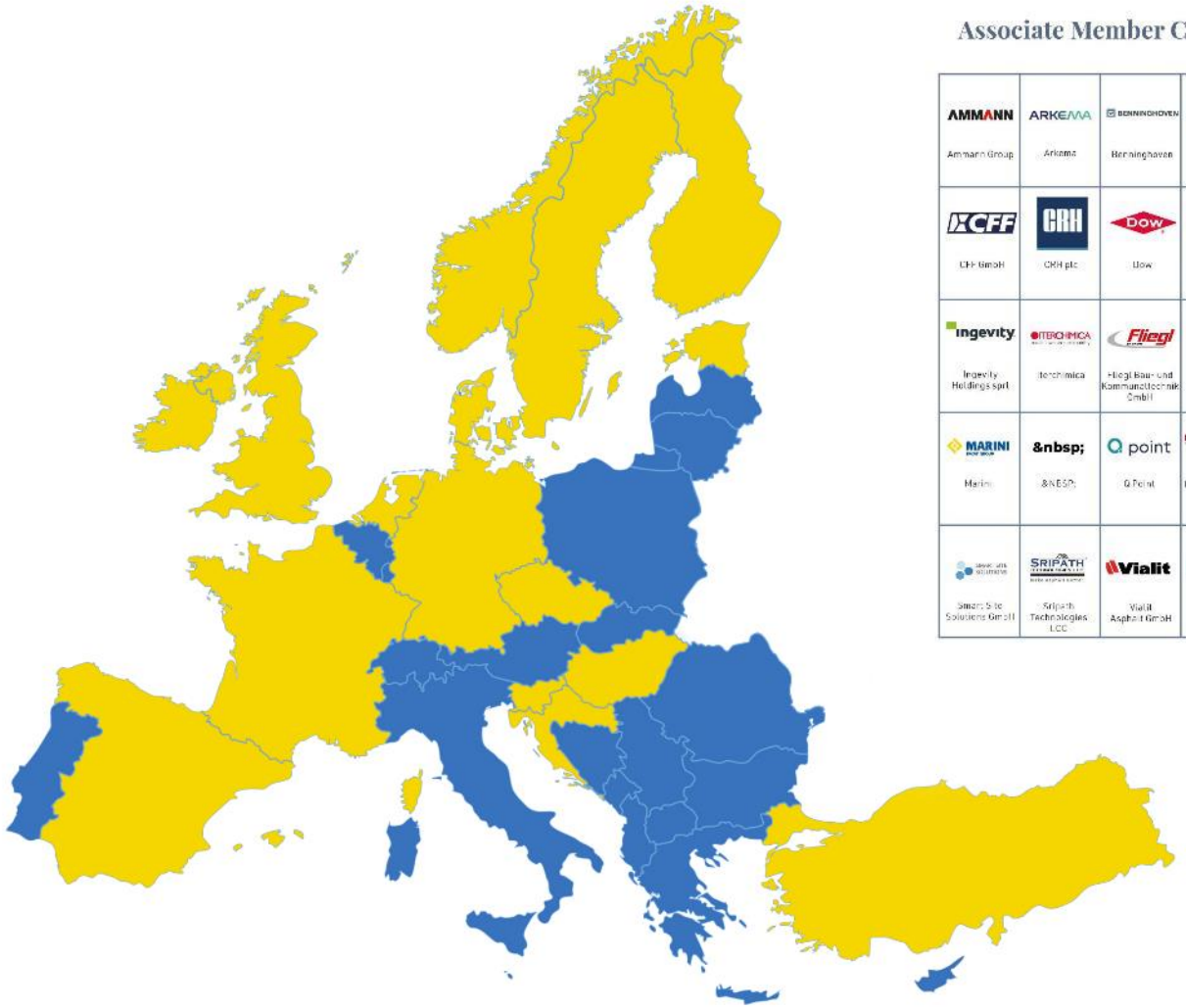
The European Asphalt Pavement Association (EAPA)

- 16 National Members

Asefma - Spanish Association of Asphalt Producers	Asfaltindustrien - Danish Asphalt Pavement Association	ASMUD - Turkish Asphalt Contractors Association	Dutch Construction and Infrastructure Contractor's Association
HAD - Croatian Asphalt Association	German Asphalt Pavement Association	EBA - Norwegian Contractors Association	ESTICA - Estonian Infra Construction Association
HAPA - Hungarian Asphalt Pavement Association	IAPA - Irish Asphalt Pavement Association	Infra Contractors Association, Finland	MPA - Mineral Products Association, UK
NCC AB, Sweden	Peab, Asphalt AB, Sweden	Czech Road Contractors Association	Routes de France - French Contractors Association
ZAS - Slovenian Asphalt Pavement Association			



Associate Member Companies

Ammann Group	Arkema	Benninghoven	BASF	Cargill	Caterpillar Paving Products Inc.
CFF GmbH	CRH plc	Dow	Evonik Resource Efficiency GmbH	GBS Bitumen	InfraTest
Ingevity Holdings sprl	Iterchimica	Fliegl Bau- und Kommunaltechnik GmbH	HyWax	J. Rettenmaier & Söhne GmbH + Co KG	Kraton Polymers Nederland B.V.
Marini		Q Point	Ruthmann GmbH	Ravago Chemicals	Sasol Germany GmbH
Simon Site Solutions GmbH	Sripath Technologies LCC	Vialit Asphalt GmbH	Joseph Vögele AG	Volvo Construction Equipment	Zydex Industries

The European Asphalt Pavement Association (EAPA)

European Contacts in Brussels:

- Aggregates Europe (UEPG)
- Eurobitume
- European Union Road Federation (ERF)
- European Construction Association (FIEC)
- Conference of European Road Directors (CEDR)
- Construction Alliance 2050
- High Level Construction Forum (HLCF)
- Industry for Europe etc.

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The European Asphalt Pavement Association (EAPA)

European Floor Exchange

- Regular exchange with representatives of European Parliament and Commission

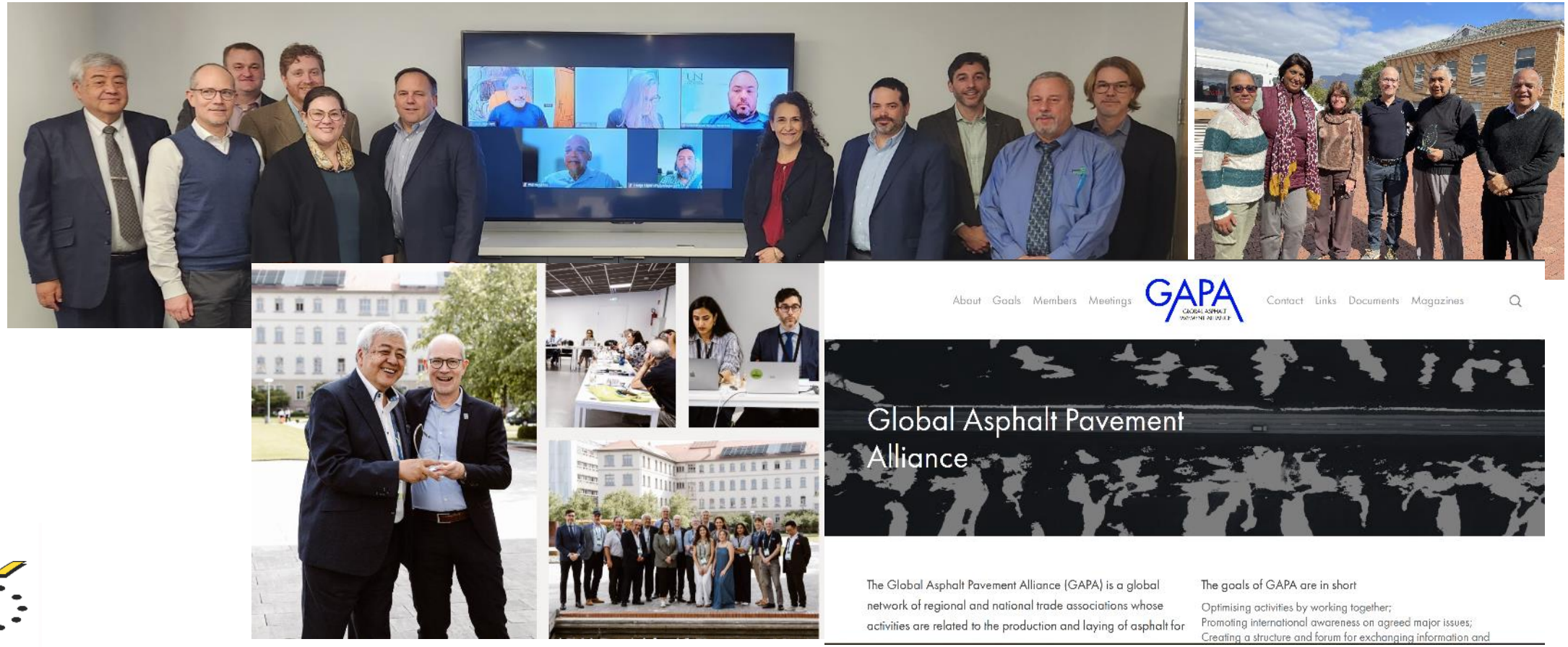
The European Asphalt Pavement Association (EAPA)

