

Project Description

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1. Starting Point

This document is the outcome of a strategic planning process to create the Moncloa Campus of International Excellence, through the grouping together of the different entities located within this physical area, coordinated by the Complutense University (UCM) and the Technical University of Madrid (UPM) and defined in the Strategic Plan for the Viability and Conversion to a Campus of International Excellence, as stated in Ministerial Order PRE/1996/2009 of July 20.

1.1. The Moncloa Campus

1.1.1. Situating the Campus and the Project within the wider context: International, European, National, Regional and Local

The Moncloa Campus combines a set of characteristics that set it apart as an outstanding university Campus: it forms an integral part of the metropolitan area of Madrid and at the same time it is the site of various Higher Education study and research institutions including:

Universidad Complutense de Madrid (UCM)

Universidad Politécnica de Madrid (UPM)

Universidad Nacional de Educación a Distancia (UNED)

Universidad Internacional Menéndez Pelayo (UIMP)

Consejo Superior de Investigaciones Científicas (CSIC)

Centro de Investigaciones Energéticas, Medioambientales y Tecnológicas (CIEMAT)

Hospital Clínico San Carlos (HCSC)

Parque Científico de Madrid (PCM)

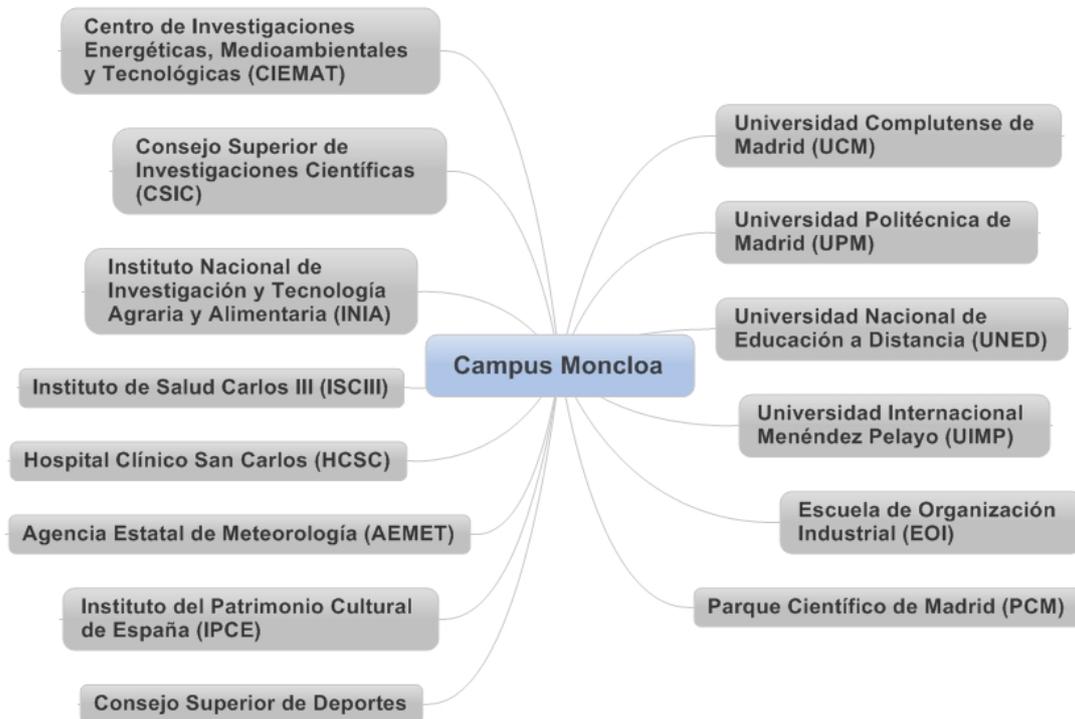
Consejo Superior de Deportes (CSD)

Agencia Estatal de Meteorología (AEMET)

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

Instituto de Salud Carlos III (ISCIII)

Instituto del Patrimonio Cultural de España (IPCE)



All the institutions on the campus bring together **more than 10,000 researchers** in many different knowledge areas, representing over 10% of Spain's scientific output, which is undoubtedly the largest national concentration of researchers in an area of comparable size.

As well as the institutions mentioned above, the Moncloa Campus is also home to other Public Administration institutions and offices. All these factors make the Moncloa Campus a **unique environment** for creating synergies which can be channelled into higher education, research, innovation and the social and cultural projection of the university in Spain. The Moncloa Campus is also the longest-established campus in the Community of Madrid , which includes six public and seven private universities. This makes it one of the most active regions in Europe in knowledge generation and innovation, and creates an extremely competitive and stimulating environment.

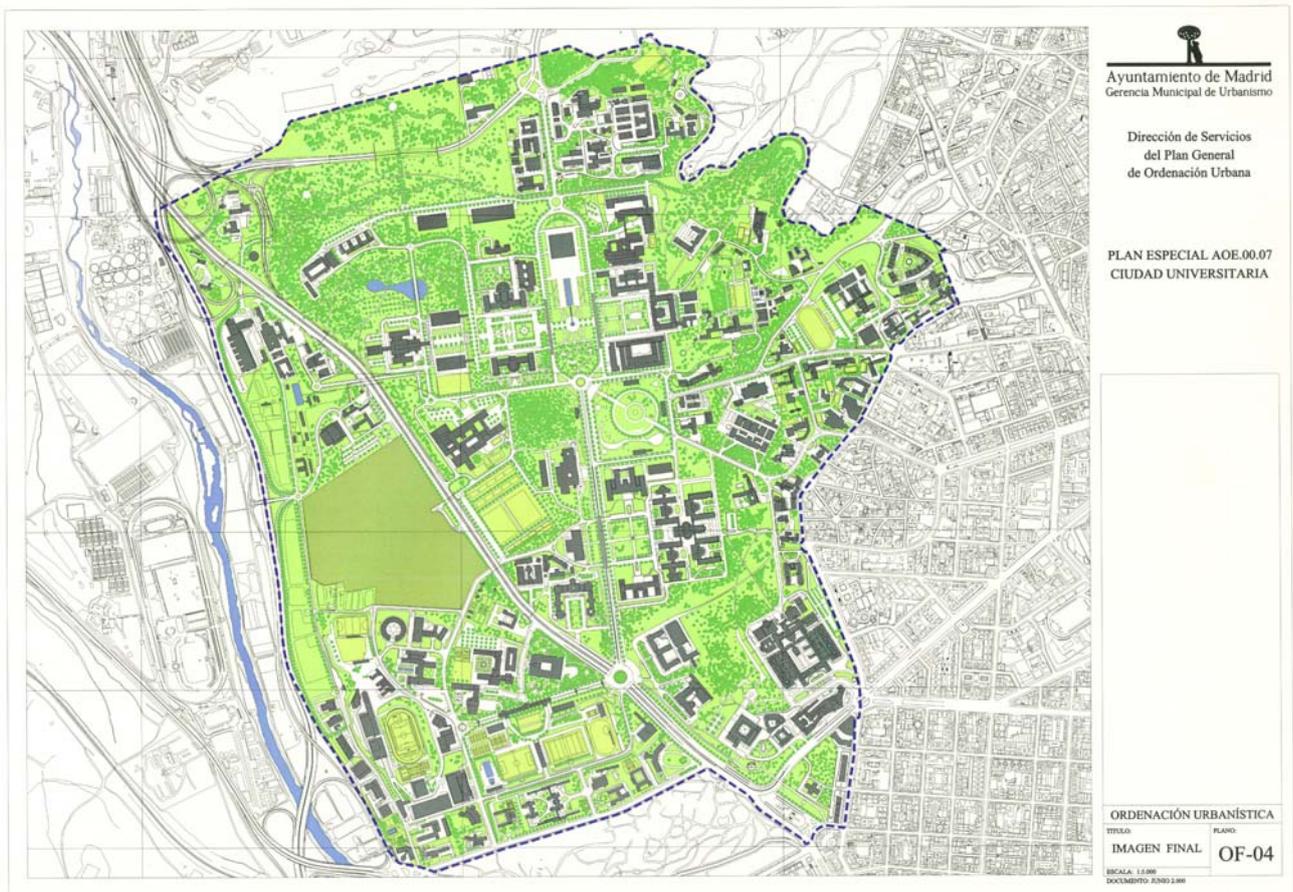
The Complutense University (UCM) and the Technical University of Madrid (UPM) coordinate the Campus jointly, in conjunction with other on-campus institutions such as the CIEMAT, various CSIC institutes and the INIA, with the common goal of converting it into a true focus of international attraction for its scientific excellence and the quality of its services, directed towards achieving an **open space** in which all those involved can **interact freely and creatively**, motivated by principles based on sustainability and social responsibility.



1.1.2. Description of the Campus

The University City or Moncloa Campus comprises over 450 hectares of land in the northwest of Madrid. It is completely integrated into the metropolitan area and is surrounded by the largest green spaces of the city. The campus was conceived in 1927 as a comprehensive campus which brought together education, science and culture and since then it has been a witness to, and an occasional actor in, the history and evolution of the country. In 1999 the University City was declared as a site of cultural interest by the Community of Madrid on account of its architectural, scenic and environmental value. This makes it a conservation area with very restricted areas available for new building.

The Moncloa Campus is one of the most valuable assets in Madrid's urban fabric: the special topographical conditions of its location, its trees and green spaces and a collection of buildings which is an outstanding expression of 20th century architecture, all make it a unique complex linking the Casa de Campo, the Dehesa de la Villa and the Pardo, three remarkable parkland areas in Madrid. A more detailed description of the campus can be found on the project website.





1.1.3. Campus Strengths

One of the indisputable strengths of the project is the campus itself as a physical and architectural space which combines its strong personal identity with a privileged location in the city of Madrid providing it with exceptional potential and beauty.

As already mentioned, the Moncloa campus hosts the highest concentration of researchers in the country. This critical mass facilitates interdisciplinary interaction and often contributes to complementary approaches that are a key strength of the Campus, transforming diversity into power. The following items give a partial overview of some of the specific strengths:

a) Science and knowledge transfer areas:

1. The number of scientific publications by campus researchers is approximately 10% of the total national production. Considering only the Complutense and Technical Universities, 11,049 publications were listed in the ISI from 2003 to 2008, 30% of these with foreign co-authors.
2. According to the Web of Knowledge CEI-Moncloa is the most important Spanish campus in the thematic areas of the selected clusters, with 4,281 publications out of a total of 40,177 countrywide.
3. Funding for research projects secured by both universities between 2004 and 2008 exceeded 731 million euros. The table below shows a breakdown of figures (in thousands of euros) :

Source	2004	2005	2006	2007	2008	TOTAL
National programmes	33,822	40,720	63,994	75,532	80,868	294,936
Regional programmes	8,373	15,116	16,303	8,604	4,056	52,452
EU projects	117,89	7,307	10,382	9,113	14,244	52,835
Contracts (OTT, art. 83, foundations, technical services)	51,728	63,016	67,846	74,520	74,473	331,583
Total (thousand euros)	105,712	126,159	158,525	167,769	173,641	731,806

4. Over 331 million euros came specifically from contracts with companies and external organisations, clear evidence of the knowledge transfer capability. In addition, between the two universities there are one hundred University/Company professorships, and in the last 10 years over 70 technology spin-off companies have been created.



5. The UCM is a founding member, together with the UAM, of the Madrid Science Park (PCM), and is a Board member, along with CIEMAT, CSIC and several companies and government agencies. The PCM is a business incubator which currently comprises 80 firms with over 100 associated companies also participating.
6. The research groups and institutions on campus take part in ambitious international research projects such as the ITER project, the Gran Telescopio Canarias (GTC Project), The WSO-UV Project which will replace the Hubble Telescope in 2013, or prominent archaeological excavations such as Atapuerca, Pompeii, Numancia or the Olduvai Gorge (Tanzania).
7. The campus is home to exceptional scientific installations such as:
 - The ICTS TJ-II located in the CIEMAT which participates in the European Fusion Project.
 - The new ICTS for nuclear fusion (TechnoFusion) shared by the CIEMAT and the UPM.
 - The laboratories of the IES (Solar Energy) and ISOM (Materials).
 - The Instituto Tecnológico PET (which makes the campus the only one in Spain with two cyclotrons for research and production of radiopharmaceuticals).
 - The central ICTS node of the Advanced Microscopy Center.
 - A node of the National Centre for Biomedical Imaging
 - The Centro de Vigilancia Sanitaria Veterinaria, VISAVET, with a European P3 reference laboratory for specific animal pathologies.

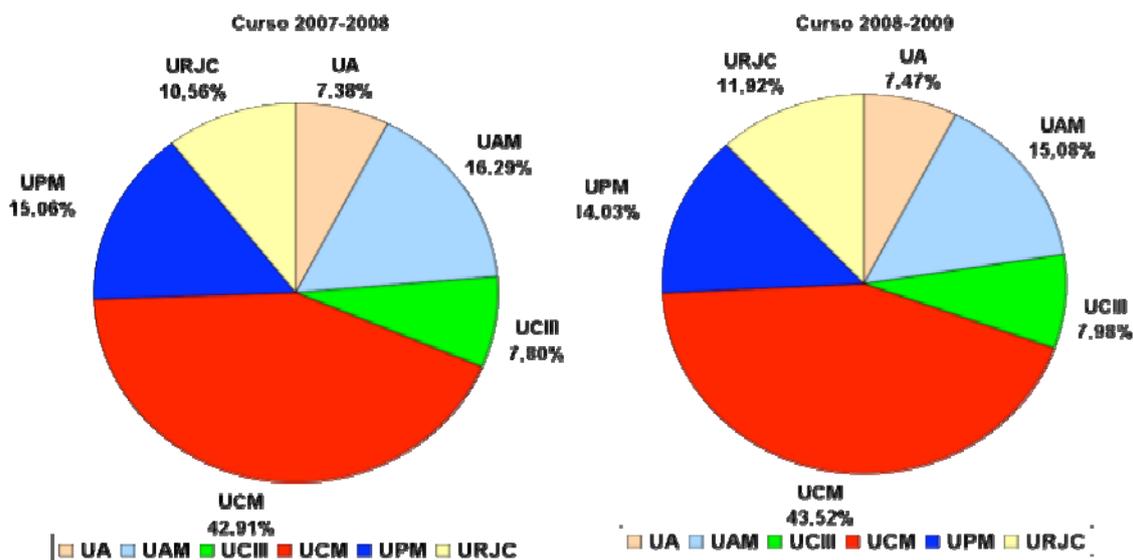
b) Teaching and the EHEA:

8. The campus 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 Medicine and Architecture, the two degrees with highest demand in Madrid. 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.

DEMANDA DE ESTUDIOS – CM

DISTRIBUCIÓN POR UNIVERSIDADES

PRIMER CICLO DE LAS ENSEÑANZAS DE PRIMER Y SEGUNDO CICLO (O CICLO LARGO) Y ENSEÑANZAS DE PRIMER CICLO (O CICLO CORTO)



9. There are over 10,000 doctoral students, and approximately 1,000 doctoral theses are submitted each year, 10% of which receive a European Mention.
10. Results from the external accreditation system to gain access to university positions show the high quality of the academics on the campus. In the UCM alone, 300 members of the teaching staff successfully passed the former system of certification examinations (152 for Full Professor and 148 for Associate Professor), and over 400 have been successful in the accreditation process which replaced certification examinations.

c) The campus as a comprehensive social model and its relationship with its surroundings:

11. The UCM has the largest university library in Spain, with over 3 million volumes, surpassed only by the National Library. Priceless works in the 232,000 volumes of its historical collection include the 13th century *Biblia Hebraea* and the only surviving copy in Spain of the first edition of Newton's *Principia Mathematica*.
12. The Campus has over 40 residences offering student accommodation.
13. Residences for scholars are also available, and will be used as accommodation for foreign visitors and scholars as part of the plan to promote the internationalisation of the Campus.
14. The Campus has the largest underground car park in the city of Madrid.
15. The Campus has the *PequeCampus* day nursery for the children of staff.



In qualitative terms, it should be noted that the efficiency and complementarity of the joint action by all the partners in the Moncloa Campus results in a combination of infrastructures, talent and enthusiasm, which make this space in Madrid an international reference point for education, research and innovation.

