



AGH UNIVERSITY OF SCIENCE
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Methods of cartographical presentation of real estate values

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Mass appraisal in Poland

- Regulation of the Council of Ministers
- Valuation map:
 - prepared separately for every commune within boundaries of cadastral precincts
 - presents valuation zones
 - the only cartographical document described there ...

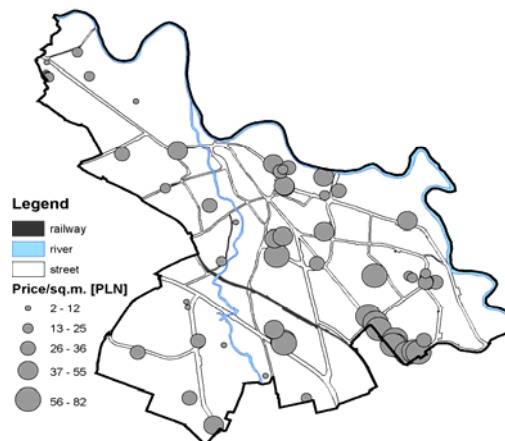


... but ...

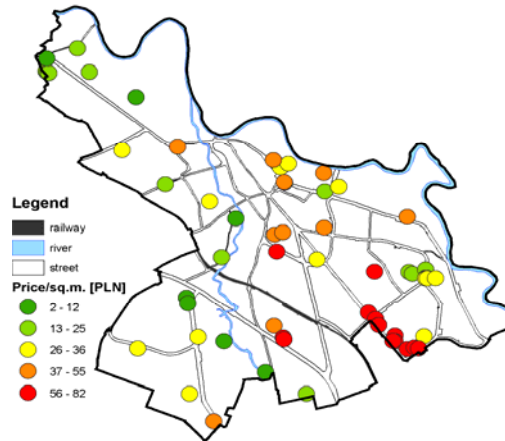
- ... information on values of real estate is an excellent example of spatial information:
 - refers to objects having location in geographical space
 - their distribution and mutual relationships are one of factors influencing their prices
 - presentation in the form of map allows showing these spatial relationships directly
 - using map image one can accomplish many mental operations, leading to various conclusions



Point symbol map – proportional symbols



Point symbol map – variable colours

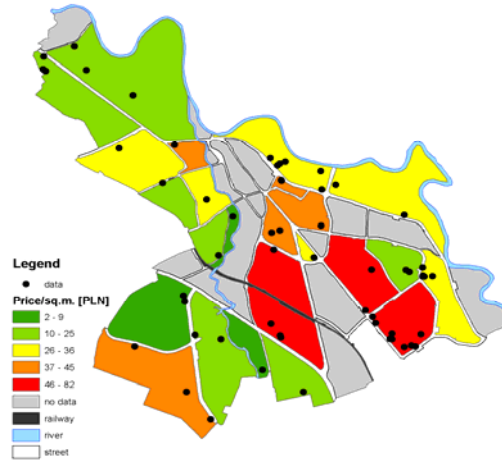


Choropleth map

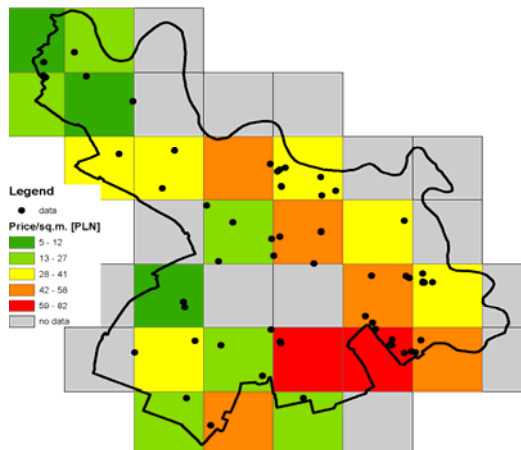
- Method of phenomenon variability presentation, in relation to a network of fields, called reference frame
- Three steps:
 - partitioning of the whole mapped area into elementary fields of equal or approximate size
 - acquiring the full and uniform quantitative information for all fields
 - delimitation of optimal class intervals for this information and finding the suitable colour scale for them



