



MMAMA

Microwave Microscopy for Advanced and Efficient Materials Analysis and Production

General description

The MMAMA project aims to enable advanced material analysis and boost its quality and production efficiency thanks to the GHz measurement and modelling platform in a wide community.

MMAMA Objectives

- Technological**
 - Improvement of SMM technology
 - Nanoscale characterization platform for EU manufacturers of coatings, photovoltaic cells, and semi-conductor circuits
- Economical**
 - Acceleration of the development of high efficiency cells
 - Performances prediction at early stages
- Sustainability**
 - Open innovation environment
 - Standard Operating Procedures
 - Electromagnetic 3D models

MMAMA Ambition

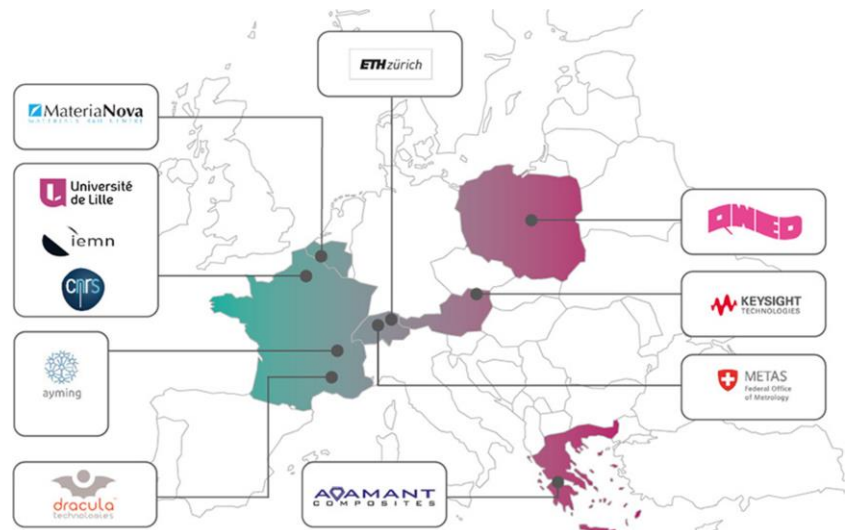
Beyond R&D and demonstration of SMM interest at production scale, MMAMA will notably allow standardization of practices and:

- allow off-line & lab characterization to generate data and application Database
- monitor and compare in-line pilot with application Database to optimize material

Main Outputs

MMAMA project results will first be exploited through dissemination to a selected community in the field to improve the application database. It will be the basis of new business opportunities for European industries in photovoltaic and composites sector.

MMAMA Consortium

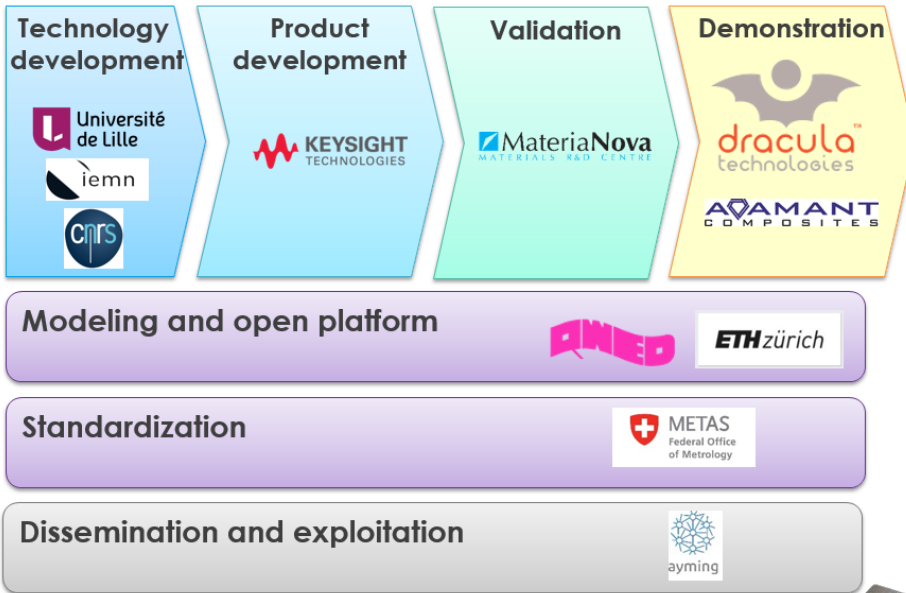


Countries involved: Austria, Belgium, France, Greece, Poland, Switzerland.