1.2. Partnerships

The Campus of International Excellence concept is based on “a unifying agent for different institutions, which involves strategic partnership...” (Art.2 of the Ministerial Order cited above). The following institutions form the Moncloa Campus, by agreement or by specific commitment:

Coordinating Universities

Complutense University of Madrid (UCM). <http://www.ucm.es>

Technical University of Madrid (UPM). <http://www.upm.es>

Public Institutions

Centro de Investigaciones Energéticas, Medioambientales y Tecnológicas (CIEMAT). www.ciemat.es

Consejo Superior de Investigaciones Científicas (CSIC). www.csic.es

Agencia Estatal de Meteorología (AEMET). www.aemet.es

Instituto Nacional de Investigación y Tecnología Agraria y Alimentaria (INIA). www.inia.es

Hospital Clínico San Carlos (HCSC). www.hcsc.es

Hospital General Universitario Gregorio Marañón (HGGM). www.hggm.es

Hospital 12 de Octubre (H12O). www.h12o.es

Instituto de Salud Carlos III (ISCIII). www.isciii.es

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

Patrimonio Nacional (PN). www.patrimoniopnacional.es

Parque Científico de Madrid (PCM). www.fpcm.es

Ayuntamiento de Madrid. www.munimadrid.es

Comunidad de Madrid. www.madrid.org

Companies

Instituto Tecnológico PET. www.petmadrid.com

Global Forecasters, S. L. www.gfcasters.es



2. Strategy

2.1. Vision: the Power of Diversity

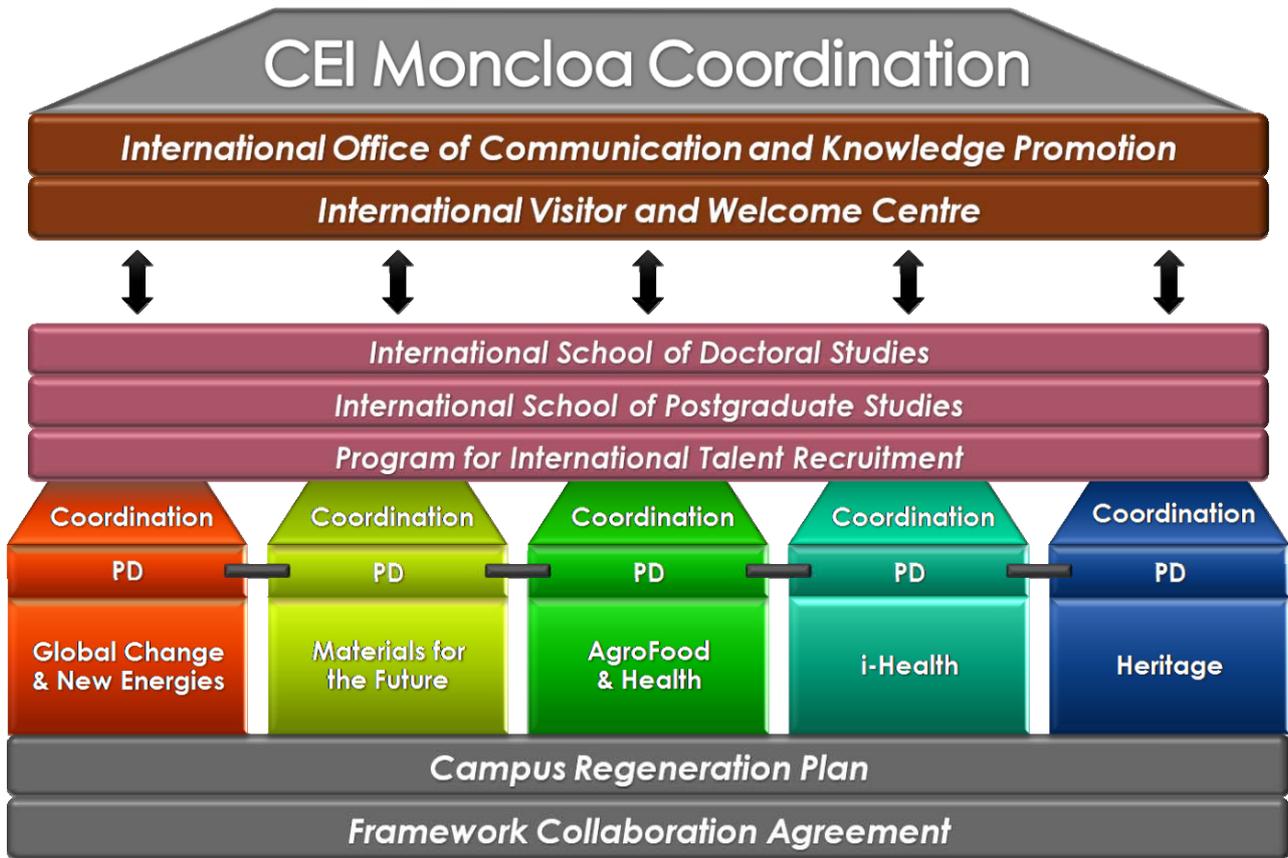
The Moncloa Campus is designed as a meeting place based on **plurality, diversity, talent and internationalisation**, with these features as some of its major strengths. This diversity applies to language and study background, as well as to student variety in terms of gender, age, social, ethnic or cultural background, or any other personal or collective features. **The Moncloa Campus defines itself as sustainable, socially responsible and health-aware**, and finds its strength precisely in its diversity, in its commitment to non-discrimination, in its deep-rooted intercultural, multilingual 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, attracting and enhancing talent.

The Moncloa Campus is a **new project** designed as a result of a Strategic Plan with the active participation, involvement and commitment of its partners. It is based on an **interdisciplinary and cross-curricular approach**; it seeks to attract students and researchers from around the world, with their different languages and cultures, and makes environmental diversity one of its scientific objectives. In short, it is a commitment to partnership in **Diversity as the innovative Power** for excellence and sustainable development.

Dealing with diversity requires cohesion. In this context, **connectivity** becomes another core idea in the Moncloa Campus project, as a necessary ingredient and goal, to ensure information flow, facilitate joint team work, and provide available resources on-line to allow us all to **connect and move forward together into the future**.

The project is based on a framework agreement between the coordinating universities and 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.

These transversal actions form the foundations of the project, the base for the pillars, or **five research clusters**. Based on the Campus strengths, the clusters will drive a qualitative leap forward in terms of international recognition, providing a base for the development of specialised scientific and teaching activities. This project is completed by the common structures responsible for visitor services and Campus communications, and the **governing bodies** which will supervise and coordinate the project.



Director Plan (PD)

2.2. Identity

The Moncloa Campus is a unique **new project**, different from both its coordinating universities and from the other partner institutions. As such, it needs its own identity to differentiate it from the parent organisations and to give it a unique identity to project to the outside world. Two main defining factors of this identity have been created: a **logo** encapsulating its main features, and the official **headquarters** for the Moncloa Campus, located in an emblematic building befitting the project's importance and acting as a reference point for everything related to it.

The logo:





This image is intended to project:

- ❖ A well-defined geographical space, open to the outside.
- ❖ The opening up of a new space, establishing interconnectivity between partner institutions.
- ❖ An open meeting space for debate and participation.
- ❖ Communication channels which flow from the meeting space.
- ❖ Arrows indicating interaction with society and the environment.
- ❖ A flow diagram which suggests a central attractor or focal point.
- ❖ A Gateway to Europe / A Gateway to Latin America / A Gateway to Knowledge.

The Headquarters:

The headquarters will be located in the building presently housing the Costume Museum, located in Avenida Juan de Herrera. This singular building, which has recently been reclaimed by the Complutense University, was awarded the National Architecture Prize in 1969. It was conceived as a centre for contemporary art (and formerly housed the Spanish Museum of Contemporary Art) – a flexible modular space with a floating ground floor raised on pillars, including the large temporary exhibition room. The office block rises from the centre, where art research seminars and workshop spaces are planned.



Due to its characteristics, distinction, emblematic value and past uses, both universities agree that it perfectly meets the requirements for the Campus flagship building, matching the magnitude and scope of the project presented. The centres and offices to be located in this building include:

- Offices for the Moncloa Campus governing body and organisation.
- Campus Museum (MUCAM).
- International Visitors and Reception Centre (CIVA).
- ‘Madrid Global’ Office under the supervision of Madrid City Council, aimed at supporting the City's internationalisation in the fields of Research and Higher Education.

- International Centre for Advanced Studies in Moncloa Heritage (CIESPAM).
- Office of the International Schools for Postgraduate and Doctoral Studies on the Campus.
- International Office for Communication and Knowledge Promotion.

2.3. Strategic Areas

The **strategic areas** set out to achieve **EXCELLENCE** at the Moncloa Campus are:

- Research area (Creating):** achieving scientific excellence.
- Teaching area (Sharing):** connecting and coordinating teaching.
- Management area (Connecting):** achieving excellence in services.
- Social Responsibility and Sustainability area (Growth):** promoting institutional and individual commitment to social and environmental sustainability.

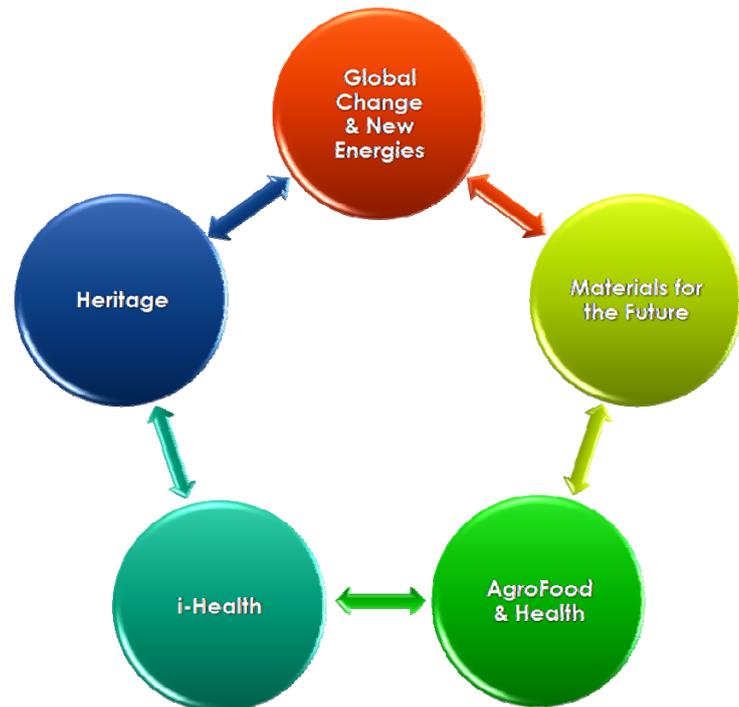


These interdependent areas define the focal points where joint action is required. We are aware that only a balanced development will lead to the achievement of the campus excellence objective, in itself a necessarily multi-faceted and integrationist goal.

2.4. Specialisation

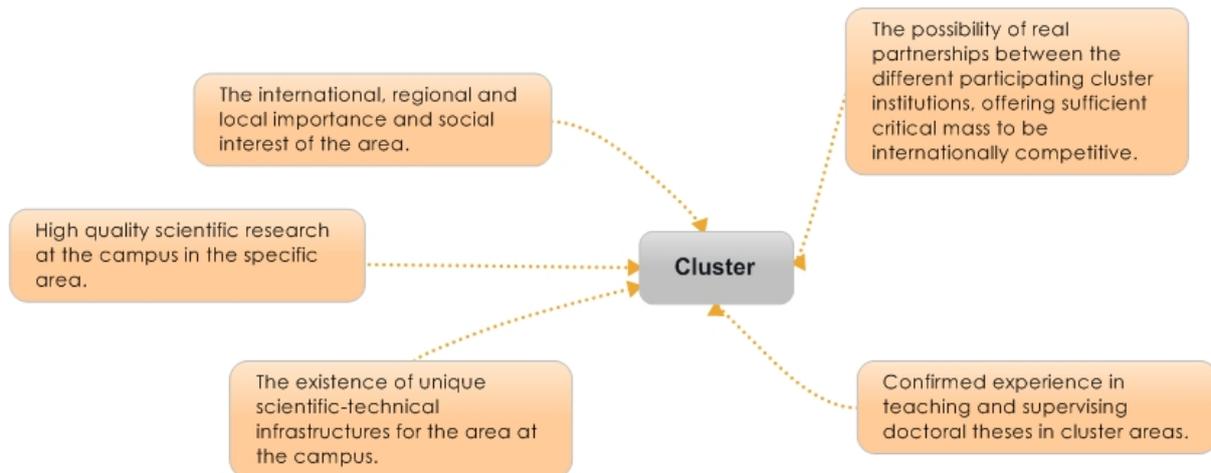
Aware of the need for specialisation to achieve excellence, the Moncloa Campus has established **five thematic clusters** aspiring to scientific and teaching excellence, detailed below:

- a) *Global Change and New Energies.*
- b) *Materials for the Future.*
- c) *Agri-Food and Health.*
- d) *Innovative Medicine (i-Health).*
- e) *Heritage.*



The combination of strengths in all these areas on the Campus provides unique configurations due to their innovative and interdisciplinary nature, highly competitive on a European level and capable of producing decisive advances in knowledge transfer. The selection of these clusters is based on their outstanding performance in relation to the following five parameters:

1. High quality scientific research within the campus in the specific area.
2. The possibility of real partnerships between the different participating institutions in the cluster, offering sufficient critical mass to be internationally competitive.
3. Proven experience in teaching and supervision of doctoral theses in the cluster area themes.
4. The existence of unique scientific-technical infrastructures for the area within the campus.
5. Relevance and social interest of the area at the international, regional and local levels.



3. Objectives

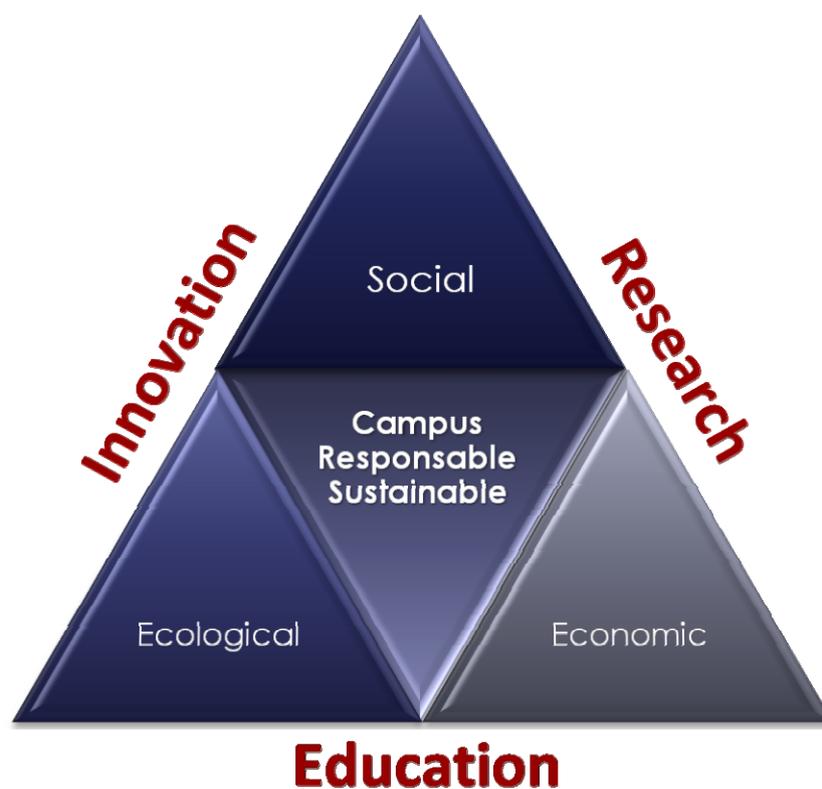
The overall objective of the Strategic Plan “**Moncloa Campus: The Power of Diversity**” is to develop an integral, unified model of a sustainable and socially responsible campus. This mission can be summed up in the following general objectives which aim to:

- Transform the Moncloa Campus into an **international reference point** for research, training and innovation in the selected clusters.
- Convert the Moncloa Campus into a socioeconomic development hub (a “knowledge accelerator”) in these thematic areas, contributing to the progress of the Region.
- Achieve real joint activity of the participating institutions and the people working in them while ensuring that they do not lose their own identity.
- Pursue excellence through sustainability, aligning structural elements with initiatives focusing on :
 - The people who are part of the campus: students, teachers, researchers, administrative and assistant staff, visitors.
 - The wider society, through socially responsible research, knowledge transfer, communication, publication and effectiveness in the activities undertaken.
 - The territory, by working towards the integrated redesign and remodelling of the campus from an urban planning, environmental and communications viewpoint.
 - The institutions, through coordination, governance, visibility, reinforcement, quality and networking.
- Stimulate the entrepreneurial spirit of our students and teachers.
- Work actively for equity.



- Act as a dynamic force within the cultural life of the city of Madrid, encouraging the general public to visit and enjoy the campus and its scientific, technical, artistic and cultural contributions as well as its sports facilities.
- Ensure that the name “Moncloa Campus”, associated with that of Madrid, evokes worldwide a city of knowledge par excellence, just as Oxford and Cambridge are reference cities for university excellence.

In short, to recover the original holistic concept of the *Ciudad Universitaria de Madrid* conceived as an integrated campus harmonizing education, science and culture; to take a great step forward and make full use of the power of the combined work of the partner institutions of the group; to offer an adequate response to the challenges presented by the society of the 21st century and to go forward **CONNECTED TO THE FUTURE**.



