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ELECTROMOBILITY: INNOVATION LEADS TO TECHNICAL EDUCATION - TECHNICAL EDUCATION BOOSTS INNOVATION

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The first steam-powered automobile was built in 1769.

The first electric car was built in the 19th century. There are several models of small electric cars.

The “Flocken Elektrowagen” of 1888 made by the German inventor Andreas Flocken, is regarded as the first true electric car.

Electric cars enjoyed popularity between the late 19th century and early 20th century.

They *reappeared* in recent times (2008) due to the impact of climate change and the eco-friendly initiatives.

Source: Wikipedia

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Innovation comes first!

In 2010 Germany founded the “National Platform for Electromobility”

The industries, the politicians, the science community, the civil society and the trade unions in Germany have come to a decision: **Germany should be a lead provider and a lead market for electromobility**.

From batteries over vehicles to internet-based services related to electromobility, German manufacturers are technological pioneers.

As a top exporting country, Germany aims to maintain its leading position in the world of electromobility with highly innovative products.

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Facts & aims:

- **29** German electric car models are currently on the market (February 2018)
- **177.000** electric vehicles are already on Germany´s roads (Battery electric vehicles (BEV) & Plug-in hybrid electric vehicles (PHEV))
- **1** Million electric vehicles are expected to be on Germany's roads until 2020
- **2,2** Billion Euros for R&D for electromobility (by 2017)
- **300** Million euros for improving the charging infrastructure
- **22** Lighthouse projects have been awarded since 2012
- **4.000** Euros as a “environmental bonus” for BEV (Federal Government + Industry)
- **3.000** Euros as a “environmental bonus” for PHEV (Federal Government + Industry)
- **117%** increase in new registrations of electric vehicles in 2017 compared to 2016
- Priority for parking
- Use of bus lanes in the cities

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Ok, now we have the vehicles **but can we repair them**?

Are the automobile repair shops ready for electric vehicles?

And so innovation leads to education and training:

In 2013 **the profession of car technicians was reorganized** in Germany. The apprenticeship and the vocational training for car technicians was divided from the third year of training onwards into the following sectors:

1. passenger car technology
2. commercial vehicle technology
3. motorcycle technology
4. **system and high-voltage technology (BEV and PHEV)**
5. auto body technology

The system and high-voltage technology is explicitly identified as a training sector for electric cars

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It´s all about training!

The recommendation* to the german car repair shops:

“Take the opportunity **to position yourself in**

a fast-growing market by training your employees.

Initial training on "system and high-voltage technology"

makes you **fit for the future**”.

*Union of the motor vehicle industry

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Education makes you fit for the future!

If you have well educated people in your business + If you are training them

= you will generate innovation*, you will get:

- New ideas
- New processes
- New products
- New clients

*Research Institute for the Economics of Education and Social Affairs

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Education makes you fit for the future!

And what are we doing in Greece?

Waiting for a Joint Ministerial Decision concerning among others:

- the duration, the content and the curriculum of the training course,
- the certification,
- the procedure for the extension of the license to practice
- the procedure for the certificate of professional competence for the different kinds of car technicians,

so that these technicians can undertake the maintenance and repair of electric vehicles.

The German Example could be helpful!

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Thank you very much

for your attention!