Aalto University
CAMPUS

WINTER
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Aalto University

Map of Aalto University campus development

Image: Tuomas Uusheimo

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From an ancient village to an innovation hub

Otaniemi has over the years become an increasingly vibrant and open community, a truly unique place in Europe. The latest additions have made our campus a home for the entire Aalto community.

A BRAND-NEW building invited the rest of the students of the School of Arts, Design and Architecture from Arabia to the Otaniemi campus from the beginning of the new academic year 2018. In the beginning of 2019, we will welcome the students and staff of the School of Business from Töölö (pages 6–9).

We are much closer to our dream of a university where different fields of science, identities, cultures, and perspectives can meet in the same place.

For students, this means new opportunities. For example, the layout of workshops in School of Arts, Design and Architeture's new Väre building helps to draft and to implement artistic projects. New spaces also allow multidisciplinary encounters between students in different fields.

Learning new perspectives open-mindedly is the heart of being part of the Aalto community (pages 10–11). The new services and restaurants located around Väre will delightfully refresh Otaniemi's service offering. Students' needs are diverse, and Otaniemi's development as an independent neighbourhood will benefit all its inhabitants, businesses and communities (pages 24–35).

And we're still on a journey. The next development projects are already going forward. For example, Aalto Works will provide new facilities for the School of Engineering and the School of Electrical Engineering. Design Factory and Kiuas will also eventually move into the same block (pages 12–17).

Students are involved in building the future campus. The Student Centre planned near the Metro Station is a joint venture between Aalto University Student Union (AYY), Aalto University Business Students (KY) and Teknologföreningen (TF), which aims to create a common meeting place for all members of the community. The project is in the design phase, whereby every member of the community has been able to present their ideas about the Centre's services and functions. Aside from the student restaurant and workstations, even minigolf and drone rental were added on the wishlist.

At the same time, a vision is being prepared to carry out the development of the campus up to year 2050. This is where we need your help. On pages 20–23 you will be able to familiarize yourself with three alternate future scenarios that we wish to receive feedback on.

Welcome to Aalto University's campus!

Ilkka Niemelä
President, Aalto University

Noora Vänttinen
Chair of the Board, Aalto University Student Union

In Väre
Image: Mikko Raskinen

Green and urban

Text
Anu Vallinkoski

Otaniemi and the Aalto University campus are set to undergo rapid change, with plenty of new development in the works. At the same time, the character of the urban areas will be transformed into an inviting oasis of outdoor environments and verdant spaces.

The development of green areas will create appealing environments that encourage people to leave their buildings and useful plants could benefit everyone on site. Illustration: SLA

PARENTS pushing prams, food outlets and restaurants, outdoor sport and exercise facilities, urban cultivation plots, and plenty of new homes. There's life after 5 pm. This is the vision that Aalto University's Campus Curator **Heini-Emilia Saari** has for the future of Otaniemi.

'Future Otaniemi will be a living-breathing part of the city. People live and work here in increasingly diverse ways and in greater numbers than before', she says.

The City of Espoo plans to develop housing for 7,000 people in the area. The eventual aim is that approximately half of Otaniemi's residents will be students.

In addition to the residential developments, numerous other buildings will be erected. These will be used by the university and its collaborative partners. For example, work on the new Student Centre is set to begin soon. The building is intended for use by the university's student bodies and is situated opposite Harald Herlin Learning Centre and the Metro station.

Transportation connections will also be modernised. Plans are already in place for the Jokeri Light Rail to wind its way around Otaniemi by 2024. It is clear that plans to update the outdoor areas across the whole campus are needed. Aalto University has commissioned landscape architecture firm SLA to draw up plans for the wide array of environments in Otaniemi.

'SLA has come up with plans for Otaniemi to become a network of interwoven and interconnected green areas. The idea is that different kinds of exercise and recreational spaces will be spread throughout this network. In this way, somewhat disparate areas will be seamlessly connected to each other', says **Kari Talvitie**, Director of Property Development at Aalto University Campus & Real Estate (ACRE).

SLA specialises in sustainable environmental planning. In 2016, the firm won the *Nordic Built Cities Challenge*.

Even more natural diversity

A myriad of verdant environments will dissect the proposed green network; ranging from the completely natural to fully landscaped urban gardens.

'In other words, biodiversity in Otaniemi is set to increase. In addition to preserving what is already there, by diversifying the natural environments the aim is to enrich the site. Currently, the green spaces are either entirely covered by lawns or have not been cultivated at all. More variation is needed', Saari says.

Sustainability Manager **Satu Kankaala** (ACRE) is enthusiastic about the proposal to utilise useful plants.

'There's no reason why the trees on the site shouldn't bear edible fruit. The yield of apples, plums, and berries could benefit everyone on site', she notes.

According to Kankaala, the site's biodiversity will be considered much more carefully than ever before. One example of this is the decision to no longer plant non-native species.

A pedestrianised city

The central premise behind the development of green areas is the creation of appealing environments that encourage people to leave their buildings and continue learning outdoors. The corridors and connecting pathways of both the in- and outdoor spaces on the site are being reimagined as meeting places.

'The hope is that people working and studying in different fields will spontaneously meet each other simply by being outside. We have people from the fields of business, technology, and the arts all making use of the site. They are from industry and the university', Talvitie says.

In addition to the plans for a more biodiverse campus, another important factor is that it will become a more pedestrian-friendly urban environment.

'Currently, cars and car parks dominate this part of the city. In the future, it will be much easier to go from one place to another on foot or by bike. The pedestrian and cycle routes have been well thought-out and will encourage people to get out and enjoy the outdoor environments', Saari says.

'Another benefit of the plans is that the travel time between different parts of the campus will be less. In the future, the university's units will be closer to each other', Talvitie continues.

In this vision, Otaniemi becomes a coherent urban hub, surrounding both the university and the Metro station. The intention is to delineate the particular characteristics and flora of other parts of the area. Every nook and cranny will be a little bit different and recognisable in its own right, much in the same way as a municipal district or neighbourhood.

Otaniemi will become a coherent urban hub, surrounding both the university and the Metro station.

Future-proofing

Considering alternative visions is vital for environmental planning.

'Nobody knows what the future holds for cars. Are we going to be driving more or less? Now, we build multi-storey car parks above ground. If our fondness for cars decreases in the future, these ground-level car parks can be knocked down and something else can take their place. There is no point sticking to a single vision of the future that may become problematic when change takes place', Talvitie notes.

It is precisely for this reason that landscape architecture must take climate change and its related factors into consideration. Increase in rainfall and high winds in Northern Europe are the result of global warming.

SLA has designed different solutions to cope with rain and melt water runoff, including water features and the use of permeable surface materials.

Another aspect considered by the proposed plans is the way in which vegetation locally affects the microclimates in the site's various outdoor spaces. The flora chosen for the site will be able to provide protection from the harsh winds or even generate much needed cool air in the summer heat.

'The need for a future-proofed and sustainable vision permeates every aspect of SLA's designs. They have considered the impact of climate change, this ideal can be seen in the plans for pedestrianisation and making the outdoor areas comfortable and lush with urban verdancy', Kankaala says.

Different perspectives

Various conditions had to be taken into consideration when planning the regeneration of Otaniemi.

A prime example of these is the Laajalahti Nature Reserve, which is home to an internationally-important wetland area, a migratory destination for numerous species of bird. The northern wheatear and corncrake can be spotted there if you look carefully. It is a stopping-off-point for flocks of birds during their spring and autumn migrations.

Otaniemi also boasts several examples of culturally and historically important architecture. The environment and buildings must complement each other.

Yet another important consideration for the landscape architects is the issue of land ownership. Although Aalto University and Senate Properties own the major share of the real estate, Otaniemi is also owned by several private landowners.

'The City of Espoo also has its own plans for Otaniemi. And the planning work must address the perspectives of various stakeholders. There is one important issue on which all the landowners agree. They all view the many green areas as a strength', Saari says.

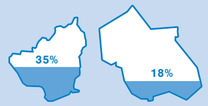
Work begins

The landscape design work will be carried out gradually over a few years. Each time a new building goes up or other substantial changes are made to the environment, the design implementation for the outdoor spaces will be reconsidered.

The final regeneration of the site's outdoor areas will begin to take shape from 2020 onwards. Work will first begin near the end of summer 2019, right at the heart of the Otaniemi campus area, around the Metro station, Alvar Square, and the Dipoli building.

An uninterrupted loop, reaching from one end to the other across the area, ties the different parts of Otaniemi better together. Illustration: SLA

Otaniemi in brief

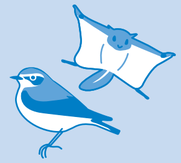


Otaniemi has a size of approximately **1.4 square kilometres**. The district is approximately the same size as downtown Helsinki, from Kallio to Ruoholahti. Around **35%** of Otaniemi is currently made up of green areas.

4 11 000

Currently, about **4,000** people live in the area. In the future, the aim is to build houses for a further **7,000** new residents.

There are several landowners. Aalto University Properties Ltd and Senate Properties Oy are the major landowners. The City of Espoo owns some of the many paths and thoroughfares. Among others, Espoo Lutheran Church, Technopolis, and Teknologföreningen all own plots of land in Otaniemi.



Otaniemi has protected Nature Reserves. Species such as the **flying squirrel** and the critically-endangered **northern wheatear** make their home on the Otaniemi headland.

Image: Tuomas Uusheimo

Into a new era

Text
Eeva Lehtinen

School of Arts, Design and Architecture and the School of Business move to their new and modern facilities.

A BIG building site has dominated Otaniemi for almost three years, but in September 2018, the campus has hatched from the scaffolding. Most of the brand-new building complex has now been taken to use, and the rest of the facilities will be completed at the turn of the year.

The new block consists of three integrally interconnected buildings: Väre, the School of Business and the shopping centre A Bloc, in connection with Aalto University's metro station entrance. Each building has its own entrance and address.

Alvar Aalto's historic buildings next to a new neighbour

The red brick building complex comprising four floors is a perfect match for Otaniemi's visual identity and architecture. It consists of rectangular modules, whose lines are designed to follow the coordinates of the closely situated buildings designed by Alvar Aalto: Aalto University Undergraduate Centre and Harald Herlin Learning Centre.

An international architectural competition was organised in 2012–2013 regarding the design of the heart of the campus, and the winning entry was submitted by Verstas Architects. The design was described as fresh, clear and distinct.

