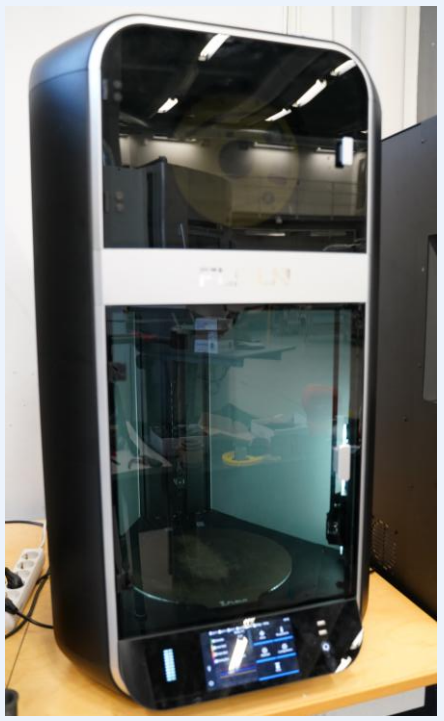
Advanced Makerspaces for PiLot production by micro-Enterprises

FDM 3D printing

Prototyping of small-scale 3D models

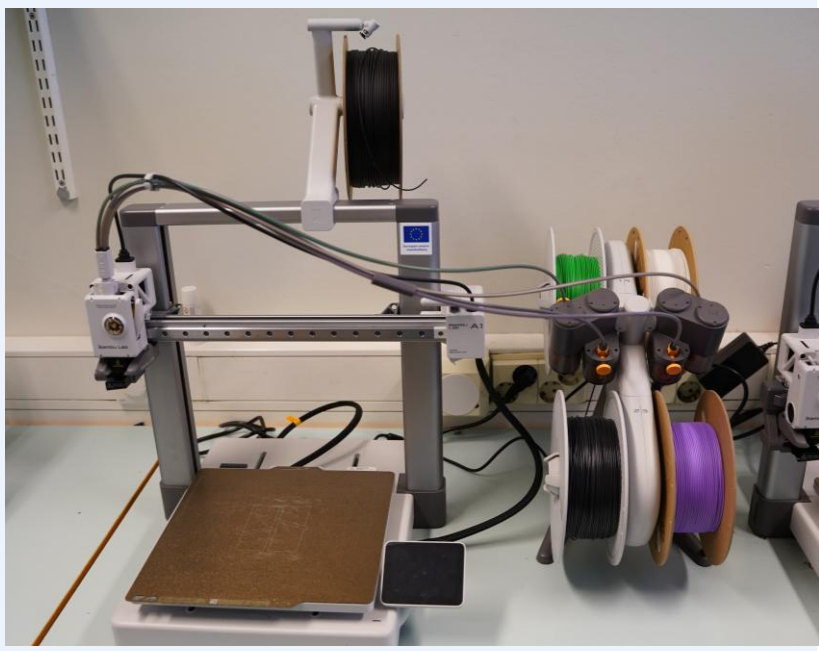
Introduction

Fused Deposition Modeling (FDM) is one of the most common and accessible 3D printing methods. FDM provides an efficient way to produce prototypes, small-scale production runs, as well as 3D parts suitable for educational and research applications. Centria's 3D printing lab offers a wide range of equipment, from compact desktop printers to advanced, large-format high-precision machines.



How Does it Work?

In the FDM printing process, the filament is melted and extruded through a heated nozzle, layer by layer, using thermoplastics such as PLA, TPU, ABS, PC, PETG or biobased renewable composites. This technique enables the creation of complex custom geometries. While a variety of commercial filaments exist for different applications, Centria's facilities make it possible to develop and produce tailor-made filaments as well.



FDM equipment from compact desktop printers to high-precision machines

Applications

3D objects can be manufactured using a wide range of functional materials, including electrically conductive filaments, engineering-grade thermoplastics, flexible polymers, and renewable biobased composites, enabling diverse mechanical and functional properties. With multi material printing, it is possible to combine several different materials in one object, enabling advanced functionality and customized properties.

3D printed samples

Interreg
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