



**Application for acknowledgement of Human Resources  
Excellence in Research incorporating the Principles of**

**“The European Charter of Researchers”**

**and**

**“The Code of Conduct for the Recruitment of Reserchers”**

**Action Plan 2017-2019**

**Institut d’Estudis Espacials de Catalunya  
(IEEC)**

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## 1. About the Institut d'Estudis Espacials de Catalunya (IEEC)

The Institute of Space Studies of Catalonia (IEEC<sup>1</sup>) was founded in February of 1996 as an initiative of the Fundació Catalana per a la Recerca (FCR), in collaboration with the University of Barcelona (UB), the Autonomous University of Barcelona (UAB), the Polytechnic University of Catalonia (UPC) and the Spanish Research Council (CSIC) with the objective of creating a multi-disciplinary and multi-institutional institute devoted to space research and their applications. The IEEC is part of the CERCA<sup>2</sup> network, the public Catalan network of *research institutes*. In 2006 the FCR was reformed (currently its name is Fundació Catalana per a la Recerca i la Innovació -FCRi) and its role was assumed by the Department of the Catalan Government responsible of scientific affairs.

From the administrative point of view, the IEEC is a private, non-profit foundation. The reason why this administrative form was adopted was to dispose a versatile tool able to deal with the private industries and companies that finally are responsible of the construction of the systems and subsystems that eventually will fly.

The agreements between the IEEC and the scientific institutions participating in the creation and governance of the institute (all of them public) allow the exchange of personnel and funds. To properly separate the private and public affairs, each one of these institutions created a scientific unit according their own bylaws in such a way that scientists can simultaneously act as member of their institutions or as a members of the IEEC.

These units are:

- **The Institute of Cosmos Sciences [ACE (ICCUB)]** is a interdisciplinary center which is devoted to fundamental research in the field of cosmology, as well as to the technological applications of the sciences of the cosmos in general. It gathers researchers from the departments of Astronomy and Meteorology, Structure and Constituents of Matter, Fundamental Physics, Applied Mathematics, Organic Chemistry and Electronics. ACE is the part of the institute working Space Research.
- **The Specific Center for Space Research [CERES (UAB)]** is an “institute without walls” created by the UAB grouping physicists and engineers involved in space research.
- **The Aeronautics and Space Research Center** (formerly devoted to aeronautics and space - **[CRAE-CTE (UPC)]**) is an “institute without walls” created by the UPC grouping astronomers, physicists and engineers devoted to space research.
- **The Institute of Space Sciences [ICE (CSIC)]**. This institute is devoted to Astrophysics (High Energy Astrophysics, Astroparticle Physics and Stellar Physics), Cosmology, Planetary Systems and Earth Sciences.

