# Changing character
# of town form during the XX−XXI c.:
# the case of Lithuanian small towns

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**Abstract. Although towns are constantly changing, changes may have a major impact on town character. Town character reflects the distinctiveness of town form and there is a risk that town may change unrecognisably. This issue is particularly close to small towns, which characters are especially fragile. Additionally, small towns are often neglected or undeservedly underestimated, though people already are searching for slower life and more authentic experiences. Nevertheless, small towns can offer close community, sense of place and attachment to it, local production, cheaper real estate and safe, sustainable environment. Undoubtedly, counter urbanisation processes are underway and Lithuania has a lot of resources for slow town concept development. Lithuanian urban settlement system consists of mostly small towns, so the research of changes of town form and their impact on the town character is extremely important. The article discusses what causes changes in small towns, paying the particular attention to the Lithuanian context. Initial methodological guidelines and insights give basis for further investigation and levels of changes are categorised. Preliminary findings state that due to the level of maturity, completeness of town form in relation to the ideology of the period and on the consequences of World War II, transformations had a different impact on town form during the second half of the XX c. and the extent of changes differ. The concept of the research is illustrated with a case study of Anykščiai town which analysis of changes of town form allows to define main transformations and actions for nurturing the character of the town. The article presents the assumption that the complex research of changes of town form may enable a possibility to identify the model of the town form character and define the townscape capacity.**
**Keywords: town form character, townscape capacity. small town, post-war urban transformations, Anykščiai**

*With the process of globalisation and integration in the world, the convergence of the nations of the world and their cultures is inevitable, but at the same time the identity of nations may be lost. This process affects many areas, but has a particularly strong impact on the cities and towns, which are gradually losing their character of town form [1].*

**Introduction**

As a result of decentralisation, various processes began in the post-socialist countries of Central and Eastern Europe in the 1990s: the privatisation of real estate, the conversion of agricultural land, the emergence of the middle class as a new social class of the rich, new commercial and spatial needs in a rapidly evolving capitalist society, the arrival of the activity of investors and developers, and the creation of a culture of privacy. Active processes of transformations are observed in the indepedent Lithuania after 1990, as in other post-socialist countries, which include not only social, cultural and economic spheres of public life, but also qualitative and quantitative changes in urban systems of various levels – physical and functional parameters of urban structures are changing [2]. In general, urban development in post-socialist countries can be described as free market concentration in the sector of private property, which has affected not only urban sprawl processes but also overall uncoordinated external and internal urban development [3; 4; 5]. Under such conditions, the overall visual appearance of town form becomes a non-priority issue and presupposes local drastic changes or, conversely, the neglect of significant structures in towns.

Contemporary problems of town form are inseparable from the assimilation processes in towns that have intensified in the 20th century. It is difficult to maintain local character of towns when they are invaded by signs of global architecture and the desire to attract the attention of investors [6]. Looking at the historical urban development of Lithuanian cities and towns, the influence of Western and Central European countries on Lithuanian cities and towns became appearant already in the 15th century [7], which is still important today due to close economical and political ties. Of particular importance is the Eastern influence that dominated the socialist countries in the second half of the 20th century through standardised transformations and, in many cases, unrecognisably altered townscapes that even after regaining the independence are still not sufficiently assessed. Not only issues of the resemblence of towns and loss of character, but also survival questions are relevant in Lithuanian towns (due to limited resources, utilitarian needs are the priority). The problem of population decline is especially important for Lithuanian small towns, which is related to the reduction of the economic viability and

attractiveness of a town. Without being an economically strong town, the challenge is how to create the image of a captivating town that not only retains town's current population, but also attracts tourists or new residents. Nowadays, it is more popular to comment the quality of living environment from the social, cultural, ecological, mobility points of view than to discuss peculiarities of towns and how to preserve, maintain or reinforce it in the context of transformations of last century. After all, the innate need of human is to experience uniqueness and that is why the strenghtening of town character can play a pivotal role in the development of the town economy [8]. Additionally, contemporary trends in sustainable development dictate the necessity to look not only at ecological aspects, but also to protect the distinctiveness of place for future generations. However, small towns are still not seen as having all resources to fulfill requirements of sustainable environment and having huge potential to offer unique experiences due to their peculiar town forms.

