

Capítulo C 11: I + D + i — COOPERACIÓN UNIVERSITARIA Y DE CENTROS DE INVESTIGACIÓN (Cooperación Científico-Tecnológica)

LÍNEAS GENERALES:

Documento iniciado con los trabajos y el estudio elaborado por Viktor Frhr. von Malchus entre 2000 y 2008, actualizado por Jannes L. Elfgén e incorporado por la Conferencia Alemana de Rectores para el diálogo con el Comité del Espacio Europeo de Investigación en 2012-2013. Dicho Comité emitió en agosto de 2013 una Opinión sobre CTF entre organismos de investigación para alcanzar un Espacio Europeo de Investigación, con seis recomendaciones principales. También desarrolló en 2013 un listado actualizado de vínculos a casos de CTF de proximidad entre universidades europeas.

PUNTOS CLAVE:

- ...

EJEMPLOS:

- (véanse las tablas incluidas más adelante)
- *Red de Excelencia Hidranatura*
- ... muchos más

Antecedentes

En 2014 comenzó el periodo de programación 2014-2020, al final del cual la Estrategia UE2020 debe haber dado sus frutos en los 11 ejes temáticos priorizados si se utilizan adecuadamente los distintos programas europeos, entre ellos el Horizon 2020, el nuevo Programa Marco de Investigación.

Se impone una utilización eficaz a todos los niveles (local, regional, nacional e internacional) del **Triángulo del Conocimiento** —formado por la educación, la investigación y la innovación—, clave para impulsar el incremento de la productividad, y un desarrollo adecuado de la **Triple Hélice** —concepto analítico y normativo derivado del papel cambiante del estado en diferentes sociedades en relación a la universidad y la industria¹—.

Ya en 2005, José Manuel Durão Barroso, Presidente de la Comisión Europea, anunciaba que el futuro de la UE pasaba por esa utilización eficaz del Triángulo del Conocimiento. Afirmaba que la búsqueda continúa del saber y los descubrimientos ha definido los valores, el alma y la identidad de Europa. Dicha búsqueda ha permitido que Europa compita con éxito en la escena mundial ofreciendo calidad frente a la mano de obra barata o la abundancia de recursos que otros ofrecen.

En 2005, por primera vez en tres décadas, la tasa de crecimiento de la productividad en Europa había caído por debajo de la de los EE.UU. El porcentaje de investigación y desarrollo en el PIB era del 1,96%, frente al 3,12% de Japón. En ese momento 400.000 europeos que habían cursado estudios técnicos o científicos vivían en los EE.UU., y tres

¹ Definición de Luis De Stefano Beltrán, Profesor e Investigador de la Universidad Peruana Cayetano Heredia

cuartas partes de los estudiantes nacidos en la UE y que estudiaban el doctorado en EE.UU. preferían seguir en ese país después de terminar los estudios. Estas cifras muestran que ya había motivos en 2005 para temer una fuga de cerebros, bastante antes de la crisis de las *sub-prime*, sus efectos en Europa, el estallido de diversas burbujas y la crisis generalizada en muchos países europeos, motivando una "huída" de jóvenes, especialmente los mejor formados, primero desde los países del sur de Europa hacia el norte, y luego a otros lugares del mundo. **Verificar cifras en 2017.**

En aquel momento el Presidente Barroso invitó a un grupo de científicos europeos galardonados con el premio Nobel para intercambiar opiniones sobre algunos temas clave como la forma de realizar un auténtico **Espacio Europeo de Investigación** (EEI), más conocido como *European Research Area* (ERA) en inglés. ¿Cuáles son los problemas derivados de la existencia de fronteras nacionales que más entorpecen la ciencia en la UE? ¿Qué instrumentos comunitarios sería mejor utilizar en este ámbito?

El mensaje fue claro: menos burocracia, menos restricciones nacionales y más dinero para gastar allí donde se necesita: en las aulas y los laboratorios.

La Comisión propuso entonces convocar un Consejo europeo de investigación autónomo que recibiera las propuestas de los científicos "desde la base", sin ninguna limitación temática. Las propuestas se seleccionarían y financiarían únicamente en función de su excelencia científica, y serían objeto de una evaluación por los especialistas del sector. Así, se habría de fomentar la excelencia de la investigación a través de la competencia a escala europea, y abrir un nuevo horizonte para los científicos con nuevas ideas que no encajen necesariamente en el corsé del programa nacional de investigación del lugar donde viven.

En cuanto a la mejora de la financiación, se fijó el objetivo de aumentar el nivel global de inversión en investigación en Europa hasta el 3% del PIB en 2010, dos terceras partes del cual deberían financiarse con fuentes privadas (**¿Cómo está esto ahora?**).

El conocimiento y la innovación para el crecimiento constituían el núcleo central de las propuestas de la Comisión Europea para impulsar la (fallida) agenda de Lisboa, el plan de crecimiento y empleo que la UE había adoptado en el año 2000.

Junto a la acción encaminada a hacer de Europa un lugar más atractivo para invertir y trabajar, y a crear más y mejores puestos de trabajo, la Comisión presentó un programa que abriría el pleno potencial del conocimiento para impulsar el crecimiento. Consideradas en su conjunto, estas medidas podrían incrementar en un 3% el PIB en 2010 y crear más de seis millones de puestos de trabajo.

Poco después se propuso una nueva iniciativa para fomentar la adopción de las TIC, piedra angular de la economía del conocimiento y un sector en el que Europa obtenía malos resultados. La inversión pública y privada en la investigación de estas tecnologías en Europa era aproximadamente un tercio que en los EE.UU. Esto ya era preocupante porque la innovación en este sector tiende a favorecer el crecimiento de otros sectores, mejorar la eficacia del sector público y traer nuevas ventajas para los ciudadanos en general.

Terminaba Barroso citando al papa Alejandro IV, quien declaró en 1255, al aprobar el currículo de la Universidad de Salamanca, una de las más antiguas e importantes de Europa: "La seguridad de los reinos reside en la multitud de los sabios". Decretó que cualquier profesor admitido en Salamanca era libre de enseñar su materia en cualquier otra universidad de Europa. Comenzaba así el lanzamiento de la economía europea del conocimiento que a nosotros corresponde completar.

Von Malchus' Study and Elfgen's Update

Since 2003, as a reaction to the Bologna Process, the AEBR has committed itself to support and promote cross-border cooperation between institutions of Higher Education and Research Centres. Therefore the former General Secretary Jens Gabbe and the former Chairman of the Advisory Committee of AEBR Dr. Viktor von Malchus conducted an extensive survey research over a period of four years among the border and cross-border regions across Europe. Unfortunately Dr. Viktor von Malchus was not able to finish the study due to his death in 2008. At the AEBR Annual Conference in Plauen (2008) therefore only preliminary findings and results of the survey could be presented.

In 2011 the previous work and data was picked up by J.L. Elfgen which led to the report *Cross-Border Cooperation between Universities and Research Centres, a Revised and Updated Analysis of the AEBR-Study Co-operation between Universities, Higher Education Institutions and Research Centres in Europe's Border Regions 2006/2007*, started by Dr. Viktor Frhr. von Malchus and finalized by Jannes L. Elfgen for the Association of European Border Regions (AEBR), Gronau, 2011.

In its synthesis report, J.L. Elfgen explains that, in order to make best usage of the unfinished study and to adjust its contents to changes that occurred over time, several steps were undertaken. The exploratory dataset about CBC was updated and partially extended to cover new major developments in all AEBR Member Regions. Next, key dimensions and factors of current university management as well as regional policy were identified through literature review, consultation of online sources and expert interviews.

In addition, changes in European Union policies towards Research, Development and Innovation and Higher Education

were analyzed to account for their effect on the development of the **European Research Area** (ERA). The central aspect of this study was to make use of the updated exploratory data of Dr. von Malchus to:

- (1) make an interregional comparison of cross-border practices;
- (2) contrast it with EU policy initiatives for establishing an integrated ERA;
- (3) apply scientific recommendations for effective policies of professional governance of Higher Education R & D and Innovation to the cross-border dimension; and
- (4) make predictions on possible developments in this field to propose areas of future AEBR supportive action.

The AEBR appreciated the considerable efforts undertaken in the various cross-border regions throughout Europe to enhance cooperation and it is aimed at supporting and fostering this process. In light of the (then) renewed Lisbon strategy on competitiveness through a knowledge-based Single European Market this study emphasized the crucial need for regions to embrace the Europe 2020 strategy within a cross-border vision.

Cross-border regions stand in the front line of the European integration process and universities, as the major knowledge producing institutions, have been identified as the key actors for sustaining economic competitiveness and growth in the future throughout Europe.

Conclusions of the 2011 revision the AEBR 2003-2007 survey

It showed that CBC between universities is a complex, multifaceted and dynamic process not easily grasped nor defined by a single definition.

Since the beginning of the European Integration process and the following promotion of the "fifth freedom" about the free movement of knowledge, agreed upon in the Bologna reform and its follow up agreements, the regions throughout Europe have pursued cooperation between institutions of higher education and R&D with varying intensity and success. When looking at the timeframe from the start of the AEBR survey in 2003 and the finalization in 2011, the data showed that the process increasingly gained in momentum over that period. The key position that was assigned to excellence in knowledge and R&D in the Lisbon strategy as well as in the Europe 2020 goals placed universities and similar institutions at the heart of policy action aiming at making Europe more competitive and creating new jobs.

The results of the analysis also showed that strategies for cooperation and internationalization of university policy have however only partially been applied to the cross-border context. Concerning this matter, the main preliminary findings of the initial AEBR survey have been that strategies of cooperation have developed at a different pace between the cross-border and interregional and global (outside Europe) context. Thereby potentials of cooperation within the immediate spatial surrounding have been disregarded for the most cases through a narrow focus on interregional cooperation.

The degree to which cross-border structures of university cooperation exist among European regions therefore varies considerably and the examination shows that the ERA has not yet come into full existence within all border regions. If the goal of finalizing the ERA by 2014, as set out by the Commission, was to be

achieved the more efforts were needed to enable and encourage all universities to partake in this project.

The results of this synthesis report revealed that there are two main rationales and goals that stand behind the different attempts of creating university cooperation within cross-border regions. Whereas some regions seek to create cooperation with the ultimate goal of establishing a coherent cross-border area of science, higher education and R&D other pursue cooperation as a means for solely enhancing and diversifying own possibilities of education through content specific agreements.

Nevertheless the intention of constructing higher education and R&D more cost efficient through the pooling of resources plays an important part for both rationales.

