

Delft University of Technology. Faculty of Architecture and the Built Environment
Department of Urbanism. MSc 4 Urbanism Graduation Studio:
Design of Urban Fabrics

JOINT APPROACH TO REVITALISE KAUNAS CITY CENTRE

Exploring Possibilities of Economic and Social Regeneration in the
Context of Post-Socialist City Centre

leva Lendraitytė. 4417097

JUNE 2016

Author

Ieva Lendraitytė
Student number: 4417097
ieva.lendraityte@gmail.com

P5 Report

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Faculty of Architecture and the Built Environment
Department of Urbanism
MSc 4 Urbanism

AR3U100 Urban Transformation & Sustainability.
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Mentor team

Prof. ir. Rients Dijkstra
Urbanism; Chair of Urban Design
R.J.Dijkstra@tudelft.nl

Dr. ir. SA Stephen Read
Urbanism; Chair of Spatial Planning and Strategy
S.A.Read@tudelft.nl

Dr. A. Arie Romein
Urbanism; Chair of Spatial Planning and Strategy
A.Romein@tudelft.nl

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1.1 SUMMARY

The graduation project is called "Joint Approach to Revitalise Kaunas City Centre". The study case is Kaunas, second biggest city in Lithuania and fourth biggest in the Baltic States. In the project it is aimed to create an active, liveable city centre and structure clear urban development framework. In order to do that a Masterplan parallel with a policy structure supporting it, is proposed in the project.

Form 1990's the development patterns of the city have changed when the country regained its independence and moved from centrally planned to free market economy. New development patterns, such as suburbanisation, demographic shrinkage, automobilisation, commercialisation, infrastructure led development occurred in the city, and influenced the way the city centre works.

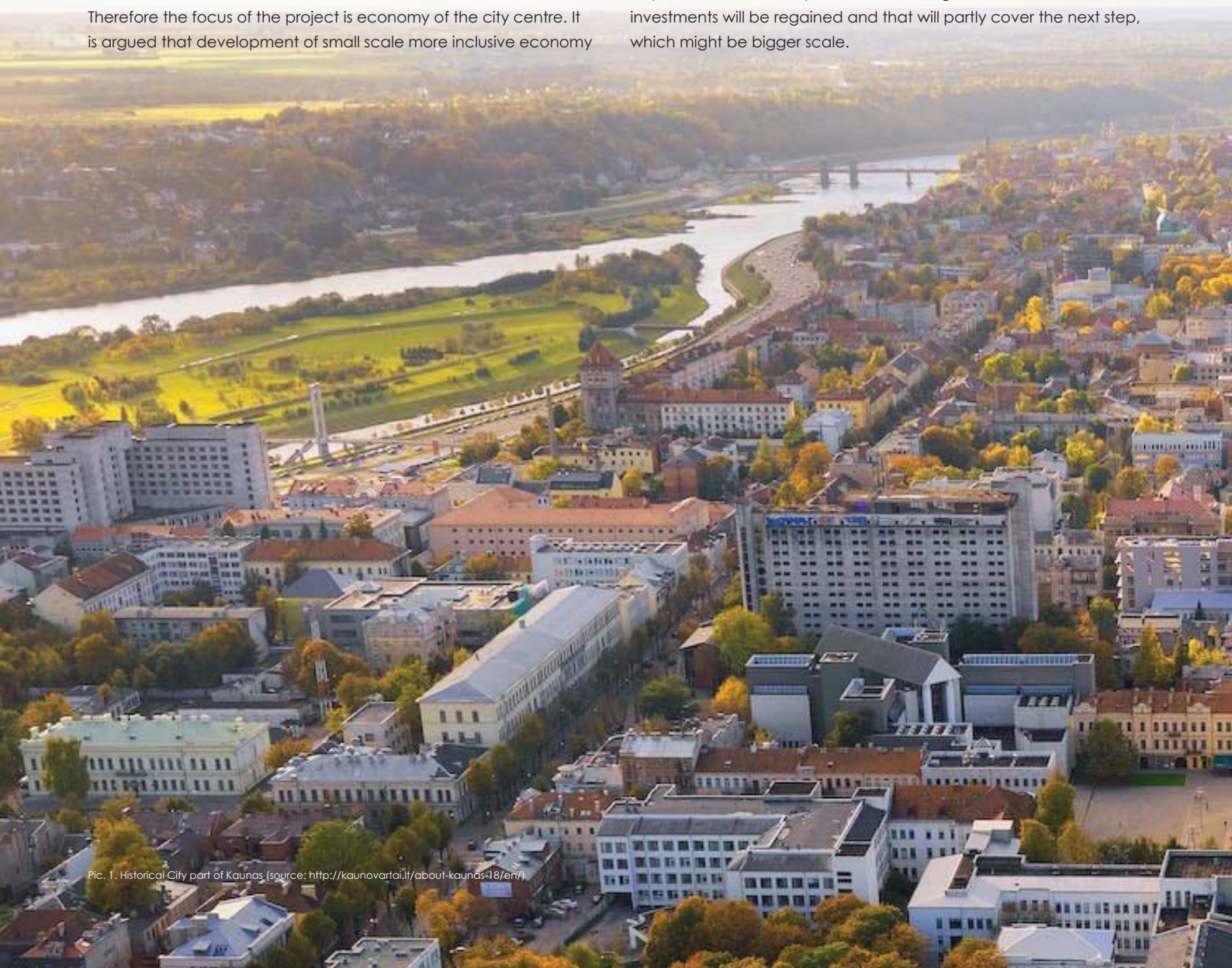
As a result the city centre faces stagnation. Traditional, small scale economic activities are disappearing from the public spaces. Thus the city centre has emptied. It's not attractive for people to come as well as businesses cannot survive there. The level of unemployment increases, that result into emigration.

Therefore the focus of the project is economy of the city centre. It is argued that development of small scale more inclusive economy

in the city centre might help to strengthen economy of Kaunas in general, as well as attract people from the other European countries back. Where it is aimed to transform an area into more pedestrian oriented. At the same time built a network of projects in the key strategic locations (student square, museum cluster, the main shopping street, city park, market area) and improve the networks connecting them. All this system would create conditions for diversity of different small scale economic activities emerge in the city centre.

In the project it is argued that small scale improvements in an urban environment might have equal or even bigger impact on daily life of residents, rather than big scale development. Therefore it is tried to combine both approaches top-down and bottom-up. In other words small steps of development is made aiming to achieve bigger goals.

Phasing here plays a mayor role. Municipality of Kaunas is in debts, at the same time economy of the city is fairly weak. Therefore it is proposed to implements the project in phasing, starting from small steps, rather modest improvements. During this time some of the investments will be regained and that will partly cover the next step, which might be bigger scale.



Pic. 1. Historical City part of Kaunas [source: <http://kaunovartai.lt/about-kaunas-18/en/>]

1.2 STUDIO CHOICE

The last two and a half decades in Lithuania has been a transition period followed by rapid environmental, economic and social changes. In the project it is believed that physical patterns of urban development and urban form directly impacts society and vice versa. In other words the way in which urban fabrics is designed can determine the level of social integration or segregation, inclusion or exclusion. The area of case study is rather homogeneous. This is one of the main reasons to explore possible changes in an urban fabric to enhance economic and social changes in a most effective way to adapt for a changed role of the city centre.

1.3 PERSONAL MOTIVATION

Personal motivation for this study comes from multiple aspects. Firstly from interest in urban transformation and relation with social and spatial processes. Following a unique historical event in post-socialist cities raises a desire to explore and record a transition period from centrally planned to free market economy in Lithuania. Here the perspective of citizen gives insights to present processes from its actual social situation and the perspective of international academic platform allows to take a distance from the study case, as a research subject.

Finally, existing planning system and approach to urban design/panning is still under development in Lithuania, there is still a number of uncertainties and gaps in planning system. Presenting this protect to the municipality, or architects and planners community might contribute to clarifying the direction of urban development of the city and start a discussion of a future of medium size post-socialist cities, consequences of suburbanization, shrinking city centre and a role of heritage preservation in such a weak economic situation.





Pic. 1. Kaunas neighborhood (photo by Romualdas Rakauskas)

1.4 SCIENTIFIC AND SOCIETAL RELEVANCE

1.4.1 SCIENTIFIC RELEVANCE

In recent decades there has been an increased interest by various scholars in the transition process of post-socialist cities. According to Stanilov (2007) social evolution of Central and Eastern Europe is a perfect laboratory for exploring the relationships between market, politics and history. It helps to understand influence of these forces on urban fabric.

There is a number of research made about the capital cities in post-socialist countries (Tsenkova, Stanilov, 2000, Tammaru et al., 2016, Ubarevičienė and Burneika, 2015). Though the interest of the middle size cities is slowly growing, they have received much less attention from the scholars. Yet these middle size cities experience even more serious problems. This graduation project aims to contribute to the existing body of knowledge in this field, specifically concentrating on urban problems of middle size post-socialist cities.

Finally, the main issues most post-socialist cities have experienced since the early 1990, are remarkably similar regardless of variations in the national context (Stanilov, 2007). A proposed strategy in the graduation thesis intends to offer an alternative and might become a pilot project for middle size cities in Lithuania or even the Baltic States.

1.4.2 SOCIETAL RELEVANCE AND ETHICS

Kaunas as other Eastern Europe cities is currently transforming from a compact socialist city to a modern capitalist city. The recent development of the city is concentrated on suburban expansion, investments in road network, basic infrastructure (electricity, water supply) while due to the lack of funding the rest is left in the hands of private investors, aiming higher personal profit. Often that ignores wider interest of the society. This project aims to bring focus back to the city centre, in a way to respond to a needs of a wider group of Kaunas inhabitants.

Secondly, due to strict heritage requirements and regulations, even though the city centre experience a stage of stagnation and faces economic difficulties, the city centre is more and more difficult to access by the lower class population, start-ups. The quality of building is worsening, parallel to that a number of abandon buildings are gradually growing, yet at the moment due to high heritage regulations the cost of renovation increases few times, rejecting economically vulnerable part of population. At the same time residents, entrepreneurs that are there already are gradually pushed out as they are not capable of taking proper care of the building, when eventually it become not possible to use and people are forced to move out anyway.



Pic.2 Abandoned industrial building in 'New Town' (photo by Erikas Ovčarenka)

2.1 PROBLEM DEFINITION

The city centre of Kaunas is losing life and vitality. There are less visitors and as a result local, small scale economy is weakening. Since the collapse of the USSR (The Union of Socialist Republics) the former communist countries are undergoing a process of dramatic transformation. A series of new development patterns, such as suburbanisation, commercialisation, infrastructure led development, have occurred when political ideology changed from socialism to capitalism. This resulted in a changed role of the city centre, and movement patterns of the people. The city centre is hardly accessible by private car, in comparison with the shopping and leisure centres along the main infrastructure, different demands led to growth of the leisure and shopping centre. As a result traditional commercial activities are losing importance in the public spaces of the centre, most of the regional users and residents of the city are attracted by the shopping malls and amenities along the main infrastructure. Hence the role and the way the city centre functions has changed. Traditional city centre functioned as a small scale neighbourhood, with a diversity of amenities, residential units within the neighbourhood itself., while now the city centre works more in a regional way, providing services, amenities for the people from all the region.

Historical urban structure do not respond to the changed uses and new functions. Meanwhile heritage regulations limits reconstruction possibilities and accordingly economic activities in the city centre.

In other words, reconstruction of an existing structure often requires a lot of investments, as well as raises the cost of maintenance. As well often interior structure legally could not be changed for the new uses.

Contrary the shrinking city in size of population is sprawling further into the region. In this way significantly increasing the cost of city maintenance, a need for a new infrastructure, services. As a result most of the budget of the city is spent on new expansions. The municipality of Kaunas is deep in debts. The city centre has been neglected for a while by urban planners.

The result of current trends is a city with a chaotic development. Where the range of the problems are intertwined and strengthen by each other leading to an even more uncertain future of the area. The city centre is emptying. Businesses are closing down, entrepreneurs moving out of the city. Economic life in the city centre is stagnated.

Due to these development patterns the level of unemployment has increased, together with that emigration to the other regions in the country or even to the Western Europe. In 25 years population has declined by 110 000 (30%) inhabitants in Kaunas. All this causes a chain reaction, when decreasing number of people results in even more weakening economy, less taxes collected,

2.2 PROBLEM STATEMENT AND AIMS

PROBLEM STATEMENT: DUE TO SOCIO-ECONOMIC DEVELOPMENT PATTERNS THE CITY CENTRE IS STAGNATED. CHANGED ROLE OF THE CITY CENTRE TOGETHER WITH STRICT HERITAGE REQUIREMENTS, AND LACK OF URBAN DEVELOPMENT DIRECTION LED TO A DEGRADING AREA. THIS MIGHT HAVE DIRECT CONSEQUENCES FOR FURTHER DETERIORATING ECONOMIC LIFE OR EVEN SHRINKAGE OF THE CITY. AN ALTERNATIVE WAY OF DEVELOPMENT IN THE AREA IS NECESSARY TO ENSURE ECONOMIC AND DEMOGRAPHIC STABILITY.

THE AIM OF THE PROJECT IS VIBRANT, DIVERSE, EQUALLY ACCESSIBLE, CITY CENTRE WITH AN URBAN STRUCTURE ALLOWING TO ENHANCE FUTURE SOCIO-ECONOMIC CHANGES.

PROBLEM DEFINITION

1. WEAK ECONOMIC LIFE

2. LACK OF URBAN DEVELOPMENT DIRECTION

2.1 growing debts

3. STRICT RESTRICTIONS OF HERITAGE

3.1 limited reconstruction possibilities;

4. CHANGED ROLE OF THE CITY CENTRE

OBJECTIVES

1. STRENGTHEN ECONOMIC LIFE OF THE AREA

create spatial conditions to promote a development of new economy, increase robustness of the economy in the area, by using mix solutions:

- a. support and attract small businesses;
- b. strengthen more local economy;
- c. more robust economy based on diverse sectors (culture + consumption + production).

2. PROMOTE MORE BALANCED DEVELOPMENT

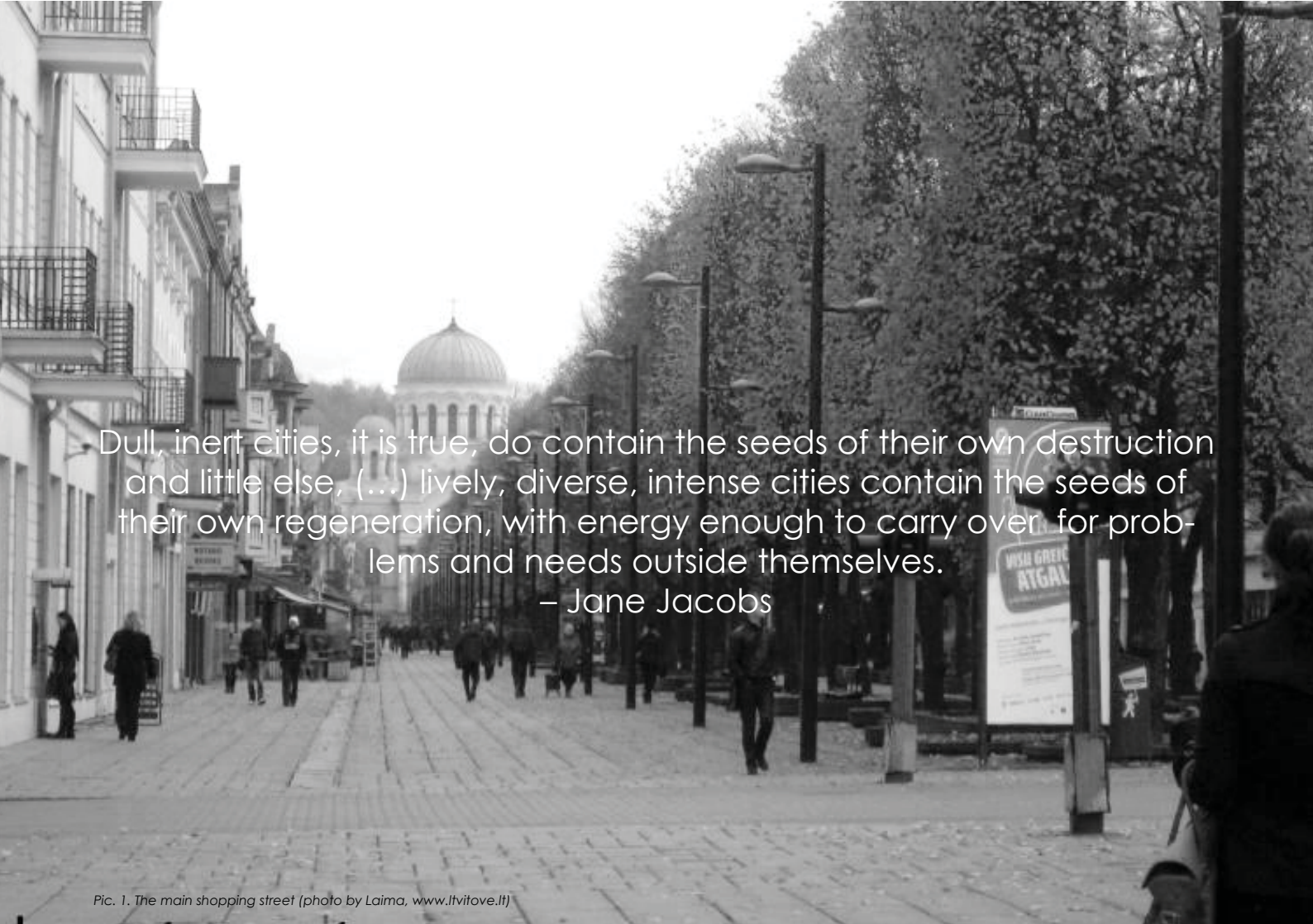
promote development of the area less dependent on the support of municipality. It will be done by:

- a. combining top-down and bottom-up approaches;
- b. using existing qualities of the area;
- c. increasing participation and inclusion of residents, in order to create conditions in a long term for the community themselves take care of the area.

3. CREATE CONDITIONS TO MAINTAIN HERITAGE WITHOUT STOPPING DEVELOPMENT AND INCREASING SOCIAL EXCLUSION

4. REDEVELOP CITY CENTRE TO MAKE IT EASILY ACCESSIBLE AND USABLE FOR THE PEOPLE FROM THE CITY AND THE REGION

redevelopment of different modalities, to make the urban space easily usable and accessible for pedestrian, cyclist, motor traffic.



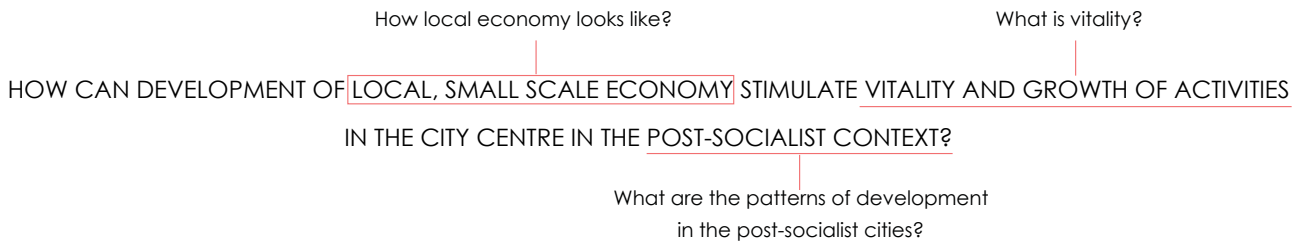
Dull, inert cities, it is true, do contain the seeds of their own destruction and little else, (...) lively, diverse, intense cities contain the seeds of their own regeneration, with energy enough to carry over for problems and needs outside themselves.
– Jane Jacobs

Pic. 1. The main shopping street (photo by Laima, www.ltvitove.lt)



Pic. 2. Shopping centre Merkurijus in the main shopping street, 1985 (photo by Romaldas Požerškis)

2.3 RESEARCH QUESTION



To be able to answer the main research question and structure the investigation of this project, a number of subquestions are raised. The following subquestions are divided into two parts:

EXISTING URBAN DEVELOPMENT ISSUES:

1. What are emerged conflicts between socialism and capitalism led city development that are visible in an urban fabric?

Post-socialist cities experience changes that Western Europe countries had just with significantly smaller capital and weaker economy (Nawratek, 2010). With this question it is aimed to explore differences between two types of the cities and urban problems they have. Finally, it is aimed to understand what mistakes might be avoided, that capitalistic cities have experienced and what can be learned.

2. What are the reasons and negative effects of the existing demographic changes and economic situation to urban structure of the city?

The main issue that Lithuania experience is demographic shrinkage of inner cities and their regions. It is a direct result of suburbanisation and emigration, where the only urban areas that grow are the periphery of the biggest cities. It is strongly linked with an economic and demographic aspects. Understanding the reasons and consequences might help to identify initial problems to be able to reverse the negative trends.

3. What spatial strategies are in the city centre of Kaunas and how effective they are?

The city centre of Kaunas is state's importance Cultural Heritage site, that has high cultural protection requirements. On top of that recently (2015) an application to be announced as UNESCO cultural heritage site has been submitted. At the moment the centre experience stagnation. This is in a way intertwined with current economic situation and demographic changes in the last decades. With the question it is aimed to set a list of priorities integrating different fields of problems, such as level of heritage preservation, economic situation and social capital.

ECONOMIC AND SOCIAL VITALITY AND ROBUSTNESS OF URBAN FABRIC

4. What are current trends and perspectives of economic development?

Right now world experience a transition process. A critique for old capitalism system and uncertainties about the future. The strategy implemented and guidelines given for future development will determine future survival and success of the city. With the question it is aimed to explore possible future scenarios and see how they might be translated into urban fabric.

5. How to make more socially and spatially inclusive structure in the city centre?

One of the reasons of a decline of the city centre is low integrity of development that led in a deep stagnation after 1990s, and at the moment due to strict heritage regulations to an increasing number of social exclusion, stopping economic livability of the centre. One of the main features of successful city centre is level of its vitality. The answer to this question might help to explore possibilities of more socially and economically robust structure and actions that might be taken to achieve that.

6. How to redevelop existing structure of the city to accommodate short and long term socio-economic needs and enable development?

What strategy and design might help to enhance changes. Finally, what specific actions should be taken and how urban structure might be changed, keeping in mind heritage, demographic structure and livability of the area.

2.4 METHODOLOGY

The methodology involved in this thesis has emerged from both systematic and intuitive approaches. The findings of the research will help to justify and adjust the hypothesis with evidences. Interviews from local stakeholders, observations, policy and real estate reports together with statistics and spatial analysis will serve as the database meant to test the hypothesis. Thus research will provide a flexible base for the design, while design will continuously help to make a reflection and narrow down the research topic. Both will be developed parallel to each other and constantly intertwined. Combination between theoretical and empirical knowledge will give a clear insight into the fundamental issue.

Research questions are divided into two main categories according to methodology used to answer them.

THEORETICAL

1. What are emerged conflicts between socialism and capitalism led city development that are visible in an urban fabric?

In order to answer this sub-question a review of existing literature should be done. The literature review is aimed to deepen understanding of the theories and knowledges that have already been researched by scholars in this field. It provides information about specific features of post-socialist cities and urban problems that they share. At the same time case studies on other post-socialist, particularly Baltic countries cities might help to predict possible trends of development and learn from the mistakes that has been done in the past cases.

4. What are current trends and perspectives of economic development?

The question is based on literature review, predictions of the most influential authors. Additionally to that case studies of existing projects will be done, to see how urban structure is changing at the moment in other cities and how Kaunas could learn from that.

5. How to make more socially and spatially inclusive structure in the city centre?

A literature overview will be used to answer this question. To see what different authors emphasize as main elements of successful city centre. Also reviewing what mistakes have been done in a development in other cases.

ANALYTICAL

2. What are the reasons and negative effects of the existing demographic changes and economic situation to urban structure of Kaunas?

Literature review will give main urban problems, and patterns of development common to most of the post-socialist cities in the Baltic States. While analysis of statistical data, mapping of existing situation, historical analysis (particularly transition process) and interviews with local stakeholders introduces with specific problems of the case area- Kaunas city. By analysing and getting information from this review, the cause / origin of existing situations will be discover.

3. What spatial strategies are in the city centre of Kaunas and how effective they area?

The answer to this question first of all comes from critical review on Cultural Heritage Policy and Strategic plans of Municipality. Finally, the level of their integrity. In the end overlaying current development trend with economic and demographic situation might help to define priorities.

6. How to redevelop existing structure of the city to accommodate short and long term socio-economic changes and enable development?

The question mainly relate to the physical form of the city. To be able to answer it an analysis of urban morphology should be done, analysing density, intensity of an urban structure. It provides information about existing capacity of the space. To be able to change a homogeneous urban structure it is important to understand what is there and what is valuable. In the end a design based research will be done, to test different scenarios and implementation possibilities in the case study area.



2.5 THEORETICAL FRAMEWORK

The literature reviewed includes diversity of researchers from various scientific field, specifically theories and on-going researches on socio-economic factors of cities. Chosen bibliography discuss the role of finance, real estate, economy, demographic changes, heritage preservation, revitalisation of a city centre, as well as analyses urban theories and practices.

2.5.1 List of scientific literature

List of scientific literature might be divided into three main categories. The main line and the core of theoretical framework focuses on the **post-socialist cities** in transition countries, particularly in the Baltic States. It helps to understand the context of this specific type of the cities, reasons of decline and emerged new urban forms in an urban structure (Stanilov, K., Musil, J.), general reasons of shrinkage (Oswal, P., Pallagst et al.,). Finally, trends of urban development and demographic changes in Lithuania (Ubarevičienė, R., Barauskienė, D., Pakalnis, M., Štankūnienė, V., Cirtautas, M.).

Second group of theories focuses on the socio-economic trends of development in Western Europe and North America. It consists of the literature concerning **new economy** (Nawratek, K., Hutton, Th. A., Scott, A. J.) as well as the critique on market profit driven planning and predictions of the socio-economic development (Piketty, T., Merrifield, A., Nawratek, K., (case of the Baltic States)). Papers about new economy discuss how an area can be activated to accommodate economic development.

The final group is based on the studies of revitalisation of the city centre (Hutton, Th. A., Rodwell, D., Navickiene, K., Tallon, A.). Understanding of a regeneration of historical environment contributes to the story by allowing to take a distance from the study case, as a research subject and make comparisons with other cases, at the same time keeping in mind post-socialist context.

2.5.2 Other

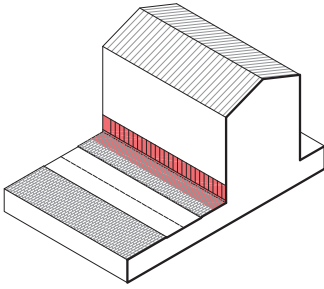
Besides academic literature, graduation projects of Jonauskis, T., Buinevičius, Račkauskas, I., were studied due to similar case studies of post-socialist city transformations. To get an insight about real situation in the city interviews with local stakeholders: architects, real estate agents has been carried out.

In the last decades growth in a specific cities has been noticed, while the surrounding regions and cities are shrinking. There are a number of different approaches, and statement.

First, Florida's claim that cities with abundant amenities grow because they attracts creative class. As a result new creative class will boost local economy. Similarly, according to Clark (2004) successful modern cities works as 'entertainment machines' that attract and maintain highly qualified workers because of the amusement characteristics. Thirdly, Glaeser (2011) argues that the cities have developed from being "centres of production in the 20th century to consumer cities in the 21st". He stated that "traditional cities will only succeed when they provide amenities that are attractive to high human capital residents".

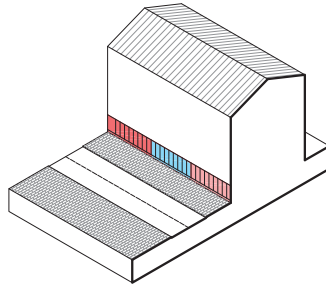
Contrary, to these amenity and consumption based approaches Storper and Scott (2009) have argued that "cities develop primarily on the basis of their job-generating capacities". In other words it is claimed that jobs and not amenities attract highly qualified workers to cities and keep them in place (from Scott, A. J., 2014). This statement might be supported by a research made in a similar post-socialist context, Poznan (Poland). It showed that two key factors attracting creative knowledge workers to the city are first good employment opportunities (57%), then because residents graduated and stayed in the city (52%).

In the case of post-socialis cities Nawratek (2012) emphasizes equal spatial and social structure of post socialist cities. He (2012) argues that the weakness of "post-socialist cities in Central and Eastern Europe is an outcome of an adopted model of imitative development ignoring the potential of the hybrid solution these cities could become". Nawratek (2012) emphasizes former industry and of scientific and research centres located in the post-socialist cities.



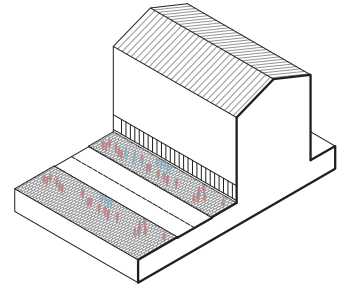
USE OF GROUND FLOOR FOR COMMERCIAL ACTIVITIES

to have vital and active street it is important to have active frontage, in other words to have activities on the ground floor



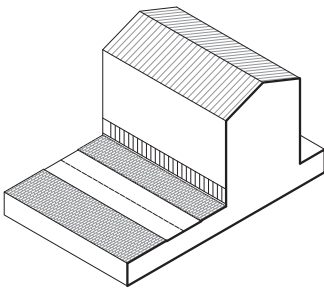
DIVERSITY

diversity of functions = diversity of users = higher density



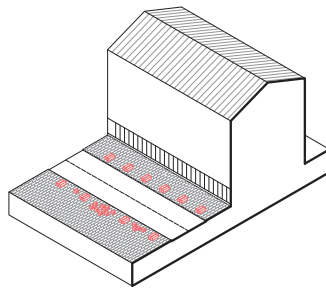
COMPLEMENTARY SECONDARY AND PRIMARY USES

to have more successful economy it is important to have variety of users, the more permanent and the ones that just occasionally drop in



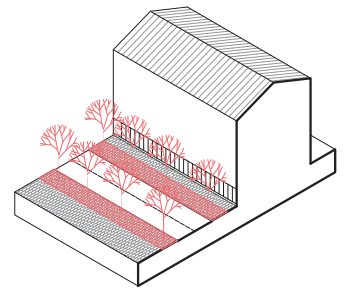
OPTIONAL ACTIVITIES

e.g. events, street vendors, other activities



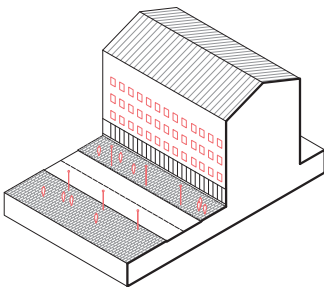
VARIETY OF STREET FURNITURE

different sitting, using possibilities might attract more different users



GREENERY

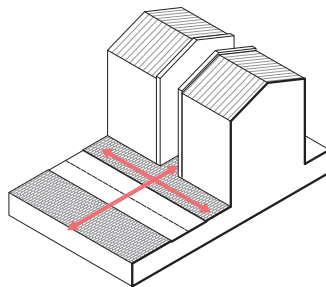
greenery (trees, grass) makes the path more pleasant and at the same time attractive for people to walk



SAFETY

to have active urban life 24/7 it is important to have safe urban spaces and people willing to spend their time in the centre

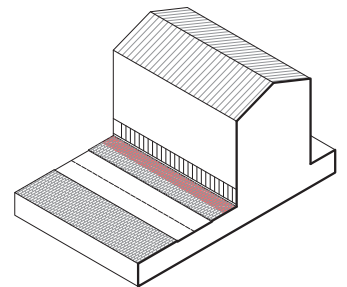
- vitality
- eyes on the street
- lighting



PROMOTE SOCIAL INTERACTION

to have successful economy and a vital area, with strong community, area that is accessible for variety of people, form different social classes. This is for networking, sharing ideas

- provide alternative routes
- create micro public spaces
- porosity and permeability of urban fabric

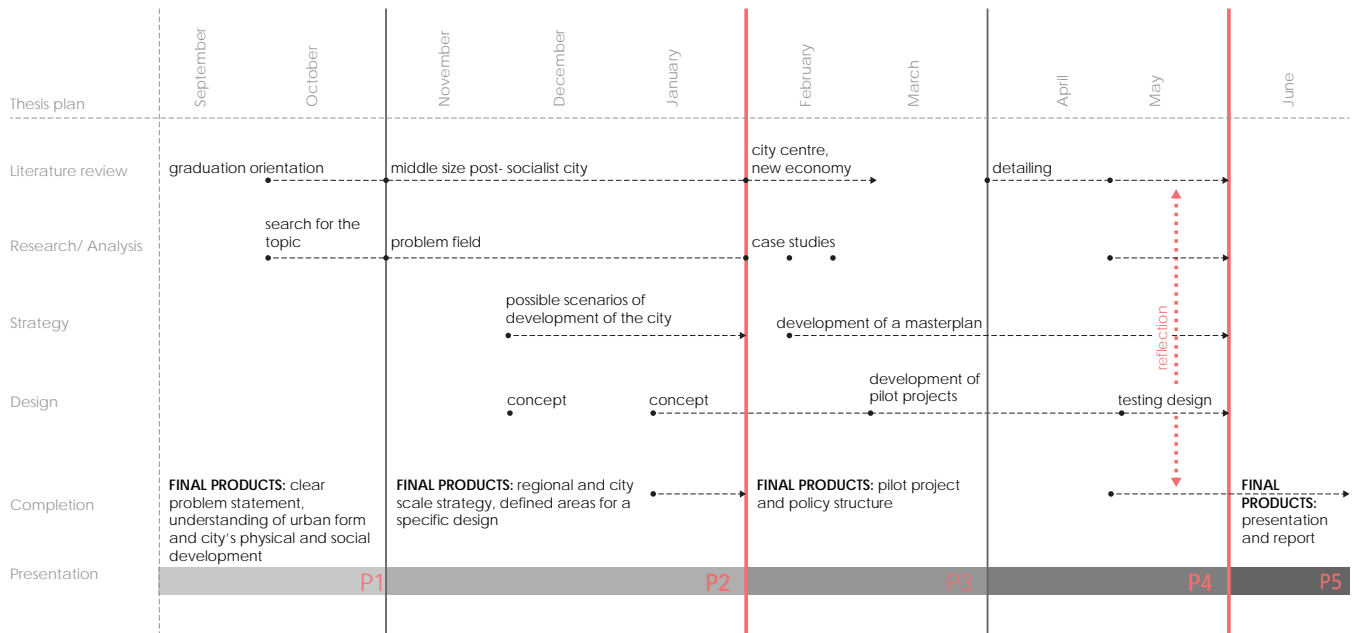


WIDENED FRONTAGE ZONE

pavement widened to allow comfortable use of pavement space for outdoor cafe/dining

Pic. 1. main elements of walkable street (drawing by author, based on information from JAN GEHL (2010), JANE JACOBS (1961))

2.6 SCHEDULE



3.1 CONTEXT

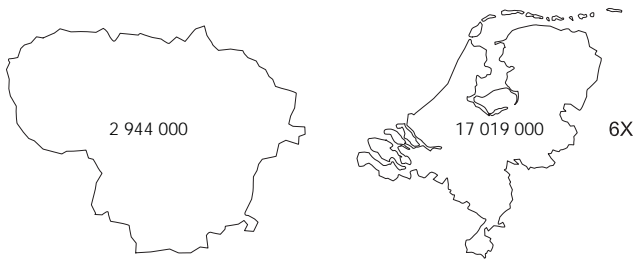


Fig.1 Comparison between population size in Lithuania and the Netherlands (drawing by author)

The project is located in Lithuania, one of the Baltic countries. It formally was part of USSR (The Union of Soviet Socialist Republics). Right now the country experience a process of transition, when from 1990 after regaining their independence moved from centrally planned to free market economy and in 2004 joined European Union and NATO.

Lithuania is southernmost country of the Baltic States (Lithuania, Latvia, Estonia). It is biggest in size and population out of the three countries.

3.1.1 REGIONAL INFRASTRUCTURE

In the last decade a big attention has been paid in improvements in The Baltic States regional infrastructure. It has been planned to connect the Baltic States with the rest of Europe and increase economic competitiveness of the region. Main European corridors connecting the Baltic States - highway Via Baltica (2003-2019) and railway Rail Baltica has been built in Lithuania.

At the same time old Russian standard lines built during socialist times, connecting with Ukraine and Russia crosses the country.

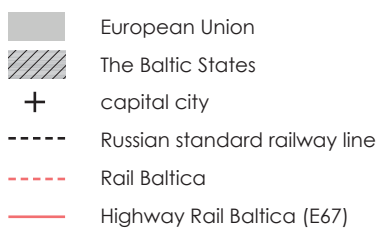
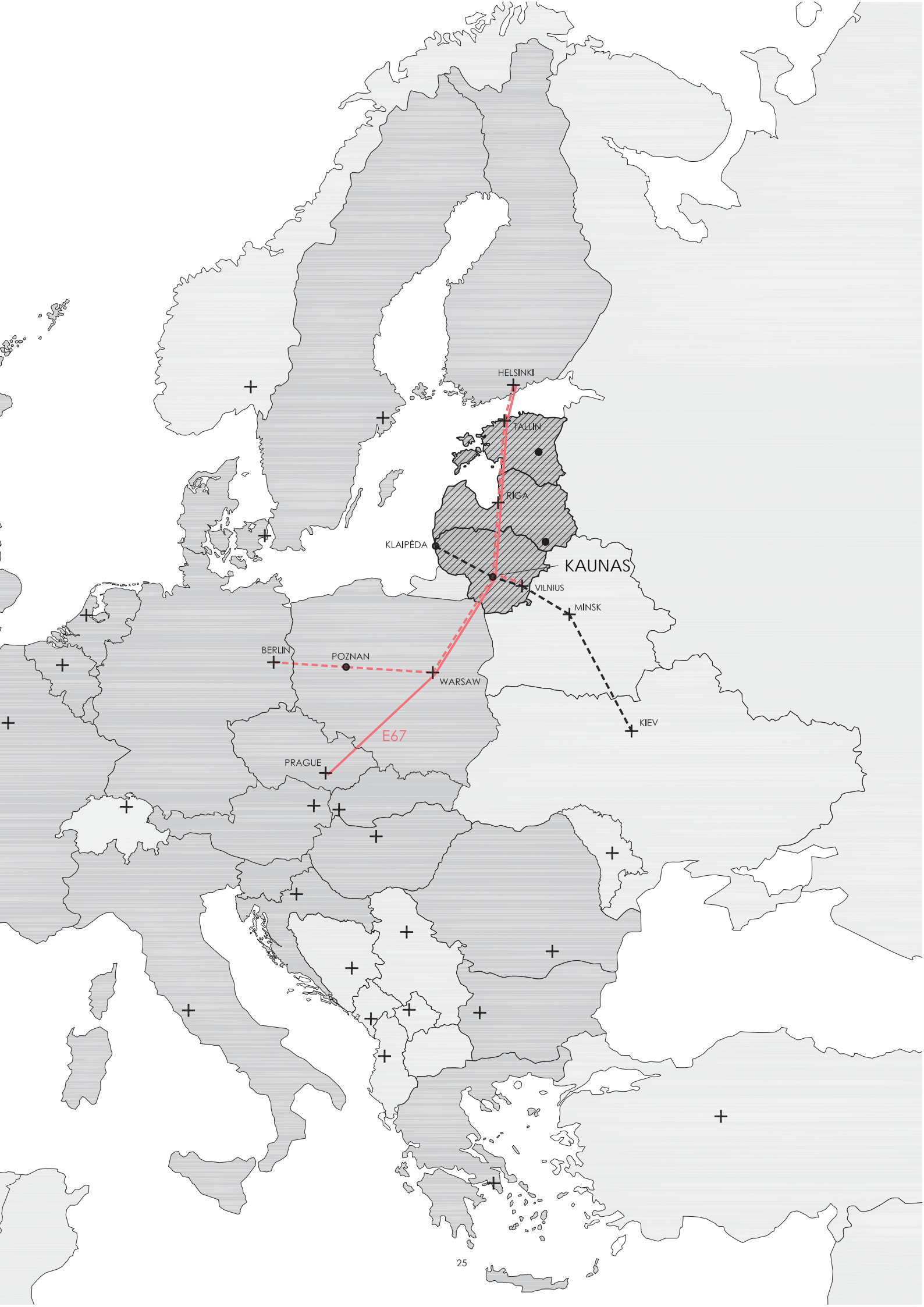


Fig.2 Main European and corridors crossing the country (drawing by author)





HELSINKI

TALLIN

RIGA

KLAIPĒDA

KAUNAS

VILNIUS

MINSK

KIEV

BERLIN

POZNAN

WARSAW

E67

PRAGUE

3.2 DEMOGRAPHIC SITUATION

From its peak population in 1992 with more than 3.5mln. residents, till 2015 Lithuania lost about 0.7mln. residents (Fig. 1).

According to social researcher Stankūnienė (2014) shrinkage in population is caused by two main aspects:

1. Economic aspects

- governmental failures;
- corruption;
- political instability;
- inefficient planning system;
- weak entrepreneurship;
- lack of market oriented policy coordination;
- poor quality oriented production.

2. Demographic aspects

- natural demographic reasons;
- lower birth rates;
- higher death rates;
- changed age structure;
- migration.

In the country emigration is one of the biggest problems, causing a sharp population decline. In 25 years 0.5mln people emigrated

(Stankūnienė, 2014), that covers 2/3 of the whole demographic shrinkage. The high rates of emigration in the first years was to the Russia (Stanilov,2007), and a blue-collar workers to the West-Europe in the last decades (Stankūnienė, 2010). According to Stankūnienė (2010) in a last decades emigration in Lithuania is led by 'pushing' factors. When citizens, could not find work in the country and are forced to leave it.

The main reasons of emigrations are:

- unemployment;
- seek for paid job, professional opportunities, especially evident in the middle of 90's and during economic crisis;
- fashionable trend;
- lack of social guarantees;
- networks of existing emigrants that attracts new people;
- education.

Most immigrants are from the lower qualification sector, blue collar workers. However recently the number of professionals emigrating started to grow as well.

The highest level of migration might be connected with main political events: independence, accession to European Union (2004) when it became convenient to travel in the Europe and Great

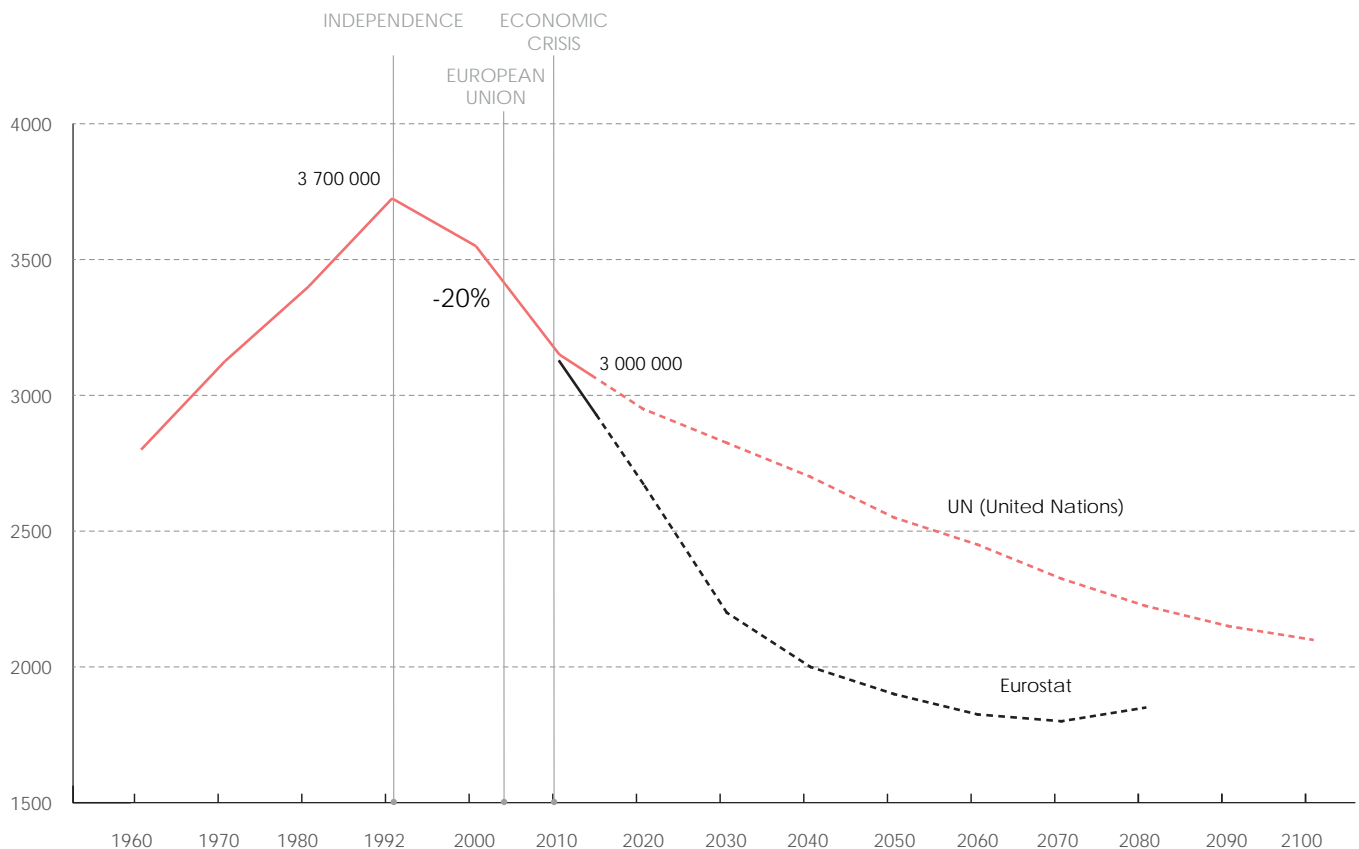


Fig. 1 Demographic changes in Lithuania from 1960-2100 (drawing by author, based on data from Stankūnienė, 2014)

Economic Crisis (2008-2010) when high level of population lost their jobs (Fig. 3).

From 2001 till 2011 most of the country shrank in population. The only areas that experience growth is the suburban areas, in a close proximity from the biggest cities (Fig. 2.)

However, often the migration from the Baltic States to other European countries is temporal. Often approximately after 2-4 years citizens come back to their home countries. Accordingly from 2006 a trends of return migration is increasing in Lithuania as well (Štankūnienė, 2014).

