

The background features a complex, abstract geometric pattern of bright red shapes on a solid black background. The shapes include various rectangles, triangles, and chevrons, some of which are nested or overlapping to create a sense of depth and movement. The overall composition is dynamic and modern.

**campus MONCLOA**  
the power of diversity

# MONCLOA CAMPUS

## CAMPUS OF INTERNATIONAL EXCELLENCE

Complutense and Technical

Universities

Madrid



### 2009-2010 Follow-up Report

**Ciemat**



**Comunidad de Madrid**



May 10, 2011

**Project Data:** CEI MONCLOA CAMPUS: THE POWER OF DIVERSITY (Ref.: CEI09-0019)

**Type of CEI:** Global X

**Acronym:** CEI Campus Moncloa

**Coordinating University:** Complutense University (UCM)

**Participating Universities:** Complutense University (UCM) and the Technical University of Madrid (UPM)

**Other CEI's promoting entities:**

Centro de Investigaciones Energéticas, Medioambientales y Tecnológicas (CIEMAT) [www.ciemat.es](http://www.ciemat.es)

Consejo Superior de Investigaciones Científicas (CSIC) [www.csic.es](http://www.csic.es)

Agencia Estatal de Meteorología (AEMET) [www.aemet.es](http://www.aemet.es)

Instituto Nacional de Investigación y Tecnología Agraria y Alimentaria (INIA) [www.inia.es](http://www.inia.es)

Hospital Clínico San Carlos (HCSC) [www.hcsc.es](http://www.hcsc.es)

Hospital General Universitario Gregorio Marañón (HGGM) [www.hggm.es](http://www.hggm.es)

Hospital Universitario 12 de Octubre (H12O) [www.h12o.es](http://www.h12o.es)

Instituto de Salud Carlos III (ISCIII) [www.isciii.es](http://www.isciii.es)

Instituto del Patrimonio Cultural de España (IPCE) [www.mcu.es/patrimonio/MC/IPHE](http://www.mcu.es/patrimonio/MC/IPHE)

Patrimonio Nacional (PN) [www.patrimonionacional.es](http://www.patrimonionacional.es)

Parque Científico de Madrid (PCM) [www.fpcm.es](http://www.fpcm.es)

Ayuntamiento de Madrid [www.munimadrid.es](http://www.munimadrid.es)

Comunidad de Madrid [www.madrid.org](http://www.madrid.org)

Instituto Tecnológico PET [www.petmadrid.com](http://www.petmadrid.com)

Global Forecasters, S.L. [www.gfcasters.es/](http://www.gfcasters.es/)

**Report: 1º (2011) X 2º (2012) 3º (2013) 4º (2014)**

**Period report:** Julio 2010 (firma del convenio con la Comunidad de Madrid) hasta 10 de mayo de 2011 (fecha entrega informe)

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## ***1. Project Summary***

## The project

The Moncloa Campus, Campus of International Excellence (CEI Moncloa Campus) is a joint project of the Complutense University and the Technical University of Madrid, and integrates other organisms within the Campus of the *Ciudad Universitaria* of Madrid. The slogan, "The Power of Diversity", highlights the complementary potential of the two universities and the partner organisms. The Strategic Plan of Moncloa Campus seeks to restore the original holistic vision of the *Ciudad Universitaria* of Madrid and take advantage of the power of working together to meet the challenges of the twenty-first century society.

CEI Moncloa institutions share a common historical space and a renovation project for the university that leads us to where we want to be in the future by means of a change in culture that is already taking place and that this joint initiative aims to promote and accelerate. We want to lead the future.

- Developing a **comprehensive**, unified, sustainable and socially responsible **campus** model.
- Achieving a harmonious **partnership** of institutions
- Transforming the campus into an **international** reference for research, training and innovation.
- Acting as a **driving force** behind cultural life in the city of Madrid.

Moncloa Campus, with its 460 hectares has been declared a venue of cultural interest based on its historical and artistic value. It is integrated into the city of Madrid, although the project includes other campuses, such as Somosaguas, outside the urban setting. It is based on the Agora, and supported by plurality, diversity, talent and internationalization.

The Strategic Plan for becoming a CEI includes **27 general and structural actions** that are the foundation of the project from where the five thematic clusters rise up like pillars providing height and visibility to the campus, namely: Global Change and New Energy, Materials for the Future, Agri-food and Health, Innovative

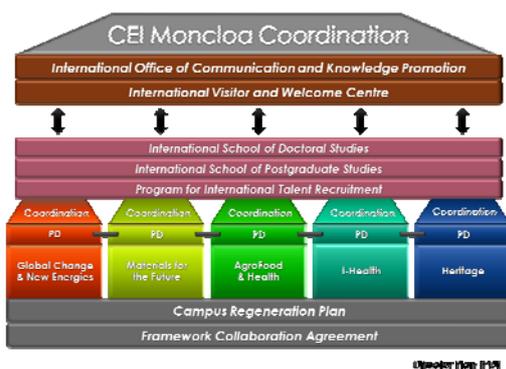


Figure 1. Outline of the Moncloa Campus Master Plan

Medicine and Heritage (with **33 specialized actions**). In all cases, the combined strengths provide unique configurations thanks to their innovative and interdisciplinary nature, and are highly competitive at the European level and capable of generating a breakthrough in knowledge transfer. Projects for the creation of International Postgraduate and Doctoral schools are based on this structure, as well as the International Program for Talent Recruitment (PICATA). The building is crowned with common reception and communication structures for the Campus and governance bodies that direct and coordinate the project.

## Progress made: General Actions

The efforts made by the CEI Moncloa Campus in the first year of operation have been focused on starting the main actions envisaged in the general strategic plan in order to achieve maximum strength in the shortest time possible. 20 actions of the 26 planned have been initiated (see Table 1).

Moncloa Campus Headquarters has been set up temporarily in the Alfonso XIII Royal Botanic Gardens (RJB), which houses the **Office of the Moncloa Campus** and other projects that improve campus relationship with the environment and people, such as the **Housing Office**, which facilitates the incorporation



Figure 2. Alfonso XIII Royal Botanic Gardens. Moncloa Campus headquarters.

of those coming from other places into campus, so that they feel part of the joint project we are building together. It will also house the Centre for Multimedia Interpretation of the **Biodiversity Tour** of the Campus, which includes an exhibition space with a sample of the Moncloa Campus' variety of natural collections. The interpretation centre has opted for an ambitious and innovative design, using highly innovative expository criteria and technological resources (augmented reality, kinetic technology or audience games). The Campus' Radio and Television (**IRTV-CampusMoncloa**) consolidates communication with the social environment.

In February 2011 the first phase of the **Maria Zambrano Library** was launched, adapted to the requirements of the European Higher Education Area, with over 1,500 seats in a modern and unique setting on the campus. Thanks to its design, it is envisioned as an Advanced Resource Centre for Learning and Research (CRAI)



Figure 3. Maria Zambrano Library. Launched in February 2011

The presentation to the university community of the activities surrounding the International campus took place in the **First CEI Moncloa Scientific Conference**. Participants included internationally renowned researchers, including the **Nobel Prize winner in Physics**, Carlo Rubbia, who gave a lecture on climate change and new energy. The researchers linked to the five clusters making up the CEI worked together in thematic sessions designed to strengthen collaboration between research groups at the UCM, UPM and partner institutions. To date, more than 400 research groups, members of the strategic CEI Moncloa partnership, have expressed interest in collaborating in joint research projects that enhance the complementarities of the different disciplines.



Figure 4. First Scientific Conference of the Moncloa Campus, 23-25 February 2011.

*In the picture: Nobel Prize, Carlo Rubbia.*

The **International Program for Talent Recruitment (PICATA)** is one of the strategic actions of the Moncloa Campus. The calls foresee the incorporation of researchers from all fields into research groups at the UCM, UPM and/or Partner Entities (CSIC, CIEMAT, INIA, AEMET, etc.) to work together. An international panel of experts has finalized the 2010 calls aimed at recruiting 15 young doctors and 20 grants for co-directed doctoral theses. The 2011 call is currently open for the recruitment of young doctors who meet the mobility rules laid down in the "Marie Curie actions" of the specific PEOPLE Program within the 7th Framework Program.

### General Actions: level of progress

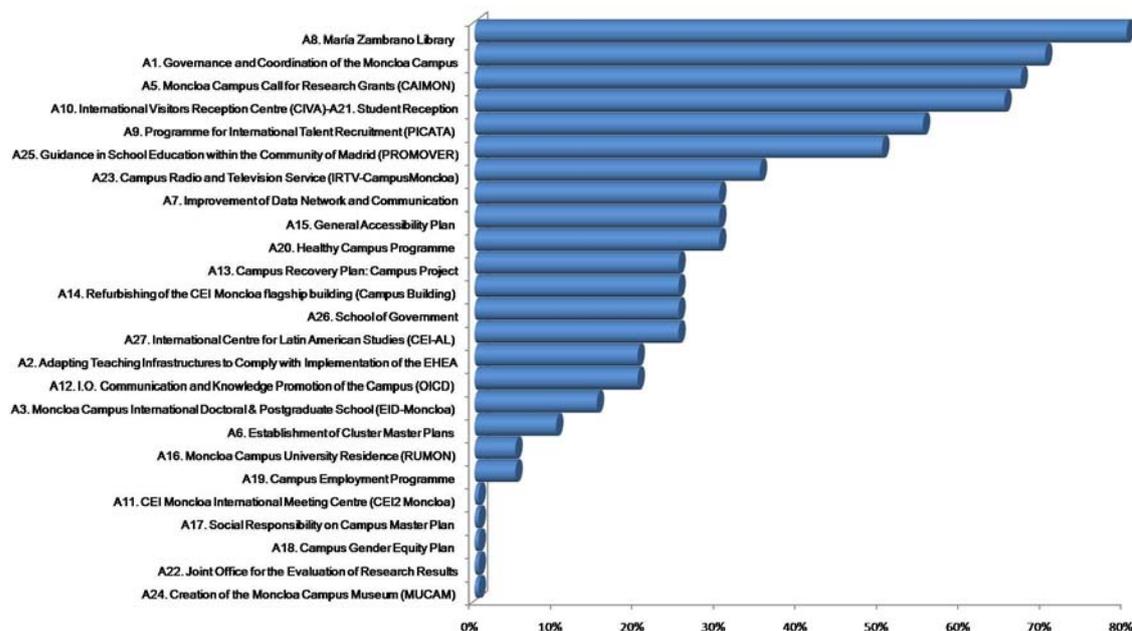


Table 1. Degree of progress in the overall actions

The CEI Moncloa participated in 2010 in the Summer Science Campus program, which is organized around four thematic workshops with the participation of about a hundred middle and high school students who, divided into groups throughout the summer, had their first contact with research work to arouse their interest in science and knowledge.

The first steps have been taken towards the creation of the School of Governance and International Centre for Latin American Studies - with the support and auspices of the Banco Santander - which is expected to open in 2012.

### Action progress: Thematic Actions

Development of the CEI Moncloa Strategic Plan in the aspects most directly related to R&D+i, has led to the development of a **Campus Master Plan for scientific research, technological development and innovation (R&D+i)**, which is based on the Master Plans of the various clusters, whose vision and mission are summarized in the slogan that defines it: "**effectively connecting talent and resources**". One of the strategic areas of this Plan, the resources area, has been prioritized by the Moncloa Campus with actions to **improve the scientific infrastructure** of the campus to enhance its visibility on the international level in the thematic areas of the clusters. 19 thematic actions have been selected from the 33 sectorial actions planned in the CEI Moncloa Strategic Plan (see table 2).

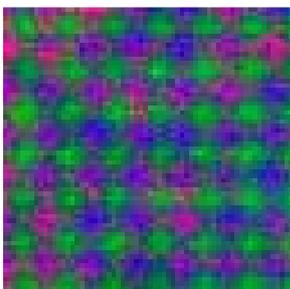


Figure 5. Electronic image which shows the structure of perovskite material Ba, Fe and Mn.

CEI Moncloa has initiated several strategic projects, such as the purchase of equipment to support the Singular Scientific and Technical Infrastructures (ICTS), the National Microscopy Centre, the ICTS Institute of Optoelectronic Systems and Microtechnology (ISOM), the reform and modernization of the Magnetoencephalography Centre or the creation of a Platform for Biomedical Imaging.

Within the Global Change and New Energy cluster the creation of the Laboratory of Climate Change and Impacts of Moncloa (MCCL) has been launched, and includes EOLO support for modelling climate change and equipment to obtain paleoclimatic proxies; the Moncloa Network for Natural Hazards Studies, the Monitoring and Remote Sensing Laboratory and the creation of an ex situ Conservation Centre. To provide

support for teaching and research projects, innovation and cluster development, an expansion of the IBM supercomputer at the UPM, a high performance computing system, has been conducted.

The Agri-food Corridor will recover part of its cultural landscape with the connection and infrastructure improvement plans now being designed. As a first step in this direction actions to improve the VISAVET Health Surveillance Laboratory have been initiated.

Finally in the field of the heritage cluster the master plans for the International Centre for Heritage Studies (CIESP) are being prepared and the network of laboratories in the field of heritage has been strengthened by launching a new dating Laboratory using TL/OSL techniques.



Figure 6. Project: Agri-food Corridor

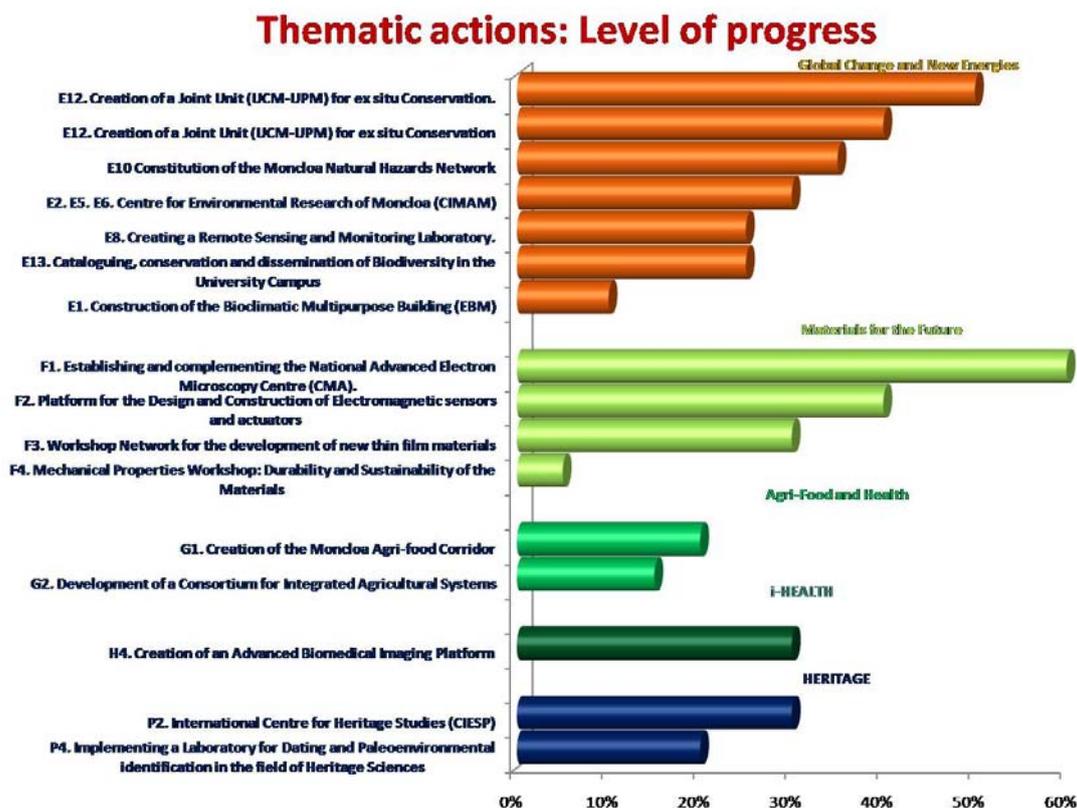


Table 2. Degree of progress in the Thematic Actions.

In short, the Moncloa Campus operation in 2010 and the first months of 2011 has demonstrated the capability a project like the one presented has to mobilize the resources of consolidated universities such as those which coordinate the project. We are convinced that the future will show the improvements the development of the Moncloa Campus of Excellence will bring to teaching, research and innovation in the partner universities and institutions. We are confident of this because we can already see the tremendous force coming from this new energy source: the "power of diversity".

## ***1. Qualitative and quantitative description***

## INTRODUCTION

Resolution of 26 November 2009 by the General Secretary of Universities, granted the classification of “Campus of International Excellence” (CEI) to the **Moncloa Campus Project: The Power of Diversity**, coordinated by the Complutense University (UCM) and the Technical University of Madrid (UPM). This project integrates, aside from the coordinating Universities, teaching and research entities located on the campus of the Moncloa University City, companies such as the Instituto Tecnológico PET and Global Forecasters S.L. and the following organisations and institutions:

Centro de Investigaciones Energéticas, Medioambientales y Tecnológicas (CIEMAT)

Consejo Superior de Investigaciones Científicas (CSIC)

Agencia Estatal de Meteorología (AEMET)

Instituto Nacional de Investigación y Tecnología Agraria y Alimentaria (INIA)

Hospital Clínico San Carlos (HCSC)

Hospital General Universitario Gregorio Marañón (HGGM)

Hospital Universitario 12 de Octubre (H12O)

Instituto de Salud Carlos III (ISCIII)

Instituto del Patrimonio Cultural de España (IPCE)

Patrimonio Nacional (PN)

Parque Científico de Madrid (PCM)

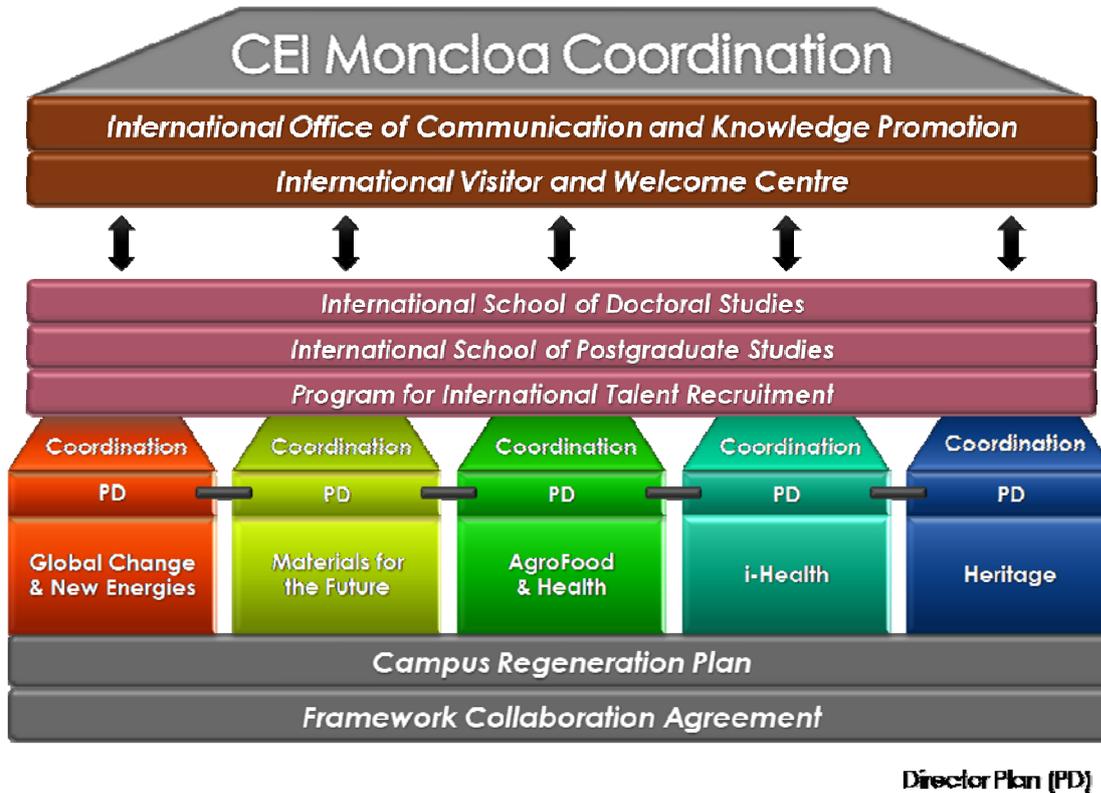
City Council of Madrid

Community of Madrid

This project, described in the Strategic Plan for Viability and Transformation of the Moncloa Campus into a Campus of International Excellence (hereinafter the CEI Moncloa Strategic Plan, cf. <http://www.ceicampusmoncloa.com/>) was the result of strategic planning to create the Moncloa Campus of International Excellence, to be achieved through partnering with the teaching and research entities located on the Moncloa Campus or *Ciudad Universitaria*. The project was built upon a framework agreement between the coordinating universities and the other partner institutions. It is the springboard for a series of transversal actions within the four **strategic areas**, which determine the **focal points** for joint action to attain **excellence**, identified as the core concepts of *Creating, Sharing, Connecting and Growth*. From these are defined the **strategic objectives** that express the desires and aims we wish to achieve in order to attain our vision of the future. In turn, these strategic objectives are translated into **specific** or **operational objectives**, with a series of transversal and sectorial **actions** described to attain them.

The Strategic Plan for transformation into CEI includes **27 general** and **structural** actions that form the foundations of the project, the base for the pillars, or five research clusters: *Global Change and New Energies, Materials for the Future, Agri-Food and Health, Innovative Medicine and Heritage* (with **33 specialised actions**). This structure is the basis for the creation projects of the International Schools for Postgraduate and

Doctoral Studies, as well as the Programme for International Talent Recruitment (PICATA). This project is completed by the common structures responsible for visitor services and Campus communications, and the governing bodies which supervise and coordinate the project.



*Figure 1. Diagram of the Moncloa Campus Master Plan*

The **Moncloa Campus** defines itself as **sustainable, socially responsible and health-aware** and it intends to project an open meeting space, based on **plurality, diversity, talent and internationalisation**, with these features as some of its major strengths. This diversity is a starting point for the Campus with the various institutions it is made up of, and is applicable to language and study background, as well as to student variety in terms of gender, age, social, ethnic or cultural background, or any other individual or collective features. The Moncloa Campus finds its strength precisely in its diversity, in its commitment to non-discrimination, in its deep-rooted intercultural and cosmopolitan co-existence and its promotion of tolerance, respect, freedom and equal opportunities. These values are the best breeding ground for creativity and innovation and for attracting and enhancing talent.

We believe our Starting Point to attain Excellence within the national context is privileged: the Moncloa Campus is one of the largest concentrations of researchers in Europe, it attracts nearly 57% of university students in Madrid, which means that over 80,000 students are present in its classrooms each year. Over 100 official four-year degrees are offered, 50% of which have already been adapted to the European Higher

Education Area, including the two degrees with the greatest demand in Madrid: Medicine and Architecture. In addition, nearly 100 official Master's degrees and many other diplomas and certificates offered by the universities provide a wide range of academic programmes.

Moreover, the UPM is the Spanish university with the highest number of projects and the greatest return within the European Union's 7th Framework Programme (7FP) for research, technological development and demonstration activities; the UCM is the leading Spanish university in the amount of funds obtained for national research plans and the number of national FPU doctoral scholarships and it is ranked among the top Spanish universities in the international rankings of Shanghai and the Times; is it also the first Spanish university, followed precisely by the UPM, in visibility according to the Ranking Web of World Universities, <http://www.webometrics.info>).

The number of scientific publications by Campus researchers is approximately 10% of the national production. Considering only the Complutense and the Technical Universities of Madrid, the number of publications listed in the ISI from 2003 to 2008 was 11,049, 30% of these with foreign co-authors; according to the Web of Knowledge of 2007, CEI-Moncloa is the most important Spanish campus in the thematic areas of the selected clusters, (4,281 publications out of a total of 40,177 countrywide); funding for research projects secured by both universities between 2004 and 2008 exceeded 731 million euros, etc.

Without forgetting that the Campus is home to exceptional scientific installations such as: the nuclear fusion reactor TJ-II located in the CIEMAT, which participates in the European Fusion Project, the new ICTS National Centre for Fusion Technologies (Technofusion), shared between the CIEMAT and the UPM, the laboratories of the Institutes of Solar Energy (IES) and Materials (ISOM), the central ICTS node of the Advanced Microscopy Centre, a node of the National Centre for Biomedical Imaging, the Instituto Tecnológico PET (which makes the campus the only one in Spain with two cyclotrons for research and production of radiopharmaceuticals) or the Centro de Vigilancia Sanitaria Veterinaria, VISAVET, with a European P3 reference laboratory for specific animal pathologies. These and other indicators show the enormous potential of the Moncloa Campus. Nonetheless, there is still a lot of work to be done in order to obtain the visibility and international recognition we aspire to.

The overall project and updates on the same may be seen at the website <http://www.ceicampusmoncloa.com/> (soon <http://www.campusmoncloa.es/>).

### **Project Evolution: General Actions**

The general actions form the foundations of the Strategic Plan, therefore the greatest efforts made by the CEI Moncloa Campus in this nearly first year of existence has been to launch the main General Actions that shall give strength to the project to become a Campus of Excellence. The following table summarises the general actions, showing the ones already initiated.

### General Actions: level of progress

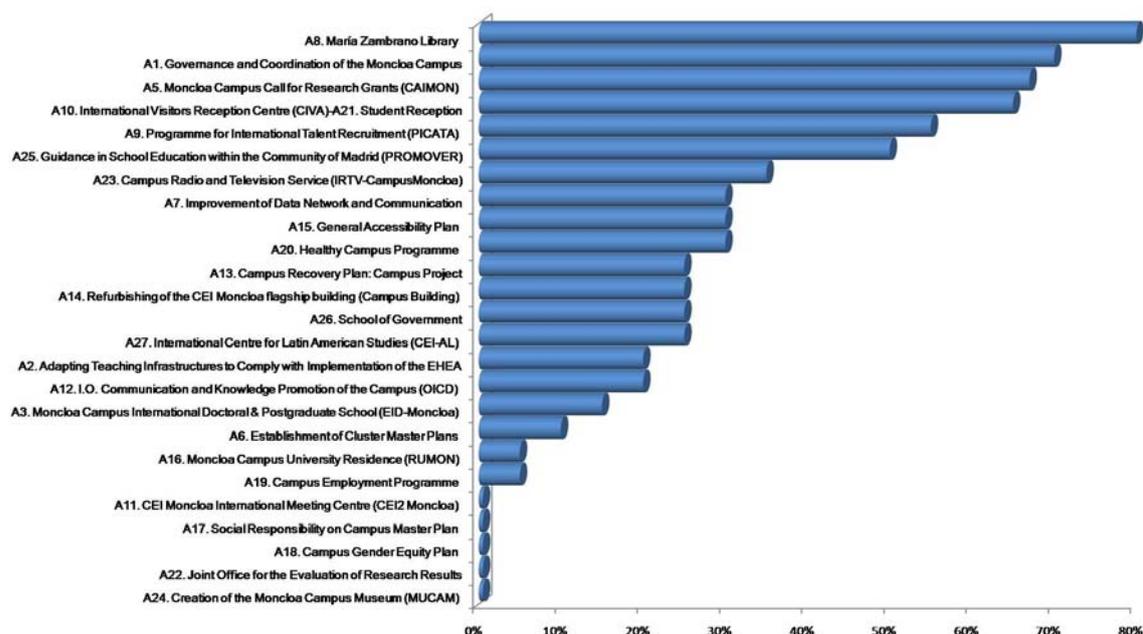
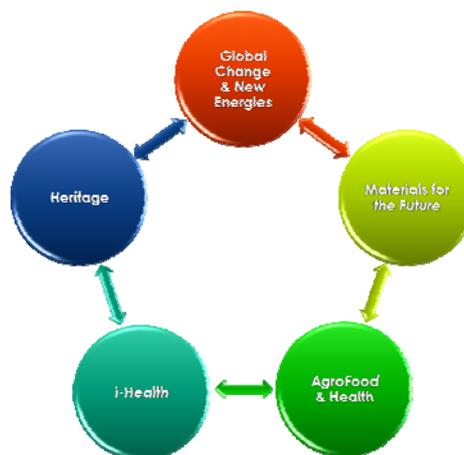


Table 1. General Actions: level of progress

### Project Evolution: Thematic Actions

Specific R&D actions are essential for the development of the CEI. Aware of their importance and of the need for specialisation to achieve excellence, the Moncloa Campus has established **five thematic clusters** aspiring to scientific excellence and to attract and train talent:

- Global Change and New Energies.*
- Materials for the Future.*
- Agri-Food and Health.*
- Innovative Medicine.*
- Heritage.*



The clustering of the available strengths in all these areas provides unique configurations in terms of their innovative and interdisciplinary character. These configurations will be highly competitive on a European level, which will result in a decisive step forward in knowledge transfer.

