

**ELOS** Konferencia  
**ELEKTROTECHNIKA, INFORMATIKA A TELEKOMUNIKÁCIE 2013**  
Trenčín  
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SPONZOR PODUJATIA:  
**ZSE**



# perspektívy elektromobility

## Slovo na úvod

## Prečo elektromobilita ?

Experts representing several projects with a total budget of over 200 M€ (**ARTEMIS-POLLUX, ARTEMIS-IoE, ENIAC-E2SG, ENIAC-MotorBrain, ARTEMIS-eDIANA, ENIAC-E3Car, FP7-CASTOR**) funded by national public authorities from several countries in Europe. The Conference is organized on 25-26 September 2013 as part of the Electro Mobility

The worldwide energy consumption is rising dramatically. In the next 20 years energy consumption will double and CO2 emissions will rise accordingly. The consequence will be a dramatically escalating price for energy and difficult challenges for ensuring Europe's energy supply. Energy issues will become highly significant for competitiveness of the European economy and the quality of life in Europe.

- Europe is targeting research on innovative electronic components and embedded systems that play a key role in electric vehicle development.
- Research is focusing on semiconductor components, power modules and embedded systems that control the different functions in electric vehicles.
- The efforts are concentrated on extending the travel range per battery charge, on integrating components to make the battery, charge unit and power distribution network lighter and more compact, and on increasing the efficiency of the power modules.

## Prečo elektromobilita ?



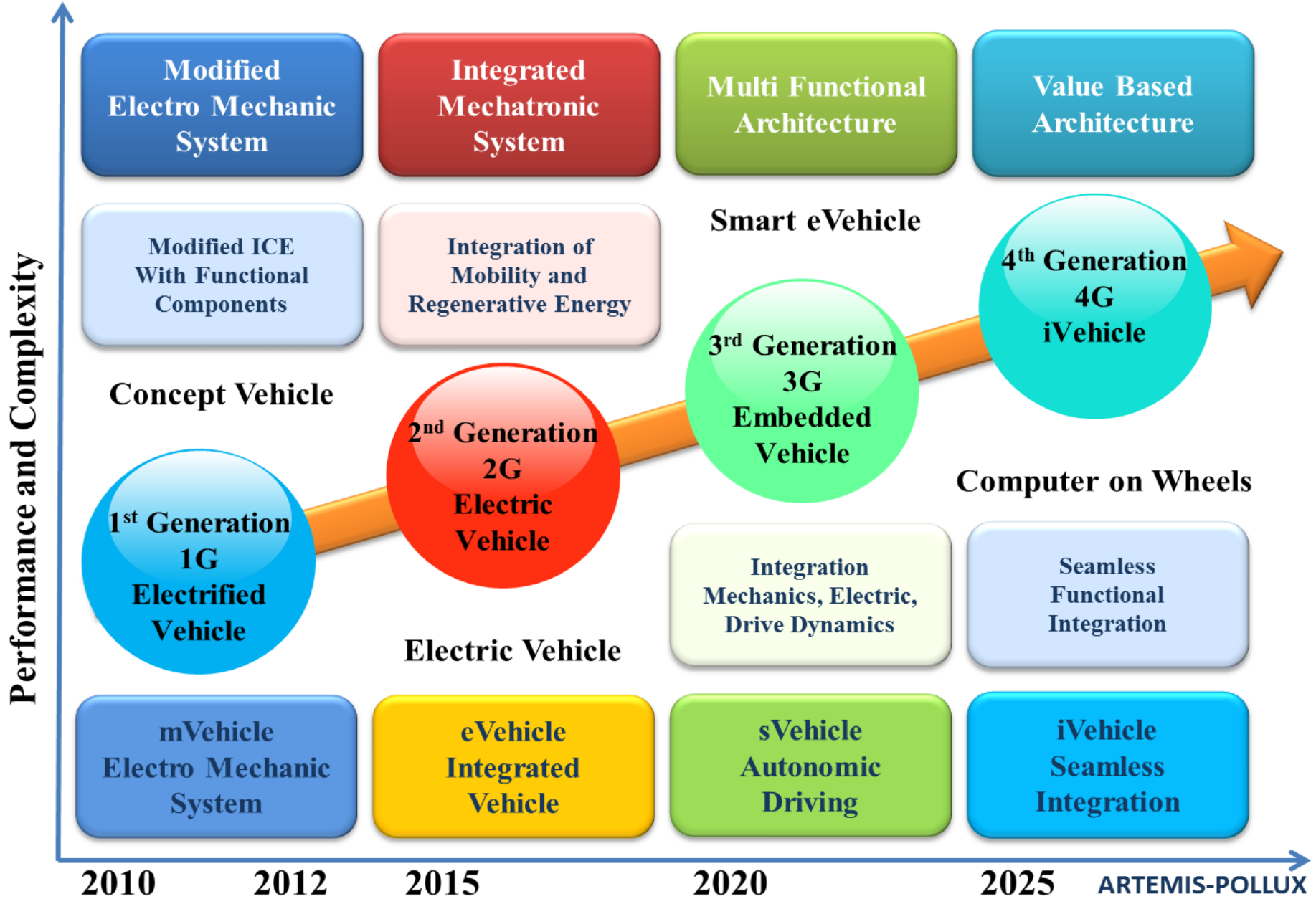
- The zero emission capability of the electric vehicle and the replacement of oil in the energy mix by using renewable energy sources is a challenging environmental task for the present as well as future generations.
- Electric vehicles are one transportation means that contribute to reduce pollution in the future smart cities.
- Electric vehicles could be delivered when drivers need the cars, rather than have cars sitting parking lots waiting for a driver.
- These new technology transportation systems incorporate new batteries and battery management systems, new electric motors, GPS, computers, navigation and search technologies to deliver a new driving experience.
- In this context we have to consider the electric vehicles as part of an ecosystem where smart grids, are allowing renewable generation, electric vehicles charging, storage, demand response, grid balancing, while the new transportation systems becomes smarter, less polluting and more efficient.

The electric vehicles technologies are currently facing several challenges amongst which are:

- limited driving range,
- high cost and overall limited efficiency.

For the most part of these issues, solutions may be found on the level of the subsystems for energy storage/battery technology, power conversion, electric power train, energy management and connection to the power grid.

# Electric vehicle generations - perspektívy



0 % Emissions

100 % Emotions

## **The Road to Electromobility**