

CESAER ERA Progress Report May 2014

CESAER's continued commitment to the European Research Area

Since CESAER presented its Unilateral Statement on ERA to Commissioner Geoghegan-Quinn on 17 July 2013, the implementation and monitoring of the ERA commitments made by the association, have a prominent position on the agenda of all meetings of the CESAER governing bodies.

The six months period since our last report that was delivered on 13 December 2013 was characterised by dynamic developments in most of our ERA action lines. In accordance with the endorsements of our Unilateral Statements we deepened the cooperation with our partner associations CLUSTER, EuroTech Universities, IDEA League and Nordic Five Tech through establishing two joint working groups.

Our task forces and working groups are reflecting on how to further develop actions in areas such as human resources strategies for researchers, gender equality, knowledge transfer and crossborder cooperation. Our universities see the advantages of working together and mutual learning on the way towards ERA. Engaging in the initiatives with the Commission raises the awareness regarding the ERA priorities within the CESAER membership and beyond, and, at the same time, it strengthens our coherent community of universities of science and technology.

We highly appreciate the participation in the ERA Stakeholder Platform, thanks to the openness of the exchanges and the mutual learning in the meetings which offer opportunities for coordination, cooperation and the development of future joint activities which we will endorse as they will emerge.

CESAER was actively involved in and contributes to the different configurations of the Doers network: Communication, ERA Monitoring, Gender and Research Infrastructures and set up the ERA Partnership Fringe Session in the frame of the Innovation Convention on 10 March 2014 in Brussels.

CESAER emphasises the importance of linking the ERA activities with the Innovation Union and proposes the widening of the membership by involving stakeholder organisations representing business R&D and innovation agencies.

In accordance with our suggestion in the meeting on 13 December 2013, we are looking forward to the decisions regarding extending the Doers configurations to the areas of Innovative Doctoral Training and Knowledge Transfer. Furthermore we support the new focus on Open Recruitment and are still interested in cooperation with other stakeholders in the area of Smart Specialisation.

In the following, we briefly report on the progress made in the twelve CESAER ERA commitments that are addressing three ERA priorities:

- Researchers and Research Careers implemented in seven action groups and one action,
- Knowledge Transfer and Open Access implemented in two action groups, and
- Cross-border cooperation implemented in two actions.

RESEARCHERS AND RESEARCH CAREERS

Most of the actions defined under the heading “Researchers and Research Careers” are implemented by working groups in the frame of the CESAER Task Force Human Resources, chaired by Prof. Karel Luyben, President of CESAER and Rector Magnificus of TU Delft. On 21-22 May 2014, the Task Force organised an international conference “Human Resources in Academia” at TU Delft. Parallel sessions addressed the topics: Human Resource Strategies for Researchers (HRS4R), recruitment, gender equality, career development, leadership development, appraisals and performance measurement. About 100 HR experts from 24 CESAER member institutions and 23 other organisations attended the conference.

1. Human Resource Strategies for Researchers (HRS4R)

and

2. Charter and Code for Researchers

In 2012, CESAER joined the 4th Cohort of the Institutional Human Resources Strategy Group with the aim to support mutual learning between member institutions about the HRS4R scheme and encouraging them to embark on the five step process towards HR excellence in research. The CESAER activities in that area are coordinated by Manfred Horvat, CESAER Senior Advisor, and Lieve Coninx, CESAER Liaison Officer.

A total of 38 CESAER member institutions endorsed the Charter and Code, 13 signed up for one of the four cohorts, and 8 CESAER member universities received the “H R Excellence in Research” logo so far. One member university got the Logo without participating in a cohort. 13 member institutions are not involved in the HRS4R process at any level. Since we started that CESAER wide initiative the Commission awarded the Logo to two CESAER member universities.

In 2014, we continue to promote HRS4R among our membership with the aim to increase the number of universities going for the Logo. Following a workshop and a seminar organised in September and October 2013, a parallel session devoted to HRS4R in the frame of the CESAER conference “Human Resources in Academia” on 21 May 2014 attracted some 30 participants. All events are shaped to stimulate mutual learning between universities that have the Logo already and others that are in the five steps process or are interested to engage in it.

