Erasmus+ Ka2 D.E.L.T.A. Project

***D*rones: *E*xperiential *L*earning and New *T*raining *A*ssets**

Newsletter no. 2 – February 2018

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INAPP
PUBLIC POLICY INNOVATION

DELTA DRONES
Experiential Learning and new Training Assets

At a glance

Did you know that many current job positions will not exist anymore in 10 years time? And did you also know that in 10 years time there will be many job positions that don't even exist today?

Most future job require STEM knowledge skills but more than 20% EU students perform low in STEM literacy.

Millions of STEM skilled workers are needed form the the job market but education strives to fill the gap!

DELTA Project's ambition is such alike: improving STEM literacy and skills in VET students thanks to Drone's technology, also preparing them for the tough job market of the future!

The Context

Technology is growing more and more today, as 90% of the EU working positions require technical skills.

Education is not heading towards the same goal though: by 2020 there will be a deficit of 825.000 resources with technological skills; by 2025, due to turnover, 7 million jobs requiring STEM skills will be available.

Besides, there is a strong gender-gap: only 32.1% of EU-27 graduates in STEM disciplines is females.

Why Drones?

Students enrolled in VET courses often put endless efforts in studying Mathematics and Physics. Subjects are perceived as difficult and far away from real life.

Theoretical Drones' technology applied to education combines learning experiences based on experiential practice, in an interdisciplinary approach:

engineering for the resolution of design issues, production and maintenance of light aircraft, built with advanced materials that allow the flight in accordance with applicable regulations;

mathematics (from trigonometry to set the flight plan, to 3D modeling through the cloud of points for volumetric calculations and remote sensing);

the physical and natural sciences to fully understand the application fields of technology.

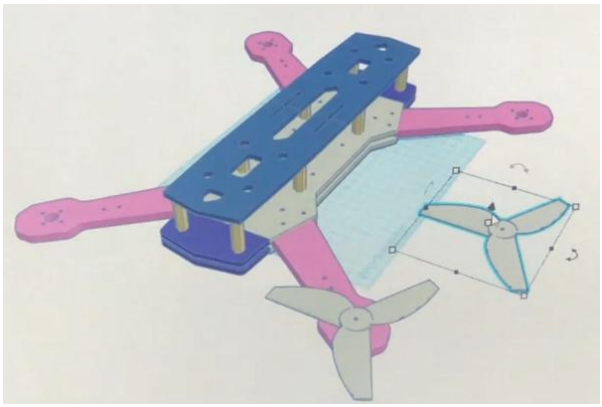
The Methodology

Students learn in a work-based setting according a project-work and problem-based approach. This methodology enhances work related skills, entrepreneurship and employability of the pupils, preparing them for their future jobs.

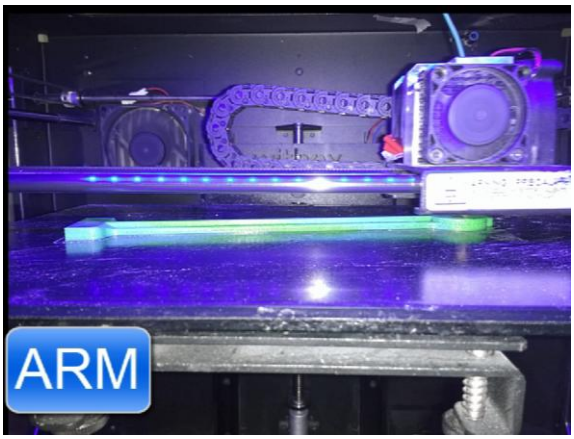
Activities

Partners up to now have worked on the realization of teacher led didactic program about Mechanical Engineering (Intellectual Output 1) and about ICT (Intellectual Output 2) working on those subjects using Drones' technology as a learning tool.

During Intellectual Output 1, each school designed a drone or parts of the drone using CAD software:

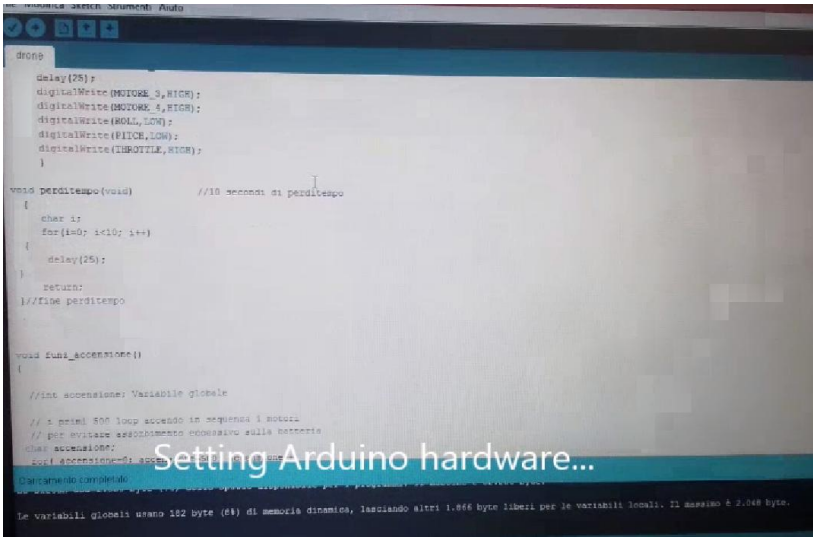


Then students 3D printed single components of the drones…



or started from a real drone trying to dismantle it and assemble it again

In Intellectual Output 2, students learned to program a drone's software…



And to give their drones a few remote-control inputs

Stay tuned for more!

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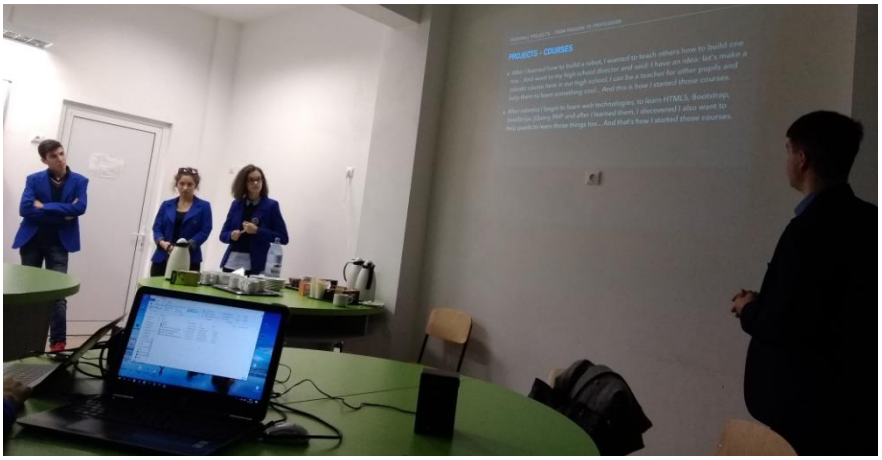
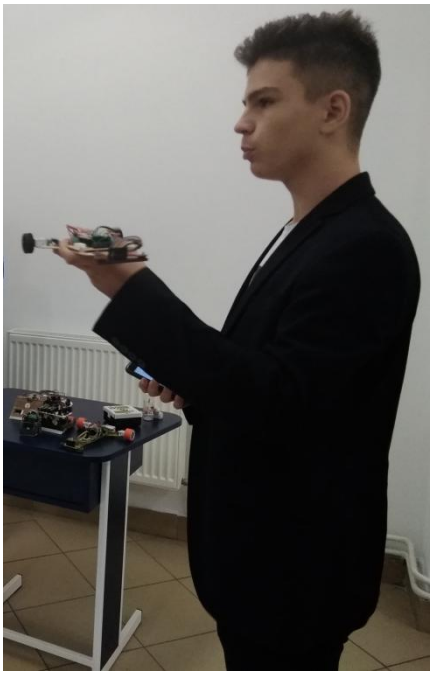
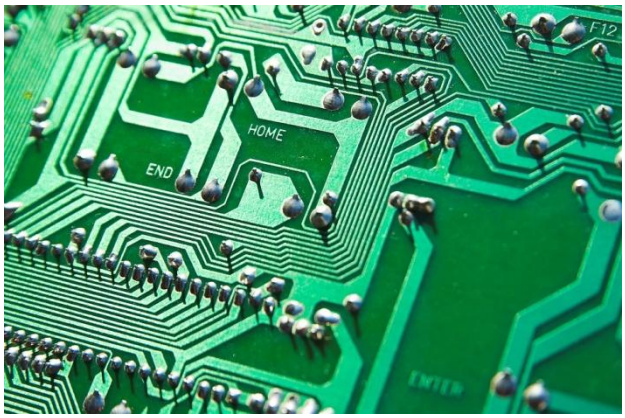
EVENTS 24TH – 25TH October 2017 – 3rd Transnational Meeting - IASI (Romania)





COMING NEXT 7TH – 8TH March 2018 – 4th Transnational Meeting - Maranello (Italy)

During next meeting, which will be hosted by P3 Ferrari school in Maranello, partners will plan IO3 program about the electronical parts of drones.

Schools and companies will work together to design a teaching program about Electronics which will be able to integrate in the school lessons drone's related topics such as design, calibration and sizing of components for vision, including the stereo-optical one, detection and geolocation installed on board a drone - starting from those available for smartphones.