

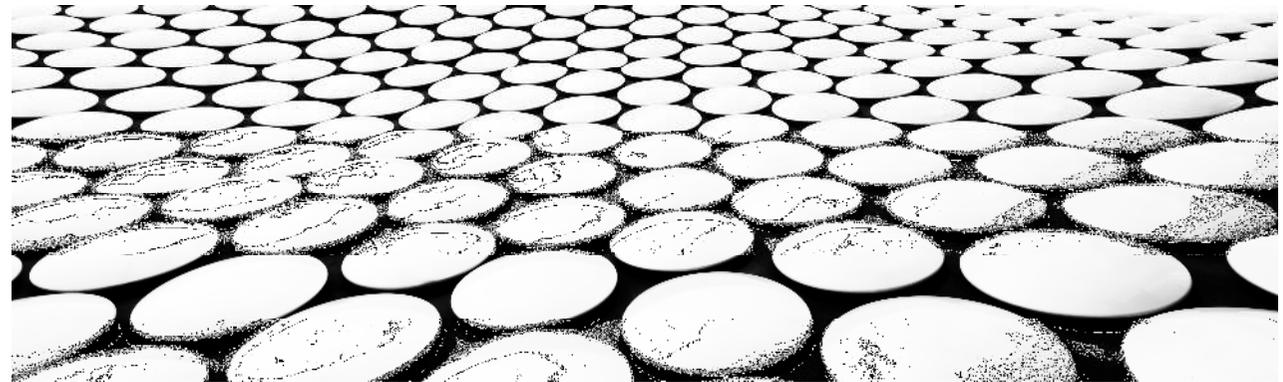
3D PRINT-TRAINING



Co-funded by the
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DR PAUL QUANTOCK
EU15 LTD
PROJECT PROMOTER

MULTIPLIER EVENT

4 AUGUST 2022

AGENDA



1. Introduction to the structure of the Multiplier Event (5 minutes)
2. What is 3D printing? Guest Speaker - Michael Molitch-Hou, Editor-in-Chief, 3DPrint.com (15 minutes)
3. The Project (history and outputs) - EU15 (5 minutes)
4. Presentation: Introductory Guide - EU15 (5 minutes)
5. Presentation: Online Training Programme - CEPROF (10 minutes)
6. Presentation: Teaching Guide for Trainers - CEPROF (5 minutes)
7. Q & A and general open discussion session about 3D printing (audience participation: experiences and thoughts; and presentation of 2 short videos of real world 3D printing products) (15 minutes)

PRESENTERS



GUEST SPEAKER

- **Michael Molitch-Hou, Editor-in-Chief (3DPrint.com).** Michael has been covering the additive manufacturing industry day-in and day-out for the past decade. After obtaining an MFA in Writing and Critical Studies at the California Institute for the Arts, he worked his way up from senior writer at 3D Printing Industry to Editor-in-Chief before transitioning to engineering.com. There, he oversaw the 3D Printing news division while also writing about emerging technologies in CAD and construction. Now, as Editor-in-Chief of 3DPrint.com, he is dedicated to ensuring that the site remains the leading source for actionable intelligence related to 3D printing technology and the larger AM industry. You can learn more about his work at <https://www.michaelmolitchhou.com>

PROJECT PROMOTER

- **Dr Paul Quantock** heads up EU15 Ltd, a training and software development company that specialises in eLearning solutions, robotics and entrepreneurship. He has a keen interest in enhancing and developing the skills required for a new generation of SMEs considering the increasing importance and challenges facing training for “New Age Technologies” and supporting budding entrepreneurs

PROJECT PARTNER

- **César Reis** is an expert in the creation and delivery of VET training in 3D printing and has, with project Partners, and his team at CEPROF (Portugal) developed the online training programme on 3D printing for trainers and the development of a teaching pack to enable educators to learn more about 3D printing

REASON FOR THE PROJECT



- The worldwide pandemic has multiplied the problems in supply chains, especially in sectors such as manufacturing and logistics
- The spread of coronavirus has caused disruptions in manufacturing plants, broken supply chains and prevented production at many industrial sites
- In a time of global crisis companies have to review their current working methods and consider implementing new strategies and technologies
- One such technology is 3D printing
- Need to address the 'Additive Manufacturing Skills Gap'; the notion that there are simply not enough talented people to fill jobs needed and demanded

JOB SEEKERS AND EDUCATIONALISTS



As the 3D printing industry booms, what does it mean for job seekers?

