Rural – Urban Partnership for Balanced Spatial Development in Latvia

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Abstract—Spatial dimension in development planning is becoming more topical in 21st century as a result of changes in population structure. Sustainable spatial development focuses on identifying and using territorial advantages to foster the harmonized development of the entire country, reducing negative effects of population concentration, increasing availability and mobility. EU and national development planning documents state polycentrism as main tool for balance spatial development, including investment concentration in growth centres. If mutual cooperation of growth centres as well as urban–rural cooperation is not fostered, then territorial differences can deepen and create unbalanced development. The aim of research: to evaluate the urban–rural interaction, elaborating spatial development scenarios in framework of Latvian regional policy. To perform the research monographic, comparison, abstract–logical method, synthesis and analysis will be used when studying the theoretical aspects of research aiming at collecting the ideas of scientists from different countries, concepts, regulations as well as to create meaningful scientific discussion. Hierarchy analysis process (AHP) will be used to state further scenarios of spatial development in Latvia. Experts from various institutions recognized urban – rural interaction and co-operation as an essential tool for the development. The most important factors for balanced spatial development in Latvia are availability of public transportation and improvement of service availability. Evaluating the three alternative scenarios, it was concluded that the urban – rural partnership will ensure a balanced development in Latvian regions.

Keywords—Rural – urban interaction, rural – urban cooperation, spatial development, AHP.

I. INTRODUCTION

Mutual relationship of urban–rural areas has been in the centre of scientific studies since the beginning of industrialization. Mutual dependence paradigm prevailed at the end of the 19th century and early 20th century, initial studies confirmed the hypothesis that growth of urban areas occurs at the expense of rural areas, but the claim that urban areas are the driving force of surrounding territories prevailed in the middle of the 20th century. At the end of the 20th century and in the 21st century researchers have concluded that as opposed to the previously used opinion emphasizing dichotomy of territories, it is necessary to analyze both theories stressing their mutual dependence and linkage. 68% of population in Latvia lives in urban areas, although urban area territory takes only 11% of the total territory of Latvia. Moreover, Latvia has highly monocentric spatial structure – capital city Riga as the main centre of administration, economics, culture, education and science has developed more successfully than other Latvian towns. As a result of urbanisation, not only habitation structure changes, but also production and consumption structure, so increasing the importance of urban areas as well as their impact on the regional development of a particular state. Urban areas, where resources, population, production and innovations are concentrated, are presumed as the leading force of region or state’s development.

As a result of scientific discussions, spatial dimension as well as the importance of providing balanced urban–rural interaction has been included in development planning at international and local level. Significant EU sustainable development policy guidelines emphasize the necessity to foster functional linkages and partnership between urban–rural territories so lessening the differences of economic growth. This goal has been included in European Spatial Development Plan, the Territorial agenda, the European Community Strategic Guidelines on Cohesion and other documents.

Necessity of mutual urban–rural cooperation and partnership has been updated also in Latvian long-term development strategies. The main instrument of regional policy is formation of polycentric territorial structure so strengthening the role of regional towns in the development of surrounding territories and concentrating the support of investment. Documents state concentration of public investment in developing centres as the main component of balanced territorial development. It is believed that the concentration of capital and resources form the necessary critical mass for socio–economic development not only in urban areas, but also surrounding rural areas, therefore mutual urban–rural interaction is important.

If mutual cooperation of regional towns as well as urban–rural cooperation is not fostered, then regional and territorial differences can deepen and create unbalanced development. Therefore it is necessary to foster urban–rural interaction in addition to the promotion of polycentrism.

The aim of research: to evaluate the urban–rural interaction, elaborating spatial development scenarios in framework of Latvian regional policy.

The following research tasks are set to achieve the aim:
1. to examine theoretical aspects of urban – rural interaction;
2. to examine the policy of spatial development in the European Union, including Latvia;
3. to elaborate urban and rural interaction development potential scenarios for well–balanced spatial development.