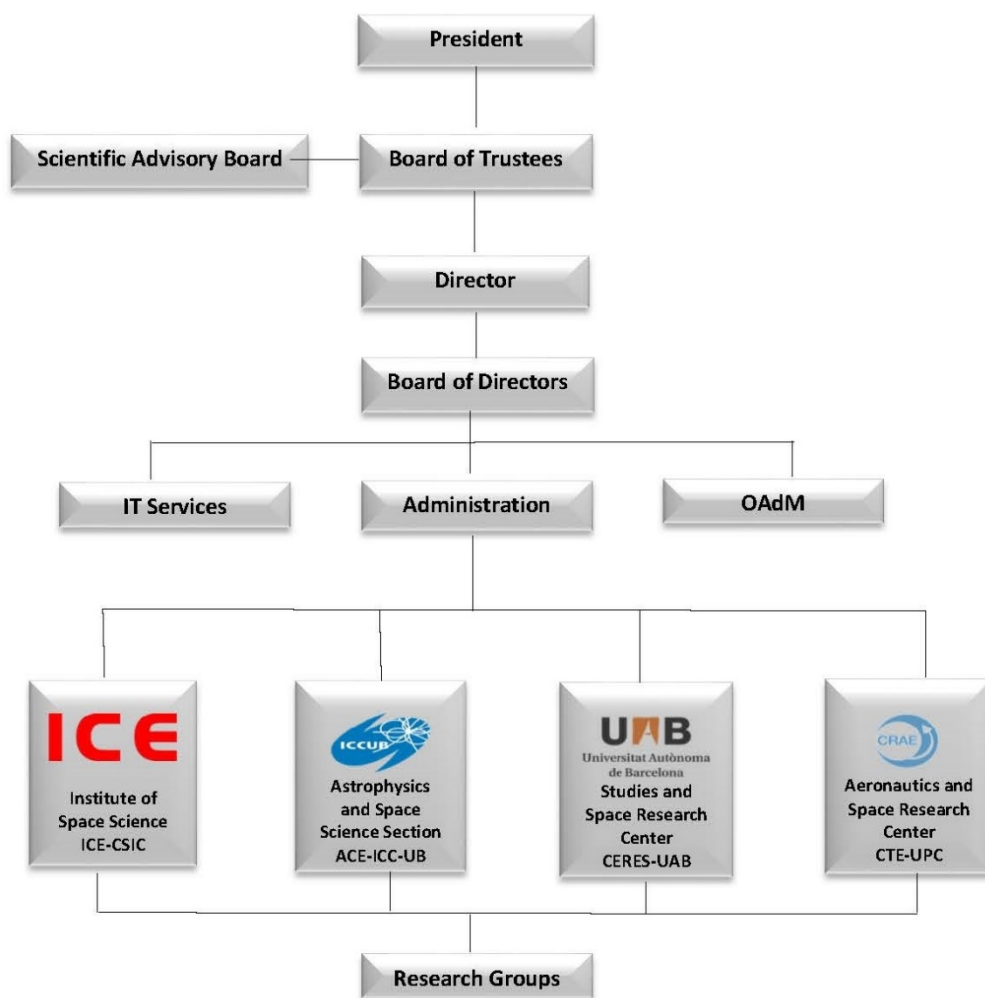
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<sup>1</sup> IEEC web page: <http://www.ieec.cat/>

<sup>2</sup> CERCA web page: <http://www.cerca.cat>

The institute is governed by a Board of Directors composed by the directors of each unit. The director of the IIEEC, nominated by the Board of Trustees, acts as the chair of the Director's Board. The administrative affairs are managed by the Head of Administration. As it corresponds to a confederate structure, the organization of each Research Unit is completely independent.

## 1.1 Organization chart



## 1.2 Board of Trustees

The IEEC is governed by the Board of Trustees, composed by the Minister of the Department responsible of research, the General Director of Research, the General Secretary of Industry, from the Catalan Government, the Rectors of the Barcelona University (UB), Barcelona Autonomous University (UAB) and Catalonia Polytechnic University (UPC), and the president of the Spanish Research Council (CSIC). The Board of Trustees is chaired by the Minister of the Department of Research.

### President

Hble. Sr. Jordi Baiget Cantons  
Business Minister and Knowledge  
Government of Catalonia

### Secretary

Sr. Francesc Ramon Subirada  
General Research Director  
Government of Catalonia

### Members

Excm. i Mg. Sr. Enric Fossas Colet  
Rector, Polytechnic University of Catalonia (UPC)  
Excm. Sr. Emilio Lora-Tamayo D'Ocon  
President, Spanish Research Council (CSIC)  
Excm. i Mg. Sr. Dídac Ramírez i Sarrió  
Rector, University of Barcelona (UB)  
Excm. i Mgca. Sra. Margarita Arboix Arzo  
Rector, Autonomous University of Barcelona (UAB)  
Sra. Núria Betriu Sánchez  
General Industry Director, Government of Catalonia

## 1.3 Board of Directors

The IEEC is governed by a board formed by the director of each unit and director of the Institute of Space Studies of Catalonia.