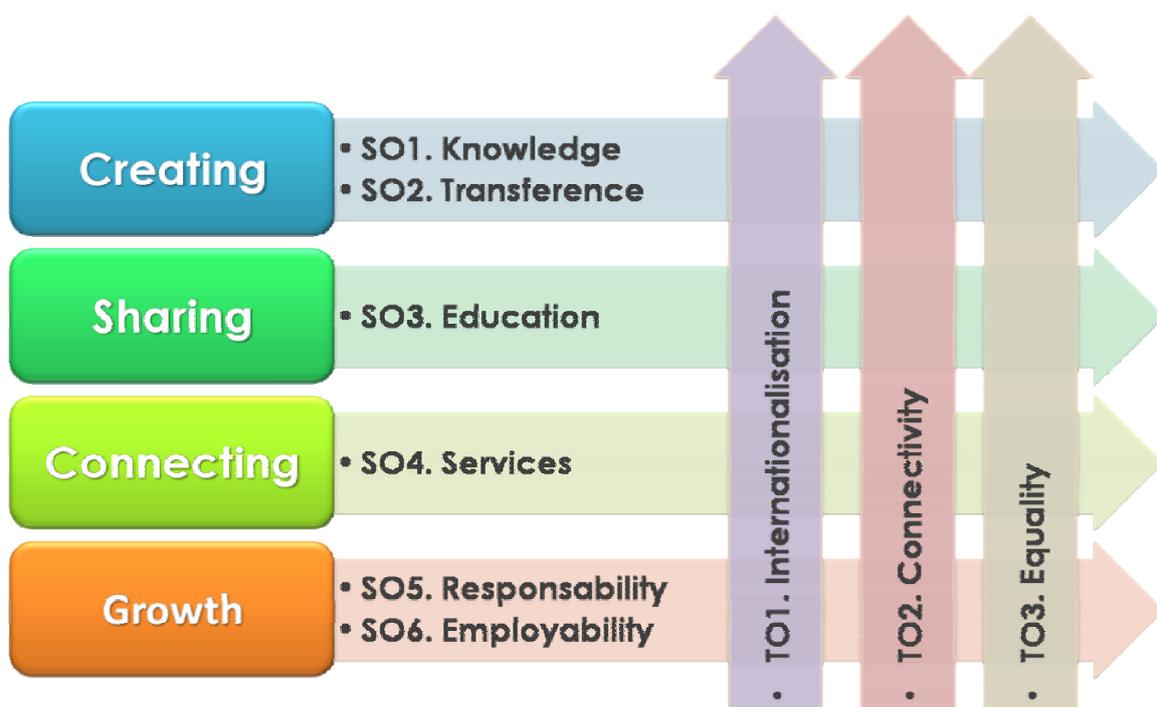
3.1. Strategic Objectives

The strategic objectives have been defined jointly by the Moncloa Campus group and include the missions of the group members.

Meta-objective-International Reference Objective: To ensure the sustainable transformation of the Moncloa Campus into an international reference for teaching, research, innovation and management.

This meta-objective will be developed with the following nine strategic objectives:

1. **SO1 - Knowledge (Strategic Objective):** To be a centre of reference for knowledge and technology, especially in the cluster areas.
2. **SO2 - Transference:** To take a qualitative step forward in university-business-society collaboration.
3. **SO3 - Education:** To generate a unique training identity as a guarantee of professional excellence with European-wide recognition.
4. **SO4 - Services:** To improve management and services for students, teaching and non-teaching staff and visitors.
5. **SO5 - Social Responsibility and Sustainability:** To carry out social, environmental and health related improvements on the campus: the dynamic regeneration of the campus.
6. **SO6 - Employability:** To promote the employment and employability of students on campus by facilitating study/work compatibility.
7. **TO1 - Internationalisation (Transversal Objective):** To increase the internationalisation of the campus in all areas.
8. **TO2 - Connectivity:** To ensure permanent connections between individuals, research groups in their respective areas, the institutions and their environment, as a tool and driving force for the campus.
9. **TO3 - Equity:** To promote Gender and Social Equity on campus, eliminating physical barriers and paying special attention to those with disabilities or special educational needs.



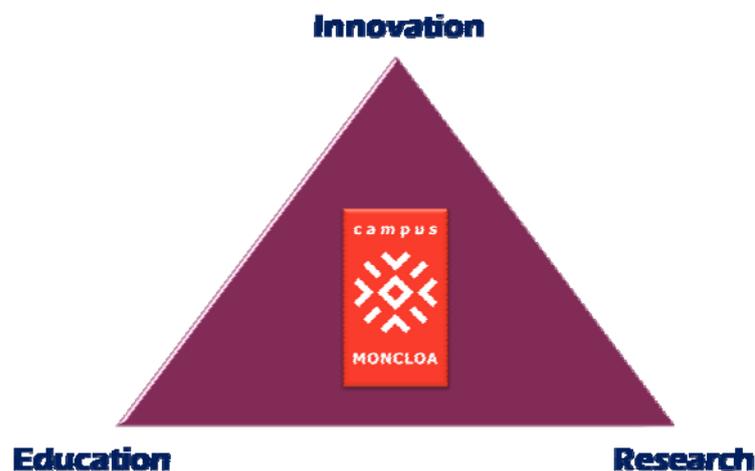


3.1.1. SO1 - Knowledge

This objective envisages the transformation of the Moncloa Campus into a centre of reference for knowledge and technology in selected thematic areas, as a leader in these fields.

The specific objectives are to:

- Increase the global impact of scientific publications.
- Improve the human and material resources for research.
- Multiply the number of post-doctoral study visits by foreign researchers to the campus.
- Increase the level of participation in international R&D projects by group members.



3.1.2. SO2 - Transference

To project and transfer to society the knowledge, capabilities and results generated, so that they may be transformed into a source of progress, and thus develop the so-called 'third mission' of the university.

The specific Objectives contemplated in this section are to:

- Increase the number of joint and collaborative projects.
- Increase the number of intellectual property and industrial patents registered.
- Increase the number of technology licence contracts.
- Promote the creation of new companies.
- Diversify funding sources.



3.1.3. SO3 - Education

This objective will generate a unique identity for the Campus that will be recognised in Europe as a landmark of quality and a guarantee of training for professional excellence.

The specific objectives are to:

- Provide students with the skills to allow them to work competently in their future professions.
- Develop an appropriate attitude in students to address professional challenges through lifelong learning.
- Increase the number of foreign students in undergraduate, postgraduate and doctoral programmes.
- Attract the most talented European students, especially at postgraduate and doctoral levels.
- Create new facilities for teaching and for the implementation of the EHEA (María Zambrano Library, Campus Museum, on-line classrooms, etc.).
- Encourage the use of the Virtual Campus.
- Integrate a system of student job training into the curriculum.

3.1.4. SO4 - Services

The main target of this project are the members of the campus community: its members are the main protagonists and also the main beneficiaries. This will entail improvement of administration and services offered to students, teaching and non-teaching staff and visitors, as a key factor in constructing the integrated social campus. Faster, transparent administration of all academic and research tasks is essential, as well as streamlined reception procedures for foreign students and researchers, with the implementation of a single 'one stop' visit to the administration office to handle all aspects of their settling in.

The specific objectives defined are to:

- Increase service user satisfaction (students, teaching and non-teaching staff).
- Ensure the effectiveness and efficiency of administration and management.
- Improve accessibility to the different services and administrative departments.
- Increase management added value.
- Improve professional qualifications and language skills of human resources.
- Improve online infrastructures and extend the campus data and communications network.
- Intensify the services and activities designed for the general public in Madrid.
- Open up areas of special interest to a wider visitor base (Campus Museum, Botanic Garden).
- Submit services for external quality accreditation.



3.1.5. SO5 - Social Responsibility and Sustainability

In agreement with the concept of social responsibility proposed by the EU (Green Book), and with the Sustainable Development Strategy (ESDS), this objective implies the commitment of the campus to social, environmental and economic aspects, which go beyond what is legally required, and are complementary to current legislation.

Included in this strategic objective is the proposal to draw up and implement a plan to define and manage the social responsibility and sustainability of the campus, outline its content, its application and metrics, and determine internal and external monitoring and follow-up systems. The intention is that this objective will be met in dialogue with all stakeholders, both on and off campus.

Specific objectives are to:

- Implement a management plan for social responsibility and sustainability of the campus.
- Encourage socially responsible values on the campus.
- Promote the participation and co-responsibility of all stakeholders involved.
- Systematise the evaluation of activities and results achieved.
- Regenerate the campus from a landscape, eco-planning, architectonic and social viewpoint.
- Encourage environmentally friendly and healthy principles and life styles among students, teaching and non-teaching staff on campus.
- Encourage the use of sustainable transport on campus.
- Optimise energy use.
- Reinforce a culture of risk prevention at work.
- Promote development cooperation and volunteer training and participation.
- Intensify the integration of the campus into the city of Madrid.

3.1.6. SO6 - Employability

The Campus has as a goal to contribute to the overall employability of the student body, both on and off campus. The specific aim is student employment on campus resulting from the development of the planned campus-based actions, enabling students to reconcile their studies and work on campus and also guaranteeing, as far as possible, the interest and formative nature of this activity. This objective also includes fostering the students' capacity for enterprise by offering information, assessment, advice and training in this area.

Specific objectives are to:

- Promote student access to the labour market.
- Extend the employment support programme to the campus as a whole (collaborative internships, etc.).
- Encourage student entrepreneurship.



- Increase student participation in campus community services.
- Promote external work placements on and off campus, ensuring their training content.
- Offer space for contact and exchange with companies and the business world in general at the training stage.
- Promote employment fairs on campus.

3.1.7. TO1 - Internationalisation

Increased recognition and visibility of the Campus in all international areas will be pursued through purpose-designed campaigns and the development of specific actions on campus.

Specific objectives are to:

- Increase the number of joint teaching programmes with foreign universities.
- Increase the number of foreign applicants for undergraduate, postgraduate and doctoral programmes.
- Promote exchanges of students, teaching and non-teaching staff with other Spanish and international universities.
- Increase the number of foreign teachers recruited to the campus.
- Increase the number of international R&D projects with participation of the partner institutions on the campus.
- Encourage foreign language training, especially in English.
- Boost the international visibility of the Moncloa Campus.
- Draw up a multi-annual internationalisation plan for the Campus.

3.1.8. TO2 - Connectivity

Connectivity is the active tool ensuring the information flow, collaboration, and networking of available resources, enabling us to move forward **connected to the future**. This aim is to ensure interconnection between campus research groups, especially internally within each cluster and externally with the outside world. The aim is also to ensure the inclusion of the campus in a wide ranging network of two-way relationships with the local environment – both with the city of Madrid and with the whole metropolitan area – as well as with the wider national and international environment. The intention is also to convert the Campus into a strategic node of this network, intensifying and increasing the density and volume of these relationships between the various environments cited.

Specific objectives are to:

- Promote the development of inter-university/joint undergraduate, postgraduate and doctoral studies.
- Increase joint publications by campus partners.
- Multiply the number of joint R&D projects.



- Increase the number of co-supervised Ph.D. theses by researchers from the Moncloa Campus.
- Share scientific infrastructure effectively and efficiently.
- Increase the intellectual property and industrial patents registered by Campus partners as co-holders.
- Encourage mobility between institutions of students, researchers, teaching and non-teaching staff.

3.1.9. TO3 - Equity

Promoting equity is an act of social responsibility. However, the importance of this objective, especially in the early stages of the Campus project development has meant giving it the status of a separate strategic objective in its own right.

The Moncloa Campus in its pursuit of excellence must be based on an effective promotion of equity in its many facets: attracting talent independently of financial or social background; gender equality - an area where urgent action is needed to carry out the tasks required in current regulations - and additional actions the campus is committed to as part of its social responsibility and complete accessibility.

Specific objectives are to:

- Redesign campus life and all its missions from the viewpoint of gender.
- Ensure the full accessibility of campus life.
- Attract talented women in areas where they are under-represented.
- Encourage balanced participation in terms of gender in teaching and research activities and in areas of innovation, culture and governance of the campus.
- Reinforce services and mechanisms to support reconciliation of personal and family life and work on campus.
- Boost teaching and interdisciplinary research offers with special reference to disability.
- Promote the participation of people with disabilities in representational roles.
- Promote the employment on campus of people with disabilities.



4. Thematic Programmes - Clusters

The thematic programmes in the CEI Moncloa strategic plan are structured into **five specialised clusters** covering those areas where the greatest synergies and real joint possibilities are between the different partners. The five specialised clusters aiming at excellence in teaching and research are the following:

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

The clustering of strengths and the existence of exceptional installations in all these areas provide unique configurations in terms of their innovative and interdisciplinary character. These configurations will be highly competitive on a European level, and their connection and added value will lead to a qualitative leap in the scientific and teaching domains, which in turn will result in a decisive step forward in knowledge transfer, thus placing the Moncloa Campus in a privileged and highly competitive position.

The key to achieving clustering is **connectivity** and the main organisational tool is the network. The Campus will foster the interconnection of researchers and institutions in each cluster and encourage interaction through specific actions and through its own coordination structure and that of the general governing body. Each cluster has a coordinating committee co-chaired by teaching staff from the cluster institutions, responsible for ensuring connectivity between the research groups in each cluster, for the performance of joint activities, for mapping the equipment and facilities for each cluster and representing each cluster on the governing body of the Moncloa Campus.

Each cluster will draw up an action master plan, which will be assessed externally and should cover all the action fields in the call for proposals (enhancement of teaching and implementation of the EHEA, scientific and knowledge-transfer enhancements, transformation of the campus into a comprehensive social model and interaction with its surroundings), although it could also focus on a specific action or a limited number of actions from this group, in addition to work on its specific area of knowledge specialisation. The following tasks in particular have already been identified:

- Teaching actions at a postgraduate level, which will be channelled through the International School of Postgraduate Studies.
- Co-supervision of doctoral theses via the International School of Doctoral Studies.
- The creation of infrastructure networks aimed at sharing equipment already available on campus, in order to ensure the optimal use and efficient allocation of these existing resources.
- The identification of transferable research results.
- The organisation of workshops and international colloquiums.



4.1. Global Change and New Energies

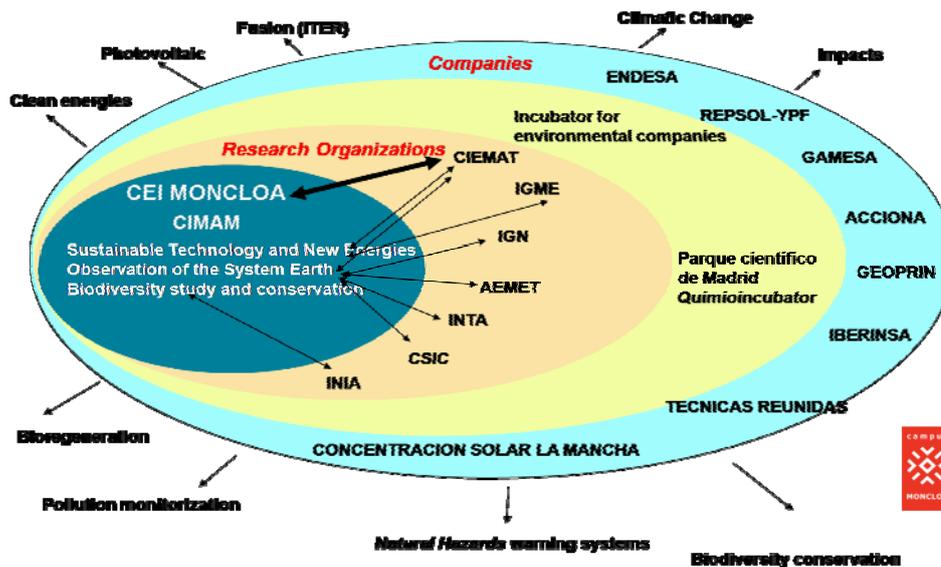
Partners

UPM (Solar Energy Institute, Laser Centre, ETSI: Industrial, Telecommunications, Aeronautics, Mining, Forestry, Agricultural, Agronomics, Public Works, CEIGRAM); **UCM** (Faculties: Chemistry, Physics, Geology, Biology, Mathematics, Pharmacy, Computing, Geography and History) **CIEMAT**; **CSIC** (IGEO Mixed Centre UCM-CSIC); **AEMET**; **IGN**, **IGME**, **INIA**.

Description

The aim of this cluster is to bring together the enormous richness of the different groups working on campus in environmental and new energy-related fields, providing them with a common unifying base and a coordination mechanism that allows them to optimise the resources available and their international impact. In this respect, the Moncloa campus can count on CIEMAT, the leading Spanish scientific institution in environmental and energy-related studies, whose presence in this cluster brings significant added value and will be a driving force.

. Global Change and New Energies



In particular, in the area of New Energies we intend to establish the Moncloa Campus as a leader in nuclear fusion and photovoltaic solar energy. To give this cluster a firmer footing, the Moncloa Campus UPM-UCM CIMAM (Mixed Centre for Environmental Research) will be established. This centre will integrate those groups from the two universities which meet the required quality standards.

The key actions in this cluster include the construction of a multi-purpose bioclimatic building (EBM), which will serve as a model from an environmental and energy efficient point of view. The EBM will belong to the UPM, although its use will be shared between the partner institutions, and will meet several objectives:

- The concentration under the umbrella of the CIMAM of both human and material resources currently spread over different parts of the campus.
- The relocation of the UPM nuclear fusion research groups, so favouring synergies with CIEMAT in the EURATOM framework and making the campus a major pole of action in the field of nuclear fusion.
- The location of new laboratories and common service platforms in the fields of photovoltaics and soil and water regeneration.
- The installation of a business incubator in the environmental field.
- Teaching installations for the cluster, especially the creation of a multimedia lecture theatre for real-time in-class and remote teaching.

Actions will be designed with the aim of improving our understanding of the active processes that control System Earth. Special emphasis will be placed on the development of climate and evolutionary models and prevention of the possible effects of climate change, and on the development of natural disaster early warning systems.