One of the strengths of the proposal was its flexibility of spaces, should the need for new space solutions arise. User orientation and sustainable development were already emphasised in the competition programme. Solar panels and geothermal energy now produce energy for almost the entire building.

Shopping centre A Bloc located next to the metro station entrance was the first new building to open its doors. It offers a wide range of services such as coffee shops, restaurants, shops, and sports facilities.

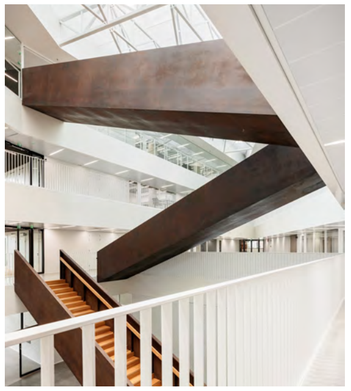
Aalto University's own shop opened in August 2018. It sells university publications as well as products designed by students.

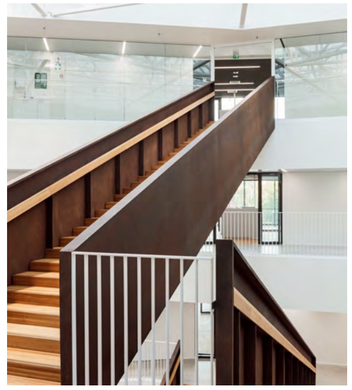
There are numerous permanent artworks in the new buildings, following the percentage for art principle Aalto University is committed to. All artists are connected with the university through study or work. Galleries and exhibition spaces displaying changing exhibitions also showcase art created by students.

The entire community involved in designing the facilities

Väre, the new building of the School of Arts, Design and Architecture, was officially opened in September 2018. It houses workshops, studios, rooms for small group work, teaching and office facilities, facilities for independent work, as well as places for hanging out and meeting people.

The address of School of Business' new building is Ekonominaukio 1. The City of Espoo has named the square in front of the School of Business as Ekonominaukio according to the initiative by Aalto University.
Image: Mikko Raskinen





The spaces are flexible and configurable. Everything, apart from staircases, outer wall and toilet facilities, can be modified to suit the needs of the end-users better. Images: Tuomas Uusheimo

The main entrance of Väre opens into a spacious lobby. A wide wooden staircase leads to the hustle and bustle of workshops, which can be observed through glass walls.

The majority of the activities of the School of Arts, Design and Architecture were located in the former Arabia factory in Helsinki.

'The building project and the transition to Otaniemi were prepared carefully by the whole community, and we wanted to ensure that the views of end-users were considered', says Project Manager **Sari Dhima**.

'We have organised approximately twenty user workshops from 2012 onwards, during which students, staff and partners have had a chance to tell us about their wishes regarding the new premises.'

A designer also needs to understand concrete matters

Teaching in the field of art and design requires a large amount of physical space, and it is still available in the new building, but in a more efficient manner. 'The spaces are flexible and configurable: furniture can be moved and lighting adjusted. The modularity of the spaces makes it possible to add and remove partition walls as required. The departments do not have their own studios, but facilities meant for building prototypes or making patterns, for example, are in shared use', Sari Dhima continues.

Although design today is largely computer-based, workshops are needed for testing the functionality of engineered solutions, experimenting with materials, and making prototypes and models. 'The designer must understand concrete matters in order to visualise a functional solution. High-quality workshop and studio facilities provide a connection between manual skills and thinking, thus combining theory and practice. They are the strength of Aalto University on an international scale, and we want to maintain them', says Dhima.

The new building brings together the School of Business

Master's degree students, doctoral candidates and staff of the School of Business will move to the new building from the traditional Töölö campus in February 2019. Bachelor level students have been studying in Otaniemi already for a couple of years.

There are four floor altogether. The ground floor has a restaurant, a wine bar, a café and teaching facilities. The upper floors contain spaces such as the BIZ Learning Hub for students, meeting rooms and facilities for departments and services.

The interior design solutions are aligned with the spirit of the School of Business and inspired by the school's history and the architecture of the building: a lot of wood and repeat patterns can be seen.

Users of the School of Business have been heard in the planning of the new premises, and, in addition to students and staff, also alumni have taken part.

'The new facilities and technology offer great opportunities for the development of teaching. We piloted technology solutions already in Töölö, and solutions proven to be good will be implemented in the new building', says **Perttu Kähäri** who manages the School of Business relocation project.

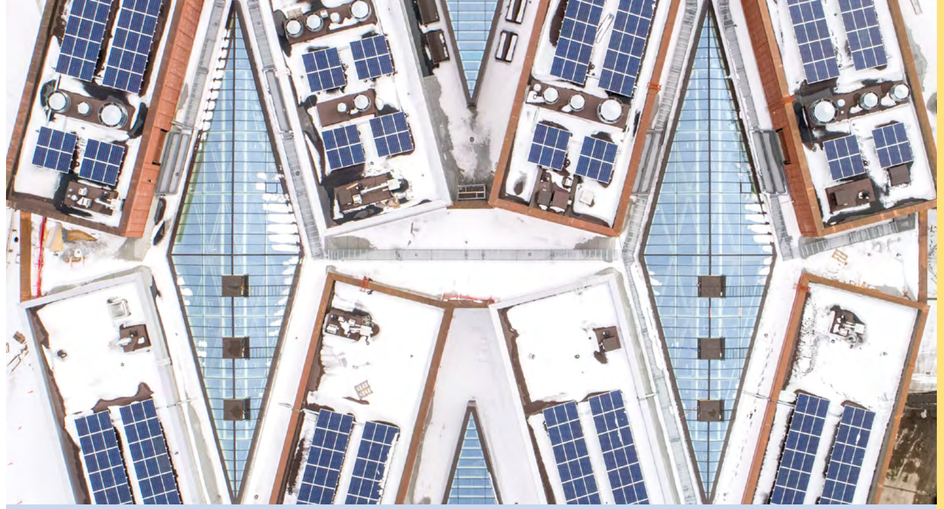
'It's great that we can now move to the joint campus and become an even more integral part of the Aalto community. The activities of the School of Business are essentially based on people and interaction, and we have wanted this to show in the new premises', Kähäri says.

Väre and the School of Business building contain teaching and study facilities and services that are available to both schools. Amongst the first people moving to the new facilities were Aalto University's multidisciplinary Master's Degree Programmes in International Design Business Management and Creative Sustainability.

Sari Dhima, Project Manager

The building project and the transition to Otaniemi were prepared carefully by the whole community, and we wanted to ensure that the views of end-users were considered.

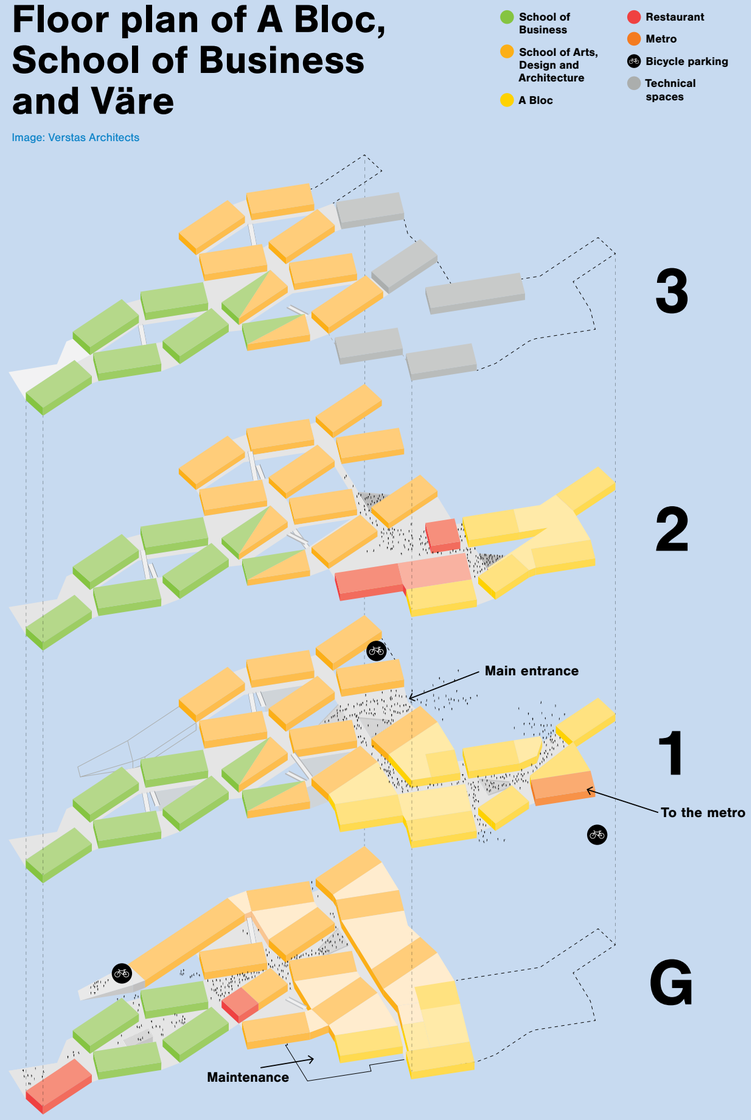
The lime tree alley frames the building block, first parts of which were opened in summer 2018. Image: Mikko Raskinen



Solar panels and geothermal heat produce energy for almost the entire building. Sustainable development was emphasized already during the design competition phase. Image: Mikko Raskinen

Floor plan of A Bloc, School of Business and Väre

Image: Verstas Architects



A Bloc – the new shopping centre on campus

OTANIEMI gained many new services when shopping centre A Bloc opened its doors at the end of August 2018. A Bloc can be found at the bustling heart of the campus, in the same block with Väre and the School of Business, by the entrance to the Aalto University metro station. The shopping centre is home to concepts developed especially for the Otaniemi area, such as the Who the xxxx is Alice, pizzeria and bar offering drinks and Neapolitan pizza, as well as the Lab Store, a new store concept by Clas Ohlson.

A Bloc also has restaurants, cafés, shops and other services for the daily needs of those living, working or studying in the area. The shops and restaurants are open from morning till evening on both weekdays and weekends.

'I believe that A Bloc will become a place with a genuine Aalto style – a place where the members of the community want to spend their time and meet up with each other', says **Eetu Ristaniemi**, Director of Real Estate Investments at Aalto University Properties Ltd.

Image: Tuomas Uusheimo

From village to campus

Text
Anne Tapanainen

Over the centuries, Otaniemi has lived through the times of a village community, mansions, and a student village. We asked an alumnus, a student and a business how they see Otaniemi today.