During development of the CEI Moncloa Strategic Plan, those aspects most closely related to R&D led to a **Master Plan of Scientific Research, Technological Development and Innovation (R&D) for the Campus**, based on the Master Plans of the different clusters, whose vision and mission can be summarised with the following motto: *“effectively connecting talent and resources”* (see INNOCAMPUS programme 2010 application). This Plan allows prioritising the various actions contemplated,

according to their need, urgency, scientific relevance, appropriateness for development of each cluster, number of beneficiaries and limited resources available within CEI.

The **meta-objective** of the R&D Master Plan for CEI Moncloa is to transform the Campus, in a sustainable and socially responsible manner, as a physical space and the universities and institutions it is made up of, into **an international reference in research, innovation and scientific management**. The Strategic Objectives included in the above meta-objective are:

- **Knowledge Generation.** To be a centre of reference for knowledge and technology, especially in the selected thematic areas, increasing publication of scientific articles.
- **Transference.** To take a qualitative step forward in university-business-society collaboration, increasing the number of contracts with companies, patents registered and spin-offs created.
- **Open innovation:** fostering the interconnection between the universities promoting the Campus and other participating institutions and companies.

The Transversal Objectives of the Campus (also affecting the area of R&D) that also have an impact on achieving the CEI Moncloa mission are the following:

- **Internationalisation:** To increase internationalisation of the Campus in the area of R&D.
- **Partnering.** Enable true partnering between the different research, innovation and transference institutions participating in the Moncloa Campus and encourage new future partnerships.

In line with the vision and mission of the R&D Master Plan "**effectively connecting talent and resources**" three specific intervention themes have been defined:

- ❖ **Talent Theme.** Acting on all fronts (cultivating, attracting, retaining) in the process of concentrating talent to reach a critical mass of exceptional students, teachers and prestigious researchers and highly qualified specialists and managers.
- ❖ **Resources Theme.** Providing the Moncloa Campus with the necessary science-technology infrastructures (adapting, renovating and improving existing ones; incorporating new science-technology platforms and providing laboratories with appropriate quality systems) to drive a qualitative leap forward in quality, internationalisation and provisions for transference and innovation.
- ❖ **Services Theme.** Improving scientific management and support of innovation and generating a culture of excellence and internationalisation.



*Figure 2. Diagram of intervention areas of the Moncloa Campus R&D Master Plan*

In the **Talent Themes** the general actions described in the previous section included in the CEI Moncloa Strategic Plan have already been initiated (especially actions A9 and A21) and described in the forms attached. And in the **Resources Themes** actions have been initiated for **improvement of scientific infrastructures** on Campus to enhance its international visibility (Internationalisation Transversal Objective) in the cluster thematic areas, where the Campus has the greatest R&D potential. 12 thematic actions have been selected out of the 33 sectorial ones already contemplated in the CEI Moncloa Strategic Plan. By way of these actions the aim is also to promote collaboration between the various institutions that comprise the Campus (the partnering transversal objective) by sharing Singular Scientific-Technical Infrastructures (ICTS), Scientific-Technological Platforms (PCTs), the Research Support Centres (CAIs) -this was the name given to the Scientific-Technical Services on Campus- and the major laboratories. These infrastructures shall provide, as well, external services (the general objectives of transference and open innovation) that will help partially co-finance the equipment requested.

Action Plan 2010-12 also contemplates providing management tools to the requested infrastructures and attaining quality certifications in the area of service delivery, but it has been considered best to temporarily postpone this until the infrastructures have been up and running for some time.

The science actions initiated were discussed and selected by the Governing Bodies (Board of Governors, Executive Committee and Board of Directors) of the Campus of International Excellence, involving researchers through the Advisory Boards of each cluster. The process has required analysing the current situation of the Campus infrastructures: ICTS, PCTs, Research Support Centres, Laboratories, Institutes, Research Units, equipment for Groups and Departments, etc. of the partner institutions; complementarity of equipments, existing gaps, emerging technologies and transference capability. This process is part of designing a map of Campus infrastructures in order to create a network that guarantees their optimal use and efficiency with resources.

Another element considered in the selection and prioritisation of actions initiated is the number of possible users and their impact on the various lines of research, so that their acquisition may have a multiplying effect, ensuring a financial return that will make the

process sustainable. Finally, a coherent time strategy has been considered, prioritising actions (and their complementing ones) that can be initiated now and leaving those which require a longer planning period for a later phase, for example, construction or renovation of buildings.

The following table summarises the structure of thematic actions and their level of progress.

Cluster	Work Areas	Actions
Global Change and New Energies	Transversal actions of the cluster: <ul style="list-style-type: none"> <li>▪ <b>E1 Construction of a Multi-Purpose Bioclimatic Building (EBM)</b>,</li> <li>▪ <b>E2 Creating the Joint UPM-UCM Centre for Environmental Research of the Moncloa Campus (CIMAM)</b></li> <li>▪ <b>E3 Creating an incubator for Environmental Companies</b></li> </ul>	
	Environmental Technologies and New Energies	<b>E4, E5, E6, E7</b>
	<b>Observation of the System Earth</b>	<b>E8, E9, E10, E11</b>
	<b>Biodiversity Study and Conservation</b>	<b>E12, E13</b>
Materials for the Future	<b>Transversal Actions: F1 Installation of the Advanced Electronic Microscopy Centre del (CMA)</b>	
	Functional Materials	<b>F2, F3</b>
	<b>Structural Materials</b>	<b>F4</b>
	Biomaterials	<b>F5</b>
Agri-Food and Health	<b>Transversal Action: G1 Creation of the Moncloa Agri-Food Corridor</b>	
	<b>Animal and Plant Production</b>	<b>G2</b>
	Animal Health and Food Safety	<b>G3</b>
	Food Hygiene and Technology	<b>G4</b>
i-Health	Innovative Medicine (i-Medicine)	<b>H1, H2, H</b>
	<b>Medical Imaging (i-Maging)</b>	<b>H4, H5, H6</b>
	Personalised Health (p-Health)	<b>H7</b>
Heritage	<b>Transversal Action: P1 Programming and Management of the Moncloa Campus Museum (MUCAM)</b>	
	<b>Cultural Heritage and Museums</b>	<b>P2, P3, P4</b>
	Natural Heritage	
	<b>Architecture, Archaeology-Palaeontology Heritage</b>	

**Table 2.** Structure of thematic actions and their level of progress. In red are the actions financed by the Ministry of Science and Innovation and in blue those financed by the Ministry of Education. In violet are the actions financed by both entities.

### Thematic actions: Level of progress

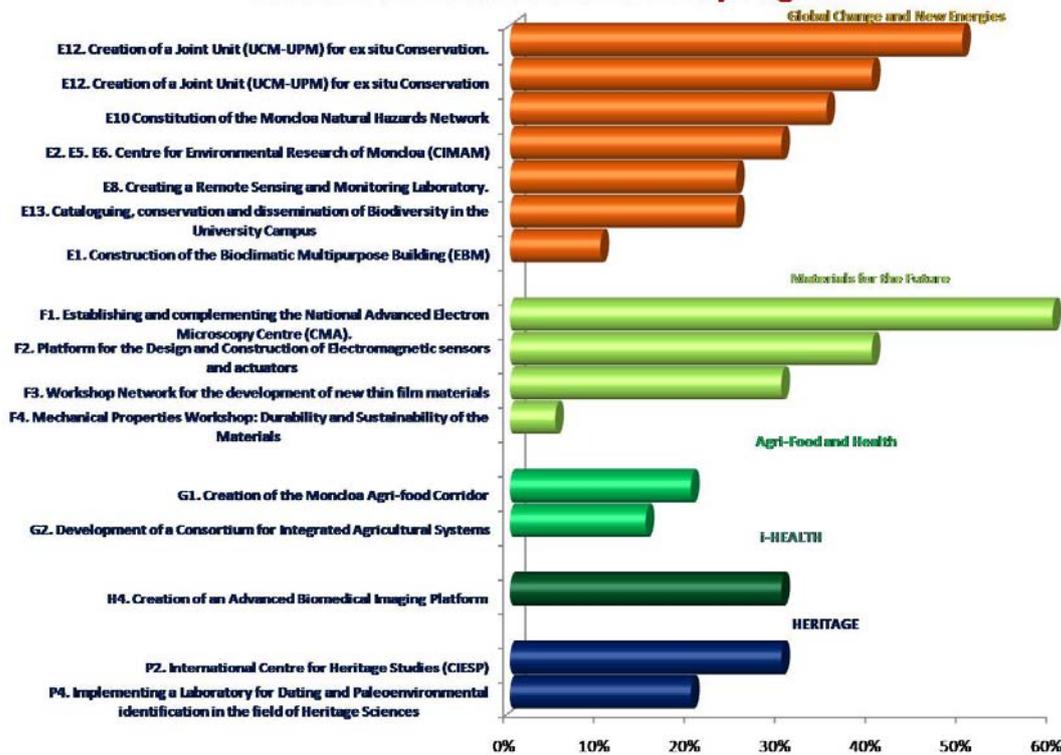


Table 3. Thematic actions: level of progress

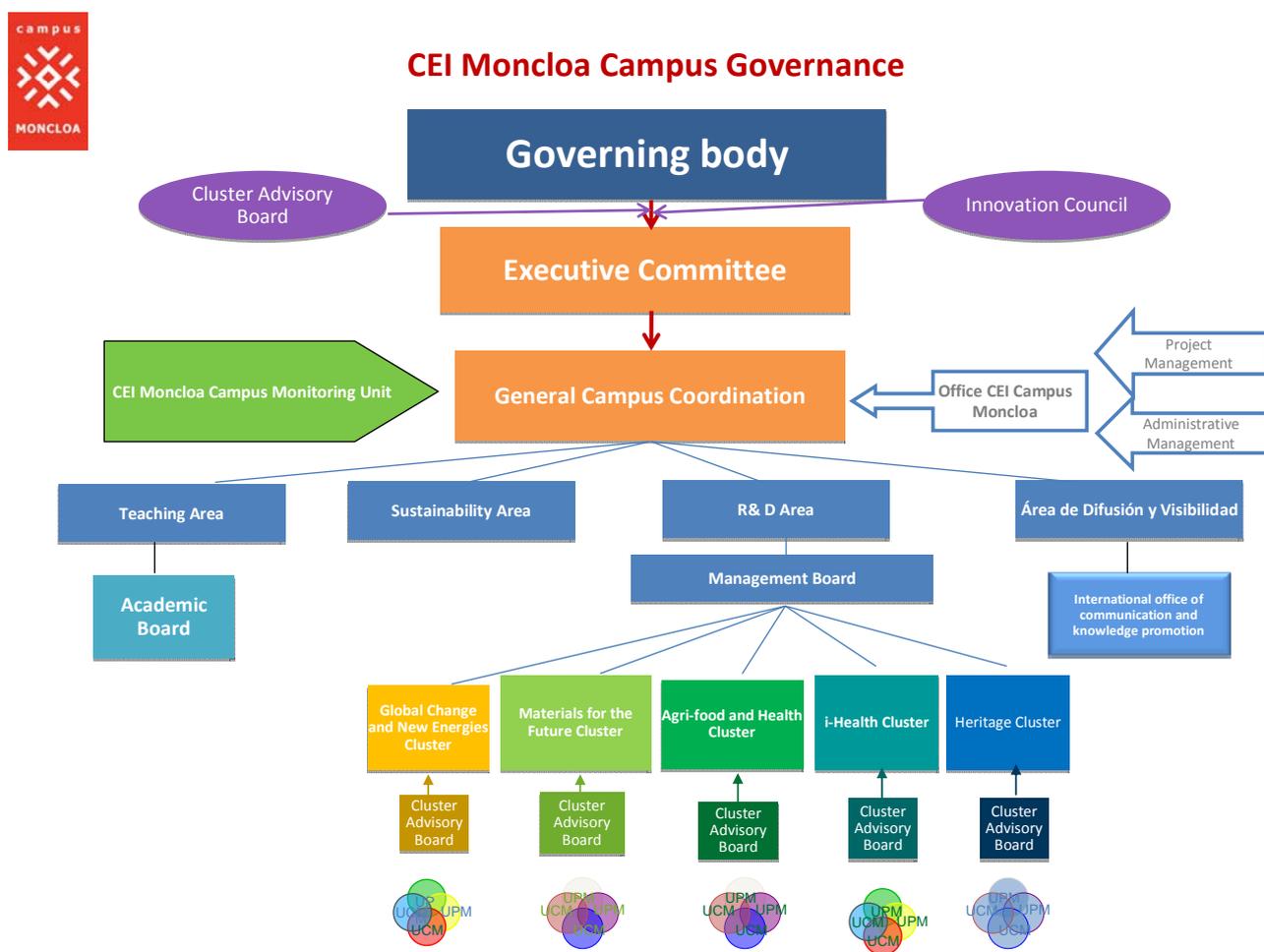
The commitment with investment for infrastructures at the Moncloa Campus includes an open call for the thematic areas of the clusters "Aid to acquire science-technology equipment and infrastructures" (Strategic Plan action: A5. Moncloa Campus Call for Research Grants (CAIMON), announced on 23 March 2011, and open until 12 May 2011. This call, one of the emblematic actions of the Campus, is financed with 4 million euros. The purpose of the call is to finance equipment, adaptation of infrastructures or improvement of research ICT networks, requested for **shared use** by various research groups, research support centres and major facilities, laboratories or experimental farms on Campus.

**Table I. Description of the project actions**

<b>Area</b>	All
<b>Action</b>	<b>A1. Governance and coordination of the Moncloa Campus</b>
<b>Objectives</b>	Campus Government A clear definition of the roles and responsibilities of all the Campus' participants. Organisation. Decision making. Project management.

**Progress towards objectives**

A new Government structure has been created, as shown in the following scheme.



**Description of work undertaken and role of the participants**

**Governance structures:**

**1. Board of Governors, consisting of**

The vice-chancellors of the Complutense University and The Technical University of Madrid (UCM and UPM, respectively), who will alternate in the Presidency.  
 The two pro-vice chancellors delegated for the Campus by each university.  
 A General Campus Coordinator for each university.

A representative of the Partner Institutions on each campus.

A representative of the Innovation Council.

Two representatives of the social agents, one per Social Council.

Two student representatives from the International Postgraduate and Doctoral School.

Roles:

- Approval of the annual strategic and economic plan.
- Proposal of corrective actions.
- Approval of the governing entities and their composition.

Frequency: Yearly. Formation pending.

2. **Executive committee**, formed in the first quarter of 2010 and made up by:

- The pro-vice chancellor of Academic Policy and Faculty of the UCM, pro-vice chancellor of the UCM delegated from January 2010 to the present date. Carlos Andradas Heranz,
- Pro-vice chancellor of research at the UPM Pro-vice chancellor of the UCM delegated from January 2010 to the present date Gonzalo León Serrano.

The presidency of the Executive Committee will alternate annually in a complementary manner to the presidency of the Board of Governors.

- General Coordinator CEI UCM From 2010 to the present date: Maria Luisa Osete López,
- General Coordinator CEI UCM From October 2010 to the present date: Inés Mínguez Tudela,

Both Coordinators are appointed Delegates of the corresponding Chancellors for the Campus of Excellence.

- Head of the Academic Council for the CEI Moncloa Campus (and Head of the International Postgraduate and Doctoral School). Appointed by the corresponding vice-chancellor. Provisional appointment: Francisco Javier Gorgas.
- Head of the Promotion Office at the CEI Moncloa Campus. Appointed by the corresponding vice-chancellor. Appointment pending.

A member of the Office at the CEI Moncloa Campus will assist the Executive Committee in its meetings and will act as secretary.

Roles:

- Proposal of the annual strategic and economic plan.
- Approval of expenses
- Approval of public tenders
- Appointments (Advisory Bodies, RTV Channel, etc.).
- Approval of requests for resources by public tender.
- Approval of Cluster Master Plans proposed by the Board of Directors.
- Approval of Masters and Doctoral programs proposed by the Head of the teaching division on the campus.
- Approval of general operational guidelines, communication plans and others yet to be specified. All proposals will be presented via General Coordination.

Frequency: monthly.

3. **General Campus Coordination**. Formed by the two general coordinators of the CEI Moncloa.

Roles:

- Responsible for executing the Plans and budgets agreed by the Executive Committee.
- This body will be proactive in managing the Moncloa Campus and will be responsible for

putting proposals forward to the Executive Committee for approval in areas related to appointments, approval of major budgetary items, reorganisation of the Campus, tenders, bids, regulations and other such aspects.

- It will be responsible for preparing the reports and requests from the CEI Moncloa Campus.
- Head of the CEI Moncloa Campus Monitoring Unit.

Frequency: weekly

**4. CEI Moncloa Campus Monitoring Unit.** Established in January 2011. It consists of:

- The two general campus coordinators
- The members of the Moncloa Campus Office

Roles: Management of the CEI Moncloa Campus

Frequency: weekly

**5. Cluster Advisory Board.** Formed by a representative of each of the Campus' Partner Institutions and two student representatives (from the International Postgraduate and Doctoral School). The representatives of the Partner Institutions have been defined and appointed. First meeting scheduled for May 2011.

Roles:

- To examine the Campus' Strategic and Master Plans and the Postgraduate and Doctoral Training plan.
- To provide advice regarding goals and lines of action of interest for the Moncloa Campus
- Collaborate in the attainment of resources for the activities and projects on the Moncloa Campus.
- To promote collaborative and training projects of institutional interest.
- To appoint a representative to the Board of Governors.
- Others yet to be determined.

Frequency: at least annually

Members

**PUBLIC INSTITUTIONS**

Centre for Energy, Environmental and Technological Research (CIEMAT) [www.ciemat.es](http://www.ciemat.es)

Spanish National Research Council (CSIC) [www.csic.es](http://www.csic.es)

Spanish National Meteorological Agency (AEMET) [www.aemet.es](http://www.aemet.es)

Spanish National Agricultural and Food Research Institute (INIA) [www.inia.es](http://www.inia.es)

Hospital Clínico San Carlos (HCSC) [www.hcsc.es](http://www.hcsc.es)

Hospital General Universitario Gregorio Marañón (HGGM) [www.hggm.es](http://www.hggm.es)

Hospital Universitario 12 de Octubre (H12O) [www.h12o.es](http://www.h12o.es)

Carlos III Health Institute (ISCIII) [www.isciii.es](http://www.isciii.es)

Spanish Cultural Heritage Institute (IPCE) [www.mcu.es/patrimonio/MC/IPHE](http://www.mcu.es/patrimonio/MC/IPHE)

National Heritage (PN) [www.patrimonionacional.es](http://www.patrimonionacional.es)

Madrid Science Park (PCM) [www.fpcm.es](http://www.fpcm.es)

Madrid Municipal Government [www.munimadrid.es](http://www.munimadrid.es)

Community of Madrid Regional Government [www.madrid.org](http://www.madrid.org)

**COMPANIES**

PET Institute of Technology [www.petmadrid.com](http://www.petmadrid.com)

Global Forecasters, S.L. [www.gfcasters.es/](http://www.gfcasters.es/)

6. **Innovation Council.** Formed by representatives of the companies present on the Campus.

Roles:

- To examine the Campus' Strategic and Master Plans and the Postgraduate and Doctoral Training plan.
- Collaborate in the attainment of resources for the activities and projects on the Moncloa Campus.
- To promote collaborative and training projects of business interest.
- To promote and support innovative actions on the Moncloa Campus
- To promote and support the creation of technology companies.
- To appoint a representative to the Board of Governors.
- Others yet to be determined.

Frequency: at least annually. Formation pending.

7. **Board of Directors.** Chaired by the two General Campus Coordinators (UCM and UPM) and formed by the two coordinators from each cluster (10 coordinators). The cluster coordinators are internationally renowned scientists belonging to the CEI's Universities and Partner Institutions. It was established in the first quarter of 2010.

Roles:

- Drafting and monitoring of the Cluster Master Plans.
- General coordination, monitoring and planning of Cluster actions.
- Report regarding the candidates proposed for the Cluster Advisory Boards.
- Proposals for investment on Campus for approval by the Executive Committee.
- Proposals for Masters, Courses and Doctoral Programs in the field of each cluster for integration into the International Postgraduate and Doctoral School.

Frequency: at least bi-monthly

Members:

The two General Campus Coordinators and:

José M <sup>a</sup> Fernández Torres	IGEO (joint institute UCM-CSIC),	Global Change and New Energies
Francisco Javier Elorza Tenreiro	ETSI Mines/UPM	Global Change and New Energies
Jaime Gálvez Ruiz	ETSI Roads/UPM	Materials for the future
José M <sup>a</sup> González Calbet	School of Chemistry/UCM	Materials for the future
Lucas Domínguez Rodríguez	School of Veterinary Science/UCM	Agri-food and health
Margarita Ruiz Altisent	ETSI Agronomists/UPM	Agri-food and health
María Teresa Arredondo Waldmeyer	ETSI Telecommunications/UPM	Innovative medicine
María Ángeles Moro Sánchez*	School of Medicine/UCM	Innovative medicine
Fernando Checa Cremades	School of Geogr. and History/UCM	Heritage
Juan Miguel Hernández León	ETS Architecture/UPM	Heritage

\* Until February 2011, acting since then Ignacio Lizasoain. New appointment pending.

8. **Cluster Advisory Boards.** Formed by the two General Coordinators from each cluster and

recognised experts:

Roles:

- To collaborate in drafting the strategy and the internationalisation of the cluster's activities.
- To validate the Master Plans, prioritisation of actions, tenders for positions and equipment...
- To collaborate in establishing institutional and international relationships for the cluster's activities.
- Propose the assignment of human resources arising from the public tenders published by the cluster for approval by the Board of Directors and Executive Committee.

Frequency: at least quarterly.

Members:

**Global Change and New Energies Cluster**

Francisco Javier Elorza	Coordinator UPM
Jose Fernández Torres	Coordinator UCM (CSIC)
Jesus Gallego	UCM
Jose María Gómez Gómez	UCM
Fidel González Rouco	UCM
Francisco Rodríguez Somolinos	UCM
Jose Luis Telleria	UCM
Appointment of an expert in the field of the socio-economic impact of Global Change pending	UCM
Jesus Ortiz	UPM
Manuel Perlado	UPM
Javier Portillo	UPM
Alfonso San Miguel	UPM
Appointment of two new experts pending	UPM
Julio Carabe	CIEMAT

**Materials for the Future Cluster:**

Jaime Gálvez Ruiz	Coordinator UPM
José González Calbet	Coordinator UCM
Antonio Hernando	UCM
Juan Rojo	UCM
Jacobo Santamaría	UCM
Maria Vallet	UCM
Enrique Calleja	UPM
Gustavo Guinea	UPM
Amparo Moragues	UPM
Jose Ignacio Pastor	UPM
María Gonzalez Viada	CIEMAT

**Agri-food and Health Cluster**

Lucas Dominguez	Coordinator UCM
Margarita Ruiz Altisent	Coordinator UPM
Teresa García Lacarra	UCM
Clemente Lopez Bote	UCM
Pedro Lorenzo	UCM
Carlos De Blas	UPM
Alberto Garrido	UPM
Miguel Quemada	UPM

Manuel Nuñez	INIA
<b>i-Health Cluster</b>	
M <sup>a</sup> Teresa Arredondo	Coordinator UPM
Ignacio Lizasoain*	Coordinator UCM (acting)
Jose Luis Pablos	UCM
Joaquin Plumet	UCM
Miguel Angel Pozo	UCM
Jose Manuel Udías	UCM
Rafael Aracil	UPM
Vicente Ortega	UPM
Francisco del Pozo	UPM
Andres Santos	UPM
Angel Corbí	CSIC-CIB

*\*Until February 2011: M<sup>a</sup> Angeles Moro*

#### **Heritage Cluster**

Fernando Checa	Coordinator UCM
Juan Miguel Hernández León	Coordinator UPM
Juan Manuel Alvarez Junco*	UCM
Jose M <sup>a</sup> Luzón	UCM
Antonio Goy Goy	UCM
Margarita San Andrés	UCM
Miguel Aguiló	UPM
Antonio González-Capitel	UPM
Luis Maldonado Ramos	UPM
Appointment pending	UPM
Rafael Fort	CSIC

*\* In his capacity as pro-vice chancellor of the UCM until April 2011. Replacement pending.*

9. **Academic Board.** Formed by the Head of the International Postgraduate and Doctoral School, two pro-vice chancellors (or their representatives) from each university. Establishment of this board is pending.

#### Roles:

- To manage the Moncloa Campus' International Postgraduate and Doctoral School
- To coordinate all teaching activities on the CEI Moncloa Campus.
- To promote the creation of joint Masters.
- To promote the international image of the Moncloa Campus' teaching activities.

Frequency: at least quarterly.

#### **International office of communication and knowledge promotion.**

Formation pending.

#### **CEI Moncloa Campus office**

A technical office for the project whose roles include supporting General Campus Coordination and cluster activities in general has been established.

This office is divided into two units:

Administrative:

This unit is staffed by two people seconded by the universities that make up the CEI Moncloa. Their roles: to manage all the internal procedures at each partner institution.

Two people are also administrative support, drafting and design of proposed contract for the commissioning and operation of the administrative unit, its functions are divided into administrative staff to support the coordination of campus activities, and one for the disclosure of Campus on

campus and among researchers.

Management:

This unit is staffed by three new recruits and is responsible for project management.

**Most significant results.**

With the signing of the corresponding agreements, the decision-making structure is perfectly defined and streamlined.

Key personnel have been appointed and formal project-management procedures have been established.

**Explanation of use of human, material and economic resources**

The start-up of the entire project governance and management structure has meant a significant human effort by the CEI's component universities.

