

LOW ENERGY PASSENGER COMFORT SYSTEMS BASED ON THE JOULE AND PELTIER EFFECTS

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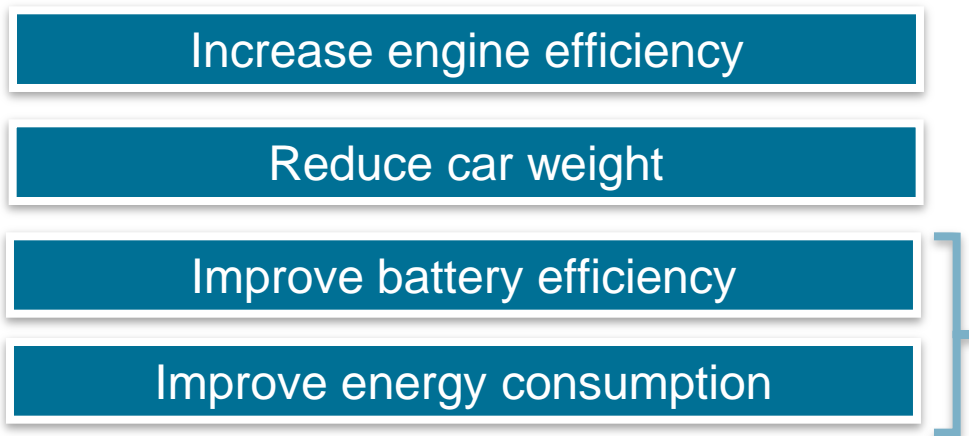
JOSPEL Fact Sheet

- Title:
 - “Low energy passenger comfort systems based on the joule and peltier effects”
- Starting /ending (duration):
 - May 2015 / October 2018 (42 months)
- Funding:
 - This project is funded under the European Call H2020-GV-2014, Topic GV-2-2014 Optimized and systematic energy management in electric vehicles.
- Budget:
 - EC Contribution € 6,668,288.00
- Consortium:
 - 14 Partners from 9 countries

JOSPEL OBJECTIVES

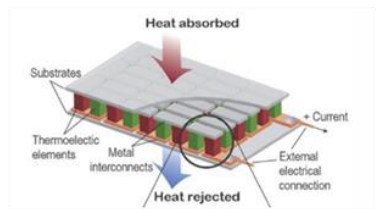
- The main objective is the reduction of at least 50% of energy used for passenger comfort (<1,250 W) and at least 30% for component cooling in extreme conditions with reference to electric vehicles currently on the market.

Ways of increasing distance range of an electric vehicle:

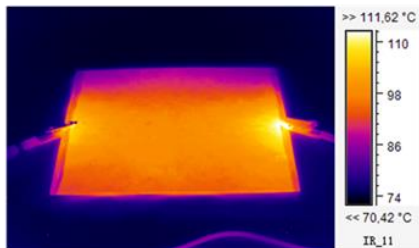


JOSPEL CONCEPT

Development of a novel **energy efficient cooling system** based on Peltier cells technology



Development of a novel **energy efficient heating system** based on Joule effect



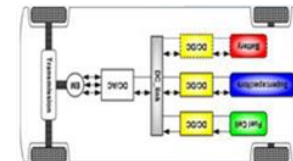
Improvement of **vehicle insulation**



Improve **energy recovery** from heat zones and increase **battery life**



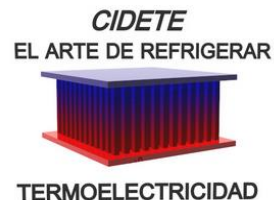
Innovative and **eco-driving strategies** and electronic control of power flows



JOSPEL Improvements

Improvement	% Energy reduction
Heating system based on Joule Effect	30%
Cooling system based on Peltier cells	25%
Battery consumption due to their optimal thermal management	15%
Thermal management of other EV components and eco-driving technologies	12%
Weight reduction and better insulation of the cabin	3%

PARTNERS INVOLVED





More information

Project coordinator



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Thank you!!
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The JOSPEL project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement n° 653851. The sole responsibility for the content of this presentation lies with the JOSPEL project and in no way reflects the views of the European Union.