These two categories are neither normative nor can they be measured as economically superior over all instances. Instead the reasons for following one of the two goals rather derive from the inherent economical, political and social conditions that are present within the cross-border areas. Regions wherein the emergence of a coherent area of science, higher education and R&D on basis of the here presented findings can be observed and are spread all over Europe with two identified hotspots in the Oresund (DK/SE) and EUCOR (French-German-Swiss) border areas. Further efforts for creating similar coherent areas could be found in 19 European border regions. Cooperation was found to materialize in the creation of Consortiums, Twin-universities, United (merged-) universities and university networks.:

Table C.11.1: **Regions with the emergence of a coherent area of science, higher education and R&D**, AEBR own elaboration, 2011

- a) *Helsinki-Tallinn Twin City of Science*
- b) *Northern dimension research centre – NORDI*
- c) *Cross-border University*
- d) *Uniska*
- e) *Øresund Campus*
- f) *Internationale Bodensee Hochschule (Graduate School Lake Constance)*
- g) *EUCOR*
- h) *University of the Greater Region*
- i) *ALMA- University Network*
- j) *Sächsisch-Tschechisches Hochschulzentrum (STHZ) – Neisse/Nisa University*
- k) *Academic Coordination Centre at the Euroregion Nisa (ACC)*
- l) *Centre for Cross-border Studies / Universities Ireland*
- m) *Eurocampus*
- n) *Kvarken Council*
- o) *Nordkalotträdet (Cap of the North Council)*
- p) *EGTC Galicia – Norte Portugal*
- q) *Euroregion (EGTC) Vasca- Linkage committee of the Universities*
- r) *Collegium Pollonicum*
- s) *EMOTIS German –Dutch University Network*
- t) *Campus Hidranatura*

Moreover one separate case was identified that showed intensive practices of cooperation in one specific instance, on the one hand, and is not matched by any other efforts in the wider region supporting cooperation practises, on the other. This case in the Euroregion of Rousse-Giurgiu (RO/BG) has been labelled as a *Flagship* since it represents an exceptional initiative which might yield, if

proven successful, other more intensive cooperation in the entire region, though is not yet incorporated within mainstreaming efforts to create a coherent area of science and education.

In addition, the example of intensive cooperation at the outskirts of Europe's borders between universities of Belarus, Russia and Ukraine —they were not subject of the analysis— was added to this list:

- u) *BRIE Centre*
- v) *Belarus-Russia-Ukraine Universities Consortium*

The empirical analysis of this synthesis report showed furthermore that almost all regions had recently, at least to some extent, started CBC practises already. However most of them had a relatively limited scope and many political and cultural barriers still exist, which are hindering universities to fully exploit CBC possibilities.

Main overall barriers that still exist for CBC were found in the differences between regions resulting from individual national implementation of the Bologna reform package. Harmonizing the grading system, workload regulations and study term duration were central aspects of these differences and have to be accommodated to allow deeper forms of cooperation.

Furthermore, interrelations between universities are often limited due to the small number of exchange places that are reserved for international students.

The findings of this analysis also showed that personal trust is a necessity to initiate cooperation which allows for pragmatic problem solving and helps to overcome cultural as well as legislative and administrative differences.

In South-Eastern European regions the lack of financial resources poses the greatest barrier to create exchange practices or establish coherent areas of science, higher education and R&D. Therefore cross-border cooperation

practices between universities are very limited in that area and besides some Flagship initiatives the South-Eastern European Regions are lagging behind the North-Western ones.

However the availability of financial resources and financial incentives through funding programmes play an important role all over Europe's border regions. It remains therefore a key challenge for all initiatives to support measures for sustaining cooperative practices also after the end of external co-funding.

Moreover, university cooperation is mostly limited to a specific educational programme or a single research project. Thus the degree of cooperation does not only vary over regions but also within regions over departmental parts of the participating institutions.

Therefore considerable efforts are still needed to fully exploit the potentials that rest within cooperation at the border throughout all educational branches and R&D undertakings to foster cross-sector specialization and innovation.

It can be stated that most cooperation structures involve some kind of internal organizational management bodies and/or external involvement at the political level. Umbrella organizations or joint university programmes play an important role nowadays to coordinate and sustain cooperation practices, and furthermore provide for a certain level of internal and external coherence. These organizations are present throughout Europe in a great variety of capacities and scope. The analysis found that most of these organizations seek liaisons within the political dimension at the Euro-regional or larger-scale regional level. Nevertheless there are still many Euro-regional cross-border structures that are not yet making full use of their potentials by providing services to support university cooperation. The dense network of institutional structures, with different overlapping

scopes, has to be addressed by future EU and national policy to avoid a duplication of efforts and to manage university cooperation within the appropriate institutional setting to realize the finalization of the ERA².

Drawing on the analysis of this synthesis report it seems advisable to support network activities between the umbrella organizations of university cooperation among the coherent areas of science, higher education and R&D. Interregional comparison across these similar institutional structures offers the possibility to identify best practises and effective approaches of problem solving further.

In addition umbrella organizations might offer the right balance between the macro-regional and the Euro-regional institutional scope, due to their variable magnitude which has evolved accordingly to regional circumstances and the prevalence of institutions of higher education and R&D.

Besides the physical linkages between universities, like common facilities or management bodies, a major observation of this study was the increasing importance that joint virtual/digital networks play within cooperation practices throughout Europe. The possibilities and benefits that exist through the usage of the internet and virtual networks are manifold and are thus being embraced by more and more actors. Areas for cooperation with the help of this method are ranging from teaching, research, networking and marketing to the creation of joint "online" virtual faculties, institutes and facilities as libraries.

It was found that regions which are shaped by weak infrastructural environments benefit from a **Digital Agenda** of cooperation especially as it compensates for missing physical links to a great extent. Moreover does this form of cooperation allow for fast and cost-

² Expected to be in 2014, the conditions are in place, but there are areas where further effort is needed.

efficient adaptations notably benefiting institutions with limited recourses or reference areas of great geographical magnitude. Joint online campus areas are becoming the norm rather than the exception in Europe and initiatives as the *Eduroam*³ network (?) introduce and confer the ERA on to the digital level. Virtual cooperation can serve as a stepping stone for following actions on the one hand and can offer additional opportunities for cooperation on the other hand, if administrative or political barriers still exist at the regional level and should thus be pursued along practical activities.

And the recommendations...

In order to facilitate and support further cooperation between universities in Europe's border regions, which is necessary to make full use of the possibilities that reside thereof, this synthesis report ended by proposing a set of recommendations.

Due to the fact that structures and strategies for cross-border university cooperation are still in the process of developing, little is known about the effectiveness and benefits of the specific measures. Moreover complete data is at the regional level still not available in all border areas to verify results and compare practices (**lack of cross-border indicators**). Cross-border data are also missing. Therefore the proposed recommendations are focusing on improving the understanding of cross-border policy measures for university cooperation on the one hand and on the other hand on stressing the need for building up mechanisms for formulating and controlling evidence based policy. In line with the Europe 2020 strategies these recommendations ultimately aim at the realization of smart growth at the regional cross-border level to foster development and higher standards of living.

As a first step the information gap on cross-border university cooperation practices and programmes, as e.g. at the ERA-watch homepage of the EU, had to be closed. This synthesis report served as a first step for creating a **platform/network** allowing for permanent and easy access to information on the topic at hand. This platform should include structures of an **observatory** (likewise e.g. cluster observatory) that allows for a regular exchange of practices between actors in the field of CBC and can also inform institutions about possible partners within their border region. The aforementioned networks as well as organizations as the AEBR can support the construction of measures for the **interregional comparison of cross-border initiatives** that would enable actors to identify effective and meaningful policies. **Regular publication** on positive and on problematic developments surrounding university cooperation in border regions should be exchanged in order to make use of the opportunities of **peer review**. A certain level of **common standards for assessing and reporting** results should jointly be put forward so that reasonable comparisons can be made in the future. Examples for such practices could be standardized **cross-border SWOT-assessment reports**.

The umbrella organizations of cross-border structures of university cooperation are located at the interface of the interactions and therefore take on a very important position, enabling them to support these proposed exchange practices. The inherent knowledge and availability of contacts and its overarching position vest the umbrella organizations with the adequate capabilities to conduct and report valid information about the cross-border area. The importance and crucial positioning of such intermediary agencies, located at the regional level and outside the bureaucratic system, has also been verified by reports of the OECD on

³ Many universities throughout Europe have created a common virtual space for their students as e.g. the *Eduroam* network

allowing European wide access to university internet connections with one registration account.

regional innovation systems (Fiore, Grisorio & Prota, 2011). It is stated that the *agencification* of the construction of regional innovation networks are most effectively managed within the realm of institutions that are located at the nodes hubs of business and university R&D activities. Applying this to border regions would imply the creation of cross-border agencies for the organization of cross-border collaboration between university and business R&D. Overall it has to be ensured that the entire activities foster a level of mutual trust between the border regions leading to the success of continuing and extending exchange practices at all levels.

The existence of **social capital** and thus trust are major prerogatives for regional economic growth and cross-border agencies as the umbrella organizations of university cooperation have to ensure that reasonable networks are put in place that foster their development (Fiore, Grisorio & Prota, 2011). Although strong vertical institutional structures are of great importance to support and coordinate cooperation, horizontal people-to-people actions offer the most direct way to create the very needed level of trust among the actors upon which organic cooperation can be funded.

The **human capital** basis⁴ and the percentages of people employed in R&D related sectors were found to be crucial for generating smart growth and exploiting knowledge and innovation. Therefore the attraction of skilled workers and the support of well educated human recourses at the regional level are central to realize regional GDP growth. However as studies about research mobility prove great differences exist between regions in their ability to attract skilled workers (Fernández-Zubieta & Guy, 2010). In fact the research mobility is not balanced in Europe and rather leading to a brain drain

for lower performing regions as in South-Eastern Europe.

Hence universities at the border area have to address this issue jointly to strengthen their position in the global competition for attracting educated human resources and **prevent one-way brain circulation**. A policy has to be developed to address mobility and regions being disadvantaged by talent-drain and different starting positions.

A possible policy approach to address the issue of brain-drain could be the so called **diaspora approach** (Fiore, Grisorio & Prota, 2011). This policy response begins by acknowledging the inherent disparities between high performing world wide recognised regions of knowledge and innovation and those peripheral regions that are lagging behind on most relevant indicators to attract high skilled researchers. However the response of the Diaspora approach is to create networks with the migrated researchers and their home institutions to make use of their experiences and their contacts that can open ways for cooperative undertakings as e.g. co-publications (Agrawal, Cockburn, & McHale, 2006).