### Director of the IEEC

Dr. Jordi Torra Roca

### Director of the ICE-CSIC

Dr. Diego Fernando Torres

### Director of the ACE-ICCUB

Dr. Francesca Figueras Siñol

### Director of the CERES-UAB

Dr. Lluís Font Guiteras

### Director of the CTE-UPC

Dr. Juan Ramos Castro

## 1.4 International Scientific Advisory Board

The Scientific Advisory Committee is nominated by the Board of Trustees and its tasks is to inform about the quality of scientific and technical production of the institute (external evaluation), the adequacy of the strategic plans and to advice about the acceptance of new members and the permanence of older ones.

Dr. Stephen S. Eikenberry  
Full Professor, University of Florida

Dr. Álvaro Giménez  
CSIC Research Professor, Director of Science and Robotic Exploration (ESA)

Dr. Manuel Martín-Neira  
Staff Engineer, European Space Agency (ESA)

Dr. Tsevi Mazeh  
Professor University of Tel Aviv, Director of Wise Observatory

Dr. Yannick Mellier  
Institute of Astrophysics of Paris (Institut d'Astrophysique de Paris)

## 1.5 Research activities at IEEC

Research activities at the IEEC are focused to study the Earth as a planet (atmosphere, oceans, crust, etc) and the Cosmos (solar physics, planetology and interplanetary medium, stellar and galactic astrophysics, cosmology, fundamental physics, astroparticle physics, etc) using space platforms.

Dissemination of knowledge at the IEEC encompasses a wide range of activities, including publications, conference presentations and organization, media appearances, transfer of knowledge activities and applied research<sup>3</sup>.

IEEC's factsheet:

- The IEEC is located at Gran Capità, 2-4, desp. 201, Barcelona
- It runs an annual budget of 3-4 M€, of which 600k€ are the economic contribution of the Government of Catalonia. The remaining comes from competitive calls and contracts with public and private administrations.
- It hosts over 200 people, including senior researchers, affiliated university professors, research assistants, post-docs, pre-doctoral students, visiting scholars and technical and administrative staff. Around 70 people is personnel contracted directly by the IEEC and funded from the different projects (local, national and international).

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<sup>3</sup> The annual reports of the IEEC can be found in:  
<http://www.ieec.cat/es/ieec/memoria-anual-es/>

The rest is affiliated personnel contracted by the four institutions that form its governing body (CSIC, UAB, UB, UPC).

- Its funding includes participation in various 7<sup>th</sup> and H2020 EU framework programme, ESA program, EUMETSAT and Research projects from the Spanish Ministry of Science.
- Over the last five years (2011-2015), IEEC's scientific production exceeded 1.207 publications in peer-reviewed journals and 542 presentations in international conferences.
- The IEEC is at present responsible of the operation of the robotic Joan Oró telescope (80cm), located at Observatori Astronòmic del Montsec<sup>4</sup>.

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<sup>4</sup> Web of the Montsec Observatory:  
<http://www.oadm.cat/ca/content/45/tjo.htm>

## 2. Steps to achieve the “Human Resources Excellence in Research” acknowledgement

### 2.1 Reasons to achieve the qualification “Human Resources Excellence in Research”

- International visibility of the IEEC, particularly as a provider of an attractive workplace for researchers.
- Opportunity to establish a comprehensive and coherent Human Resources strategy adopting international best practices and high standards.
- Impact on the EU funding landscape, particularly on Horizon 2020.

### 2.2 Actions taken prior to the implementation of the HRS4R strategy

Before the implementation of the HRS4R strategy, the IEEC has already taken actions on issues regarding the management of human resources. The summary of our achievements are as follows:

- 2008: implemented the recommendations of the Catalan Research Agency (CERCA) through yearly Program Contracts.
- 2012: became a member of the EURAXESS Network (28/02/2012)
- 2013: IEEC’s international research audit coordinated by CERCA.
- 2014: endorsed the European Charter and Code (13/10/2014)
- 2016: Approval and implementation of the IEEC Gender Equality action plan.

