

H2020 project fact sheet:

Open Innovation Ecosystem for Sustainable Nano-functionalized Flexible Plastic and Paper Surfaces and Membranes

FlexFunction2Sustain



Project ambition:

FlexFunction2Sustain will be the **first European Initiative to support Plastics and Paper Processing Industry** in overcoming challenges of improving environmental footprint and entering the digital age while offering new material functionalities through a **sustainable Open Innovation Test Bed (OITB)**. Such an Ecosystem shall support innovative SMEs and industries by **drastically reducing time and effort for proceeding through the innovation chain** from a product idea to market success by establishing holistic technical and business services such as material and process design, development, upscaling, pilot production, testing and verification in application and with respect to Circular Economy principles and access to networks, finance, markets and clients.

Project description:

FlexFunction2Sustain connects complementary pilot lines to a set of 9 connected lab-2-fab facilities covering all major nanosurface processing techniques for (flexible) plastic and paper surfaces and membranes. The facilities and novel surface functionality will be demonstrated in six relevant industrial application scenarios. 20 pre-commercial pilot cases will demonstrate the Services of the FlexFunction2Sustain OITB.

Project facts:

Start date: 01/04/2020
End date: 31/03/2024

Duration in months: 48

Project budget: € 16.1 M

H2020 Innovation Action

Grant Agreement: 862156

Call: H2020-NMBP-HUBS-2019

Topic: DT-NMBP-03-2019
Open Innovation Test Beds for nano-enabled surfaces and membranes

Keywords:

Open Innovation Test Bed
Sustainable materials
Flexible
Nano-enabled surfaces and membranes
Single Entry Point
Open Call

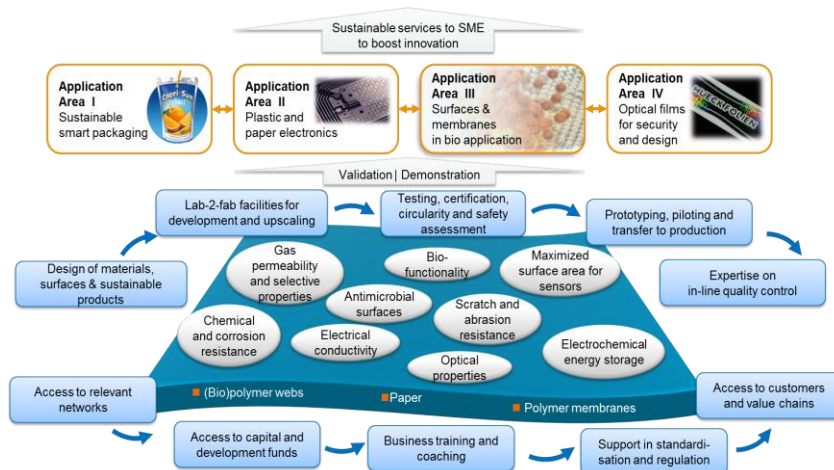


Figure 1: FlexFunction2Sustain Concept

The FlexFunction2Sustain OITB is prepared to support the client at **any point in the innovation chain from TRL4 to TRL7** with an integrated technological, business development and verification/pre-certification service portfolio that helps the client to progress quickly through the innovation chain.

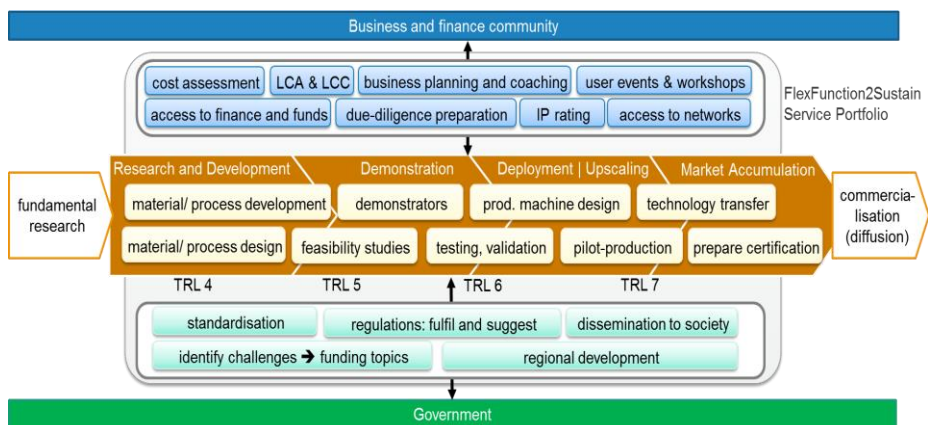


Figure 2: FlexFunction2Sustains Service Portfolio along the innovation chain

The FlexFunction2Sustain OITB will **satisfy the need of innovative SMEs to test and validate their product idea, product, material or nano-surface treatment processes and technologies both in lab and in a relevant and operational environment.**

FlexFunction2Sustain will develop dedicated services to boost innovation for nanofunctionalised flexible plastic and paper surfaces and membranes and offer those services to users, in particular SMEs, in all EU countries through an **independent Single Entry Point** with multiple regional front offices, which will guarantee the profitability and sustainability for the OITB on the long term.

Expected impact:

1. Open and upgraded facilities at the EU level for the design, development, testing, safety assessment, and upscaling of nano-enabled surfaces and membranes;
2. Attracted significant number of new SME users, with at least a 20% increase for existing test beds;
3. Increased access to finance (for SMEs in particular) for investing in these nano-enabled surfaces or membranes or in applications using them;
4. At least 15% improved process parameters and 20% faster verification of nano-enabled surfaces or membranes performance for highly promising applications;
5. At least 20% improvement in industrial productivity, reliability, environmental performance, durability, and reduction of life-cycle costs of nano-enabled surfaces;
6. At least 15% indirect reduction in energy consumption for applications using novel nano-enabled surfaces or membranes.

The project includes 19 partners from all over Europe including leading research organizations, universities and private companies who are facilities and services providers and each one being a European leader in his field.

Consortium:

FHG	DE
JOA	AT
AUTH	GR
COA	DE
AMCOR	CH
GEMI	DE
OET	GR
SHP	DE
BLNANO	GR
IPC	FR
INL	PT
HOPEA	GR
i3M	DE
HUECK	AT
CRF	IT
PG	DE
SONAE	PT
CAPRI	DE
AMI	CZ

Contacts:

Project coordinator:

Dr.-Ing. Christian May
Fraunhofer FEP (Germany)
[Christian.May\(at\)fep.fraunhofer.de](mailto:Christian.May(at)fep.fraunhofer.de)

Project manager:

Anastasia Grozdanova
AMIRES s.r.o. (Czech Republic)
[grozdanova\(at\)amires.eu](mailto:grozdanova(at)amires.eu)

Website:

www.FlexFunction2Sustain.eu



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