The cluster will also play a vital role in the conservation, broadening and enhancement of the biodiversity of the campus and its numerous collections, with both teaching and research goals, and its full incorporation into UNESCO's *Global Biodiversity Information Facility* via GBIF-SPAIN (<http://www.gbif.es/>).

Strengths

- On the Moncloa Campus, CIEMAT has a unique scientific installation at its disposal, the TJ-II thermonuclear fusion reactor (National Fusion Laboratory - EURATOM Association), which will soon be joined by the new Technofusion ICTS to form one of the largest nuclear fusion infrastructures in Europe. Both these installations, along with ITER (International Thermonuclear Experimental Reactor), form part of Europe's commitment to making nuclear fusion a new source of clean energy.
- The UPM and CIEMAT have wide-ranging experience in the EURATOM programme and are currently working together on radiological protection and safety improvement and on the development of fusion energy using inertial confinement (HiPER and ITER projects). They also participate in coordinated projects from the European Fusion Development Agreement (EFDA) Technology Programme.
- The UCM coordinates the Erasmus Mundus FUSION-EP Masters Programme, which includes universities from five European countries. The Spanish universities involved are the UCM, the UPM and the UC3M. The creation of expert human capital in the field of nuclear fusion has been recognised as a strategic need by the EU.
- The campus is also host to the two largest research groups in photovoltaic device technology in the Community of Madrid: the UPM IES (Solar Energy Institute) and CIEMAT's Photovoltaic Solar Energy Division, which work on complementary research themes. There is also productive collaboration between CIEMAT and the UPM's Laser Centre involving the development of these technologies.
- Successful spin-offs include Centesil (UPM-UCM: research into silicon purification) and DC Wafers (wafer manufacturing).
- No other Spanish campus can boast internationally recognised experts in the fields of meteorology, climatology, seismology, ecology, hydrology, geology, geodesy, geophysics, mathematics, physics, biology, geography and telecommunications, mining, aeronautics, forestry, agronomics and agricultural engineering dedicated to studying the Earth as a complex system.
- Moncloa is the only campus to host national centres whose fields correspond to those of the clusters, such as the IGN (National Geographical Institute, in the field of seismic and volcanic risk), AEMET (Spanish Meteorology Agency) and IGME (Geology and Mining Institute of Spain), with which both the UCM and the UPM have signed cooperation agreements.
- The UPM-INIA Plant Germplasm Bank contains some 10,000 seed samples from 3,500 different Mediterranean plant species, including endemic and threatened species from the Iberian Peninsula; the different herbaria and zoological collections belonging to the two universities total several hundred thousand specimens from different regions of the planet, as well as arboretums and botanical gardens, including the UCM Botanical Garden and the UPM Mediterranean Garden.

Areas of action

Transversal actions of the cluster: **E1, E2, E3**

- a. **Sustainable technology and new energies.** Aimed at developing new technologies to provide clean energy and to prevent, monitor or mitigate current environmental problems. Actions: **E4, E5, E6, E7**
- b. **Observation of the System Earth.** Aimed at preventing and mitigating climate change and natural disasters using a complex, interdisciplinary and innovative approach that takes into account the special sensitivity of the Iberian Peninsula, its oceanic borders, the North of Africa and the Canary Islands to natural disasters and the impact of climate change. Actions: **E8, E9, E10, E11**
- c. **Biodiversity study and conservation,** with special attention to the Mediterranean and Latin-American regions, which currently contain enormous biodiversity reserves (www.biodiversityhotspots.org). Actions: **E12, E13**



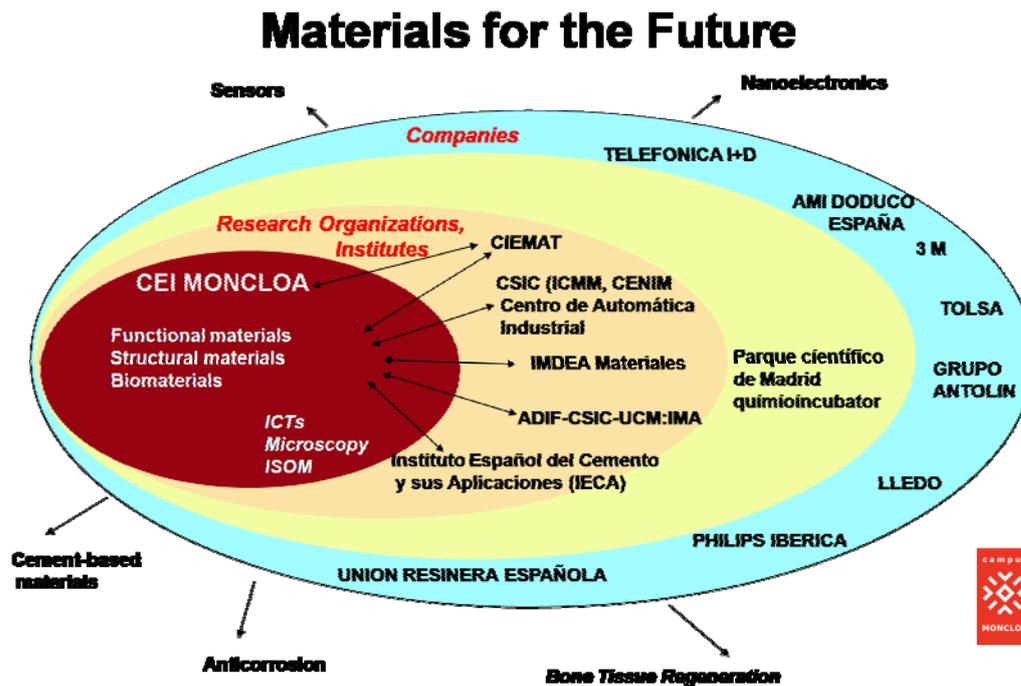
4.2. Materials for the Future

Partners

UCM (Faculties: Chemistry, Physics, Geology, Pharmacy) **UPM** (ISOM, Solar Energy Institute, ETSI: Telecommunications, Civil Engineering); **UCM-ADIF-CSIC**: IMA (Applied Magnetism Institute); **CIEMAT**, **CSIC** (ICMM, CENIM, Industrial Automation Centre); **Other bodies**: IMDEA Materials, IECA (Spanish Institute of Cement and its Applications).

Description

This cluster aims to develop a network structure involving research groups in the fields of structural and advanced functional materials from the UCM and UPM. These groups are expert in the synthesis and structural and physicochemical characterisation of these materials and the determination of their structure-property relationships. The research lines of these groups cover some of the hottest topics in Materials Science and Technology, including metallic, ceramic, magnetic and conducting materials, biomaterials and cement-based materials.



A large part of this cluster's activity will be based on the ICTS for Advanced Microscopy, whose main node will be installed on campus according to the agreement signed with the Ministry of Science and Innovation. This ICTS will consist of two new ultra high resolution electron microscopes (one TEM and the other STEM) so that it will be the **first with these characteristics** to be installed in Europe, permitting images with resolution smaller than 1 Å (0.05 Å in TEM). The installation will be completed with a dual-beam scanning electron microscope (FESEM-FIB) for micro- and nano-structural analysis of materials.

Strengths

- Location on campus of the CMA (Centre for Advanced Microscopy).
- Location on campus of the ISOM (Institute for Optoelectronic and Microtechnology Systems), hosted by the UPM (Technical School of Telecommunications Engineering). The ISOM is recognised as a national ICTS. It has a nanolithography system with a resolution of 10 nm that is practically unique in Europe. It is the only centre in Spain with various molecular beam epitaxy systems to manufacture optoelectronic materials allowing research in the fields of applied nanotechnology and nanostructures.



- This cluster is outstanding in terms of its scientific quality and its ability to train new PhD students. The average h-factor of the group leaders involved is higher than 30. In addition, the number of papers published by these groups in ISI-ranked journals in the past three years is higher than 800, with 75% of these being published in journals in the first quartile and 50% published in conjunction with scientists from foreign institutions. The faculty staff participate in seven doctoral programmes with a Quality Award and have supervised 42 doctoral theses in the past three years.
- Considering this, the likelihood of these groups attracting research funding is very high. In the past three years they have participated in 134 national projects with a total funding of €4,594,470. Contracts worth a total of €4,173,000 have been signed with external companies in the past three years. The groups have also participated in 25 European projects (6th and 7th Framework Programmes) with a total funding of €2,526,800.
- The UCM and UPM are very well supported in terms of scientific infrastructure for the study of materials, with the CAIs (Research Support Centres) for Physical Techniques, X-ray Diffraction and Nuclear Magnetic Resonance.

Areas of action

Transversal action: F1

- a. Functional materials. Actions F2, F3
- b. Structural materials. Actions F4
- c. Biomaterials. Actions F5

4.3. AgriFood and Health: the AgriFood Corridor

Partners

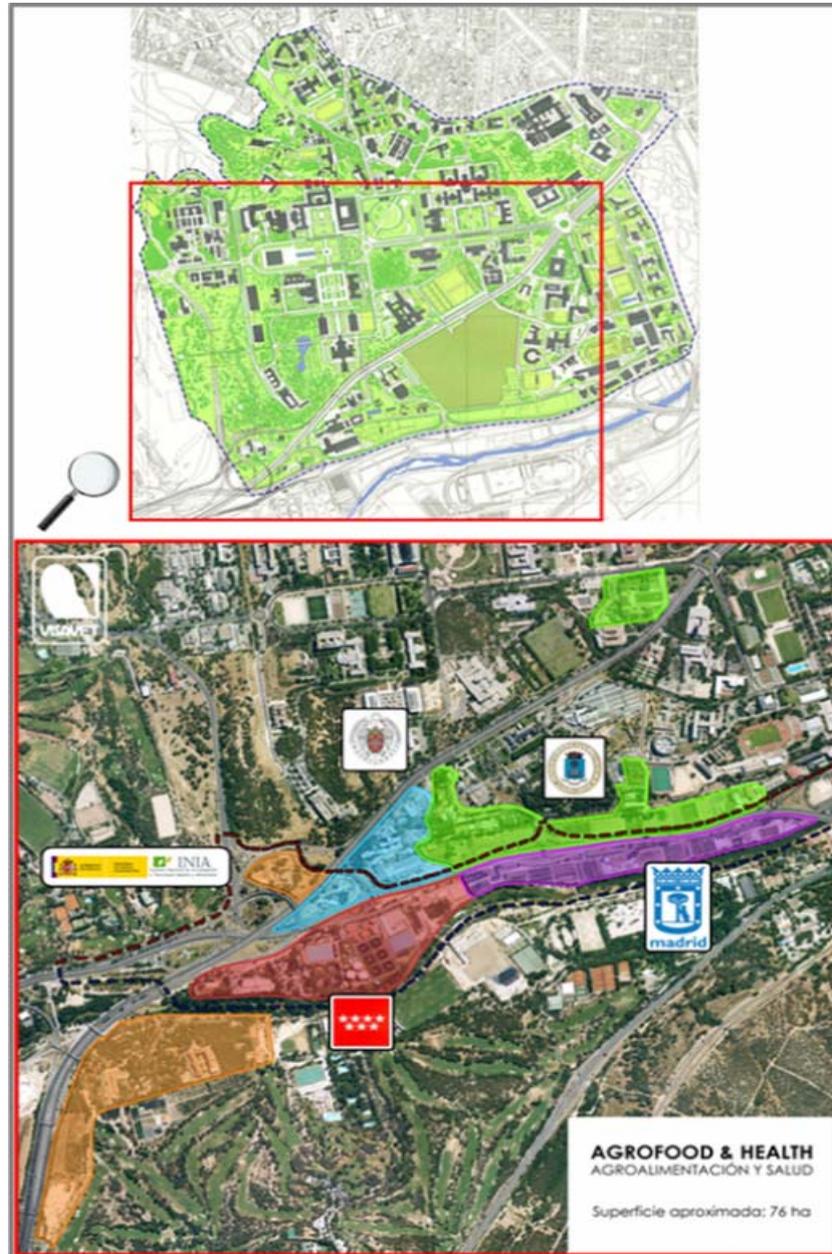
UCM (Faculty of Veterinary Science and Animal Hospital, Centro de Vigilancia Sanitaria Veterinaria VISAVET), **UPM** (Technical School for Agronomics Engineering and Practice Fields), AGRISOST and CEIGRAM consortia (**UPM-INIA-CIEMAT-UCM**), **INIA** (including the INIA's Breeding Centre), **Instituto de Salud Carlos III**, **IMDEA-Alimentación (Community of Madrid-UPM-CSIC-UCM)**, **Madrid City Council**.

Description

The proposal for the AgriFood and Health cluster covers those activities undertaken by its component groups in the fields of generation of agricultural and livestock products and their processing for the production of safe, healthy and high-quality foodstuffs for human and animal consumption using techniques that are technically and economically sustainable from an environmental, animal-welfare and socially responsible viewpoint.



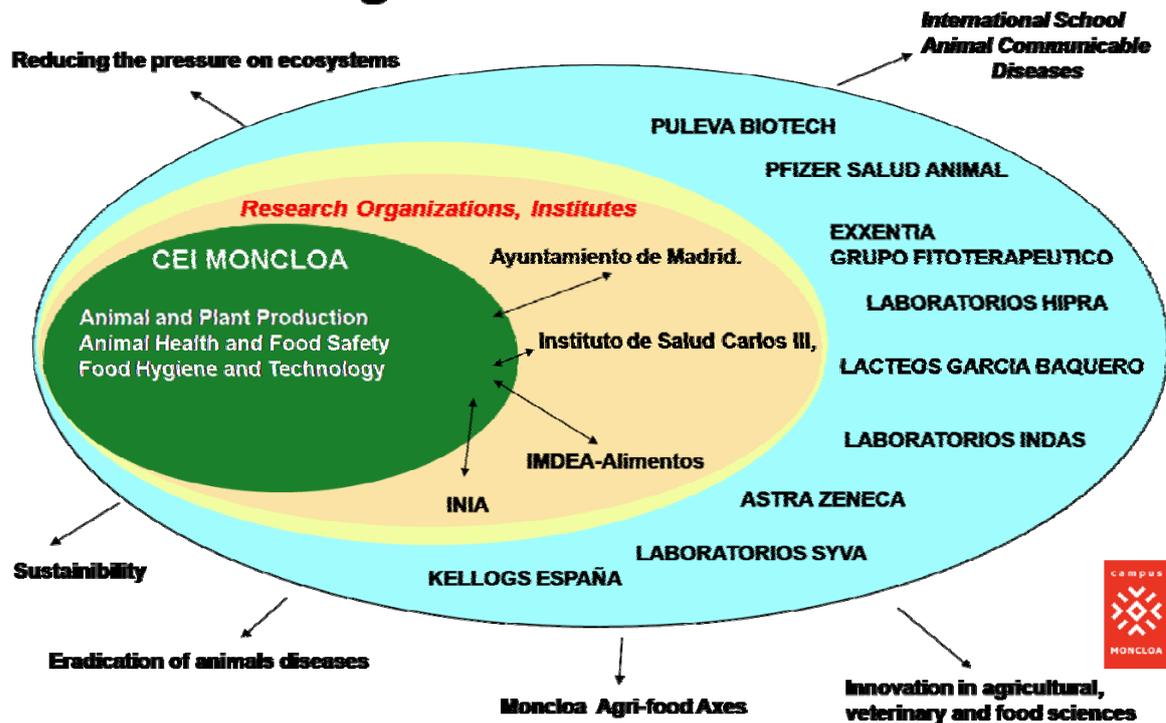
The cluster's overall aim is to set up the Moncloa Agri-Food Corridor, a 76-hectare plot within the campus along the banks of the Manzanares River. The majority of the cluster's component groups are concentrated on this plot. The aim is to recuperate the Moncloa Agri-Food Corridor from an environmental and land-use planning point of view, and transform it into an environmental reference point and one of the leading European R&D centres in the fields of sustainable agricultural production, foodstuff quality and safety, and animal health and welfare.



The cluster will create a multidisciplinary consortium aimed at increasing the productivity of agricultural systems by improving their use of natural resources, balancing economical and environmental sustainability and reducing the pressure on ecosystems.

According to these aims, VISAVET’s maximum-security laboratories, which have been identified as an EU Reference Laboratory, will be used for research and for training scientific and technical staff in the fight against various animal diseases such as tuberculosis, where there is a large demand for expert staff. A multimedia lecture theatre will be installed, which will host on-line international courses dealing with the fight against communicable animal diseases.

Agri-Food and Health



Strengths

- The unique nature of the AgriFood Corridor, which brings together the UCM’s Faculty of Veterinary Science, two research centres (VISAVET-UCM, an EU Reference Laboratory: CRL and the INIA’s Breeding Centre), an animal hospital (UCM), the Departments of Plant Production (including AGRISOST and CEIGRAM), Animal Production and Food Technology (UPM), the Agricultural Engineering Department’s trial fields (UPM) and two of the three sites of the IMDEA-Alimentación of the Community of Madrid. These institutions employ 709 lecturers, 736 researchers and 625 postdoctoral researchers and 2,565 students.
- Moncloa is the only public university campus in the Madrid region to offer both Veterinary Science and Agricultural Engineering degrees; in this way, it plays a key role in educating professionals in these fields.
- Bringing all these institutions together will allow them to cover the whole range of research topics in the field of food production (from the primary sector to the transformation, distribution and customer impact), ranging from basic aspects to those directly applicable and transferable through the production chain.



