

**Helsinki University of Technology [TKK]**

Motto: Labor et scientia

Founded: 1849

Number of employees: 3,700

Number of students: 15,000

Percentage of foreign students: 8%

Ratio male / female students: 78% / 22%

Number of faculties: 12

Largest faculty: Electrical and Engineering

Annual budget: 230 m EUR [2006]

Otaniemi Science Park

Slogan: Bridging Innovation and Business

Founded: 1986 extension [1949 TKK Campus]

Campus area: 1,000,000 sqm + 50,000 sqm planned

Floor space: 467,000 sqm + 250,000 sqm planned

Number of employees: 16,000 + 15,000 planned

Number of students: 15,000 + 6,500 planned

Number of residents: 3,300 + 50,000 sqm planned

Number of companies: >600 /~70 new companies p.a.

Number of institutions: 27 incl. 12 TKK

Investments: 223 m EUR [1986–2006]

Location: **Otaniemi Science Park is located within the Helsinki metropolitan area in the city of Espoo on a peninsula that extends into the Gulf of Finland. Home to 15,000 students of the Helsinki University of Technology and 16,000 technology professionals, Otaniemi is part technical university, part research centre and part high-tech hub. It is the leading science park in Northern Europe dedicated to high-level research and higher education and entrepreneurship. Otaniemi is well served by private and public transport systems connecting it to the centres of Espoo and Helsinki. Helsinki's Vantaa airport also facilitates good international connections.**



Development: **The development of the science park began in 1946 with the decision to move the Helsinki University of Technology (TKK) and the Technical Research Centre of Finland (VTT) from the city centre of Helsinki to Espoo. First to be built on the new campus were a sports hall and student housing, used for the 1952 Olympics and for other sports events since then. The first university functions were relocated to Espoo in 1955. By the beginning of the 1970s, most departments of the TKK had moved into their new buildings at Otaniemi. Starting in the 1980s with the foundation of the Technology Park (today Technopolis Ventures) and the Technology Centre Innopoli, a network of private office spaces has been built around TKK and VTT to support the activities at the core of the campus, changing Otaniemi from a pure science and research centre into a true technology cluster with over 600 high-tech companies. Currently, Otaniemi is planning an expansion towards the neighbouring commercial and residential district of Tapiola.**

Programme: **The Otaniemi Science Park comprises three different zones. The heart consists of the main building of the TKK with administration, auditorium, a number of faculties, the main library and a shopping centre. The northeast corner has housing, leisure and sports facilities as well as communal infrastruc-**



Otaniemi Science Park with the TKK Campus

tures such as a chapel, a hotel and a convention centre. In the southwest the individual faculty buildings mingle together with the VTT research centres and numerous other organizations such as the Geological Survey of Finland, the Finnish IT Centre for Science, the Centre of Expertise of the Helsinki Region, and the Foundation for Finnish Inventions. This zone also includes Technopolis Ventures – supporting start-ups and managing the business incubator services of Otaniemi – and the Technopolis Innopoli which commercialises research and knowledge-intensive ideas, and functions as a business generator. Many companies such as HP, Fortum, Kone, Nokia, and Microsoft have opted to locate their corporate headquarters close to the science park to benefit from its resources and infrastructure.

Morphology: The development plan and many buildings on the TKK campus were designed by renowned Finnish architect Alvar Aalto. For this reason, the area has been designated a protected national landmark. The Otaniemi Science Park is a good example of how physical proximity and interconnectedness can foster innovation and multidisciplinary collaboration between different organisations. As a generously scattered ensemble loosely arranged in functional clusters, it retains the natural characteristics of the wooded setting. The transportation

system is also designed in an organic and free-form manner with good accessibility for individual traffic and the recently built underground connection. The different institutions are housed in freestanding buildings often three storeys high with individual expandability. Most of the campus is built in red brick architecture, giving it a coherent appearance. However, in the outlying areas with corporate headquarters and the high-tech buildings of Innopoli there are towers of up to twenty storeys in height.

The City of Espoo: Espoo is located on the southern coast of Finland and is part of the Helsinki metropolitan area. Espoo started to develop rapidly in the 1950s and has since grown from a rural municipality into a fully-fledged city that gained its urban status in 1972 and today has a population of around 235,00. The city has made a determined effort to preserve nature throughout its expansion, which has led to the creation of a network of five regional centres, each the size of a medium-sized Finnish city. This decentralised structure of clusters without a clear town centre has led Espoo to be facetiously referred to by some as ‘Finland’s only highway with city privileges’ or as the ‘Los Angeles of Finland’.

Technopolis Innopoli 1 by Kaarina Löfström (1991), auditorium and small amphitheatre of the main TKK building by Alvar Aalto (1965), former student union building Dipoli by Raili and Reima Pietilä (1969), and Nokia Headquarters by Helin & Siitonen Architects (1998).