

# PLANNING IN A VACUUM: TARTU UNIVERSITY HOSPITAL AND URBAN DEVELOPMENT OF THE CITY OF TARTU IN THE SECOND HALF OF THE 20<sup>TH</sup> CENTURY\*

Epi TOHVRI  
Kaisi UDUMÄE

## Abstract

The University of Tartu has been an anchor institution – as a driver of urban revitalization and a designer of urban landscape. Starting from the re-opening of the university, the growth of the population in the city has been directly correlated with the growth of the university and its student body (Kruus, 1927). In 2010 the collective body of the university constituted approximately 1/5 of the registered population (Tartu City Forum, 2010). The anchor institution is a driver of economic growth, a real estate developer and a service provider (Harkavy *et al.*, 2009).

The University of Tartu and Tartu University Hospital known as Estonian Meds and Eds are one of the key factors of the favorable economic climate since the two medical and educational institutions concur in providing health care, quality of life, amenity and highly educated labor for the community. In the 21<sup>st</sup> century Tartu University Hospital has become one of the anchor institutions of Tartu and South Estonian Region, having a direct impact on the City and its economic growth.

**Keywords:** anchor university, Tartu University Hospital, urban development, city of Tartu, establishment of university.

Epi TOHVRI (corresponding author)

Associate Professor, Ph.D., Director of Civil Engineering and Building Design Program, Tartu College, Tallinn University of Technology, Tartu, Estonia  
Tel.:0037-262-04814  
E-mail: epi.tohvri@ttu.ee

Kaisi UDUMÄE

MSc. Landscape Architecture, Tartu College, Tallinn University of Technology, Tartu, Estonia  
E-mail: kaisi.udumae@gmail.com

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## 1. Introduction

The aim of this article is to discuss the impact of the Teaching Hospital (Clinic) of the University of Tartu on the urban development of the City of Tartu. The Maarjamõisa campus, which has recently caused much debate, is closely connected with the development of the Maarjamõisa medical campus. By the end of the 19<sup>th</sup> century the medical campus established historically on Toome Hill was not able to meet the increasing needs for the expansion of the material base of the Faculty of Medicine. In order to build a new campus a final vote took place in 1910 on four potential locations: Tähtvere, Jaama, Maarjamõisa manors and Toomemägi. The final decision favored Maarjamõisa which is geographically one of the highest places in Tartu and its proximity to the railway was regarded as a considerable asset.

The expansion of the University of Tartu in the Maarjamõisa field is the most actual theme in the dispute handling the integration between the university and the City. The core of the development of the Maarjamõisa science campus is the medical campus which is the high-tech study base and the most favorable 'planning ground', and of which acts as effective anchor institution by attracting a whole city life. Systemic development of Tartu as an entirety started after World War II, but the General Plan did not guide the perspective development of the university. The university was seen as an established *alma mater*. According to the European tradition a monocentric university in the middle of urban life did not facilitate any expansion, and that had led to arbitrary planning. Similarly to the Soviet period, the City has not been able to develop hand in hand with the university and subsequently the correction of mistakes has to be applied to the 50-year-old practice. In 2010 the town initiated a specific plan of the master plan: 'Spatial development of the universities, colleges and Tartu University Hospital'. The latter is not ready yet but its aim is to continue the historical and cultural tradition and develop the future university in the City center.

The identity of Tartu is closely linked to the University of Tartu, which was reopened in 1802. The Faculty of Medicine enjoyed great conditions for development in the Imperial University of Tartu. An important role was played by the constant need for doctors, especially military surgeons (Leppik, 2006). Tartu University's Clinicum was established in 1804 and the new educational hospital was placed on Toome Hill, where the first building was constructed (Velliste and Tael, 2004). Later on, all university structures were planned compactly near the center of the City. During the 19<sup>th</sup> century the Faculty of Medicine developed into the biggest faculty of the university (Siilivask, 1982). By the beginning of the 20<sup>th</sup> century the educational hospital's or *Meds and Eds'* strategy had lifted the medical market to the frontier of Tartu's economic life. University's clinics operated as anchor institutions – clinics employed thousands of people (Leppik, 2006) and the high level of medical services made Tartu an acknowledged treatment center in the Baltic region and in the North-Western Russia. In 1910 the decisive stages of the creation of new clinics was reached as demand for services outgrew the compact area around Toome Hill (Velliste and Tael, 2004). Negotiations for finding the suitable site began with the City but decisions were slow