CESAER universities with the Logo emphasise the benefits of the internal process when performing the gap analysis and developing the HR action plan. The Logo has been found to increase the attractiveness of institutions and the self-assessment is most valuable for continuous improvement in institutional human resource management.

On the basis of the feedback from universities in step 5 of the process, being the external peer review, CESAER will review of the European Charter for Researchers and a Code of Conduct for the Recruitment of Researchers and the HRS4R process. Recommendations for a review of the Charter and Code will take into account the lessons learned .

In the follow up of the CESAER conference in Delft, we are considering further initiatives to support HRS4R at our member institutions. In addition, we signed up for the next mutual learning seminar of the 4th Cohort organised by the Commission in October 2014 as we see the added value of such actions for our members and partner associations.

3. Open, transparent and merit based recruitment

More than 95% of CESAER member institutions are using the EURAXESS Jobs Portal and express their satisfaction with it. They see recruitment of excellent, highly skilled academic staff at all levels as key element of their strategies supporting excellence in education, research and innovation. Leaders of CESAER universities concentrate on attracting top talent and ensuring the quality of their academic and management staff.

In general, CESAER supports the principles of open, transparent and merit based recruitment. As it comes to implementation, CESAER sees the need for a diversified approach with different procedures to be applied for the different levels of researchers. We studied with great interest the report of the Expert Group "Recommendations on the Implementation of the ERA Communication". Therefore, following an internal consultation process, CESAER will soon publish comments on the Expert Group's recommendations regarding open recruitment (coordination: Thomas Eichenberger, Head of Faculty Affairs, ETH Zurich, CH).

4. National barriers for ERA related activities

In contrast to our original intentions to extract CESAER relevant results from the TANDEM project, it has been decided not to implement this commitment so far.

5. Gender equality

We launched a detailed **survey on gender equality at CESAER member institutions** in January 2014. The questionnaire was developed by a project team led by Anna Steiger, Vice-Rector for Human Resources and Gender at TU Wien (AT) and Manfred Horvat, CESAER Senior Advisor. The survey was completed in April with a response rate of 94%. Although the results analysis is ongoing, first preliminary results already provide important insights into the situation of strategies, structures and activities addressing gender equality at CESAER universities. To give some examples:

- Gender Equality Plan at universities of Science and Technology:
 - 52% of responding universities have a specific Gender Equality Plan
 - 37% have no Gender Equality Plan
 - 7% of the respondents reported about integrated gender equality in the general institutional strategy.
- Gender Equality" embedded in the university organisation:
 - At 1/3 of universities, a special unit is established dealing with gender equality.

- At about 1/3 of institutions, gender equality is part of the responsibilities of an organisational unit with a wider remit.
- At 9% of the universities, one person is dealing full-time with gender equality.
- 9% of the responding universities choose other ways of supporting gender equality such as the university leader being personally responsible, a gender commissioner, or committees for gender equality.
- In some countries, such as Germany, the main research funding organisation has defined specific requirements regarding gender equality for being eligible for funding which has a strong influence on the universities getting their gender strategies, structures and targeted measures right.

When implementing the gender equality plans, universities give priority to measures supporting work-life balance as well as attracting female students and researchers. A specific feature is the focus on activities for developing gender competence.

5 out of 51 CESAER member institutions are led by women, which is only 9,8%. In contrast, more than 26% of the positions of vice-rectors or equivalent members of the universities' leadership are occupied by women, which is probably due to the fact that there is a growing awareness regarding the gender aspect when shaping university rectorates or leadership teams. 15,7% of deans and only 14,4% of department heads are women.

Student statistics show that about one third of entering students and bachelors and master as well as doctorate graduates are women. However, the percentage of female academics is decreasing sharply when climbing the academic career ladder and progressing towards positions equivalent to assistant (30,9%), associated (22,4%) and full professors (16%). It is, however, interesting to note that the percentages of female assistant and associated professors at CESAER universities are in the range of the She numbers 2012 for science and engineering, whereas the 16% of female full professors at CESAER universities are above the level of the She 2012 average of 11%¹.

22,4% of FP7 coordinators from CESAER universities are women. Some 29% of incoming and 18,3% of outgoing Marie Curie fellows are women. However, the percentages of female ERC grantees are much lower: only 13,7% of Starting Grants and 15,4% of Advanced Grants are awarded to female researchers.

