

Web de EAPA Asphalt 4.0 Tecnologías Digitales y Pavimentación, <https://eapa.org/asphalt-40/>

Esta es una de las secciones más visitadas de la web de EAPA, www.eapa.org, desarrollada por el Grupo Asphalt 4.0 de EAPA, presidido por el Presidente de Asefma, Juan José Potti y el apoyo de su Secretario Breixo Gómez, Director Técnico de EAPA, por su interés y relevancia vamos a mantener el texto original, en inglés.

Digital transformation of Industry, also known as Industry 4.0, refers to a series of smart and autonomous systems fuelled by big data, machine learning, artificial intelligence, blockchain, internet of things (IoT), etc. with capacity to significantly push forward the efficiency, productivity, quality, reliability and sustainability of a given industrial sector. The application of these technologies to the asphalt paving sector is known as Asphalt 4.0. This involves the use of digital tools to automate, monitor and improve the way, in which organisations develop conventional activities, such as management of asphalt plants, manufacturing of bituminous mixtures, transport/supply or installation (e.g. laying, compaction, etc).

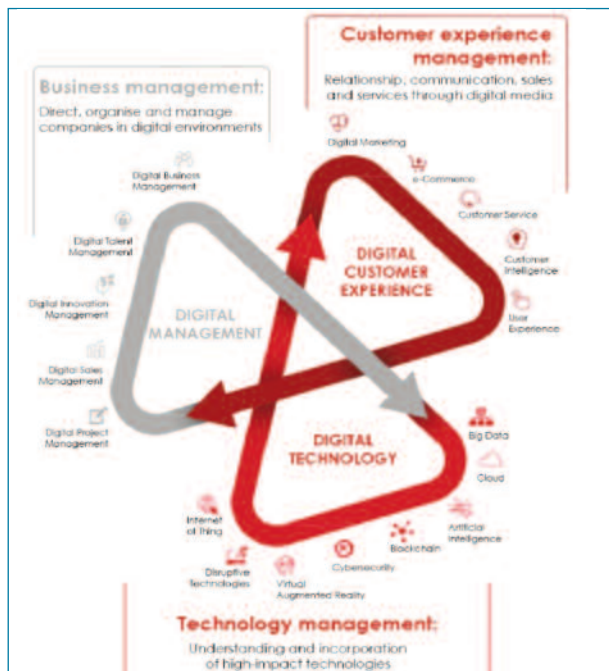
Through the use of digital technology, the organisation can improve the way in which it develops its activity, to help those working in it. In addition, it also facilitates and accelerates the transition of the mobility sector towards its new users, such as the electric and automated vehicles.

The development of the Asphalt 4.0 concept affects all areas of the organisation and for this reason it should be directed at the highest level. The concept is based on three pillars:

- Digital technologies and tools for the safe, effective and efficient data management, which includes its generation, storage and transfer. Some examples are the cloud storage, internet of things (IoT), virtual and augmented reality, blockchain, artificial intelligence, machine-to-machine (M2M) communication systems, advanced sensors, autonomous robots or

cybersecurity protocols.

- Smart management systems able to process all data obtained and identify patterns, which will lead to optimum decision making and in a timeframe, which would not be reasonably feasible for humans. Some examples are the digital business management, digital talent management, digital innovation management, digital sales management and digital project management
- Customer experience. The consequence of previous technologies is a dynamic production system, which is constantly adopting innovations and readapting to maximise the customer satisfaction. Roads are not just delivered after construction, but monitored, managed and maintained based on the instant information that is being received and the resulting optimum strategy. Some examples are digital marketing, e-commerce, customer service, customer intelligence and user experience



Development of the Asphalt 4.0 concept relies on 3 fundamental criteria: transparency, traceability and innovation. An adequate Asphalt 4.0 transformation process can result in greater efficiency of the organisation, better guarantees and durability of the offered products and services, savings of time and resources, a permanent innovation process and a totally different way of managing customer satisfaction (customer experience).

Development of the Asphalt 4.0 concept seems to be a robust answer for the mobility and transportation sectors. This is, without any doubt, an exciting challenge.

For this reason, its development will need to go hand in hand with a new generation of tendering systems, which combine to meet the needs of the sector for innovation, transparency, technical capacity, cost-efficiency and resource optimisation. Its adoption is recommended for all the stakeholders involved in every stage of the road service life, from its design to its end of life (and / or re-use).

How does EAPA help to implement Asphalt 4.0?

<https://eapa.org/how-does-eapa-help-to-implement-asphalt-40-view/>

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AFIRMACIONES ASFÁLTICAS

“Las carreteras con pavimentos bien mantenidos con mezclas bituminosas ofrecen una superficie de rodadura cómoda, silenciosa, segura y con bajo consumo de combustible” (Editorial)

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