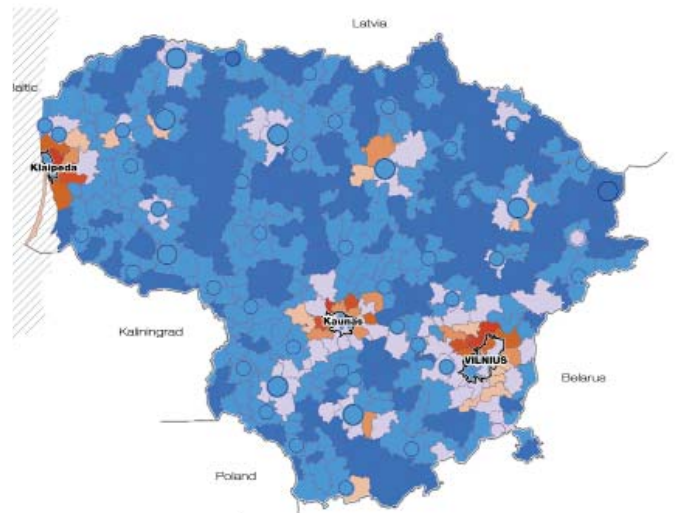


Fig. 2 Change in population (2001-2011), percent (Ubarevičienė, 2014)

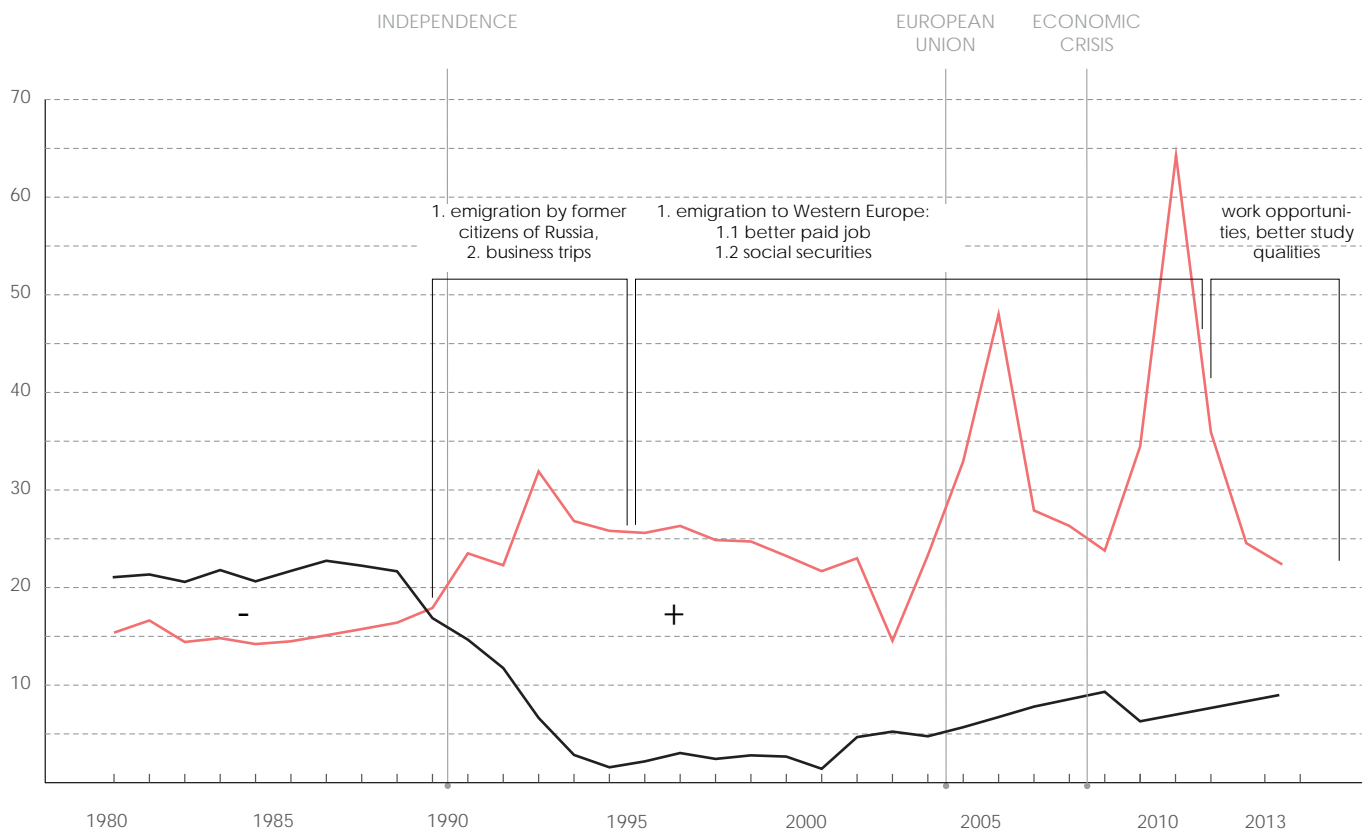
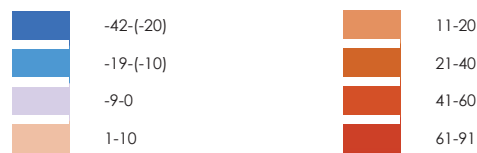


Fig. 3 Level and direction of emigration (drawing by author, based on data from Štankūnienė, 2014)

3.3 ECONOMY OF THE COUNTRY AND EU FINANCING

Lithuania together with other Baltic States is part of the countries that has one of the lowest level of GDP in the EU (European Union). Therefore it receives high EU support. From 2007-2013, the county received 6 775mln euros, and will be supported by approximately 7 billion more euros till 2020. However it is predicted that till 2020 the economy will strengthen and at the second stage Lithuania will become a donor country.

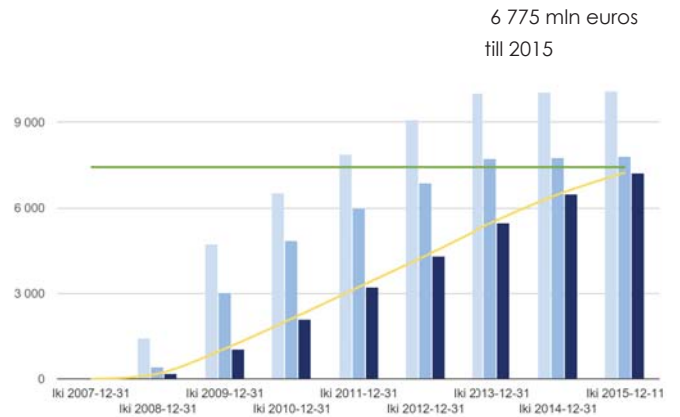


Fig. 1. Financial support from European Union received in 2007-2015 (EU Structural Funds)

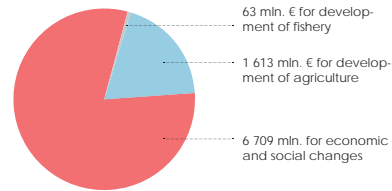


Fig. 2 Financial support from European Union in 2014-2020 (drawing by author, based on data from EU Structural Funds)

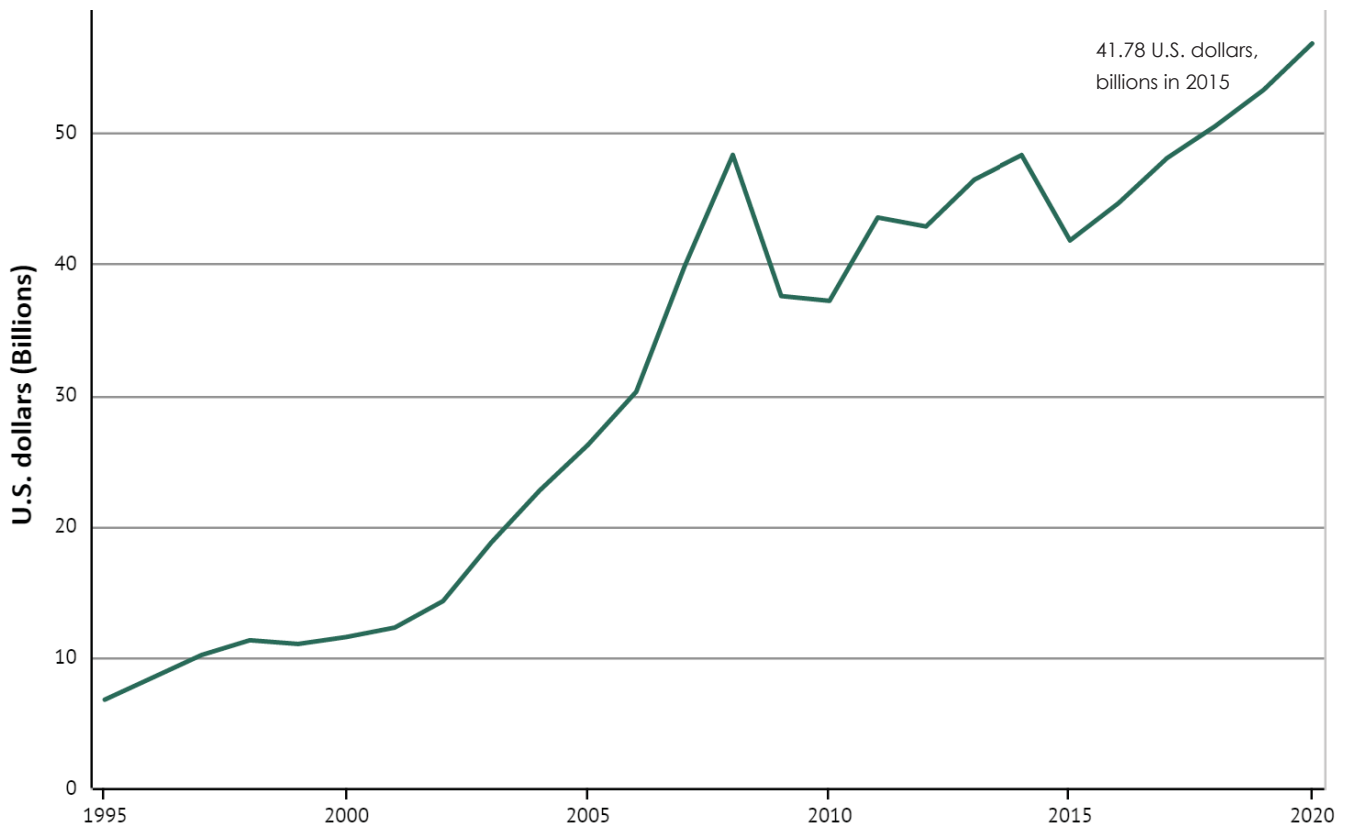


Fig. 3. Level of GDP in Lithuania (source: IMF World Economic Outlook (WEO), October, 2015)

3.4 URBAN STRUCTURE AND ECONOMY IN THE REGION

Fig. 1. Context of region of Kaunas (drawing by author)

- Kaunas region
- - - EU standard Railway line

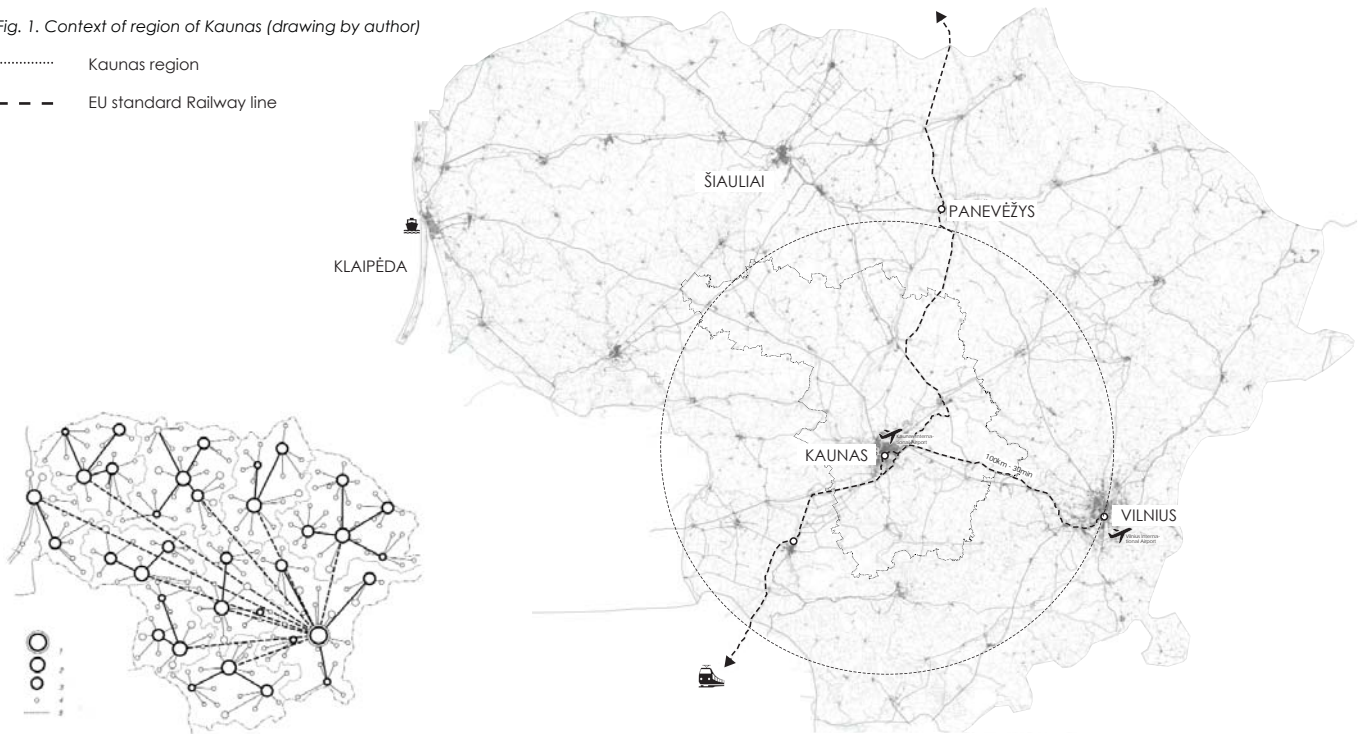


Fig. 2. Urban development model in Lithuania in 1960's (Vanagas, 2003)

Lithuania has rather equally spread population over the country. There are five main cities with population over one hundred thousand. Kaunas city is second biggest city in the country and fourth biggest in the Baltic States. Lithuania's capital is Vilnius with more than six hundred thousand people and port city is Klaipėda, with more than two hundred thousand inhabitants.

3.4.1 MAIN REGIONAL INFRASTRUCTURE

Kaunas region is second biggest region in Lithuania. It is located in the central part of the country. Main highway connecting port city (Klaipėda) in the west, with the capital of Lithuania (Vilnius) and Belarus capital Minsk in the east goes through the city. Another European corridor Via Baltic is passing through and connecting all Baltic States with West-Europe. Finally, new European standard railway line is on the plans to end in Kaunas with transfer terminal.

3.4.2 KAUNAS AND VILNIUS

Kaunas and Vilnius are 100km apart from each other. Main highway A1 and railway tracks are connecting the cities.

After independence Vilnius was only city in Lithuania that grew in population. And as in most post-socialist countries in Lithuania capital has attracted the most of foreign investments.

Though Kaunas International airport is going to be main airport in Lithuania, since Vilnius airport can not expand anymore due to space limitations. New fast European standard railway lines, connecting Kaunas and Vilnius will start running in 2020. It will take

approximately 40min to travel between the cities.

3.4.3 REGIONAL ECONOMY

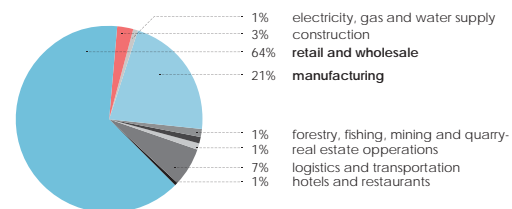


Fig.3. Sectors that receives highest profit in the region of Kaunas (drawing by author, based on data from General Plan of Kaunas region, 2007)

Retail and wholesale is the dominant sectors receiving the highest profit, with 64%. In the region the city of Kaunas is a main service centre, with large share of facilities, amenities, workplaces.

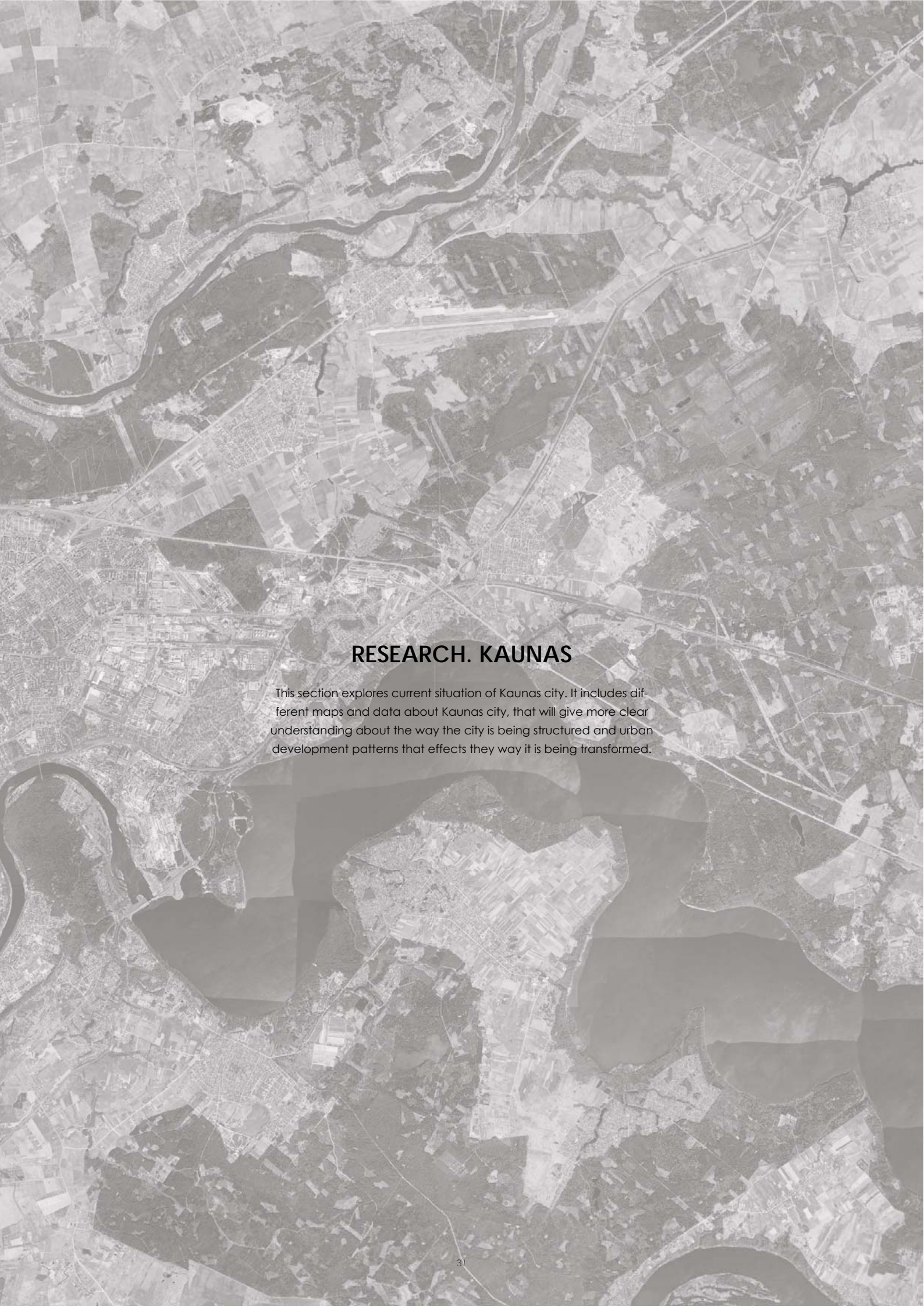
The next comes manufacturing, with 21%. According to the General Plan of Kaunas region (2009) 1/5 of all products of the country is produced in the region. The biggest economic sectors are:

- food industries;
- textiles and knitwear.

Other big sectors:

- machines and appliances manufacturing;
- metal processing;
- chemical;
- building materials;
- printing;
- furniture;
- glass.





RESEARCH. KAUNAS

This section explores current situation of Kaunas city. It includes different maps and data about Kaunas city, that will give more clear understanding about the way the city is being structured and urban development patterns that effects they way it is being transformed.

4.1 KAUNAS CITY



Fig. 1. Comparison of the size of Kaunas and Utrecht (drawing by author)

Kaunas

population: 348 635inh

area: 157km²

density: 2,279 inh/km²



Utrecht

population: 335 089inh

area: 100m²

density: 3,350 inh/km²

Fact sheet:

2nd largest city in LT

4th largest city in the Baltics

population:	348,635 inh
student population:	50,000
area:	157 m ²
density:	2,279 inh/km ²
distance to the capital:	100 km
distance to the port:	200 km

Built area:	68 km ²
Green area:	22 km ²
Roads and streets:	10 km ²
Water surface:	12 km ²
Agricultural land:	18 km ²
Other:	27 km ²

source: Kaunas General Plan, 2011

10% of LT population;

20% of national industry;

international logistics centre;

international airport;

knowledge economy;

5 universities;

largest Technical University in the Baltics

source: National Department of Statistics, www.stat.gov.lt, 2010

4.2 DEMOGRAPHIC SITUATION

During the transition period (1990-2015) Kaunas lost most of its population, that is 27%, from 418,000 in 1990's to 304,000 in 2015. Both city of Kaunas and the region have faced a decline of population. There are two main reasons. First, due to high level of suburbanisation, the city is slowly sprawling, resulting into suburbanisation and growing areas in a close proximity to the city. However growth of suburban areas is relatively slow in comparison with decline in population in the city.

The biggest part of population decline has been caused by people moving to the other urban areas in the country. Here the peak of emigration has been reached in 2004 (accession to EU) and 2010 (Economic Crisis). However recently level of emigration started to slow down.

- emigration to other cities or regions in Lithuania
- emigration to other countries
- immigration from other cities or regions in Lithuania
- immigration from other countries



Fig. 1 Population changes in Kaunas city, region and county (source: Department of Statistics of the Republic of Lithuania)

- Kaunas
- Kaunas county
- Kaunas region

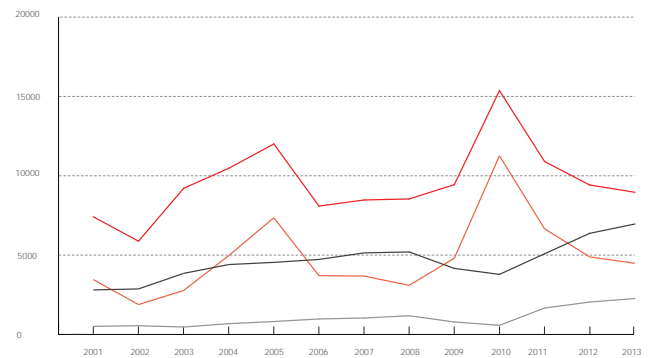


Fig. 2 Migration of population in Kaunas city (drawing by author, based on the data from Department of Statistics of the Republic of Lithuania)

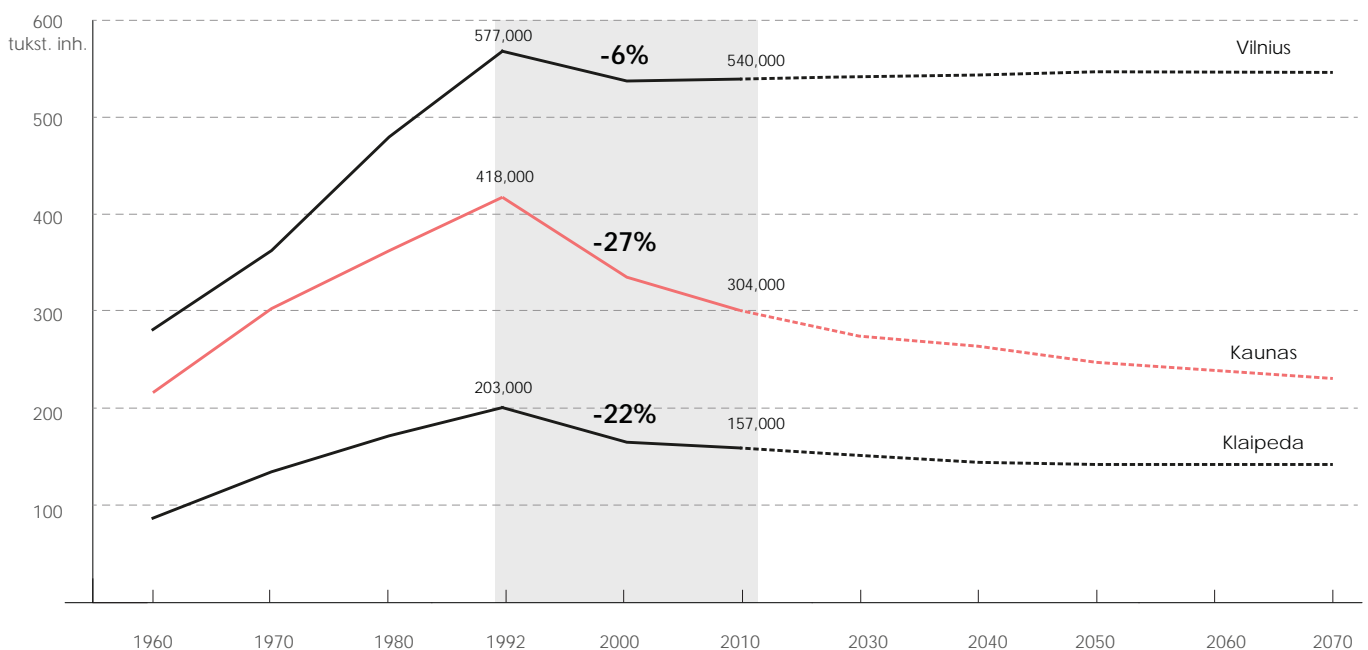


Fig. 3 Change of population size (drawing by author, based on data from Department of Statistics of the Republic of Lithuania)

4.3 DEVELOPMENT OF THE CITY 1990-2015

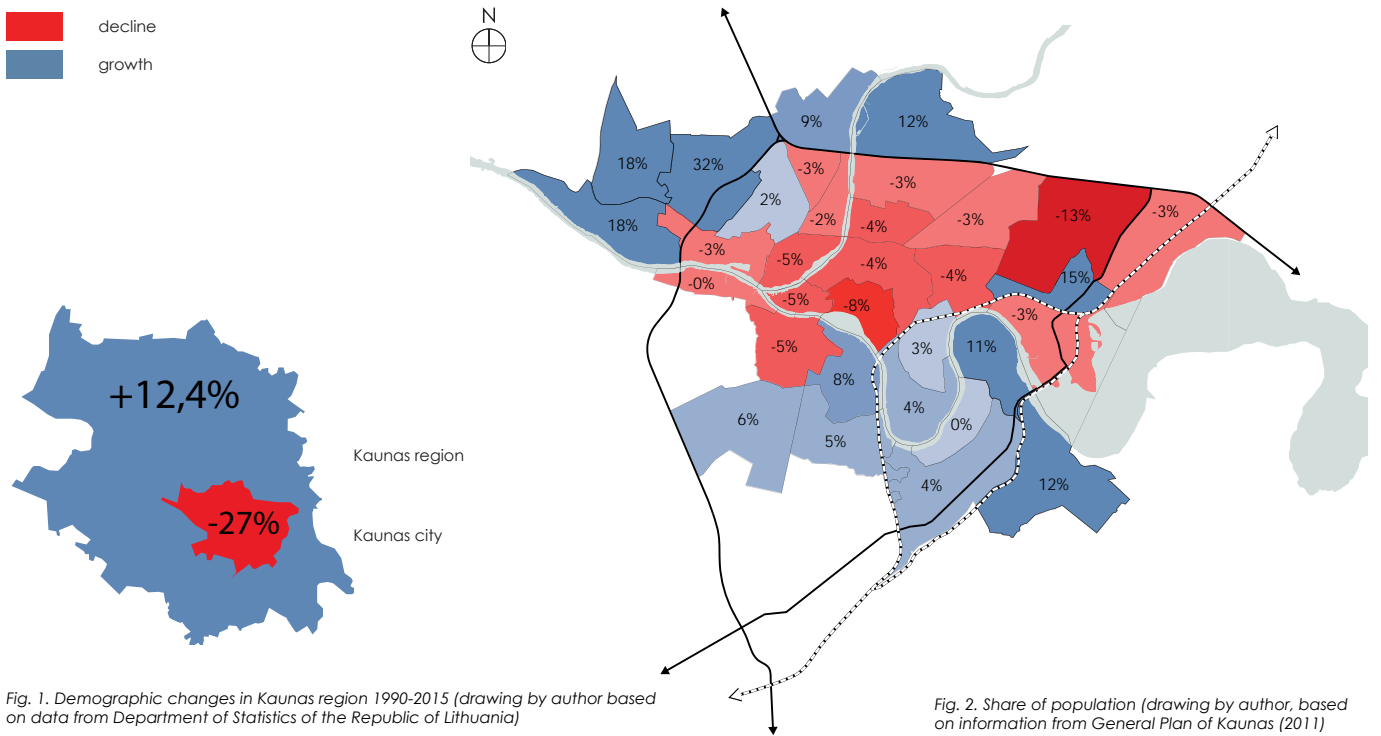


Fig. 1. Demographic changes in Kaunas region 1990-2015 (drawing by author based on data from Department of Statistics of the Republic of Lithuania)

Fig. 2. Share of population (drawing by author, based on information from General Plan of Kaunas (2011))

Development in the post-socialist cities takes place in two main areas: in the city centre and periphery. Following Strategic Plans and projects supported by municipality the development is based on major infrastructure projects, e.g. roads, sewage systems. Other new investments by private developers are in majority housing estates and shopping malls.

a number of urban problems to the urban structure of the city: increase numbers of private cars, cost of maintenance, change the way city functions in general. "It is hard to believe that the city will be capable to keep residents in the city and have a suburban areas with a necessary facilities" (Nawratek, 2010).

4.3.1 SUBURBANISATION

At the first years of independence main areas of development in Kaunas city has been concentrated on new suburban expansions. The main factors driving the boom of residential and non-residential construction in the urban periphery firstly are "the restitution of land, the relaxation of land development controls, and the establishment of an open land market" (Stanilov, 2007). In other words in the first years a possibility to purchase a private property and at the same time lack of clear urban development direction shaped kind of development in the periphery that has been guided by private developers and self organised housing market (Cirtautas, 2010) rather than an urban strategy having a clear long-term urban vision.

Secondly, rural mentality and tradition is still big part of the culture. The majority of population in biggest cities in Lithuania as well as in Kaunas is first urban generation, after start of mass urbanisation in 1960's when inhabitants were forced to move to the cities. Accordingly, private houses with a courtyard and garden in the periphery are considered to be a goal for the most households.

To sum up, in a last 25 years urbanised areas has expanded in the context of shrinking population of the city. This already causes

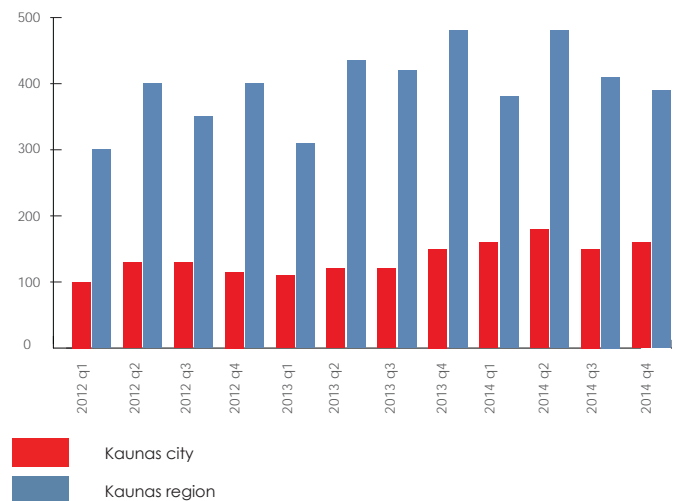


Fig. 3. Number of private houses built in the suburbs and the city of Kaunas from 2012 till 2014 (drawing by author based on data from Center of Registers (lt. 'Registrų Centras'))



Fig. 1. The main shopping and leisure centre "Akropolis" in the city centre (photo by A.Didžgalvis)

4.3.2 INFRASTRUCTURE LED DEVELOPMENT

Current suburban development and mobility patterns are strongly based on private automobile. Therefore a significant increase in the number of cars per inhabitant had a striking effect on urban development patterns in Lithuania (Grava, 2007) and a significantly increased demand for infrastructure.

Most of the investments in the development of the city by the municipality from 1990 – 2015 was in a main infrastructure projects and expansion of periphery. Due to weak economic situation development of infrastructure has covered most of the overall budget designated for the urban development of the city leaving other urban objects just with a basic or no care. According to Pakalnis that also stops projects of infrastructure or other important objects in the city centre.

Commuting between shopping centres, inner city and suburban house became regular part of daily routine. Moreover other tendency shows that in 2005-2010 in Kaunas the use of public transport decreased from 52-40%, at the same time car ownership increased till 540 car per 1000 residents. Accordingly regional users are mostly attracted by shopping and leisure centres that are easily accessible from the main infrastructure.

4.3.3 COMMERCIALISATION

Another trend of development after 1990 might be characterized as a commercialisation. In the first decade many of the developers sought for a short term profit (Kličius, 2001) and services, commerce

seemed to be the fastest and easiest way to achieve that. Privatisation of the land gave birth to private investments which very soon became monopolistic, large scale development. In other words it appeared in the form of a group of very local small 'kiosk', stores in the redeveloped ground floor of monofunctional housing estates that later on were gradually replaced by bigger and more luxurious shopping centres.

In contemporary city according to Ambrasas (2008) commercial buildings has the biggest influence to the 'face' of the city. In Kaunas a rise of big shopping and leisure centres started in 2004 with "Mega" (102 000m² (2004)) along highway in the North. First buildings of this typology were designed in the areas, further way from the city centre, where the land were cheaper, as new development were not planned there by municipality (Ambrasas, 2008). Afterwards it was followed by a number of projects of commercial centres along the main infrastructure closure to or in the centre (e.g. "Akropolis", 80 000m² 2007m., Jurevičius, G., Kančas, A, "Merkurijus", 28 000m², was planned to be built in 2011.)

Shopping malls are developed with the intention to attract people, not just from their immediate surrounding nor from the city, but from the whole region. Therefore, cities has been competing whose shopping mall is the biggest, most advanced, most luxury, etc. Aiming to attract the biggest amount of population, complexes are usually build along main infrastructure and followed by the construction of big parking spaces.

After development of 80 000m² "Akropolis" shopping centre in the inner city, next to the main shopping street, most successful retail



Pic. 2. The main shopping and leisure centre "Akropolis" in the city centre (photo by Erikas Ovčarenko)

from the main shopping street moved to "Akropolis". As a result a number of vacant property increased, the public spaces have emptied, a number of crime increased, leading the rest of the services and retail to the financial losses and bankruptcies in the centre.

To sum up, the development patterns of the city changed the way the city centre functions in general. The traditional economic activities lost its importance in the city centre. At the moment city centre functions more in a regional scale and has to be easily usable and accessible for regional users.

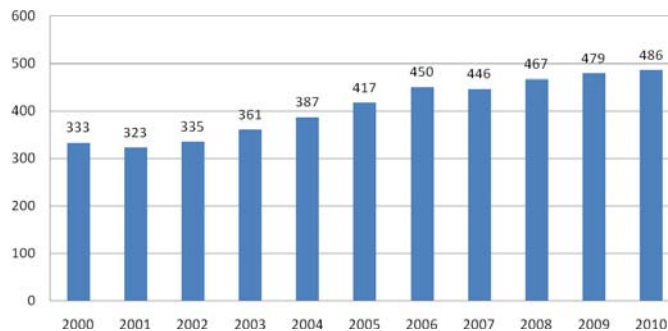


Fig. 4. Number of cars per 100 inhabitant in Kaunas in 2000-2010 (drawing by author based on data from Kaunas General Plan, 2011)



Fig. 5. Use of public transport in Kaunas in 1995-2008 (source: Kaunas General Plan, 2011)

4.4 EXISTING PLANS AND STRATEGIES BY MUNICIPALITY

Current plans of municipality are oriented towards growth, allowing not urbanized areas to be used for new residential development. At the same time stimulating transit oriented development, making main commercial and industrial centres along external ring road in the periphery of the city. In general all administrative area of the city is allowed to be urbanized, except an urban parks, waterfronts and natural corridors.

As a result of current economic, demographic and urban development patterns municipality of Kaunas is in debts, reaching 52mln. euros. First, due to sharp population decline the city lost the main source of financing - taxes of inhabitants. Secondly, due to current development trends of the city (growing urban areas, expansion of infrastructure, a need for more services) the maintenance cost of the city has increased. At the same time due to weak economy it is more difficult to collect enough taxes. At the moment development in Kaunas as other cities in Lithuania are partly covered by European Union funding.

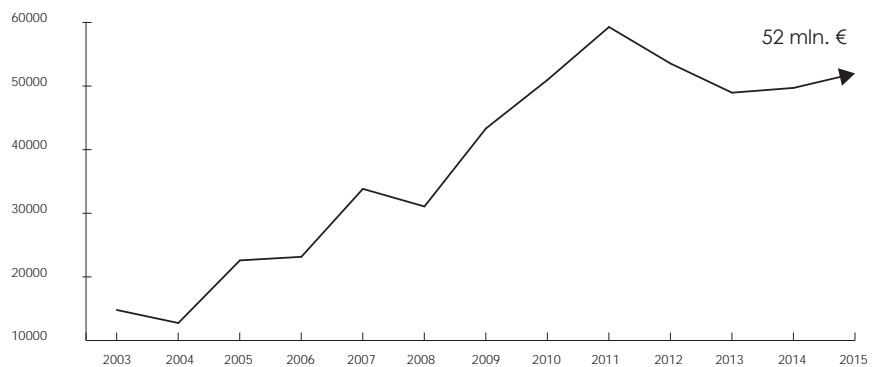


Fig. 1. Level of Kaunas Municipal Debts from 2003 till 2015 (source: Ministry of Finance of the Republic of Lithuania)

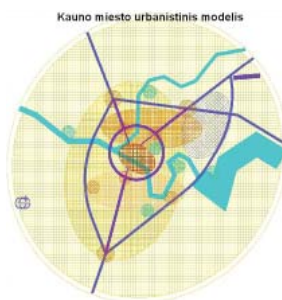


Fig. 2. Conceptual model of Kaunas city (source: Kaunas General Plan, 2011)

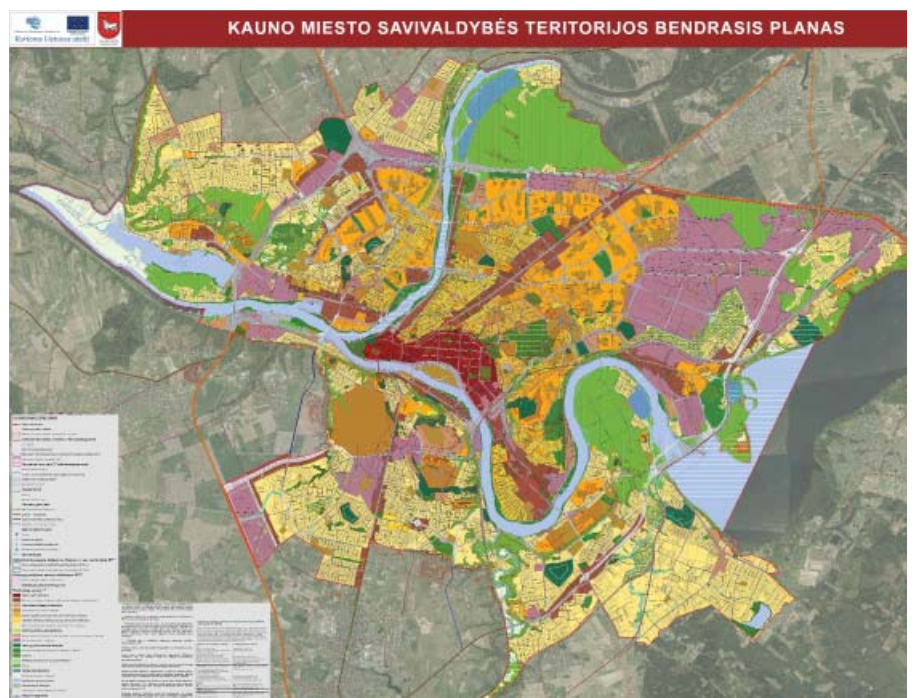


Fig. 3. Kaunas city General Plan 2013-2023 (source: http://www.kaunoplanas.lt/bendrieji_planai)

4.5 DISTRIBUTION OF MUNICIPAL BUDGET

Direct investments in the development of the city of the municipality from 1990 – 2015 was designed to the main infrastructure projects and expansion of periphery (fig. 2, 3). Due to weak economic situation development of infrastructure has covered most of the overall budget for the urban development of the city. Accordingly, leaving other urban objects just with a basic or no care.

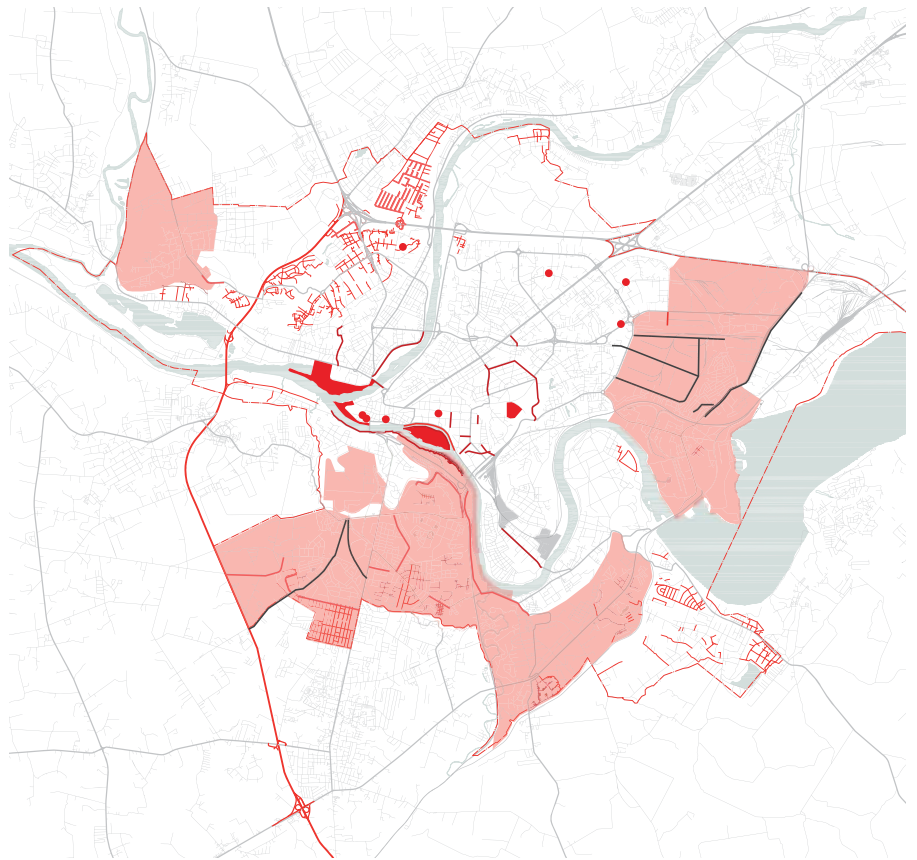
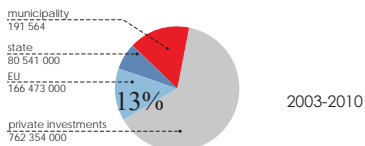
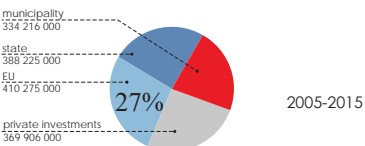


Fig. 1. Development of the city from 1988-2005 (drawing by author, based on data from Strategic Plan of Municipality)



1 243 708 000 €



1 515 170 000 €

Fig. 2 Kaunas city budget (drawing by author based on data from Strategic Plan of Kaunas Municipality)

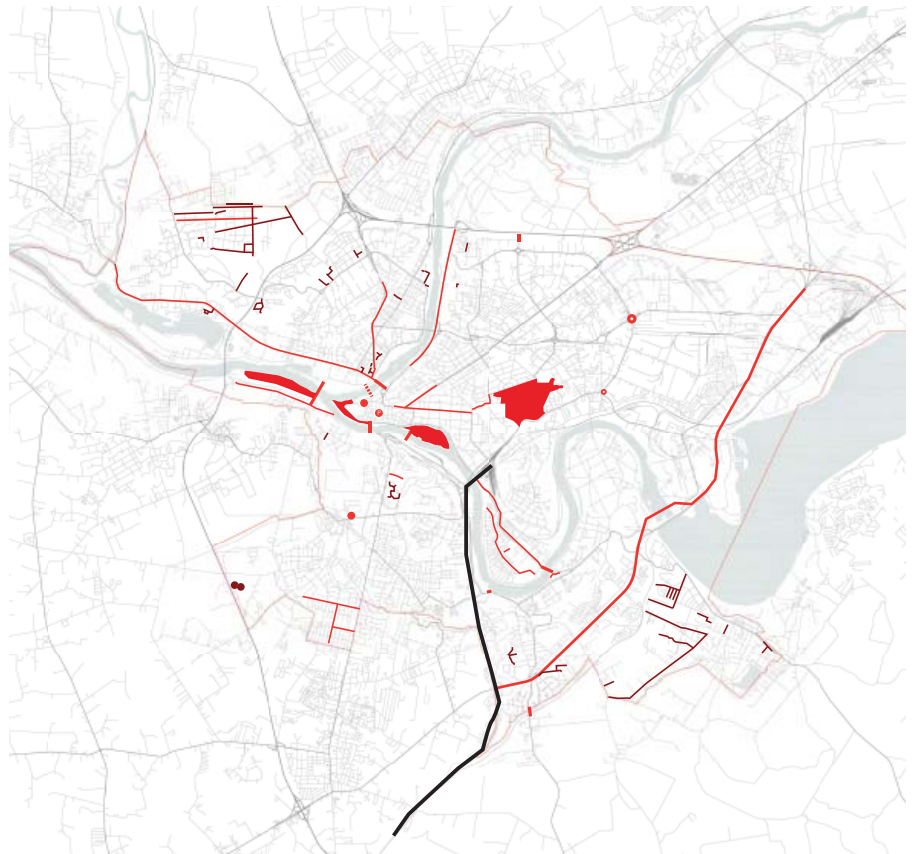


Fig. 3. Development of the city from 2006-2015 (drawing by author based on data from the Strategic Plan of Municipality)

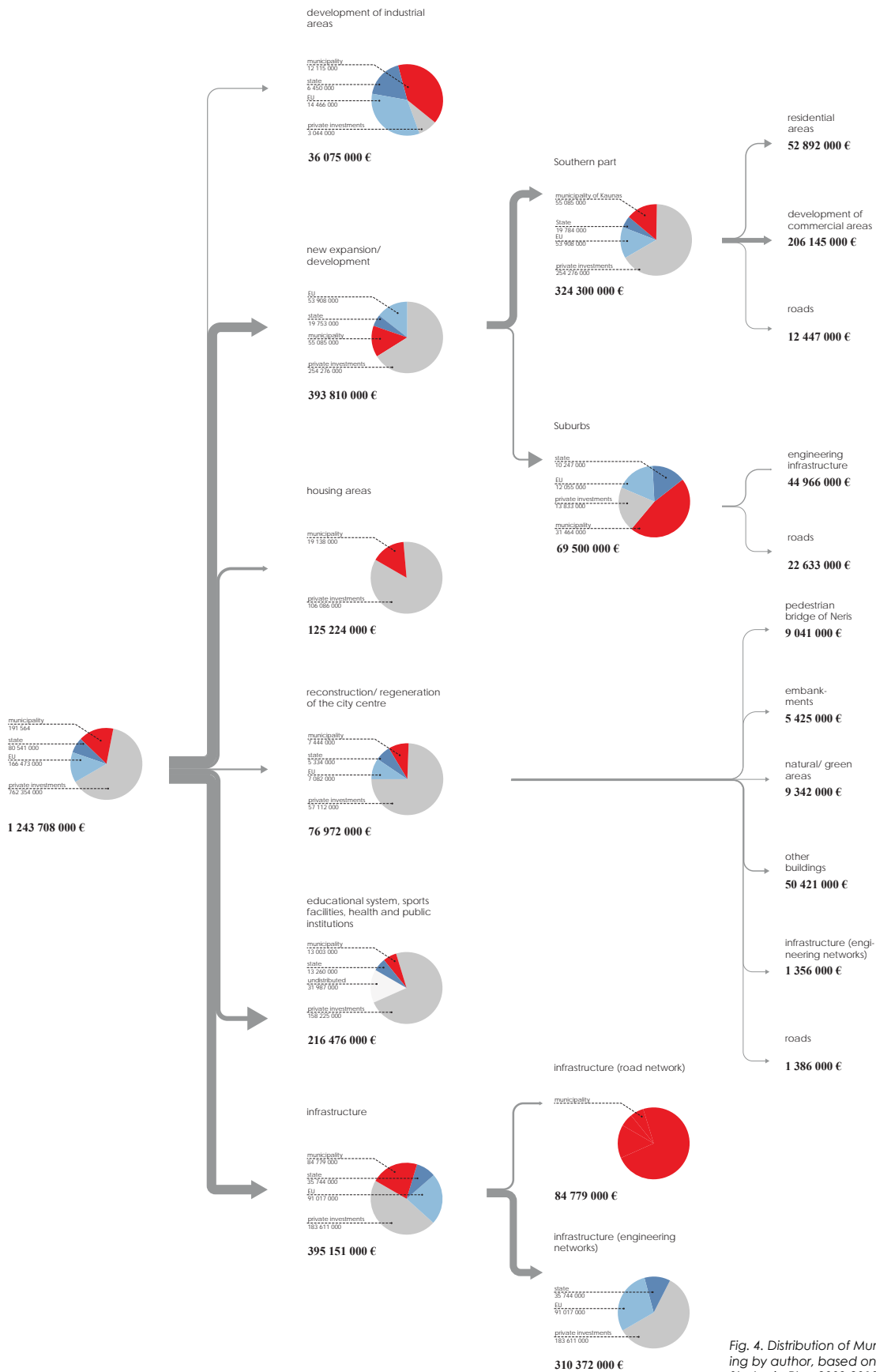


Fig. 4. Distribution of Municipal Budget 2003-2010 (drawing by author, based on data from Kaunas Municipality Strategic Plan 2003-2010)

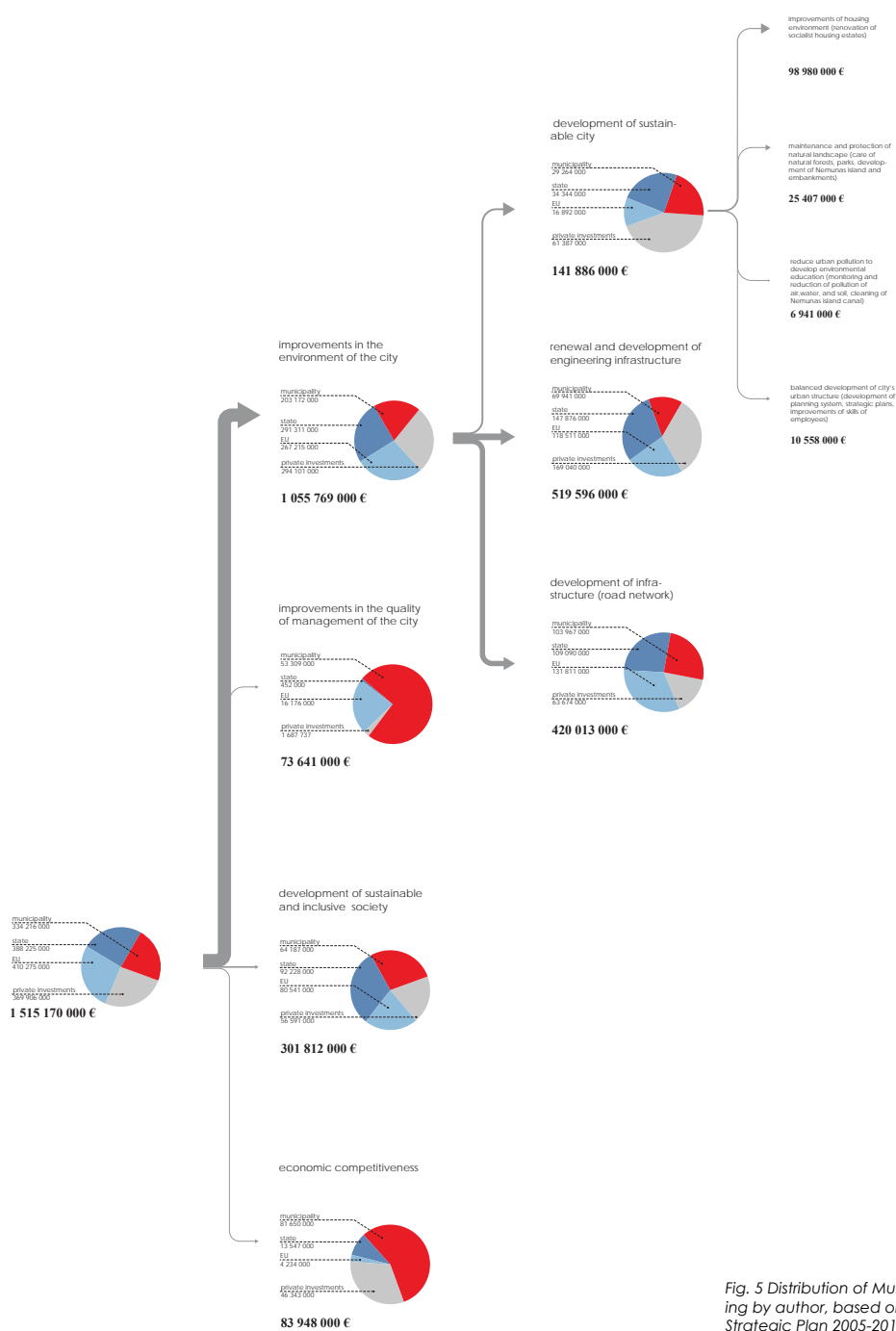


Fig. 5 Distribution of Municipal Budget 2005-2015 (drawing by author, based on data from Kaunas Municipality Strategic Plan 2005-2015)

4.6 REAL ESTATE SITUATION

In the city of Kaunas, the price of real estate is the highest in the city centre. Here the price of real estate is slowly growing after the great economic crisis (from 2012).

