

VITAL - A Modular VR & AR Based Educational Toolkit To Help EU Adults Foster Climate Neutral Practices

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Project Summary

- The VITAL project is motivated by the EU's Green Deal Action Plan and the exploitation of two Erasmus+ priorities – the fight against climate change combined with digital transformation in the adult education sector.
- The behaviour and lifestyle of EU Citizens in terms of consumption and use of products and services needs to be influenced so that we all contribute daily actions that are more sustainable and aligned with best practices leading to carbon neutrality.
- European Member States have defined their National Energy and Climate Plan (NECP) strategies with clear targets and milestones. For these targets to be achieved, all those concerned whether at their home or place of work need to take appropriate daily actions.
- Although best practices such as recycling, re-use, reduction and a shift toward Circular Economy principles are practised by some adults, to effectively reach the necessary NECP targets, much more effort is required.
- More structured knowledge, practical examples and a deeper understanding of how to apply such principles and concepts leading to low carbon activities in everyday life in education, businesses and leisure are mostly missing.
- The VITAL project aims to help EU adult learners understand better the basic scientific principles giving rise to climate change, so that better informed daily actions and decisions can be taken.
- At the same time, adults are busy individuals who do not always have the time to attend courses to acquire knowledge on for instance 'low carbon' best practices. Compounded with this fact, adult trainers need a set of training resources that can help them transfer knowledge to adult learners in an efficient and engaging way yet customised to learner needs.
- One way of how this can be overcome is to exploit the emerging digital technologies of Augmented Reality (AR) and Virtual Reality (VR) technologies to better engage learners. However, many EU adult trainers are still not familiar with these technologies.
- The VITAL project aims to address this need too by providing training on AR/VR to relevant target groups (adult trainers, teachers and educators, adult training providing organisations, SME managers) so that they can reach out more effectively to the EU adult population to help Europe gradually shift towards more climate-neutral practices.

Objectives

- Using an activity-based learning methodology to stimulate critical thinking and help adults understand in simpler terms and with examples, what the EU Green Deal is all about.
- To help adult trainers create relevant activity-based learning activities which could be based on different areas applicable to the EU Green Deal (farm to fork, sustainable industry, building and renovating, eliminating pollution and single-use items, etc.)
- To support a basic understanding of the main scientific principles and other phenomena involved e. g., in the greenhouse effect, carbon/material footprint, heat losses etc. through AR/VR based case studies.
- Making use of AR and VR to develop content-rich training material that helps adults understand better and how they can foster and adopt resource-efficient practices both at home and at their place of work (thus, work with digital transformation and the increase of digital literacy skills and digital content creation at the same time).
- Promote work-based learning and digital tools to allow direct implementation of acquired knowledge.

Results

- Modular Training Resources To Foster Climate Neutral Practices;
- The VITAL Modular Open Educational Toolkit;
- VITAL Trainer's Guide.

Partners

- UNIVERZITA PALACKÉHO V OLMOUCI, Czech Republic;
- SOCIAL COOPERATIVE ENTERPRISE DROSOSTALIDA, Greece;
- UNIVERSITATEA POLITEHNICA DIN BUCUREȘTI, Romania;
- MACDAC ENGINEERING CONSULTANCY BUREAU (MECB) LTD, Malta;
- INERCIA DIGITAL SL, Spain;
- LIPKA – školské zařízení pro environmentální vzdělávání, p.o., Czech Republic;
- ISTANBUL VALILIGI (GOI), Turkey.

Co-funded by the European Union



Result 1 - Modular Training Resources To Foster Climate Neutral Practices

Reducing emissions through Carpooling

For AR experience and a short video scan the QR code and open the link in Your mobile/tablet browser

This case study aims to sum up the benefits of carpooling for going to work and travelling. Carpooling (also car-sharing, ride-sharing and lift-sharing) is the sharing of car journeys so that more than one person travels in a car, preventing the need for others to have to drive to a location themselves. Carpooling reduces fuel costs, tolls, and the stress of driving. Sharing journeys reduces air pollution, carbon emissions, traffic congestion on the roads, and the need for parking spaces. Authorities often encourage carpooling, especially during periods of high pollution. Carpooling can be arranged in many different ways, including public websites, social media, employer websites, smartphone apps, carpooling agencies, and pick-up points.

Carpooling is more popular for people who work in places with more jobs nearby, and who live in places with higher residential densities. It also helps to build social contacts. In Europe, long-distance car-pooling has become increasingly popular over the past years, thanks to BlaBlaCar, with millions of users in 22 countries.

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Protecting the Environment by Reducing Water Wastage

Stick this flyer next to your sink

SAVING WATER SAVES ENERGY

The aim of this case-study is to demonstrate why and how saving water saves energy. By downloading the Zappor App on your mobile (from Appstore or Google Play) and pointing towards the flyer, you will see a video on how to save water. You can also learn more about the VITAL project by pointing your mobile to the logos below.

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Emissions in my life

Have you ever wondered which measures are having a real impact on reducing greenhouse gas emissions?

Carbon footprint: what does it consist of?

Czech Republic average carbon footprint in tonnes

Diet	2.8 tonnes
Home & Pets	1.2 tonnes
Transport	1.3 tonnes
Energy	2.8 tonnes
Goods & Services	3.4 tonnes

Scan me for more info!

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Calculating Carbon Footprint

What is a Carbon Footprint

Plymouth University emissions: 1 kg of CO₂e every 3 seconds

The aim of this case-study is to demonstrate why one should opt for ecotourism activities when planning holidays. By downloading the Zappor App on your mobile (from Appstore or Google Play) and pointing towards the flyer, you will see a video clip on how this task can be performed. You can also learn more about the VITAL project by pointing your mobile to the logos below.

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Some info about carpooling

Challenges:

- Flexibility: It can struggle to be flexible enough to accommodate in route stops or changes.
- Reliability: If a carpooling network lacks a 'critical mass' of participants, it may be difficult to find a match for certain trips.
- Riding with strangers: Concerns over security have been an obstacle to sharing a vehicle. It works better within a community.

Number of carpooling vehicles worldwide from 2015 to 2023 (in million units)

Carpooling is becoming a natural part of planning new parts of the cities like Brno in the Czech Republic. Learn more about carpooling [Brumlovka](#)

Quiz

For AR experience quiz scan the QR code and open the link in Your mobile/tablet browser

Click to learn about saving water at home

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Which measures will save the most GHG* emissions? Take a quiz!

Estimate the impact of each measure on reducing these emissions at the unit level:

- A - LITTLE OR NO IMPACT
- B - MEDIUM IMPACT
- C - VERY EFFECTIVE

- Avoid plastic bags and packaging.
- Eat no cheese or other dairy products.
- Upgrade to energy efficient light bulbs.
- Wash clothes in cold water.
- Unplug chargers from the power outlet.
- Do not waste water.
- Less living space.
- Insulate housing.
- Eat no meat.
- Consume locally produced food that is in season.
- Use public transportation.
- Hang dry clothes (avoid dryer).
- Reduce watching online TV series and movies.
- Do not use deodorants in spray cans.
- Avoid air travel.
- Live car free.
- Avoid food waste.
- Do not switch devices to standby mode, but switch them off.

Scan me for results!

"What humans do over the next 50 years will determine the fate of all life on the planet." -David Attenborough

What are you ready to change first?

Read the text

You can test your knowledge on changing personal preferences in daily life via the interactive questions below.