



JRC-IPTS Report: "Is Europe in the driver's seat? The competitiveness of the European automotive embedded systems industry"

Overview:

This study is part of a series of studies, whose aim is to analyse the future competitiveness of the EU ICT sector in emerging ICT technologies, which are co-financed by JRC-IPTS and the Enterprise and Industry Directorate General of the European Commission.

The report starts by introducing the market, its trends, the technologies, their characteristics and their potential economic impact, before moving to an analysis of the competitiveness of the corresponding European industry. It concludes by suggesting policy options.

Highlights:

This report highlights that, currently, information and communication technologies (ICT) innovation in the automotive sector is a key competence in Europe, with much innovation of this kind finding its way from the EU automotive companies to the global automotive market. However, the report aims to answer the following question:

How can the European automotive industry retain its strong current position and prosper in an increasingly competitive global sector?

According to the study, ICT will play an even increasingly crucial role and the EU must retain its leadership in most automotive ICT sectors. ICT features can be used to differentiate market segments and raise car sales, which can help solving the overcapacity problem the European automotive industry has faced for decades, hence EU needs to keep high levels of product innovation if the jobs are to be maintained in this sector.

Conclusions:

Among their policy-related conclusions, the authors of the study recommend the EU automotive industry to invest in emerging and future technologies with software-intensive segments:

- Advance Driver Assist systems (ADAS),
- Vehicle-to-vehicle/Vehicle-to-Infrastructure communication (V2X) and
- Autonomous driving.

The Report also highlights the role of ICT in the transformation of the economy and call for a highly skilled workforce of software engineers and system integrators as well as for integrated cross-departmental public policies. A major benefit of a strong automotive ICT industry is the resulting large and valuable employment base. But future maintenance of automotive ICT jobs within the EU will only be possible if the EU continues to have high levels of product innovation.

In addition, the importance of electric vehicle (EV) will grow in the next decade and currently it seems that Japan and China are ahead in electric vehicle development. As electric vehicles increase in importance, the EU will need to be a leader in EV embedded software, otherwise the EU automotive Industry will risk losing its lead in the largest embedded software segment. While the EU leads in current diesel and gasoline engines, it will require significant investment to remain the leader in these 'legacy' technologies. The key question is whether the EU automotive industry has enough resources to extend the life of its current propulsion systems and also invest enough to gain a leadership role in EV technology.

Website: <http://is.jrc.ec.europa.eu/pages/ISG/COMPLETE/automotive/index.html>

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