Manifesto of the European Asphalt Pavement Association on the occasion of its 50th Anniversary

1973-2023

50 YEARS
EAPA
1973 - 2023

The history of the asphalt paving industry since 1973

The asphalt paving industry started a slow but constant revolution 50 years ago when the old criteria for paving design, such as Marshall stability and Marshall flow, progressively made way to a new generation of scientific test methods and criteria, such as fatigue, rutting, low-temperature cracking, skid resistance, etc.

This conceptual revolution, together with the arrival of high-quality bitumens and additives, led to the gradual emergence of a wide range of new types of asphalt, allowing engineers to choose not only the traditional asphalt concrete and asphalt mastic but new a-la-carte solutions, such as high-modulus asphalt, porous asphalt, soft asphalt and a series of thin and ultrathin asphalt layers, such as Gussasphalt, Hot Rolled Asphalt or Stone Mastic Asphalt. This change made our roads durable and safe while optimising the overall costs through the use of project-specific solutions.

Nevertheless, it was in the last couple of decades, when the industry finally realised that satisfactory mechanical performance was not enough and concepts, such as sustainability, circular economy and resilience, become indispensable in any road construction or maintenance project. The industry understood the importance of reducing the need for raw materials, energy consumption and emissions and, once again, it responded to the challenge with a new generation of techniques that nowadays allow us to re-use approximately 2/3 of the available reclaimed asphalt that we extract every year from old roads and recycle practically the remaining 1/3. We also produce and install asphalt at lower temperatures and by using alternative fuels, we use low rolling resistance asphalts, which can reduce 3-5% of the fuel consumption of all the vehicles circulating on it. Finally, the new standards and CE-Marking have just become tools not only for the assessment and warranty of the mechanical but also the environmental performance.

The latest revolution, the digital transformation, which we are still starting nowadays, came hand-in-hand with the latest smart and autonomous systems fuelled by big data, machine learning, artificial intelligence, blockchain, the internet of things (IoT), etc. With these, a new asphalt industry, so-called Asphalt 4.0, is pushing forward the efficiency, productivity, quality, reliability, sustainability and customer experience of asphalt roads to a whole and unprecedented new level.

Every one of the above-mentioned milestones contributed to making asphalt the optimum choice for the construction and maintenance of any sort of road. Hence, it is not surprising that nowadays, more than 90% of European roads are paved with asphalt, supporting the transport of more than 80% of passengers and 70% of inland freight.

Hence, with more than 4.000 production sites and 10.000 companies in Europe, and with an annual production of around 300 million tonnes of a material, which is not only safe, durable and resilient but also 100% recyclable and even 100% re-usable, the asphalt paving sector perseveres as a benchmark in the construction industry.

Reaching this was not easy. Asphalt plants and construction equipment have been under a constant process of renovation and development decade after decade. The installation of parallel drums in asphalt plants to maximise asphalt re-use, the switch to more-sustainable fuels and the use of foam reactors to manufacture at lower temperatures and save emissions, the installation of ventilation systems in modern pavers to ensure safe and comfortable working conditions or the development of smart roller compactors with temperature, density and positioning sensors to optimise compaction and final quality, is just the beginning. The first proofs of concept of autonomous and electric equipment or plants running on hydrogen are already knocking on the door and will probably continue the renovation process in the coming years.

Through this long journey, our sector has found numerous challenges, such as the recent ban on Russian crude oil and bitumen, the strict price regulations in times of incisive economic fluctuation and the scarce generational renovation in our workforce. Nevertheless, it is essential to remember that still, during the worst periods of the COVID-19 pandemic, roads were the mean of transport, which remained fully operative, and the road paving sector was one of the very few, which continued working and delivering for our society.

Someone once said that the reason behind this success story is that, unlike other materials, hot mix asphalt always required the coordination of all the stakeholders involved in road construction to reduce the temperature losses during the process. Material suppliers, mixing plants, delivery, paving, compaction, etc., working in synchrony to deliver top-quality asphalt decade after decade. Probably it is not the only reason behind it, but the truth is that such a strong collaboration decades ago, may have paved the way, which brought us to the present times, when more than ever, we share common challenges and pursue common goals.

EAPA`s start and development in the last 50 years

During the European meeting held on the 9th of March 1973 in Munich and organised by nine national associations their representatives decided to prepare the necessary actions to create a European Association. The formal adoption and official founding of EAPA would not happen on that same day, but on 14 October 1973, when of Austria, Belgium, Denmark, Finland, Germany, The Netherlands, Norway, Spain, Sweden, Switzerland and UK signed the agreement.

The main reasons, which moved EAPA founders to create an association, came from the need of establishing a platform for the intensive exchange of information between the member countries, developing collaboration structures with various road authorities and achieving European opinions based on technical, social, welfare and environmental aspects.

Nowadays, these principles remain, but the EAPA mission goes beyond. EAPA is currently 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.

With the involvement of 16 National Associations and more than 25 Associate Members, EAPA continues working to create an innovative and modern asphalt industry that cares for health and safety as well as for the protection of the environment and sustainability.