The relationship between urban form research and urban planning and urban design practise has become a crucial debate at the international level in the last decade [9]. A research on the urban form provides a methodological basis, knowledge of how the physical form of cities or towns is changing, transforming and what are the characteristic features of particular place. The collection, processing, systematisation and comparison of such data are very important in the preparation of urban planning, urban design projects or other kind of documents which deal with the issues of urban form and its unique character. This is especially relevant for Lithuania and many other post-socialist countries where the traditions, research methods of urban morphology and their application in practise have not yet been established or strong enough. Furthermore, the impact of changes on the town form, townscapes during XX–XXI c. has not yet been thouroughly investigated: the relationship between architecture and ideology, the question of national identity and the evaluation of Soviet architecture in contemporary society are still important topics [10]. Also, the world recognises that it is better to add today's circumstances to existing urban form than to transform valuable features. The originality and professionalism of an architect is manifested precisely when he ensures the continuity of traditions in the contemporary world [11].

The aim of the article is to introduce to the issue of changing town forms of Lithuanian small towns during the XX – XXI c. in relation to the town character (the small town has a population of up to 20 thousand in the context of Lithuania [12]). The article presents challenging background of small

town development, which causes changes and may damage the character of the town. After regaining the independence, the focus is on the largest cities in Lithuania. Central parts of small towns in many cases have fundamentally transformed during the socialist period and due to the challenges of shrinking towns, they remain unchanged. The changes, transformations of Lithuanian small towns and their impact on the character of the town have not yet been studied in detail, though majority of towns in Lithuania are small (only 14 out of 103 have more than 20 000 residents) and their unique character is under the threat to be neglected or left transformed unrecognisably.

**Key concepts and background of the research**

Urban form is a physical, built form of an urban place [13]. Fundamental composite elements of urban form and principles of analysis are [14]:
- Urban form is defined by three main physical elements: the building and spaces associated with it, plots and streets;
- Urban form can be perceived on four different scales: building – plot, street – quarter; town, city; region;
- Urban form can only be understood on the basis of history, because the elements that shape it are constantly changing.

Town form is used in the article to indicate that the object is not a separate urban unit but a town as a whole. Town form can be generalised by town character. Town character is: peculiarities of a place; models of development, townscape and use; a combination of all aspects that sets a town apart from others. Townscape is a visual appearance of town form [13]. In order to maintain town character, limits of change of town form start to be questionable.

Changes of town form can be caused by several main factors: natural growth; catastrophes; globalisation, internal forces. The natural growth usually causes more dense inner structures and new external development which follow and extend existing patterns. Also, even the planned development can bring the same effect. Nowadays, a town form mostly is changing due to globalisation and internal forces: political, economical, social and cultural factors [15]. Changes of town form can also be caused by disasters, catastrophes which were influenced by humanity or nature [16]. Usually, if there is no strong political, ideological background, towns recover from disasters by continuing the former tradition. The post-war period is an example how political, ideological background can have a major impact on changes of town form. Therefore, changes can be defined by comparing the town form to itself in its original state and by taking into account the processes that led to certain change.

Globalisation, assimilation processes are undoubtedly one of the most important challenges today and in the future. The Gregorian calendar, which spread at the end of the 19th century, is like a symbol of the beginning of standartised international processes [17]. The period from 1750 to 1939 brought a great deal of transformations in the world, which led to an abundance of ever-changing ideas for the urban development. The following fundemantal changes in the 18th–19th centuries, which caused intensive urbanisation processes and urban transformations, can be distinguished: cultural transformations (perception of human powers against the nature; the formation of working class; technological possibilities and changes in people's consciousness have encouraged them to get to know more about their history and environment); technical transformations (inventions of steam engine, systems of metallurgy, railway, bridges and agricultural technologies; improved medical technologies, though rapid urbanisation and travelling possibilities caused outbreaks of diseases; modular building systems shortened construction time and enabled high-rise buildings); territorial – spatial transformations (growing population, mobility, traffic flows, the strive for better hygiene and healthier environment led to transformations of urban form; more greenery started to appear in urbanised areas; axis was not used for the formation of urban structures – it was seen as an open and promisingly expanding structure) [18; 19; 20].

