THIS BOOKLET PRESENTS
THE BEST PRACTICES/PROGRAMMES/INITIATIVES RELATED TO
DIGITAL TRANSFORMATION, INDUSTRY 4.0 AND 3D TECHNOLOGIES
IN GREECE, SPAIN, NETHERLANDS, CYPRUS, ITALY
COLLECTED AS PART OF THE ERASMUS+ VET PROJECT

3D2CT

Fostering Industry 4.0 and 3D Technologies through Social Entrepreneurship: An Innovative Programme for a Sustainable Future

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ΙΔΡΥΜΑ ΚΡΑΤΙΚΩΝ ΥΠΟΤΡΟΦΙΩΝ
ΙΚΥ

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aidplex

Aidplex Startup company developing 3D printed patient-centered solutions for orthopedics and healthcare.

3D ACTIVITIES

3D printing custom made and patient-specific splints for bone fracture treatment. Integration of biometric sensors.

SOCIAL IMPACT

Using innovative technologies in the orthopaedics field, thus improving the effectiveness of products and the comfort of the patients.

TARGET GROUP

- Patients
- Doctors
- Medical Staff

CONTACT DETAILS

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Open Technologies Alliance - GFOSS is a non-profit organization founded in 2008, with 37 Universities and Research Centers as shareholders. GFOSS's main goal is to promote Openness through the use and the development of Open Standards and Open Technologies in Education, Public Administration and Business in Greece.

3D ACTIVITIES

Open educational material for learning the basic concepts of designing and printing 3D models (Additive Manufacturing).

SOCIAL IMPACT

Providing freely available open courses (online and offline seminars) for 3D printing/3D design and STEM.

TARGET GROUP

- Students
- Young adults

CONTACT DETAILS

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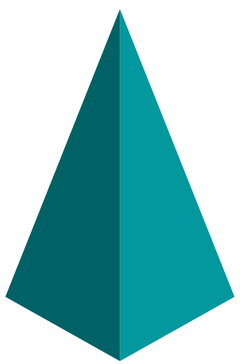
IMPACT HUB Athens

CO{DE}+CREATE | EDUCATION + INTEGRATION WITH DIGITAL AND TECH SKILLS - Teams of young girls and boys from Greek and refugee communities have been learning digital and tech skills such as programming, robotics and 3D printing in Athens, organized by co{de}+create.

3D ACTIVITIES



Greek youth and newcomers in Greece had the chance to learn together how to code, design websites and games, develop apps and experiment with 3D printing & robotics.

SOCIAL IMPACT

co{de}+create serves as a platform for social integration, promotes creative thinking and facilitates access to higher level studies and job skills.

TARGET GROUP

- Greek youth
- Newcomers in Greece

CONTACT DETAILS

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The **e-NABLE** Community is an amazing group of individuals from all over the world who are using their 3D printers, their designing skills and their spare time, to create free 3D printed hands and arms for those in need of an upper limb assistive device.

3D ACTIVITIES

Train individuals related with people with disabilities (their teachers, families, friends) and every person interested in the utilization of 3D Printing in order to contribute to the reduction of social exclusion of vulnerable groups.

SOCIAL IMPACT

All the e-NABLE devices are free of charge for the final recipient. All the costs are covered by the maker who has the responsibility to build and give the device to the recipient.

TARGET GROUP

- Every person who deals with body disability of upper limb or visual impairment

CONTACT DETAILS

W: https://enabling.gr/
https://www.facebook.com/GreeceEnable/

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Επαγγελματικό Λύκειο Ελευθερίου Βενιζέλου

Construction of a custom 3D Printer by a student -One of the students constructed a custom 3D Printer from scratch, using basic materials such as wooden frames (from his father carpentry), incorporating patents to make the printer functional.

3D ACTIVITIES

A model of a 3D printer has been used for the construction, as well as printer consumables and materials for testing.

SOCIAL IMPACT

Extensive reference was made to newspapers, TV channels and social media for this project.