Three new staff members have been recruited to the Project Technical Management Unit financed by project CEI2009.

**Most important deviations from planned objectives**

The project's governance structure has had to be redefined between the initial proposal and start-up of the project due to financial changes to this process. The only aspect worth highlighting is the fact that the role of the Partner Institutions has had to be modified as the Moncloa Campus project is now funded by a loan and not a grant. The responsibility to pay back this loan has passed to the UCM and UPM, therefore the Partner Institutions do not form part of the overall decision-making body, in other words the Executive Committee.

Likewise, actions have been prioritised on the basis of the resources obtained, as the amount awarded is not sufficient to fund all actions in the initial proposal.

**Corrective actions proposed**

A meeting with the Partner Institutions has been scheduled for May.

<b>Area</b>	Teaching improvements/Unified Social Campus
<b>Action</b>	<b>A2. Adaptation of teaching infrastructures to EHEA deployment.</b>
<b>Objectives</b>	Adaptation of teaching installations to meet the new challenges posed by the EHEA and internationalisation of the campus, by: <ol style="list-style-type: none"> <li>1. Adapting lecture halls, spaces and equipment, thereby creating more flexible and mobile learning spaces that facilitate the student–lecturer interaction.</li> <li>2. Incorporating new teaching instruments into lecture halls (electronic blackboards, cameras, etc.) that allow teaching materials and lectures to be made freely available via the internet.</li> <li>3. Creating five multimedia lecture halls, one per cluster, that allow real-time on-line teaching and teaching relationships between the campus' institutions and other Spanish and foreign universities.</li> </ol>
<b>Progress towards objectives</b>	
Acquisition of the SAKAI Virtual Campus Platform and servers (objective 2 in the action). Status: purchase procedure underway. Study of the location of 2 distance-learning lecture halls.	
<b>Description of work undertaken and role of the participants. Governance structures created</b>	
In order to encourage on-line teaching on the Campus, a study aimed at improving the tools currently available on the virtual campus has been undertaken. After considering various possibilities, it has been decided to purchase and roll-out the most up-to-date version of the SAKAI virtual campus tool. This tool will provide a suitable platform to allow foreign lecturers to give lectures, from their countries, on the courses offered by the International Postgraduate and Doctoral School. Likewise, this platform will be used to support all the masters offered by the campus, which are expected to be able to start using it during the academic year 2011–12. The location of 2 distance-learning lecture theatres of the 5 that the Campus will have has been studied.	
<b>Most significant results</b>	
The new virtual campus tool, whose purchase has been initiated, allows integration with <i>Adobe Connect</i> and has a permanent licence for 5 simultaneous rooms, each with 100 users. It also allows integration of the currently available <i>Complumedia</i> resources.	
<b>Explanation of use of human, material and economic resources</b>	
Acquisition of the software tool and servers. Budget charged to the Moncloa Campus: 115,000 Euros (financed by Reinforcement sub-program). The human resources used to undertake the technical studies of the tools offered for the new virtual campus have been provided by the Computer Services of both universities. This did not result in additional costs for the project.	
<b>Most important deviations from planned objectives</b>	
The work undertaken was as anticipated in the Strategic Plan. The most important deviation is the delay in starting the renovations required to the Costume Museum building, a flagship building on Campus, where 5 new multimedia lecture halls are supposed to be sited. This has resulted in the relocation of these lecture halls to Faculties and Schools as well as the provisional Campus Building.	
<b>Corrective actions proposed</b>	
Relocation of the 5 distance-learning lecture halls (one per cluster) proposed in the Strategic Plan. One of these lecture halls will be created in the Royal Botanical Garden building. Provisional Campus building.	

<b>Area</b>	Teaching improvement/Scientific improvement/Transference/Unified Social Campus
<b>Action</b>	<b>A3.</b> International Doctoral School CEI Moncloa (EID-MONCLOA)- <b>A4.</b> International Postgraduate School CEI Moncloa (EIP-MONCLOA)-
<b>Objectives</b>	The creation and start-up of an International Postgraduate and Doctoral School for the CEI Moncloa with the aim of converting the Campus into an international training reference. The specific objectives are as follows: 1) To promote the development of inter-university Masters and Doctoral programs, especially between the UCM and UPM, thereby rationalizing the courses offered by the two universities and improving resource use; 2) to increase the number of foreign students participating in the postgraduate, masters and doctoral program; and 3) to promote the exchange of students and lecturers with other Spanish and foreign universities and to increase the number of foreign lecturers on the Campus.

### **Progress towards objectives**

These two actions have been merged into the International Postgraduate and Doctoral School (EIPD) to achieve cost savings.

The criteria that the official masters must fulfil in order to be included in the EIPD have been defined during this period and the creation of various masters (currently in the design phase) related to the themed clusters has been promoted.

### **Description of work undertaken and role of the participants**

The following criteria have been defined for the EIPD masters:

- High level teaching staff (PhDs with an extensive research background or renowned professionals). Minimum CSI publication indices and/or contracts with companies/transference activities have been evaluated.
- Significant participation of both universities (UCM + UPM) plus Partner Bodies.
- Teaching in English except in those cases where the content makes this inadvisable (for example Latin American studies).
- A minimum percentage of foreign lecturers.
- A minimum percentage of foreign students.

The use of on-line teaching (e-learning), thereby facilitating the participation of foreign lecturers, the support and participation of companies and other bodies, and the ability to be self-financed, especially when it comes to providing study grants, will also be assessed

This action is complemented by the PICATA Program (action A9), which is aimed at recruiting foreign talent. In 2010 a total of 20 grants to undertake co-supervised doctoral theses were awarded. A new call, which is expected to be published in July, will be made this year.

### **Governance structures created**

Currently in the definition phase: An Academic Board chaired by the Head of the Teaching Area of the Moncloa Campus (Head of the EIPD).

### **Most significant results**

The design studies for various masters that fulfil these criteria have commenced. The following are at an advanced stage: AN INTER-UNIVERSITY MASTERS IN REMOTE DETECTION AND GLOBAL CHANGE, and the INTER-UNIVERSITY MASTERS IN ANIMAL HEALTH AND PRODUCTION, AND HERITAGE MANAGEMENT. It is hoped that all the formalities can be completed so that the first masters can commence in the School in the academic year 2012–13. Furthermore, the EIPD will incorporate the Erasmus Mundus masters, the IMIM-INTERNATIONAL MASTER IN INDUSTRIAL MANAGEMENT, EUROPEAN MASTER IN NUCLEAR FUSION SCIENCE AND ENGINEERING PHYSICS (FUSION-EP). Work is

also underway to launch the INTERNATIONAL SCHOOL OF COMMUNICABLE ANIMAL DISEASES (ISCAD).

**Explanation of use of human, material and economic resources**

The work undertaken to date has not resulted in significant costs. All studies performed have been undertaken by staff from the coordinating universities.

**Most important deviations from planned objectives**

On 2 February 2010 the Board of Directors decided to create a single Doctoral and Masters School (EIDP), therefore the two proposed actions were combined.

Creation of the EIDP had to be put on hold for a significant part of this period due to the need to wait for the publication of a Royal Decree regarding doctoral studies. Royal Decree 99/2011, of 28 January, which regulates official doctoral teaching, was finally published in February 2011. Now that this legal framework has been established, studies are underway to determine how best to create the International Postgraduate and Doctoral School of the Moncloa Campus of Excellence taking into account the different structures of the new doctoral studies currently being designed by both universities.

**Corrective actions proposed**

Not applicable as the work undertaken is in accordance with expectations.

<b>Area</b>	Scientific improvement/Teaching improvement/Transference
<b>Action</b>	<b>A5. Call for research grants Moncloa Campus (CAIMON)</b>
<b>Objectives</b>	To publish a joint call for research grants restricted to those groups participating in the clusters to allow them to purchase scientific equipment that will enhance their research abilities. Likewise, the connectivity between the CEI's clusters is also expected to be enhanced.
<b>Progress towards objectives</b>	
<p>A joint resolution of the UCM and UPN dated 23 March 2011 led to the publication of a call for grant applications for the purchase of scientific/technological equipment and infrastructures for 2011 in the framework of the CEI Moncloa. The deadline for receipt of applications is 12 May. These grants are in addition to the strategic scientific equipment purchase actions requested in the programs. International Campus of Excellence Subprogram B (MICINN) and INNOCAMPUS.</p>	
<b>Description of work undertaken and role of the participants</b>	
<p>In accordance with the objectives defined in the CEI Moncloa's strategic Plan, the call for applications currently in force is intended to increase the capacities of the Campus, to create the conditions for optimal exploitation of its scientific/technological infrastructures, to create the synergies required to strengthen the Campus, to optimise the transference of research results to the manufacturing sector and to promote the excellence of the Campus in those fields in which the clusters are involved.</p> <p>The aim of the call for applications is to fund equipment requested for shared use by various research groups from both universities, research support centres (CAIs) and large facilities, laboratories or experimental plots. The adaptation of infrastructures for the installation of equipments and the creation and improvement of research-based communication networks is also covered.</p> <p>The actions funded must take place between 2011 and 2012 and can be requested in two different ways:</p> <ul style="list-style-type: none"> <li>- Mode A. Singular Scientific/Technical Infrastructures, the UCM's Research Support Centres and the Major Support Laboratories of the UPM, which support the themed areas of the Campus of Excellence.</li> <li>- Mode B. The research groups and networks at the UCM and UPM that have shown interest in joining the Moncloa Campus and that perform research in the selected thematic areas. The applications should include at least one research group from each of the coordinating universities in the Campus, or from one of the universities and one of the Campus' Partner Institutions. Applications presented jointly by various laboratories, centres or scientific/technological platforms will also be considered provided they are supported by groups or bodies from the two universities or one of them and at least one Partner Institution.</li> </ul> <p>The terms and conditions of the call for applications can be consulted at:  <a href="http://www.ucm.es/info/ceicampusmoncloa/esp/">http://www.ucm.es/info/ceicampusmoncloa/esp/</a>  <a href="http://www.ucm.es/?a=invest&amp;d=0022930">http://www.ucm.es/?a=invest&amp;d=0022930</a>  <a href="http://www.upm.es/institucional/Investigadores/Campus+de+Excelencia+Internacional">http://www.upm.es/institucional/Investigadores/Campus+de+Excelencia+Internacional</a>.</p>	
<b>Governance structures created</b>	
<ul style="list-style-type: none"> <li>• Scientific/technological evaluation committee. Appointed by the Moncloa Campus' Board of Directors. It will prepare a reasoned report detailing the overall score for the project on a scale of 0 to 60.</li> <li>• 5 Selection Commissions, one per cluster. Each Commission will consist of the two General</li> </ul>	

Campus Coordinators and two members of the cluster appointed by the Moncloa Campus' Board of Directors. The Selection Commissions will assess the fit of the applications to the cluster's strategic lines (0–40 points), will perform a joint study of the projects presented and will prepare a priority list of those that are of sufficient quality and interest to be granted. This list will include a budget proposal for these applications, which will be determined on the basis of the best use of the available resources.

- In light of these reports and the priority list, and taking into account the budget available, the Moncloa Campus' Executive Committee will make a provisional decision.

As far as possible, and taking into account the limited size of these Commissions, criteria of equality between men and women will be taken into account when deciding their composition, as set out in Organic Law 3/2007 concerning equality between men and women.

The vice-chancellors of the UCM and UPM will publish the provisional decision, indicating the amount of funding awarded to each applicant and the conditions and time-frames in which the actions are to be performed or, if applicable, the reasons for refusing the application.

**Most significant results**

The call for applications is currently open; the deadline is 12 May.

**Explanation of use of human, material and economic resources**

The call for applications for the **acquisition of scientific/technological equipment and infrastructures** is endowed with **3.9 million Euros** and is being managed by the CEI Moncloa Campus' Office.

**Most important deviations from planned objectives**

Not applicable as this project complies with the objectives proposed.

**Corrective actions proposed**

Not applicable.

<b>Area</b>	Teaching improvement/Scientific improvement/Transference/Unified Social Campus
<b>Action</b>	<b>A6.</b> Drafting of the Cluster Master Plans.
<b>Objectives</b>	The preparation and development of the Cluster Master Plans in order to ensure the strategic objective of connectivity, internationalisation and transference.
<p><b>Progress towards objectives</b></p> <p>The cluster coordination structures have been established during 2010. This process commenced with the appointment of the Cluster Coordinators and their Advisory Boards. The Cluster Coordinators form part of the Campus' Board of Directors.</p> <p>To date more than 400 research groups belonging to the CEI Moncloa's strategic Partner Institutions have shown an interest in collaborating in joint research projects. The number of expressions of interest received to date, by cluster, are as follows:</p> <ol style="list-style-type: none"> <li>Global Change and New Energies: 173 groups</li> <li>Materials for the Future: 97 groups</li> <li>Agri-food and Health: 74 groups</li> <li>Innovative Medicine: 120 groups</li> <li>Heritage: 148 groups</li> </ol>	
<p><b>Description of work undertaken and role of the participants</b></p> <p><b>Governance structures created</b></p> <p>In 2010 progress has been made towards consolidating the clusters, identifying the groups involved in the CEI Moncloa's strategic lines and defining their objectives. Part of this consolidation is due to the decision-making structures created:</p> <ul style="list-style-type: none"> <li>• Campus Management Body. Formed by two internationally recognised coordinators (one from each university). First meeting of the Management Body: 1-02-2010 (minutes attached). Management Body meetings: average of one per month. Strategic meeting: 15 March 2010. Cercedilla. Each of the Campus' actions in the field of R+D+i and/or teaching was presented and discussed by the Board of Directors.</li> <li>• Cluster Advisory Boards. Contrasting experts from the different thematic areas in each cluster. Key members of the Campus' Partner Institutions also participated alongside researchers from the UCM and UPM. Each cluster has held a considerable number of meetings of its Advisory Board to define strategic aspects.</li> <li>• Relationship between the Board of Directors/Advisory Board and the Campus' groups Network structure. Input from the groups: Formalisation of expressions of interest (June-July 2010, October-November 2010, April 2011).</li> </ul> <p>The strategic lines that are to define the strategic plans for each cluster were decided upon by the Board of Directors:</p> <p><b>Contents of MASTER PLAN:</b></p> <ul style="list-style-type: none"> <li>- Description of Cluster</li> <li>- SWOT for Cluster</li> <li>- Research Lines Define remit</li> <li>- Vision, Mission of Cluster</li> </ul>	

- Strategic objectives
- General action plans (what, who, when) Project schedule
- Short-term wins (list of successes and short-term benefits)
- Human Resources Plan (2010-2012) Talent recruitment strategy
- Equipment Plan (2010-2012)
- IT Plan (2010-2012)
- Facilities Plan (2010-2012)
- Current expenses and capital investments budget Financial plan, source of funding
- Partners Strategy: Who, how, when. Centres, institutions and companies to include or included in the cluster
- Innovation valorisation and commercialisation strategy
- Synergies and dependences with other clusters
- Main obstacles to start-up
- Identification and assessment of the cluster's main risks (operational, commercial, personal, financial, strategic risks)
- Identification of aspects where help is needed from the CEI Moncloa
- Project governance and structure

In order to make progress in the elaboration of the Cluster Master Plans and to define their organisational structure (in a network), a series of thematic meetings were held by each cluster in parallel with the CEI's First Scientific Conference, which was held on 23–25 February 2011. Close to 400 research groups from both universities and the Partner Institutions participated in these meetings. Although the formats were slightly different for each cluster, the participating groups presented their lines of work and identified synergies and common areas of interest with other groups, and considerable progress was made towards defining the strategic objectives and strengths of each cluster, thereby strengthening already existing collaborations and launching many new ones. In short, this conference was very useful for making progress in terms of the lines of the Cluster Master Plans.

**Most significant results:** Creation of the structures. Appointment of the Cluster Coordinators and the Advisory Boards. These are described in a separate section (clusters section).

More than 400 research groups from the UCM and UPM have formally presented expressions of interest in forming part of the Campus' clusters.

Identification of inter-group synergies.

**Explanation of use of human, material and economic resources**

Celebration of the Moncloa Campus' First conference: invited speakers (including the Nobel Prize winner Carlo Rubbia, pamphlets, coffees, meals, etc.)

Other organisational costs were paid by the organising universities.

**Most important deviations from planned objectives**

The role played by the groups from the Partner Institutions as regards the CEI Moncloa Project has changed due to the fact that a loan, which has been taken on by the Coordinating Universities alone, has been provided to launch the project rather than a grant.

**Corrective actions proposed**

A meeting to redefine the role of the Partner Institutions has been scheduled for May.

<b>Area</b>	Teaching improvement/Scientific improvement/Interaction with surroundings
<b>Action</b>	<b>A7. Improvement of the data and communication network</b>
<b>Objectives</b>	To provide better access and a higher bandwidth in order to allow new services and applications aimed at the university community (new wireless access points) and the integration into new national and international R+D initiatives (more demanding in terms of network requirements).
<b>Progress towards objectives</b>	
<p>Connection to the RedIRIS-NOVA network. A study of the starting situation has been performed and the different projects evaluated.</p> <p>Improvement of the WiFi network. Status: process initiated.</p>	
<b>Description of work undertaken and role of the participants</b>	
<b>Governance structures created</b>	
<p>Study of the actions required to achieve broadband, fibre optic-based interconnection of the UCM, UPM and CIEMAT networks and the RedIRIS-NOVA point of presence at CIEMAT. One of the first such studies was the Optical Nucleus of the Moncloa Campus (NOMON) project undertaken by the “Communication Networks and Services” Group at the UPM. The pro-vice chancellors of Computer Science and Communications at the two universities, together with CIEMAT and the RedIRIS-NOVA network, have developed other, alternative projects.</p> <p>Improvement of the WiFi network. An analysis of the Campus' WiFi network has been carried out. A reinforcement of the network has been initiated. Status: process initiated.</p>	
<b>Most significant results</b>	
<p>In progress: 321 new WiFi access points.</p> <p>Project involving interconnection with the UCM and UPM RedIRIS-NOVA network.</p>	
<b>Explanation of use of human, material and economic resources</b>	
<p>The reports have been drafted by the “Communication Networks and Services” Group at the UPM and the pro-vice chancellors of Computer Science and Communications at the two universities. This has not resulted in costs to the project.</p> <p>Budget for improvement of the WiFi network: 320,000 Euros (CEI 2009)</p> <p>Interconnection to RedIRIS-NOVA: 50,000 Euros (CEI 2009)</p>	
<b>Most important deviations from planned objectives</b>	
Not applicable.	
<b>Corrective actions proposed</b>	
Not applicable.	

<b>Area</b>	Teaching improvements/Unified Social Campus/Interaction with surroundings
<b>Action</b>	<b>A8. Opening of the María Zambrano library</b>
<b>Objectives</b>	Retrofitting and opening of the María Zambrano library, located below the square formed by the two new buildings just west of the Law and Philosophy faculties, the square extending to the Philosophy B building, site of the Faculty of Geography and History, opposite the College of Highway Engineers. Provision of equipment for the repository (with a capacity for 2 million volumes) and the reading room, with an expected capacity of 4000 places.
<b>Progress towards objectives</b>	
<p>The María Zambrano library was inaugurated in February 2011. Half of the reading places have been installed. The opening of this new library has led to the creation of 1500 new reading places and the provision of new computer access points equipped with WiFi.</p>	
<b>Description of work undertaken and role of the participants</b>	
<b>Governance structures created</b>	
<p>The Moncloa Campus has the largest university library in the country (the UCM library), which is only exceeded by the National Library, with more than 3 million volumes and a historical reserve of more than 232,000 volumes. One of the Campus' strategic actions has involved the opening of a new library, namely the María Zambrano library, which will bring together the vast majority of the collections currently spread throughout various centres and has a potential capacity of around 4000 reading places. As a result of its design, it is configured as an advanced Learning and Research Resource Centre (CRAI). Work on the library is partially complete. Within the framework of the Moncloa Campus half the library's reading room has been opened for use, with the acquisition of furnishings and computer access points. This major library plays a key role in the special library opening policy at exam time, which is continually demanded by the students.</p>	
<b>Most significant results</b>	
<ul style="list-style-type: none"> <li>• An increase in the number of reading places used on Campus.</li> <li>• Improvement in the number of reading places per student on Campus.</li> <li>• Increased efficiency in lending -use and guidance services- for users of the combined libraries.</li> <li>• Recovery of the spaces currently occupied by the libraries for teaching and research purposes.</li> <li>• Efficient use of the user care resources.</li> <li>• Efficient special library openings.</li> </ul>	
<b>Explanation of use of human, material and economic resources</b>	
<p>This action has required the purchase of equipment to the value of 296,020 Euros. This new space provides the CEI Moncloa with 1500 reading places and a new library that takes part in the special opening program at exam time.</p>	
<b>Most important deviations from planned objectives</b>	
Not applicable	
<b>Corrective actions proposed</b>	
Not applicable	

<b>Area</b>	Teaching improvement/Scientific improvement/Transference/Unified Social Campus
<b>Action</b>	<b>A9. International Program for Talent Recruitment (PICATA)</b>
<b>Objectives</b>	Recruitment of international talent at all levels: students (grants for Masters, doctoral study grants), post-doctoral contracts, highly qualified technicians and distinguished visitors program. This Program is complemented by a mobility sub-program.

**Progress towards objectives**

The International Program for Talent Recruitment (PICATA) is one of the Moncloa Campus' strategic actions. The calls for proposals contemplate the incorporation of researchers into research groups at the UCM, UPM and/or Partner Institutions (CSIC, CIEMAT, INIA, AEMET, etc.) which work together.

The A9 line of work is an action that strengthens the collaboration and integration of the Moncloa Campus and promotes internationalisation-

**Description of work undertaken and role of the participants**

**Calls for proposals published and planned for 2011**

**1. International call for proposals for doctoral studies:**

The joint Vice-Chancellor Resolutions regarding the regulatory basis and calls for proposals for annual pre-doctoral grants lasting for four years (2 years as a grant and 2 years as a contract) to study for a doctoral thesis co-supervised by members of research groups at the UCM, UPM and/or Partner Institutions have been established.

- A decision on the first call for proposals, which awarded a total of 20 grants, was reached in December 2010.
- The CEI Moncloa will publish the second call for proposals in July (maximum of 20 grants).

**2. International call for proposals for post-doctoral contracts:**

The joint Vice-Chancellor Resolutions regarding the regulatory basis and calls for proposals for young PhD holders who are starting out in their research career and who fulfil the mobility requirements established in the “Marie Curie” actions of the specific PEOPLE program of the 7th Framework Program have been established.

- A decision on the first call for proposals was reached in December 2010. This led to the award of 15 annual post-doctoral contracts lasting for two years (50% of which were awarded to non-Spaniards as part of the Integration of Marie Curie fellows mode and the remainder as part of the Reintegration of Marie Curie fellows mode). (Funding: CEI2009).
- The 2011 call for proposals was published in late April-early May (funding: CEI2009) and aims to incorporate 14 young foreign researchers or those who fulfil the same mobility requirements established in the 7th Framework Program. (Funding: CEI2009).

The **proposed timetable** for the next calls for proposals is as follows:

Call for proposals	Publication date	Decision period	Date of execution
7 (UCM) + 5 (UPM) Qualified Technicians 18-month contract	May 2011	May-June 2011	July 2011
Distinguished Visitors (6-12 months)	May-June 2011	July-September 2011	January 2012

Mobility – Active pre-doctoral grants	October-November 2011	December 2011-January 2012	March 2012
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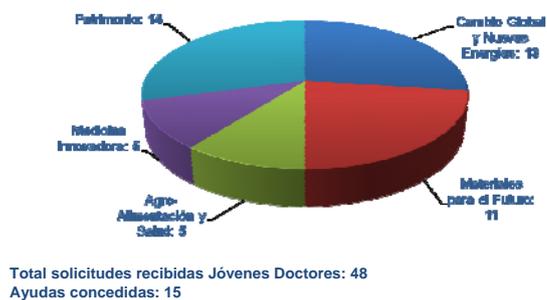
**Most significant results**

The two calls for proposals published to date have been widely publicised and have attracted interest from numerous high-quality applicants. Half of the positions for young PhD holders were occupied by non-Spaniards. The most significant results were presented during the Moncloa Campus' First Scientific Conference.

 **A9. Programa Internacional de Captación de Talento (PICATA). Resultados convocatoria 2010 de Ayudas Doctorado por Clúster**



 **A9. Programa Internacional de Captación de Talento (PICATA). Resultados convocatoria 2010 de Jóvenes Doctores por Clúster**



The grant-holders and contracted researchers from the first call for proposals joined their respective research groups in March 2011.

**Explanation of use of human, material and economic resources**

The credit retention records for the 20 pre-doctoral grants and the 15 contracts for young PhD holders from the first call for proposals have been processed.

Costs charged to the project: Accommodation and maintenance of the external members of the Evaluation Committees.

