

# Using the Unused

*Spaces for  
Aalto  
University's  
Creative  
Community*

*Caroline Knappers  
Master of Arts thesis  
2013*

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**Abstract**

This thesis investigates the possibility to implement an agile space-use system in otherwise vacant spaces. To gain knowledge about the demand for office- and workspaces the Helsinki Metropolitan Area is researched. The Otaniemi campus of Aalto University is located inside this area and functions as a case study. Earlier research has identified a change in working habits and the upcoming of creative work fields, which give the required insights for further study. Through a series of expert interviews, conducted in 2012-2013, the current state-of-the-art in learning spaces is studied through which information is gathered about existing facilities within the University, as well as on the vacant spaces on the campus. The user perspective and the preferred future development is mapped out through a student survey, which enquires their opinions on the study environment and to gather their insights regarding the development of new learning spaces. Based on the acquired information a space-use system is developed. In accordance with the research findings a proposal is made to link the existing open work- and study facilities. The research shows that in order to optimize the use of such spaces and to create grounds for expansion of their services communication is essential. Improved communication about the available learning- and working facilities will allow the implementation of new types of flexibly usable workspaces.

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**Keywords** Aalto University, creative fields, learning spaces, vacant spaces, space-use, systems

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# Foreword

When the time came to decide on a thesis topic for my Creative Sustainability studies, it was difficult to define the one that was most interesting. With my background in Spatial Design, the multi-disciplinary approach in the sustainability studies opened my eyes to new possibilities. After discussing my broad interest in the reuse of vacated spaces, the research topic gradually began to take shape. Reusing the obsolete built environment, but for what?

Seeing empty buildings always gives me a strange feeling. The houses, offices and an occasional industrial site. Abandoned and sometimes vandalized, I wonder what happened, and what still could happen there. Surely there are people interested in working or living there?

When I heard about the many vacant spaces within the campus of Aalto University, I wondered the same thing. And as I talked about these spaces with other people, they asked me the same question. Why then was nothing happening?

In an attempt to find out why not, and what needed to happen to make things possible, I encountered many inspiring people, plenty of opportunities, and a lot of closed doors. Searching for the information I needed, and finding the spaces that nobody seemed to need inspired me to write this thesis.

# Terminology and Abbreviations

The different terms used in the thesis are clarified here. The description of the terms used apply to this particular thesis only.

**Aalto University:** Finnish university, created by the merger of the Helsinki University of Technology (TKK), the University of Art and Design Helsinki (TaiK) and the Helsinki School of Economics (HSE).

**Aalto University's Creative Community:** Students, researchers, professors, supporting-, administrative- and managing staff at Aalto University, who create innovative ideas.

**Arabia:** City district to the east of the center of Helsinki, where the Aalto University School of Arts, Design and Architecture is located.

**Creative fields:** Traditionally some fields of business are more creative than others, generally arts, crafts, design and stage performance fall in this category. Florida (2002) draws this wider and lists science, engineering, architecture, design, education, arts, music, entertainment, business, finance, law and health care as creative fields of work.

**Creatives:** Those who are working on creative fields, applying skills and imagination (creativity) to produce something new.

**Empty:** Indicates the physical emptiness of a space. At the moment there are no people and objects inside.

**Gentrification:** When the original inhabitants of an area are forced to move elsewhere due to the development of the area, and consequent price-rises which make it unaffordable to remain there.

**Milieu:** The social environment in which one lives or works.

**Obsolete:** The state of a building when it is no longer needed for the function it was originally built and used for.

**Otaniemi:** City district in Espoo, to the west of Helsinki, where the Aalto University Schools of Technology are located, as well as the Environmental Art programme, and the Department of Architecture from the School of Arts, Design and Architecture.

**Owner:** The person or company who is by mutual agreement in charge of a space or item, and thereby has the responsibility over it.

**Place:** The geographic location, as well as a specific point in a space.

**Service:** A system that provides something, other than objects.

**Space:** A defined area, either in an interior context or in a wider urban context.

**Temporary:** With the intent to last for a short time; not permanent. "[A] finite period of time with a defined beginning and end." (Bishop, Williams 2012)

**Töölö:** City district in the center of Helsinki, where the Aalto University School of Business is located.

**Unused:** Space which is not being used at the moment, but which could practically be used. The space is in theory used, but in practice is not.

**User:** The person or company using a (collection of) space(s) or items, with or without a written agreement.

**Vacant:** Indicates the physical and practical disuse of a space. The space could contain furniture or other objects, but is not being used.

**AYK:** Aalto Yliopistokiinteistöt Oy/ Aalto University Properties Ltd. The real estate company which owns the University premises in Otaniemi and Töölö, as well as the Metsähovi Radio Observatory in Kirkkonummi.

**CBD:** Central Business District; in the center of Helsinki where many company offices are located, as well as the main retail center of the city. It is located roughly to the south of the central railway station.

**HMA:** Helsinki Metropolitan Area; consists of the cities Helsinki, Espoo, Vantaa and Kauniainen. The city of Helsinki is the capital city, and with over 605,500 inhabitants is the most densely populated.

**MoA:** Masters of Arts/Masters of Aalto. A yearly exhibition, displaying the graduation projects of master's degree graduates. Until 2012 the works displayed were exclusively made by students of Aalto University School of Art and Design, from which the name Masters of Arts was derived. From 2013 onwards all master's students of Aalto can apply to display their graduation project or thesis at the yearly show, which was renamed Masters of Aalto for this occasion.

**R&D:** Research and Development. Specific activities carried out within companies in order to create new knowledge and research possibilities for implementation of new systems, products, technologies, etc.

**Sqm:** Square meters

**T3:** Tiede (Science), Taide (Arts), Talous (Economics), refers to the areas of Otaniemi, Keilaniemi and Tapiola in Espoo, Finland. This area is being developed by the city of Espoo, and is aimed to become the real center of the city. The city of Espoo consists of seven areas, which at present all have a separate center. The new center should be an attractor in the area, and will have English as the working language.

# Introduction

This research investigates the global development of flexible workspaces and changing working habits. As there is an increasing amount of buildings and spaces left vacant, this thesis investigates the possibility of matching different types of workplaces with available spaces. At first the larger Helsinki region and its business areas is researched, which give a broad view on the vacancy situation, with all its complexities, bureaucracy and policies. Upon developing the research the focus is laid on the vacancy situation and changes in demand at Aalto University: a multi-faceted institution, with a core task in education at university level.

The campuses of Aalto University are spread out over the Helsinki Metropolitan Area (HMA), which consists of the cities of Helsinki, Espoo, Vantaa and Kauniainen. Two schools are located in Helsinki: the School of Business in the Töölö district, and the School of Arts, Design and Architecture in the Arabia district. The third and largest location is the campus in Espoo, to the west of Helsinki. It is located in the Otaniemi district, and houses the School of Engineering, the School of Science, the School of Electrical Engineering and the School of Chemical Technology.

This diverse campus offered an interesting possibility for a case study, as different sources informed me about 5000 sqm of vacant space. The initial challenge was to find whose responsibility these spaces are: Aalto University or AYK. In the first case, the spaces are rented assets that are left unused, in the latter situation they would be valuable readily available spaces left idle.

This thesis builds on previous and ongoing research, conducted on and off the Otaniemi campus, by the Future Learning Environments research group. As Otaniemi is home to the technical branch of the University, their norms and traditions have strongly influenced the atmosphere

on the campus. When looking into the opportunities and limitations of this situation, the news that the School of Arts, Design and Architecture will move to Otaniemi makes for an interesting twist in the future perspective.

To identify the different factors involved in this, factual data concerning the vacant spaces was gathered from key persons within the University's Campus and Facilities Services management, as well as from different actors outside of the University context. Furthermore a survey was offered to Aalto University students to acquire more comprehensive information about their viewpoints on the possibilities and to inquire their needs. This led the way for the further development of this thesis, focusing on making the unused spaces within the Otaniemi campus available to Aalto University's Creative Community.

## *Aim of the research*

How does vacancy arise in business property and how can this be reduced or solved? This research investigates the current usage of vacant spaces and aims to improve the use possibilities through providing space as a service. Through a workshop, several expert interviews and a number of case studies the topic is researched. The results are analyzed and compared to the chosen case study.

As the second part of this research focuses specifically on the situation at Aalto University's Otaniemi campus, this thesis furthermore aims to find a way to adapt the space utilization to the upcoming budgetary savings of the University on its facility costs. Reports and interviews provide the required information regarding these savings, while a user group survey studies the changing demands. This is concentrated into a service concept which makes spaces available to all members of the community. The service concept provides information about the availability and accessibility of spaces in order to improve upon the vacancy situation, as well as expanding the options for a given community.

Through observation of the existing learning spaces and the changing working and studying habits the current space-use philosophy is studied. Through synthesis, a revised utilization system for the use of the available spaces is proposed. The possibilities and benefits of giving flexible access to the spaces, and improving the possibilities of using them is researched. This can lead to higher use-efficiency, reduced costs, and increased social cohesion. These factors are of key importance in the development of a sustainable solution.

To investigate these issues the following research question was drafted: How can the vacant spaces within the Aalto University campus in Otaniemi be made available to the University's Creative Community?

After handling the background research and investigating the general situation the research is further deepened in the second part of this thesis.



# Methods

This research was conducted using different methods:

**Literature, articles and reports:** To acquire deep knowledge about previous research regarding temporary phenomena in the fields of architecture, urbanization, communities, systems and services, several books were read. Consequently several articles in newspapers were read, concerning vacant building use and work cultures. Furthermore, several reports were studied, which gave insight into real estate situations in the HMA.

**Interviews:** Over the course of the research interviews were conducted with people who are involved in the chosen topic. Their involvement is either in terms of their professional background in Real Estate and Architecture, or based on their knowledge and opinion on the vacancy of the built environment. The twenty semi-structured interviews and conversations took approximately one hour each, during which questions were asked, and the topic was discussed. Two introductory questions were prepared for each interviewee, after which four topical questions were asked, followed by a visionary closing question. This gave insight in personal opinions, as well as useful information for further research. Often times the interviewee made a suggestion who else could be interviewed for the thesis research.

**Workshop:** Following the initial interviews, the author hosted a workshop, inviting people with an interest to pro-actively improve their surroundings. The workshop was held as part of the Wärik:fest festival, organized in the weekend of 20/21-10-2012. It was advertised as a do-it-yourself event, and was organized by Alternative Party Ry: a non-profit organization based in Finland, organizing a variety of events, focused on familiarizing digital culture, and supporting equality and tolerance (Alternative Party ry 2013). The workshop was titled 'I wish this was...- a workshop on inhibiting the city spaces', and was inspired by Candy Chang's fill-in-the-blank sticker project. Chang intended to ask the people who know best—those who live and work in an area—what businesses and services are needed

(Chang 2010). The workshop hosted as part of the research had a similar intention. The workshop took one hour, during which the topic and structure were explained, supported by digital presentation slides, followed by the active part of the workshop, which is dealt with in more detail in [chapter 1.7.2 Vacancy awareness workshop](#).

**Survey:** Inquiring the habits and demands of students of Aalto University, the author proposed a survey. This survey consisted of twenty questions, and was aimed at students from all Schools of Aalto University. The first four questions were aimed at obtaining basic demographic information about the respondents, the following eleven questions were focused on their study habits. The final five questions inquired the opinion of the respondents regarding available workspaces within the Aalto University. In [chapter 2.7 Inquiring survey](#) the results are handled in more detail.

**Case studies:** Upon reading about general workspaces and flexible working situations, the author conducted a number of small case studies. These focused on practices that had been found in the fields of space use, redevelopment of real estate, and co-working spaces.

**Observation:** Lastly, this thesis research was carried by the observations done by the author. Curiosity and astonishment were the driving factors, and have contributed for a large part to the results.

# Part 1.

## Background Research

The following chapters look into the different themes involved in space usage. Relevant literature is reviewed, which gives insight into the common practices in a global context. The Aalto University situation will be dealt with in the latter part of this thesis. The sub-chapters are organized in a thematic arrangement, and give insight into the factors at play in a descriptive way.

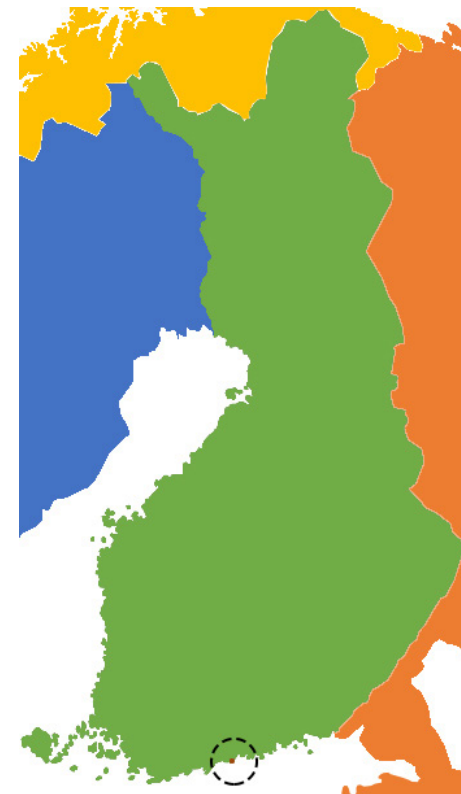
## 1.1 Demand for flexibly usable spaces

On a global scale, a shift can be seen towards a working ethos which emphasizes creativity. Florida (2002) describes this as being the Rise of the Creative Class, in his eponymous book. The "Creative Class" is considered to have functions creating meaningful new forms and "include[s] people in science and engineering, architecture and design, education, arts, music and entertainment, whose economic function is to create new ideas, new technology and/or new creative content. [...] The Creative Class also includes [...] professionals in business and finance, law, health care and related fields" (Florida 2002, pp 8).

New forms of industry are evolving which support creativity: increased structural investment on research and development (R&D), support for startup companies, and

structural financing of ventures. Measures are taken by different actors to spur creative people and support promising ideas and products (Florida 2002).

Looking at the capital region of Finland, within which the chosen design case is located, we can see similar trends. The population of the greater Helsinki region has exceeded 1.3 million inhabitants in December 2011, and is expected to reach over 1.4 million in 2015 (Helsinki region 2011). This increase is largely the result of incoming students, migrating Finns and immigrating foreigners. The increased population rises the demand for housing, for which the city has started redeveloping the former harbor areas Jätkäsaari and Kalasatama in Helsinki. The increased population ultimately needs to have access



Img. 1: Finland



Img. 2: Greater Helsinki Region



Img. 3: Helsinki Metropolitan Area

to services, and provide for their livelihood through a job. In order to make this possible, the HMA needs to continue to be a region which attracts a variety of businesses, ensuring a high level of diversity. At present, the highest spatial demand is for office and business spaces. Helsinki-based Masterplan Office (2013) notes furthermore that “a functional urban region also needs areas with more affordable premises and locations for small industries, retail, workshops and small business facilities”. These types of affordable premises often cannot be found in Central Business Districts, since these are in prime locations, making them popular and expensive (Känkänen 2012a). The real estate developers charge considerable amounts of rent for spaces in the Central Business District (CBD) of Helsinki, rising to over 130 euro/sqm/month for retail space (Känkänen 2012b, pp 7, see Graph 1).

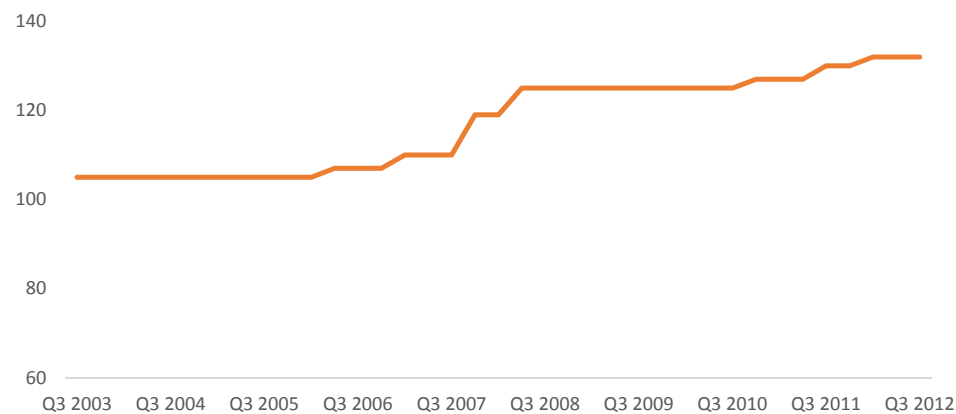
The demand for more affordable types of spaces comes from smaller companies, cultural entrepreneurs and startups, that don't require much space, and operate on a small budget (Pulkkinen 2013a). The need arises for more flexibility in the usage of office space. Entrepreneurs are looking for possibilities to establish their own identities. For them, older space is an ideal solution.

*“As long as extensive renovation isn't needed, it can be cheap—ideal for a small firm bursting with ideas but not money.” (Florida 2002)*

In Jätkäsaari, above mentioned as an area under development for housing purposes, an old harbor warehouse is rented by a group of artists and creative workers. The

building, named L3 Makasiini had been empty for years. Tilakeskus, the Real Estate Department of the City of Helsinki, is renting out office and gallery spaces in the L3 Makasiini. Starting small, this building has the potential to become a true activator in the area. The recent history started with a group of three enthusiasts, among which was Hella Hernberg; an architect and urban visionary, currently working at the ministry of the environment, where she works on a strategy to ensure the use of vacated space. They heard about the availability of this former harbor warehouse, and contacted Tilakeskus to inform about the possibility to rent a 200 sqm office space in the building. After a lengthy and cumbersome process the paperwork was arranged in August 2010. The group started to organize parties and fairs to invite people into the building, and activate the area surrounding it. New people joined, and in 2012 the graduation exhibition of the former School of Art and Design of Aalto University, Masters of Arts (MoA) was organized there. Besides these short events, some galleries moved in on a more permanent basis (Hernberg 2013). Since the city had no certainty about the future development plans for the warehouse the lease agreement is based on an open-end contract with a short notice period. This in order for the city to be able to empty the building quickly when a developer decides to purchase it. Since the building is listed, there is no threat of demolition of this industrial heritage.

*“It has long been observed that creative entrepreneurs, artists and others are often early entrants to marginal areas, squatting or occupying vacant buildings*



Graph 1: Prime retail rent Euro/Sqm/month  
Source: DTZ Research

*on temporary leases, adapting them, testing the market and helping to change the image of an area. In fact the role and impact of temporary uses has received most attention in relation to such 'creative milieus'.” (Bishop, Williams 2012)*

### 1.1.1 User activism

The process in the L3 Makasiini has certain similarities to what happened at the Cable Factory, or Kaapelitehdas in Finnish, of which the City of Helsinki gained ownership after Nokia moved out of the factory building. The factory was operational between 1954 and 1987 for the production of cables. When Nokia scaled down their production in 1989, they began leasing out space to artists and businesses at affordable rates. Nokia agreed with the City on a transition period, during which spaces in the factory building would be rented out to different users (Högström 2008). The initial plan for the redevelopment involved demolition of the large building—said to have a capacity of ten apartment buildings—which had hardly been maintained during the diminishing of the factory activities. With the prospect of extreme renovation costs, the City of Helsinki had made plans to split the building into three parts, in which schools, museums, hotels and a car park would be created. This would force the users to move elsewhere. As the tenants were pleased with their workplace, they united in an association named Pro Kaapeli. “Architects who had worked at the Factory, created a parallel plan to save the building” which in time convinced the City, who then decided to maintain the former factory (Högström 2008). Up until today the Cable Factory is an intensively used cultural center, in an ideal location, with endless possibilities. The space use concept is still largely the same, and various creatives make use of the spaces on flexible terms.

When such historically and culturally important buildings are in the ownership of the city, it is their challenge to make future plans for them. The cities' Real Estate Departments do not currently have such expertise (Hernberg 2013), and as a result there is no structured plan for what to do

in similar situations. Most buildings are built for a specific purpose. They are particularly designed to suit a mono-function need, and as a result cannot be easily taken into use for a different purpose (Brand 1995). And whilst office buildings can often be let out for the same purpose again, the former industrial buildings need a separate approach. Their industrial history, and the roughness of these buildings is at the same time what makes them so attractive to creatives. Many tenants in for example the Cable Factory have happily taken the chance to acquire such characteristic spaces, and enjoy the freedom to utilize them as they wish. The mixed user group in such places makes for interesting encounters, and fruitful cooperations.

The current development displays a need for more flexibility. The traditional work-ethos of working from nine-to-five is fading to the background, and people gain and obtain more freedom in the times of working, and the place of working (Florida 2002). This demand is for example met through the emergence of co-working spaces, which are dealt with in more detail in [chapter 1.2.3 Co-working spaces](#). The changes in work culture have been studied by the Chartered Management Institute (CMI 2008). The institute predicts that the flexibility needs will increase in the next 10 years. A rise in self-employment and more creativity and playfulness will be seen in working according to the institute.

These changes in the working habits have several implications on the demand. The shift in needs has influenced the supply of working facilities with the emergence of numerous different types of workspaces. They each address different needs within the evolving working community.

### 1.1.2 Start-ups

In the search for suitable workspace creative startups are often willing to settle for a less state-of-the-art workplace if the price is right (Online poll on Mushrooming Facebook group November 2012, attachment 2). They are flexible, often require only basic equipment, and can plug in anywhere.

They are dedicated to their project, and would possibly work long and odd hours. Furthermore, these startups' viability is yet to be proven. Combined with the fact that the average rental period is three to five years, (KTI Kiinteistöieto Oy 2012) this creates a difficult situation to professionalize a business.

When startups get the chance to try out their business, time will tell whether they are a potentially viable company or not. This calls for a certain flexibility in use agreements. It is probably rare for a startup to agree to a five-year lease contract if they are uncertain of the viability of their company. When contracts would be drafted for shorter terms, the interest of such entrepreneurs can be generated (Online poll on Mushrooming Facebook group November 2012, attachment 2). Such short term, temporary-based and pop-up use of the space would be very suitable for spaces that have the potential to be used actively again, but currently aren't because of the tradition of long-term agreements, and the difficulties of finding tenants. The real estate business needs to adjust their practice to suit today's needs better, by creating more room for flexibility.

### 1.1.3 Creative Community

What defines a community can be interpreted in different ways. One can belong to a community because of their religion or the area or country they live in. The community feeling, sense of togetherness and commonality is not a requirement to be part of a community. Such emotional engagement to a certain cause, or a shared fascination with something could however be powerful enough to create a community. Looking at creatives there are a number of commonalities they share, both in terms of mentality, as well as in practices.

Creative people cluster (Tähtinen 2013, Florida 2002), as can be seen in the previously described Cable Factory and L3 Makasiini. Larger areas also have the ability to allow for such clustering, for example in the Punavuori area in Helsinki. Research by architect and doctoral

researcher Sari Tähtinen (Ibid.) into the attractiveness of this particular city district concluded that, among other factors, the presence of creative professionals functioned as an attractor to other creatives.

A creative community is in this research considered to be a group of people who are connected to each other through their field of work, as well as through their vicinity to each other in terms of workspace. They do not necessarily work for the same company, or in the same building, though because of their closely linked professions they feel connected. Unlike with a number of other professions, designers, artists and the like often do not compete with each other over business. A characteristic of creatives is that, because the work is very much derived from one's own imagination, the style and line of work differs between them, which creates a wide diversity within the creative field, reducing overlap and competition. Confidence, independency and uniqueness in the profession one practices is needed to succeed, which goes for the traditional creative fields of arts, design and architecture, but also for any professional who considers their practice innovative and original.

Besides the factor of similarity in professions, the possibility to share facilities can influence the choice of location as well. For start-ups, small companies or independent entrepreneurs, purchasing the required equipment is expensive. Being close to peers to collaborate with can result in a stronger position, and the ability to satisfy a company's needs through shared investment.



