Project Design Documentation Approval Group’s role in the investment process in Krakow

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1973 – start of the synchronization of operating of local institutions and engineering offices in Krakow, in order to coordinate engineering design, planning and construction layouts etc. (spatial information reorganization). Process began by Krakow Survey Company (KPG), resulted in the establishment of Project Design Documentation Approval Group.
1973 – official appointment of Project Design Layout Plans Geospatial Approval Group in Krakow area by the resolution of the Presidium of National Council of the City of Krakow on May 7, 1973 (as one of the first cities in Poland beginning the process).
1977 – official name changed to **Project Design Documentation Approval Group** (PDDAG =ZUDP) in Krakow, due to the territorial reorganization of Krakow region and administrative changes in the country – regulation of the Mayor of the City of Krakow of December 22, 1977. Extended services to wider area covering all major towns of Krakow region (Dobczyce, Krzeszowice, Myślenice, Niepołomice, Proszowice, Skawina, Słomniki, Wieliczka).
1981 – the whole area of Krakow region covered by PDDAG (ZUDP) – regulation of the Mayor of the City of Krakow of April 2, 1981.

This regulation appoints the Governor as a person in charge of the PDDAG.
Historical look at Project Design Documentation
Approval Group in Krakow

The MILESTONE

1989 - new „Geodesy and Cartography Law” introduces regulations and operational rules of PDDA for whole country.
Historical look at Project Design Documentation Approval Group in Krakow

1998 – National Political System
Reform hands over this task to the district governor – starost (in Krakow case, the starost= Mayor of the City)

2005 – reorganization of PDDAG (ZUDP) due to the changes in regulations – new Construction Law – the starost appoints the Group for approval of planned new utilities.
Municipal Spatial Information System

- On April 7, 1993 - the agreement of cooperation for development of Malopolska Spatial Information System in Malopolska was signed by the Voivode (Governor) of Malopolska Region and the City of Krakow.

- On January 1, 1998 – following the National Political System Reform - the Mayor of City of Krakow took over the development of the Terrain Information System in the City of Krakow which was called the Municipal Spatial Information System MSIS (MSIP).
Main layers of the MSIS (MSIP):

- Geodetic control
- Land registry records and recorded plans
- Utilities records
- Spatial development plans
- Orthophotomap
- Etc.
MUNICIPAL SPATIAL INFORMATION SYSTEM

- TERRAIN INFORMATION DATABASES
  - LAND & BUILDING REGISTRY LAYER
  - GEOSPATIAL LAYER
  - UTILITIES LAYER
  - BENCHMARK LAYER
  - ORTHOPHOTOMAP

- DESIGNED SPATIAL MODIFICATIONS DATABASES
  - EFFECTIVE (LEGALLY BINDING) LOCAL SPATIAL DEVELOPMENT PLAN
  - NO PREDEFINED LOCAL GEOSPATIAL DEVELOPMENT PLAN
  - DECISION ON CONDITIONS GROUND DEVELOPMENT AU-1

- DESIGNED UTILITIES GEOSPATIAL APPROVAL
Regulation Acts concerning the TIS (SIT) database update and geospatial approval of designed utilities

- May 17, 1989 „**Geodesy and Cartography Law**” Act (the 2005 Law Act Journal No. 240, pos. 2027 with further changes)

- April 2, 2001 regulation on the utilities geospatial registry and PDDCS (ZUDP) by the Minister of Regional Development and Construction (Building engineering)

- February 21, 1995 regulation concerning categories and scope of land surveying and cartography projects as well as the civil engineering surveying duties and responsibilities by the Minister of Geospatial Management and Construction (the 2005 Law Act Journal No. 25, pos. 133)

- September 21, 2005 Mayor’s of the City of Krakow regulation No. 1683/2005 regarding the appointment of the utilities alignment and location coordination group and regulations regarding its functioning.
Total Area of Krakow:
32680 ha