**Most important deviations from planned objectives**

Not applicable

**Corrective actions proposed**

Not applicable

<b>Areas</b>	Comprehensive Social Campus/ Interaction with the environment
<b>Action</b>	<b>A10.</b> International Visitors Reception Centre (CIVA) <b>A21.</b> Moncloa Student Centre Programme ( <i>'Casa del Estudiante'</i> )
<b>Objectives</b>	To manage accommodation To provide a single CEI information and reception desk
<b>Progress towards objectives</b> Project implementation: Moncloa Campus Accommodation Office opened January 2011. Design of International Visitors Reception Centre: pending.	
<b>Description of work undertaken and role of participants</b> <b>Governance structures created</b> On 11 May 2010 the collaboration agreement was signed between the UCM and the Ministry of Housing, through the <i>Sociedad Pública de Alquiler</i> (SPA), for the management of rented accommodation. The UCM will shortly sign a similar agreement with the SPA, and a partnership action to create a joint Moncloa Campus Accommodation Office was proposed. This action aims to facilitate the reception of students and researchers arriving on Campus. This office will also manage other accommodation options, including rented accommodation available, the intergenerational " <i>Vive y convive</i> " initiative and offer information on other accommodation options of interest to students, including University Halls of Residence, etc. This Office is managed by the UCM <i>Casa del Estudiante</i> and it is located in the Royal Botanical Gardens - <i>Real Jardín Botánico Alfonso XIII</i> (RJB) Building	
<b>Most significant results:</b> Office opened: Moncloa Campus Accommodation Office, located in the RJB Building (see photo attached). More information on Moncloa Campus Accommodation available at: <a href="http://casaestudiante.ucm.es/encuentra-tu-alquiler">http://casaestudiante.ucm.es/encuentra-tu-alquiler</a>	
<b>Explanation of use of human, material and financial resources:</b> This Action is co-funded by the SPA. Office set up costs: 3 members of staff provided by UCM, furniture provided by UPM, 2 staff resulting from agreement with the SPA. CEI costs: Publicity, information brochures.	
<b>Most important deviations from planned objectives:</b> n/a	
<b>Corrective Actions proposed</b> n/a	

<b>Areas</b>	Transference/ Comprehensive social campus/ Interaction with the environment.
<b>Action</b>	<b>A12. International Office of Communication and Knowledge Promotion (OICD)</b>
<b>Objectives</b>	To create an office to coordinate and promote communication between the Campus and its external environment to ensure dissemination of the knowledge generated on the Campus, with the following specific aims: International Projection of the Campus. Coordination of scientific dissemination. Organization of Conferences and Encounters with invited Nobel Prize Winners. Campus Radio and Television Service (related to Action A23)
<p><b>Progress towards objectives</b></p> <ul style="list-style-type: none"> <li>• First Moncloa Campus Symposium held 23-25 February 2011.</li> <li>• Visit of Nobel Prize Winner: Carlo Rubbia (Nobel Prize for Physics 1984). <i>Institute for Advanced Sustainability Studies, Potsdam, Germany, CERN, Geneva, Switzerland.</i></li> <li>• Design of new webpage for the Moncloa Campus.</li> </ul>	
<p><b>Description of work undertaken and role of participants</b></p> <p><b>Governance structures created</b></p> <ul style="list-style-type: none"> <li>• <b>First Moncloa Campus Symposium 23-25 February 2011.</b></li> </ul> <p>The First Moncloa CEI Science Symposium was held on 23 - 25 February 2011 in the Auditorium of the Faculty of Odontology (UCM). The main aim of this Symposium was to present the Moncloa Campus R&amp;D action areas to the scientific and university communities and to the general public, and to introduce the most relevant cutting-edge research areas within the thematic areas of the scientific clusters as defined in the Campus of Excellence knowledge advancement strategy.</p> <p>The Symposium included plenary sessions open to the public where researchers of international prestige presented scientific topics of maximum current relevance in areas including Agri-Food and Health, Global Change and New Energies, Materials for the Future, Innovative Medicine, and Heritage. Invited speakers included: Professor Paolo Bonato (Harvard Medical School, Harvard-MIT; Professor Víctor M. Orera Clemente (Instituto de Ciencia de Materiales de Aragón, University of Zaragoza), Professor Ricardo García Herrera (President, AEMET), Professor Malcolm Mitchell (Scottish Agricultural College - SAC), Professor Javier García Fernández (Professor of Constitutional Law, Ministry of Defence).</p> <p>In parallel, each cluster organized specialist sessions aimed at strengthening already existing collaboration and seeking new synergies between different research groups from both universities and their partner institutions.</p> <p>In the closing session of the Symposium on 25 February at 11.30, Professor Carlo Rubbia, Nobel Prize for Physics gave a talk on ‘Innovative energies for sustainable development’.</p> <p>The Symposium sessions are available on IRTV– Campus Moncloa (currently being trialled), and a video summary produced by the UCM is also available.</p> <ul style="list-style-type: none"> <li>• <b>Design of new Campus web page.</b></li> </ul> <p>The current Campus web site has a provisional page created to house the documents presented for the Campus of International Excellence (CEI) programme. The webpage needs to be revised and readjusted to international standards to meet the recommendations of the Spanish Ministry of Education and to match the specific needs of the Moncloa Campus. An agreement was signed with the European Foundation for Information Society to design a new web page, among other tasks.</p> <p>After an evaluation of the proposals made by this Foundation for the design and features of a new web page, it was evident that these did not fully meet the needs of the Moncloa Campus and the</p>	

relevant authorities in the UCM and UPM decided to create a new web page. Work is currently in progress on its design.

The new web project will be designed in three stages:

Phase 1: Initial development. (1 month starting April 2011). To develop an accessible web page compatible with the current TV and video web project. A web site is being developed in line with the original project idea, but in a more accessible format complying with international web standards. The web structure is being optimized overall to improve visibility, complying with the recommendations of the Ministry of Education in this area. The project is currently in this phase.

Phase 2: The recommendations of the Ministry will be followed here, prioritizing information related to training, research, transfer and services. Content not included in the current version will be created. Different possibilities will be analysed to generate dynamic, updated content.

Phase 3: The tool will be implemented on the web to display updated information on the different clusters in terms of research groups, areas and facilities, as well as projects and publications. A first version is already accessible for the Agri-Food and Health cluster.

#### **Most significant results**

- The First Moncloa Campus Science Symposium facilitated increased connectivity, creating new group synergies between UCM, UPM and their Partners.
- The project advances have been presented to the whole Campus community and to other institutions including the Ministry of Education, Community of Madrid, etc.
- New collaborative projects have emerged.
- Groups from the socio-economic areas within the Global Change and New Energies cluster have become more actively involved.
- Within the Heritage Cluster, groups have been included in Natural Sciences areas. Natural Heritage: conservation of collections, museums, etc.

#### **Explanation of use of human, material and financial resources**

Funding for Nobel Prize winner visit and organization of the Symposium. Budget: 30,000€ (CEI2009)

Funding for new web page. Budget- first phase: 8,000 €(CEI 2009)

#### **Most important deviations from planned objectives**

The existing web page does not meet the requirements, which reduces Campus visibility. Delay in creation of the International Office of Communication and Knowledge Promotion (OICD).

#### **Corrective actions proposed**

Work is already underway to adapt the web to the needs of CEI Moncloa and in later stages priority will be given to the creation of the OICD.

<b>Area</b>	Comprehensive Social Campus / Interaction with the environment
<b>Action</b>	<b>A13. Campus Recovery Plan: Campus Project</b>
<b>Objectives</b>	<ol style="list-style-type: none"> <li>1. Recover woodland and other green areas for public use on the campus.</li> <li>2. Control of surface traffic and parking.</li> <li>3. Implement a system of bicycle stations for on-campus mobility and define a cycle lane to connect different university areas.</li> <li>4. Design a network of well-defined, prioritized pedestrian routes, with the appropriate street furniture installed.</li> <li>5. Launch a clean and tidy campus awareness campaign.</li> </ol>
<p><b>Progress towards objectives</b></p> <ul style="list-style-type: none"> <li>• Phase underway: Strategic viability Plan to recover <i>Real Jardín Botánico Alfonso XIII</i> (RJB).</li> <li>• PMUS Mobility Plan Actions started</li> <li>• Start up of Phase 1- Green Areas Recovery Plan.</li> <li>• Moncloa Campus Sustainability Plan drawn up (Action completed).</li> </ul>	
<p><b>Description of work undertaken and role of participants.</b></p> <p><b>Governance structures created</b></p> <ul style="list-style-type: none"> <li>• <b>Recovery of Royal Botanic Garden (RJB).</b></li> </ul> <p>Preliminary reports have been requested and contacts made with companies to draw up the <b>Strategic Viability Plan</b> for the recovery of the RJB (In coordination with the Global Change and New Energies Cluster and the Heritage Cluster). This is based on the preliminary reports by Professor John S. Parker, Director of the Cambridge University Botanic Garden and by the RJB Consultative Committee.</p> <ul style="list-style-type: none"> <li>• <b>Recovery of woodland and other green areas for public use on campus.</b></li> </ul> <p>The geographical area of the CEI Moncloa is defined by the perimeter of Madrid's <i>Ciudad Universitaria</i> and coincides with the limits of the University Campus Planning Consortium. This Consortium was created to protect, conserve and simultaneously realize the full value of the most important environmental and landscape features of the Campus and its members represent the UCM, UPM, UNED and Madrid City Council. The Consortium ensures the application of the Special Plan for the University Campus, which includes among its aims the recuperation of the planning, architectonic and environmental features of the Campus and in particular how it relates to the existing and planned green areas; protection of the Campus, including its architectural and landscape heritage, taking as its main theme the establishment of channels to facilitate its integration into the city.</p> <p>Within the Moncloa Campus framework the former <i>Senda Real</i> which runs through the Campus has been re-opened to the public. This is a 2.7 km. footpath which runs from the Puente de los Franceses to the Sinesio Delgado street, rediscovering this natural area and highlighting the cooperation between Madrid City Council and the three universities which engage in their teaching and research activities on the Campus. This action combines progress and economic development with a respect for the natural surroundings and provides new green spaces for the university community and for the general public.</p> <p>Projected: Recovery of the parterres and pond in the Plaza de Ramón y Cajal. Financial viability study of changing the watering system to save water.</p> <ul style="list-style-type: none"> <li>• <b>Control of surface traffic and parking.</b></li> </ul> <p>As this action is included in the CEI aims, during 2010 an agreement was signed by the University</p>	

Campus Planning Consortium, as the relevant acting body on the Campus, and the Madrid Transport Consortium (CRT), to design a '*Sustainable Mobility Plan for the Moncloa Campus Madrid*'

From a technical point of view the above agreement states that the action plan will be designed and drawn up by the CRT, which will consider the action areas and problems. It also sets the maximum level of funding for this study at 200,000-€ with the CEI assuming 30% of the total.

- **Implementing a system of bicycle stations for on-campus mobility and defining a cycle lane to connect different university areas**

During 2010 the Campus bicycle loan system was put out to tender and contracted and it is expected to start in May 2011. To allow the system to function correctly, a cycle lane runs through the central nucleus of the Campus, providing access to the different Centres.

- **Launching an awareness campaign for a clean and tidy campus.**

The UNIVERDE project, developed by the University Campus Planning Consortium has led to a series of actions intended to raise the awareness of the University community and encourage the implementation of good practice and improvements to avoid any further deterioration. The actions already carry out include:

- Antibotellón Campaign: To provide information on the damage open air drinking sessions cause on Campus. The campaign included information by email, posters and placing banners at busy points.
- Waste disposal/Recycling Campaign: To raise awareness of the importance of recycling and waste separation, energy saving and reducing water consumption. The campaign made use of email, poster distribution and installing banners at busy points.
- Mobility campaign: To discourage the use of private vehicles on Campus, control surface parking and encourage the use of the available car parks on the Campus. Information was by email, poster distribution and installing banners at busy points.
- **Campus Sustainability Plan.**

Plan drawn up by the company ERF, funded by: UCM General Foundation

#### **Energy Efficiency Plan.**

Study carried out by ENDESA of the Campus power supplies and facilities. Energy saving formulas examined. Special financial conditions offered to replace heating systems.

#### **Most significant results**

Opening of the *Senda Real* footpath

Recovery started of Plaza de Ramón y Cajal (green areas and pond)

Tender process underway for RJB Strategic Plan..

Cycle loan system.

Campus Sustainability Plan.

Energy Efficiency Plan.

#### **Explanation of use of human, material and financial resources**

Part of these actions are co-funded by the Partner Universities, the Consortium and the UCM General Foundation. CEI Moncloa is responsible for:

30% of Moncloa Campus Sustainable Mobility Plan (CEI 2009).

Phase 1 of the Green Areas Recovery Plan: Recuperation of parterres and pond in the Plaza de Ramón y Cajal.

Strategic Plan for the RJB

<b>Most important deviations from planned objectives</b>
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n/a
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<b>Corrective actions proposed</b>
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n/a
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<b>Area</b>	Teaching improvement / Comprehensive Social Campus/ Interaction with the environment.
<b>Action</b>	<b>A14.</b> Refurbishing of the CEI Moncloa flagship building (Edificio CAMPUS)
<b>Objectives</b>	To refurbish and adapt the Moncloa Campus Building (currently Costume Museum) to its new use within the framework of the Moncloa Campus to house the Governing Offices and other services and actions proposed in the CEI project.
<p><b>Progress towards objectives</b></p> <p>Provisional Campus Headquarters Building: <i>Real Jardín Botánico Alfonso XIII</i> (RJB) Building.</p> <p>Offices provisionally installed:</p> <ul style="list-style-type: none"> <li>• Moncloa Campus Accommodation</li> <li>• CEI Moncloa Campus Office</li> </ul> <p>Study completed for creation of Campus Biodiversity Interpretation Centre, in the Royal Botanical Gardens Building, starting point for Moncloa Campus Biodiversity Trail (in conjunction with Action E13).</p> <p>Study carried out to create multimedia/exhibition classroom for the Global Change and New Energies cluster (in conjunction with Actions A2, A3-4).</p>	
<p><b>Description of work undertaken and role of participants</b></p> <p><b>Governance structures created</b></p> <p>Offices set up (see above).</p> <ul style="list-style-type: none"> <li>• Moncloa Campus Accommodation: UCM –SPA Project</li> <li>• CEI Moncloa Campus Office</li> </ul>	
<p><b>Most significant results</b></p> <p>Setting up of the two offices</p>	
<p><b>Explanation of use of human, material and financial resources</b></p> <p>Projects co-funded by the institutions mentioned above. See Actions A1, A2, A3-A4, A10, A21. Funded by CEI2009: Carrying out refurbishing work, IT posts for CEI Moncloa Campus Office. Dossier will be produced shortly.</p>	
<p><b>Most important deviations from planned objectives</b></p> <p>Delay in actioning the Agreement signed between UCM, Ministry of Culture and Prime Minister's Office for the use of various buildings located on the Campus, including the current Costume Museum. This has led to important delays in implementing this Action. A temporary relocation option was adopted for the relevant offices, centres and classrooms mentioned.</p>	
<p><b>Corrective Actions proposed</b></p> <p>Relocation from the Campus Building (Costume Museum) to a provisional location in the RJB Building.</p>	

<b>Areas</b>	Comprehensive social Campus / Interaction with the environment
<b>Action</b>	<b>A15. General Accessibility Plan</b>
<b>Objectives</b>	To improve all aspects of accessibility, both external and internal, related to buildings and facilities, and to the different activity areas on campus. The actions will be applied transversally until 2012 incorporating a global accessibility management system using <b>UNE 170001, 1-2</b> certification processes to obtain this certification. These will include the extension to the whole Campus of support for persons with disabilities, backed by the approval of a Campus regulation governing this area. This programme includes the already existing Accessibility Plan, with a global cost of 7 million euros, co-funded by the Community of Madrid.
<b>Progress towards the objectives</b>	
Improved accessibility of Colegio Mayor Santa María de Europa.	
<b>Description of work undertaken and role of participants</b>	
<b>Governance structures created</b>	
In 2011 the UCM has processed a request for inclusion in the Agreement between the Ministry of Education and the Fundación ONCE, proposing actions to improve accessibility to the C.M. "Santa María de Europa" within the priority action designed to guarantee universal accessibility to persons with disabilities in the building and refurbishing of university accommodation. However, due to existing demand for accommodation from within the university community for persons with severe disabilities, a change to this action has been requested, to adapt the C.M. "Santa Teresa de Jesús" to satisfy this demand. The Fundación ONCE has acceded to this request for change and the approval of the Ministry of Education is now pending.	
<b>Most significant results</b>	
Signing of Agreement with ONCE.	
<b>Explanation of use of human, material and financial resources</b>	
Agreement ONCE-UCM to eliminate physical barriers and improve accessibility to Residences. Funding: 75,000 Euros (Reinforcement Sub-programme 2010).	
<b>Most important deviations from planned objectives</b>	
Change to Agreement pending approval.	
<b>Corrective Actions proposed</b>	
n/a	

<b>Areas</b>	Comprehensive Social Campus / Interaction with the environment
<b>Action</b>	<b>A16. Moncloa Campus University Residence (RUMON)</b>
<b>Objectives</b>	<p>To facilitate and encourage talent recruitment</p> <p>To transform the current UCM Colegio Mayor Antonio de Nebrija into a university accommodation facility offering a different format from that currently available in the existing traditional on-Campus residences.</p> <p>To set up a Campus Accommodation Office as part of the CIVA, to advise and assist students, visiting teachers and international researchers on Campus to find accommodation.</p>
<b>Progress towards objectives</b>	
<p>The Campus Accommodation Office is already working, located provisionally in the Campus headquarters in the Royal Botanical Gardens Building (See Actions A10-A21 and A14).</p> <p>The search is underway for a partner for the project to transform the present UCM Colegio Mayor Antonio de Nebrija into a University Residence and take on the subsequent running of the complex through the appropriate agreement, to guarantee its viability and maintenance in line with the quality standards required. Several companies have been contacted.</p>	
<b>Description of work undertaken and role of participants</b>	
<b>Governance structures created</b>	
See Actions A10-A21, in relation to the Student Accommodation Office.	
<b>Most significant results</b>	
See Actions A10-A21, in relation to the Student Accommodation Office	
<b>Explanation of use of human, material and financial resources</b>	
The agreed budget for this Action is 75,000€	
<b>Most important deviations from planned objectives</b>	
The project to transform the existing UCM Colegio Mayor Antonio de Nebrija into a University Residence has been delayed. It is expected to start shortly.	
<b>Corrective Actions proposed</b>	
Relocation of the Campus Accommodation Office to the Campus headquarters in the RJB Building, until work on the Campus Building is completed.	

<b>Area</b>	Comprehensive Social Campus
<b>Action</b>	<b>A19. Campus Employment Programme</b>
<b>Objectives</b>	To increase the number of internships and grants (collaborative studentships and others) to support student employment on-campus as a whole. The jobs should also have the maximum possible training content (e.g. in library support services, the Biodiversity interpretation centre, museums and scientific collections, etc.). To offer employability-oriented training, through courses, workshops and seminars. Moncloa Campus Prize for Student Enterprise
<b>Progress towards objectives</b>	
The inclusion of collaborative studentships in the PICATA Programme. Funding requested in the Reinforcement Sub-Programme 2011	
<b>Description of work undertaken and role of participants</b>	
<b>Governance structures created</b>	
Study of the inclusion of 40 collaborative studentships with a Call in two phases. The first, support for Campus publicity activities, has been requested in the Reinforcement Call in this current year.	
<b>Most significant results</b>	
<b>Explanation of use of human, material and financial resources</b>	
<b>Most important deviations from planned objectives</b>	
This sub-programme has not yet been started up because of lack of funding	
<b>Corrective Actions proposed</b>	
Additional funding has been requested in the Reinforcement Sub-programme 2011.	

<b>Area</b>	Comprehensive Social Campus
<b>Action</b>	<b>A20. Healthy Campus Programme</b>
<b>Objectives</b>	<ul style="list-style-type: none"> <li>• Prevent occupational risks and physical and psychological disorders</li> <li>• Promote sustainable development and social responsibility</li> <li>• Develop life skills and human strengths</li> <li>• Develop a healthy lifestyle (healthy diet, physical exercise, prevention of drug abuse and smoking)</li> <li>• Create positive psychosocial environments</li> </ul>
<b>Progress towards objectives</b>	
Programme Definition.	
<b>Description of work undertaken and role of participants</b>	
<p>Within the Healthy Campus Programme some general objectives have been identified: To promote the overall (physical, psychological and social) health of the teaching and non-teaching staff and students. To encourage sustainability. To promote the prevention of occupational risks. To develop University Social Responsibility through responsible financial, social and environmental behaviour.</p> <p>The specific objectives proposed in the programme are:</p> <p><i>Evaluate and identify:</i></p> <ol style="list-style-type: none"> <li>i. Psychological variables, indicators of mental health.</li> <li>ii. Psychosocial risks.</li> <li>iii. Healthy behaviour and life styles.</li> <li>iv. Satisfaction levels and overall and occupational welfare.</li> <li>v. Environmental quality related aspects.</li> </ol> <p><i>Train and Inform re:</i></p> <ol style="list-style-type: none"> <li>vi. Preventing occupational hazards in the area of hygiene and safety.</li> <li>vii. Preventing harassment and psychosocial hazards.</li> <li>viii. Eating disorders: anorexia and bulimia.</li> <li>ix. Musculoskeletal disorders: cause and effect.</li> <li>x. Cardiovascular risk factors: physical and psychological.</li> <li>xi. Diet and nutrition.</li> <li>xii. Preventing smoking and other substance abuse.</li> <li>xiii. Environmental and sustainable aspects.</li> <li>xiv. University Social Responsibility.</li> <li>xv. Road Safety awareness and preventing traffic accidents.</li> </ol>	
<b>Governance structures created</b>	
<p>UCM Technical Committee including:</p> <ul style="list-style-type: none"> <li>• Chancellery Representative for Health, Social Welfare and the Environment.</li> <li>• Director of Services for Prevention of Occupational Risks and Medicine in the Workplace.</li> <li>• Head of Social Action Service.</li> <li>• Coordinator of the Dept. for Health, Social Welfare and the Environment.</li> <li>• Director, Student Centre (<i>Casa del Estudiante</i>).</li> <li>• Other invited technical specialists.</li> </ul>	
<b>Most significant results</b>	
<p>-Provision of training courses, campaigns, talks, seminars, information dossier focusing on all the points contained in the specific objectives.</p> <p>-Collaboration of those involved in the various Campus Services and the participation of various</p>	

relevant bodies and foundations.

**Explanation of use of human, material and financial resources**

The actions undertaken have been funded by the UCM

**Most important deviations from planned objectives**

n/a

**Corrective Actions proposed**

n/a

<b>Area</b>	Teaching improvement /Comprehensive social campus / Interaction with the environment
<b>Action</b>	<b>A23.</b> Creation and Implementation of the Campus Radio and Television Service (IRTV-CAMPUSMONCLOA)
<b>Objectives</b>	Social and international promotion of the Campus. Promotion and dissemination of knowledge
<p><b>Progress towards objectives:</b> Meetings held with the European Foundation for Information Society over the last six months have led to a specific Agreement between the European Foundation and CEI Moncloa which is currently being reviewed by the legal services of the UCM and UPM.</p>	
<p><b>Description of work undertaken and role of participants</b></p> <p><b>Governance structures created:</b></p> <p>The above Agreement will be covered by the framework agreement signed in October 2010, to promote the implementation of an internet based corporate TV platform (IP) in the CEI Moncloa, for training, knowledge dissemination and international promotion of the UPM and UCM.</p> <p>The objective of this Agreement is to facilitate the implementation of the CEI Moncloa Internet based Corporate Television Platform, intended for students, teaching and non-teaching staff of the UPM and UCM and for the general public.</p> <p>A test version page has been created.</p>	
<p><b>Most significant results:</b></p> <p>This Agreement will be funded jointly by the European Foundation for Information Society and CEI Moncloa for a five year period on the following basis: the first two years will be funded by the CEI Moncloa and other three years by the European Foundation.</p> <p>The European Foundation will guarantee, for the five year duration of this contract:</p> <p>1) The production of a 20 minute news broadcast 5 days per week, or various blocks lasting a total equivalent time. 2) The production, recording, post-production and broadcasting of 40 x 3 minute audiovisual programmes per year.</p> <p>The web link for the CEI Moncloa Television is: <a href="http://www.irtvcampusmoncloa.tv/">http://www.irtvcampusmoncloa.tv/</a></p>	
<p><b>Explanation of use of human, material and financial resources:</b></p> <p>To facilitate the continuity of the CEI Moncloa Corporate Internet Television and stimulate the production of interesting high quality content, the European Foundation will provide the following material and human resources:</p> <ul style="list-style-type: none"> <li>A full time Director responsible for coordinating the Television</li> <li>Staff and materials needed to produce the agreed audiovisual content: <ul style="list-style-type: none"> <li>2 production staff</li> <li>2 Post-production staff</li> <li>2 Production Assistants</li> <li>8 - 10 reporters</li> <li>Audio recording material</li> <li>HD video recording material</li> <li>Lighting equipment</li> <li>Mixing and editing consoles</li> <li>All material required for live broadcasting</li> <li>Lighting equipment</li> <li>Post-production software</li> </ul> </li> </ul> <p>In the first Agreement with the European Foundation, the Moncloa Campus provided 20,400€for</p>	

IRTV trials.

**Most important deviations from planned objectives**

n/a

**Corrective Actions proposed**

n/a

<b>Area</b>	Comprehensive Social Campus / Interaction with the environment
<b>Action</b>	A25. Moncloa Campus Programme for Guidance in School Education within the Community of Madrid (PROMOVER)
<b>Objectives</b>	To give secondary school students a comprehensive view of the institutions and educational capacity of the Moncloa Campus

#### Progress towards objectives

- Participation of the CEI Moncloa in the Science Campus Summer 2010 programme with the following workshops:
  - Global Change and Remote Sensing.
  - Animal-to-human transmission of contagious diseases.

The Science Campus was organized by the participating CEI laboratories (Visavet and Grupo geodesia-UPM) and coordinated by the Director of the *Casa del Estudiante* Student Centre

- Career guidance and campus visits for secondary school students: 17,000 students visited the Campus in 2010
- Proposal for Science Campus Summer 2011 approved by Ministry of Education. Workshops planned: Introduction to research through astronomic observation. Scientific applications in the field of Heritage Conservation and Restoration. New technologies in Agri-Food and Health: from farm to table.

#### Description of work undertaken and role of participants

To achieve the objectives set, a programme was designed combining theory-based classes with practical activities and scientific/technological visits as well as leisure and cultural activities. The Science Campus was held in the research departments of the CEI Moncloa partner universities during July 2010 (two sessions each lasting a fortnight: 4-17 July and 18-31 July). 60 students attended (6-7 students per week per project, with each student taking part in two projects). The workshops were given by university and secondary education teachers, with the support of professional leisure activity leaders.

#### Most significant results:

The main achievement of the Summer Science Campus was to raise the awareness of secondary school students of the activities carried out in a research laboratory, from the methods applied to the usefulness to society of the results obtained. As well as encouraging their potential scientific vocation they were able to take part in the University Campus with hands-on experience of different activities.

Satisfaction levels were high overall, as shown in the results of the surveys completed by the students:

<i>Do you agree with these comments?</i>	<i>YES</i>	<i>NO</i>	<i>Don't know</i>
The programme was what I expected	74,24 %	24,10 %	1,67 %
It will help me to choose my future career	59,51 %	33,16 %	7,33 %
I learned things which I can use in the future	78,67 %	15,00 %	6,33 %
The projects let me actually use techniques and 'do' instead of just	89,64 %	9,36 %	3,00 %

watching 'how it's done'			
The programme has changed the way I see science	72,53 %	22,13 %	5,34 %
I'd like to repeat the experience	92,67 %	6,33 %	1,00 %

**Explanation of use of human, material and financial resources**

The Campus workshops were given by university and secondary education teachers, with the support of professional leisure activity leaders. Other staff who took part in the coordination and organization were mainly from the Office of the Vice-Chancellor for Students and from other UCM-UPM Services (Colegios Mayores, Culture, etc.).

The students attending were given access to the material and equipment used in the laboratories and to the computer based and audiovisual material they needed to produce the scientific presentations they gave at the end of the workshops.

The FECYT, which organized the Science Campus, covered the costs of accommodation and meals, transport and group leaders and the CEI Moncloa provided 2500 euros per project (total 5000 euros) to cover the payments to the university and secondary teachers and the consumables used for the activities during the month. As well as the amount provided by the FECYT within the agreed framework an additional amount was provided by the UCM to cover other staffing and logistic costs.