- This cluster receives more than € 40 million a year in research funding and offers advice, transfer and co-innovation services to numerous public and private institutions, including Ministry of Agriculture, Fomento, the Agencia Española de Seguridad Alimentaria y Nutrición (Spanish Agency for Food Security and Nutrition), the European Food Safety Agency, the European Medicines Agency and the World Organisation for Animal Health.
- The groups in this cluster belong to the network of Biological Alert Laboratories RE-LAB (Orden Ministerial PRE/305/2009) defined by the Spanish Government.

Areas of action

Transversal Action: G1 Moncloa AgriFood Area

- a. Animal and Plant Production. Action: G2
- b. Animal Health and Food Safety. Action: G3
- c. Food Hygiene and Technology. Action: G4

4.4. Innovation in Health (i-Health)

Partners

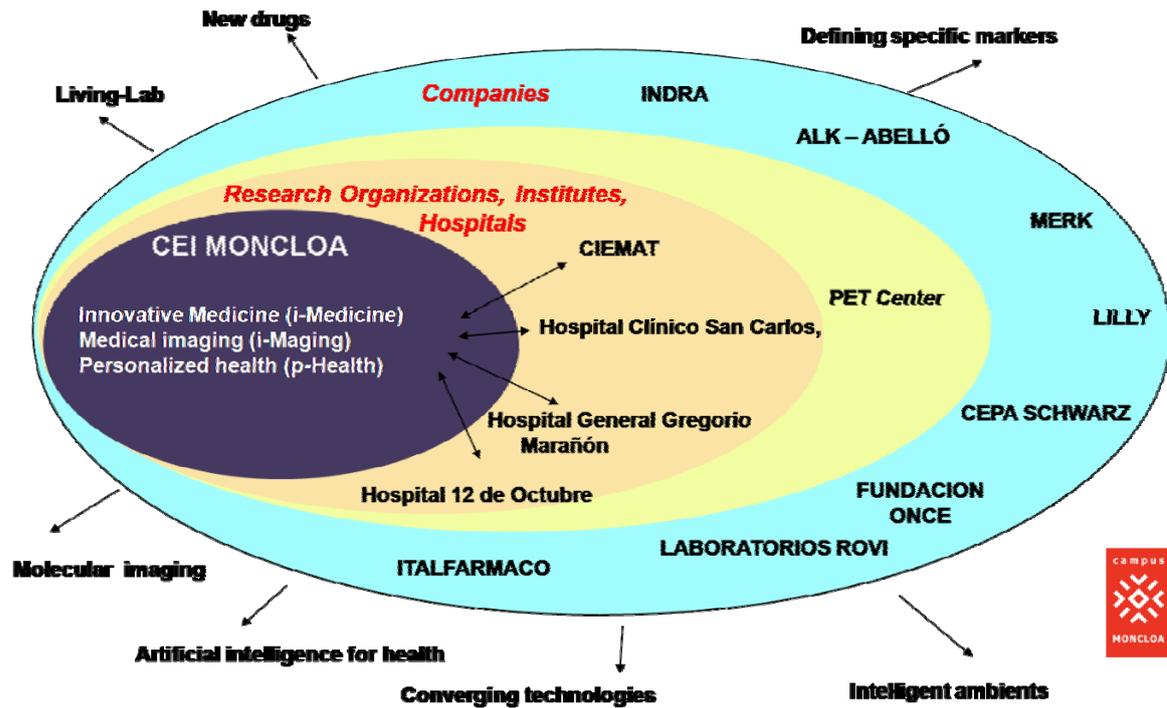
UCM (Faculties of Medicine, Pharmacy, Biology, Chemistry, Physics and Computer Science), **UPM** (Technical School of Telecommunications Engineering), **CIEMAT**, **CSIC** (CIB), **Hospital Clínico San Carlos**, **Hospital General Gregorio Marañón**, **Hospital 12 de Octubre**.

Description

The term Innovation in Health (**i-Health**) includes the most recent medical advances with the combination of basic clinical knowledge of diseases and the use in the medical domain of information and communication technologies (medical imaging and specialised technology for centralised and personalised management of diseases). This is an area of important innovation and is specifically included in the FP7 of the European Union. It has enormous social repercussions and economic impact since it allows advances in preventive measures, early diagnosis, and the treatment and monitoring of illness.

The cluster aims to take advantage of the unique situation on the Campus, which is home to a powerful Biomedical Sciences area, the hospitals linked to the Faculty of Medicine, and experts in health-oriented applications of information and communication technologies. This union allows the cluster to cover from the most basic aspects of biomedical research all the way through to practical implementation and validation using clinical trials and tests.

i-Health



Strengths

- The Moncloa CEI has the most powerful teams in Spain in terms of production and citations in the area of Pharmacology (source: Web of Science). The UCM is the second university in Spain and the first in Madrid in Biomedical and Health Sciences production, according to the Bibliometric Map of Spain 1996-2004.
- The company Instituto Tecnológico PET (ITP), set up on the campus, does pioneering work in the area of image diagnostics and the production of new radiopharmaceuticals thanks to its two cyclotrons and synthesis laboratories for producing radionuclides including ^{18}F and ^{11}C .
- The Campus participates in the Centro Nacional de Imagen Biomédica, an ICTS for Biomedical Imaging based mainly in the Gregorio Marañón Hospital in Madrid which will have at its disposal the latest biomedical technology and instrumentation for non-invasive molecular imaging.
- UCM, UPM and CIEMAT collaborate in the LIM (Medical Imaging Laboratory) in the Experimental Medicine and Surgery Unit of the Gregorio Marañón University Hospital, a leading institution in the development of hardware and software for pre-clinical molecular imaging and radiodiagnostics. More specifically, the UCM has developed advanced PET image reconstruction algorithms, currently commercialised worldwide by General Electric.
- The ETSI Telecomunicaciones hosts the Living-Lab facility, a real home where experiments can be done on IT based services employed to improve quality of life in the area of social and health care, using medical monitoring of patients and tests related to disabilities and social integration. The ETSI Telecomunicaciones also hosts the Vodafone Telemedicine Professorship.



Areas of action

The cluster will be structured in three closely related main work areas:

- **Innovative Medicine (i-Medicine)**, focusing mainly on the development of new drugs and pharmaceutical technologies. Actions: H1, H2, H3
- **Medical Imaging (i-Maging)**, focused on defining specific markers, design of radiopharmaceuticals, and the design of software and hardware to capture molecular imaging data. Actions: H4, H5, H6
- **Personalised Health (p-Health)**, aimed at the coherent, coordinated integration of bio- and nano-technologies, ubiquitous computing, intelligent environments, self-adaptive multimodal interfaces and artificial intelligence for health and the improved quality of life for the individual. Action: H7

4.5. Heritage

Partners

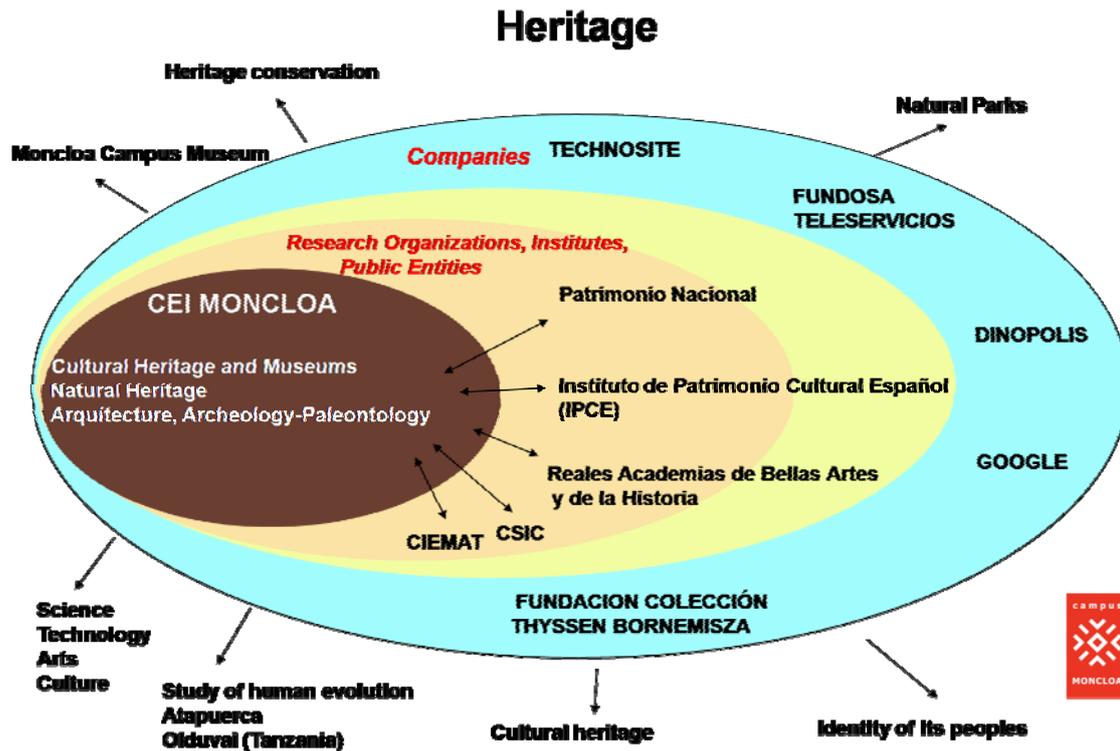
UCM (Faculties of Geography and History, Fine Arts, Geology, Biology and Physics), **UPM** (Architecture, Civil Engineering), **UCM-CSIC** (IGEO), **IPCE** (Institute for Spanish Cultural Heritage), **Patrimonio Nacional** (National Heritage), **Real Academias de Bellas Artes y de la Historia** (Royal Academies of Fine Arts and History), **CIEMAT**.

Description

Today's concept of heritage covers such diverse fields as palaeontological and palaeoanthropological heritage or natural heritage (National Parks), as well as archaeological, artistic, museum and architectural heritage and so this wide-ranging theme requires a **multidisciplinary** focus.

On the other hand, the *monument*, or the *memorable*, has a social component that makes it determinant for the identity of different peoples and therefore a potential parameter for the development and self-esteem of communities in a globalised world. This means that what was initially defined as a *culture of protection* must overcome its *defensiveness* when faced with different forms of plunder and adopt more *positive* outlook within the framework of the new economy which understands that sustainable territorial development is the only option for the future.

This cluster aims to benefit from the unique character of this campus, with its different University Centres and other institutions linked with heritage: its discovery, restoration, conservation and valuing, as well as research group networks for the science and technology of conservation and restoration of cultural heritage. All this will facilitate the setting up of the CIESP (Interdisciplinary Centre for Heritage Studies) to provide a modern global view of cultural heritage, creating expertise and drawing up informed reports in collaboration with the relevant public authorities. It will also engage in the parallel task of training in this area of heritage, one of Spain's greatest treasures.



The Centre will be supported by the network of Campus Laboratories specialised in the Science and Technology of Cultural Heritage, which will incorporate new absolute dating techniques.

Strengths

- The Moncloa Campus hosts the UPM School of Architecture, the UCM Faculties of Fine Arts and Geography and History and the IPCE which already work together.
- Two of the most remarkable sites for the study of human evolution are directed by Campus staff, Atapuerca (Spain) by Professor Juan Luis Arsuaga and Olduvai Gorge (Tanzania) by Professor Manuel Domínguez.
- A network was recently created bringing together research groups in the field of science and technology for heritage conservation in the Community of Madrid. This R&D network is coordinated by researchers from the Moncloa Campus (CSIC-UCM).
- Research in this field is supported by existing scientific infrastructures, such as the recently created CAI (Archaeometry and Archaeological Analysis) (UCM), the Petrophysics laboratories of the IGE-IGEO (CSIC-UCM) and the laboratories of the CENIM-CSIC.
- The location of the cluster in Madrid and the surrounding region provides significant added value: the Prado, Thyssen and Reina Sofía Museums, the Reales Sitios and important archaeological sites, as well as the Campus itself, declared a site of Cultural Interest, open up infinite opportunities for teaching and research in the area of cultural heritage.

Areas of action

**Transversal Action: *P1 Management of the Campus***

The cluster will be structured in three closely related main work areas:

- **Cultural Heritage and Museums.**
- **Natural Heritage.**
- **Architecture, Archaeology-Palaeontology Heritage.**

Actions: *P2, P3, P4*

Structure of the Cluster Work Areas

The table below summarises the structure of the work areas of the clusters.

Cluster	Work Areas	Actions
Global Change and New Energies	Transversal Actions: <ul style="list-style-type: none"> ▪ E1 Construction of EBM (Bioclimatic Multipurpose Building) ▪ E2 Creation of UPM-UCM CIMAM (Moncloa Campus Centre for Environmental Research) ▪ E3 Creation of the Incubator for Environmental Companies 	
	Sustainable Technologies & New Energies	E4, E5, E6, E7
	Observation of the System Earth	E8, E9, E10, E11
	Biodiversity Study and Conservation	E12, E13
Materials for the Future	Transversal Actions: F1 CMA (Advanced Microscopy Center)	
	Functional Materials	F2, F3
	Structural Materials	F4
	Biomaterials	F5
AgriFood and Health	Transversal Action: G1 Moncloa AgriFood Areas	
	Animal and Plant Production	G2
	Animal Health and Food Safety	G3
	Food Hygiene and Technology	G4
i-Health	Innovative Medicine (i- Health)	H1, H2, H3
	Medical Imaging (i-Maging)	H4, H5, H6
	Personalised Health (p-Health)	H7
Heritage	Transversal Action: P1 Programming and management of the Moncloa Campus Museum	
	Cultural Heritage and Museums	P2, P3, P4
	Natural Heritage	
	Architecture, Archaeology–Palaeontology Heritage	



5. Action Plan

The project is structured as a **collaborative agreement** between group institutions, guided by strategic themes: achieving scientific excellence and internationalisation, guaranteeing connectivity and clustering, converting the campus into a sustainable system, providing on-campus student employment opportunities and contributing to innovation and development. This is in pursuit of a plural and participative campus, inspired by the transforming power of diversity, exchange and dialogue. An efficient campus, with transparent governance, open to all the people and institutions it comprises and also to interaction with the wider social, economic and cultural fabric.

This section summarises first, the actions contained in the action plan. All the actions are described in a brief outline summary. A more detailed description of each can be found in the additional section documents.

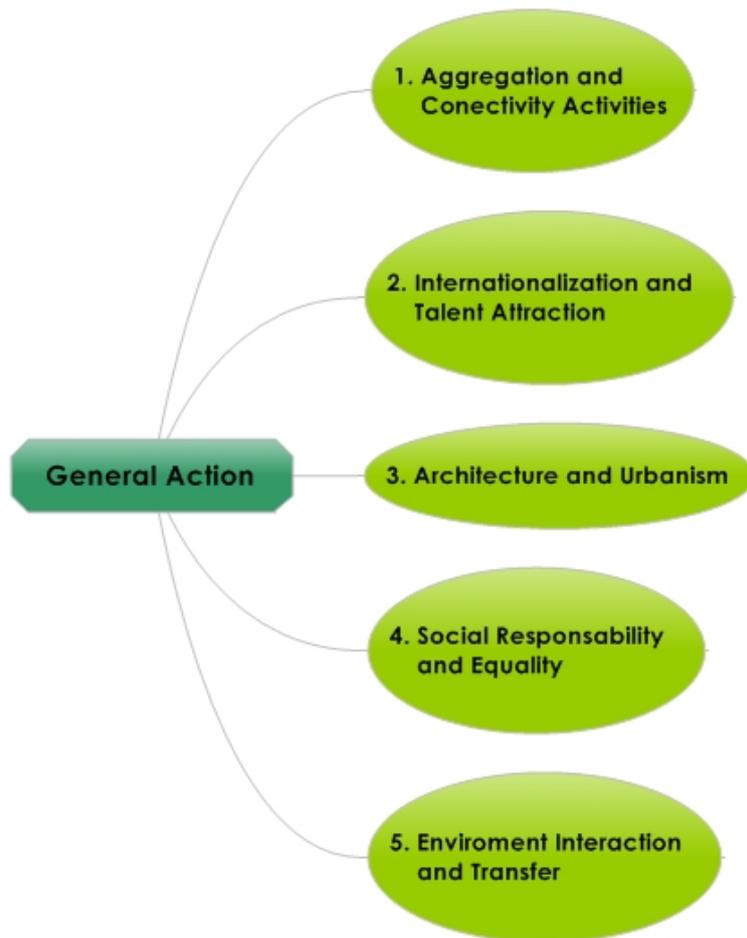
Section 5.1.1 lists what can be called general actions, those directed to achieving the strategic objectives but which are not linked to any of the clusters, although they may in some cases be carried out in coordination within each cluster. These are actions directed to all those participating in the Campus and they form the horizontal structure of the proposal, as well as some of its general identifying traits. Section 5.1.2 lists the thematic actions proposed in each of the five clusters.

The tables in section 5.2 summarise the actions as a whole, specifying for each of them the areas mentioned in the call for proposals in which they are included. Sections 5.3 and following list briefly other important features of the action plan, including the project calendar, the management format of the plan itself and some alternative routes for capturing resources for the project development, apart from the CIE call for proposals.

