

Ruda Śląska Pilot: Underground Scenario



Ruda Śląska is a town having rights of a county, located in southern Poland, at the Silesian Upland (Wyżyna Śląska) in the centre of the Upper-Silesian Industrial Region (Górnośląski Okręg Przemysłowy – GOP).

The present Ruda Śląska is made up of several localities, which had not been under one administration years ago. Some of them are of medieval origin.

The development of the area of the present Ruda Śląska took place in the 19th century, when heavy industry started to develop extensively.

General Information

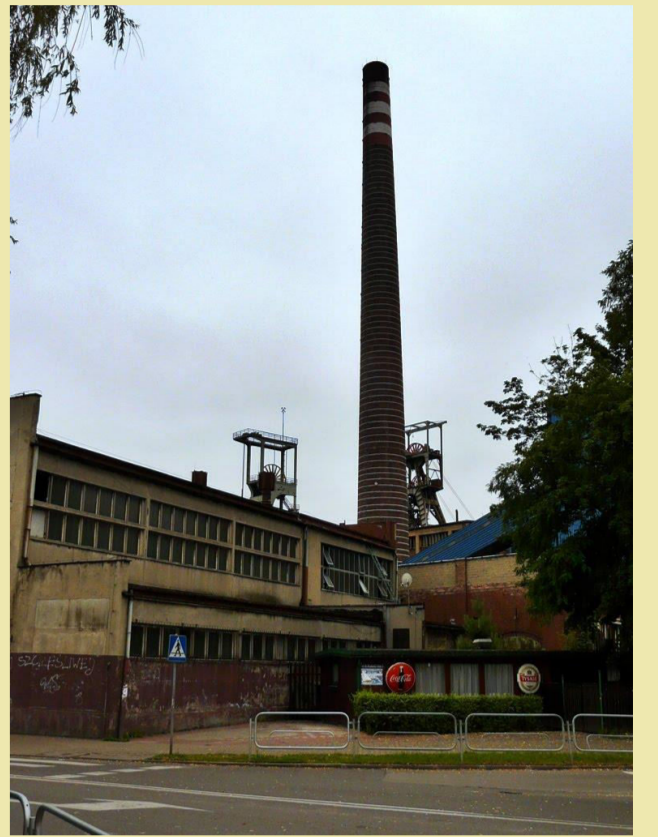
Population: 142 500
Surface: 77,73 km²

Length of utilities for which have been catalogued:

- water pipes - 924 km
- sewerage - 1057 km
- gas pipes - 586 km
- district central heating - 238 km
- telecommunication network - 527 km
- power distribution - 1332 km
- other networks - 85 km



For over two hundred years Ruda Śląska had been developing on the basis of hard coal mining and metallurgy, which to a large extent shaped the economic image of the town. However, in recent years the town has been changing that image. Although it is the biggest mining town in the European Union at the moment, Ruda Śląska economy has been developing in various directions.



Very good transportation network of the town, and its location in the heart of a conurbation with 2.5 million inhabitants, the A-4 motorway and regional highway (DTS - Drogowa Trasa Średnicowa) crossing the town, the nearby intersection point of two motorways: A-1 and A-4, as well as some 9 million inhabitants within the radius of 100 km – all that makes Ruda Śląska one of the most attractive towns in Upper Silesia.

Description of the pilot deployment:

The Town of Ruda Śląska has a digital (vector) map of the utility network location in a greater part. This map was made in a continuous way in the last 50 years as a result of geodetic works (as-built).