**Most important deviations from planned objectives**

n/a

**Corrective Actions proposed**

n/a

<b>Area</b>	Teaching improvement / Scientific improvement / Transference/ Comprehensive Social Campus
<b>Action</b>	A26 School of Government
<b>Objectives</b>	<p>The two main objectives are:</p> <ol style="list-style-type: none"> <li>1. To follow the tradition of the most prestigious Schools of Government, updating content and focus in line with the new demands of today's society.</li> <li>2. To coordinate the excellent work areas developed in the CEI Moncloa, basically technological, with the UCM and UPM potential in the area of public management, with special emphasis on technology management.</li> </ol>
<p><b>Progress towards objectives</b></p> <p>Although some exploratory advances have been made in relation to the second objective, almost all the steps taken are aimed at an in-depth analysis of this inherited tradition and how we can update it in relation to the thematic areas defined and the needs and real conditions which we have detected in our preliminary encounters with the different institutions involved in public sector management and training.</p>	
<p><b>Description of work undertaken and role of participants.</b></p> <p>The main steps taken have been the creation of a committee of experts who have already met in five working sessions. Contacts have been set up with a variety of different academic, private and public sector institutions, to exchange ideas on the project and create a support network. Currently existing research groups, institutes and qualifications are emerging in both partner universities and work is underway on their possible convergence within the context of high quality postgraduate teaching. An in-depth study of the main Schools of Government in Europe and N. America was commissioned and discussed in two working sessions.</p> <p><b>Governance structures created</b></p> <p>A committee was formed to study the viability of the project, propose the organizational structure, the School of Government course offer, the teaching staff and the steps needed to implement it, coordinated by Fernando García Selgas and including an expert in each thematic area:</p> <p>International Development (José Antonio Alonso), Public Policy (Paloma Román Marugán), Knowledge Society and Government (Luís Jañez) and Technology Management (José María Díaz Puente). This committee, with exception of the Coordinator, could be incorporated as appropriate into the management of the School of Government as an Advisory Committee.</p>	
<p><b>Most significant results:</b></p> <p>The most significant results are still pending although they are expected shortly: the presentation of the detailed report drawn up by Dr. Scheherezade Pinilla and the presentation of the School of Government proposal to the consultative and invited representatives, in a meeting which should lead to the forming of an Advisory Council.</p>	
<p><b>Explanation of use of human, material and financial resources</b></p> <p>For the moment all the work has been carried out by the members of the implementation committee, except the more intensive task of drawing up the report, for which Dr. Scheherezade Pinilla was contracted. Her work included a week's visit to Boston to interview relevant figures in both the Harvard and MIT Schools of Government.</p>	
<p><b>Most important deviations from planned objectives</b></p> <p>There have been no significant deviations from the pre-established objectives and calendar, although there has been some delay in achieving the second objective. However, in our opinion this is both justified and appropriate, as the best criteria to link up, select and coordinate what both</p>	

universities and the other CEI Moncloa partners can bring to the overall theme of the School of Government can only emerge from a well-defined project, contrasted with other Schools of Government of Excellence and guaranteed by the experts and bodies consulted.

**Corrective Actions proposed**

Place more emphasis on finding partners and sponsors and on establishing agreements with other international Schools of Government.

<b>Area</b>	Teaching improvement / Scientific improvement / Transference/ Comprehensive Social Campus
<b>Action</b>	A27 International Centre for Latin-American Studies (CEI-AL)
<b>Objectives</b>	<p>The central objective is to set up a Centre of International Excellence which will become a point of reference for the development, transfer and management of knowledge related to Latin America and which in turn will promote the transfer and internationalization of the CEI-Moncloa.</p> <p>The aim is to inspire and motivate, leading to improved research and postgraduate teaching in a Latin American context in both universities.</p>
<p><b>Progress towards objectives</b></p> <p>The first step was to form a Monitoring Commission to follow up the Agreement signed with the Banco Santander, which has met twice so far. The next steps were to: Define the basic research and teaching thematic areas. Make progress in the choosing of an International Scientific Committee. Name the person responsible for setting up the Centre. Appoint the Executive Committee. Establish relations with other institutions, including Fundación Carolina, Fondation de la Maison des Sciences de l'Homme, Aacid, etc.</p>	
<p><b>Description of work carried out and role of participants</b></p> <p><b>Governance structures created</b></p> <p>Person responsible: Alfonso Pérez-Agote, Professor of Sociology, UCM.</p> <p>Executive Committee: Alfonso Pérez-Agote; Manuel Gutiérrez Esteve, Professor of American Anthropology, UCM; Julián Pavón, Professor of Business Organization and Director CEPADE-UPM; Heriberto Cairo, Director, Master in Latin American studies and Dean of the Faculty of Political Sciences and Sociology, UCM.</p> <p>International Scientific Committee: Néstor García Canclini (Argentina-México), Professor of Anthropology, UNAM-México; Danilo Martuccelli (Perú), Professor, Université Paris IV Sorbonne; Michel Wieviorka, Director of Studies, École des Hautes Études en Sciences Sociales, Director, Fondation de la Maison des Sciences de l'Homme, Paris; Saskia Sassen (proposed), Professor University of Columbia- New York; Manuel Antonio Garretón (proposed ), Professor of Sociology, Universidad de Chile.</p>	
<p><b>Most significant results:</b></p> <p>Constitution of basic organizations.</p> <p>Drawing up the document to define the characteristics of the Centre, its doctorate and research programme. This document acts as presentation for funding sources, to recruit quality teaching staff and to attract future doctoral and master students.</p>	
<p><b>Explanation of use of human, material and financial resources</b></p> <p>The work of those involved and the material and financial resources have been devoted basically to establishing contacts and meetings with Spanish and international institutions and setting up and holding meetings of the Monitoring Commission and Executive Committee.</p>	
<p><b>Most important deviations from planned objectives</b></p> <p>The Monitoring Commission for the Agreement signed with the Banco Santander, established in the Clause 4 of this Agreement has not yet finished defining the detail of the above Agreement and the budget for the coming years.</p>	
<p><b>Corrective Actions proposed</b></p> <p>On completion of the definitive proposal for the organization of the centre and the definition of its requirements, the Monitoring Commission will need to meet urgently to determine how the</p>	

Agreement is to be developed.

The appointment of the 10 international recognised experts who will form the International Scientific Committee is still underway and they should be brought together to set out the directives for the Centre. To do this an international encounter is envisaged which will also double as a presentation.

<b>Area</b>	Teaching improvement / Scientific improvement / Transference/ Comprehensive Social Campus
<b>Actions</b>	<p><b>Thematic actions of the cluster for GLOBAL CHANGE and NEW ENERGIES</b></p> <p><b>Planned Actions:</b></p> <p>E1. Construction of the Bioclimatic Multipurpose Building (EBM).</p> <p>E2. Creating the Joint UPM-UCM Centre for Environmental Research of the Moncloa Campus (CIMAM).</p> <p>E3. Creating an incubator for environmental companies.</p> <p>E4. Creating a Laboratory for Research Support in Land Degradation and use alternatives.</p> <p>E5. Creating a Centre for Research Support in technology of photovoltaic devices.</p> <p>E6. Developing support programmes for the ITER project.</p> <p>E7. Creation of a Network for Modelling Pollutant Dispersion in the Atmosphere.</p> <p>E8. Creating a Remote Sensing and Monitoring Laboratory.</p> <p>E9. Creation of the Laboratory for Climate Change and Impacts.</p> <p>E10. Constitution of the Moncloa Natural Hazards Network.</p> <p>E11. Creation of the Advanced Scientific Instrumentation Laboratory (LICA).</p> <p>E12. Creation of a Joint Unit (UCM-UPM) for ex situ Conservation.</p> <p>E13. Creating a program for cataloguing, conservation and dissemination of Biodiversity in the University Campus.</p>

<p><b>Objectives</b></p>	<p>The fundamental actions of this cluster include the construction of a Bioclimatic Multipurpose Building (EBM), as a model of environmental awareness and energy efficiency, belonging to the UPM but used jointly by the partner institutions and which will meet the following objectives: to concentrate human and equipment resources of the partner universities within the Joint UPM-UCM Centre for Environmental Research of the Moncloa Campus (CIMAM); house the UPM Nuclear Fusion groups, facilitating their synergy with the CIEMAT; house the new laboratories and common services for photovoltaic devices and for land and water degradation and regeneration; set up an incubator for environmental based companies and make available teaching facilities for the cluster, in particular a multimedia classroom for real-time distance based teaching/learning.</p> <p>Actions have also been designed to increase our understanding of the active processes which control System Earth with climate models, studies of climate change impact and the development of natural disaster early warning systems.</p> <p>The cluster will play a prominent role in the conservation, extension and appreciation of the biodiversity of the Campus and of the many collections existing within it and will boost its full inclusion in the <i>Global Biodiversity Information Facility</i> sponsored by UNESCO, through GBIF-España (<a href="http://www.gbif.es/">http://www.gbif.es/</a>).</p> <p>The Cluster is structured into four strategic research areas:</p> <p>a) <b>Environmental technologies and new energies.</b> Focused on developing new technologies for obtaining clean energies and for the prevention, monitoring and mitigation of some current environmental problems. <u>Actions: E4, E5, E6, E7</u></p> <p>b) <b>Observation of System Earth and Space.</b> Focused on prevention of Climate change and natural disasters and on the mitigation of the impact they produce, as the Iberian Peninsula, the seas around it, North Africa and the Canary Islands are considered especially vulnerable areas. This includes support for space missions and instrument development in Astrophysics. <u>Actions: E8, E9, E10, E11</u></p> <p>c) <b>Study and conservation of biodiversity,</b> especially in the Mediterranean area and Latin America, where important biodiversity reserves are currently found. (<a href="http://www.biodiversityhotspots.org">www.biodiversityhotspots.org</a>). <u>Actions: E12, E13</u></p> <p>d) <b>Socioeconomic implications of Global Change.</b> New action proposed within the project development to include migration, impact of climate change on agri-food systems, environmental legislation, etc.</p>
<p><b>Progress towards objectives</b></p>	<p>Cluster coordinators appointed. February 2010.</p> <p>Cluster Advisory Councils set up</p> <p>Drawing up of cluster master plans is underway</p> <p>Implementation of actions:</p> <p>E1. Construction of the Bioclimatic Multipurpose Building (EBM).</p> <p>E8 Creating a Remote Sensing and Monitoring Laboratory.</p> <p>E9 Creation of the Laboratory for Climate Change and Impacts</p> <p>E10 Constitution of the Moncloa Natural Hazards Network</p> <p>E12. Creation of a Joint Unit (UCM-UPM) for ex situ conservation (Construction of a research greenhouse).</p> <p>E13 Creating a program for cataloguing, conservation and dissemination of Biodiversity in the University Campus</p>
<p><b>Description of work undertaken and role of participants</b></p>	<p>Each action is described in a separate file.</p>

Work in progress: drawing up the cluster master plans.

Work has also been undertaken on the design of the Master's programmes: Inter-University Master in Remote Sensing and Global Change, and included in the EIPD: the Erasmusmundus Masters: IMIM-INTERNATIONAL MASTER IN INDUSTRIAL MANAGEMENT, EUROPEAN MASTER IN NUCLEAR FUSION SCIENCE AND ENGINEERING PHYSICS (FUSION-EP).

**Governance structures created**

Coordinators and Advisory Council appointed. See File A1.

**Most significant results:**

The Cluster is formed by partnerships between 173 research groups in the UCM and UPM. Each action is described in a separate file

**Explanation of use of human, material and financial resources**

See separate file

**Most important deviations from planned objectives**

The work completed is as planned, but the funding obtained was less than requested, which has meant that a strategic selection has had to be made of specific actions to take forward. These are described in a separate file.

**Corrective Actions proposed**

Seek additional funding to implement the remaining actions.

<b>Area</b>	Teaching improvement /Transference/Comprehensive Social Campus
<b>Action</b>	<b>E1. Construction of the Bioclimatic Multipurpose Building (EBM)</b>
<b>Objectives</b>	To construct a building (3.500m <sup>2</sup> ) using technologies which improve the energy efficiency of the University Campus to house the Joint Centre for Environmental Research
<p><b>Progress towards objectives</b></p> <p>Both universities have agreed to the construction of the joint research centre in the area of the ETSI Montes, UPM. The intention is to facilitate its creation using specific existing services and laboratories provisionally until the new building is completed.</p> <p>The building will include non-commercial technology, through an Innovative Public Purchase Procedure with the support of the Ministry of Science and Technology.</p>	
<p><b>Description of work undertaken and role of participating partners</b></p> <p>Several meetings have been held between UPM and UCM and with partner institutions to reach the results described below.</p> <p><b>Governance structures created:</b></p> <p>No specific structures have been created although as this action is included in the Global Change and New Energies Cluster, the Coordinators of this Cluster and the Cluster Advisory Committee will provide monitoring and management of the operation for the Moncloa Campus Executive Committee.</p>	
<p><b>Most significant results:</b></p> <ol style="list-style-type: none"> <li>1. Conversations with the Secretary General for Innovation in the Ministry of Science and Technology and the CDTI to analyse the possible use of the Innovative Public Purchase Procedure.</li> <li>2. Basic specifications have been drawn up to enable a competitive dialogue with relevant companies, once laboratories have been identified. <ul style="list-style-type: none"> <li>• Identification of the needs of the Centre's research laboratories</li> </ul> </li> <li>3. Establishing the discussion table as specified in the <i>Ley de Contratos del Estado</i>. <ul style="list-style-type: none"> <li>• Three companies will be invited to define the basic tender specifications.</li> <li>• Given the special characteristics of the building the decision has been taken to invite a single tender for the project and construction work.</li> </ul> </li> <li>4. Identification of pre-competitive technologies aimed at improving the energy efficiency in the building: <ul style="list-style-type: none"> <li>• Bioclimatic windows with fluid</li> <li>• Solar concentration energy with high performance photovoltaic cells</li> <li>• Biomass heating system integrated in heating and cooling provision.</li> <li>• Self-adjusting intelligent domotics to run dynamic systems depending on facades and uses.</li> <li>• Modular building system for facades to allow on-going inclusion of future technology developments.</li> </ul> </li> <li>5. Preliminary conversations with companies and research centres. <ul style="list-style-type: none"> <li>• SACYR</li> </ul> </li> </ol>	

<ul style="list-style-type: none"> <li>• Intelliglass</li> <li>• OHL</li> </ul> <p>6. Preparation of documents for the University Campus Planning Consortium</p> <ul style="list-style-type: none"> <li>• Authorization obtained for transfer of building permits to the selected site.</li> </ul> <p>7. Request for planning permission, expected in July 2011.</p>
<p><b>Explanation of use of human, material and financial resources</b></p> <p>The resources assigned (5 M€) have not yet been used.</p> <p>It is hoped that c.1M€ will be obtained from the Ministry of Science and Innovation for the selected company or companies to cover the extra cost of the design development and use of non-commercial technological solutions.</p>
<p><b>Most important deviations from planned objectives</b></p> <p>Delays resulting from modifications to the proposed building site and from the type of funding obtained.</p> <p>The construction work is expected to be contracted during 2011 and the building work is expected to start early 2012. The estimated construction time is 18 months.</p>
<p><b>Corrective Actions proposed</b></p> <p>Request for extension of project schedule.</p>

<b>Area</b>	Teaching Improvement / Research/ Knowledge Transference
<b>Action</b>	E2 Joint UPM-UCM centre for Environmental Research of Moncloa (CIMAM) E5 Creating a Centre for Research Support in technology of photovoltaic devices. E6 Developing Support Programs for the ITER Project
<b>Objectives</b>	<p>These actions are aimed at developing new technologies for the production of clean energy and the prevention, monitoring and mitigation of some of today's environmental problems.</p> <p>E2: CIMAM: Proponent institutions wish to create a new multidisciplinary research centre on the issue of environmental technologies taking the necessary steps in their respective governing bodies. This new centre will be located in the Multifunctional Bioclimatic Building (EBM) and will enhance environmental science and technology activities in the <i>Ciudad Universitaria</i>.</p> <p>E5 y E6: The UPM has two University Research Institutes in the Area of environmental technologies: the IES (Solar Energy Institute) and the DENIM (Nuclear Fusion Institute taking part in the ITER project) specifically focused on two energies; nuclear energy and different types of renewable energy (solar thermal, wind, biomass or photovoltaics) while conducting various actions to improve energy efficiency.</p>

#### **Progress towards Objectives**

Both the UPM and the UCM believe this area needs horizontal support investment: Expand the UPM IBM supercomputer to provide a high-performance computer system and support for teaching and research, innovation and development projects. The existence of an advanced supercomputing service is essential to ensure the future development of services for its growing base of scientific users, and to undertake new projects and services to support research to which the university is committed in its research, innovation, development and technology transference projects. The availability of advanced computational services in a university generates more and better quality research and attracts resources in enabling projects that would be impossible without this infrastructure. The availability of broadband networks also assures that the use of equipment can be made regardless of physical location of users and equipment can be installed in the most suitable places for them. This system has been expanded to improve the existing service.

The impact of this infrastructure makes the university more competitive. Acquiring more efficient processors means greater energy efficiency, with a better performance to power efficiency ratio and reduced maintenance operating costs. This improved energy efficiency means providing better service with a more rational, ecological and environmentally friendly use of natural resources.

#### **Most significant results.**

The future development of services for a growing user base has been guaranteed and new projects and services to which the university is committed in its research, innovation, development and technology transfer can be provided.

A new server infrastructure to expand the system supplements the existing shortfall in facilities in Intel architecture-based environments. A storage library ensures the integrity and availability of system information of the Supercomputing and Visualization Centre in Madrid.

This activity is a cross Action between the Moncloa and Montegancedo campuses of International

Excellence and will provide services to both universities.

**Explanation of the use of human, material and economic resources**

Expansion of the UPM IBM supercomputer has been funded by the CEI2009 Sub-program B (MICINN).

The work done in the other actions has not led to significant costs to date. Studies have been prepared by the staff of the coordinating universities.

**Most important deviations from planned objectives**

Delays resulting from changes in the proposed construction area and the type and amount of funding obtained.

The final location of the equipment will be at the Multipurpose Bioclimatic Building EMB, Action E1, which is already underway.

**Corrective Action Proposed**

A delay in implementation is requested

<b>Area</b>	Teaching improvement/ Scientific improvement/ Transference/ Comprehensive Social Campus
<b>Action</b>	E8 Creating a Remote Sensing and Monitoring Laboratory
<b>Objectives</b>	The main objective of the Remote Sensing and Monitoring Laboratory is the creation of a device capable of monitoring the Earth's surface from space and ground data. Region of interest: Iberian Peninsula, North Africa and the Canary Islands. Including the development of algorithms.
<p><b>Progress towards Objectives</b></p> <p>Funding was requested for the implementation of this Action in the INNOCAMPUS 2010 call. The Action is within the framework of major European and international initiatives: IGOS (<i>Integrated Global Observatory Strategy for monitoring our environment from Earth and Space</i>), GEOSS (<i>Global Earth Observation System of Systems</i>), CEOS (<i>Committee on Earth Observation Satellites</i>), GEM: Global Earthquake Model, GlobVolcano de la ESA, etc.</p>	
<p><b>Description of the work undertaken and role of the participants</b></p> <p><b>Governance structures created</b></p> <p><u>Partners involved in the Action</u> UPM (ETSI: Telecommunications, Aeronautical Engineering, Mining, Forestry, Agronomy), UCM (Faculties: Chemistry, Physics, Geology, Biology, Mathematics, Pharmacy, Computer Science, Geography and History), CSIC (IGEO, a UCM-CSIC Joint centre), AEMET, IGN, IGME, INIA.</p> <p><u>Groups in charge at each University.</u> UPM: ETSI Aeronautical Engineering, UPM-UCM: Joint Institute for Geosciences IGEO, Department for Earth Observation.</p> <p><u>Overall supervisor of the Action:</u> UPM</p> <p><u>Scientific heads:</u> Coordinators of the Global change and new energy cluster. Dr. José Fernandez Torres (CSIC-UCM) and Prof. Francisco Javier Elorza (UPM).</p> <p>Documents for the acquisition and installation of the supercomputing system are being prepared. The cluster will consist of 10 remote workstations for the different user groups in the CIS.</p> <p>The software necessary for image processing and 3D visualization is being defined, as well as the data to be requested from space agencies</p>	
<p><b>Most significant results</b></p> <p>The Action is already underway.</p> <p>Discussions with the ESA (European Space Agency) and the GEO (<i>Group on Earth Observations</i>) have begun for the inclusion of this laboratory within the framework of the <i>Supersites</i> initiative, as well as the EPOS project (<a href="#">European Plate Observing System</a>).</p>	
<p><b>Explanation of the use of human, material and economic resources</b></p> <p>To develop this Action 280,000 Euros are available (240,000 UPM, 40,000 UCM) funded by the INNOCAMPUS program.</p>	
<p><b>Most important deviations from planned objectives</b></p> <p>The final location of the equipment will be at the Multipurpose Bioclimatic Building EMB, Action E1, which is already underway. While the building works are completed, the cluster will be installed temporarily in the ETSI School of Telecommunications, UPM</p>	
<p><b>Corrective Action Proposed</b></p> <p>Provisional location of the laboratory: ETSI School of Telecommunications, UPM.</p>	

<b>Area</b>	Teaching improvement/ Scientific improvement/ Transference/ Comprehensive Social Campus
<b>Action</b>	E9 Creation of the Laboratory for Climate Change and Impacts.
<b>Objectives</b>	<p>The main objective is the analysis and modelling of the climate system (atmosphere, oceans, cryosphere, biosphere and their interactions) and the impacts of climate change. The issue will be approached from different spatial and temporal scales, ranging from the geological periods until the end of the century.</p> <p>The laboratory consists of: a computing cluster, an isotope laboratory focused on obtaining paleoclimatic proxies (stable isotope laboratory and a Thermo-ionization Mass Spectrometer)</p>
<p><b>Progress towards Objectives</b></p> <p><b>Computing cluster EOLO:</b> A work team has been created to develop the equipment architecture. Architects have reviewed the adequacy of facilities. There have been several meetings with companies for quotes and to evaluate the costs and benefits of the equipment offered by each company. Final location: IGEO, provisional Location: Computer Centre of the UCM.</p> <p><b>Laboratory for obtaining paleoclimatic proxies.</b> Start of the application process to purchase stable isotopes laboratory equipment: Automated carbonates systems, (O, N, C, H) and the acquisition of the Thermo-ionization Mass Spectrometer -TIMS. Final location of Stable isotopes: IGEO; provisional Location: School of Geological Sciences at the UCM. TIMS, location: CAI (Research Support Centre) of Geochronology of the UCM</p>	
<p><b>Description of the work undertaken and role of the participants</b></p> <p><b>Governance structures created</b></p> <p><u>Partners participating in the Action</u> UPM (ETSI: Agronomy, Forestry, CEIGRAM), UCM (Faculties: Physics, Geology, Mathematics, Chemistry, Biology, Pharmacy, Computer Science, Geography and History), CIEMAT, CSIC (IGEO, UCM-CSIC joint centre), AEMET, INIA.</p> <p><u>Groups in charge at each University.</u> UPM-UCM: Joint Institute of Geosciences IGEO, Department for Climate Change), UCM: Faculty of Physical Science, UPM: ETSI Agronomy.</p> <p><u>Overall supervisor of the Action:</u> UCM</p> <p>Defining the <u>scientific researchers in charge</u> of each sub-action: Cluster EOLO: Prof. Fidel Gonzalez Rouco (Faculty of Physical Science, UCM) Laboratory of Stable isotopes: Prof. Javier Martín Chivelet (Faculty of Geological Science, UCM) Thermo-ionization Mass Spectrometer : Prof. Carmen Galindo (CAI -Research Support Centre- of Geochronology, UCM)</p>	
<p><b>Most significant results</b></p> <p>The equipment purchase process has begun. The Action is on schedule, only some equipment has needed to be relocated.</p>	
<p><b>Explanation of the use of human, material and economic resources</b></p> <p>Financial aid requested: 1,200,000 Euros (UCM). Source of funding: INNOCAMPUS</p> <p>Computing cluster EOLO: 300,000 €</p> <p>Laboratory of Stable isotopes: 360,000 €</p> <p>Thermo-ionization Mass Spectrometer: 540,000 €</p>	
<p><b>Most important deviations from planned objectives</b></p> <p>The need to relocate some equipment while conducting the IGEO building works</p>	

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**Corrective Action Proposed**

Computing cluster EOLO: Relocation to the Computer Centre of the UCM

Laboratory of Stable isotopes: temporary relocation: Faculty of Geological Science of the UCM

<b>Area</b>	Teaching improvement/ Scientific improvement/ Transference/ Comprehensive Social Campus
<b>Action</b>	E10: Moncloa Natural Hazards Network
<b>Objectives</b>	Development and innovation in new technologies focused on the study of the processes that cause natural hazards. Promotion of modelling studies and development of early warning systems for natural hazards.
<b>Progress towards objectives</b>	
A specific objective has been targeted: Improvement of the Western Mediterranean seismic network (WM, ROA/UCM) through the acquisition of 4 broadband seismic stations equipped that can record velocity and acceleration and 3 seafloor seismometers (Ocean Bottom System, OBS).	
<b>Description of the work undertaken and role of the participants</b>	
<b>Governance structures created</b>	
<u>Partners participating in the Action</u>	
UPM (ETSI: Telecommunications, Mining, Forestry, Agronomy, Civil Engineering), UCM (Faculties: Physics, Geology, Mathematics), CIEMAT, CSIC (IGEO, UCM-CSIC Joint centre), IGN, IGME, INIA, AEMET.	
<u>Groups in charge at each University.</u> UPM-UCM: Joint Institute of Geosciences IGEO, Department of Earth Observations), UCM: Faculty of Physical Science, UPM: ETSI School of Mining.	
<u>Overall supervisor of the Action:</u> UCM	
<u>Scientific head:</u> Elisa Buforn (Faculty of Physical Science, UCM).	
The characteristics of the instrumentation on the market have been studied, its relevance to the objectives of the WM network and especially the maintenance of network homogeneity. This is of vital importance to integrate the observations from the new equipment into the existing database. It is also necessary to ensure the maintenance and control of new equipment. This work was done in collaboration with the Royal Institute and Observatory of the Navy (ROA).	
<b>Most significant results</b>	
The Action is underway. Procedures have begun for the acquisition of 4 broadband speed sensors. Reports are being prepared for the acquisition of acceleration sensors, a data acquisition system and a digitizer. Also reports are being developed for the acquisition of OBS.	
<b>Explanation of the use of human, material and economic resources</b>	
There is a grant for 360,000 Euros (UCM) for this Action. Source of funding: INNOCAMPUS. The Royal Navy Observatory (ROA) is collaborating in the installation of the OBS. Installation costs will be borne by said institution.	
<b>Most important deviations from planned objectives</b>	
No deviations, the Action is being developed as scheduled	
<b>Corrective Action Proposed</b>	
Not applicable	

<b>Area</b>	Teaching improvement/ Scientific improvement/ Transference/ Comprehensive Social Campus
<b>Action</b>	E12 Creation of a Joint Unit (UCM-UPM) for ex situ Conservation.
<b>Objectives</b>	Ex situ conservation is a critical / key / essential activity against the loss of biodiversity in natural habitats. The aim is to encourage the development of cutting-edge research in the Moncloa Campus taking advantage of existing UCM-UPM-INIA groups already working together on this issue.
<b>Progress towards Objectives</b> Installing a research greenhouse in the Alfonso XIII Royal Botanic Gardens.	
<b>Description of the work undertaken and role of the participants</b> The Greenhouse installed in the Alfonso XIII Royal Botanic Gardens will serve to activate the research for the Study and Conservation of Biodiversity.  The Installation allows for planting in soil or on benches for ex situ conservation and for experimentation. It also has an insulated compartment for transgenic plants. It is equipped with programmable automatic irrigation and temperature and lighting control, as well as artificial lighting control to vary the photoperiod.	
<b>Governance structures created</b> Greenhouse management will be similar to the current management of the Research Support Centres of the UCM, and will serve all CEI researchers, both the UCM and the UPM and the partner institutions. A Management Committee has been appointed who will define protocols for use of the Installations and mechanisms for scientific evaluation of the proposals.	
<b>Most significant results</b> The Action is underway. Installation of a research Greenhouse.	
<b>Explanation of the use of human, material and economic resources</b> The installation of a Greenhouse has been funded under the CEI2009 Project, Subprogram B. Costs have amounted to 330,493.83 Euros.	
<b>Most important deviations from planned objectives</b> The rest of the sub-activities planned are underway, although somewhat delayed due to financial problems.	
<b>Corrective Action Proposed</b> Seeking additional funding.	

