

PHOTONICS



Where precision meets light

Canton of Neuchâtel

Canton of Neuchâtel

For three centuries, Neuchâtel has mastered the infinitely small. This expertise — watchmaking, microtechnology, thin films — has become the foundation of one of the densest photonics ecosystems in Europe, spanning from research to industrial production.



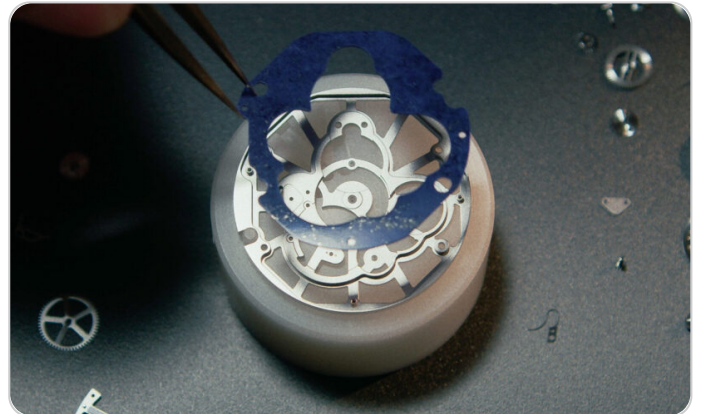
A unique ecosystem in Europe



An official contact for your business establishment



A complete value chain



300+
years in the art of precision

ECOSYSTEM

« Photonics is transforming the digital and energy transition — **transmitting, measuring and processing information using light.**

Neuchâtel covers the entire value chain:
every link is present, active and accessible. »

ECOSYSTEM

Skills & Positioning

From mastering the infinitely small to mastering light

Precision. Miniaturization. Low energy consumption. These three values have structured Neuchâtel's industry for three centuries. They are also the fundamental requirements of modern photonics.

What makes Neuchâtel unique in Europe: within a few kilometers, direct access to CSEM and EPFL, world-class expertise in TFLN, QCL, SPAD, and micro-optics, cleanrooms and specialized infrastructure, and a rapid transition from research to industrialization. Cutting-edge research, specialized components, industrial manufacturing, and excellence in training are all gathered in one territory.

+10'000

Jobs in the Swiss photonics industry

1'000+

Researchers in the innovation district

CHF 4 billion

Sector turnover in Switzerland

1st

TFLN Foundry – born in Neuchâtel (CCRAFT)

~30

Photonics companies in the canton

46%

of the cantonal GDP from the industrial sector

Interconnected players, at all stages

Research

CSEM · EPFL · UniNE

more than 100 industry projects between 2018 and 2022

ComponentsCCRAFT · Alpes Lasers · Sercalo Microtechnology · FEMTOPRINT · NovoViz · SPhotonix

ApplicationsLiDAR / mobility · Medical · Datacom · Space & Defense · Metrology · Gas detection

Training

EPFL · HE-Arc · University of Neuchâtel · CPNE-TI

15 startups since 2009

FinancingInnosuisse · Horizon Europe · invest Neuchâtel · Finergence · Cautionnement Romand

Value chain

Research & technology transfer

CSEM has been supporting the industry for several decades in the development and transfer of photonic technologies, from prototype to industrialization. **EPFL Neuchâtel**, located in the heart of Microcity, conducted more than 100 collaborative projects with the industry between 2018 and 2022. The **University of Neuchâtel** gave birth to Alpes Lasers, the world's leading manufacturer of quantum cascade lasers.

Components & manufacturing

- [**CCRAFT**](#) — World's first TFLN photonic chip foundry, spun out of CSEM. Over 40 international industrial partners.
- [**Alpes Lasers**](#) — Global pioneers in QCL since 1998, present in everything from industrial detection to NASA instruments.
- [**Sercalo Microtechnology**](#) — Precision micro-optical and MOEMS components, partner of CSEM.
- [**FEMTOPRINT**](#) — Glass microsystems for photonic and microfluidic applications.
- [**NovoViz**](#) — Single-photon imaging sensors, spun out of EPFL Neuchâtel, selected by ESA BIC Switzerland.
- [**SPhotonix**](#) — Optical data storage, photonic devices, and ultrafast laser processing.

Training & Talents

- **90 minutes** – to access a wider pool: Lausanne, Bern, Basel
- [**EPFL**](#) – Master's and PhD degrees in microtechnology, photonics, applied physics
- [**UniNE**](#) – Material sciences, physics
- [**HE-Arc**](#) – Engineers in microtechnology and embedded systems
- [**CPNE – TI**](#) – Technicians and practitioners in micromechanics, microtechnology, and microelectronics trained locally
- **15 startups** – Spun out of EPFL since 2009, including 8 established in the canton

Concrete results. Companies that have chosen Neuchâtel.



CCRAFT

CSEM spin-off

World's 1st TFLN photonic chip foundry

www.ccraft.com



Alpes Lasers

UniNE spin-off

Global pioneer in quantum cascade lasers (QCL) since 1998

www.alpeslasers.ch



NovoViz

EPFL spin-off

On-chip single-photon imaging sensors (SPAD), selected by ESA BIC

novoviz.com



SPhotonix

SPhotonix

Founded 2025, NE

Optical data storage and ultrafast laser processing

sphotonix.com

Research & Development

| Photonic technologies active in the canton

Integrated photonic circuits

TFLN platform developed in the canton: chips up to 8x faster and 10x more energy-efficient, with over 40 global partners.