to come by (Estonian Historical Archives, 1909–1910). New clinics outside the administrative borders of the City were built in Maarjamõisa before World War I (Raam, 1999). The development of these new clinics, outside city boundaries was considered to be the break from traditional development patterns and the emergence of a separate Maarjamõisa's medical campus. The City and the university worked as independent institutions until the first part of the 20<sup>th</sup> century. Tartu's city map, certified in 1775, was developed before the reopening of the University and was the only plan that dealt with urban dynamics for nearly 150 years (Kotšenovski, 1984). In 1939 the first new campus plan searching for more compact institution of higher education was created by the University. The plan saw Maarjamõisa as the location of the new medical campus, which had to be developed in accordance to economic opportunities (Estonian Historical Archive, 1939).

The purpose of this article is to bring to light discussions held during the 20<sup>th</sup> century about the locational options and the development of Maarjamõisa's medical campus separate from the historical buildings of the center of Tartu. It is important to realize, which principles were followed for this choice. Planning discussions on the topic of whether the University of Tartu should locate and expand within the City of Tartu have lasted throughout the 20<sup>th</sup> century, but no necessary analysis or conclusions have been made. It is essential to grasp the whole concept that would help to develop the university together with the City which would strengthen both of them. In addition, relations between the Tartu University Hospital, Maarjamõisa's medical campus and the City of Tartu's spatial growth from the second part of the 20<sup>th</sup> century to the beginning of the 21<sup>st</sup> century are analyzed.

## **2. Theoretical framework**

The article uses the comparative method. Main comparisons are made with the Scandinavian countries, especially with Finland. Besides that, concepts of 'Meds and Eds' and 'anchor institutions' are used.

The success of Meds and Eds are inseparable from its key institution – the university. Universities are one of the main components of town's economic development and the shaping of city landscape (Wiewel and Perry, 2005). Universities' impact on the dynamics of the surrounding environment has been acknowledged little by little, but there are still only a few academic writings on this topic that originate from Europe (Wiewel and Perry, 2005). American urban planning specialists Wim Wiewel and David C. Perry have dealt with connections regarding the development of cities through case studies in many of their works. 'The University as Urban Developer' published in 2005 and 'Global Universities and Urban Development' from 2008 can be highlighted here.

An important step toward acknowledging the role of universities is the introduction of the term 'anchor institution'. Pennsylvania University's urban planning department professor Eugenie Birch has given anchor institutions a modern meaning: the engine of the rebirth of a town and survival are anchor institutions such as universi-

ties, hospitals, sports centers, cultural centers, various communal centers, churches etc. Universities have three prominent roles: university as the accelerator of economic growth; university as a real estate developer, also supporting the housing market (i.e. housing for students, scholars); and university as a provider of services. Universities are also catalysts of economic growth, both directly and indirectly by being employers. At the same time they train specialty professionals and have the ability to change scientific researches into profit earning technology or business. Universities are magnets for enterprises that wish to establish close collaboration with scientists. Latest positive examples are Massachusetts Institute of Technology (MIT) and Stanford University, which have functioned as anchor institutions for well-known research areas of Boston and Silicon Valley (Harkavy *et al.*, 2009).

Moreover, universities have often become the biggest real estate owners: for example the University of Columbia is the third largest property owner in NYC (Wiewel and Perry, 2005).

The concept of anchor institution originates from the USA, but has also grown roots in Europe and can be vividly illustrated by the Finnish practice. Finnish state policy in the 1960s ordered new universities to be built in regions with lower development levels. In 1958 Oulu University was established in Northern-Finland; in 1969 Lappeenranta University of Technology and Joensuu University along the Eastern border of the country were set up; Lapland University on the polar circle was created in 1979. When comparing different cultural spaces, the historical traditional features in the establishment of universities can be seen: American suburban campuses are the opposite of European universities' traditions to place higher educational institution in the center of the town. The goal is to integrate the academic life into city environment. The University of Helsinki, much like the University of Tartu, was constructed in the center of the town. The main building (1832) was built next to the town square, where the Capitolium and the Dome Church are located (Haila, 2008).