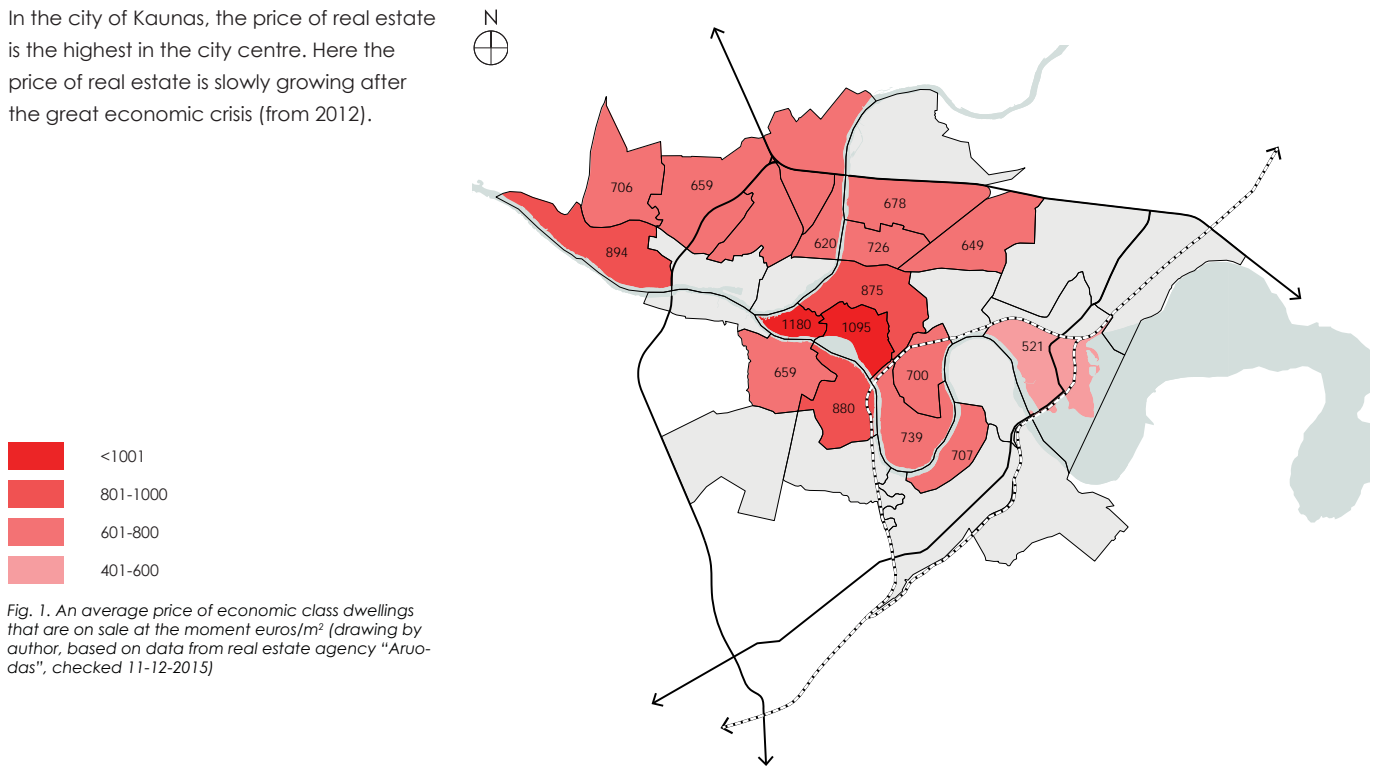


Fig. 1. An average price of economic class dwellings that are on sale at the moment euros/m² (drawing by author, based on data from real estate agency "Arudas", checked 11-12-2015)

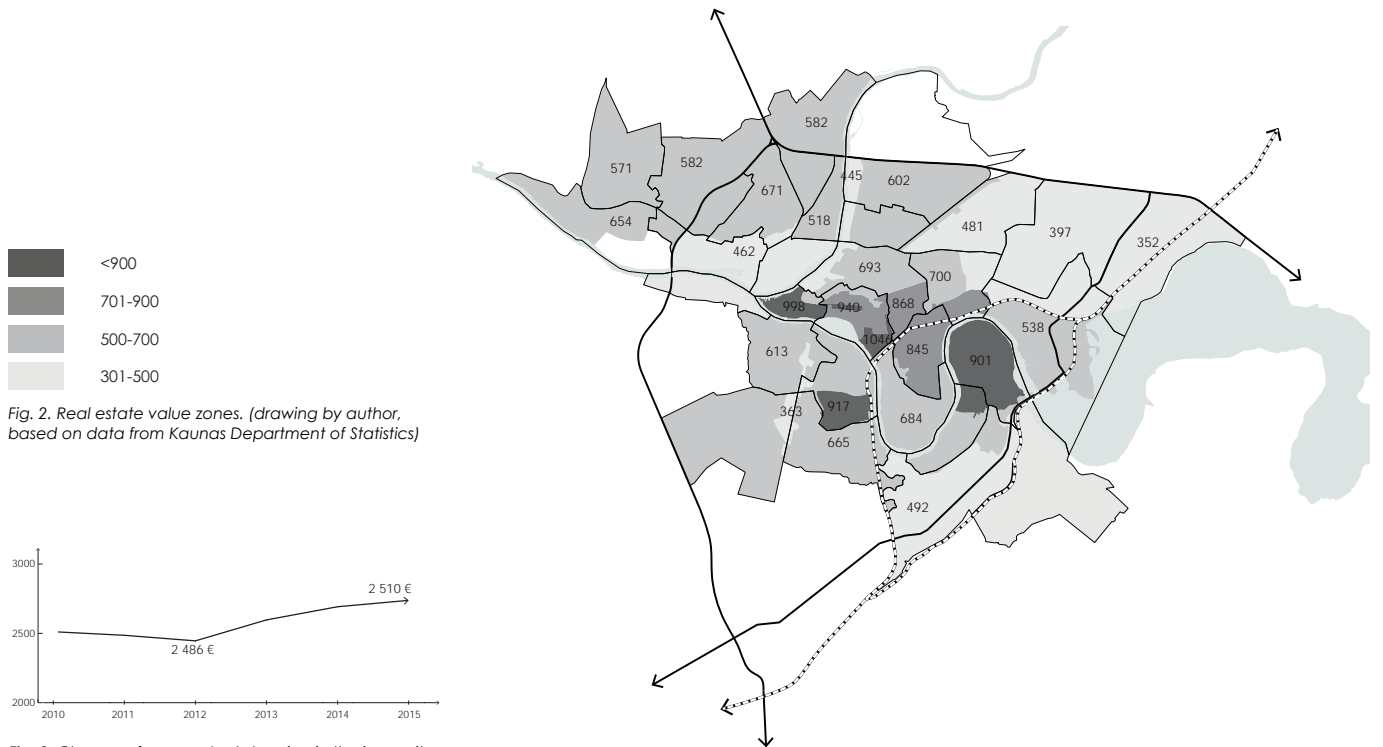


Fig. 2. Real estate value zones. (drawing by author, based on data from Kaunas Department of Statistics)

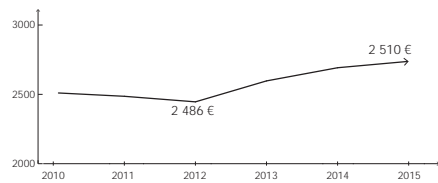


Fig. 3. Change of new real estate price in the inner city of Kaunas (euro/m²) (drawing by author, based on data of real estate agency Ober-Haus)

4.7 DEMOGRAPHIC STRUCTURE

4.7.1 DEMOGRAPHIC STRUCTURE

As a result of current trends of development and changed habits of the users demographic structure is changing accordingly in the city. In other words due to suburbanisation, families, higher income working age population are leaving the inner city and moving to the periphery.

According to social research made in different residential areas in Kaunas (these are old-working class neighborhood, socialist housing estates, city centre), it is more predictable that single person households, families having less children, retirement age inhabitants will live in the city centre rather than in other residential areas (Žilys, 2013). City centre is losing its attraction for families, working age residents.

Existing residents who used to live in the area are aging therefore city centre on one side is concentration of older residents that were awarded by a flat during Soviet times. Secondly, proximity to leisure facilities, work is the main reasons attracting young social class to the centre.

Also, this group of population is economically more vulnerable. Therefore it is directly linked with a growth of lower incomes population size. As well as increased percentage of single person households. More young and elderly people is living alone or in childless households.

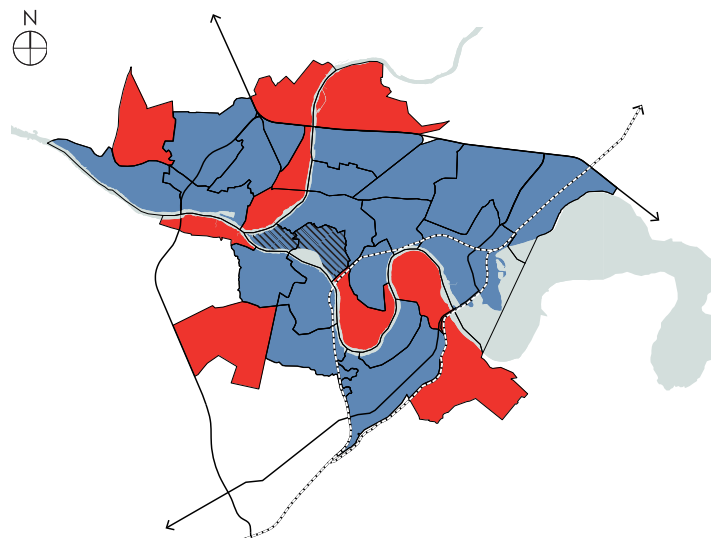


Fig. 1 Share of retirement age population (drawing by author, based on data from General Plan of Kaunas, 2011)

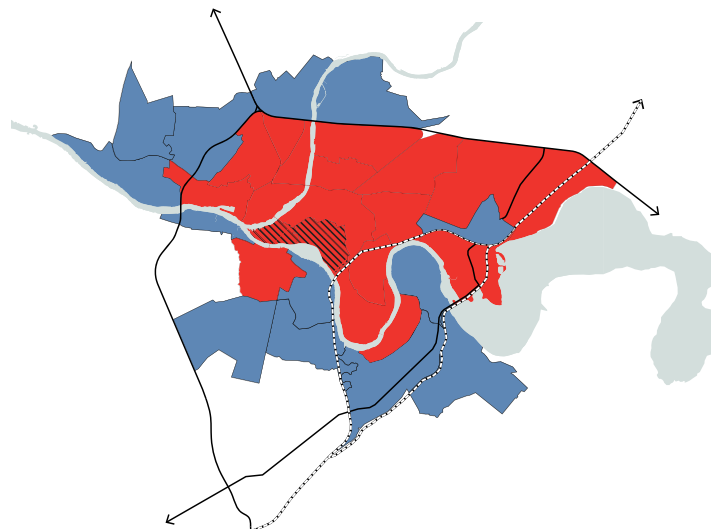


Fig. 2 Share of working age population (drawing by author, based on data from General Plan of Kaunas, 2011)

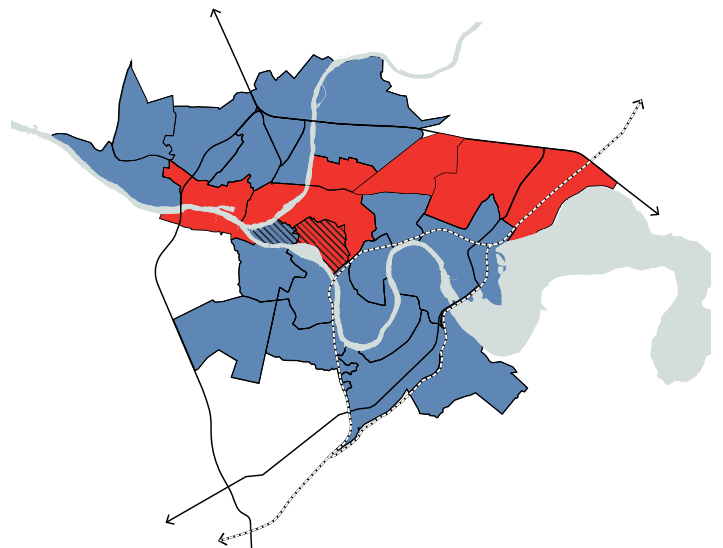
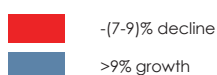


Fig.3 Share of children under 15 years old population (drawing by author, based on data from General Plan of Kaunas, 2011)



4.7.2 BALANCE BETWEEN OF NUMBER OF WORK PLACES AND SIZE OF POPULATION

The highest density of population is in the Northern part of the city, in the socialist housing estates.

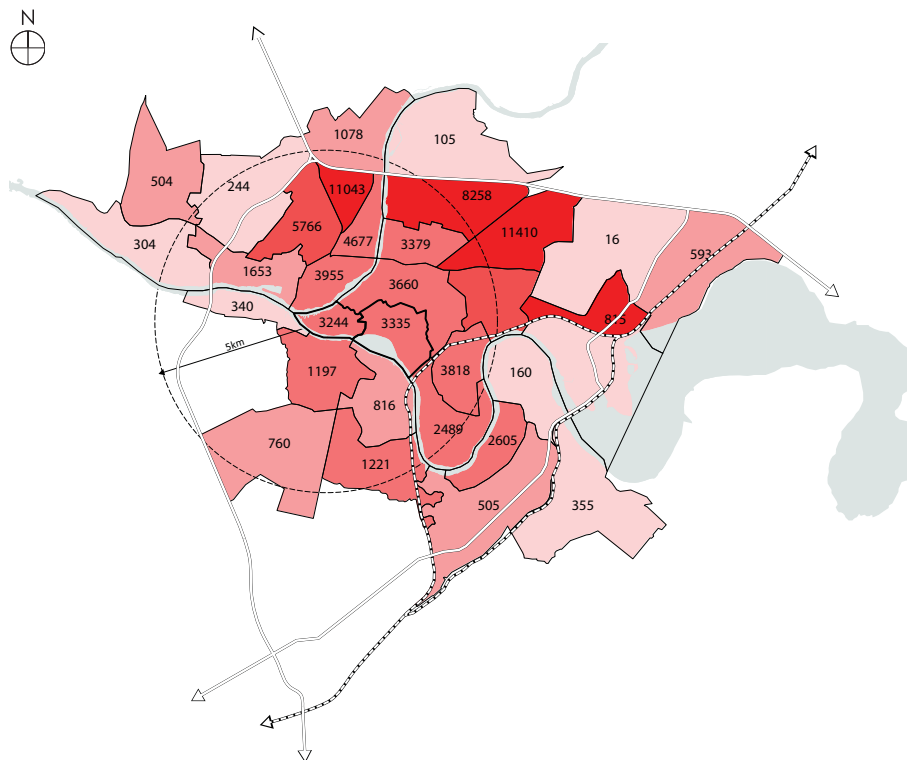
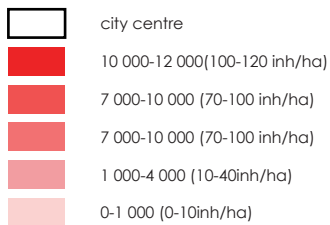


Fig. 4. Density of inhabitants (inh/km) (drawing by author, based on data from Kaunas General Plan, 2011)

Most of the companies and work places are locate in the industrial district "Petrašiūnai" and inner city part "New Town".

4,5% of all population lives in the centre, 10% of all residents of the city works there.

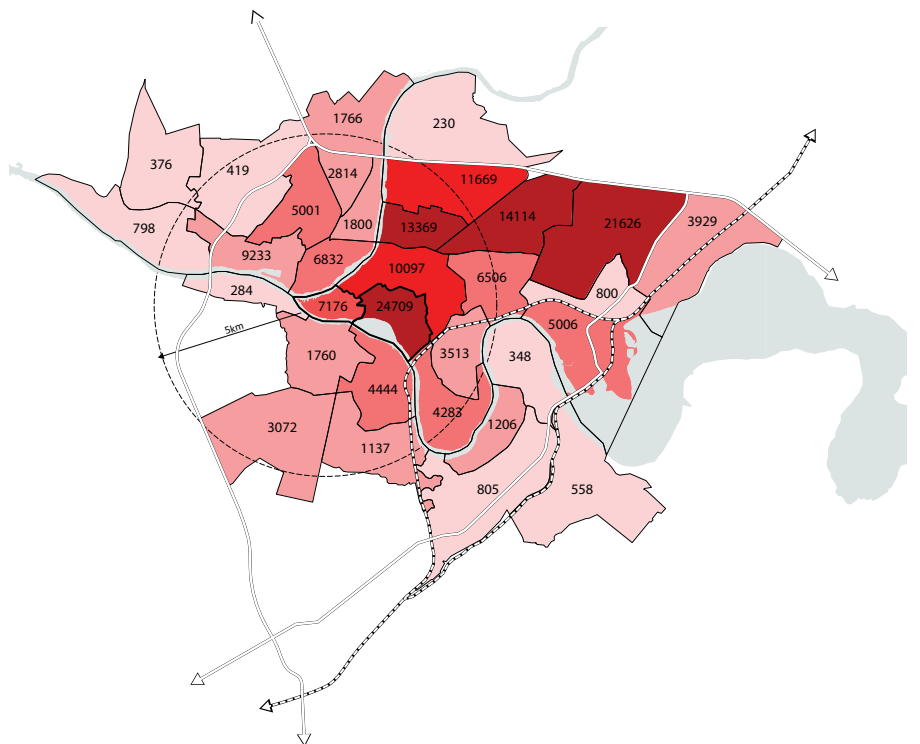
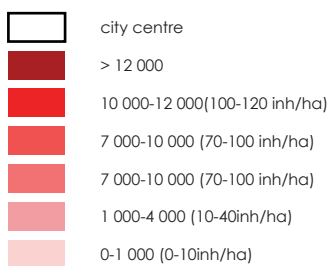


Fig. 5. Distribution of work places in the city (drawing by author, based on data from Kaunas General Plan, 2011)

4.8 ECONOMY

At the moment level of GDP in Kaunas is one of the lowest comparing with biggest cities in the country (Vilnius, Klaipėda).

According to Stanilov (2007) the countries remain economically disadvantaged with high level of unemployment, partly owing to the decline of trade with Russia, Ukraine, and other Eastern European states.

Economic performance is rather poor outside the capital regions (Stanilov,2007). In the country the capital city receives the most of the domestic and foreign investments. Owing the development of Kaunas as one of the main industrial city during socialist times, the city have experienced the strongest decline due to many closures of unproductive state enterprises that were not able to restructure themselves during the first years of the transition period.

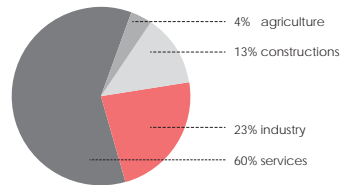


Fig. 1. Main economic sectors in Kaunas (drawing by author, based on data from Kaunas General Plan, 2011)

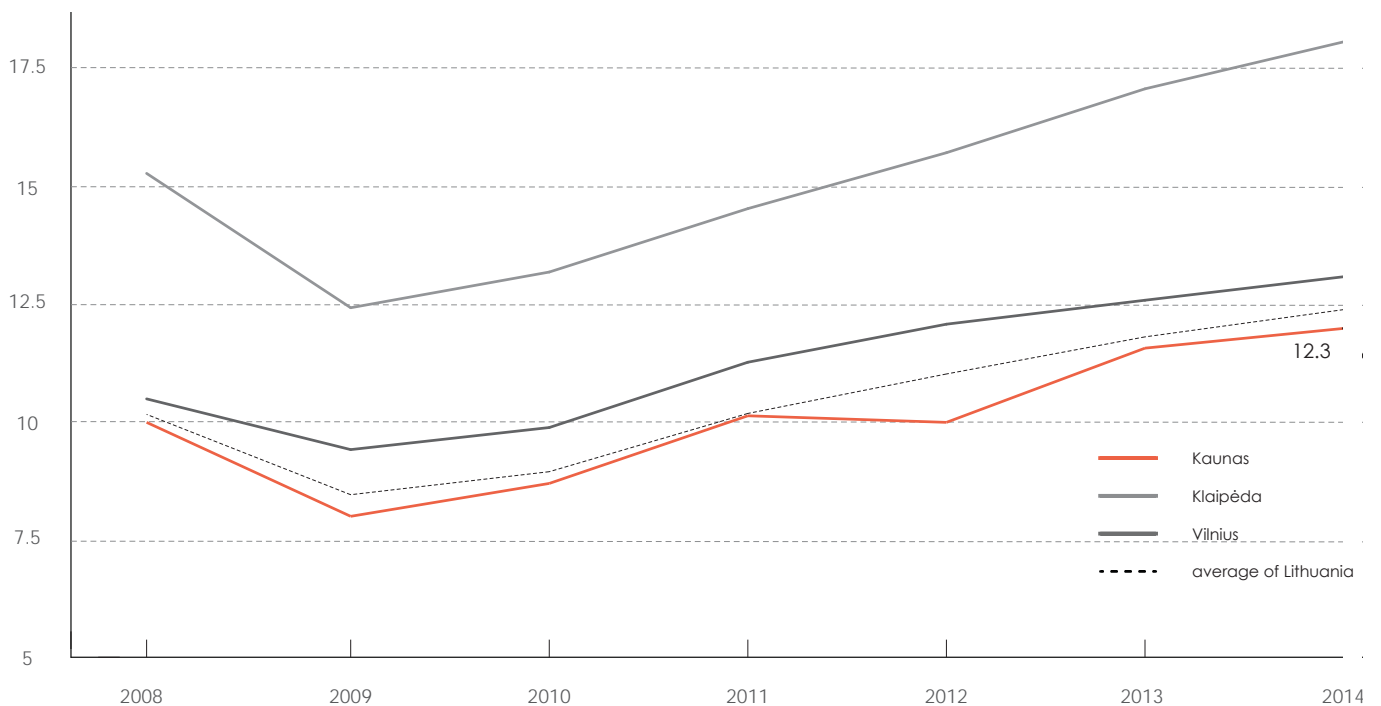


Fig. 2. GDP per capita in Kaunas region (thousand of euros). (drawing by author, based on data from Department of Statistics of the Republic of Lithuania)

4.8.1 MANUFACTURING

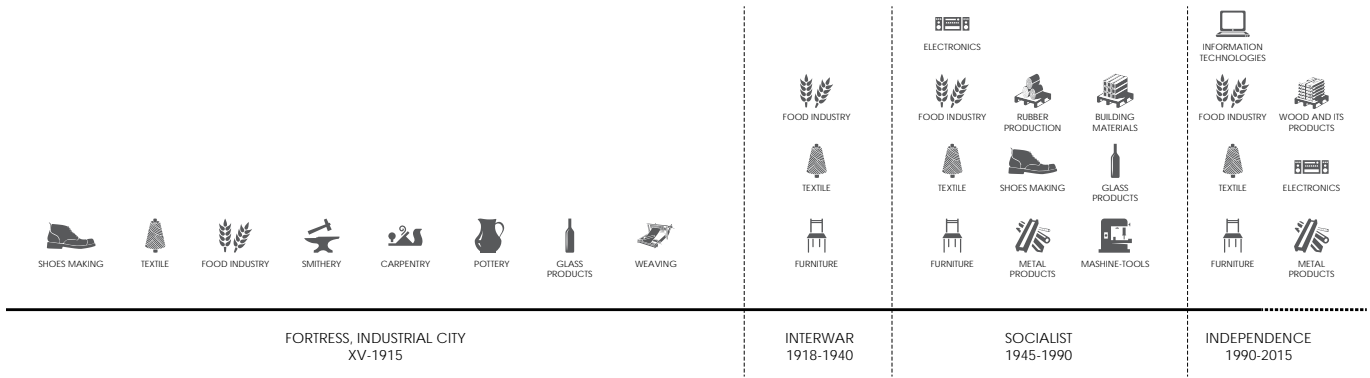


Fig. 3. Timeline of production in Kaunas (drawing by author, based on data from Miškinis, 1991)

Until independence Kaunas was one of the most important industrial centres in the country:

- from XV-XVI the city was famous for craftsmanship. The products by local blacksmiths, shoemakers, potters, tailors, weavers, carpenters was appreciated in the whole country (Miškinis, 1991);
- In the interwar period (1918-1940) food, textile and furniture sectors started to grow (Miškinis, 1991);
- during socialist times (1945-1990) the main industrial sectors were food, furniture, building materials, textile, shoemaking, glass, paper, rubber, metal and its products, production of machine-tools, electronics and other industries. In order to supply the companies with energy, energy sector was being expanded significantly in the city
- the construction of new power transmission lines and power plants was started (Miškinis, 1991).

After independence, from 1990's changes to services based economy led to a sharp decline in economic activities. Strong former dominance of production made it more complicated to reorient to service based economy. Particularly a sharp decline was seen in industrial and agriculture sectors (Kličius, 2001)

In the last years information technology and electronics has become an important sector in Kaunas.

Half of the production companies sell in the domestic market, and exports all the rest. The most products, that are exported, are textile and its products, metals, electrical machinery, wood and its products, furniture. The main destinations of export are countries of EU, Scandinavia and Russia (General Plan of Kaunas, 2011).

Main industries in Kaunas city:

- 2.7% manufacturing of wood products
- 2.7% chemical products
- 10,8% manufacturing of metal products**
- 5.7% rubber and plastic products
- 5.9% other non-metallic mineral products
- 17,5% production of food products and beverage**
- 5.7% publishing, printing and reproduction of recorded media
- 5.7% recorded media
- 8,8% manufacturing of textiles**
- 1.2% footwear products
- 14,1% clothing industry**
- 4.2% Machinery and equipment manufacturing
- 1.5% office equipment and computers
- 11,2% production of furniture**
- 2.4% medical, and optical instruments, watches and clocks
- 5.6% other industry products

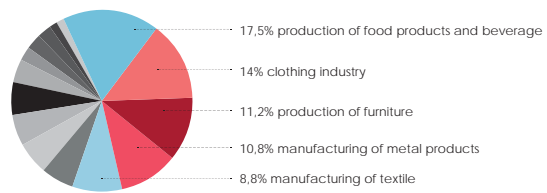


Fig. 4. Five biggest fields of production in Kaunas (drawing by author, based on data from Kaunas General Plan, 2011)

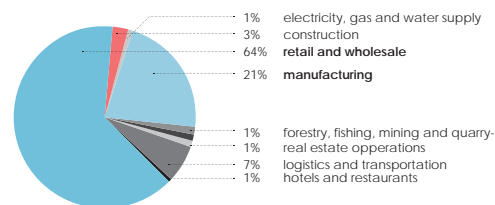


Fig. 5. Main economic sectors in the region of Kaunas

4.8.2 UNIVERSITIES

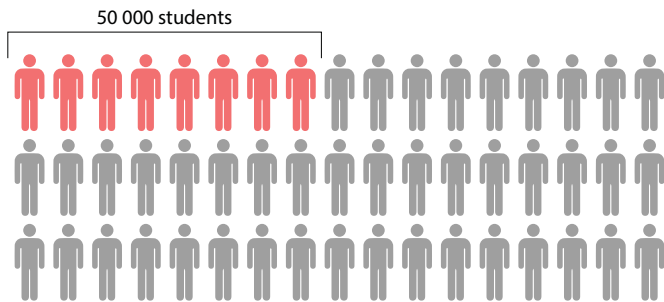


Fig. 6. Share of students from the population of Kaunas (drawing by author)

Kaunas have 7 universities and 6 colleges. There are approximately 50.000 students which occupies more than 12% of total population.



1. Kaunas Technological University (KTU, www.ktu.lt) is one of the major centres in Lithuania for graduates in technical fields such as Engineering, IT, etc. as well as Management. KTU has also a strong R&D basis;



2. Vytautas Magnus University (VDU, www.vdu.lt) prepares highly qualified graduates in the field of Humanities and Social sciences. The University is famous for well prepared graduates in Economics, Management, Languages, and Social sciences;



3. Kaunas University of Medicine (KMU, www.kmu.lt) is the largest institution of medical education and training in Lithuania. Most of the graduates work at Hospital of Kaunas University of Medicine. Kaunas University of Medicine is also the largest medical research institution in Lithuania;



4. Kaunas Academy of Arts (KDA, www.vda.lt/lt/kauno-fakultetas) is department of Academics of Art, that is located all around the country;



5. Antanas Stulginskis University (ASU, <http://asu.lt/>) is one of the main academic institutions preparing professionals for work related with agriculture, engineering, forestry, water management and others;



6. Lithuanian Sports University (LSU, www.lsu.lt/) that has sport, physical education, rehabilitation (physical therapy) and health sciences direction;



7. ISM

4.9 POTENTIAL FOR CREATIVE INDUSTRIES, CLUSTERS

Lithuania

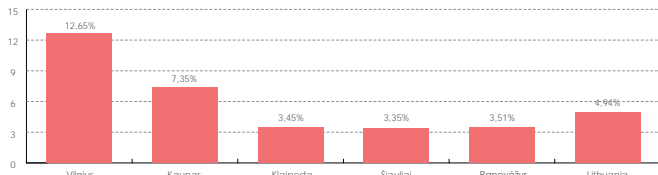


Fig.1. Location of cluster and incubators in the city of Kaunas (drawing by author, based on data from Černevičiūtė et al., 2015)

The highest potential creative industries has in the field (Černevičiūtė et al., 2015):

1. computer games
2. cultural tourism
3. design
4. entertainment business
5. advertisement
6. architecture
7. movies industry



Fig.2. Location of clusters and incubators in the city of Kaunas (drawing by author)

Kaunas region

According to creative industries development action plan in Kaunas region (2009) out of 34,169 companies 2,445 were in creative industries, that is 7%. The biggest percentage of them is located in the city centre of Kaunas. The biggest number of companies within this creative sector is in architecture, engineering, and fields related.

In general 11 000 people worked in creative sector. It is 6.1-6.6% of all employers. The biggest amount of people worked in architecture (3161 employees, 29% of all in creative sector), advertising (1150, 10,6%), publishing (612, 5,6%), and programming (868, 8%) field.

70% of creative industries in the region is located in the city. In 2009 there was two main clusters in the city of Kaunas, first in the old town and second in the area of the main shopping street. It is expected that new cluster will be developed in the Southern part of the city with the art factory "Potiomkinas" ("Action Plan of Development of Creative Industries in Kaunas Region," 2011).

Old town cluster is located in the historical city part build in XV-XVII century. A number of museums, galleries universities, amphitheatre, castle of Kaunas is located here.



Pic.1. Easters in the main shopping street, 2016 (source: www.delfi.lt)



Pic.2. Fair in the main shopping street (source: www.delfi.lt)



Pic.3. Easters in the main shopping street, 2016 (source: www.delfi.lt)



Pic.4. Fair in the main shopping street (source: www.delfi.lt)

'Freedom alley' cluster is developed in the main shopping street and the street bordering with it. It developed when the main shopping mall 'Akropolis' was built and the retail shops moved to it. A vacant property started to be used by the creative industries. Later the development was supported by the theatres and galleries located there, as well as activities organised by universities in the area, such as exhibitions, events, movie nights. Common city events, fairs, special events: sculpture exhibitions, parades, performances of street artists in the main shopping street (pic.1,2,3,4) ("Action Plan of Development of Creative Industries in Kaunas Region," 2011).



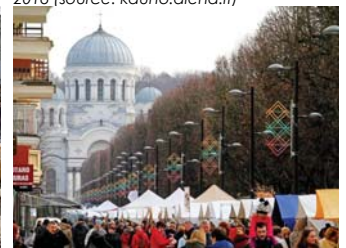
Pic.5. Events in the museums square next to the main shopping street (source: www.delfi.lt)



Pic.6. Easters in the main shopping street, 2016 (source: kauno.diena.lt)



Pic.7. Easters in the main shopping street, 2016 (source: www.delfi.lt)



Pic.8. Fair in the main shopping street (source: www.delfi.lt)

4.10 INCUBATORS AND HUBS

In Kaunas recently an interest in creative industries has increased. A number of separate projects is being developed, such as incubators, co-working places, events hubs.



Pic.1. Art Factory Potiomkinas (source: potiomkinas.eu)

Art Factory 'Potiomkinas' (2011) (<http://www.potiomkinas.eu>) is located in former meat factory. It is described as not traditional alternative space for experimentation, bringing local artists, residents of the city and local community together. In 6 years these spaces of experimentation grew up into a meeting space for family and mass events. In the future it is aimed transform an area as a key location for bikers, artists, films and other clubs. Finally make it a space for concerts, community and other events, that are labelled by 'different frame of mind'.



Pic.2. A flyer of one of the events organized in the centre (source: ktu.edu.lt)

KTU „Startup Space“ (2012) (<http://nivc.ktu.edu/sen.htm>) is a community open for all start-ups, having innovative ideas and aiming to start their businesses, or interested innovations, technologies. The organisation is part of the wider strategy founded by the EU to stimulate entrepreneurship among youth, mentoring and consultations, related to the establishment of technological companies, product development and commercialization.

Finally, it is aimed to invite wider population in this project, the space also might be rented out for the community gatherings and meetings.



Pic.3. The Ministry of Fluxus (source: delfi.lt)

The Ministry of Fluxus (2012-2016) (<http://www.lituanicakaunas.lt/>) is an inclusive, publicly accessible art project in Lithuania.

The "Ministry of Fluxus," was established in 2010 in Vilnius, the capital of Lithuania. However from 2012 till middle of 2016 it was housed in a former shoe factory 'Ltuonica' in the old town of Kaunas. During this time there were 60 different artist working in the building. The additional functions were:

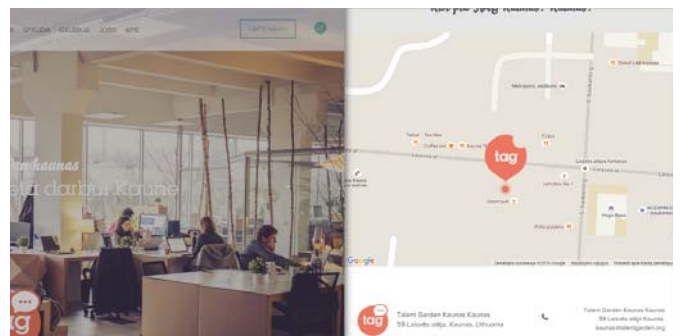
- art incubator, spaces to make and export artist projects
- exhibition hall
- cinema hall
- concerts and dancing hall
- exhibition space for art installations
- space fro lectures and seminars
- laboratory of 'future city'

One of the key concepts of Ministry is constantly move to different areas turning abandoned buildings into publicly accessible studio, performance and exhibition space. Participating artists need only check with organizers to ensure that there is space for them. Most events hosted at the Ministry of Fluxus are free.



Pic.4. Santaka Valley (source: delfi.lt)

Santaka Valley (2014) (Lt: Santakos Slėnis) (<http://www.santakosslenis.lt/en/>) is located in the campus of Kaunas Technical University. "Purpose of Santaka Valley – to create an integrated science, study and business centre for public and private research, knowledge-intensive businesses, and to provide added-value services. Santaka Valley can be characterized by its ideal conditions for businesses to carry out research and develop new products, which increase Lithuania's competitiveness at the international level." (<http://www.santakosslenis.lt>).



Pic.5. Co-work spaces in the main shopping street (source: kaunas.talentgarden.org)

'Talent Garden' Kaunas (2014) (<http://kaunas.talentgarden.org>) is the first campus in Eastern Europe, that brings entrepreneurs, freelancers, start-ups, companies from digital and creative industries to work, meet, learn and collaborate with each other. It is located in the main shopping street and hosts up to 50 members.

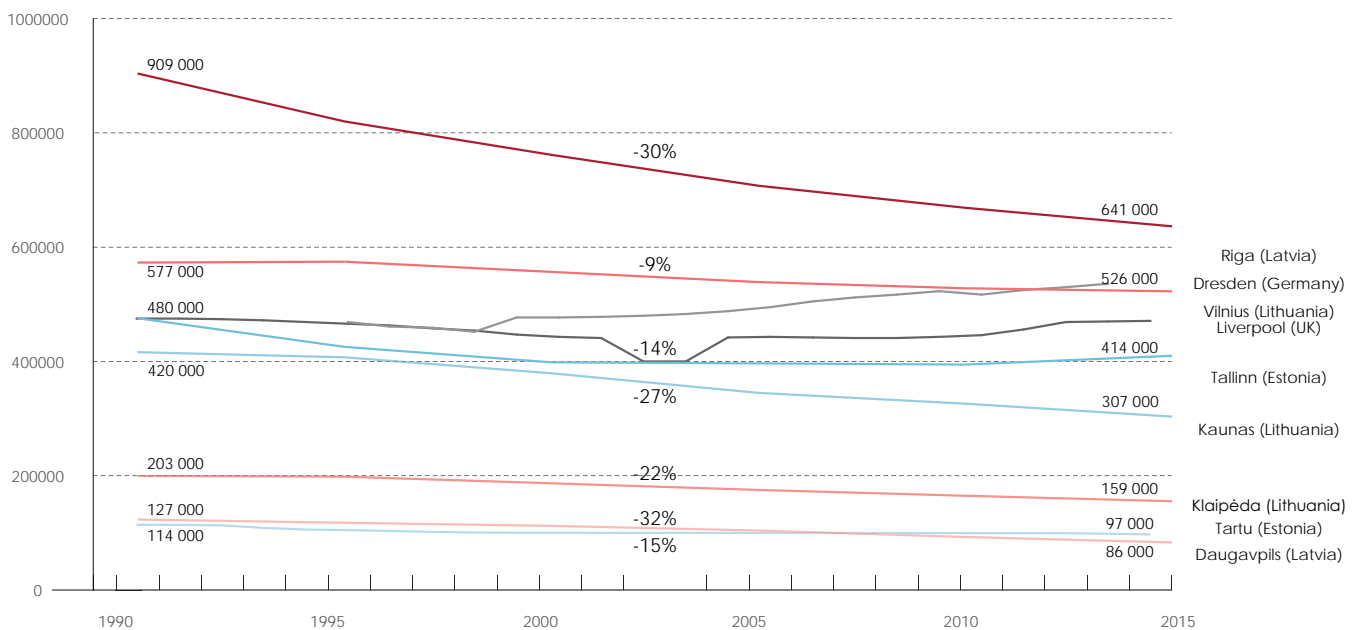
4.11 CASE STUDIES

To understand possible trends of demographic development in Kaunas, a case study of biggest cities in the Baltic States (Tallinn, Tartu, Riga, Daugavpils, Vilnius, Kaunas, Klaipėda) and former industrial cities that faced demographic shrinkage in the Western Europe (Liverpool, Dresden, Sheffield) has been done, monitoring type of economy, as well as demographic changes.

From 1990's all of the biggest cities (Tallinn, Tartu, Riga, Daugavpils, Vilnius, Kaunas, Klaipėda) has experienced a negative demographic decline at different level. Firstly, from all the cities capital of Lithuania, Vilnius has experienced the smallest decline. One of the reasons is that before independence Vilnius had the most developed service based economy. Secondly, from 2010 population in Tallinn has started to grow. Municipality has successfully implemented a program to reoriented to knowledge, technologies based economy.

Currently, the economic perforce is gradually growing. The Baltic Countries are among the ones that has one of the fastest growing economy at the moment.

As the case studies two cities are chosen: Tartu, for the similar context as posts-socialist city, and Sheffield as a former industrial city, that is implementing urban strategy to strengthen its economy and identity as a former industrial city, a city of 'makers'.



TARTU. ESTONIA

Tartu is second biggest city in Estonia, with the population of 97 000 people (Estonia Department of Statistics). It is universities city. The case study chosen due to similar post-socialist context, and position within the regional context, relation with the capital.

During the first years, the airport was closed as well as several industries supporting the military. The city lost many firms, especially in the military complexes and in industries such as chemicals, communication equipment, and manufacturing (Friedrich et al., 2014).

However according to Friedrich "three phases of development can be separated:

- reflecting economic breakthrough from 1991 to 1995,
- the period of adaptation from 1996 to 2000,
- the period of recovery from 20001 to 2012".

From 1990's the country faced a significant drop in population mostly due to emigration of non-Estonians, but also due to a drop in birth rates and emigration of Estonians. The last type of emigration was quite modest in a first years, but has increased after accession to EU. In a case of Tartu in general in 25 years the city lost 15% of population, that are 17 000 residents (Friedrich et al., 2014).

On the other hand a number of firms has grown from 2001 till 2011 in the city. The share of **scientific activities and construction rose**; at the same time **agriculture, manufacturing, and wholesale lost share** (Friedrich et al., 2014).

In a last years the country pays a big attention to promote development of creative industries and attract back creative class to the country. According to Friedrich (2014) clusters in Estonia has a potential to focus towards food industries, forestry - wood industries, machinery and electronics, health and wellbeing services, logistics, and IT. **Creative Estonia** is a program started in 2009 for raising awareness. The program brings together different activities to promote creative entrepreneurship and creativity in society by making



Pic 1. Creative Estonia (source: <http://loovtartu.ee>)

programs for raising awareness, knowledge and skills, promoting the formation of clusters and doing joint marketing (Urban Creative Poles, 2012).

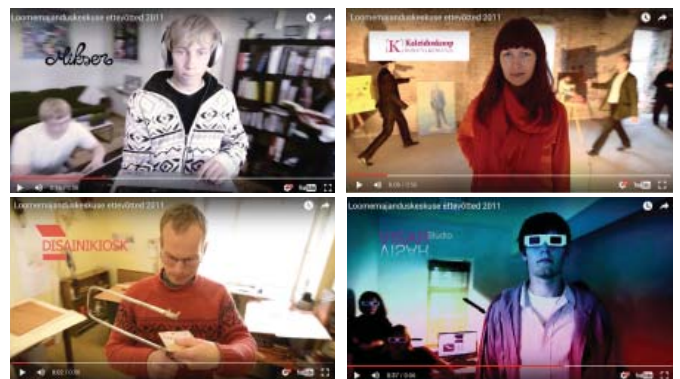
More specifically the program involves developing a creative industries web portal (1), a comprehensive collection of relevant information on creative industries (2), web resources for start-up companies

(3), online advice (4), networking support (5) and in the future also promotional and marketing capabilities for creative companies (6). In addition to the portal, Creative Estonia publishes best practices, reports from studies and mapping projects, organizes conferences and seminars in different parts of Estonia, offers media support for creative industries initiatives and raises awareness through different means (<http://www.looveesti.ee>).

With this program Tartu has founded a **Centre for Creative Industries**, whereas in Tallinn (capital of Estonia)) there is a **Creative Industries Incubator** to support creative startups.

In addition to regional centres there are also development centres of different fields such as Estonian Centre of Design, Estonian Centre of Architecture, Development Centre of Estonian Music, and others. In many fields creative unions and other representative organizations act as active partners (<http://www.looveesti.ee>).

With the Development Strategy "Tartu 2030". Tartu places major emphasis on developing a knowledge-based economy, especially through the creation of clusters for knowledge-based electronics,



Pic 2. Clipping from the video representing TCCI (source: <http://loovtartu.ee>)

material science, biotechnology, information and communication technology, and for health industries. The city expects spin-offs from the universities (Friedrich et al., 2014).

Tartu Centre for Creative Industries (TCCI) (<http://loovtartu.ee>) was

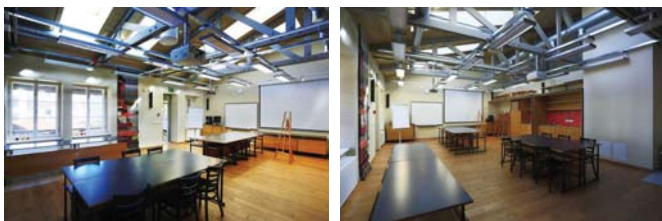


Pic 3. Location of Tartu Centre of Creative Industries (source: <http://loovtartu.ee>)

founded on May 14th, 2009 by Tartu City Council.