To perform the research, general scientific methods from will be used – monographic, comparison, abstract–logical...
method, synthesis and analysis. The Analytic Hierarchy Process (AHP) will be used to state further scenarios of spatial development in Latvia. AHP is a multi-criteria decision-making approach and was introduced by T. Saaty [1]. The AHP is a decision support tool which can be used to solve complex decision problems. It uses a multi-level hierarchical structure of objectives, criteria, subcriteria, and alternatives. The pertinent data are derived by using a set of pairwise comparisons. These comparisons are used to obtain the weights of importance of the decision criteria, and the relative performance measures of the alternatives in terms of each individual decision criterion. If the comparisons are not perfectly consistent, then it provides a mechanism for improving consistency.

II. URBAN – RURAL INTERACTION

At the beginning of industrialisation era in the 19th century, when residents and resources were concentrated in cities, the question about urban–rural interaction became topical in scientific discussions. Traditional approach of emphasizing urban–rural dichotomy, which opposes territories as separate territorial units with different functions, traits and possibilities of development, however, the economic integration of the 20th century, globalisation, development of information technologies significantly changed urban–rural relationship. As a result of this process, accentuating opinion about urban–rural interaction strengthened, emphasizing that both territories are a unified whole and that urban area cannot do its functions without those of rural areas and vice versa [2]-[4]. Both territories are interconnected and dependant both from social and economic aspect in the concept of interaction. Evans [5] claims that sustainable development cannot take place, if territories are opposed – they must work as a unified whole. The basis of interaction analysis is the separate and common identification of both territories in the context of spatial development [6]. The approach of urban–rural interaction as the characterising paradigm of territorial relationship and mutual linkages is the basis of the promotion thesis development, highlighting that development in economics happens by effectively using the existing resources of territory and it is possible only by interacting with surrounding territories.

Urban–rural interaction is characterised as visible and invisible human, capital, goods, information and technology flows, which include administrational, legal, financial and culture linkages between both territories [7] and the aim of which is balanced spatial development and socio-economic growth of participating territory. The conceptual model of urban–rural interaction has been reflected in Fig. 1 – components of interaction and expected benefits have been included.

The basis of urban–rural interaction is different material and non–material flows between urban and rural areas, so creating basis for linkages. For instance, resident commuting from urban to rural areas or vice versa can cause economic or social linkages depending on the aim of commuting. Interaction can be promoted or, just the opposite, limited by the activity of administration both regarding the development of particular territory and the cooperation with neighbouring territories. Several significant benefits are obtained as a result of interaction, for example, public services are promoted, territory’s potential is effectively used; as a result, the residents of both territories are beneficiaries.

**Fig. 1 Urban–rural interaction**

Source: Author’s construction based on [6]-[9], [13], [14], [27]-[29]

When collecting the opinion of various authors, it must be concluded that there is no united understanding about the interaction of territories and its elements. Scientists emphasize the positive role of interaction in the promotion of balanced spatial development and effective administration of both territories by characterising different interaction elements and forms, for instance, the formal cooperation of state or municipality authorities, resident migration, agricultural production and trade. Complex research of separate elements, including urban–rural linkages, flow and cooperation characterisation, is necessary in order to have detailed understanding of the concept of interaction.

A. Urban–Rural Linkages

Important element of interaction is the linkages formed among territories, which are formed of different territory development potentials and their role continues to increase. Researchers and policy–makers consider linkages as one of the most important tools in the 21st century to ensure balanced spatial development [5], [8]. However, relatively rare are the cases, when this aspect has been included in the development planning strategies [9].

Scientists have identified several sectors, in which linkages between urban and rural areas have been detected – they variate characterising the ease/hardship of founding, initial aim, beneficiaries (urban, rural areas or both – sometimes the benefit is clearly visible, sometimes it can be expected in long term) or problems. Linkages can be created by one or the other territory depending on various aspects, beneficiaries can be representatives of either territories or only one.
Scientific literature lists linkages, which can be classified as follows:

1. **Structural linkages** – characterise those spheres and fields, in which urban–rural territories are interconnected and mutually dependant;
2. **Functional linkages** – characterise processes and activities, which have been formed with a definite aim;
3. **Spatial linkages** – mainly physical linkages, which can be observed in reality;
4. **Other linkages**, which do not belong to the above mentioned grouping.

### A. Flows between Urban–Rural Areas

Physical manifestation of linkages can be measured in structural and functional flows [14], which are associated with interaction among people, places and objects [13], [7]. There are natural flows, partially altered flows by people as well as flows created as a result of human or human activity. Flows created by humans are capital (private or public), flow of people or goods, as well as flows of ideas, innovations and information [6], [8], [10].