EAPA Committees

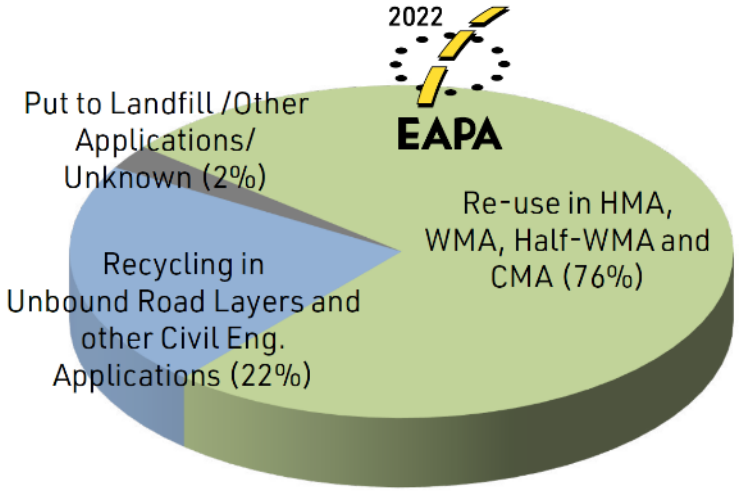
- General Council Assembly
- Directors' Group
- Executive Committee
- Technical Committee
- Health, Safety and Environment Committee
- Communication Committee
- Asphalt 4.0 Committee
- Various Task Forces: Warm Mix Asphalt, Reuse of asphalt, Decarbonisation, Odour

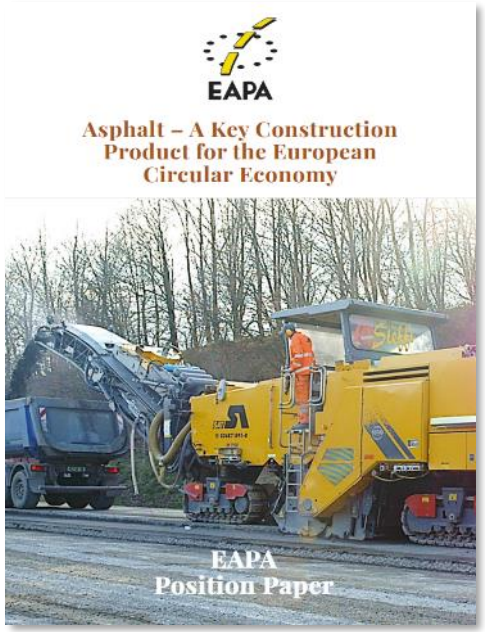
The European Asphalt Pavement Association (EAPA)

Global contacts and Chairmanship of Global Asphalt Pavement Alliance



The hot topics and new challenges for the asphalt industry in Europe





Many hot topics for the asphalt industry (1)

- Sustainability
  - **Decarbonisation of asphalt and road sector**
  - Environmental Product Declaration (EPD)
  - Circular Economy - Re-use of asphalt
  - Taxonomy
  - Tyre and road wear particles
  - Alternative binders
  - European End-of-Waste criteria for asphalt
- Health issues
  - Reduction of emissions in work environment
  - **Temperature reduced asphalts/Warm Mix Asphalt (WMA)**
  - Odour - Emissions of asphalt plants
  - Emissions of existing asphalt pavements

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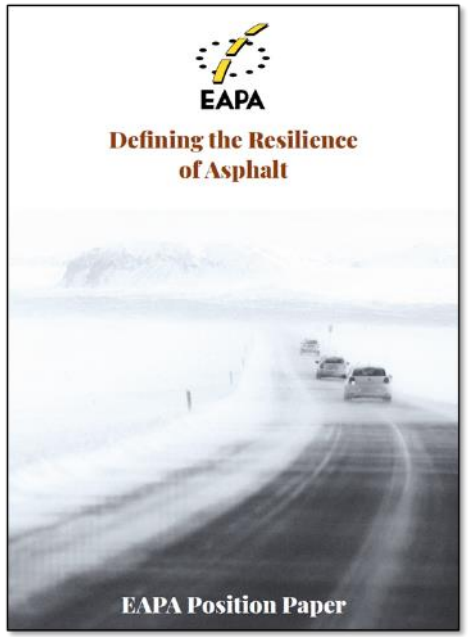
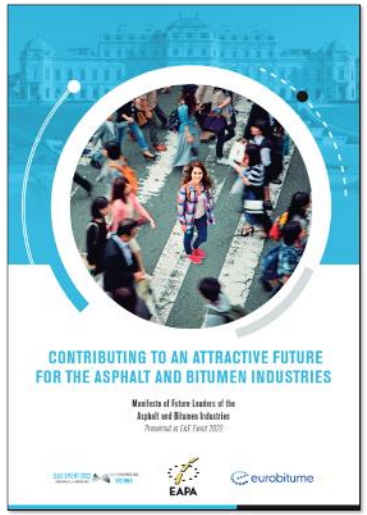
Many hot topics for the asphalt industry (2)

- Technical Aspects
  - Megatrends towards increased productivity
  - Durability of asphalt pavements
  - Hydrogen use for drying systems of asphalt plants
  - Asphalt for bike lanes
- Digitalisation and Innovation / Asphalt 4.0
- Attracting new talents and skilled workforce
- Resilience
- **Future Road Transport**
- **Communication** -Webinars, Social Media, Magazine, YouTube, Podcasts, etc.





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Always hot topics for the asphalt industry

Standardisation

- Revision of the Construction Products Regulation (CPR)
- Updates and inputs for CEN Standardisation Committees
  - Bituminous mixtures (CEN TC227, CEN TC227 WG1)
  - Bituminous binders (CEN TC336, CEN TC336 WG1)
  - Sustainability, PCR and EPDs (CEN TC227 WG6)
  - Aggregates (CEN TC154)
- Exchange with Academia
  - Rilem TC on Alternative Paving Materials and Fumes Emission Evaluation
  - ERTRAC, ECCREDI
  - Universities over Europe

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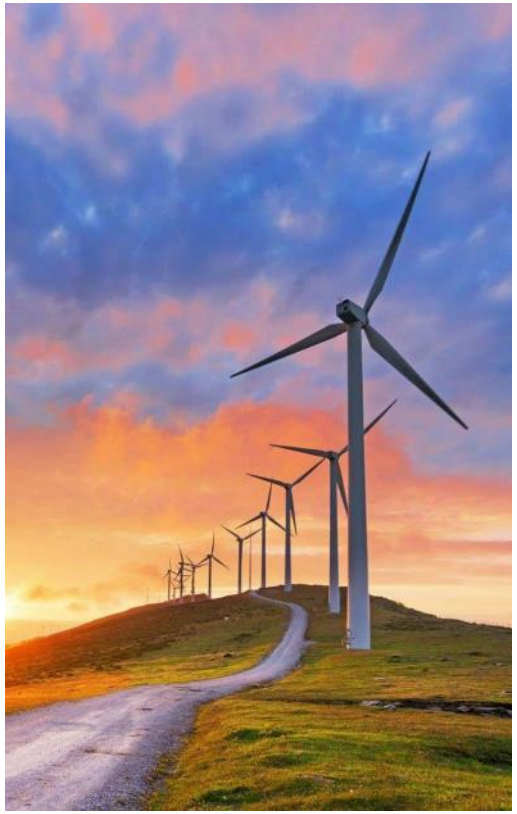
Decarbonisation of the Asphalt Sector



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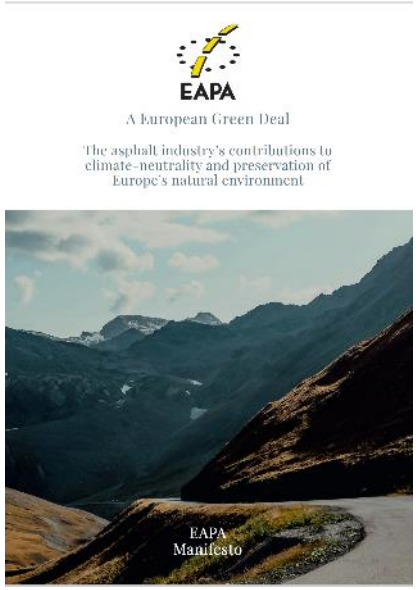
Decarbonisation and Circular Economy – The European Green Deal

- "A European Green Deal" by EC in October 2019
  - **Carbon Net Zero** by 2050
  - A **circular economy** action plan and a 'sustainable products' policy to support the circular design and prioritising reducing and reusing materials before recycling them. Encourage businesses to offer reusable, durable and repairable products. Reduce waste significantly.
  - **Emissions** reduction
- "Fit for 55" package in July 2021
  - revision of climate, energy and transport-related legislation in order to align laws with the 2030 and 2050 ambitions.



