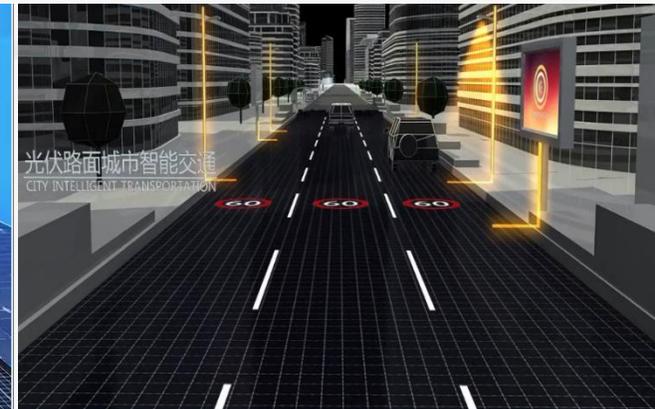


Demonstration Project

integrating driverless technology with
a road with solar energy and wireless
charging/supply technologies

「
2018



Haiyan Zheng

Project Overview



Electronic Road

- Total length: about 600m
- Width: 3.5m
- The installed capacity of the photovoltaic road: 240kWp
- The transmitting power of Dynamic Wireless Charging System: 30kW



Distribution Room

- Intelligent Control and Scheduling System
- Distribution Facility of DC 750V power