<b>Area</b>	Teaching improvement/ Scientific improvement/ Transference/ Comprehensive Social Campus
<b>Action</b>	E13 Creating a program for cataloguing, conservation and dissemination of Biodiversity in the University Campus
<b>Objectives</b>	To retain the herbaria and collections of the UCM and UPM for research and teaching purposes; to continue with the task of incorporating them into the international project coordinated by GBIF-Spain (Global Biodiversity Information Facility; <a href="http://www.gbif.es/">http://www.gbif.es/</a> ) and create with this material and botanical gardens located on the university campus a training route (with network catalogues) for university students of our community and secondary education institutions of the Community of Madrid.

### **Progress towards Objectives**

Design of the Moncloa Campus Biodiversity Tour which includes visits to:

- The Museum of Vertebrates, Biology, UCM
- The Museum of Entomology, Biology, UCM
- The Herbarium, Biology, UCM
- The Arboretum, Forestry, UPM
- Fish farms, Forestry, UPM
- Alfonso XIII Royal Botanic Gardens, UCM
- The Geology Museum, UCM

Project Development: Multimedia Classroom for the interpretation of Biodiversity on Campus, starting point and interpretation of the itinerary.

Script development and improvements in collections and museums (Herbarium, Vertebrates Museum and Museum of Entomology).

### **Description of the work undertaken and role of the participants**

- Commencement of Refurbishment Works of the Vertebrates Museum, Biology, UCM. The proposed works seek to accommodate exhibition spaces in the annex building, containing the exhibition collections. Four separate areas are intended: two rooms of 20 square meters, the entrance hall of the Degree Room and the Assembly Hall (approx. 30 square meters) and changing rooms (approx. 100 square meters). The first three spaces need minor repairs (replacement of false ceiling, repairing cracks and painting, electrical installation suitable for museum use, installation of exhibition rails); the latter area requires much more work: underused changing rooms and bathrooms, in which walls will be demolished, removal of bathroom fittings, etc..., and the area will be adapted to become an exhibition hall (painting, lighting, etc).
- Improvement of the Entomology Collection, Biology, UCM. The Entomology collection, Faculty of Biological Science, is mainly for scientific use and stores specimens (many of them being type-specimens that have served for the identification of a new species) resulting from the research work of professors from the Department of Zoology. The specimens are stored in a room of 150 square meters (approx) which requires the installation of a cooling system as a mechanism of preventive conservation to prevent the invasion of entomophagous pests. Traditional conservation methods used chemicals (dichlorobenzene) that have proved to be toxic to people working in this environment and harmful to the environment and, therefore, have been replaced by physical methods (cooling).
- Improvement of the Herbarium PCI. The MACB Herbarium (included in the official list of

university herbaria) has two workspaces: one area for the administrative and scientific processing of new entries, and a storage area for the specimens (these are stored on sheets of paper, enveloping the dried plants). The latter is a space of 150 sqm (approx) which has a powerful air conditioning system that prevents pests, but no anti-fire system to ensure the safety of the collection (and building), the material being highly flammable.

- Design of the multimedia interpretive centre of the Biodiversity Tour of the Campus. This action involves the execution of coordination tasks between various Complutense and Technical University centres, scientific collections and tools to develop awareness campaigns among school students and public in general. The Alfonso XIII Royal Botanic Gardens has designed a specific action in one of the buildings of the compound, which represents a 'visitors' reception centre' and includes an exhibition area with a sample of the variety of natural collections of the Moncloa Campus. Regarding the interpretation centre an ambitious and innovative design has been chosen, using expository criteria and highly innovative technological resources (augmented reality, kinetic technology or audience games). The creation of the Interpretation Centre has involved a funding request in the Reinforcement call 2011. The creation of the Tour Itinerary provides for the existence of signs and signage systems to give an overall picture, along with outreach activities over the Internet as a means of approaching the school community and society in general.
- Specification of human needs (partnership grants) and infrastructure for the implementation of the action. Additional funding has been requested under this year's Reinforcement sub-program

**Governance structures created**

Joint Commission for the coordination and preparation of the Biodiversity Itineraries

**Most significant results**

There is already a design for the itinerary/ itineraries and the interpretation multimedia centre. Records have been opened for the development of museum and library refurbishment.

**Explanation of the use of human, material and economic resources**

The refurbishment Works are funded under the CEI2009 project.

**Most important deviations from planned objectives**

The Project is on schedule. Funding below the requested amount has made it imperative to seek additional funding.

**Corrective Action Proposed**

Request for funding under the Reinforcement sub-program 2011 (done).  
Search for promotional partners

<b>Area</b>	Teaching improvement/ Scientific improvement/ Transference/ Comprehensive Social Campus
<b>Action</b>	<p>Actions scheduled within the cluster MATERIALS FOR THE FUTURE:</p> <p>F1 Establishing and complementing the National Advanced Electron Microscopy Centre (CMA).</p> <p>F2 Platform for the Design and Construction of Electromagnetic sensors and actuators.</p> <p>F3 Creation of the Workshop Network for the development of new thin film materials.</p> <p>F4 Mechanical Properties Workshop: Durability and Sustainability of the Materials.</p> <p>F5 Workshop for the Design of Biomaterials for Bone Tissue Regeneration.</p>
<b>Objectives</b>	<p>The cluster aims to develop an integrated network structure of research groups in advanced structural and functional materials of the UCM and UPM, experts in synthesis and structural characterization and physical-chemical properties, in order to establish the structure-property relationship in different materials. The research lines of these groups address some of the hottest topics in Materials Science and Technology in the area of metals, ceramics, magnetic materials, conductors, biomaterials and cementitious materials.</p> <p>Much of the activity of this cluster has developed around the commissioning of the ICTS of the National Centre for Advanced Microscopy, whose main node will be installed on the campus, by agreement of the Ministry of Science and Innovation. The ICTS will consist of two new ultra high resolution electron microscopes, one TEM and one STEM, with various devices that will make it <b>the only one in Europe with these features</b>, allowing images with a point-to-point resolution below 1 Å (0.05 Å TEM). The installation is to be completed with a dual beam system (FESEM-FIB) for the micro and nano-structural analysis of materials.</p>
<p><b>Progress towards Objectives</b></p> <p>Appointment of cluster coordinators. February 2010.</p> <p>Forming Cluster Advisory Councils</p> <p>Underway: preparation of master plans for clusters</p> <p>Actions started:</p> <p style="padding-left: 40px;">F1. Establishing and completing the Advanced Electron Microscopy Centre (CMA)</p> <p style="padding-left: 40px;">F4. Mechanical Properties Workshop: Durability and Sustainability of the Materials.</p> <p style="padding-left: 40px;">F3 Creation of the Workshop Network for the development of new thin film materials.</p> <p>Aimed at the development of new thin film materials for the development of nanoelectronic sensors and devices.</p>	
<p><b>Description of the work undertaken and role of the participants</b></p> <p>Each action started is described in a separate detail sheet.</p> <p>Underway: preparation of master plans for clusters.</p> <p><b>Governance structures created</b></p> <p>Appointment of Coordinators and the Advisory Council. See detailed action plan A1</p>	
<p><b>Most significant results</b></p> <p>The cluster is formed by the aggregation of 97 research groups from the UCM and UPM. Each Action started is described in a separate detail sheet.</p>	

**Explanation of the use of human, material and economic resources**

Each Action started is described in a separate detail sheet

**Most important deviations from planned objectives**

The work conforms to expectations, but the funds received, being below the amount requested, has made it necessary to chose a strategic selection of specific actions to be reinforced. These are described in a separate detail sheet.

**Corrective Action Proposed**

Seeking additional funding for implementation of the remaining actions.

<b>Area</b>	Teaching improvement/ Scientific improvement/ Transference/ Comprehensive Social Campus
<b>Action</b>	F1 Establishing and complementing the Advanced Electron Microscopy Centre (CMA).
<b>Objectives</b>	<p>Currently, in order to address the structural complexity of the topic, increasingly sophisticated equipment is needed. To understand the relationship between structure and properties of the materials high-resolution electron microscopes are needed which provide atomic resolution images to analyze the lighter elements, and simultaneously provide high-resolution maps of chemical analysis and electronic characteristics with suitable spatial resolution. To do this, lens aberration correctors have been developed in recent years, which placed in the appropriate setting of a particular electron microscope, provide a direct image of the structure, chemical composition and electronic property information with atomic resolution. Under these conditions, electron microscopes with an accelerating potential of 200-300 kV, equipped with a cold field emission electron gun (Cold FEG) and spherical aberration correctors can achieve resolutions that can reach 0.5 Å resulting in a notable advance in the development of new materials with particular interest in the area of nanomaterials. By way of example, a schematic configuration of the microscope equipped with an aberration corrector in the condenser lens is shown.</p>

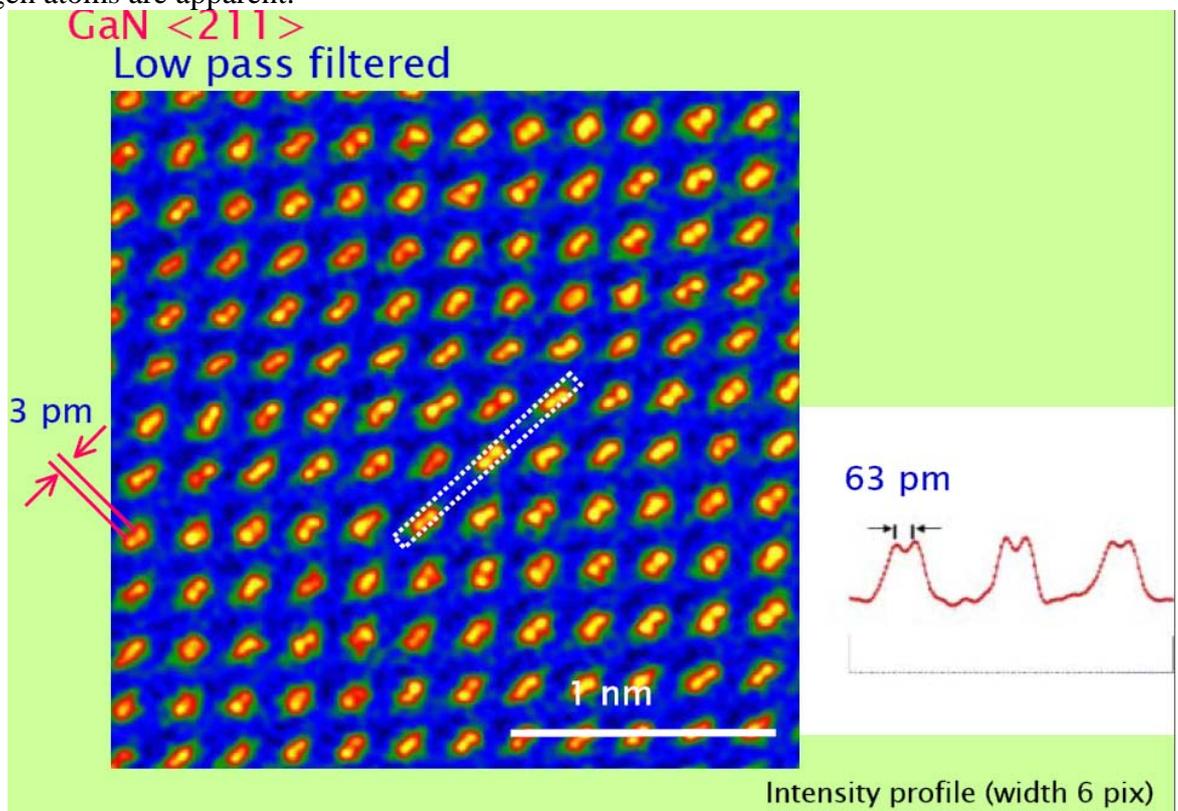
**Progress towards Objectives**

The use of these microscopes requires prior characterization of materials. This leads to a characterization at three levels: i) reciprocal lattice, ii) real space and iii) composition. For this, it is necessary to use less technologically advanced but more versatile microscopes which allow us to routinely obtain intermediate-resolution information. The transmission microscope JEOL JEM 2100, acquired through SUBPROGRAM-B CEB09-0013 PROJECT, "Campus Of International Excellence" and recently installed at the centre, fulfils these general characteristics. This equipment has a

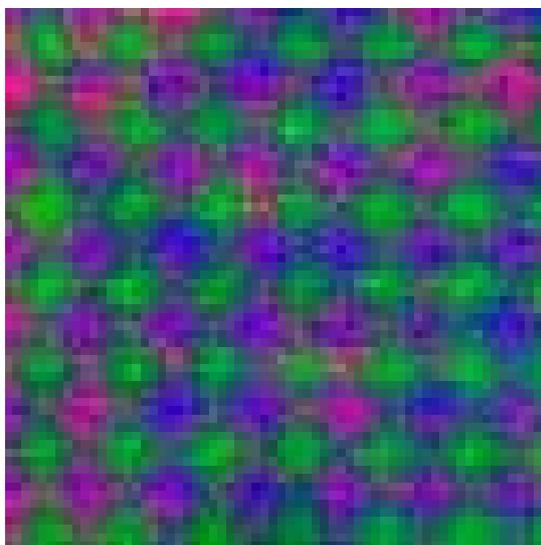
thermionic electron gun with a LaB<sub>6</sub> filament which together with the specific design of the lens ( $C_s = 0.6$  mm) can achieve a structural resolution of 2.3 Å. In addition, this microscope is equipped with a STEM unit which, together with the bright field detector (also installed as an accessory of the microscope) allows one to obtain maps of sample composition. The XEDS microanalysis system plays a key role in detecting and quantifying the elements present. This microscope is equipped with a double tilt sample holder ( $x = \pm 42$ ,  $y = \pm 30$ ) required for the study of the reciprocal lattice, which plays a key role in the context of the ICTS since it is compatible with the two microscopes with aberration correctors and is therefore the first step in the characterization of materials. It also features a unique tilt sample holder that allows a shift of  $\pm 80^\circ$  suitable for electron tomography, a technique that allows the morphological study of the samples in 3 dimensions.

Today, the process of acquiring new equipment to complete the ICTS continues. To this end, a public tender has been opened for the purchase of the equipment listed above, in the first phase of which the UCM provides € 1,500,000 under INNOCAMPUS to be allocated to the purchase of some of the material pertaining to the 200 kV equipment with an aberration corrector in the condenser lens. In a second stage, conditional on the actual budget allocation of funds needed for this purpose following the signing of the agreement regulating the project by the participating entities (MICINN, Ministry of Education of the CM and UCM), the remaining equipment will be purchased.

The peculiar singularity of this Centre for Electron Microscopy is given by the acquisition of an aberration corrected electron microscope working at 300 kV able to get a point to point resolution of 0.5 Å which is the first microscope in the world showing such features. This microscope, which has been designed for this Centre, produces structural images, unpublished up to now, of the weakest elements. For instance, we show here an electron micrograph of a semiconductor, GaN, where the nitrogen atoms are apparent.



On the other hand, by placing the aberration corrector in the condenser lens, compositional maps can be achieved. Moreover, the chemical composition inside each column can be analyzed.



Actually, in this image the [001] image of a Ba, Fe, Mn oxide is observed. Ba columns (green) are at the A positions of a perovskite related material ( $ABO_3$ ) whereas B sites are occupied, in different amounts, by Fe (red) and Mn (blue). Analysis by EELS (Energy Electron Loss Spectroscopy) spectroscopy can be used to quantify the column content

#### **Description of the work undertaken and role of the participants**

Since the creation of the Advanced Microscopy ICTS described in the ICTS map adopted by the Third Conference of Presidents held on January 11, 2007 and subsequent confirmation by the Governing Council of the UCM held on June 14, 2010, we have proceeded to fine-tune the different existing equipment at the ICTS, to adapt and provide the necessary infrastructure for the rooms which will house the new equipment, to recruit new staff to maintain them and to begin the process of training young researchers. The technical aspects of the equipment have been described in previous sections.

#### **Governance structures created**

In the agreement to be signed between the Ministry and the Autonomous Community, the Complutense University of Madrid undertook to provide 1.9 million Euros for equipment to complete the installation of the ICTS. The actions undertaken are the Moncloa Campus's contribution towards the completion of the installation.

#### **Most significant results**

Installation of a new transmission microscope, which has a thermionic electron gun with a  $LaB_6$  filament equipped with a STEM which, together with the bright field detector (also installed as an accessory of the microscope) allows one to obtain maps of sample composition for ICTS. Currently, this equipment is fully operational.

#### **Explanation of the use of human, material and economic resources**

Electron microscope purchased: 467,300 Euros under Subprogram B (MICINN)  
Equipment to be purchased: 1,500,000 Euros to be funded by the INNOCAMPUS program

**Most important deviations from planned objectives**

The project is developing according to plan. There are some delays due to the signing of the relevant agreement between MICINN, CAM and UCM. .

**Corrective Action Proposed**

Not applicable

<b>Area</b>	Teaching improvement/ Scientific improvement/ Transference/ Comprehensive Social Campus
<b>Action</b>	F2. Platform for the Design and Construction of Electromagnetic sensors and actuators.
<b>Objectives</b>	Aimed at developing sensors with applications in medicine, radar and rail technology and encouraging the recruitment of researchers in companies within the sector.

**Progress towards Objectives**

Equipment for the Institute of Optoelectronic Systems and Microtechnology:

Acquisition of the X'PERT PRO-MRD Diffractometer (PANalytical), a leading tool whose technical characteristics make it the ideal equipment to meet new technological challenges within the framework of current micro and nanotechnology.

Acquisition of the incident beam module equipped with X-ray lens: X'Pert PRO de PANalytical. B.V.

**Description of the work undertaken and role of the participants**

Acquisition of X-ray diffraction equipment: The X-ray diffractometer purchased constitutes a basic tool for structural characterization of any type of material. It is an indispensable piece of equipment for the ISOM and for its Technology Central Unit (Singular Spanish Scientific and Technical I) since one of its main activities is the growth of new high quality crystal semiconductor compounds in epitaxial multilayers using MBE (Molecular Beam Epitaxy) for optoelectronic devices and magnetic sheets for sensors.

Acquisition of the Incident beam module equipped with X-ray lens: The objective is the development of new thin film materials for the development of sensors and devices for nanoelectronics. The characterization is based on the combined use of high-resolution microscopy techniques of the STEM-EELS ICTS of this Campus and spectroscopy for the scattering and absorption of polarized X-rays and neutrons, as well as magnetic and transport measures. The intention is to use the phenomena that appear at the interfaces between complex oxides to produce devices with new functionalities. Nanofabrication processes will use the ICTS ISOM facilities on this campus.

These actions have been led by the UPM. The equipment purchased will be used by UPM and UCM researchers.



X-ray diffraction equipment

**Governance structures created**

Not applicable; the equipment has been installed in the ICTS: ISOM (Institute of Optoelectronic Systems and Microtechnology), with its own structure.

**Most significant results**

Commissioning of new equipment.

**Explanation of the use of human, material and economic resources**

Equipment purchased has been funded under CEI2009, Subprogram B of the MICINN. Costs of the equipment have amounted to 182,328 Euros.

**Most important deviations from planned objectives**

The funding obtained was below the amount requested, so the action has been delayed and priorities have been established.

**Corrective Action Proposed**

Seek additional funding.

<b>Area</b>	Teaching improvement/ Scientific improvement/ Transference/ Comprehensive Social Campus
<b>Action</b>	F3 Creation of the Workshop Network for the development of new thin film materials.
<b>Objectives</b>	Aimed at the development of new thin film materials for the development of sensors and devices for nanoelectronics
<p><b>Progress towards Objectives</b></p> <ul style="list-style-type: none"> <li>• Refurbishment of the laboratories of the West Wing of the Faculty of Physical Science at the UCM</li> <li>• Adapting the installations of the Physical techniques CAI of the UCM.</li> </ul> <p>Note: The equipment for the Institute of Optoelectronic Systems and Microtechnology (ISOM), described in the previous Action, also has an impact on this Action</p>	
<p><b>Description of the work undertaken and role of the participants</b></p> <p>Adapting the facilities of the Physical Techniques CAI of the UCM: installation of washers in the laboratories, an electrocompressor, a needle valve rotameter, network points, pressure reducing valve for pipes, block and frame structure for liquefier, protection of power lines.</p> <p>Refurbishment of laboratories in the West Wing of the Faculty of Physical Science: Certification of the West Wing of Physics (OHL): Certification No. 12 for the month of May 2009, Works management of West Wing of Physics (Technical Institute of Materials and structures): Project management, implementation management and coordination of health and safety of the conservation, consolidation, adaptation and refurbishment works of the west wing of the Faculty of Physical science at UCM.</p> <p>These actions have been coordinated by the UCM</p> <p><b>Governance structures created</b></p> <p>Not applicable; the Physical Techniques CAI has its own governing structure.</p>	
<p><b>Most significant results</b></p> <p>Adaptation of research laboratories.</p>	
<p><b>Explanation of the use of human, material and economic resources</b></p> <p>The actions taken were funded under CEI2009, Subprogram B MICINN. Costs for the refurbishment for the West Wing laboratories of the Faculty of Physics have been 207,952 Euros. The adaptation of the Physical Techniques CAI has amounted to 46,782 Euros.</p>	
<p><b>Most important deviations from planned objectives</b></p> <p>Funding obtained was below the amount requested, so priorities have been established.</p>	
<p><b>Corrective Action Proposed</b></p> <p>Seeking additional funding.</p>	

<b>Area</b>	Teaching improvement/ Scientific improvement/ Transference/ Comprehensive Social Campus
<b>Action</b>	F4. Mechanical Properties Workshop: Durability and Sustainability of the Materials.
<b>Objectives</b>	The action aims at the modernization and expansion of facilities in the Faculty of Civil Engineering, through the provision of suitable and versatile equipment for a mechanical testing building for the experimental analysis of structures and the evaluation and characterization of building systems and materials, within the Structure Safety and Durability Centre (CISDEM, joint centre UPM-CSIC)
<b>Progress towards Objectives</b>	
The Centre has been created but headquarters have not yet been assigned and its rules of procedure are pending approval.	
<b>Description of the work undertaken and role of the participants</b>	
Studies for the construction of the Mechanical Testing Building	
<b>Governance structures created</b>	
The Centre Council has been created, constituted by the Vice-Chancellor for Research at the UPM and his deputy and Vice Chair of the CSIC and his deputy. The Director and Deputy Director of the Centre have been appointed. The following bodies have been constituted: Board of Directors and Board of the Centre.	
<b>Most significant results</b>	
Without comment.	
<b>Explanation of the use of human, material and economic resources</b>	
The action will be funded under the INNOCAMPUS 2010 Project. Budget: : 541,000 Euros	
<b>Most important deviations from planned objectives</b>	
Delayed start of actions	
<b>Corrective Action Proposed</b>	
Without comment.	

<b>Area</b>	Teaching improvement/ Scientific improvement/ Transference/ Comprehensive Social Campus
<b>Action</b>	<p>Actions scheduled under the cluster AGRI-FOOD AND HEALTH.</p> <p>G1 Creation (environmental restoration and land-use planning) of the Moncloa Agri-food Corridor.</p> <p>G2 Development of a Consortium for Integrated Agricultural Systems</p> <p>G3 International School of Infectious Communicable Animal Diseases (EIEAC).</p> <p>G4 Development of subunits for Safety and Technologies for IMDEA-Alimentación</p>
<b>Objectives</b>	<p>The AGRI-FOOD AND HEALTH cluster includes the activities of the partner groups in the area of agricultural and livestock products, and their processing to produce safe, healthy and quality food for human and animal consumption. Systems and techniques applied are economically sustainable, environmentally friendly and respectful of animal welfare standards.</p> <p>The cluster aims to constitute the Moncloa Agri-food Corridor (COAM), a plot of 76 ha. distributed on campus along the Manzanares River, which accounts for most of the groups participating in the partnership. The aim is to restore the COAM from an environmental and land-use planning standpoint, transforming it into an environmental example and one of the top European centres in R+D+i for sustainable agricultural production, food quality and safety and animal health and welfare.</p> <p>The cluster will create a multidisciplinary consortium with the aim of increasing the productivity of farming systems by improving the use of natural resources, balancing economic and environmental sustainability and reducing the pressure on ecosystems.</p> <p>Also, the maximum-security laboratories VISAVET, designated as an EU Reference Laboratory, will promote research and be responsible for technical and scientific training in various animal diseases such as tuberculosis, where there is great demand for experts. In particular it aims to install a multimedia classroom that allows the development of on-line international schools to combat the most widespread animal diseases.</p>
<b>Progress towards Objectives</b>	
<p>Appointment of cluster coordinators. February 2010.</p> <p>Formation of Cluster Advisory Councils</p> <p>Underway: preparation of master plans for the clusters</p> <p>Implementation of the actions:</p> <p>G1 Creation of the Moncloa Agri-food Corridor</p> <p>G2. Development of a Consortium for Integrated Agricultural Systems</p> <p>Initial actions for:</p> <p>G3 (International School of Communicable Animal Diseases).</p> <p>G4 (Projects for improving the installations of subunits for Safety and Technologies)</p> <p>Request for additional funding under the Reinforcement Program 2011 to start action G3 International School of Infectious Communicable Animal Diseases (EIEAC).</p> <p>Improvement of Health Surveillance laboratory VISAVET.</p>	
<b>Governance structures created</b>	

Appointment of coordinators and Advisory Council. See detailed action plan A1.  
Cluster Advisory Committee: constitution, six meetings, communications, and documentation.  
Underway: preparation of master plans for the clusters

**Partner groups:** 74 groups

**Description of the work undertaken and role of the participants**

The agri-food and health cluster is progressing in accordance with the scheduled objectives: classification and contact, scientific conference and program for the sharing of equipment of 74 research groups from UCM, UPM, INIA, CSIC. Joint projects in response to the call for pre-and post-doctoral grants, and for equipment and infrastructure (about 10 right now).

Defining the research lines and group allocation thereto.

Improvement of the Health Surveillance Laboratory VISAVET: VISAVET Waterproofing of the UCM Clinic (Alfrefalcon, S.A.): Works to repair leaks in the perimeter wall of the "VISAVET" located at the Veterinary Hospital of the UCM. The improvements are completed with some software and a new freezer.

Recruitment of a technician for the VISAVET laboratory.

Each action started is described in separate detail sheets.

**Most significant results**

1. The Cluster is formed by the partnership of 74 UCM and UPM research groups.
2. Start of the Master Plan with a Kick-off conference.
3. Classification and monitoring of partner groups from UCM, UPM, CSIC, INIA, ISCIII
4. Start of joint projects; a growing interest in new joint lines of research
5. Website at VISAVET-UCM: <http://www.vigilanciasanitaria.es/es/cei/grupos-investigacion>
6. Scientific conferences
7. Programmed master's in progress - four: two underway and two at the accreditation stage.  
Two mentions of excellence for the doctorate requested.
8. Scientific Summer Campus
9. Science Week (November 2010)
10. Waterproofing and improvement of VISAVET.
11. Technical support to the VISAVET laboratory.

