



### Introduction

The information system for the development of the bioeconomy of the city corresponds to the directions of the development of bio and circular economy, partnership with enterprises, environmental management, representatives of the authorities and the public. Therefore, the Macrosystem should be formed as a web portal, which has separate subsystems for: stimulation of territorial bio- and circular economy; preserving the security of resources; reduction of emissions; development of industrial symbiosis; resolution of conflicts between production and land use change; improvement of waste management. The best practices of implementing the bioeconomy development strategy in Europe, creating a symbiosis of partnership in Lithuanian cities, and initiatives in Ukrainian cities make it possible to justify the feasibility of developing the concept of bioeconomy development in the city and to determine the directions of development of the information system in the city. The purpose of the research is to develop the general principles of creating an information environment for the development of the city's bioeconomy. The subject of the study is the processes of the city's bioeconomy development and their automation in the information system. The object of the research is the model and implementation of the information system of the bioeconomy of the city.

### Methodology

The development of the bioeconomy information system is based on the following concepts:  
The theory and model of mirrors - the reflection of planned, factual information and the formation of models for achieving goals.

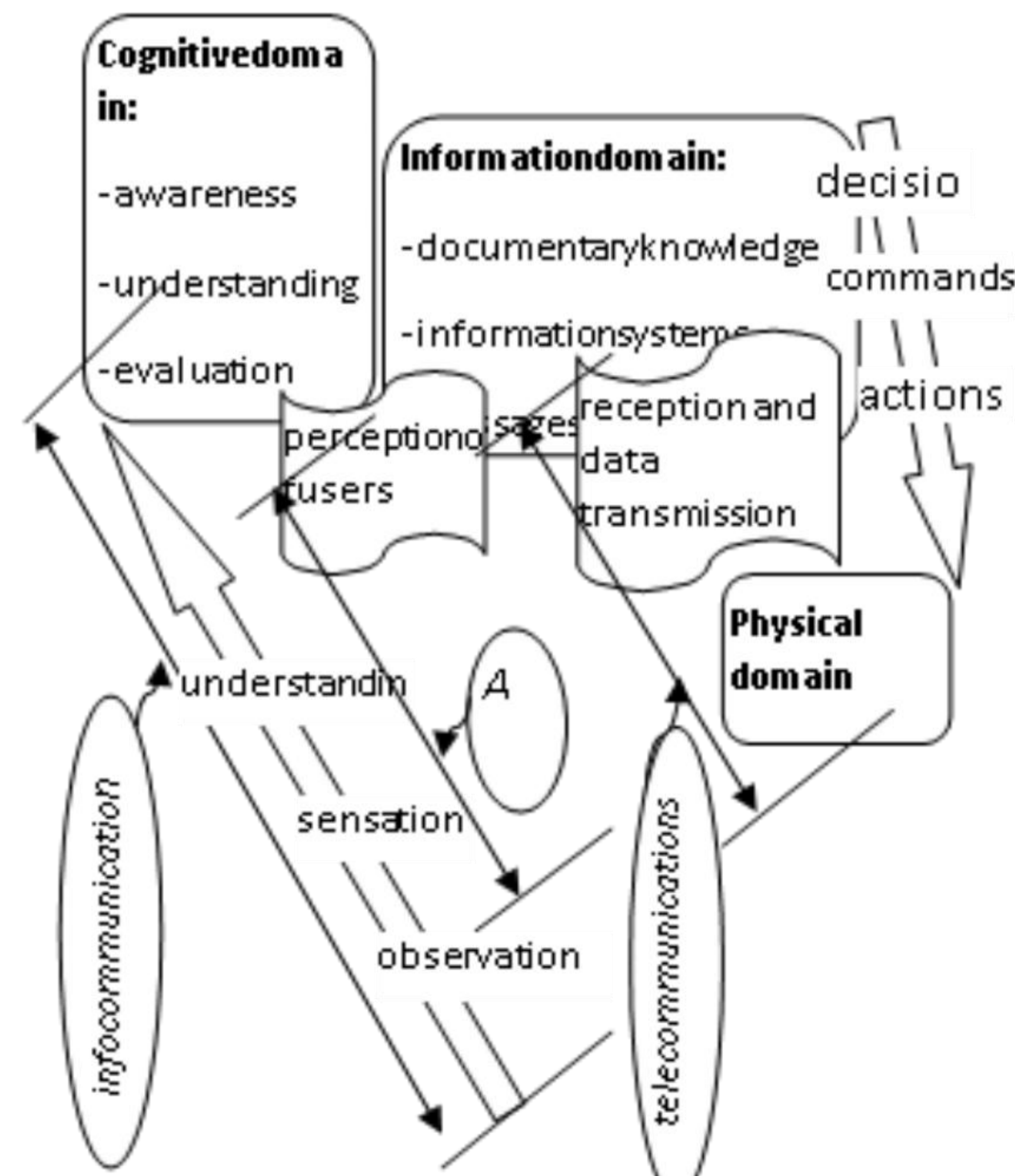