Static Wireless Charging Carports

- The transmitting power of Static Wireless Charging System is 30kW

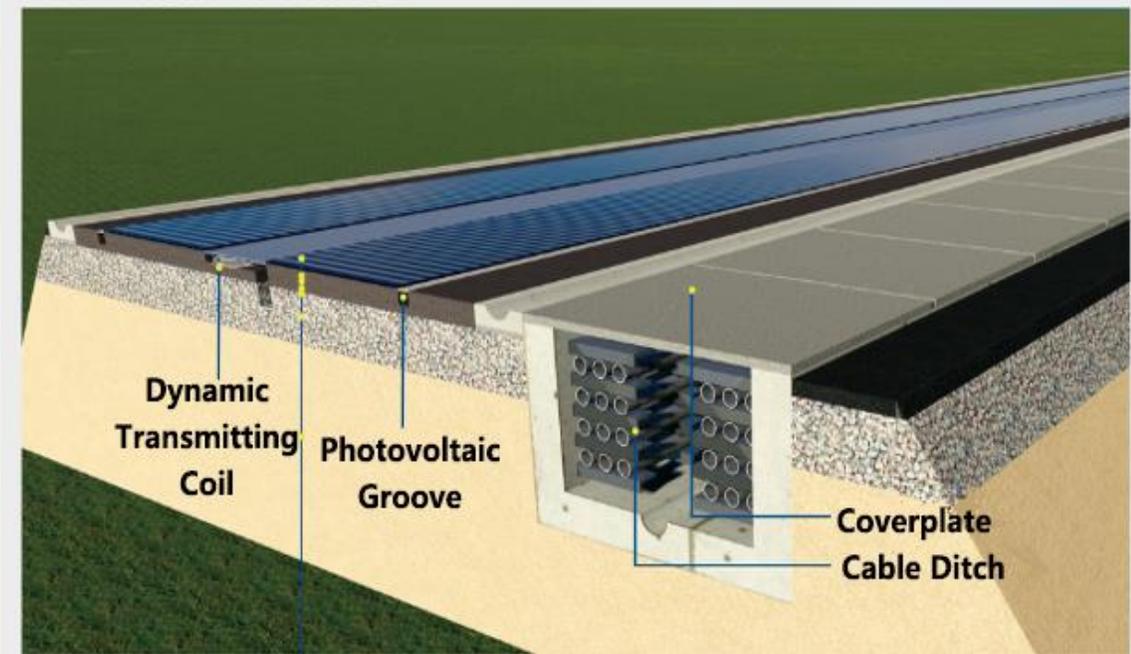
Project Detail



Photovoltaic Road



Driverless car with level 4

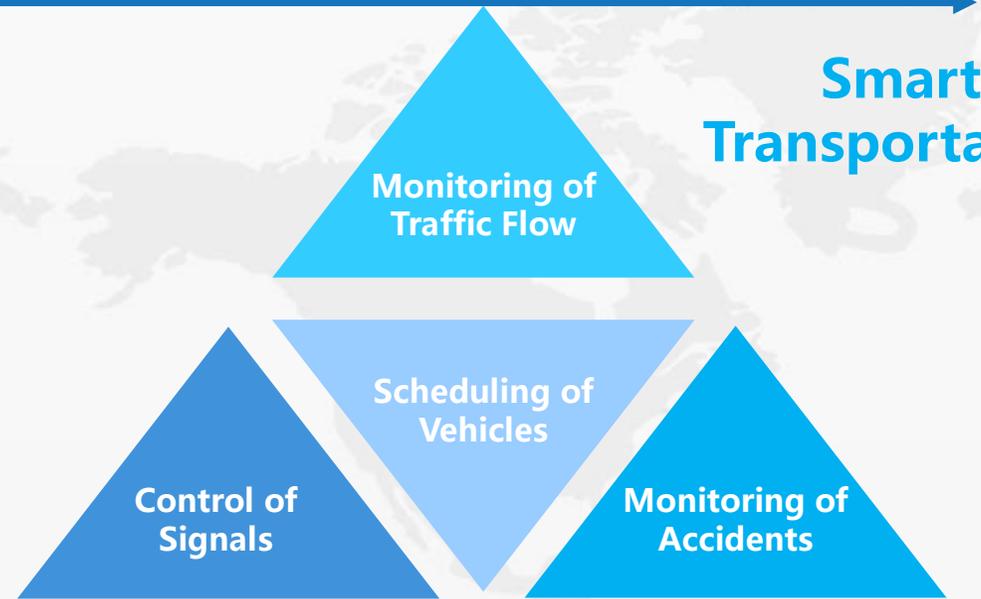
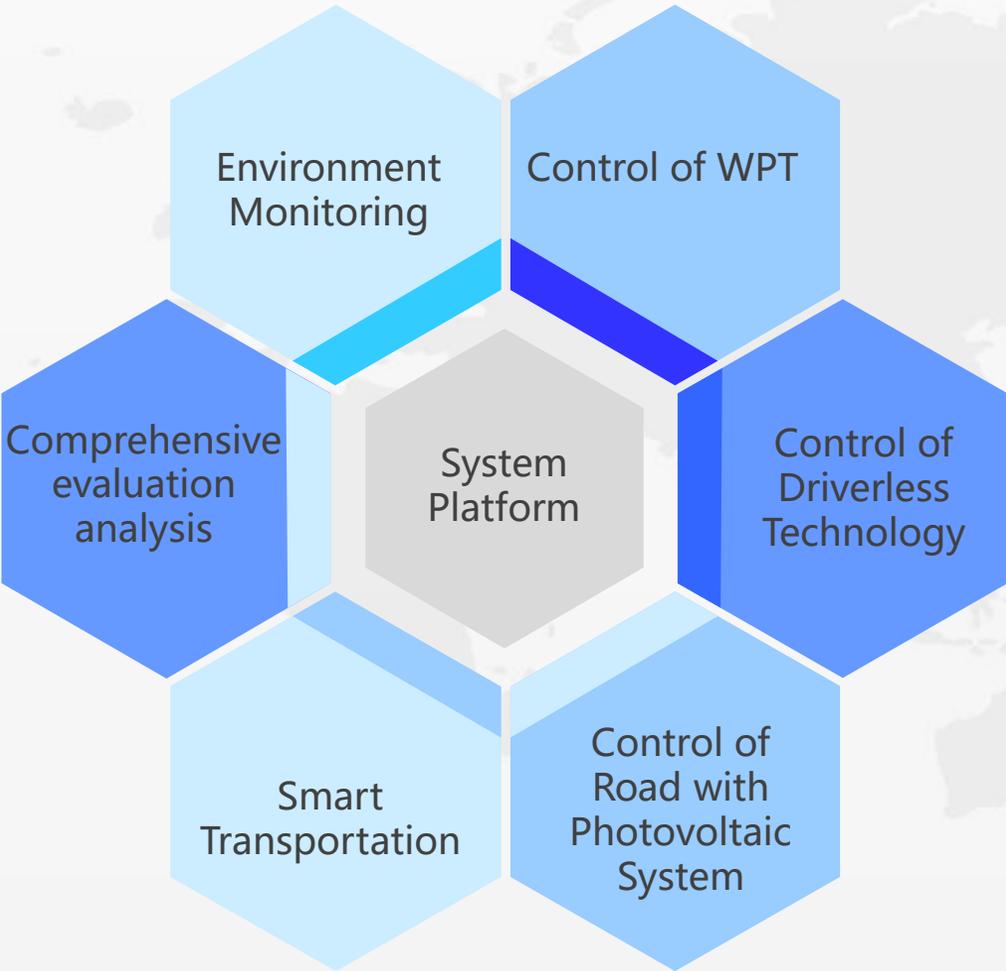


- Photovoltaic Road
- Top Layer: thickness 70 AC-13C Fine particle modified asphalt concrete
- Glue Layer: SBS(1-D) Modifying agent 3%~4%
- The Following Layer: thickness 80 AC-20C Medium grained asphalt concrete
- Sub-seal Layer: Emulsified asphalt permeation layer with thickness 10, Sub-seal layer, glass fiber grid bespread
- Base Layer: thickness 360 cement stabilized macadam, divided in two layers and compacted separately
- Reinforced fill