Each action started is described in separate detail sheets

**Explanation of the use of human, material and economic resources**

Human resources: project manager provided by VISAVET; project manager requested for this CEI cluster; Website management by VISAVET. Use of own offices for meetings, in the Corridor Area. All provided by the participating entities UCM and UPM

Under the Campus of International Excellence program:

Lab technician from VISAVET under CEI2009

Waterproofing and improvement of the VISAVET Laboratory. Under Subprogram B. Cost: 30,344.28 Euros.

**Most important deviations from planned objectives**

The work conforms to expectations, but the funds received, less than requested, have made it necessary to make a strategic selection of specific actions to be reinforced. These are described in a separate detail sheet.

**Corrective Action Proposed**

Seeking additional funding for implementation of the remaining actions.

<b>Area</b>	Teaching improvement/ Scientific improvement/ Transference/ Comprehensive Social Campus
<b>Action</b>	G1 Creation of the Moncloa Agri-food Corridor
<b>Objectives</b>	Creation, environmental restoration and land-use planning of the Moncloa Agri-food Corridor.
<p><b>Progress towards Objectives</b></p> <p>Hiring of the <i>Cultural Landscape Research Group</i>, through the <i>Miguel Aguiló Foundation for Research on Constructed Heritage and Landscape</i>, a Strategic Assessment Project of the Agri-Food Corridor Area of the Moncloa campus of International Excellence. To be completed by July of this year.</p> <p>Resolution of the budget allocated to the cluster in Reinforcement 2010 Infrastructure: Improving Livestock Research Units of the Corridor</p>	
<p><b>Description of the work undertaken and role of the participants</b></p> <p><b>Governance structures created</b></p> <p>Cluster Advisory Committee: constitution, six meetings, communications, and documentation</p>	
<p><b>Most significant results</b></p> <ul style="list-style-type: none"> <li>• Interviews with INIA's general management</li> <li>• Enhancement of the importance, safety and welfare of animals through the livestock research units, with allocation of CEI resources and own co-funding towards the improvement of facilities.</li> </ul>	
<p><b>Explanation of the use of human, material and economic resources</b></p> <p>Human and material resources for Project development provided by the participating entities (Project manager provided by VISAVET; Website management by VISAVET).</p> <p>Budget of 600,000 Euros from CEI-2010 to implement the action. Progress with the execution and implementation of costs; completion of pending Works for 2012.</p>	
	
<p>The Moncloa Agri-food Corridor.</p>	
<p><b>Most important deviations from planned objectives</b></p> <p>Slight delay in the contracting of the Corridor Landscape Study, although it has started.</p> <p>Delays in drafting the Master Plan, which is underway. Completion: July</p>	
<p><b>Corrective Action Proposed</b></p> <p>Administrative assistance for cluster coordination (requested, Finnova)</p>	

<b>Area</b>	Teaching improvement/ Scientific improvement/ Transference/ Comprehensive Social Campus
<b>Action</b>	G2. Development of a Consortium for Integrated Agricultural Systems
<b>Objectives</b>	Development of a Consortium for Integrated Agricultural Systems to increase the productivity of farming systems by improving the use of natural resources, balancing economic and environmental sustainability and reducing the pressure on ecosystems.
<p><b>Progress towards Objectives</b></p> <p>The scientific area of the project is part of this action. Research lines have been defined and there has been a first allocation of groups. Collaboration has been sought between UPM groups and UCM, INIA and CIEMAT groups, strengthening collaborative agreements prior to this action.</p>	
<p><b>Description of the work undertaken and role of the participants</b></p> <ul style="list-style-type: none"> <li>- Shared objectives have been defined and research work has begun while looking for collaboration and strengthening of the research lines by the groups included in this action.</li> <li>- The research groups participating in the CM research program known as Agrisost, have performed experiments in common throughout the year 2010 to implement this line.</li> <li>- The groups AgSystem, Agricultural Economics and COAPA have also conducted shared activities financed by the European Project N-Toolbox strengthening the objectives of the action in the line of N leaching mitigation measures in agricultural systems.</li> <li>- CEIGRAM has developed a project with the Technology Platform for Sustainable Agriculture to obtain sustainability indicators of Spanish agriculture, which have involved researchers from Ag Systems, Economy and Animal Production.</li> <li>- Collaboration with other groups in the Cluster (Agrisost-Newgam) conducting seminars on common research topics. Collaborative agreements have been established in national project proposals.</li> <li>- European research projects have been filed in which several groups of the Consortium work together. One of these projects (ECLAIRE), which is in the final negotiation phase, involves groups of AGRISOST (COAPA, AgSystem and CIEMAT).</li> <li>- The first year of the TAPAS Master's has begun (21 students) and the Doctorate with the same name has been launched (11 students).</li> <li>- A Mention of Excellence has been requested for the TAPAS Doctorate: There have been conferences open to the groups inviting relevant national and international researchers in the framework of the TAPAS Master's.</li> </ul> <p><b>Governance structures created</b></p> <p>There are Management Committees of the Agrisost and CEIGRAM programs. Collaboration is achieved through meetings on topics of interest.</p> <p>For the TAPAS Master's the Master's Academic Committee has been created.</p>	
<p><b>Most significant results</b></p> <p>A number of research papers in the framework of AGRISOST are being prepared, some coming from inter-collaboration between groups.</p> <p>Projects have been requested to the National Plan by some groups and 2 European projects, one has</p>	

been very positively assessed and is under negotiation.

**Explanation of the use of human, material and economic resources**

The work was carried out with the material resources existing at the beginning of the action. No costs have accrued against the Campus of Excellence Project

**Most important deviations from planned objectives**

Integration into common research lines of the cluster has been slowed down during the first year, due to reasons unrelated to the groups, but related to the delay in the constitution and signing of the Campus agreement.

**Corrective Action Proposed**

Approval of the Master Plan and establishment of a cluster strategy, having objectives, schedule, review, reporting and governance.

<b>Area</b>	Teaching improvement/ Scientific improvement/ Transference/ Comprehensive Social Campus
<b>Action</b>	<p><b>Actions scheduled within the I-HEALTH cluster</b></p> <p>H1 Creation of the Technical Unit for the Development of New Drugs and Pharmaceutical Technology.</p> <p>H2 Creation of an Advanced Preclinical Development Platform.</p> <p>H3 Developing a Clinical Validation and Pharmacovigilance Network.</p> <p>H4 Creation of an Advanced Biomedical Imaging Platform.</p> <p>H5 Creation of the Laboratory for New Nano-magnetic markers and radioactive tracers.</p> <p>H6 Establishment of a Laboratory for the Advanced Biomedical Imaging Analysis (LA<sup>2</sup>IB).</p> <p>H7 Installation and consolidation of the Living-Lab.</p>
<b>Objectives</b>	<p>The cluster aims to take advantage of the uniqueness of the Campus's Biomedical Sciences, hospitals linked to the Faculty of Medicine and experts in Information and Communication Technology focused on applications in health. This group can cover from the most basic aspects of biomedical research to practical implementation and validation through testing and clinical trials.</p> <p>The cluster is organized in three main working lines closely related to each other:</p> <ul style="list-style-type: none"> <li>• Innovative Medicine (i-Medicine), focused mainly on the development of new drugs and pharmaceutical technologies. <i>Actions: H1, H2, H3</i></li> <li>• Medical Imaging (i-Maging), focused on the definition of specific markers, design of radio-pharmaceuticals and the development of software and hardware for data acquisition of molecular imaging. <i>Actions: H4, H5, H6</i></li> <li>• Personalized Health (p-Health) focused on the consistent and coordinated integration of bio and nanotechnology, pervasive computing, ambient intelligence, auto-adapting multimodal interfaces and artificial intelligence for health and improved quality of life of individuals. <i>Action: H7</i></li> </ul>
<p><b>Progress towards Objectives</b></p> <p>Appointment of cluster coordinators. February 2010.</p> <p>Constitution of cluster Advisory councils</p> <p>Underway: preparation of master plans for clusters</p> <p>Implementation of the action:</p> <p style="padding-left: 40px;">H4 Creation of an Advanced Biomedical Imaging Platform.</p>	
<p><b>Governance structures created</b></p> <p>Appointment of Coordinators and Advisory Council. See detailed action plan A1.</p> <p><b>Description of the work undertaken and role of the participants</b></p> <p>The action started is described in a separate detail sheet.</p> <p>Underway: preparation of master plans for clusters.</p>	
<p><b>Most significant results</b></p> <p>Cluster partner groups: 120 groups</p> <p>Defining strategic lines</p> <p>The actions started are described in a separate detail sheet</p>	

**Explanation of the use of human, material and economic resources**

The actions started are described in a separate detail sheet.

**Most important deviations from planned objectives**

The work conforms to expectations, however the funds received, less than the amount requested, have made it necessary to perform a strategic selection of specific actions to be enhanced. This is described in a separate detail sheet

**Corrective Action Proposed**

Seeking additional funds to implement the remaining actions.

<b>Area</b>	Teaching improvement/ Scientific improvement/ Transference/ Comprehensive Social Campus
<b>Action</b>	H4. Creation of an Advanced Biomedical Imaging Platform
<b>Objectives</b>	<p>Comprising 3 units:</p> <ol style="list-style-type: none"> <li>1. Preclinical biomedical imaging platform, consisting of the preparation in different laboratories for studies of experimental approaches to prevalent diseases focusing on the visualization through anatomical/ morphological imaging techniques for diagnosis, prognosis and research purposes.</li> <li>2. Clinical information platform, comprising the development of a laboratory for the maintenance of a network of clinical information with PACS and online space for clinical database files for research, meta-analysis and teaching purposes.</li> <li>3. Advanced Biomedical Imaging Analysis (LA2IB) to be a space shared with the previous one for the development and optimization of hardware (antennas, etc. ...) and software tools for data acquisition and quantitative analysis of molecular imaging.</li> </ol>
<p><b>Progress towards Objectives</b></p> <p>Defining needs and defining physical spaces.</p> <p>The General call for Campus infrastructure acquisition is open, which, together with self-financing of this Action obtained in the INNOCAMPUS program, will address the requirements for initiating this action.</p>	
<p><b>Description of the work undertaken and role of the participants</b></p> <p>To save space, and in order to regroup Campus laboratories, the Magnetoencephalography centre has been relocated. This activity is part of the creation of a cognitive and computational neuroscience laboratory, within the Biomedical Technology Centre. A cross-over action between the Moncloa Campus of International Excellence and the Montegancedo Campus.</p> <p><b>Governance structures created</b></p> <p><u>Partners participating in the Action:</u> UPM (ETSI: Telecommunications), UCM (Faculties: Medicine, Pharmacy, Biology, Physics, Computer Science), CSIC (Biological Research Centre), CIEMAT, Hospital Clínico San Carlos, Hospital General Gregorio Marañón, Hospital 12 de Octubre.</p> <p><u>Groups in charge at each University.</u> UPM: ETSI School of Aeronautics, UCM: Faculty of Medicine.</p> <p><u>Overall supervisor of the Action:</u> UCM</p> <p><u>Scientific head of the Action:</u> Ignacio Lizasoain, Faculty of Medicine, UCM.</p>	
<p><b>Most significant results:</b> Relocation of the Magnetoencephalography Centre</p>	
<p><b>Explanation of the use of human, material and economic resources</b></p> <p>Relocation of the Magnetoencephalography Centre. Funding: Subprogram B (INNOCAMPUS): 140,000 Euros.</p> <p>Budget for the Advanced Biomedical Imaging Platform: 900,000 Euros.</p>	
<p><b>Most important deviations from planned objectives</b></p> <p>Action delayed. Expected to start in June 2011.</p>	
<p><b>Corrective Action Proposed</b></p> <p>Action to be started in June 2011.</p>	

<b>Area</b>	Teaching improvement/ Scientific improvement/ Transference/ Comprehensive Social Campus
<b>Action</b>	<p><b>Actions scheduled within the HERITAGE cluster</b></p> <p>P1 Programming and management of the Moncloa Campus Museum (MUCAM).  P2. International Centre for Heritage Studies (CIESP).  P3 Development of the Moncloa Science and Technology Laboratories Network for Heritage Conservation (RedLabPat).  P4. Implementing a Laboratory for Dating and Paleoenvironmental identification in the field of Heritage Sciences.</p>
<b>Objectives</b>	<p>This cluster aims to take advantage of the coincidence in the Campus of various centres of universities and other institutions related to the topic of Heritage: its discovery, restoration, conservation and adaptation, as well as networks of research groups in the science and technology of heritage conservation and restoration. All this will enable the creation of an Interdisciplinary Centre for Advanced Heritage Studies (CIESP) capable of giving a global and modern view on heritage, developing doctrine and reports in collaboration with State administrations, while developing training work in this area, one of the greatest assets of our country. The CIESP will be supported by the Campus Laboratory Network specialized in Heritage Science and Technology, which seeks to incorporate new dating techniques.</p> <p>The cluster is divided into three interrelated working lines:</p> <ul style="list-style-type: none"> <li>• Cultural Heritage and Museums.</li> <li>• Natural Heritage.</li> <li>• Architecture, Archaeology-Palaeontology Heritage.</li> </ul>
<p><b>Progress towards Objectives</b></p> <p>Appointment of cluster coordinators. February 2010.  Constitution of cluster Advisory councils  Underway: preparation of master plans for clusters  Implementation of the action:  P2. International Centre for Heritage Studies (CIESP).  P4. Implementing a Laboratory for Dating and Paleoenvironmental identification in the field of Heritage Sciences</p>	
<p><b>Description of the work undertaken and role of the participants</b></p> <p>Each action started is described in a separate detail sheet</p> <p><b>Governance structures created</b></p> <p>Appointment of Coordinators and Advisory council. See detailed action plan A1.</p>	
<p><b>Most significant results</b></p> <p>148 groups are assigned to the cluster.  Excellent participation of groups in the first Scientific Conferences of the Moncloa Campus (see attached posters in additional documentation.)</p> <p>Defining the strategic lines of the cluster.</p>	
<p><b>Explanation of the use of human, material and economic resources</b></p>	

The cluster has a person hired by the Moncloa Campus to support their activities.  
Other actions started are described in a separate detail sheet.

**Most important deviations from planned objectives**

The work conforms to expectations, however the funds received, less than the amount requested, has made it necessary to perform a strategic selection of specific actions to be enhanced. This is described in a separate detail sheet.

**Corrective Action Proposed**

Seeking additional funding for the implementation of the remaining actions.

<b>Area</b>	Teaching improvement/ Scientific improvement/ Transference/ Comprehensive Social Campus
<b>Action</b>	P2. International Centre for Heritage Studies (CIESP).
<b>Objectives</b>	<p>a) Thinking: development of doctrine, rationale, criteria and techniques to serve as references to other institutions.</p> <p>b) Management: establishment of synergies between universities, research groups and the different institutions involved to encourage multidisciplinary work in the field of Heritage.</p> <p>c) Practice: generation of research projects, researcher training and enhancement of the University Museum and Documentation Centre of the Campus of <i>Ciudad Universitaria</i>.</p>

**Progress towards Objectives:**

1. In terms of thinking, a number of training initiatives at different levels are being coordinated:

- The ISC20C - International Scientific Committee on 20th Century Heritage of the ICOMOS and the Moncloa International Campus of Excellence – Heritage Cluster, with the collaboration of the School of Architecture of Madrid (ETSAM), organize the first International Scientific Conference held in Spain on Criteria for Intervention in 20th century Architectural Heritage.

- The UPM Summer courses at the Granja de San Ildefonso, will host the professional meeting: *Margins. Boundaries and intersections in the concept of Heritage* on 5 and 6 July 2011. The main objective of the meeting is to establish an open and multidisciplinary discussion around the concept of heritage that serves to draw a map on which to place the different situations related to heritage, establishing the borders and boundaries of the concept in relation to culture and contemporary society.

- Participation in Science Summer Campus (July 2011) Course: *Scientific applications to the field of Heritage Conservation and Restoration*.

-V Congress of Conservation and Restoration of the Spanish IIC Group: "Cultural Heritage. Quality criteria for intervention "(April 2012)

Within the first Scientific Conference of the Moncloa Campus Professor Javier García Fernández, an expert on legislation in the Heritage Area, was invited as keynote speaker to deepen the comparative analysis of legislation on cultural heritage being one of the main objectives to be developed within the CIESP line of thought. The incorporation of Professor García Fernández to the Advisory Council of the Cluster has been proposed by the UCM.

2. In the management area an initial determination of aggregate resources has already been completed. Existing research groups at the two universities related to Heritage have been included as well as laboratories, libraries, museums and archives on campus that have an impact on this problem.

Work is being done on the CIESP Master Plan.

3. Among the practical objectives, a study has been conducted to adapt the current Costume Museum in order to adapt it to new user requirements, both temporary and permanent. 2013 is the date for final vacating and relocation.

Four grants have been awarded for the completion of the doctoral thesis within the Heritage Cluster which will enable the training of young researchers in the field of Heritage

**Description of the work undertaken and role of the participants:**

Juan Miguel Hernández León chairs the Scientific Committee of the *International Scientific Conference on Criteria for Intervention in the 20th century architectural Heritage*, also with the collaboration of professor Luis Maldonado

A subcommittee has been set up within the Advisory Council composed of professors Luis Maldonado, Antonio Goy Goy and as an external researcher, Professor Martin Almagro to coordinate the actions derived from scientific consulting work done for the Ministry of Culture in the Department of Fine Arts and Cultural Heritage for the evaluation of the UNESCO Category II Centre.

Juan Miguel Hernández León is the Director of the Professional Conference: *Margins. Boundaries and intersections in the concept of Heritage* in which all members of the Advisory Council will participate as speakers and it is expected that conclusions will be reached regarding the limits of the concept of Heritage that would allow CIESP's work to become more operational

Margarita San Andrés and Rafael Fort are coordinating the 5th Congress of Conservation and Restoration of the Spanish IIC Group: "Cultural Heritage. Quality criteria for interventions "and they participate as CIESP representatives in the Science Summer Campus (July 2011) Course: *Scientific applications to the field of Heritage Conservation and Restoration*.

The Advisory Council is meeting biweekly to develop the CIESP Master Plan.

**Most significant results:**

The presence of representatives of the Heritage Cluster within the National Plans should be noted, thus ensuring CIESP's scientific contribution at the highest level.

The CEI Moncloa Campus, represented by the Heritage Cluster through the Technical University and the Complutense University, is currently a founding partner of the UNESCO Category II Centre proposed by the Department of Fine Arts and Cultural Heritage of the Ministry of Culture

**Explanation of the use of human, material and economic resources**

The office of the Heritage cluster -CIESP has been provisionally located in a space donated by the School of Architecture at the Technical University of Madrid.

A budget of 100,000 € has been allocated for the *International Scientific Conference on Criteria for Intervention in the 20th century architectural Heritage*, while a coordination grant of the Heritage Cluster-CIESP has been obtained.

**Most important deviations from planned objectives**

Currently, negotiations regarding the adaptation of the Costume Museum have come to a stand-still.

**Corrective Action Proposed:**

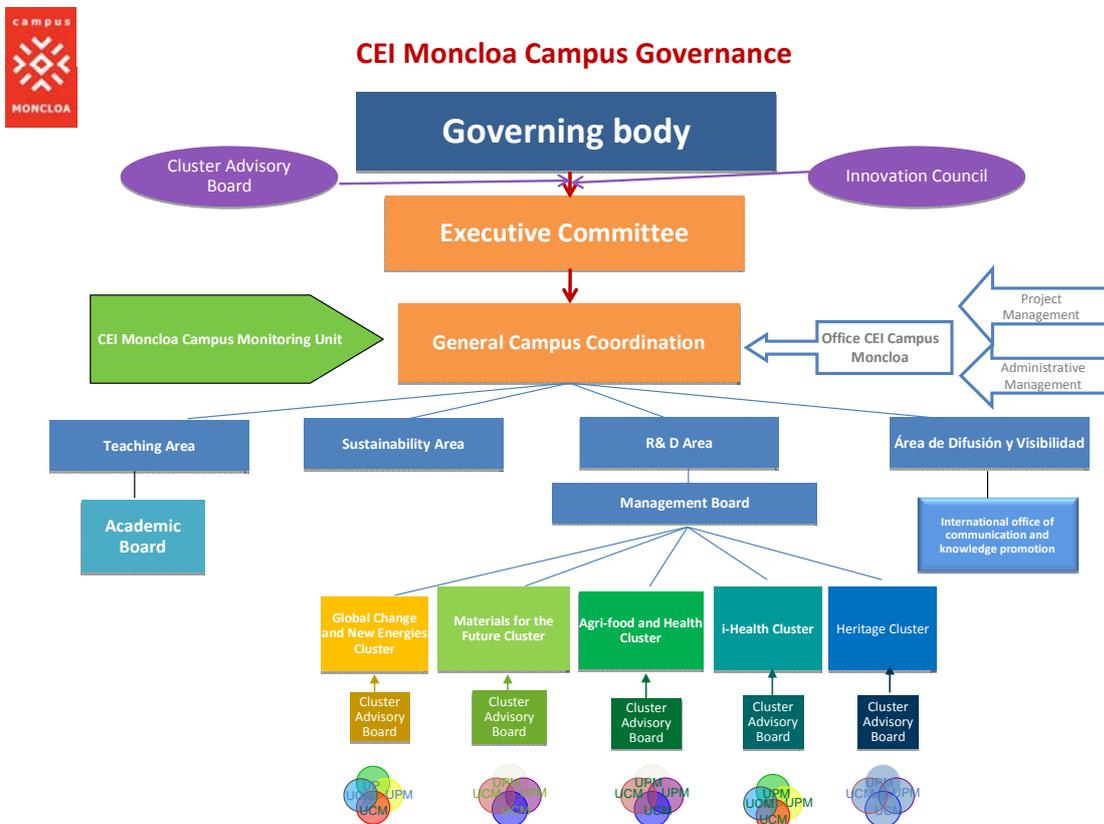
Discussions between the Complutense University, the Ministry of Culture and the Government office will be re-established to include the spaces of the Costume Museum or, failing this, to designate an alternative venue for the University Museum and Documentation Centre of the Ciudad Universitaria Campus. A temporary exhibition foreshadowing the future Moncloa Campus Museum projecting the visibility of the Campus will be addressed within a year and a half to two years.

<b>Area</b>	Teaching improvement/ Scientific improvement/ Transference/ Comprehensive Social Campus
<b>Action</b>	P4. Implementing a Laboratory for Dating and Paleoenvironmental identification in the field of Heritage Sciences.
<b>Objectives</b>	Implementing a Dating Laboratory using TL/OSL techniques Relocating the Radiocarbon Laboratory to the Moncloa Campus
<b>Progress towards Objectives</b>	
<p>Currently at the stage of inviting tenders for the equipment needed to operate the dating laboratory. Its temporary location has been established at CIEMAT, an OPI partner of the CEI-Moncloa; the equipment will be transferred to the Institute of Geosciences facilities when the necessary space is available</p>	
<b>Description of the work undertaken and role of the participants</b>	
<p>Since there is still no equipment for the implementation of the laboratory, it has not been possible to carry out specific work with the exception of the management work needed to determine the location and the proposed acquisition of necessary equipment.</p> <p>Since technicians are needed for proper implementation, during the installation period a CIEMAT researcher will be present. The recruitment of a technical expert has also been requested from the OPE from the CSIC, whose response is still pending.</p>	
<b>Most significant results</b>	
The action is underway, although the laboratory is still not operational.	
<b>Explanation of the use of human, material and economic resources</b>	
Budget for the action: 680,000 Euros. Funding: INNOCAMPUS program.	
<b>Most important deviations from planned objectives</b>	
<p>The equipment is manufactured specifically to order and the manufacturing period is about one year, so its implementation may not be possible until 2012. This causes a slight delay in the initial plans.</p> <p>Dependence of the instrumentation on highly skilled technical experts may cause the TL / OSL laboratory to not be fully autonomous, requiring that the irradiation process be carried out in external laboratories. If the required technicians are not available, the lab would be designed differently and specific equipment would not be purchased.</p>	
<b>Corrective Action Proposed</b>	
Funding is being sought to recruit two technical experts. One technician has been requested from the CSIC. Another technical expert is necessary for the laboratory to be autonomous.	

### **3. Governance**

The project governance structure is described in *Table I. Description of the activities of the project* as the first action, within the general actions undertaken to achieve the objectives.

