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# About Us

## Impact from excellence



The Tyndall Building

**Tyndall National Institute is a leading European research centre in integrated ICT (Information and Communications Technology) hardware and systems. Specialising in both [electronics](#) and [photonics](#) – materials, devices, circuits and systems – we are globally leading in our core research areas of:**

- Smart sensors and systems
- Optical communication systems
- Mixed signal and analog circuit design
- Microelectronic and photonic integration
- Semiconductor wafer fabrication
- Nano materials and device processing

Central to our mission is delivering economic impact through research excellence. We work with industry and academia to transform research into products in our core market areas of electronics, communications, energy, health, agri-food and the environment. We generate over €30m in income each year with approximately 85% coming from competitively won contracts.

With a network of over 200 industry partners and customers worldwide, we are focused on delivering real impact from our excellent research. Our ambitious five-year strategic plan sets out a clear strategy to create employment and build critical mass within the Irish technology space.

As the national institute for photonics and micro/nanoelectronics and a research flagship of [UCC](#), the institute employs 600 researchers, engineers and support staff, including 120 full-time graduate students. Together we generated over 270 peer-reviewed publications in 2018.

Our institute hosts the only full Silicon CMOS, Micro-Electro Mechanical Systems (MEMS) and III-V Semiconductor Wafer fabrication facilities and services in Ireland. We are experts at designing, miniaturising and prototyping products to drive connectivity.

At Tyndall, we deliver research and innovation in Europe with local and global impact. Since the launch of [Horizon 2020](#) in 2014, we have participated in 56 projects with total value of €370m, including significant co-funding by industry partners. The investment in Tyndall activities within the projects is valued at €29m, with an additional €20m in funding going to our Irish partners, including €12m to industry which supports over 50 jobs during the projects' lifetime.

We are the lead institute for the [Irish Photonics Integration Centre \(IPIC\)](#) and [European Space Agency \(ESA\) Space Solutions Centre Ireland](#). We host industry aligned research centres; [Microelectronic Circuits Centre Ireland \(MCCI\)](#); [International Energy Research Centre \(IERC\)](#); and the [Centre for Future Networks and Communications \(CONNECT\)](#). During 2017 two new SFI research centres were funded, that will involve Tyndall collaborating with other Higher Education Institutions and Industry; the [CONFIRM Centre](#) for Smart Manufacturing and the recently launched [VistaMilk](#) for precision pasture-based dairying.