



AGH UNIVERSITY OF SCIENCE
AND TECHNOLOGY

THE INDUSTRIAL REAL ESTATE MARKET IN KRAKOW

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The plan of presentation

1. Krakow as an area of industrial properties.
2. The scope of analysis.
3. Warehouse and productive spaces in Krakow.
4. The analysis of warehouse spaces in Nowa Huta and Podgorze districts.
5. The analysis of unbuilt industrial properties.
6. Modern warehouse and productive spaces in Krakow.



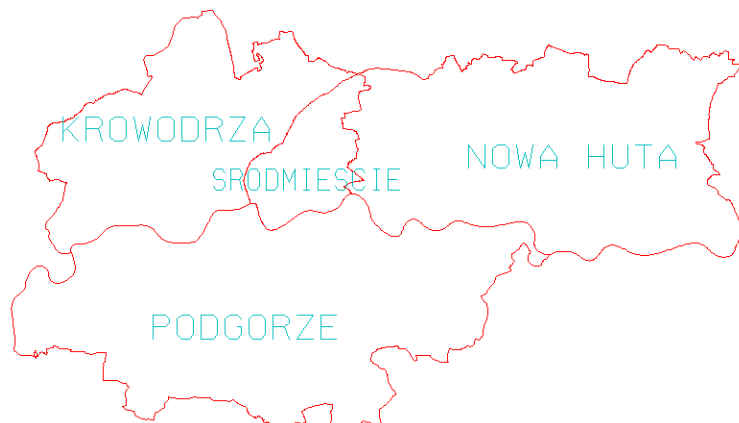
1. Krakow as an area of industrial properties.

The city of Krakow:

- area: 326,8 sqkm;
- population: 756 441;
- location: the middle-south part of Poland, around 100 km from Slovakia borders.



Krakow's districts



Transport service in Krakow



The source: CB Richard Ellis/Market View, spring 2008

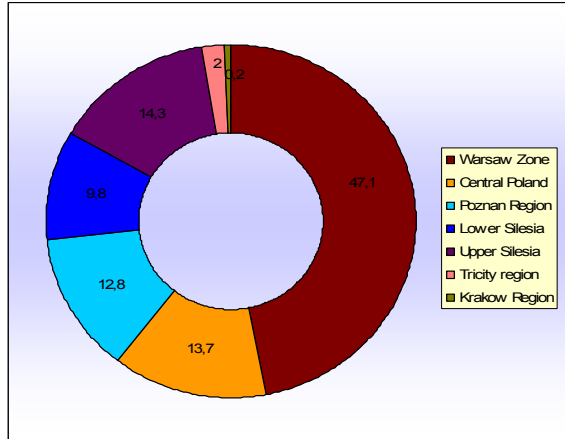
Local Site Development Plan

- document as an act of local law;
- at the beginning of 2009, valid land development plans were covering the 4 554 hectares, whereas the drafting plans were relating to 12 856 hectares area, what is accordingly 14 % and 39 % of total city's area;
- the decision of zoning regulations;

According to data collected by the City Hall of Krakow, in 2007 there were given 83 planning permissions for industrial buildings, what is smaller number comparing to 2006, when there were given 113 decisions, but the number of building permits grew almost six times from 13 in 2006 to 87 in 2007.



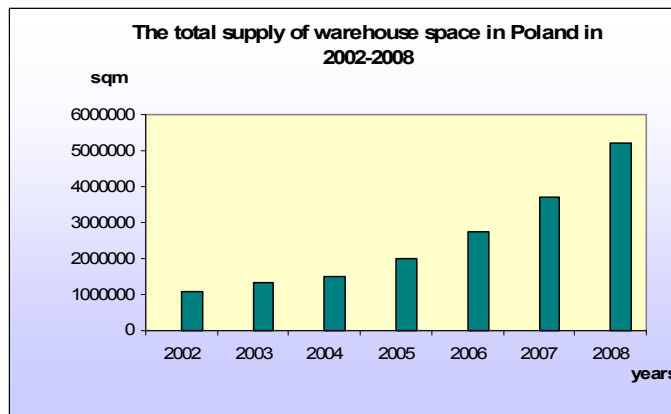
Krakow and other cities – industrial real estate