Registry Units
/Administrative Districts:
Krowodrza
Śródmieście
Podgórze
Nowa Huta

Registry Ranges:
252
Land and building registry Layer

Land Registry Map
Contents:
• Lot boundaries and ID
• Building layout shapes and their street address id numbers
Streets Layer

- Road centerlines and edges
- Street names
- Serial numbers
Utilities layer

**Mains:**
- Gas
- Teletechnical
- Water
- Electricity
- Sewer
- Central heating/hot water
Gas system layer

Total length of lines – 2802 km
Telecommunications network layer

Total length of lines
– 2821 km
Water supply system layer

Total length of the network – 4093 km
Power network layer

Total length of the network – 9318 km
Sewage system layer

Total length of the system – 5870 km
Central heating / hot water supply layer

Total length of the network – 758 km
Utilities layer on the orthophotomap
LOCAL SPATIAL DEVELOPMENT PLANS

STATUS as on FEB. 16, 2008
City administrative boundaries
Roads
Vistula River
Resolution Accepted plans
Prepared plans
Inactivated plans
Disregarded plans (by Krakow City Council)
Accepted yet not in use plans

CARTOGRAPHICAL VIEWER
December 2008
PDDAG's Final Projects (ZUDP)
2007 - 2009
The organizational structure of the PDDAG (ZUDP):

1. **Chairman** – Land Surveyor

2. **Consultants representing departments of the Municipality of Krakow:**
   - Department of Architecture and Urban Planning
   - Department of Environmental Impacts

3. **District Inspectorate of Construction Supervision**

4. **Highway and Drainage Administrators** – Public Infrastructure and Transportation Board

5. **Administrative entities responsible for underground and overhead utility networks’ management:**
   - Water and Wastewater Municipal Company Inc. – water, waste water, sewer and drainage systems
   - Thermal Energy Municipal Company Inc. – thermal energy systems
   - Polish Oil and Natural Gas Exploration Company Inc. – natural gas systems
   - ENION Inc. – power energy systems
   - Polish Telecommunication Inc. – phone and telecommunication systems
   - Netia Inc. – phone and telecommunication systems
   - Other professional consultants and representatives invited by the Chairman
Range of operations of the PDDAG

Application for PDDAG, prepared by a developer (Client) consist of:

- Proposed layout of considered new design of (underground and overhead) utilities,
- Administrative decision regarding the specifications of construction and area development,
- Technical specifications of utilities connections to existing utility networks, which were obtained from those administrative entities responsible for utility network’s management,
- Proposed approximate location of newly designed underground utilities.

Subsequently, the request for PDDAG is processed and examined as follows:

- Compliance with PDDAG request standards,
- Quality control of the map/plan used, in terms of area, scale, contents, timeliness, accuracy, legibility as well as verification of the official clauses confirming approval of the map as a part of the state’s central geospatial database
- Legibility of the designed elements shown on the map
Range of operations of the PDDAG

Project design documentation preparation for PDDAG meeting:

• Quality control in order to check the compliance with the technical specifications addressed by the administrative entities responsible for utility management, with municipal spatial development plans or with the administrative decision on the conditions of the development,

• Preparation of the preliminary report containing comments, concerns and possible issues,

• Forwarding the prepared documentation to the PDDAG.

A qualified representative of the developer may be present during the PDDAG meeting in order to answer the questions regarding the project.
Geospatial approval of the designed utility networks means making sure there is no conflict between proposed and existing utilities, and to:

- Other utilities and equipment
- Existing buildings and structures
- Survey control point monuments, benchmarks, gravity- and magnetic controls points etc.
- Tree canopy lines and other extensive vegetation areas
- Environmental monuments
- Any potential objects selected as a results of study of local predefined geospatial development plans

The Mayor of City of Krakow issues an official decision (opinion) regulating the geospatial coordination of the newly designed utilities’ location, based on the above analysis.

