


## BUILDING GOOD PRACTICE

### The City Hall Building – Katowice, Upper Silesia

GENERAL INFORMATIONS		
<b>Name of the public building renovation:</b>	<b>The City Hall Building of Katowice (symbol UM_3M7)</b>	
<b>Index of Building Good Practice (ex. BGP n°1 – IT)</b>	<b>BGP n°4 – PL</b>	
<b>Sub-group</b>	<b>Historical buildings, Office</b>	
<b>Description</b>	Photo	
	<b>Address</b>	3-go Maja Street no 7 , 40-126 Katowice
	<b>Public sector contractor</b>	Renovation and Construction „JANMAR” 2 Królowej Jadwigi Street, 41-200 Sosnowiec
	<b>Architect</b> <b>Engineering consulting</b>	MSc.ENG. Andrzej Krzysztof Barysz BARYSZ POINT LINE 56 Norwida Street, 43-100 Tychy
	<b>Building Characteristics (surface, number of users, orientation etc.)</b>	5-storey building, ground floor public (four commercial units allocated to services and shops), the other floors used by the departments of the City Hall of Katowice; <ul style="list-style-type: none"> <li>- the average number of users - 130people.</li> <li>- floorage – 560,00m<sup>2</sup></li> <li>- footprint – 1950,00m<sup>2</sup></li> </ul>

	– gross volume – 11084,00m <sup>3</sup>
Date of construction	1946
Legal aspects (e.g.: protected property)	The object is under protection and conservation supervision.
Date of renovation	2005 - 2008
Nature of the work (short description)	Complex thermal modernization of the building including walls, ceilings, replacement of windows, door and central heating systems. The front elevation is finished with mineral plaster and stone facing of sandstone.
Budget and source of financement	The task financed by the City of Katowice budget Allocated funds : 1 717 980,97 PLN net
<b>AVAILABLE RESULTS</b>	
<b>What were the big problems (in terms of energy efficiency) to tackle?</b>	Problems with proper evaluation of building energy consumption during the four-year period of construction work, what was connected with modifications of power supply contract (problems with supplier who objected constant changes).
<b>Has this building been already analysed and certified?</b>	No Since 2010 regular monitoring of energy consumption of heat and electricity has begun, in 2011 monthly reports are transferred to the monitoring system KEGEMS.
<b>What are the key innovative energy efficiency measures undertaken through the renovation?</b>	The main objective achieved through the process of energy efficiency is reduction of energy consumption for heating, thereby reduction of energy bills.
<b>What are the measurable improvements in terms of energy efficiency (kWh saved)?</b>	In 2001-2006, the average heat consumption was ~ 411 000 kWh/a, while in 2007-2011 the average heat consumption decreased to ~ 260 000 kWh/a (during and after the renovation). Average annual energy savings for heating 151 000 kWh/a
<b>Ecological Effect</b>	
<b>ENERGY EFFICIENT MEASURES</b>	
<b>Energy efficient measures of</b>	<ul style="list-style-type: none"> <li>• external wall insulation thick Styrofoam 8 cm,</li> <li>• application of low-carbon double glazing windows <math>U_k = 1.1 \text{ W/m}^2</math></li> </ul>

<b>the building envelope</b>	of gas.
<b>Energy efficient measures of the heating system</b>	In 2005 - replacement of old central heating system (radiators, cast iron and steel, finned tube, without valves), the new installation included: <ul style="list-style-type: none"> <li>– copper pipes,</li> <li>– steel plate radiators,</li> <li>– thermostatic valves,</li> <li>– control valves under plumb lines.</li> </ul>
<b>Energy efficient measures of monitoring energy</b>	An annual analysis of the amount of heat energy consumed and the current analysis performed by the Municipal Housing Enterprise in Katowice (MHEK).
<b>Energy efficient measures regarding behaviour</b>	Installation of radiator valves with thermostatic regulation allowing the current flow of heating substance.
<b>Others?</b>	
<b>SUSTAINABILITY OF THE RENOVATION</b>	
<b>Design and choice of sustainable materials?</b>	<ol style="list-style-type: none"> <li>1. Did the materials used for thermal modernization followed any special provisions of law or norms regarding environmental or healthy character of the materials ? <b>NO</b></li> <li>2. Are the materials certified ? <b>YES – in accordance with Polish Standards</b></li> <li>3. Was the selection of class of materials included into the specification of essential terms? <b>YES</b></li> </ol> <p>All used materials were chosen by the architect accordingly to standards and technical conditions binding in Poland concerning energy saving and thermo insulating power. All of them have proper tastings and declarations of conformity.</p>
<b>Sustainable building site management? (sorting waste, water...)</b>	<p>During the modernization the Contractor was charged of the expenses of used energy and water, what influenced the rationalization of consumption. The Contractor was also responsible for waste management and utilization.</p> <p>On the turn of 2005/2006 building administrator conducted complex replacement of water supply system along with the replacement of sanitary ware (faucets, toilet bowls, old valves into ball cocks) limiting the water loss caused by leaky old devices.</p>
<b>Application of a valuation method (BREAM? HQE? Others?)</b>	None

<b>BUILDING MAINTENANCE: life of the building after the renovation</b>	
<b>Is the building object of an energy monitoring? Is there a responsible manager?</b>	The building has monitoring system KEGEMS, the staff assigned by building administrator i.e. Municipal Housing Enterprise in Katowice (MHEK) twice a month passes the information about cost and consumption of energy to The City Hall – the person appointed for data entry and supervision of energy monitoring system.
<b>Who is in charge of the maintenance of the heating system of the building?</b>	Building Administrator – Municipal Housing Enterprise in Katowice (MHEK).
<b>Who is in charge of the day to day energy management?</b>	Building Administrator – Municipal Housing Enterprise in Katowice (MHEK) and the users of offices for example The City Hall of Katowice.
<b>Are there some specific measures to raise energy awareness and to implicate users in energy efficiency?</b>	Yes – based on the result analysis of monitoring process the dialogue between the representatives of the Building Administrator and the main user i.e. The City Hall of Katowice (Administration Department, Management Department) is undertaken in order to enhance the awareness of direct users of offices regarding austerity of energy management.
<b>TRANSFERABILITY</b>	
<b>Transferable aspects according to the partner in charge of this example of good practice</b>	<p>Transferability of planning (forming a partnership, choosing priorities, setting up a renovation building teams)?</p> <p><b>The specification of essential terms i.e. the description of order prepared for the advertise of tender for technical documentation. The content of specification was agreed with the user of building and the specialists in energy efficiency.</b></p> <p>Transferability of the process of renovation (management structure, monitoring system, implication of end users, participation, etc.)?</p> <p><b>The procedure of handling supervision of conducted work. The supervision was carried out by specialists coordinating the realization of the task within the conformity with technical project.</b></p> <p>Transferability of results (good solutions, adaptability, change of behaviour, etc.)?</p> <p><b>Current (monthly) monitoring of cost and consumption of energy carriers and water.</b></p>
<b>Transferable aspects according to all the partners</b>	The other partners will analyse and validate these good practices. During the process of validation the partners will take on the role of auditors because they will assess and improve the effectiveness and

<b>of Serpente project</b>	portability of good practices in their context.
	The validation process will promote a systemic approach in local competent public administrations. Moreover, this process of selection and validation is a peer review and entails the mutual role of experts and auditors depending on typology of buildings and partner's expertise.
<b>SOURCES</b>	
<b>Publications</b>	
<b>Website</b>	
<b>Interviews</b>	Administration Staff of Municipal Housing Enterprise in Katowice (MHEK).