The main objective of the TCCI is to work as the coordinating and developing centre of creative industries not only in Tartu but the whole region (South Estonia). TCCI operates as the coordinator of creative industries in this region by providing creative industries related information and training, legal and economic consulting for creative entrepreneurs, as well as business incubation (+ pre- and post- incubation) services.

TCCI is located in three buildings (Kalevi 13, 15 and 17) (pic.3) providing office space for up to 40 creative companies. In addition, the centre also houses a conference (88m²), seminar (35m², 72m²) rooms, cafeteria, arts exhibitions and shops (Estonian design, vintage clothes), garden with the courtyard. The conferences and



Pic 4. Seminar room (source: <http://loovtartu.ee>)



Pic 5. Garden and cafeteria (source: <http://loovtartu.ee>)

seminar rooms might be rented out.

The duration of the incubation period according to the rules is 2+1+1 years. When start-ups enter an incubator they sign contracts for two years, in the end of this term the incubant has a right to apply twice for an extension for a year.

The incubants have an obligation to pay:

- 1) rent for rooms,
- 2) communal expenses for the rooms
- 3) incubation service.

In return every incubant gets:

- 1) counseling in entrepreneurship once a month;
- 2) the trainings of the first year incubants. It is done in collaboration with the Tartu Science Park which helps to analyse how the given business plan would work in reality
- 3) project writing trainings four times a year

To sum up, in a last years it has been focused on raising awareness, making lectures and consultations concerning establishment of the business, increasing collaboration and communication between different institutions, finally creating an open online platform and sharing the results with public. According to Friedrich (2014) because of the number of universities and successful economic and educational policies Tartu's population development seems more promising compared to Tallinn. However a city has to concentrate on urban renewal rather than assist urban sprawl (Friedrich et al., 2014).

SHEFFIELD. UK

Sheffield is a city in England. The size of population is 564 000 inhabitants. At its peak, in 1951, the population numbered 577,050. Sheffield's population declined between 1974 and 2002, from 570,000 to 512,242 (Roland Lovatt, 2007). It is a university city that partly influenced economic performance in the city centre.

In the 19th century, Sheffield was famous for steel production. After industrial revolution a number of unemployment increased, consequently the city experienced a population decline. According to the Sheffield City Masterplan (2013) the size of the 'High Street' retail economy has seen decline nationally due to the recession but also for deeper structural reasons related to growing e-shopping and out of town competition. Sheffield City Centre currently has 116 vacant shop units against a total number of 836. This gives a vacancy rate of 13.8%.

The aim is to attract and keep young innovative talents, by strengthening economy and making more inclusive development of the city, that will offer possibilities for different .

Year of Making Sheffield 2016 (<http://www.sheffieldcityofmakers.co.uk>)



Pic 5. Sheffield's Years of Making 2016 logo

co.uk) is a city branding program started in the city in 2016. Incorporating five core themes: Art & Design, Manufacturing & Industry, Film & Literature, Heritage & Placemaking, and Music & Performance, the strategy features a programme of festivals, theatre, exhibitions, conferences and cultural events that will reveal talent and break down barriers (<https://www.sheffield.ac.uk>).

According to Vanessa Toulmin, Director of City and Cultural Engagement at the University of Sheffield and Chair of the Sheffield Cultural Consortium: "This is a unique opportunity to show that making is in the city's DNA, to foreground all forms of making in the city and region – from advanced manufacturing, specialist steels, forged products, cutting tools, flanges, bearings and blades to award winning theatre, international art and design, ground-breaking research and world class talent." (<http://www.sheffieldcityof->

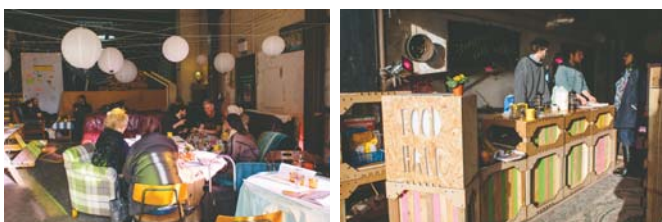


Pic 6. online platform of ReNew Sheffield (source:<http://www.renewsheffield.co.uk/makers.co.uk/>)

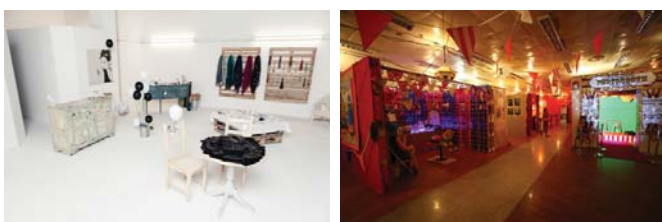
To deal with the number of growing number of vacant property in the city centre besides spatial improvements, new policy structures are made. **ReNew Sheffield** (<http://www.renewsheffield.co.uk>) is a non-for-profit organization, created by Sheffield City Council, in collaboration with the University of Sheffield's Office for City and Cultural Engagement and Schools of Law and Management. It aims to build relations between landlords, space holders and potential space users. It works as a mediator between three different stakeholders.

One of the main objectives is to allow "new concepts to be tested on a temporary basis, which will hopefully lead to those businesses becoming established for permanent use elsewhere in the city centre". Secondly, at the same time enliven the city centre by adding variety, and new economic activities. The program firstly provides funding for new entrepreneurs for redevelopment of vacant property in the city centre, secondly connections to other people, assistance in establishment a business, finally guidance on getting started, such as finding out what licenses might be needed, how to write first budget, how to fund raise, where to advertise and marketing (<http://www.renewsheffield.co.uk>). Finally, manages online platform, with all the necessary information and case studies.

ReNew is based on the successful Renew Newcastle, Australia



Pic 7. Foodhall (source: <https://www.facebook.com/sheffieldmakersshop>)



Pic 8. Roseannah (source: <http://www.renewsheffield.co.uk/>)

Pic 9. Sheffield Bazaar at Castle House (source: <http://www.renewsheffield.co.uk/>)

initiative led by Marcus Westbury. Moreover, similar policy structure is developed in Adelaide, Australia (<http://renewadelaide.com.au/>).

A number of new pop-up units has been opened, such as FoodHall (pic.7.), Roseannah (pic.8), Sheffield Bazaar (pic.9), etc. One of the projects supported by this program is **Makers shop**. It is managed by a collective of local makers. The shop provides a home for in-dependent creators and designers to sell their products.

The project received £2,800 of Renew funding to repair damage to the unit and install permanent fixtures. The Sheffield Makers shop began life as a temporary 1 month Christmas pop-up in an empty unit organised by Kate Cooper. After a successful opening period and with the support of the Renew scheme Sheffield Makers have been able to stay for the long term (<http://www.renewsheffield.co.uk>).

The two examples have rather similar aims, however function in a different way. In a case of Tartu to strengthen economy it is invested a lot in developing clusters and incubators with work spaces provided in the building.



Pic 10. Makers shop (source: <https://www.facebook.com/sheffieldmakersshop>)





5 RESEARCH. CITY CENTRE

This chapter introduces city centre and overviews main functional concentrations, explains the way the city centre functions. At the same time spatial conditions that are there, like built-up structure and urban spaces. Finally, explores existing strategies of revitalization and financial and spatial conditions of their implementation.

5.1 CITY CENTRE



References:
Photos by author





5.2 HERITAGE

The city centre of Kaunas has a National Cultural Heritage status. It is one of the most valuable areas with an exceptionally high concentration of the modernism interwar buildings in Europe. It represents the most prosperous historical period of the city.

From 1999 Kaunas "New town" (city centre) was added to the Cultural Heritage Register. In 2005 it was announced as States importance area, where 57% of the buildings are included into Cultural Heritage Register (Fig. 1). There are three main levels of preservation:

19% of the protected buildings have very high conservation requirements, where it is allowed only restoration and conservation of urban structure. In other words it is not allowed to change original structure as well as historical function;

37% of the protected buildings have an average level of protection, with restoration and adaptation of an urban structure. Specifically the interior structure could be changed to adapt to a different needs and use, while the building should maintain an authentic exterior structure;

44% of the buildings have rather low conservation requirements, with an adaptation of urban structure preserving valuable heritage features. This means that interior and exterior structure of the buildings might be changed preserving just specific features indicated (Cultural Heritage Preservation Plan 2014).

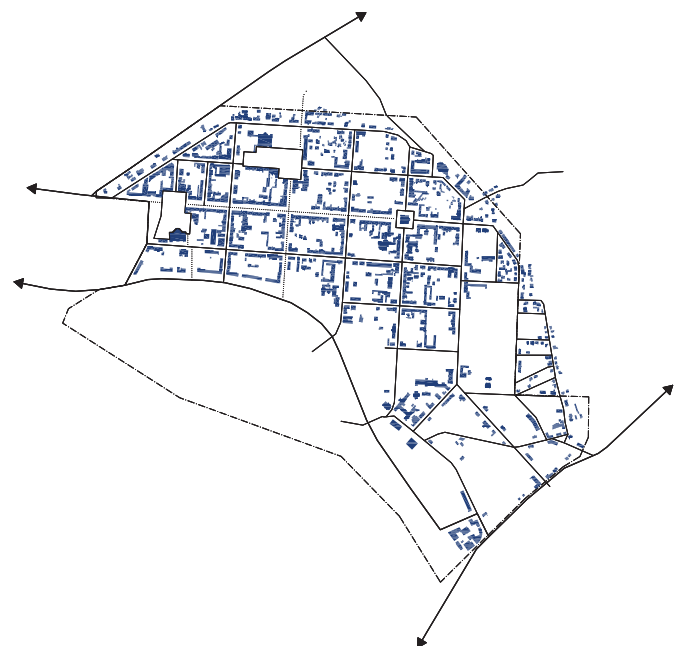
Overall urban grid of the area has to be preserved, keeping an existing built-up line and perpendicular grid tissue. The density of the urban blocks can not be increased.

In the last quarter of 2015 Municipality of Kaunas submitted an application asking to announce 'New Town' as UNESCO World Heritage Site. A final answer is not clear yet, however Dr. Vaidas Petruolis, architecture scholar who is part of the team working on the application for UNESCO, notes that there have been fears about strict UNESCO World Heritage regulations turning the city into an open-air museum, restricting its development and regeneration opportunities.

Strict Cultural Heritage requirements partly might be linked with appearance of negative urban development trends, such as worsening quality of built-up structure, vacancy, stopping development and social exclusion.

57%

Objects protected by Cultural Heritage Register



Of them:

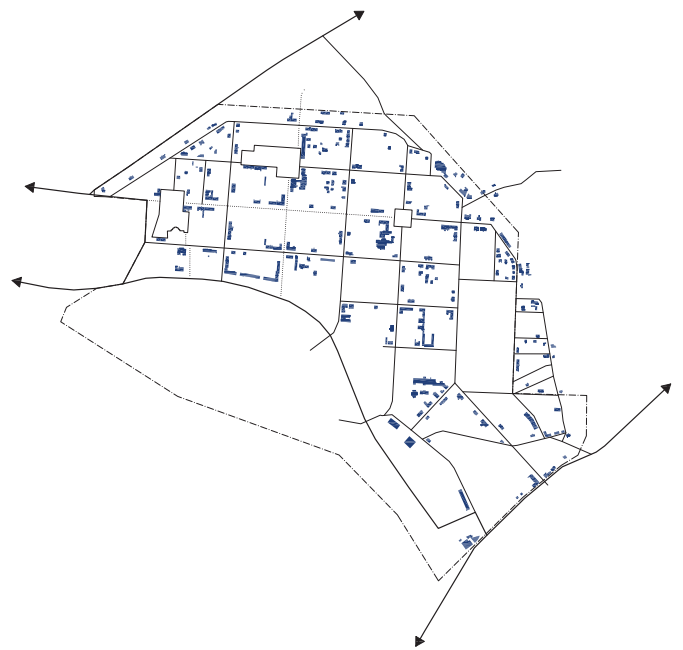
19%

restoration and conservation of urban structure



37%

restoration and adaptation of urban structure



44%

adaptation of urban structure preserving valuable heritage features



Fig. 1 Cultural heritage status of the buildings (drawing by author based on data from Kaunas, Naujamiestis (New Town) Cultural Heritage Preservation Plan 2014)





5.3 VACANCY

Growing number of vacant buildings can be noticed in the area. Two main clusters of abandoned buildings can be defined in the nearby areas of the main shopping street and in the former industrial district in East South.

Firstly, the construction works of buildings that has been started just before independence stopped ('Respublika', 'Britanika'). Later on it was followed by former industrial, their administrative buildings and recently public institutions that eventually can not sustain amount of real estate that inherited from socialist times. Therefore institutions, such as universities tries to sell their property. It was followed by other commercial and leisure facilities that were out-competed by shopping and leisure centres build in the surrounding area and periphery.

Moreover, vacancy is partly linked with strict heritage regulations. 69% of the abandoned buildings are included into Cultural Heritage Register. Due to this taxes, maintenance and reconstruction cost gradually increases. This together with decreased desire to invest in an area, at current weak economic situation, adds up to the growing number of vacant buildings. It might be predicted that the number of vacant property will continue growing in the least attractive areas for a successful developer.

Finally, often the buildings do not match current economic situation and needs and due to strict heritage regulations commerce as other non-residential activities has been rather limited. This is in a first place due to inadequate structure and impossibility to change it and secondly, due to high price of restoration and uncertainties about payback of investments. Subsequently, a city has been turned into an open-air museum.

Fig. 1. Abandoned buildings (drawing by author)

6% of the buildings in the area is vacant

- 98% buildings built till 1990
- 2% after 1990

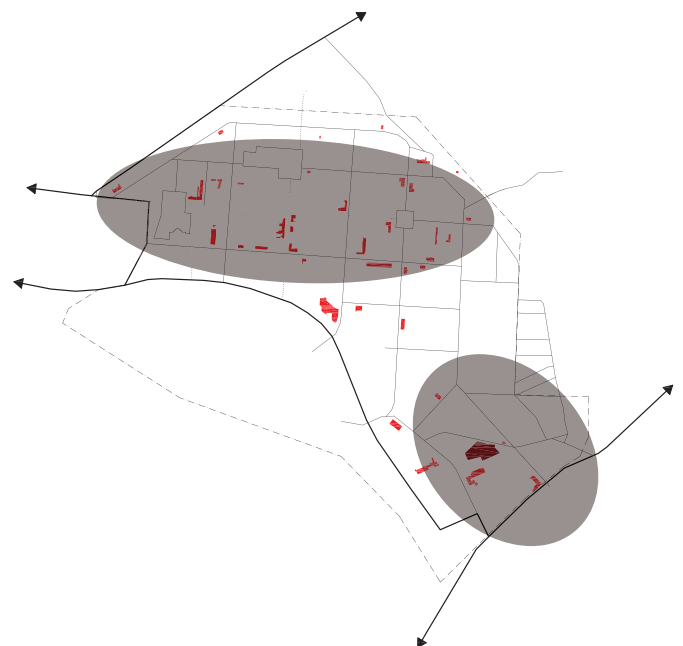


Fig. 2. Quality of vacant buildings (drawing by author)

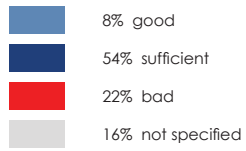
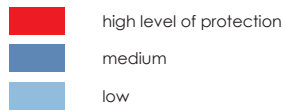


Fig. 3. Vacant buildings included into cultural heritage register and their level of protection (drawing by author based on data from Kaunas, Naujamiestis (New Town) Cultural Heritage Preservation Plan 2014))

69% buildings are included into Cultural Heritage register



31% buildings are not included into cultural heritage register

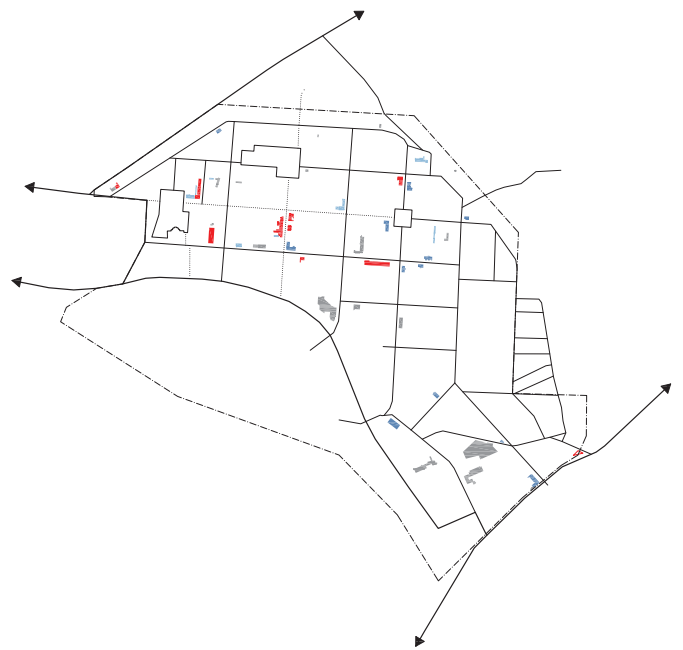
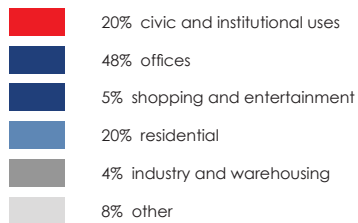


Fig. 4. Function of the vacant buildings (drawing by author)

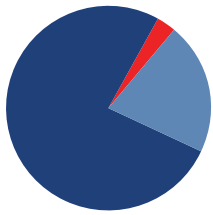




5.4 QUALITY OF BUILT-UP STRUCTURE

Overall physical conditions of the area are rather poor. According to Kaunas "New Town" Plan of Poor Quality Architectural Objects (2011) out of 1167 buildings 58 (5,2%) are of very poor quality, 182 (16,2%) of good quality, and condition of other 927 (78,6%) are sufficient (Fig. 2). A main criteria of evaluation is depreciation rate of a construction. Buildings are considered to be good quality, when level of physical deterioration is lower than 30%, sufficient quality - when physical deterioration is 30-70% and very poor quality - when physical deterioration is more than 70%, which makes them impossible to use.

Strict heritage requirements adds up to the process of deterioration by making maintenance and basic construction works impossible for certain part of population. Most of the buildings are apartment buildings. Residents themselves are responsible for the maintenance. The cost for it often increases few times due to Cultural Heritage requirements. At the moment social structure of the buildings are very diverse, this means that part of the residents can not afford or do not want (rented apartments) to invest into the appropriate maintenance. In the end the quality and the energetic efficiency in the buildings drop increasing taxes and maintenance cost.



3% very poor quality houses

76% medium quality houses
(31-75% abandonment rate)

21% good quality houses
(<30% abandonment rate)

21% good quality houses
(>30% abandonment rate)

76% medium quality houses
(31-75% abandonment rate)

3% very poor quality houses
(>76% abandonment rate)



Fig. 2 Quality of the buildings (drawing by author)

5.5 DEVELOPMENT IN THE CITY CENTRE 1990-2015



Pic. 1. Reconstruction of former milk factory (2015)



Pic. 2. Shopping and leisure centre "Akropolis" (2004)

The development in the centre of Kaunas has been very slow. During two and a half decades 38 new buildings has been built. This includes commercial centres, offices, public facilities, industrial buildings as well as residential houses.

Because of the extremely high demand and yet low supply of newly build apartments, flats is often reserved even before the beginning of the construction works. Though the situation with an old housing market is rather different, as often they are poor quality, making them not attractive for residents and because of rather high heritage requirements for developers. in such a weak economic situation. In the last years, after economic crisis the price of real estate has been slowly growing (approximately 1%/year).

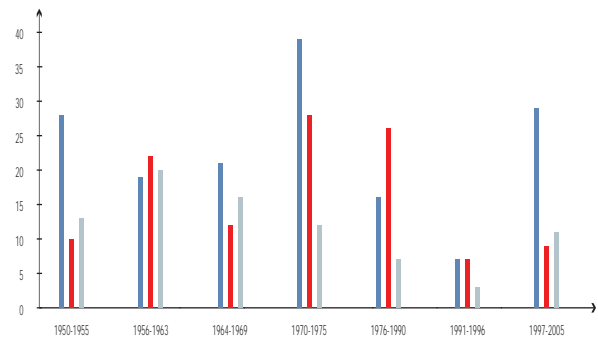


Fig. 1. Number of buildings built in the city centre of Kaunas

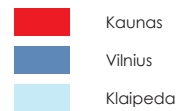
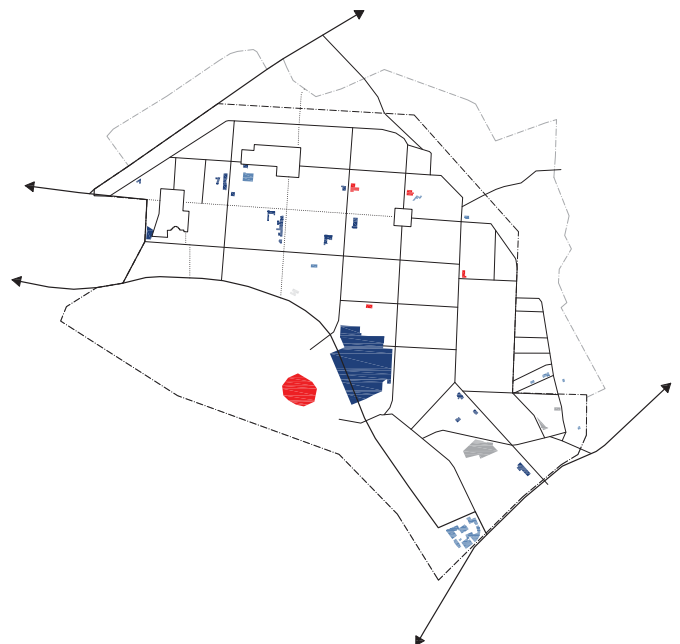


Fig.2. Buildings built after 1990s (drawing by author)



5.6 CURRENT DEVELOPMENT PLANS IN THE CITY CENTRE



Fig. 1. Location of the projects planned by municipality (drawing by author)

1. Regeneration project of the main shopping street (under construction)

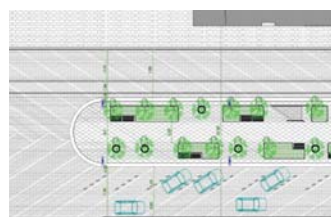


Pic. 1. Project of new shopping street (visualisation by Š Kiaunė)

Budget	20,28mln. €
Time	2015-2020
Phasing	6 stages
Financing	by municipality and private investors



Pic. 2. The main shopping street (photo by Stewart Ward)



Pic. 3. The main shopping street (project by Š. Kiaunė)

2. Reconstruction of Kaunas bus station (under construction)



Pic. 4. Project of new bus station (by „Dviejū grupė“)

Budget	5,79–7,24 mln.€
Time	2015-2017
Financing	by municipality and private investors
Author:	„Dviejū grupė“

The program that is planned to be made in the station:

- waiting hall;
- booking office;
- self-checkout;
- luggage storage;
- travel agency;
- coffee bar;
- parcel terminal (850 m²);
- commercial spaces;
- underground car parking (200spaces).

It is expected that bus station platform will serves 10 thousand visitors a day.



Pic. 5. Interior space of new bus station (by „Dviejū grupė“)



Pic. 6. Project of new bus station (by „Dviejū grupė“)



Pic. 7. Temporal bus station next to the shopping and leisure centre "Akropolis"



Pic. 8. Temporal bus station next to the shopping and leisure centre "Akropolis"

3. Knowledge museum (2018-2019)



Pic. 9. Knowledge Island (photo by Erikas Ovračenka)

Budget	23mln.€
Time	2018-2019
Financing	10 mln.€ by Ministry of Education and Science 2,5 mln.€ by municipality of Kaunas the rest by private investors

This year municipality of Kaunas won a competition for the States Knowledge Museum. It will be one of the biggest this type museums in the Baltic States. Both Vilnius and Kaunas competed for this museums, but due to good central location in the country, in the end Kaunas was chosen as a best location. According to rector of Kaunas University it is planned to exhibit countries science achievements, as well as interactive lectures, finally organize workshop in the Knowledge Museum.

It is planned that 300 000 people per year will visit the museum. 70% of visitors will be tourists.

4. Congress and Conferences Hall (2018-2019)

Budget	30mln.€
Financing	15% covered by municipality of Kaunas the rest by EU
Time	2018-2019
Area	10675 m ²

There is plans of municipality of Kaunas to built new Congress and Conferences Hall. The new building is proposed to be built instead of reconstruction of Philharmonic Hall in the city centre of Kaunas. A new building was decided to be built because of high investments required for reconstruction. According to city official the new Hall is planned to be located on the waterfront in the Southern part of the



Pic. 10. Project of new Congress and Conferences Hall (by „Vilius ir partneriai“)

city, that will be in the central location between museums in the Old Town and the New Town. In addition to that helps with regeneration of southern part of the city.

The program that is planned in the building is:

- main concert halls with 1500 spaces
- secondary concert hall with 720 spaces
- contemporary and modern art exhibition spaces
- a restaurant with the terrace and the view to the river and Old Town
- a riverside amphitheater with 1440 spaces
- a roof amphitheater with 500 spaces
- 350 spaces underground parking
- 3000m² commercial spaces

The building will be used for various concerts, festivals, competitions and performances. It is planned to organize educational program for children, adults, weekend events for families. Finally, the building might be used to stimulate international conferences and tourism (<http://www.krda.lt/>).



Pic. 11. Philharmonic Hall (photo by Kęstutis Malžinskas)



Pic. 12. Conceptual scheme for the location of CCH (by „Vilius ir partneriai“)

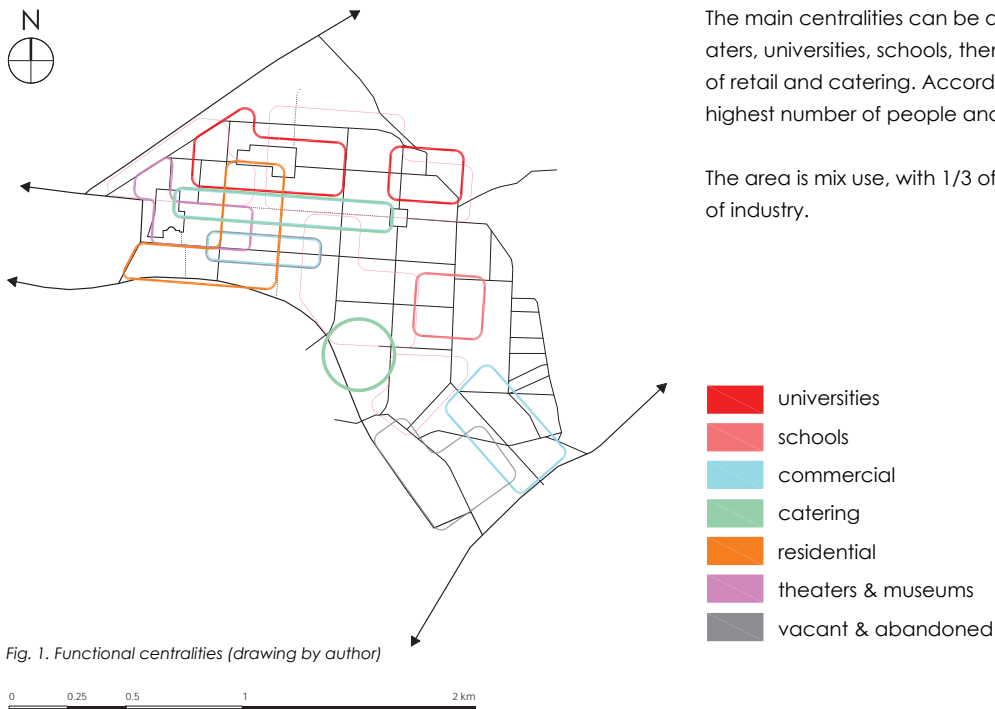


Pic. 13. Workshop for CCH (photo by Rokas Teinys)



Pic. 14. Project of new Congress and Conferences Hall (by „Vilius ir partneriai“)

5.7 PROGRAM



The main centralities can be defined, such as museums and theaters, universities, schools, then main streets with the highest density of retail and catering. Accordingly all these locations attracts the highest number of people and are mostly used.

The area is mix use, with 1/3 of work, leisure, housing and almost 10% of industry.

EXISTING PROGRAM

1 009 000m² existing spatial capacity of the area

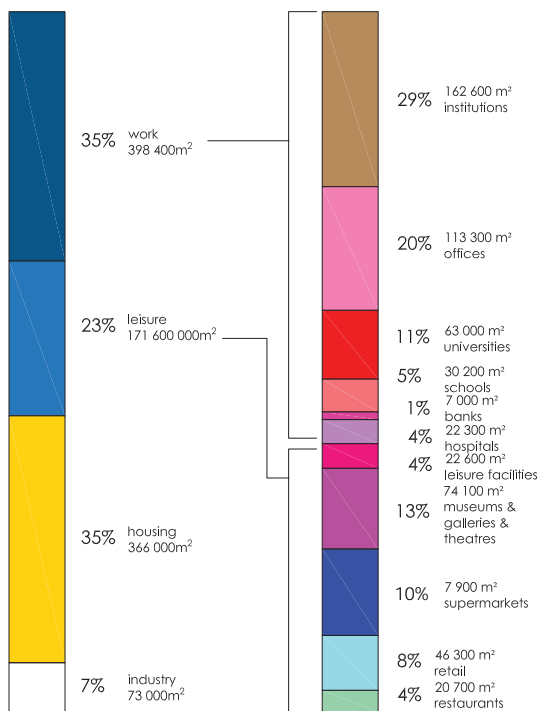


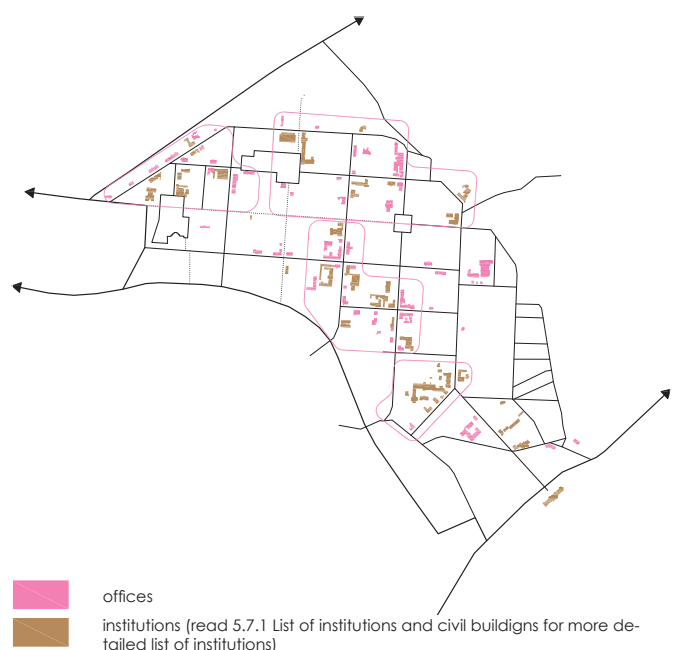
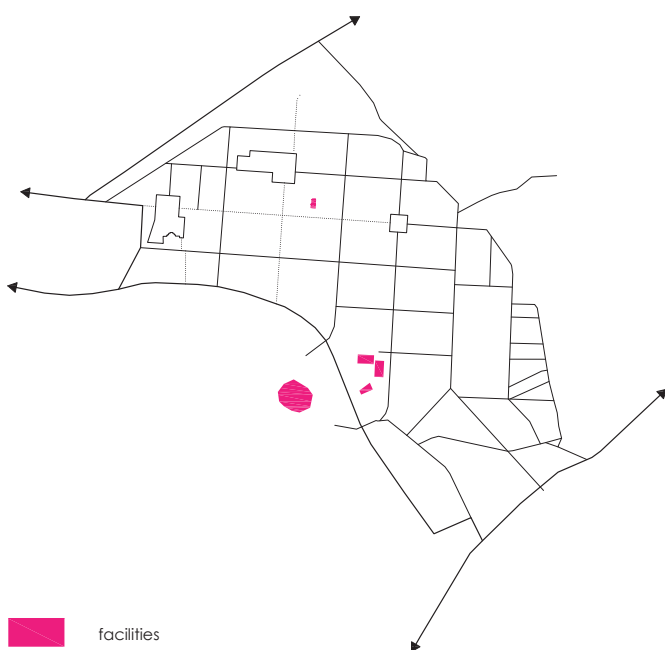
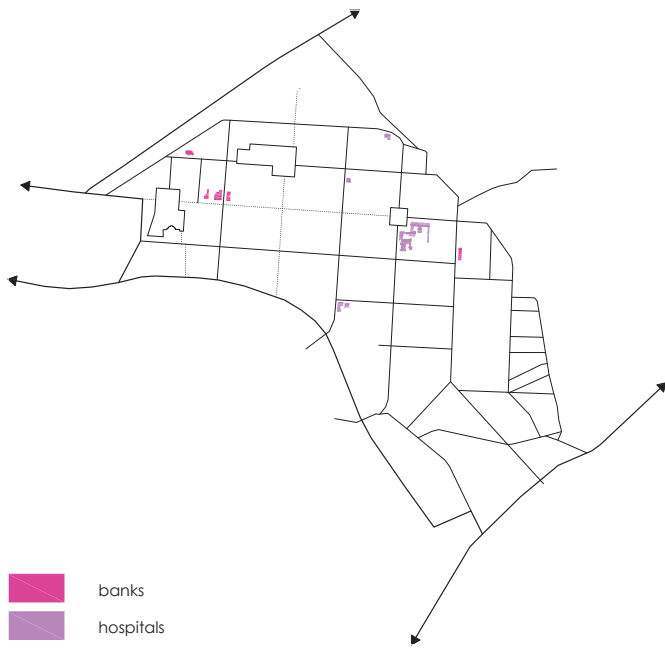
Fig. 2. Existing program of the area (drawing by author)

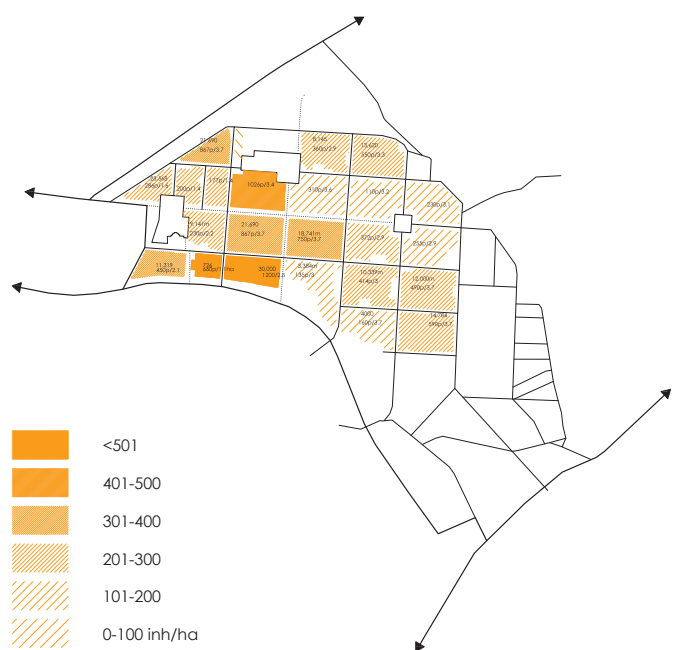
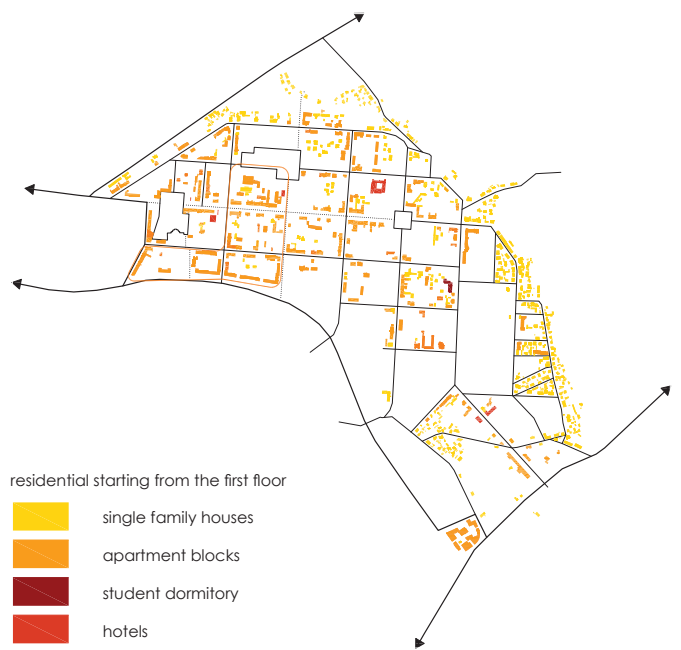
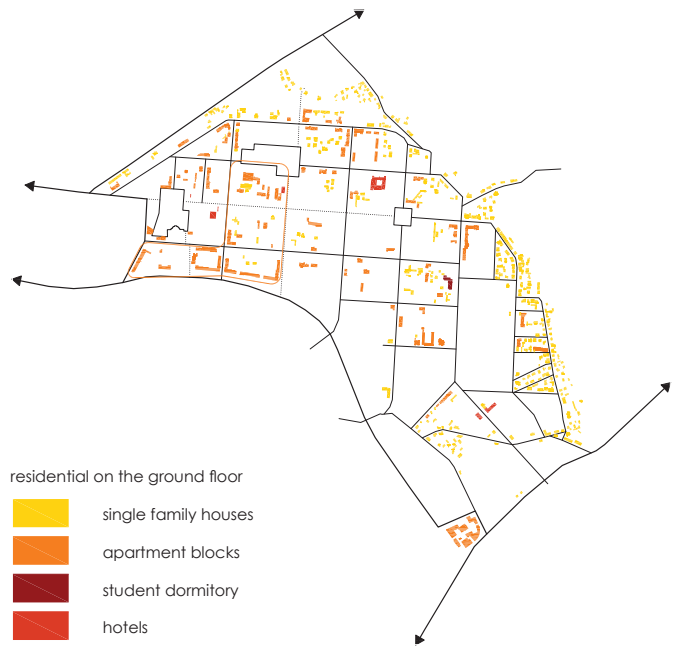


Fig. 3. Institutions in the area (drawing by author)

5.7.1 LIST OF INSTITUTIONS AND CIVIC BUILDINGS

1. post office
2. Center of Registers
3. municipality of Kaunas
4. state land survey institute
5. Kaunas County Administration
6. central bank of the state
7. youth employment center
8. Kaunas territorial labor exchanges
9. business leader centre
10. Industrial Construction Design Institute
- 11.
12. the center of the pancreas (centrinės kasos)
13. Lithuanian Political Prisoners and Deportees alliance
14. labour exchange (Sodra)
15. state land survey institute
16. department of migration of Kaunas district
17. department of Commerce, Industry and Crafts of Kaunas
18. department of Agriculture of the Republic of Lithuania
19. Kaunas main police office
20. Lithuanian Assay Office, a branch of Kaunas (lietuovs prabavimo rumai, Kauno filialas)
21. Kaunas city jail
22. Kaunas district court palace
23. Lithuanian air force headquarter
24. center of students
25. Army Volunteer Force Headquarters
26. International Police Association department
27. Lithuanian Armed Forces Military Medical Service
28. Kaunas teacher association (mokytoju namai)
29. Kaunas main bus station
30. Kaunas medical bank
31. Kaunas main train station





5.8 EXISTING BUILDING TYPOLOGIES

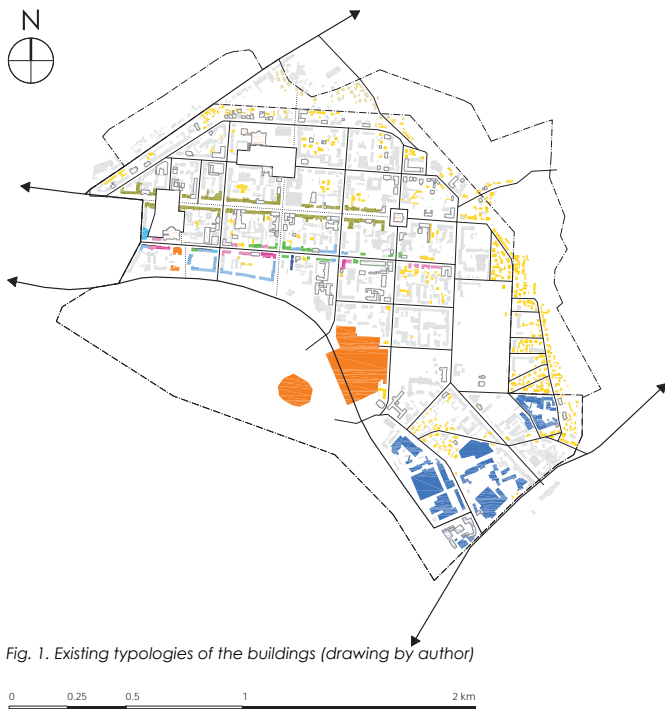
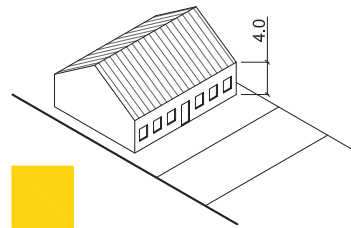


Fig. 1. Existing typologies of the buildings (drawing by author)

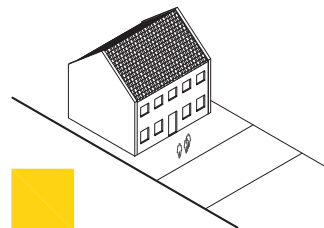
		single family house	apartment block pitch roof	apartment block flat roof	industrial building
all the floors 3m height	closed	1.1	2.1	3.1	-
	open	-	-	-	-
ground floor 4m height, other 3m	closed	1.2	-	-	-
	open	-	-	3.2	-
all floors 4m height	closed	-	2.3.o	-	-
	open	-	2.3.c	-	-
high seasonal plinth	closed	-	2.4	-	4.4
	open	-	-	-	-

SINGLE FAMILY HOUSE

1.1

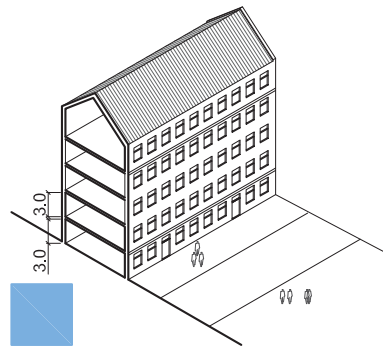


1.2

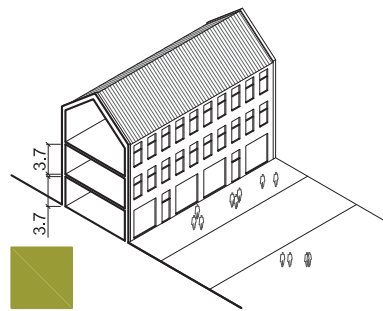


APARTMENT BLOCK. PITCH ROOF

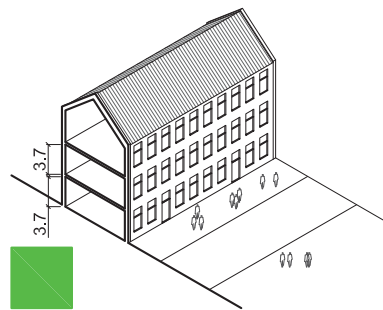
2.1



2.3.o

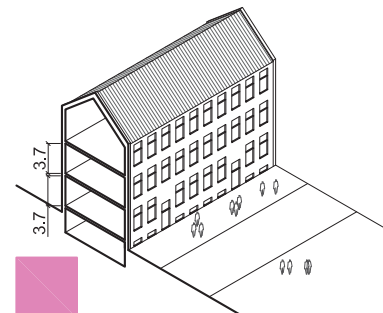


2.3.c

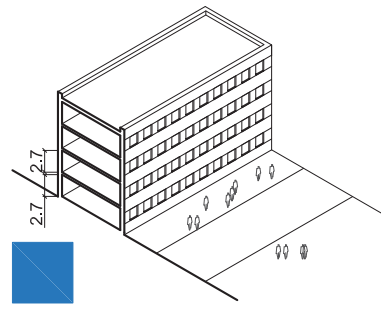


APARTMENT BLOCK. FLAT ROOF

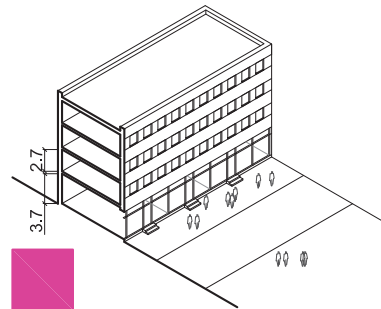
2.4



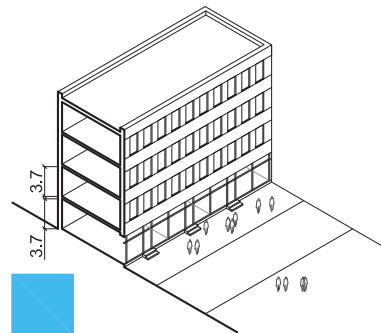
3.1.c



3.1.o

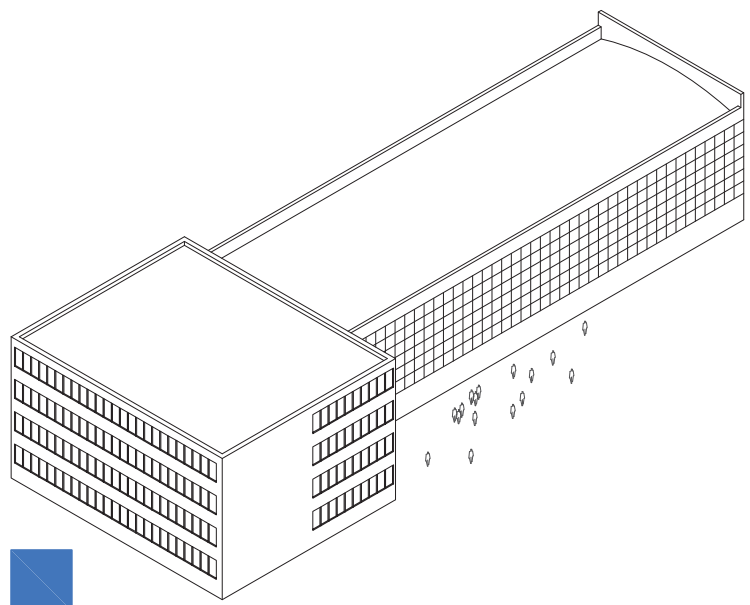


3.2



INDUSTRIAL BUILDING

4.4



5.9 CONCLUSIONS

LITHUANIA. REGION

One of the main trend that can be notices is demographic shrinkage in Lithuania, that is mostly caused by emigration to the countries in Western Europe. All five biggest cities (Vilnius, Kaunas, Klaipėda, Šiauliai, Panevėžys) faces shrinkage.

This means that it is hardly possible to attract people from the other cities in the country and in the end achieve growth of the city. However compact city model with successful centre will help to strengthen economy of the city and make its more attractive and still will offer a rich urban life for its residents.

KAUNAS

Kaunas is one of the most important industrial cities in the country. from XIVth century Kaunas was famous in textile industries, wood and its products production, then over the time the industries slightly changed, however food industries, textile, wood is still the main industrial sectors. Recently it was supplemented by knowledge based economy, production of electrics. Mostly this was influenced by the number of universities in the city, there are one of the biggest technical universities. In general 1/6 of the population is students.

Kaunas experienced one of the fastest demographic decline in the country after 1990's. This is caused by both emigration to other countries in European Union and emigration to other regions in Lithuania. However at the moment level of emigration is slowly declining.

The structure of the city is rather chaotic and influenced by a number of development patterns characteristic to post-socialist cities. Movement patterns and the way the city functions has changed. A process of suburbanisation started. As a result the inner parts of the cities are shrinking while the periphery is slowly growing and cities expanding.

Secondly, this is directly linked with the growing number of car ownership, that from 2000 till 2010 tripled, accordingly the use of public transport decreased. These movement patterns changed the way city has been developed in the last 25 years. The development is led by infrastructure, and oriented towards regional and suburban users, building big shopping and leisure centre along the main infrastructure.

As a result the structure of the city is expanding, consequently a need for new services, infrastructure. On the other hand the population of the city is shrinking, meaning less taxes collected, and smaller budget possible for the maintenance of the city.

