# LFoundry spearheads semiconductor fabrication advancements and delivers cutting-edge solutions for a dynamic global electronics market.

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| Best practice category | **Strengthening manufacturing capacities, Skills** |
| Stakeholder group | **Large enterprises** |
| Value chain position | **Fabrication** |

## General Information

Established in 1999 and headquartered in Avezzano, Italy, LFoundry is a premier semiconductor manufacturer specialising in analogue, mixed-signal, and specialised technologies. The company employs over 1,300 workers and operates one of Europe's largest semiconductor foundries, with a wafer capacity of >40,000 wafers/month.

LFoundry supports its own technology IP for 150 nm and 110 nm, with a large portfolio of process-proven libraries, IP, design tools, and reference flows. LFoundry is pivotal in the fabrication of integrated circuits and microelectronic components, with facilities that are renowned for scalable production capacities and advanced technologies tailored to the automotive, industrial, and consumer electronics sectors.

LFoundry is highlighted here for setting a best practice in Strengthening manufacturing capacities thanks to its high-quality and customer-centric manufacturing processes, as well as in the Skills category for its educational outreach activities.

## Activities and best practices

Since its founding, LFoundry has continuously expanded its technological repertoire, adopting latest generation lithography and etching tools to accommodate finer geometries and more complex integrated circuit designs. Currently, the company offers advanced manufacturing capacities at 200 nm, alongside proprietary technologies at 150 nm and 110 nm nodes, including stacking capability and copper metallisation, with volume leading-edge specialised technology capacity down to 90 nm. The company has established partnerships with key industry players, enhancing its technological capabilities and expanding its service offerings.

Apart from fabrication, LFoundry extends significant support in the design phase with its customer-specific integrated circuits design services. LFoundry's service model relies on its fast and flexible customer-specific manufacturing, with its close relationships with key EDA suppliers and design houses ensuring a broad EDA portfolio and a speedy time-to-market (TTM).

Accordingly, the company is constantly expanding its IP portfolio in-house but also collaborates externally with a reliable network of IP vendors around the world to meet its customers' needs. This enables clients to optimise their products from the initial design to the final manufacturing process, ensuring compatibility and performance efficiency.

The Italian company also keeps an active educational role in the L'Aquila, organising site visits for primary and secondary school students to introduce them to the work of the fab and deepen their understanding of the employment opportunities that are available in the L'Aquila province. The students get a guided tour of the facility, get to visit the cleanroom, wear the cleanroom suits and hold wafers, all the while learning more about the company's projects. In this way, the educational initiatives can spark the students' interest and enlighten them about possible job prospects in the microelectronics sector. In the long-term, this can help to retain young talent within the L'Aquila region, while also creating a mutually beneficial scenario for both the community and the company.

# Challenges addressed with this practice

LFoundry addresses the critical need for high-capacity and flexible semiconductor production facilities capable of adapting to rapid market changes and technological advancements. The company's robust fabrication services help meet the growing demand for specialised and high-performance microelectronic products, while its vast design portfolio and support services ensure the compatibility and reliability of the chips from design to manufacturing. Additionally, the company's educational outreach activities in the region position it as an attractive employer to local youth, promoting microelectronics as a viable career path to future engineers and technicians.