

# ELENA<sup>WX</sup>

Lithium Niobate PICs for Europe

## European electro-optic and nonlinear PIC platform based on lithium niobate on insulator (LNOI)

ELENA will develop the first European LNOI PIC (photonic integrated circuit) platform, accessible to all interested entities in the form of an open foundry service.



ELENA's ambition is to establish the key steps of a fully European supply chain to support the LNOI PIC platform. This includes:



### ESTABLISH

a process to produce 150 mm optical grade LNOI wafers on an industrial scale



### MATURE

a reliable wafer-scale fabrication process for low-loss LNOI PICs for the foundry offering



### DEVELOP

a reliable and flexible packaging solution to interface LNOI chips with optical fibers and other PIC platforms



### DESIGN

the world's first process design kit (PDK) library of standard PIC building blocks for the LNOI platform and make it accessible through PIC design software



### DEMONSTRATE

the technology and validate the results by developing 4 PIC prototypes designed by 3 "end-user" partners covering telecom, quantum technologies and microwave photonics

## THE PROJECT



STARTING DATE

**01/01/2022**

PROJECT ACRONYM & TITLE

**ELENA**

European electro-optic and nonlinear PIC platform based on lithium niobate



**10 partners**



DURATION

**42 months**



CALL / TOPIC

Advancing photonics technologies and application driven photonics components and the innovation ecosystem / novel PIC technology building blocks



**3 European countries**



GRANT / BUDGET

**5 M€**

COORDINATOR

Dr Hamed Sattari | CSEM  
hamed.sattari@csem.ch

GA NUMBER

**101016138**

## CONSORTIUM



[www.project-elena.eu](http://www.project-elena.eu)



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