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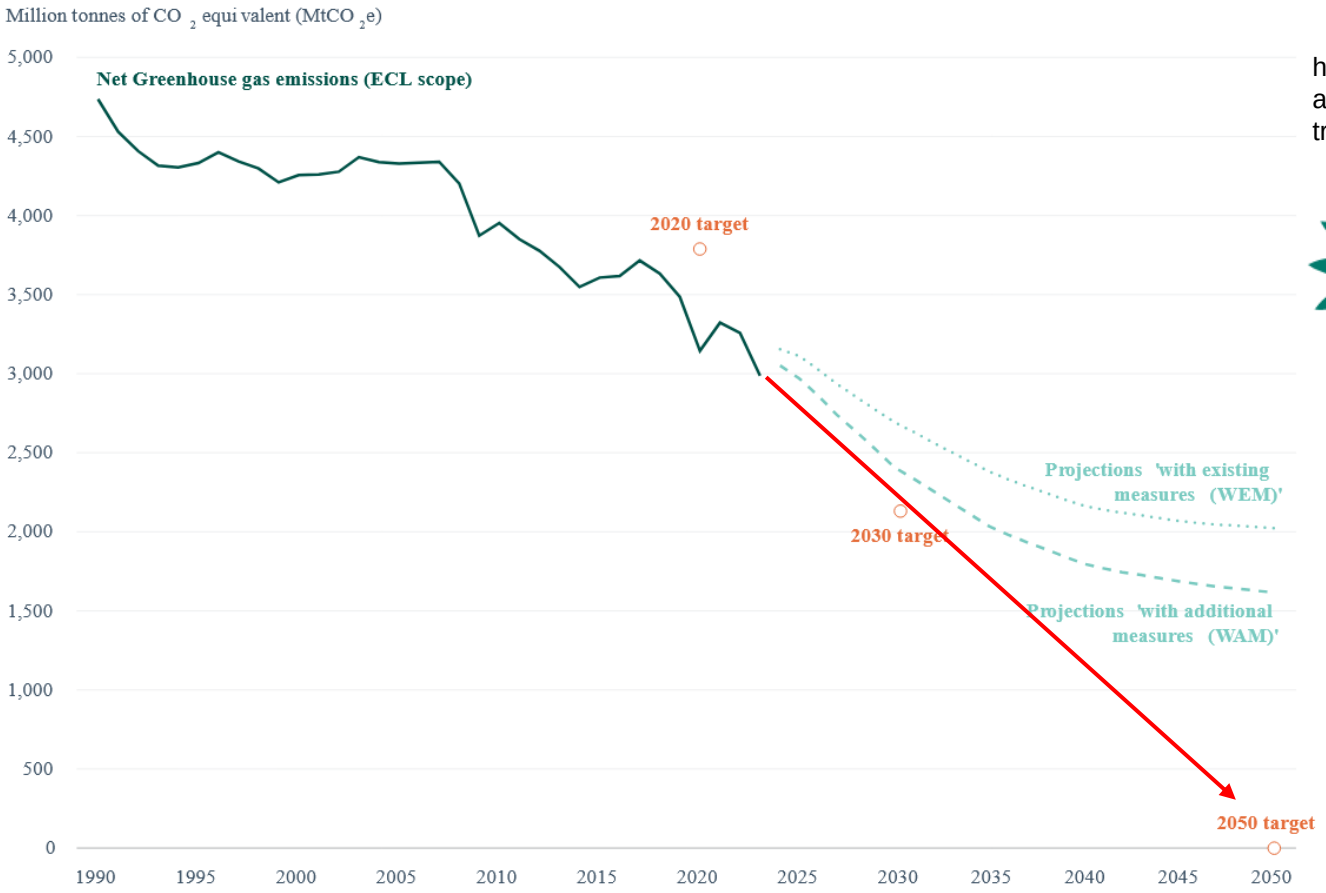
GHG emissions in the EU



https://www.eea.europa.eu/en/analysis/indicators/total-greenhouse-gas-emission-trends/progress-towards-achieving-climate

European Environment Agency

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JUST RELEASED!!!

Scan & access

digitally

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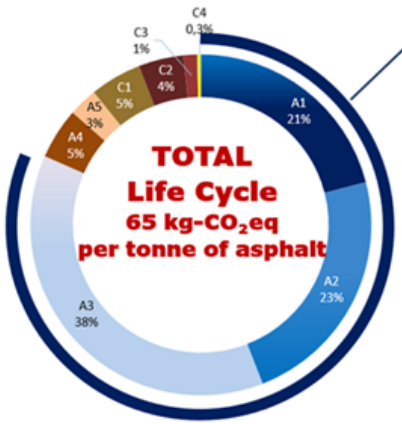
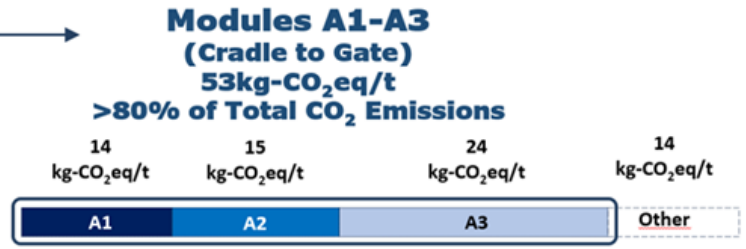
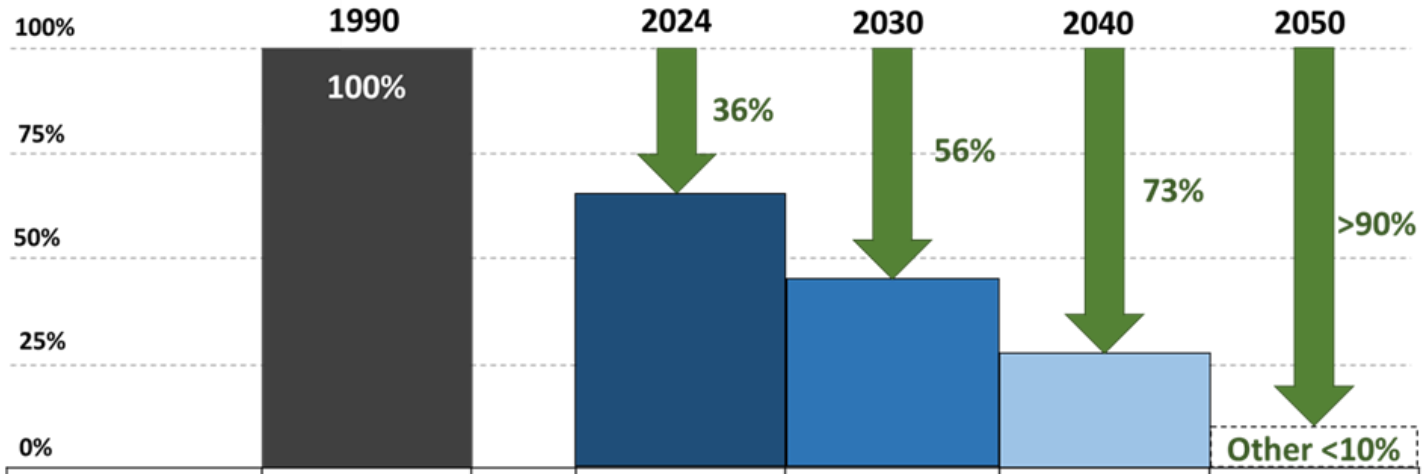
Roadmap to Net Zero





Currently best available information and prediction



	1990		2024	2030	2040	2050
Binder substitution	0%		0%	~0%	5%	10%
% WMA production	0%		4,8%	50%	75%	100%
Average RA content	~0%		13,2%	30%	45%	50%
Fuels	Coal, heavy fuel-oil		Mix (all)	Gas, bio, hydrogen	Gas, bio, hydrogen	Bio, hydrogen
Moisture reduction	0%		~0%	2%	2%	2%
Binder heating	Heavy fuel-oil		Fuel-oil, gas, electric	Gas, electric	Electric	Electric
Transport emissions	152%		100% (reference)	~100%	60%	20%
Plant consumption	~100%		100% (reference)	~100%	75%	50%
Job-site emissions	~100%		100% (reference)	~100%	60%	20%