Knowledge spillovers have been found to play a fundamental part for developing regional smart growth (ETEPS 2010) if specific conditions are present, which is of particular importance for regions lagging behind and trying to catch up. With regard to the precise topic of this study three primary aspects were identified to be most relevant for realizing regional growth through knowledge spillovers:

- First, a high level of **talent** has to be present and the availability for training and continuing education has to be secured as described previously.
- Second, social networks and interrelations between knowledge intensive sectors are necessary to generate the needed absorption

⁴ Instead of human capital, it is better to talk about talent (according to the President of the German Rectors' Conference)

capacity. The aforementioned regular exchange practices and platforms/observatories for university cooperation can serve as the right means to establish these social networks.

- Last but not least, scientific findings (ETEPS, 2010; European Commission, 2009b; OECD, 2009) put forward that there is a positive correlation between the effectiveness of knowledge spillovers and spatial proximity. Thus knowledge spillovers would be best suited in the cross-border context compared to the interregional or macro-regional ones to generate smart growth. Therefore policy efforts with regard to lagging regions should focus on creating such proximity linkages within border areas rather than over-emphasising the creation of interregional programmes.

In order to realize this scenario, which would lead to generate smart growth, methods of financial engineering and support through EU programmes, as well as national or private funding, should be used at its full potential. Possibilities for accessing the myriad of material and non material support measures that exists at international, EU, national and regional level have to be shared with university cooperation players. The analysis of this report proves that financial incentives are fundamental for most initiatives to come true or to pursue interrelations across the border.

In order to provide sufficient support to realize 2020 goals and make progress in establishing a fully integrated ERA, euro-regional cross-border structures and

large-scale regional groupings should combine their efforts.

University cooperation should thus make use of e.g. **INTERREG A and C** funding especially in the new Multiannual Financial Framework (2014-2020). This is possible in combination with **Horizon 2020**, as multi-fund initiatives are possible.

Additional strategies have to be developed to account for societal difficulties and changes by making use of other financial support measures as for example the social fund. Demographic change, unequal distribution of private investment patterns and unbalanced research mobility are major threats and obstacles for lagging regions, not only in European border areas. Strategies have to be developed for cross-border university cooperation to specifically address illiterate and educationally deprived social classes, increasing the level of human capital and **prevent** the emergence of a **two-level-ERA**. The much proliferated pursuit of a digital agenda of university cooperation can serve as a part of the solution.

However further research and analyses on the efficiency of single university cooperation should be carried out over time. A quantitative follow-up study on similar essential empirical indicators as in this synthesis report could provide much insight into the precise functioning of the described processes. Standardized regular online surveys among actors of university cooperation are advisable regarding time-, effort- and cost- efficiency. This would be a follow up study that would catch a much higher response rate to the initial AEBR 2003-2007 survey.

Table C.11.2: List of umbrella organizations of CB University Cooperation

Oresund Committee: Oresund Campus (DK-SE)

<http://www.studygateway.org/campus/>

EUCOR (CH-DE-FR)

<http://www.eucor-uni.org/>

Lake Constance International Conference:

Internationale Bodensee Hochschule (Lake Constance College)

<http://www.bodenseehochschule.org/>

Northern dimension research centre – NORDI:

Finish Russian Innovation University

Finish Russian Forest Academy

<http://www.lut.fi/en/nordi/Pages/Default.aspx>

Cross-border University

<http://cbu.fi/en/>

Eurocampus

<http://www.eurocampusweb.eu/es>

The Centres of research and Higher Education (PRES)- Public Institutions of scientific cooperation

<http://www.pres-univ-montp.fr/english/presentation.php>

Midi-Pyrennees

Higher Education and Research in Toulouse and Midi-Pyrenees

<http://en.univ-toulouse.fr/our-assets>

Euroregió Pirineus-Mediterrània: PRES Pirineus-Mediterrània

<http://www.prespm.eu/>

Xarxa Vives (Vives Network) <http://www.vives.org/en/qui-som/>

The Greater Region: Universities of the Greater Region

<http://www.uni-gr.eu/en/nc/startseite.html>

Europaregion Pro Viadrina: Collegium Pollonicum

<http://www.cp.edu.pl/de/index.html>

Euroregion Nisa:

- **Academic Coordination Centre at the (ACC)**
<http://euroregion.tul.cz/index.php>
- **Sächsisch-Tschechische Hochschulzentrum (STHZ)**
<http://www.tu-chemnitz.de/phil/europastudien/geographie/sthz/projekt.html>
- **Neisse University**
<http://www.neisse-uni.org/start/neisse.php>

Centre for Cross-border Studies

<http://www.crossborder.ie/>

Universities Ireland

<http://www.universitiesireland.ie/>

Uniska

<http://uniska.org/index.html>

ALMA- University Network

Kvarken Council

<http://www.kvarken.org/WebRoot/1018447/Page.aspx?id=1021902>

Nordkalotträdet

<http://www.nordkalottradet.nu/svindex.htm>

Euroregion (EGTC) Vasca: *Linkage committee of the Universities***Helsinki-Tallinn: *Twin City of Science*****EMOTIS German –Dutch University Network**

<http://www.mba-iscm.org/>

Euroregion EUROACE (Extremadura, Centro, Alentejo)***Hidranatura Campus of Excellence***

<http://www.hidranatura.com>

Table C.11.3: Flagships**BRIE Centre**

<http://brie.uni-ruse.bg/en/pages/home.php>

Belarus-Russia-Ukraine Universities Consortium

Not available

Table C.11.4: Large scale cross-border university umbrella organisations**CEI University Network**

<http://www.ceinet.org/content/post-graduate-studies-university-network?tab=0>

Baltic Sea Region University Network

<http://bsrun.utu.fi/>

Baltic University Programme

<http://www.balticuniv.uu.se/>

Rectors conference Alps-Adriatic Sea (ARGE)**Association of Carpathian Region Universities (ACRU)**

Cross-border Network for Applied Research and Training (in planning stage)
Slovenian and Italian Border

Table C.11.5: Cases of CBC between institutions of higher education and R&D**1. Euroregion Lyna - Lawa (PL/RU). Warmia and Masuri University**

1. Kaliningrad State Technical University
2. Immanuel Kant State University of Russia
3. Warmia and Masuri University

2. Euroregion Nemunas/Niemen/ Neman (BY/PL)

1. Warmia and Masuri University
2. Grodno State University (Yanka Kupala)

3. Oresund Campus ("University") – Øresundkomiteen (DK/SE)

1. LU - Lund University
2. KU - University of Copenhagen
3. MaH - Malmö University
4. CBS - Copenhagen Business School,
5. RUC - Roskilde University
6. DTU - Technical University of Denmark,
7. HKr - Kristianstad University
8. KA - The Royal School of Fine Arts School of Architecture
9. SLU - The Swedish University of Agricultural Sciences

4. Västmanland-Østfold (NO/SE) / Gränskommittén Østfold - Bohuslän/Dalsland (NO/SE)

1. Karlstad University
2. Dalarna University
3. University of Akerhus
4. Schule in Lillehammer
5. University College of Hedmark
6. University of Gjøvik
7. University College of Østfold

5 Kvarkenrådet (FI/SE) / Österbottens Förbund (FI)

1. Umeå University
2. Swedish University of Agricultural Sciences
3. University of Vaasa
4. Åbo Akademi University in Vaasa
5. Swedish School of Economics and Business Administration
6. Vaasa University of Applied Sciences
7. Novi University of Applied Sciences
8. Bodø University College
9. Chydenius Institute in Kokkola

6. Nordkalottenrådet (FI/NO/SE) / Tornedalsrådet - Bothnian Arc (FI/NO/SE)

1. Lulea University of Technology (LTU)
2. University of Oulu
3. University Tromsø
4. University of Lapland (Rovaniemi)
5. University of Applied science Kemi-Tornio
6. "Umeå University"

7. Euregio Karelia (FI/RU) - Cross-border University

1. University Joensuu
2. University of Eastern Finland (UEF)
3. Lappeenranta University of Technology (LUT)
4. University of Tampere (UTA)
5. University of Helsinki (UH)
6. St. Petersburg State Polytechnical University (SPSPU)
7. St. Petersburg State University (SPSU)
8. Petrozavodsk State University (PetrSU)
9. St. Petersburg State Forest Technical Academy (SPSFA)
10. European University at St. Petersburg (EUSP)
11. Moscow State Forest University

8. Regional Council of South Karelia (FI) / South-East-Finland - Russia (FI/RU)

1. University Joensuu
2. Finish Russian Forest Academy / Finish Russian Innovation University --> NORDI
3. Lappeenranta University of Technology,
4. St. Petersburg State Technological University of Plant Polymers
5. St. Petersburg State Forest Technical Academy

9. Euregio Helsinki - Tallinn (FI/EE)

1. University of Helsinki,
2. Helsinki University of Technology,
3. Tallinn University of Technology,
4. Tallinn University
5. Estonian Academy of Arts (especially design),
6. Estonian Academy of Music
7. Estonian Public Service Academy.
8. Tartu University
9. Estonian Business School
10. Concordia Audentes University

**10. Euregio "Pskov - Livonia" (EE/LV/RU)
Euro Faculty Kaliningrad**

1. Pskov State Polytechnic Institute
2. Pskov Volny Institute.
3. University Tartu
4. University Vilnius
5. University Riga

11. Euroregion Nemunas/Niemen/Neman (BY/LT/PL/RU)

1. Immanuel Kant Baltic federal University
2. Warmia and Masuri University
3. Kaunas University of Technology (KTU)
4. Liepaja University

12. Euroregion Pomerania (DE/PL/SE)

1. University Greifswald
2. University of Szczecin

13. Region Sønderjylland - Schleswig (DK/DE)

1. University of Applied Science Flensburg
2. University Flensburg
3. University of Southern Denmark (Syddansk)

14. Euroregion Puszca Bialowieska (BY/PL) / Euroregion Bug (BY/PL/UA)

1. Maria Curie-Skłodowska University
2. University Lublin
3. University Lviv

15. Euroregion PRO EUROPA VIADRINA (DE/PL) - Collegium Pollonicum

1. Adam Mickiewicz University
2. European University Viadrina Frankfurt (Oder)

16. Euroregion Spree-Neiße-Bober - Sprewa-Nysa-Bóbr (DE/PL)

1. University of applied Science Lausitz
2. Brandenburg University of Technology
3. University of applied Science Leibnitz
4. University of applied Science Gorzow
5. University of Zilona Gora
6. Poznan University of Technology
7. University of Wrocław

17. Euroregion Neiße-Nysa (DE/CZ/PL)

1. Technical University Liberec (TUL)
2. Kolegium Karkonoskie (Jelenia Góra)
3. University of applied Science Zittau & Görlitz
4. International Graduate School Zittau
5. Wrocław University of Technology

