RESEARCH ARTICLE

OPEN ACCESS

Contemporary Trends for the Development of the Production Zones

Vangjel Dunovski*, Radmila Tomovska**, Damjan Balkoski***

*(Faculty of Architecture, MIT University - Skopje, bul. Treta Makedonska brigada bb. 1000 Skopje, R.M.) ** (Faculty of Architecture, MIT University - Skopje, bul. Treta Makedonska brigada bb. 1000 Skopje, R.M.) *** (Faculty of Architecture, MIT University - Skopje, bul. Treta Makedonska brigada bb. 1000 Skopje, R.M.)

ABSTRACT

The basic concept for the construction of such zones is to create conditions for concentration the existing procedures in one place and contribute to discovering, developing and creating the new ones. Contributions are very heterogeneous, starting from planning and development of common infrastructure to creation of the new jobs. Except this, industrial zones promote modern entrepreneurship, which is based in a modern structure and has the opportunity for permanent development and introduction of advanced technologies. The trend of increasing number of international companies working on Macedonian market, as well as the positive development of Macedonian businesses companies, will contribute to increase investments in industrial property.

Keywords: advanced technologies, concept, heterogeneous, jobs, work zones.

I. INTRODUCTION

The lack of certain warehouses and factory buildings with a proper infrastructure, where companies can start effective business is the main reason for establishment and development of numerous industrial and manufacturing zones and logistics centers. There are many expectations for fast development of new industrial zones and logistics centers in the industrial sector. This is due to the fact that activity of the most commercial companies is connected not only with the distribution, but also with production that requires an optimal solution for the development of business. The most required option is the position of production, warehouse and offices at the same place, known as industrial zones. Industrial parks in the world are known as zones in areas intended for industrial development. Their development dates back to the seventies of the last century. However, in the past the Polluting industries were placed very near to the cities and after urbanization, facing with many environmental problems. The focus on creation of industrial parks, except stimulation of economic development, was the need for removing the polluting industries, primarily metallurgy, oil, leather industry and paper industry. On the other side the euphoria for quick building of industrial parks in some countries causes a glut of such production units by destruction of fertile arable land that often are left without any commercial activities and unable to be used for other purposes.

II. TOPIC, OBJECTIVE AND TASKS

Topic: urban organization, modernization and development of production / industrial territories in

the cities. This text mainly relates to complex functional, spatial, communication, art - esthetic and other features of industrial areas, that are main factor for creation of favorable work environment and development of the city.

Objective: Developing of an urban concept for completely operation of industrial zones in cities, in context of modern urban development, where theoretically grounded criteria related to specific multilateral and specific characteristics of production territories with declining trend in the states should be proposed as an urban alternatives aiming to create conditions for optimal functionality into the urban fabric.

Therefore the following tasks needs to be undertaken:

- Analyze the reasons of changes in industrial areas;
- To clarify the theoretical set-up for implementation of the production territories the term adaptation, participants in processes, financial, legal and managerial aspects;
- Analyze examples from esthetic practice and to emphasize the main advantages and disadvantages of various methods of conversion;
- To develop a methodology for the conversion of industrial areas Based on studies within theoretical framework;
- To propose alternatives to urban conversion by the developed methodology;
- To explore regional and local influences in the implementation of various alternatives to industrial zones;

• The lack of facilities for warehousing and manufacturing buildings with infrastructure, where companies can still start with the market to begin with effective legislation import can cause the creation and development of industrial and manufacturing zone.