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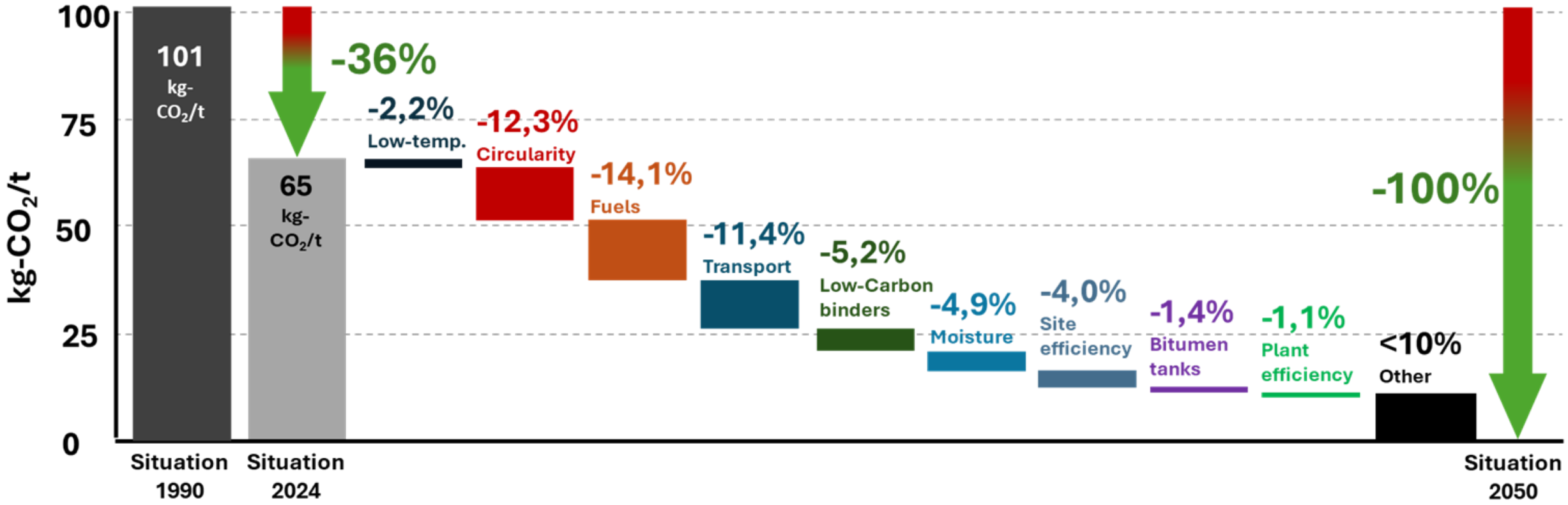
Roadmap to Net Zero



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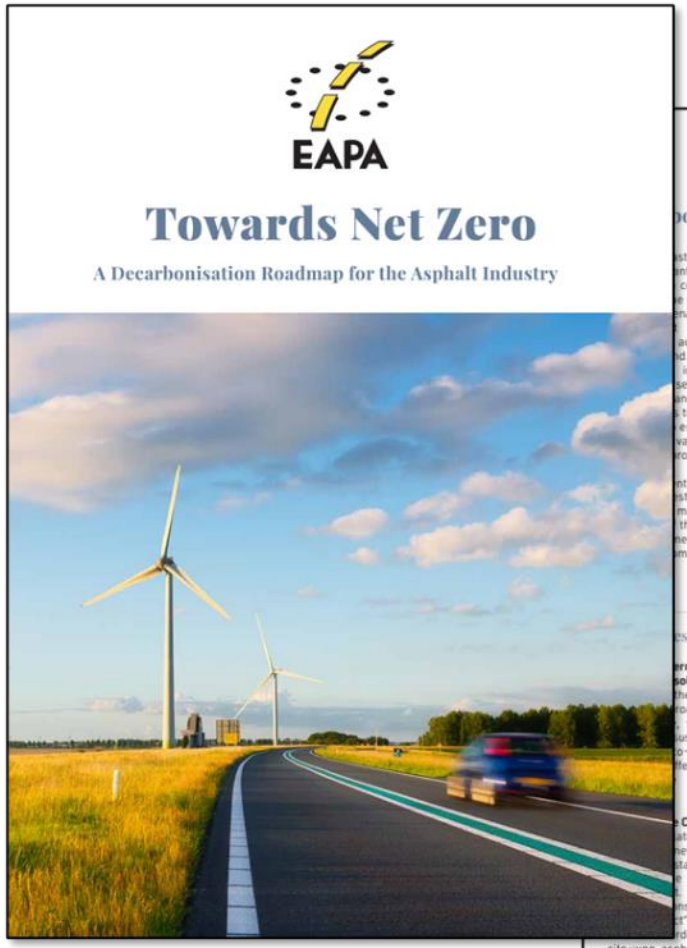
Roadmap to Net Zero



Reduce Road Transport Emissions with proper Road Maintenance

- Transport is responsible for nearly 25% of the EU's total CO_{2eq} emissions 3,000 Mt (2023), of which 70% comes from road transport.

Road Transport

- Appr. 525 Mt of CO_{2eq} are related to road transport
- 3-5% can be saved with smooth and even roads*
  (and more with tailor made asphalt surfaces)
  → **>25 Mt of CO_{2eq} per year → Road maintenance is important**

Production of Asphalt

- 50kg of CO_{2eq}/t of Asphalt with 215 Mt of Asphalt being produced (2019/EU-27)
  → **appr. 10 Mt of CO_{2eq} per year**

* See Road Pavement industries highlight huge CO2 savings offered by maintaining and upgrading road - view - EAPA