18. Euroregion Tešínské Slezsko - Śląsk Cieszyński (CZ/PL)

1. University of Silesia
2. University of Ostrava
3. (University Gliwice)

19. Euroregion ELBE/LABE (DE/CZ) / Euroregion Erzgebirge - Krušnohří (DE/CZ)

1. Technical University of Dresden
2. Jan Evangelista Purkyně University in Ústí nad Labem
3. Technical University Liberec (TUL)
4. Charles University Prague // University of Economics, Prague ("Masaryk University")

20. EUREGIO EGRENSIS (CZ/DE) / Euroregion Erzgebirge - Krušnohří (DE/CZ)

1. University of West Bohemia
2. Chemnitz University of Technology
3. Jan Evangelista Purkyně University in Ústí nad Labem

21 EUREGIO EGRENSIS (CZ/DE) // Euroregion Erzgebirge - Krušnohorí (DE/CZ)

1. University of Applied Science Hof
2. University of Applied Science Amberg-Weiden
3. University of South Bohemia
4. University of West Bohemia
5. University College Karlovy vary

22. Euregio Bayerischer Wald - Šumava - Mühlviertel (DE/CZ/AT)

1. University of Passau
2. University Regensburg
3. *University of South Bohemia*
Academic and University Center of Nove Hradý
Johannes Keppler University Linz

23. Euregio Silva Nortica (AT/CZ)

1. University of South Bohemia
2. Academic and University Center of Nove Hradý
3. Johannes Keppler University Linz
4. University of Applied Science Krems

24. Euregio Silva Nortica (AT/CZ) / Euroregion Weinviertel - Jižní-Morava - Záhorie (AT/CZ/SK)

1. Donau University Krems
2. Comenius University in Bratislava

25. North West Region Cross Border Group (IE/UK) / Irish Central Border Area Network (ICBAN) Ltd (IE/UK) / East Border Region Committee (IE/UK)

1. University of Ulster
2. Queen's University Belfast
3. Dublin City University
4. Trinity College Dublin
5. University College Dublin
6. University College Cork
7. University of Limerick
8. National University of Ireland Galway
9. National University of Ireland Maynoot

26. Ireland - Wales Cross-border Cooperation (IE/UK)

1. Aberystwyth University
2. Waterford Institute of Technology
3. Pembrokeshire College
4. Bangor University
5. Dublin City University

27. Euregio Scheldemond (BE/NL)

1. University Gent
2. ROC Westerschelde, Terneuzen
(“University Bruge ”), (“University Antwerp”)

28. Ems Dollart Region - EDR (DE/NL)

1. University of Groningen
2. Drenthe University
3. University of Applied Science of Oldenburg, - Ostfriesland, -Wilhelmshaven, - Osnabrück (Lingen/Ems)

29. Provincie Overijssel (NL) / EUREGIO (DE/NL)

1. University of Twente
2. WWU Münster
3. University of Osnabrück, Emotis University Network
4. University of Applied Science Saxion
5. Münster/Steinfurt, -Gelsenkirchen/Bocholt
6. University of Applied Science of Osnabrück

30. Euregio Rhein-Waal (DE/NL) / Provincie Gelderland (NL) / euregio rhein-maas-nord (DE/NL)

1. University of Duisburg-Essen
2. University Nijmegen
3. University of Wageningen / University of Düsseldorf
4. University of Applied Science of Gelsenkirchen/Bocholt
5. University of Applied Science of Arnhem and Nijmegen
6. University of Applied Science Niederrhein/Krefeld

31. Euregio Maas-Rhein (BE/DE/NL)/ German-Speaking Community of Belgium (BE) - ALMA Universities:

1. RWTH Aachen University
2. University of Maastricht
3. University Liege
4. University Hasselt

32. Euregio Saar-Lor-Lux (DE/FR/LU) Universities of the Grande Region

1. University of Luxembourg
2. University of Kaiserslautern
3. The University of Lorraine
4. University of Trier
5. Saarland University
6. University of Liege

33. Région Alsace (FR) / Eurodistrict REGIO PAMINA (DE/FR) / Regio Basiliensis / RegioTriRhena (CH/DE/FR) / Regionalverband südlicher Oberrhein (DE)

EUCOR Universities:

1. Albert-Ludwig-University Freiburg
2. University of Basel
3. University of Strasbourg
4. Karlsruhe Institute for Technology
5. University of Haute-Alsace, Mulhouse-Colmar

34. Espace Mont-Blanc (CH/FR/IT)

1. University Politecnico de Torino
2. University Nice
3. University Genova

35. Hochrheinkommission (CH/DE) / Regionalverband Hochrhein - Bodensee (DE)

International Bodensee Graduate School (IBH)
Incorporating Total of 29 Institutions

36. Euregio Zugspitze - Wetterstein - Karwendel (DE/AT)

1. Technical University of Munich
2. LMU Munich
3. University of Innsbruck
4. University of Salzburg

37. Europaregion Tirol - Südtirol / Alto Adige - Trentino (AT/IT) / Autonome Provinz Bozen –Südtirol (IT)

1. Free University of Bozen
2. University of Trento
3. University of Innsbruck
4. University of Applied Science Kärnten

38. Regione Friuli-Venezia Giulia (IT)

1. University of Primorska
2. University of Ljubljana
3. University of Trieste
4. University of Venice
5. ("University Nova Gorica")

39. Euroregion Podunajský Trojospolok (AT/SK)

1. University of Wien
2. University Bratislava

40. Slovenian-Hungarian Crossborder Development Council (SI/HU) / EuRegio West/Nyugat Pannonia (AT/HU) / Euroregion Vagus - Danubius - Ipolia (HU/SK)

1. Széchenyi István University'
2. Universities of Wien: e.g. BOKU, WU, TU University Bratislava
3. Daniel Berzsenyi College of Szombathely
4. University of West-Hungary
5. Central European University
6. Theological College of GYOR
7. Donau University Krems

41. Euroregion Rousse-Giurgiu (BG/RO)

1. University of Ruse
2. University of Bucarest

42. Euroregion Strymon - Strouma (GR/BG)

1. Aristotelian University of Thessaloniki
2. Macedonia University of Thessaloniki
3. Technical Institute of Serres
4. Technical Institute of Kavala
5. Democritus University of Thrace
6. Sofia University
7. American University of Blagoevgrad
8. South-West university "Neofit Rilski" Belgoevgrad

43. Catalunya (ES) / Andorra (AD) / Languedoc-Roussillon (FR) / Midi-Pyrénées (FR) / Aragón (ES)

1. (Xarxa) Vives Network
2. PRES Pirineus Mediterrània
3. Higher Education and Research in Toulouse and Midi-Pyrenees
4. PRES de Montpellier

For the total of 139 Institutions go to <http://www.eurocampusweb.eu/es/centros-y-formaciones>

44. Navarra (ES) / Aquitaine (FR) / Pais-Vasco/euskadi (ES)

1. University Bordeaux (I- IV)
2. University of Pau and Pays de l'Adour
3. University of Pais Vasco
4. University de Deusto
5. University de Mondragon
6. Public University of Navarra
7. University of Navarra

45. Galicia (ES) / Norte (PT) / Castilla y León (ES)

1. University of Vigo, Jean Monnet Centre of Excellence
2. University Minho (Braga)
3. University Santiago de Compostela
4. University of Porto
5. University of A Coruna
6. University of Trás-os-Montes and Alto Douro

46. Euroregion Baltic (DK/LT/PL/RU/SE)

1. Klaipeda University
2. Immanuel Kant State University of Russia

47. Hajdú-Bihar - Bihor Euroregion (HU/RO)

1. University Oradea
2. University of Debrecen

48 Kent/Sussex Nord-Pas de Calais/Picardie (FR-UK)

1. University Kent
2. University East Sussex
3. University Lille

49. Extremadura (ES), Centro (PT), Alentejo (PT)

1. Centro de Cirugía de Mínima Invasión de Cáceres
2. IPROCOR (Instituto del Corcho, la Madera y el Carbón Vegetal), adscrito al Centro de Investigación Científicas y Tecnológicas de Extremadura (CICYTEX), Consejería de Economía, Competitividad e Innovación del Gobierno de Extremadura.
3. RITECA Network
4. Centro de Investigaciones Energeticas Medioambientales y Tecnologicas – CIEMAT
5. Agencia Estatal Consejo Superior de Investigaciones Cientificas (CSIS)
6. [Centro de Biotecnologia Agrícola e Agro-Alimentar do Baixo Alentejo e Litoral - CEBAL](#)
7. CATAA – Associação Centro de Apoio Tecnológico Agro-Alimentar
8. Internacional Center for Technology in Virtual Reality - ICTVR
9. Associação de Desenvolvimento Regional - Instituto Politécnico de Portalegre
10. [Centro Operativo e de Tecnología de Regadío](#)
11. [Instituto Politécnico de Beja](#)
12. Instituto Politécnico de Portalegre
13. Instituto Nacional de Recursos Biológicos - INRB
14. [Universidade de Évora](#)
15. CEVALOR - Centro Tecnológico para o Aproveitamento e Valorização das Rochas Ornamentais e Industriais
16. CTIC - Centro Tecnológico das Indústrias do Couro

50. Euroregion Bile-Biele Karpaty(CZ/SK)

1. University Zilina Alexander Dubcek
2. University of Trencin
3. Tomas Bata University (UTB)

**ERAC OPINION ON CROSS-
BORDER COOPERATION
AMONG RESEARCH-
PERFORMING ORGANISATIONS
FOR ACHIEVING THE
EUROPEAN RESEARCH AREA**

**European Research Area Committee,
Brussels, 16th August 2013**

**BACKGROUND AND
INTRODUCTION**

Following repeated calls for an in-depth analysis of how to deal with cross-border cooperation between research performing organisations (CBC-RPO) –which holds an important potential for the European Research Area and for the strengthening of European research and innovation– a dialogue was initiated in 2012 between the Committee and representatives of European research performing organisations that operate across borders. In 2012, representatives of European research stakeholder organisations and a number of other interested parties prepared a document about the challenges and needs which had been identified in developing CBC-RPO. Despite the challenges encountered, most of the initiatives by RPOs towards cross-border cooperation should be perceived as “real” success stories. It is therefore highly recommended to read the present Opinion together with last year's more detailed description of these success stories.

This dialogue on cross-border cooperation between RPOs and ERAC was timely, as on 17 July 2012 the European Commission had proposed to reinforce the ERA partnership by deepening the involvement of European research stakeholder organisations, focussing on, inter alia, cross-border cooperation. A Joint Statement was agreed in this context between the Commission and a number of European research stakeholder organisations, and four organisations (EUA, EARTO, LERU and Nordforsk) signed a Memorandum of Understanding with the Commission. The Council endorsed conclusions on the follow-up to this

Communication on 11 December 2012, and a first progress report about the implementation of the different measures is due by September 2013.

