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TRack Your ATmosphere: Open Learning Materials for Vocational Education and Training. Final Report.

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In the framework of ERASMUS+ program Key Action “Cooperation for innovation and the exchange of good practices” with an Action Type “Strategic Partnerships for vocational education and training”, our project TRack Your ATmosphere (TRYAT) was approved in august 2017 and is co-funded by the European Union. The projects total duration is 35 months and the participants are teachers, researchers and students from three vocational schools and Research/University Institutes in France, Germany and Italy.

The project is going to end next August 2020. Here we present the final report on the achieved objectives.

The main research goal of TRYAT is a combination of processing and analysis of Global Navigation Satellite Systems (GNSS) data and monitoring of environmental parameters for vocational education and training (VET). Permanent high-precision GNSS stations currently operate for geodetic purposes, e.g. geodynamics, earthquake and volcano monitoring, etc. We want to capitalize and highly disseminate the fact that they also offer a reliable tool for remote sensing the atmospheric water vapour. Three professional GNSS stations and low-cost weather stations have been installed on the roof of the buildings of Lycée Saint Cricq (Pau, France), Lise-Meitner-Schule (Berlin, Germany) and Istituto Leonardo da Vinci (Naples, Italy).

We show the achievements so far for each expected intellectual Output (O).

O1- Learning Plattform.

The Learning Web Platform is an interactive and versatile tool. It helps learners, teachers, researchers and other involved personnel to crosslink, enhance intercultural teambuilding and work on the related technological and environmental issues. The platform gives even access to

online real-time and archived data, maps, evaluation and graphical visualization.

O2- Starter Kit.

We have been realizing a starter kit of a system to acquire and manage data from both GNSS and weather stations. The kit enables us testing not only the technology, but even the concept itself.

O3- OER Learning Material 'Physical and Technical Foundations'.

It is an interactive physics course where students learn the foundations of three relevant main topics of the project: satellite technology, propagation of waves and physics of the atmosphere. The corresponding competences are elaborated for the use in different VET curricula.

O4- OER Learning Material 'Informatics and Electrical Engineering'.

We have developed an interactive learning unit ("learning environment") with focus on informatics and electronics. The students are given just a problem, namely the collecting of environmental data. This problem is proposed to them in the form of an order from industry "Monitoring of renewable energy plant – measuring wind and sun strength as well as the electrical power".

O5- Educational videos.

A series of 5-minute long videos have been realizing in all the official languages of the participating countries. The videos deal with the scientific subjects pertaining the project and report on the results themselves, and the way the student worked as teams to achieve them. Different subtopics will be presented in short videos, as a desirable way of dissemination.