The process of modernisation in Eastern Europe started in the late 19th century. Modernisation is characterised by the dissemination of knowledge and information that has affected cities and life in them: local, elite-formed government and growing influence of political parties; international acitivities of urban planners, urban designers and architects; new infrastructure, development of railways, tram, electricity, gas and other networks, improving sanitation; creation of philharmonics, museums and other institutions where both local and "European culture" could be demonstrated; the growth of universities and the creation of other new educational institutions [21]. Soviet planners formulated the concept of socialist urbanism in the 1930s, which fundamentally shaped urban development in Eastern Europe in the later decades and led to functional segregation between industrial and residential areas and elongated green spaces. After the collapse of communism at the end of the 20th century, the political and economic context changed dramatically, and the forces of global economy became apparent [22]. A rapidly changing world, international architectural styles, shopping networks, pop culture are increasingly associated with the loss of identity and the disappearance of distinctive features of places.

Nowadays, the perspectives of urban development are drawn not only by municipalities, individual institutions of countries, but also by European and the world institutions, organisations. Although organisations (European Union, European Commission, World Health Organisation, UNESCO, etc.) and various programs, documents (ESPON, European Spatial Development Perspective, New Urban Agenda, etc.) represent the strive for a human well-being, but also are examples of standartised processes that have been in place for many years. Nevertheless, this is the case when standartised processes are implemented with an aim to preserve and nurture local character in the context of globalisation. Global organisations seek to guarantee equal opportunities for people, and one of them is the freedom to choose how and where a person wants to live. In order to respond a demand, cities and towns face the question of image – what it can offer to potential resident or tourist. This results a bigger competition between towns and cities, an even greater significance of their distinctive character, and better opportunities for small towns to revive.

Modernisation, globalisation, standartisation did not bypass small towns: external governance dominates, the local economy is undermined by the displacement of local businesses and the acceptance of the universally accepted, towns become more similar and have less capacity to retain their local character. Shrinking small towns are experiencing a decline in public services and a resource-based economy, abandonment of the cultural landscape, increasing areas of unused land and emptied housing, social exclusion and lack of political vitality, an aging population. On the other hand, small towns are like an oasis in a rapidly changing world, away from noise and pollution. They can offer a small close community, a sense of attachment to a place, and a less standartised, homogenised environment. Small cities can suggest a sustainable future by reaping the benefits of their cultural, economic and natural environment. Counterurbanisation processes began emerge in the 1960s as opposed to globalisation and intensive urbanisation. One-fifth of people live in small European towns, and in more intensively urbanised, metropolitan regions, as many as a third or a half in some cases. There is a strong growth of population in small towns (population up to 50 000) in the U.S. [23]. Due to the development of technology, better travelling conditions and opportunities to work and receive services or goods remotely, small towns are emerging as attractive living environments, which can offer slow life and exceptional character. Therefore, researching and nurturing the character of small towns and adapting it to the contemporary needs is the key not only to solving the issues of

small towns survival or uniqueness, but also to respond to promising trends. Unfortunately, the changes, transformations of town form, their impact on the town character and the townscape capacity have not been studied in detail in the small towns in Lithuania.

## Historical urban development of Lithuanian small towns till World War II and subsequent changes

Most of European small towns emerged in the early Middle Ages as spiritual, defensive, administrative, educational centres in the feudal system. As the need for the military grew, more taxes had to be collected and people where forced to sell more. As a result, agricultural and craft production began to grow. Emerging specialisations and rising trade provided the basis for a new phase of urbanisation based on merchant capitalism. Starting in Italy, a dense network of market towns quickly developed through Europe. In many cases, this was the period during which the forms of towns were shaped, which were later supplemented by industrialisation and modernism [23]. Although, there is a great variety of towns, but they always developed close to important roads and waterways. The main structures in towns where castles, manors, churches, monasteries and the market square. The main street usually widened towards the market and the square changed according to the size of market and the adjacent shops. With the growth of towns, the need for new structures and functions emerged: hospitals, schools, town halls, a rectangular plan has been introduced, etc. Until the 19th century, towns and cities clearly reflected the culture of society and formed a cohesive structure based on military, religious or societal symbols that enabled residents to form a connection with the environment [24]. The industrialisation accelerated and the importance of markets decreased during the 19th century, which led cities and town to become more prominent by function: The economic changes of the 20th century can be seen today in abandoned factories, unused land, changed appearance of main streets and squares, and spread of standartised networks. Urban development was projected on the basis of the land ownership and infrastructure development rather than a historically formed plan [25]. The impact of globalisation on towns and cities become extremely apparent: standartisation, rationalisation, homogenisation.