Quite a number of universities implement specific programmes, often funded by government, to attract girls to engineering studies and also to support women in engineering and technology. In addition a broad range of dedicated measures is being applied. 27 universities reported institutional change since gender equality measures have been initiated. The most important changes were identified in areas such as institutional culture, attitudes and perceptions. Only two universities reported a small quantitative change in the gender balance in the range around 2% within two years. However, it is interesting to note that their plans for next steps have a clear focus on quantitative changes.

¹ European Commission: She Figures 2012. Gender in Research and Innovation. Statistics and Indicators. Luxembourg, 2013, p. 89

The final report is expected to be ready in October. On 27-28 November 2014, respondents to the survey will be convened at Vienna University of Technology for a workshop on the survey outcomes and possible follow up activities. Together with the project team they will look into the possibility of a biannual update of this survey allowing a regular monitoring of the development of gender equality at CESAER universities.

6. Structural programmes for Innovative Doctoral Training

In accordance with the attention given to excellent research, doctoral education and training is of central importance for our member institutions. We acknowledge the substantial work and reports published by the European Commission and by partner stakeholder organisations. On the other hand, we observe the lack of examples of best practice from universities of science and technology in the available communications and reports. Therefore, a **joint working group “Innovative Doctoral Training”** (Chair: Ulla Bidian, Secretary General of IDEA League) was set up as an initiative of CESAER together with our partner associations CLUSTER, EuroTech Universities, IDEA League and Nordic Five Tech.

Following an analysis of available studies and reports, joint doctoral programmes were defined as one of the main focus areas of the work of the working group. Currently the group prepares a questionnaire for a survey of CESAER member institutions to be implemented in summer and early autumn. The report is planned for the first half of 2015.

7. Education and training in complementary skills

CESAER member universities are very actively supporting **career development** and **leadership training** of their researchers in line with the Human Resources Strategy for Researchers. Two working groups led respectively by Doris Klee, Vice-Rector for Human Resources Management and Development at RWTH Aachen University (DE), and Cecilia Hahn Berg, Head of Recruitment Unit, Chalmers University of Technology (SE) in the frame of the Task Force “Human Resources” are active in those areas and performed surveys at several CESAER member universities. A CESAER publication on leadership development will come out in June and a report on career development will be finished by end of September. Both reports will show that a stimulating working environment, well-defined positions with clear development perspectives are key elements of institutional strategies towards attracting and retaining excellent staff.

Most of CESAER universities promote **entrepreneurship** through study programmes and training courses as well as in applied research. Specific structures such as entrepreneurship and technology transfer centres as well as incubators offering support services are also implemented. On the one hand, the objective of such activities is to educate a new generation of entrepreneurial and innovation minded people in Europe by delivering a unique brand of excellent education responsive to both business and societal demands, focused on creativity, innovation, and entrepreneurship. On the other hand, at the universities of science and technology in CESAER, support and coaching is given to new companies in the start-up phase, resulting in very successful spin-off companies.

Following the international workshop organised in October last year, the **Task Force “Entrepreneurship”** chaired by Malte Brettel, Pro-Rector for Economy and Industry and Professor/Chair of Economics for Engineers and Scientists, RWTH Aachen University (DE) started its work in cooperation with about 50% of the CESAER member institutions. Until the end of June 2016, the Task Force will prepare a White Paper on the specialty of entrepreneurship at technical universities. With this paper the Task Force aims to offer guidance to CESAER member institutions towards providing future graduates with entrepreneurial and leadership skills and inspiring the next generation of entrepreneurs and intrapreneurs. At the same time, a benchmarking exercise among all members of the Task Force will be carried out in order to identify best practices in establishing entrepreneurship at technical universities. It should be noted that CESAER’s partner associations endorse and join the work of this Task Force.

Again, exchange of experience and mutual learning as well as future initiatives towards entrepreneurship at the member universities will be realised jointly and synergies can be used. Furthermore, students (mainly Master und Ph.D. students will be addressed) interested in entrepreneurship will benefit from the establishment of the Task Force in two ways: first, universities will be able to better develop and support students in becoming entrepreneurs and second, a fruitful exchange between student entrepreneurs at the different universities using the Task Force’s network will be enabled.