Fig. 4: Cable Factory  
Source: <http://www.conference-expert.com/default.asp/ac/konvkoht/lan/en/ld/190>

## 1.2 Supply of various workspaces: effects of changes in demand

The supply is adjusting to meet the demands of the workforce. Spaces are being adjusted to fit the needs in different ways. The following subchapters look into specific upcoming and established trends related to the changes in working (and studying) habits. Through an exploration of the temporary phenomena, the scale gradually moves on to more professional and structured organizations.

### 1.2.1 Cafés

Although they may not be designed for the purpose of working, cafés are frequently used as workspaces. For those working from home, either on 'remote-working-days' or as entrepreneurs, a café can be a welcome change in the working environment. Days can become lonely when working by oneself, and thus the social setting of a casual establishment is often chosen. Cafés are referred to as 'third spaces'. This term is derived from a setting where home is the 'first space' and the normal working location is the 'second space'. A café can be considered as a typical 'third space', which is described by Florida (2002) as a (semi-) public space, where informal encounters and meetings can take place. Because of their deviating atmosphere cafés have become a popular place to go to when in need of a change of scenery when working.

### 1.2.2 Pop-ups

Pop-ups are short impulses in the urban context, most often given in the form of shops. Vacant retail outlets are temporarily inhabited to offer something new, taking

them into use swiftly for a short period of time only (Holmqvist 2010). Their intended effect is two-fold. On the one hand they are a unique chance for entrepreneurs to display their skills and sell their products. On the other hand the use benefits the property owner, who has income from the space, albeit it is only for a short period. Depending on the popularity and atmosphere in the surroundings, there is the possibility to boost the area through such short impulses: a third, indirect benefit. This can influence the wider surroundings. It may take a while longer and several pop-up impulses might be needed before the effects last. The success of such a positive result depends on what type of pop-ups they are. Thus some pop-ups aim more at the positive influence the type of work can have on its surroundings. It is a non-committal opportunity to take a first step onto the professional retail market, or sidestep to explore different fields or locations.

A good example of such pop-up type of space use is the 'Renew Newcastle' initiative in Newcastle, Australia. The idea is that "property owners license [...] their buildings to Renew Newcastle while they have no tenants or are awaiting development" (Westbury 2011). Renew Newcastle does some basic maintenance work on the building, and then finds temporary users for the space. These users are working on cultural, creative and community based activities, and for the time they use the space, function as custodians. They activate the space and have the possibility to make neglected areas popular again.

Following these short impulses we can see more established places such as co-working spaces, offering flexible workspaces

to those who need it, also allowing for interaction and serendipitous encounters.

### 1.2.3 Co-working spaces

There are several places where you can work when you need a desk and a chair. So called co-working spaces can be found in many cities around the globe. Generally co-working spaces are equipped with 'hot-desks' (workplaces which can be used by multiple workers at different times), meeting rooms, event spaces and kitchen facilities for casual interaction (Keilen 2013, interview January 9th, Oinonen 2013, interview January 15th).

Some are connected with each other through a shared name and concept, others stand alone. The concepts of the different workspaces and their service models vary greatly. What they have in common is their offering of a physical space, what makes them different is the crowd they attract. The uniqueness can be found in their operation model. A distinction can be made between co-working spaces which are professionally managed—with a clearly structured operation model—and on the other hand the community based co-working facilities, which have a less clearly defined operation model. The first often has a more fixed crowd, who know each other well, and the operation model is focused on accelerating the co-workers. The service providers are aware of what the workers are doing and it is their aim to support them. This type of modus operandi can be seen in Harvard Innovation Lab. When starting activities there, everyone is asked to share their business idea by writing it on a board for the others to see. The idea behind this strategy is informing other workers know what you are developing so that they can provide you with their insights and ideas.

The community based co-working spaces are more free in their setup, and workers can drop by as they wish. The Urban Office—an open co-working space set up by the library—located in the center of Helsinki, works that way. There is much

freedom, and the purpose of a visit is up to each individual. Such a service model can also be seen in the HUB. They have locations all around the globe, which are all set up as franchise branches with different organizational structures. In 2005 the first HUB opened in London, and in 2007 the HUB Brussels was the first co-working space to open in Belgium. It led the way for other co-working spaces to open in Belgium, the Netherlands, France, and many other countries. Its focus is on social innovators, and judging by the number of locations the concept is a hit. However, the business model alone is not a guarantee for success, as can be seen in the case of the bankrupt HUB Brussels, dealt with in detail in [chapter 1.6.1 Case 1: The HUB](#).

### 1.2.4 Incubators

Incubators, or business incubators, are organizations which are specialized in supporting entrepreneurs and businesses, and are intended to aid startups to become viable and well-running companies. The first incubator-type space was founded in 1959 in Batavia, New York. It was named the Batavia Industrial Center (BIC) and is commonly known as the first U.S. business incubator. It was founded by Joseph Mancuso, whose family had purchased the former Massey-Ferguson business complex. It was his task to fill it, and when it proved impossible to rent the entire complex to a single company, he changed his strategy. Mancuso decided to split the building into smaller segments and rent those to "separate businesses that he would nurture by providing shared office services, assistance with raising capital and business advice" (NBIA 2009c). The concept of such business incubation did not become widely known until the late 70's, and in 1980 about 12 such incubators were operating in the United States (NBIA 2009b).

The incubators provide the entrepreneurs with "an array of targeted resources and services" (NBIA 2009a). Not everyone can acquire a place at an incubator. Usually, they have selection criteria based on the business proposal and the objectives choosing only the companies the incubator

management deems potentially successful.

Once a startup is in the program of an incubator, they have access to their facilities, including for example workspace, coaching, equipment, premises, a personal network, and often financing. Incubators vary in terms of focus group and organizational structure. The management of the incubator can have a program set up, which is tailored to the startups' needs. During this time, they tutor the starting business to become a successful firm. "These incubator graduates have the potential to create jobs, revitalize neighborhoods, commercialize new technologies, and strengthen local and national economies" (NBIA 2009a).

Next is the challenge to keep the startup welcoming atmosphere in the area. When a previously uninteresting area becomes thriving, there is a risk of gentrification, raising the prices to levels which cannot be afforded by the initial habitants.

# 1.3 Gentrification vs. Vacancy

Opposed to the oversupply of certain types of spaces, a scarcity is created with ease. Through means of creating a demand, attention is drawn to a previously uninteresting area, which has severe implications on the habitants.

In places which have gone through a transformation in terms of usage and users, gentrification can occur. This happens when the former users are forced to leave, due to increased costs and changes to local services. Brand (1995) handles this topic in his book and TV-series in the chapter "The Low Road". He explains the situation as one in which worthless spaces are occupied by people, often with creative activities going on, who are in time forced to leave due to interest of property developers. Because of the roughness and unimportance of the space, there is much freedom in what to do there. He describes attics, basements, sheds and garages, cottages, and old industrial or warehouse buildings as being such "Low Road" spaces. The space can be used and adjusted as one pleases.

*"When artists move in to an industrial neighborhood like this, a predictable sequence occurs. They make the place exciting and spruce it up. Pretty soon, there are trendy nightclubs, restaurants and shops. That makes it a fashionable place to live. Developers move in, and convert the live-work studios to upscale apartments. Goodbye artists. [...] Economic activity follows Low Road activity." (Brand 1997)*

Because of these creatives' approachability, and ability to draw others to the area, the location becomes interesting to developers and eventually to higher income classes. Consequently the area becomes too expensive for those who functioned as the activators, who will then have to move

elsewhere. Brand continues to say that this is an endless cycle, as the banished will occupy another place in a similar situation.

## 1.3.1 Obsolete buildings

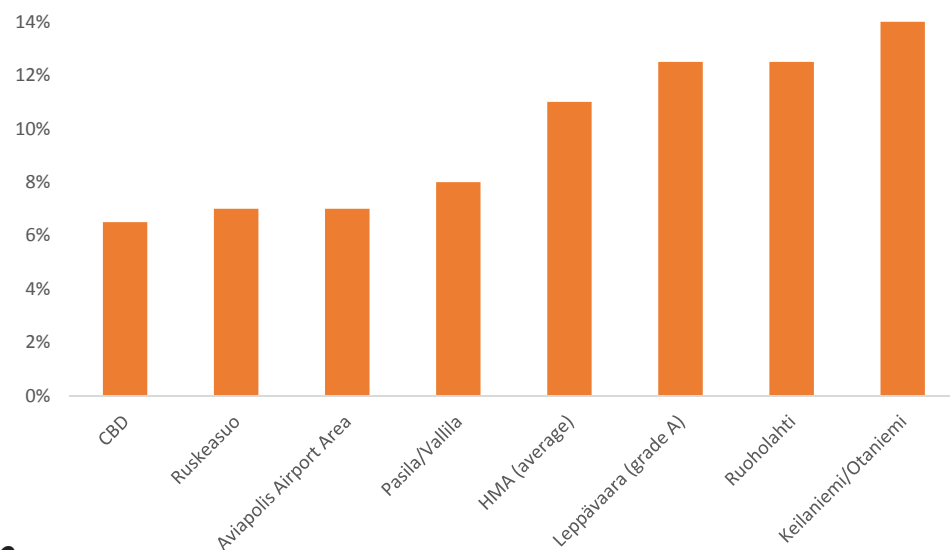
When a building has been vacated, and no new user can be found, the building can be considered obsolete: it no longer serves a purpose and is outdated. In such cases it is likely that the building remains empty, and thus it should be considered whether it is worth to keep the building or if it should be demolished. In either case the CO<sub>2</sub> emissions should be taken into account. Studies have shown that it is more energy efficient to renovate, than it is to completely demolish a building and construct a new one (Alter 2013, Empty Homes 2008, Biggelaar 2012, interview August 13th). This includes both construction impact and operation emissions. When maintaining the building, a suitable new function ought to be found. Taking a quick look into what types of buildings fall into this category, we find mostly old industrial sites. Referred to often as 'brownfields', they have gone through a long period of intensive use, possibly involving a certain degree of pollution. In the cases where the pollution has caused the soil or groundwater to be contaminated, remediation is necessary before the area can be taken back into use. This leads to costly and lengthy procedures, which influences the willingness of developers to take on such a redevelopment project. It is not impossible however, and many redeveloped brownfields have become an asset to their surroundings, taking an example from the renowned Tate Gallery in London, in the former Bankside Power Station (Forton, Kelly et al. 2011).

*When the decision is made to demolish a building, the opportunity arises to build an entirely new building, which can comply with the current energy efficiency regulations. The design can be made with the latest materials, and also refurbished materials from a demolished building can be used. However, demolition would mean destroying a piece of history. Emotional attachment and memories are often left out of such decisions. Demolition furthermore creates a peak in the carbon emissions (Empty Homes 2008), on top of those emitted during the building phase and use phase. Upon building a new structure where the old one once stood, these emissions can be added up to those of the previous building. According to the 2008 study (Empty Homes) the lower embedded energy and emissions of the new building alone do not outweigh the emissions of making and consequently keeping the previously obsolete building operational.*

# 1.4 Policy

When a building becomes vacant, there is a risk it will be vandalized or squatted (Camelot Europe 2013, Huys, Verhoeven 2012). This is commonly understood to be an undesirable situation. However, the undesirable situation in fact already occurs at the moment the building is vacated and no new use or user is found. From that moment on, the building is a costly part of the owner's portfolio, having to maintain, heat and secure it, while no income is generated through the asset. Depending on the former use of the building, and its acuminate building typology, including size, pollution and inadequate or outdated facilities, it is a challenge to have the building used for the same purpose again, let alone for a different one. Looking into the first situation, in which the aim would be to take the building back into use for its previous function, the competition is often the most obstructive factor. Newer buildings, built according to the latest needs and standards, are more appealing. This leads to a higher vacancy percentage in existing buildings, compared to the vacancy rates in newly built office buildings (Zuidema, Elp 2010). In this particular context and situation, buildings built within the last 10 years are considered as new.

Though rental price might play an important



Graph 2: Office vacancy 2013  
Source: DIZ Research

role in this—considering that an existing office rented at price X would be less attractive than a brand new one rented out at the same price X—the situation in the HMA points out that this is not the only influencing factor. In fact, when looking at charts visualizing the vacancy rates in the different business areas in the HMA (see Graph 2), it can be seen that attractiveness is largely affected by the location. Thus the vacancy in the capital region is lowest in the CBD, and relatively high in Otaniemi and Keilaniemi. Comparing the rental prices of the different office areas, it can be seen that Keilaniemi and Otaniemi are 3rd most expensive in the HMA (Känkänen 2013). As Keilaniemi is being developed constantly, the impression is given that the occupation rates are good. However, due to the new construction, the vacancy levels reached up to 18.9% in 2011 (Peltomäki 2011), later declining to around 12% in 2012 (Känkänen 2013).

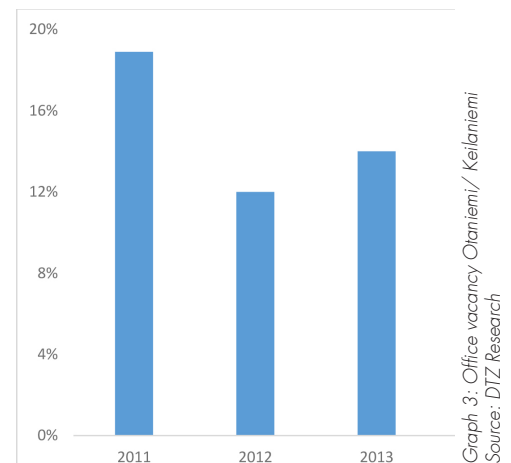
## 1.4.1 Taxation

Since the situation does not seem to be considered as alarming in whichever region of the HMA, it is not much of a surprise there is little incentive on the side of politics to intervene. In a conversation

with Johanna Sumuvuori (2013, interview February 11th), local politician and former member of National Parliament for Greens, she explained the reluctance in parliament to actively influence the situation. In her opinion, however, there are good possibilities to increase the incentive of letting properties out, by increasing taxation on vacant properties, or implementing a vacant property tax. She suggested a sanction system, increasing the tax on vacant buildings.

Such a tax on idle properties has also been proposed in the United States of America. Macroeconomist Dean Baker (2011) explains it as “an especially desirable tax in the current economic situation”, where many properties stand empty due to the reluctance of property owners to rent or sell the buildings at rates lower than those prior to the economic recession which started in 2008. “A vacant property tax would help these property owners to see reality. By providing an additional incentive to actually use vacant property this tax can both raise a substantial sum of money and bring down the cost of renting [...] commercial property” (Ibid). Taxing such properties will increase the incentive of owners to rent it out—at lower rates where needed—so that they do not need to pay the tax.

Another option for them not to pay would be to sell the property off to someone who has the intent to use it (Baker 2011). Both options would result in diminished rents. Besides this strongly financial incentive, the risk of vandalism should also be taken into account. The previously mentioned Vacant Property Management offices have



Graph 3: Office vacancy Otaniemi/Keilaniemi  
Source: DIZ Research

the aim to ensure an unused property is kept safe and in good condition. Taking an example, Camelot Europe has several possible schemes for any vacant property. The one they are most known for is their ‘Live-In Guardian Solution’; a system where the property is protected against vandalism and squatting through having people reside temporarily in the building. The process starts when the owner of a vacant property consults Camelot, after which the possibilities for the premises are assessed. When the live-in guardians scheme is chosen, Camelot selects the temporary occupants, who will then live in the property as guardians, on a license agreement. Besides the live-in guardians, Camelot also offers conventional security, management and maintenance, and ‘make space pay’, in which case they seek short term projects to generate income from the vacant property.

## 1.4.2 Vacant property management

The core principle of anti-squat living is concerned with the security of a vacant property, and by placing 24h human security, the “anti-social behavior associated with vacant property” (Camelot Europe 2013) is prevented. Other than in a residential lease where rent control laws apply, in an anti-squat live-in guardian security solution a construction applies which, for example, only requires a three week notice for the company, after which the property is again vacated. Vacant property managers such as Camelot, using the described solutions, are consulted in cases of complete building vacancy. However, as this research looks into the utilization of individual vacant spaces in otherwise occupied buildings, the question is raised whether such companies could be consulted in those particular situations. Essentially what these vacant property managers do is provide an owner with a utilization service, which is in fact what is needed for any vacant space. A suitable use system ought to be set up for a (set of) spaces, which works well with the remaining use and user community. Through that our built environment can be used more optimally,

creating a more sustainable situation.

conflicting use a request must be made to allow for change in the existing zoning plan.

### 1.4.3 Anticipating on vacancy

In general very little is done to actively prevent building vacancy. Property occupancy is subject to economic fluctuation, and the real estate companies are dependent on tenants to rent their assets and provide the income. The dependency situation makes it difficult to act upon a threatening vacancy situation. Nevertheless, it is possible for companies to take a proactive approach in a declining market (Bloore, Fowler 1989). The research of Bloore and Fowler (Ibid.) identifies the need for anticipation and early recognition of change and implementation of new strategies. The actions taken by the studied companies are viewed from the business perspective, rather than from the practical side. Thus the strategies include selling off assets, changing the targeted markets, and finding new products to develop. The effect of their actions on the existing real estate properties is subject to drastic changes made in the physical appearance and practical usability of the concerned properties.

Considering that the property is affected in the same way, regardless of which company owns it, it is important to investigate possibilities for redevelopment and “transforming office space into other functions” (Euromoney 2012). In the Netherlands there are two legal instruments which are aimed at creating possibilities for use. First is the Vacancy Ordinance, which demands property owners to notify the municipality of (partial) vacancy, after which the municipality appoints a new user or use for the property. The article continues to explain a second measure: the Building Decree 2012, which sets clear rules for redevelopment initiated by a property owner. By transforming an office space into a space-type for which there is a higher demand, the time a building is left idle can be minimized. The quality levels, required for new build, are adjusted to some extent to ease the possibilities for redevelopment. Nevertheless, the zoning plan should be taken into account, and in the case of

## 1.5 Sustainability effects

Upon completion, the operational phase of a building accounts for 80% of its greenhouse gas emissions, although the actual numbers differ between buildings. (Huovila, Alajussela et al. 2009). The studies have taken basic needs into consideration, such as heating, ventilation and lighting, but also the use of electronic appliances. When a building is used as it should, this percentage is a given fact, and it has been taken into account. There are of course possibilities to reduce the emissions somewhat, though the balance will be roughly equal.

As soon as the building is not used, however, the 80% emissions will remain roughly the same as before, but no-one benefits from the building in any way. It then becomes a burden to the owner, but more importantly to the environment. Building for vacancy is a waste of resources and space.

Socially there are also consequences for the vacancy situation. Derelict areas attract vandalism. This has negative implications for the building and owner, but also for the surrounding community. Besides the practical nuisance they experience from the vandalism, their (living) environment degenerates. In severe cases the building could get squatted. Preventing such situations can be done by having the building occupied after all. When there are no interested

companies to be found, aforementioned live-in guardian schemes can be consulted.

Another measure, taken by architects and urban planners to positively influence the effect a building has on the environment is ‘Green Architecture’ (Yudelson 2009, Williamson, Radford et al. 2003, Kohler 1999). Buildings get graded according to, for example, their energy efficiency, carbon neutrality, and materials used. Their performance is measured by major design assessment institutions, of which LEED (Leadership in Energy and Environmental Design) and BREEAM (Building Research Establishment Environmental Assessment Method) are internationally known. These institutions look into the data of the building to be assessed, and judge its environmental performance based on given measures. When buildings fulfill certain requirements they will be certified as a ‘Green Building’. However, this certification does not look in to the usage—both in terms of user behavior and use rate—of buildings, which influences the relative ‘greenness’ of a building (Hoes, Hensen et al. 2009).

### 1.5.1 Use rate

User behavior has a measurable influence

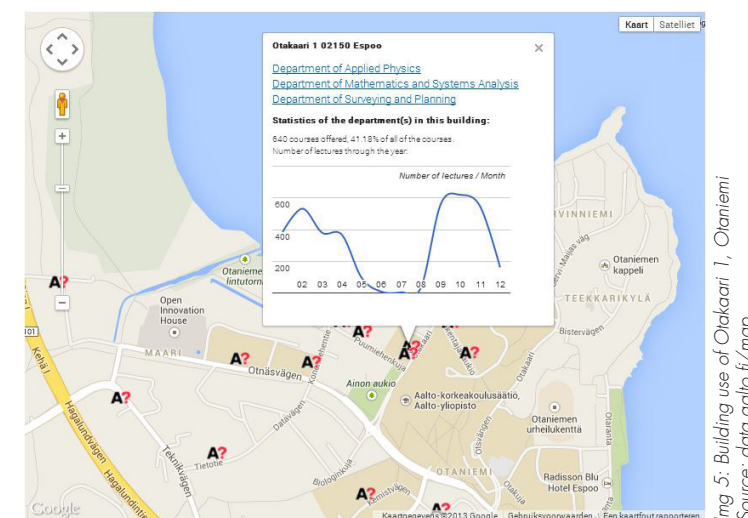


Fig 5: Building use of Otakaari 1, Otaniemi  
Source: data.aalto.fi/map



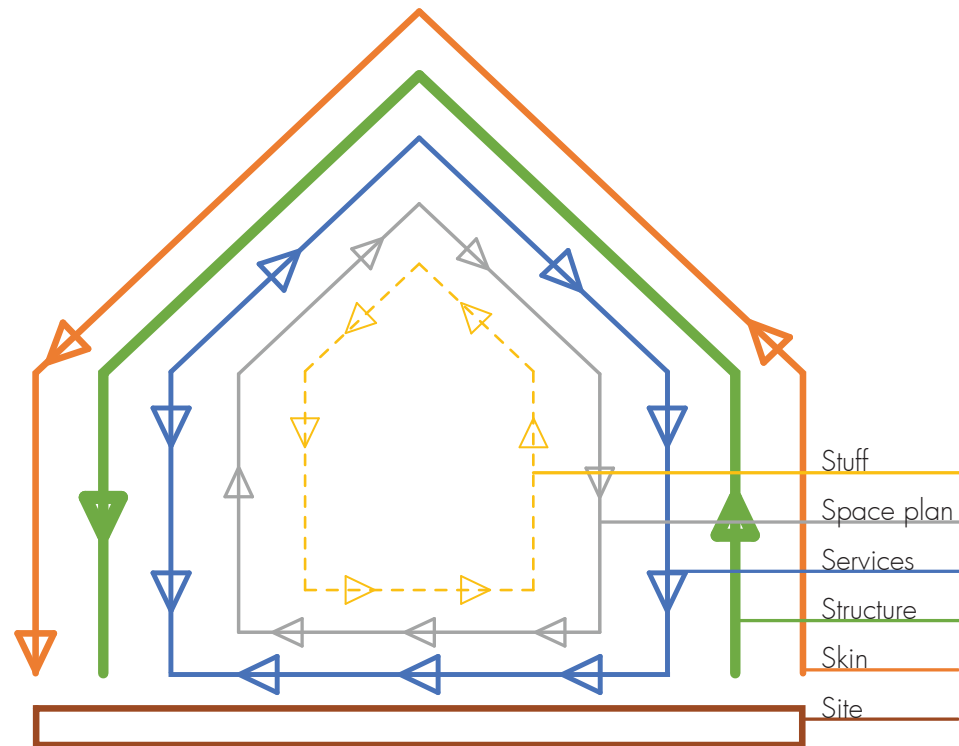
on the environmental performance of a building (Hoes, Hensen et al. 2009). The influence of the occupancy rate of a building on its ecological sustainability is neglected however. As academic workplace utilization generally lies between twenty-five and thirty percent (Harrison 2010), it is to be expected that this has an impact on the sustainability of the situation. Both in economical, and ecological terms. This low occupancy results in inefficient use, and diffuses the actual spatial demand.