Cross Section Structure of Electronic Road

Intelligent Control and Scheduling System

Smart Transportation



上午好, 今天是: 2018年06月01日 星期五, 欢迎您! 本次行程的目的地为服务中心, 全程长度200米. 预计时间三分钟. 语音播报

综合余额

电子公费

车辆状态

18%

11%

100%

太阳能 总辐射量 0.368 MJ/m²

电能 日发电量 340 kWh

汽车动能 当日里程 80 km

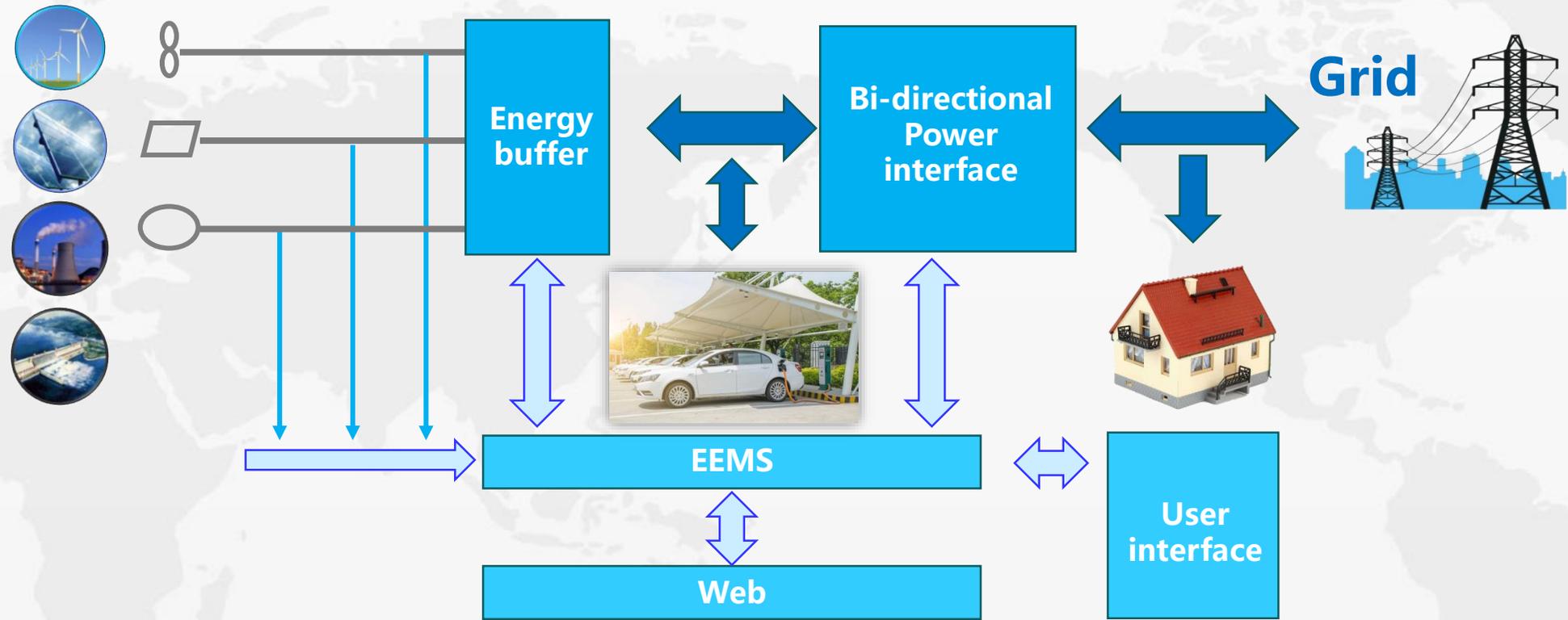
Project Features

- 01** Efficient Wireless Charging : When the power level of dynamic wireless charging system is 30kW, the efficiency of power transfer is close to 90%
- 02** Driverless Technology: Driverless vehicle at the level 4 is equipped with vehicle-mounted wireless charging module
- 03** Seamless switching in dynamic wireless charging system: The power loss and the spread of radiation are reduced, the electromagnetic radiation is well below the international standard limit.
- 04** New type of pavement: The transparent concrete made of a flexible material can bear a weight more than 50 tons and the attenuation of transfer power is lower than 15%
- 05** Smart Transportation: Intelligent roadside facilities , LED road traffic elements, multi-function street lamp, Intelligent traffic control system

Project investment
€ ≈ 8,000,000

The central graphic consists of a dark blue circle containing a white icon of a clock and a dollar sign. Below the icon, the text 'Project investment' and '€ ≈ 8,000,000' is displayed in white. Five blue arrows radiate from the circle, pointing towards the five project features listed in the surrounding text.

Prospection



By designing the bidirectional power flow circuit, the electric vehicle will be charged wirelessly when the loads are light, in addition to that, the battery pack of electric vehicle will realize power feedback to relieve the pressure of power network when the loads outweigh. So this system can play a role of peak shaving and valley filling.

「Thank you