This Opinion takes into account the presentations of best practice examples during the 11th ERAC meeting on 6 and 7 September 2012 held in Limassol (CY) (see Summary Conclusions under item 6.2 in doc. ERAC 1205/12 of 27 August 2012), and the ensuing discussion at the meeting, which was attended by a number of research stakeholder organisations.

After this discussion, an ad hoc Working Group was set up under Article 10 of ERAC's Rules of Procedure. This Working Group has met two times: on 18 April 2013 and on 31 May 2013, and it has also had several exchanges of views via e-mail.

During the last meeting, representatives from research stakeholder organisations⁶ were invited to express their views on a preliminary Opinion. While these representatives fully supported the approach taken by the Working Group, they emphasised the need for ERAC to take into account the particular characteristics and needs of so-called near-border cooperation.

In preparing the Opinion, the Working Group has closely followed its mandate (see doc. ERAC 1211/13, included in Annex I). In line with this mandate, this Opinion addresses the following issues:

- a. Based on examples of and best practices in cross-border cooperation between research-performing organisations, recommendations for establishing framework conditions enabling simple and smooth cross-border cooperation between research-performing organisations acting in the framework of programmes or implementing projects jointly, in the wider context of achieving the European Research Area.
- b. Needs for EU support for cross-border cooperation initiatives, making best use of future Horizon 2020 and Cohesion Policy instruments, and recommendations for support by national authorities.

- c. Input for terms of reference for further study concerning CBC-RPO.

In particular with regard to the framework conditions, this ERAC Opinion on CBC-RPO will be relevant for ERAC's response to the Commission's first ERA progress report, which ERAC is planning to prepare by October 2013, as well as the possible further (political) follow-up. CBC-RPO will both benefit from the implementation of the reinforced ERA partnership and at the same time contribute to its objectives. The Opinion starts with the two most relevant recommendations as regards the ERA.

RECOMMENDATIONS RELATED TO THE CHALLENGES AND NEEDS IDENTIFIED

Based on the document on the challenges and needs identified when establishing CBC-RPO (doc. ERAC 1205/12), and the ensuing discussions in the Working Group and the ERAC plenary, ERAC would like to give six recommendations. These are grouped under the three headings already listed in the Note preceding the Opinion. The international dimension, which is an important part of the ERA, should also be taken into account in these recommendations if and when appropriate.

Heading I. Creating the framework conditions for simple and smooth cross-border cooperation between research performing organisations (RPOs) in the context of achieving the ERA and with a wider impact on innovation

RECOMMENDATION ONE

Give priority and support to existing policies and new initiatives towards simplifying and improving interoperability of national research funding programmes, in certain cases also allowing them to be opened up to CBC, and towards better conditions conducive to mobility of researchers and the cross-border use of research infrastructures.

The 2012 report on CBC-RPO prepared with stakeholder organisations illustrates that even successful "ERA actions" between neighbouring countries conducted on a larger regional, CB scale could benefit from a more clear-cut policy fostering near-border cooperation by universities/RPOs. Put differently, even leading industrial and innovation areas need support from more flexible instruments, financial support for mobility, and simpler regionally-governed cross-border research funding pots.

A number of successful examples still face issues such as institutional complexity and diversity with coordination problems and budgetary fragmentation that need to be addressed. Further incentives are needed to harness the full potential of this CBC, such as optimised and transparent governance structures and procedures. Models for step-by-step and partial opening-up of national research funding could be explored, and inclusive cross-sectoral platforms could be established to identify joint priorities and common strategies and projects.

Further political goals and visions remain necessary, as do structured and systematic policy analysis and intelligence. Simplification of political and financial processes may be beneficial and should be discussed between EU partners. A well-organised regular exchange of experience as well as tailored support programmes for the initiatives could give CBR-RPO initiatives such as "ERA laboratories" the boost they need to overcome the challenges created by the border situation.

CBC-RPO is benefitting from the different Marie Curie Actions and will continue to benefit from the strengthened and simplified "Marie Skłodowska-Curie Actions". Some obstacles to CBC-RPO in terms of researchers' mobility are no different from the obstacles to the realisation of the ERA as a whole, such as a number of remaining obstacles to transparent, open and merit-based recruitment and obstacles to access for non-nationals/non-residents to national grants and possibilities, which occasionally

result in uncertain career prospects. These issues were also addressed in the Commission's 2012 ERA Communication (see footnote 6). The SG HRM WG report "Access and portability of grants" (adopted on 23 May 2012) addressed the last two issues in more detail, with a view to learning from existent conditions in Europe, based on a survey of Member States and Associated Countries.

CBC-RPO will potentially benefit from the improved conditions for mobility, careers and CB access to large research infrastructures based on the implementation of the ERA Communication, while RPOs themselves can also contribute to solving current and future challenges involved in achieving the ERA, e.g. by introducing open recruitment and improved human resources policies. A strong incentive for CBC-RPO is the (cross-border) accessibility of important research infrastructures, as this is a crucial aspect for successful research.

In this context ERAC:

1. Calls on Member States to give priority and support to existing policies and new initiatives towards adjusting and improving interoperability of national research funding programmes, in certain cases allowing them to be opened up across borders, based on principles of open access and variable geometry, on models which have been proven to work effectively and on the non-legislative ERA measures as proposed by the European Commission.
2. Calls on Member States to consider creating conditions conducive to the mobility of researchers and cross-border use of research infrastructures, and to support the implementation of the relevant non-legislative ERA measures as proposed by the European Commission.
3. Calls on the Commission to encourage and support initiatives in this area within the wider context of ERA policy.

RECOMMENDATION TWO

Fully exploit the potential of CBC-RPO for the development of the Knowledge Triangle and the promotion of knowledge transfer.

Knowledge transfer is broadly defined as the process by which knowledge and ideas are shared and exchanged, both within the research base and between the research base and industry, for societal and economic benefit and scientific progress. The examples gathered in the framework of the work on this Opinion show that it may be easier to develop an integrated Knowledge Triangle approach in more focussed near-border cooperation initiatives, and in specific thematic areas, such as energy research, than is the case in generic research and innovation programmes at EU and national level. At national level, however, good examples do exist of programmes to support the development of the Knowledge Triangle, e.g. by universities, which could also support CBC-RPO.

At EU level, the European Commission will develop a comprehensive policy approach for open innovation and knowledge transfer going beyond issues related to intellectual property, through consultation of the relevant stakeholders.

The European Institute of Innovation and Technology (EIT)'s main mission is to bring together excellent research, education and innovation, and RPOs are actively participating in its Knowledge and Innovation Communities (KICs). As of 2014, the KICs will also implement a Regional Innovation Scheme (RIS), an outreach scheme targeted at partnerships between higher education institutions, research organisations, companies and other stakeholders in order to foster innovation across the EU.

Transfer of knowledge is also a key element of all Marie Skłodowska-Curie Actions, particularly in the schemes for staff exchange and doctoral training. They will support trans-national knowledge exchange not only between academia and industry within Europe, but also with

research and innovation-related partners in third countries.

In line with the Innovation Union commitment to strengthen knowledge transfer offices in European cross-border public research organisations (PROs), the Joint Research Centre established the European TTO (Technology Transfer Office) CIRCLE Network in 2011²¹. It comprises 25 large PROs, whose prime mission is to perform research in Europe. The aim is to complement existing collaboration on R&D with technology transfer. In particular, the Network agreed to join forces through a set of initiatives including fostering the use of their knowledge; sharing best practices, knowledge and expertise; performing joint activities; establishing informal channels of communication with policymakers; organising training programmes; and developing a common approach towards international standards for the professionalisation of technology transfer. The network will also promote the design and implementation of a European Technology Transfer Financial Facility to increase the transfer of research results to the market.

In this context ERAC:

1. Calls on Member States to consider CBC-RPO within the context of national R&I policies as a means to develop integrated Knowledge Triangle policies and effective knowledge transfer.
2. Calls on the Commission to encourage and to continue to support relevant initiatives to develop Knowledge Triangle policies, within the wider context of the Innovation Union and ERA policy, by a comprehensive policy approach for open innovation and knowledge transfer and by the implementation of the EIT, Marie Skłodowska-Curie Actions and the TTO CIRCLE.

Heading II. Support for CBC-RPO by the EU and Member States

RECOMMENDATION THREE

Structurally involve research performing organisations and other stakeholders, in so far as this is not yet the case, in an early stage of the preparation of new research and innovation initiatives.

It is crucial that when new initiatives in research and innovation are prepared, stakeholders, including RPOs, are involved in the preparatory work at an early stage in order to identify relevant issues, to formulate programmes and determine the governance/governing structure as well as to identify and develop more detailed instruments.

While at the ERAC plenary discussion on 14 June 2013 the question was raised as to whether such early involvement is not already current practice throughout Europe, the Working Group concluded that this is, somewhat surprisingly, not always the case everywhere in Europe. Implementation of this recommendation will therefore raise the strategic level of the R&I initiatives at national level, but will also require additional coordination and efforts in communication and dialogue by national and regional authorities during the different preparatory phases of any new R&I measure. Ways to involve and consult stakeholders are developing over time, e.g. by making use of IT-based crowd sourcing techniques, interactive policy-making tools and responsible research and innovation programmes where ethical and social aspects of new technologies are considered from the design phase. It is also important not to define the "research stakeholders" too narrowly, allowing for new entrants and for the "accidental" involvement of a wide range of people. Many national variations may continue to exist within national governance systems and administrative traditions.

In the context of good governance at EU level, an impact assessment exercise is required for any new EU policy or legislative proposal, including consultation

of stakeholders in the design of new policy measures. Despite this existing requirement at EU level, it seems that RPOs feel that systematic involvement of stakeholders can also be improved when new initiatives are set up at EU level. This will be important for example for new European Innovation Partnerships and other initiatives to address societal challenges. The 2012 initiatives towards achieving a fully functioning European Research Area have clearly also put more emphasis on increased stakeholder involvement, via federative organisations at European level, and this may lead to an intensified dialogue and increased trust.

In this context ERAC:

1. Recommends to the Commission and Member States that stakeholders, including RPOs, should be involved systematically in an early stage of the preparations for all new European and national research and innovation initiatives in order to identify their needs, relevant issues, to formulate programmes, to determine the governance/governing structure, and to identify and develop instruments.
2. Observes that this involvement should take shape at different levels and stages during the development of new initiatives and with a good balance between bottom-up and top-down processes.

RECOMMENDATION FOUR

Fully exploit national and European policies, initiatives and measures to enhance the development of sustainable CBC-RPO, in particular for CBC-RPO partners to take part in a more programmatic approach to solving societal challenges.

Sustainable cooperation is more than mere funding. CBC will normally develop in a bottom-up way based on autonomous decisions by RPOs. While needing money to cover the extra costs, it seems that initiatives towards CBC-RPO in the end are only sensitive to outside incentives in a limited way, and will mainly develop

depending on the strategic advantage the cooperation will bring.