Harrison (2010) states that because of the low use-rate of this particular part of our built environment, enhanced by the changing culture in learning, traditional categories of space become less meaningful. People have different daily rhythms. This causes some people to be more active, and willing to work or study in evenings and weekends, while others prefer to work during office hours. When spaces, and their supporting operations can adjust to such differences, their use could be optimized.

Monofunction buildings, as pointed out by Brand (1995) are not ideal for efficient use in the long run. As they are built for one specific purpose, they do not suit other uses.

This causes them to become functionally obsolete much faster than buildings which are more uniform in their use. In his Shearing Layers theory, Brand (Ibid.) explains how the exterior skin of a building generally remains, as do the structure and site of a building. The interior layers—the stuff, space plan, and the services—are prone to more frequent alteration. When these layers are constructed to be permanent it is more difficult to adapt the building for a different use.

When designing a building, it would be beneficial to take this future change into consideration, choosing the interior and exterior design in such a way that it can withstand the test of time in terms of user needs and the fluctuation of fashion. Ideally, buildings would be usable in such a flexible manner that they can serve as whatever they need to during whichever time of the day.



Img 6: Shearing Layers  
Source: S. Brand; How Buildings Learn

## 1.6 Example cases

In order to investigate the different types of workspaces that are emerging, four small case studies were done.

### 1.6.1 The HUB

Founded by four pioneers, the HUB Brussels became an innovative space. In an evaluation, Anis Bedda gives his view on the closure. Bedda (2013) worked at the HUB for several years in different functions, and explains how the HUBs business model has, in his opinion, not lead to its closure. What he marks as the most important issue leading to the bankruptcy is the experience. A co-working space needs to be more than just tables and chairs in order for it to create a community. HUB Brussels had been able to create this community and facilitating social impact, but in doing so, lost the sense of a workspace. Because of the social interaction and the lack of separable spaces, the space was generally noisy, which didn't provide an ideal working situation. In fact, members who had once come there to work, left, while the others stayed. Bedda writes this partially to the hosting of the space. In an interview the author had with Sami Oinonen, co-founder of HUB Helsinki, the topic of the closed hub came up. To the question of why he thought the location in Brussels went bankrupt, Oinonen (2013) answered that it was probably because they didn't have a clear target group. There was no clear communication about what kind of people they wanted to attract, and what professional backgrounds were existing in the community. Another important aspect in the entire HUB network is the communication. Bedda writes in his analysis that even though people had visited the website, they were uncertain of what the HUB really was. Furthermore, confirming what Sami Oinonen claimed, HUB Brussels focused on "social entrepreneurs", which caused some people to stay away, thinking they weren't the target group. At the same time others who didn't necessarily have

many social innovation activities did come. This contradiction caused the community to be diverse, but limited at the same time. Bedda continues by saying that a co-working space should be open to everyone who finds value in the space and its community. "The identity of the community takes shape in how the hosts of the community act upon their values" (Bedda 2013).

### 1.6.2 Loosecubes

A co-working concept with a rather different business model was LooseCubes. The concept started as a member based system, connecting workers in need of a place, with hosts having a workspace available. This could be for just a day, or for longer term agreements. Initially the hosts and LooseCubes, were paid through membership fees: the host companies charged, working members paid, and LooseCubes received part of this. This model is focused on serendipitous interactions and social exchange, rather than on a tight community. With funding LooseCubes received, they initiated pop-up workplaces, such as a workspace under the Manhattan Bridge, and a short inhabitation of the shipping containers at the Dekalb Market in New York (Empson 2012). Later, they changed their business model to an invite-only system, with the idea that current members would bring in new members and hosts. This change in openness and spontaneity was very contradictory to their initial model, and not long after this their business proved unviable as they went bankrupt.

One big difference in the two previously described systems is the options that you have as a co-worker, being part of their network. In the case of the HUB, the membership you take is only valid for one particular location. You can work at HUB Brussels as agreed, but you cannot work at a HUB in another city if you happen to find yourself elsewhere. This was in fact possible in LooseCubes' system,

which particularly focused on business travelers in need of a workspace during their trip. Nomadic workers, whose work location moves as they do (Cluthe 2011). This difference in setup doesn't give any conclusive success guarantee, though the latter is more agile, and better suited to today's needs.

### 1.6.3 Seats2Meet

Another co-working space with a hot-desking concept is Seat2Meet. Besides these shared, drop-in workspaces they also have a number of meeting rooms. The meeting rooms are the main source of income, as the co-working space is offered free of charge. This can be done, explains Luc van der Keilen (2013), since they use that same space for serving the daily lunch, and for hosting larger events. The Seats2Meet business model differs per location, as it is, like the HUB, set up as a concept to be developed under franchisees. They have locations across the Netherlands, and are expanding their network to Asia and Africa. Their focus is on independent professionals from all branches of business.

The Seats2Meet concept is focused on sharing knowledge without boundaries. The business model is based on paying for your workspace with 'social capital'. Independent professionals are knowledge bearers, and they pay by sharing their knowledge. When reserving a workplace one needs to indicate their areas of expertise, and agree to others requesting you to share it with them. Van der Keilen (2013) explains that social capital is equally valuable to them as money. Their financial business model is focused on leasing meeting rooms with an inspiring atmosphere with which people can identify themselves. Each space is decorated differently, and they are rented based on a variable price per seat. In response to a question about the membership based systems many co-working spaces work with, Van der Keilen replied that this creates a limited community. Due to the costs, fewer people will choose to go there, compared to when it is free. Seats2Meet wants to take away this threshold completely (Keilen 2013). In doing so they have managed to attract

a various group of independent workers who regularly visit Seat2Meet, as well as a flow of new professionals coming in.

### 1.6.4 +Studio

Looking at Finland, there are co-working spaces scattered around the capital area, among which are the HUB Helsinki, and +Studio, both co-founded by Sami Oinonen. Where the HUB Helsinki works mainly on a hot-desking concept, +Studio has a fixed community of creative businesses. They work independently, but are joined together through their shared values and interest in "the synergy that can happen from working with talented people in the same space" (+Studio 2012). It was initially advertised through the "Mushrooming" Facebook page: a creative (co-)workers community, scattered around Helsinki. As Oinonen (2013, interview January 15th) explains, it takes about thirty to forty people to spread the word, which they achieved with only one post on the Mushrooming Facebook group. From that moment on they developed to be an inspiring co-working facility with a steady community. The physical space, as Oinonen tells during the interview, isn't the most important factor in the success of a co-working space. It is a necessity to have the basic facilities in place in order to make the space work, though the physical appearance is rather insignificant. Like-minded people are the key. The independent creatives working at +Studio create the atmosphere that is needed to make the space into an active workplace.



img 7: Seats2Meet hot-desking space  
Source: <http://www.flickr.com/photos/moqub/6568265233/>

## 1.7 Surplus of buildings and spaces

As a result of the changes in demand and the increased flexibility, mobility and digitalization and the inability of the property development business to adapt, a surplus of (mainly office) space has emerged. This is called the 'Real Estate Bubble' (Huys, Verhoeven 2012).

A distinction ought to be made between vacant buildings and vacant spaces. Vacant buildings are often visible, and are numerous. On average one in every ten buildings is vacant in the HMA. Vacant spaces are even more numerous, however, they are less visible. They occur when the spatial need of a user of the building user diminishes, for example due to reorganization when the business premises remain unchanged. The spaces are within organizations, where they easily go unnoticed. As these spaces are fixed within the larger lease agreement, they cannot be returned to the realtor. Thus the spaces remain with the original user, often leaving the realtor unaware of the vacancy within its premises. The spaces are not advertised, and the hidden vacancy lingers on.

When companies would assess their need for space, they can clearly state their particular need. The amount of employees, what times of the day people are in the office, remote working, etcetera. Interpolis, a Dutch insurance company located in Tilburg, the Netherlands, completed the construction of a new head office in 1996. Shortly after completion the company grew considerably, resulting in a lack of space for all employees. They made an analysis of their company which resulted in an unbiased picture of their need for space, but instead of building a new addition to their office they implemented a lean office concept. This resulted in a redesign of their workplaces to facilitate flexible working, which led to the cancellation of an additional office tower

(Eekeren P. van, Schijndel et al. 1996). Also Nokia is actively assessing their office space usage. For various reasons their offices worldwide are shrinking. In certain countries they have only a small location with few employees. In situations where the number of employees drops so radically that it is no longer viable to lease an entire office, they arrange workspace in office hotels or co-working spaces for their employees to work (Varpasuo 2013).

### 1.7.1 Vacant buildings and spaces

Vacant space is a global problem (see Graph 4) (Berg 2012, Geng, Guan 2004, Shilling, Sirmans et al. 1987, Sun, Xu et al. 2011, Douglas 2006). Buildings become vacant for several reasons, though as Douglas (2006) describes it, the main reasons are moving occupants, economic influences causing closure of companies, seasonal fluctuation, a lack of new tenants or owners, and lastly unawareness of owners regarding the vacant state of their property. The first three causes refer to the reason they became vacant, whilst the last two indicate a reason why a building or space remains unused. It indicates that there is little incentive to improve upon the vacancy situation. However, with only one planet to live on—and population increasing daily—resources are limited and we cannot afford to close our eyes to this lingering vacancy problem (Meadows, Randers et al. cop. 2004). In a prosperous world it would not cause problems for a realtor to accept a vacant building as long as they were receiving rent for it. The current economic, and indirectly the ecological state we are currently in, cannot allow this. Without people being aware of the existing opportunities, it

is impossible to change this situation. Therefore, awareness needs to be increased, and opportunities ought to be promoted.

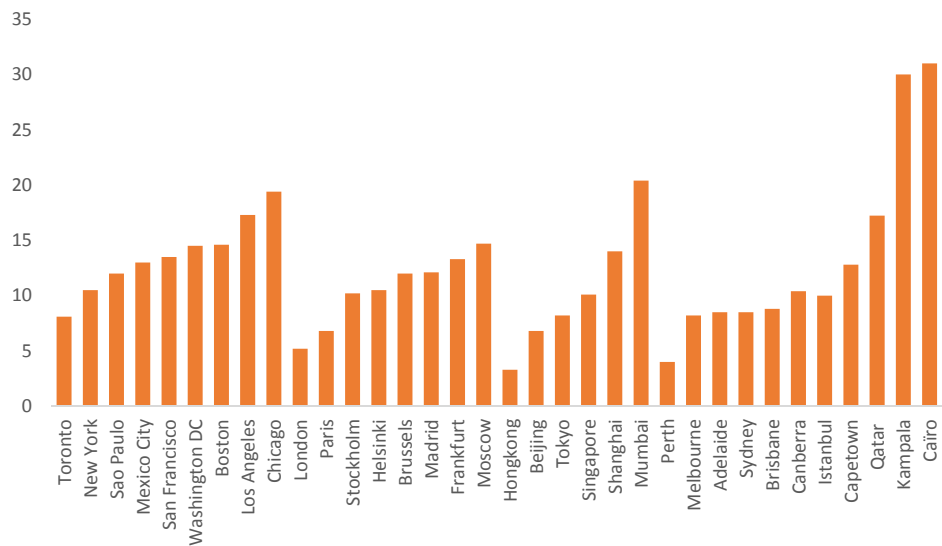
When further categorizing the vacant building stock, two types of vacant buildings can be defined: those which are temporarily vacant (0-5 years), and those which are vacant for a long time (over 5 years) (Douglas 2006). This categorization leads to think the first category includes spaces which most likely will be used again, such as office spaces, whilst the latter involves those which have lost their function and for which no future utilization is planned, for example factories. Each category brings along a different set of possibilities and a different approach to their vacancy. The buildings in the second category were once in the first category. As the buildings that have good potential to be used again generally fall in the first category, they might not be noticed before moving into the second category.

A majorly important aspect to look into is the reason why they are vacant. As Douglas (2006) describes, this is often caused by moving occupants. The questions rise why the previous user moved out, and why there aren't any interested occupants to utilize the space? In the case of vacant office buildings—generally considered a type of spaces which can be used again for the same function—it can happen that the previous tenant had the possibility to move to an office building that is more modern and generally better suited to today's standards

of technology and luxury (Douglas 2006). This implies that the building they left is becoming, or has become, obsolete. The problem in such cases is that the rents for the vacated spaces aren't significantly lower than those of the new buildings which causes the older buildings to be disproportionately expensive, and thus unattractive, leading to high vacancy rates (Känkänen 2012a).

This can be seen for example in Ruoholahti, a business dominated area in Helsinki, close to the CBD. Rental prices are second highest in the area, yet vacancy rates reach up to 14%. As new construction of 200.000 sqm of office space is ongoing elsewhere in the HMA, the vacancy in the Ruoholahti area is expected to increase (Känkänen 2012a). In areas which are less expensive and ultimately in less bubbling districts in the outskirts of the city, the vacancy rates are lower than in more expensive areas (Känkänen 2012b). This implies that there would be more demand for the decentralized spaces if the rental prices were lower. Due to this financial aspect, there is a risk that a building will remain unused for a long time if the rental prices aren't adjusted based on its potential popularity. This inevitably means that there is no income for the owner, while the maintenance costs remain. This issue, and related policy, have been dealt with in more detail in [chapter 1.4 Policy](#).

During the second quarter of 2012 the vacancy rates in the total HMA were about 10% in office buildings, nearly 6% in industrial



Graph 4: Global Vacancy 2012  
Source: DTZ Research, Jones Lang LaSalle Research

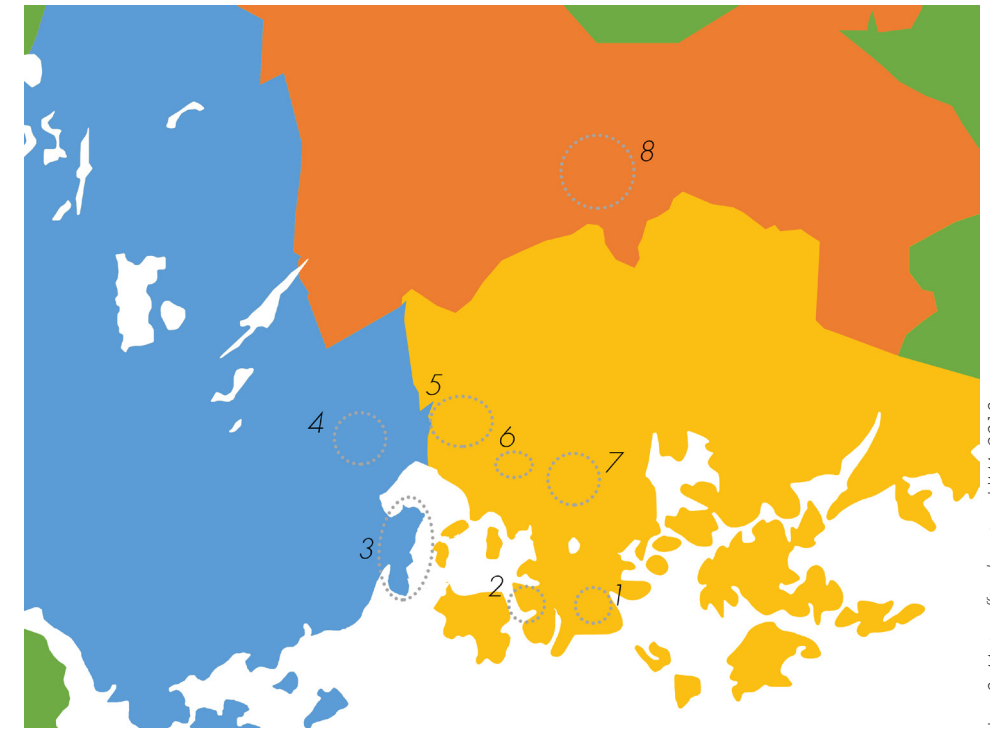
and warehouse spaces, and 2,5% in retail premises (Catella 2012, Känkänen 2012b). This roughly equals 800.000 sqm of vacant offices, about 450.000 sqm of vacated industrial sites, and over 85.000 sqm of unused retail outlets (KTI Finland 2012). In total, this adds up to an astounding amount of over 1.3 million square meters of built environment that is not used. However, these research results mainly look into entirely vacant buildings, and thus vacant spaces inside partly occupied buildings are disregarded. This indicates that the actual amount of vacant space is even higher.

### 1.7.2 Vacancy awareness workshop

To enquire the awareness of people regarding the vacancy situation in the HMA, and generate ideas and willingness to make a change in this, the author organized a workshop. The festival during which it took place was organized in the Cable Factory.

Wärk:fest lasted two days, and the workshop took place on the second day of the event.

In investigating the phenomena of vacant spaces and for what purpose to utilize them, information about the situation and possibilities in the HMA was gathered. During the workshop the seven participants were asked to think of their surroundings, and mark the empty and unused spaces and buildings on a map. The information from this select group gave an interesting insight into the vacancy in the area. The diverse backgrounds of the participants—Three Finns from in or around Helsinki, two people from other parts of Finland, and two foreigners residing permanently in Helsinki—made for a good mix of perspectives and viewpoints on the topic discussed. Each seeing their surroundings from a different angle, the types of buildings and spaces they mentioned varied largely. From a vacated house on a small island, to a vacant office block in Helsinki's CBD, the spaces the participants had noticed were all different—and there were many. Going further into the places they mentioned, the participants



1. Central Business District
2. Ruoholahti
3. Keilaniemi/Otaniemi
4. Leppävaara

5. Pitäjänmäki
6. Ruskeasu
7. Pasila
8. Aviapolis

Img 8: Major office locations HMA 2013  
Source: DTZ Research

were asked to look at the surroundings of those buildings, and consequently asked them to consider what might be missing in this context, and whether the vacant building or space could be utilized to house that particular function. The size of the building and its relative location in a larger context were factors that came into the discussion, and bearing in mind that the mentioned buildings might only be available temporarily, functions such as community centers, silent spaces or retreats, communal kitchens, homeless shelters, and daylight spots with café function came up. Also utilizing vacant buildings for the use of startups and as 'connection spaces'—places where one could go to work and collaborate with other people from different disciplines—were mentioned. All could, in one way or another, boost the activity in the area, and create a more lively, vibrant situation.

Although the original function of the spaces would be altered greatly, many such changes do not necessarily imply large, permanent alterations in the appearance and structure of a building. In cases where the use would be only temporary, for example in between rental periods or for short impulse uses such as pop-ups, it is essential that the impact on the building is minimal. Both for structural reasons, as well as for the swiftness of the usage. Interior architects play an important role here, as they have the vision needed to successfully adapt a space to a new use.

The workshop provided the grounds for further investigation into the topic of temporary uses. The variety in situations and possible utilizations, as well as the different needs expressed during the workshop were inspiring for further study.

# 1.8 Matching demand and supply

Upon identifying the apparent demand and supply, these elements ought to be matched. By doing so the use density of spaces is increased and a more sustainable situation can be created: existing spaces are used more optimal. The demand, coming from the potential users of the space, and the supply found within the buildings, should be inventoried and documented. Setting up a database which incorporates information from both sides allows insight into the present situation. In turn this will allow for the users of the database to find the space they require, ensuring otherwise vacant space to remain used.

This is achieved through the creation of a matching mechanism which holds the information regarding the availability of spaces. In order to make the matching process as efficient as possible, there needs to be clear communication between the two sides, and feedback should be collected from the users.

When comparing this to other phenomena that are well documented and organized, such as libraries and even warehouse management systems, it becomes evident that there is much positive potential in investing in a similar kind of system. Expanding this from a mere database to a genuine service will benefit contributors and users, and more importantly, help create a more sustainable situation.

Aalto University's facility management kept pointing at each other, both claiming not to have such vacancy. After persistent emails and phone calls, it was possible to schedule a meeting with Jarkko Leinonen, Head of Campus Development, who was able to provide the much needed information. In an interview he clarified the Otaniemi Master plan and the denouncing of twenty-two percent of the campus premises.

He was able to shed light on the reasons behind the large amount of vacant spaces. The first reason mentioned concerned the rental contracts that apply to buildings. These are agreed upon for longer term and thus the lease cannot be terminated for those buildings yet. These can be considered empty. The second reason involves the condition of the spaces. Certain spaces within the buildings are in bad condition, and therefore are not usable. The third reason includes the unused spaces within the schools and department buildings. They are registered as used, but in practice are not, thus they are unused. A forth category are the buildings left as spare. They are recurrently used to house departments which can temporarily not use their respective buildings due to renovations. The spaces in the third category have the most potential as they call for a critical assessment of the actual need for space and a rearranged division of allocated space based on the results. This may in turn result in categorizing many of these spaces

## 1.8.1 Thesis Statement

Evaluating all information, and acquiring information about a lingering vacancy situation at the Otaniemi campus of Aalto University, the researched deepened. Upon informing about the large amount of dispersed vacant space, AYK and

# 1

• Rental agreements stretch longer than use terms

# 2

• Poor condition of facilities, making them unsafe (health wise) to use

# 3

• Practically unused, registered and designated to be used

# 4

• Spare buildings, kept to temporarily house schools which cannot use their respective buildings due to renovations

in the first category. In both situations the spaces ought to be taken into use, be it temporarily or on a more permanent basis.

After receiving a document that clearly indicates which spaces are unused, where they are located, what their function has been and what their size is, the amount appears to be over two times higher, reaching well over 11,000 sqm (Leinonen 2013b). Considering that Aalto University pays commercial rent for these spaces, it is obvious that changes need to be made. The empty and unused spaces in the Aalto University Otaniemi campus should be made flexibly available to students in order to achieve a more sustainable situation.

## *1.8.2 Deepening the research*

To deepen the initially stated research question of how the vacant spaces within the Aalto University campus in Otaniemi can be made available to the University's Creative Community, a number of sub questions was drafted:

1. How is Aalto University's creative community formed?
2. What types of spaces does Aalto University's Creative Community need?
3. Which spaces are vacant, and how can they be made accessible?

The following chapters study the context of Aalto University in order to answer the research questions. These focus on Aalto University as a whole, looking specifically into the situation at the Otaniemi campus. As mentioned, different departments and organizational units within the University will move to Otaniemi, which ultimately makes this campus the most interesting to study.

# Part 2.

## Otaniemi and Aalto University

Otaniemi is part of the T3 area, which stands for *tiede, taide, talous*, meaning science, arts and economics. These terms respectively refer to the Otaniemi, Tapiola and Keilaniemi districts in Espoo. The city of Espoo is developing these areas as one, and aims to create an “innovation city”. It is destined to become the second city center of the HMA. At present, an extension of the current metro line is being constructed, which will place the T3 area within ten minutes travel from the center of Helsinki. Aalto University will play an important role in the development, as it is marketed to be the world’s first innovation university (Tyry-Salo 2012).

The Aalto University campus in Otaniemi is the largest campus of the University, offering over 14,000 study places, and about 4,000 jobs and professorships (Lohi, Lind 2013, Aalto-www 2013b). They are divided over the four schools of technology, being the School of Engineering (ENG), the School of Chemical Technology (CHEM), the School of Electrical Engineering (ELEC), and the School of Science (SCI). In addition, the Department of Architecture, part of the School of Arts, Design and Architecture is located in Otaniemi. These are currently situated in the numerous campus buildings, with a total amount of 288,000 sqm (Kankaala, Viinamäki 2013, interview March 7th), including the 11,000 sqm of vacant space as stated by Leinonen (2013b). With the development of a new campus building, consisting of approximately 50.000 sqm for accommodating the School of Arts, Design and Architecture (Campus2015 Competition Programme 2012), together the total number of students is expected to increase to about 17,000 (Aalto-www 2013b).



Fig 9-10: T3 Area in Espoo, consisting of Otaniemi, Keilaniemi and Tapiola

## 2.1 The Otaniemi Campus setting: Urban

The urban environment and setting in which the Otaniemi campus of Aalto University is situated has a large impact on the atmosphere. The park-like surroundings make the campus feel remote from the busy city life of close by Helsinki.