Lithuanian towns began to grow at the end of 13th century and were forming when towns and cities in Europe were already developed. From the very beginning of the formation of the state of Lithuania, cultural exchanges took place and their traces can be seen in the town forms: a spontaneous urban development was until the 15th century in the Grand Duchy of Lithuania, which included present-day Belarus, part of Russia, Ukraine and Poland, and later Latvia and Estonia; the first plans of settlements were drawn up for the Wallachian reform in the 16th century, which was influenced by the Gothic; the Renaissance and Baroque ideas influenced the formation of urban complexes in the 17‑18th centuries; after Lithuania was included in the Russian Empire, master plans for urban reconstruction were prepared according to the example of Russian cities [26]. At the beginning, with a low level of crafts, Lithuania was a raw material base for neighboring countries. The movement of trade roads shaped the streets of towns. Due to the streets going to the market square or fortress, in many cases, a radial plan was formed. The introduction of Christianity brought churches as almost the only landmarks in towns. The emergence of Magdeburg rights, the creation of organistions of workshops, military and the establishment of manors also had a significant impact on the changes in the town form. Over the time, each town developed its own traditions, giving the town its own character [27]. According to Lithuanian researches, it can be stated that Lithuanian towns were maturing, forming until 1940 and later underwent transformational as well as new urban development processes. Since small towns in Lithuania were not as fully formed and developed as other European towns by that time, it can be presumed that their character formation was more disturbed. Also, it can be assumed that small towns in Lithuania are very fragile and even minor changes may have a great impact on their character. Based on researches on town form character of Lithuanian small towns, it can be summarised that the following general peculiarities were formed till 1940 [27; 28; 29]:

- Lithuanian towns did not repeat the urban traditions of Russia or Western Europe – they have many peculiarities that depend on the cultural level of country, the development of productive forces and geographical location. Radial and linear plans according to the natural conditions are especially characteristic;
- Lithuanian towns were dominated by a network of winding streets with closed street perspectives and multifaceted visibility;
- Central parts of towns were compact, densely and regularly built. Buildings usually faced the square with their ends or, in some cases, with their sides and passageways between buildings leading to the square were formed;
- Different sizes, shapes, proportions of squares and unique connections with main streets, residential areas determined a great variety of squares and town form character. The relation between square and buildings had not yet acquiredt the maturity of a well-organised space;
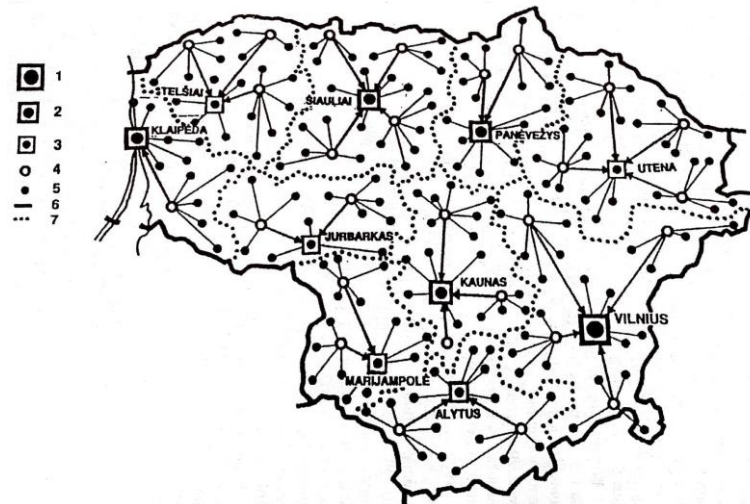
*Fig. 1. Scheme of the development of a unified urban settlement system in the territory of Lithuania in 1964: 1 – capital Vilnius; 2 – developing regional centres based on cities and medium towns; 3 – developing regional centres based on small towns; 4 – developing district centres; 5 – local centres [32]*

- Moving away from the square, 2.4–3.1 times less dense built-up area and more greenery. Central parts of towns, public centres were not surrounded by greenery, except for the church environment, which was often only one landmark in town.
- The architectural expression of buildings is characterised by: the harmony between nature and construction; the dominance of gable or quadruple roofs in building volume; rhythm, local materials and natural light shades were used to accentuate building structure without exaggerated decor.