CITY CENTRE

The existing historical structure of Kaunas is still rather homogeneous. It is former capital city (1919-1940) with a number institutions required for a changed status of the city. The area represents unique authentic architecture of Lithuanian interwar modernism. It retained

CITY CENTRE OF KAUNAS

The existing historical structure of Kaunas is still rather homogeneous. It is former capital city (1919-1940) with a number institutions required for a changed status of the city. The area represents unique authentic architecture of Lithuanian interwar modernism. It retained its historic layout, morphological homogeneity by a historical period with traditional small-scale, mixed-use characteristics, that has not been strongly affected by market pressures on property values or fashion (Rodwell, 2010). As a result the area has rather authentic character and high historical value.

In the last 25 years the development of city centre of Kaunas is influenced by the patterns of development that were already discovered in a scale of the city.

Development in the centre of Kaunas has been very slow. From 1990 the area has experienced a decline of a number of users and economic stagnation. The city centre functions in a different way. The movement patterns as well as role of traditional economic activities in the city centre has changed, it has to function more for the regional users, that are mostly attracted by easily accessible amenities on the main infrastructure. So in the end city centre lost its original purpose.

On top of that due to shortage of funding Municipality left city centre just with a basic maintenance. Lack of attention resulted in a worsening quality of public space, urban structure, as well as less attractive environment for visitors to come, accordingly for developers and entrepreneurs to open their businesses.

All these problems such as changed development pattern in the city, heritage preservation, weak financial situation causes a chain reaction. As a result small scale local economy of the city centre is weakening, the centre is losing its original function as a market place for exchanging products and ideas. Less and less people comes, eventually it's not beneficial for entrepreneurs to have their business there.

However the area is rather mix. There is a number of States importance Museums and Theaters, the main shopping street, city's bus and train station. Most of Kaunas universities are located in the there therefore large number of students are arriving everyday. To sum up, the area has high potential, attracts high number of users daily, however different centralities do not work in a coherent system. Users of the newly built (States Sports Arena) and proposed to be built institutions (Knowledge Museum) do not contribute to the economy of the city centre.





6.1 CONCEPT

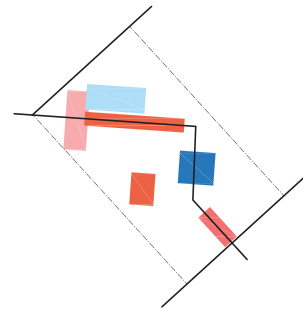


Fig. 1. Scheme of existing centralities (drawing by author)

Design proposal is based on recognition and usage of existing potential and qualities that are in the area already. To achieve more robust economy a big attention is being paid to a number of different economic sectors such as production, service, tourism. In this way creating a more flexible and clear framework for new development to take place and for growth of economic activities. First, organizing special programs and events to bring attention and to raise awareness for the area. Then by giving financial support and providing business related information attract interest of new start-ups, entrepreneurs.

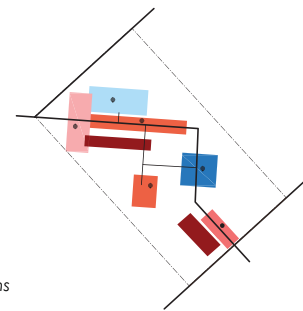


Fig. 2. Scheme of proposed centralities and key locations (drawing by author)

Programs and events are organized in the main functional centralities (Fig.2) firstly that are located within walkable distance from each other, secondly that are used and crossed by a number of people daily. These are universities square, museums and theaters

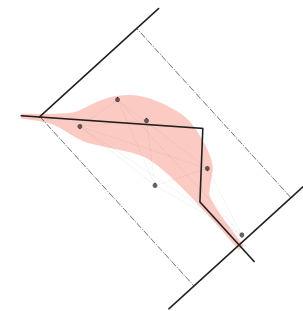


Fig. 3. Scheme of the main public backbone (drawing by author)

square, the main shopping street, station area, and the city park. City programs and financial support will be combined with the spatial improvements. Redevelopment of urban structure to enhance new program and make it more flexible, promoting walkability at the same time growth of small scale economy.

In the end it is expected to define a strong backbone of intense economic activities (Fig.3), with the primary and secondary uses, supporting each other.



Fig. 1. Masterplan of the area 1:7 500 @A3 (drawing by author)

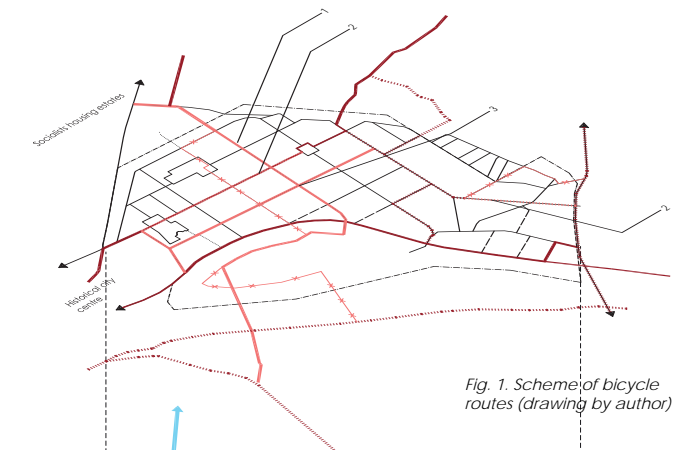


Fig. 1. Scheme of bicycle routes (drawing by author)

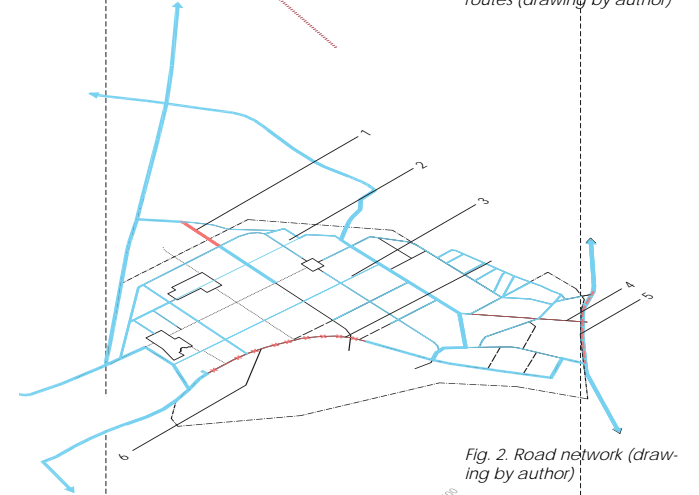


Fig. 2. Road network (drawing by author)

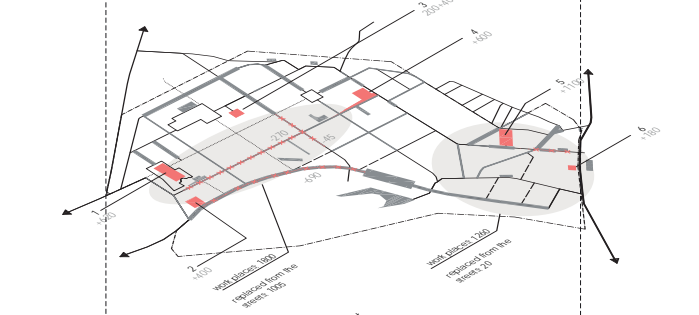


Fig. 3. Car parking (drawing by author)

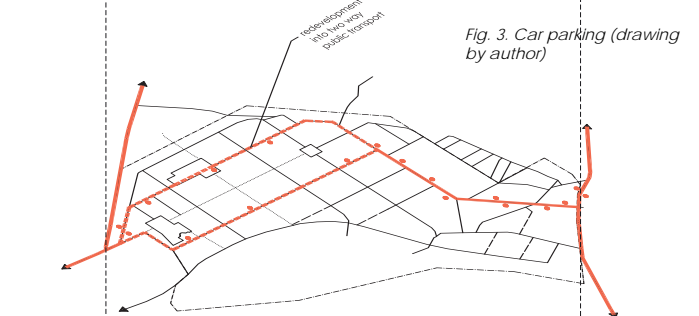


Fig. 4. Public transport (drawing by author)

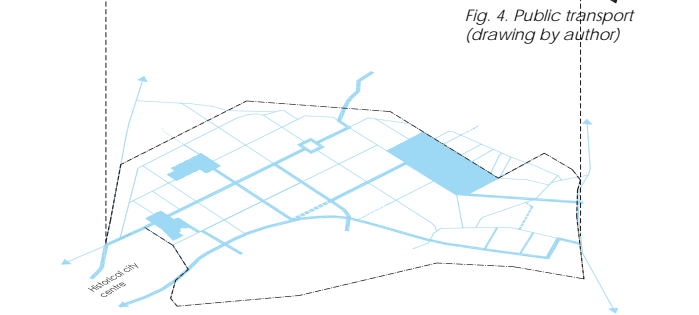


Fig. 5. Pedestrian routes (drawing by author)

6.2 PHASING

General aim is to create vibrant city centre with stronger local economy.

PHASE A. ATTRACTING PUBLIC ATTENTION/ ESTABLISHMENT OF IDENTITIES

Firstly, it is aimed to start the process of activation and attract public attention to the area, raise discussions about its future development. This will be done partly by activation of the key locations (students, museums square, park, etc.). Weekly events, street art, installation of street furniture and other programs will be organised to attract visitors, students, employees and residents of the area. Rather small investments requiring low budget will be used for these 5 key projects.

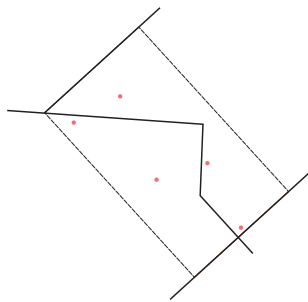


Fig. 1. PHASE A (drawing by author)

PHASE B. ACTIVATION/ BINDING THEM

In the phase two main areas are proposed to developed to start the process of regeneration. First one is the area around the main shopping street and the second is a transport hub, next to the train and bus station - an entrance to the city. The phasing is based on development of these two areas, that will be foundation for revitalisation. The area are chosen due to good connectivity with the city and the region. As well as central location between main functions in the city centre, accordingly are crossed by a rather high number of local residents, employees, visitors from the region.

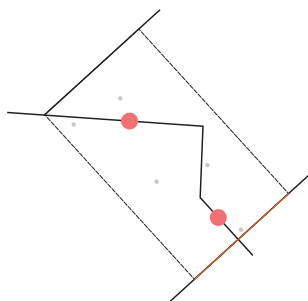


Fig. 2. PHASE B (drawing by author)

PHASE C. GROWTH

The main aim in phase is to make the key areas to grow. Attracting new social groups make the areas more economically active.

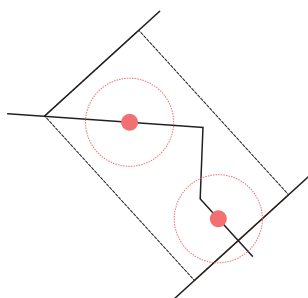


Fig. 3. PHASE C (drawing by author)

PHASE D. BECOMING ONE

In the end, connecting together.

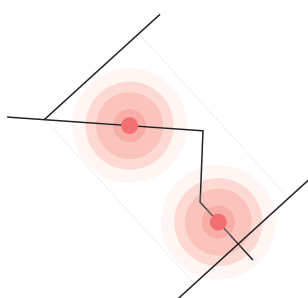


Fig. 4. PHASE D (drawing by author)

6.3 FINANCING

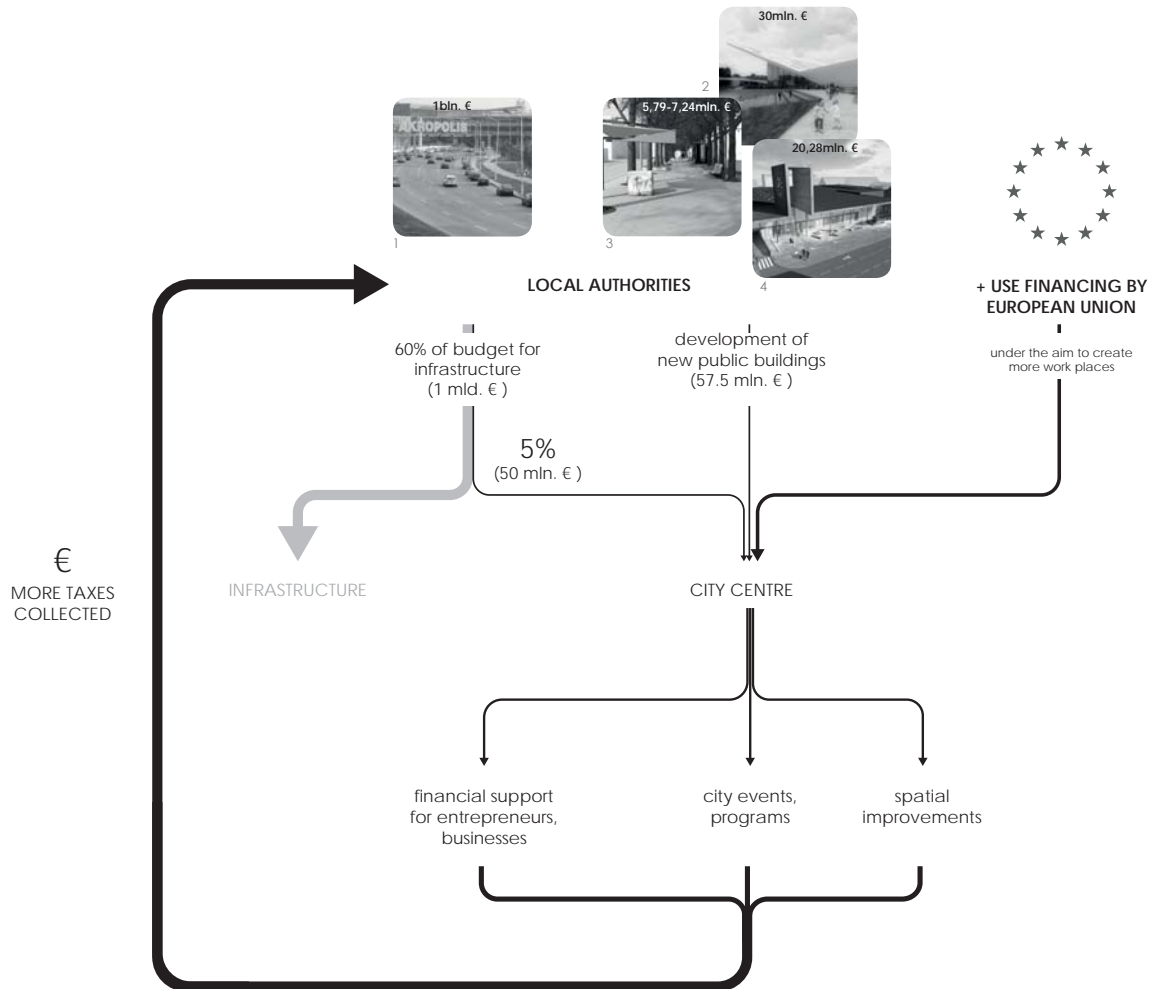


Fig. 1. Scheme of the funding of the project (drawing by author)



Fig. 2. Existing model of implementation of the projects (drawing by author)



Fig. 3. Proposed model of implementation of the projects (drawing by author)

References:

- 1 Shopping and Leisure Centre <http://cultureshock.kristiejoy.net/lithuania-kaunas/>
- 2 Kaunas Congress and Conferences Hall, source: <http://www.statybunaujienos.lt/naujiena/Kauno-kongresu-konferenciju-ir-koncertu>
- 3 Main shopping street by Šarūnas Kiaunė
- 4 New Bus station by Gintaras Balčytis

At the moment most of the budget of municipality is designated firstly, to big new projects, such as building new Congress & Conferences Hall, Regeneration of the bus station. Secondly, due to growth of suburban areas, to development and maintenance of infrastructure. In the project it is proposed to redistribute this funding to a number of smaller projects. Then together with improving economic situation gradually increase the scale of interventions (Fig.2). In other words rather than making a big scale redevelopments, small interventions will be used to test different possibilities slowly moving towards the final vision. Moreover some of the investments might be regained in the first years already, which might be used to partly cover the next step.

The process has to be actively monitored by urban planners and designers every time evaluating result of the interventions before taking a next step. In this case if some of the interventions will not be successful, all the energy could be shifted to the more successful areas. In this way big financial losses might be avoided.

6.4 PHASE A. KEY PROJECTS

The main objective of making key projects is to create more active urban life, bring people to the city and at the same time create optional activities to promote pedestrian friendly environment, and walkability.

6.4.1 STATION & MARKET AREA

The Market area is rather abandoned. Mostly used by lower incomes people, older residents. At the same time it attracts a number of homeless residents. To regenerate the market first of all is proposed to promote **industrial tourism**, giving tax reductions for the breweries that are there now. Improving the path connecting two of them and making it go through the market street. At the same time a brand **bear bar** will be built in the area. Improvements might be partly covered by the industries. Secondly, making **summer festivals** in one of the abandoned buildings.

Thirdly, improving the **link between station**, making an art installation in the pedestrian crossing in the first phase. This is to bring visitors of the city to the market street, rather than leaving the area right after arrival.

New flows of the secondary users will contribute to the regeneration of the market as well. The market itself has to be branded as a market place for eco products. **Food fairs** has to be organized regularly, in the first years making tax reduction for the local farmers.

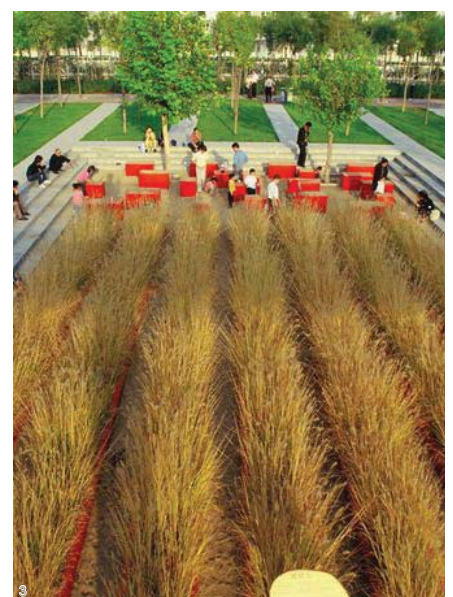
juice bars, cafes, restaurant

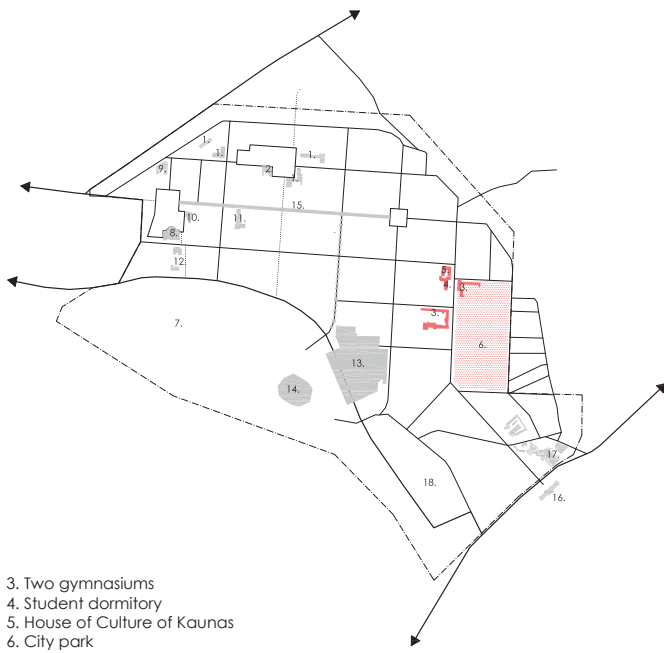
Actors:

- the city government
- local residents
- individual entrepreneurs
- breweries
- market traders
- farmers from the region

References:

- 1 Abandoned underpass by Bill FitzGibbons, available at <http://www.billfitzgibbons.com/myportfolio/>;
- 2 Installation during Paris Design Week by Dorothee Noirbent and Sas Alsou;
- 3 Market street, photo by google.com;
- 4 Tianjin Qiaoyuan by Turenscape Landscape Architecture.





- 3. Two gymnasiums
- 4. Student dormitory
- 5. House of Culture of Kaunas
- 6. City park

Fig. 2. City park area (drawing by author)

0 0.25 0.5 1 2 km

6.4.2 CITY PARK

Start regeneration from organizing **activities** in the park, such as yoga classes, exercising, open air games, barbecue. After the flows of people increases municipality can make a competition for the **temporal coffee, snacks bar**, that might attract even more people, at the same time will be a possibility for local entrepreneurs.

- Actors:
- students
 - pupils
 - residents of the city
 - sport club

References:
 1 Nashville Corporate Events, available at <http://www.briansnyderentertainment.com/blog/2016/2/29/>
 2 Outdoor activities in the Georgia College campus, available at <http://www.gcsu.edu/outdoor-activities/>
 3 Lawn Games to Bring the Amusement Park Home, available at <http://www.bobvila.com/slide-show/10-diy-lawn-games-to-bring-the-amusement-park-home-44603#.V2PKhbh95EY>;
 4 Kiosk Singeldingen by SUB office, available at <http://www.deenergiekestad.nl/singeldingen/>;
 5 Noorderparkbar by Bureau Sla, photo by Jeroen Musch.





6.4.3 THEATRES & MUSEUMS SQUARE

The area is rather abandoned, and barely used. Theaters attracts less and less people, as a result that influences public spaces and economic activities in the surrounding area as well. At the moment the square is used only for performances during city fairs that are organized once per year in the main shopping street.

Purpose.

In the project it is proposed to make event more frequently. It might be open performances from the theaters and music school. It is proposed to **clean up part of the square** to have necessary space for scene and crowds of people.

The area is surrounded by offices and institutions, therefore in the 'city garden' part **street furniture** will be made. It is important to have diversity and possibility for people to use the space during lunch time as well.

Actors:

- museums
- theaters
- employees of offices
- visitors of the city
- resident of the city
- entrepreneurs
- artist community

References:

- 1 Prismatic by RAW, photo by Cindy Boyce
- 2 The Playing Field by Assemble, photo by Jim Stephenson
- 3 Risho University Kumagaya Campas by studio on site, available at <http://www.s-on-site.com/works/detail>





Fig. 4. Student square (drawing by author)



- 1. ISM University of Management and Economics
- 2. MRU faculty of police
- 3. Kaunas University of Technology (KTU) Central Office
- 4. Vytautas Magnus University (VDU) Central Building
- 5. VDU student association
- 6. VDU Faculties of Humanities and Social Sciences
- 7. KTU International Studies Centre
- 8. KTU Institute of Humanitarian Science
- 9. KTU
- 10. College of Kaunas. Faculty of Economy and Law
- 11. VDU Institute of Political Science and Diplomacy

6.4.4 STUDENT SQUARE

The square is surrounded by a number of faculties of different universities, student association, as well as one of the highest concentration of offices in the 'New Town'. A public space is crossed by a number of people daily, however it itself do not work as a place to stay and do not have any particular program.

In this key project it is proposed to make free **Wi-Fi connection**, flexible **furniture** for students to stay: have lunch, study outdoor. Parallel to that **events** has to be organized (such as book fairs, street food festivals). During the events municipality has to make tax reductions for street vendors in the first years. If the space becomes more successful and visited make a non-profit **permanent student bar**, **open air cinema**.

- Actors:
- the city government
 - authorities of universities
 - employees of the offices
 - students
 - student association

References:
1 Meet Me at the Plaza: New Seats, New Scene at Harvard University, photo by PPS



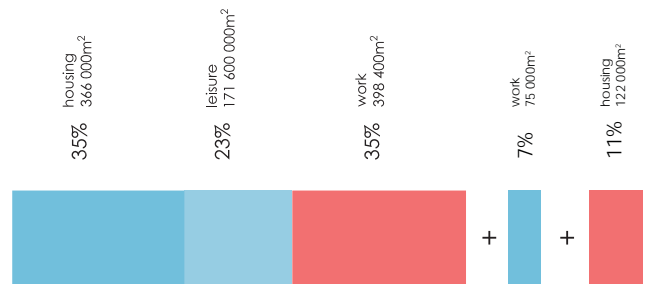
6.5 PROGRAM

Implementing new program it is aimed to keep the mix and increase the program equally. In other words a number of work places created will be equal a number of new residential places. In general it is proposed to redevelop or add 200 000m² of new program: production/ commercial and residential:

- 75 000m² production;
- 122 000m² residential.

In average 25m² of workspace is required per person. This means that there is capacity of about 3 000 new work places to be created, and 2040 (60m²/ apartment) new economic class apartments to be built.

There is two main areas to implement a new program, first secondary shopping street and second an area in the former industry.



75 000m² of new production space
122 000m² of new residential



new program proposed to be implemented



abandoned and vacant buildings (130 000m²), 600 apartments

In general there is 130 000m² abandoned and vacant property, of that 70 000m² is in industrial area, 60 000m² in the rest of the area.

In the industrial area it is important to have mix area 24/7 (industry, residential, services, etc.). Firstly for the safety of the area. Secondly to have more diverse and attractive housing market for creative class and create new housing for new employees. So out of 70 000m²/ 50% has to be redeveloped into residential or work-live units. This is 35 000m².



ground floor and 1st floor of the buildings along the street (60 000m²)

In the new production street first and ground floor of the buildings will be gradually redeveloped, when possibility occurs and not forcing current residents, entrepreneurs to move out.

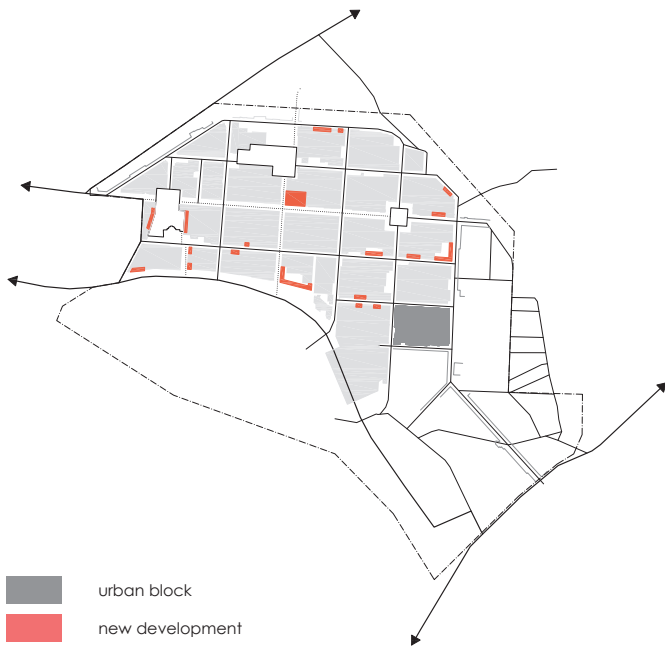


- 162 600m² institutions (50 000m²/ground floor)
- redevelop 1/3 into production
- priority zone for commercial use on the ground floor

institutions (54 200m²)

Percentage of institutions is rather high in the area. It is quite insufficient for this size of the city. This might be an opportunity to implement new program by using existing housing market that is owned by the state. First, it is proposed to concentrate main institutions in few of the buildings, then move out some of the institutions that do not contribute to the vitality of the city centre (such as City jail, Court Palace). In general it is aimed to redevelop 1/3 of all institutions into production and residential.

Most of the buildings of institutions are rather high quality. This identity and symbolic value might be used to attract start-ups and new social class.



- urban block
- new development

new development (~3floor buildings) (21 500m²)

In the new development ground floors has to be built for commercial or production use, while upper floor might be residential use.



densification of courtyards (84 000m²) 1400 apartments

An existing urban blocks and courtyards are rather big (260x170m). The courtyards are insufficiently used and are rather abandoned: occupied by old warehouses and garages or car parking. To keep equal mix between residential and production, courtyards will be gradually cleaned up for development for residential units. New housing has to include at least 50% of economic class apartments.



6.6 NETWORKS

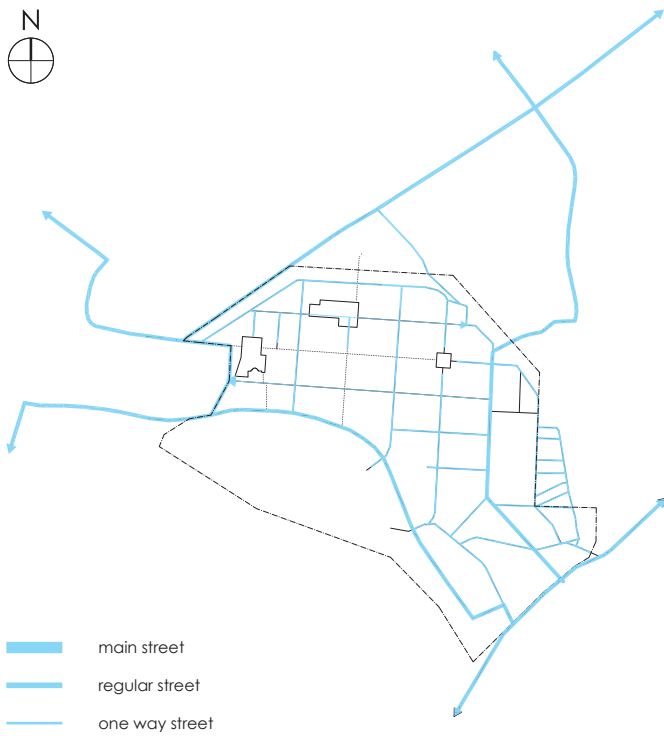


Fig. 1. Existing street network (drawing by author)

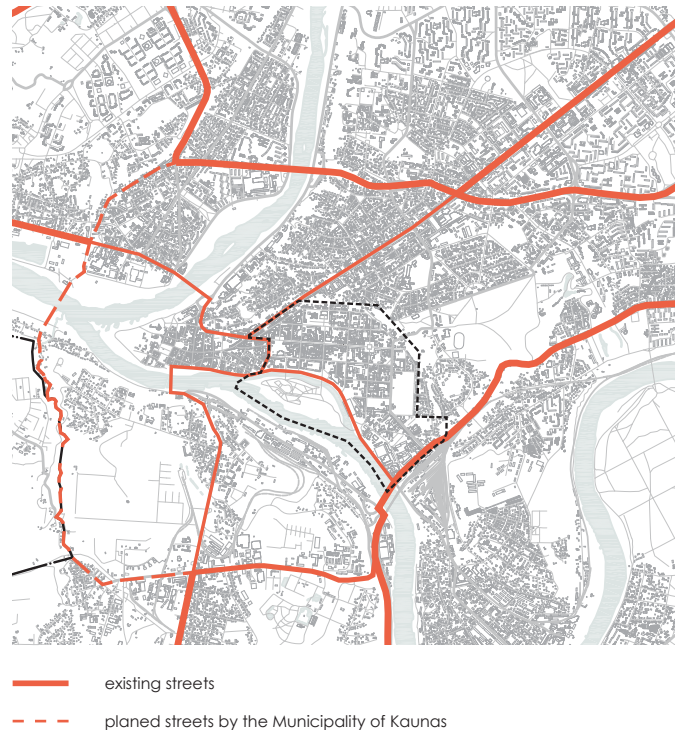


Fig. 2. Planned construction of new ring road (drawing by author based on data from Kaunas General Plan (for full map see the attachments in the end))

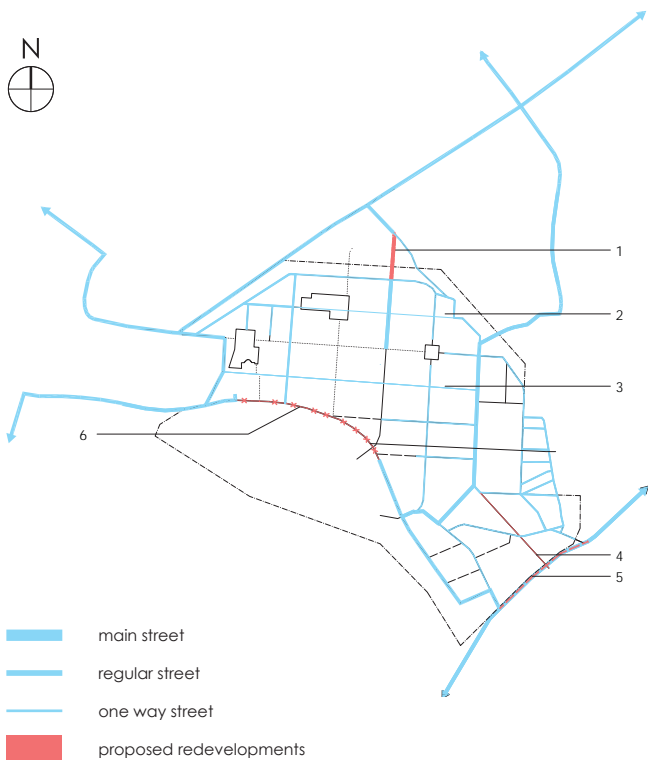


Fig. 3. Proposed street network (drawing by author)

6.6.1 STREET NETWORK

The area is rather badly connected with the rest of the city. Wide road built during socialist times subdivided urban spaces of the centre.

The main main principle of street networks is - motor traffic infrastructure on the edges of the area:

1. new a connection in the Northern part of the area improving accessibility with the central part of the development
4. redevelopment of the street in front of the market into shared space, downgrading the street and reroute the traffic
5. underground tunnel in front of the station
6. after the new ring road will be built remove the street along the riverfront to connect public buildings in the island (Sports Arena, new Knowledge Museum) with the city centre



Fig. 4. Existing car parking (drawing by author)

6.6.2 CAR PARKING

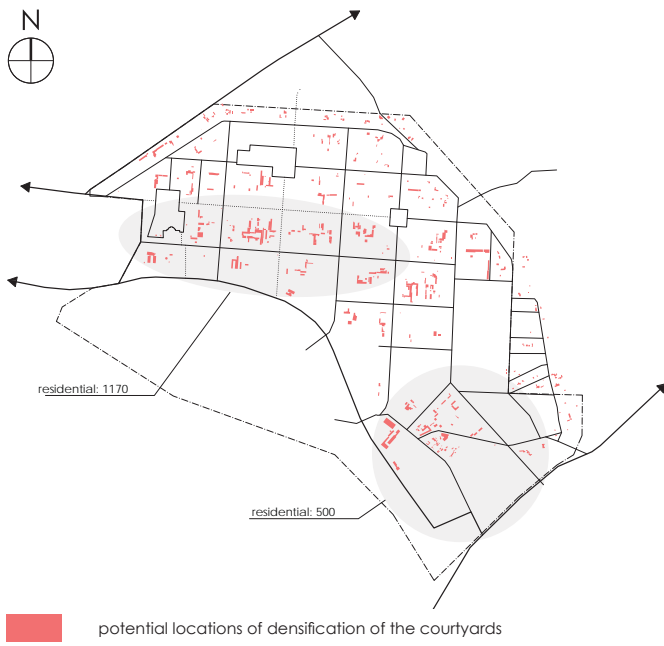
In the project it is aimed to promote walkability. Therefore number of parking spaces in the central part of the area will be reduced concentrating parking spaces in the parking facilities on the edges of the area. In the case new development will be very successful and reaches a maximum of the planned program, considering overlap of 10%, between residential and public use, there is a demand for:

- 1760 spaces in the station area (public - 1260; residential - 500)
- 3000 spaces in the area around the main shopping street (public - 1800; residential - 1170)

Parking facilities for the public use will be concentrated in the key parking facilities on the edges of the area within the distance of 400m to the key attractions, optimizing existing open air parking facilities (3;4;6), building new multistorey parking garages in empty lots (2), in the place of moved bus station (5) and building underground parking garage under public spaces (1). In general there will be 1800 parking spaces in the shopping street area and 1260 in the market area.



Fig. 5. Proposed public car parking (drawing by author)



Parking spaces for residential use will be implemented in the courtyards, maintaining possibility for resident to keep their cars next to the dwelling. Space for parking facilities in the courtyards will be provided by optimizing existing structure of the courtyards, removing abandoned buildings, parking garages built during socialist times, in the long term redeveloping the inner structure of the courtyards and locating parking spaces in the plinth, underground parking.

Fig. 6. Proposed locations for residential car parking (drawing by author)





Pic. 1. Courtyards in the area (photos by author)



Fig. 6. Planned bicycles network by Municipality of Kaunas (drawing my author, based on data from Kaunas General Plan)

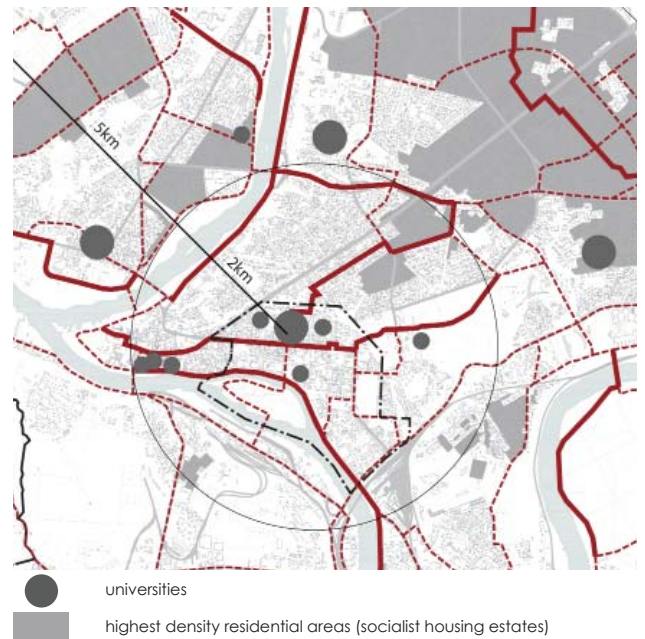


Fig. 7. Bicycle network (drawing by author, based on data from Kaunas General Plan (for full map see the attachments in the end))



Pic. 5. Nemunas river touristic bicycle route in the region (available at <http://www.bicycle.lt/>)



Fig. 8. Proposed bicycle network (drawing by author)

6.6.3 BICYCLE NETWORK

Cycle network that is planned by the municipality of Kaunas will be reorganized, making the lanes through the strategic locations (station, market, secondary street). Priority of improvement and development of the cycle network will be given on strategic links, passing through the 'New Town', particularly on the routes (Fig. 8):

1. crossing the area North-East direction from the main city infrastructure to the waterfront and regional route along the river. In this way providing fast access to the central location of the development;

2. in the main shopping street into shared bicycle and pedestrian. This is done to have possibility to reorganize the shopping street for different events, fairs, trading of street vendors, other small scale economic activities that takes place on the street. The street in front of the city market will be redeveloped.

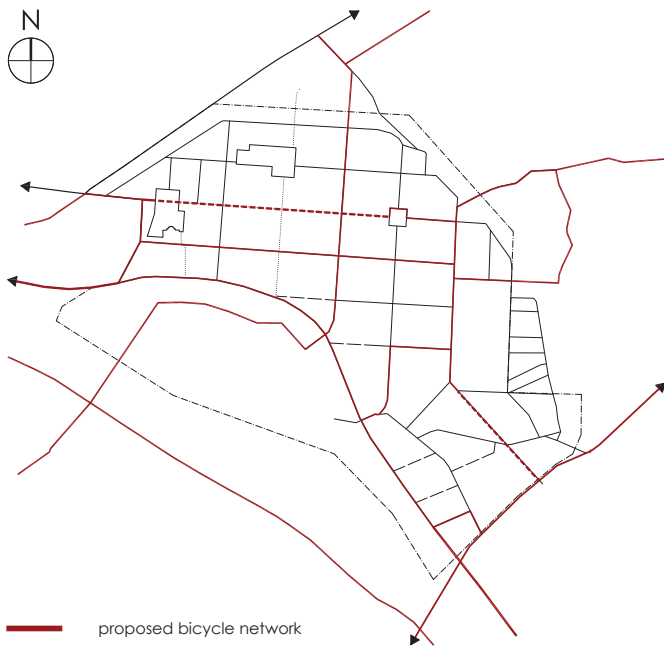


Fig. 9. Existing bicycle parking (drawing by author)



oped into shared space as well;

3. the separate bicycle route will be moved to the new production street, that is parallel to the main shopping street, to maintain fast bicycle connection through the city centre;

4. the proposed routes will complement touristic bicycle network along the river valleys as part of the strategy Nemunas river bicycle route connecting the city centre with the villages in the region.

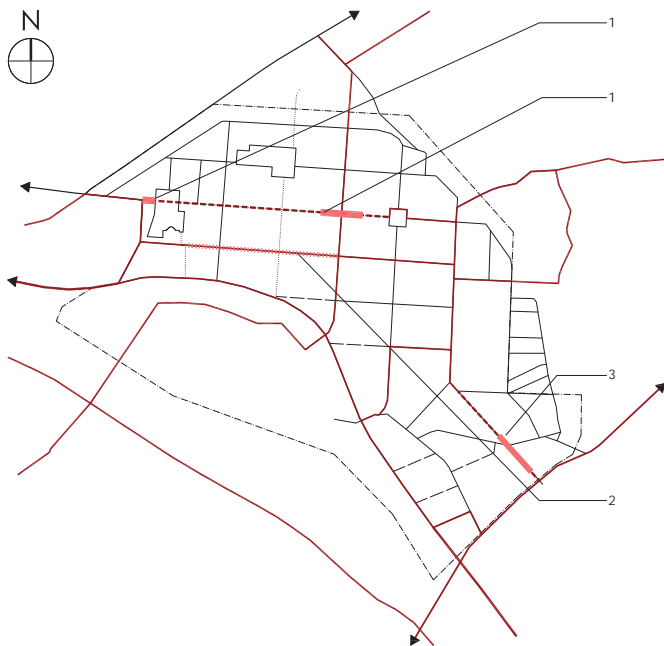


Fig. 10. Proposed bicycle parking (drawing by author)



6.6.4 BICYCLE PARKING

At the moment there are no bicycle parking. In a long term together with increased use of bicycles in the area it is proposed to install bicycle facilities along strategic bicycle routes (Fig. 10):

1. making bicycle parking at the entrance to the main shopping street (next to the museum square in the west, and on the crossing between the main shopping street and the street connecting with the main city infrastructure);

2. more equally distributed bicycle parking racks in the new production street, to have possibility to park a bike in front of the office or dwelling;

3. parking facilities in front of the market and station area.

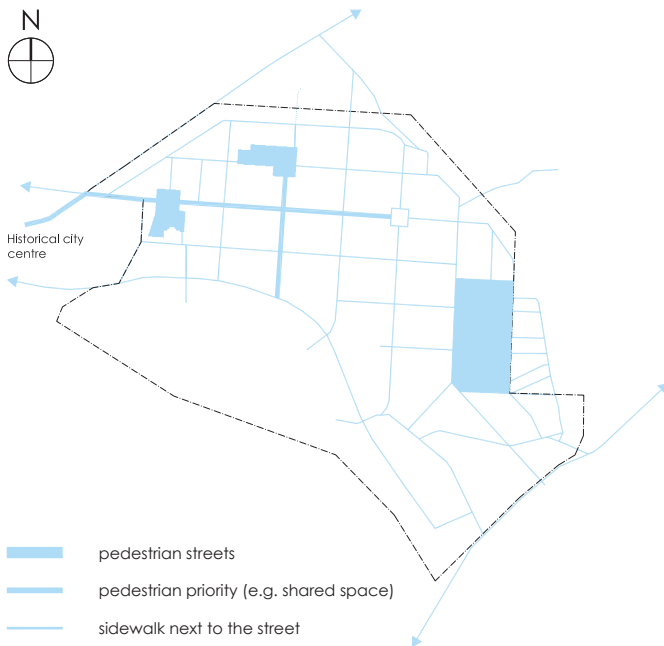


Fig. 11. Existing pedestrian network (drawing by the author)



6.6.5 PEDESTRIAN NETWORK

The biggest attention is proposed to be paid for the pedestrian network, which will be expanded:

1. improving the routes passing by the key locations (universities square, museum square, city park, station and market area), and forming a united pedestrian network
2. creating missing paths in the grid, to make clear system and allow people easily navigate within the neighborhood, and explore it.



Fig. 12. Proposed pedestrian network (drawing by the author)



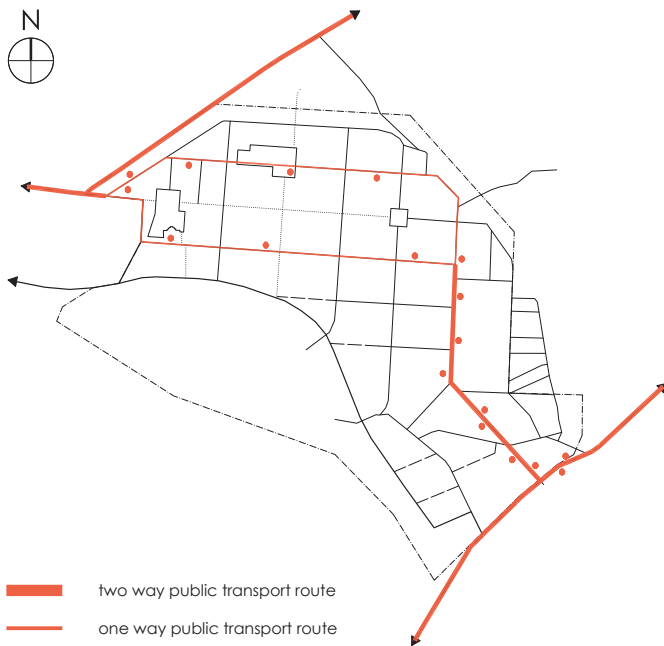


Fig. 13. Existing routes of public transport (drawing by the author)

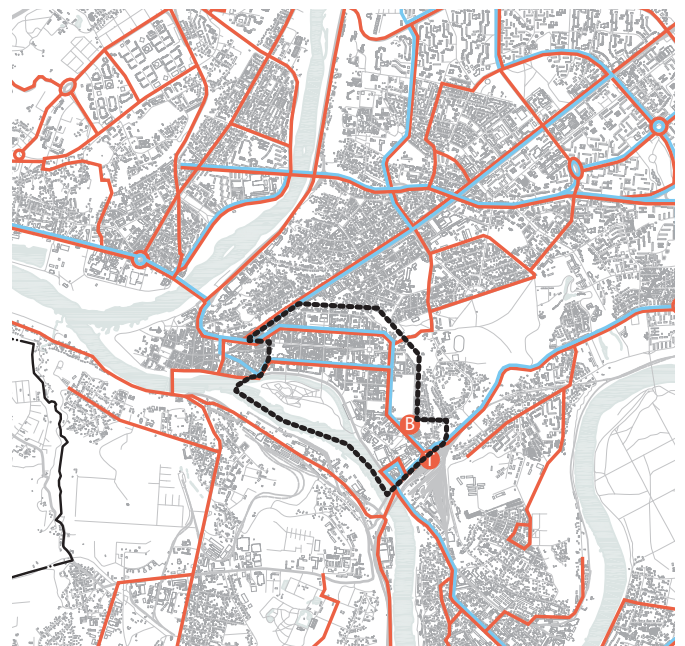


Fig. 14. Scheme of public transport (drawing the author, based on data from Kaunas General Plan, for full map see the attachments in the end) (B- bus station, T - train station))



Fig. 15. Proposed routes of public transport (drawing by the author)



6.7 DESIGN ELEMENTS



The main aim is to emphasize spatial qualities and enhance identity, that is determined by the program. Therefore distinctive design spaces of the five key projects and the networks linking them are determined. The biggest attention is paid to the quality of the locations of the key projects, which are the theatre & museum, student square, the main shopping street, city park and the station & market street. Design of each of the locations will have their own identity, that is tried to strengthen through design elements at the same time here the lighting, street furniture, pavement, will be improved in a first place.

All the rest of the area will have more unified design, highlighting existing spatial qualities of the area, especially unique modernist architecture of the inter-war period. The most characteristics features are round corners, metal details, massive concrete elements. By using the same materials and details the design will create united image and character of the streets with the costumed "islands" - locations of the key projects.