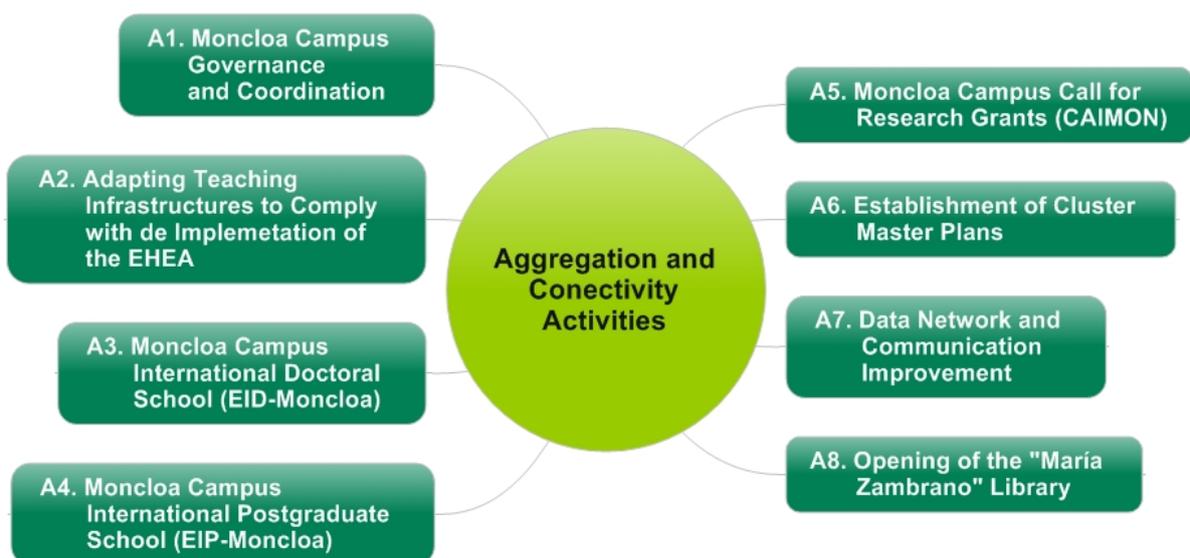
5.1. Actions

5.1.1. General Actions

The general action plans have been grouped into five general units or programmes, to facilitate their interpretation, and are organised around the established strategic objectives.



5.1.1.1. Coordination and Connectivity Actions





A1. Governance and Coordination of the Moncloa Campus

The management and governance of the Action Plan are described below, in point 5.5., and the general governance and structure of the campus are described in point 6.

A2. Adapting Teaching Infrastructures to Comply with Implementation of the EHEA

To comply with the implementation of the European Higher Education Area (EHEA) the proposals are to:

1. Adapt classrooms, spaces and furniture to allow more flexible, mobile learning areas to facilitate student-teacher interaction.
2. Introduce new classroom teaching tools (electronic whiteboards, cameras etc.) which will allow real time online uploads of teaching materials and classes.
3. Set up five multimedia classrooms, one per cluster, to allow on-line teaching in real time and teaching inter-relationships between the universities on the campus and other Spanish or international universities.

A3. Moncloa Campus International Doctoral School (EID-Moncloa)

An International Doctoral School will be created within the Campus leading to the presentation of doctoral theses within the research areas of the thematic clusters, co-directed by members of at least two of the group institutions. The EID-Moncloa will lead to the awarding of Doctorates from both universities, the UCM and UPM.

All the theses defended in the EID-Moncloa will be subject to strict quality control: they must have a European Doctorate mention and be written and defended in English before an international board, including at least two external referees.

A4. Moncloa Campus International Postgraduate School (EIP-Moncloa)

An International Postgraduate School will be set up on the Campus which will be responsible for the study, design and implementation of the inter-university Masters qualifications offered by the participating universities in the proposal, in collaboration with other public and private institutions.

Drawing up this proposal has offered an insight into the enormous potential for cooperation at postgraduate level if the two universities join forces. The fact that very similar Masters currently exist at the two universities was also noticed. The EIP-Moncloa will allow the rationalisation of existing programmes in a redesign more in keeping with the Campus proposal, making better use of resources and internationally more attractive. The implementation of the new Masters will start in the academic year 2010-11 and all Masters offered by the EIP-Moncloa will share the following characteristics:

- They will be designed for an international environment and will be conducted in English.



- The teaching staff will be professionals or researchers at the highest level, including international teachers.
- They may be semi-classroom based, through on-line teaching using the virtual campus and video conferencing tools of the UCM and UPM universities.

The proposed Masters under consideration include:

- Master in Sports Performance (combining technical aspects (INEF, UPM) with medical, nutritional and physiotherapeutic content (Health Sciences area, UCM).
- Master in Scientific Communication and Knowledge Dissemination (combining a basic and applied knowledge approach and the use of new technologies).
- Master in Environmental Studies.
- Master in Heritage Studies.

A5. Moncloa Campus Call for Research Grants (CAIMON)

To act as a stimulus and incentive for joint research projects by research groups from the institutions included in the project, there will be an annual Call for research grants open to the groups participating in the clusters. All the proposals will have to be co-directed by at least two researchers from the two universities or, at least, one researcher from the CEI plus one belonging to one of the partner institutions.

These grants are intended to act as seed capital for the creation and launch of inter-university and interdisciplinary research groups (all proposals must be co-presented by at least one researcher from one of the coordinating universities and at least one researcher from the other university or from one of the group members), which will then function independently, obtaining their own funding and research contracts.

A6. Establishment of Cluster Master Plans

Each cluster must develop an action master plan within six months to ensure the strategic goal of connectivity. The Master Plan will be monitored annually.

A7. Improvement of the Data and Communications Network

The aim of this action is to provide greater accessibility and bandwidth to provide new services and applications (new wireless access points) for the university community, to comply with the requirements of the new R&D national and international initiatives (with more demanding network requirements). All the developments and implemented services will consider the info-accessibility recommendations included in the report by "Fundosa Accesibilidad" for the Moncloa Campus.

A8. Inauguration of the María Zambrano Library

To increase the number of study places in the Campus Library, the inauguration of the María Zambrano Library will shortly take place. This new facility is located under the square formed by the two new buildings, next to Law and Philosophy, immediately to the west. The work is now complete pending the internal installations for the library stacks (with capacity for 2 million volumes) and the reading room with a capacity of more than 2000 new study places.

5.1.1.2. Internationalisation and Talent Recruitment



A9. Programme for International Talent Recruitment (PICATA)

This is intended to attract outstanding students and researchers from all over the world to the Moncloa Campus at three levels: Pre-doctoral, Post-doctoral and Senior. The contracts will be signed by one of the coordinating universities, aiming at a balanced distribution of contracts and scholarships.

This Action is divided into three sub-actions:

1. **International call for doctoral scholarships:** 20 doctoral scholarships will be offered for a four-year period starting in the academic year 2010-11.
2. **International call for post-doctoral contracts:** 15 post-doctoral contracts will be offered for a two-year period starting in the academic year 2010-11.



3. **Chairs of Excellence Programme:** an annual Chair for one visiting professor will be set up in each of the clusters which will be occupied by invitation, for continuous periods of at least three months, by a high profile, prestigious researcher in the area concerned.

In all the above cases the possible extension of the programme with private sector funding will be examined.

A10. International Visitors Reception Centre (CIVA)

The aim of this action is two-fold:

- a. To set up a Visitor Centre in the usual sense of the term, responsible for providing information to campus visitors (e.g. architectonic, historical, environmental, events information) and used as the starting point for possible visitor tours to explore the campus.
- b. To set up an international reception centre for students and researchers joining the campus with a “one stop” point for information and problem solving on all aspects of settling into the campus.

A11. CEI Moncloa International Meeting Centre (CEI² Moncloa)

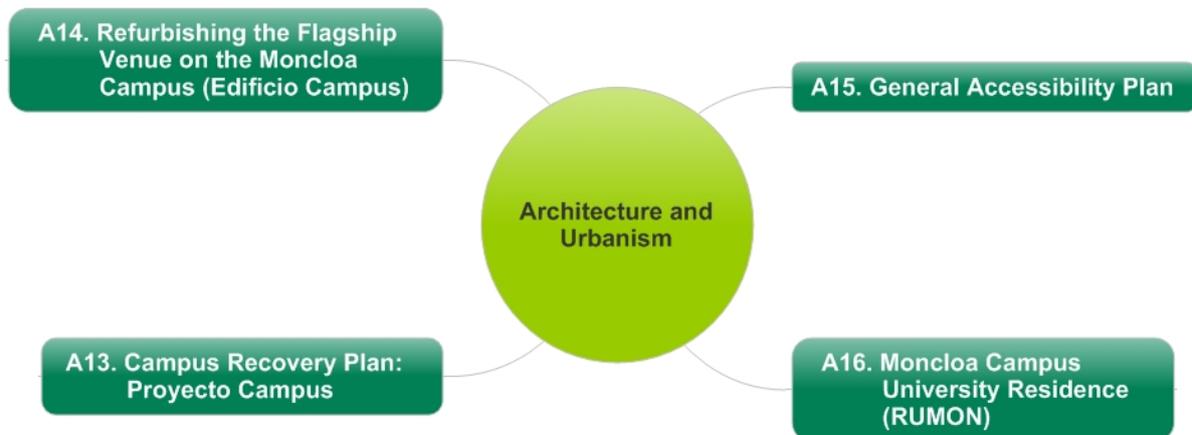
The transformation is envisaged of the current *Colegio Mayor Cardenal Cisneros* (UCM) into the CEI Moncloa Campus Meeting Centre to provide a medium-sized centre (max. 100 places) including possible on-site accommodation for at least some participants.

A private partner will be sought to carry out the project and later running of the complex through an appropriate agreement, to guarantee the viability and maintenance of the centre in line with required quality standards.

A12. International Office for Communication and Knowledge Promotion of the Campus (OICD)

The OICD is in charge of the design, coordination and implementation of the outgoing communication activities and knowledge dissemination activities generated on campus. In particular, it will be in charge of image and internationalisation campaigns, coordinating the existing scientific dissemination platforms in partner universities, the Campus Radio and Television, Campus Museum, Botanical Garden and Mediterranean Gardens, presence at Science Fairs, etc.

5.1.1.3. Architecture and Urban Planning/Accessibility



A13. Campus Recovery Plan: Project Campus

The objective is to regenerate common areas of the campus from the viewpoint of urban planning, environmental considerations, mobility and sustainable development, with an ongoing renovation programme to halt the growing deterioration of these areas and reduce excessive surface traffic.

As well as monitoring the progress of the work envisaged in the *Plan Especial de la Ciudad Universitaria (PECU)*, the following are proposed:

1. Actions to recuperate woodland areas and other green spaces used by the public on campus.
2. Actions to control surface road traffic and parking.
3. Implementing a system of bicycle stations for on-campus mobility and defining a cycle lane to connect different university areas.
4. Designing a network of well-defined, priority pedestrian routes, with the appropriate street furniture installed.
5. Launching an awareness campaign for a clean and tidy campus.

A14. Rehabilitation of the Moncloa Campus Flagship Building (Edificio Campus)

The building currently housing the Costume Museum (and called here *Edificio Campus*) will be refurbished and adapted to its new use as the flagship building and focal point of the Campus. It will be used for Campus government and for some of the services and actions put forward in the proposal.



A15. General Accessibility Plan

Taking the **diagnosis of the present status, carried out by Fundosa Accesibilidad** as a starting point, this Plan aims to improve overall accessibility, both external and internal, affecting buildings and other locations, including different activities on campus. The planned actions will be applied transversally by 2012, incorporating a global accessibility management system through the **UNE 170001, 1-2 certification process** to obtain this certification. This system includes actions for accessibility of internal and external environments -including accommodation- but also refers to accessibility to teaching facilities, to non-academic social, cultural or sports activities, and to services and management procedures on campus.

This programme will also include campus-wide support for people with disabilities, supported by approved Campus norms. This programme includes the existing Accessibility Plan, with a global cost of 7 million euros financed jointly by the Community of Madrid.

A16. Moncloa Campus University Residence (RUMON)

The remodelling of the current *Colegio Mayor Antonio de Nebrija* (UCM) is envisaged to provide a university residence with small apartments allowing students a degree of independence, kitchen facilities etc., and offering a different residence format from the existing *colegios mayores*. An Accommodation Office will be set up on campus as part of the CIVA, to offer information and help in finding accommodation for campus students.

The planned residence will also be used to facilitate and encourage recruitment of international students and researchers, in collaboration with the talent recruiting programmes, and for visiting professors.

A partner will be sought to carry out the project and subsequent running of the complex through an appropriate agreement to guarantee the viability and maintenance of the centre in line with the required quality conditions or it may be managed through a joint action with the Ministry for Housing (MVIV) and Madrid City Council.



5.1.1.4. Social Responsibility and Equity



A17. Social Responsibility Campus Plan

Create and include in the Campus Management a social responsibility on campus master plan to be applied to all actions, themes and strategic objectives as well as to people, services and areas on campus. This plan will define action areas and specific content including social and cultural aspects of the campus such as fostering socially responsible values or participation in development cooperation or voluntary work; environmental aspects such as energy efficiency or promoting sustainable transport; and economic aspects including ensuring management based on effectiveness, efficiency and transparency criteria.

The implementation of the Plan will include new tools for definition, evaluation and measurement, basically a Campus Code of Conduct and the annual report “Moncloa Campus, a Sustainable and Responsible Campus” based on a metrics scorecard. The Campus will also sign the UN Global Compact.

A18. Campus Gender Equity Plan

This Plan will be based on plans from the partner institutions and will contain core and shared elements of those plans. The following are envisaged : Include specific information designed to attract talented women to study areas where their participation is low in all pre-university student information campaigns; expand the already existing UCM **PequeCampus** nursery school, which will be open to the whole campus from the 2010-11 academic year to improve the balance between personal life, study and work; implement awareness and information campaigns on gender violence and create intervention protocols in this area; carry out gender equity awareness campaigns on campus, especially for students.



A19. Campus Employment Programme

An increase in scholarships and aid (collaboration scholarships and others) will be part of this plan to help support employment on campus, with the additional goal of encouraging the participation of women. Additionally, the programme will aim to include the maximum possible training content and will focus on maximum relevance activity areas - libraries, research related services, etc.-, and include supervision by teachers.

The programme also includes employability training, in the form of short courses, workshops or seminars available throughout the academic year using an active and participative methodology which will target the skills and competencies which enhance employability ; the Moncloa Campus Enterprising Student Award will be announced, with municipal and regional co-funding.

A20. Healthy Campus Programme

Action will be taken to promote health on campus, to improve working conditions and the physical, environmental and psychosocial environment for all who work and study on the campus, with particular emphasis placed on the following aspects:

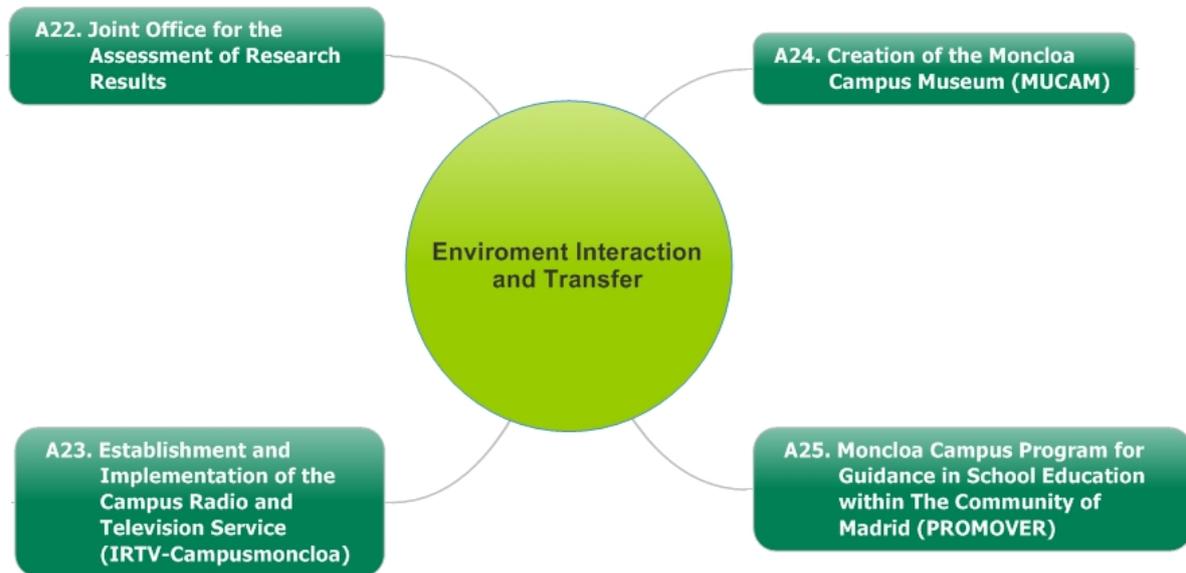
- Prevention programmes to reduce work-related risks and physical and psychological harm.
- Sustainable development and social responsibility.
- Development of life skills and human strengths.
- Development of a healthy lifestyle (healthy diet, physical exercise, banning tobacco and other addictive substances).
- Creation of a positive psychosocial environment.

The **Observatory for Campus Health and Welfare**, a health and welfare watchdog group, will be set up to monitor and follow up the programme.