TODAY, the ancient neighbours, Helsinki and Espoo, are developing Otaniemi together.

The Laajalahti area, the western part of Helsinki and eastern Espoo form together a significant concentration of science, art and business. Collaboration between the cities, Helsinki University, VTT Technical Research Centre of Finland and other research and business partners makes the region one of the most important cultural and scientific hubs in Europe. On Espoo's side, Otaniemi's neighbours are Keilaniemi and Tapiola. The goal is to provide the area with internationally competitive transport, living and working conditions.

'Over time, Otaniemi, the Keilaniemi business community and the Tapiola Garden City are expected to grow together and constitute a viable entity. The city and its urban residents, Aalto University, research institutes and companies of all sizes will collaborate there', says Mayor of Espoo, **Jukka Mäkelä**.

The metro enables travelling from the Helsinki Metropolitan Area to Otaniemi for study or work. In the 2020s, the Jokeri Light Rail will make public transport from Otaniemi to Itäkeskus smoother.

Mäkelä thinks it is promising that the area is now developed from the centre.

'Otaniemi's new urban centre is essential. The metro will create an entrance to it and be surrounded by other operators.'

Urban development takes place through dialogue

Jukka Mäkelä has fond memories of his studies at the Helsinki University of Technology in Otaniemi. He received excellent tools for life, not only from his studies but also from the student union.

At that time, the activity was very communal, and now the City of Espoo is involved in the development of land use in Otaniemi together with the scientific community, the residents and businesses. For example, student accommodation will be built in cooperation between the City of Espoo, the Foundation for Student Housing in the Helsinki Region HOAS and the Aalto University Student Union AYY. Apartments of AYY have also been built in Jätkäsaari, Helsinki.

The significance of the Otaniemi area grows. Rail connections give everyone access to the services in the area, as well as to the fields of creativity and science.

When Espoo residents were asked what they would like to be considered in the city development, two things appeared high on the list: nature and safety. According to Mäkelä, the same values are considered in the development of Keilaniemi, Otaniemi and Tapiola: nature in the region, the Natura area, the sea, and economically, ecologically, socially and culturally safe living environments.

'A dialogue respecting the values of residents in the area is important. I believe that positive development is taking place.'

A unique place to live

Rosa Väisänen, soon to be an architect after finishing her master's thesis, is one of a number of students who live in Otaniemi throughout their studies. Väisänen works as an expert in international affairs and issues relating to new students at the Aalto University Student Union AYY. In particular, issues related to housing and welfare are important to her.

'At AYY, we want to ensure that all interested students have an opportunity to live in Otaniemi at an affordable price.'

The 2200 joint flats of HOAS and AYY located in Otaniemi and the flats of other operators house approximately 3,000 students. The aim is that by 2050, there will be up to 10,000 residents in the area. This requires thousands of new apartments.

The new buildings have mainly one-bedroom flats, although communal living is encouraged.

'Experiencing everyday life in shared accommodation can be fruitful. Aalto has good experiences from 5–10 people sharing their daily student life, such as having film nights together.'

Nature, the rural landscape and parks have been an integral part of Otaniemi for centuries. Rosa Väisänen thinks that urban development is welcome but it must take place respecting the environment.

'Otaniemi is a unique place to live, and the proximity of nature also increases well-being. At the Aalto University Student Union, our goal is to make the students' daily life the best in the world, so that everyone can concentrate on developing their own competence.'

Creative technology and deliberate collisions

Today, top research, education and the core campus area make Otaniemi into a vibrant centre of innovation, which also attracts businesses. One of them is the Mehackit, a startup offering courses in creative technology for young people.

Thousands of secondary school kids have already taken part in Mehackit's course in music and visual arts programming and electronics. Now the company wants to invest in inspired teachers and online courses.

Mehackit has an adaptable space in the A Grid startup hub, including an office and a studio. CTO Creative Technology Orchestrator **Sanna Reponen** says that the location also brings some synergy benefits.

'We appreciate direct contacts and cooperation with the schools of Aalto University and the proximity of other businesses.'

The startup culture also plays a part, as it interconnects companies in a natural way.

'There is a low threshold to make contact with other startup entrepreneurs, exchange information and develop cooperation, or ask for help. We also gained good experiences in mentoring from the xEdu business accelerator, although we do not produce any learning applications ourselves, but focus on the pedagogy and contents of technology education.'

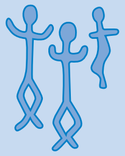
Reponen, who graduated from Aalto University's Media Lab Helsinki and worked in the Science Centre Heureka, mentions Aalto Fablab as a good meeting place. It is an open workshop for small-scale digital manufacturing.

'The maker culture of places like Fablab is close to us. We are also interested in lectures, workshops and other events where you can meet potential partners and make things collide.'

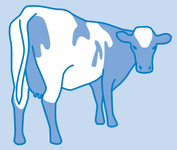
What is Mehackit's vision for the area?

'Otaniemi could be a lively test platform for businesses working in the field of learning and teaching. Cooperation would work well at different levels of education from early childhood education to higher education, and also businesses from the third sector would be involved.'

History of Otaniemi



The earliest signs of human life in the region date back to the **Bronze Age** 3,000 years ago. As late as in the 16th century, Otaniemi was a village community consisting of three houses, and connected to Helsinki by a church road. The taxes were also paid to Helsinki. Otaniemi became a part of Espoo at the end of the 17th century.



Entrepreneurship is not a new feature in Otaniemi. Already at the beginning of the 20th century, during the times of the Sinebrychoff family of traders, the Hagalund-Otaniemi estate consisting of two manors became a model farm of the area. Great attention was paid to **livestock** and forest management. The gardens, greenhouses, crops and parks flourished.

The Helsinki University of Technology was not the first school in Otaniemi. The first school in Otaniemi was started in the 1860s by **Anna Sinebrychoff**, the wife of beer factory owner and businessman Pavel Sinebrychoff. Since 1878, Hagalund's elementary school operated in the area in Swedish.

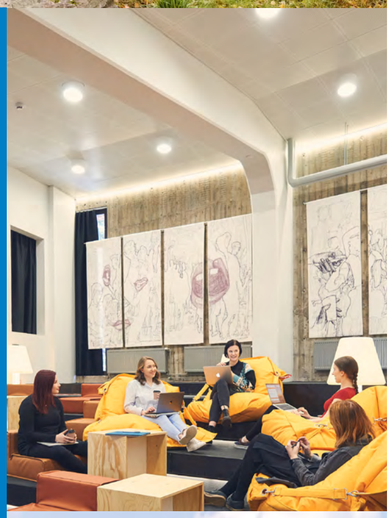
For many people who have studied in Otaniemi, the most significant building is Dipoli, which was designed by Raili and Reima Pietilä and completed in 1966. The secretariat and canteen of the former Helsinki University of Technology were located in Dipoli, and celebrations took place there, too, up to 1993.
Image: Tuomas Uusheimo

The School as a Service model inspires

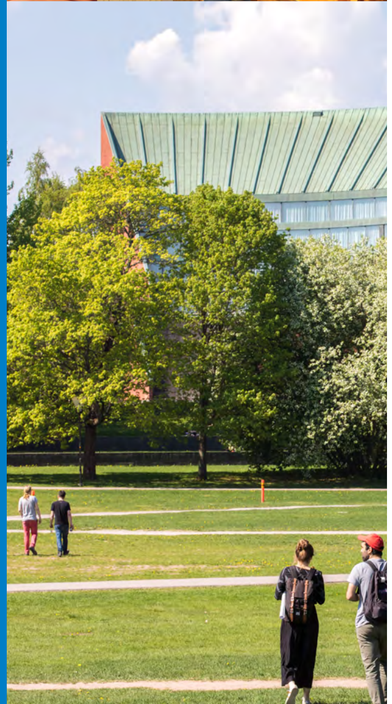
THE SCHOOL AS A SERVICE operating model has brought Haukilahti and Pohjois-Tapiola Upper Secondary Schools to the campus, but soon Otaniemi will also have a school providing basic education.

The model originates from Aalto University. The idea is that the school environment is a platform for shared thinking and social learning, making use of the physical premises and pedagogical possibilities of the environment. The university provides services for schools. For example, upper secondary school students have access to campus laboratories and mutual canteen and exercise services, and gain a better idea about further studies and what businesses do. Some of the university courses are also open to upper secondary school pupils. In return, university teachers have received pedagogical training.

The School as a Service Model has produced good and measured results, and the development work will continue. The aim is also to make early childhood education and basic education available for the needs of incoming foreign researchers and business employees.



The startup hub A Grid is now located in the former premises of the School of Electrical Engineering. A Grid's new residents include the United Nations Technology Innovation Lab (UNTIL Finland), accelerators of the European Space Agency and the Aalto Start-Up Center and many companies, such as Surgify, Reaktor Space Lab and Mehackit.
Image: Unto Rautio