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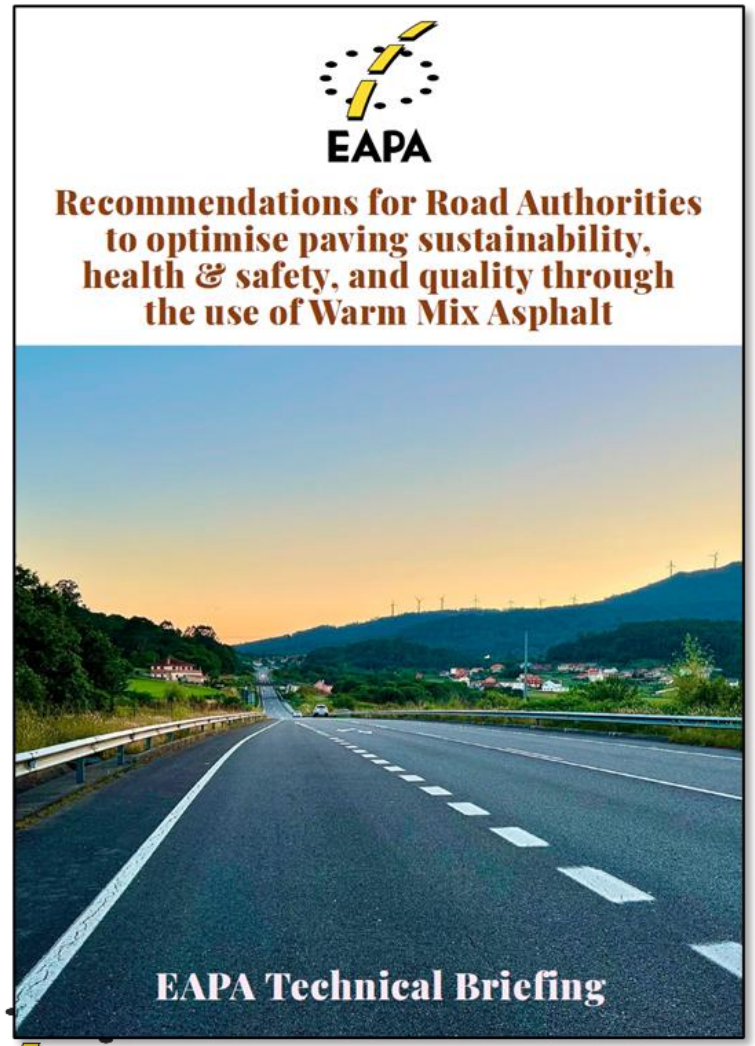
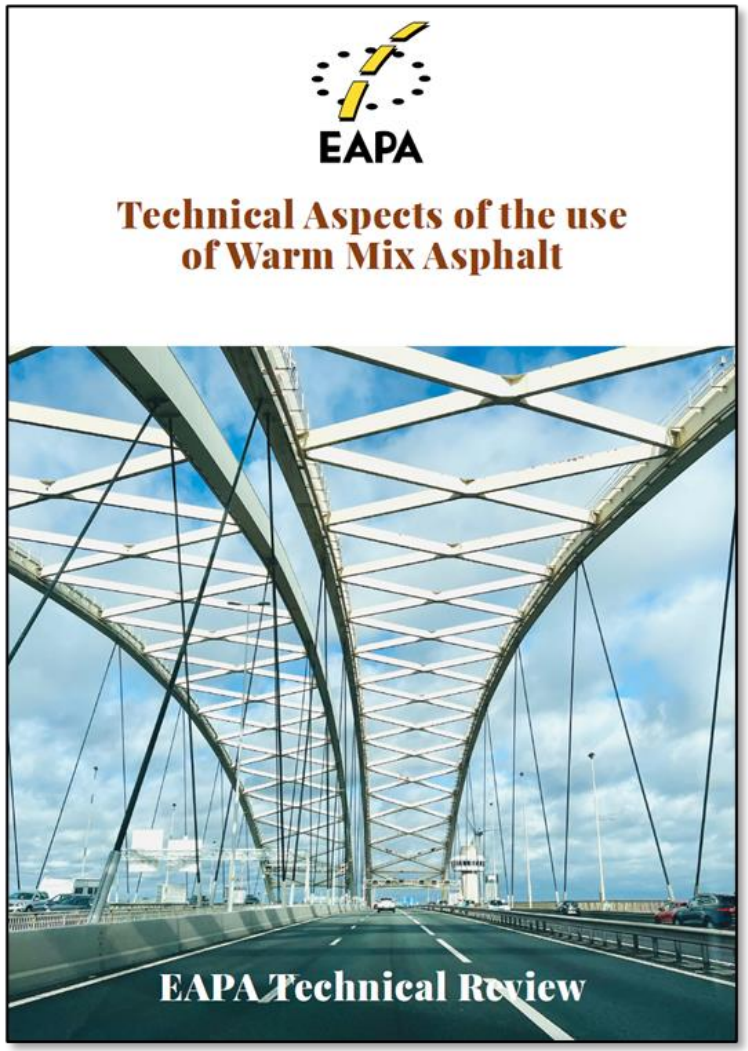
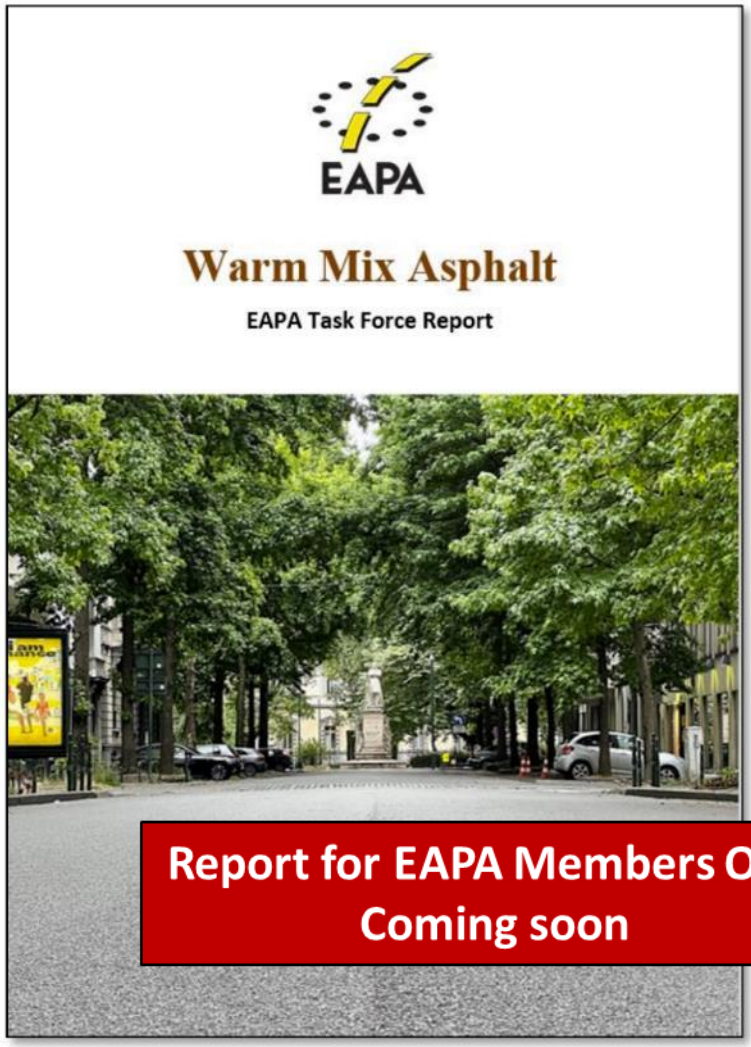
Temperature Reduced Asphalts/ Warm Mix Asphalt

Warm Mix Asphalt







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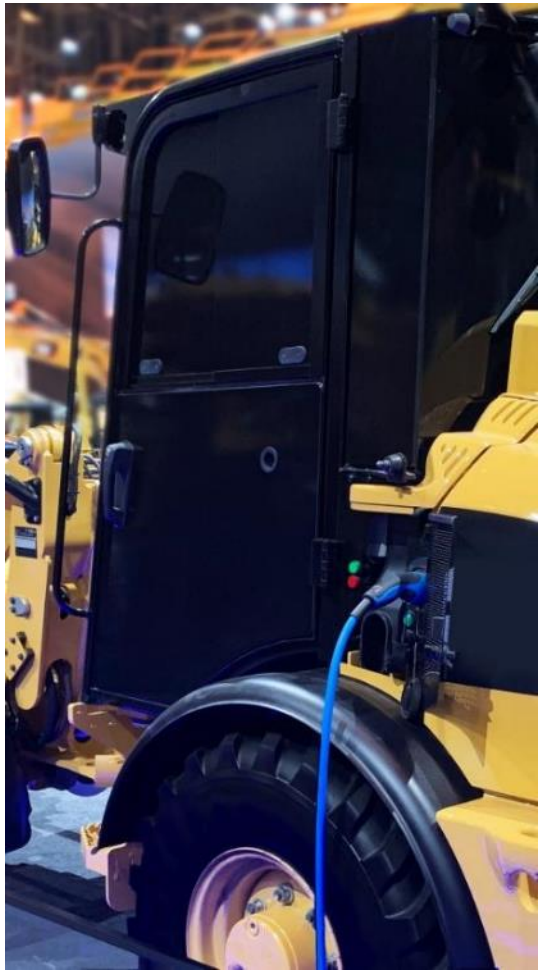
Future Road Transport

Changes in Road Transport

- Automated
- Electrified
- Connected



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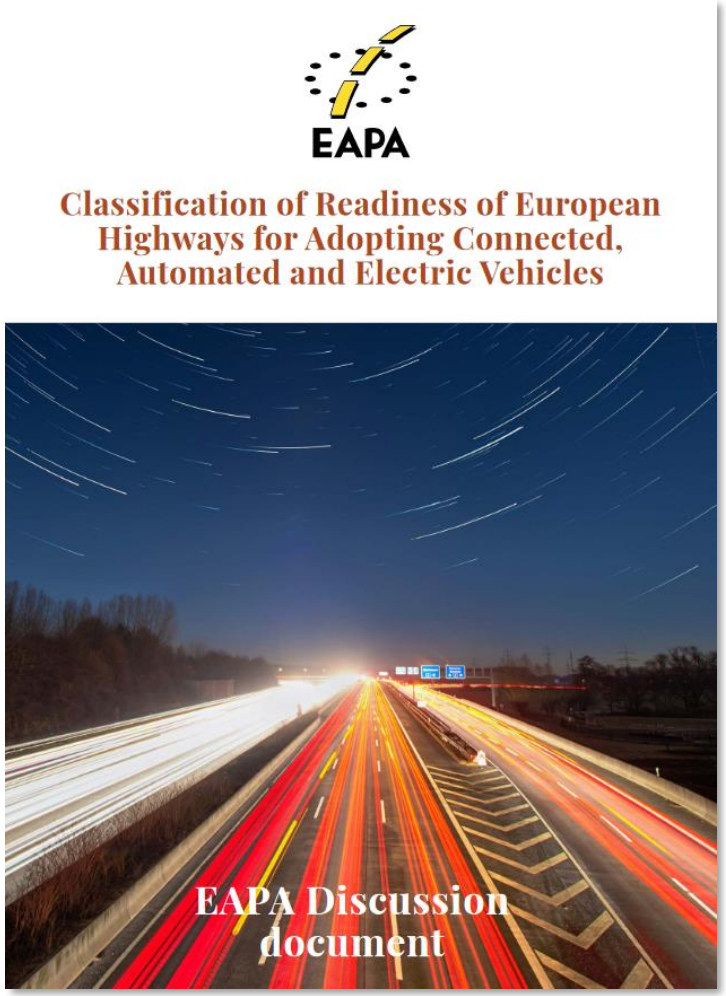
Changes in Road Transport

- Is the European road network ready for the future transport?
  - Weight of trucks
  - Slip

- Alternative Fuels for Transport
- Less Bitumen
  → Alternative Binders needed?

