
Barcelona Knowledge Campus (UB+UPC)

Challenges and opportunities for academic cooperation between China and Spain

Prof. Manuel Barranco
University of Barcelona Rector’s Deputy for BKC
http://bkc.ub.upc.edu/
UB, an urban University
Merging our capabilities
Faculty of Mathematics and Statistics (FEM)
School of Industrial Engineering of Barcelona (ETSEIB)
School of Building Construction of Barcelona (EPSEB)
School of Architecture of Barcelona (ETSAB)

School of Telecommunications Engineering of Barcelona (ETSETB)
School of Civil Engineering of Barcelona (ETSECCPB)
Barcelona School of Informatics (FIB)
The complementary nature of the BKC’s scientific and technical profile stands as the project’s greatest contribution to the Campus of International Excellence.
Merging our capabilities

- **Total surface area**: 227 ha
- **Constructed surface area**: 515,000 m²
- **National students**: 42,720
- **Professors and lecturers**: 3,700
- **International students**: 2,886
- **Researchers**: 6,800
- **University graduates each year**: 5,329
- **Theses published**: 768
Process of modernization European Universities

France
Pôles de Recherche et d’Enseignement Supérieur (PRES-2006)
Map of PRES (2008)
Programme Campus (2008)
Lyon Cité Université
Campus Strasbourg
Université de Toulouse
12 selected campus

Germany
"Initiative for Excellence" (2006-2012)
9 selected campus

UK
A new “University Challenge” (DIUS, 2008)
(20 new centers/campus in 2014)
Strategic Development Fund (SDF)
(£ 150M 2010-11)
UNIVERSITY 2015 STRATEGY

CAMPUS DE EXCELENCIA INTERNACIONAL

AGGREGATION

Environment, territory,
Geographic space where
University plays a fundamental
Role
UNIVERSITY CAMPUS-XXI

INDICATORS OF EXCELLENCE

To develop the teaching,
research
And innovation strengths
Indicators of excellence
Masters of excellence
Quality of life

INTERNACIONAL REFERENCE

More international awareness
of the campus
Potential mobility
ERASMUS students
Researchers
New contracts for Professors
LOCAL ENVIRONMENT: DIFFUSION FROM CAMPUS TO SURROUNDING AREA
**BKC funding**

### 2009 CALL

**CEI – BARCELONA KNOWLEDGE CAMPUS**

- 12 M euros UB (M. Education) -- 3 M euros sub.MICINN
- 9 M euros UPC (M. Education) -- 1 M euros sub. MICINN

### 2010 CALL

**SUBPROGRAMME OF REINFORCEMENT**

- 540.400 euros subvention M. Education

**AGREEMENT WITH** Catalan Government

- 2,2 M euros

**SUBPROGRAMME INNOCAMPUS (MICINN)**

- 16 M euros (10 M UB + 6 M UPC)
Objectives of CIE- BKC

A. IMPROVING TEACHING ACTIVITIES
   - International positioning in masters and doctoral programmes, International Postgraduate and Doctoral School,
   - Generation of enterprise and innovation programmes to promote student skills and their employability

B. IMPROVING SCIENTIFIC ACTIVITIES
   - Grouping and organizing scientific infrastructures, Improving technological scientific equipment, Recruiting and training researchers and technologists

C. CAMPUS EVOLUTION TOWARDS A SOCIALLY INTEGRATED MODEL
   - Improving accessibility, adapting emergency and evacuation systems, Improving management of safety measures,
   - Sustainable building practices, managing energy resources, reducing and recycling waste

D. ADAPTATION AND IMPLEMENTATION OF EUROPEAN SPACE FOR HIGHER EDUCATION (EHEA)
   - Innovation in teaching, adapting facilities, classrooms and services, student employability, collaborations with secondary education and professional training centers

E. TRANSFER OF KNOWLEDGE AND TECHNOLOGY TO THE BUSINESS SECTOR
   - Creation of the Technological Innovation Centre, programmes to stimulate innovation, professionalization of research,
   - Group innovation management, new incubation infrastructures, consolidation and internationalization of research appraisal

F. INTERACTION BETWEEN THE CAMPUS AND ITS ENVIRONMENT
   - Creation of teaching, cultural, social and sport environments, improving mobility at the campus (pedestrian, bicycle, metro)
Agent of change in the productive model

The offering in educational training, transference and research is intended to foster productive models based on knowledge and innovation.
Agent of change in the productive model

Productive sectors based on knowledge and innovation
Current situation: 55%  Objective for 2015: 73%

BKC qualifications corresponding to emerging productive sectors
Current situation: 12%  Objective for 2015: 18%

Contribution of the BKC to R+D+i GDP in Catalonia
Current situation: 25.7%  Objective for 2015: 30%

National and international patents
Current situation: 192  Objective for 2015: 240
Drawing and stimulating talent

