



# PRODUCE

A Social Manufacturing Framework for Streamlined  
Multi-stakeholder Open Innovation Missions in  
Consumer Goods Sectors



# Overview

iPRODUCE will introduce and define a social manufacturing framework (SMF) to support open innovation and co-creation activities for the design, engineering and production of consumer goods.

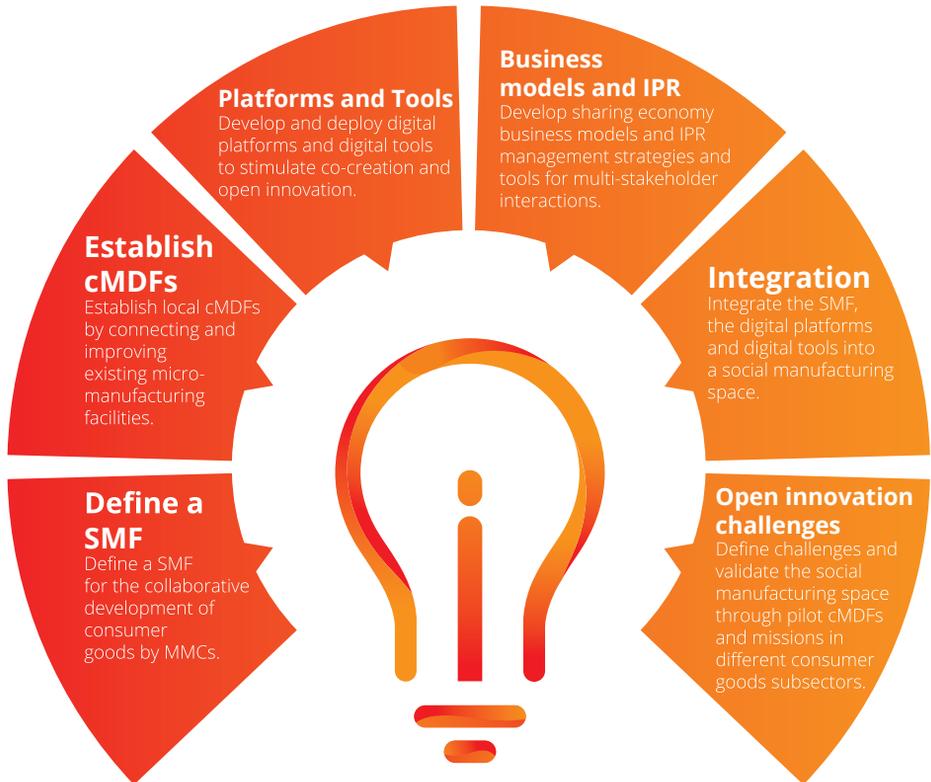
The SMF aims to engage at the local and European level with manufacturing enterprises, makers communities, and consumers. These stakeholder groups will be mobilised to participate in co-creation missions driven by consumer needs.



The SMF proposes increased collaboration between these stakeholder groups through open innovation projects in collaborative Manufacturing Demonstration Facilities (cMDFs). Here, new ideas are leveraged to meet consumers' needs, and existing designs and prototypes are explored for commercialisation and mass production.

# Objectives

Bring closer manufacturers, makers and consumer communities (MMCs) through co-creation challenges for the manufacturing of new consumer products and the introduction of novel methods, tools, and engineering and production (eco)systems.



# Multisectoral cMDFs

iPRODUCE will run six pilots through cMDFs involving local partners and focusing on different sectors: furniture, automotive, medical, electronics and microelectronics.

## 1 SPAIN

Collaborative engineering in customer-driven home furnishing products.

## 2 GERMANY

Open consultation, collaborative product development and collaborative learning.

## 3 FRANCE

Establishment of cMDF in the French industrial ecosystem for developing collaborative projects in the automotive/mobility and associated consumer goods sectors.

## 4 ITALY

Collaborative manufacturing environment with cross-competences sharing for product development/enhancement in the microelectronics consumer sector.

## 5 DENMARK

Establishment of a mobile makerspace unit in real scenarios (in 10 Danish cities), allowing consumers to interact with tools and technologies, and execute and assemble products in these locations.

## 6 GREECE

Collaborative design and development of 3D printed medical products with IoT sensors integration.



# Approach & Outcomes



## Phase 1

### Framework design and preparation

- Identification of end-user and system requirements according to the project's domains.
- Refinement and extension of use cases.
- Definition of modelling and design needs for deployment of technologies.



## Phase 2

### Technical development and innovation

- Identification of technology specifications and tools and improvement of existing technology.
- Design and implementation of a maintenance and production management solution.



## Phase 3

### Integration and validation

- Configuration and adaptation of individual prototype components.
- Experimental verification and later integration in the iPRODUCE framework.
- Iterative testing followed by system integration.



## Phase 4

### Demonstration and evaluation

- Improvement and validation of the iPRODUCE framework and assessment of demonstrations.
- Iterative deployment of the framework to business scenarios.

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- Open innovation methods
  - Generative design and design thinking approaches
  - Mass personalization approaches
  - Novel business models for social manufacturing
  - Open innovation space platform
  - Training toolkits
  - Establishment of a network of CDMFs

# Consortium

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