A21. Moncloa Student Centre Programme

The goal of this programme is to encourage student participation in campus life and student associations as well as in academic, social, cultural or environmental projects of their own. Some of the proposed actions are as follows: creation of a **new site for the Moncloa Student Centre**, to be located in one of the current student residences which will be expanded; weekly publication on the Student Centre website of a section including planned activities and a space for student associations to publish their own information; hold the **Student Association Fair** at the start of the academic year, a week when all the student associations on campus can display their activities and proposals; hold an International Student Day once a year and also specific student nationality days with the cooperation of the respective Embassies; publish a quarterly competition for funds to support student projects.

5.1.1.5. Relationship with the Research Environment and Knowledge Transfer



A22. Joint Office for the Evaluation of Research Results

Within the strategic objective of knowledge transfer, the experience, tools and channels for transfer of research findings developed since 1989 by the Research Knowledge Transfer Offices (OTRI) in the UCM and UPM will be used to enhance the protection of results and use of patents obtained by the clusters.

A23. Creation and Implementation of the Campus Radio and Television Service (IRTV-CampusMoncloa)

The launch is planned of the Campus Radio Television service (IRTV-CampusMoncloa), via webcast. This will help to relate the campus to its surroundings, while enabling the students from the Schools of Information Sciences, Telecommunications Engineering and Computer Science to learn and acquire practical work experience. The IRTV-CampusMoncloa will be a key tool for the social and international projection of the campus and for the spread and dissemination of knowledge, in collaboration with the OICD (International office for Communication and Knowledge Promotion).

A24. Creation of the Moncloa Campus Museum (MUCAM)

The aim is to create a museum on the Moncloa Campus (MUCAM) to include both the rich artistic heritage of the partner universities and their thematic collections. The work to refurbish the temporary exhibition rooms will be carried out in 2010; during that time the existing collections will be uploaded so that they can be visited online. This museum will be one of the key links between the Campus and its wider environment.



A25. Moncloa Campus Programme for Guidance in School Education Within the Community of Madrid (PROMOVER)

The aim is to inform secondary school students about the institutions and educational possibilities available on the Moncloa Campus, with visits to Secondary Schools (IES) in the Community of Madrid and the surrounding regions (Communities of Castilla y León and Castilla-La Mancha) and to increase the number of Educational Action Workshops held for students finishing secondary school. The collaboration of campus students, who will share their experiences, is especially important in these activities.

5.1.2. Actions in the Thematic Programmes

The following set of measures is scheduled for the clusters:

5.1.2.1. Global Change and New Energies

- ❖ **E1. Construction of a Multipurpose Bioclimatic Building (EBM).** This building (10,000 m²), located on the Moncloa Campus will house approximately 100 teachers/researchers, 100 research staff and 50 technical staff as well as various labs and equipment.
- ❖ **E2. The Joint UPM-UCM Centre for Environmental Research on the Moncloa Campus (CIMAM),** located in the EBM, to enhance the development of technologies applied to environmental contamination and decontamination. It will include remote sensing, monitoring and modelling facilities and, where appropriate, prevention or mitigation of natural disasters and climate change.
- ❖ **E3. Creation of an Incubator for Environmental Companies Stage 1: Chemical Incubator.** Located in the EBM this will be the first incubator for environmental companies in the area, open to any spin-offs generated in public institutions located on Campus. The creation of a chemistry incubator is planned in the Madrid Science Park.
- ❖ **E4. Creation of a Centre for Research into Soil Degradation and Alternative Land Uses.** Located in the EBM this will bring together techniques for the characterisation, evaluation and monitoring of degraded soils and their regeneration.
- ❖ **E5. Creation of a Centre Supporting Research into Photovoltaic Device Technology.** Located in the EBM this will be equipped with non-conventional facilities to promote the UPM Solar Energy Institute, the CIEMAT Photovoltaic Unit and UPM Laser Centre.



- ❖ **E6. Development of Support Programmes for the ITER Project.** Support will be provided for the following actions: Development and characterisation of W-V and W-Ti tungsten ODS alloys by Mechanical Alloying (MA) and HIP, the EFDA (European Fusion Development Agreement) Technological Programme, Activity 2 (“Structural Materials Development”), and the nuclear fusion training programme.
- ❖ **E7. Creation of a Network for Atmospheric Pollutant Dispersion Modelling.** Improving numerical simulation models of pollution dispersion incorporating the latest advances in physical and chemical processes.
- ❖ **E8. Creation of a Remote Sensing and Monitoring Laboratory.** Aimed at creating devices capable of monitoring the Earth's surface from space and from earth. Topics include : classification of plant cover, natural and anthropogenic deformations, changes in soil humidity and temperature, erosion, forest fires, etc.
- ❖ **E9. Laboratory for Climate Change and Impacts.** For the characterisation, analysis and modelling of the climate system and climate change impacts on the biosphere, ecosystems and agro-ecosystems. Coverage will range from palaeoclimatic research to late 21st century climate change scenarios, along with the development and optimisation of new models, and uncertainty assessment.
- ❖ **E10. Moncloa Natural Hazards Network.** Including research, development and innovation in new technologies aimed at studying the processes that cause natural disasters. Modelling studies will be enhanced and early warning systems will be developed.
- ❖ **E11. Advanced Scientific Instrumentation Laboratory (LICA).** Focused on the design and development of sensors aboard aircrafts and satellites, and ground systems for monitoring the Earth's surface and astronomical instrumentation.
- ❖ **E12. Creation of a Joint Unit for ex situ Conservation.** To conserve, improve, reform and prepare the UPM Plant Germplasm Bank, the UCM research greenhouse and maintain material for genetic use (setting up a DNA databank).
- ❖ **E13. Creation of a Programme for the Cataloguing, Conservation and Dissemination of Biodiversity in the University City.** To promote the herbaria and collections of the UCM and UPM and their incorporation into the international Global Biodiversity Information Facility project (<http://www.gbif.es/>). On-campus educational biodiversity trails on the campus will be designed (with online catalogues), intended for campus members, non-university education centres in the Community of Madrid and visitors in general.



5.1.2.2. *Materials for the Future*

- ❖ **F1. ICTS of the Advanced Electron Microscopy Centre.** Incorporating the two new TEM and STEM ultra high resolution electronic microscopes, to obtain images between points smaller than 1 Å (0.05 Å en TEM), the first in Europe with these characteristics.
- ❖ **F2. Platform for the Design and Construction of Electromagnetic Sensors and Actuators.** To develop sensors for use in medicine, radar and railway technology and foster the integration of researchers in companies in the sector.
- ❖ **F3. Workshops for the Development of New Thin Film Materials.** To develop new thin film materials for nanoelectronic sensors and devices, researching phenomena occurring at interfaces between complex oxides to produce devices with new functionalities.
- ❖ **F4. Mechanical Properties Workshop: Durability and Sustainability of Materials.** For the characterisation, modelling and, where possible, advanced design of composite materials, alloys and compounds of current interest such as ceramics or polymers.
- ❖ **F5. Workshop for the Design of Biomaterials for Bone Tissue Regeneration.** To design new materials for use in bone regenerative medicine, to prepare materials suitable for patenting and clinically tested to regenerate bones and/or restore their function in the body.

5.1.2.3. *Agri-Food and Health: the Agri-Food Corridor*

- ❖ **G1. Creation (Environmental Restoration and Land-Use Planning) of the Moncloa Agri-Food Corridor,** providing a focal point for sustainable research and innovation in agricultural, veterinary and food sciences, planning and protecting the environment and implementing energy sustainability programmes.
- ❖ **G2. Development of an Integrated Agricultural Systems Consortium: Sustainability, Environmental Services and Risk Management.** A multidisciplinary consortium to increase agricultural system productivity by improving the use of natural resources, balancing economic and environmental sustainability and reducing the pressure on ecosystems.
- ❖ **G3. International School for Communicable Animal Diseases (EIEAC).** Located in VISAVET and addressing the technical and scientific training of worldwide specialists in communicable animal diseases.
- ❖ **G4. Developing Safety and Technology Sub-units for IMDEA-Alimentación,** which will be located in the Moncloa Agri-Food Corridor so enhancing interaction at all stages of the food chain.



5.1.2.4. Innovative Medicine (i-Health)

- ❖ **H1. Creation of the Technical Unit for the Development of New Drugs and Pharmaceutical Technology.** Providing centralised management of research support facilities and equipment, offering services and advice to campus and other users through technical sections: Medical Chemistry; Development of pharmaceutical technologies; and Gene and cell therapy.
- ❖ **H2. Creation of an Advanced Platform for Pre-clinical Development.** Based on experimental laboratory models of diseases, this will identify and validate therapeutic and diagnostic targets and molecular and imaging markers, as well as conducting efficacy and safety studies.
- ❖ **H3. Developing a Clinical Validation and Pharmaco-vigilance Network.** To address the diagnosis and treatment of prevalent diseases holistically through interaction with the databases of associated hospitals, by allowing clinical validation of biomarkers and clinical trials and pharmaco-vigilance studies.
- ❖ **H4. Creation of an Advanced Biomedical Imaging Platform.** To enable the development of research programmes in molecular imaging for in-vivo visualisation of molecular processes.
- ❖ **H5. Creation of a Laboratory for new Nano-magnetic Markers and Radioactive Tracers.** To focus on the development of new radioactive tracers and nano-particulate and biocompatible biomaterials, with contrast agent properties in molecular imaging by positron emission tomography (PET), magnetic resonance imaging (MRI), computed tomography (CT) and optical imaging.
- ❖ **H6. Creation of a Laboratory for Advanced Biomedical Imaging Analysis.** To provide tools for biomedical imaging; it will assist in the quantification of images obtained and their interpretation, and the development of better quantification methods, while contributing to the selection of the most appropriate operating modes of existing equipment depending on the experiment.
- ❖ **H7. Installation and Consolidation of the Living-Lab.** Located in the ETS de Telecomunicacion this is a fully equipped house for anyone including persons with disabilities , with a flexible design that allows monitoring and testing of ICT applications for improving quality of life, especially where health is concerned. In the lab facilities Aml solutions of companies or technologies developed in other centres or laboratories can be implemented and intensively tested with real users over long time periods.



5.1.2.5. Heritage

- ❖ **P1. Programming and Management of the Moncloa Campus Museum (MUCAM).** The museum will offer educational activities, as well as engaging in dissemination and research functions, with the relationship of the campus with its environment as a key feature. The building will also house a *gypsotheque* (library of plaster models) that will be enhanced and conditioned to allow access and use.
- ❖ **P2. International Centre for Heritage Studies (CIESP).** In collaboration with Patrimonio Nacional, the IPCE and the Reales Academias de Bellas Artes y de la Historia this aims to be an international point of reference, for the research, discovery, study, conservation, management and valuing of heritage.
- ❖ **P3. Science and Technology of Heritage Conservation Laboratory Network RedLabPat.** Formed by laboratories to improve their quality and competitiveness, defining analytical protocols and intervention methods and developing new cultural heritage conservation techniques.
- ❖ **P4. Implementation of the Heritage Dating Laboratory (DACIPA).** To incorporate absolute dating luminescence techniques (TL and OSL) into the RedLabPat to widen the chronological spectrum, thus complementing the existing techniques of dendrology (INIA), radiocarbon (CSIC) and palaeomagnetism (UCM).



Table: Participation of partner institutions in thematic programme actions

Partner institutions \ Activities	Partner institutions													
	UCM	UPM	CIEMAT	CSIC	INIA	AEMET	ISCIII	HCSC	HGGM	IPCE	PN	IGME	Madrid City Council	Other
E1	X	X												
E2	X	X												
E3	X	X	X											
E4	X	X	X											
E5		X	X											
E6		X	X											
E7	X	X	X			X								
E8	X	X		X										
E9	X	X	X	X	X	X								
E10	X	X		X								X		X
E11	X	X												X
E12	X	X		X	X									
E13	X	X		X										
F1	X	X	X	X										X
F2	X	X	X	X										
F3	X	X	X	X										
F4	X	X		X										X
F5	X	X		X										
G1	X	X		X	X								X	
G2	X	X	X		X									
G3	X	X			X									
G4	X	X			X								X	
H1	X	X	X	X			X							
H2	X	X	X	X			X							
H3	X	X	X	X				X	X					
H4	X	X						X	X					X
H5	X	X	X											X
H6	X	X	X						X					
H7	X	X												
P1	X	X												
P2	X	X								X	X			
P3	X	X	X	X	X					X		X		
P4	X	X	X	X	X					X		X		



5.2. Matrix of Activities and Objectives

Table Matrix of actions and strategic objectives

Activities	OE1	OE2	OE3	OE4	OE5	OE6	OT1	OT2	OT3
A1. Governance and Coordination of the Moncloa Campus				X			X	X	
A2. Adapting Teaching Infrastructures to Comply with Implementation of the EHEA			X		X			X	X
A3. Moncloa Campus International Doctoral School (EID - MONCLOA)	X		X				X		
A4. Moncloa Campus International Postgraduate School (EIP-MONCLOA)	X		X				X		
A5. Moncloa Campus Call for Research Grants (CAIMON)	X	X						X	X
A6. Cluster Master Plans	X	X	X	X	X	X	X	X	X
A7. Data Network and Communication Improvement	X		X	X				X	
A8. María Zambrano Library	X		X	X	X			X	X
A9. Programme for International Talent Recruitment (PICATA)	X		X			X	X		X
A10. International Visitors and Reception Centre (CIVA)				X			X		
A11. International Meetings Centre (CEI ² Moncloa)						X	X	X	
A12. International office for Communication and Knowledge Promotion (OICD)							X	X	
A13. Campus Recovery Plan: Project Campus				X					
A14. Refurbishing the CEI Moncloa Flagship Venue (Edificio Campus)				X	X			X	
A15. General Accessibility Plan				X					X
A16. Moncloa Campus University Residence (RUMON)							X		
A17. Social Responsibility on Campus Master Plan				X	X				X
A18. Campus Gender Equity Plan					X				X
A19. Campus Employment Programme				X	X	X			X
A20. Healthy Campus Programme				X					X
A21. Moncloa Student Centre Programme					X	X	X	X	
A22. Joint Office for Evaluation of Research Results	X	X		X				X	
A23. Campus Radio-Television (iRTV-CampusMoncloa)			X	X	X	X		X	
A24. Creation of the Moncloa Campus Museum (MUCAM)					X	X		X	
A25. PROMOVER	X				X	X			X

**Table** Matrix of actions of strategic objectives and scope

Activities	Improved Teaching / EHEA Deployment	Scientific Improvement	Transfer	Comprehensive Social Campus	Environment Interaction
A1. Governance and Coordination of the Moncloa Campus	X	X	X	X	
A2. Adapting Teaching Infrastructures to Comply with Implementation of the EHEA	X			X	
A3. Moncloa Campus International Doctoral School (EID - MONCLOA)	X	X	X	X	
A4. Moncloa Campus International Postgraduate School (EIP-MONCLOA)	X	X	X	X	
A5. Moncloa Campus Call for Research Grants (CAIMON)	X		X		
A6. Cluster Master Plans	X	X	X	X	X
A7. Data Network and Communication Improvement	X	X			X
A8. María Zambrano Library	X			X	X
A9. Programme for International Talent Recruitment (PICATA)	X	X	X	X	X
A10. International Visitors and Reception Centre (CIVA)				X	
A11. International Meetings Centre (CEI ² Moncloa)	X	X		X	X
A12. International office for Communication and Knowledge Promotion (OICD)			X	X	X
A13. Campus Recovery Plan: Project Campus				X	X
A14. Refurbishing the CEI Moncloa Flagship Venue (Edificio Campus)	X			X	X
A15. General Accessibility Plan				X	X
A16. Moncloa Campus University Residence (RUMON)				X	X
A17. Social Responsibility on Campus Master Plan				X	X
A18. Campus Gender Equity Plan				X	
A19. Campus Employment Programme				X	
A20. Healthy Campus Programme				X	
A21. Moncloa Student Centre Programme				X	X
A22. Joint Office for Evaluation of Research Results		X	X		
A23. Campus Radio-Television (iRTV-CampusMoncloa)	X			X	X
A24. Creation of the Moncloa Campus Museum (MUCAM)	X			X	X
A25. PROMOVER				X	X



Table: Matrix of actions of thematic programmes and scope

Activities	Improved Teaching / EHEA Deployment	Scientific Improvement	Transfer	Comprehensive Social Campus	Environment Interaction
E1	X	X	X	X	X
E2	X	X	X		X
E3			X		X
E4	X	X	X		
E5		X	X		
E6		X			
E7	X	X	X		
E8	X	X	X		
E9	X	X	X		
E10	X	X	X		
E11	X	X	X		X
E12	X	X	X	X	X
E13	X			X	X
F1	X	X	X		
F2	X	X	X		
F3		X	X		
F4		X	X		
F5		X	X		
G1	X	X	X	X	X
G2	X	X	X		X
G3	X			X	
G4		X	X		X
H1	X	X	X		
H2	X	X	X		
H3		X	X		
H4		X	X		
H5		X	X		
H6	X	X	X		
H7	X	X	X		X
P1	X			X	X
P2	X	X	X		X
P3	X	X	X		
P4		X	X		



5.3. Relationship with the Surroundings

Apart from its relationship with productive sectors resulting from the research and knowledge transfer contracts in the various clusters, its situation as an urban campus in the city of Madrid allows the Moncloa Campus to have a special relationship with the City Council.