Preston, one of the first scientists, who researched urban–rural interaction – their kind, intensity and direction very often states the development possibilities of both territories. There is no united opinion in the scientific literature about that, how urban and rural areas are mutually connected. Economic, social and institutional linkages are mentioned as the most important. The basis of mutual linkages is the flow of residents, goods, capital from urban to rural areas.

### B. Flows between Urban–Rural Areas

Urban–rural linkages are an important element of urban–rural interaction – their kind, intensity and direction very often states the development possibilities of both territories. There is no united opinion in the scientific literature about that, how urban and rural areas are mutually connected. Economic, social and institutional linkages are mentioned as the most important. The basis of mutual linkages is the flow of residents, goods, capital from urban to rural areas.

### C. Urban–Rural Cooperation

Cooperation and partnership among the administrations of territories is an important element in order to create urban–rural interaction. Partnership is institutional form of urban–rural cooperation, which is influenced by legislation, institutional structure, tax system, knowledge and skills, stereotypes and prejudices [7]. Sustainable administration of urban–rural interaction is directly dependant on the attitude of local administration structures, when developing territory development strategies, which can generate cooperation or exactly the opposite – conflicts among territories.

Partnership can take many forms by including institutions and private partners; it can be of informal character or based on the administrative structure of territory. Benefits are both economic and social, when deliberately forming urban–rural partnership and using existing linkages or forming new ones [12]. As a result of urban–rural cooperation, polarisation and stratification are lessened; local problems are solved in wider and more strategic level. Urban–rural cooperation promotes the integration of knowledge, ideas, innovation and entrepreneurship in rural economy and society [15].

Some researches set distance of urban–rural impact has been defined, for example, 30km impact border [16]. Other studies conclude that urban–rural partnership is not influenced by distance, but more important factor is the administrative burden – if administrative burden of unnecessary investments for the forming of cooperation exceeds expected outcome, then partnership is not effective.

Veneri [17] points out that urban–rural interaction is influenced by region’s economic, spatial and administrative structure. Regional aspect has been reflected also in Čaplikas [2] researches in Lithuania – it has been concluded that if significant regional differences exist as a result of urbanisation process, then different interaction models must be created for each region separately, taking into account the spatial structure, agricultural development, availability of services and the level of urbanisation.

Urban–rural interaction is an important tool for promoting balanced habitation and economic development structure in regional and spatial development. The concept of interaction is a complex notion, which covers both urban and rural mutual relationships, which create flows of residents, goods and finances as well as territory administration and cooperation among various municipalities for implementation of common goals. Although scientists have focused on urban–rural mutual
interaction since the 18th century, studies mainly have been carried out about separate elements and components of interaction, not analyzing interaction in general.

III. URBAN–RURAL INTERACTION IN SPATIAL DEVELOPMENT POLITICS

A. Spatial Development Planning in European Union

European Regional/ Spatial Planning Charter [18] was the first document in the sphere of European spatial planning. Four main objectives were set in this document - balanced socio-economic development of the regions, improvement of the quality of life, responsible management of natural resources and protection of the environment and rational use of land by interdisciplinary integration and co-ordination between the authorities involved. Charter stresses the importance of rural territories within the aspect of agriculture, the necessity to create adequate living conditions in rural areas, especially taking into account the differences between less developed and remote rural areas and territories next to big city agglomerations.

In 1999 European Spatial Development Perspective [19] as in legally non-binding policy document paid attention to urban–rural cooperation at a national, regional and local level. Providing of transportation and basic services, development of common territory development strategies, projects implemented together and exchange of experiences, as well as promotion of cooperation not only in public sector, but also at entrepreneurship’s level have been identified as measures, which promote urban–rural interaction. Following by Guiding Principles for Sustainable Spatial Development of European continent [20] which emphasizes that the role of urban–rural cooperation continues to grow, especially in the development of public transportation network, renewal and differentiation of rural economics, the increase of infrastructure productivity, the creation of recreational areas for urban residents and protection of natural and cultural heritage and better management.

Next important document – the treaty of Lisbon [21] highlights an important development condition for additional economic and social cohesion – territorial cohesion, while Green Paper on Territorial Cohesion “Turning Territorial Diversity into Strength” [22] defined the objective of territorial cohesion – to foster harmonic development and ensure that residents can optimally use the resources of respective territory.