### 2.3 Working group and meetings held to elaborate the “Action Plan”

In 18<sup>th</sup> of December 2015, the IEEC, under the coordination of its general manager, Ms. Pilar Montes, established a working group to develop the “Action Plan” for the Human Resources Excellence in Research. The working group includes representatives from all professional categories at IEEC.

- Senior researcher: Dr. Carlos F. Sopena
- Postdoctoral researcher: Dra. Lola Balaguer-Núñez
- PhD Students: Francisco Rivas and Marina Lafarga
- Technical and administrative staff: Anna Bertolin
- Coordination: IEEC co-directors (Francesca Figueras (ICC/UB-IEEC), Juan Ramos (CRAE/UPC-IEEC), Lluís Font (CERES/UAB-IEEC) and Diego F. Torres (ICE/CSIC-IEEC))



Since its establishment, the group has held several meetings. The following is the list of meetings and the actions taken to communicate results within the research institute:

18/12/2015 Joint meeting HRS4R working group (kick-off)  
05/02/2016 Joint meeting HRS4R working group  
04/03/2016 Meeting with the co-directors to agree on the first draft of the Action Plan  
08/04/2016 Joint meeting HRS4R working group  
06/05/2016 Meeting with the management team  
07/07/2016 Presentation of the proposed Action Plan to the co-directors  
15/07/2016 Presentation of the proposed Action Plan to the staff of the IEEC  
08/09/2016 IEEC open meeting to receive suggestions for improvements  
07/10/2016 Presentation of the update proposed Action Plan to co-directors  
11/11/2016 Presentation to the European Commission and request for HRS4R Logo

### 3. Internal gap analysis

Prior to the development of the Action Plan, an internal gap analysis was needed. To make such analysis, the working group used the following strategy:

- 3.1 Design a survey on the 40 principles of the Charter and its application in the IEEC
  - The relevance of each of the principles to the structure, dimensions and implementation capacity of IEEC
  - The laws that govern these principles
  - The current implementation of each principle in the IEEC
  - Actions that IEEC should take to improve the implementation
- 3.2 The survey was filled out by each member of the working group, comprised of a representative from the different branches of IEEC (researchers and administrative staff) who participated in the survey. The internal gap analysis showing the 40 principles of the charter is show in Appendix A. It contain the relevant legal regulations, the IEEC internal regulations, information of if it is already implemented, priorities and requirement for actions.
- 3.3 The IEEC has seek the opinion of a representative sample of key stakeholders. In this query we included: a representative sample of the personnel directly contracted by IEEC, the Board of Directors and 2-3 representatives of each of the four units composing the institute (UB, CSIC, UAB, UPC). To be independent, members of the working group that elaborate the internal gap analysis we not included in this consultation.

As a result of this consultation it was verified and confirmed that no additional items to the action plan are required. The internal gap analysis described in the appendix reflect the current status of the Institute and the prioritization and requested actions are adequate to the expectation of the key stakeholders consulted.
- 3.4 To prepare the action plan for coming years we mainly followed the recommendations arisen from the results of the survey to IEEC's personnel on the internal gap analysis. Roughly, IEEC's personnel were satisfied by the gender and family conciliation policies at IEEC, largely because of the implementation past July the IEEC Equality plan. There is also a need to develop some rules on intellectual property and a plan for good practices.

It is important to have in mind that the IEEC is a research center largely composed by professors and researchers belonging to the Universities and Research Council that form its governing body (UB, UPC, UAB and CSIC). All these institutions have already received the logo of the HRS4R. On the other hand, we want to emphasize that the training programme of the pre-doc personnel is carried out at the universities (UB, UPC and UAB).



The personnel directly contracted by IEEC, this about 70 people mentioned in previous section, is funded by the projects managed by IEEC (soft money), although all these personnel is also affiliated to one of the mentioned centres.

