

## ***CEU RENEWS: The Community Approach to Building a Sustainable Campus***

### ***Presentation Description:***

Central European University has embarked on a redevelopment project aimed at transforming its existing campus into a flexible, modern, and welcoming facility which maximizes user comfort while minimizing environmental impact. Phase I of the project, which includes the creation of a new library, auditorium and conferencing center will be completed in the summer of 2016. In compliance with standards outlined within the University Sustainable Development Policy, and the requests of the Campus community, project architects O'Donnell and Tuomey in cooperation with sub-consultants, have incorporated design principles which will ensure a healthy and productive campus environment housed in an energy and resource efficient building complex. With hopes of setting a precedent for sustainable building within the region, CEU has chosen to have its redevelopment project accredited utilizing the Building Research Establishment Environmental Assessment Method (BREEAM), administered by Britain's Building Research Establishment (BRE). BREEAM accreditation encourages a holistic approach to sustainable building and project management, and the assessment method rewards points for excellence in project design, sustainable construction management, and post construction in-use performance.

The aims of the campus redevelopment project are to:

- Create an environment that reflects and responds to the needs of a diverse student and faculty body, providing as far as possible a 'home away from home', an environment that accommodates diversity and is not disadvantageous to any specific group in either educational or operational terms.
- Provide facilities that enable CEU to be a leading university in the application of information technology to assist its on-campus activities and expand its outreach.
- Ensure that CEU complies with appropriate international standards and best practices for sustainable development in the construction and design of facilities and fixtures concerning energy use and other environmental conservation.

From the onset of the Campus Redevelopment Project, creating building infrastructure that fulfills the expectations of the University community, and the standards set by the University Sustainable Development Policy has been one of the primary goals. Sustainability principles have been integrated within each preliminary phase by the project architects O'Donnell and Tuomey in conjunction with their environmental sub-consultant A\_zero.

Background research and consultations with sustainability professionals have indicated that BREEAM International Bespoke green building certification was the most suitable environmental accreditation option for this project. The accreditation process following BREEAM guidelines has encouraged long term performance optimization of campus facilities while reinforcing CEU's commitment to sustainability within the greater community.

By pursuing the environmental accreditation of a major campus building project, CEU has embarked on an ambitious quest to demonstrate that institutions of higher education in Central Europe and beyond can initiate capital projects which demonstrate commitments to sustainability and building communities which consist of environmentally conscious individuals.

The new design will significantly reduce overall energy consumption per square meter of building space related to University activities, lowering the environmental impact of CEU's operations. Savings of close to €1 million per year are expected thanks to energy efficiency, prudent management of the space and increased user consciousness regarding sustainable practices.

O'Donnell and Tuomey's "green" CEU design incorporates eco-friendly elements, a key factor in blending new construction into the existing built environment. In addition to energy-efficient equipment and building management systems, and the added ecological value of a rooftop garden of native species that will span two buildings, CEU received a 100 percent BREEAM transportation rating for providing plentiful cycle racks and showers for bike commuters. The architects also carefully considered how natural light and shading can be managed with architectural elements and building controls to positively impact the working conditions within the campus. Further aiding in energy conservation, the new campus will rely less on mechanical heating, cooling and lighting systems to provide ideal internal conditions, and instead capitalize on natural lighting and shading elements, and a robust building fabric to maintain a high quality work environment.

The new CEU design is a 'bespoke' or customized assessment. It is complex as the evaluation has to take into account existing buildings and structures, some of them historic. Another feature that makes the project special is the management's efforts to work with the surrounding community which has a vested interest in the University. It is also unique to Hungary to implement international best practices during the construction – to monitor air quality, reduce dust and communicate with workers in their native languages. CEU is working with the Market Strabag Consortium to maintain prudent sustainable site management practices during the construction period and to assure BREEAM certification for the construction stage of the project.

The University and Campus Redevelopment Team are specifically proud of these environmentally friendly building elements which have been incorporated into the project:

- A rooftop garden of bird and bee friendly native species that will span two buildings
- Energy-efficient equipment and building management systems
- Abundant bicycle racks, storage lockers and showers for bike commuters
- Natural light and shading elements to reduce reliance on mechanical heating, cooling and lighting
- Significant repurposing and reuse of building materials; minimizing the need for procuring virgin resources
- A rainwater collection based drip irrigation system which will reduce fresh water consumption for maintaining the rooftop garden