The broad framework Europe 2020: Strategy for Smart, Sustainable and Inclusive Growth [23] emphasizes the role of urban areas in the development of surrounding territories – planning frameworks of local level must implement inclusive approach, taking into account mutual urban–rural interaction to promote cooperation between both territories, and special attention should be paid to the provision of availability both in the aspect of services and employment so connecting rural and urban territories.

When evaluating EU activities in the sphere of spatial development, it must be concluded that since 1999, when urban–rural interaction was included in important framework documents and the Treaty of Lisbon, it shows the importance of topic, taking into account the economic and social inequality among EU member states and their regions. Unfortunately, all documents of EU level contain only suggestions about that, how member states, including Latvia, should act to lessen regional differences.

Such optional or recommendation form can lessen the expected outcome, if national and regional level planning documents of EU member states do not include spatial development and urban–rural issues. The updated discussion about urban–rural interaction at EU level has resulted in the development planning documents of Latvia.

B. Spatial Planning Policy in Latvia

Urban–rural interaction has been mentioned as a component of spatial perspective in development planning documents. The most important are Sustainable Development Strategy of Latvia until 2030, National Development Plan of Latvia for 2014 – 2020 (NDP 2020), as well as Regional Policy Framework for 2013 – 2019.

Sustainable Development Strategy of Latvia until 2030 [24] emphasizes Spatial Development Perspective as significant, which states that in contrast to the existing monocentric habitation structure, polycentric habitation structure must be developed and it would be formed by mutually dependent and connected networks of various level development centres to lessen unfavourable differences in regions of Latvia.

One of development directions, parallel to the formation of potential development centres, increase of competitiveness and creation of functional networks for cooperation centres, is mutual urban–rural interaction and cooperation in providing workplaces and services, promoting the quality of entrepreneurship and the formation of qualitative life conditions in rural areas. Municipalities must promote interaction so advancing mobility, flow of workforce and knowledge, flow of capital and tourists.

Although it can be evaluated positively that the document highlights the role of urban–rural cooperation and meaning, no tools on how to promote cooperation and create positive interaction, as a result of which residents of both territories will be beneficiaries. As the development strategy foresees the promotion of sustainable development, it is difficult to state the implementation of performance indicators in 2013. Strategy of sustainable development is seen as the framework document of NDP 2020, therefore the block of particular tasks and tools has been analysed in the framework of NDP.

National Development Plan for 2014 – 2020 [25] nominates the development of entrepreneurship or “entrepreneurship’s breakthrough” as the most important. One must admit, that the concentration of NDP’s attention on economic changes can increase risks in other fields, for instance, actualizing of social issues, decrease of education and science, which will limit the expected economic growth. NDP 2020 has set three main priorities – growth of economics, safety capability and territories supporting growth. Most important was of activity have been set for every priority.
NDP priority „Territories Supporting Growth“ stresses the necessity to form sustainable and balanced economic growth both in republic cities and in rural areas by emphasizing that the whole potential of economic growth is not being effectively used now. It is promoted by the creation of strong development centres, which are interconnected so creating city network, which covers all territory of Latvia. Investments, entrepreneurship, transportation and public service provision and improvement of tourism infrastructure will be concentrated in development centres. Although this document foresees lessening of existing territorial differences by developing urban–rural partnerships, this aspect has been mentioned just in some places, so it can make it difficult to implement urban–rural interaction in reality.

Regional Policy Framework for 2013 – 2019 [26] was approved in 2013 and it is planning document of average aim – to create equivalent life and work conditions to all residents regardless of place of residence by promoting entrepreneurship in regions, developing qualitative transport and communication infrastructure and public services as well as to strengthen the international competitiveness by increasing the role of Riga and other big cities as the northern metropolis.

Primary, the promotion of balanced development in the framework of regional policy will be carried out by concentrating the support of public investments in development centres (9 republican cities un 21 regional centre of urban area) in all territory of Latvia, simultaneously urban–rural interaction and partnership will be stimulated to promote the positive impact of urban territories on the development of surrounding territory. The most important flaw of this document is a set of tools, which would promote the transfer of development from development centres to surrounding territories.