#### 4. Human Resources Action Plan 2017-2019 (Euraxes Charter and Code)

GOALS	CHARTER AND CODE PRINCIPLES COVERED BY THE ACTION	TYPE OF ACTION	WHO?	WHEN?
Intellectual Properties of the IEEC	Area I. Ethical and professional aspects 5, 8,9  Area III. Working conditions and social security 31, 32	Managing knowledge transfer plan	IEEC director, board of directors and Knowledge Transfer Technology (KTT) specialists in IEEC	2Q 2018
<p>MESURES:</p> <p>Implemented:</p> <ul style="list-style-type: none"> <li>- From 2011, there is a UPC-IEEC agreement for the Intellectual Properties</li> </ul> <p>To be implemented:</p> <ul style="list-style-type: none"> <li>- The Intellectual and Industrial Property agreement between the IEEC and the other three remaining units (UB, ICE-CSIC, UAB). This will be done in collaboration with the CERCA institution</li> <li>- Train IEEC's researchers, scientist and engineers, about Intellectual and Industrial Property</li> </ul>				
GOALS	CHARTER AND CODE PRINCIPLES COVERED BY THE ACTION	TYPE OF ACTION	WHO?	WHEN?
Code of Good Practices of Research	Area I. Ethical and professional aspects 1, 2, 3, 4, 8, 9, 11	Promote de rights and duties of the researchers with employment contract with the IEEC	IEEC director, board of directors and the Principal Investigators of the main research groups	1Q 2019

Area III. Working conditions and social security 31, 32, 35, 38, 39

**MESURES:**

**Implemented:**

- IEEC director and the principal investigators of the main research groups gather regularly to oversee the general progress of the institution and of its research projects.
- EEC adopt the code of the UB, UPC and UAB regarding rights and obligations of the pre-doctoral students
- IEEC offers advice to publish in peer-reviewed journals
- IEEC uses the quality indicators set in the “Programme-contract” with the Generalitat de Catalunya to measure its progress.

**To be implemented:**

- Elaborate the “Good practices code” for the IEEC
- Increase the participation of IEEC’s researchers in the achievement of IEEC’s quality indicators.

GOALS	CHARTER AND CODE PRINCIPLES COVERED BY THE ACTION	TYPE OF ACTION	WHO?	WHEN?
Dissemination Plan	Area I. Ethical and professional aspects 1, 2, 3, 4, 8, 9  Area III. Working conditions and social security 31, 32	Regulation publications and conference procedures	Responsible of communication	3Q 2017

**MESURES:**

**Implemented:**

- IEEC has a policy to foster participation in national and International conferences and seminars for both senior and junior researchers, including pre and post-doctoral fellows.
- IEEC provides funds to participate in conferences and seminars

- IEEC offers advice to publish in peer-reviewed journals
- IEEC communication department disseminates research results through
  - o IEEC website, Press releases. Impacts on media and Social Media
- IEEC shares relevant information to researchers working at the institutions that form the IEEC by a weekly mail
- IEEC promotes the organization of outreach activities through very different audiences Students, astronomy's amateurs, general audience...

To be implemented:

- Write and approve a dissemination policy plan
- Create a weekly or monthly newsletter to share IEEC information not only with our researchers but also with people who would be interested by subscription

GOALS	CHARTER AND CODE PRINCIPLES COVERED BY THE ACTION	TYPE OF ACTION	WHO?	WHEN?
Human Resources management plan	Area II. Recruitment 13, 14, 15, 16  Area III. Working conditions and social security 22, 25, 28	Regulate the management of human resources	General Manager and Human resources department	1Q 2019

MESURES:

Implemented:

- IEEC uses the public national, regional and international calls to recruit its scientific personnel
- IEEC fosters international mobility and exchange among its researchers, particularly among the pre and post-doctoral researchers.
- IEEC publish all its job offers at IEEC website

To be implemented:

- Prepare a “Welcome” document aimed to those researchers that visit temporally or want to joint IEEC
- To develop a protocol that regulates the selection of new personnel (researchers and administrative staff).