CBC will also develop gradually over time, based on increased experience and trust being built up. The seven step approach which was discussed in the 11th ERAC meeting in September 2012 is relevant in this context and could be considered as a good starting point for understanding the strategic considerations for CBC at the level of (the management of) RPOs:

- 1) No CBC is planned;
- 2) Learning phase concerning the own organisation as well as other RPOs to see if cooperation is possible;
- 3) Trust building with other RPOs;
- 4) Start of initial academic cooperation;
- 5) Start of (academia-driven) research projects;
- 6) Joint integrated and collaborative research;
- 7) Development of innovation clusters.

The 2009 study on non-university RPOs mentioned earlier concluded that over 90% of RPOs are involved in some form of cross-border cooperation, but that it is difficult to influence the collaborative behaviour of RPOs, not least because co-operation is usually a bottom-up process in a research organisation. Many good examples of structured and long-term co-operation and co-ordination activities (as opposed to project-based co-operation) exist, such as joint programmes involving several RPOs or joint laboratories. Very often these activities consist of RPOs jointly pursuing research as well as education and training targets. The intensity of this bottom-up cooperation of universities is also exemplified by the data bank of German universities listing 20 000 international co-operation activities being conducted on a formal basis. The 2009 study concluded that there would be significant potential for more structured and long-term co-operation among RPOs, however. Among the future challenges, developing contacts and structured cooperation among RPOs and with other research performers was often mentioned.

There is therefore a need to fully exploit existing support policies, initiatives and measures to enhance the development of sustainable CBC-RPO, and to develop new measures when necessary. There are examples of Finnish national support policies where CBC-RPO is encouraged in the wider context of internationalisation and international collaboration.

Partnership programmes are essential in order to achieve the ERA. At the same time, whereas Public-Private Partnership initiatives (PPPs) involve the performers (mainly industry) in their governance, Public-Public-Partnerships (P2Ps) do not involve the research performers in the same way. ERA-NET, ERA-NET +, article 185 and JPIs normally involve only research funding organisations (RFOs).

The 2011 ERAC Opinion on ERA-related instruments concluded that there is a lack of instruments to support sustainable cooperation between RPOs. Horizon 2020 should encourage cross-border cooperation between RPOs, in particular in projects dealing with societal challenges. A crucial question is how a shift could be realised in Horizon 2020 from a project approach to a programme approach, and how RPOs could contribute to this.

In this regard, there have been some interesting pilot projects since then in the last calls of FP7, e.g. in the field of energy and ICT, to involve research performing organisations in the coordination of nationally funded programmes. The AERTOS project and the Article 185 metrology initiative are other exceptional examples of institutional programming and of funding being aligned in a specific area, as mentioned at the 11th ERAC meeting in 2012. The example of the European Platform of Universities engaged in Energy Research, Education and Training (EPUE) as part of the European Energy Research Area (EERA) under the SET Plan shows another way of involving RPOs in joint programming of research and also clearly highlights the long preparatory period needed to set up a platform of RPOs to contribute to joint

programming activities, as well as the considerable own resources needed.

A large part of national public funding goes to universities and institutes in direct block funding. A study by the European Commission showed that about 70% of total university income comes from government allocations. Although there is a growing trend for block funding to be allocated on a competitive basis, this is normally not done through competitive calls via agencies/research councils. The same study showed that on average 20% of public funding from the government is assigned on a competitive basis. It is clear that a good balance is needed between initiatives governed by research funding organisations and those governed by research performing organisations, as the basis for the contribution by RPOs to tackle societal challenges.

In this context ERAC:

1. Recommends the Commission and Member States fully exploit policies, initiatives and measures, at both EU and national level, including by project funding allocated under appropriate conditions, to facilitate sustainable cooperation and ensure a level playing field between different categories of RPOs, taking into account the different phases in which such cooperation normally develops.
2. Recommends the Commission make use in the future of the new proposed programme co-fund scheme in Horizon 2020 in a more flexible way than was the case under FP7, in order to directly involve Research Performing Organisations in the governance and implementation of Public-Public-Partnerships, and make best use of relevant experiences in the last calls under FP7.
3. Encourages Member States to facilitate the engagement of Research Performing Organisations in partnerships programmes addressing societal challenges and in activities to implement the ERA priority of optimal transnational co-operation and competition.

RECOMMENDATION FIVE

To stimulate near-border cooperation between research performing organisations, new possibilities should be created to combine the EU instruments to support education and research and development with the use of European structural and investment funds, underpinned by Research and Innovation Strategies for Smart Specialisation (RIS3). Twinning, teaming and ERA Chairs will help address the innovation divide. Candidate countries for enlargement could use pre-accession support instruments.

Near-border cooperation is seen as easier due to proximity and trust, but it is not always easy to acquire financial support for this type of cross-border cooperation at EU level. It is relevant to note that the former regional support activities in FP7 will not be part any more of Horizon 2020, but part of the cohesion policies. Structural Funds - or national funding - should be used instead. This means that other procedures will apply and a shift of responsibility will be seen. Because the Structural Funds and Horizon 2020 will work in very different ways, early coordination will be necessary.

In September 2011, the Commission published a practical guide on how universities can connect to regional growth and in October 2011 it published its legislative proposals for Cohesion Policy 2014-2020. Cohesion policy will focus on the Europe 2020 objectives for smart, sustainable and inclusive growth, based on a list of thematic objectives developed around the Europe 2020 headline targets – including strengthening research, technological development and innovation - and Flagship Initiatives. The Commission also adopted "Elements for a Common Strategic Framework 2014 to 2020" for cohesion. R&I investment priorities for ERDF will include enhancing R&I infrastructure and capacities to develop R&I excellence and promoting centres of competence, and supporting technological and applied research.

The European Commission proposals to strengthen synergies between research and innovation policy and cohesion policy and better align those policies, with their complementary objectives, have the following new features:

- ex-ante conditionality by existence of RIS3 strategies (see below);
- combined funding, i.e. making it possible for the same project to be supported by different funds for different project components;
- support can be given outside of the programme area, provided the operation is for the benefit of the programme area and up to a specific percentage which is still to be defined under the current trilogue;
- simplified cost options have been proposed under Horizon 2020 and Cohesion Policy;
- an enhanced territorial cooperation Cohesion Policy budget share, allowing trans-national linkages to be built between bodies involved in regional innovation.

A new element in Cohesion Policy will be Research & Innovation Strategies for Smart Specialisation (RIS3). Smart specialisation is the process of setting priorities in national and regional innovation strategies in order to achieve place-based economic transformation by building on and developing competitive advantage. This implies fostering one's own strengths in research and innovation, identifying other unique characteristics and assets of a territory, and matching these with business needs so as to effectively seize emerging opportunities and market developments in a coherent manner.

The existence of a national and/or regional research and innovation strategic policy framework for smart specialisation (RIS3) will be the ex-ante conditionality for investments under thematic objective 1. Such strategies are based on evidence and developed through an entrepreneurial discovery process with relevant stakeholders (national or regional

authorities from the different departments in charge of innovation issues, research and educational establishments, business, authorities directly concerned by Horizon 2020, civil society, etc.). Such a RIS3 defines indicators, a monitoring system and policy measures on how to attain them, in particular measures that are fit to incentivise private R&I investments. A Smart Specialisation Platform was launched in June 2012 for assisting Member States and regions in developing RIS3.

Stakeholder organisations like the European University Association are already preparing for their potential role in RIS3 (see box). ERAC itself held a mutual learning seminar on 20 March 2013 on "Synergies between Horizon 2020 and Cohesion Policy: the Challenge and Opportunities of Smart Specialisation". It showed that EU Member States and regions face a variety of challenges in order to increase the benefit they can derive from the excellence-based system of funding that will continue under Horizon 2020. This is where Cohesion policy plays a key role. Already, informal discussions are taking place between the Commission and the Member States and regions on the outline of the future Partnership Agreements and Operational Programmes, while DG RTD and the other DGs in the Research family are actively planning the first draft Work Programmes under Horizon 2020. All of these will have to be formalised as soon as the regulatory framework is in place. The current period is crucial for all key officials in the Member States dealing on the one hand with Horizon 2020 and on the other with Cohesion policy planning linked to research and innovation. They must organise this process in such a way as to ensure that the necessary synergies are established 'on the ground'.

Similar to the use by EU Member States of structural and cohesion funds for the benefit of research and innovation, as well as for capacity building in this area, candidate countries for enlargement, who often do not have adequate absorption capacities for support from the EU

Framework Programmes, could use pre-accession support instruments.

In the framework of Horizon 2020, the future initiatives designed to reduce the innovation divide in Europe will be Teaming, Twinning and ERA Chairs. These will be complemented by the establishment of a Policy Support Facility that will support national and regional authorities in the design and delivery of research and innovation policies, together with a substantial improvement of the services provided by the National Contact Points. In the context of the EIT, the Regional Innovation Scheme (RIS) will further contribute to this goal.

Furthermore, in the framework of the Commission's proposal for a European Territorial Cooperation Regulation³⁶, interregional cooperation is expected to reinforce the effectiveness of cohesion policy by encouraging the exchange of experience between regions to enhance design and implementation of operational programmes under the investment for growth and jobs goal. It should, in particular, foster cooperation between innovative research-intensive clusters and exchanges between researchers and research institutions, based on "Regions of Knowledge" and "Research Potential in Convergence and Outermost Regions" under FP7. Regions of Knowledge focused on transnational cooperation of research-driven clusters, requiring the active cooperation of full triple-helix partners. It resulted in increased cooperation between clusters' stakeholders (regional authorities, universities, research organisations and businesses) and in increased cluster connectivity within Europe. Research Potential, on the other hand, tackled a variety of challenges such as 'brain gain'. It strengthened networking of Convergence region's clusters with other European world class research players and industry, and allowed the upgrading of relevant RTD equipment as well as the recruitment of experienced researchers.

In this context ERAC:

1. Calls on the Commission to step up efforts for more synergies between research and innovation policies on the one hand and cohesion policies on the other hand, in particular through the INTERREG 2020 Programme, which should build on the effective tools and practices implemented in the framework of Regions of Knowledge and Research Potential programmes.
2. Calls on the Member States' planning and in particular their managing authorities to integrate their CBC-RPO activities in the overall framework of RIS3 (Research and Innovation Strategies for Smart Specialisation) in the best possible way and to reflect this properly in the forthcoming Partnership Agreements and Operational Programmes of the European Structural and Investment Funds.