In the post-war period, industry, administration, services, transport and natural features were essential factors in planning urban development and changes [30]. Most of the urban planning projects were completed till 1956, which were characterised by regular shape blocks – a regular single-line plan that offered uneconomical street network. The new streets of single family houses seemed dull, trite and often a stark contrast to historic buildings appeared, as the old streets were picturesque and resilient to natural obstacles. Furthermore, roofs were formed at 25 – 45 degrees, although roofs of 42 – 48 degrees were common in Lithuania [31]. Later, the scheme for the development of a unified urban settlement system in the territory of Lithuania was prepared (Fig. 1). This scheme strengthened the polycentric urban settlement system in Lithuania, emphasised role and importance of smaller towns, and gave an impulse for further and more intense transformations in small towns: redevelopment of central parts of towns, development of industrial areas, multi-storey complexes, etc.

After regaining independence, the following changes were observed in smaller towns: reconstruction, demolition or construction of new single family houses; the ground floors of single family houses and multi-storey buildings are started to be adapted for commercial and other functions that change the architectural expression of buildings and the street view; urban development is oriented to individual needs (construction of standartised shopping centres, single family houses, farmsteads, gardens, etc.); larger industrial complexes are being abandoned and smaller ones transformed; the construction of utility buildings became more important; paving, landscaping of urban public spaces are being renovated and supplemented by monuments and other elements [33].

Nevertheless, it is still unclear: how town form was changed; which changes in towns can be called as transformations that had a major negative impact on town form character; how those changes, transformations could be evaluated in the context of the whole town as a process; is it possible to find general strategies for solving the issues of particular transformations which would be suitable for more than one town or standartised urban development changed towns completely different; what is the townscape capacity – where is the line which can not be crossed in order to maintain at least essential features of Lithuanian small towns.

**Concept of the research. The case of Anykščiai**

A general idea of the research is to identify peculiarities of changes of town form of Lithuanian small towns after the World War II in relation with town character: what is the extent of changes in towns; did those changes transform essential features of town and some actions are needed; is it possible to identify the model of specific town form or a model could be the same for more than one town. For the first stage of the research it was chosen to analyse those small towns, which were defined as the most distinctive ones. According to the resolution of the Council of Ministers of the
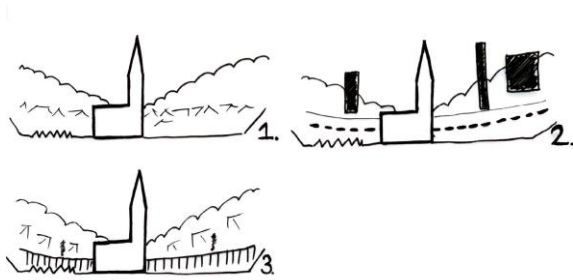
*Fig. 2. Substantial value and transformations of Anykščiai town form character (1 – key feature: the church dominates in a Šventoji river valley, surrounded by green slopes; 2 – key transformations: industrial, multi-storey buldings are overshadowing the church and green slopes, the old part of the town is not identifiable; 3 – possible actions: clearifying the structure of the old part of the town, eliminating visual pollution in order to emphasise the church, strenghtening the town structure by accentuating peculiarities of the terrain)*
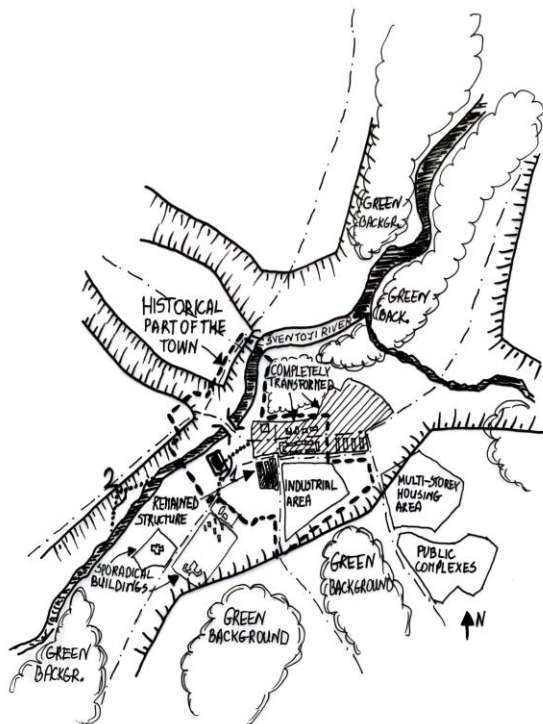