## Appendix

### IEEC internal gap analysis.

INTERNAL GAP ANALYSIS					
Principles of the Charter	Relevant legal Regulations	Internal IEEC Regulations	Current status	Priority	Actions required
<b>I. Ethical and professional aspects</b>					
1. Research Freedom	Spanish Constitution, art. 20,1b and 44,2 Spanish Law (14/2011) of Science, Technology and Innovation	Code of good Practices of Researchers of the IEEC	Not developed	Medium	Yes
2. Ethical Principles	Spanish Law (14/2011) of Science, Technology and Innovation Spanish law 15/1999 on personal data protection	Code of good Practices of Researchers of the IEEC	Not developed	Medium	Yes
3. Professional responsibility	Spanish Law (14/2011) of Science, Technology and Innovation	Code of Good Practice of Research of the UB, UPC, CSIC and UAB. Code of good Practices of Researchers of the IEEC	Implemented  Not developed	Medium	Yes
4. Professional Attitude	Spanish Law (14/2011) of Science, Technology and Innovation Code of Good Practice of Research of the UB, UPC, CSIC and UAB	Code of Good Practice of Research of the UB, UPC, CSIC and UAB. Code of good Practices of Researchers of the IEEC	Implemented  Not developed	Medium	Yes
5. Contractual and legal obligations 6. Accountability	Spanish Law (14/2011) of Science, Technology and Innovation Spanish Workers' Statute (ET)	Regulation of the intellectual properties of the IEEC Internal annual audit disposal at Registre de Fundacions (Tribunal de Justicia)	Not developed Implemented	High	Yes
7. Good Practice in Research	Spanish Health and Safety Law (31/1995)		Implemented		No
8. Dissemination, exploitation of results. 9. Public engagement	Spanish Law (14/2011) of Science, Technology and Innovation	Code of Good Practice of Research of the UB, UPC, CSIC and UAB. Code of good Practices of Researchers of the IEEC Regulation of the intellectual properties of the IEEC	Implemented  Not developed  Not developed	Medium  Medium  High	Yes
10. Non discrimination	Spanish Constitution Spanish Law (14/2011) of Science, Technology and Innovation Spanish Law for equality between women and men (3/2007), art. 10 and art. 63,3	IEEC equality plan	Implemented		No
11. Evaluation / appraisal system	Spanish workers' Statute	International research audit coordinated by CERCA	Implemented		No

II. Recruitment					
12. Recruitment 13. Recruitment (code) 14. Selection (code) 15. Transparency (code) 16. Judging merit (code) 17. Variations in the chronological order of the CVS (code)	Spanish Constitution Spanish Law (14/2011) of Science, Technology and Innovation Conveni col·lectiu del personal docent i investigador de les universitats públiques catalanes, de 10 d'octubre de 2006 (DOGC, 14.02.07) Spanish workers'statute Convenio colectivo de ámbito estatal para los centros de educación universitaria e investigación (BOE, 04,07,12) Spanish Law for equality between women and men (3/2007)	Internal IEEC Regulations IEEC equality plan Llei 19/2014 de transparència, accés a la informació pública i bon govern	Implemented		No
18. Recognition of mobility experience (Code)	Spanish Law (14/2011) of Science, Technology and Innovation		Implemented		No
19. Recognition of qualifications (code)	Spanish Law for equality between women and men (3/2007)		Implemented		No
20. Seniority (Code)	Spanish Law for equality between women and men (3/2007)		Implemented		No
21. Postdoctoral appointments (code)	Spanish Law (14/2011) of Science, Technology and Innovation Conveni col·lectiu del personal docent i investigador de les universitats públiques catalanes, de 10 d'octubre de 2006 (DOGC, 14.02.07) Spanish workers'statute Convenio colectivo de ámbito estatal para los centros de educación universitaria e investigación (BOE, 04,07,12) Spanish Law for equality between women and men (3/2007)	Internal IEEC Regulations IEEC equality plan Llei 19/2014 de transparència, accés a la informació pública i bon govern	Implemented		No