TARGET GROUP

- Students of the Computer Science department of VET schools

CONTACT DETAILS

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The Response of the Hellenic 3D-Printing Community over the COVID-19 Pandemics: 3D Printed Face protection masks -The Laboratory of Precision Machining and Reverse Engineering (PMRE Lab) of the Hellenic Mediterranean Institute created 300 face protection masks using 3d printing.

3D ACTIVITIES

Students designed the process of face mask model 3d printing. Consumables and materials were acquired.

SOCIAL IMPACT

All masks were given in hospitals and medical care centres throughout the country.

TARGET GROUP

- Students of the School of Engineering in the Hellenic Mediterranean Institute

CONTACT DETAILS

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1ο Εργαστηριακό Κέντρο Ηρακλείου

3D printing of spare parts for laboratory use - 3D printing of spare parts to support lab use on various school subjects. It is an attempt to cover schools' needs.

3D ACTIVITIES

3D printing of spare parts for various laboratories. (The 1st Laboratory Center supports various VET schools in the area)

SOCIAL IMPACT

Reference to websites and social media for this project.

TARGET GROUP

- Students of the 1st Laboratory Center of Heraklion

CONTACT DETAILS

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Birziplastic

Birziplastic is dedicated to the recovery of end-of-life plastics, through the proper management of this waste, and for this it has a design of already certified processes that do not generate added waste during them.

3D ACTIVITIES

Due to the knowledge of polymers, the treatment of plastic waste is done by mechanical systems, avoiding generating added pollutants.

SOCIAL IMPACT

It helps meet two European green goals: the circular economy and the reduction of the use of materials from virgin materials.

TARGET GROUP

- Industry
- Companies
- Institutions
- Associations.

CONTACT DETAILS

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salesianos DEUSTO

Mobility Enhancement Challenge in collaboration with the 3DLAN Association, which consists of developing a prototype so that wheelchair users can open doors without having to manipulate the handle by hand.

3D ACTIVITIES

This prototype was designed by mechanical manufacturing and 3D students, that work together in teams.

SOCIAL IMPACT

This challenge gave the students the possibility to empathise with this group, by facilitating the day-to-day life of other people.

TARGET GROUP

- Wheelchair users
- 3DLAN Association

CONTACT DETAILS

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3D2ACT

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d'lab

Fablab offering students and companies an opportunity to develop prototypes with 3D printing for example. D'Lab is a part of Friesland College (a VET provider), while working closely with Frisian Design Factory (part of NHL/Stenden - University of Applied Sciences).

3D ACTIVITIES

D'Lab offers the possibility and support to print own prototypes with the several 3D printers, like Objet30 Prime and Ender3.

SOCIAL IMPACT

D'Lab is involved in socially impactful projects, like Circulair Plastic Hub - production methods are developed, based on recycled plastic.

TARGET GROUP

- Students
- Start ups companies.

CONTACT DETAILS

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FABLAB GRONINGEN

A fablab which is a knowledge center for 3D printing, where teachers can gain knowledge and skills in digital fabrication. It includes a virtual reality lab and provides workshops in Industry 4.0 among others.

3D ACTIVITIES

FabLab Groningen offers the possibility to work with 3D printers, makes 3D products based on orders and organises knowledge meetups.

SOCIAL IMPACT

Everyone can use facilities and knowledge of FabLab Groningen. Also, it is cooperating with mainly universities to work on upcycling.

TARGET GROUP

- Students
- Teachers
- Everyone

CONTACT DETAILS

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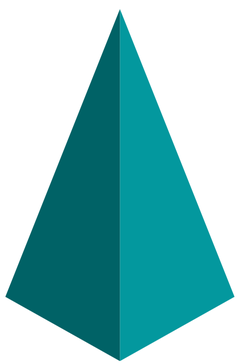
YOUTH MAKERSPACE LARNAKA

ΟΡΓΑΝΙΣΜΟΣ ΝΕΟΛΑΙΑΣ ΚΥΠΡΟΥ

Youth Makerspace Larnaka Larnaka provides young people with access to high-quality and state-of-the-art equipment for developing prototypes and bringing their ideas into life.