This decision (opinion) is valid for period of 3 following years from the date of issue.
The PDDAG’s (ZUDP) expertise (sample)
The PDDAG's (ZUDP) Map (sample)
V-BIURO (V-Office) – administrative IT system of the PDDAG

- Registration and preliminary verification of PDDAG application for spatial location approval
V-BIURO (V-Office) – administrative IT system of the PDDAG

Documentation of the case

Recorded modifications
V-BIURO (V-Office)  
– administrative IT system of the PDDAG

If there are any remarks or objections, the proceeding of application is stopped and the comments are sent to the client (developer) for updating or correction of the documentation.

When correcting, the application is proceeded once more.
V-MAPA – graphic services IT system of the PDDAG

Location of designed utilities in V-System – sorted by lots location
V-MAPA – graphic services IT system of the PDDAG

After geospatial analysis with approved projects, the selected objects are generated and then displayed.
V-MAPA – graphic services IT system of the PDDAG

The preview of the current state of MGIS database is then generated and displayed.
A new design project data and existing MGIS data are then confronted together with other prior coordinated projects’ data in order to analyze any potential geospatial conflicts. In this process a raster or layer with proposed design data is overlaid above layers representing current data from central geospatial database (geodetic data).
V-MAPA – graphic services IT system of the PDDAG

Input of new data from the approved project into V-System
Traditional map „on duty” with changes
Official opening of PDDAG services via web portal for developers:
www.geodezja.krakow.pl
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Land registry documentation and reprints of the recorded plans prepared for clients’ requests

- Projects in traditional format - blueprint version are photo scanned, calibrated, then processed using vectorization or manually inputted into system based on survey point data.
- Projects delivered in electronic format are semi-automatically incorporated into database, preceded by adequate analysis and parameterization during V-System processes.
- Processed project data is then stored in separate database called “buffer” where it is put “on hold”, meaning it is not officially approved yet.
- Finalizing the process of data collection, analysis and verification of documentation and reprints prepared for a client
- Final quality assurance and check by the Chairman of the PDDAG or delegated by him official, who finalizes process by issuing an official opinion (authorization)
- After authorization, the project data from “buffer” is then incorporated into central database system. From that point on, the new data set becomes an integral part of the official geospatial database.
Implementation of the V-System in the PDDAG

The chart represents quarterly shown quantity of approved projects in year of 2007.
Implementation of the V-System in the PDDAG

The quarterly shown quantity of approved projects in year of 2008

The quantity of approved projects in January and February of 2009

Quantity of issued opinions

Quantity of approvals (layer R)
As-Built survey/inventory of the new design utilities

- As-built survey/inventory takes place after the APPROVED project is completed.
- As-built survey/inventory, initiated by request order placed by a client/developer, is prepared by state licensed land surveyor.
- As-built survey/inventory reveals conformity or discrepancy of the as-built utility layout with designed location in accordance to the approved project layout.
- Maximum allowed misplacement error is 0,30 m or less in the urbanized areas and 0,50 m or less in the rural or forest areas.
As-Built survey/inventory of the new design utilities
As-Built survey/inventory of the new developed utilities

In case of any inconsistency between newly developed utilities and approved project, the as-build plan showing the results of inventory are sent immediately to the local architecture and building authority.
Summary

- Data basis and development of MGIS (MSIP) database layers, including, but not limited to surveying control point network, land and building registry, geospatial development plans and utilities inventory created new possibilities in the framework of functioning of the PDDAG (ZUDP).

- This technology contributed with the change in the traditional approach to the processes of project control, more advanced, universal and detailed inspection, and facilitated registration of issued decisions.

- Thanks to the new web portal [www.geodezja.krakow.pl](http://www.geodezja.krakow.pl) there is 24 hours access to the information on the project/application status as well as on the possible deficiencies.

- Activation of the web page decreased number of phone inquiries more than 90%.