## Solution optician 2020

**Optician2020** is developing the technologies and processes necessary to demonstrate that the **personalised spectacles business can be fashionable** and, at the same time, a **sustainable and profitable** proximity manufacturing industry. The project addresses the need for new manufacturing technologies and ICT tools for the local production of personalised spectacles.

The main competitive advantages of Optician2020 personalised spectacles manufactured at the proximity mini-production centres, compared to traditional mass production manufacturing with a wide distribution network, are the **following:**

- **Complete personalised spectacles will be available for the first time.**
- **Product flexibility – shorter time-to-market: Frame catalogues easy to modify or update.**
- **Local manufacturing for consumer proximity.**
- **Shorter manufacturing time: no big batches and no manufacturing tools are required.**
- **Highly scalable business model via mini-factories spreading via existing suppliers: free-form RX labs and AM manufacturers.**
- **Higher added-value for all relevant actors within the supply chain.**

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COOPERATION

Factories of the Future
Public Private Partnership

## The Consortium optician 2020

eurecat
Technology Centre of Catalonia
www.eurecat.org

satisloh
www.satisloh.com

ALCOM
TECHNOLOGY OF CORRECTIVE LENSES
www.alcom.si

Lensworld
www.lensworld.ch

knowledge integration
www.k-int.com

ÓPTICA PITA
www.opticapita.pt

IBV
INSTITUTO DE BIOMECÁNICA DE VALENCIA
www.ibv.org

melotte
High Precision Manufacturing & 3D Metal Printing
www.melotte.be

indo
your eyes, our world
www.indo.es

Building Success Layer by Layer 3T
www.3trpd.co.uk

optician2020.eu

# FLEXIBLE AND ON-DEMAND MANUFACTURING OF CUSTOMIZED SPECTACLES

by close-to-optician production clusters

optician 2020

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## What is? optician 2020

The **Optician2020** is the **new project** for Flexible and on-demand manufacturing of customised spectacles by close-to-optician production clusters, a 3-year-project co-funded by the European Commission within the Factories of the Future initiative of the 7th Framework Programme.

Spectacles are a fashionable product combining health prescription, functional performance and aesthetical requirements. The 2020 ophthalmic industry paradigm will be that fully personalised spectacles are manufactured at dedicated optics local workshops based on the refractive prescription and the customer's anatomical data and their fashion preferences.

For a large variety of products, the use of **innovative technologies** of advanced manufacturing allows the total personalisation, which provides end users with real added value. Customization strategies allow manufacturers and marketers to offer products unique to end-user specifications and build them from the ground up to a given person's needs and desires.

With **personalisation** the end-user of a product co-defines (participates in) the entire product provisioning process from beginning to end. On the contrary, mass customization, typically only provides some illusion of personalisation as it permits the creation of customized product variants by enabling end-users to further enhance a standard product with features and components selected from a pool of available pick-and-choose building blocks.

## Roles and responsabilities

| | |
|---|---|
| **Personalised Design Procedures** | Indo Optical |
| **User Input Management** | IBV |
| **Personalised Frames Manufacturing Thechnologies** | 3TRPD / Melotte |
| **Lens Flexible manufacturing** | Satisloh Photonics |
| **Mini-factories Network Development** | K-Int / Eurecat |
| **Mini-factories Demonstration** | Óptica Pita<br>Lensworld<br>Alcom<br>Indo Optical |

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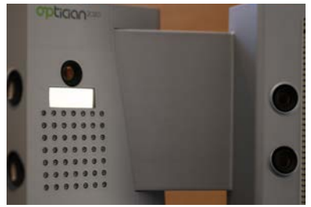
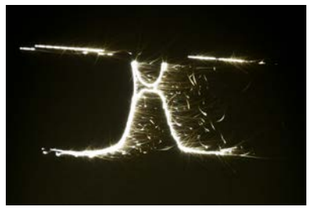
### 1 Personalised Design Procedures

Will focus on the automated personalisation of the spectacles catalogue with user data gathered through a reliable scanner device.



### 2 Personalised Manufacturing Tech

Performs research on adapting production procedures for the components manufacturing and its post-processes. It includes additive manufacturing for polymeric and metallic frames, suitable post-processing for polishing and decoration, and spin coating and sputtering technologies for lens colouring and coating.



### 3 Mini-factories Network Development

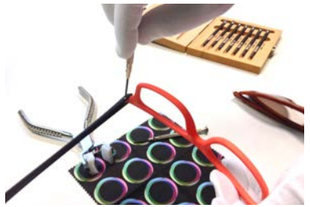
Develops the platform managing the personalised spectacles manufacturing and delivery through a network of available production sites, under the criteria of delivery time, costs, proximity and environmental impact.

### 4 Industrial Scalability

Is dedicated to key studies for a smooth industrial scalability of the project developments, including environmental impact assessment, regulatory implications and quality and risk monitoring.

### 5 Manufacturing Demo

Focuses on tools and activities showing the mini-factory potential in manufacturing personalised spectacles in a first proximity cluster.



### 6 Networked Minifactories Demo

Focuses on tools and activities demonstrating the mini-factories network concept, showing the flexibility and reproducibility by engaging new production sites in a second proximity cluster.

### 7 Dissemination & Exploitation

Assures the dissemination of the project results to different audiences and perform IPR management and activities towards the future exploitation of the project results.

### 8 Management

Will cover the financial, administrative and consortium coordination of the Optician2020 project.