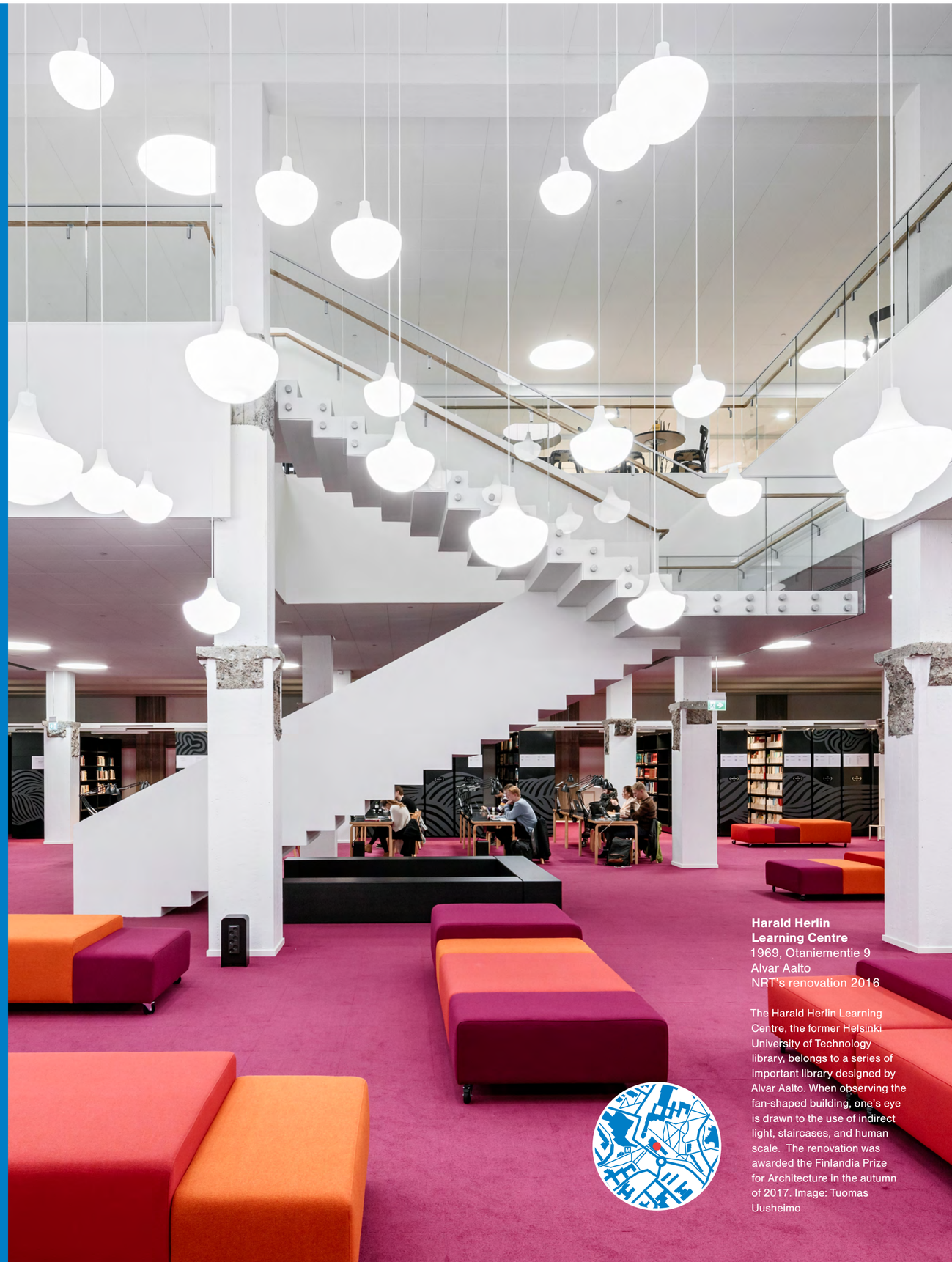


From the office of the Aalto University Student Union AYY in the old shopping centre, there is a view over the Alvar Square on the Learning Centre's side and past the new metro station to the buildings of Chemical Technology. In both directions, the walking routes are framed by lush lindens with their roots reaching back to the times of the manors, the end of the 19th century.
Image: Mikko Raskinen

Architectural gems

Text
Dakota Lavento

The architecture in Otaniemi pays homage to the legacy Alvar Aalto, Raili & Reima Pietilä and Heikki & Kaija Siren. The campus is emerging as a completely new and open place for study, work, living and leisure. The site is rapidly becoming a new kind of open and lively space in which to study, work, live, and spend free-time.



Harald Herlin Learning Centre
1969, Otaniementie 9
Alvar Aalto
NRT's renovation 2016

The Harald Herlin Learning Centre, the former Helsinki University of Technology library, belongs to a series of important library designed by Alvar Aalto. When observing the fan-shaped building, one's eye is drawn to the use of indirect light, staircases, and human scale. The renovation was awarded the Finlandia Prize for Architecture in the autumn of 2017. Image: Tuomas Uusheimo

The heart of Aalto University's campus area is constructed in line with Alvar Aalto's land use plan.

IF Otaniemi was superimposed over central Helsinki, it would cover the area from Hakaniemi to Ruoholahti. And owing to its super-size, Otaniemi is home to a wide variety of urban environments, districts, and buildings. A large part of Otaniemi has traditionally been the stronghold of Finnish technical education and research, but now a multidisciplinary and diverse Otaniemi is being built for all to enjoy.

Originally the preserve of rural villages and manor houses, Otaniemi is a special place in which to study and work. The campus brings together some of the finest examples of traditional and contemporary Finnish architecture.

Hopefully, the well-known campus buildings, workshops, creative events, business community, lush greenery, and vibrant student life of today's Otaniemi will be as fondly remembered in decades to come by present students as was the case for the so-called 'teekkarit' generation of technology students gone by.

Aalto University began operations in 2010, with the merging of the Helsinki School of Economics, the School of Art and Design, and the Helsinki University of Technology. The new university took its name from perhaps the most internationally renowned and respected Finnish architect, Alvar Aalto, who was also a designer and entrepreneur.

'He is probably still better known than Aalto University itself', surmises **Antti Ahlava**, Vice President for campus development.

When the decision was taken to base Aalto University's main campus in Otaniemi, everyone knew there was a lot of building work ahead.

The heart of Aalto University's campus area is constructed in line with Alvar Aalto's land use plan. The well-known buildings now called the Undergraduate Centre (the former main building of Helsinki University of Technology) and the Harald Herlin Learning Centre (formerly the library of Helsinki University of Technology) both represent some of Alvar Aalto's most important architectural works. Other architectural gems found on the Otaniemi campus include the Shopping centre designed by Aalto, **Reima** and **Raili Pietilä**'s Dipoli, and the Otaniemi chapel designed by **Heikki** and **Kaija Sirén**.

Otaniemi has been designated as a nationally significant cultural environment by the National Board of Antiquities. The Undergraduate Centre, Otaniemi chapel, and Dipoli are all protected by DOCOMOMO (International Committee for Documentation and Conservation of Buildings, Sites and Neighbourhoods of the Modern Movement).

A modern campus of many summits

Following his architecture competition win at the end of the 1940s, Alvar Aalto was commissioned to design the Otaniemi site as the Helsinki University of Technology prepared for its move from Hietalahti, Helsinki. Aalto chose to position several buildings in ways that complimented the site's many hills, setting aside the lowland areas for grass fields and car parks.

In fact, there wasn't much by way of forestry in the area at this time, with arable and pasture land previously dominating the site. Otaniemi has a rich history of manor houses dating back to the 16th century. Indeed, alongside many of the area's more traditionally well-known features, the Haglund manor courtyard, located behind the School of Chemical Engineering's main building, often goes unnoticed. The site of the current Undergraduate Centre was previously occupied by the Otaniemi manor house, once owned by the von Wright family.

Alvar Aalto left the manor house's original lime avenues in his plans for the Otaniemi campus. Prior to his success in the state-sponsored architectural competition for the Otaniemi site, Aalto had been a visiting professor at MIT, Cambridge, Massachusetts. In fact, the time he spent on American campuses can clearly be seen to have influenced his plans for Otaniemi.

'Alvar Aalto perhaps envisioned Otaniemi as a mixture of MIT and Harvard University's campus gardens, but in a slightly more modern and wild or rugged way that suited the landscape', Antti Ahlava observes.

The origins of the red brick architectural style found in both the former Helsinki University of Technology's main building and the first student residences are not, in fact, industrial in nature; rather the use of the bricks stems from Alvar Aalto's so-called 'red brick period'. In the early days of Otaniemi's re-development, the decision to use red bricks was dictated both by chance and practical reasons.

On the first night of heavy bombing in Helsinki during the Continuation War, the Soviet Embassy was itself badly damaged. The Finnish government donated the red bricks from the collapsed building to the technology students of the time. Once they had been cleaned, the bricks were first put to use in the construction of the student residences designed by Heikki Sirén and **Martti Melakari**.

The belief that Otaniemi is entirely covered by red brick buildings is not entirely true. Not even all of the buildings designed by Aalto himself are red bricked. For example, the Otahalli sports complex, situated at Otaranta 6 and completed for the Helsinki Olympics, and the Shopping Centre completed in 1960 are both rendered with plaster.

Multi-faceted architectural excellence

In Antti Ahlava's opinion, the significance of Alvar Aalto's status as an architectural heavyweight in his own time cannot be emphasised enough.

'In addition to the ways be made advances in physical architecture, Aalto also realised a new, more humanistic, organic, and everyday style.'

'Otaniemi was designed and built using the limited resources and materials available after the war. And, yet, he still managed to make a horizon-dominating entity, replete with inventive indoor spaces.' The Undergraduate Centre and the Harald Herlin Learning Centre constitute an architectural whole.

Aalto also designed a residential building for Otaniemi. The dynamically modelled student dormitory from 1966 can be found at the Jämeräntaival 1 street address.

While taking a tour of Otaniemi's architectural sights, one can also admire Aalto's Saha building, completed in 1954 at the Konemiehentie 1 street address. Today, the building is home to Aalto University's School of Business' students' banquet hall.

The materials used in the winding stairways and wooden roof structures of Alvar Aalto's Otahalli sport complex, completed for the 1952 Olympics, represent Aalto's elegant functionalism.

Undergraduate Centre
1965, Otakaari 1
Alvar Aalto

Aalto University's Undergraduate Centre, occupying the site of the main building of the former Helsinki University of Technology, is one of Otaniemi's prime landmarks. The landscape-dominating stature of the new building is equal to that of its predecessor. In fact, with its surrounding terraced banquet courtyards, the building's auditorium is reminiscent of ancient Greece. The listed building was restored by Aalto University in 2015. Image: Tuomas Uusheimo

The Otaniemi chapel
1956–1957, Jämeräntaival 8
Heikki and Kaija Sirén

Typical to the Nordic tradition of nature-based modernism, the glass south wall of the building allows light to burst through from beneath the narrow roof slats. Situated in nature itself, the altar lies at the head of the building, on the other side of the window. Image: Reija Hirvonen

For any fans of industrial architecture or the so-called 'steampunk' style of modern architecture, the towering glass façade of the heat distribution plant designed by Aalto, which can be found at the Otakaari 6 street address, is a must-see. The foundations of the building lie 6.5 kilometres deep in bedrock, which is being drilled as part of the St1 Deep Heat pilot project. The project is seeking to realise Finland's first industrial-scale geothermal energy plant.

Many new buildings have been built on the campus site over the years, although some progress is made at a more sedentary pace. It is fascinating to see how the new generation of architects have tipped their hats to Alvar Aalto's legacy.

One of the latest to put their own stamp on the Otaniemi site is Verstas Architects, who are responsible for the A Bloc shopping centre and facilities for two schools. This development consists of two coordinated spaces, connected by four parallel glass-ceilinged lightwells. The ambience of the indoor spaces changes according to the purpose of the space. The external façade grabs the attention of onlookers with its pale silk prints on the glasswork towards the top of the building, as well as with the School of Business' glass gable end, which is somewhat reminiscent of a lantern.