6.7.1 STREET FURNITURE

There are limited number of street furniture, at the same time, the ones that are there already are rather low quality and limited typologies. The biggest attention has to be paid to the quality of street furniture in the key strategic locations, representing the area:

- main shopping street (1)

Existing street furniture



furniture in the main shopping street (1)
furniture in the theaters & museum square (2)
student square (4)

restoration of an existing street furniture in the main shopping street (1)



- theaters & museum square (2)
 - the station and market area (4)
- That will have the highest quality of street furniture. Other locations for designing a street furniture are:
- student square (3)
 - city park (5)

Fig. 2. Proposed quality of the street furniture (drawing by the author)

Proposed new street furniture



multi-functional theaters & museum square (2)

- permanent street furniture on the edges of the space and more portable furniture, during the events: lectures, discussions, conferences;
- high quality contemporary design, building an identity of the museum square, as an touristic attraction with states importance public amenities.

the market area (3)

- more technical and industrial

student square (4)

- flexible furniture, to be able reorganize the space for different activities (lectures, meetings)
- tables with benches

city park (5)

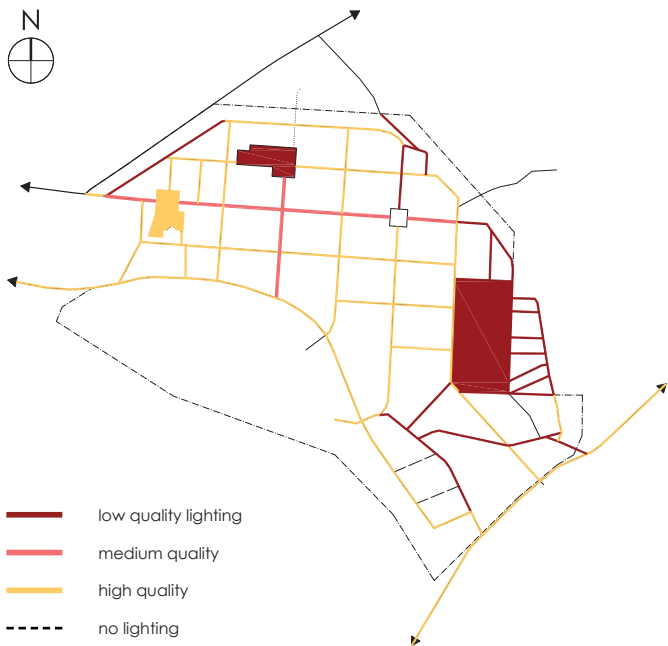


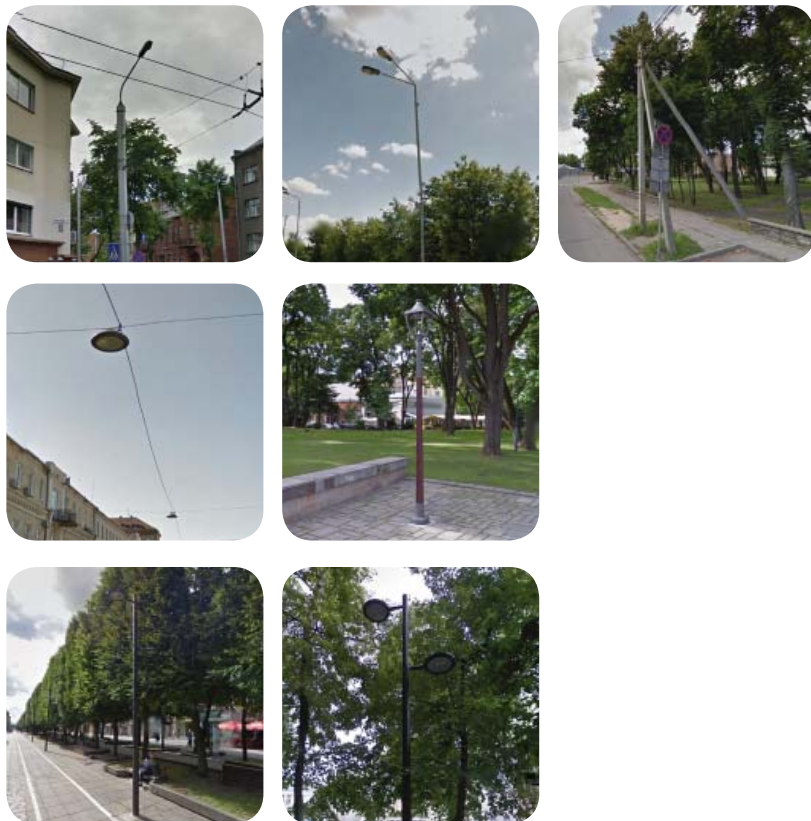
Fig. 3. Existing road network (drawing by the author)

6.7.2 LIGHTING

The priority is the quality of lighting in the pedestrian streets for the safety.

In general it is proposed to keep medium quality in the whole area and higher quality lighting in the main urban spaces, such as museum square, main shopping street and the station area, that makes first impression about the city after arrival.

Existing street lighting



low quality lighting

existing medium quality lighting

high quality lighting
The only area that has good enough lighting is the main shopping street (2). The type of lighting will be kept there.



Fig. 4. Proposed road network (drawing by the author)



Proposed street lighting



theaters & museum square (1)

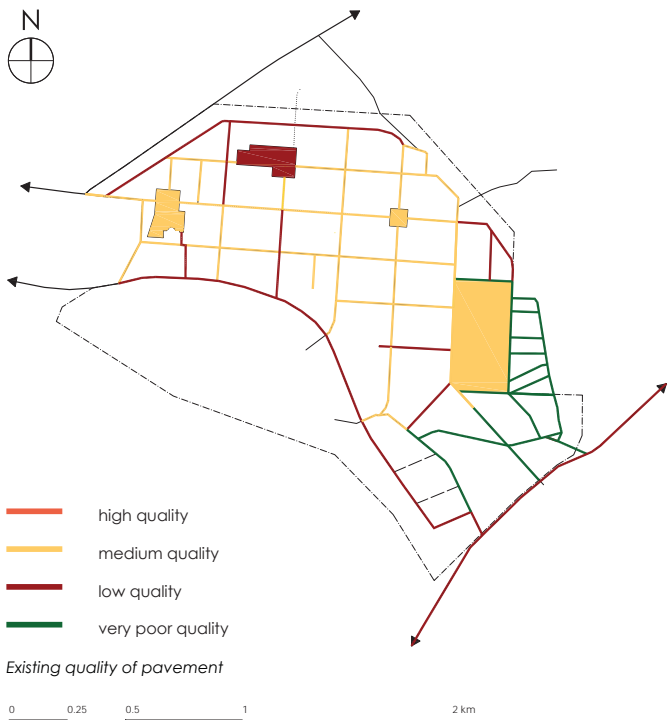


the market area. More technical and industrial (3)



regular type of lighting in the shopping street area

regular type of lighting in the industrial area

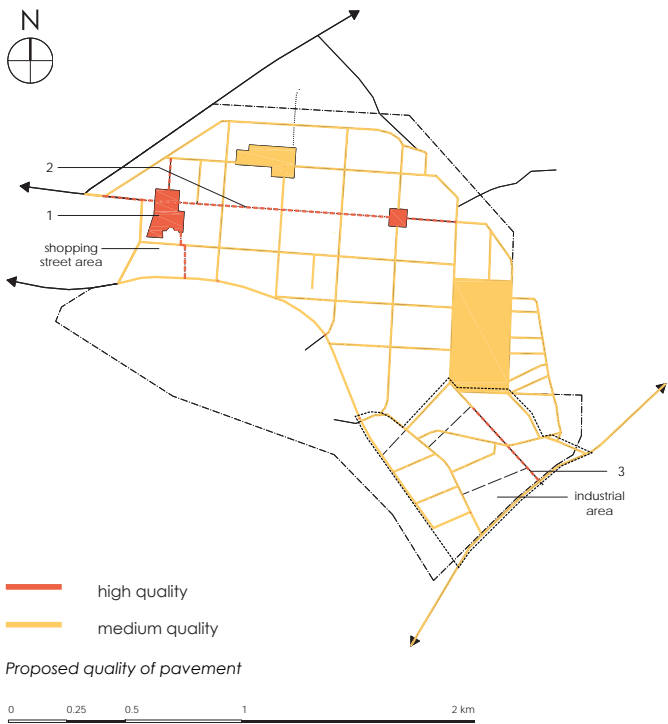


6.7.3 PAVEMENT

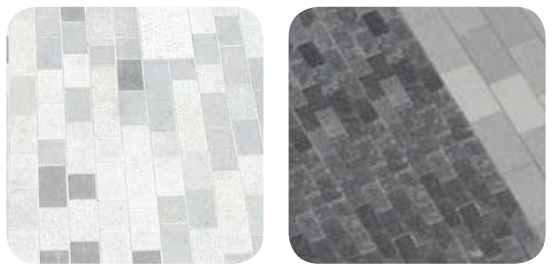
The highest quality pavement is in the areas that works in a regional scale, and attracts most of the visitors and tourists. This is museums and theaters square, the main shopping street and the station area with the market.

Existing pavement





Proposed pavement



theaters & museum square (2)



existing pavement in the main shopping street (2)



proposed high quality pavement in the main shopping street (2)



medium quality pavement connecting the key locations

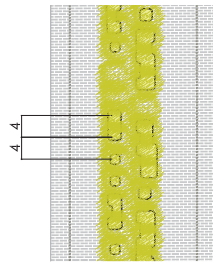
6.7.4 PLANTING



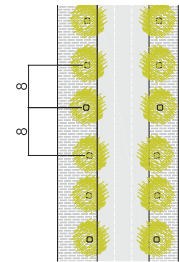
Existing planting



alley of the lime trees in the main shopping street (2)



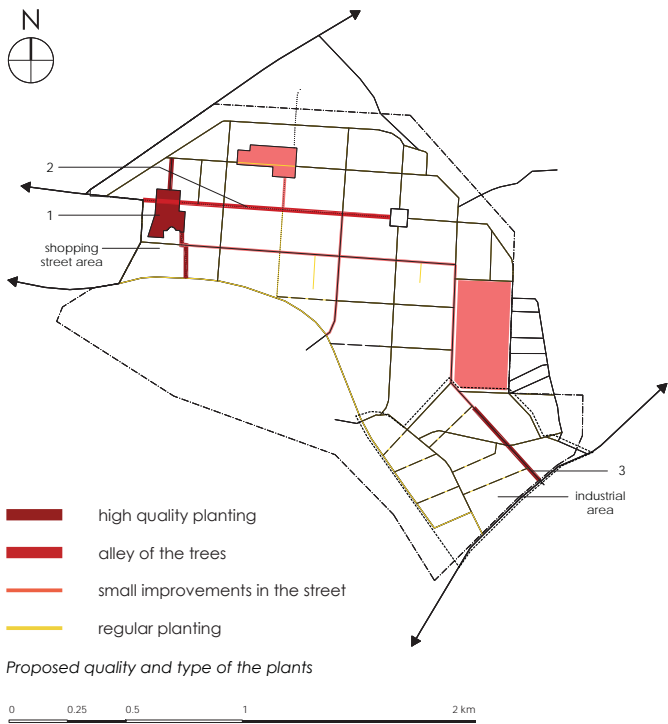
regular planting of the streets (4)



high quality tree grates



low quality tree grates



Proposed planting

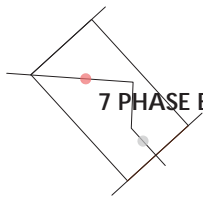


Planting in the museum square (1)

main shopping street (2)



industrial area (3)



7 PHASE B. AREA OF THE SHOPPING STREET

One of the areas to start a redevelopment is the area around the main shopping street. It is surrounded by the universities and offices street in the North and the secondary shopping street in the South. When the shopping and leisure centre was built, a number of successful shops from the main shopping street moved to this centre. A vacant property was partly occupied by the shops from the secondary street. Currently the shops in the main shopping street struggle to attract customers, while in the secondary street there is one of the highest percentage of vacant property. At the same time level of economic activities in the secondary street is rather weak. New entrepreneurs frequently moves in and out.

The aim is to create more successful shopping area. In order to do that it is aimed to attract more stable supportive users. The secondary shopping street will be redeveloped into more production oriented. In this system the main shopping street will work as a 'third place', between work/studies and homes bringing students, start-ups, entrepreneurs together.

Finally, the secondary shopping street is next to the museum cluster, that works in a regional or even the national scale, there are State Drama Theatre, State Music Theatre, biggest Sports Arena in the country, finally, a new Knowledge Museum is planned to be built till 2019, that will be one of the biggest this type museums in the Baltic Countries. Flows of tourist might add up to economic vitality of the secondary street as well.





Universities street

Main Shopping Street

Museum Square

Knowledge Museum

Sports Arena

Shopping and Leisure Centre

Bus and Train Station

7.1 PHASING OF THE NEW PRODUCTION STREET

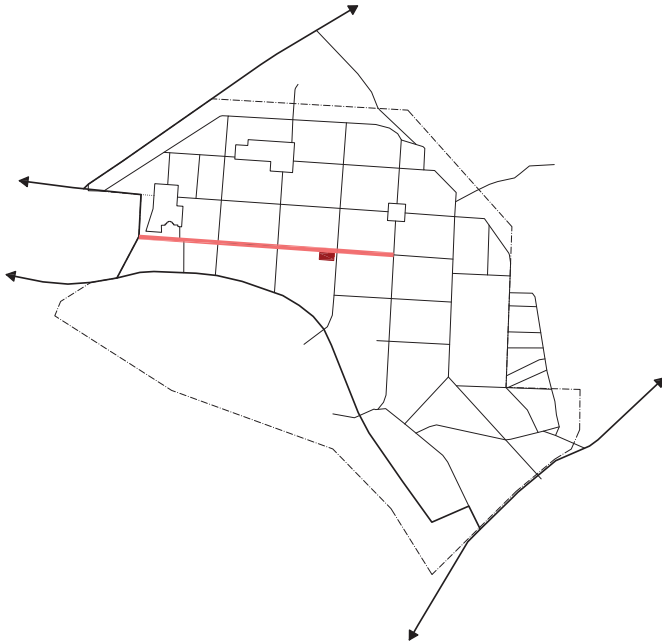


Fig.1. Phase 1 (drawing by author)

PHASE 1. DEVELOPMENT OF THE NEW PRODUCTION STREET

To boost the process of regeneration of the area the biggest attention has to be paid to the **redevelopment of the secondary shopping street**, which will be transformed into more production oriented. Development here will be stimulated by establishing an **Entrepreneurs Centre** and providing **financial support** for the beginning of the business.

It is aimed to attract new creative economically active class to the city. In this way the users will be more stable, active throughout the whole day, the area will be less dependent on the day-trippers, visitors from the region. At the same time the aim is to create conditions to establish private businesses might help to improve rates of employment and keep young graduates from leaving the city.

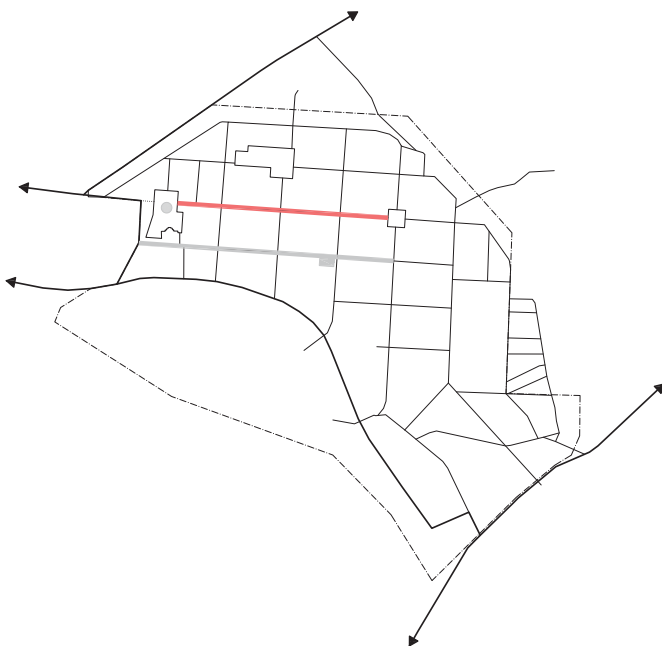


Fig.2. Phase 2 (drawing by author)

PHASE 2. IMPROVEMENTS IN THE MAIN SHOPPING STREET

Growth of the new production street and new social class will contribute to the regeneration of the main shopping street accordingly, making a more attractive area for entrepreneurs to establish their businesses, and customers to come. At this stage to attract even more people improvements in the quality of the main shopping street has to be made emphasizing the qualities of pedestrian friendly environment and the identity of the main shopping street. In this case **street furniture** has to be installed and **optional activities** has to be organised.

So this street will retain and reinforce its identity as a key location of bars and cafes, centre of other social activities bringing start-ups, students and entrepreneurs together.

To strengthen relation between the main shopping street and new production street a weekly **crafts market** will be organized in part of the street, both raising attention for the new Entrepreneurs Centre at the same time contributing to the vitality of the main shopping street.

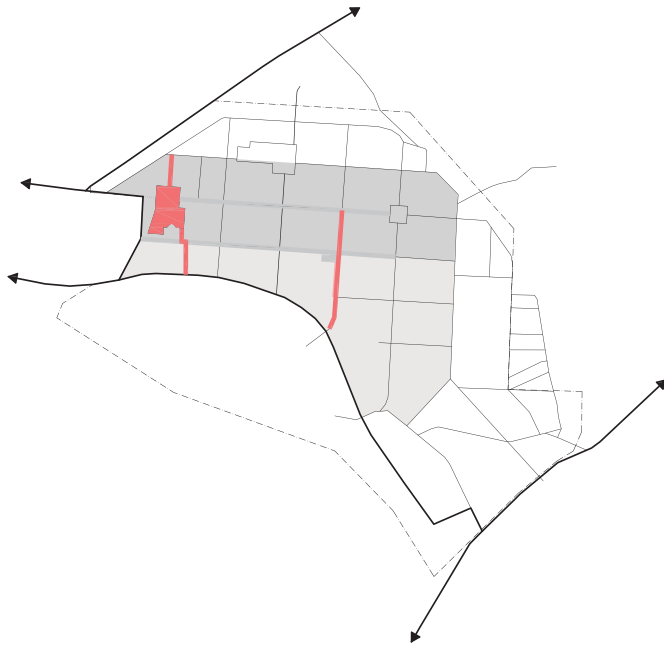


Fig.3. Phase 3 (drawing by author)

PHASE 3. IMPROVEMENTS OF THE CONNECTIONS BETWEEN MAIN SHOPPING STREET AND THE DEVELOPMENT IN THE ISLAND

After the core area of the new production and the main shopping streets becomes more successful it might be possible to attract visitors from the main shopping and leisure centre, other amenities in the island back to the streets of the city centre. **The links between new development in the island** (Knowledge Museum, Sports Arena), **shopping and leisure centre and the main shopping street will be improved.** Again new flows of users will contribute to the growth of both main shopping street and the newly developed production street that is in between and will be inevitably crossed bringing more visitors and passers by.

It is aimed to stimulate walkability and movement of the people, between main parking facilities, main attractions. Firstly it will be done by **removing parking spaces from the street and concentrating them in the key parking facilities on the edges.** Then making the path more attractive, look shorter, safer.



Fig.4. Phase 4 (drawing by author)

PHASE 4. IMPROVEMENTS OF THE CONNECTIVITY WITH THE CITY

When flows of the people working, living, visiting the area increases there will be a demand for better connections with the city and the region. In the phase main infrastructure will be redeveloped, making **new connections** with the main city scale infrastructure, developing new key **parking facilities** on the edges, according to the existing demand. This will help to attract even more people, make the growth even faster and the area even more successful.

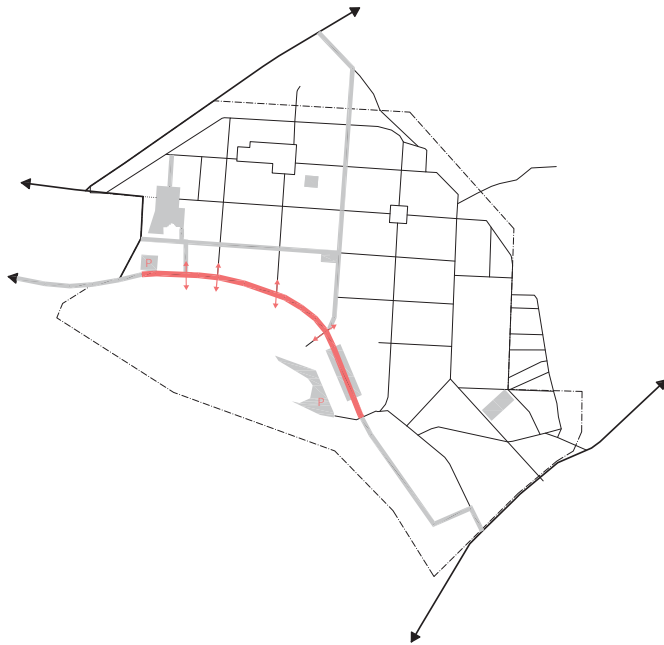


Fig.5. Phase 5 (drawing by author)

PHASE 5. DEVELOPING MORE PEDESTRIAN FRIENDLY ENVIRONMENT

When the museum cluster starts to grow and the new Knowledge Museum is built, to improve connectivity between regional amenities and the central area of the development, the 8 lanes street along the waterfront will be downgraded developing parking facilities in the both ends. It will be possible after construction of new ring road, that is already planned by municipality.

7.2 PHASE 1. PRODUCTION STREET



Fig.1. New production street, scale 1:2 500 (drawing by author)

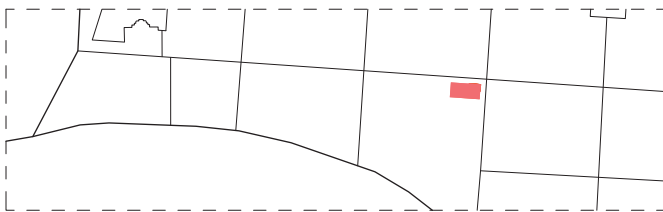


Fig.2. Phase 1.1 community centre (drawing by author)

PHASE 1.1. ESTABLISHMENT OF THE ENTREPRENEURS CENTRE

Development in the new production street will be stimulated by establishing an Entrepreneurs Centre. The centre is proposed to be located on the crossing between the production street and the street connecting the shopping mall and the central part of the main shopping street. This area is in the central location of the new plan and will be passed by a number of people daily, that might help to achieve public interest. The Entrepreneurs Centre will work as a meeting place for start-ups, entrepreneurs, students, visitors of the city and provides business related information.

PHASE 1.2. REDEVELOPMENT OF ABANDONED BUILDINGS

The redevelopment of the street first will start from the regeneration of the abandoned buildings next to the Entrepreneurs Centre. Which will work as a mediator between entrepreneurs and the landlords using rent free lease model (read 'Rent free lease model' for further information). This will give rather cheap opportunities for start-ups to test their ideas.

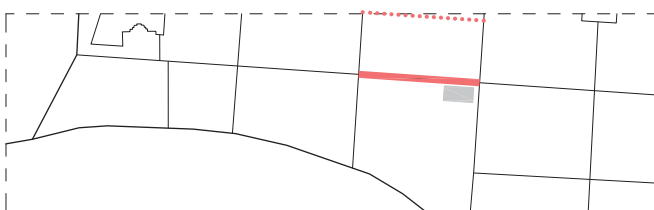


Fig.3. Phase 1.2. monthly market (red dotted line) (drawing by author)

To help to build an identity to the street rather small scale interventions will be used, such as custom planters.

In the main shopping street monthly markets will be organised simultaneously, making possibility for start-ups to promote their products at the same time it might help to attract public attention for the Entrepreneurs Centre and increase interest of potential start-ups.

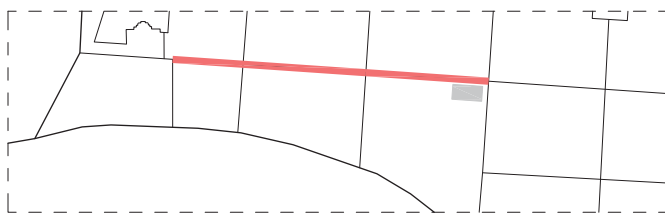


Fig.4. Phase 1.3 (drawing by author)

PHASE 1.3. IMPROVE ACCESSIBILITY

When the amount of visitors, employees, customers and clients increases and the development along the museums cluster is taking place accessibility with public transport has to be improved making two way traffic and better connection along the street. Removing parking facilities, and indicating the bicycle routes, improving the lighting for the safety. Again the improvements of the street has to start from the Entrepreneurs Centre towards the museum cluster.

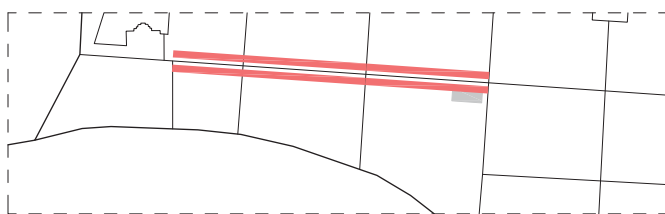


Fig.5. Phase 1.4 (drawing by author)

PHASE 1.4. MAKE THE STREET MORE PEDESTRIAN FRIENDLY

When the street starts to attract entrepreneurs and new creative class the quality of the street has to be improved, making it more pedestrian friendly, more walk-able. Then the pavement has to be improved, making permanent separate bicycle routes, overall uniformed pavement, using measures to slow down the motor traffic.

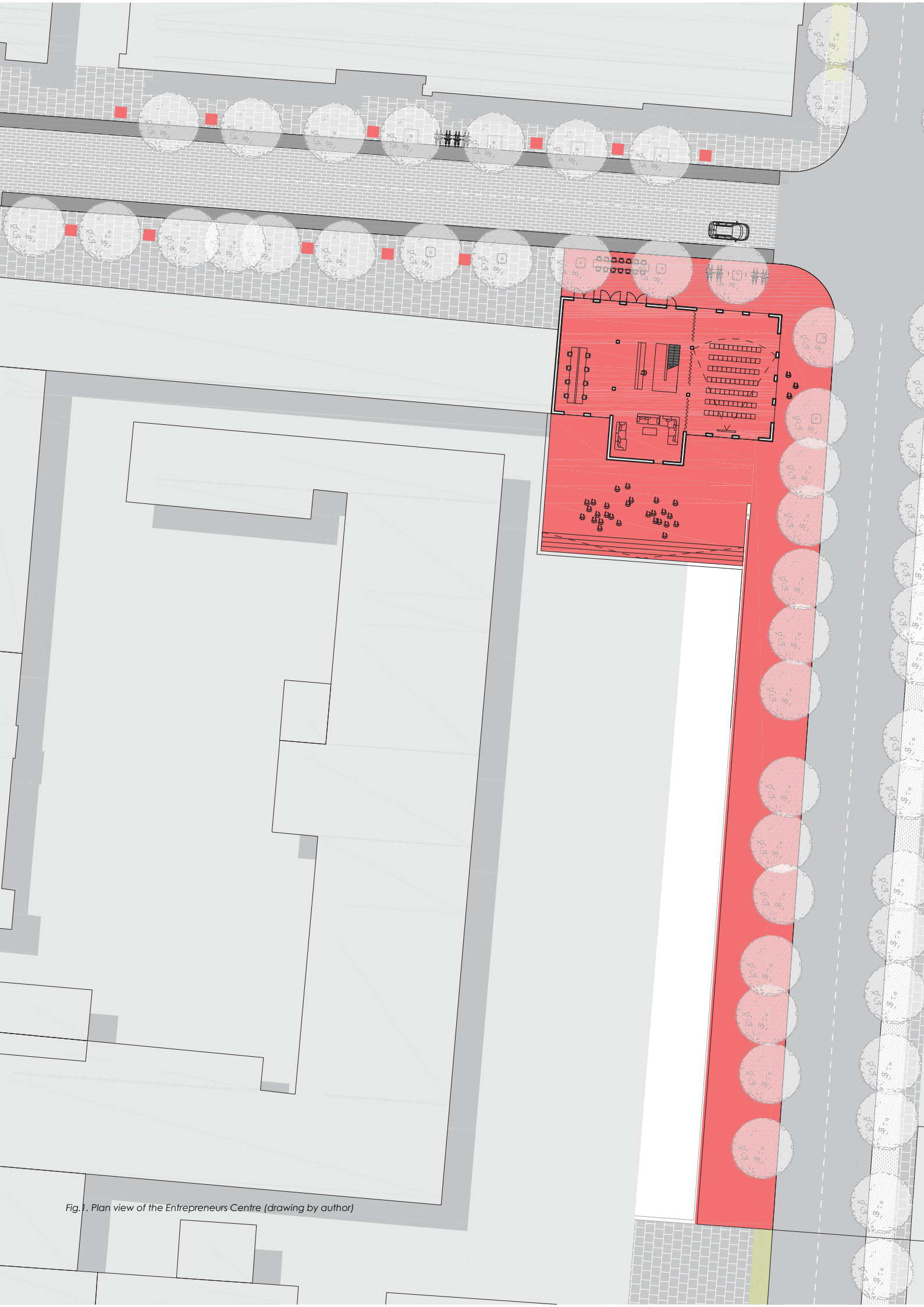
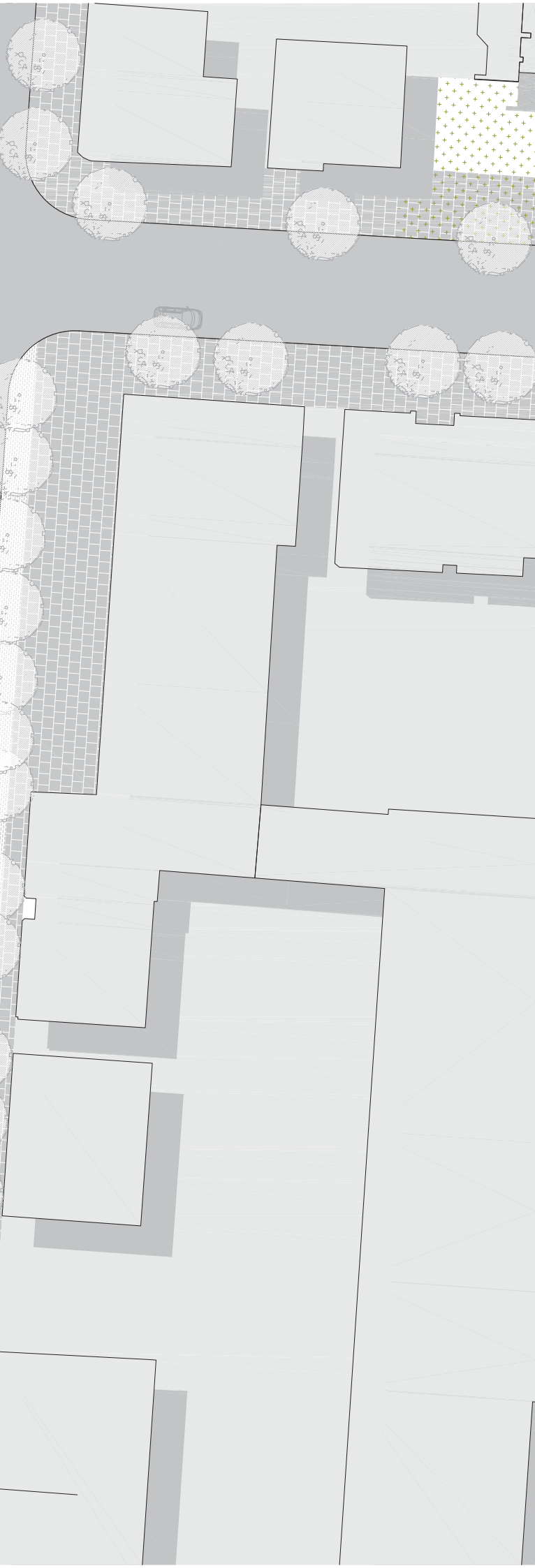


Fig. 1. Plan view of the Entrepreneurs Centre (drawing by author)



7.2.1 ENTREPRENEURS CENTRE

The entrepreneurs centre provides all the necessary information about start of the small scale business, legal assistance, helps with finding the commercial and production spaces. Finally provides grants for start-ups for redevelopment of the store-fronts or to make other urgent spatial improvements.

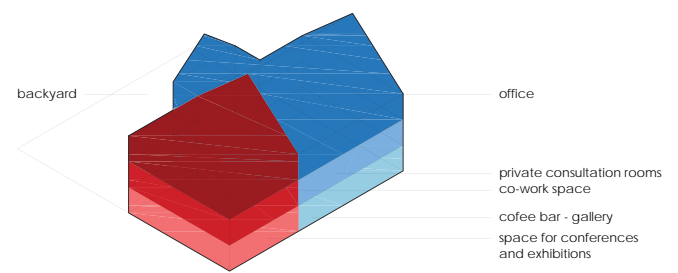


Fig.2. 3D view of the Entrepreneurs Centre (drawing by author)

There will be a coffee bar, space for conferences/ lectures and exhibitions on the ground floor. The events has to be organised at least two time per month, as well as the space could be rented out for the lectures, by individuals. The Entrepreneurs Centre will be open during the working hours, and might be used as a meeting place for start-ups. All the information will be published and managed on online platform. In the upper floors there will be more private consultation rooms and the office spaces for the non-profit organisation.

The backyard will be expanded and the amphitheatre will be built to have weekly evening events during the summer time.

To attract public attention to the development the crossing will be painted and a competition for local artists, such as Mindaugas Bonanu (the author of graffiti "Putin kissing Trump") to create a design for the wall of the jail next to the community centre will be organised. At the same time this installation will contribute to revitalisation of the street connecting the main shopping street and development on the waterfront.

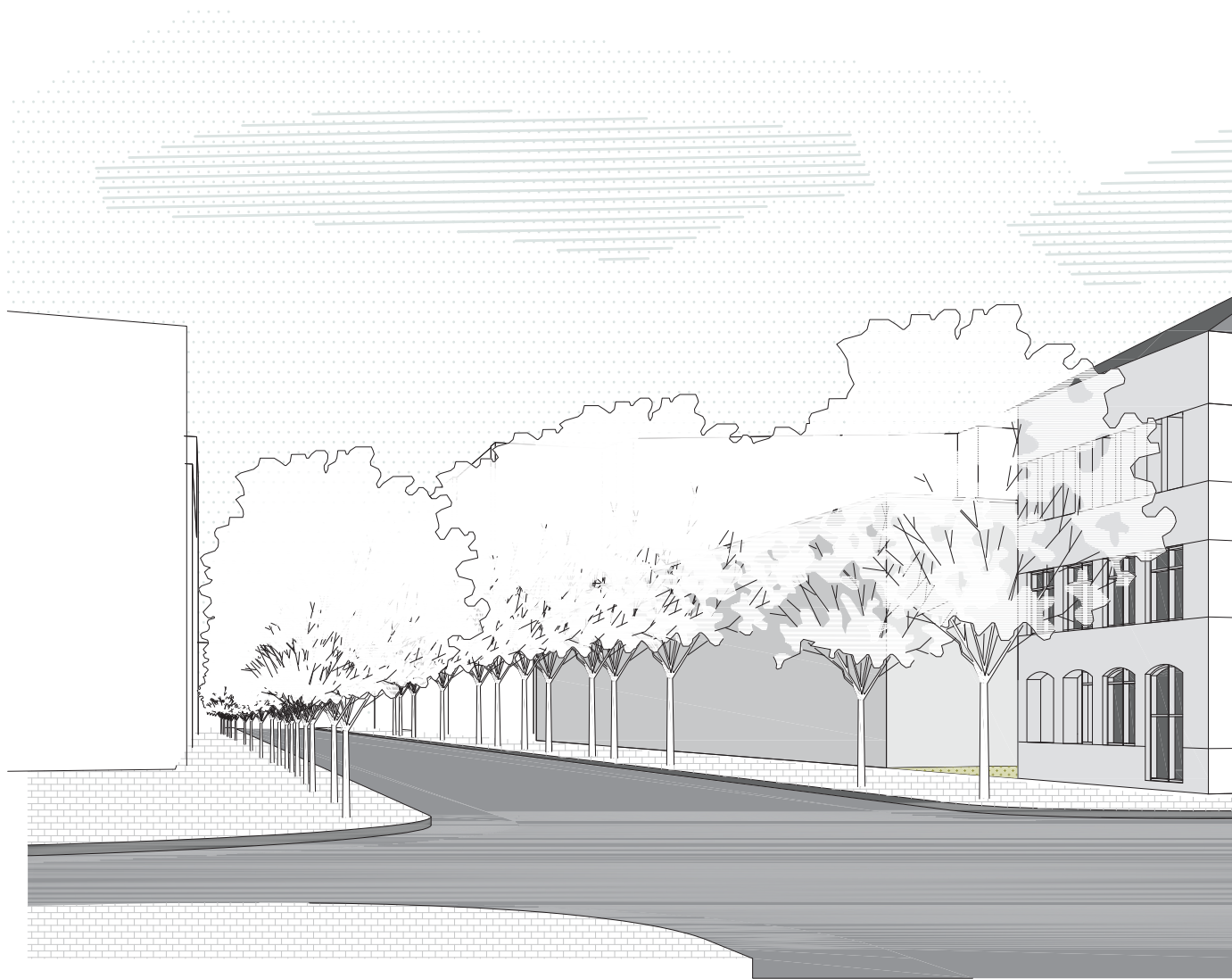






Fig.3. Perspective of the Entrepreneurs Centre (drawing by author)

street art/ identity

garden & amphitheatre



1 Putin kissing Trump by Mindaugas Bonanu (photo by Mindaugas Kulbis)
 2 green wall, source: <https://www.colourbox.com/image/green-wall-background-of-boston-ivy-image-8294108>
 3 City Lounge in St. Gallen, Switzerland, source: <http://coolboom.net/category/landscape-design/>
 4 Tolix® Marais Counter Stool, <http://www.dvr.com/dining-chairs-and-stools/tolix-marais-counter-stool/>
 Ieva Lendraitytė. Joint Approach to Revitalise Kaunas City Centre



open conference room,
transparent interior
structure

bicycle racks

painting the corner of the
street building



coffee tables on the sidewalk



Wi-Fi connection



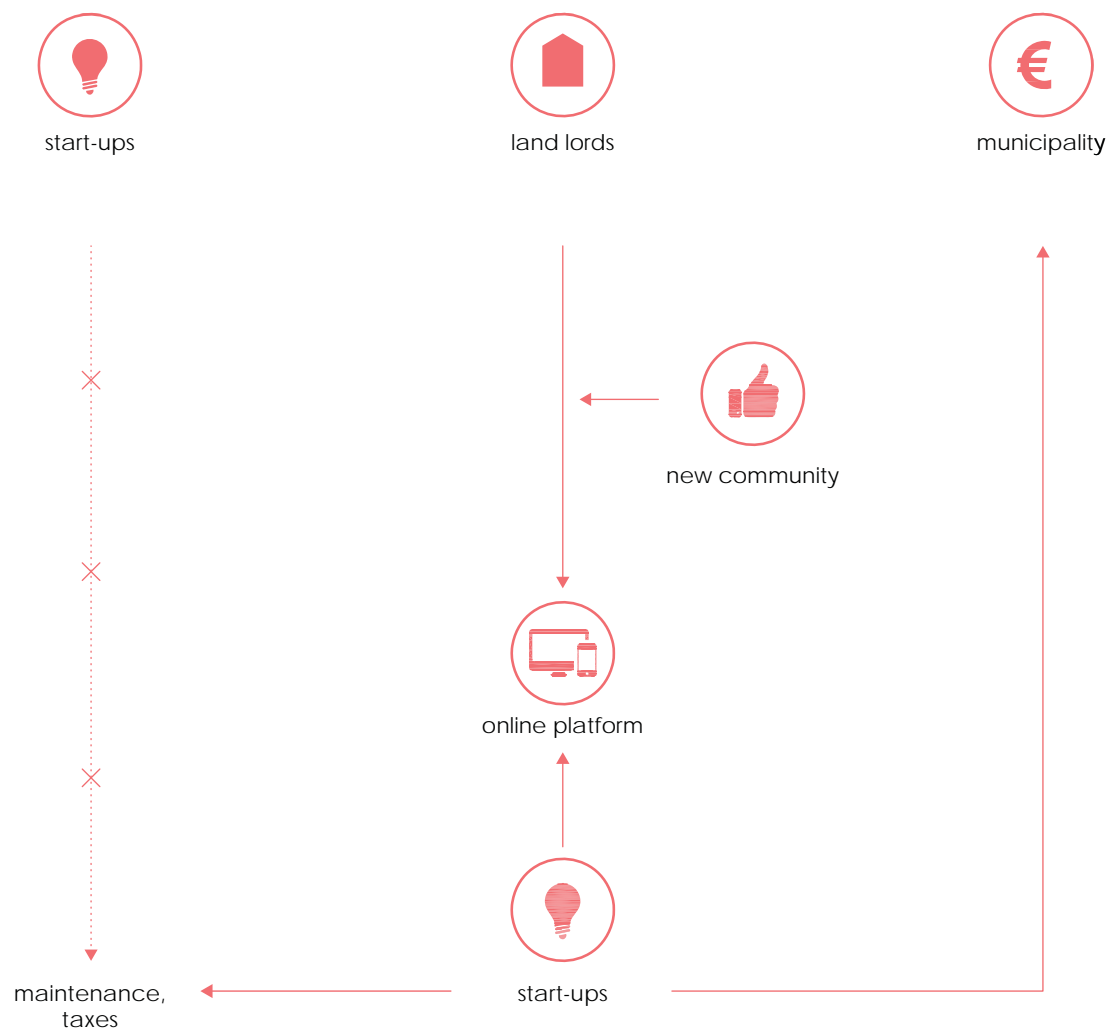


Fig. 1. Rent free lease model (drawing by author)

7.2.2 RENT FREE LEASE MODEL

At the moment owners of the abandoned properties have to pay fines to the Municipality of Kaunas for not taking proper care of the buildings. Often it is unsuccessful and this policy do not stimulate economic growth of the area. With the new policy structure it is proposed to use rent free model. Rather than paying fines and taxes landlords will be offered to lease their property rent free for entrepreneurs. It will be up to for 5 years. The process will be managed by non-profit organisation in the Entrepreneurs Centre.

When abandoned property is registered start-ups have 1 month to apply for rent free lease with innovative business ideas. The decision of which project wins the lease will be made by the new entrepreneurs community. In this case the new development will promote new ideas and will slow down the process when big companies occupies an empty housing market. At the same time start-ups not only get the place for their business but also are more involved and responsible in the management of the area and successful functioning of it.

Municipality will contribute by providing financial support, that might cover up to 50% of the most urgent reconstruction cost.

The aim is to provide fairly cheap test sites. After winning a competition entrepreneurs could use the property up to 5 years rent free, though if commercial offer occurs they have to leave the property warning them 1 month in advanced. Therefore as soon as they are sure about their idea they would be interested in switching from rent free to more permanent rent contract.

It will be beneficial for the landlords as first, they will not need to pay the fine, second, use of the property by entrepreneurs might attract permanent tenants, by showing possibilities of the potential use, as well as new development will attract more users and that will start regeneration of the rest of the street, and boost economic life.

Benefits:

A. Entrepreneurs:

- low risk ways to test ideas
- no rent
- sense of community
- easily accessible information

B. Landlords:

- no taxes
- possibility to get permanent commercial offer in the future

C. Municipality:

- more taxes collected

7.2.3 VACANT BUILDINGS REDEVELOPMENT

The street has one of the highest vacancy rates in the city centre. These abandoned buildings will be used in a first place to implement a new program with a 'rent free lease model'. The redevelopment of the buildings will be done after agreement with the landlords, preferable starting from the buildings close to the community centre. 75% of the building has to be occupied before redevelopment of the next one.

7.2.4 PROGRAM IN THE PRODUCTION STREET

It is aimed to redevelop existing housing market into more mix use: have commercial or production spaces on the ground floor, residential in the upper floors and mix in the middle. In the maximum scenario having both ground and first floor redeveloped into commercial or production there are a capacity of 50 000m² space, this will be approximately 2 000 new work places created.

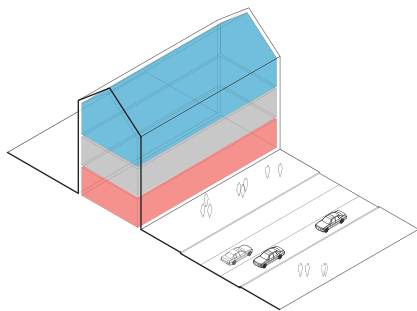


Fig. 3. Abandoned buildings (drawing by author)

45 000m² of new production space (1800 work places)
72 000m² of residential (1200 new flats)

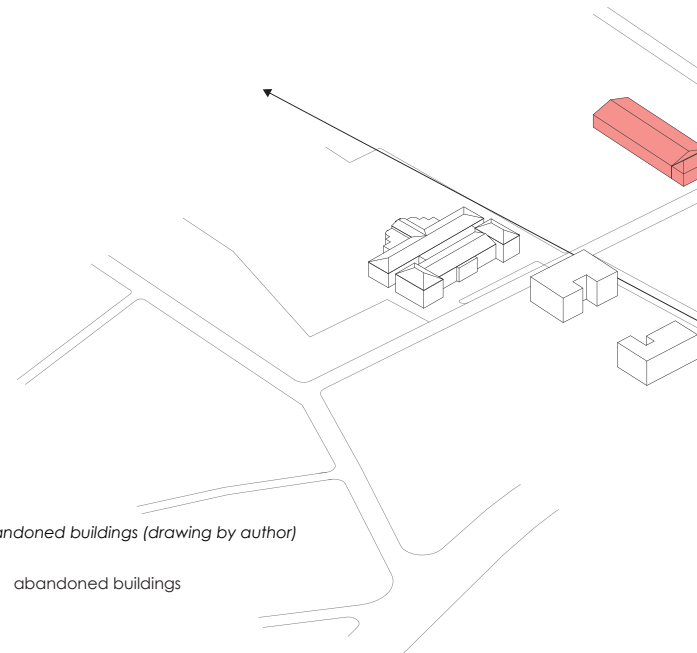


Fig. 1. Abandoned buildings (drawing by author)

■ abandoned buildings

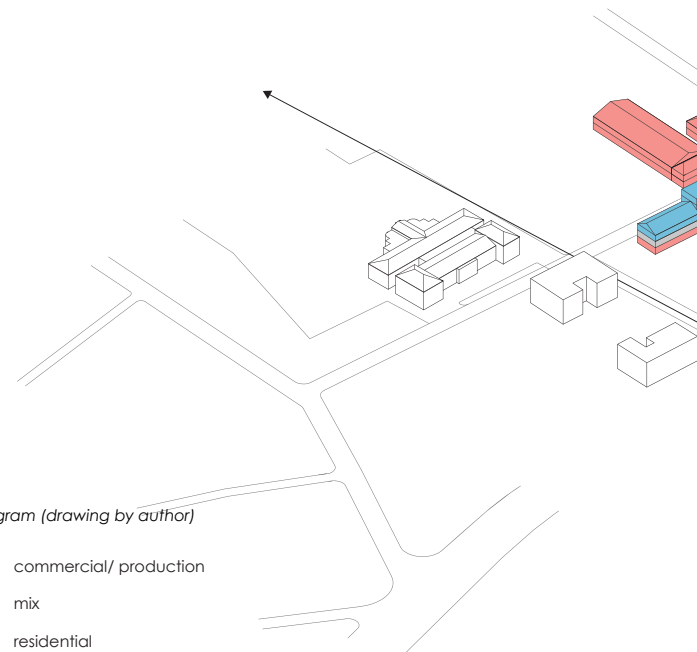
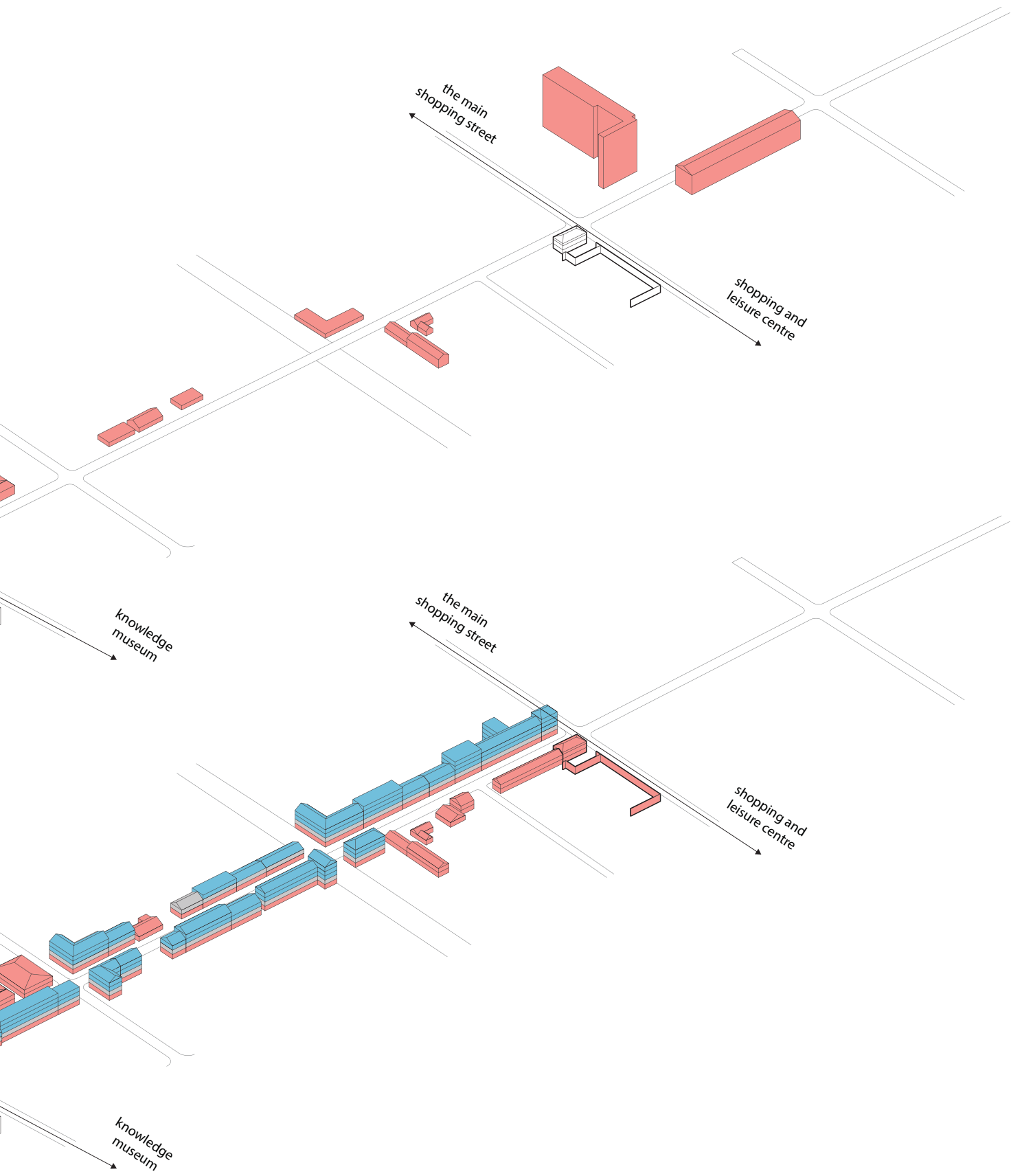


Fig. 2. Program (drawing by author)

■ commercial/ production
 ■ mix
 ■ residential



7.2.5 REDEVELOPMENT OF FRONTAGES

The secondary shopping street is rather mono-functional. Big percentage of the frontage is not 'active'. In the project it is proposed to use existing examples of adaptation and redevelopment of the ground floor, like opening up the store-front, constructing a separate entrance to commercial use.