IV. POSSIBILITIES AND SCENARIOS OF LATVIAN SPATIAL DEVELOPMENT

Development and analysis of three development alternatives was carried out to evaluate the possible development direction of spatial development in Latvia by using AHP. This multi-criteria analysis helps to evaluate a number of possible alternatives (scenarios) in accordance with the criteria and aim. The problem is divided into simpler parts (aim, criteria and alternatives) and arranged in the hierarchy, then synthesized by using experts’ evaluation. Expertise is quantified, and as the optimum alternative is determined alternative with the highest evaluation. Scenario evaluation analysis was carried out as follows:

1. defining the aim, criteria and scenarios based on the policy planning documents and theoretical approaches;
2. creating a hierarchical matrix containing aim, criteria and alternative development scenarios;
3. evaluating criteria using pair comparison;
4. synthesis of the priority alternatives using the linear composition of priorities of hierarchy elements, the mathematical summary of the assessments;
5. testing the coherence of judgments by calculating the coherence index and coherence relations;
6. evaluation: determines more factors that influences the choice of the model, evaluation of the definite criteria, evaluation of the groups of criteria - it optimizes the method, adjusts it to monitoring performance;
7. interpretation of results, choice of the models.

The aim for AHP analysis was set – Balanced territorial development of Latvian regions. Alternative development scenarios of future spatial development in Latvia were identified as 1) polycentric spatial development, 2) mono–centric spatial development, 3) urban and rural cooperation.

To evaluate the possibility of alternative development scenarios, 12 criteria were selected. They were chosen based on theoretic guidelines about factors influencing spatial development, development planning documents and the implemented survey of municipality development planning specialists. Criteria are:
1. changes and concentration of population,
2. availability of public transportation for the improvement of resident mobility,
3. availability of workplaces,
4. improvement of road and other infrastructure;
5. improvement of municipality development strategies,
6. improvement of regional development strategies
7. improvement of national development strategies,
8. attraction of state’s earmarked grants and EU structural funds,
9. improvement of entrepreneurship’s environment,
10. effective administration and use of municipality resources,
11. improvement of service availability,
12. fostering of cooperation among municipalities at a local and regional level.

To interpret the results of evaluation, following methods are used:
1. creation of linear models of criteria and alternatives;
2. creation of mathematical summary of all evaluated scenarios;
3. construction of coherence index for synthesized priorities – it allows to compare the synthesized priorities with the priorities of hierarchy elements;
4. creating hierarchical matrix – it helps to evaluate the synthesized priorities.

By introducing the linear models of criteria and alternatives, it is possible to create a hierarchical model of synthesized priorities and to create mathematical summary of all evaluated scenarios.

Within AHP analysis, the model can be adjusted to monitoring performance, it is possible to optimize the method, make it suitable for monitoring performance, and use it for interpreting the results.
Polycentric spatial development – spatial development model, which is based on urban area network to ensure territorial cohesion by effectively using those resources that exist in urban areas. 9+21 model developed by MEPRD (Ministry of Environmental Protection and Regional Development) foresees that in the case of limited resources support will be given to the development ideas of nine republican cities and 21 towns, which have been region centres. This development scenario has been included in sustainable development planning documents since NDP of 2007 – 2013. Its main task is to increase the competitiveness and to strengthen capacity so spreading the positive outcomes to nearby territories. MEPRD Secretary of State has emphasized that urban areas have a very significant role in the creation of economic success as the most important resources for growth are concentrated there and the competitiveness of urban areas are stated by the possibilities and activities for resource attraction. Development centres must foster the critical mass of resources and activities so they could fully develop, they must effectively use existing resources, taking responsibility for the growth of a wider territory and specialisation in entrepreneurship and growth strategies, which are based on cooperation with other urban areas.

Other alternative – Monocentric development states Riga as the main centre of Latvia, where investments, resources and residents are concentrated. Other territories of Latvia have relationship of competition in attraction of state’s and EU funding. There have already been attempts in the past to develop regions, however, the main concentration of resources and knowledge has formed in Riga, and it will continue to be the main driving force of Latvia. Nowadays the life cycle of important resources is short; therefore growth must be concentrated in one centre so resulting in bigger developments. Monocentric development has also been included in NDP 2020 – it has been emphasized that existing structure of habitation is monocentric and it has been expected to partially keep this structure, emphasizing Riga as metropolis, at the same time promoting the transfer of potential and resources created in the capital city to surrounding territories and regions.