The history of Tartu University Hospital has been thoroughly researched in a work titled 'Tartu University Hospital 200' by editors Anne Velliste and Kristi Tael in 2004. For the objective approach of planning discussions and for the reconstruction of historical environment of Tartu University's and the medical campus' different stages of development, Soviet literature has been used. When talking about periodicals, journals 'Eesti Arst' (Estonian Doctor), 'Nõukogude Eesti Tervishoid' (Estonian Soviet Healthcare), 'Ehitus ja Arhitektuur' (Construction and Architecture); newspapers 'Postimees', and 'Edasi'.

Soviet planning material's center of gravity rests on the archive of the Museum of Estonian Architecture. The archive's repository № 4 covers the general plans of towns and boroughs, including the perspective plans of Tartu University from 1960 to 1980. From the personal collections of Architectural Museum are worth mentioning the archive repositories by architects Raul-Levroit Kivi and Arnold Matteus, respectively № 21 and 25.

### **3. The formation of the Maarjamõisa medical campus: discussions on urban planning during the Estonian Soviet period**

During the Estonian Soviet period, the faculty of medicine was consistently the biggest faculty. At the end of the Soviet period, approximately 1800 students were enrolled there (Kaasik, 1998). The construction boom for hospitals had also gained momentum due to the political conditions of the Cold War and Estonia was also seen as a possible evacuation destination in case of nuclear disasters at the Sosnovõi Bori power plant near St. Petersburg.

Tartu's medical market continued its role as the engine of economic growth. The condition of Tartu's medical institutions was considered exceptionally positive: the number of hospitals and beds per population exceeded the required standards 1.5 times. As most of the medical institutions reported to the State, the clinicum drew more patients from outside Tartu than from the City itself (Reissar, 1965). Even though, medical aid was free during the Soviet period, outsiders affected local trade with significant indirect spending.

Systematically, the development of Tartu as a whole began only after World War II. Tartu was one of the first Estonian Soviet Republic States that created a general plan following the war. The plan was worked out in 1945 by architects Peeter Tarvas and Anton Soans, although its main focus was on the restoration of the center of the City (Kotšenovski, 1978), which did not involve the university or its Maarjamõisa's medical campus' perspective development (Kivi, 1966a; 1966b). It wasn't until the end of 1950s that Tartu State University's dean of the Medical Faculty Robert Looga was asked to create an entirely separate campus plan titled 'Tartu State University's Faculty of Medicine's and Tartu health institution's development perspective plan in 1960-1980' (Looga, 1966). Understandably, this plan was to focus on modern methods of treatment, that could be used most efficiently in large medical campus setting, where all the specialists were gathered with the most modern diagnostics and medical equipment and where quick consiliiums could be organized (Port, 1983).

These separate, seemingly unrelated planning efforts highlighted the disconnection between the City planning officials and the campus planners. In April 1966, discussions on the future development of Tartu were held, with a particular interest concerning the relation between the university and the City. University's expansion and choices between new locations created a nationally lively debate, which culminated in October 1966 with a roundtable consisting of 68 experts in the quarters of the newspaper 'Edasi'. Among the participants were architects from Tartu and Tallinn and the representatives of Tartu State University, Academy of Agriculture, Estonian Soviet Academy of Science, and City of Tartu Executive Committee.

Concerning the development of the university, three aspects were analyzed: sociological, specific-technological and city constructional. The roundtable showed that from a sociological aspect university represented the main function and historical cultural tradition to the City. Specific-technological aspect took the university as a project contractor and a user of buildings. City constructional aspect anticipated university

planning, where the city's infrastructural needs would be considered. Scattering of buildings was avoided in the City center, because this would have burdened the inter-college traffic in the center, which was already suffering from traffic jams (Kivi, 1969a). The Head Architect of Tartu's Department of 'Estonian Project' Raul-Levroit Kivi emphasized that university's impact force as a sociological field depended on the compactness of its mass (Kivi, 1969b).

The planning process was based on the global planning principles of that time which were introduced in Tartu State University newspaper's section entitled 'Basic principles and opinion of modern university planning' (Kaasaja ülikoolide planeerimise põhimõtteid ja seisukohti). The basis of everything was focus around three main themes – perspective, compactness and flexibility. Developed structures of universities were usually the following.