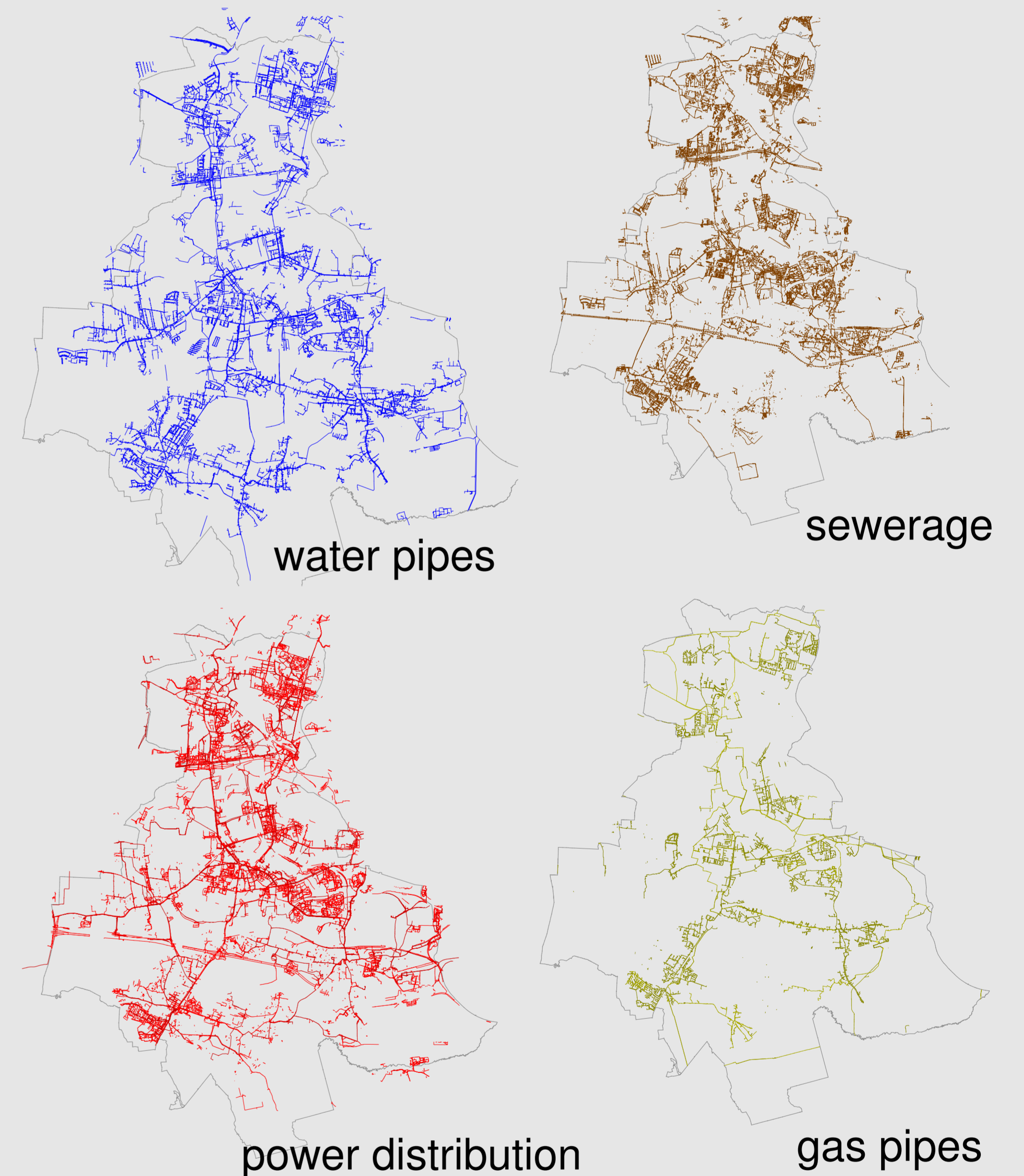
It requires to be transformed into an object base, to be supplemented with attributes, and what is the most important, to be verified and controlled by particular administrators of the network, who maintain their own registers.

The GeoSmartCity is to provide a re-usable toolkit) and methodology for integration of Geo-Information from different sources. It will be very helpful while performing tasks which the Town faces.

Only reliable GI about the infrastructure of the utility networks can be basis for efficient management of the town.

Cavities formed in the rock mass after coal exploitation cause ground subsidence and damage of the utility networks. The utility register system cannot be detached from surrounding and influences of anthropic interactions.

Ruda Śląska sees a solution to the problem in wider context by creating subsequent digital bases, services and Smart City.



Objective

The main aim is to establish a constant flow of information between the companies managing the networks and receivers of big production works (coal mines, steelworks), which often had their own utility networks on the premises on the large area and had an influence on anthropogenic changes of the area.