III. Working conditions and social security					
22. Recognition of the profession	Spanish Law (14/2011) of Science, Technology and Innovation Conveni col·lectiu del personal docent i investigador de les universitats públiques catalanes, de 10 d'octubre de 2006 (DOGC, 14.02.07)		Implemented		No
23. Research Environment	Spanish Law (14/2011) of Science, Technology and Innovation		Implemented		No
24. Working Conditions	Spanish Law (14/2011) of Science, Technology and Innovation Spanish Health and Safety Law (31/1995)		Implemented		No
25. Stability and permanence of employment	Spanish Law (14/2011) of Science, Technology and Innovation Conveni col·lectiu del personal docent i investigador de les universitats públiques catalanes, de 10 d'octubre de 2006 (DOGC, 14.02.07)	MINECO, AGAUR and H2020 rules IEEC equality plan	Implemented		No
26. Funding and salaries	Spanish Law (14/2011) of Science, Technology and Innovation Conveni col·lectiu del personal docent i investigador de les universitats públiques catalanes, de 10 d'octubre de 2006 (DOGC, 14.02.07) Spanish Law for equality between women and men (3/2007)	MINECO, AGAUR and H2020 rules IEEC equality plan	Implemented		No
27. Gender balance	Spanish Law (14/2011) of Science, Technology and Innovation Conveni col·lectiu del personal docent i investigador de les universitats públiques catalanes, de 10 d'octubre de 2006 (DOGC, 14.02.07) Spanish Law for equality between women and men (3/2007)	MINECO, AGAUR and H2020 rules IEEC equality plan	Implemented		No
28. Career development	Spanish Law (14/2011) of Science, Technology and Innovation Conveni col·lectiu del personal docent i investigador de les universitats públiques catalanes, de 10 d'octubre de 2006 (DOGC, 14.02.07) Spanish workers' statute Convenio colectivo de ámbito estatal para los centros de educación universitaria e investigación (BOE, 04,07,12) Spanish Law for equality between women and men (3/2007)		Implemented		No
29. Value of mobility	Spanish Law (14/2011) of Science, Technology and Innovation Spanish workers' statute Spanish Law for equality between women and men (3/2007)		Implemented		No
30. Access to career advice	Spanish Law for equality between women and men (3/2007)	IEEC equality plan	Implemented		No
31. Intellectual Property rights 32- Co-authorship	Spanish Law (14/2011) of Science, Technology and Innovation	Code of Good Practice of Research of the UB, UPC, CSIC and UAB. Code of good Practices of Researchers of the IEEC Regulation of the intellectual properties of the IEEC	Implemented Not developed	High High	Yes
33. Teaching			Not apply to IEEC, only for PhD development (see IV. Training section)		Not apply to IEEC
34. Complains /appeals	Spanish Law (14/2011) of Science, Technology and Innovation Conveni col·lectiu del personal docent i investigador de les universitats públiques catalanes, de 10 d'octubre de 2006 (DOGC, 14.02.07) Spanish workers' statute Convenio colectivo de ámbito estatal para los centros de educación universitaria e investigación (BOE, 04,07,12) Spanish Law for equality between women and men (3/2007)	IEEC equality plan	Equality agent from July 2016		No
35. Participation in decision-making bodies	UB, UPC, CSIC and UAB statutes regulation framework for Academic and Research staff	Code of good Practices of Researchers of the IEEC	Not developed	High	Yes

IV. Training					
40. Supervision 36. Relation with supervisors 37. Supervision and managerial duties	Spanish Law RD 99/2011 for the regulation of PhD Teaching	Training and PhD career development plan are regulated by the rules of one of the three universities: UB, UPC or UAB. Doctoral Schools of the UB, UPC or UAB (depending of where the student is registered)	To start the PhD the student is registered in the doctoral school of one of the three institutions: UB, UPC or UAB.	Not apply	No
38. Continuing Professional development			Code of good practices of research at the IEEC: Further training provision to ensure that training needs are met.	High	Yes
39. Access to research training and continuous development			Code of good practices of research at the IEEC: Further training provision to ensure that training needs are met.	High	Yes