

STRENGTHS

Growing market, availability of young talent, consolidated research capacity thanks to an extensive network of institutions, expertise in manufacturing special optical components.

TRENDS

WORLD

Increase data demand and transmission capacity.

Exponential increase in the use of devices connected to the Internet.

Alternative ways of data transmission.

Apply photonics and sensors to different industries such as: aerospace, construction and defence.

Organic optical fibre interfaces.

ESTIMATED GLOBAL MARKET SIZE 2021

Photonic sensors

\$19 billion dollars

Optic fiber

\$4 billion dollars

Biophotonics

\$54 billion dollars

Laser technology

\$16 billion dollars

MILESTONES & PROJECTS

2020

Implement Urban Operative Systems for street lighting

Create an incentives scheme to produce photonic components.

Strengthen logistics and the business ecosystem for photonic materials.

Promote innovation and design of photonic materials for LEDs.

Increase the production and use of clean energy

Jointly develop photovoltaic cells and advanced silicon.

Perform production analysis of silicon and photonic materials.

Develop advanced silicon and photovoltaic materials research and production centres.

Create and boost regulation and certification organisations.

2025

Produce sensors and state-of-the-art lasers along with certification processes

Partnerships and incentives to research and produce 2-20 µm sensors.

Partnerships and incentives to research and produce an ultra-high power laser.

Create the Mexican Photonic Cluster.

Optical fibre urban connectivity

Urban connectivity telecommunications project.

Develop an industrial base to produce specialty fibres.

Mexico's Science and Technology Law considers optics and photonics technologies as crucial for the country development.

Some Mexican success stories to tell:

- The creation of the Mexican Photonics Cluster in the near future, as support for the current [Queretaro's Aerospace Cluster](#).
- The largest fiber optic production plant in Latin America was inaugurated in 2017, in the State of Durango.

STRATEGIC IMPROVEMENTS

- Curricula programmes to train engineers and technicians in photonic-related fields.
- Links between the Mexican Optics Association and international scientific associations to boost optics and photonics in the country.
- Cooperation networks for technology research and joint development.



RESEARCH CENTRES

- Puebla INAOE (National Institute of Astrophysics, Optics & Electronics)
 - Mexican Optics Association
- Leon CIO (Optics Research Centre)
 - Mexico City CCADET (Applied Sciences and Technology Development Centre)



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- BBRResearch
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