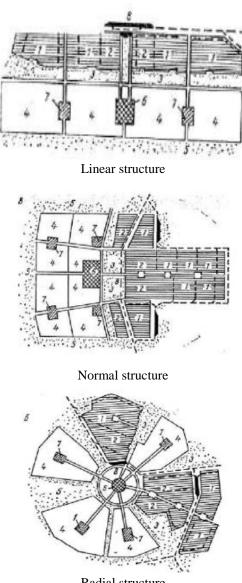
III. INDUSTRIAL ZONES - ESSENCE AND MEANING

The production zones are important and the main needs modern society. They represent a variety of activities constantly being updated with they are developing and becoming new. independent. This system of a separate part of the work is a direct reflection of political, social, urban and other developments of the society. This zone passes through several major stages of development: agricultural era, industrial era and today so-called IT period. It is imposed major changes in the system, in the character, structure, standards and activities. One of the elements of labor system is the production territories. They are territories intended for proper construction, mainly of buildings and facilities for production and storage of products. On the other side, the production zones can be classified as follows:

- Upon the location: urban and suburban
- Upon the way of production: industries of material or virtual production
- Upon the sanitary hygienic requirements: according to our laws three categories
- Upon the technological characteristics: mono functional and multi- functional
- Upon the qualitative characteristics: traditional related, predominantly with the material production and the new zones of trade production

"The City" as a concept is "created" as living place. Later during industrial revolution the city was "born" as a place for labor developing. The labor system is likely to be a reason for appearance of larger cities and also "born" the modern city, in which at the same time labor population, service, recreation and communication are functioning. In the urban structure the production areas has a different place. Initially there are with smaller and are located on the suburbs, but today with the development and expansion of urban territory many of them appear in the inner city. During the industrial revolution the production territories reached expansion in terms of the level of production, capacity and territorial range. They cover a large percentage of the territory of the city, located on fertile land and often even higher than the residential areas. In the period of technological revolution the characteristic of production process has been modified in qualitative and quantitative

terms. By introducing of computer systems human labor and mechanization of processes in process of production has been reduced. This requires radically different demands on the territories of production reducing the necessary areas for industrial needs. On the other hand the development of technology affects the public needs. In the production territories there is an increasingly need to implement the zones for recreation and services that are needed in the major production areas. It is increasingly looking functionality and optimal utilization of limited territorial resources of a city (Fig.2).



Radial structure Fig. 2. Types of structures available in the production zones in the cities

In this whole process of technological and public change public component of ownership is involved. Changing of political management model leads to denationalization of the land. This further complicates the development of production zones as a complete unit and it distinguishes and facing economic interests of numerous owners. All of these components of the modern city lead to declining of industrial territories and need for change of management. Otherwise they are "white spots" on the urbanized area of the city.

The contemporary technological opportunities production zones in the city are two:

- without intervention independent development that ranges from motives owners and a market economy;
- Through managerial intervention extensive or intensive development of the city and production areas change of the management through different approaches.

The first option is a mechanical sum of private interests without taking into consideration the social interest. This could probably de predicted, but not be managed as a process and it is a subject of urban introduction, as forecast and result. In the second option private and social interests are balanced. The choice depends on private, social, economic and other factors of the city as a whole. They undergo on the legal analysis, the results of which are opting for a particular direction of development.

With extensive development of the city, the urban territory increased as a result of other types - of agriculture, forestry and other. The city has been increasing its size due to the surrounding This type of development is landscape. recommended when all our possibilities for optimal urban structure are exhausted. On one side the lack is limited territorial resources of the state, municipality and city and on the other side urbanized territory leads to a high cost of the functioning of the urban structure - the infrastructure for shopping, and deteriorating ecological situation, because of the decreasing the natural environment. In intensive development of the city, emphasis is being placed on existing optimal urban territory in terms of office in accordance with the actual needs of the population. The intensive development requires a change in the existing production areas in decline in order to prevent the conversion into "white spots". So this model of development is an indication of the change in status zero, initiating urban processes that change the management model in order to optimize urban structure. Urban intervention is possible on the level of the city structure. The aim is to avoid occurrence of the social problems. For an indication of declining industrial areas necessary urban intervention, which will analyze the processes in the urban structure to determine the management model (Fig.3).