CESAER highly welcomes the Horizon 2020 focus on Grand Challenges as stipulated in the Lund declaration of 2009, the problem oriented approach of the new framework programme and the activities supporting **Responsible Research and Innovation (RRI)**. The necessary inclusive approach to research and innovation requires that societal actors work together during the whole research and innovation process and different needs, values, interests and expectations are taken into account in decision processes. Societal challenges require the responsible application of all the knowledge, capabilities and skills that science and engineering universities can muster across disciplinary, departmental and institutional borders.

The CESAER **Task Force “Responsible Research and Innovation” (TRRI)** chaired by Jeroen van den Hoven, Professor for Moral Philosophy at TU Delft (NL) will work towards the adoption of RRI policies by CESAER and other relevant parties that will help to raise the awareness about the social and moral responsibilities of scientists and engineers. The aim is also to influence institutional policies and strategies as well as education, research and innovation programmes and initiatives towards responsible research and innovation. In September, the TFFI will present comments and recommendations for the Horizon 2020 Work Programme 2016-2017. At a workshop at Tallinn University of Technology on 15 October 2014, the agenda will be set for initiatives towards the development of a CESAER RRI policy as well as for the development of a RRI curriculum for universities of science and technology. A workshop report will be published around the end of the year. Finally, the Task Force will contribute to the preparation of the Dutch Presidency Conference on RRI in the first half of 2016.

Many of our member institutions are running **structured programmes supporting the mobility between academia and industry** for bachelor or master students or as part of doctoral programmes. At the level of our association, CESAER represented by the Liaison

Officer, was the main academic partner in the pilot edition of the Internship Programme of the European Institute of Technology Foundation (EITF). 7 CESAER member institutions participated and 45 student applications were eligible. 3 students were selected and, finally, 2 placements were realised. Based on an analysis of the experiences of the pilot, the EITF has launched the second edition of the programme.

8. Pan-European Supplementary Pension Fund for Researchers

We are well aware of the problems for researcher mobility caused by the social security barriers in the EU. Therefore, CESAER supports the Commission initiative for a Pan-European Supplementary Pension Fund for Researchers. Prof. Paul Jankowitsch, the chair of the Task Force established by the Commission, worked on a basis of a CESAER mandate and reported regularly to the CESAER governance. We welcome the progress made by the Task Force preparing a **Retirement Savings Vehicle for European Research Institutions (RESAVER)** and we will alert our member institutions about the information events for employers organised by the European Commission across Europe in the coming months. By carefully monitoring the expressions of interests from our member institutions the CESAER governing bodies will identify the eventual need for central support from the level of the association and plan appropriate actions.

KNOWLEDGE TRANSFER AND OPEN ACCESS

9. Institutional research strategies and management – Knowledge Transfer

Building on the results of the CESAER SMART initiative (2011) we are deepening the investigation of the university research strategies and management of member universities with a special focus on knowledge transfer towards companies and other societal actors.

CESAER, being an organization of leading engineering universities in Europe with a dominating presence in EU's framework programmes, is also a group of universities with a top performance in cooperation with corporate partners. The seven European universities among the top ten in the global Leiden university ranking on university-industry collaboration are all CESAER members. This ranking is based on one particular set of indicators focused on co-authorship with companies in leading journals. However, universities with lower positions in this ranking may well have developed other efficient ways of cooperating with industrial and business in general. Using the network of CESAER and its partner associations in a joint working group thus provides an opportunity to collect and compare different ways of promoting knowledge transfer in a sample of member institutions.

Thanks to the strategic collaboration with our partner associations CLUSTER, EuroTech Universities, IDEA League and Nordic Five Tech (N5T) **joint working group “Institutional Research Strategies and Management – Professionalisation of Knowledge Transfer”** was formed and is chaired by Jörgen Sjöberg, Chief Development Officer and Senior Advisor of the President, Chalmers University of Technology (SE). The working group is comparing the university knowledge transfer practices of CESAER universities. The following areas are covered:

- the organisation of knowledge transfer at universities including the professional qualification profile of knowledge transfer staff
- the spectrum of knowledge transfer activities and other related aspects such as the role of knowledge transfer in researcher promotion and career,
- the role of inter- and transdisciplinary cooperation and criteria for assessing knowledge transfer.

