



Vision 2050 competition – March 2020

By Ryan Curtis

ElectroSmart Cities

ElectroSmart Cities are the vision of the future which embodies all of the England's Economic Heartland priorities. With technology advancing at a rapid rate every year, boundaries are being pushed to make life more efficient. By 2050 ElectroSmart Cities will make England's Economic Heartland a beacon for all others to follow. It will revolutionise the way people connect with places, opportunities and services.

The idea for ElectroSmart Cities is influenced heavily by the need for increased connectivity and carbon neutrality. By 2050 transportation will be predominantly electric powered with a large majority being autonomous. The road network will have 'charge as you drive' roads which will power electric vehicles as they are travelling.

ElectroSmart Cities will be fully autonomous with the option for self-drive outside of the city boundary. There will be charging car parks located outside the city's boundaries which will give people the opportunity to travel into the city centre by bike with electric capabilities or ElectroPods. ElectroPods are a 2 person fully autonomous electric capsule with the capabilities to link to other pods to accommodate larger groups that wish to travel together.

The 'charge as you drive' roads will power all of these modes of transport including the autonomous bus service. This will allow vehicles within cities to be designed with smaller and simpler battery.

This will further reduce emissions and production costs of electric batteries as they will be constantly charging when driving on the network which will increase their range. When an Electropod is unused it will store itself in a holding car park, this will promote walking or cycling and decongest the network making it more aesthetically appealing and create safer movements for the public.

Behind the scenes ElectroSmart Cities will be connected through a national database. This will share information on traffic patterns, roadworks, available pods and bicycles. There will also be a range of smart parking tabs installed in the city with a direct link into the vehicles navigation system, this will inform the vehicle of an open parking space but also send information for when that space has been taken which will automatically divert the route to the next nearest parking space.

There will only be one national database for transferring and uploading transportation information on the network.

Economic growth will be improved through ElectroSmart cities as it will reduce the dependence on foreign oils, production costs, emissions for electric vehicles will be reduced and it will also attract more businesses, residents and employment opportunities to the area.

By freeing up the network and storing vehicles out of sight when they are not required it promotes healthy lifestyle and makes accessibility easier for those in need of assistance as they will be able to order a Pod which will pick them up from any location.

Carbon neutrality and the use of green renewable energy will improve air quality and reduce emission related diseases which will improve the quality of life along with promoting a healthy lifestyle through the availability of electric bikes.

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