Looking at the T3 area, and Otaniemi in particular, it presently is a rather quiet place. The campus is no exception to this. There is not much action going on, only an occasional student walking from one building to another. With an enabling culture in place the area has the potential of being a thriving and exciting place to be. In only a few years’ time the metro will improve the connection with Helsinki, and with the addition of the art and design students, the area will change its appearance and atmosphere. The current technology monoculture in Otaniemi, the purely housing oriented Tapiola, and the business area of Keilaniemi will be diversified, and the already ongoing mixing of fields will continue. The campus, office park and surrounding dwelling area have the potential to become an attractive place to organize events, roam around and meet people.

What possibilities there are for activating the surroundings more, how the accessibility is at present and how it can be improved through different methods of wayfinding has been elaborated in the following subchapters.

### 2.1.1 Activating the urban environment in Otaniemi

Looking into what is needed at the beginning of such a process, Pulkkinen (2013b, interview February 4th) explains

that it is essential that there are people in need of space. This to ensure there is already some action going on. Secondly the kind of spaces that are available come into the picture. There is an overload of space available, though the special character of the space is what distinguishes one from the other: what makes one area transform into a bubbling creative district, and another to become derelict.

Furthermore, there needs to be a culture of ‘making possible’, or allowing, making people feel free to use the space. Then the information about the possibilities and activities taking place there needs to be communicated. Another essential ingredient is a café. It is a place where people meet and come together. These types of spaces are so called ‘third-spaces’. They are spaces other than home or your usual workplace. Florida (2002) describes them as (semi-) public spaces for informal meetings. They form a welcome change in our everyday life. Whyte (1988) explicitly states the need for food in activating an urban environment, which can be accommodated in these cafés. At present there are mainly student restaurants, of which the majority serves food only during lunchtime.

Lastly, events can be organized to activate the space (Pulkkinen 2013b, interview February 4th). And for such activities there is plenty of space on the Otaniemi campus. When all these elements are in place, there is a good base to develop the area from the grassroots, and make the place attractive to the wider Aalto community.

Something that is not lacking in Otaniemi, and which could be used as an asset much more than is currently done, is the green space. The park-like environment in which the campus buildings are situated is supplying plenty of natural elements.

Open grass fields and trees, and the development of the campus gardens make the outdoor space nice to be. Providing seating will market the space more as a place to stay. As described by Whyte (1988) it is essential to have sufficient and plentiful seating options. These can be ridges and edges of planters for example, provided they have proper dimensions and are at a comfortable height. Also movable chairs are mentioned.

*“Having a back, it is comfortable; more so, if it has an armrest as well. But the biggest asset is movability. Chairs enlarge choice: to move into the sun, out of it, to make room for groups, move away from them. The possibility of choice is as important as the exercise of it. If you know you can move if you want to, you feel more comfortable staying put” (Whyte 1988).*

The seating options can provide a more comfortable, natural environment. When providing sufficient sheltered places to abide, the outdoor environment will be a more attractive place. (Whyte 1988).

## 2.1.2 Accessibility

Accessibility influences at different levels. The reachability of the larger area, the navigation in the vicinity of a destination, and in a smaller scale the wayfinding inside the building, and physical accessibility in terms of the possibility to enter into a space.

At present the Otaniemi campus is reachable by car, bicycle, bus and on foot. Regardless of the form of transportation, the outdoor wayfinding is problematic (Pulkkinen 2013a, Nenonen, Airo et al. 2013). There are no directions from the entrance points into the campus, and outdoor signage is limited to the name of the University in three languages, and the street address of the building. They are rather minimal in terms of information, and in winter they are often hidden from view as snow piles up in front of them. Besides these signs, there is a limited amount of campus maps spread around the area. It is difficult to orientate when arriving there for the first time, as all buildings look rather similar. A number of them have been designed by the famous Finnish architect Alvar Aalto, and are mostly made of red brick. Furthermore all buildings are oriented inward, which causes a visitor to be oblivious to the proximity of the sea. All these factors contribute to a very disorienting experience.

## 2.1.3 Wayfinding on the campus

The currently provided aids regarding wayfinding on the Otaniemi campus are minimal. The Schools and Departments are not marked, nor are there directions provided on the campus. This can of course be reasonably easily overcome with the aid of maps and a Global Positioning System (GPS). Such a system can be consulted through a Smartphone or navigation system, making it possible to find the building upon

keying in the address. In addition to car-accessible roads with sidewalks and bicycle lanes, there are also smaller paths across the campus. These can provide a convenient shortcut for pedestrians and cyclists. However, the fact remains that there is little to no signage, which makes it necessary to either use a map or a GPS system. Only when one is familiar with the campus it is possible to confidentially take a certain route.

When moving around the campus in a car, the issue of parking comes into play. There are several parking spaces on the campus which are currently free of charge. Not all buildings have car parks situated directly near them, and when leaving one's car in such a place, the campus should be further explored on foot.

It would be very beneficial to the welcoming character of the Otaniemi campus and Aalto University, being part of the T3 development area, to provide for better signage on its premises, clarifying the directions of facilities, as well as to provide ample parking for bicycles.

## 2.1.4 Accessibility of buildings

When moving around the campus on foot, the buildings do not look inviting. Their entrances are hidden in the shadow of a canopy, and the doors are solid and closed. This forms an obstructive factor to those coming to Otaniemi for the first time.

When it comes to entering the buildings the entry points are of crucial importance in terms of appearance and invitingness. There are little possibilities to grasp what goes on inside the campus buildings, because of the closed appearance of the facades.

Furthermore, many entrance doors are elevated, and require one to take a small stairs to reach the doors. Whyte (1988) makes note of this in regards to the use of indoor plazas, and concludes that leaving a door open is a way to draw people in. People are not likely to use a place if they cannot see it. Taking this further, it could be logically concluded that if people don't know a space is there, they will not use it. Together with the minimal information provided outside of the buildings, this results in an alienating experience for first time visitors and creates demotivation with regular users of the campus to explore other buildings.

Outside office hours, which run from Monday to Friday, 8.00 until 16.00, each buildings can be entered only by those holding a key to the specific building. Over time many buildings have been equipped with a digital key-card system, though others remain openable only with a physical key. As not all locks have been replaced at the same time, there is a variety of electronic key systems in place. This is a very administration heavy and loss sensitive system. The variety of accessibility modes furthermore implies that one who has access to certain buildings, might not be able to enter others. Also when visiting the campus—as for example often happens



img 11: Snow concealing the information on the signs



img 12: Covert entry to Otaniementie 17, TUAS building

when multi-disciplinary student-teams decide to meet on the Otaniemi campus—outsiders need a patron to enter the buildings. Once inside the freedom of movement is limited by individual door-locks. In an exploration of the campus' vacant spaces by the author, locked doors were a common encounter. The spaces need to be critically assessed in terms of accessibility, and the reasons for keeping the doors locked. When this is done, it is possible to review the situation and make adjustments. This might include unlocking certain doors during the day, but ideally also the implementation of a uniform key system. When ensuring optimal accessibility, a future oriented choice of entrance control should be taken into consideration. The present systems, apart from the key-code, all need a physical object previously acquired. When aiming at making the spaces available more flexibly, such a system is devious and impractical. Ideally, a code-lock would be installed on all spaces that require it, granting access to those people who need to be there.

## 2.1.5 Wayfinding inside buildings

Inside the buildings, previously discussed signage should be kept in mind. Upon entering a building on the campus, one is left to the directions provided inside, which differ per building. The methods, quality and quantity of directional information varies widely. The signs often indicate room numbers. However, not all spaces in

Descriptive versus visual directions:  
*"The entrance is next to the shop in the large Arabia building, in a glass corridor."*



Img 13: Online directions to Aalto Media Factory  
 Source: <http://mediafactory.aalto.fi/contactus/>

the buildings are referred to by their room number, taking an example of a library or canteen, which makes this information insufficient. The information provided inside the building must correspond with the information provided beforehand, through for example information leaflets, websites or email newsletters. A mere indication of '2nd floor' does not provide the information one needs in order to find the stairs, know which direction to turn at the top of the stairs, and find the desired destination.

## 2.1.6 Analogue wayfinding aids

Finding one's way in a new environment can be difficult. When tools are applied to aid wayfinding, the experience can be less stressful (Arthur, Passini 1992). Often times information provided prior to arrival is focused on the spatial surroundings of the building. Directional information inside the building is however most often provided in the form of signage and arrows, which results in visitors not paying attention to the environment (Deasy 1990). This inconsistency needlessly complicates wayfinding.

There are different ways to overcome this inconsistency, one of which includes making the signage more specific. When the name or type of space is mentioned on the signs, rather than the room number, this can make it easier for visitors to find their way.

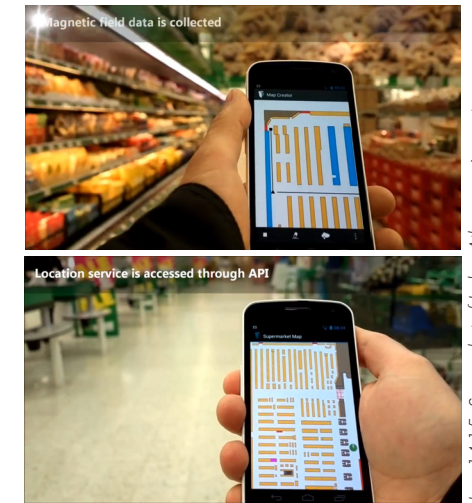
Another, more wholesome option, to overcome the inconsistency in room number

and space name would be to ensure a clear non-signage related way of guiding the visitor in the right direction. This could be done through branding a space in a distinct way, and consequently implement this brand throughout the building in order to direct the visitor towards it. Knowing the identity of the space you are looking for, and finding hints of this throughout the building, can help in finding it more easily (Arthur, Passini 1992).

## 2.1.7 Digital wayfinding aids

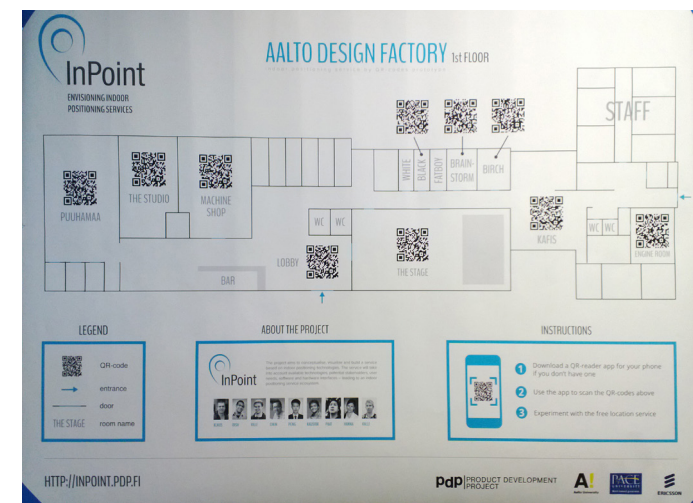
For navigating outside we have the possibility to utilize handheld devices, such as Smartphones, equipped with GPS. Because the satellites cannot detect devices located indoor, GPS does not work for finding a space within a building. There are possibilities to utilize high-tech devices for indoor wayfinding. Several types of positioning systems are being developed, of which InPoint is one. The project started in 2012 as part of the Aalto University's Design Factory Product Development Project (PDP) course. The InPoint positioning system works with QR-codes which are to be scanned by a mobile device. When scanning different codes the embedded information is read, and your position, destination and routes are displayed. The visualization at the physical place where the codes are scanned is based on an analogue, static map, on which the QR-codes are displayed, as well as the location of the user (InPoint 2013).

Another positioning system for indoor use is IndoorAtlas, which bases its navigation on the deviations in the magnetic field caused by the building structure. It works with the compass in the used mobile device, and when installing the software, the system is able to tell precisely where in the building the user is located. With the unique magnetic fields, the Smartphone with the IndoorAtlas software will be able to navigate one to where they need to be (IndoorAtlas 2012). This system works with a predefined digital map of the building.



Img 14-15: Screenshot of IndoorAtlas mapping system  
 Source: <https://www.indooratlas.com/>

These type of developments have the potential to improve the wayfinding situation, and through that the accessibility significantly. They are able to aid us, and provide us with much needed information in new situations and places. Mapping out the Otaniemi campus buildings with such a wayfinding application will make the area, and its buildings more accessible, and reduce the threshold of entering unfamiliar buildings.



Img 16: Picture of InPoint floorplan, depicting Aalto Design Factory with QR codes in rooms



# 2.2 The Otaniemi Campus

## setting: People

The Otaniemi campus offers working-studying- and living space to both students and professionals. Besides Aalto University, a number of companies is located on the campus, among which is the Finnish Research Centre VTT. The campus is not only a working place, it also offers housing to thousands.

### 2.2.1 Cultures

As mentioned, the Otaniemi campus is the home of the technical branch of Aalto University since 1955 (Campus2015 Competition Programme 2012). They have their roots there, and have formed many traditions over time. One of these is the renowned Vappu stunt. Each year on the thirtieth of April Finland celebrates May Day. It is a day on which all students go out for a picnic, and celebrate the end of the academic year. Each year, the technology students—who are called Teekkarit—think of a provocative activity.

*"[T]hese classical park benches, the green ones that you see everywhere. They bought one of those from the city of Helsinki. And then they were carrying it around in the Vappu time. So the police goes and stops them. They can of course show that they own this. After which the police [...] say on the radio, "they own it, it's ok". After that [...] the city is full of Teekkarit who are carrying these park benches around" (Pulkkinen 2013b, interview February 4th).*

While the technology students go off the campus, the art and design students at Aalto University are more active within their own study surroundings. The users of the Arabia campus have been able to modify the spaces. This kind of student activism is what is needed in Otaniemi to make the campus

a nicer place to be.

One major limiting factor in this is the protective situation applying to the buildings designed by Alvar Aalto. The buildings were designed after the architectural firm of Alvar and Aino Aalto won the town planning competition in 1949 (Campus2015 Competition Programme 2012). The buildings are considered to be of high historical and cultural value. Because of the importance given to the built structures, there is reluctance and disallowance to genuinely inhibit the spaces.

In order to spark this change, the Aalto University Student Union (AYY) is establishing a Campus Guerilla Group. They will function as a platform generating concrete ideas, with the aim to develop the campus from the grassroots up. The group will work on idea generation, and by creating a platform, allowing all members of Aalto University's Creative Community to share their ideas. The group gathers these ideas to possibly realize them in the future. By being an open platform for all members, the community should come together. The present technology students get chances to be more involved, and the newcomers can start at the same level with the others. By merging both groups this way, equal chances are created. This approach enhances a sense of fellowship, eventually forming a genuine Creative Community. This Guerilla Group was initially planned to be running in the Spring of 2013, however it was not yet possible to gather an enthusiastic group of people. When this Guerilla Group is established it could be beneficial to the liveliness of the University campus.

### 2.2.2 Stakeholders

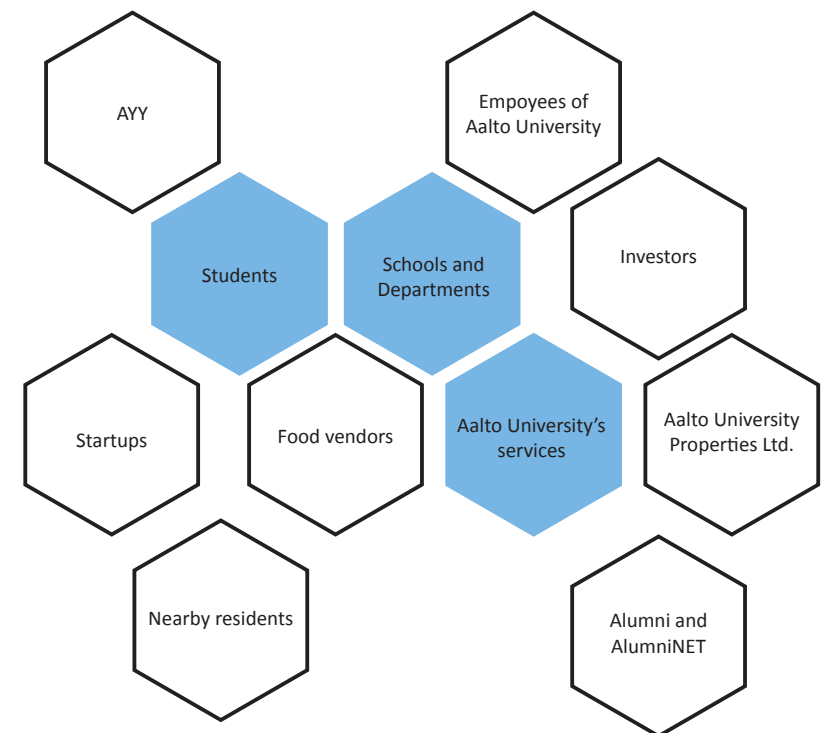
Different actors are involved in the University's facility system. Looking at the situation on the Otaniemi campus we find the following stakeholders:

- AYK; which owns the building, and receives rent for the premises which are under contract. At present this involves Aalto University, and a few other tenants,
- Aalto University; which can be roughly subdivided into the overarching services and the Schools and Departments. These bodies can be considered to act on behalf of Aalto University, and are both practical and theoretical users of the premises leased from AYK,
- Students; who are the practical users of the facilities, and act on behalf of themselves,
- AYY; they cater for the interest of the students, and work in between the University and the students,
- Employees; Aalto University's employees have different possibilities for utilizing the facilities.
- Startups; emerging from Aalto University, or coming from elsewhere to be part of the developing T3 area, small starting up companies are potential users,
- Food vendors; Needed to provide the users with food, as well as additional meeting places,

- Nearby residents; upon increased use and facilities on the Otaniemi campus, its surroundings will be influenced, which could be positive for this stakeholder group,
- Investors; Both in terms of financial investment and knowledge investment, corporations can benefit from the talent and facilities of Aalto University,
- Alumni and AlumniNet; Stay connected to the University.

The different stakeholders relate to each other on different levels. Those marked in blue are primary stakeholders, meaning they have the primary interest and benefits from the use of aforementioned spaces. They will either be directly affected by the possibilities, or have certain practical responsibilities. The remaining stakeholders have a more distant and indirect relationship with the space use system. The closer they are to the primary stakeholders, the stronger their tie and interest.

Based on this stakeholder map it is possible to focus specifically on the primary core group. Following this part of the process decisions can be made regarding who to address and who to involve in the further process. In order to investigate the opportunities, two personas were



Img 17: Stakeholder map

drawn. These fictional characters are based on the student population of Aalto University, who will benefit most directly from the proposed and existing facilities.

When looking at the situation from the different stakeholders viewpoints:

#### Schools and Departments

The Schools and Departments within the University are occupying buildings or parts of buildings on the campus. These buildings could house flexibly usable spaces as described earlier, and draw in a more diverse group of students and employees. They now have the buildings exclusively to themselves, and welcoming others into their buildings requires a change in mindset.

#### Aalto University's services

The Facilities and Services management can utilize the spaces more optimal, even at times when they are not in use by a School or Department. The spaces do not need to be heated and maintained without anyone using them, which is a more desirable situation than the current vacant state.

#### Students

Students can use more spaces on the campus and become more familiar with their study surroundings. They can dedicate more time to studying rather than finding and arranging a space to study or meet, than they could when there are less spaces.

## 2.3 Aalto University's Creative Community

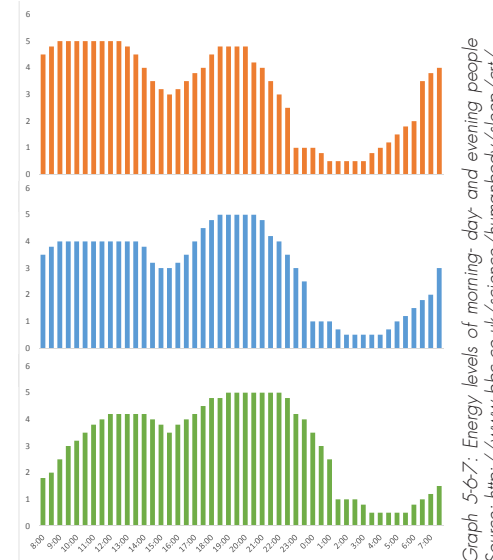
The user community consists of Aalto University students, staff and professors. They form Aalto University's Creative Community through their common denominator, and their ability and enthusiasm to develop ideas using their unique skills and imagination. The large community, mostly consisting of students, needs to be able to influence their study and living surroundings. According to architect and doctoral researcher Katri-Liisa Pulkkinen (2013b, interview February 4th) the area is presently not very inviting as it is difficult to navigate and form a mental map. The outside areas are generally left empty, as people only occasionally move from one building to the next: they do not roam around outside. In an interview regarding the creative attractiveness of the campus, Pulkkinen (Ibid.) states that the Otaniemi campus is generally considered to be unattractive because of the technology mono-culture. Her studies focus on the comparison between the Otaniemi campus and the change that went on in Punavuori, Helsinki, as that area slowly transformed from an unattractive area with a bad reputation to a bustling city district, filled with trendy boutiques, bars, and creative studios.

The campus in Otaniemi could benefit from a similar approach which stimulates random and free use of the available urban space. When the users are stimulated to use their study and work surroundings more freely, they can activate the campus and make it more lively. Once the ball is rolling, more people will become attracted to the area. The campus, located in the T3 area, can play a pioneering role in putting Espoo on the map.

### 2.3.1 Changes in demand within Aalto

Students do not only study during daytime in the workweek. More multidisciplinary groups are working on project cases and arranging meetings often results in deciding to meet in the weekends or evenings. Space should be provided for such activities.

As the way in which studying takes place shifts from the traditional one-way information distribution to peer learning, the facilities need to suit these demands. Looking into the facilities at the different Aalto campuses, the Otaniemi campus buildings have many lecture halls with fixed furniture. Because of this, there is no flexibility in the arrangement of the space and they are not particularly suitable for interaction among students. The design is based on one way communication: from teacher to pupil. As modern studies are more and more focused on group work and peer learning, students need to have access to spaces which suit those methods of working. This involves discussion and visualization of ideas, which cannot be done in such classrooms or a traditional library setting.



## 2.3.2 Situation at Aalto: Obsolete buildings

The background research looks into involve entirely vacant buildings and taking them into use as such. The problem identified within the Aalto University campus in Otaniemi concerns single or multiple unused spaces, classrooms, offices, etcetera, in otherwise actively used buildings. Considering the large institution Aalto University is, this vacancy can easily go unnoticed. On paper the buildings are used fully, though in reality many spaces are left idle. These spaces are either appointed to a person or to a department or study program, which apparently does not need it and as a result the spaces are not being used.

This results in vacant spaces scattered around the campus area. Because of the hidden character of this vacancy, the managing bodies have difficulties discovering them. At moments where they do, it appears to be considered inappropriate to raise the issue regarding this lingering problem. It is however a terrible waste of resources to leave the spaces empty and unused, and thus this situation needs be changed. In order to do so effectively, time and effort need to be spent on the matter, ensuring to find the best possible solution. However, as the information is scarcely disclosed, it is difficult to resolve the vacancy issue. The topic of vacancy within the University will be further dealt with in [chapter 2.6 Surplus of spaces](#).

# 2.4 Existing types of work- and learning spaces

Aalto University's campus in Otaniemi has a supply of various types of work spaces for its people. Anticipating on the increased variety in backgrounds the community will have, the current supply ought to be expanded and improved, including increased variety in types of spaces.

At present, there are different types of working spaces available, both to students, as well as to other members of the Creative Community. These can be found in the School and Department buildings, such as computer rooms for individual students. These work places provide computer equipment and often printing facilities, and on occasion some might be in use as computer classrooms. As a basis, a university consists of classrooms and lecture halls: the place where the primary pedagogical activities take place. These spaces are not discussed in the following subchapter, as are the traditional offices for teachers and other staff.