By 2025 there will be three to four times as many people living and working in Otaniemi than in 2015.

Towards a human-centred urban environment

In addition to Alvar Aalto's masterpiece, Otaniemi naturally boasts some less-frequented districts and buildings.

'In contrast to today's way of thinking, the urban planning that took place at the midpoint of the 20th century, emphasised cars and especially the distance between buildings, as well as the monumentalism of the architecture. When we asked people using the area what their hopes for the future of Otaniemi were, they wanted less referencing of the past and a less institutional feel and, instead, more variety and a pedestrian-friendly approach', Antti Ahlava notes.

He too hopes that Alvar Aalto's legacy empowers brave architectural creativity, true to contemporary ideals, rather than restricting the development of Otaniemi. 'The university wants to continue to be an internationally significant architectural site.'

Welcoming and energised

It is estimated that by 2025 there will be three to four times as many people living and working in Otaniemi than in 2015.

The architectural style of the former Helsinki University of Technology very much represented the 1950s modernist fondness for urban planning around car transport and monumentalism, where home life, work, and public services were thought of separately. According to Antti Ahlava, the tenets of contemporary design are human-centredness, walkable environments, multifunctional outdoor spaces, and the blurring or merging of organisations. While nature on campus is set to be preserved, its vibrancy will only increase.

The more tightly-knit Otaniemi of today also has a new age-group to serve – the hundreds of school children who use the university's buildings as part of its 'School as a service' operating model.

New apartments are being built in the Kivimies area on Otaniemi's southern point. These will be joined by a Chemistry district in the vicinity of the Metro station, which will also include recreational space for students, funded separately through a project run by the university's student organisations. Apartments are also being built alongside the Otakaari district, in Maari and Servinniemi.

The multifunctional spaces on the building's ground floor will be open to everyone and home to innovative and welcoming workspaces, cafes, and restaurants.

The idea behind this plan is that students and employees will create the daytime buzz about the place, while the apartments' new residents will continue this into the night. And thanks to its excellent transport connections, including the Metro and the upcoming Jokeri Light Rail line, Otaniemi is the ideal venue to organise events serving the whole Greater Helsinki region.

In Antti Ahlava's estimation, Otaniemi has been a test case for ways to develop the suburban areas of the 1950s and 60s into more people-centred, multifunctional, and enjoyable spaces. 'The same principles can be applied to developments in similar areas to ours. In fact, the successes we've had are being closely followed by other cities.'

Everyone visiting, living, and working in Otaniemi is currently bearing witness to the frenetic building work going on throughout the area. In the years to come, the Aalto Works district, home to innovation and start-up enterprises, the Aalto Studios media centre, and much more will all sit alongside the area's new residential developments.

'Some people seem to think that when the work on Väre and the School of Business is over, the development stops there. In actual fact this is just a small taste of what the future holds!'

Nanotalo
1966, Puumiehenkuja 2
Alvar and Elissa Aalto

The building currently known as Nanotalo, situated at Otaniemi's Puumiehenkuja 2 address, was in large designed by Alvar Aalto and is one of the area's architectural gems. Entering the building's extremely well preserved lobby feels like stepping back in time to a wealthy seaside villa. Nowadays, the building is home to part of the Department of Applied Physics and two Academy of Finland centres of excellence run by Aalto University's Low Temperature Laboratory. Image: Adolfo Vera

Image: Tuomas Uusheimo

Dipoli
1966, Otakaari 24
Reima Pietilä and Raili Pietilä (née Paatelainen)
ALA Architects' renovation 2017

Dipoli, constructed using natural stone, concrete, copper, and wood is the crowning glory of architects Raili and Reima Pietilä and one of the most expressive and radical examples of Finnish architecture. More than anything else, Reima Pietilä envisioned Dipoli as a site for human interaction and as a continuously changing process, rather than a static space.

Among Dipoli's main features are its seven sculptural fireplaces, its exceptionally multi-functional layout, the natural light that penetrates the spaces between the building's thick framework, and its confoundingly modernist cave-life spaces with their angular plastic geometry, juxtaposed against the rationalised office area. Built with due reverence to its origins on the foundations of the former technology students' residence, Aalto University's Dipoli building is now protected thanks to the university's efforts. Today, Dipoli functions as the university's main building and as a meeting venue. Image: Tuomas Uusheimo

Want to learn more?

Map of Otaniemi's walking routes
http://www.aalto.fi/en/about/campus/around_campus/campus_maps/

History of Otaniemi
https://www.aalto.fi/campus/this-is-how-otaniemi-grew-into-a-centre-of-technology-business-and-art

Alvar Aalto and his architecture
https://kansallisbiografia.fi/english/person/1408

Heikki and Kaija Sirén and their architecture
http://www.mfa.fi/architect?apid=956487

Reima and Raili Pietilä and their architecture
http://www.greatbuildings.com/architects/Reima_Pietila.html

Public art sparks our imagination

Text
Paula Haikarainen

Silja Puranen 'World's strongest man (one hand only)', 2007. Fabric paint, transfer photograph, soft pastel and stitching on found textile. The strongest man series is located in the world of circus. Circus represents the otherness and difference together with performance culture and the idea of a complete mastery of life. In today's world, the weak need to be strong in order to survive. The strongest man in the world is a boy with Down syndrome. Image: Mikko Raskinen

Research has shown that public art improves our wellbeing and also elicits many different emotions. It can even make us angry. In my opinion, art should always make us think.

Outi Turpeinen, Aalto University's Art Coordinator

AALTO University is the first university in Finland to commit to the principle of the art percent. The art percent is a funding model for art purchases, whereby approximately one percent of a building project's funds are allocated to art purchases.

Aalto University applies this principle to new construction and renovation projects, as well to expansions and infrastructural development. Art procurements are made either by purchasing finished works of art, commissioning site-specific pieces or organising art competitions.

A strategy document has been prepared by the university in order to guide the procurement of public art. The approach is both structured and systematic in its vision. The renovated Dipoli and two of the new buildings on campus have each been assigned their own theme or artistic concept, the aim of which was to incorporate the views of the buildings' users – primarily university staff and students – into the aesthetic of the buildings.

Dipoli's Radical Nature

The Radical Nature art collection comprises 30 works selected specifically for the Dipoli building. The building, designed by architects **Raili** and **Reima Pietilä** was completed in 1966.

The collection's name, Radical Nature, not only references Dipoli's wild spaces, with their varying shape, but also the sense of responsibility people feel for the wellbeing of nature and the environment as a whole. For example, in artist **Renata Jakowleff**'s work, the enchanting spectacle of thousands of glass droplets can be seen sparkling in front of a backdrop of concerns about marine pollution.

The exhibited artworks are by Aalto University alumni and represent numerous different fields. The majority of the works are from recognised and experienced photographers such as **Elina Brotherus**, **Jorma Puranen**, **Ulla Jokisalo**, and **Ilkka Halso**. Three site-specific pieces where commissioned for the Dipoli building: **Christian Berg**'s kinetic acrylic installation *Color Space – Color Lensing Blind*, Renata Jakowleff's glasswork masterpiece *Blue*, and **Inni Pärnänen**'s plywood wall ornament *Keto* (Engl. 'Meadow').

Väre – Global Equality

The artistic themes of the collection on display in Väre, the School of Arts, Design and Architecture's new building, elicit a characteristically Finnish sense of social equality and emphasise the school's strong international identity. There is a conceptual emphasis on the important role art plays in sparking public debate.

The collection's artworks address a wide array of issues, including identity and difference, nationality, asylum-seeking, gender, and sexuality. The works are fundamentally brave and arresting precisely because they are placed under the direct scrutiny of both current and future artists and other professionals in the field of the arts.

In total, there are around 25 works of art. In fact, the collection includes works by alumni, former professors, and current students. Broad both in terms of their scope and range of media, the artworks consist of textiles, ceramics, photography, painting, drawings, and sculptures. Multimedia art also comes to the fore in the shape of the ever-changing info boards and in the exhibition spaces themselves.

There are three site-specific artworks: **Tommi Grönlund** and **Petteri Nisunen**'s installation *Insight*, **Kirsi Kaulanen**'s steel sculpture *Lumen*, and student **Gloria Lauterbach**'s sculpture *Kreutzstrasse*, situated on the concrete wall adjoining Väre and the School of Business.

The School of Business takes a human approach

In transitioning from the School of Business situated in the district of Töölö to the Otaniemi campus in Espoo, artistic means were employed to smooth the way and create a new identity during a time of great change.

Central to the current school's operations is the notion of human interaction and it was this concept that the procured artworks evoked. This conceptual approach sought to pay homage to the past while always keeping one eye on the future. For example, the china clay used by artist **Kirsi Kivivirta** harks back to the relief work façade of the School of Business' former main building. The piece is entitled *Stage* and conjures up a scenographic atmosphere in the way it conveys a space for people to meet and exchange thoughts.