The source: DTZ Research



The total supply of warehouse space in Poland in 2002-2008



The source: DTZ Research

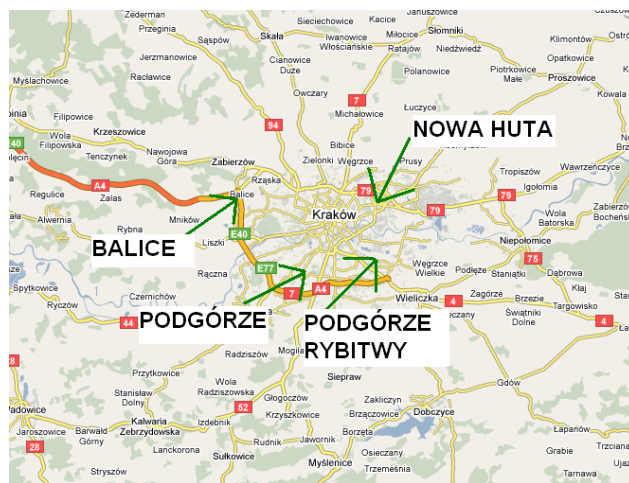
2. The scope of analysis.

The analysis include the following data:

- the level of unit rents due to warehouse and productive area,
- the unit offered prices of industrial un-built properties,
- the level of capitalization and discount rates achieved in the filed of industrial's real estate investment.

3. Warehouse and productive spaces in Krakow.

The location of industrial investments in Krakow.



The source: own work, www.mapy.google.pl



4. Warehouse and productive spaces in Nowa Huta district.

- Warehouses and production halls, that are offered for rent, are the objects with area from 300 to 1 600 m², whereby there are mostly structures with area from 600 to 1000 m².
- Most of offered properties have office facilities, staff rooms, parking places, boarding ramps and vehicle manoeuvre areas.
- These are also structures built in the last years or “built-to-suit” – developed and arranged for particular investor’s requirements. The height of buildings is between 4-8 m, with the prevailing height of 6,5 m.



- There was collected the data base of 18 properties, that were offered for rent.
- Each property was described by attributes like:
 - rented *usable area*,
 - technical infrastructure facilities equipment – *utilities*,
 - *road access*,
 - *property’s technical condition*
 - *variety of built-up and the presence of additional facilities.*

Based on the collected data we can draw the following conclusions:

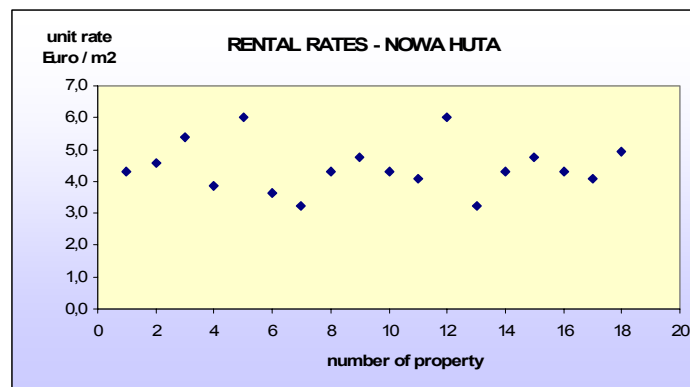
- The average net unit rate is:

4,5 €/sqm

- The standard deviation for unit rents, which is the measure of the mean dispersion regard to the average net unit rate, equals:

0,77 €/sqm

The dispersion of unit rents in Nowa Huta district.