*Fig. 3. Major transformations in Anykščiai town which have an impact on the town form character*

flood, fire), vitality (e.g. economics, culture). Secondly, changes of street network, structure of blocks and their form, building principles, structure of urban public spaces are measured in comparison to their original form (mostly formed till World War II) and relation with natural environment. Changes are comprehensively categorised into different levels:

1. Substantially transformed structures, which already had a particular form before World War II (street network, blocks structures were changed);
2. Partially transformed structures, which already had a particular form (mainly single objects appeared or changed);
3. Changed structures, which had not had a particular form (extended, densified street network and blocks structures);
4. Unchanged or slightly altered structures which already had a particular form.
5. New urban development territories which have not yet undergone transformational processes.

Such collection of data provides primary knowledge about extent of changes and differences between towns. Although the same ideological principles of urban planning were implemented in towns, the nature and extent of changes in towns differ to several key factors:

▪ what maturity the town form had reached (the absence of vacant areas and the strength of urban composition often led to a lower degree of changes in the central part, e.g. institutions, public services were established in existing buildings);

▪ what is the extent of the consequences of the war (empty areas led to the favorable conditions of building new types of structures);

▪ how the existing plan structure corresponded to the ideology of that time (e.g. in the first half of socialist period, regular blocks of single family houses were compacted and expanded; classicist principles of axial composition were respected).

So the case of each town is individual and though it is possible to distinguish common types of changes, their scale and impact on the particular town may be different. It confirms the assumption that in order to define the model of specific town form and to measure the impact of changes, not only each town should be analysed separately but the results should be compared as well. An individual study of the town is aimed to specify cases of changes and their impact on the town form character including the fact that town form is constantly changing and the goal is not to conserve, but to maintain essential features of towns in contemporary world. The changes are planned to be summarised in the form of models describing the substantial change in town form character which would also help to define the townscape capacity (Fig. 2).

LSSR of 1963, the order of the Minister of Culture of the LSSR of 1969, the order of the State Construction Affairs Committee of the Council of Ministers of the LSSR of 1969 and the resolution of the College of the Ministry of Culture of the LSSR of 1988, a list of 67 urban monuments of Lithuanian SSR settlements was defined [34]. 29 out of 67 are small towns and considered as potential objects of the research. Since the research is ongoing and methodology is constantly adjusting, the article presents initial methodological guidelines, insights and shows Anykščiai town as an argument for the need of such kind research in Lithuania.

First of all, historical urban development of towns is analysed considering political background (e.g. ideology, orders, plans), cataclysms (e.g. war,

*Fig. 4 Transforming townscape of Anykščiai: two pictures above before the World War II [35]; below – XXI c.*







Figure 2, 3, 4 show an example of the town of Anykščiai in the north-eastern Lithuania. Regardless of the period of time, the town form character has always been identified by the relationship between the natural and anthropogenic environment: Anykščiai is located in the valley of the Šventoji river and surrounded by green slopes, which act as a background for the landmark – the highest church in Lithuania. However, the transformations of the 20th–21st centuries (Fig. 3) threaten essential features of the town form character. Firstly, some of the areas, destroyed during the war in the central part, were formed using larger-scale structures, and some were transformed by fundamentally changing the structure of blocks, the nature of the design principles and the spaces. Moreover, an industrial complex which emerged in the central part of the town and other complexes or separate buildings overshadow the

dominance of the church and a common scale in the town. Finally, the green slopes which surround the central part of Anykščiai are disturbed by multi-storey buildings and other complexes. In general, some main features of Anykščiai town form still remain: natural environment is preserved, green slopes are still visible; street network basically is not changed; there are remains of common small scale block structures; the church still acts an important role in townscape.