The City Council is a part of the University City Consortium, together with the three universities located on the campus, and therefore it plays a decisive role in its maintenance, organisation and urban development. A result of this has been the building of the bicycle lane that goes through the campus and the large underground car park, the largest in the city, which will help improve road traffic conditions in the campus and in the city.

The Madrid City Council is strongly committed to the Moncloa Campus project, through the City Council-Moncloa Campus framework agreement for mutual collaboration on:

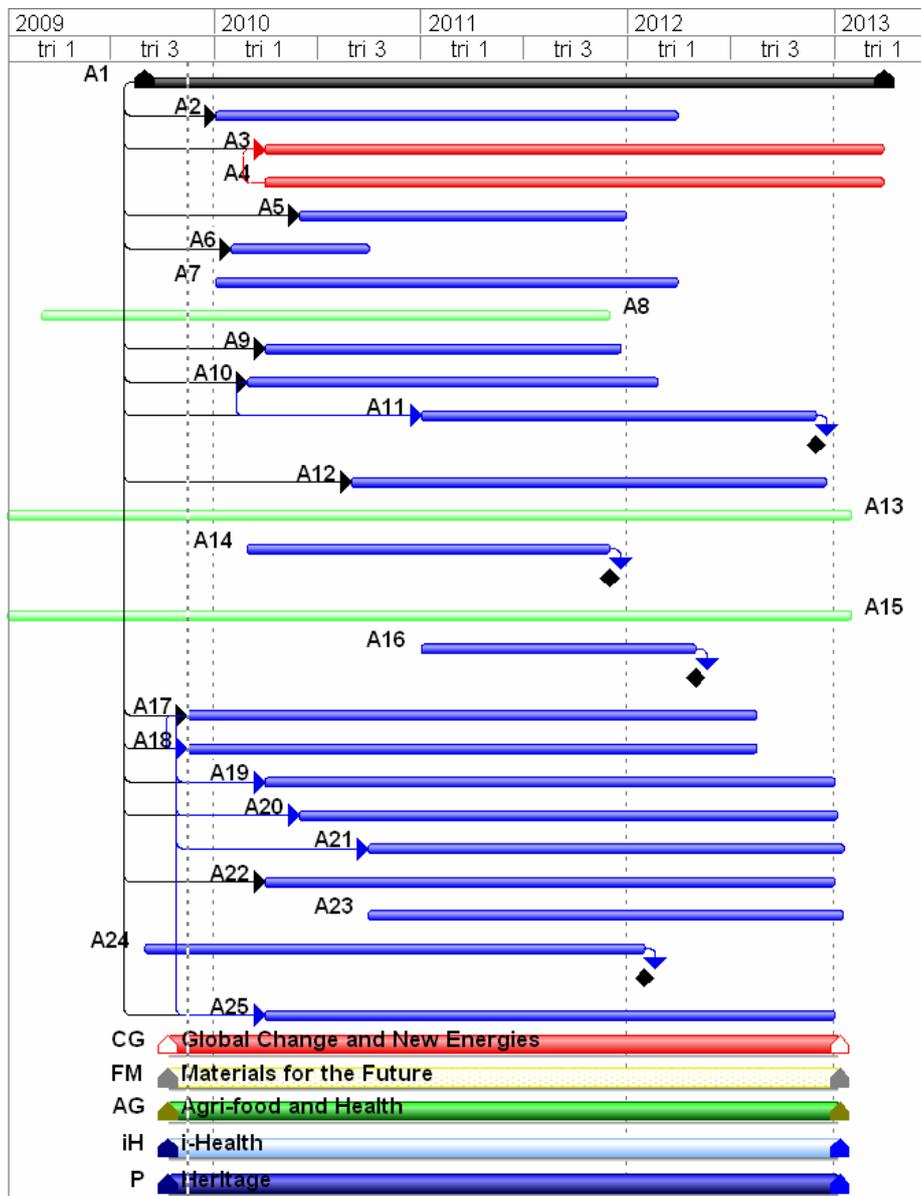
- a. Campus internationalisation:
 - A “Global Madrid” office of the Madrid City Council will be set up, aimed at supporting the city’s internationalisation in Research and Higher Education areas.
 - The Moncloa Campus and its image will be included in all international promotional campaigns for Madrid, starting with the City of Madrid stand at the upcoming Universal Exhibition in Shanghai.
 - Recognition will be sought for Madrid as a City of Science and Innovation within the State Fund for Employment and Local Sustainability of the General State Administration.
- b. Knowledge transfer, with actions in the areas of:
 - Animal Health.
 - Food Safety.
 - Biodiversity.
 - Monitoring of pollution, of both air and noise in the city.
- c. Opening of the campus for the people of Madrid to enjoy:
 - Holding cultural events, which already have a longstanding tradition with the Complutense Concert Series, Universimad, Madrid Rock, Complujazz and the series of concerts and operas (joint action with District 9) in the Ramón y Cajal Hall at the School of Medicine.
 - Organizing sports events.
 - Including the Campus Museum in the city’s museum network.

Simultaneously, several activities aimed at primary and secondary schools in the Community of Madrid are planned, including:

- d. Pre-university Orientation Seminars for students completing upper secondary education, which have become a longstanding tradition.
- e. Implementation of campus tours, guided by university students hired and trained for this purpose, with special emphasis on the Botanical Garden and the Mediterranean Garden, given their educational potential.

5.4. Timeline

The above actions have been planned chronologically to obtain a Action Plan programme , shown below as a Gantt chart for each of the thematic programmes and for the set of general aims:





5.5. Action Plan Management and Governance

The Plan has been designed and organised to integrate people, so that all participants can support and endorse the actions to achieve the objective of turning the Moncloa Campus into an international reference. Roles and responsibilities are clearly defined and lines of communication will be established with plan management to correct any issues that may arise.

All actions will be assigned to the person in charge, who will be responsible for overseeing the execution of tasks and timing of deliverables as well as for communicating any relevant incidents to the Board of Governors of the Moncloa International Campus of Excellence.

The teams from the clusters and those responsible for the strategic objective actions will meet regularly (at least once a month) with the managers from the control office.

A twice monthly meeting will be held of the coordinating board for each cluster attended by at least one representative of each partner institution. These meetings will cover the main issues related to the execution of the CEI Moncloa Campus Strategic Plan, the current state of the various actions, and decisions will be made affecting critical aspects. Each cluster will also prepare an annual report to be sent to the Governing Board, in charge of the execution and follow-up of the Strategic Plan.

A meeting is also planned with the various managers of the general actions every semester to follow up compliance with the project objectives set.

5.6. Fund Raising/Maximising

The partner institutions in the Moncloa Campus have agreed to implement and subsequently continue the Moncloa Campus initiative by providing their own resources and seeking external contributions to sustain their efforts. The first steps towards the preparation of this joint strategy were conducted with their own funds and a grant from the Ministry of Education for development and definition of the Strategic Plan for the Viability and Conversion to an International Campus of Excellence.

However, to undertake the activities needed to implement this proposal, it is essential to receive the funding contemplated under Order PRE/1996/2009 for execution of the strategic plan. The partner institutions are aware that they will have to seek other sources of funding to support lasting integration beyond the period covered by the above Ministerial order. The financial plan will be perfected and completed throughout the life of the Moncloa Campus, developing our current vision of this plan as follows:



- **Private funding** : The International Campus of Excellence and the visibility of our results will increase contacts with those sectors interested in research collaborations with our community. These collaborations will be linked to programmes for sponsoring activities requiring the collaboration of foundations and university programmes of large companies in the thematic areas of the clusters. Participants already receive direct funding from these institutions, and this will be the basis for a joint proposal to the sponsoring companies of some of the Moncloa Campus activities.
- **Individual participant funding** : The activities will be supported with the individual funds of the participants through their regular actions and with the contributions needed to conduct some of the priority actions.
- **Funds from the Madrid City Council:** through grants for undertaking specific actions within the collaboration agreement with the City Council, as well as continuous funding within the University City Consortium.
- **Funds from the Community of Madrid** : through calls for proposals from the Regional Science and Technology Research Plan, grants for specific actions (such as the above accessibility plan) and other grants that may arise in future.
- **National Funds:** through various regular calls for proposals (National Plans, Science Parks, OTRIs -Research Results Transfer Offices-, recruitment of human resources, etc.).
- **European Union Funds:** Within the European Union, there are various programmes and initiatives that can help support and drive the Moncloa Campus: the 7th Framework Programme of the European Communities for Research and Technological Development (FP7), the Framework Programme for Competitiveness and Innovation (CIP), Erasmus-Mundus, etc. We are committed to recurrently using, in a joint, coordinated and coherent manner, the existing EU programmes and initiatives to support the lasting integration of our research efforts.
- **Extra-European Public Funds:** Some international organisations and Extra-European countries have international cooperation programmes for research and education (for example NATO or the NSF in the United States). Although this will probably represent a limited source of funds for the Moncloa Campus, it cannot be ignored as it also provides an excellent framework for disseminating excellence and collaborating with some of the best research groups specializing in the cluster themes.



6. Governance

6.1. Coordination and Management Structures

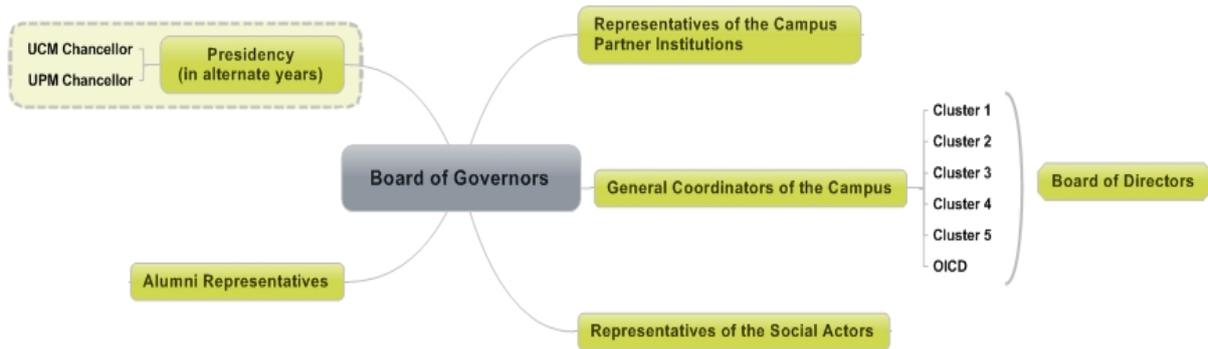
In order to establish, run and coordinate the International Campus of Excellence an ad hoc organisational structure has to be set up that is able to drive and manage the cluster of entities and lead the proposed actions. This structure will be located in the Campus Headquarters and will comprise a Board of Governors and a Board of Directors. Two general coordinators will be designated to coordinate the project, one from the UCM and one from the UPM. Each will preside the Campus Board of Directors in alternate years.

The Board of Governors will play an executive role and will make the strategic decisions which affect the development of the Campus. Specifically, it will approve the economic plan for the Campus and the budget allocation for the different actions. Its members will be :

- The Chancellors of the Complutense University (UCM) and the Technical University of Madrid (UPM) who will assume the presidency in alternate years.
- representatives of the Campus partner institutions.
- the general coordinators of the Campus.
- representatives of the social actors.
- student representatives.

The Board of Governors will be gender-balanced and meet at least once each semester.

The Board of Directors will be made up of the two general coordinators, those responsible for each cluster and the head of the International office for Communication and Promotion (OICD) of the Campus. Their function will be to monitor and plan the campus activities. In parallel, each cluster will have a coordination body to be co-directed by two professors from the UCM and UPM who will be responsible for the cluster. The coordination body will have representatives from each partner organisation involved in the cluster.



The coordination activities at different levels will be reinforced by the administrative and management structures of each partner as well as by ad hoc groups created to analyze specific actions or issues (for example, the creation of joint bachelor's and post-graduate degrees in each of the clusters) and which will involve only the representatives from the partners involved.

6.2. Relationships with other Campuses of International Excellence and Similar Initiatives

Responsible governance in the Moncloa Campus of International Excellence cannot be limited to internal issues, but should be open to the outside world. A project of excellence should be born with the ambition of extending itself beyond its partners and carrying out actions to disseminate excellence to the region, nation and Europe. It should emerge with the idea of relationships with other Campuses which have gone through similar processes (such as *Exzellenzinitiative* in Germany, *L'Opération Campus* in France and *A new 'University Challenge'* in United Kingdom), to learn from them and share experiences. As a result, from the outset two tasks have been assigned to the Board of Directors and the International office for Communication and Promotion (OICD):

- ❖ The creation of a map of universities and European centres of knowledge and excellence with a special emphasis on those that have created clusters.
- ❖ The promotion of the *European Network of Campuses for Excellence (ENCE)*.

6.3. Visibility

The OICD will be responsible for creating a Moncloa Campus identity based on the Vision and the Campus Image (logo). This will be included in the corresponding identities of the coordinating universities and other partner institutions and specific actions will be carried out to increase the project visibility.



As part of the strategic objective of creating an identity for the Moncloa Campus, a well-defined communications plan is essential, in particular including knowledge dissemination activities and efforts to capitalise the research and work done on the Campus.

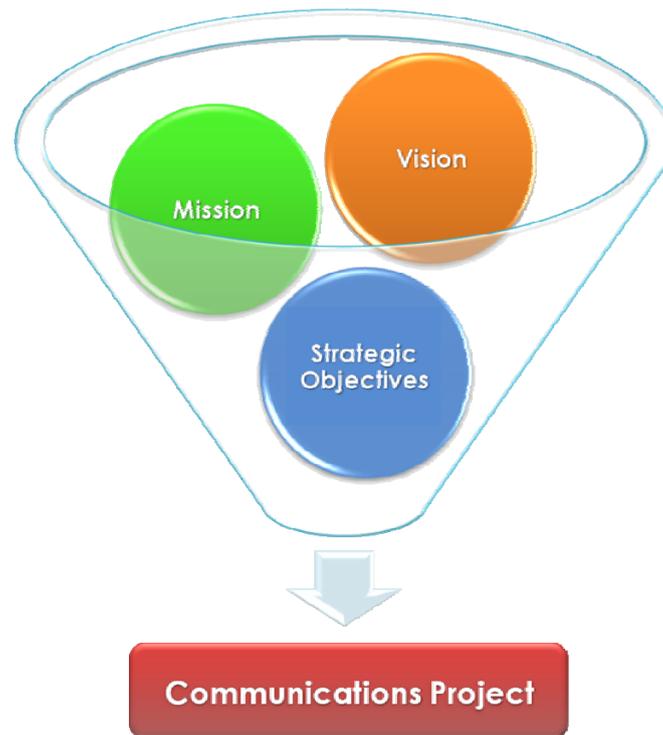
In order to maximise the impact of the Campus of Excellence, visibility will be achieved through the actions of the Campus itself (calls for proposals to attract talent, international gatherings, scientific publications, etc.) as well as international communications efforts using campaigns for the international promotion of the Campus based on the following aspects:

- ❖ Use of the Moncloa Campus logo in all scientific events that take place in the partner universities.
- ❖ Use of the Spanish Presidency of the EU to internationalise the Moncloa Campus.
- ❖ Joint use of the Campus logo when partners participate in international fairs and events.
- ❖ Multilingual creation of any document related to the Moncloa Campus.
- ❖ Inclusion of the Moncloa Campus brand to emphasise author affiliation in publications where cluster members have participated: articles, conference presentations, books.
- ❖ Association with Madrid Global to promote the Campus in suitable international actions promoted by the city.

To highlight the activities of the thematic clusters, the institutional repositories of the partners in the CEI Moncloa ([E-Prints Complutense for UCM](#) and [Archivo Digital UPM for UPM](#)) must be coordinated so that the scientific and academic documentation generated by the clusters and the Campus in general can be consulted easily.

6.4. The International Communications Project

The communications plan and projects will be the specific examples of the efforts to promote the Moncloa International Campus of Excellence which will always be based on its strategic plan.



The first piece of the international communication project will be the Moncloa Campus's own multilingual website (www.ceicampusmoncloa.com) which will complement the institutional websites of the partners. This site will have individual sections for each one of the clusters and will contain specific blogs, podcasts, videocasts and forums which will be managed by the students hired as part of the search for talent (PICATA). Apart from the web itself, channels will be created in suitable sites (for example, YouTube), for the diffusion of videos for training or related to research; and, of course, the available social networking tools will be used to support this effort.

The international communication actions will concentrate on world regions and will focus their efforts on the European Union, Latin America, Northern Africa and Asia. As an example, the decision has already been made to include the Moncloa Campus in the City of Madrid Pavilion in EXPO 2010 in Shanghai.

As part of this strategy, special efforts will be made to set up collaborations or reinforce them with international initiatives that are already in place. Of note are those related to postgraduate education: the Fundación Carolina and the European Erasmus-Mundus initiative.

Finally, another aspect of the international communications plan is the publication of successes and results. This concept goes beyond mere knowledge dissemination and includes annual campaigns in relation to specific results to promote the Moncloa Campus. These campaigns will be based on integrated marketing communication tools and include advertising in mass media.