<table>
<thead>
<tr>
<th>Category</th>
<th>Current Situation</th>
<th>Objective for 2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>Doctorands</td>
<td>3,867</td>
<td>4,500</td>
</tr>
<tr>
<td>Offering of international master’s degrees</td>
<td>19</td>
<td>50</td>
</tr>
<tr>
<td>Researchers</td>
<td>6,800</td>
<td>7,500</td>
</tr>
<tr>
<td>Spin-off companies</td>
<td>47</td>
<td>60</td>
</tr>
<tr>
<td>M² available for spin-offs and knowledge companies</td>
<td>60,000</td>
<td>105,000</td>
</tr>
</tbody>
</table>
Drawing and stimulating talent

The BKC: a living ecosystem for drawing and stimulating talent

- Laboratories
- Spin-offs
- Doctors
- Patents
- International prestige

RESULTS

- Drawing talent
- Stimulating talent

Doctoral programs
BKC research groups
International master's programs
The student at the centre of the learning process

**Teaching innovation projects**
- Current situation: 76
- Objective for 2015: +30%

**Classrooms with internet connections**
- Current situation: 80%
- Objective for 2015: 100%

**Classrooms, laboratories and resource centres fully adapted to EHEA directives**
- Current situation: 30%
- Objective for 2015: 100%

**Secondary school students participating in campus initiatives**
- Current situation: 10,333
- Objective for 2015: +30%

**Participants in training programs in entrepreneurship and innovation**
- Current situation: 2,083
- Objective for 2015: 3,500
The student at the centre of the learning process

Traditional teaching models are giving way to a new model of learning with the student at its centre.
The notion of “international relations” has given way to the reality of “integrated internationalization”
Talent beyond borders

Master’s degree courses taught entirely in English
- Current situation: 16%
- Objective for 2015: 25%

Erasmus Mundus master’s degree courses
- Current situation: 9
- Objective for 2015: 15

International reference networks
- Current situation: 13
- Objective for 2015: 18

European and international projects
- Current situation: 46
- Objective for 2015: 60

International postgraduate and doctoral students
- Current situation: 3,163 (47%)
- Objective for 2015: +30%
International networks
An investment in excellence

The budgets for 2015 describe the resources needed to build a foundation for excellence.
Urban changes in the BKC
Improving the mobility

- Promote the use of Bicycle (Bicicampus)
- Electric vehicle
- Pedestrian Campus
- Mobility plans (2009-2011): measures to guarantee a more sustainable access to BKC
Mobility in the BKC

**Bicicampus**

*Bicycle parking in the BKC*

Loan system:

*Use of bicycle during the academic year, including insurance*

2003 = 291 places  
2011 = 1000 places
Mobility in the BKC

Electric vehicle

- Project Live
- Public-private joint platform
- Objective: To promote the development of electric mobility in BCN
- Electric charging point at BKC
Increasing the use of public transportation to access the Campus (Metro line 9 and tramway)
Pedestrian campus
Transfer from BKC to business sector

Current assets / Actions planned

1. Creation of the Technological Innovation Centre (CIT)
   - 30 scientific groups incorporated to TECNIO, brand promoted by ACC1Ó
   - Creation and development of CIT
   - Incorporation into the K2M building (BKC north campus) of the school management and support
   - Bringing together institutions and research groups of the BKC
   - Meeting point of research groups and companies for R+D+i projects
   - Promoting international collaborations
   - Assign staff to manage projects and the intellectual property, encouraging mobility between sectors and institutions
   - Increase and diversify revenue of R+D+i
2. Programmes to stimulate innovation

• Programme on Innovation in collaboration with the Barcelona Chamber of Commerce (includes UB Postgraduate Diploma)

• Knowledge 2 Market: University-Industry Collaboration
  18 ongoing projects, in the Information and Communications Technologies area (ICT)

• International Centre for Business Accomodation
• Knowledge to Market (K2M) Program
• R+D+i Mini Cluster programme
• Business-University programmes
3.1 Consolidation and internationalization of research appraisal and improving the results of knowledge transfer

- The FBG and the CTT are members of the ProTon Europe network (group of european offices for the transfer of research results)

- Emprendia Network, Latin American universities network for business incubation funded by the Santander group

- The European network EEN (Enterprise Europe Network): alert system “Partner Opportunity Alert” to identify european projects which require two partners: researchers and companies

- Innoversia, Inberso portals, internationally oriented

- Active participation in fairs and brokerage events (Bio Chicago, Biospain..)
3.2 Consolidation and internationalization of research appraisal

• Program of knowledge appraisal and transfer, promoting its internationalization
• Training of technical staff for international transfer
• Commercialization of industrial and intellectual property
• Proof of concept funds (help to draft the patents, patentability studies, prototyping, laboratory testing...)
• Creation of platforms for research groups and spin-off
• Partnerships with entities to receive the knowledge generated in R+D+i programs
Merging our capabilities to multiply excellence.

THANK YOU