The types of spaces are divided into two categories: Those who are open to all members, and those who are focused on a subgroup within the Aalto Community.

a whiteboard. The rooms are suitable for group discussions and meetings. The faculty libraries are different in terms of what type of workspaces they provide. The libraries are of varying sizes, though in general there is some space for reading and studying.

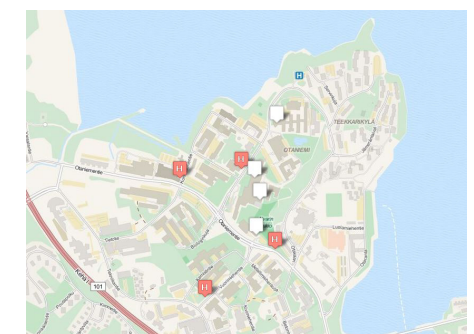
### Learning Hubs

A number of libraries within Aalto University have a special Learning Hub space inside or nearby. These spaces are initiated and developed by Valeria Gryada, Interior Architect and graduate of Aalto University. Each Learning Hub is developed together with students who are enthusiastic to create one. The spaces are all informal with comfortable seating for casual studying, often situated in small clusters (Gryada 2012). At present there are five Learning Hubs spread out over the campus, with varying sizes. The spaces are used by individual students, but also by groups for meetings. Their popularity could increase, as the spaces have the capacity to be used much more.

## 2.4.1 Spaces open to all

### Libraries

In the libraries, spread around the campus inside the different school buildings and in the main library building, there are silent study places available, as well as group working spaces. In the main library the individual workspaces are located in the general space, and quietness is the norm—as is customary in a library. The group working spaces in the main library are equipped with tables and chairs, and



Img 18: Existing and planned Learning Hubs  
Source: Learning Hub presentation by V. Gryada

### Case Learning Hubs

Around the Otaniemi campus more and more Learning Hubs are emerging. The first one was developed in an uninspiring study room in the Töölö library. Changeability of the space played a large role in its development. For its development the set-up of other, similar learning centers, in regards of their program, changeability, openness and appeal to the

senses was studied (Gryada 2012). The outcomes of this research found a practical synthesis in the development of the Aalto Hub Töölö. The space was opened in September of 2011, and the use of the space increased considerably compared to earlier years. The space was designed to house different types of use within one space, separating them visually and aesthetically. This resulted in individual workspaces for concentrated work, a group-work table for discussions, as well as a lounge area located in a 'Hub House': a cardboard house creating a separate space inside the 65 sqm space, functioning as an indoor walk-in pavilion which could be easily transported for display and use elsewhere (Ibid.). Over time, Gryada, in collaboration

space. To create support for and interest of students organized the realization of the in the Learning Hub, the team collected information from students and staff, and based on the provided information the design was made. The Learning Hub consists of several grouped seats and meeting spots, as well as more lounge style seating. Furthermore there is a separate block inside which 3 meeting spaces are placed, as well as a large table with ample seating on top of it. The spaces are to be used by Aalto's entire Creative Community, as well as outsiders. The entry is open and informal, which makes it easy for anyone to enter, regardless of their familiarity with the building. During different observations the casual seating and group working spaces seemed most popular, unlike the individual desk-style workspaces, at which was considerably more space available. This division in use creates an interesting lead for further research and development of such informal seating options, as well as group meeting facilities.

### Factories

Other places in Aalto space with casual meeting possibilities are the 'Factories'. The factories are located on the different Aalto University campuses, matching with the fields on which the schools have collaborated. The Design Factory, Media Factory, Health Factory and Service Factory are set up as platforms within the University, combining the expertise of the different schools. As each factory is set up differently they offer different facilities to the Aalto community (Aalto-www 2013a). The service factory, located at the Töölö campus, focuses mainly on research projects and coordinating service-related educational activities. They

with the Aalto library team and different groups of students, developed several more Learning Hubs. They are located inside the libraries of certain Schools, or in the case of Learning Hub Sundek in several leftover spaces in the School of Engineering. The collaboration with the library comes in a time where study needs, as well as study methods change. Books are used less as digital material is becoming more common. The recently opened Learning Hub Greenhouse, located in the library of the School of Science, the Library had space available, and under supervision a team



Img 18: Hub House  
Source: V. Gryada, Everchanging Space



Img 19: Learning Hub Greenhouse  
Source: <http://www.aalloadesignfactory.fi/design-factory-news-wedhuc-6-3-12-3/>

invite international speakers, and host events (Service Factory 2013). The Media Factory at the Arabia campus, focuses on media related activities, and in addition has several studio spaces, housing a Web Studio, an Electronics Studio, a FabLab, a variety of AV facilities, as well as a gallery space and open working space. The space is accessible from nine in the morning, and is open for everyone (Media Factory 2013). The Design Factory, located in Otaniemi, is focused on Design Research and multidisciplinary collaboration. It is located in a separate building on the University campus, making it equally accessible to everyone. The Design Factory has a variety of spaces, suitable for different purposes, such as meeting rooms, lecture spaces, leisure spaces and work- and project rooms (Design Factory 2013). There are a number of solo working desks and the building is furthermore equipped with several workshops in which prototypes can be fabricated. The Design Factory is the biggest of the factories, both in terms of size and popularity. It is a well-known space among students. (single most mentioned known space in the survey 28) Attachment 1) Further details about the Design Factory are given in the following case study.

### Case Design Factory

The Design Factory, located in Otaniemi, serves as an open, experimental platform where students, researchers and business practitioners come together and collaborate generating new insights. The platform is located in a former industrial building and has been set up in 2008 as a working environment, floating between the different disciplines of

Aalto University. The Design Factory consists of several spaces, which are used day-in day-out by students, staff of the factory, teachers and researchers, companies and various visitors. People come there for various reasons. One space in the building is dedicated to a group of students who are involved in the Product Development Project course. The space is freely accessible to all, and is part of a larger hall in which small meeting or discussion spaces are situated. These are placed inside and on top of shipping containers, creating a small space for intimate meetings, separated from the larger hall. Also in other parts of the building there are small meeting spaces. These can be reserved by blocking a timeslot on the calendar next to the door of the room. These rooms are themed in order to give the discussion a boost in case needed. The spaces are used by student groups, but also for smaller one-on-one meetings which could not as easily be held in open spaces such as Kafis. This kitchen is the heart of the Design Factory, and is on the crossroads of different parts of the building. Because of its function and casual atmosphere it is often visited to take a break, work individually or casually meet others. The possibility to use the equipment makes it inviting to gather at Kafis and cook a meal with friends. This space is popular, and used intensively.

Other spaces which can be used equally by all are the hot-desking spaces, one of which is called 'the Holiday', and is located upstairs. This particular workspace is equipped with desks which can be reserved by writing one's name on the table, together with a specification of when you will clear the desk again. Each desk has a lamp and an external screen which can be wired up to a laptop. A number of other spaces are equipped with full workstations. The Design Factory is used



Img 20: The Holiday at Aalto Design Factory  
Source: ADF Flickr stream

at all times of the day. Community members using the space often refer to the style of the interior in a positive way. The Design Factory, despite its immense popularity and success, is still rather unique in its stimulating and open character as a study space. Naming it a study space does not do the Design Factory justice, as it is much more than a mere collection of study- and meeting rooms, showcasing space and workshops. Although the Design Factory practically houses those spaces, it is bustling with creativity, motivation and enthusiasm coming from its users. They are what makes the Design Factory to the success it is today. Taking the interior design, which is often mentioned as an important factor in the success of the space, and implementing it elsewhere on the campus would not guarantee similar popularity. The flexibility and freedom users have to alter the space to their liking, and the low pressure instructions which are given through short informative texts on the wall or equipment, are part of the success formula. The ability of the operators and creators of the space to allow for spontaneity and change in the Design Factory are a big influence in the way the space is perceived, and to which extent users feel the space is theirs. An active student community, eager to excel in their studies, is what is needed to create the right atmosphere. The aesthetics are complementary to the satisfaction, and need to be in balance with, among other factors, social interaction (Florida, Merlander et al. 2009) These factors combined create the success, and would need to be created elsewhere to achieve similar popularity.

## 2.4.2 Miscellaneous spaces

Above mentioned workspaces offer the possibility to come and work in their accommodation among students from all different fields, and even professionals from outside the Aalto community. The variety in backgrounds makes for alternative ways to look at things and tackle problems, which can be a great benefit and offer new possibilities. The University, and in particular those spaces which are aimed at mixing disciplines, offer the ultimate opportunity to develop multidisciplinary skills and understanding about others. Following are a number of facilities

existing on the Otaniemi campus which are focused on facilitating the needs of specific subgroups within the Aalto Community.

### Urban Mill

Another co-working space which is more focused on a single target group is the UrbanMill. It is a new concept and is still under development. UrbanMill is a prototype co-working space focused on different forms of urban innovation (Mikkela 2013). The driving force behind the activities are Kari Mikkela, innovation architect and urban service engineer, and Lars Miikki, project manager and consultant. Together they are building the service, drawing in various parties, and generating a viable business. In the months after the opening in January 2013 the space has evolved from an empty industrial hall into an actively used workspace. Different events are hosted at different times, such as the PDP Gala. The final presentations of the Product Development Project course of Design Factory took place in UrbanMill, opening its doors to all who wished to visit, making a large crowd familiar with the facilities. Prior to this Gala, the Urban Mill provided space for a number of project groups from the PDP course. The remaining space is used by numerous small companies or parts of larger businesses. They have a workplace at their disposal in return for an investment in the Urban Mill, both financially and socially.

### Startup Sauna

Besides cooperation with Design Factory, UrbanMill also works together with Startup Sauna. The buildings of these three workspaces are located near to each other around a common courtyard, making it an ideal situation for active collaboration. Startup Sauna is an incubator working under Aalto University. They launch a program each year to which start-ups from Northern Europe and Russia can apply. The Startup Sauna consists of several semi-separated workspaces where the companies can work, as well as an open event space, separated offices, and a casual space with the kitchen nearby. The event space is used for their 'Slush Conference', bringing together companies, start-ups and investors (Startup Sauna 2012). The presence of this kind of facility

on the campus is a great asset in facilitating a culture of enabling and student activism.

### Synergy space

Aalto University also offers space to other kinds of initiatives, more indirectly focused on creating synergy between disciplines. Node Gallery and Aalto Global Impact radio project are examples of these. The Node Gallery is located at the art department in the Arabia campus, and is set up as a contact zone where community members can exhibit their work, and others can come to see it. The gallery aims to create a platform for innovations and new working methodologies within the fields of Art and Education (Node Gallery 2013). Guild rooms, located in Otaniemi, can be categorized as synergy spaces. These are rooms which are accessible only to the members belonging to that guild. The spaces are decorated and maintained by the members, and can be used by them to relax, study or meet-up with other members. At present Ulpu Kojo and Eelis Rytönen, two doctoral researchers at the Built Environment Services and Future Learning Environment research groups, are doing an excessive research into creating Aalto Guild rooms. These casual spaces would be open to all students of the University, and aim to create more cohesion among students.

## 2.4.3 Generally accessible spaces

Besides these specifically organized and branded spaces, the University campuses have several computer workrooms and open study spaces, varying in formality. At present these facilities are mostly used by students from the school in which the space is located. Mixing happens only sporadically, mostly in situations where it concerns multidisciplinary groups.

Concluding, there are several spaces available for studying and working within the campuses of Aalto University. There are many options where students, but also staff members and outsiders, can go to meet each other. With the future move of the School of Arts, Design and Architecture

to Otaniemi, and the current unawareness of students on the possible study spaces, more such spaces could be created in the future. The knowledge among the community ought to be increased in order to improve the use of the spaces, as well as the satisfaction about their options.

# 2.5 Current information systems

The information regarding these facilities is highly dispersed and because of this many students are unaware of the possibilities. The reservation system for the group working spaces in the Otaniemi main library are for example on the library website, while reservations for the group working spaces in the Design Factory are done manually.

## 2.5.1 Online platforms

The University currently has approximately 6 commonly used web-based communication or information distribution platforms. In total there are about 10 different websites that are used by different Schools, Departments and courses. Occasionally Dropbox and Facebook are also used to share information. It is no surprise that students are confused about which platforms they should consult to find the information they need. Regardless of the usability of individual platforms, it would make matters more clear if all information was accessible from a single portal or platform. For employees there is a separate set of platforms to work with, among which is the booking page, from where classrooms and meeting spaces can be booked. This is a completely text-based system, where the person doing the booking must have previous knowledge regarding the space they need: most spaces are named by their room number, not revealing any details about their size, available equipment, or location inside the building.

## 2.5.1 Reservation systems

Whereas employees of Aalto have access to the website where such space bookings

can be made, students cannot reserve a space for any activity by themselves. They need to contact their amanuensis and request a booking. Either the student must know which room they desire, or the amanuensis must have knowledge about the facilities in each available room in order to make a useful booking.

The Learning Hub spaces are rather popular, however, they have a small community which expands very slow because of the difficulties in finding the spaces. Because of this diffuse situation, finding alternatives to those spaces already known to the community is difficult. When students don't know about the available work spaces, it is likely that they are not used optimally. This ultimately leads to remaining demands in terms of workspaces. The usability of each Learning Hub depends on the size, the people who are already there, and the equipment in the space. These are presently not actively communicated.

The group working spaces in the Design Factory and Media Factory can be reserved in advance. The several smaller spaces in the Design Factory are bookable through marking the paper calendar next to the door of the respective spaces. Its larger spaces can be reserved through the website. The Media Factory spaces, including the meeting room, are to be booked online as well. The online bookable spaces in these Factories can be viewed on the website. Their information sheet includes photographs of the spaces, and a list of equipment, in order to get an indication of what the space is like.

The group working rooms in the Otaniemi main library can also be booked online. A calendar contains information about the timeslots the spaces are free, reserved or unavailable. However, no information is provided about the appearance of the

spaces, how many people they fit, and what equipment is available. As the survey results show the need for students to dispose of such information, the lack thereof may result in reluctance with future users to make a reservation: Students try to find a different space. This undermines the booking system, and shows its inconvenience.

All of the available spaces within the campus should be communicated uniformly and complete in order to optimize their use. In order to achieve this, this thesis proposes a web-based information and reservation system.

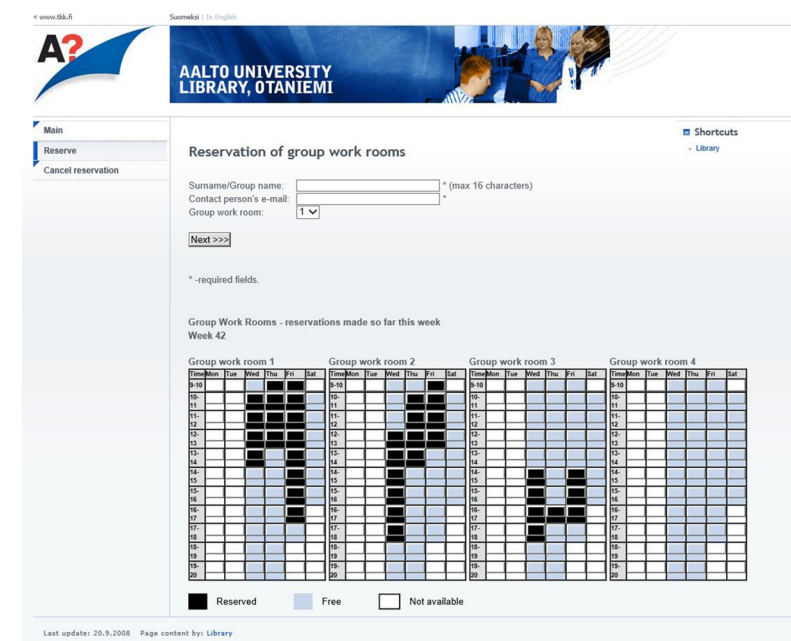


Fig 21: Aalto library group work room reservations webpage  
Source: [http://web.lib.aalto.fi/ryhmatyohuoneet/englanti/groupworkrooms\\_reservation\\_ifron1\\_page.php](http://web.lib.aalto.fi/ryhmatyohuoneet/englanti/groupworkrooms_reservation_ifron1_page.php)

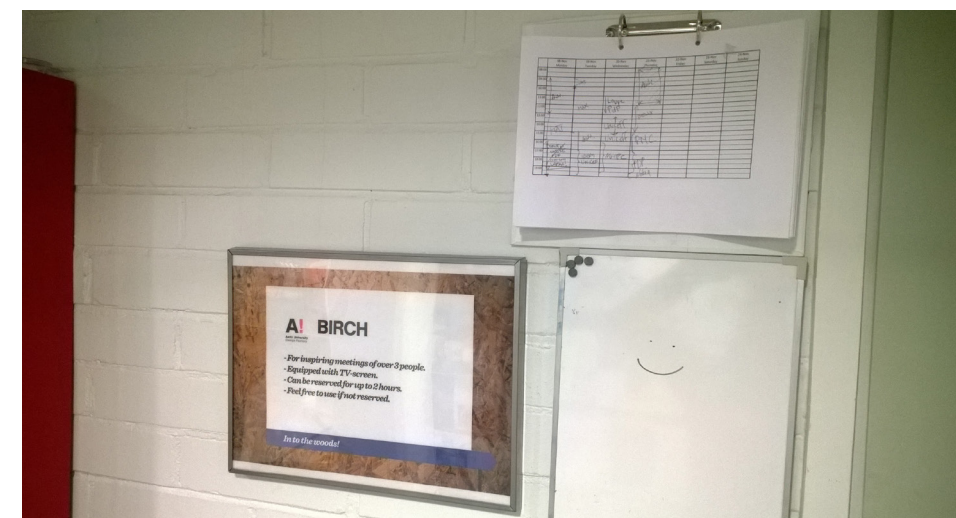


Fig 22: Design Factory group work room reservation sheets

## 2.6 Surplus of spaces

Besides these spaces the University buildings house many classrooms, lecture halls and offices. Several departments have a surplus of spaces within their buildings. Some are allegedly looking for ways to relinquish these spaces, while others are holding on to them, expecting they will need them in the future. Whether the spaces are voluntarily transferred or not, they are vacant nonetheless. The different reasons for building or space vacancy have been discussed in [chapter 1.8.2 Thesis Statement](#), and the spaces studied fall under the third and fourth category: spaces which are registered as used, but in practice are not, and buildings and spaces left as spare. The spaces which have been identified as such are listed, and consist mainly of offices, meeting rooms, storages, laboratories, coffee rooms and classrooms.

Studying is going through an evolution in terms of methods and styles, as are the working styles and cultures of employees working at the University. This creates a need for differently set-up spaces on the campus. Together with the budgetary savings of the University, and the inevitable renouncing of buildings because of this, both students and staff will need different options. Senior researcher at the Built Environment Services research group Suvi Nenonen (2013) outlines the concept of 'office pooling'. Redesigning the workspaces to suit new needs can result in space reduction, focusing on hot-desking workplaces where not everyone is working at the office at the same time (Ibid.).

With the upcoming spatial reduction, and the demand for different types of study spaces, it is a terrible shame that so many spaces are unused yet unavailable. Developing new types of workspaces, or more of the innovative ones currently existing can create a sustainable situation and meet the need of the Creative Community. This creates more flexibility and swiftness in the use per person, and an increase in

the total amount of time space is used.

### 2.6.1 Aalto University Properties Ltd.

To overcome the issue of vacancy the University has decided to renounce a number of its premises. As explained, the properties in Otaniemi are owned by AYK, and Aalto University rents them to house their activities. These contracts are drawn up for several years, and as a result, not all spaces the University no longer needs can be renounced instantly. In an interview (2013, interview March 7th) with Satu Kankaala, environment and sustainability coordinator at AYK, and Jouko Viinamäki, property manager at AYK, they elaborated the possibilities of ending the contracts with the University. When AYK would not agree to preliminarily terminate the agreements, Aalto University will not have any use for the spaces, and will leave them empty. In the long run this has consequences on the state of maintenance and usability. Another option for AYK is to agree to end the contracts, in which case they regain the properties. As a consequence, AYK is forced to find a new user for the space, which could take long, resulting in the premises being left empty and not creating any revenue. One option brought up was for AYK to turn the properties into business complexes, and lease out individual spaces as offices with common facilities. This requires an initial investment, but can yield more income over time.

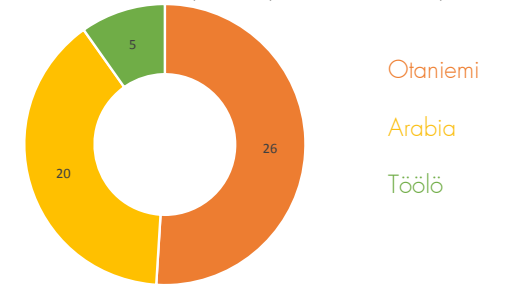
During the negotiation and consideration time the spaces could be utilized for temporary activities.

## 2.7 Inquiring survey

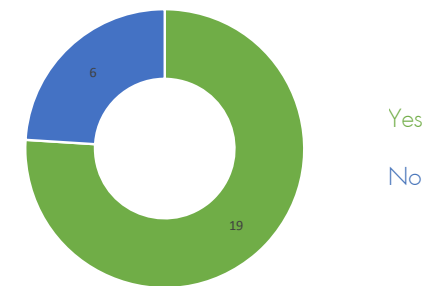
To map out the bottlenecks in the current situation, the author offered a survey to Aalto students of the different schools (attachment 1). This survey was distributed through the widely used social medium Facebook and was additionally advertised through notice papers posted on strategic places in the different campus- and School buildings. Fifty-one students responded. The survey inquires the knowledge with students about the available study facilities, their demand regarding study places, and additional services.

Firstly the survey attempts to make an inventory of common study habits such as the location, type of space, and methods of studying. Respondents studied at all campuses. Most of the people who answered the survey (26/51) are studying in Otaniemi, and the majority of students who study in Arabia or Töölö (25/51) state to be familiar with the other campuses (19/25). The survey furthermore pointed out that the large majority of the studies involve group work (47/51). For meeting with the project groups, most prefer a place in the University, over gathering at one's home or a co-working space. Based on their experience, they rate these facilities in the University with grades far from satisfactory, as the majority (35/50) graded them with a three or lower, on a scale of 1 (very dissatisfying) to 5 (very satisfying). Regarding their impression of the open co-working spaces within the campuses, respondents find that among other things, location, available equipment such as whiteboards and printers, comfortable furniture and proper lighting could be improved. Students (attachment 1) wrote that "[T]here are too few of them, [s]mall spaces scattered around the campuses would be better than one huge location remote from all departments". There should also be "open space like a café".

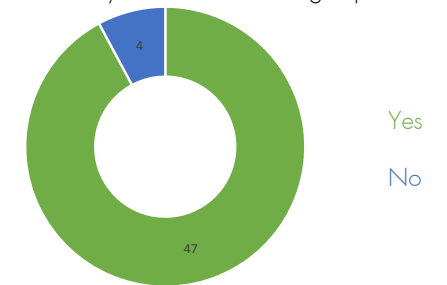
5. At which campus do your studies take place?



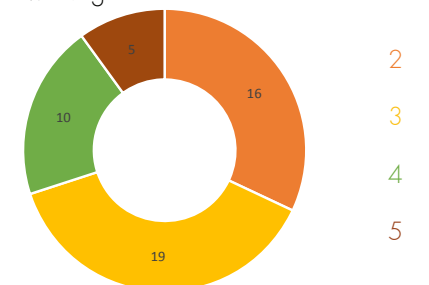
6. Are you familiar with the other campus(es) of Aalto?