Throughout its history, EAPA became more present in Standardisation Committees, established strong alliances with global partners beyond Europe (e.g. as a member of the Global Asphalt Pavement Alliance), and became the contact point for many stakeholders, from Road Administrations (CEDR) and European Commission to academics and researchers (RILEM), transportation and construction professionals (FIEC, ERTRAC, ECCREDI, ACEA...) and associations of raw materials suppliers (Eurobitume, UEPG).

Also, the growing technical work has been progressively structured into a more and more complex system of Committees and Task Forces, beyond the traditional Technical Committee and Committee on Health, Safety and Environment. The change in times is well reflected in the incorporation of the newest Committee on Asphalt 4.0 and Communication or the ongoing Task Forces on Decarbonisation and Life Cycle Assessment.

Over these 50 years, the exhaustive work undertak-

en by all the people behind these Committees led to the publication of several dozens of position papers, technical reviews, technical briefings, discussion documents and manifestos, addressing different audiences, such as road administrations, industrials, academics and the general public. The topics changed, from the first ones on purely mechanical topics to the latest on the circular economy asphalt, the use of secondary materials from other sectors into asphalt or the readiness of asphalt roads to adopt connected, automated and electric vehicles. The channels also changed, from the original publications printed in paper and posted by conventional mail, to the downloadable documents on the EAPA website or the brand new EAPA YouTube channel and social media.

Times have even changed the way we meet, thanks to new technologies. Since the first Eurasphalt Congress, held in 1976 in Montreux, and after more than 20 Eurasphalt Congresses, Symposiums, E&E Congresses and Events, in 2021 an unprecedented milestone was achieved with the celebration of the first E&E Congress purely virtual. With almost 1000 participants, this Congress allowed stakeholders to continue exchanging even during the worst pandemic of the last century. The programme of the Congress 2021, with sessions on topics like "communication" or with space for the Future Leaders of our industry to present how to make our sector more attractive for young generations, had more to provide than that held in Montreux almost 50 years ago. However, the idea of sharing experiences, discussing new challenges and proposing solutions to improve our industry, remains intact.

For 50 years, the voice of the asphalt industry, through the speakers of EAPA, has never stopped reaching more and more stakeholders of the sector, from the European continent and beyond.

EAPA's vision for the future

Over the last 50 years, many lessons were learnt, and many milestones were achieved. Some difficulties were overcome, and yet some others remain challenging our industry.

Just in the coming months, the ongoing revision of the Construction Products Regulation will probably change what for many years we have understood as "CE-Marking" and will probably help to give preference to the use of sustainable materials, like asphalt. The ongoing revision of the European Waste Framework Directive may also help to overcome important barriers to the circular economy, such as the lack of clear end-of-waste criteria to stop considering as "waste" a material 100% re-usable and recyclable, like reclaimed asphalt. Taxonomy regulations, microplastics reduction policies, Product Category Rules and Environmental Product Declarations... After all, this is just the beginning of an exciting future.

With the aim of continuing the positive evolution of the last 50 years and ensuring a prosperous society connected through safe, sustainable and resilient road networks, EAPA calls all stakeholders of the asphalt road paving sector:

1 To establish a common understanding among European National and Regional Road Authorities to include vehicle CO_2 considerations in road maintenance strategies and procurement policies and ensure a minimum state of maintenance of our road networks.

2 To encourage and support National and Regional Road Authorities to stimulate demand for the use of sustainable solutions in roads construction and maintenance, which optimise the criteria of sustainability, circular economy, eco-design and quality, through effective maintenance strategies, the use of reclaimed asphalt coming from existing pavements and the use of low-temperature techniques.

3 To set up regulatory plans, in which "asphalt" is never considered as a "waste" by establishing reasonable end-of-waste criteria for site-won asphalt. If the owner of the road can declare that the asphalt layers to be milled are not hazardous, the extracted material should be automatically declared as a "by-product" or "secondary raw material". Thus, its stockpiling and application should be permitted over the following years, in order to ensure that site-won asphalt is re-used into asphalt mixtures or, at least, recycled for other applications.

4 To prevent the introduction of waste materials and by-products from other industries into asphalt, which could compromise certain fundamental characteristics. Alternative components proposed to the asphalt industry must be only incorporated into asphalt if it can be demonstrated through a Risk Assessment process, that now and in the future, there will not be disadvantages concerning circularity, health and safety, environmental impact, value for money, technical performance and competitiveness of asphalt solutions.

5 To embrace the digital transformation of the asphalt paving industry, the so-called Asphalt 4.0, to push forward the efficiency, productivity, quality, reliability, sustainability and customer experience of the asphalt paving sector.

6 To exploit innovations, such as embedded sensors, energy harvesting pavements or road-vehicle communication systems to facilitate the transition towards the new road mobility, hand-in-hand with the development of connected, automated, electric and heavy-duty vehicles.

7 To establish a common procurement understanding across the EU, which enables innovative, rather than the 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.

8 To undertake initiatives based on green and digital technologies, which makes our sector more attractive for the youngest generations.

9 To get in closer contact with Academics and Researchers, to make sure that their efforts target real needs in the industry and that their developments are transformed in practical implementations.

10 To communicate and create outreach by publishing reports, media content and post on social media about the benefits of successful implementations to increase the visibility and reliability of the technology among other industrials, administrations, policymakers and regulators.

EAPA
Square de Meeûs 40
1000 Brussels – Belgium
www.eapa.org

eapa **eapa_org**

eapa_org **eapa**