In relation to values attributed to particular characteristics of each property, there were calculated the Pearson correlation coefficients r , describing the correlation level each of attribute with net unit rates in Nowa Huta district, and their importance values k_j , which equal:

- Utilities: 24%
- The technical building conditions: 36%
- Variety of built-up: 40%



Warehouse and productive spaces in Podgorze district.

The main area of industrial investment is Rybitwy, the Zakopińska region and the south-west part of Podgorze district.

The big variety in the area of space offered for rent which is from 200 to 7 700 m². The major group are the properties with area from 500 to 1 600 m².

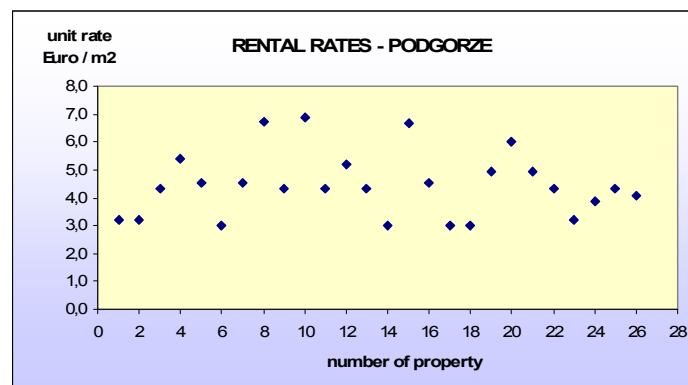
There were collected data about 26 properties.

The attributes of these properties are related to characteristics that apply to warehouse spaces research in Nowa Huta.

Based on the collected data we can draw the following conclusions:

- The average net unit rate is:
4,5 €/sqm
- The standard deviation for unit rents, which is the measure of the mean dispersion regard to the average net unit rate, equals:
1,1 €/sqm

The dispersion of unit rents in Podgorze district.



In relation to values attributed to particular characteristics of each property from the base, there were calculated the Pearson correlation coefficients r , and their importance values k_j :

- Utilities: 36%
- The technical building conditions: 37%
- Variety of built-up: 26%

5. The analysis of unbuilt industrial properties.

In the range of industrial real estate market, the research contain undeveloped land properties market that are designed for industrial built-up in relation to their unit offered prices. The research is related to Nowa Huta and Podgorze districts.

There were collected data base contained properties located in Nowa Huta and Podgorze.

Each of them was described by attributes like:

- *plot's area,*
- *the plot's shape,*
- *technical infrastructure facilities equipment – utilities,*
- *road access.*



The attribute's importance values for industrial lands in Nowa Huta are:

- the plot's shape: 56%
- utilities: 34%
- road access: 10%

The attribute's importance values for industrial lands in Podgorze are:

- area: 15%
- the plot's shape: 21%
- utilities: 19%
- road access: 45%



Based on the collected data base there were calculated the following parameters:

-The average offered unit price of land is:

Nowa Huta	89,2 €/sqm
Podgorze	59,8 €/sqm

- The standard deviation for offered unit prices , which is the measure of the mean dispersion regard to the average offered unit price, equals:

Nowa Huta	14,2 €/sqm
Podgorze	19,6 €/sqm



The capitalization and discount rates for analyzed real estate market.

The mean capitalization rates $R(k)$ and discount rates $R(d)$ for warehouse and productive structures are:

- Nowa Huta: $R(k) = 0,08$ $R(d) = 0,09$

- Podgórze: $R(k) = 0,07$ $R(d) = 0,08$



6. Modern warehouse spaces in Krakow.

According to data of Suchman & Wakiefield company, the demand of warehouse spaces in 2006-2007 was constant and equaled 18 400 m² where the vacancy rate was 2,7%.

- Special Economic Zone
- The logistic center in Podgorze - total warehouse space is 8 000 sqm and office 2000 sqm
- The Cracow Airport Logistic Center - plans for building modern warehouse spaces, "A" class, with 150 000 sqm of total area.



THANK YOU