A. University center, rectorate, library, overall study and science group, service buildings (including polyclinic), forum;

B. Faculties;

C. Student dormitories;

D. Academic campus;

E. Sports complex;

F. Museums, botanical garden etc.

Existing development patterns offered little flexibility due to the development of science and pedagogy that sparked new changes at both educational and scientific levels. Discussions concluded that due to space limitations, new universities and expansion of already existing institutions should be built on open spaces just outside the City. Fragmentation or dispersion would strongly paralyze university's life. Inner city complex would have some benefits: old buildings with cultural traditions can be linked with new ones, economic effect in the preserved parts, shorter distance from the City center etc. Tartu State University faced the same problems as Helsinki University (Haila, 2008). According to European tradition, university's institutions were situated in the City center, which did not give the opportunity to enlarge and lead to scattered buildings.

Architect Raul-Levroit Kivi took compactness as the prime objective, which he phrased: 'Compactness in a university complex is something in-between: an ensemble with the building complex which is connected by galleries'. New buildings were meant to be situated on as few properties as possible and had to be suited with the old ones on Toome hill. As a historic cultural factor the new university had to stay influential, without burdening the City center with traffic at the same time. The size of the territory had to guarantee a longer perspective and first-priority buildings could not have been thwarted by already existing valuable buildings. In R.-L. Kivi's opinion, a result almost close to ideal was accomplished: compactness and perspective, direct contact was created with the land occupied by the old university, Emajõgi river and Toome hill's slopes (Kivi, 1969b). The only compromise was the future medical education center that lay on Maarjamõisa field (Kivi, 1969b), covering most of the area

between L. Puusepa, Riia, Ringtee ja Viljandi mnt (The Museum of Estonian Architecture, 1968).

Hospitals built in Estonia during the Soviet period were offered positive role models by the Northern neighbors, especially Finnish block hospitals. In 1960s and 1970s 'Estonian Project' architects, several medics and Tartu State University's representatives visited Northern countries – Finland, Sweden, Denmark. Finland was visited on two occasions: in 1966, when Kalju Luts, the architect of several future hospitals in Tallinn participated (Luts and Avarsoo, 1967). In 1970s, Hermann Vahter, Tartu State University's medical scientist, was part of a five member delegation (Kink, 1970). On both occasions Southern-Finnish hospitals were visited, which aimed to get acquainted with the building process and designing in Finland (Luts and Avarsoo, 1967) and establishing professional contacts (Kink, 1970). Four bigger hospitals Tampere, Turu University, Helsinki University (Luts and Avarsoo, 1967) and Kotka central hospitals were visited (Kink, 1970). Statistically, Estonian Soviet Republic did not fall behind the Nordic countries, on the contrary, by several development characteristics Finland and Denmark were left behind. The number of hospital beds per population was bigger in Estonia than it was in Finland and Denmark and there were even three times more medics per 10,000 people than in Finland. Tartu State University was still able to fulfill all the needs of the republic, training qualified doctors (Saarma, 1965).

As a conclusion from the Soviet period it can be said that the Faculty of Medicine can be considered as one of the cornerstones of the university due to its size and material base, but Tartu's city officials were not involved in the visioning of Tartu University's spatial development. The City of Tartu did not acknowledge university's importance, especially its medical campus as an anchor institution. The City and the university continued their individual planning until the 1960s, when a perspective plan for the development of medical campus in Maarjamõisa was created (Looga, 1966). Both the representatives of the City and the university understood by that time the necessity to co-operate. As late as 1968 the town's perspective plan specifying the general plan was completed. It directed the placement of higher educational institutions in Tartu (The Museum of Estonian Architecture, 1968). This plan also had to take into consideration the perspective plan of Maarjamõisa that was adopted ten years earlier.

#### **4. Tartu University Hospital and Tartu's spatial development after the regaining of independence 1990–2010**

In 2010 the Council of the University of Tartu confirmed 'The principles of the spatial development of the University of Tartu until 2015', which is a basis for planning new buildings and facilities, reconstruction and changes in functions of already existing buildings (The Council of the University of Tartu, 2010).

