

Copernicus Science Centre develops

The construction of the new Copernican Revolution Lab (CRL) will start in 2019. The investment has just received a grant from the funds of the Mazowieckie Voivodeship and the capital city of Warsaw. The new building of the Copernicus Science Centre complex will be erected in Warsaw's Powiśle district in 2021.

The total cost of the investment will amount to 65 048 943.24 PLN (17 027 181.96 USD/ 15 018 341.66 Euro)

The subsidy from the Regional Operational Programme of the Mazowieckie Voivodeship for 2014-2020 amounts to 16 765 860.42 PLN (net) (4 388 624.04 USD/ 3 870 861.04 Euro)

The budget grant from the City of Warsaw amounted to 19 390 101.00 PLN (net) (5 075 544.07 USD/4 476 739.32 Euro). The remaining funds include the Copernicus Science Centre's own contribution, as well as funds obtained from consortium members and sponsors.

The tender for the general contractor will be announced in January 2019. Construction is scheduled to start in June 2019. The building is slated to be commissioned in mid-2021.

An innovative building

The architectural concept of the new Copernicus Science Centre building is developed by Heinle, Wischer und Partner Architekci Sp. z o. o., a Wrocław-based studio headed by Edzard Schultz and Anna Stryzewska-Słońska. The company specialises in designing research and laboratory facilities.

The simple and light structure of the cuboid-shaped building will have an original façade in the form of air-filled cushions made of ETFE membranes. The unusual material and design of the façade will make the venue not only visually attractive, but also energy-efficient and environmentally friendly, as it will enable lighting the halls and rooms with natural light and ensure sustainable energy use. The green roof covering the building will serve as more than just a relaxation zone - it will also feature solar and photovoltaic cells, as well as installations enabling the use of rainwater.

The Copernican Revolution Lab will be able to accommodate 600 people at a time. It will have three above-ground storeys and one underground one with a total usable area of approx. 6000 m². It will be erected in the immediate vicinity of the Copernicus Science Centre, and both venues will be connected by a pedway.

The design of the CRL building is developed using the innovative BIM (Building Information Modeling) technology, which is touted as the Copernican revolution in the construction industry, since it is a change from traditional 2D-based design to modelling new building in 3D. This in turn enables close cooperation between the architect, contractor and investor at every stage of the project.

A universal space

The CRL is going to be an open and interdisciplinary space. It will host a number of laboratories fully stocked with equipment needed to conduct biology, chemistry, physics, mechatronics classes, as well as workshops employing new technologies such as 3D printers and VR. It will also feature a large design workshop with tools for designing and constructing various objects. The space will be adapted for testing different formats of classes in a school environment,

as well as conditions similar to the working environment of real researchers. One-way mirrors and recording equipment will enable making observations. The new building will also include an office space, a showroom to showcase the current projects being developed in the Lab, as well as a foyer, cloakrooms and a café.

Lab of the future

The Copernican Revolution Lab is a scientific consortium founded by the Copernicus Science Centre (its leader), as well as Moje Bambino and BeCreo Technologies. This is the first interdisciplinary and intersectoral research and development centre in Poland, focusing its research efforts on learning processes and creating products geared towards education.

The Lab will focus its efforts on two main aspects, first being research and development projects. The CRL will serve as a meeting place for experts in fields as diverse as psychology, pedagogy, cultural studies, linguistics, anthropology, sociology, natural sciences and hard sciences. The Lab's activities will encompass the acquisition, integration, shaping and use of existing knowledge and skills for the development and design of new educational products and solutions, as well as research services. The Lab will also develop and test in practice a wide variety of working forms and methods of action, while existing models of education will be analysed and compared with each other.

The second aspect entails cooperation with business, which will provide ample opportunities for combining the potential created by the Lab with the unique experience of companies. The products and solutions prototyped and developed at the CRL will be disseminated on the commercial market. The Lab offers companies its highly innovative R&D services, knowledge and know-how resources of the research team, as well as modern infrastructure enabling R&D works on new products and services. The cooperation is possible in three main areas: sales and licensing of products and educational solutions, classifying existing products and educational solutions, as well as developing and marketing products and educational solutions. The CRL is sponsored by Samsung Electronics and Saint Gobain.

We hope that the activities of the Copernican Revolution Lab will result in the development of new knowledge and help building a community involved in research and development of learning processes.