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INNOVATION GARAGE OF GARAGES

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Getting started

with troubleshooting

IG2 project started with Output #1, an **open & transferable VET Train-the-trainers** program, to combine work-based training



programs with the real automotive workplace practices.

The IG2 Pilot Learning Model envisages **more phases of implementation**:

-Design of the practical experience within the **work-based** environment, **for the sake of developing HEV/BEV skills**

-troubleshooting & testing in the workplace

-assessment & review from a technical expert

-Validation through to the students' feedback about the skills gained through the experimentation.

Identification of the **learning goals** is the key to start from.



Target Groups

- ◆ VET Teachers & Trainers
- ◆ VET learners, in particular those with less opportunities
- ◆ Automotive Technicians skilled about e-vehicles & avionics circuits
- ◆ Dual Learning & Apprenticeship Managers



The basics: safe work with e-vehicles

Handling High Voltage vehicles must always be done with **extreme carefullness** in exactly applying all the **safety procedures**.

This is extremely important for keeping operators safe under the **hazard of HV**, which is dangerous for human life.

All partners started **training students** and apprentices

about **how to prepare the work setting** when an e-car is nearby, which **protection devices** each operator must wear and which **sequences of operations must be executed** in order to replace or maintain **batteries** of e-vehicles.

In the pictures below, a few components which partners worked on during the Utrecht meeting in April 2022: devices to check voltage in cars and switches to regulate the electrical circuits of car lights.



Innovation Garage of Garages official YouTube Channel

Experimentations related to **e-vehicles battery** maintenance, replacement and diagnosis are available online. Each VET school is performing **troubleshooting operations** with their students and shooting **video footages**, that will be useful for future trainees or workers willing to gain skills about **electric or hybrid vehicles**.

The screenshot shows the YouTube channel page for 'Innovation Garage Erasmus Project', which has 10 subscribers. The channel features a navigation bar with 'Home', 'Video', 'Playlist', 'Canali', and 'Informazioni'. Below the navigation bar, there is a section for 'Video caricati' with a 'RIPRODUCI TUTTI' button. Five video thumbnails are displayed, each with a title, duration, and view count:

- 103 Battery removal & diagnostics @ VAVM, LT** (3:56, 6 visualizzazioni • 1 mese fa)
- 103 AC/DC Inverter Unit @ ITS MAKER** (3:14, 16 visualizzazioni • 1 mese fa)
- 102 Power Unit Maintenance @ ITS MAKER** (3:37, 9 visualizzazioni • 1 mese fa)
- 103 Electrical Insulation Volvo XC40 @ GTC...** (3:42, 10 visualizzazioni • 1 mese fa)
- 102 Performing Electrical Insulation @ GTC...** (1:34, 10 visualizzazioni • 1 mese fa)

Meetings: The 4TPM was held in Utrecht, Netherlands, in April 2022 hosted by ROC Midden & Innovam.

PARTNERSHIP

