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URBAN LOGISTICS IN THE SUSTAINABLE DEVELOPMENT CONCEPTION

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URBAN LOGISTICS IN THE SUSTAINABLE DEVELOPMENT CONCEPTION

"city is a spatial phenomena, lasting through time and developing an evolutionary, but is also a collection of overlapping in time of architectural forms, landscapes, symbols, values and social structures".

URBAN LOGISTICS IN THE SUSTAINABLE DEVELOPMENT CONCEPTION

In Poland, the most common definition is based on the decisions of officials, *"the city is the entity that owns the city rights, formally being the administrative area, with borderline statistical, acting in a relatively closed area and high population density"*

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On December 31st, 2009, the population living in Polish cities (897 cities) amounted to 27,820,000 which represents 60.98% of the total population in Poland (number of total: 38 167 329 persons)

Much of the urban village is inhabited by population of 40 thousand people. The smallest cities in Poland are inhabited by over 200 thousand people, and as "metropolises", you can specify just a few of them: Warsaw, Wrocław, Kraków, Łódź.

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Groups of cities by population	Cities amount	December 31st, 2010		
		In thousand	% of total population in Poland	% of total population living in cities
Total	897	23 278 187	60,98	100%
under 2500	49	81 141	4,70	0,34
2500-4999	262	872 275	2,28	5,74
5000-9999	186	1 334 667	3,49	5,73
10000-19999	180	2 643 052	6,92	11,35
20000-39999	134	4 191 685	10,98	18,00
40000-99999	47	3 203 645	8,39	13,76
100000-199999	22	3 039 873	7,96	13,05
above 200000	17	7 911 849	20,72	33,98

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In every city there are many processes that can be identified as the logistic processes. They represent a specific set of processes forming the sub-logistics system. Such processes are taking place in each city, including procurement processes, production, transportation, distribution, storage, together with them are also the costs of logistics and eco-logistics processes

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The main task of a logistics system and processes in place it is to meet the needs of the residents of the city (transportation, manufacturing, science, development, recreation, information), therefore, when describing the city in terms of logistics, pay attention to:

- characteristics of the population living in the city, its size and changes in its structure,
- characteristics of all equipment the city which included the following elements:

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Control processes, organization and coordination of flows in channels chains and logistics are the main elements included in the implemented concepts of city logistics. And the presence of interference and delays in each of them can result in a significant increase in the duration of logistics processes.

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- a properly functioning logistics system should contain the following subsystems:
- environmental resources, investment and media,
- logistics facilities,
- surrounding the environmental, socio-economic, technological, organizational and legal.

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The characteristics of the logistic system of the city are the characteristics resulting from the nature of logistics system:

- heterogeneity, the system includes elements of both natural and artificial, animate and inanimate, abstract and concrete,
- existence of technical, economic, organizational, legal, social, cultural and ecological links
- each subsystem forming part of a logistics system has its own hierarchy,
- elements included in the system have different level of development and are linked (complex system),

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- is an open system, not having clear boundaries, its openness makes it can be variable in time,
- as a system represents a great value,
- take an active part in the deterioration or improvement of the situation in its subsystems, system is nonlinear and spatially non-uniform
- is a self-learning system and is usually aimed at fulfilling certain tasks,
- occur in the short and long lasting processes.

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Like any system, logistics system has inputs, transformation processes and outputs. Elements of inputs are logistics needs of all those who are living in the area belonging to the city. However, the output elements are essential to improve the efficiency of distribution systems and services, and economic effects felt by businesses and residents. The elements of departure must also include any damage and losses incurred in the environment as a result of the various elements of logistics system.

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For the first time, the term "city logistics" was defined by E. Taniguchi in 1999 as the process of optimizing operations of private enterprises in logistics and transport in urban areas, aided by modern information systems, taking into account the transport environment, congestion, safety and efficient use of energy the market economy

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Universally applicable definition of sustainable development was established in 1987 in the report of World Commission on Environment and Development, sounded as follows: *"Sustainable development is a process designed to meet the career aspirations of the present generation, enabling the realization of the same aspirations of future generations"*.

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Vision contained in this definition includes not only the human population, but also the flora and fauna, ecosystems, natural resources of the Earth (water, air, energy resources and natural resources). Sustainable development means that economic growth leads to increasing social cohesion, while raising the quality of the environment, ie. by promoting equal opportunities, combat exclusion, reduce the harmful impact of production and consumption on the environment

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Freiberg city is one of the first cities in which was made an urban logistics assumptions based on the concept of sustainable development. The city is characterized by the fact that in the downtown a lot of trade companies are located and it has created a need to find a solution to relieve the town center from the freight transport.

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"Citylogistik" group included transport companies, forwarders and traders which had its locations in the downtown.

As a result of conducted measures , based on fully cooperation between all members of the "Citylogistik" group, including the city authorities, the costs associated with empty mileage has dropped significantly (measurable effect), in addition, noise and exhaust emissions were substantially reduced (the unmeasurable effect)

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Citylogistik:

- the storage area has been significantly reduced which allowed to create a larger area designated only for the clients - more shops were opened, together with coffee shops and restaurants
- a time limit and a special dedicated space for unloading goods

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Munich is the capital of Bavaria land and has a high number of residents, a high degree of urbanization and a fully-developed communication that requires significant logistical support.

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Autobahrin Munchen - this project involves the creation of the highway, which revolves around the city and has a branch leading to both the city center and to individual districts,

City reduces the number of vehicles in the center, the noise level is reduced and the number of gases emitted by vehicles, the driver saves time, fuel and nerves

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London, the capital of Great Britain, is the first city which has introduced the so-called congestion charge. This is a fee that must be paid by the drivers to drive into the city.

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Congestion charge:

- Delays due to traffic jams are created in the city center was reduced by 30%,
- Vehicular traffic in the hours covered by the fee has been reduced by 18%,
- Buses started arriving more frequently according to the timetable,
- Number of passenger buses has increased by almost 30 thousand people, many people opted for public transport than private road transport,

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- Congestion charge:
- Studies have shown that 60% of respondents support the introduction of fees for entrance to the center, 20% are against and 20% did not have its own opinion,
- Introduction of a fee brought revenue to the city of 50mln pounds a year, much of this money was generated by a much greater number of passengers of buses and subway

*THANK YOU FOR
YOUR ATTENTION!!!*