

# Thematic seminar on „Tools for VET-learner mobility“, October 4<sup>th</sup> 2019, Brussels

## Linking ECVET documents and Europass documents: The Green Wheels project

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# Electromobility on the rise NEW CHALLENGES



- ✓ new technologies and trends
- ✓ the need for skilled workforce in automotive industry
- ✓ lack of educational and methodological materials
- ✓ necessary methodological support of teachers



# The Green Wheels project

## AN ANSWER

- ✓ New learning content using the **ECVET principles** (Units of learning outcomes) for use in teaching
- ✓ **7 clearly defined Units of learning outcomes** focused on the operation, repair and servicing of hybrid and electric vehicles
- ✓ A set of **online innovative teaching and methodological materials** and resources for the new content defined in each Unit
- ✓ **Methodological support for teachers** (e-learning, online forum, online vocabulary of technical terms...)
- ✓ All outputs posted in **online platform** for teachers and students in 4 languages, <http://www.gwproject.eu/home/>



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# The Green Wheels project

## ADDED VALUE

- ✓ Opportunity to **focus on innovation**
- ✓ A good starting point for both **international and national mobilities**
- ✓ Accumulation and possible **transfer of learning outcomes** acquired in different learning environments
- ✓ Possible use in **initial and continuing VET** (IVET and CVET)
- ✓ **Extensive source of information** for deciding on content of practical training in companies and the opportunity to improve quality of cooperation between schools and employers



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# The Green Wheels project

## WHEN, WHO

- ✓ EU Erasmus+ project, KA2 (11/2016 – 10/2019)
- ✓ **14** partners from **4** countries (CZ, SK, HU, UK)
- ✓ One automotive school, one sector organization and one national education institution from each country
- ✓ Cooperation is based on the principle of **transferring and sharing experience**
- ✓ Each country focuses on the implementation of new content according to national specifics and strategies



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# Green Wheels Partnership

## OUR TARGET GROUPS

- ✓ VET schools and other educational/training providers
- ✓ Employers in automotive industry
- ✓ Policy-makers
- ✓ Other key stakeholders (awarding bodies in VNFIL, professional associations, etc.)



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# The Green Wheels project

## MAIN OUTPUTS

- ✓ Table of **7 GW ECVET Units** of learning outcomes
- ✓ **82 student worksheets** and methodological instructions for teachers connected directly with 7 GW ECVET Units
- ✓ **15 educational videos** connected with 82 student worksheets
- ✓ Worksheets using **CLIL approach** (for English lessons)
- ✓ **E-learning modules** and methodology guide for teachers
- ✓ **ECVET and Europass tools** to facilitate mobility



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# GW ECVET Units A STRUCTURE

Nr of Unit	A Code of the Unit	Name of ECVET Unit	Outcomes	Assessment Criteria
1	EHV1	Electric/Hybrid vehicles awareness and safe working practices	<p>1.1. Know about the types of electric/hybrid vehicles available</p> <p>1.2. Understand the hazards around motor vehicle high energy electrical systems</p> <p>1.3. Know how to work safely around electric/hybrid vehicles</p>	<p>1.1.1 Describe how to identify electric/hybrid vehicles</p> <p>1.1.2 Give examples of the electric/hybrid vehicles that are currently available</p> <p>1.1.3 Outline the main differences between electric/hybrid vehicles, including charging</p> <p>1.1.4 Define the voltages used for motor vehicle high energy systems and give examples for a range of electric/hybrid vehicles</p> <p>1.2.1 Describe the hazards associated with high energy electricity</p> <p>1.2.2 State the hazards that may be present in the event of a vehicle accident or when charging</p> <p>1.2.3 Identify the hazards associated with the transportation, storage and disposal of electric/hybrid vehicle high voltage batteries</p> <p>1.3.1 State safety precautions to be taken before approaching and working around electric/hybrid vehicles</p> <p>1.3.2 Describe how to identify motor vehicle high energy cabling and associated components</p> <p>1.3.3 Describe how the vehicle may be safely charged using an external source</p>
2	EHV2	Electric/Hybrid vehicles electrical and electronic principles	<p>2.1. Understand vehicle electrical and electronic principles</p> <p>2.2. Know about the main components and systems</p>	<p>2.1.1 Describe the basic electrical circuit requirements</p> <p>2.1.2 Describe the two basic electrical circuits and the requirements for current to flow</p> <p>2.1.3 Describe how to interpret simple light vehicle wiring diagrams</p> <p>2.1.4 Describe the safe operation of key light vehicle circuit protection devices and why these are necessary</p>



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## ECVET PRINCIPLES USED

- ✓ **Principle 1:** Qualifications should be composed of clearly defined groups of learning outcomes. – **Green Wheels Units of learning outcomes**
- ✓ **Principle 2:** Groups of learning outcomes within a qualification should be capable of independent assessment. – **Independent Units assessment possible**
- ✓ **Principle 3:** The assessment of each group of learning outcomes should be properly documented. – **Assessment form for each Unit of learning outcomes**
- ✓ **Principle 4:** Provision of learning opportunities should be arranged to facilitate individuals to achieve groups of learning outcomes. – **Student worksheets, educational videos, online resources...**
- ✓ **Principle 5:** Individuals should have the opportunity to have their learning outcomes validated, irrespective of how and where they have acquired them. – **Evaluation record template**
- ✓ **Principle 8:** Processes for development, assessment, validation and recognition of sets of learning outcomes should be transparent and underpinned by quality assurance. – **The validation process set in the Green Wheels project**



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# The Green Wheels project

## ECVET TOOLS

- ✓ **Memorandum of Understanding (MoU)** – using ECVET Users' Group template
- ✓ **Learning Agreement (LA)** – using ECVET Users' Group template
- ✓ **Unit of learning outcomes** – example (annex to MoU/LA)
- ✓ **Evaluation form** – example (annex to Unit of learning outcomes)
- ✓ **Personal Transcript** – example (annex to LA)



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# The Green Wheels project EUROPASS DOCUMENTS

- ✓ **Europass mobility** – example of an alternative document next to Personal Transcript
- ✓ **Europass CV** – example

***Additional evidence-based document***

- ✓ **Certificate from practical training** – example

*All of the above mentioned documents and tools are intended to improve quality of VET-learner mobility.*



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# The Green Wheels project EQAVET QUALITY CYCLE

1. Planning
2. Implementation
3. Evaluation
4. Review



*Retrieved from: O1 - Framework for Sustainable Transnational VET Mobility - v4.pdf;  
slightly modified for the seminar purposes*



# Using the quality cycle to ensure THE QUALITY OF MOBILITY

- 1. Planning:** MoU, LA, Units of learning outcomes, Evaluation form (assessment criteria)
- 2. Implementation:** Unit of learning outcomes, apply defined assessment procedures, provide feedback
- 3. Assessment and documentation:** Evaluation form, Personal Transcript or other type of personal record
- 4. Validation and recognition:** Personal Transcript or other type of personal record, certificates...
- 5. Review:** objectives, processes, documents...



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Thank you!



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