Choropleth map - quarters of streets

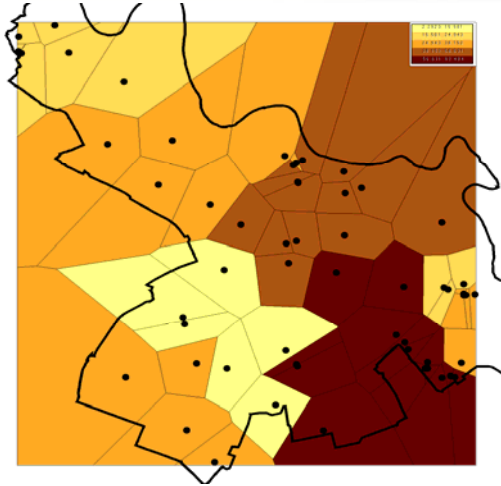


Choropleth map - square fields

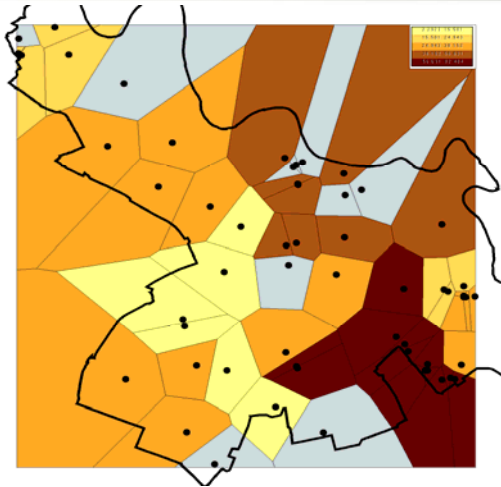




Choropleth map - Voronoi diagram (mode)



Choropleth map - Voronoi diagram (cluster)



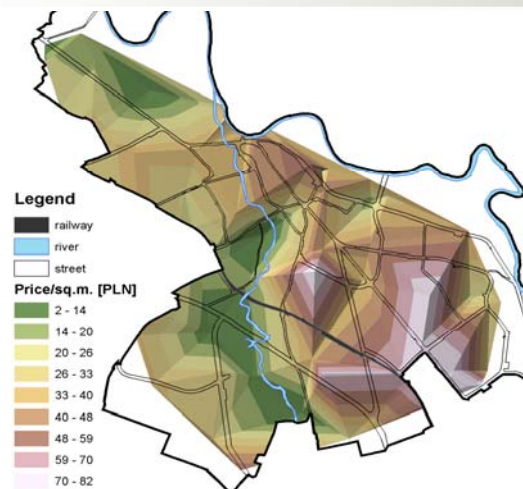


Isopleth map

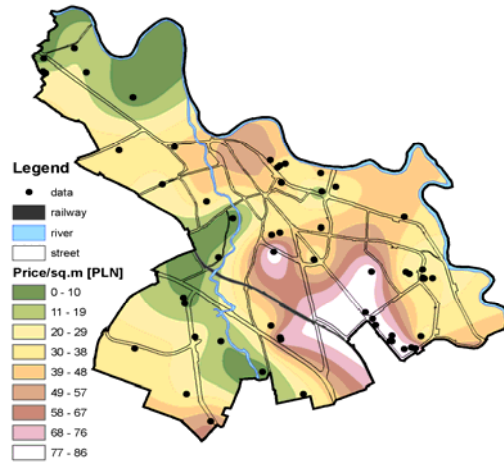
- Assumption of smooth variability of values between points having known value
- Expression of spatial variability of phenomenon by means of curves (isolines) system, not intersecting each other, having assigned following increasing or decreasing values, derived from points of equal values, which they connect



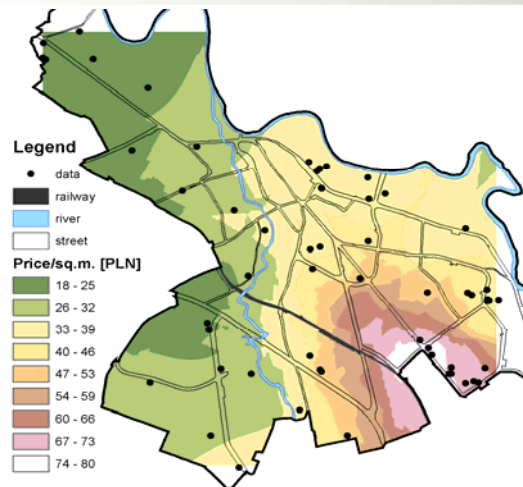
Isopleth map - linear interpolation



Isopleth map - topographical surface



Isopleth map - kriging





Conclusion

- Many methods of the cartographical presentation exist, which can be used for representing distribution of values of real estate
- Not all methods satisfy the basic criteria of image readability and exact mapping of objects characteristics:
 - symbols of variable size
 - assumption of the extrapolation of known values
 - assumption of phenomenon smooth variability between locations of known values