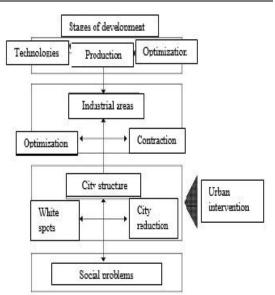


Fig .3. Development of the production and implication on urban structure and society

The production territories can be:

- Only for production, by construction of industrial, warehouse and official buildings and facilities, where could be constructed a health stations, shops, administrative buildings, etc;
- Main production, with facilities for production, storage, administrative buildings, commercial and official facilities and buildings, and which are not permitted facilities for hazardous industries and
- High technological production (for example. technological parks).

High technological production zones are independent within the territories borders intended for one or more associated enterprises in technologically complex, and needed services, administrative, scientific, educational, recreational and other facilities. They build companies with high technological industries, laboratories, centers and facilities for teaching and scientific experimental innovative activity, administrative offices and business buildings and shops, offices, residential buildings and homes research, professors and employees in the factories, shops and catering services, hotels and others.

- Prospects for development of industrial zones
- 1. Industrial zones can be the main factor for early preparation in the process of searching for an innovative and modern learning opportunities.
- 2. Construction of industrial zones is of great importance to the relationship between state institutions and private business, because administrative efficiency is changing the, which usually overcomes bureaucracy in all dimensions.

- 3. In the next few years investments in multifunctional places for industrial production, logistic and offices have an excellent prospects, have an excellent opportunities, differently form the building of settlements in the tourist complexes, where is mission an appropriate touristic infrastructure.
- 4. According to international analyzations, Macedonia has an excellent prognosis in terms of opportunities to gain property for the construction of industrial and logistics zones.
- 5. Macedonia is still cheaper destination, in terms of costs for organization of production; the country has a rapid economy growth, initiating higher investments.
- Services that can be provided to investors
- 1. Land with changed status for industrial buildings and warehouses.
- 2. Administrative services and advice to investors about the method and feasibility of a particular project.
- 3. Issuing all necessary permits related to technical documentation of buildings.
- 4. Construction of space for unloading and warehouses in accordance with the requirements of investors.
- 5. Design and construction of industrial buildings and warehouses renting or buying.

IV. CONCLUSION

Developed topic is an attempt to combine the acquired theoretical knowledge and practical skills in terms of an important socio - economic problem conditioned by substantial impact on modern human values and priorities. This topic elaborates urban problems related to the development of production zones. The main objective is the development of urban conception for completely functioning of production zones, in the context of the overall modern urban development, where through theoretically grounded criteria related to multilateral and specific characteristics of the production areas in a state n and declining urban proposing alternatives for their change to create conditions for optimal functioning in the urban fabric. As a main goals are:

- improving the economy
- development of new technologies
- development of new production projects
- optimum protection of the natural heritage
- environmental protection
- protection of cultural heritage
- improve street infrastructure
- energy and communications infrastructure
- water infrastructure
- Economic development and others.

On grounds of Anja explores urban concept is developed that includes:

- Comprehensive, evenly distributed a territorial development throughout the territory;
- Integration of functional Peak ski domain in the economy with mutually coordinated organizing activities;
- Create the conditions undisputed exercise of basic human activities (functions), providing high of October degree of environmental protection and preservation of the principles of maintenance of development.

V. REFERENCES

Books:

- [1]. "Architectural design" Ernst Nojfert, Skopje 2010
- [2]. "Архитектонски нормативи во градењето на индустриски згради"–проф. Воислав Дамјановиќ, Белград, 1970
- [3]. "Technological Change and Industrial Development in Western Europe from 1750 to the Present" – Landes, David S. Cambridge, New York 1969

Internet sites:

- [4]. www.novamakedonija.com.mk
- [5]. http://www.archdaily.com/category/industri al-architecture/
- [6]. http://www.worldarchitecturemap.org/types /industrial-factory

Journal Papers:

- [7]. PhD Charles Dunham Planning Industrial Structures – New York, 1988
- [8]. Willhelm Friedemann Industriebau Fertigungsbetriebe – Munich, 1969

Theses:

[9]. Goodknight, Edomond B. *Social activism in industrial architecture*, undergraduate thesis, College of Architecture and planning, USA, 1971

www.ijera.com