Heading III. Building of evidence on CBC-RPO and its socio-economic and scientific impact

RECOMMENDATION SIX

Member States (national governments and national parliaments) should be better informed about the positive national scientific and socio-economic benefits of RPO investments abroad, on the basis of a better taxonomy of CBC-RPO, systemic evidence on the size of CBC-RPO and its impact, which could be underpinned by further studies by the European Commission, cooperation with the OECD and monitoring of Horizon 2020 and ERA.

A broader issue is the "return-on-investment" logic as understood/used by politicians and civil servants on the return of investments (abroad). Historically, that logic has tended to be about bricks-and-mortar on national territory creating jobs within a country's own borders. It is increasingly meaningless in a globalising world of mobile, multi-national firms and global open innovation networks. RPOs use as counterarguments the need to

engage with world-leading companies wherever they may be located, the contribution of international exposure to attracting and retaining the best scientific talent, access to new knowledge and technologies abroad that can be deployed at home and the support to national actors operating in the host country. From the perspective of national and regional authorities, the impact on regional economic development is crucial (see box below).

At its 11th meeting in September 2012, ERAC concluded that the report prepared by RPOs had made clear that there is much more going on in the field of cross-border cooperation than was publicly known before. It also demonstrated that there was a lack of quantitative and qualitative evidence on CBC that needs to be addressed. The Commission was asked if it could assist in gathering more evidence.

One possibility for this would be a follow-up to the 2011-2012 study by the European Commission called "Investments in joint and open R&D programmes and analysis of their economic impact" (the so-called JOREP study), which could also take into account the impact of joint programmes on CBC-RPOs³⁸. The planned JOREP-II study would be funded under the CDRP (Coherent Development of Research Policies) part of FP7's Capacities Work Programme 2013. As input for further evidence gathering, the Working Group has also formulated some areas for further study concerning possible Terms of Reference (see Annex III).

The strengthened monitoring of ERA progress as well as the future monitoring of the implementation of the Horizon 2020 programme could shed further light on the amount of CBC-RPO in the years to come.

It is also relevant to note that the on-going OECD project "Cross-border regional innovation policies", which is supported by the European Commission (DG REGIO), seeks to provide recommendations to policy-makers on when and how to design and implement effective cross-border regional innovation policies that are developed and implemented jointly by

neighbouring regions. A workshop is planned in the autumn of 2013 to bring together participating regions and other experts, and a final report and case studies should be available by early 2014.

In this context ERAC:

1. Recommends that the Commission and Member States gather data on cross-border cooperation between research performing organisations on the basis of the implementation of FP7 and Horizon 2020.
2. Recommends that the Commission initiate further studies on the amount of CBC-RPO and its (economic) impact and on the impact of Joint Programmes on CBC-RPO, and that it consider the suggestions by ERAC for terms of reference for such study/studies in Annex III to this advice.
3. Recommends that the Commission and Member States consider CBC-RPO in relation to achieving a fully functioning ERA, in the forthcoming ERA progress reports, in their follow-up and in the further development of the reinforced ERA partnership.

CASES: List of Links to Near Cross Border Cooperation of Universities in Europe (in alphabetical and editing order)⁵ (as of 15.11.2013)

Case C.11.1: *Alps-Adriatic Rectors' Conference (AARC)* (AT-HR-HU-SI)

The Alps-Adriatic Rectors' Conference was founded in 1979 and includes the vice-chancellors and presidents of the universities and colleges of the entire region of the *Alps-Adriatic-Alliance* Working Community. At present, this comprises 32 universities or colleges in eight countries.
<http://www.alps-adriatic.net/> (English) [Website update 2013]

C.11.2: *Euroregion Nisa - Academic Coordination Centre (ACC)* (CZ-DE-PL)

The Academic Coordination Centre ACC came into existence in 1991 to coordinate the educational, scientific and research activities of pedagogical and specialist staff of the universities working in the territory of the Czech-German-Polish border, at the Euroregion Neisse. Among its partner universities are the Politechnika Wroclawska, the Hochschule Zittaz/Görlitz and the Internationales Hochschulinstitut Görlitz.
<http://acc-ern.tul.cz/en> (English)
<http://acc-ern.tul.cz> (Czech)
<http://acc-ern.tul.cz/de> (German)
<http://acc-ern.tul.cz/pl> (Polish) [Website update 2013]

C.11.3: *Association of Carpathian Region Universities (ACRU)* (SK-HU-PL-RO-UA)

The Association of Carpathian Region Universities (ACRU) is an international association of higher education institutions. It was established in 1994 by sixteen universities and colleges from five countries of the Carpathian region to encourage links among its member institutions and throughout the world. The main objective of the Association is the advancement of academic, scientific and cultural cooperation, taking advantage of the particular dynamics of the long established historic and cultural links developed in the Carpathian region. The Association is registered in the Slovak Republic as a non-governmental (NGO) not-for-profit organisation of international scope.
<http://acru.uvlf.sk> (English) [Website update 2011]

⁵ The Secretariate of the German Rectors' Conference (HRK) collected the data and could partly draw on information provided by the Association of European Border Regions, AGEK, (<http://www.aebr.eu/en/index.php>).

Case C.11.4: **AVANTIS – European Science and Business Park** (NL-DE)

The Avantis European Science and Business Park is a cross-border industrial park in the municipalities of Heerlen in the Netherlands and Aachen in Germany. The site of the industrial park is about 40 acres. However Avantis hasn't written a success story so far, mainly due to the economic downturn. Initially there were only few companies in two office building which remained partially empty. In 2005, Solland Solar Energy (the largest Dutch producer of solar cells) and one year later Electrical Naebers moved in the industrial park. In 2008, the multinational consultancy Capgemini joined the site. Plans to found a cardiovascular center (CVC) as a joint project of the University Hospital Maastricht and Aachen were abandoned in 2012.

<http://www.avantis.org> (English) [Website update 2012]

C.11.5: **Baltic Sea Region University Network (BSRUN)** (BY-EE-FI-LV-LT-PL-RU)

The Baltic Sea Region University Network (BSRUN) agreement was signed by 16 institutions in Turku in 2000. BSRUN is an umbrella organisation to facilitate and enhance co-operation between the members.

In the network there are at the moment 30 member institutions in Belarus, Estonia, Finland, Latvia, Lithuania, Poland and Russia. The members develop bonds of mutual partnership between students, teachers, researchers and administrators.

<http://www.bsrn.org/> (English) [Website update March 2013]

Case C.11.6: **Baltic University Programme (BUP)** (BY-EE-FI-LV-LT-PL-RU-SE)

The Baltic University Programme (BUP) is a network of about 225 universities and other institutes of higher learning throughout the Baltic Sea region. The Programme focuses on questions of sustainable development, environmental protection, and democracy in the Baltic Sea region. The aim is to support the key role that universities play in a democratic, peaceful and sustainable development. This is achieved by developing university courses, and by participation in projects in cooperation with authorities, municipalities and others.

<http://www.balticuniv.uu.se/> (English) [Website update February 2013]

Case C.11.7: **Botnia-Atlantica** (FI-SE-NO)

The Botnia-Atlantica programme (term until 2014) is a cross border cooperation programme intended to co-fund projects within the Botnia-Atlantica area. The programme is one of several European territorial Cooperation programmes, co-funded by the European Regional Development Fund. A similar cooperation was earlier carried out under the Interreg heading. The Kvarken-MittSkandia Interreg IIA and IIIA programmes were implemented 1995-1999 and 2000-2006 respectively.

<http://www.botnia-atlantica.eu/default.asp?lid=1> (English)

<http://www.botnia-atlantica.eu/default.asp?lid=2> (Swedish) [Only SE updated 2013]

<http://www.botnia-atlantica.eu/default.asp?lid=4> (Finnish)

Case C.11.8: **BRIE - Bulgarian-Romanian Interuniversity Centre**

BRIE was established within a project of the stability pact for South Eastern Europe on the grounds of German Rectors' Conference initiative in 2000. In 2006, an agreement for cooperation and mutual assistance regarding the development of BRIE between the government of Romania and the government of the Republic of Bulgaria entered into force. The universities offer four-semester bi-lingual (English and German) joint master programmes and conduct joint research work (in Robulna).

BRIE secretariat www.brie.uni-ruse.bg/en/pages/home.php (English)

BRIE Giurgiu Center www.brie.ase.ro (Romanian)

BRIE Ruse Center www.brie.uni-ruse.bg (Bulgarian)

ROBULNA website, a result of the BRAINS project (Bulgarian-Romanian Area Identities: a Neighborhood Study): <http://robulna.eu/en/> (English) [Website update 2011]

Case C.11.9: *Finnish-Russian Cross-border University (CBU)*

The CBU is a university consortium of universities in Russia and Finland. The CBU involves seven participating universities: two in Finland and five in Russia. The seven CBU universities are jointly offering Master's Degree Programmes in four fields of study. The participating universities are the University of Eastern Finland, University of Tampere, St. Petersburg State University, St. Petersburg State Polytechnical University, Petrozavodsk State University, St. Petersburg State Forest Technical University and Moscow State Forest University.

www.cbu.fi (English) [Website update 2013]

Case C.11.10: *CEI (Central European Initiative) University Network*

(AL-AT-BY-BA-BG-HR-CZ-HU-IT-MK-MD-ME-PL-RO-RS-SK-SI-UA)

The CEI University Network (CEI UniNet) is a contribution of the CEI to higher education in order to enhance cooperation among universities and other institutions of higher learning in Central, Eastern and South Eastern Europe. This is done through the mobility of students and teaching staff at post-graduate level.

<http://www.cei.int/content/post-graduate-studies-university-network> (English)

[Website update 2013] Seems to have changed to *CEI Science and Technology Network* (2017)

Case C.11.11: *CENTROPE* (AT/CZ/HU/SK)

Centrope is an Interreg IIIA project to establish a multinational region in Central Europe encompassing four European countries: Slovakia, Austria, Hungary and Czech Republic. CENTROPE is a joint initiative of the Austrian Federal Provinces of Vienna, Lower Austria and Burgenland, the Czech Region of South Moravia, the Slovak Regions of Bratislava and Trnava, the Hungarian Counties of Győr-Moson-Sopron and Vas as well as the Cities of Bratislava, Brno, Eisenstadt, Győr, Sopron, St. Pölten, Szombathely and Trnava. On the basis of the Kittsee Declaration of 2003, they work jointly towards the creation of the Central European Region in this four-country quadrangle. CENTROPE CAPACITY is the lead project funded under the EU programme CENTRAL EUROPE. In the period until 2012 it aims to create a multilateral, binding and sustainable framework for the cooperation of local and regional authorities, enterprises and public institutions in the Central European Region. Specific goals consist in creating of polycentric cooperation framework which should allow all the partners to work jointly and more effectively on the cross border issues. Project also offers them new tools for a balanced spatial development as well as integrated development strategy and action plan. CENTROPE CAPACITY builds on the results of two INTERREG IIIA projects concluded in 2007, which provided the necessary preparatory work and development steps to establish the Central European Region CENTROPE.