- Durability of Asphalt Pavements / Climate Change



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Changing road usage

- Platooning and vehicle length

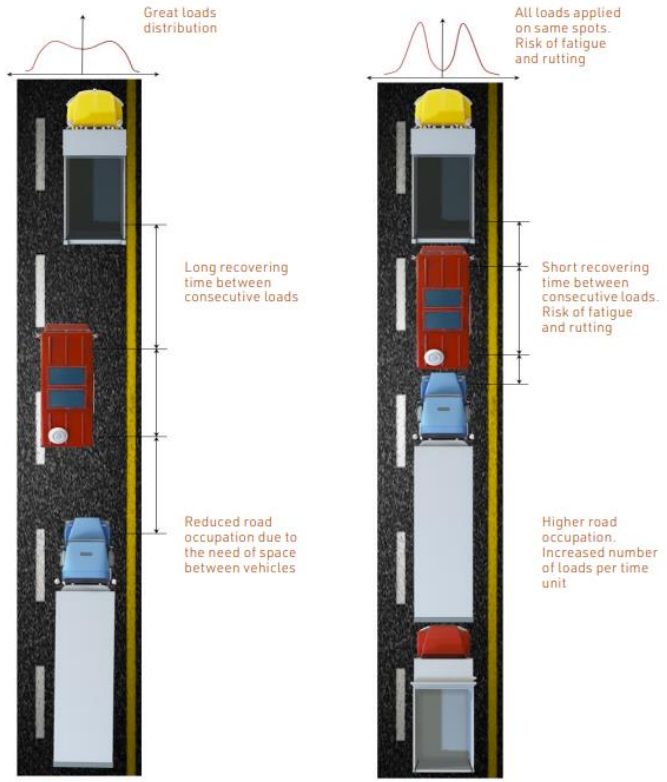


Figure 3. Differences in load application between current vehicles (left) and electric and autonomous vehicles (right)

Vehicles (and drivers)	6	4	3
Vehicle length	16.5m	25.25 m	32 m
Load per vehicle	100 m^3	150 m^3	200 m^3
Fuel consumption	3.5 ml/m^{3km}	3 ml/m^{3km}	2.5 ml/m^{3km}
CO2 emissions	100%	85% = **-15%**	73% = **-27%**
Road use	499 m	368 m	296 m

Figure 2. Transportation of 600 m^3 of volume limited goods with the same density (150 kg/m^3) [4]

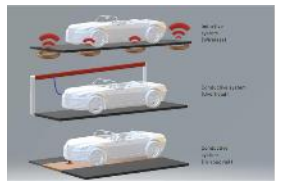
Potential risks of new road users on the durability of pavements

Heavy vehicles. Improvements in transport efficiency and technical developments in the automotive industry have also contributed to increase axle loading as well as higher tyre pressures. Greater use of high pressure super single tyres is getting more and more usual, while the total weight of trucks keeps growing. This has potential to increase rutting and fatigue cracking.

Electric vehicles following a catenary (overhead system) or a conductive rail embedded in the pavement (in-road system) to charge batteries on-the-fly tend to "hit" always the same spots of the road cross section. This produces a concentration of stresses in these spots, reducing service life.

High-capacity vehicles (HCV) are vehicles especially designed to carry more freight than a standard vehicle. Depending on the configuration and usage, these vehicles have potential to reduce carbon emissions at the individual vehicle level in the range of 15%-40%. However, these vehicles will need to increase either the axle load or the number of axles, potentially leading to either higher pavement stresses or shorter recovering time between loads, increasing fatigue and/or rutting in the pavement.

Autonomous vehicles. The development of autonomous vehicles and the formation of groups of vehicles driving in line, at the same speed and at a very reduced distances between them (system also known as Platooning) is especially beneficial for the aerodynamics of large vehicles. Consequently, it has potential to reduce fuel/electricity consumption. However, these vehicles tend to self-position in the centre of the lane (spots of the cross section receiving most impacts) and reduce the recovering time between loads, which increases the risk of premature rutting and/or fatigue damage.



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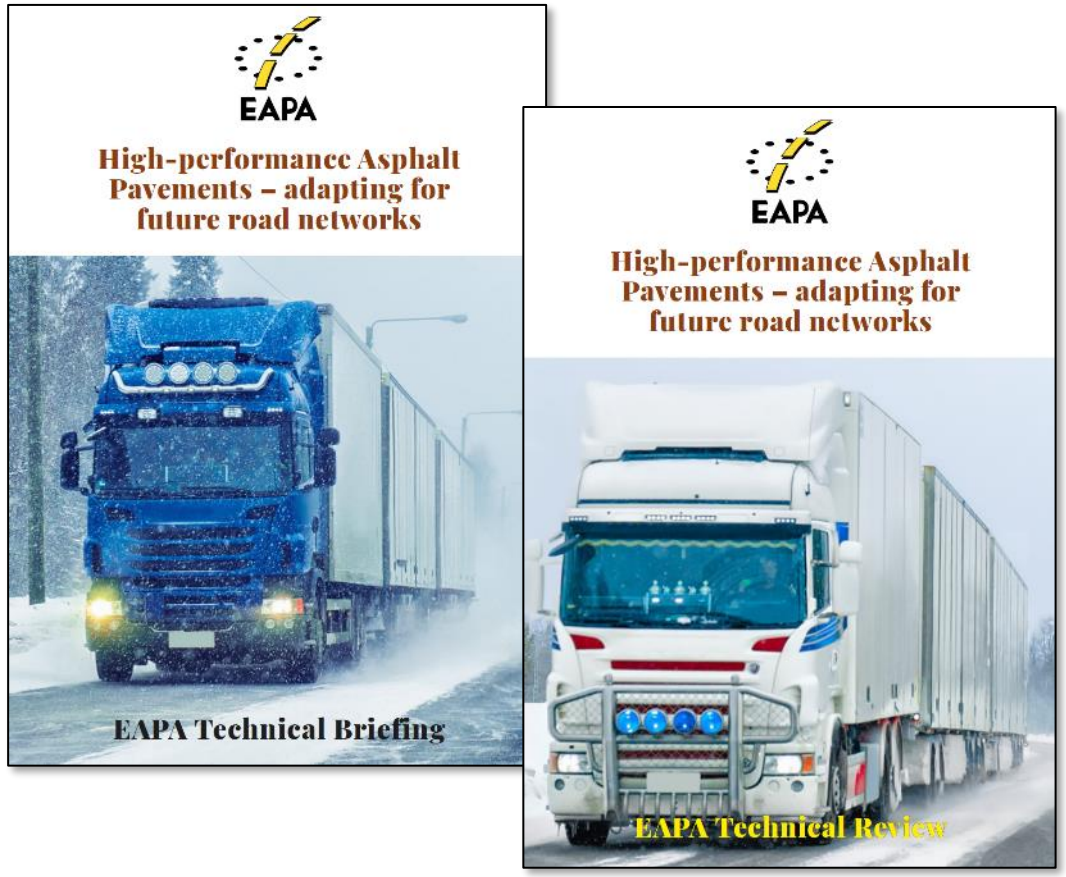
Changing road usage

- High Performance Asphalt



In order to meet the current EU requirements, roads must be resilient, durable and require minimum maintenance operations and traffic disruptions. However, emerging factors are hindering these objectives, such as Climate Change, increasing road transport demand and axle loads, or the arrival of new types of vehicles with certain characteristics, which might produce the premature deterioration of the pavements.

To prevent this, high-performance pavement solutions can be adopted, progressively shifting our current pavement designs towards technologies conventionally used in highly stressed pavements. These solutions include the use of high-performance surface courses (e.g. SMA), high-modulus base courses and a series of advanced concepts, such as anti-fatigue bottom layers or triple SMA; all of this combined with the latest developments for optimum logistics and coordination among stakeholders.

Some of these solutions have been used for many years, while other have been developed over the last decade especially for this type of pavements. In all cases, the results were satisfactory.