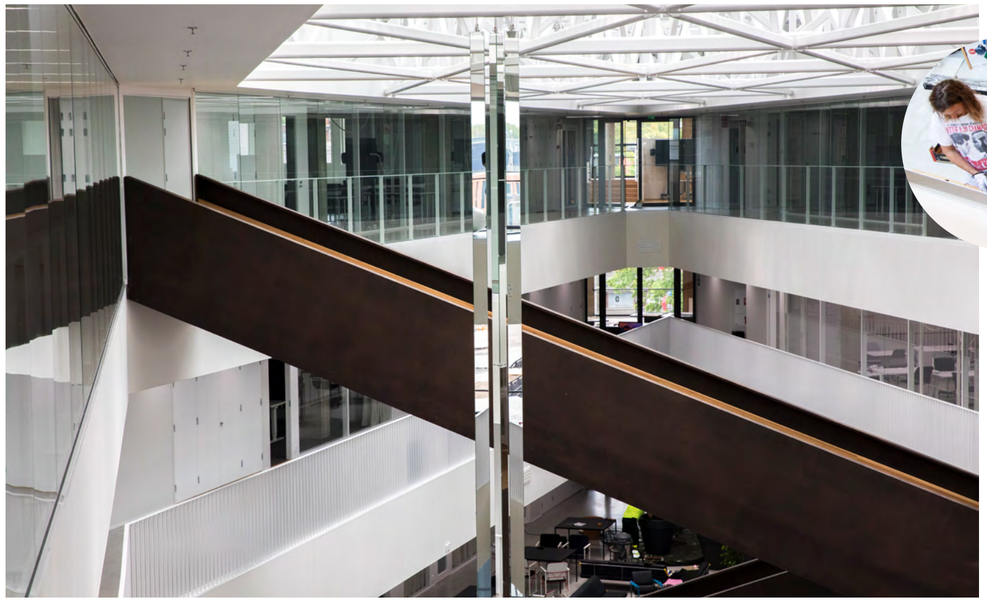


Image: Dora Dallia Cheffi

Tommi Grönlund and Petteri Nisunen 'Insight', 2018. Mirror, aluminium, stainless steel, electric rotators. Insight offers the viewers constantly altering viewpoints, underlining how our common environment is seen is various ways, none of which is as such better than the other. Image: Mikko Raskinen

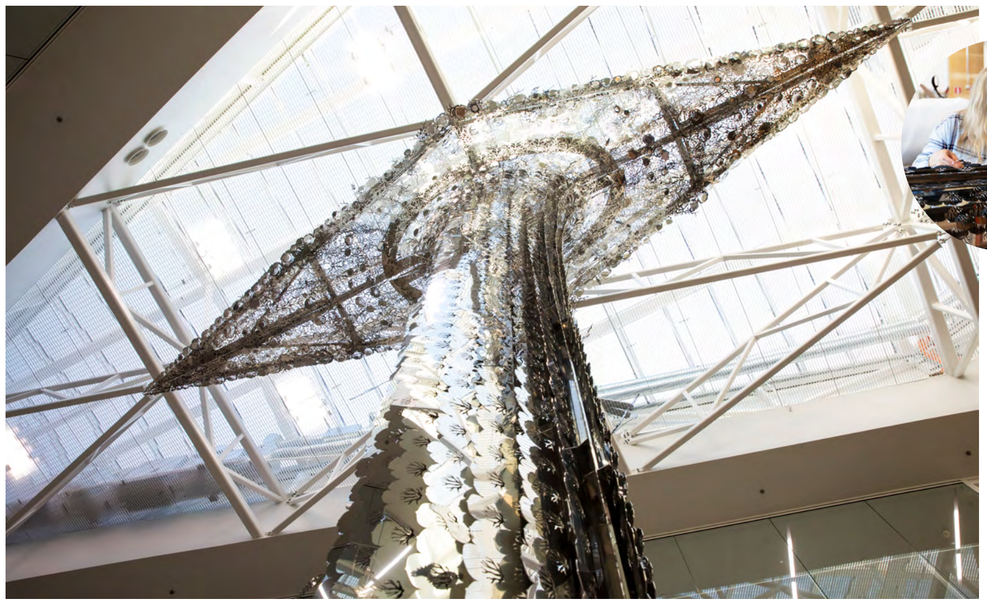
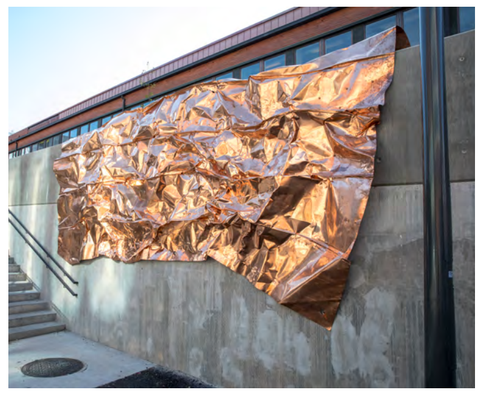


Image: Dora Dallia Cheffi

Kirsi Kaulanen 'Lumen', 2018. Lasercut and welded stainless steel. Lumen connects hard technology with nature and feminity. The site-specific artwork interplays with the architectural space by stretching from floor to ceiling and adding ornamentation to the straight lines of the space. Image: Mikko Raskinen

Image: Dora Dallia Cheffi



Gloria Lauterbach 'Kreutzstrasse', 2018. Copper, steel, birch tree. Kreutzstrasse is a replica of a copper roof element torn off by a heavy storm from a church in Zurich, Switzerland in 2015. For the new Väre building, the roof remains have been re-created including the entangled birch tree. Images: Mikko Raskinen

Illustration: A-konsultit / Tietoa Oy

What will Otaniemi look like in 2050?

Text
Noora Stapleton

New buildings and services, more residents and plenty of green. The outlines for the next stage of development at the campus are already being drawn on the map.

What do you think?

Are we on the right track with the campus vision? Would you change something? What things would you emphasise? You can participate in creating the campus vision at **https://www.aalto.fi/campus/aalto-university-campus-2050**

The next campus vision aims to year 2050. The whole Aalto community has now the opportunity to influence the weighting of the vision options by taking part in the survey. Image: Tuomas Uusheimo

IT'S hard to visualise the changes that will have taken place by 2050 – who, for example, would have been able to predict 32 years ago the founding of Aalto University? And who in 1986 saw the potential of the internet and the importance of mobile phones?

In the same way, the task force for university campus development is now facing a challenging task. The current development vision stretches only to 2021, and so now the sights are being set on the mid-point of our present century.

Three alternative visions are under development for the future development of the campus as a whole. 'Our current plans will be fully implemented by 2035. The alternatives developed for the future will function as continuations of these current plans', explains Aalto University's Vice President for Campus Development **Antti Ahlava**, who is leading the task force.

And each of these alternatives will be a viable option.

Turning an isolated campus into a self-sufficient local district

'In the future, Otaniemi may, for example, develop into a local district that his self-sufficient in terms of both food and electricity, or is part of such a self-sufficient network.'

Since the start of 2018, Ahlava's task force has been preparing the vision together with both the university's students and staff as well as external experts and partners. The task force has studied recent literature on the topic, organised workshops and discussion sessions, and studied the campuses of other universities and companies overseas.

'When making comparisons with other campuses, we have to take into consideration what our own resources are. We are not rich, but we have attractive surroundings and an inventive community.'

International examples can help understand, however, what methods are worth using for sustainable development, for steering development within the area, and for urbanisation. The current strengths – such as a technology-orientated culture – will not be discarded, but new emphases may be added alongside them.

The best information about the campus's shortcomings and resources can be obtained from its users, so it has been decided to open up the further development of the alternative visions to the members of the Aalto community. After collecting the feedback, the task force will come back together to summarise the results, and then we will continue working on the vision until November 2018.

The task force will present three possible visions, all of which will be viable options. Each in its own way will use as a springboard the current strengths and draft concepts of the campus that can already be seen around us.

The community at the centre

'Physical construction is campus development: at the same time, it also develops the community and its activities', says Antti Ahlava.

The ways that the buildings are used will also change. It is important to examine, for example, how different user groups and activities will be mixed together.

Ahlava hopes that the whole community will participate in the visioning process. 'As a university, we should be able to develop a model community and ideal city. So we invite the whole community to join us in this work.'

Antti Ahlava, Vice President

As a university, we should be able to develop a model community and ideal city.

In the future, Otaniemi will increasingly link to Keilaniemi and Tapiola. Growth in the region's service offering and residential construction create a new kind of entity. Illustration: A-konsultit / Tietoa Oy

1

Community Works
A compact community of opposites

Otaniemi has become a more compact and diverse local district in which old and new buildings are woven together to form a unique fabric. At the same time, it has shaped up to become a centre of cultural life. Cultural networks mix with both creative communities and also long-established technology and business networks. Art and design organisations together with their members and workers attract visitors and social actors to the area.

The campus offers for people of different ages a lifelong learning environment which favours forms of experimental learning and teaching and which support learners and researchers. Otaniemi is one of Finland's most international local districts, and its community-orientated planning mechanisms are imitated elsewhere.

The multifaceted reuse of old laboratory buildings attracts new users to Otaniemi. Old buildings offer spaces for artists and workshops for experimenting with new technologies. The hybrid buildings and quarters that flexibly mix different activities support human interaction. Local identity is built up through both the urban culture and artistic offerings. There are many different kinds of events, and people come to Otaniemi from far away.

The district's ecosystem services support urban culture, for example through the addition of city gardens and roof gardens. It has been possible to alleviate the worst effects of climate change through artful environmental planning. Otaniemi's different neighbourhoods have radically different identities and environments.

2

Information Resort
A self-sufficient local district that is always open

The campus is a Nordic hub of entrepreneurship, innovation and top-level education. The local district is known internationally for its abundance of new patents, multidisciplinary skills and new business models.

'Otaniemi is only lacking a birthing hospital', is an often-heard phrase which emphasises the area's self-sufficiency. A diverse range of amenities and services are available 24/7 to campus users and residents. Automatic transport options have removed the need for parking areas.

The campus is more compact, and many building plots have been repeatedly rebuilt for decades, so many blocks on the edge of the campus are already pretty high-rise. Advanced building technologies are used to combine old and new in imaginative ways. Energy production, energy storage and food production on the campus have been maximised.

Climate change has been combated using cutting-edge technology. The campus has also seen the development of smart antennas which help to protect against wind and enable complete, real-time management of air-conditioning, water and energy use. The challenge, however, comes from the systems' energy use and continual need to be updated.