11. Do your studies contain groupwork?



13. How satisfied are you with the group working facilities?



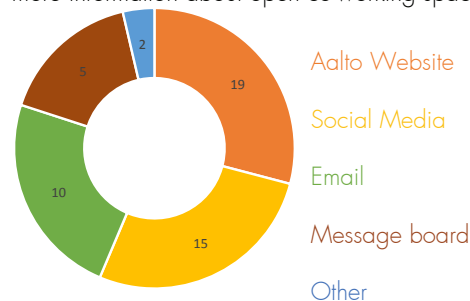
## 2.8 The required spaces

The wish for an actual café in the vicinity of the workspaces is also mentioned several times. A café can be considered a 'third space' (Florida 2002), in a setting where primary study facilities, and private homes are the first two spaces. The survey furthermore reflected the need for spaces suitable for organizing workshops, 'PechaKuchas' (a presentation concept for concise, short presentations of oneself or ones work), movie nights, exhibiting work, and the holding of meetings with outside parties. Through such activities the University could open up more to the outside world. The core need for an ordinary workspace, with a possibility to store materials and items, has also been expressed several times.

Some less mentioned types of uses involve quiet activities such as prayer, yoga, and napping. Such spaces could be used by those students who need to take a moment for themselves.

The needed information was mainly focused on both the existence of different spaces and the availability of each space. To inform the Community about the different spaces available around the campus, the online platforms within Aalto (16/51), as well as social media such as Facebook, Twitter and LinkedIn (15/51) were mentioned as good communication tools. Using email newsletters can also work as a strong initial information method.

17. What would be a convenient way to find more information about open co-working spaces?



All in all the survey results indicate the need for inspiring, dispersed, flexibly usable, small scale workspaces. Furthermore the need for additional information supply regarding such spaces was expressed. In order to facilitate the decision making

process when going to new spaces, there should be information regarding their location, accessibility, number of current and maximum users, the look of the space, and its reservation system. Such information would preferably be distributed online. This would ensure easy access, and real-time updated information. The majority of the respondents indicated they would be interested to use spaces for previously mentioned activities. The further research looks into the possibilities of providing study facilities inside otherwise unused spaces. Furthermore the development of an online platform is researched.

The rigidity of working fixed hours, dictated by western societal norms, is fading. Mixing of people in group work creates awareness regarding the different rhythms people have, and opens the mind to the idea of working at different times than those one might have been used to. Furthermore, multidisciplinary groups are working on project cases, and arranging meetings not seldom results in deciding to meet in the evenings or weekends because of conflicting schedules. To hold those meetings it is necessary to have access to suitable space. This is expressed in the need for group working spaces. For such groups, bookable workspaces with a meeting table and sufficient chairs are ideal. In certain cases there might also be a need for a number of different artifacts, such as a whiteboard, a flip chart or a projector. When groups are able to use different spaces around the campus at different times during the course period, this allows them to actively work on their projects in spaces which foresee in their needs.

The type of space most suitable depends on what kind of project the group is working on. In contrast to the above described meeting space, a design team has, at times, different requirements. Such groups might require a large space to prototype their ideas. More rough spaces would be better suitable for those purposes.

Individual students often only need a place to touch down and work. Depending on personal preferences a quiet or a more bustling space might be preferred. Because of this difference, the possibility exists to mix group working spaces with individual working stations, providing more lively workrooms, or actively promote the use of cafés for studying purposes. To provide adequate space for those students who prefer a silent work environment, quiet studying spaces should be available.

Another factor, influencing the times at which people are studying, is the times of

the day at which one feels most energetic and motivated to study (see charts 5-6-7). This is in part influenced by the old societal norms, which dictate to work between 9 and 5. However, when one is able to break free from those expectations, it becomes possible to plan the day as one pleases, and study, work and recreate during times which suit oneself. This can be seen as a development towards a 24-hour society (Kreitzman 1999). An additional effect of the attention span a person has during 24 hours, is a dip in the energy levels about half way through their day. To acknowledge and nurture this natural fluctuation, it should be possible to take a break from studying and take a rest or undertake relaxing pastimes (BBC Science 2004). Providing space for such activities would be an asset for the University and a benefit for its community.

Aalto University's space use strategy should consider this, and the campus must thus offer various types of spaces. As the Otaniemi campus is rather widespread, the placement and spreading of such spaces comes into play. It is important to provide different spaces spread out over the campus, in order to provide easy access and proximity to all students. Following the rough geographic location, the placement of spaces inside the buildings becomes important. The described different work styles have different needs in terms of placement; while a basement might be very suitable for prototyping, it would not be as stimulating for individual studying.

At times students want to exhibit study projects. Occasionally also course organizers initiate exhibitions or presentations of course outcomes. Suitable places for exhibiting, showcasing or presentations are limited however, and thus suitable places for such events could also be developed. The kind of passive visibility that is needed can be for example accommodated in street level spaces with a close relation to the entrance and exterior surrounding of the building.



The Creative Sustainability program is organizing “CS on display” days, where students can present their projects. Such presentations could be organized in larger spaces around the different campuses. When hosting such events at varying locations a larger and more varied audience can be drawn.

Also student initiatives need to have access to attractive spaces, for example to host movie evenings, such as the ‘CS on movies’ events, currently hosted in the auditorium of the Media Factory. In these events, every two weeks one of the organizing students from the Creative Sustainability program invites other students to watch a documentary or movie. The movies are opted for by the participants themselves, and are generally within the field of social, economic and environmental sustainability.

The different uses require different facilities and equipment. The above described short use periods ask for swiftness in communication of information, as well as clear instructions regarding the purpose and usage of each space.

### 2.8.1 Timespan of use

Equal to the short individual use periods, the overall timespan of use can also be flexible. As the mentioned types of use do not necessarily require large impacts or implementation times. For the duration of time at which a space is available it can easily be taken into use for either of the study related functions described above. Setting up a group work room in an empty office would not require more than a large table and ample seating. This can be carried in, and out of the space in under an hour.

The consequent challenge upon identifying potential uses for spaces, is the identification of physical spaces to house them. Identifying spaces within the University campus which might be, or are suitable for these purposes can be done in different ways.

For the purpose of conducting a thorough theoretical research, a datasheet was collected from the Campus Facilities and

Services Management, which stated the buildings, floors, rooms and surface of the vacant spaces which currently exist within the University campus. This clearly proved a multitude of spaces were vacant, and possibly available for use. In order to keep the data up to date the Campus Facilities and Services would need to provide the information on a regular basis. Another way of pinpointing the vacant spaces within the University is to allow for the Creative Community members themselves to point out those spaces. Undoubtedly they know best what goes on within the premises of their Schools, and thus they would be the best people to identify those spaces. In that case the students and staff members are together responsible to maintain the information together.

## 2.9 Future types of work- and learning spaces

Most of the currently existing work spaces within the University are valued and used regularly. These must be kept, and where possible or desirable expanded. The functions of different facilities within the University are changing, such as the previously described change in the library. But also spaces which are not specifically dedicated to any function will become the workspaces of the future. Corridors and cafés can function wonderfully as study spaces. A very important, if not most important factor in the supply of any kind of work or study space is the familiarity, acceptance and welcoming of specific spaces. In the following subchapters a number of potential existing and new space categories will be discussed.

### Learning Hubs

The currently existing Learning Hubs have potential to expand across the Otaniemi campus. They are inviting, and bring together different members of the Creative Community. As the spaces are developed by a different team each time, plenty of variety is ensured. The developing team consists of Creative Community members who are involved in the environment in which the new Learning Hub will take shape. Because of this approach the implementation of a new space can count on large support from its potential users.

### Co-working, hot-desking spaces

As emphasized earlier, hot-desking spaces can facilitate different members of the Community. Both employees and students could use such workplaces. Scattered around the campus, they can be easy drop-in spaces where members can work when they need, for example between meetings.

### Group work rooms

A type of space which is currently not developed independently from established

institutions such as the library or the Factories are the group work rooms. They do not necessarily need to be inside those, and could be scattered around the campus. When having a group work room nearby or inside the buildings where students have their lectures they could be used during the day in between classes for example. The title group work room might distract from their primary spatial characteristics. A student group in need of a space to discuss their project has essentially the same need as a team of employees or researchers who need to hold a meeting. Opening such spaces to the entire Creative Community who can use them for short time periods, results in more optimal use of the space.

### Ateliers, lofts

When considering the needs of different students, and the move of the School of Arts, Design and Architecture to the Otaniemi campus, a more free use of the space can be implemented. Ateliers and lofts for the use of artistic projects or prototyping can be created in empty spaces. Utilizing spaces in basements or attics can give these otherwise unattractive spaces a creative function.

### Sports or mediation spaces

A space type which is not looked into frequently is sports or meditation space. It might not seem like a facility that a university needs to have, but offering the use of a space for exercising or meditation can improve work performance (Takeuchi Cullen 2006). Having the possibility to take a moment to practice mindfulness can help in work or studies.

### Cafés

Another category is the café space, which is primarily aimed at providing beverages, but functions well for several other purposes as well. The campus restaurants do not supply in the need in which a specific café space

can foresee. This type of casual meeting space currently does exist, but is rare within the facilities of Aalto University. One such space has so far been developed. The ADD café is located inside the Aalto Digital Design Laboratory (ADD Lab), and is part of the Learning Hub network (Torniainen 2013). Creating more casual spaces with a comfortable and relaxed atmosphere can give the campus that friendly character it needs as part of the T3 area. Cafés are open to all, welcoming outsiders into the (University) buildings. Because of the drop-in culture of such spaces serendipitous encounters can occur. When emphasizing the café as a workplace, power outlets need to be readily available.

#### Existing spaces

The University spaces discussed in [chapter 2.4 Existing types of work and learning spaces](#) are considered key elements in today's learning environment outside the classroom. Several of the remaining spaces can be updated to facilitate the changing studying methods, which include peer learning and collaboration. The library is already undergoing such change by dedicating space for the development of Learning Hubs.

*"[T]he library is becoming a key location outside the classroom where the constructivist pedagogy plays out as students learn to analyze information and create new information, often working in a group. This change represents a great shift for the library from a reading and storage site to a center of interactive learning." (Steelcase 2011)*

Leftover spaces, or spaces such as corridors that generally not have a distinct function can be utilized to support studying and working. They are ideal places to sit down and continue class discussions (Steelcase 2011).



Img 23: ADD Café, Otoniemi

# Part 3.

## Matching supply and demand

When one needs the study between classes, it is most convenient to be able to find a convenient space fast. Since there are spaces vacant at all times, this should not be impossible. The challenge is, however, to make it easier. When the vacant and spaces are inventoried, organized and listed, it is more convenient to find a space, arrange the access, and start working there. The proposed matching System provides this possibility.

## 3.1 User involvement

As the demand for the use of these spaces comes from the users, meaning they have the strong wish to find a suitable space for their activities, the system is based on user activism. This way, the users have the possibility to adjust the supply side to their needs. When a lack of certain space types occurs, the interested users have the possibility, and responsibility, to actively contribute to the supply. They can scout seemingly available spaces, and notify the Service Provider of their finding. These spaces can then be investigated in terms of usability, both practically as well as administratively, after which they could be added to the system. Equal to adding spaces, space types for which there is no interest, and no reservations are made, can be altered and transformed into usage types which are in high demand. This way, a self-regulating vacant space management is achieved.

The diverse, assembled group of people is linked to each other as they share the same space, stimulating the formation of the Creative Community. In order for this to happen smoothly, each one's responsibility should be clear, and they should collectively agree on the terms. Every member of the Community shares equal responsibility, which can be assured through a feedback loop. By involving the user community in the constant development of the Service, and the direct effect, they work together instead of for an unknown cause. This is aimed at forming a cohesive Creative Community.

To illustrate situations the author developed two personas based on an average of the participants of the survey.

*Persona 1: Soini is a 22 year old IDBM student from the School of Science: I live in Helsinki, but actually I study in Otaniemi. Usually I do coursework at home, but I also use different place, like Design Factory on the campus, the Learning Hub in Töölö, and some other places, mostly in Otaniemi. In my free time I like to go longboarding*

*in the streets of Helsinki together with my friends.*

*Persona 2: Viiva is 26 years old and is studying Furniture Design at Aalto ARTS: The campus is in the Arabia district in Helsinki. I have my own table at the 7th floor, but for group work I usually meet in the open workspace on the 8th floor. Whenever I have time I take my guitar to play some tunes.*

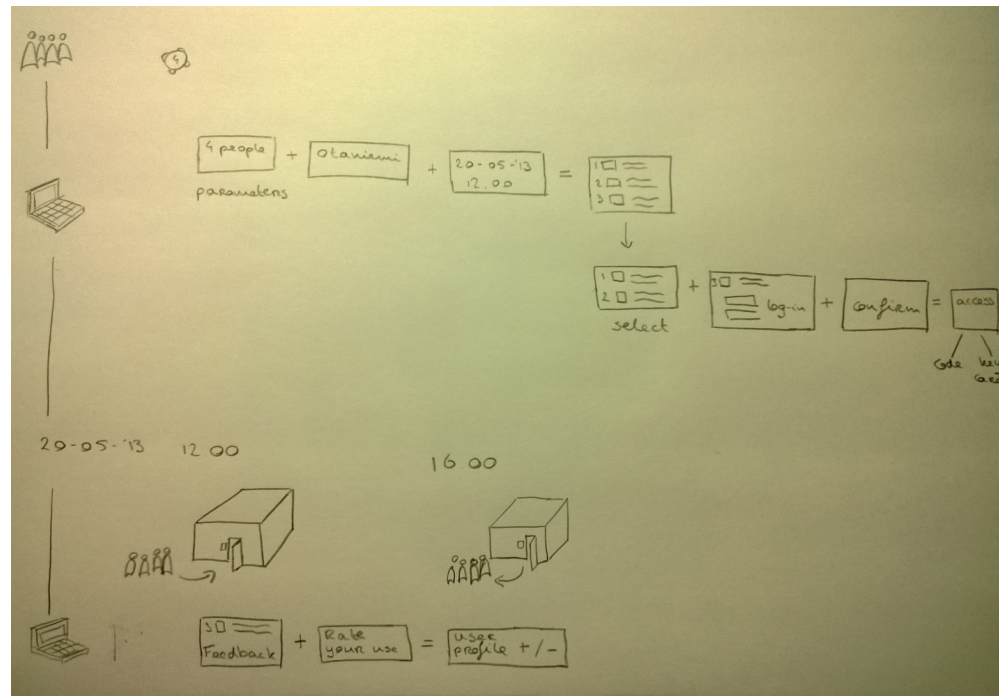
# 3.2 Matching mechanism

In order to organize the available spaces, the author built a website on which all spaces are mapped out, along with their available facilities and reservation possibilities. The information on the website includes the location of the spaces, the use each suits, the number of people that can use the space, the equipment available, and the accessibility. The bundled information provides the Community with an online overview of the options. The user feeds their needs into the system, such as the number of seats needed, the duration and preferred time of use, the preferred location, and the required facilities. Upon this, the system will produce a number of matching spaces.

All spaces, at diverse locations on the campus, are available to each user. This offers the flexibility one needs when undertaking activities at different locations on the large University campus.

Upon the choice of the Community member for a certain space, a reservation can be made. The user logs in with their regular Aalto credentials to gain access to the

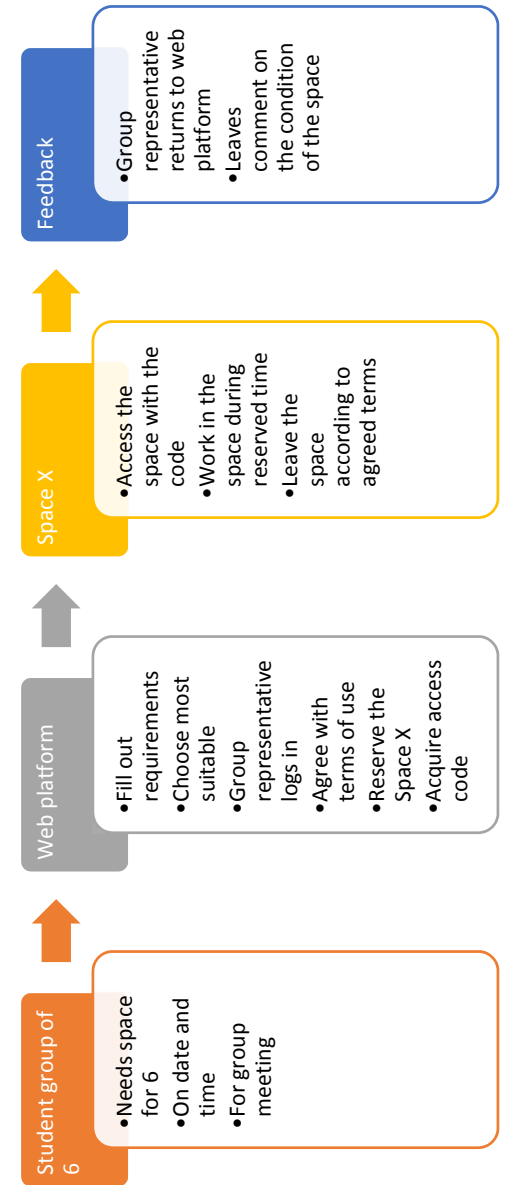
reservations page. Using existing log-in data is convenient for both user and Service Provider: the users do not have to remember a new username and password, and the service provider does not have to add new users to the system, separately from the University's administration. Logging in with existing Aalto credentials furthermore ensures validity of the users, and it creates credibility for the Service. The user agrees to the terms of use, and receives an access code to the space, valid during the time it is reserved. The Community member will then go and work in the reserved space. After the reservation ends, the user returns to the website to leave a feedback post regarding the space. The user also leaves a note stating their use of the space, and how they have left it. This information is later matched to the feedback of the next user of that particular space. Service system map, approach of digital communication platform:



img 24: Sketch of events

Soini: I want to have meetings with my project group, but the meeting rooms are always booked. I noticed that in the basement of the Department of Computer Science there is a room which I think is never used. I filled contacted the Service Provider to inform them about it, and that I would like to go there to have meetings. They contacted the Computer Science Department, and found that the space was not used at the moment, after which the Service Provider added the space on the website. Now I book the space every week to discuss the project with my team members.

Viiva: I needed a room for a course, to test a lampshade I had designed. Because all the ateliers were booked, I informed if it would be possible to book a hot-desking space, for which there were no bookings for the coming weeks. The Service Provider changed the booking options for that space, so I could book it. Then it was possible for me to make a reservation for the next 2 months to try out different options for the lampshade.



Dynamic approach, from the user

# 3.3 Perceived ownership and feedback loops

Alongside the online System in place for finding and reserving the space, a digital feedback system is essential for a self-regulating use system.

## 3.3.1 Feedback system

This feedback is given by the user about the space and about their use of the space. As each space is categorized by what it can be used for, and comes with a brief on what equipment is available, users can easily find what possibilities and duties there are.

Only when the users keep the spaces in proper condition themselves, the system can remain self-regulating. The registered users of the space agree to these responsibility when agreeing to the terms and conditions that apply. Upon leaving the space, the users grade their efforts, and report on the state of the space and its equipment. This information is available to other users of that space, who can review previous users' feedback. In situations where the status of the space and equipment are as described by the previous user, all is well. However, when the reported information in the feedback form deviates from the information left by the previous user, this indicates the need to investigate the situation.

When a user does not comply with the set rules, and leaves spaces in a disorderly condition, this can lead to negative credits on the account of the previous user. After multiple occasions, measures should be taken, including for example a (temporary) ban from the system. Such a feedback system creates a situation of peer control and social pressure, which should ensure proper use of the space.

The upkeep of the space can be checked

occasionally. Ensuring that the space does not become disused because it got dirty over time, or because equipment has gone missing. It is the task of the Service Provider to ensure the spaces in the system are maintained, updated, and available.

## 3.3.2 Perceived ownership in items

To ensure proper use, a sense of ownership should be induced. When people get to use an item, they do not automatically feel this responsibility, explains Robert White, chairman of the Oranssi housing company, in an interview (White 2012). This is dependent from the relation between user and owner, and the perceived social distance between them. When it is a rather anonymous situation, often the user does not feel as responsible. People might be less careful with the object in these situations, than they would be when they have a close relationship to the owner. In situations where the person borrowing an items knows the owner they are more likely to treat it with more care, as damage on the object will be directly linked to them. They are directly responsible for the object that was borrowed to them. This is caused by the feeling of social pressure. When giving someone the responsibility over an item, it is important that people build up a sense of ownership over the item, in order for them to treat it in a certain way.

## 3.3.13 Perceived ownership in spaces

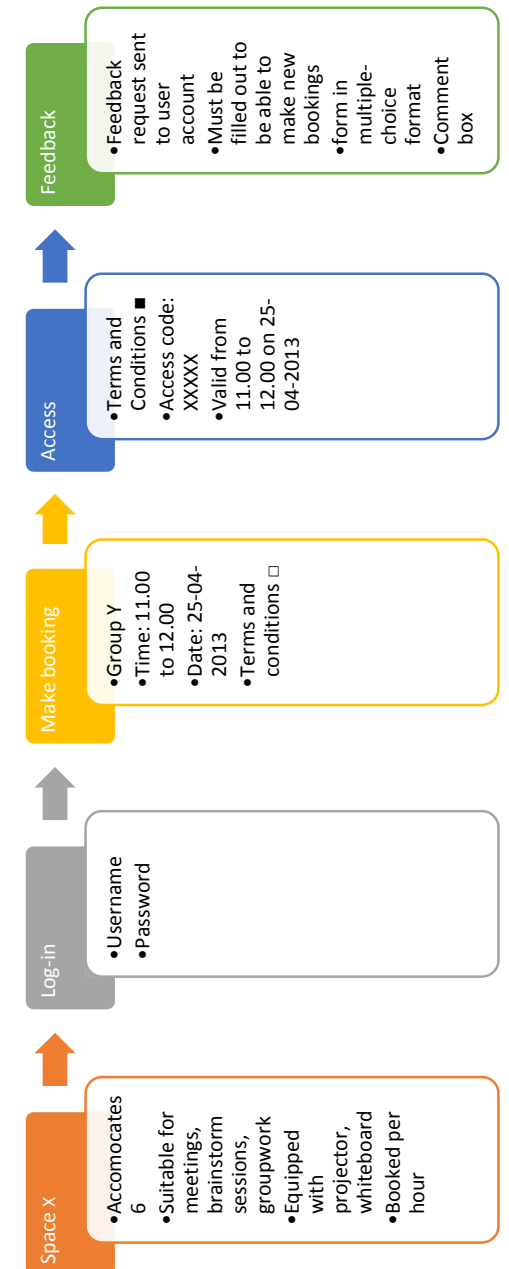
Some spaces could be used for short times, others for longer periods. Such longer

term uses could occur in the proposed Service when a group or individual finds a suitable space in the system to execute their project or develop a prototype. A sense of ownership would contribute to proper caretaking of the space.

*"Trust is the currency of the sharing economy." (Voorzanger 2013)*

In the case of shorter use periods, the users of the Service, members of the Creative Community, will use the space for a short period of time. Members can use it for the needed purpose, and acting in one's own best interest will result in acting in everyone's best interest. The feedback system and sanctions are used to ensure compliance with the use agreement, relying on the common sense and decency of the Creative Community members to maintain usability of the spaces.

*Soini: I had a group meeting in the Library workroom this morning, and I will now fill out the feedback form on the website. We agreed with the group to meet there again next week, and if I want to make the booking I need to give feedback on the space first. It was tidy when we came, and we left it the way we found it.*



Static approach, from the system

# 3.4 Online platform: Worknode

The way to match community members with suitable spaces, and also to keep track of what is going on at a certain moment, is fastest done through an online platform. Here one can go to check the availability at present, and also get insight in the near future availability. Any space the Departments, Schools or Aalto University at large agrees to offer for the use of its Creative Community is listed. The title for the Service was sought in the concept of the System, comprising of work spaces, interlinked, forming a network: Worknode.