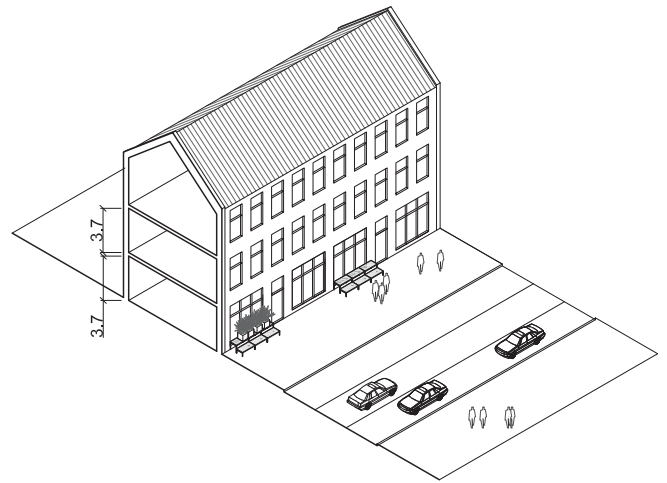
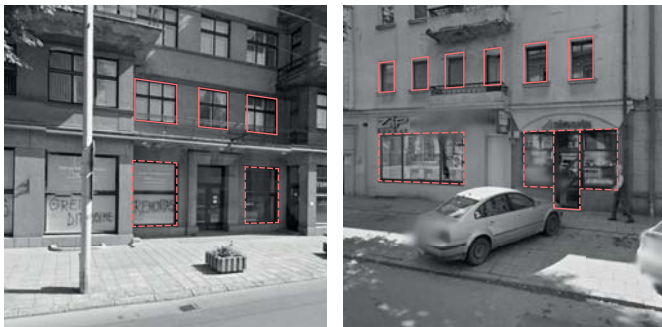


Fig. 1. Opening up storefronts (drawing by author)



Pic. 1. Photos of existing examples of redevelopment of frontage (drawing by author)

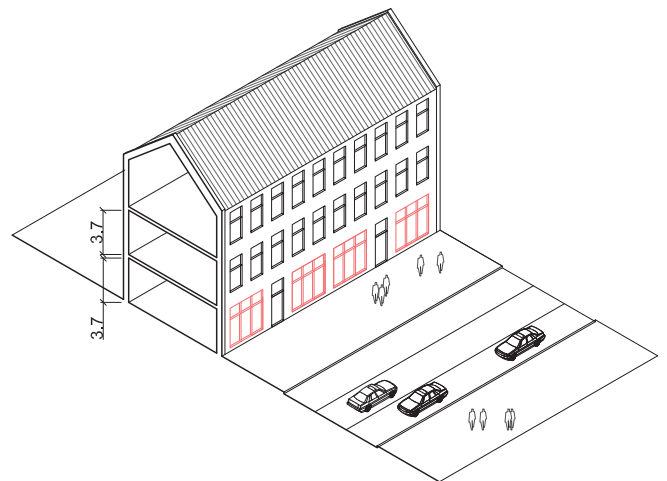
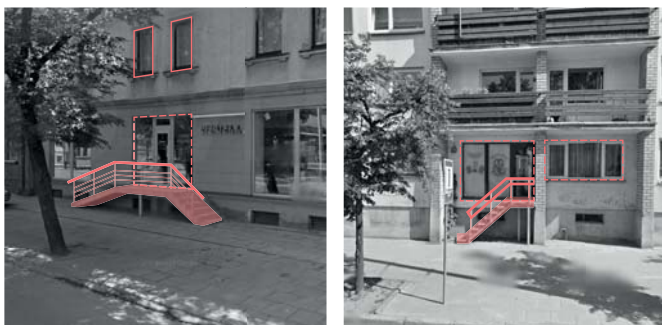


Fig. 2. Buildings stairs (drawing by author)



Pic. 2. Photos of existing examples of redevelopment of frontage with high seasonal plinth (drawing by author)

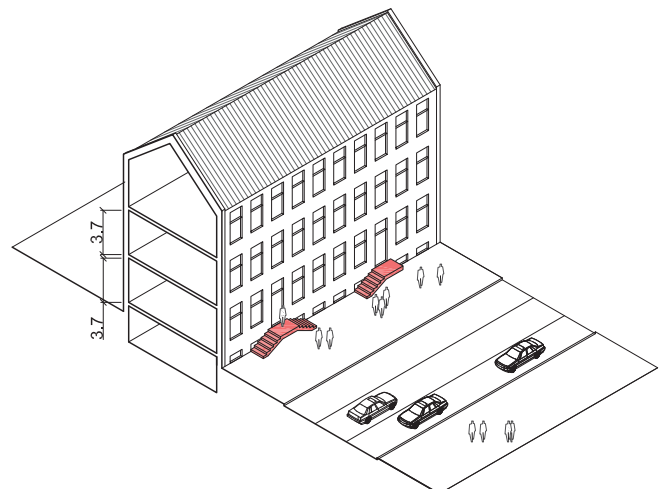


Fig. 3. Bringing commerce outdoors (drawing by author)

7.2.6 PRODUCTION & RETAIL SPACE REQUIREMENTS

To ensure accessibility for small scale entrepreneurs and producers, maximum space requirements for each of the uses is defined.

The space for commercial use can vary from 30m² up to 60m². The optimal length of frontage is 5-6m (Fig. 1.).

The space for production can vary from 30m² up to 200m² in this case opening up the whole floor (Fig. 2., Fig.3.)

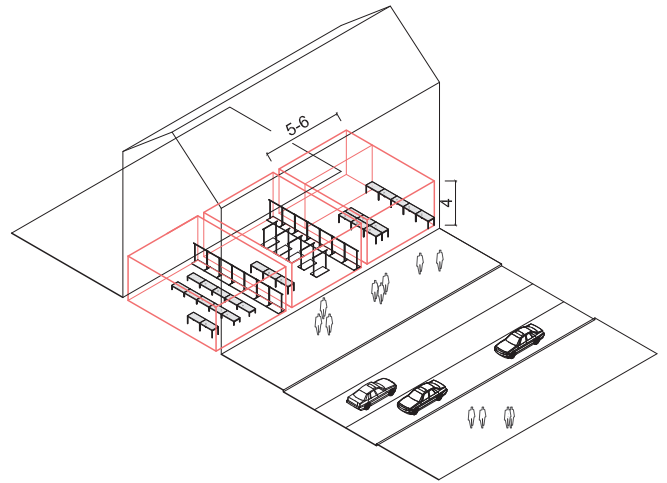


Fig. 1. Space requirements for commercial use (drawing by author)

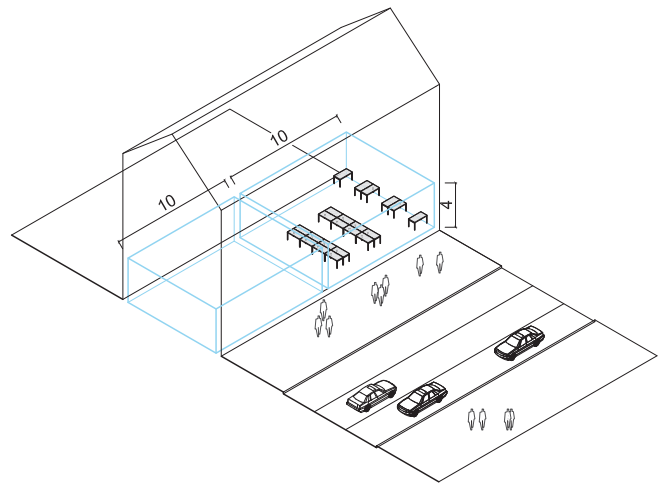


Fig. 2. Space requirements for production (drawing by author)

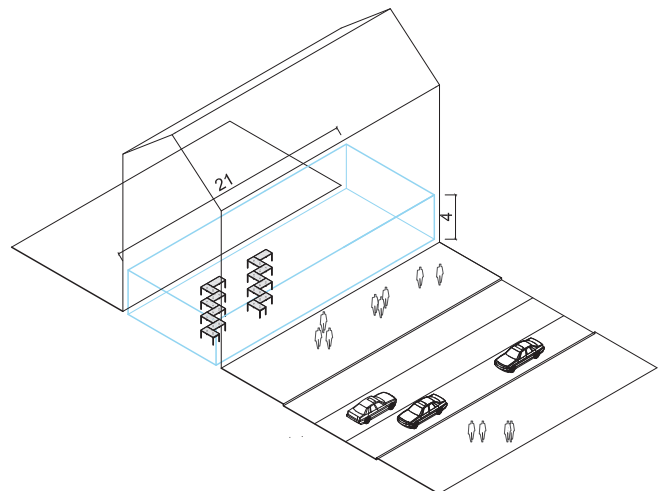


Fig. 3. Space requirements for production maximum scenario (drawing by author)

- commercial spaces
- production space

At the moment there is three lanes one way street. The main aim of the street is to make it more pedestrian friendly. At the same time more walkable and slower speed of the cars.

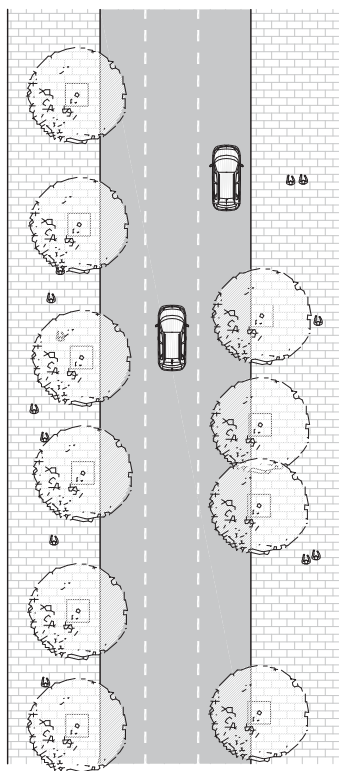
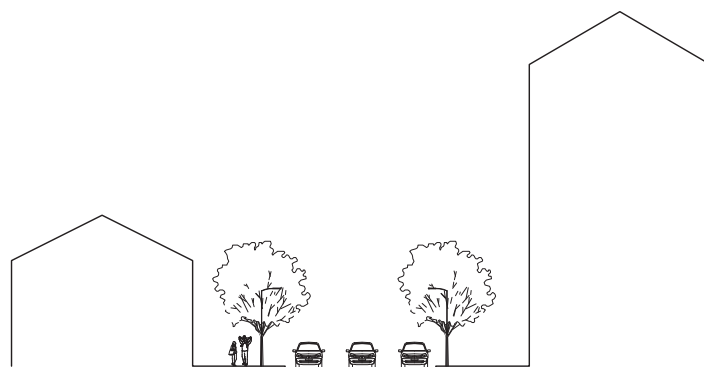


Fig.1. Existing section of the production street. Scale 1:50 (drawing by author)

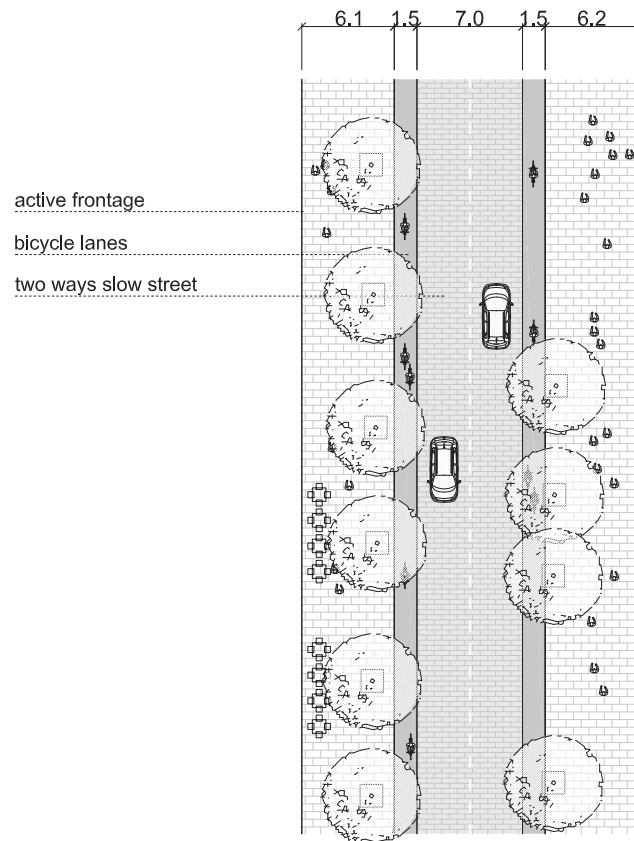


Fig. 2. Proposed section of the production street. Scale 1:50 (drawing by author)

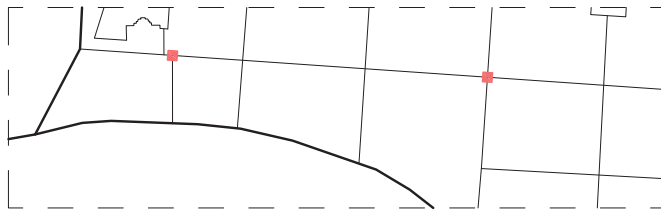


Fig.3. Location of speed tables (drawing by author)

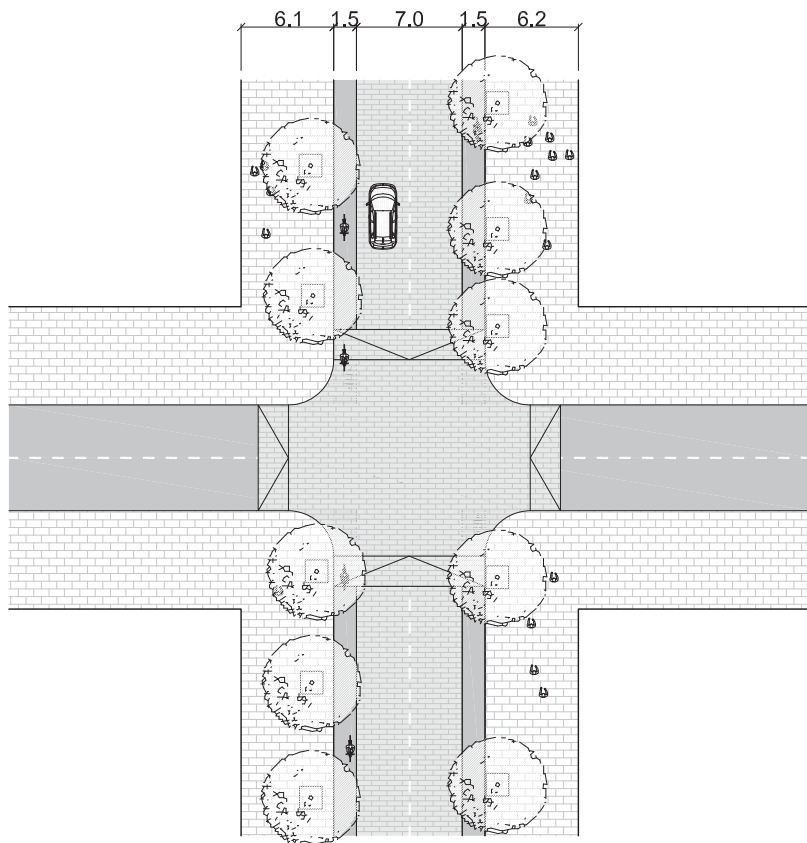


Fig.4. Section of the speed table. Scale 1:50 (drawing by author)

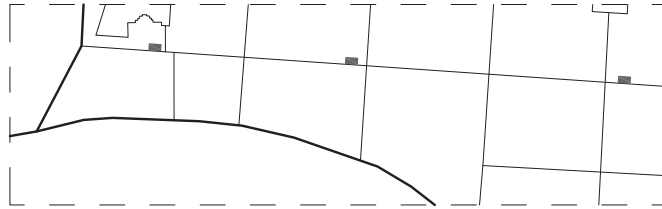


Fig. 5. Location of bus stops (drawing by author)

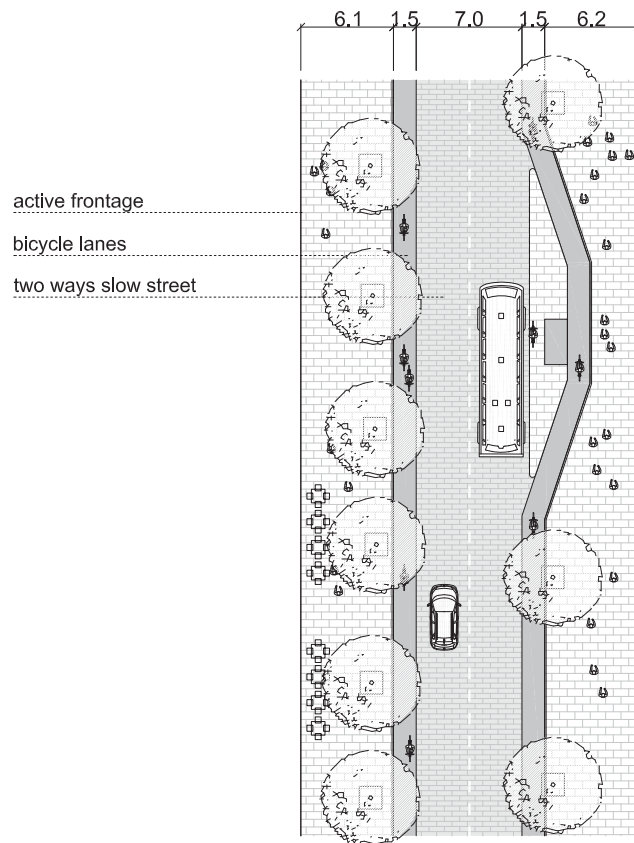


Fig. 6. Proposed section of the production street. Scale 1:50 (drawing by author)



Fig. 8. Proposed changes (drawing by author)

redeveloped abandoned
buildings

pavement to slow down
car movements





separate bicycle lanes

entrance sign for branding the street

bringing production/ commerce to the street



7.3 PHASE 2. SHOPPING STREET



Fig. 1. Plan view of the main shopping street, scale 1:2500 (drawing by author)

It is a 1km long main shopping street leading to the historical city centre and between the new production street and university street. The street works as a main backbone of public life in the 'New town' neighborhood. It is the first pedestrian street in the country that has and maintained exceptional character.

Aim: emphasize qualities of leisure shopping. Actions:

1. make additional activities in the street;
2. link activities with existing cultural functions;
3. strengthening image of the street.

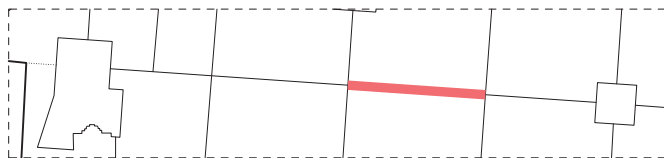


Fig. 2. Phase 2.1 (drawing by author)

PHASE 2.1. CRAFT MARKET

To support development and growth in the secondary street regular markets will be organized in part of the street, making possibility for makers from the secondary street to promote their products, and the street itself. Temporally closing down separate bicycle routes.

For weekend markets a block to the north from the Entrepreneurs Centre will be used. It is well accessible from the student square. At the moment it is one of the most successful parts of the shopping street and most of the coffee bars and trendy shops are there.

The market will start to be organized after establishing the Entrepreneurs Centre to attract public attention for the new development in the production street.

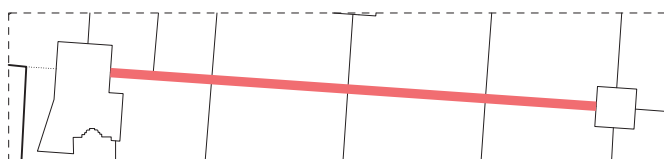


Fig. 3. Phase 2.2 (drawing by author)

PHASE 2.2. REDEVELOPMENT INTO SHARED CYCLIST & PEDESTRIAN SPACE

The street pavement is rather good, however the functional arrangement of the street limits its use. The bicycle lanes in the street subdivides the space, preventing the street vendors to use the middle part of the street daily. Therefore it is proposed to remove separate bicycle lanes, redeveloping the street into shared bicycle

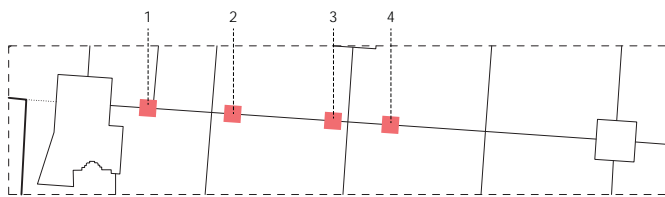


Fig. 4. Phase 2.3 (drawing by author)

and pedestrian space. The fast bicycle route will be moved to the new production street parallel to the shopping street.

PHASE 2.3. RESTORATION & STRENGTHENING IDENTITY

In the last phase general improvements of the street, restoration of existing historical street furniture, renewal and unification of the pavement will be done. The biggest attention has to be paid to maintenance of existing historical street furniture and British Lime tree alley.

Then to fragment the street into smaller parts and strengthen identity distinctive street furniture and design elements will be used located in front of the main public functions in the street, such as Kaunas State Puppet Theatre, Drama Theatre, Cinema and City Library.

1. Kaunas State Puppet Theatre - an exhibition space for local artists.
2. Kaunas Drama Theatre - a zone for street performers. In the first year it might be supported by Municipality and the Drama Theatre.
3. City Library - open air library and book sharing.
4. Cinema - more flexible street furniture.



restoration of existing furniture

British Lime tree alley

weekly temporal market stalls

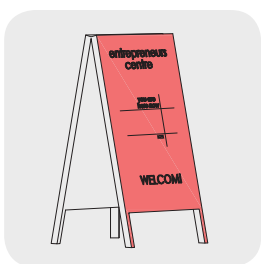


Fig. 5. Perspective view of the main shopping street (drawing by author)



stall of the entrepreneurs centre

graphic elements signing the way to the entrepreneurs centre



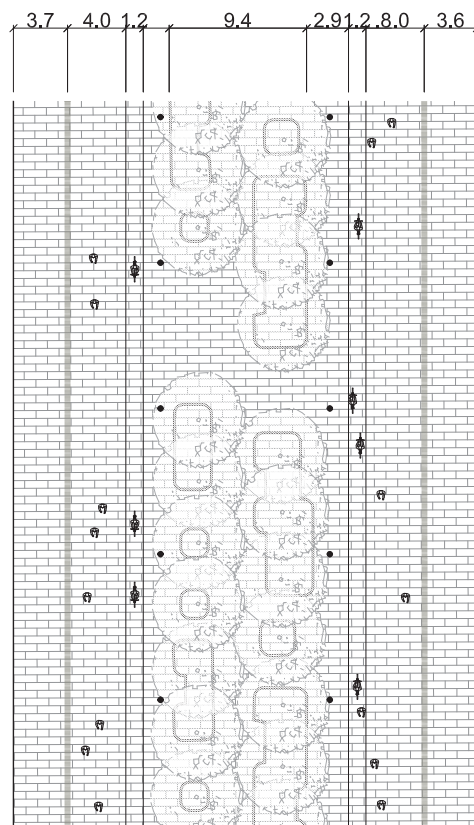
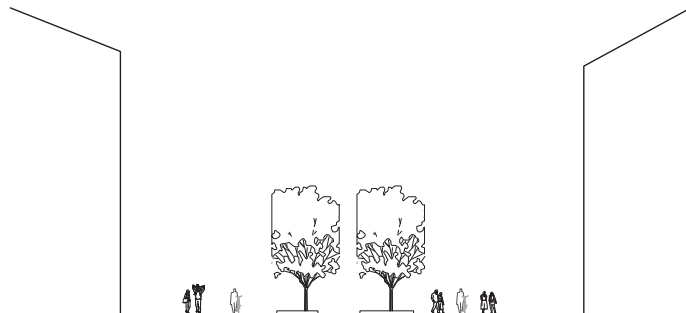


Fig.6. Section of the main shopping street. Scale 1:50 (drawing by author)

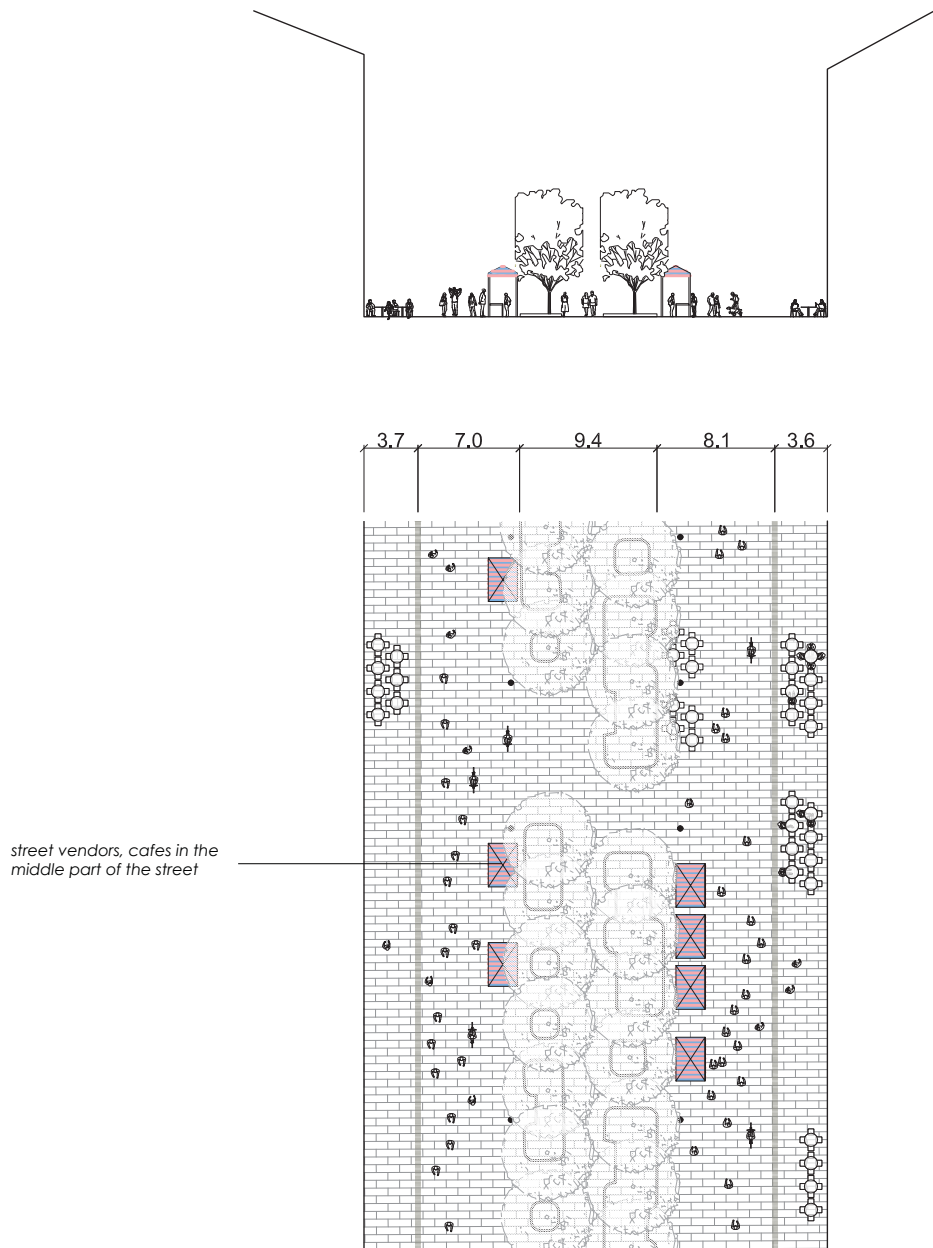


Fig. 7. Proposed section of redeveloped main shopping street. Scale 1:50 (drawing by author)



Pic. 1. Kaunas Music Theatre(photo by Aleksandras Brusa)



Pic. 2. The main shopping street and Theaters and Museums square (photo by Kestutis Fedirka)

7.4 PHASE 3. MUSEUM AND THEATRE CLUSTER



In phase 3 two connections between the shopping street and development in the waterfront has to be improved. One of them is museums and theaters cluster, with states importance amenities: Kaunas State Music Theatre, Kaunas State Puppet Theatre, Knowledge Museum, that is planned to be built till 2018, Philharmonic Hall, Music School and Zoology museum. As well as at the moment during the events in the main shopping street, the square is used for the performances and concerts.

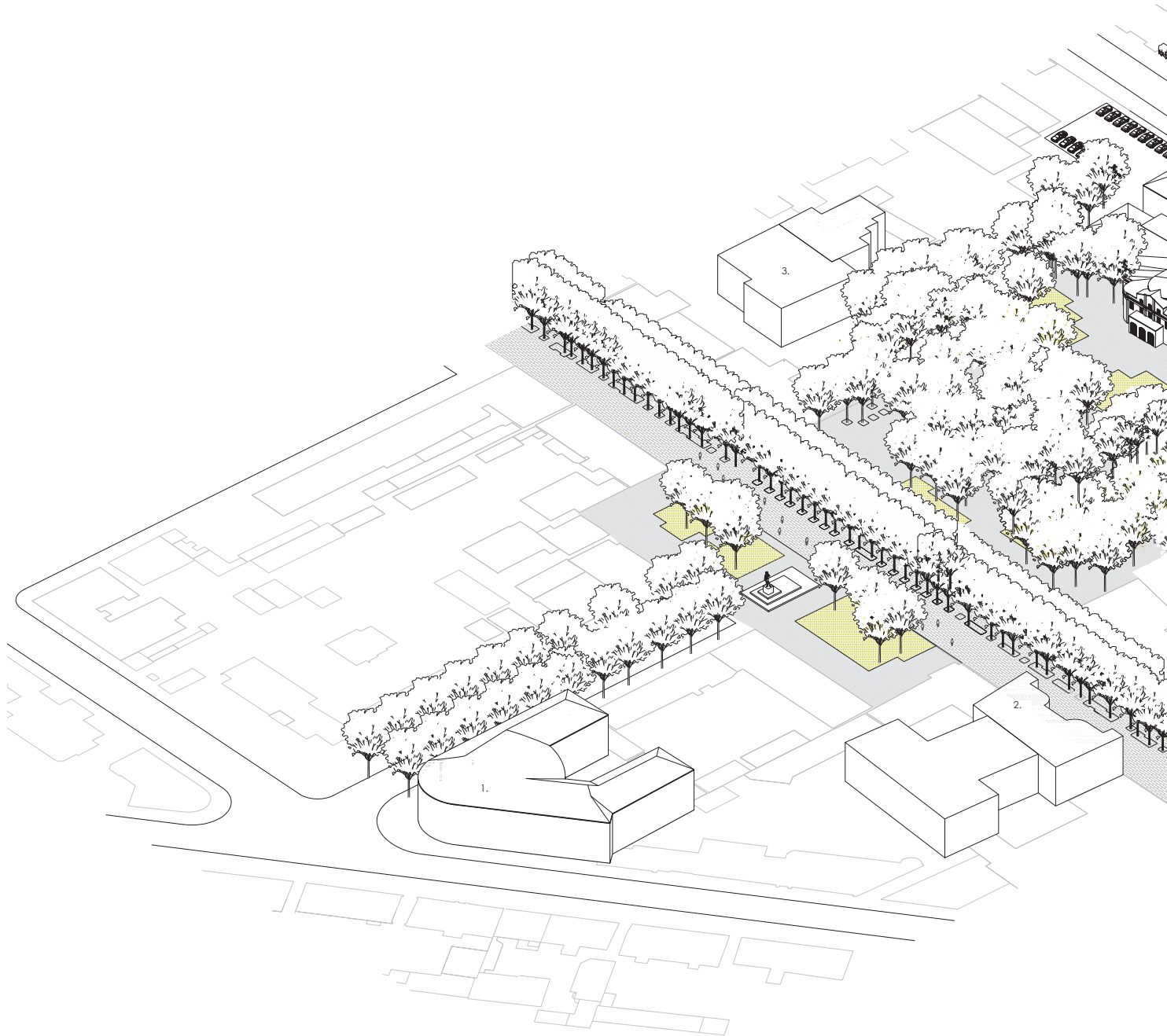
The way museums, theaters and the space in between them functions have changed recently. The financial support from the state has decreased, museums and theaters became more dependent on their own ability to attract users and collect the necessary funding for maintenance and regeneration. At the same time the use of cultural facilities has decreased. According to Stephen (2001) (at Chieh-Ching Tien, 2008) more attention is now being paid on museums leisure function. "With their unique features, flexible open hours, multiple exhibition facilities, shops and restaurants they are ideally placed to satisfy a range of consumer needs" (Chieh-Ching Tien, 2008).

In the area museums and theaters are clustered along the network of streets and the square. It includes states importance cultural facilities that were built during the most prosperous times of the city, when Kaunas was temporal Capital of Lithuania (Kaunas State Music Theatre, Kaunas State Puppet Theatre) and recent projects, such as Knowledge Museum that is going to be one of the most important of this type museums in the Baltic States.

Aims:

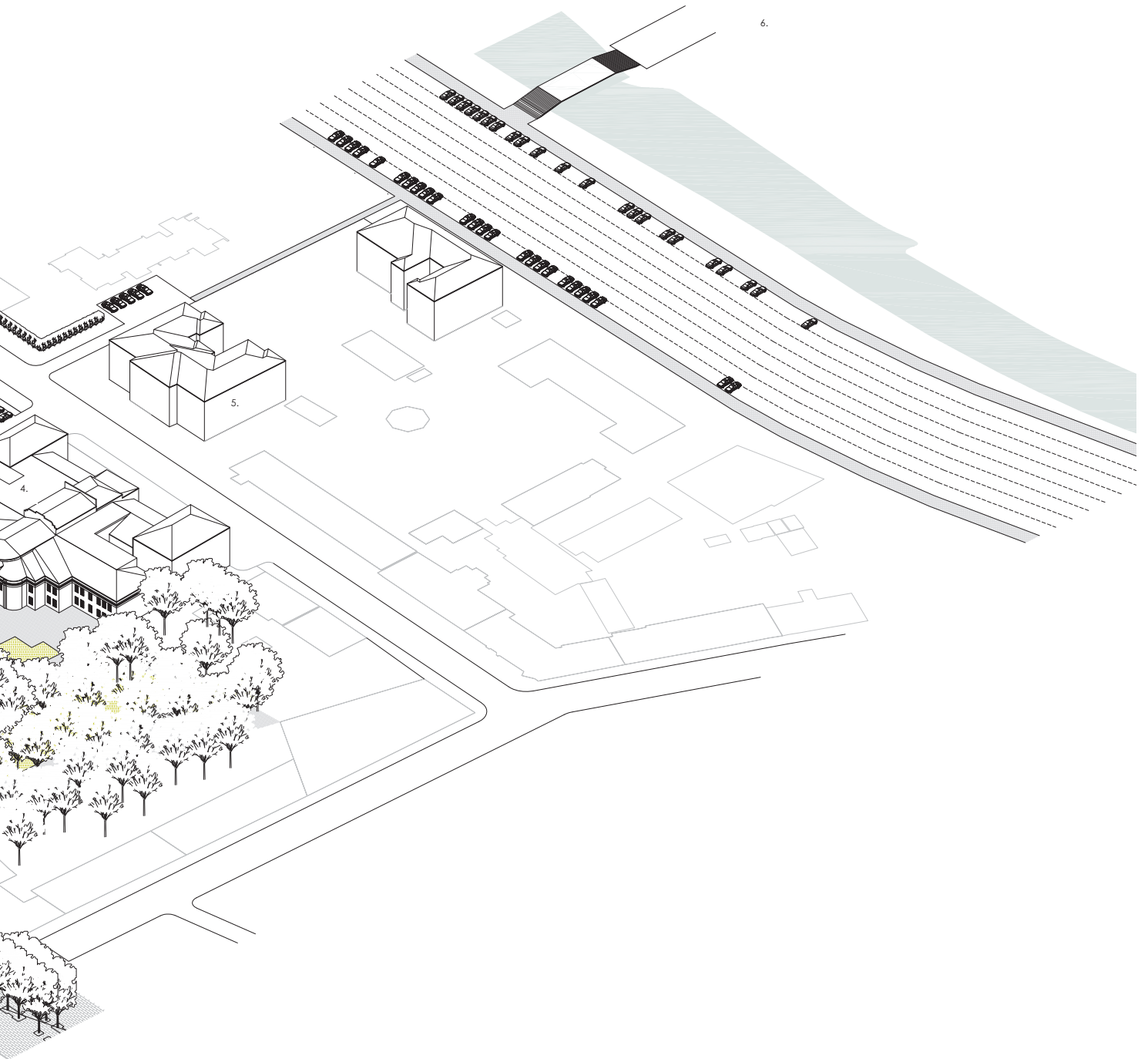
1. connect theaters and museums into one unified cluster, establish collaboration between them. That together with joint programs might help to benefit museums and theaters from proximity of each other, organizing special programs, having Kaunas Theatres and Museums day tickets. In such cluster one of the most important features is unity, both visual and functional;
2. strengthen identity of the area. According to Chieh-Ching Tien (2008) the key element in the success of museums clusters is distinctiveness, which is formed from unique, local resources. Here identity might play a key role attracting day-tripper and tourists;
3. promote open business model, when museums actively makes educational programs, family weekends (Eid, 2016) in order to respond to a changed uses;
4. bring people form the Knowledge Museum in the island to the central part of the area.

Fig. 1. Plan view of Theaters & Museums cluster, scale 1:3500 (drawing by author)



1. Philharmonic Hall
2. Museum Zoology
3. Kaunas State Puppet Theatre
4. Kaunas State Music Theatre
5. Music School
6. Knowledge museum

Fig.2. 3D view of the Theater and Museum Cluster, scale 1:1500 (drawing by author)



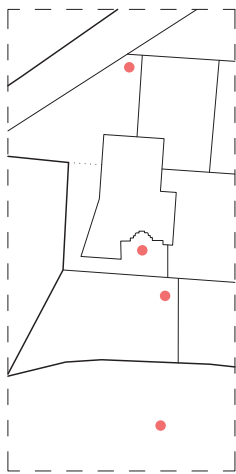


Fig.3. Phase 3.1 (drawing by author)

PHASE 3.1. RAISE ATTENTION

In order to raise awareness small scale city events will be organized. In the beginning once each quarter of a year, then more and more frequently. Events will be managed by the administration of the theaters, publishing the program through joint 'New Town' online platform. Events that will be organized:

- establish collaboration between museums and theaters, organize Family days, other educational programs;
- organize free open air performances;
- make fund raising events for the redevelopment of the museums;
- music festivals, from very traditional, till very contemporary;
- create possibilities for companies, individuals themselves to suggest their own event;
- establish collaboration with the Music Museum in the capital, having possibility to exhibit their exhibition.

PHASE 3.2. CONNECTING THE PROGRAM

1. Strengthen urban cluster by organizing events in the island, specifically connected with the future Knowledge museum, meetings, discussions, open air science exhibitions, lectures. Collaboration between universities and the schools will be established, to organize science days, awarding the best students project.

Create link between different museums and theaters, emphasize spatial unity of the cluster, and direct flows of the people across this space. Here, actions are:

2. remove parking spaces from the backyard of the Music Theatre, that are on the way and make pedestrian path;
3. develop a route in-between the Music School and residential areas to the East, changing the pavement, constructing street lighting, placing planters;
4. make crossing through the street along the river: remove parking spaces blocking the path and make zebra crossing leading to the bridge.

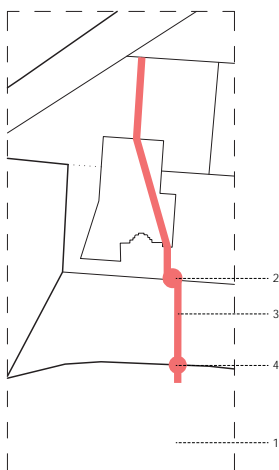


Fig.4. Phase 3.2 (drawing by author)

PHASE 3.3. IMPROVE THE LINKS

When the space becomes more successful and the scale of events grow the central part of the main museum square has to be opened up cutting out the trees in the middle and leaving them on the edges. To create enough space for the city events in the middle part of the square the existing pavement might be reused.

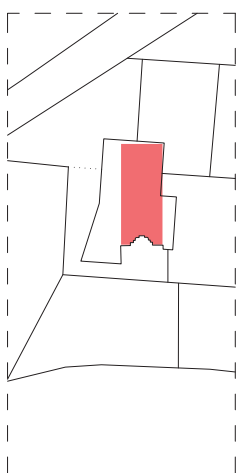


Fig.5. Phase 3.3 (drawing by author)

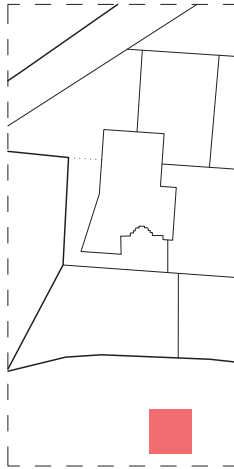
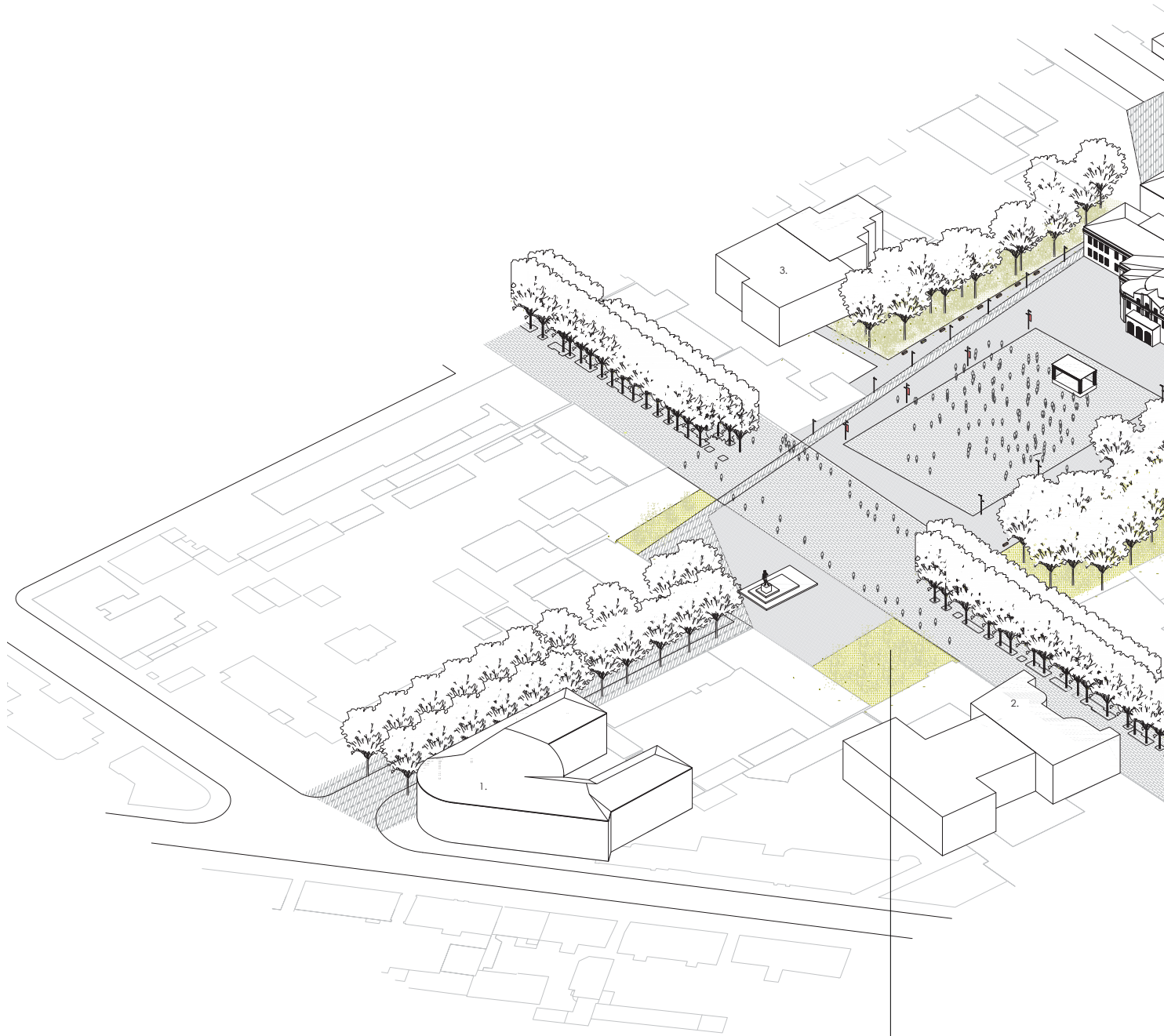


Fig.6. Phase 3.4 (drawing by author)

PHASE 3.4. CONSTRUCTION OF THE KNOWLEDGE MUSEUM

When the shopping street area and museum clusters attracts more people and part of the investments paid back, a development of the complex of the Knowledge Museum will be started. To connect to nodes even better, by redeveloping infrastructure along the riverfront: removing high intensity street. New constructions might be partly covered allowing new development instead on the waterfront.