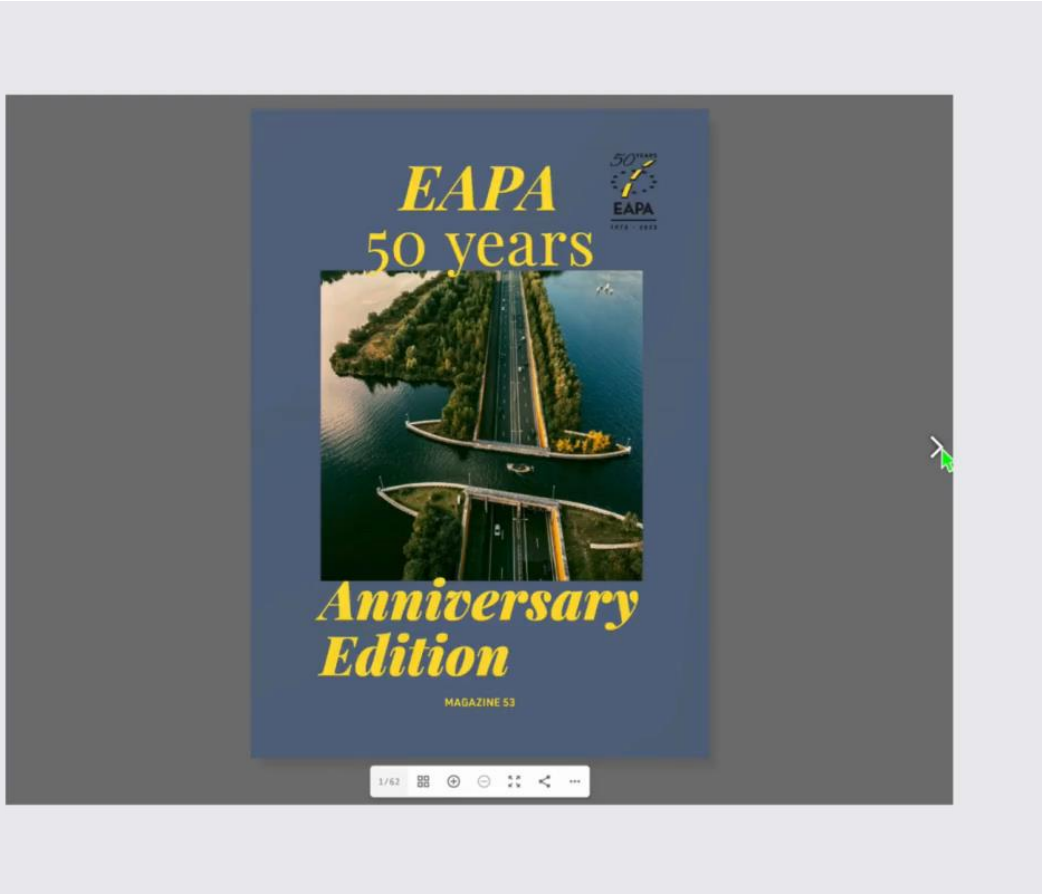
For these reasons, the European Asphalt Sector is completely prepared and has capacity to give support to the traffic of new vehicles with enhanced road requirements, as well as to adapt the European road network wherever necessary.

EAPA

Communication

Magazine, Newsletter and Website

- Communication via website, magazine, newsletter as well as public relations



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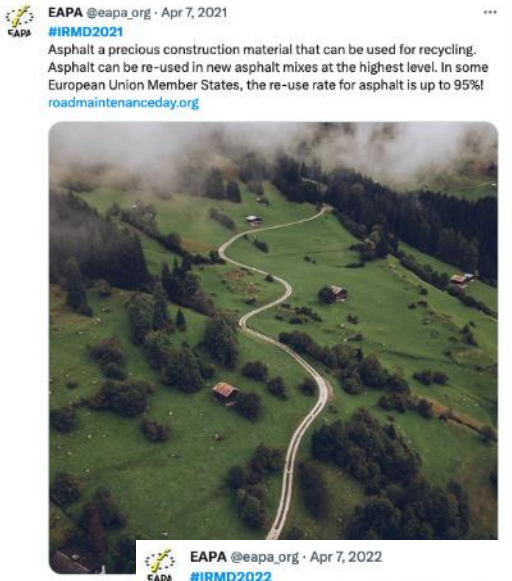
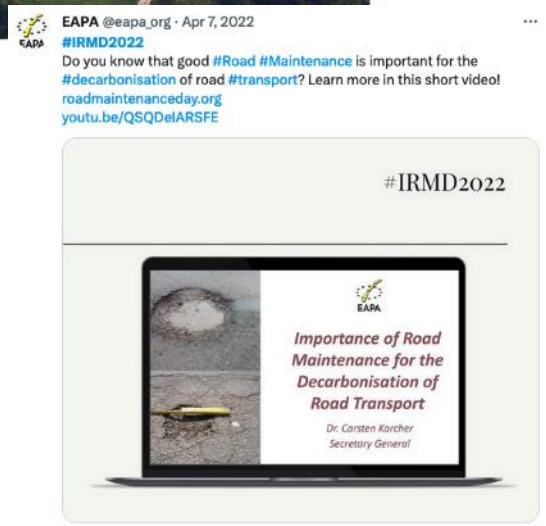
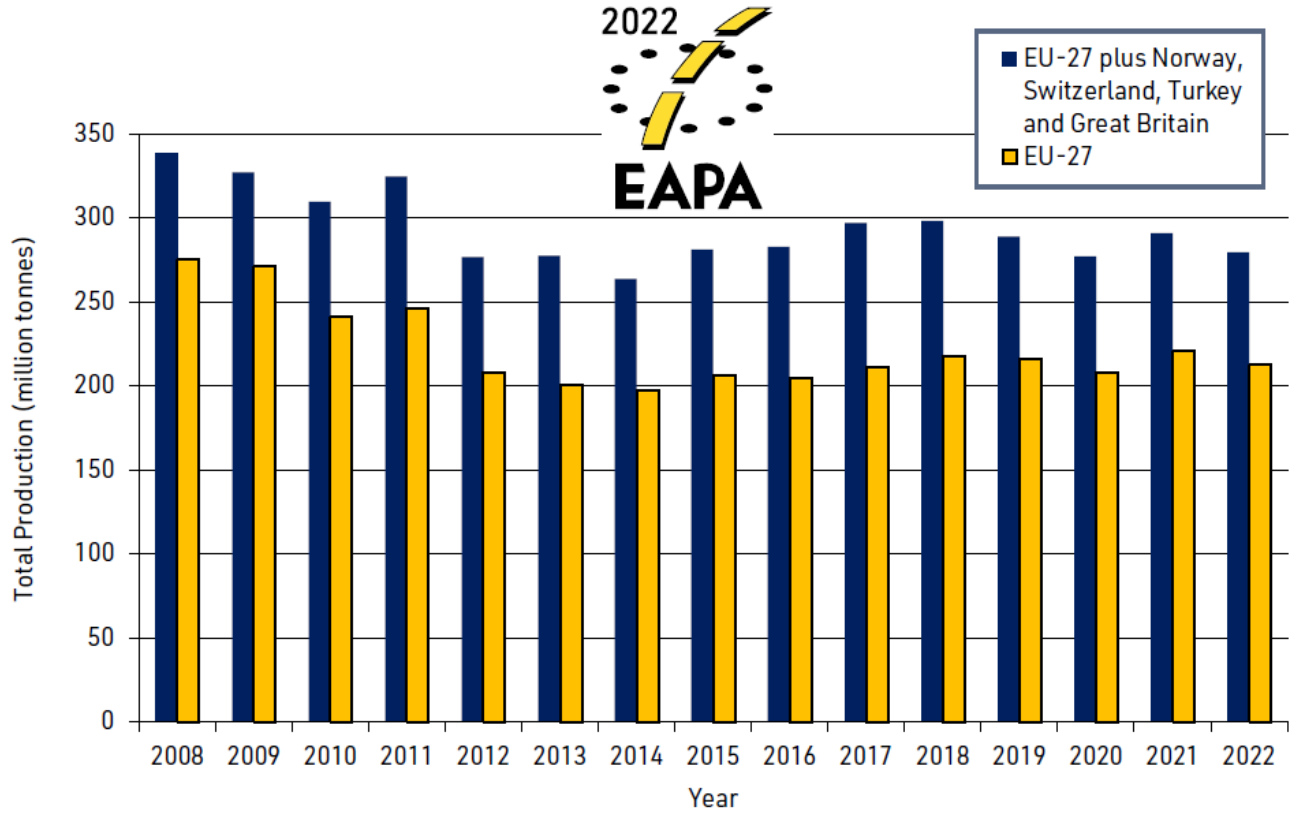
Social Media – LinkedIn, Instagram, X





