

# Recommendations for Lithuania to grow the Semiconductors and Optoelectronics sectors

The main limitation for Lithuania's success is the talent shortage and the insufficient development of STEM professionals.

Building an ecosystem without talent is tough, and growing talent is challenging without a supportive environment.

FDI companies can accelerate ecosystem development.

## Talent Growth

Talent growth poses a global challenge for the electronics industry, and Lithuania is no exception. Local companies that wish to expand their operations lack electronics engineers. Currently, there are no study programs which would specifically prepare students for semiconductors and optoelectronics fields within the microelectronics industry.

### Recommendations

- Grow the popularity of physics, chemistry and mathematics subjects in school.
- Promote studying STEM sciences, especially electronics and microelectronics engineering.
- Create new study programs in universities for semiconductor and microelectronics engineering.
- Financial support for universities obtaining and maintaining necessary equipment for laboratories.

## Creating an Ecosystem

The semiconductor sector demands substantial capital investment, as shown by our FDI analysis, indicating the necessity for significant government grants to attract manufacturing plants. Microelectronics industry is crucial for a country's technological and economical advancement, which makes the expansion highly politicized.

This study also revealed a common pattern where companies usually start with establishing an R&D center. It is seen as a strategic approach to gradually grow the talent pool and assess the political climate before committing to larger investments.

### Recommendations

- Semiconductor sector needs more political involvement and recognition to start growing and attracting FDIs.
- Specific financial support for FDI companies in semiconductor and optoelectronics sectors.
- Start with attracting FDIs by building an R&D facility, search for the key company.
- Help local companies to scale beyond SME size (turnover less than 50 mln.) via governmental or EU support to strengthen local market for incoming FDIs.