Based on the information gathered by the CampusFacilitiesandServices/Management, an inventory is made to include a variety of spaces. The aim is to make the online space library as complete as possible, using as many of the otherwise unused spaces, and providing as many of these spaces to the users. When the spaces are included into the Worknode database they remain in the administration of each Department, School, study program, or the University at large. Worknode is then registered as the primary (long term) user, which allows them to offer the space to all Community members.

Worknode is driven by user activism. Because of the difference between the administration regarding the usage of space and the reality it is difficult to administratively identify the unused spaces. Therefore, in order to complete the currently available administration, and to list the spaces which are potentially unneeded by the Departments or Schools, an active user community is indispensable. Therefore, besides the spaces brought on by Aalto University, also the users of the Worknode platform have the possibility to put forward spaces they have discovered. This activism could ultimately be rewarded through the user accounts of the Worknode platform through awarding positive credits. They

work as ambassadors of the system.

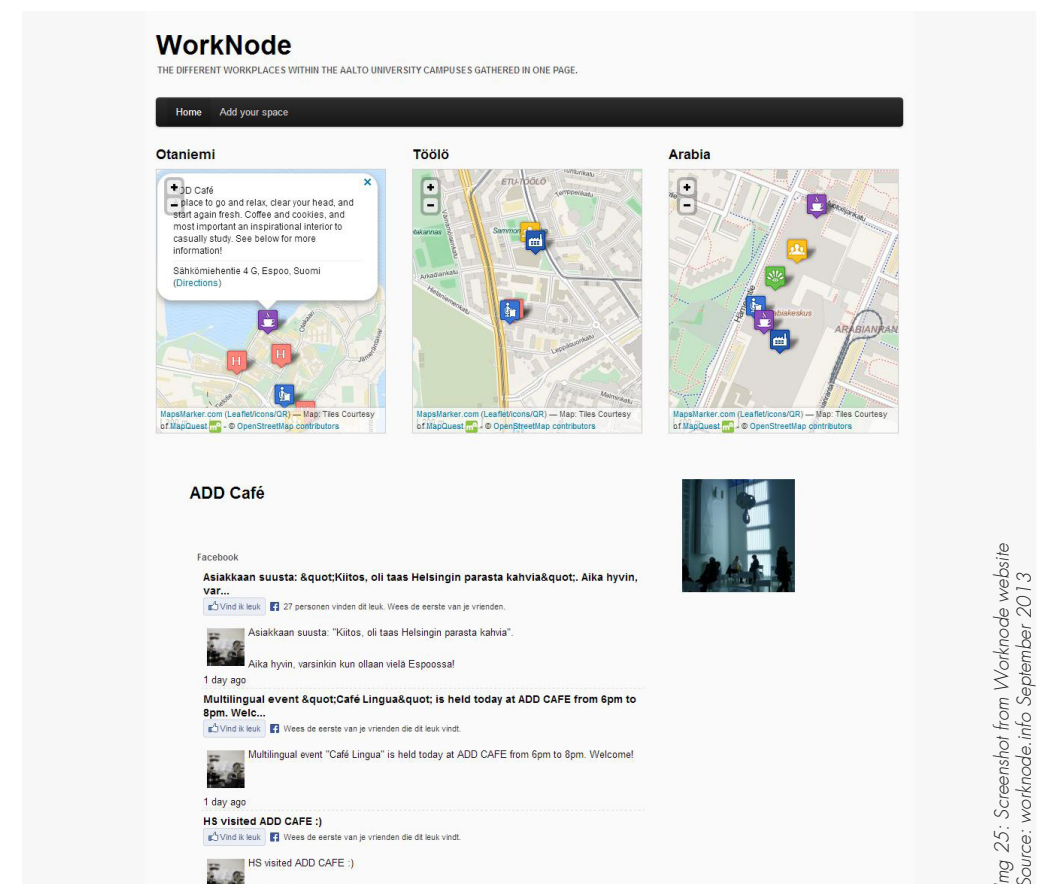
Users notify Worknode of suitable unused spaces they find. Following, Worknode contacts the department or school in charge of the space, and investigates the possibility of registration into the system. After this is done the users can make use of this space. This all happens through the online Worknode platform, where the spaces are registered, and relevant information is available.

On this online platform the availability of workspaces can be checked. The discussed multitude of webpages is confusing at present, and adding another platform is not desirable. Therefore this thesis proposes the creation of an Aalto-wide platform, where all space-related issues are gathered. As the Otaniemi campus is rather large, clear information on the locations of classrooms would be beneficial to many. When the School of Arts, Design and Architecture moves to Otaniemi, over 2,000 students who have not studied there before, will need to find their way. Setting up a system which provides information regarding locations and availability, this will be of great aid. The availability, and usage of the spaces, is also important information to gather from the point of view of development of Aalto University. Which spaces are used, which are not, where are most people, what time of day are spaces used, etc. This in order to analyze the need for creating new, or merging departments in terms of location. Data on the used spaces greatly aids this.

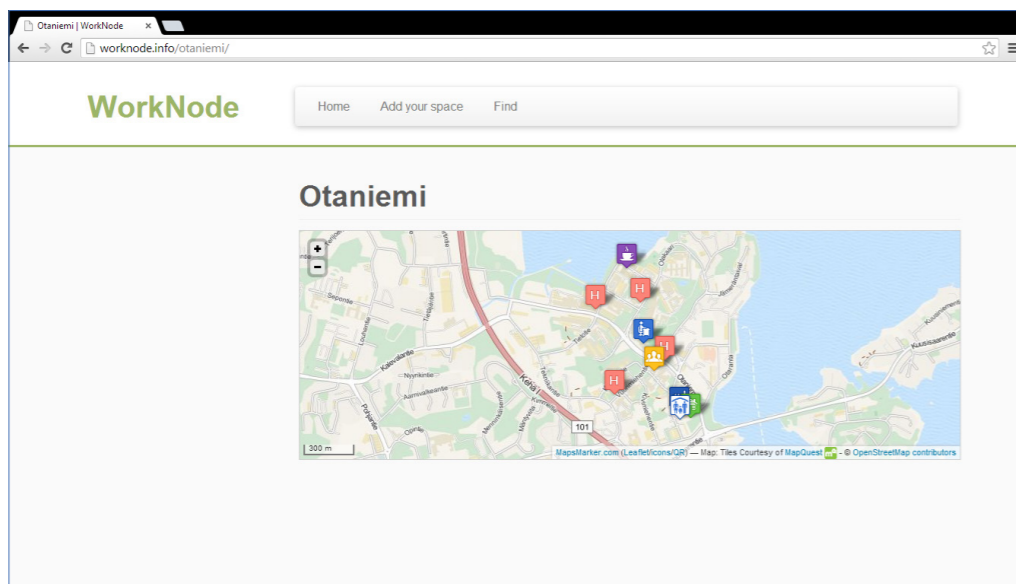
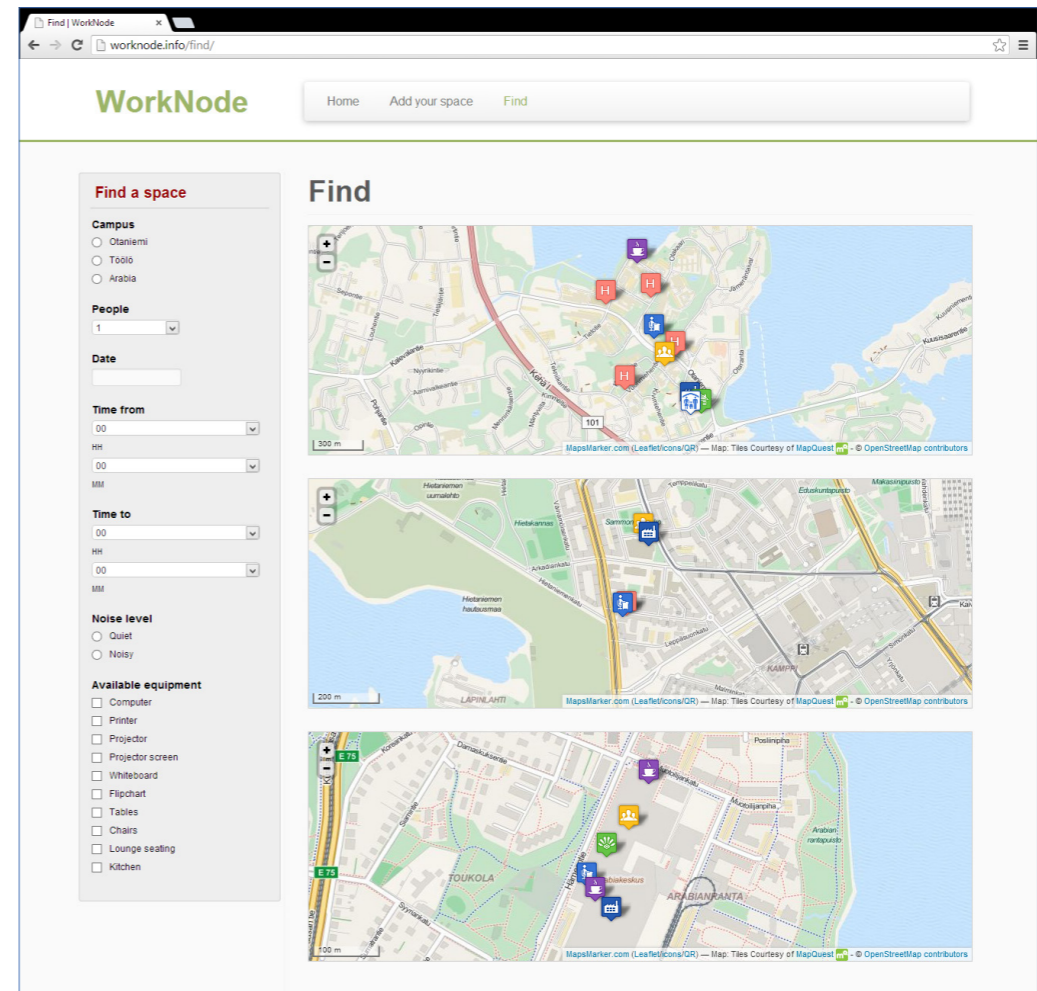
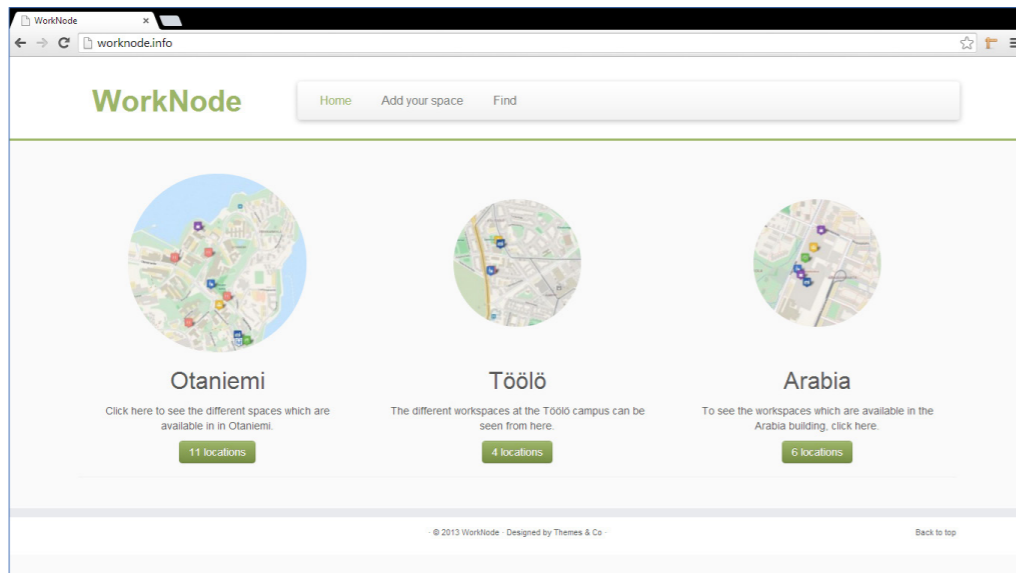
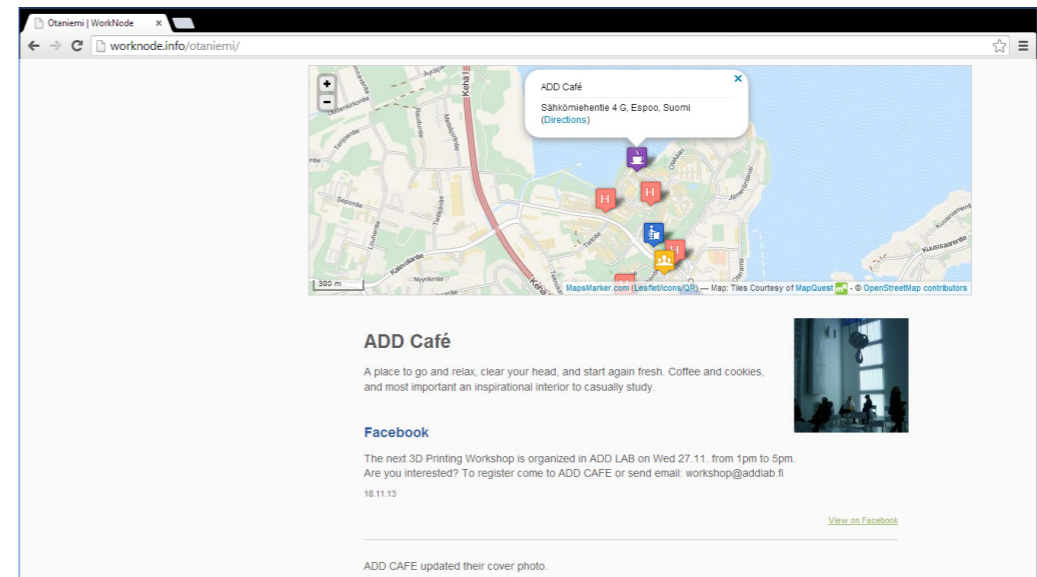
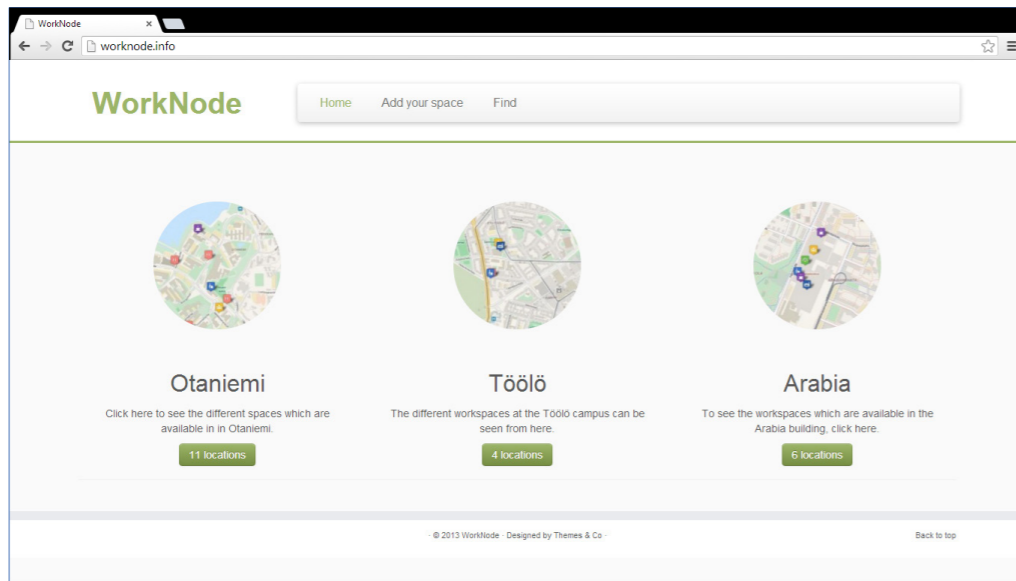
Because the system is mainly focused around otherwise unused spaces, the cost factor can be neglected. The spaces are made available on a day to day basis, which allows sufficient freedom to take add and remove spaces from the system. They can then be used even for short periods of time. This allows freedom within the Aalto

University Creative Community to utilize the campus more, and create incentive to work in an inspiring environment created for them. Because of the benefit to the entire Community it is expected that the supplying Departments and Schools will see the benefits. Everyone benefits from the possibilities this agile system brings.

The Worknode database includes both temporary unfamiliar spaces, as well as well-known workplaces such as the Design Factory and the Learning Hubs. This combination ensures a low threshold, as users can find the places they are comfortable with equally easy as they can discover other possibilities.



Img 25: Screenshot from Worknode website Source: worknode.info September 2013



# Part 4.

## Recommendation and benefits

The students and staff from the different Schools of Aalto University will be merged on the Otaniemi campus. People are put together, clustered in their separate Departments. The implementation of a University-wide network of spaces creates the possibility for those using the campus to work and study at different places. When mixing people, and bringing them together in the available workspaces, the Community is formed. Through this mingling of people with varied backgrounds, new collaborations can form, addressing their creativity to achieve successful collaborations, as well as innovative projects. Such multidisciplinary collaborations can take place in the Learning Hubs and Factories which already exist on the campus. These concepts can spread wider across the campus, creating more inspiring spaces for the Community. At times a Community member might be in need of a separate space, either for studying or for taking a short break. Such spaces, along with other leisure facilities can also be developed within the University buildings. Caused by moving and shrinking of Departments several spaces have become vacant. These vary from basement storages, to coffee rooms and meeting spaces. By incorporating these spaces, as well as the existing open learning spaces into the online space library Worknode, Community members can easily find information about their possibilities and use the University's facilities in an agile, flexible way.

The current real estate mindset is fixed on long terms of use. It looks at revenue and profit. The world and its societies and communities are however evolving at such rapid speed, that this mindset is impossible to maintain. There is a need for agility, flexibility, adaptability. People's needs change, and the surroundings should be able to adjust rapidly.

Upon discussions with the Aalto Libraries team, the benefits are discussed for integrating the Worknode pages into the Library's website. This would ensure immediate familiarity among the Creative Community with the website. Furthermore, as the Learning Hubs currently do not have a central information point, integrating the pages would provide in this need at the same time.

In the long run, the Worknode spaces could be advertised more widely, attracting professional practices to the campus area.

*"An overall trend can be seen that leads us from possession to use. A sharing economy, within which a transition from possessing to using fits. Why would you need to own lighting? One can use that, temporarily, and afterwards return it. The same goes for a car, a refrigerator, practically everything we have, what we possess, which we don't need on a permanent basis. At most we need it temporarily. [...] [A]ctually, every product in your house, in your surroundings, you want to use temporarily when you need it. If you can share that with others, it is beneficial for the economy and the society, and it is cheaper. So when you think about it deeply, you think, why didn't we start doing this earlier?" (Rotmans 2013)*

### 4.1 Space-use improvements at Aalto University

The Community of Aalto University would benefit greatly from the availability of the currently vacant spaces, and a proper system and platform to allow their use. The described

system would ideally be implemented in one of the currently existing platforms Aalto University uses such as the library website. This would allow users to maintain the use of their Aalto credentials, and would ensure familiarity, trustworthiness and ease of use.

Every available space on the campus should be taken into use to support studying and working on the campus. The buildings will become more lively and vibrant with various people going in and out.

The Schools and Departments ought to make an inventory of the (types of) spaces they require in order to be able to decide on their genuine spatial need. Upon doing so the Campus and Facilities Services can assess the total situation, and make a decision on a new spatial strategy. This should incorporate the use of a number of spaces for general use, such as described above. The Campus and Facilities Services can then reallocate the remaining premises, making a contemporary and reviewed plan, which is adapted to the changes in studying and working.

### 4.2 Suggestions for Aalto University Properties Ltd.

When AYK decides to terminate a number of lease contracts and regain the spaces, they can review the usage. Originally most buildings on the Otaniemi campus were designed to accommodate educational purposes. Finding a new user to occupy the premises as they are is possible, but looking into the possibility to redesign the interior setup, and focus on a wider target group by allowing shorter lease terms could yield more income, and generate wider interest. AYK could then draw a more varied user group to the Otaniemi campus, which can in turn benefit the University's students.



# Conclusion

When researching the possibilities of making the vacant spaces within the Aalto University campus in Otaniemi available to its Creative Community, it was found that there are many possibilities, which do not necessarily rule each other out. Looking into how the Creative Community was formed, the impact of proximity and similarity in mindset is crucial. The question of what types of spaces are needed is closely linked to the question of which spaces are vacant. Upon looking into the needs of the Community, it was found that especially many casual facilities for groups were missing or inadequate in numbers, as well as private workspaces for larger projects and exhibition purposes. There is a large number of vacant spaces spread across the campus at different locations within the buildings which allows for implementation of different types of use. Analyzing the general accessibility, and the specific accessibility of individual spaces, many issues arise in the form of opening hours and key systems. Clarifying this through making equal opening hours for buildings and services and a unified key system to be used outside opening hours ensures all Aalto Community members have the same possibilities. Digitalizing the key system would create the possibility to adjust the access possibilities where needed. Thus this thesis suggests the implementation of a utilization scheme, advertising the available space and allowing their usage by those Community members who need them. By providing this service as a web based system, the online platform Worknode can function as the single place where this information is provided. Gathering all information and all Community members on one platform gives a clear overview of the available spaces and usage. Because of the categorization, finding a suitable space for any purpose is easier. This benefits both those looking for a space and it increases the usage of University spaces. In turn, using the existing built environment provides an honest image of the actual space required, which can be extrapolated to planned and

future space reductions and budgetary savings. In the wider context this can reduce the need for building new, thus not emitting carbon into the atmosphere. Utilizing the existing space allows for new possibilities in reuse and redevelopment, using the spatial resources in a new and sustainable way.