Asphalt in Figures



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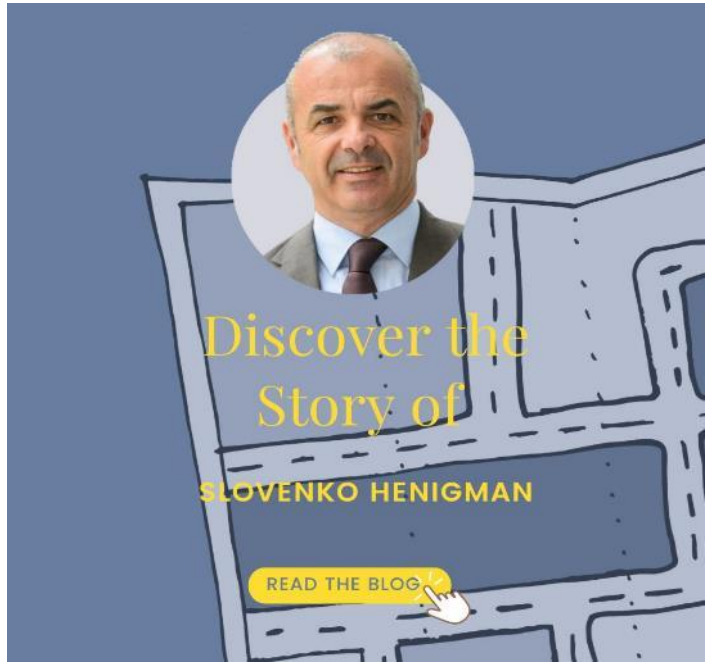
Podcast and Blog

Inspiring and empowering the next Generation of Engineers



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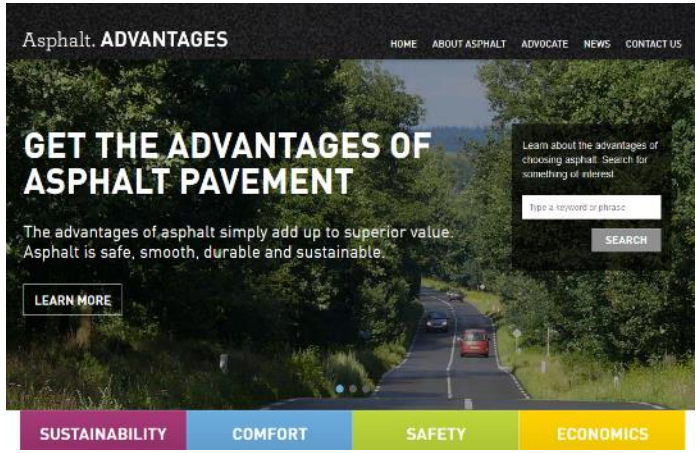
Videos, Advantages, Webinars, Awards

- EAPA YouTube Channel
- Webinars
- Asphalt Advantages
- Asphalt Advocate of the year



YouTube

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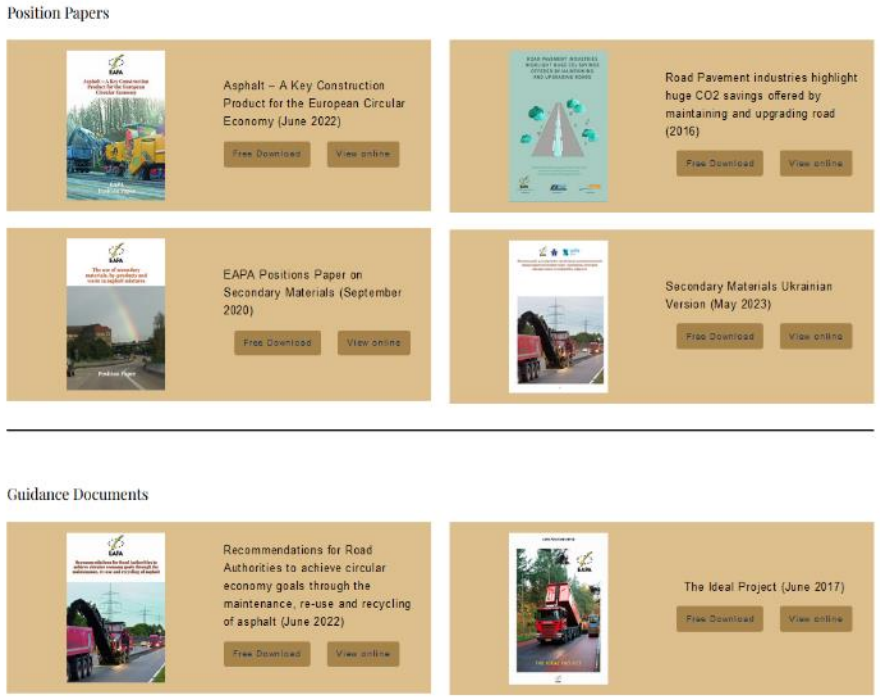
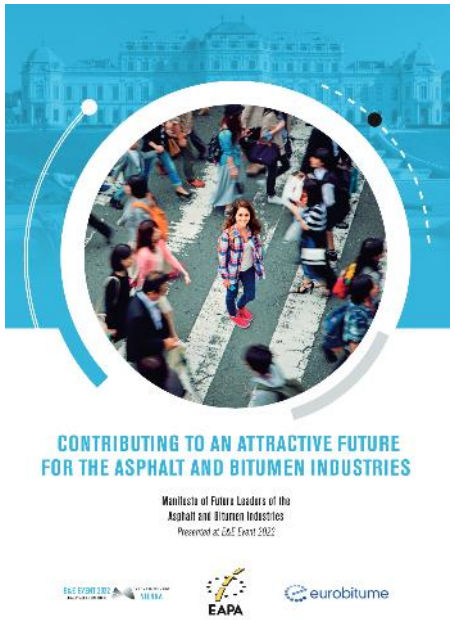
Manifestos and Position Papers

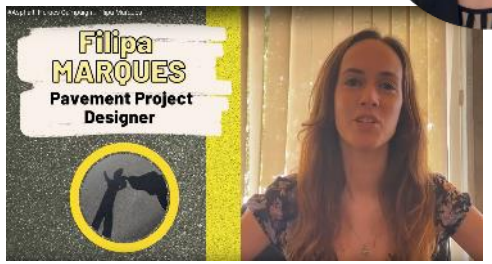
- Preparing EU Items and Manifestos (e.g. Green Deal, Reducing CO2 in the transport sector, Circular economy)





Campaigns

- Enhancing the public perception of asphalt as a versatile and beneficial material
- Associate asphalt with sustainable road users and connect with runners & cyclists' community to foster a new audience base and promote the sustainability and usability of asphalt
- Address misconceptions about Asphalt roads
- Attract young talents and professionals to the industry
  - #AsphaltHeroes
  - #CyclistsLoveAsphalt
  - #RunnersLoveAsphalt



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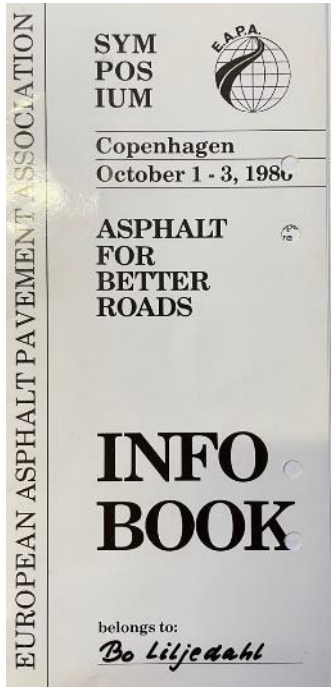
International Road Maintenance Day

- Gathered on 4 April 2024, bringing together experts to discuss CO_2 emissions reduction and sustainable road maintenance. Hosted by EAPA and Asefma (Spanish Asphalt Pavement Association) with participants from 45 countries. Live streamed by EAPA for global audience.

Congresses, Symposia, and Events



1976	1st Eurasphalt Congress Montreux
1980	2nd Eurasphalt Congress Brussels
1984	3rd Eurasphalt Congress Berlin
1986	1st Symposium Copenhagen
1988	4th Eurasphalt Congress Nice
1990	2nd Symposium Stockholm
1992	5th Eurasphalt Congress the Hague
1994	3rd Symposium Helsinki
1996	1st Eurasphalt & Eurobitume Congress Strasbourg
1998	4th Symposium Berlin
2000	2nd Eurasphalt & Eurobitume Congress Barcelona
2002	5th Symposium Antalya
2004	3rd Eurasphalt & Eurobitume Congress Vienna
2008	4th Eurasphalt & Eurobitume Congress Copenhagen
2010	6th Symposium Madrid
2012	5th Eurasphalt & Eurobitume Congress Istanbul
2014	7th Symposium Paris
2015	8th Symposium Istanbul
2016	6th Eurasphalt & Eurobitume Congress Prague
2017	9th Symposium Paris
2018	1st Eurasphalt & Eurobitume Event Berlin
2019	10th Symposium Paris
2021	7th Eurasphalt & Eurobitume Congress Online
2022	2nd Eurasphalt & Eurobitume Event Vienna
2024	8th Eurasphalt & Eurobitume Congress Budapest

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3RD E&E EVENT

EURASPHALT & EUROBITUME

11-12 JUNE 2026

VIENNA

AUSTRIA

AUSTRIA TREND HOTEL
SAVOYEN VIENNA

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Thanks for listening!

www.eapa.org
@eapa_org

karcher@eapa.org
@CarstenKarcher