3

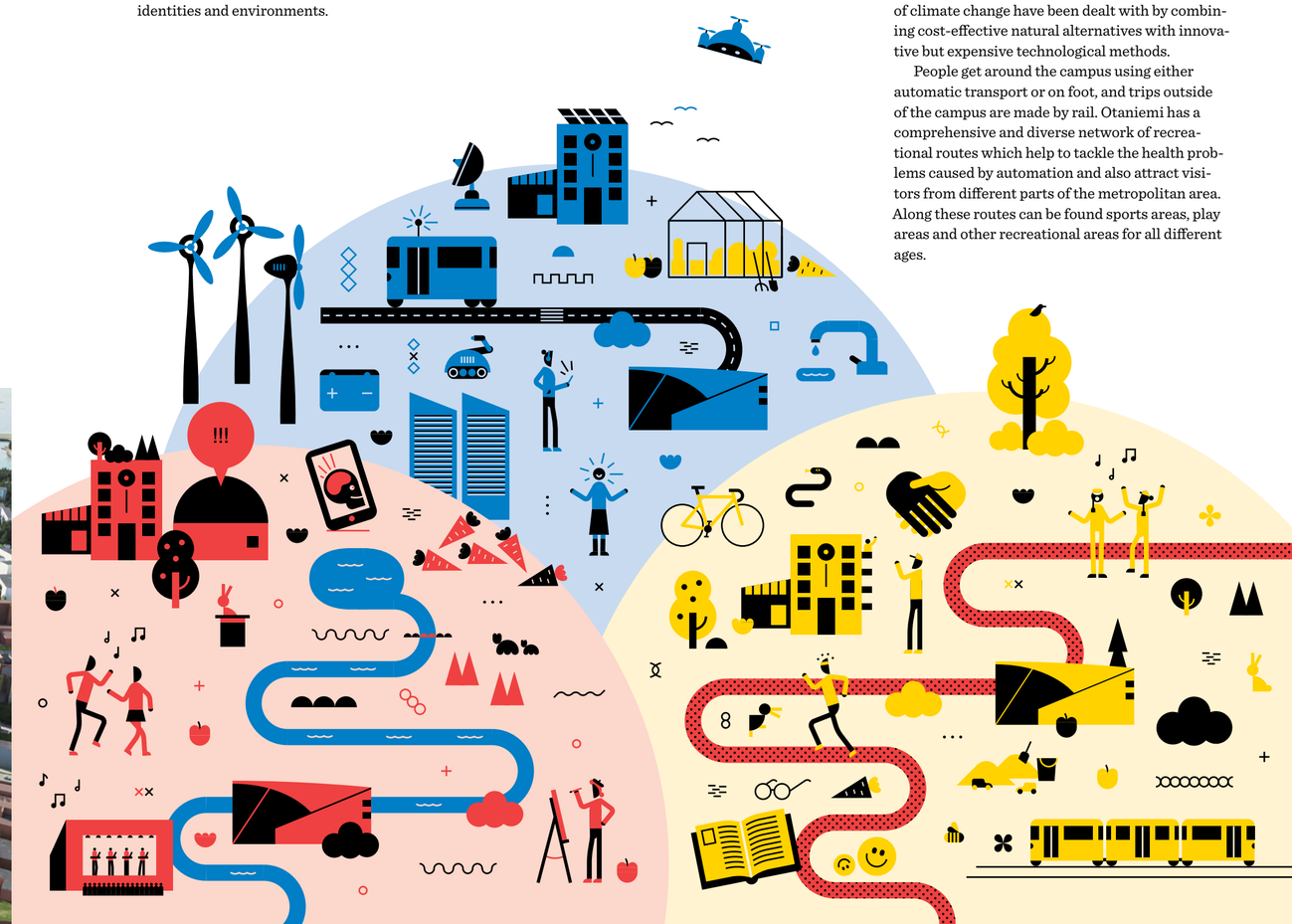
Health Wave
A diverse, well-being village community

Otaniemi's renowned well-being campus has grown to become part of the urban tapestry of Helsinki and Espoo, but has also succeeded in retaining its village feel. Familiar faces greet passers-by, and the area is imbibed with an accepting and lively culture which supports quality-of-life and well-being. The student culture is very active and gives the area its own unique identity.

The campus's harmonious and beautiful surroundings bring wholeness to both a human mind torn by digitalisation and to people's fragmented timetables. The campus also has digital-free areas where visitors can focus on their thoughts without being distracted. The architecture and outside areas have retained their traditional, clear features. Together with its partners and students, the university develops the campus' new and innovative residential areas that support meaningful social and private life for different groups.

In the Otaniemi campus area, well-being is central, and the area is known for its splendid outdoor spaces, clean-air and human-centred lifestyle which seeks out a good balance between work and free time. These factors attract the best from around the world to come to study and work on the campus. The well-being campus boasts creativity and quality-of-life. Otaniemi's natural qualities are supplemented by luscious gardens, parks, courtyards and walkways. There is a wider variety of natural habitats than before, ranging from wetlands to meadows, and the most significant effects of climate change have been dealt with by combining cost-effective natural alternatives with innovative but expensive technological methods.

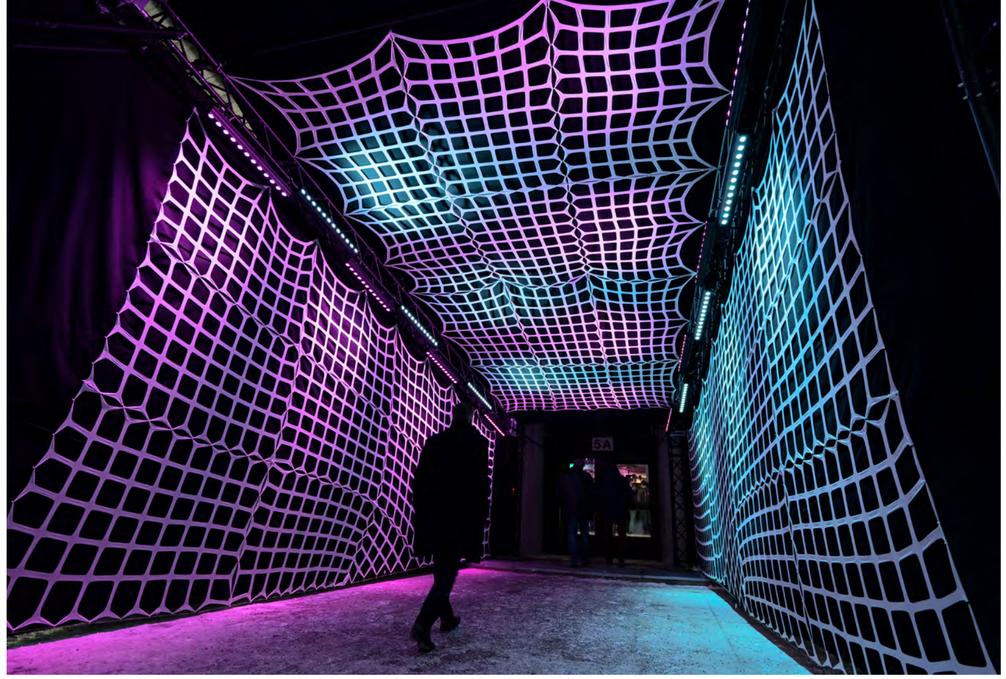
People get around the campus using either automatic transport or on foot, and trips outside of the campus are made by rail. Otaniemi has a comprehensive and diverse network of recreational routes which help to tackle the health problems caused by automation and also attract visitors from different parts of the metropolitan area. Along these routes can be found sports areas, play areas and other recreational areas for all different ages.



The startup space to explore

Text
Andrew Flowers

How Aalto University's campus became the hottest startup hub in the Helsinki region.



A Grid officially opened in February 2018, and houses now more than a hundred startups and companies. Image: Anni Hanen

The campus has come of age as a thriving hub of academic, business and social life.

BACK in 2014, the Massachusetts Institute of Technology (MIT) released a report ranking Aalto University as one of five 'rising stars'. The report recognized Aalto University for fostering innovation, conducting independent research, and supporting entrepreneurship through the vibrant startup community on its campus.

Visiting the university some four years later, one understands the potential MIT saw. Located less than 15 minutes from downtown Helsinki on the city's sparkling new metro extension, the campus has come of age as a thriving hub of academic, business and social life.

Emerging from the metro station into the newly built shopping centre A Bloc and Väre building, one has a sense the campus has become much more than a place where people go to study. There's something special happening in the buildings behind the trees, and a big part of it is down to the 800 or so companies and organizations that call the campus home.

'A lot of great startup ecosystems have a university at their heart,' says **Marika Paakkala**, Head of the Aalto Startup Center. 'The campus plays a very important role in bringing talent together and spinning technology out into the business world. The startups here often say how they value being close to student life, to the research programs and the university infrastructure, and to the big companies we maintain close ties with.'

School of Arts, Design and Architecture moved to the campus this year, and the School of Business will complete its move in spring 2019. This will finally put all of Aalto's core disciplines – Engineering, Business, Art, Design and Architecture – in the same location. This is integral to the university's ethos of bringing business, tech and creative people together under several themes: Health Tech, Materials, Living, Energy, Experience, Digitalisation, and Entrepreneurship.

The home of innovation

One of Aalto University's own rising stars is ICEYE, a company developing and commercializing synthetic-aperture radar technology for satellites. ICEYE's founding partners are both Aalto University alumni, and the company has been based on the campus since they started it in 2014. ICEYE in fact grew out of a university-led nano-satellite research program called Aalto-1.

'Early on, Aalto University gave us help in reaching the right decision makers in Finland, as well as with conducting research and finding talent,' says the company's head of marketing, **Mikko Keränen**. 'Back then it was crucial for us to have access to the university's facilities, such as the anechoic chamber where we've tested our radar satellite instruments.'

'Aalto University does a really good job of promoting the startup community and in providing facilities,' he says. 'The metro has been a great improvement for commutes both from the Helsinki and Espoo sides. And it's wonderful to see the campus is flourishing with developments like A Bloc. For us, there are definitely more reasons to be here than anywhere else.'

Making surgery safer

Another Aalto-based startup to watch is Surgify, a medical-engineering company developing a physical solution to make bone surgery safer. Surgify's drilling tool can distinguish between bone and other tissue, helping surgeons avoid damage during operations, reducing pain and suffering among patients, and lowering post-operative treatment costs.

Surgify co-founder Visa Sippola witnessed the issue of drill-related injuries while watching neurosurgeons at work as part of his medicine and PhD studies. He contacted Aalto University to help to develop the technology safer for the patients, and Surgify was soon on it's a way to raising a total of EUR 2 million in funding.

'Aalto University was the logical starting point for something like this,' says Sippola. 'It has the best local research and engineering capability that I know of.'

The university provided Surgify with its first financial assistance through a EUR 20,000 grant, and several Aalto students and graduates are now part of the company too.

'That first grant was incredibly important at the time' says Sippola. 'It carried us through as the university then supported us in applying for a EUR 500,000 public research grant – which we got too. Aalto was a very valuable sparring partner through all this, helping us with our value position and the commercial aspects of our solution.'

Just as ICEYE has grown up on the campus, so too has Surgify. Today, the company is part of a startup community in the A Grid building – the heart of the Aalto University startup community and home to some 130 companies and organizations. Both the European Space Agency Business Incubator and the United Nations Technology Lab have offices in A Grid too.

'We really enjoy the technical environment on the campus, both from the academic and business perspectives,' says Sippola. 'There are many medical-engineering projects taking place here, and there's a lot of collaboration between the university and all the startups. This is one of the main reasons we're located here, as we can easily consult with experts in various fields.'

The heart of collaboration

Much of the collaboration on the campus is driven by the Aalto Startup Center, founded in 1997 to bring new companies together with mentors, investors, academics and established corporations. The Startup Center reviews applications from companies interested in locating to the campus, assessing their needs and looking at what they would bring to the community.

