EMBRYO

for secondary schools

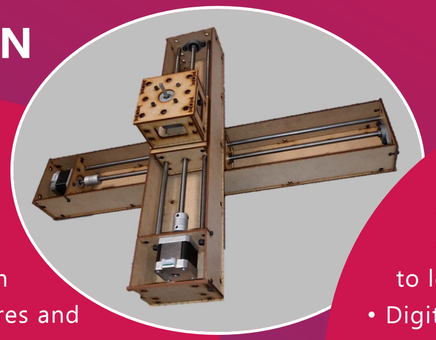
PROJECT START
January 2020

- 340.000€ + EIT Funding (two years)
- New lectures about manufacturing ready (June 2020)
- New table-top bending press ready (June 2020)
- 270 Pupils taught with table-top press kit (scholar course 20-21)
- New lectures and kit for machine ideation ready (December 2021)
- More than 300 pupils taught with machine ideation kit (scholar course 22-23)

CHALLENGE

- **Europe needs skilled people for manufacturing** but this sector is not attractive for young people
- Digitalization and green manufacturing are key technologies for the future sustainable development of Europe
- An increased presence of women in the manufacturing sector is needed
- **The aim** of Embryo is **to engage pupils in manufacturing** as it is a key sector for the European GDP

SOLUTION



- The Embryo consortium has developed **two new educational kits** for secondary schools, which combine theoretical lectures and Hands on activities
- **Project Based Learning (PBL)** methodology has been used in classrooms and students have learned about manufacturing by mounting the new kits, forming their own designs and ideating their own machines

BENEFITS

- The new kits are used for hands on activities. Learning by doing enormously motivates pupils to learn complex concepts
- Digitalization and programming with Arduino shows the students that manufacturing technologies are very advanced processes where many different disciplines are merged to create a precise product
- Surveys proved that this learning methodology is the right way to teach and motivate them!

MAIN PROJECT RESULTS

13 SECONDARY SCHOOLS (Germany and Spain)

270 STUDENTS TAUGHT (14 years old)

NEW KITS FOR SECONDARY SCHOOLS

- TABLE-TOP BENDING PRESS
- MODULAR MACHINE IDEATION KIT

"thanks to EMBRYO and EIT-M we were able to motivate young pupils and get them interested in manufacturing"

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eit Manufacturing

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PtU FORMING EXCELLENCE

ARDUINO