Advanced laser sources

Pioneering expertise in quantum cascade laser (QCL) since the late 1990s – from industrial detection to space applications.

Micro & nano-optics

Meta-lenses, freeform components, metamaterials – from life sciences to space.

Intelligent & quantum vision

On-chip single-photon sensors and integrated quantum photonics, in collaboration with major international research centers.

Ultrafast storage & processing

Optical data storage, photonic devices, and ultrafast laser processing.

JD7 – Designed for **precision**, ready to welcome you

JD7

| The technological hub of the innovation district

Operational spaces ready upon your arrival – just a few meters from CSEM, EPFL, and your future partners.

- Cleanrooms meeting the strictest standards
- Modular laboratories & scalable infrastructure
- Bright offices – adaptable to your growth
- Collaborative spaces – CSEM & EPFL on your doorstep

www.jd7.ch



10'000 m2

Dedicated to high precision

CHF 70 million

investment

From 2027

available spaces

7'000

students in the innovation district

“In **Neuchâtel**, **three centuries of excellence in precision** have given rise to a unique **photonic ecosystem**, **connecting research, innovation, and industrialization.**”

LIVING IN NEUCHÂTEL

Neuchâtel: a canton to experience

Bordered by a lake and surrounded by mountains, the region offers a perfect balance between nature and urban life. This privileged setting allows researchers and professionals to enjoy an environment conducive to creativity, inspiration, and well-being.

NEUCHÂTEL IS NOT ONLY A PLACE OF INNOVATION, BUT ALSO A GREAT PLACE TO LIVE, WORK, AND RESIDE.

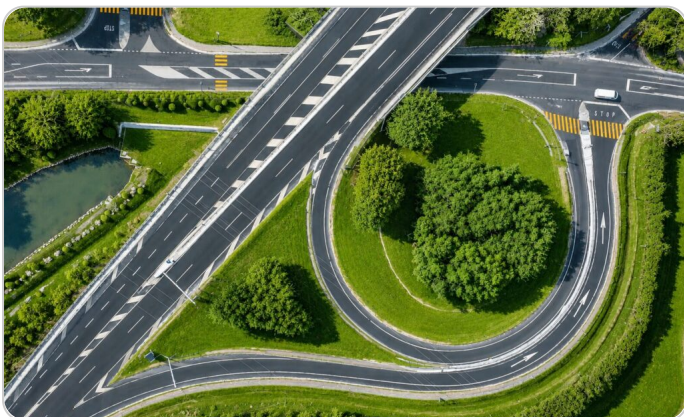
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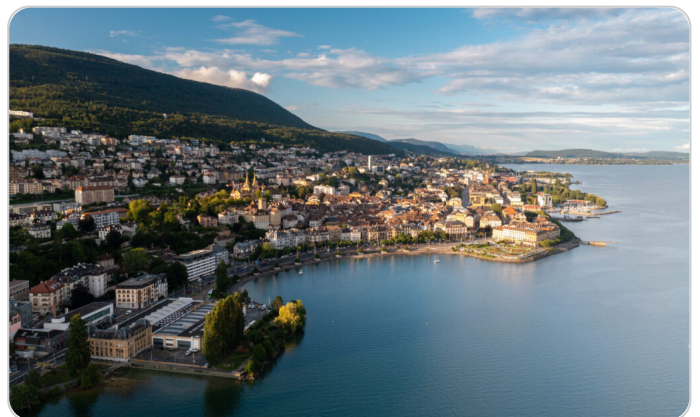
Competitive taxation



Talent pool



Accessibility



Quality of life

FAQ

Why is the canton of Neuchâtel a reference hub for photonics?

The canton of Neuchâtel brings together one of the densest photonics ecosystems in Europe, from fundamental research to industrial production. CSEM, EPFL, and the University of Neuchâtel develop integrated photonic circuits, advanced laser sources, and micro-optics here. The canton notably hosts the world's first thin-film lithium niobate (TFLN) photonic chip foundry.

What sets Neuchâtel apart from other regions for photonics?

Three centuries of watchmaking microtechnology have forged a rare expertise: precision, miniaturization, and low energy consumption — the requirements of modern photonics. Neuchâtel holds the highest density of patents per capita in Switzerland (IPI). The value chain is complete and concentrated within a few kilometers: research, components, manufacturing, and training.

What are the concrete advantages of establishing a business in Neuchâtel?

Neuchâtel applies a corporate tax rate of 13.57%, one of the most competitive in Switzerland, within an attractive cost environment compared to the rest of the country — business real estate, land, and operating expenses. The canton is at the heart of Europe: Lausanne, Bern, and Basel are accessible in less than 90 minutes, and the international airports of Geneva, Zurich, and Basel are within direct reach. This is complemented by dedicated industrial infrastructure and a readily available network of precision subcontractors.

How to set up in the canton of Neuchâtel and what support is available?

invest Neuchâtel, supported by the Department of Economy and Social Cohesion, is the sole official contact for any establishment. Its support is confidential: search for premises and land, networking with the ecosystem, access to public funding, work permits and authorizations, project coaching. **Contact invest Neuchâtel for an initial, no-obligation discussion.**

invest Neuchâtel – Your official contact

As a state agency, the Economic Development Department of the Canton of Neuchâtel facilitates, coordinates, and accelerates every step of your relocation.

- Search for land and premises
- Networking with the ecosystem
- Access to public funding
- Work permits and authorizations
- Project coaching and support

CONTACT

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