

Pavnext - technological device to implement on the road pavement surface

Pavnext consists of a road pavement surface application equipment that allows kinetic energy to be extracted from vehicles and, consequently, reduces their speed without any action of the driver and without impacting the vehicle or affecting the ride quality.

Thus, Pavnext promotes road safety in a unique way at locations where it is required to circulate at low speed, as in approaching crosswalks, roundabouts, schools, among others.

The energy harvested from vehicles is then converted into electrical energy with a 70% conversion efficiency, being produced without associated emissions. This energy can be used in public street lighting, sensors, traffic lights, to charge electric bicycles or even injected into the

power grid. Additionally, Pavnext provides real-time data by monitoring traffic and its speed, as well as the generated and consumed electrical energy. Data are sent to the cloud and can later be used to generate reports and optimise energy consumption in real time, promoting energy efficiency.

The key drivers of the project are an effective road safety promotion, by reducing vehicle speed without any driver action; a clean energy generation, by converting a typically wasted energy into electrical energy; and an optimisation of energy consumption based on real time data, by monitoring traffic and sending the data generated to the cloud •

