

## Expert leadership in the field of energy efficient building in Poland

The Laboratory is the first place in Poland to do such large-scale research on energy efficient technologies and the comfort of the occupants of low-energy buildings. This interesting project gives the University the leading position in the sector of energy efficient building.

The innovative building is situated on the University campus in Warszawska street. It has 5 floors (built area is 258,41m2, utility space is 1039 m2, the front elevation is 17,02 m wide and 19,24 m high). It is a slab and column construction with self-supporting external walls and glass elevations. Owing to this, materials and construction can be changed to meet research needs. Inside there is 14 climate and energy zones where researchers study properties of materials and technologies in relation to climate conditions.

The object has an intelligent control system and relies on varied systems of heating and ventilation. Energy supply also comes from different sources including renewables.

All installations such as heating, cooling and ventilation have meters so as to allow current monitoring. The object comprises of 14 thermal zones working independently of one another so as to make their comparative analyses possible. The laboratory is supplied with specialist research equipment for testing and implementing new technologies, material and construction solutions and installations.

Thermal comfort of the occupants is studied and analyses of air quality are made for the tested technologies. The laboratory has:

- a chamber for climate testing of building partitions and installations,
- a chamber for studying thermal comfort while using different HVAC installations,
- thermal imaging cameras,
- a 3D scanner,
- thermal manikin,
- a PIV system to examine air flow in relations to the ventilation system used.

The Laboratory building allows research to be carried out in real conditions. The building is equipped with some 3 thousand sensors placed in the building construction.

## Contact details:

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## Scientist + Entrepreneur = Success

If you are planning to develop your company on the basis of the latest scientific findings and you would like to collaborate with experienced scientific experts check the offer of Cracow University of Technology for the industry www.s2b.transfer.edu.pl.

## Our online database includes:

- → technology offers, patents and industrial designs
- → listing of University commercial services including laboratory expertise and research
- → database of experts with experience in the implementation of services for the industry

As an internal unit of Cracow University of Technology, our team of consultants is specialized in the commercialization processes. On the other hand long term active cooperation with entrepreneurs allows us to identify precisely industry needs and expectations. Experiences gained through the last two decades on the edge of industry and science collaboration, let TTC formulate optimal models of commercialization and suitable methods of development projects support.







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