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# Attachment 1

1. What is your age?	2. At which school are you studying your major?	3. At what stage in your studies are you? [1]
21	School of Science	Bachelor 1
20	School of Electrical	Bachelor 2
26	School of Arts,	Master 1
23	School of Science	Bachelor 4
28	School of Electrical	Master 1
23	School of Engineering	Bachelor 1
23	School of Electrical	Master 2
26	School of Business	Master 2
24	School of Arts,	Master 2
23	School of Science	Bachelor 2
26	School of Arts,	Master 6
35	School of Science	Doctoral
23	School of Business	Bachelor 4
26	School of Engineering	Master 2
15	School of Arts,	Master 2
30	School of Arts,	Master 2
28	School of Arts,	Master 2
15	School of Engineering	Bachelor 2
24	School of Arts,	Bachelor 5
27	School of Science	Doctoral
20	School of Engineering	Bachelor 2
33	School of Arts,	Master 2
44	School of Arts,	Doctoral
23	School of Science	Master
34	School of Arts,	Master 2
27	School of Engineering	Master 2
22	School of Science	Master 3
24	School of Arts,	Master
29	School of Arts,	Master 2
33	School of Arts,	Master 2
29	School of Arts,	Master
30	School of Arts,	Master
20	School of Arts,	Bachelor
33	School of Arts,	Bachelor 6
33	School of Arts,	Master 3
30	School of Arts,	Master 3
31	School of Engineering	Master 5
24	School of Arts,	Master
23	School of Business	Master
39	School of Science	Doctoral
31	School of Arts,	Master
24	School of Business	Master 2
24	School of Engineering	Bachelor 5
26	School of Arts,	Master
33	School of Arts,	Master
42	School of Business	Master 2
28	School of Arts,	Master 3
25	School of Science	Master 2
30	School of Business	Master 2
26	School of Electrical	Master
20	School of Science	Bachelor 2

4. What work experience do you have?	5. At which campus do your studies take place?
Employed full time (including full-time summer jobs),	Otaniemi
Employed full time (including full-time summer jobs)	Otaniemi
Employed full time (including full-time summer jobs),	Arabia
Employed full time (including full-time summer jobs),	Otaniemi
Employed part-time (including weekend- and side	Otaniemi
Employed full time (including full-time summer jobs),	Otaniemi
Employed full time (including full-time summer jobs)	Otaniemi
Employed full time (including full-time summer jobs)	Otaniemi
Employed part-time (including weekend- and side	Arabia
No work experience	Otaniemi
Employed full time (including full-time summer jobs)	Otaniemi
Employed full time (including full-time summer jobs)	Otaniemi
Employed full time (including full-time summer jobs)	Töölö
Employed part-time (including weekend- and side	Otaniemi
Employed full time (including full-time summer jobs),	Arabia
Employed full time (including full-time summer jobs),	Otaniemi
Employed full time (including full-time summer jobs),	Arabia
Employed full time (including full-time summer jobs),	Otaniemi
Employed full time (including full-time summer jobs)	Arabia
Employed full time (including full-time summer jobs),	Otaniemi
Employed full time (including full-time summer jobs),	Otaniemi
No work experience	Arabia
Employed full time (including full-time summer jobs),	Arabia
Employed full time (including full-time summer jobs),	Arabia
Employed full time (including full-time summer jobs)	Arabia
Employed full time (including full-time summer jobs),	Arabia
Employed full time (including full-time summer jobs),	Arabia
Employed full time (including full-time summer jobs),	Otaniemi
Employed full time (including full-time summer jobs)	Arabia
Employed part-time (including weekend- and side	Arabia
Employed part-time (including weekend- and side	Arabia
Employed part-time (including weekend- and side	Arabia
Employed full time (including full-time summer jobs),	Otaniemi
Employed full time (including full-time summer jobs),	Otaniemi
Employed full time (including full-time summer jobs)	Arabia
Employed full time (including full-time summer jobs),	Töölö
Employed full time (including full-time summer jobs),	Otaniemi
Employed full time (including full-time summer jobs),	Arabia
Employed full time (including full-time summer jobs),	Arabia
Employed full time (including full-time summer jobs),	Arabia
Employed full time (including full-time summer jobs),	Töölö
Employed full time (including full-time summer jobs)	Arabia
Employed full time (including full-time summer jobs),	Otaniemi
Employed full time (including full-time summer jobs),	Töölö
Employed part-time (including weekend- and side	Otaniemi
Employed part-time (including weekend- and side	Otaniemi

6. Are you familiar with the other campus(es) of Aalto?	
Yes	
No	Otaniemi campus library
Yes	
No	Otaniemi library,
No	
Yes	
Yes	
No	Startup Sauna space
Yes	
No	
Yes	
Yes	
Yes	
No	
Yes	
Yes	
No	
Yes	
No	Marintalo
No	
Yes	
Yes	
Yes	
Yes	
Yes	
Yes	Design Factory
No	
Yes	
Yes	
No	library in arabia
No	None
Yes	Umm, not really any.
No	none
No	
Yes	
Yes	
Yes	
Yes	
Yes	Design Factory
Yes	Media Factory
Yes	
No	
No	
Yes	
Yes	
Yes	
Yes	
Yes	The ones in Töölö
Yes	Maarintalo
No	Design Factory \r\n

7. Which of the open (co-)working spaces within Aalto are you familiar with? Both for individual studies and group work.	
	Greenhouse, Main Library, The TUAS building Library.
	Otaniemi campus library
	Media lab, conference space in Aralis library
	Otaniemi library,
	Main Library, Mari building, electrical library
	Most of the spaces in Otaniemi (Kone 1 building, DeFa mostly)
	Library and reading room at School of Electrical Engineering,
	Startup Sauna space
	libraries in otaniemi and arabia, design factory, media factory
	Maarintalo, libraries at the different bulgings in Otaniemi
	Design factory, libraries in Otaniemi, workspaces at the Business school
	Aalto garage
	Design Factory, Media Factory, Aalto Hub Töölö, Kesko-room in Töölö, KY-
	The department building, Design factory
	Design Factory, Media Factory, 6th and 8th floors at Arabia
	Design Factory, unofficial spaces at dept of architecture
	Design Factory, Media Factory
	In Konetekniikka 1 building: Sundeck and other co-working spaces,
	Aalto Design Factory, grate place!
	Marintalo
	the "main" library in Otaniemi, Design Factory, Sun Deck
	Libraries, some group work areas in Otaniemi and Töölö
	ARTS library, Media Factory, ARTS workshops (Fab lab, wood workshop
	T-talo hub, Konetalo hub, design factory, main library, riihi (sähkötalo),
	Libraries (3), design factory, media factory
	<a href="http://www.youtube.com/watch?v=B3np6iOkqMk">http://www.youtube.com/watch?v=B3np6iOkqMk</a> Please contact if you feel
	Design Factory
	I usually study in the library in Arabia and the co-working open space on
	ARTS, Design Factory, Media Factory, Aralis library
	Design Factory in Otaniemi, computer class in the School of Business,
	library in arabia
	None
	Umm, not really any.
	none
	Media factory, Arabia 8th floor
	All the libraries and the design factory. Alvari cafe has also been used as a
	Design Factory, otaniemi library
	Design Factory in Otaniemi, co-working studies in Industrial Design
	Design factory, Chydenia computer classes, Kesko-sali and Tieto-sali,
	Design Factory
	Media Factory
	Töölö campus I know pretty well and there are not so many working spaces
	The facilities of civil engineering and electrical engineering.
	The media factory in Arabia and Design factory in Otaniemi, also the
	design factory, media factory
	Kesko in the Töölö main building, computer labs, the small group-work
	Mostly the libraries for individual work
	Maari, Otaniemi Lib, Computer rooms in Otaniemi and econ school, aalto
	The ones in Töölö
	Maarintalo
	Design Factory \r\n

9. Where do you usually study?	10. How satisfied are you with your current studying place?	11. Do your studies contain groupwork?
At home, At the		4. Yes
At home		5 Yes
At home, At the		3 Yes
At the university,		3 No
At home, At the		5 Yes
At home, At the		4 Yes
In a co-working		4 Yes
At home, At the		3 Yes
At the university,		3 Yes
At home, At the		2 Yes
In a co-working		4 Yes
At the university,		3 Yes
At home, At the		3 Yes
At the university,		4 No
At home, At the		4 Yes
At home		2 Yes
At the university,		3 Yes
At the university,		3 Yes
In a co-working		5 Yes
At the university,		3 Yes
At home, At the		4 Yes
At home, In a co-		3 Yes
At the university,		5 Yes
At home, In a		3 Yes
At the university,		3 Yes
At the university,		5 Yes
At the university,		5 Yes
In the (university)		2 Yes
At the university,		2 Yes
At home, At the		2 Yes
At home, At the		5 No
At home		3 Yes
At home, At the		2 Yes
At home, At the		3 No
At the university,		2 Yes
At home, At the		3 Yes
At home, At the		4 Yes
At home, At the		3 Yes
At the university,		4 Yes
At the university,		3 Yes
At home		3 Yes
At home, In the		2 Yes
At home, At the		3 Yes
At home, At the		2 Yes
At home, At the		2 Yes
At home		3 Yes
At home, In the		3 Yes
At home, At the		5 Yes
At home, At the		3 Yes
At home, In a		4 Yes
At home, At the		3 Yes

12. Where do you usually work with a team?
At home, In a co-working space of Aalto
In the (university) library, In a co-working space of Aalto
In the (university) library, In a computer room, In a co-working space of
At home, In a computer room
At the university, not in a private work space
In a co-working space of Aalto
At the university, not in a private work space, In a co-working space of
In a co-working space of Aalto
At the university, not in a private work space
In a co-working space of Aalto
In a co-working space of Aalto
At the university, not in a private work space, In a co-working space of
At the university, not in a private work space, In a co-working space of
In a computer room
At the university, at one of the members' private work space, At the
At the university, not in a private work space
At the university, not in a private work space
At the university, not in a private work space, In a computer room, In a
In a co-working space of Aalto
At the university, not in a private work space
At the university, not in a private work space, In a computer room, In a
At the university, not in a private work space, In a computer room, In a
At the university, at one of the members' private work space, At the
At the university, not in a private work space
At the university, not in a private work space, In a co-working space of
At the university, not in a private work space, In a co-working space of
At the university, at one of the members' private work space, In a co-
In a co-working space of Aalto, In a co-working space outside the
At the university, not in a private work space, In a co-working space of
At home, At the university, not in a private work space, In the
At the university, not in a private work space
At the university, not in a private work space
At the university, not in a private work space, In a co-working space of
In a co-working space of Aalto
At the university, not in a private work space, In the (university) library
At the university, not in a private work space
In the (university) library, In a co-working space of Aalto, In a co-
At the university, not in a private work space, In a computer room, In a
At the university, not in a private work space
At home, In a co-working space of Aalto, In a co-working space
At the university, not in a private work space, In a computer room
At the university, not in a private work space, In a computer room
At home, At the university, not in a private work space, In a computer
At the university, not in a private work space, In a computer room, In a
At the university, not in a private work space
At the university, not in a private work space, In a co-working space
At the university, not in a private work space, In the (university) library,
At the university, not in a private work space, In a computer room
In a computer room
At the university, not in a private work space, In a computer room



**13. How satisfied are you with the group working facilities?**

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3
2
3
3
3
2
2
2
2
3
2
2
5
2
4
2

**14. Why do you / do you not use the co-working facilities of Aalto?**

I use co-working spaces because:	I don't use co-working spaces because:
I use them because	They provide good
I don't use them because	i didnt even know
I don't use them because	they are not always
I don't use them because	I hardly know of any
I use them because	of study
I use them because	Because the ones at
I use them because	Because they are
I use them because	I love working and
I don't use them because	the ones in Otaniemi
I use them because	those that are
I use them because	the new ones
I use them because	all the required
I use them because	They give me the
I use them because	They have
I use them because	It is better to work
I don't use them because	Because I don't
I don't use them because	They are not really
I use them because	They are convenient
I use them because	I study ME310
I don't use them because	I didn't have
I use them because	They're close to our
I don't use them because	They are distracting
I don't use them because	I don't need them
I don't use them because	I use co-working
I use them because	Best available
I use them because	I feel I get more
I use them because	I am having courses
I use them because	I cannot work at
I use them because	that's where we're
I use them because	there is a need to co-
I don't use them because	my studies do not
I don't use them because	I don't know where
I don't use them because	They aren't placed
I don't use them because	I have not
I use them because	I used couple of
I use them because	As it happens, I'm
I use them because	It is natural, flexible
I use them because	The format of the
I use them because	usually everyone is
I use them because	I need a place for a
I use them because	I use Media factory
I don't use them because	I don't know any
I don't use them because	I have quite limited
I use them because	There are
I use them because	they are practical, I
I don't use them because	?
I don't use them because	They are often
I use them because	Peace of working,
I use them because	there is a need to
I don't use them because	What are they
I use them because	the ones I use are

**15. What could be improved about these spaces, or what do you think such a space should have?**

-

location should be near the main building or teekkari village. these spaces should study equipment (technical, as well as drawing boards, markers, etc.), have a ergonomical chairs and tables, good light, peaceful and harmonic environment, There can be motivational things displayed to inspire the students.

More possibilities for group activities, board games and such so you can include a There should be more equipment

A real coffee barista serving good coffee

personal workspace for every student would be great (so you could leave stuff...);

There should be more of them! The spaces should have 1-2 tables and also some Reservation should always be through the internet, in a way that you can easily see easy reservation

Töölö campus is lacking any good group working spaces; e.g. Kesko room is too There are often too many random people around. People who are attending different Reservations, common space with sofa. There should always be a silent room, where Location, for example DF is remote from all departments. Reservation system is ok, Should be accesible.

More equipment to draft and sketch things. Also computers and AV equipment.

DF kind of places should be much more. Nice fatboys, chairs, tables, post-its etc.

They should be properly advertised with what facilities they have and for what It should have a large enough table, and chair, benches, sofas or something to sit

No sense of "we're sitting in this together"... lousy mood there usually.

-reservations for some spaces but it's good if you know that some are just free to

Less mac-computers, more linuxes, less innovation and more functionality for Something to tell you it's ok to work there..

Easy to connect with laptop. Working reservation system

To me, the first issue is to raise awareness about those places! Most of people have The could look inspiring - have posters/workspaces etc.

-functioning and ergonomic furniture

It should have a good studio-like features: a possibility to work alone and a dont know

Big whiteboards, big tables, good lighting, enough privacy

...

All of those mentioned

On line reservation system, cozy furniture, and entertainment stuff for taking rests Lockers. Depending on the task some form of reservation, so that you leave all your Maybe some sort of cetralized reserving system. More interdisciplinary workes near Better air quality and lighting that does not tire the eye after long days of working.

Audiovisual equipment, easy connectability, comfortable seats

A meeting space should not necessarily be a room or a closed environment, but also Air quality, problems with the inside air especially in the old building in Arabia and in First of all providing information where to find these spaces + how to book them.

-

The general quality of the space and especially how it looks. Now it is crowded and mobile phone loading stations, computer maintenance assistance

What exactly are they? We mostly use the couches in cafeteria or the lobby, they some areas which you can reserve and have only for your group, closed co-working Coffee, near buss stops

There are too few of them, and the ones in Töölö are terribly depressing (the i have no idea what are co-working spaces so maybe first step could be to promote Mainbuilding, Maari, TUAS co-working spaces: something what design Factory has

16. What would be reasons for you to start using co-working spaces?	19. Would you be interested in using such a space for a short period of time?	20. What would you want to use the space for?
-	Yes	-
i would start using them if	No	i dunno
if the above mentioned things	Yes	guest lectures,
more co-working places	Yes	informal meetings,
Because sometimes i cant study	Yes	group meeting
I'm already using them!	No	About the previous
Motivation to work by seeing	Yes	Parying,
to be around other like minded	Yes	event space, and a
see last question	Yes	networking, getting
I already use the co-working	Yes	i don't know
team work, master thesis	Yes	Open usage;
--	No	--
The space offers good spaces	Yes	Spaces which bring
All I need is a comfortable sofa	No	Random
Friends and a very convenient	Yes	Conferences,
That I would know about them.	Yes	Guild meetings,
If they are close to where I live.	Yes	Should be use for
I use them already.	Yes	Networking
good facilities, encouraging	Yes	Protoshops, tools for
I am taking courses where we	No	Groups study,
easy to find and near lectures	No	meetings of student
If I get the feeling of support	Yes	Fun activities
if I have to do more teamwork	Yes	in the 90s there was
I like those colorful spaces! I	Yes	For meetings.
Having enough available	Yes	Semi-formal
to get all the relevant info for the	Yes	Meetings,
Collaboration, meaning need of	Yes	Co-creation,
-To get out of home	Yes	Group/individual
all of the above would improve it	No	-like mentioned
Good action environment:	Yes	Oh my, as far as an
social interaction and change of	Yes	exhibitions
If the co-working space would	No	- events
If the usage terms were clearer.	Yes	Workspaces - we
To know they exist and be	Yes	To both study and
because the project is going on	Yes	art work or
Being involved in group work.	Yes	The forthcoming CS
The suitsble athmosphere for	Yes	Teamwork,
I already am using these spaces	Yes	For exhibitions of
Groupwork that requires face-to-	Yes	If the place would
Good atmosphere. Not	Yes	For research
Better air quality, nice and cosy	Yes	group work
Need for work space outside	Yes	I think the most
-	No	
If they are fresh and offers a	Yes	I think the functions
a good crowd, leisure activities	Yes	clubrooms, teaching
Fasilitation o group work	No	
Location, availability, cosines	Yes	informal gaterings,
-	No	
knowing where they are, if they	Yes	entrepreneurial
-	Yes	Enterpreurial
-	No	

# Attachment 2

**17. What would be a convenient way for you to find more information about these open co-working space?**      **18. What information would you like to be know about such spaces before going there?**

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

Facebook, LinkedIn, Twitter or other social	Where it is, Who are the people that
On an Aalto website, Email newsletter	Where it is, How it can be entered,
Facebook, LinkedIn, Twitter or other social	Where it is, How it can be entered,
On an Aalto website, Facebook, LinkedIn,	Where it is, How many people are
Facebook, LinkedIn, Twitter or other social	Where it is, How it can be entered,
On an Aalto website, Email newsletter	Where it is, Who are the people that
On an Aalto website, Email newsletter,	Where it is, How it can be entered,
Message board notice, Signage	Where it is, What the space looks like ,
On an Aalto website, Facebook, LinkedIn,	Where it is, How many people are
Facebook, LinkedIn, Twitter or other social	Where it is, How it can be entered,
On an Aalto website, Message board notice	Where it is, How it can be entered,
On an Aalto website, Facebook, LinkedIn,	Where it is, How it can be entered,
Facebook, LinkedIn, Twitter or other social	Where it is, How it can be entered,
Facebook, LinkedIn, Twitter or other social	Where it is, How it can be entered,
On an Aalto website, Email newsletter,	Where it is, How it can be entered,
On an Aalto website, Facebook, LinkedIn,	Where it is, How it can be entered,
Facebook, LinkedIn, Twitter or other social	Where it is, How many people are
Facebook, LinkedIn, Twitter or other social	Where it is, How it can be entered,
On an Aalto website, Email newsletter,	Where it is, How it can be entered,
On an Aalto website, Facebook, LinkedIn,	Where it is, How it can be entered,
Facebook, LinkedIn, Twitter or other social	Where it is, How it can be entered,
On an Aalto website	Where it is, How it can be entered,
On an Aalto website, Facebook, LinkedIn,	Where it is, How it can be entered,
Message board notice	Where it is, What the space looks like ,
On an Aalto website, Email newsletter	Where it is, How it can be entered,
On an Aalto website	Where it is, What the space looks like ,
-	-
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-	-
-	-
-	-
-	-
-	-
-	-
-	Where it is, What the space looks like ,
-	-
-	-



**Caroline Knappers**

Hello Mushroomers, my name is Caroline, and I am currently working on my thesis, focusing on the use of vacant interior spaces by people like you: creative, enthusiastic and motivated. I would like you to answer this question: How did you find your workspace/office space?

**Through a friend** +8

**Mushrooming** +8

**Through other means** +5

Nog 6...

Vind ik leuk · Reageren · Bericht niet meer volgen · Delen · 2 november 2012 om 13:05

2 personen vinden dit leuk.



**Hannu Aarniala** Nice quiz!

3 november 2012 om 23:41 · Vind ik niet meer leuk · 1



Schrijf een reactie...



**Caroline Knappers**

Next question: Would you be interested in renting a space temporarily at a non-commercial rate? Let's say, you could probably work there for 3 months, after which you have to move out/move on. Please leave a comment as to why/why not.

**No** +6

**Yes** +8

**If I was doing a photography project and I could use the space alone** +2

+ Voeg een optie toe...

Vind ik leuk · Reageren · Bericht niet meer volgen · Delen · 5 november 2012 om 16:22

2 personen vinden dit leuk.



**Kiira Käkönen** Maybe if I wanted to travel to a different country/city I would consider it. But if in my hometown, no, because I want a lasting place to be and feel comfortable 😊

5 november 2012 om 16:32 · Vind ik leuk · 1



**Lilli Maarja Mäkelä** 3 months is such a short time

5 november 2012 om 17:20 via mobiel · Vind ik leuk

 **Inari Virkkala** The rent would need to be quite low, so that it would be acceptable that the standards (location, tidyness, size etc,) of the space change. Perhaps this would work better if instead of one space there would be e.g. three around town: one in Kamppi, one in Otaniemi, one in Kalio etc. This could be handy for a person who often needs a meeting room, but for example architects usually have quite a lot of books at their offices that would be a nuisance to move around.  
6 november 2012 om 8:25 · Vind ik leuk · 🔄 2

 **Jere Kasanen** too much hassle for three months of low rent  
6 november 2012 om 10:42 · Vind ik leuk

 **Therese Bogan** I would rather pay more and feel secure, it helps me concentrate  
6 november 2012 om 10:51 · Vind ik leuk

 **Laura Beloff** yes. definitely it would be a great option. this is very much what i have been looking for recently; possibility to rent a space for just few months to be able to finish a project. one can find work-table space for rent in longer or shorter term, but it is more difficult to find a workspace for other (possibly messy or requiring more open space, wall-space, etc) kinds of work. Artist association has some spaces that they rent out for few month periods, but one has to apply them long time before the actual time-frame. This is problematic, as things dont always work out the way one plans. Also these temporary spaces (by the artist association) are very wanted.  
6 november 2012 om 16:46 · Vind ik niet meer leuk · 🔄 1

 **Noora Aaltonen** I agree pretty much what Emmi said here.  
8 november 2012 om 10:15 · Vind ik niet meer leuk · 🔄 1

 **Caroline Knappers** This is great help, thank you so much 😊  
8 november 2012 om 10:28 · Vind ik leuk

 **Elina Alatalo** I would also be ready for working in different environments every now and then. New people are inspiring.  
8 november 2012 om 15:55 · Vind ik leuk

 Schrijf een reactie...



### Caroline Knappers

Follow-up question(s): Would you be interested to use the space as an exhibition, experiment or project space for a short period of time? Please leave a comment again as to why/why not.

**Yes** +3

**No** +1

+ Voeg een optie toe...

Vind ik leuk · Reageren · Bericht niet meer volgen · Delen · 8 november 2012 om 10:32

Marika Tynnälä vindt dit leuk.

 **Jere Kasanen** I need my peace at all times  
8 november 2012 om 11:34 · Vind ik leuk

 **Hannu Aarniala** Few times a year on a weekend, for a christmas-sale or on Ravintolapäivä for example, yes. The problem with our workspace is that there are around 10 people working there and the timing should suit for everyone. DISCLAIMER: only speaking on my own behalf now, tho.  
8 november 2012 om 14:54 via mobiel · Vind ik leuk

 **Elina Alatalo** Action few times a year usually brings energy to the people in workroom.  
8 november 2012 om 15:58 · Vind ik leuk

 Schrijf een reactie...



### Caroline Knappers

Would you be interested to rent a space at a non-commercial rate for over 3 months, max. 1 year as a studio/exhibition/project/experiment/atelier space? Please leave a comment again as to why/why not.

**Yes, minimum 3 months** +3

**Yes, minimum 6 months** +1


**No**

+ Voeg een optie toe...

Vind ik leuk · Reageren · Bericht niet meer volgen · Delen · 8 november 2012 om 10:37

 **Elina Alatalo** I could rent a place to work even on hourly basis, if the payment of a rent would be easy and simple enough. On the other hand, there are plenty of free of charge places to work in, such as libraries.  
8 november 2012 om 16:02 · Vind ik leuk

 **Sonja Potenze** If the location and the price are good and I could rent a portion small enough (I just need 1-2 square meters for me and my laptop), why not.  
9 november 2012 om 16:06 · Vind ik leuk

 Schrijf een reactie...



### Caroline Knappers

Hello again. It's been a few weeks since my previous questions, but one very important question hasn't been asked yet: How difficult/easy was/is it to find an affordable workplace, and what causes it? Please comment again with some more specific details. Thank you

**Through a network it is easy, otherwise hard** +6

**Still looking** +2

- Easy, there are many affordable workspaces available**
  - Hard, there are few affordable workspaces available**
- + Voeg een optie toe...

 Vind ik leuk · Reageren · Bericht niet meer volgen · Delen · 19 november 2012 om 11:41



**Kiira Käkönen** found our place through Mushrooming. It was quite easy, but without this place I don't believe it would have been anywhere near as easy 😊

19 november 2012 om 11:45 · Vind ik niet meer leuk · 👍 2



**Inari Virkkala** I wouldn't say that without a network it is especially hard, but just requires more work(ing hours) of browsing in Etuovi or Oikotie and going to see different places that you don't already have references from someone that has been working in a space before

19 november 2012 om 12:47 · Vind ik leuk



**Caroline Knappers** Thank you for your responses 😊

22 november 2012 om 15:40 · Vind ik leuk



Schrijf een reactie...