'The feedback we receive from the startups here is that they appreciate us taking their individual needs into account, rather than just putting them into a program with a start point and an end point,' says Paakkala. 'What makes this a community is that everybody is contributing something unique. Everybody is adding value and shining in their own way.'

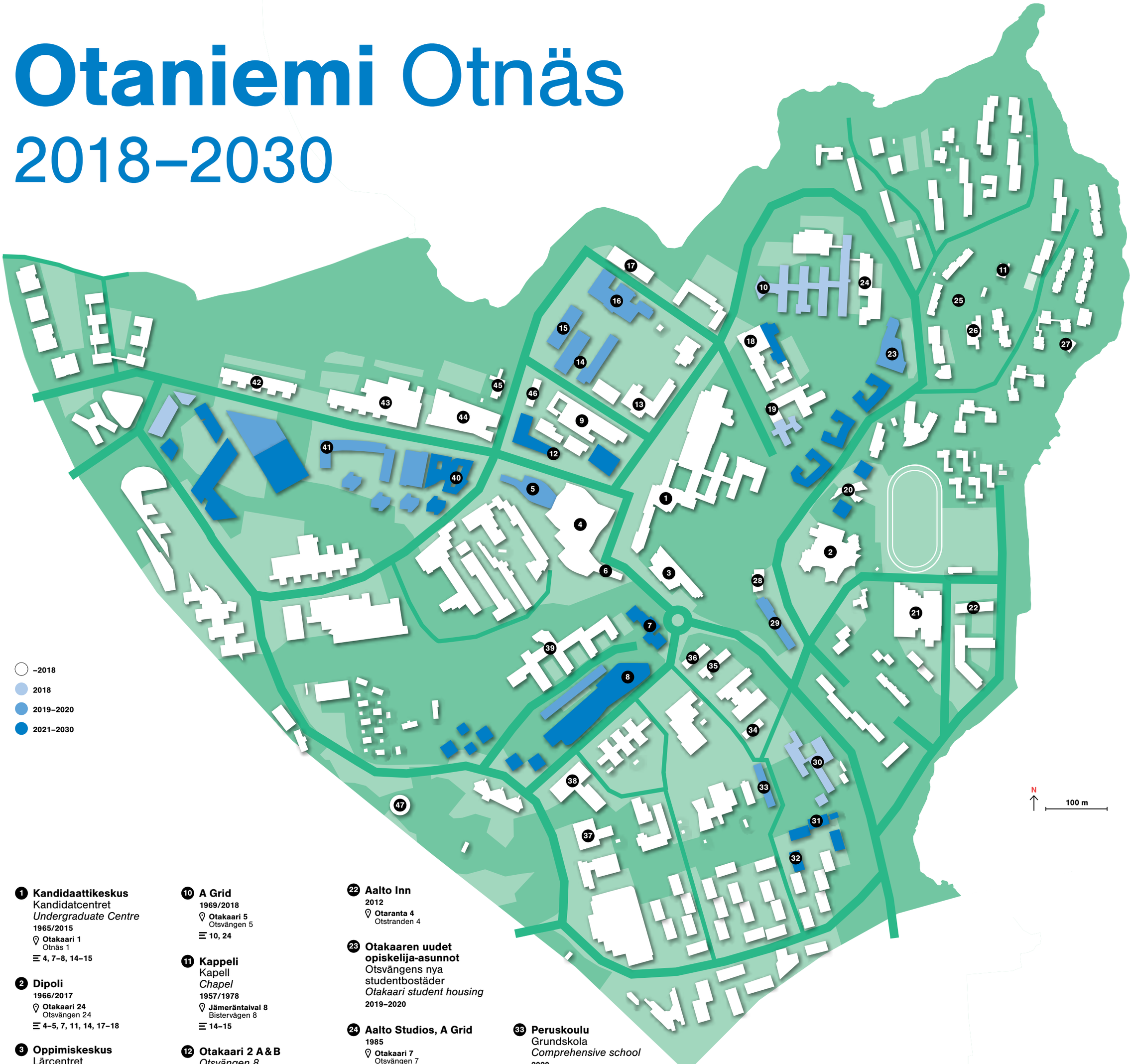
The campus also has an abundance of communal spaces for work and play, such as the 1500 square meter Startup Sauna co-working space. Open to anyone, the space is used for everything from hackathons to BBQs. There are also more than 30 lunch canteens on the campus, as well as coffee shops and restaurants like the popular Fat Lizard, an American-style bistro and brewery that's even drawing in people from off campus.

'Nobody knows better than our students that campus life is both about working hard and playing hard! So there's always something fun happening here,' says Paakkala. 'With a combination of students, startups and other companies on the campus, you never know when you may meet your next client, be introduced to an investor, or discover a new opportunity of some kind.'

Students can find jobs at startups, and the companies can take part in research and teaching projects. Image: Unto Rautio

Open events and workshops are organised in A Grid according to business interests. Along with Aalto Start-Up Center, A Grid also houses the European Space Agency and several companies, like Fortum. Image: Aki Rask

Otaniemi Otnäs
2018–2030



1 Kandidaattikeskus
Kandidatcentret
Undergraduate Centre
1965/2015
Otakaari 1
Otnäs 1
4, 7–8, 14–15

2 Dipoli
1966/2017
Otakaari 24
Otsvängen 24
4–5, 7, 11, 14, 17–18

3 Oppimiskeskus
Lärcentret
Learning Centre
1969/2016
Otaniementie 9
Otnäsvägen 9
4, 7, 14

4 Väre
Taiteiden ja suunnittelun korkeakoulu
Högskolan för konst, design och arkitektur
School of Arts, Design and Architecture
2018
Otaniementie 14
Otnäsvägen 14
3, 5, 7–9, 14, 16, 18

5 Kauppakorkeakoulu
School of Business
2019
Ekonominaukio 1
Ekonomiplatsen 1
3, 7–9, 14, 16, 18

6 Kauppakeskus A Bloc
Köpcentrum A Bloc
Shopping centre A Bloc
2018
Otaniementie 12
Otnäsvägen 12
7, 9, 16

7 Opiskelijakeskus
Studentcentrumet
Student Centre
2021–2030
3, 4

8 Uusia toimisto-rakennuksia
Nya kontorsbyggnader
Office development area
2019–2020
4

9 Nanotalo
Nanohuset
Nanotalo building
1966/2006
Puumiehenkuja 2
Träkarlsgränden 2
16

10 A Grid
1969/2018
Otakaari 5
Otsvängen 5
10, 24

11 Kappeli
Kapell
Chapel
1957/1978
Jämeräntaival 8
Bistervägen 8
14–15

12 Otakaari 2 A & B
Otsvängen 8
Aalto Studios 2021–2030
24–25

13 Konetekniikan talo
Maskinteknik-huset
Mechanical Engineering 1
1966
Otakaari 4
Otsvängen 4

14 Puumiehenkuja 3
Träkarlsgränden 3
1965

15 Puumiehenkuja 5
Träkarlsgränden 5
1968/1987

16 Maarintalo
Maari building
1991
Sähkömiehentie 4
Strömkarlsvägen 4

Aalto Works 2021–30
3, 16

17 Maarintalo
Maari building
1967
Sähkömiehentie 3
Strömkarlsvägen 3

18 Terveysteknologiatalo
Health Technology House
1959
Otakaari 3
Otsvängen 3

19 Rakentajanaukio 4
Byggarplatsen 4
1959

20 Urdsgjallar TF Teknologföreningen
1966
Otakaari 22
Otsvängen 22

21 Otahalli
1952
Otaranta 6
Otstranden 6
14

22 Aalto Inn
2012
Otaranta 4
Otstranden 4

23 Otakaaren uudet opiskelija-asunnot
Otsvängens nya studentbostäder
Otakaari student housing
2019–2020

24 Aalto Studios, A Grid
1985
Otakaari 7
Otsvängen 7
24–25

25 Teekkarikylä
Teknologbyn
1952
10

26 Servin Mökki
1952
Jämeräntaival 4
Bistervägen 4

27 Rantasauna
Strandbastun
1986
Vastaranta

28 Aalto-yliopiston ylioppilaskunnan keskustoimisto
Huvudkontoret för Aalto-universitetets studentkår
Aalto University Student Union's central office
1985
Otakaari 11
Otsvängen 11

29 Ostoskeskus
Gamla köpcentrum
Old Shopping Centre
1961/2019–2020
Otakaari 13–15
Otsvängen 13–15
14

30 Peruskoulu ja päiväkoti
Grundskola och daghem
Comprehensive school and nursery school
2019
Lämpömiehenkuja 2
Värmemansgränden 2
11

31 Betonimiehenkuja 3
Betongblandargränden 3
1964/1984

32 Betonimiehenkuja 5
Betongblandargränden 5
1958/1997

Asuinrakentaminen 2021–30
Bostadsutveckling
Residential development

33 Peruskoulu
Grundskola
Comprehensive school
2020
Lämpömiehenkuja 3
Värmemansgränden 3
11

34 Metallimiehenkuja 10
Metallmansgränden 10
1964

35 Metallimiehenkuja 4
Metallmansgränden 4
1964

36 Metallimiehenkuja 2
Metallmansgränden 2
1955

37 Haukilahden lukio
Gymnasium
Upper Secondary School
1973
Tekniikantie 3
Teknikvägen 3
11

38 Aalto Bioproduct Centre
1967
Vuorimiehentie 1
Bergmansvägen 1

39 Biofilia
Aalto-yliopisto Junior
Aalto University Junior
1967
Kemistintie 1
Kemistvägen 1

40 Tietotie 1
Datavägen 1
1968/1986, 2016

41 Meritekniikka
Marinteknik
Marine Technology
1968/1986, 2016
Tietotie 1
Datavägen 1

Maarinkorttelin kehitys 2021–35
Utveckling av Markvarteret
Marine Tech development

42 Open Innovation House
2012
Maarintie 6
Marvägen 6

43 Maarintie 8
Marvägen 8
2003

44 Tietotekniikan talo
Informationstekniska huset
CS building
1998
Konemiehentie 2
Maskinbyggarvägen 2

45 Espilä
1967
Konemiehentie 4
Maskinbyggarvägen 4

46 Saha
1954/2007
Konemiehentie 1
Maskinbyggarvägen 1

47 Vesitorni
Vattentorn
Water tower
1971

Osoite
Adress
Address

Mainittu sivulla...
Presenteras på sidan...
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