Duration : 01/11/2017 to 30/10/2020

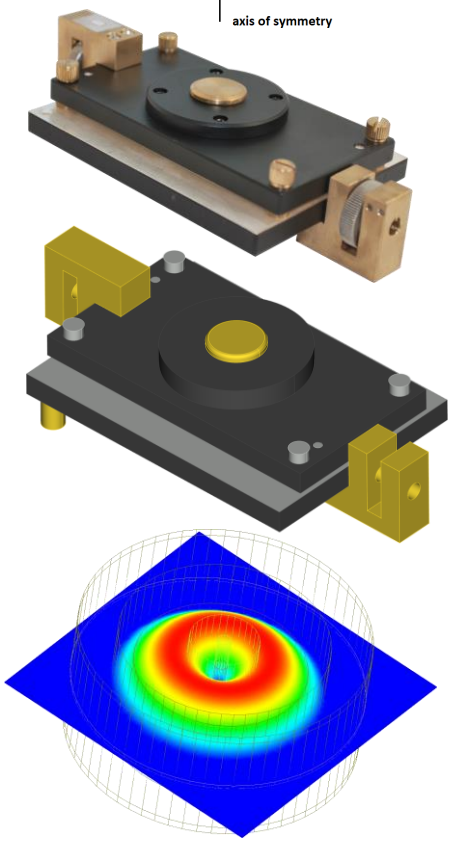
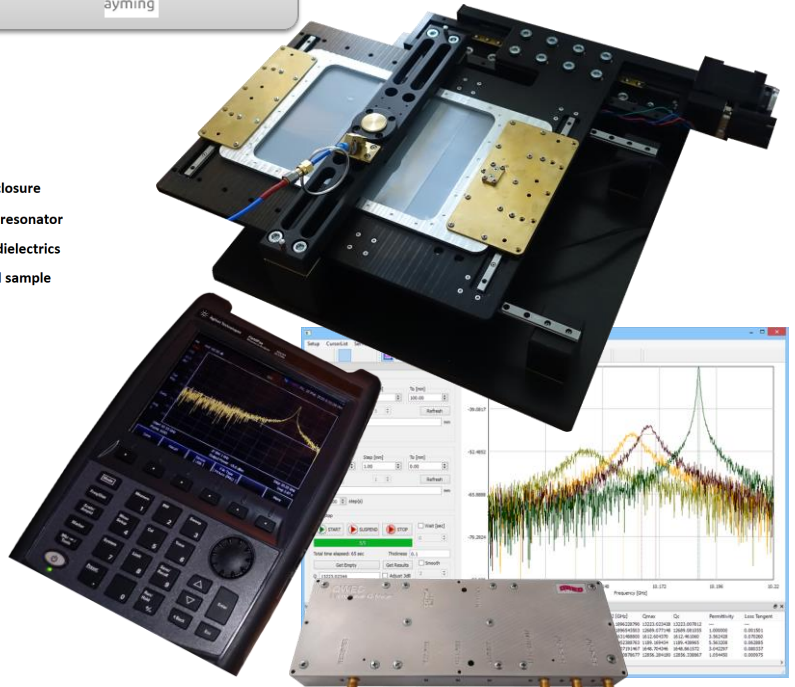
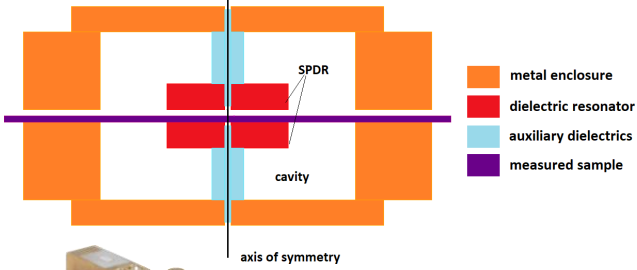
Budget/EU Grant: 3 992 176.25€

MMAMA Value Chain



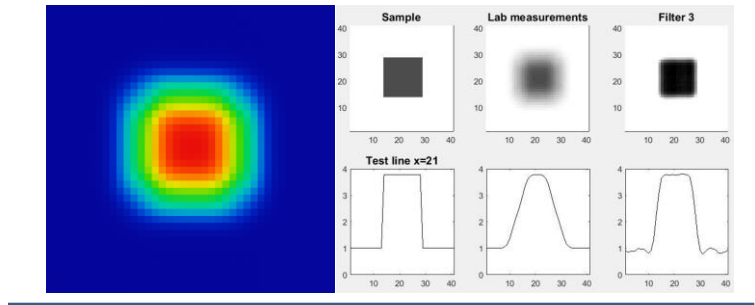
The MMAMA project has received funding from the European Union's Horizon 2020 Research and Innovation program under Grant Agreement N°761036.

Current QWED activities



2-dimensional scanner for measurement of electric properties of materials using an SPDR at 10 GHz. Automatic control of the measurement process with FieldFox Handheld Microwave Analyzer and with new small portable 10 GHz Microwave Q-Meter.

Adaptation of the dielectric resonator technology from laboratory environment to S2S inline industrial application.



Improvement of SPDR scanning using signal processing methods.