

## European Education for Electro-mobility

### News from the project

Newsletter #3  
July 2015

### The EEE Project Activities and Results

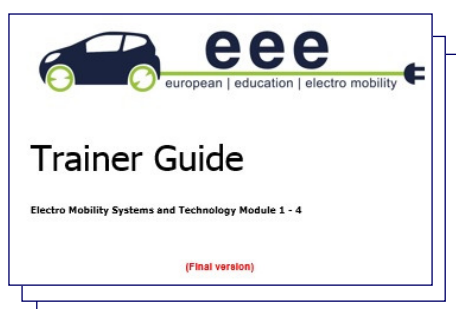
#### Development of Student Training Package on Electro Mobility Systems and Technology

One of the main outputs of this project is the **student training package**, which are the documents to be delivered to and used by the students during the training on maintenance and repairs related with electrically propelled vehicles. The final version of the student training package is finally ready to be used by the partners for the final tests and adjustments for each country specifications. This means that all involved partners in this project have an agreement about the training outcomes and assessment criteria as well as in the training contents necessary for a successfully training action.



The training content is divided into four modules with the following topics:

- Module 1: Electric Vehicle Awareness
- Module 2: Electrically Propelled Vehicles
- Module 3: Routine Maintenance Activities on Electrically Propelled Vehicles
- Module 4: Electrically Propelled Vehicle Diagnostics, Repair and Replacement



But the consortium wanted to go even further in order to guarantee the quality of the training delivered by each partner. In this sense a Student workbook was also developed, together with a set of practical exercises to be applied during the training sessions (**pilot trainings**) and also a set of theoretical and practical assessments for final evaluation of the students. The pilot trainings are part of the project's aims and are carried out by well prepared trainers in all the partner countries. Therefore a Trainer Guide was developed and is widely used for a smooth running of the pilot trainings. At the final stage the pilot trainings will be evaluated to improve the training content and the methodology.

The finalisation of the pilot trainings for module 1, 2 and 3 marks the practical and theoretical assessment. For module 4 only a practical assessment was developed.

The **practical assessment** consists of a total of 11 “*Learners Work Sheets*”. The tasks to be carried out range from ‘*Recognizing connections for charging*’ to ‘*Checking differential processes between HV components and ground*’ and cover a broad spectrum of practical work regarding repair and maintenance activities on electrically propelled vehicles. This assessment is carried out under observation of instructors and auditors.



The **theoretical assessment** is an examination to evaluate the knowledge of the trainees. The entire testing is worked out in English to combine both technical and language skills respectively. The assessment is structured as a written multiple choice test with one question or statement and four possible answers — the right one has to be ticked by the trainees.

- In module 1 there are 10 theoretical questions and the time limit is set to 25 minutes; the passing rate is set to 70% correct answers.
- In module 2 and 3 there are 15 questions with a time window of 30 minutes and a passing rate of 75% correct answers.

## Project Management and Partner Meetings

Up to now the most important milestones of the project management have been:

- the Kick off meeting in Apeldoorn (NL) in October 2013
- four additional partner meetings:
  - 2nd meeting in Nottingham (UK) in April 2014
  - 3rd meeting in Palmela (POR) in June 2014
  - 4th meeting in Graz (AUT) in October 2014
  - 5th meeting in Düsseldorf (GER) in April 2015
- finalisation of the interim report and submission to the National Agency of the lead partner in November 2014.



*Impressions from the last partner meeting in Düsseldorf at the FJBK in April 2015*

## Germany

### Old car — new technology, part 2

The baby blue Trabant has become somewhat of a mascot for the Regionales Berufsbildungszentrum Technik in Kiel. While the last article focused on the technical aspects, as a teacher at the school and a EEE team member, I was curious about how the car, and the project, came to (Kiel) be.

“I traded it for a ‘construction worker radio,’” Guido Frevert said to me chuckling, as I just sat looking confused. He went on to explain that “construction worker radio” is a colloquial expression for a sixpack of beer. Guido, a teacher at RBZ, has a vacation spot just north of Berlin, in PriePERT. In the summer of 2012 he saw the ‘Trabi’ on the side of the road and stopped to inquire about the car. After Guido exchanged just enough words with the owner for it to be considered a conversation, the two parted ways. A few months later he came back and asked about the car again, but did not make an offer. In the spring of 2013, he stopped by for a third visit and the impatient car owner ended up signing over the Trabant in exchange for a case of beer.

Guido is not only adept at bartering, but is also the brains behind the “Electro-Trabi” project at RBZ.

Along with generating excitement for electric automobiles at expos, the car is also available as a teaching tool at the school. Having had the chance to work personally with the students involved on the project they expressed excitement about combining electro-technic with car restoration.



*Benjamin O'Connor*



### Benjamin O'Connor

is a 26-year-old American who has been working at RBZ Technik in Kiel and with the EEE team. He would like to thank everyone on the team for their hard work and friendship over the past two years. It has been a pleasure for him to get to know and work with everyone.



## News from Aventus, The Netherlands

As mentioned in the 2nd EEE newsletter 22 Aventus students had participated in the Dutch national exam 'Safe working at electrically propelled vehicles according to NEN 3140', however results were not yet available. We are very happy to announce that 18 students have passed this exam, which means they are now officially allowed to work on these type of vehicles.

After the 5th EEE partner meeting, the EEE training products were further developed and the 3rd pilot test (mainly to test the diagnosis and repair part of the training package) was organised by Aventus. Five 3rd grade EQF level 4 students participated in 4 training sessions to test the developed materials including the developed assessments which they all passed. For this reason they all received a special Aventus certificate.



## News from ATEC, Portugal

European Education for Electro-mobility project was in the event "Expo Mecânica" in Porto, from the 5th to the 7th of June 2015.

This event is one of the most important in Portugal related to car mechatronics and was visited by more than 10 thousand people this year. ATEC was one of the represented companies and the electro-mobility and our project were the major attractions in its stand.

### The EEE partnership

**Aventus (NL)**

[www.ventus.nl](http://www.ventus.nl)

**Emtec Colleges Limited (UK)**

[www.centralnottingham.ac.uk](http://www.centralnottingham.ac.uk)

**Franz-Jürgen-Berufskolleg (GER)**

[www.fjbk.de](http://www.fjbk.de)

**ATEC (POR)**

[www.atec.pt](http://www.atec.pt)

**Regionales Berufsbildungszentrum Technik (GER)**

[www.rbz-technik-kiel.de](http://www.rbz-technik-kiel.de)

**CPC Austria / bit group (AT)**

[www.cpc.at](http://www.cpc.at)

### Status of the project European Education for Electro-mobility (EEE)

- ◆ The project is still ongoing (till Oct 2015)
- ◆ The pilot trainings are coming to an end during these days.
- ◆ The theoretical and practical assessments are carried out to test the knowledge and competences of the trainees.
- ◆ A final project meeting will be held in September 2015 in Kiel

### EEE—Newsletter #3

This is the newsletter of the LdV project European Education for Electro-mobility (EEE)

**Project website:**  
<http://eee-leonardo.eu>

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