It has established the structure of government, represented in the following diagram:



**4. Tables showing Results, Indicators  
and Future Milestones**

**Table 2. Main results achieved**

<b>Result N°</b>	<b>Area</b>	<b>Description</b>	<b>Format</b>	<b>Date completed</b>
1	All	Agreement signed by CEI Moncloa partner institutions	Document	10/06/2010
2	All	Appointment of individual governing posts	Document	January 2010
3	All	Appointment of Cluster coordinators	Documents	February 2010
4	All	Coordination meeting held in Cercedilla.	Documents	13-15 March 2010
5	All	Appointment of Cluster Advisory Councils	Document	September 2010
6	Teaching improvement/ Research/ Knowledge transference	Waterproofing of VISAVET Laboratory	Infrastructure	November 2010
7	Teaching improvement/ Research/ Knowledge transference	Work to refurbish laboratories in the W wing of the Faculty of Physical Sciences	Infrastructure	December 2010
8	Teaching improvement/ Research/ Knowledge transference	Updating facilities in CAI Técnicas Físicas	Infrastructure	October 2010
9	Teaching improvement/ Research/ Knowledge transference	Equipping and transfer of the Magnetoencephalography Laboratory	Infrastructure	November 2010
10	Teaching improvement/ Research/ Knowledge transference	Installation of a research greenhouse.	Infrastructure	November 2010
11	Teaching improvement/ Research/ Knowledge transference	Scanning transmission electron microscope (STEM)	Infrastructure	October 2010
12	Teaching improvement/ Research/ Knowledge	Diffractionmeter with incident beam X-ray lens module.	Infrastructure	September 2009

	transference			
13	Teaching improvement/ Research/ Knowledge transference	Equipment for the Madrid Centre for Super- Computation and Visualization	Infrastructure	30/04/2010
14	Teaching improvement/ Research/ Knowledge transference	Equipment VISAVET	Infrastructure	November 2010
15	Teaching improvement/ Research/ Knowledge transference	Transfer equipment CAI Técnicas Físicas	Infrastructure	November 2010
16	Teaching improvement/ Comprehensive Social Campus	Estimate for acquisition of the SAKAI Virtual Campus Platform and servers	Document	25/04/11
17	Transference/ Comprehensive Social Campus / Interaction with environment	First CEI Moncloa Campus Scientific Symposium	Symposium DVD, brochures	23-25 February 2011
18	Transference/ Comprehensive Social Campus / Interaction with environment	CEI Moncloa Campus Publicity. Publicity brochures. Science Park	Documents	December 2010
19	Teaching improvement/ Comprehensive Social Campus / Interaction with environment	Inauguration of the María Zambrano Library	Infrastructure	February 2011
20	Teaching improvement/ Scientific improvement / Transference/ Comprehensive Social Campus	Results of the 2010 Call for the International Programme for Talent Recruitment (PICATA). 25 pre-doctoral studentships started and 15 Young Doctor contracts signed.	Documents	December 2010

21	Comprehensive Social Campus / Interaction with environment	Relocation of Campus Accommodation Office to the Botanic Garden Building (RJB)	Infrastructure	January 2011
22	Comprehensive Social Campus / Interaction with environment	Agreement signed between the UCM and the Ministry of Housing through the SPA, to manage rented accommodation	Document	11/5/2010
23	Transference/ Comprehensive Social Campus / Interaction with environment	New CEI Moncloa Campus Webpage	Web	May 2011
24	Comprehensive Social Campus / Interaction with environment	Project General Accessibility Plan for C.M. Europa – included in Agreement with ONCE	Document	March 2011
25	Comprehensive Social Campus	Healthy Campus Programme	Brochure	December 2010
26	Teaching improvement / Comprehensive Social Campus / Interaction with environment	Agreement with European Foundation for Information Society	<a href="http://www.irtvca.mpusmoncloa.tv/">http://www.irtvca.mpusmoncloa.tv/</a>	December 2010
27	Teaching improvement/ Scientific improvement / Transference/ Comprehensive Social Campus	School of Government: INFORME EG-CEI (Basis for drawing up a model for the School of Government within the CEI framework )	Document	May 2011
28	Teaching improvement/ Scientific improvement / Transference/ Comprehensive Social Campus	Project for the International Centre for Latin American Studies within the CEI - UCM-UPM	Document	May 2011
29	All	Governance: IT infrastructure acquisition	Infrastructure	April 2011

30	All	Governance: Contracting administrative technical staff	Document	July/December 2010 and 1 May 2011
31	All	Governance: Contracting 2 management staff	Document	15 May 2011
32	Teaching improvement/ Research/ Knowledge transference	Procurement procedure initiated: Acquisition of TIMS	Infrastructure	December 2011
33	Teaching improvement/ Research/ Knowledge transference	Procurement procedure initiated: Acquisition of stable isotope equipment	Infrastructure	March 2011
34	Teaching improvement/ Research/ Knowledge transference	Procurement procedure initiated: Acquisition of equipment for the Moncloa Natural Hazards Network	Infrastructure	March 2011
35	Teaching improvement/ Research/ Knowledge transference	Procurement procedure initiated: Equipment to complete the ICTS National Microscopy Centre	Infrastructure	April 2011
36	Teaching improvement/ Research/ Knowledge transference	Procurement procedure initiated: EOLO computation system	Infrastructure	May 2011
37	Teaching improvement/ Research/ Knowledge transference	Technical contracts VISAVET	Document	February 2011
38	Teaching improvement/ Research/ Knowledge transference	Budget Strategic Viability Plan RJB Alfonso XIII	Document	April 2011
39	Teaching improvement/ Research/ Knowledge transference	Preliminary study Interpretation Centre: Biodiversity trails	Document	March 2011
40	Teaching improvement/ Research/ Knowledge transference	Procurement procedure initiated: Refurbishing work Museum of Vertebrates	Infrastructure	April 2011

41	Teaching improvement/ Research/ Knowledge transference	Procurement procedure initiated: Cooling system for Museum of Entomology	Infrastructure	April 2011
42	Teaching improvement/ Research/ Knowledge transference	Procurement procedure initiated: Improvements in the PCI Herbarium, Biological Sciences	Infrastructure	March 2011
43	Teaching improvement/ Research/ Knowledge transference	Procurement procedure initiated: equipment TS/OSL	Infrastructure	April 2011
44	Teaching improvement/ Research/ Knowledge transference	Regulations 2011 for Young Doctor Contracts (PICATA)	Document	29 April 2011
45	Teaching improvement/ Research/ Knowledge transference	2011 Call for Young Doctors Contracts (PICATA)	Document	3 May 2011
46	Teaching improvement/ Research/ Knowledge transference	Call: Grants for acquisition of scientific infrastructure (CAIMON)	Document	23 March 2011
47	Teaching improvement/ Research/ Knowledge transference	Budget for improving the WiFi network	Infrastructure	April 2011
48	Teaching improvement/ Research/ Knowledge transference	Procurement procedure initiated: IrisNova	Document	May 2011
49	Teaching improvement/ Research/ Knowledge transference	Procurement procedure initiated: remodelling green areas and pond Plaza Ramón y Cajal	Infrastructure	May 2011
50	Comprehensive Social Campus / Interaction with environment	Campus Sustainability Plan	Document	March 2011

51	Teaching improvement/ Comprehensive Social Campus / Interaction with environment	Transfer of Campus Headquarters to RJB Alfonso XIII	Infrastructure	April 2011
52	Teaching improvement/ Research/ Knowledge transference	Technical contracts - Heritage Cluster	Document	July 2010
53	All	Governance: 1 admin support post contracted	Document	January 2010
54	All	Governance: 1 admin support post contracted	Document	April 2010
55	Teaching improvement/ Research/ Knowledge transference	Library for information storage for the UPM Madrid Centre for Supercomputing and Visualization	Infrastructure	May 2010
56	Teaching improvement/ Transference/ Comprehensive Social Campus	More information UPM. Actions underway E: 1 Bioclimatic Multipurpose Building: preliminary study completed	Infrastructure	November 2010
57	Teaching improvement/ Scientific improvement / Transference/ Comprehensive Social Campus	Remote Sensing and Monitoring Laboratory: inaugurated	Infrastructure	April 2011
58	Teaching improvement/ Scientific improvement / Transference/ Comprehensive Social Campus	Development of Agri-Food Corridor: preliminary study completed	Documentation	February 2011
59	Teaching improvement/ Scientific improvement / Transference/ Comprehensive Social	“Living Lab”, initiated and co-funded by UPM (ETSIT)	Infrastructure	March 2010

	Campus			
60	Teaching improvement/ Scientific improvement / Transference/ Comprehensive Social Campus	Procurement procedure initiated: MRI 3-tesla equipment	Infrastructure	May 2011
61	Teaching improvement/ Scientific improvement / Transference	Scientific and teaching collaboration Agreement signed between UCM, UPM and University of Colorado	Document	May 2011

**Table III. Progress` Indicators**

Scope	Indicator Name	Initial Status	Status date of report	% progress
Teaching Improvement	% of non-Spanish students studying graduate courses	24,00%	33,63%	9,6 %
Teaching Improvement	% of non-Spanish students studying doctoral courses	28,00%	22,63%	-5,4 % <sup>1</sup>
Teaching Improvement	% of Spanish students not living in Madrid enrolled in degree courses	15,00%	17,34%	2,3 %
Teaching Improvement	% of non-Spanish students studying degree courses	4,50%	5,24%	0,7 %
Teaching Improvement	Number of incoming Erasmus scholarship holders (in)	2.385	2.351	-1,4 %
Teaching Improvement	Number of enrolled Erasmus students abroad (out)	2.090	2.536	21,3 %
Teaching Improvement	Number of joint UPM-UCM graduate and doctoral courses	2	9	350,0 %
Teaching Improvement	Number of joint graduate and doctoral courses (of either UPM or UCM) with non-Spanish Universities	11	103	836,4 % <sup>2</sup>
Teaching Improvement	Number of remote learning lecture halls for EHEA deployment	2	10	400,0 %
Comprehensive Social Campus	Number of people of campus enrolled in Spanish sign Language courses (ILS)	317	335	5,7 %
Comprehensive Social Campus	Number of adapted workstations for people with visual disabilities	20	41	105,0 %
Comprehensive Social Campus	Students that benefit from the Spanish Sign Language Program (ILS)	58	25	-56,9 %
Comprehensive Social Campus	Number of collaboration scholarships	658	600	-8,8 %

<sup>1</sup> The fall in the number of non-Spanish students studying doctoral courses could be caused by the uncertainty legislative process that was being carried in Spain in 2010 in relation with PhD studies.

<sup>2</sup> Double degree with Universities of Germany, Argentina, Austria, Belgium, Denmark, , USA, France, Italy, Peru, United Kingdom, Czech Republic, Sweden.

Comprehensive Social Campus	Number de internship agreements with companies	3.009	8.913	196,2 %
Comprehensive Social Campus	Amount allocated to Cooperation Development projects	1.606.998	1.713.676	6,6 %
Environment interaction	Number of Science Week visitors	22.000	21.800	-0,9 %
Environment interaction	Number of high-school students participating in pre-university guidance activities on campus	16.833	17.514	4,1 %
Comprehensive Social Campus	Number of renewable energy facilities/ buildings on campus	3	6	100,0 %
Comprehensive Social Campus	Number of bicycle parking spaces on campus	175	273	56,0 %
Comprehensive Social Campus	Square meters of regenerated parkland	38.000	91.803	141,6 %
Scientific Improvement	Number of scientific publications, ISI journals (UCM-UPM)	3.830	4.257	11,2 %
Scientific Improvement	Number of joint publications by Partners (UCM-UPM)	80	87	8,8 %
Scientific Improvement	Number of national-government funded R&D Projects	793	758	-4,4 %
Scientific Improvement	Amount spent on national government-funded R&D Projects	65.750.000	93.916.162	42,8 %
Scientific Improvement	Number of R&D Projects of international programs	161	207	28,6 %
Scientific Improvement	Amount spent on R&D Projects of international programs	14.000.000	42.213.592	194,4 %
Scientific Improvement	Number of non-Spanish students on post-doctoral visits	69	81	17,4 %
Scientific Improvement	Number of singular scientific technical infrastructures (ICTS)	2	2	0,0 %
Scientific Improvement	Number of students holding predoctoral grants (EPIF)	1.614	1.474	-8,7 %
Scientific Improvement	Number of post-doctoral contracts	253	334	32,0 %
Scientific Improvement	Number of joint doctoral thesis	1	3	200,0 %
Scientific Improvement	Number of doctoral thesis	894	1.000	11,9 %
Transfer of knowledge	Number of Spin-offs	7	16	129,0 %
Transfer of knowledge	Number of national patents applied for	36	82	128,0 %
Transfer of knowledge	Number applications for international patents (PCT)	22	40	82,0 %
Transfer of knowledge	Number of Intellectual Property registration certificates	9	15	67,0 %
Transfer of knowledge	Number of technology licensing agreements	9	12	33,0 %
Transfer of knowledge	Amount spent on technology licensing agreements	144.000	365.443	154,0 %
Transfer of knowledge	Number of cooperation projects University-Business (R&D, consultancy, services)	1.371	1.608	17,0 %

Transfer of knowledge	Amount spent on cooperation projects University-Business (R&D, consultancy, services)	85.420.000	89.275.308	5,0 %
Transfer of knowledge	Number of certified Laboratories	10	26	160,0 %
Transfer of knowledge	University-Business Professorships or Chairs	68	136	100,0 %

**Table IV. Future Milestones**

<b>Milestone</b>	<b>Area</b>	<b>Description</b>	<b>Expected Date</b>	<b>Verification method</b>
1	All	Set up Partners Advisory Council	May-June 2011	Documentation
2	All	Set up Academic Council	June-July 2011	Documentation
3	All	Set up Innovation Council	January 2012	Documentation
4	Teaching improvement/Comprehensive Social Campus	Acquisition of SAKAI Virtual Campus Platform and Servers	September 2011	Tool available on campus
5	Teaching improvement/Comprehensive Social Campus	Open two distance learning classrooms	September 2011	Classrooms open
6	Teaching improvement/Comprehensive Social Campus	Create three new distance learning classrooms	Quarter 1 2012	Classrooms open
7	Teaching improvement	Set up Moncloa Campus International Doctoral and Postgraduate school (EIDP-MONCLOA)	September 2011	Information available online
8	Teaching improvement	Start EIDP Masters	From Academic Year 2011-2012 onwards	Information available online, new Masters
9	Scientific improvement	Award the tender for acquisition of scientific and technological equipment for CEI Campus Moncloa (CAIMON)	15/09/2011	Publication of decision online
10	Scientific improvement	Improve equipment of Clusters through CAIMON	Quarter 2 2012	Installation and start up of selected equipment
11	All	Cluster Master Plans	July 2011	Web page. Documentation
12	All	Connection to RED IRIS-NOVA.	Quarter 2 2011	Infrastructure. Improved bandwidth
13	All	Improve WiFi network	December 2011	Infrastructure. New access points on Campus

14	Scientific improvement	Selection process for PICATA programme Call: Young Doctor contracts 2011	Selection process: Quarter 3 2011 Contracted: Quarter 4 2012	Selection published on webpage. Post docs start.
15	Scientific improvement	Development PICATA Programme: Pre-doctoral grants 2011	Call: September 2012 Selection process: Quarter 4 2011 Contracted: January 2012	Call and selection published on web page. PhD candidates start
16	Scientific improvement	Development PICATA Programme: Qualified technicians 2011	Call: Quarter 3 2011. Selection process: Quarter 3 2011. Start: Quarter 1 2012	Call and selection published on web page. Technicians start
17	Scientific improvement	Development PICATA Programme: Distinguished Visitors 2011	Call: June 2011 Selection process: Quarter 4 2011. Start: Quarter 1 2012	Call and selection published on web page. Visitors arrive
18	Scientific improvement	Development PICATA programme: Mobility abroad of Teaching – Technical Staff and Researchers, short stays (1 - 3 months)	Call: June 2011. Selection process: October 2011. Study visits start November 2011	Call and selection published on web page. Study visits undertaken. Documentation
19	Comprehensive Social Campus/Interaction with the environment	International Visitors Reception Centre	February 2012	Office inaugurated
20	All	Create International Office of Communication and Knowledge Promotion. Contract staff	October 2011- January 2012	Web, infrastructure, office open to public
21	All	New CEI Moncloa Campus web page	May 2011	Web page

22	Comprehensive Social Campus/Interaction with the environment	End first phase of Recovery Plan for Green Areas	Quarter 1 2012	Recovery of areas
23	Comprehensive Social Campus/Interaction with the environment	Mobility Plan PMUS	Quarter 4 2011	Documentation
24	Comprehensive Social Campus/Interaction with the environment	Strategic Viability Plan for Royal Botanic Garden (RJB)	September 2012	Documentation
25	Comprehensive Social Campus/Interaction with the environment	Refurbish RJB Building as Campus Headquarters with all offices installed	From May 2011 to June 2012	Opening of the different offices in RJB Campus Building
26	Comprehensive Social Campus/Interaction with the environment	Continue implementation of General Accessibility Plan	From present to December 2012	University buildings and facilities adapted
27	Transforming the Campus to develop a comprehensive social model	Work to convert UCM CM Antonio de Nebrija into a University Residence	Quarter 3 2012	Building
28	Comprehensive Social Campus	Collaborative Studentships Programme	Calls: September 2011, January 2012, June 2012	Information on Web
29	Teaching improvement /Comprehensive Social Campus/Interaction with the environment	Start up of iRTV Campus Moncloa	June-July 2011	Web, iRTV
30	Comprehensive Social Campus / Interaction with the local environment	Summer Science Camps 2011	July 2011	Student Campus visits. Documentation

31	Comprehensive Social Campus / Interaction with the local environment	Career guidance days for secondary school students	Academic Year 2011/2012 Academic Year 2012/2013	Student Campus visits. Secondary School visits. Documentation
32	Teaching improvement/Scientific improvement/Transference/Comprehensive Social Campus	Set up Government School	October 2011	Decision published on web page.
33	Teaching improvement/Scientific improvement/Transference/Comprehensive Social Campus	School of Government Activities	From October 2011	Courses and Activities of the School. Information on web page
34	Teaching improvement/Scientific improvement/Transference/Comprehensive Social Campus	International Centre for Latin American Studies (CEI-AL)	From October 2011	Reports and Web page. Activities carried out. Courses. Masters.
35	Teaching improvement/Scientific improvement/Comprehensive Social Campus/Interaction with the environment	Moncloa International Meetings Centre (CEI <sup>2</sup> Moncloa)	December 2012	Centre inaugurated
36	Comprehensive Social Campus/Interaction with the environment	Start refurbishing work on Moncloa Campus flagship building (Edificio Campus). Current Museum of Costume	From March 2012	Documentation: permits obtained, work carried out
37	Transference/Scientific improvement/Comprehensive Social Campus	Create Joint Office for assessment of research results	Quarter 1 2012	Joint Office opened
38	Comprehensive Social Campus/Interaction with the environment /Transference	Create Moncloa Campus Museum (MUCAM)	Quarter 4 2011- Quarter 1 2012	Museum inaugurated, information available online. Virtual Museum visits
39	Scientific improvement/ Transference/ Interaction with the environment	EOLO computation system	Quarter 2 2012	Infrastructure. Computation system start up

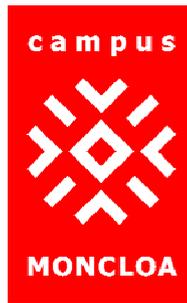
40	Scientific improvement/ Transference / Interaction with the environment	Stable Isotopes Laboratory	Quarter 4 2011	Infrastructure. Equipment in use
41	Scientific improvement/ Transference / Interaction with the environment	Thermal Ionization Mass Spectrometry –TIMS	Quarter 1 2012	Infrastructure. Equipment in use
42	Scientific improvement/ Transference / Interaction with the environment	Update CAI Geochronology	Quarter 4 2011	Refurbishing work
43	Scientific improvement/ Transference / Interaction with the environment	Seismic network	Quarter 4 2011- Quarter 1 2012	Equipment installed. Web information. Inclusion in international seismic networks
44	Scientific improvement/ Transference / Interaction with the environment	Develop Remote Sensing and Monitoring Laboratory	December 2011	Infrastructure. Equipment installed
45	All	Set up Biodiversity Trail	January 2012	Information on line. Visits. Virtual visits
46	All	Inaugurate Bioclimatic Multipurpose Building (EBM)	Year 2013	EBM Building
47	Scientific improvement/ Transference / Interaction with the environment	ICTS microscopy. Install new electronic microscope	Quarter 4 2011	Infrastructure. Equipment installed
48	Scientific improvement/ Transference / Interaction with the environment	Acquisition of advanced medical NMR ecography equipment	Quarter 1 2012	Infrastructure. Equipment installed
49	Scientific improvement/ Transference / Interaction with the environment	Set up Living Lab	April 2012	Building
50	All	Develop Agri-Food Corridor	December 2012	Facilities
51	Teaching improvement/ Scientific improvement/ Transference / Comprehensive Social Campus	Inaugurate International School for Communicable Animal Diseases	October 2011	Information on line. Courses.
52	Scientific improvement/ Transference / Interaction with the environment	Luminescence (TL and OSL)	Quarter 2 2012	Infrastructure. Equipment installed.

**Tabla V. Use of resources**

<b>Use of resources. CEI 2009</b>					
<b>Activity</b>	<b>Description</b>	<b>Staff</b>	<b>Expenditure flows</b>	<b>Investment</b>	<b>Total</b>
A1. . Governance and Coordination Moncloa Campus	Advice for the preparation, presentation, monitoring and updates to the proposal of the Moncloa Campus.	70,669.15 €	20,394.00 €	0.00 €	<b>91,063.15 €</b>
	Computer material expenses	0.00 €	0.00 €	899.00 €	<b>899.00 €</b>
A5. Research grants (CAIMON)	Program for the acquisition of equipment and infrastructure in the research groups of the Moncloa Campus	0.00 €	0.00 €	3,900,000.00 €	<b>3,900,000.00 €</b>
A8. Opening María Zambrano library	New library in the Campus	0.00 €	0.00 €	292,784.00 €	<b>292,784.00 €</b>
A9. International Program for Attracting Talent (PICATA)	Cost of the program for 2010 and 2011 calls	2,816,400.00 €	0.00 €	0.00 €	<b>2,816,400.00</b>
	Costs of the assessment committees	0.00 €	558.50 €	0.00 €	<b>558.50 €</b>
A12. International Office of communication and dissemination of knowledge (OICD)	Cost organization 1st CEI Research Conference	0.00 €	37,308.38 €	0.00 €	<b>37,308.38 €</b>
	Other current expenditure	0.00 €	779.51 €	0.00 €	<b>779.51 €</b>
A10. International visitor's reception centre y A21. "Students house" program in moncloa	Dissemination and publicity material	0.00 €	6,388.25 €	0.00 €	<b>6,388.25 €</b>
A23 Campus Radio and Television Service (Irtv-Campusmoncloa)	<a href="http://www.irtvcampusmoncloa.tv/">http://www.irtvcampusmoncloa.tv/</a>	0.00 €	0.00 €	20,400.00 €	<b>20,400.00 €</b>

<b>GLOBAL CHANGE AND NEW ENERGIES CLUSTER</b>					
E2. E5. and E6: Global Change and New Energies Cluster	Improvement of the equipment for the Centre for Supercomputing and visualization of Madrid: enlargement of the supercomputer IBM, acquisition of a new infrastructure of servers, storage of information library	0.00 €	0.00 €	705,849.76	<b>705,849.76 €</b>
E12 Creation of a Joint Unit (UCM-UPM) for ex situ Conservation.	Installation of a greenhouse of research in the Royal Garden Botanical Alfonso XIII of the Moncloa Campus	0.00 €	379.00 €	330,493.83 €	<b>330,872.83 €</b>
<b>MATERIALS CLUSTER</b>					
F1: Installation of the "National centre of advanced microscopy" ICTS	Support for the creation of the National Center for microscopy: acquisition of a transmission electron microscope	0.00 €	0.00 €	467,300.00 €	<b>467,300.00 €</b>
F3 creation of the network of workshops in preparation of new materials in thin film.	Renovation work of the laboratories of the West of the Faculty of physical science wing.	0.00 €	0.00 €	207,951.24 €	<b>207,951.24 €</b>
	Adaptation of the facilities of the CAI of physical techniques	0.00 €	0.00 €	46,781.35 €	<b>46,781.35 €</b>
	Other performances of equipment of the CAI (relocation of equipment)	0.00 €	0.00 €	6,749.87€	<b>6,749.87 €</b>
F2. Platform for design and construction of sensors and electromagnetic actuators	Equipment for the Institute of Systems Optoelectronics & Microtechnology	0.00 €	0.00 €	96,121.11	<b>96,121.11 €</b>
<b>AGRI-FOOD AND HEALTH CLUSTER</b>					
G3 international school of reportable animal diseases (EIEAC)	Improvements of the laboratory of monitoring health VISAVET	0.00 €	0.00 €	30,344.28	<b>30,344.28 €</b>
	Acquisition of equipment for the endowment of the laboratory of health surveillance	0.00 €	0.00 €	25,089.57€	25,089.57 €

	VISAVET staff recruitment	53,015.00 €	0.00 €	0.00 €	<b>53,015.00 €</b>
<b>I-HEALTH CLUSTER</b>					
H4: Creation of the advanced platform of biomedical image	Equipment and transfer of the laboratory of Magnetoencephalography.	0.00 €	0.00 €	139,700.00 €	<b>139,700.00 €</b>
<b>HERITAGE CLUSTER</b>					
Heritage	Personnel recruitment support for cluster	7,800.00 €	0.00 €	0.00 €	<b>7,800.00 €</b>
				<b>TOTAL</b>	<b>9,284,155.80 €</b>



**Campus of International Excellence**



**MONCLOA CAMPUS**

**CEI Web Development Monitoring Report**







## MONCLOA CAMPUS CEI WEB DEVELOPMENT REPORT

### Current situation

The website of the Moncloa Campus, Campus of International Excellence is currently hosted on the Universidad Complutense de Madrid's server accessible at the web address with domain name **ceicampusmoncloa.com**. The website features a flash development that initially served as the presentation of the project and has been updated thereafter, collecting information related to certain campus aspects, activities and services.

However, once the activity of the Moncloa Campus CEI initiated, it became evident that the web platform chosen failed to ideally cover all its needs and a new more dynamic development was required, whose design and content should successfully cover aspects of training, research, technology transference and services.

The last report of the Ministry of Education revealed the shortcomings of the web in the positioning of its content, largely resulting from the initial design, which did not allow search engines to index the content, presented accessibility problems and hindered updating tasks.

In this situation, with the aim of globally providing information to users in the most complete and efficient manner possible, a new web development has been launched to replace the initial one, which will follow the different recommendations highlighted in the Ministry of Education's latest report.

### New web development

The new Moncloa Campus CEI website is a new development based on guidelines to ensure content accessibility, its internationalization and readability regardless of the device used and ultimately the quality of the web service provided.

- **php XHTML +CSS Programming:** Enabling a clean code which adapts to the different platforms required.
- **Compliance with web standards:** World Wide Web Consortium (W3C), internationally accepted and recognized.
- Use of **optimization techniques for search engines (SEO)** aimed at improving the visibility of the web and its positioning in the search engine.
- **Web accessibility** with a WAI AA compliance level to ensure access by disabled users.
- **Web usability** to facilitate website navigation and access to information



- **Fully bilingual** Spanish/ English **content** to contribute to the Campus goals of internationalization.

This new development is taking place in several stages, and is currently in the early stages of adapting existing content and will end with the replacement of the current web.

The ultimate goal is to present a dynamic web portal that displays updated information and subsidiary content linking to the websites of both universities that make up the campus and also involving a parallel project for a press and IP television platform.

Once development is completed, an assessment and monitoring report will be issued in accordance with the aspects defined by the Ministry of Education which are listed hereunder indicating the steps taken in each case.

## Quantitative analysis

### 1. Title

The current TITLE will be replaced: *CEI Campus Moncloa*, with ***Campus Moncloa: Campus de Excelencia Internacional*** in the Spanish version and **Campus Moncloa: Campus of International Excellence** in the English version. Accordingly, the acronym CEI, unknown to foreign users, will be removed.

### 2. URL

With regard to the address and domain, the current [ceicampusmoncloa.com](http://www.ceicampusmoncloa.com) redirected to <http://www.ucm.es/info/ceicampusmoncloa/> will be changed to a sole non-redirected URL **<http://www.campusmoncloa.es>**. This measure will replace the generic domain currently used with a national domain and the initial acronym CEI will be deleted.

### 3. Size

Although this section is closely related to the quality and volume of content, the new development in compliance with W3C standards and using SEO techniques will greatly improve content visibility, promoting its indexing by search engines.

## Positioning

As in the preceding section, the application of optimization techniques for search engines contributes greatly to the successful positioning of keywords that can be used by campus web users and whose study is one of the first steps to be taken.



## **General content**

Efforts will be made to maintain at all times a website with a complete content in two languages, with proper care of web accessibility and usability aspects and accurate governance and contact information.

## **Teaching content**

It will feature a special teaching section with detailed information on master's and doctoral programs as well as existing facilities, grants and steps for application.

## **Research content**

It will feature a special research section that will display information on the research units and offers and services available to researchers. In this sense an application has been developed for the research groups participating in the Agri-Food and Health Cluster, accessible from the address <http://www.vigilanciasanitaria.es/cei/> and which will be extrapolated to the other clusters making up the Moncloa Campus.

## **Transference content**

There will be updated information on technology transference in the Moncloa Campus combining the contents provided by the Research Results Transfer Offices of both Universities displaying useful content for stakeholders and information on the transfer of knowledge to society and human resources mobility.



excellence international campus