According to the development plan, university's stacial location in Tartu is compressed into two campuses: City center region (departments of *humaniora* and *socialia*) and Maarjamõisa region (*departments of realia et naturalia* and *medicina*) (The Council

of the University of Tartu, 2010). The City center campuses represent the historical buildings that are used for educational and scientific purposes, administrative and supportive activities and in case of need a new more efficient purpose is searched. University's principle is preserving historic buildings as an urbanistic unity (The Council of the University of Tartu, 2010).

Maarjamõisa's scientific campus is a developing modern complex of buildings on Maarjamõisa plane that consists of already existing and newly projected science structures using state of the art technology. The whole campus is closely linked to high-tech enterprises (The Council of the University of Tartu, 2010).

To better connect these two campuses there have been workshops offering practical solutions. Maarjamõisa is separated from the rest of the City by a railroad and it is situated between private houses. The region has not developed urbanistic crossroads like cultural and recreational spaces. Maarjamõisa is easily accessed by car, but has not developed pedestrian or non-motorized connections with the City center and historical campus (Lepner, Tamm, Peil, Sild and Vallner, 2007).

One solution would be the creation of a new park to be used by pedestrians. The park would be the main element for creating order, orientation and connectivity. The edge of it would host clinics of Tartu University and other buildings of natural science (Lepner *et. al*, 2007).

From an ideological aspect nowadays Tartu University's condition recalls the conditions of the 1960s, when the City's comprehensive planning looked at the university as a fully developed *alma mater*, without having a perspective plan considering the City's and university's growth. Maarjamõisa medical campus is once again embraced by the society as a compromise solution contrasting with the City center's campus.

## 5. Conclusion

The Medical Faculty of Tartu University has been a significant player since the 19<sup>th</sup> century at the community level. Its importance has been characterized by its role as the biggest faculty at the University; the largest employer in Tartu; and a regional medical center through the ages. It is a perfect example of an anchor institution as it has acted as a magnet for people, investment and innovation. Its presence has contributed to economic stability, regional and international innovation and collaboration, social wellbeing and infrastructure modernization. The city of Tartu is known as a regional center for medicine and technology because of the presence of the medical campus. Its historically important position is still maintained due to the growth in both the medical and educational sectors. Promoting Meds and Eds is often seen as good economic policy. Today, the clinical medicine and medical campus in Tartu ranks in the top 1% of the world's most prestigious institutions by the Institute of Scientific Information (Tina, Tintson and Pajuste-Kuul, 2010). It is the biggest employer in Southern Estonia and treats up to 40% of the country's ill (Tartu University Hospital Foundation, 2003) and continues to attract visitors (professors, professionals and patients) from abroad.

While the medical faculty is fully recognized by the University as a cornerstone of their establishment, with the largest faculty and building resources, the City of Tartu has lagged behind in the recognition of the importance of the University in general and the Medical Campus in particular. Unfortunately, this disconnection between the town and the campus can be seen from the earlier plans for both city and town. The very first plan for the city of Tartu was drawn up in 1775, before the University existed. The University's first integrated plan for its campus system was developed in 1939. Tartu city's comprehensive plan prepared in 1945 did not integrate the University's campus plan. The two planning entities continue to go along their separate paths till the 1960s when the medical campus plan for a satellite campus outside the city is unveiled. Officials on both sides begin to see the need for a more integrated approach to both city and campus planning. It wasn't until 1969 when the city plan focused on the location of higher education facilities within Tartu. This 1969 plan de facto had to integrate the satellite campus plan created in 1960 for the medical campus on the Maarjamõisa site. This historic disconnection between city and campus planning still seems to exist even today. The University's objectives are to create an efficient, compact campus with primary regard to cost and convenience, while the city struggles for social cohesion, uses for empty buildings and a growing loss of student oriented activities in its center.

The university, however, has been quite consistent in its planning activities for the satellite campus which would house all the medical related facilities, and expand to integrate the pure sciences such as chemistry and physics. In fact, the 2003 Clinicum Plan called for the consolidation of all medical activity into the new campus. Because of this campus planning has dictated city planning since the 1960s.

It would be in the city's best interest now to work with the campus planners to create better connections between the satellite campus and the center such that it can still attract students, benefit from a growing regional science center, and actively working with the University to find new uses for the vacated buildings within the City. The creation of a Meds and Eds center so close to the city center can be seen as a huge development opportunity for the City of Tartu. The opportunity can be realized if closer cooperation between city and university can be achieved in the current 2010 plan still underway.

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