



Thematic Actions

Coordinating Universities for the Proposal: UCM and UPM

Title of Action	Construction of a Multipurpose Bioclimatic Building (EBM)		
Participating partners	UPM, UCM	Other participants	
Personnel involved (indicate institution)	UPM, UCM, CIEMAT		
Start date	2010	End date	2012
Cluster	Global Change and New Energies	Other clusters	Materials for the Future
Areas of action	Research / Knowledge Transfer		
Location	Site in the University City. This action refers to the construction of a building on the site assigned to UPM on the Moncloa Campus, and includes use of the remaining area of the site.		
Infrastructures involved	CIMAM Laboratories, Nuclear fusion, business start-ups, etc.		
Keywords	Multipurpose building; Environmental rating		
<p>Objectives:</p> <p>To construct a building to house the Moncloa Environmental Research Centre (Centro Mixto UPM-UCM de Investigación Medioambiental de Moncloa -CIMAM), groups and infrastructure for nuclear fusion and radiological protection, new laboratories for environmental technologies and others for technological innovation, within the cluster areas Global Change and New Energies, and Materials for the Future.</p> <p>With this action the coordinating institutions will have a building available to group together activities which at present are dispersed, and which they wish to foster within the CEI-Moncloa project.</p>			
<p>Description of the action:</p> <p>The proposal envisages a new building with a surface area of 10,000 m², located in the Paraninfo of the University City on the Campus site originally assigned to the UPM, to house 100 teachers/researchers, 100 research staff in training and 50 technicians. It is also envisaged that the building will include an area for business start-ups in the environmental and energy sector, so that the first business start-up initiatives in the area will be located on campus. This start-up facility will attract spin-offs generated in any of the public institutions located at the University City.</p> <p>The tentative distribution of this building is as follows:</p> <ul style="list-style-type: none"> • 1,500 m² for central services for the Centre (reception, cafeteria, auditorium, security, videoconference rooms, etc.). • 3,500 m² for the CIMAM distributed in: <ul style="list-style-type: none"> • 1,000 m² for offices and multipurpose rooms. • 2,500 m² for specialised laboratories. <p>The internal distribution would correspond to the Director of CIMAM for the different areas envisaged in the Centre and described briefly in Action E2.</p> <ul style="list-style-type: none"> • 1,500 m² for the site of the DENIM and joint actions related to ICTS TechnoFusion, for which facilities are to be built at a future date in TecnoGetafe, and for the participation in the HiPER international project included in the EU ESFRI roadmap. • 500 m² for radiological protection laboratories. • 1,500 m² for technological innovation activities. • 7,000 m² for business start-ups (12-15 companies). • 1,200 m² for technological demonstration and support platforms for services for the Public Administrations in environmental areas. • 1,000 m² for postgraduate teaching activities carried out in the building by agreement between the UCM and UPM. • 1,000 m² corresponding to open-air spaces for data collection activities (e.g. setting up environmental sensor networks). 			



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<p>The building should be a model for environmentally adapted solutions, with third generation photovoltaic concentration solar panels, bioclimatic windows with fluids to improve insulation capacity, domotic control of energy consumption and environmental variables, selective waste processing systems, recovery and treatment system for grey water and the use of recyclable materials. The building aims to achieve a 'B' environmental quality rating.</p> <p>The Centre should be available for use by end 2012 with a total time frame of 33 months from the present date. The estimated planning schedule is as follows:</p> <ul style="list-style-type: none"> • Draw up preliminary project and use assessment: 3 months. • Design project: 6 months. • Building construction: 18 months. • Equipping for initial occupation: 6 months. <p>Given the timeframe to complete the building and installation, it will be essential for the participating institutions to provide temporary spaces.</p>	
<p>Planned key results:</p> <p>From a Human Resources viewpoint, this project is expected to boost participation in the FP7-CE PEOPLE programme and the CIEMAT-EURATOM association training programmes. In both cases, the programmes imply contracting research staff working outside Spain.</p> <p>With respect to the control of natural disasters, it is hoped that the building will house observation and monitoring services for natural disasters in close collaboration with similar existing centres in other EU member states.</p> <p>With respect to the environment, it is envisaged that the CIMAM will contribute to the training of researchers and technical staff from other countries.</p>	
<p>Rationale for the action:</p> <p>The present University City has very little space available for developing new activities. The proposal to remodel the existing Costume Museum and to construct this new building is, in fact, an action to provide spaces dedicated to research and innovation, currently lacking on the existing campus. The new proposed space will also facilitate more joint actions by both universities.</p> <p>This means, however, that the new building cannot be used for one single activity.</p>	
<p>International aspects:</p> <p>The R&D activity on the nuclear campus has a clear international dimension. At present, both the UPM and the CIEMAT have wide-ranging experience in the EURATOM programme and contribute to radiological protection activity and improvement in security, as well as aspects of the development of fusion energy through inertial confinement with participation in laser design in the HiPER project and support for the ITER project. In both cases, it is essential to reinforce the experimental capacity for component development and testing by setting up new laboratories. This activity will support the laboratories that will eventually be installed in TechnoFusion.</p> <p>With respect to the environment, it is hoped that the building will house advanced training facilities for students from non-Spanish institutions with the support of the Public Administrations.</p>	
<p>Planned impact:</p> <p>Improvement in scientific competitiveness of existing research groups with modern and appropriate facilities available to carry out their activity.</p> <p>Increased synergy between research groups in the UCM and UPM and others from the CIEMAT who work in related areas and which both universities propose to house in the same building.</p> <p>Generating stable relationships with businesses in the sector.</p> <p>Availability of common joint laboratories for the Environment and Energy cluster.</p> <p>Encouraging the creation of new technology-based companies in the environment and energy sector by setting up a business start-up facility.</p>	