Primary collection of data and analysis present possible priority areas for action (Fig. 2) which will be clarified in later stages of the research:
- Central part of Anykščiai consists of two potentially transformational areas: northern part could require regeneration; southern – conversion;
- Emphasis on church could be brought back by eliminating visual pollution;
- In order to maintain green slopes as a distinctive feature, areas of multi-storey housing and public complexes on upper terrace should be reconsidered.

The given example of Anykščiai shows that the detailed research of changes of town form and their impact on the town form character is necessary. It can be assumed that the complex analysis of the changes of town form based on the primary form and assessed not as a current situation, but as constantly changing process, can help to define the fundamental changes of the town form character and to determine the townscape capacity.

**Conclusion**

The impact of modernisation, globalisation, standartisation and other processes on town character is a constant discussion and is especially sensitive issue for small towns, which character is very fragile. Nowadays, small towns are often seen as an unattractive place to live and most of investments usually are focused on large cities. On the other hand, processes of counterurbanisation show that small towns are or will be an alternative type of living environment for people, who search for lower real estate and mobility costs, tranquility, greater variety of local production, less polluted, more communal and unique neighbourhoods. The character of small town is not only a significant survivol factor, but also a possibility to stand out among other towns or cities. However, since small towns are trying to meet at least the basic needs of residents and are fighting migration issues, their character is often not maintained and nurtured. As a result, changes of town form are not seen as a major issue, their effect on town form character is not evaluated and the threat to lose local distinctiveness arises.

Lithuanian towns as well as other post-socialist towns underwent major changes during the XX– XXI c., but the extent and specifity of town

form transformations is still not clear. The preliminar studies show that it depends on the level of maturity, completeness of town form in relation to the ideology of the period and on the consequences of World War II. Furthermore, according to the complex research which consists of analysis of changes of separate elements of town form, the extent of changes may be categorised into different levels. Also, mostly transformed areas can be defined and data may be compared with other towns, which could give insights about general situation in Lithuania or in wider context.

Nevertheless, situation of each town and their character are different as it was presented by unique example of Anykščiai. Anykščiai case illustrates particular issues and the need of actions: the central part was completely transformed during the second half of the XX c.; uniqueness of the church dominance in the green slopes background is disturbed. The initial investigation confirms the assumption that the model of essential features of town form is necessary. The introduced concept of the research presents changes of the town form as a process and searches for the limit of change beyond which the character distorts. The analysis may allow to identify the model of town form character and the townscape capacity. This base could also play a role in finding principles how to nurture the character in particular cases.

If the changes of town form and their impact on the character of the town are not studied, towns may continue to change unknowingly or dissapear from the map of the country. Therefore, especially in the regard that most towns of Lithuania are small, the establishment of the town form character model in the context of changes and the definition of townscape capacity are vital for small Lithuanian towns.

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**Kopsavilkums**. Lai arī pilsētas patstāvīgi mainās, pārmaiņām var būt liela ietekme uz pilsētas raksturu. Pilsētas raksturs atspoguļo pilsētas formas atšķirtspēju, pastāv risks, ka pilsēta var mainīties neatgriezeniski. Aktuālā tēma ir īpaši tuva mazajām pilsētām, kuras bieži tiek atstātas novārtā un par zemu novērtētas. Neskatoties uz to, mazās pilsētas var piedāvāt sabiedrībai vietas sajūtu, vietējo ražošanu, ekonomiski izdevīgāku nekustamo īpašumu un drošu, ilgtspējīgu vidi. Pētījumā analizētas Lietuvas pilsētas, pilsētu formu un rakstura izmaiņas. Rezultātā sniegts pieņēmums, ka kompleksa pilsētu formu izpēte var sniegt iespēju identificēt formas raksturu un noteikt pilsētvides ietilpību.