Urban – rural partnership is coordination of common interests in planning process, effective use of resources among several municipalities and republican cities, differentiation of services and promotion of availability, prerequisite of attracting funding – cooperation of several municipalities. It was concluded in the evaluation of Administrative and Territorial Reform that when reform was concluded, there was not a strong development centre in several municipalities, which is an important obstacle to have implementation of balanced regional development policy. In general, municipality system cannot take over the functions of decentralised administration because of having disbalanced population. A big number of comparatively small municipalities have been formed, but these municipalities do not have sufficient tax income base and they cannot implement their autonomous functions, concentrate funding or have rational, effective administration without delegating or forming common municipality authorities. These aspects put forward the cooperation of urban–rural municipalities as the most important prerequisite to create balanced spatial development.

Eight experts were selected to ensure that all necessary levels of administration planning and interests would be represented. As a result, group of experts consisted of the following representatives from Jelgava district municipality, Zemgale, Riga and Vidzeme planning region administrations, MEPRD Regional Policy of the Department of Regional
Economy, Latvian Association of Local Governments and Rezekne Special Economic Zone Authority.

In experts’ opinion the most important criteria to achieve the aim are Accessibility of public transport to improve the mobility of people and Improvement of service availability (on average 0.14). Variation coefficient of the two criteria that reflect expert opinion dispersion is relatively high (48% and 51 %), suggesting that the experts opinion is quite polarized.

The criteria Improvement of regional development strategies has been evaluated as less important – may suggest that impact of the regional strategic documents on spatial development is low.

By evaluating all 12 criteria in connection with the objective – balanced territorial development in Latvian regions – and three possible alternative scenarios, the most optimal variant was obtained – the development of urban–rural cooperation.

![Fig. 4 Evaluation of alternative scenarios](image)

Source: authors’ research

Results of hierarchy analysis show that the most significant aspects, which foster urban–rural partnership, are as follows:

- promotion of cooperation at local and regional level – as stated by the experts, the local government is a key factor that can either stimulate cooperation or, on the contrary – limit it or even interrupt;
- availability to public transportation to improve the mobility of residents – unfortunately, the public transport network improvement is directly dependent on the population in a municipality – if the population increases, the regional administration is prepared to expand the public transport network and the movement frequency. However, in a situation where people continue to migrate from distant rural areas to the cities or county centers, there are concerns that in the future will be reviewed and evaluated public transport routes. This situation makes a vicious cycle - public transport routes are not planned due to lack of population, while people do not choose to live in areas where there is no public transport;
- improvement of municipality development strategies and effective use of resources.

However, existing tendencies regarding population and its concentration foster the forming of monocentric structure – concentration in capital city Riga and its nearby territories. Future development of polycentric development has been included in national documents of various levels as a significant priority of balanced spatial development.

V. Conclusion

The long-term goal of regional policy in Latvia is creation of an equal life quality and working conditions for all inhabitants, regardless of their residence – encouraging entrepreneurship in the regions, the development of high-quality transport and communication infrastructure as well as availability of public services. To achieve the goal the public investment will be concentrated in national and regional development centers, highlighting the role of cities in the country's economic growth. Investment concentration will create substantial critical mass for growth, increasing employment and the amount of taxes paid, improving the situation not only in the development centers, but also in the surrounding rural areas.

The planned outcomes stated in development strategies may foster balanced spatial development, however, there is concern that the benefits will not be achieved and the economic disparities between the national and regional development centers and other areas will increase. Experts representing regional or local authorities noted that there is lack of tools for development transfer from development centers to the surrounding area. The lack of such tools can lead to the substantial growth in development of centers and stagnation in other areas.

When collecting expert opinions, it can be concluded that the cooperation of urban–rural municipalities gives benefits to both territories according to several aspects:

- provision of services – use of natural resources, public transportation networks, education, health care, waste management etc.;
- economic development – the expansion of goods and services and improvement of quality;
- planning of spatial development – effective use of resources, implementation of coordinated development aims and coordination of activities;
- increasing the attractiveness of a territory – cooperative projects in fields of education, culture, entertainment and tourism;
- use of EU funds;
- influencing legislation processes and political decisions.

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