The results from the sample of universities will lead to strengthening the findings and also to mutual learning amongst the full CESAER membership. It is planned that first outcomes of the joint working group will be available in spring 2015.

In a complementary study performed by Manfred Horvat, CESAER Senior Advisor, the spectrum of **structures and activities supporting knowledge circulation** of all CESAER member institutions is explored through an in-depth web analysis. A draft report will be available by end of September 2014 and the final report by the end of the year.

10. Open Science: Open Access – Open Data and Open Education

Our **Task Force “Open Access – Open Data”** chaired by Torbjorn Digernes, Professor of Marine systems design and former rector of NTNU The Norwegian University of Science and Technology, is preparing a CESAER position on Open Access that will be complemented by guidance to our member institutions on how to effectively implement an Open Access policy. We have observed that the practical implementation of Open Access in our institutions in many cases is lagging behind the policy statements adopted by their governing bodies. With requirements on Open Access publications now being put in place from major funding sources nationally and internationally, there is a need to quickly improve institutional practices.

By end of June 2014, a short position paper will be published. For the end of 2014, supporting guidance material will be prepared providing practical advice on how to deal with e.g. institutional management & funding of gold route publications, copyright agreements with publishers to get permission for parallel archiving, institutional archives, examples of good practice and links to other resources on the subject

Open Data is more complex issue, and our member institutions working with a significant portfolio of applied research, and close to market research may have specific challenges here. Also the cost of implementing and maintaining Open Data Archives is an important issue, which we believe is not sufficiently well understood, also by research funding organisations. Thus our institutions are on a learning curve on how to deal with Open data. Therefore, in a first step, we will concentrate on collecting good showcases, and make best practice examples available on the CESAER web site. This process will go on into 2015.

A new **Task Force “Open Education”** chaired by Pierre Dillenbourg, Professor at the School of Computer and Communication Sciences at EPFL (CH), is in the starting phase. The task force serves as a forum for the exchange of information about experiences of good practices and of new approaches. It will address issues such as accreditation and credentials and concrete problems such as how to make the best use of open education in order to

increase the quality of education, the number of engineers and the visibility of engineering in society. The Task Force will have its first workshop in autumn.

CROSS BORDER COOPERATION

11. Participation in European programmes, projects and ERA initiatives

CESAER universities represent the strongest group of institutions among the top 50 higher education institutions participating in FP7. With the support of the Commission services, we are regularly monitoring the participation of our member institutions in the framework programmes and we discuss the participation numbers and patterns on a regular basis with the governing bodies of the association. The aim is to provide our members with detailed information on participations and coordinators from member institutions in order to support them in identifying complementary strengths at partner institutions and stimulating cooperation within ERA. The next update of data will be done in June and July and the structured analysis will be presented to the member institutions in September.

12. Collaborative links between CESAER member institutions – especially EU15/EU12

Among the CESAER membership are also leading universities of technology of the new member states (EU12). By carefully monitoring not only the participation of CESAER universities in the framework programmes but also the collaborative links between them, we aim at fostering benchmarking and mutual learning and initiating or strengthening collaboration. We define the support of „Spreading of excellence and widening participation“ - “ERA Chairs”, “Teaming” and “Twinning” actions - between our member institutions in Horizon 2020 as one of our priorities. The CESAER 2014 Seminar at Tallinn University of Technology on 16 October 2014 will have the topic “Widening participation”. Based on the presentations and discussions of the annual seminar, we will discuss possible targeted follow up activities in support of this Horizon 2020 action line.

FINAL REMARK

By engaging as stakeholder in the development towards the completion of ERA and its possible evolution, CESAER is contributing to raising the awareness of universities, and the scientific and engineering community how an integrated ERA will improve their working environment in Europe but also strengthen their potential for international cooperation and competition. Therefore, we identified priority areas where we see room for improvement and a need for action and change.

CESAER has entered into that innovative but challenging partnership with the Commission and the other stakeholders. CESAER is and will continue to be highly committed to make the ERA Partnership a success.

Leuven, end of May 2014