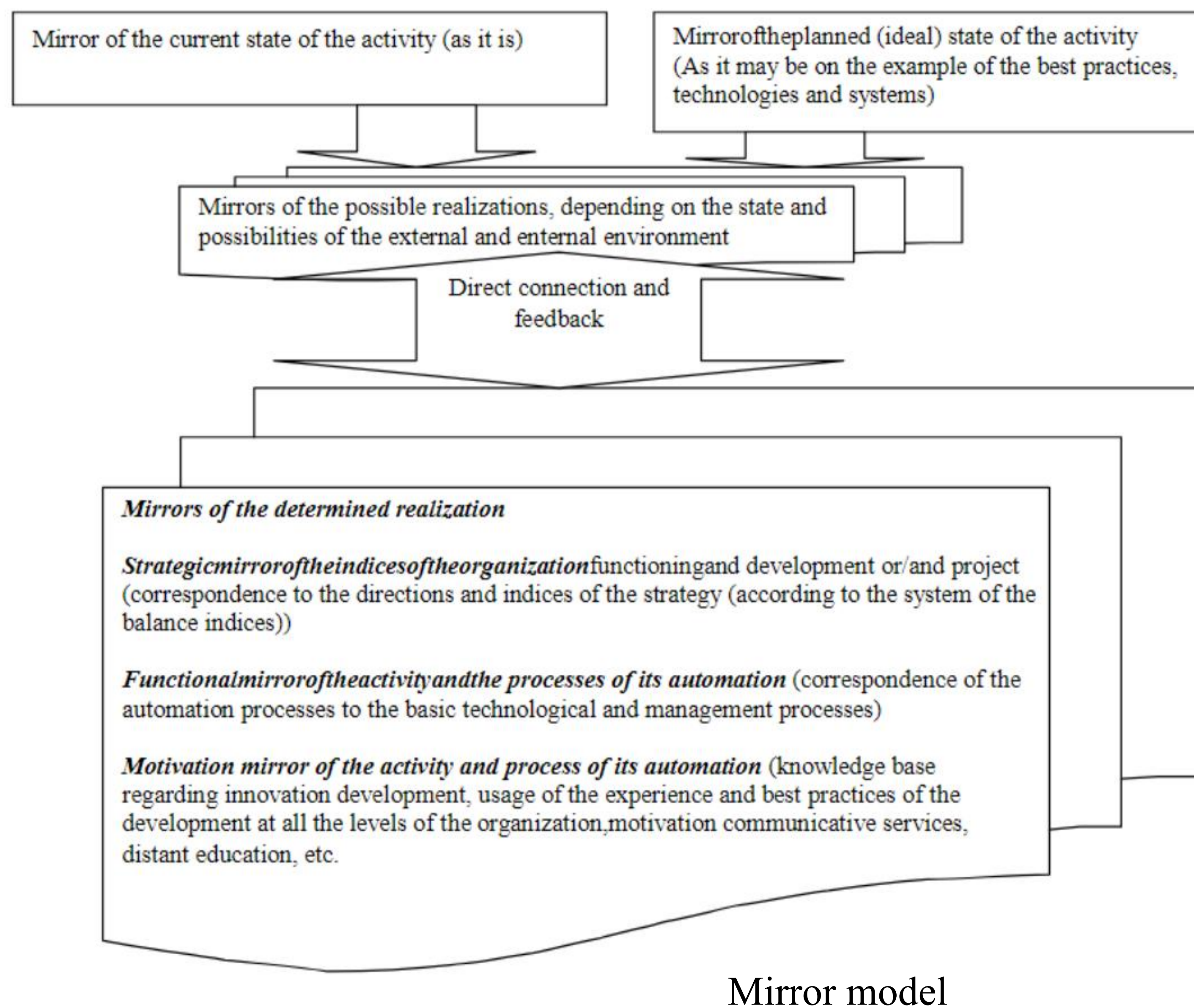
The results of the functioning of the information system of the city's bioeconomy - actual data on the development of the bioeconomy in the city for its residents; development of bioeconomy at the enterprise level; bioeconomy projects.

Development of multi-layered visual maps for all levels of the bioeconomy of the city - macro, meso, micro. An example of a map - small rivers of Vinnytsia

### Results



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### Main conclusions

The city's bioeconomy is a complex system of intelligent use of the city's resources and its enterprises. The information system supporting the bioeconomy of the city should include a development strategy, territorially forming enterprises of the bioeconomy, educational and public organizations for the development of a culture of reasonable land use, waste management, quality control of common resources, etc. The information system should be built on the basis of multi-layer scenario maps. Such maps allow monitoring of water and air resources; monitor the development of enterprises of the bioeconomy cluster; form markers of public organizations and events. Special attention needs to be paid to the development policy, preservation of existing and creation of new green areas in the city. The diversity of bioeconomy development directions requires the cooperation of various social institutions, businesses, public organizations, and educational institutions. An open information system in the form of a portal will enable public-private partnership to be activated and the level of life support in the city to be increased.