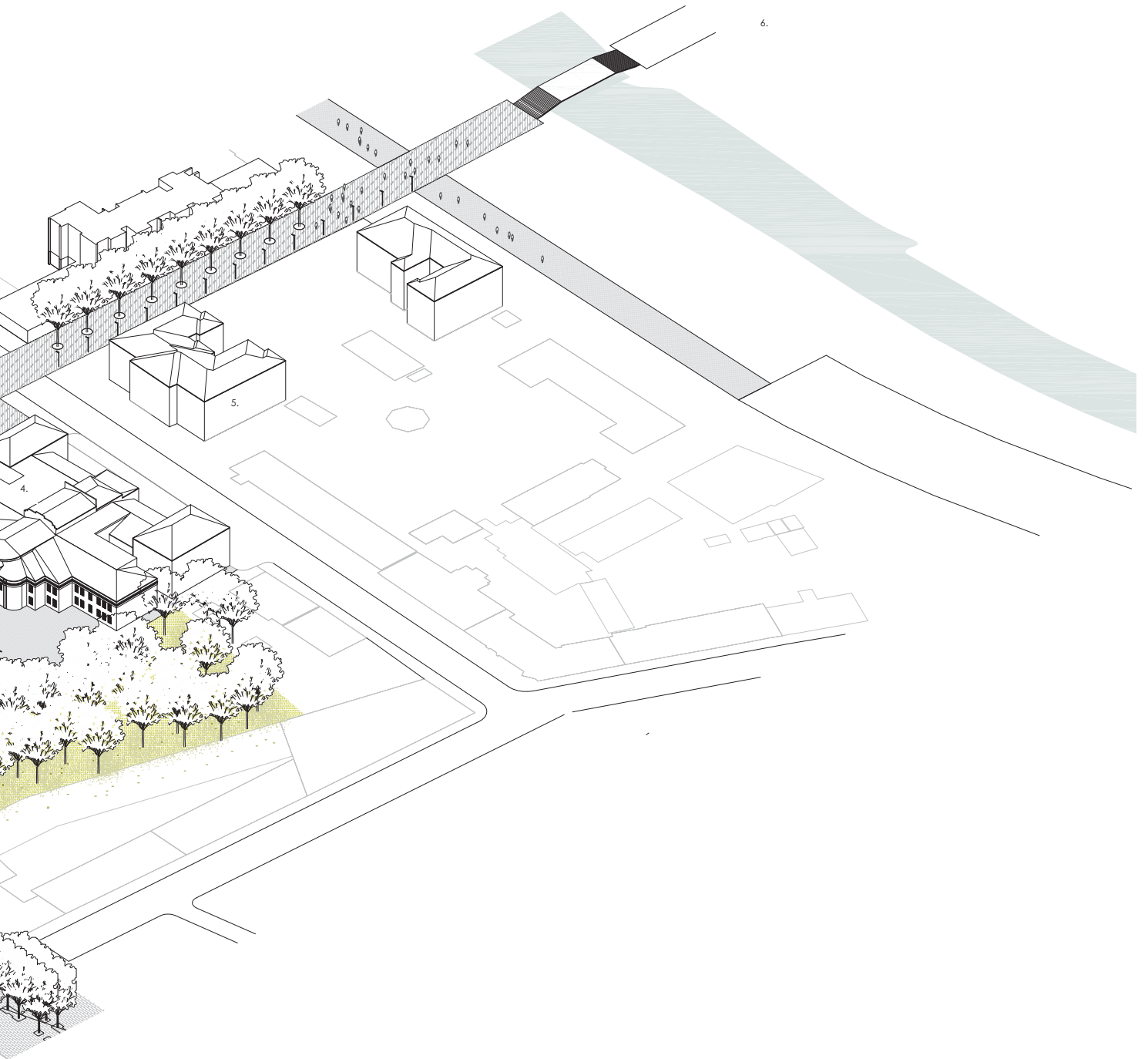
- 1. Philharmonic Hall
- 2. Museum Zoology
- 3. Kaunas State Puppet Theatre
- 4. Kaunas State Music Theatre
- 5. Music School
- 6. Knowledge museum



Grass

Type of the plants

Fig.7. 3D view of the Theater and Museum Cluster, scale 1:1500 (drawing by author)



6.

5.

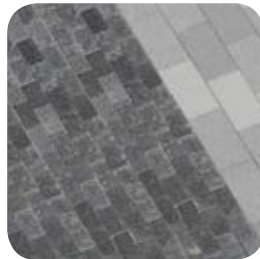
4.



Furniture



Light pavement for the square



Dark pavement



Tree grates

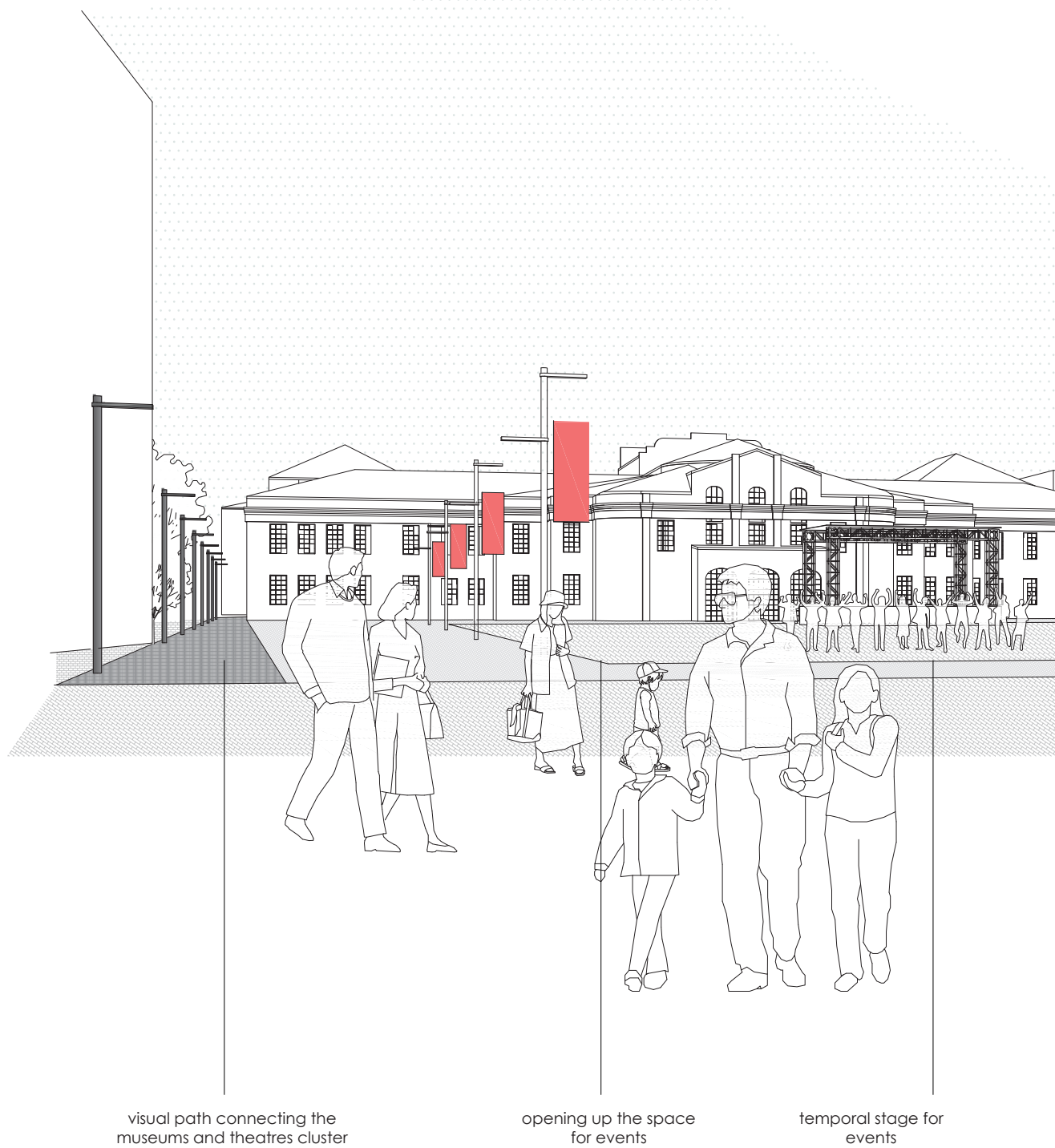
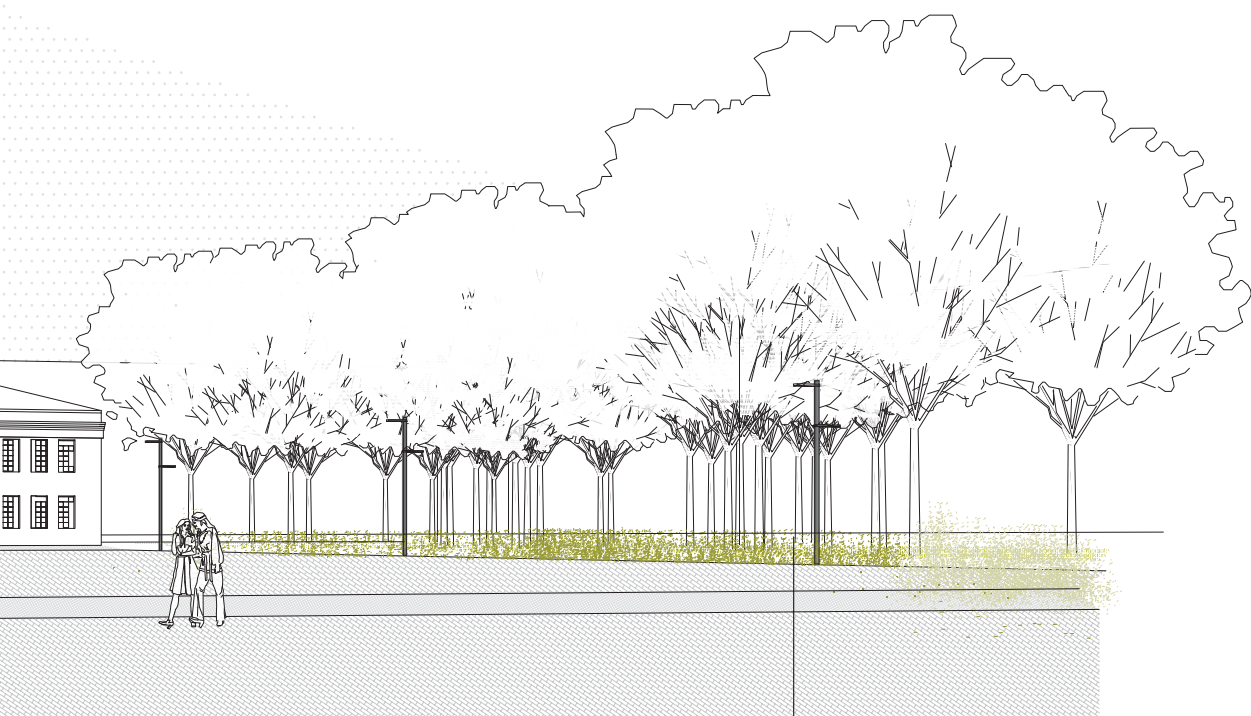
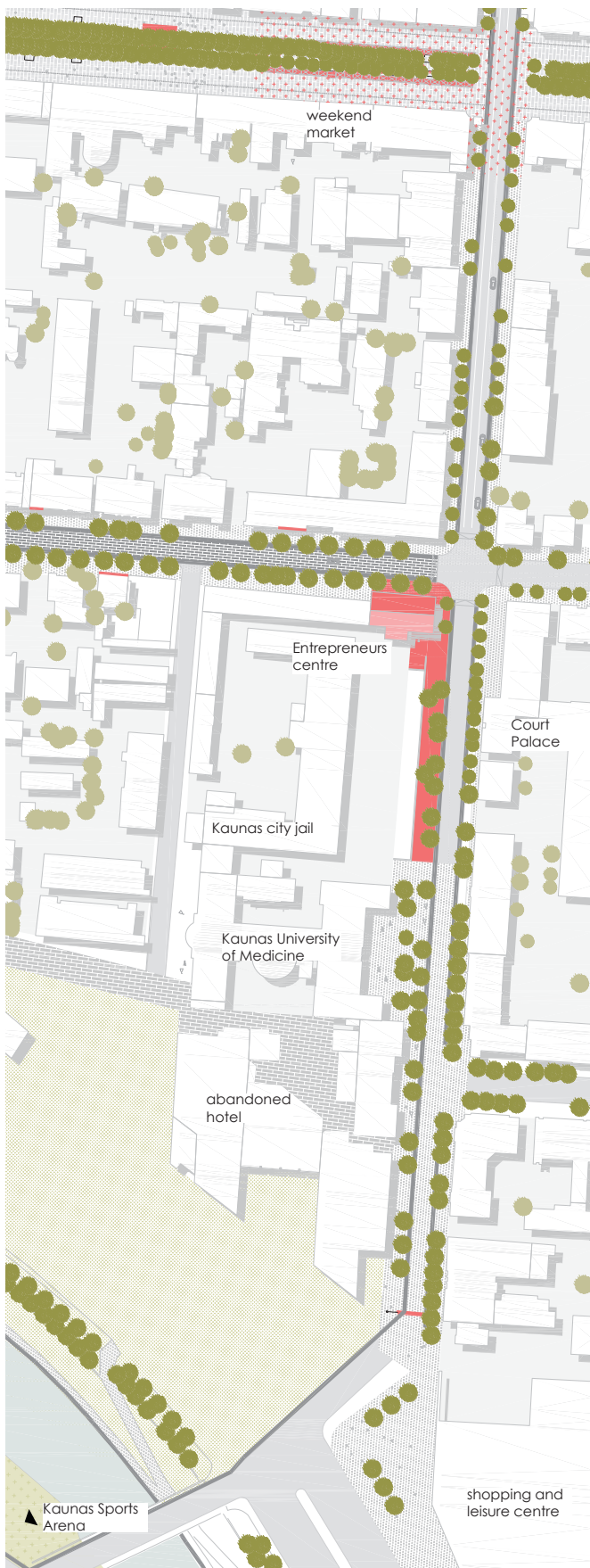


Fig.8. Perspective view of the Theaters and Museums Square (drawing by author)



densifying existing park

7.5 PHASE 3. SHOPPING AND LEISURE CENTRE, SPORTS ARENA AND THE MAIN SHOPPING STREET



The street is connecting the shopping street area with the leisure and shopping centre and the Sports Arena. At the moment these objects attract most of the day-trippers and regional users in the centre. Moreover, there is concentration of one of the main parking facilities.

The street is rather mono-functional, and is barely used by pedestrians. The frontages are passive in the street, most of the buildings next to it are offices and institutions (jail, courthouse, etc.).

Aim:

1. connect the main shopping street with existing leisure and shopping centre and Sports Arena in the waterfront
2. make the path safer, make it look shorter.

Fig. 1. Plan view of the street between leisure and shopping centre and the main shopping street, scale 1:2500 (drawing by author)

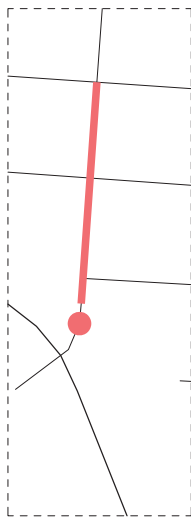


Fig.2. Phase 3.1 (drawing by author)

PHASE 3.1.

Direction signs will be made to make the location of the main shopping and new production streets more clear, as well as some improvement will be made to make the path more pleasant, look shorter and safer for pedestrians. This will be done by placing planters, then improving the lighting, making art installation next to the Entrepreneurs Centre.

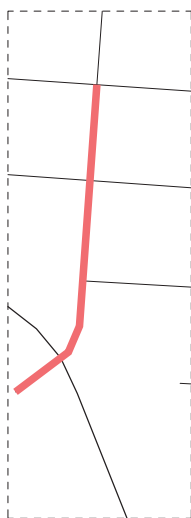


Fig.3. Phase 3.2 (drawing by author)

PHASE 3.2. BICYCLE ROUTES

After improving connections of the area and the city, make bicycle routes crossing the city centre and connecting one of the most important streets in the city, students campus.

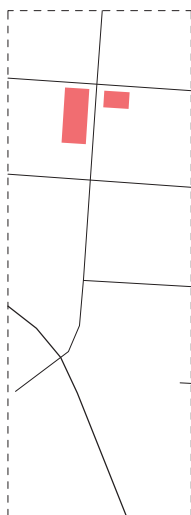


Fig.4. Phase 3.3 (drawing by author)

PHASE 3.3. REDEVELOPMENT OF FRONTAGES

When demand for new production space increases institutions such as the jail and courthouse might be relocated to make space for new programs. This will give a possibility to have more mixed-use areas and active frontages, accordingly making more attractive space for pedestrians.

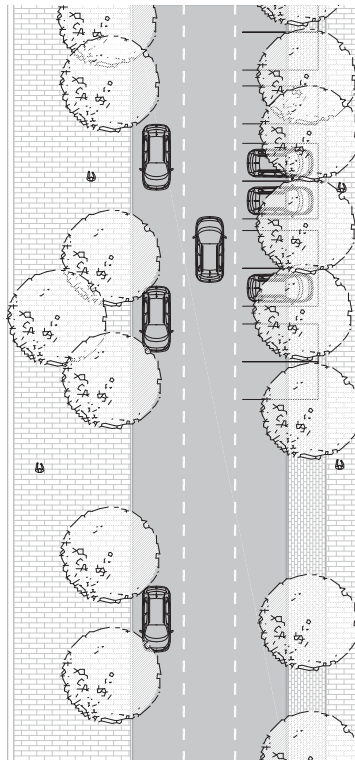
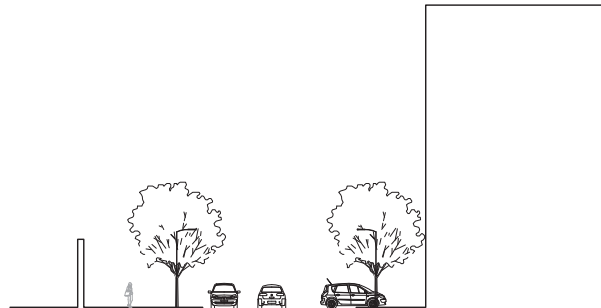


Fig.5. Section of the street. Scale 1:50 (drawing by author)

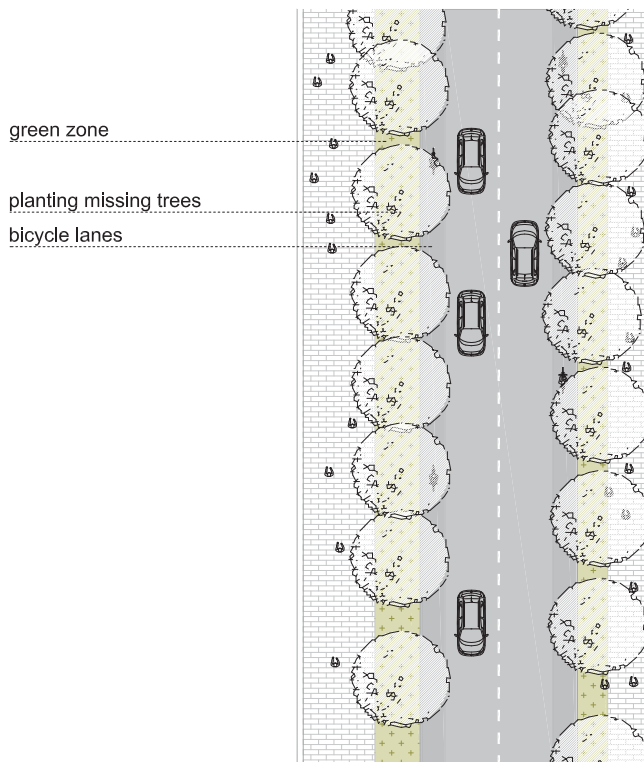
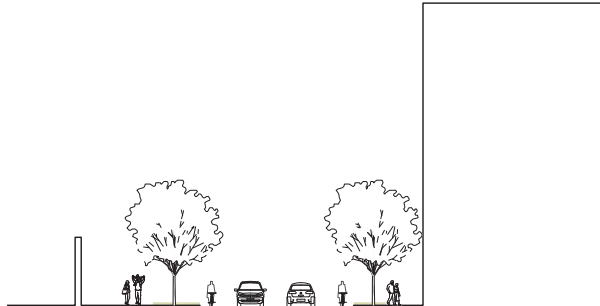
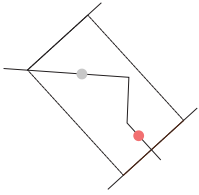


Fig. 6. Proposed section of the street. Scale 1:50 (drawing by author)



8 PHASE B. STATION AREA

A second node with the highest potential to grow is the station area. It is the main bus and train station of the city and is frequently used to transfer while traveling through the country. Moreover at the moment old Russian standard railway lines are being reconstructed according to European standards and will work as a link between the Baltic States and the rest of Europe. This is expected to increase use of trains and together with improvements in the rest of the area and would help to attract more visitors.

Further away from the main street is a former industrial district. At the moment most of the industries already moved out. The existing ones are manufacturing related, such as beer, beverages industries.

Finally, along the main street there is a city food market, used both by the residents of the city and the people from the region. Close proximity to the station allows people from the region bring and sell their products and come to the city to find the necessary purchase. Usually this is done by elderly population.

At the moment the quality of the area is rather low. The most of the industrial buildings are vacant. All this added to the growing reputation of the station areas as a rather dangerous, neglected place. In the end mostly low end retail stores and low quality catering services are located there, that often moves in and moves out.

Usually day trippers who come to the city right away take a public transport to go to their destination. Creating possibilities to enhance the program that is there already together with improvements in the quality of the space might help to regenerate a district into multi-functional area, with attractive entrance to the city, as well as successfully working market, new creative and crafts industries in the back of the main street.

Recently the former industrial buildings are being reused by entertainment industries, such as paint-ball fields, kart tracks, indoor volleyball court.





Bus station

City market

Industrial area

Train station

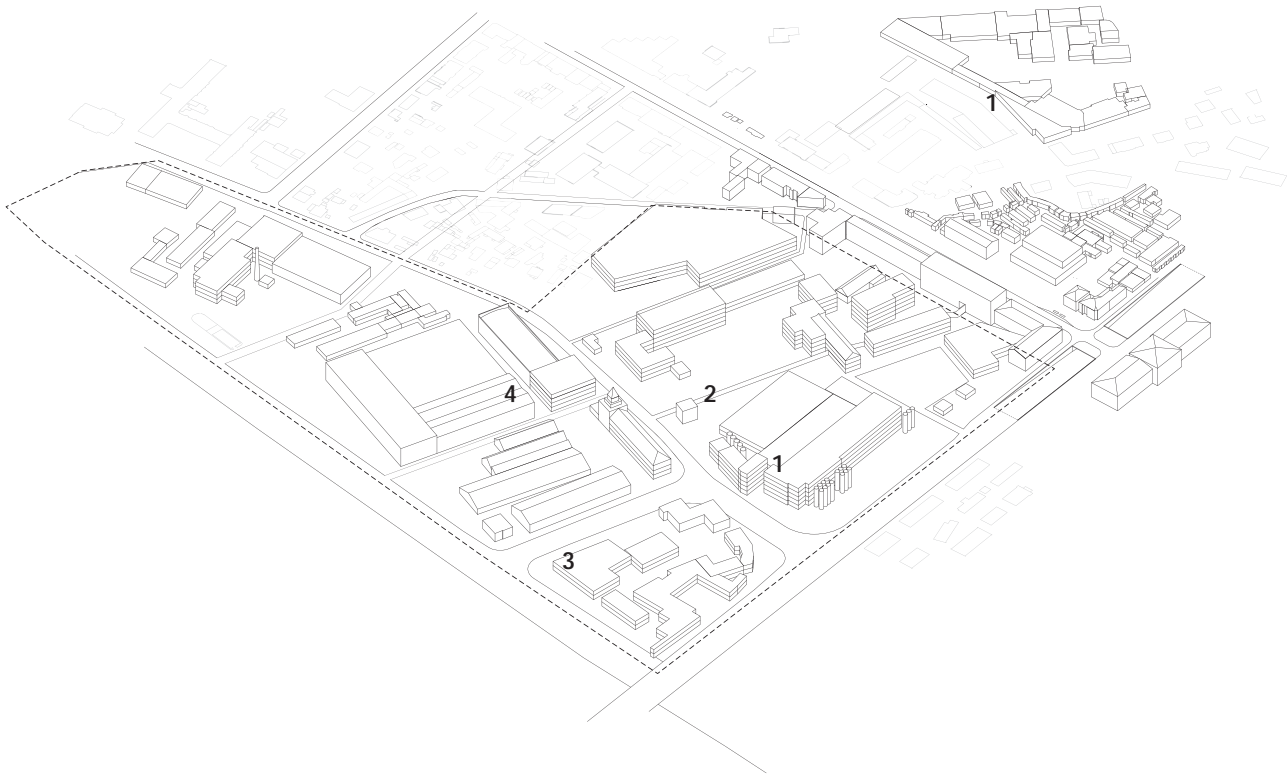


Pic. 1. Inner yard in the industrial area (photo by author)



Pic. 2. The street in front of the market and train station (photo by author)

8.1 STAKEHOLDERS



1 Bear industries (<http://www.volfasengelman.lt/en/>, <http://www.stumbras.eu/>):



2 Paintball (www.saudom.lt):



3 Rio Wallyball Arena (<https://www.facebook.com/Tinklininkistai/>):

4 Kart tracks (<http://kartai.lt/>):



8.2 PHASING

To regenerate an area and the main street with the market a mix of different solutions will be used. It is aimed to redevelop neighborhood into successful area, with vibrant food market, that works throughout the whole week.

PHASE 1. ATTRACT SECONDARY USERS

In the first phase it is aimed to attract secondary users to the area, first by:

1.1 developing touristic industry:

- promote collaboration between the bear industries, that are in the area already
- organise festivals (providing tax reductions to the companies)
- organise tours in the bear industries. This might be done with collaboration with local industries and improving the links connecting them.

1.2 improving link with the station:

- improve pedestrian crossing with the station, by first making the underground crossing more attractive.
- reroute bus routes, adding an extra stop next to the train station to have better connection between bus and the train station.

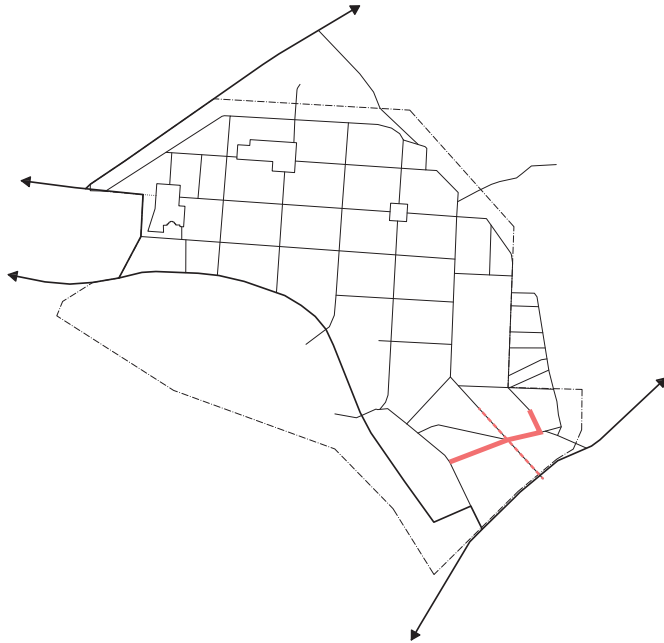


Fig.1. Phase 1 (drawing by author)

PHASE 2. BRANDING OF THE MARKET

When there are more people coming to the area, measures to attract people to the market has to be taken, such as signing an entrance to the market and giving a unique identity

2.1 market branding:

- organise organic food market monthly, then weekly on the street, temporally closing down the street. Moreover invite local producers, from the region, to advertise their products
- if the market becomes more successful, make a competition for development a new local food restaurant, that will use products from the market. In this way the area will be more active not only during the market days, as well as it might attract even more people.

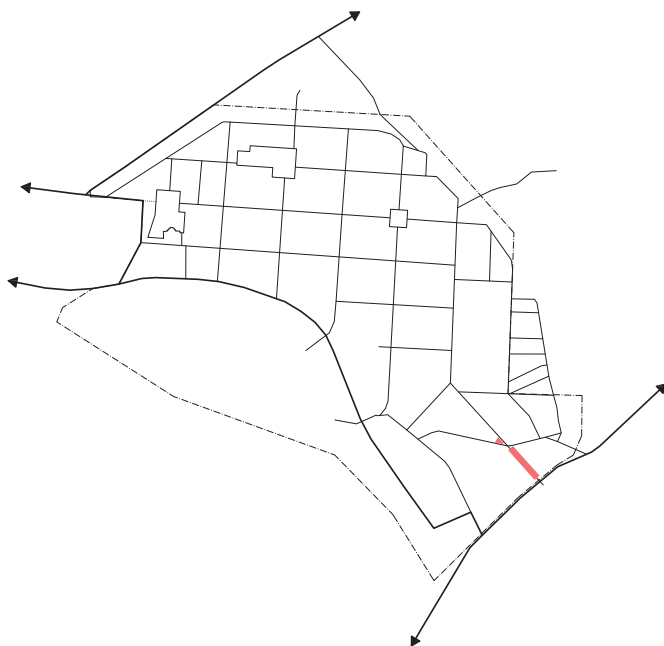


Fig.2. Phase 2 (drawing by author)

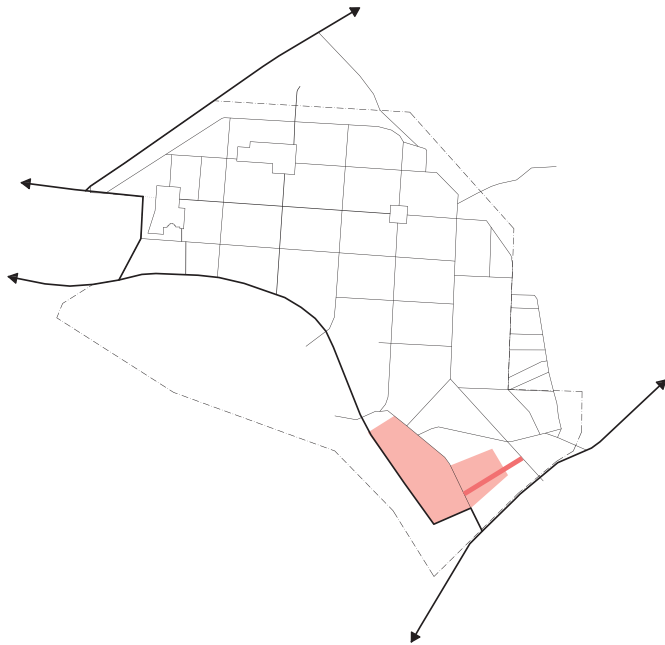


Fig.3. Phase 3 (drawing by author)

PHASE 3. REDEVELOPMENT OF ABANDONED BUILDINGS INTO HOUSING AND PRODUCTION

When the secondary street becomes more popular among start-ups and creative class, new economic class housing area will be developed, this will help to establish more local community, and social class who work and lives in the city centre. At the same time will be a first step connecting two nodes together (the area of the shopping street and station area).

At the same time links with the main street and stops of public transport from the central area has to be improved. It will be done, by making a pedestrian route through the inner part of the block.

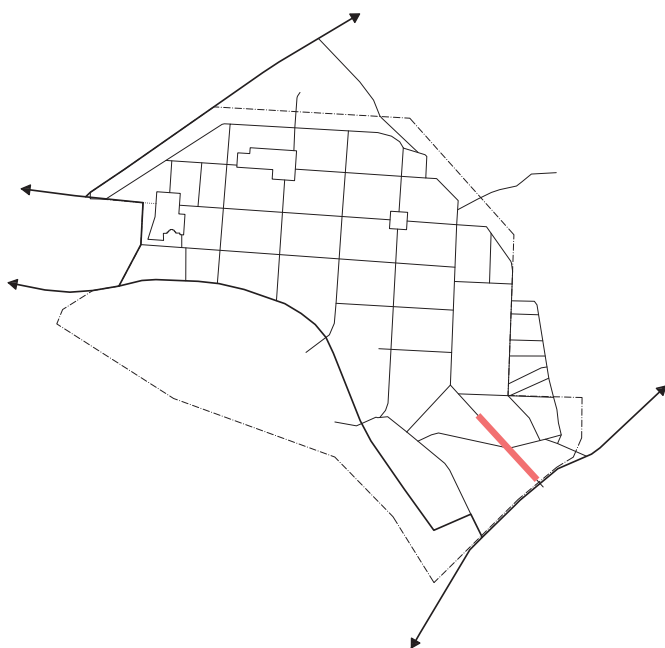


Fig.4. Phase 4 (drawing by author)

PHASE 4. REDEVELOPMENT OF THE STREET

All this will contribute to the regeneration of the market street and the market itself. It is expected that new bars and retail will be opening in the street at this phase. Therefore to enhance that improvements in the quality of the street has to be made, to make it more pleasant to walk, to slow down the movements. It will be done by downgrading the street, redeveloping it into few lanes street, then shared space.

The permanent market will be expanded to the street, by firstly moving out the parking spaces in front of the market. Then after redevelopment of the street to the street itself.



Fig. 3. Plan of station area, scale 1:3500 (drawing by author)

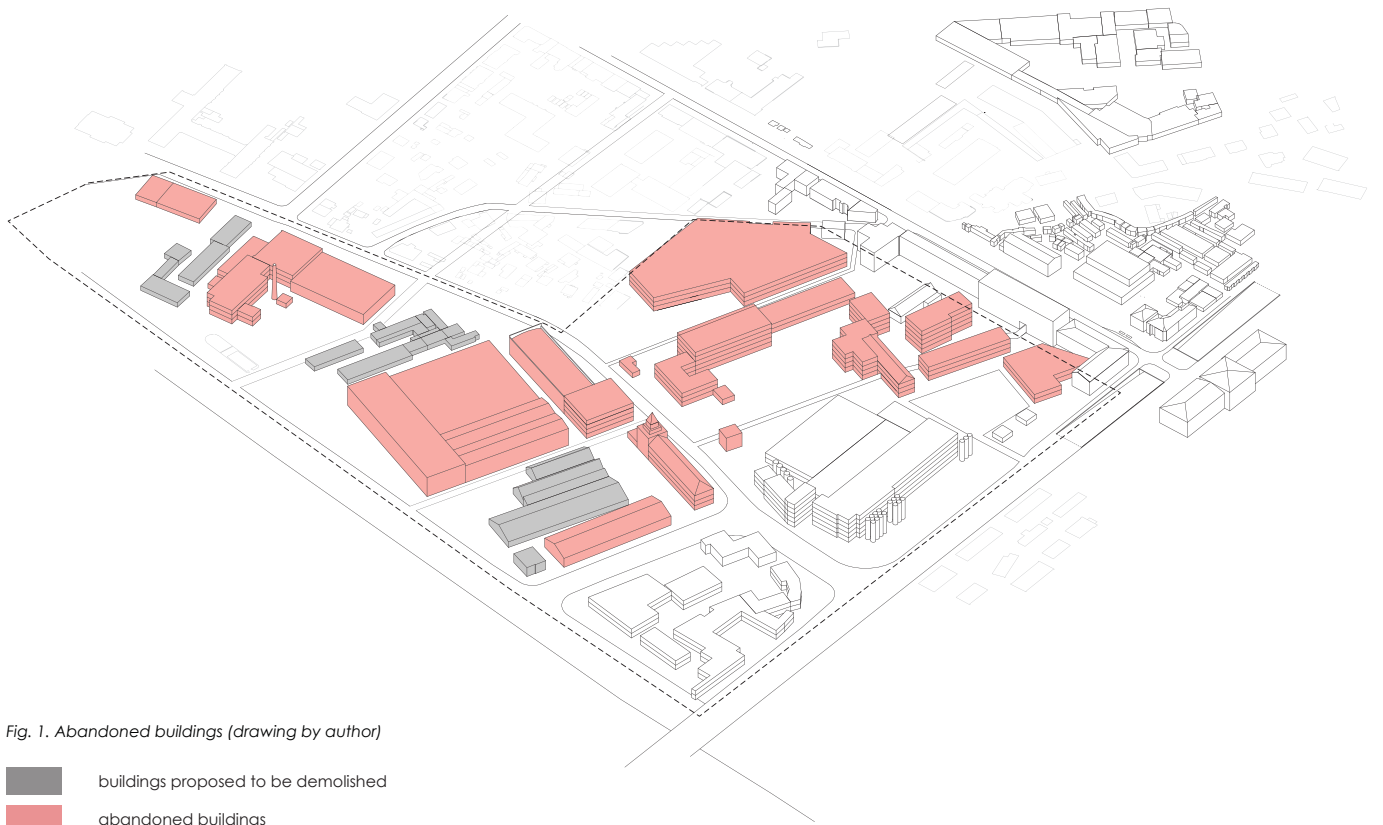
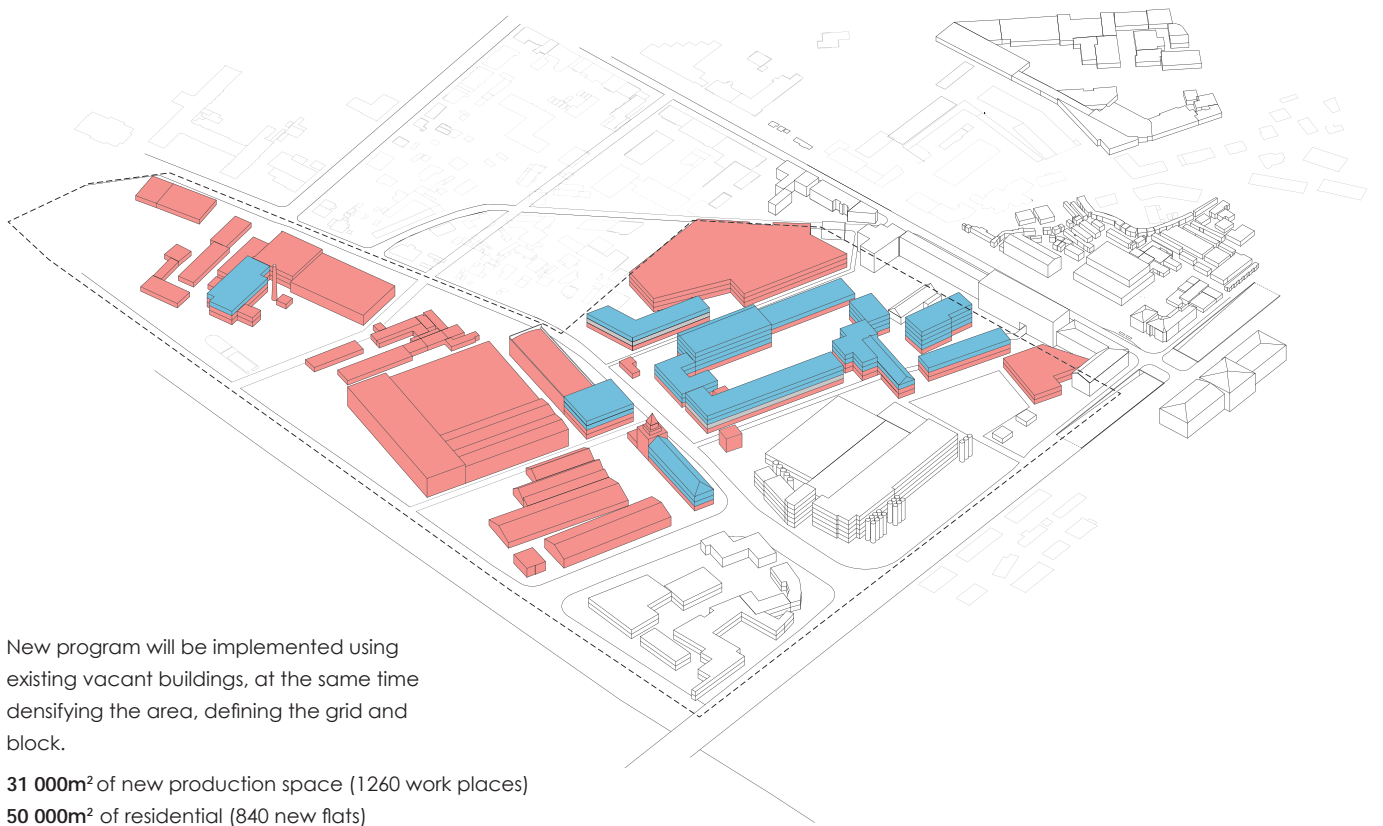


Fig. 1. Abandoned buildings (drawing by author)

- buildings proposed to be demolished
- abandoned buildings



New program will be implemented using existing vacant buildings, at the same time densifying the area, defining the grid and block.

31 000m² of new production space (1260 work places)
50 000m² of residential (840 new flats)

Fig. 2. Program (drawing by author)

- commercial/ production
- mix
- residential



improved pavement

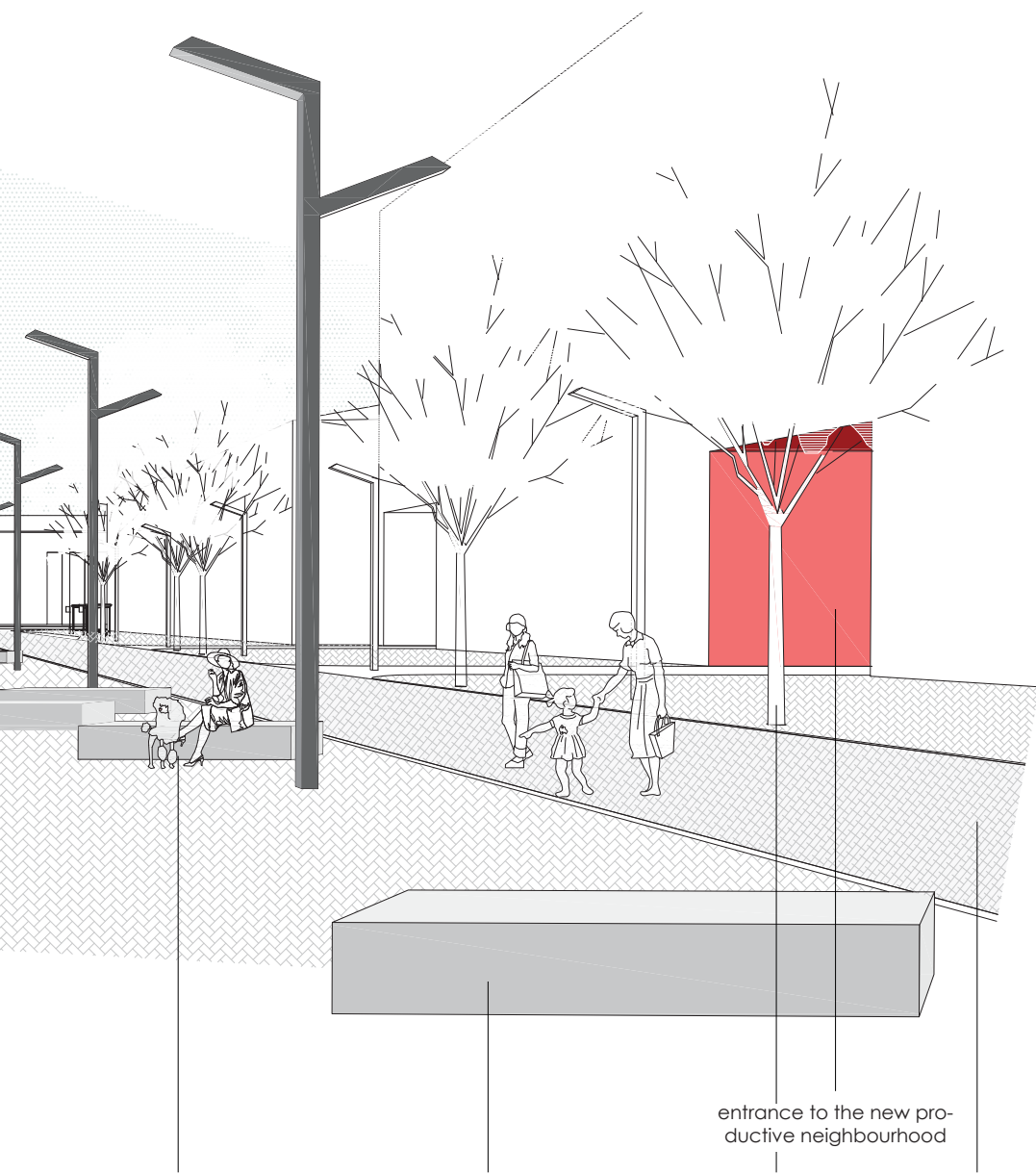
opening up frontages of an existing market building

new permanent open market pavilion

improved crossing to the train and bus station

moving bus stops to have more space in front of the market

Fig.1. Station and market area visualization



entrance to the new productive neighbourhood

street lighting



street furniture



tree grates



downgrading the street

9 CONCLUSIONS

The approach in the project shows how using limited financing the city centre of Kaunas can be redeveloped to make it more vital and livable by building a flexible framework of key projects and networks connecting them. In this way conditions for wide range of local economic activities to emerge are formed.

At the same time more robust economy is created using qualities and potentials that are in the area already, attracting more visitors, at the same time developing more local production based economy. In the end, creating conditions for makers and visitors of the city to benefit from each other.

First, it is done by redeveloping the networks, making the centre easily accessible for regional users. Secondly, promoting walkability in the central part of the area, by reducing parking spaces, improving the quality of sidewalks and locating key projects within walkable distance.

To achieve that a combination between bottom-up and top-down approaches is used. In the project it is aimed to prove that to start a process of regeneration it is possible with rather low budget. This is done using very small scale interventions to achieve and bigger and more complicated redevelopment projects. With in the process more taxes will be collected accordingly investments might be bigger .

Finally, in the project vibrant, compact city centre works as a key location to strengthen economy of the city in general, by attracting new creative class and investing in small businesses. The strategy of revitalisation might start from inwards to outwards, growing further towards the periphery of the city.

10 REFLECTION & EVALUATION

This chapter reflects on the graduation project 'Regeneration through Reindustrialisation'. It evaluates research and design process. Secondly describes the main choices that were made in research and design and argues their reasoning.

1. The relationship between research and design

The starting point of this research project was the fascination of influence of urban form to the everyday life of the people. What are the main reasons of stagnation and what should be changed to activate economic life in the city centre. The main research question is:

How to enhance economic development to create vibrant, livable, and equally accessible city centre in the post-socialist context?

Research has been done simultaneously during the whole graduation process. It might be grouped into three main categories. First, initial literature review, field research, case studies comparisons were done. Findings of the research helped to define the repetitive patterns of development in the post-socialist cities, identify the main problems and strengths. Secondly, research helped to set the new program for the area. The group was related with trends of new economy and development in Europe. Finally, it created a base for the chosen design approach and helped to define characteristics of urban fabric to achieve the key objectives. Specifically exploring the patterns of vital, livable environment, that fosters growth of economy and production. Overall, research helped to build a solid design proposal.

2. The relationship between the theme of the graduation lab and the subject/case study chosen by the student within this framework (location/object)

The research group 'Design of the Urban Fabric' deals with social and physical aspects of urban fabric. How do physical and 'social' aspects interact. Finally, it aims to answer the question how urban form can contribute to the successful development, as well as foster vitality and liveability in an urban environment.

The chosen subject and site is directly responding to research group's main theme. The project's location is in the city centre of Kaunas, Lithuania. It deals with an urban problems through redevelopment of urban fabric, making small scale strategic interventions. Specifically, focuses on economy and opportunities in the area to make it more vital, diverse and inclusive. It is expected that the changes in an urban fabric will influence daily functioning of the area accordingly, and makes it more vital, walkable with an active urban community, that itself will contribute to the regeneration.

3. The relationship between the methodological line of approach of the graduation lab

The studio is using pattern language approach in the research. It allows to recognize common elements and rules that might be used

to achieve certain qualities of urban fabric. The methodology used in the graduation project aimed to combine research and design from the very start. Accordingly, big attention has been paid to explore case studies, literature and different patterns. Thought this has been done simultaneously testing new guidelines and patterns in the context of case study. That helped to make decisions about an urban form necessary for vibrant and economically successful places and possibilities of application of these guidelines and elements.

4. The relationship between the project and the wider context

After regaining independence former socialist states underwent a number of urban, economic and demographic changes. In Lithuania the level of unemployment increased, as a result people emigrate to more economically successful countries, the most active, middle class is moving to suburbs. The city experience demographic shrinkage along with the sprawl, changing the role of the city centre and the way it functions. In the projects it is aimed to explore different solutions for the redevelopment of the city centre that will be more mix, flexible and based on small scale investments requiring low budget. Since the main urban problems and patterns of development in most post-socialist cities are remarkably similar regardless of variations in the national context (Stanilov, 2007), a proposed strategy in the graduation thesis intends to offer an alternative that might become a pilot project for middle size cities in Lithuania or even the Baltic States.

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