



# 3D COFFEE

## 3D PRINTED HEAT-EXCHANGERS FOR COFFEE-MACHINES



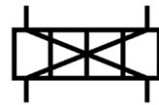
**3D Coffee** is an experiment aimed at validating an innovative heat-exchanger for a more sustainable, high-quality and personalizable coffee preparation.



**AI-DRIVEN  
MODEL-BASED  
DESIGN**



**ADDITIVE  
MANUFACTURING  
OF THE PROTOTYPES**



**TESTING  
OF THE PRINTED  
HEAT-EXCHANGER**

**Sustainability and quality** are the two concepts guiding 3d Coffee project and its results: a 3d printed heat exchanger for both electric and non- electric coffee machines with thermodynamic characteristics to guarantee the preparation of coffee in a more sustainable, performing, economical and quality way.



## GOALS



Validation of both the digital tween and the **AI-driven Model-based Design** used to optimize the conformal topology of the heat-exchanger.



**3D printing** of the heat exchanger and optimization of the Additive Manufacturing process through a **set of test-bench prototypes**.



Measuring of the highly-efficient heat exchanger's performance enabling a **more energy-efficient and sustainable coffee preparation**.



## PARTNERS



**Additive Appliances** is a startup company developing innovative solutions for the next generation of household appliances, including coffee brewers and personal care products.



**Kilometro Rosso** is among the major Innovation Districts in Europe which promotes Additive Manufacturing through Lisa Tech the Living Space for Additive Technologies, a laboratory for companies and professionals who need AM production competencies and services.

[info@kilometrorosso.com](mailto:info@kilometrorosso.com)  
[www.kilometrorosso.com](http://www.kilometrorosso.com)



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