3D ACTIVITIES



Courses and Webinars for Makers introducing 3D Modelling and 3D Printing. Mobile Makerspace equipped with 3D printer, laser cutter, Oculus virtual reality, Arduino.

SOCIAL IMPACT

The Makerspace helps children and young people develop 21st century skills in the fields of science, technology, engineering, arts, design and critical thinking, while boosting their self-confidence!

TARGET GROUP

- Young people

CONTACT DETAILS

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Thinker Maker Space

Thinker Maker Space - Help creators discover new and develop existing skills using an array of tools that they would otherwise not have access to. Encourage dialogue and interaction with academics to gain knowledge.

3D ACTIVITIES

Provide an (FDM) printer and an (SLA) printer, that can take an array of versatile filaments and resins, for use in Rapid prototyping and model building.

SOCIAL IMPACT

To inspire the public to the opportunities offered by science, technology and entrepreneurship. To encourage technology-led innovation. To support scientists and entrepreneurs social engagement. To help creators discover and develop new skills. To train and support local entrepreneurship

TARGET GROUP

- Students
- Researchers
- Entrepreneurs
- Small-scale creators/ amateur
- Small-to-medium enterprises (SMEs)
- Cultural and creative industries
- Industry/large corporations

CONTACT DETAILS

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Easy Covid - During the Covid-19 crisis, as the hospitals were facing insufficient masks in the sub-intensive unit, they converted a Decathlon mask into a sub-intensive care mask and they patented a new component for connecting the mask to the ventilator. The new component was realised using 3D printing.

3D ACTIVITIES

They analysed the functionality of a C-PAP mask and created an emergency C-PAP mask. They used a standard commercial snorkel mask, and on the other hand, they designed and made the connection between the mask and the oxygen regulator.

SOCIAL IMPACT

The geometric ease of design allows it to be produced in a short time using 3D printing (particularly FDM), even with amateur printers. The ease of construction was one of the decisive driving factors for the project, which was disseminated and shared worldwide during the peak of the epidemic in 2020.

TARGET GROUP

- Youth and Adult
- SMEs
- Medical Staff

CONTACT DETAILS

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INDIRE ISTITUTO NAZIONALE DOCUMENTAZIONE INNOVAZIONE RICERCA EDUCATIVA

Maker@Scuola is the observatory set up at Indire that since 2014 it has been monitoring, even beyond national borders, the most interesting experiences related to Makers, especially in the educational field. Makers are the “digital artisans” who experiment in a creative and collaborative way with their technical skills to manufacture objects or pave the way for a simpler and more modern future.

3D ACTIVITIES

Born as part of the experimentation of the "Maker @ Scuola" research project, SugarCAD is a free 3D modeling software that, thanks to its ease of use, allows teachers, students and makers to give shape to their ideas.

SOCIAL IMPACT

It’s an educational programme that helps teacher and students to face the challenges of the use of 3d technology at school, encouraging young people to use creativity that can be translated into prototypes through the use of 3d printers.

TARGET GROUP

- Teachers
- Students

CONTACT DETAILS

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THE CONSORTIUM

DEMOKRITOS

learn
EUROPEAN DIGITAL LEARNING NETWORK

POLITEKNIKA IKASTEGIA
TXORIERRI
S.COOP.

Emphasys
CENTRE

Inqubator
Leeuwarden

ΠΕΡΙΦΕΡΕΙΑΚΗ ΔΙΕΥΘΥΝΣΗ
ΕΚΠΑΙΔΕΥΣΗΣ ΚΡΗΤΗΣ
REGIONAL DIRECTORATE
EDUCATION OF CRETE

ΠΑΝΕΠΙΣΤΗΜΙΟ ΚΡΗΤΗΣ
UNIVERSITY OF CRETE

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