What good are these jobs if no one has the qualifications to fill them?

- To help fill the skills gap 3D printing programs, at all grade levels, need to be developed
- This will open up jobs for educators who can teach the technical and business uses of 3D printing
- The possibilities and opportunities that 3D printing is creating in education are endless
- Whilst the uses of 3D printing are endless in the real world, they're also limitless in the classroom
- Educationalists will need specific skill sets to teach specialized courses and stay up-to-date with the latest trends
- 3D printing presents new business opportunities as well as new entrepreneurial models based on transforming digital data into physical objects in remote locations, independent of centralized production and industrial areas by using "3D printing hubs"

PROJECT PARTNERS



In order to fulfil the project objectives and achieve the outputs a highly trained and experienced team had to be created from the worlds of technology and training

- **EU15 Ltd (UK)** specialises in eLearning solutions, robotics and entrepreneurship
- **CEPROF (Escola Profissional de Espinho (ESPE)) (Portugal)** are experts in the creation and delivery of VET training in 3D printing
- **Europole (Italy)** works in every field of education, from ITC to in-service training courses for teachers
- **Citizens in Power (Cyprus)** works to increase employability through entrepreneurship education and practical experience
- **All Digital (Belgium)** enables those without basic digital skills to exploit the opportunities created by digital transformation

PROJECT OUTPUT OVERVIEW



INTRODUCTION TO 3D PRINTING

Production of a guide on how to introduce 3D printing in educational settings e.g. type of equipment required, 3D printers 'best buys', how to maintain the equipment, where to buy materials etc

TEACHING MATERIALS FOR TRAINERS

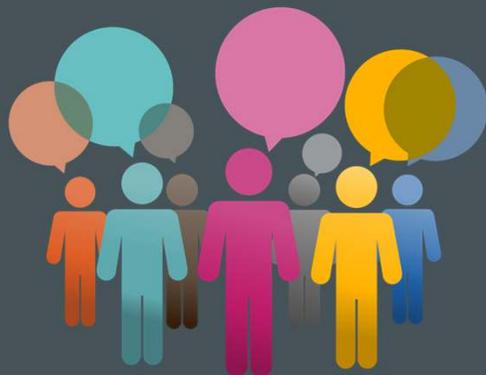
Creation of a training programme on 3D printing for trainers, to provide them with the knowledge to develop a teaching programme on 3D printing

TEACHING GUIDE FOR TRAINERS

Development of a teaching pack to enable educators to learn more about 3D printing and provide course materials for their students e.g. assignments, quizzes, general learning materials

3D PRINTING EUROPEAN SURVEY

(Report Extract)

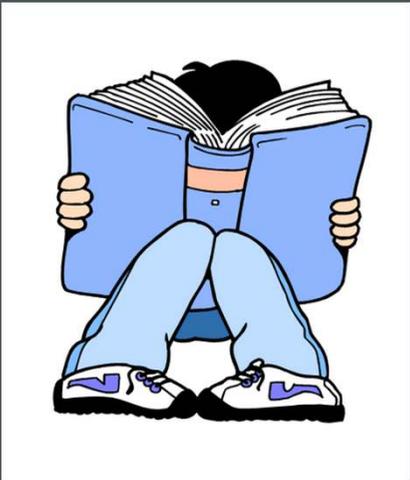


To ensure we developed outputs that met the needs of individuals, SMEs and training institutions we undertook a European Survey of 235 individuals, SME Managers and teachers. Here are some of the main findings:

- 89% of teachers would like to integrate 3D printing in the classroom, if they had the right support
- 86% of individuals and SMEs thought that schools and educational institutions should provide more 3D printing skills training
- 82% of SMEs thought that their employees would benefit from more knowledge and training about the use of 3D printing
- 67% of SMEs thought that the use of 3D printing would improve their competitiveness and/or reduce costs
- Only 36% of respondents knew how to use a 3D printer
- Only 9% of the educational institutions who responded said they offer stand-alone 3D printing courses

The survey results show that there is a need for additional education and training in 3D printing

OUTPUT 1 INTRODUCTION TO 3D PRINTING



OUTPUT 1 of the project was the production of a guide on how to introduce 3D printing in an educational setting

- What is 3D printing?
- The opportunities and potential for its use
- The impact on society
- The prospects for employment
- How to introduce 3D printing in training establishments
- The type of hardware and software required
- A few general ‘tips/tricks’
- 3D printers ‘best buys’
- How to export the models to the 3D printer
- How to maintain the equipment
- Where to buy the materials



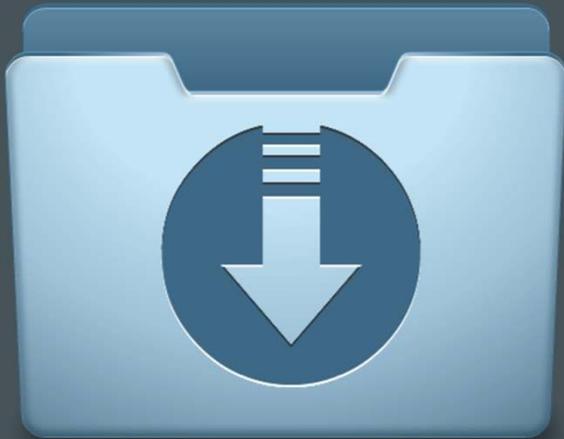
March 2021

Introduction to 3D Printing

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DOWNLOAD THE REPORT



The FULL Report was published in March 2021

Download at <https://3dprint-training.com/guide>

NOTE: A Summary of the Report is available to download in Portuguese, Italian, Greek and English

OUTPUTS 2 & 3

Next Steps



TEACHING MATERIALS FOR TRAINERS

Creation of a training programme on 3D printing for trainers, in order to provide them with the knowledge to develop a teaching programme on 3D printing

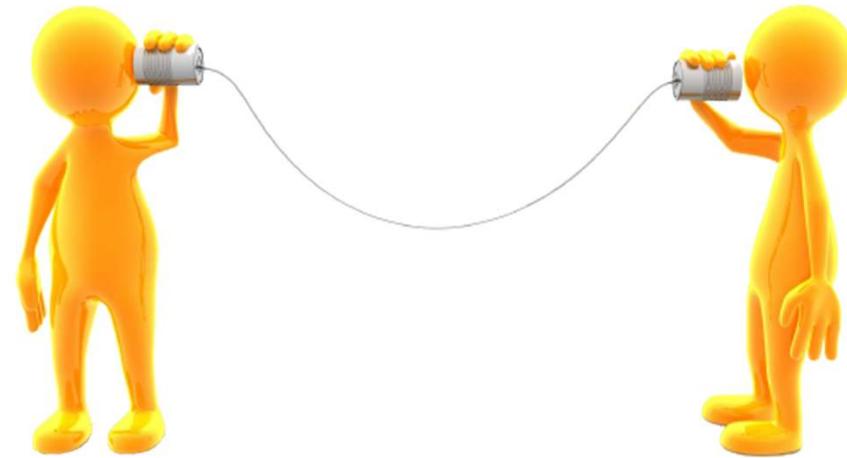
Launched in December 2021

TEACHING GUIDE FOR TRAINERS

Development of a teaching pack to enable educators to learn more about 3D printing and provide course materials for their students e.g. assignments, quizzes, general learning materials

Launched in July 2022

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