The project "centrope_tt", which is a part of Centrope, has designed a database to support transnational cooperation and knowledge transfer between stakeholders in the Centrope region.

<http://www.centrope.com/en> (English)

<http://www.centrope.com/de> (German)

<http://www.centrope.com/cz> (Czech)

<http://www.centrope.com/sk> (Slovenian)

<http://www.centrope.com/hu> (Hungarian) [Website update 2013]

Case C.11.12: *Collegium Polonicum* (DE-PL)

Collegium Polonicum is a cross-border, academic institution which was jointly brought into being and is being maintained by the European University Viadrina and the Adam Mickiewicz University. It was initiated in 1991 by a "Joint Declaration of Cooperation", signed by the Minister of National Education of the Polish Republic and the Minister of Science, Research and Culture of the Federal German State of Brandenburg.

<http://www.cp.edu.pl/en/index.html> (English)

<http://www.cp.edu.pl/pl/index.html> (Polish)

<http://www.cp.edu.pl/de/index.html> (German) [Website update 2013]

Case C.11.13.a: **European Confederation of Upper Rhine Universities** (CH-DE-FR)

The universities of Freiburg in Breisgau, Basel, Strasbourg, Karlsruhe and Mulhouse-Colmar formed an association in 1989 to create the European Confederation of Upper Rhine Universities (EUCOR). The Upper Rhine Conference provides the institutional framework for cross-border cooperation in the Upper Rhine region. In 2010, the Upper Rhine Conference signed the founding declaration of the Upper Rhine Trinational Metropolitan Region (TMO). There are currently 167 Universities and RPOs part of the TMO.

www.eucor-uni.org/en (English)

www.eucor-uni.org/de (German)

www.eucor-uni.org/fr (French) [Website update 2013]

TMO (Upper Rhine Trinational Metropolitan Region)

<http://www.rmtmo.eu/> (German)

<http://www.rmtmo.eu/fr/home.html> (French) [Website update 2013]

Case C.11.13.b: **Scientific Pillar of the Upper Rhine Trinational Metropolitan Region (TMO-RMT)**

The Scientific Pillar of the Tri-National Upper Rhine Metropolitan Region has been officially founded in 2010 and consists of currently around 167 Universities, Schools of Applied Sciences and Research Organizations. Its aim is the reinforced networking of these institutions by using existing structures like EUCOR (www.eucor-uni.org; see also entry number 13 in this list) but also by creating new connections, especially to economic, political and social actors. In the long term, the objective is to increase the competitiveness of the whole region on the international playing field.

www.rmtmo.eu (German and French) [Website update 2013]

<http://www.centrum.umcs.pl/ru> (Russian)

<http://www.centrum.umcs.pl/pl> (Polish) [Website update 2013]

Case C.11.14: **EULIMNOS** (AL-ME)

The project was first initiated in the course of the Bologna Process. First talks through a closer collaboration between the Universities of Shkodra (Albania) and of Montenegro started in 2001, which then led to the establishment of the *EcoEducationCentre* and that this in turn extends back to a conference held at Lake Ohrid in Albania in 2003. This CB collaboration was supported by the German Rectors' Conference (HRK) with stability pact funds from the very beginning. (The cooperation is not active at the moment)

Case C.11.15: **GIR Maralpin** (CH-FR-IT)

The Groupe Interdisciplinaire de Réflexion sur les traversées sud-alpines et l'aménagement du territoire maralpin (Interdisciplinary Working Group on the southern alpine Crossings and the maritime alpine area) (GIR Maralpin) was founded in 1996. Its role is to bring together university teachers, researchers and experts from France, Italy and Switzerland, representing every discipline, with the aim of contributing to the detailed analysis of issues related to the development of the region and of communication and transport routes, as well as environmental protection in the coastal and maritime alpine areas (the Mediterranean Alps).

<http://www.gir-maralpin.org/index2.htm> (French) [Website update 2011]

http://www.espaces-transfrontaliers.org/en/detail_projet.php?idprojet=39 (English)

Case C.11.16: **Hidranatura Campus** (ES-PT)

Hidranatura is a Spanish-Portuguese cross-Border initiative promoted by the University of Extremadura (ES), the University of Evora (PT) and the Polytechnic Institute of Leiria (PT) together with the firm support of national and international expert organisations and businesses.

www.hidranatura.com (Spanish)

<http://www.hidranatura.com/#!/page19.do?acon75=en&acon77=en&inu7.current.att11=1&acon99=en&kcond2.att7=35&rcond15.att3=18&kcond29.att7=35&rtu2.current.att7=35> (EN)

<http://www.hidranatura.com/#!/page19.do?acon75=pt&acon77=pt&inu7.current.att11=3&acon99=pt&kcond2.att7=64&rcond15.att3=18&kcond29.att7=64&rtu2.current.att7=64> (PT) [Website update 2013]

Case C.11.17: **International Iberian Nanotechnology Laboratory (INL)** (ES-PT)

The International Iberian Nanotechnology Laboratory (INL) is the first, and so far the only, fully international research organisation in Europe in the field of nanoscience and nanotechnology and also the first intergovernmental Organisation in Europe in this field. INL is the result of a joint decision of the Governments of Portugal and Spain, taken in November 2005, whereby the two Governments made clear their commitment to a strong cooperation in ambitious science and technology joint ventures for the future.

INL has been installed in Braga, Portugal, and will count with 200 researchers to be recruited all over the world, aiming at international excellence.

<http://inl.int> (English) [Website update 2012]

Case C.11.18: **International University of Lake Constance – Internationale Bodensee-Hochschule** (AT-CH-DE-LI)

The International University of Lake Constance is a cooperation of 30 universities and colleges located in Austria, Germany, the Principality of Liechtenstein and Switzerland. It offers new study courses, supports research and development together with regional companies and enhances the offer of education and advanced training programs. It is focusing on the subjects of "Energy, Environment and Mobility", "Education, Society and Health" as well as projects for teaching, training and the knowledge and technology transfer. The network is supported by the The International Lake Constance Conference (IBK – Internationale Bodenseekonferenz), a collaborative association of the countries and cantons bordering on and connected with Lake Constance.

www.bodenseehochschule.org (German) [Website update 2013]

Case C.11.19.a: **Kehl Euro-Institute** (DE-FR)

The Franco-German Euro-Institut was founded in 1993. The institute has a strong bicultural, bilingual and binational focus and supports public administration officials and other stakeholders from the two countries with their design and optimization of cross-border cooperation projects. (Website in German and French only)

<http://www.euroinstitut.org/wDeutsch/index.php> (German)

<http://www.euroinstitut.org/wFranzoesisch/index.php> (French) [Website update 2013]

Case C.11.19.b: **TEIN (Transfrontier Euro-Institut Network)**
(AT-BE-CH-CZ-DE-DK-ES-FR-IE-IT-PL-SI-UK)

The TEIN (Transfrontier Euro-Institut Network) is led by the Euro-Institut which was created in 1993 in Kehl/Strasbourg on the French/German border with the aim of facilitating cross-border cooperation. In the context of growing awareness of the importance of Cohesion Policy in Europe, the objective of TEIN is to build capacity in cross-border and transfrontier contexts and in this way strengthen European integration.

TEIN, formed in 2010, brings together 12 partners from nine border regions in France, Germany, Switzerland, Austria, Italy, Slovenia, Poland, Czech Republic, Denmark, Belgium, Spain, the French Caribbean, the UK and Ireland. Its unique feature is that it consists of university departments, research institutes and training centres which are dedicated to the practical business of cross-border cooperation in Europe.

The work of the partners consists in cross-border training and facilitation, managing cross-border projects, providing mentoring, training and advice for cross-border actors, and doing research on cross-border issues.

www.transfrontier.eu (English) [Website update 2013]

Case C.11.20: **Neisse University (German-Czech-Polish cooperation)**

The Neisse University, established in 2000, represents a network of co-operation between the Technical University of Liberec/Technická univerzita v Liberci, the Wrocław University of Technology/Politechnika Wroclawska and the University of Applied Sciences Zittau/Görlitz/Hochschule Zittau/Görlitz. The subject of the cooperation is the joint three-year Bachelor of Science (B.Sc.) course of Information and Communication Management. What makes this degree program stand out is that the students study respectively one year at the three participating universities

<http://www.neisse-uni.org/about-the-nu.html> (English) [Website update 2013]

Case C.11.21: **Northern dimension research centre (NORDI) at Lappeenranta University of Technology (LUT)** (FI-RU)

The Northern Dimension Research Centre (NORDI) is a unit focusing on LUT's know-how of Russia and cooperation with Russia. NORDI's mission is to support and develop Russia related research and research cooperation in LUT's focus areas. NORDI functions as a Russia-related network actor, actively linking national and international universities and research institutes together in research projects. NORDI actively seeks research funding together with faculty researches and manages the development projects of LUT's Russia-related activities.

<http://www.lut.fi/en/lut/Pages/Default.aspx> (English)

www.lut.fi/ru/lut/Pages/Default.aspx (Russian)

www.lut.fi (Finnish) [Website update 2013]

Case C.11.22: **Øresund Region** (DK-SE)

The Øresund region is a Danish/Swedish border region, divided by the Øresund straight. Cooperation between the Øresund universities was formally instituted in 1997-2012 through an agreement between the four biggest universities. Twelve universities have been members of the academic network, performing activities in education, research and innovation. After 15 years of co-operation the Øresund University and Øresund University Network has come to an end. On August 31 2012 the Øresund University Network has been closed and the cross border cooperation between the universities will continue in other forms.

Øresund University Network: www.uni.oresund.org (English) [Website update 2013]

Projects initiated under the former governance structure, i.e. Øresund University/Øresund Science Region/Øresund Org are now coordinated by the Lead partners:

www.uni.oresund.org/?q=content/about-oun/the-network/associated-projects-and-networks (English) [Website update 2012]

Medicon Valley: <http://www.mediconvalley.com/> (English) [Website update 2013]

Case C.11.23: **Oldenburg-Groningen European Medical School** (DE-NL)

The German Council of Science and Humanities, which advises the German Federal Government and the governments of the Federal States on the development of science, research and higher education, endorsed the German-Dutch joint project European Medical School Oldenburg-Groningen on November 12, 2010. The approval of the University of Oldenburg model curriculum in medicine by the responsible state ministry of Lower Saxony on January 30th, 2012, signaled the beginning of the first bi-national medicine program in Germany that offers a medical state examination (in Oldenburg) and/or a bachelor's and master's degree (in Groningen).

The Universities in Oldenburg and Groningen have developed the European Medical School as a German-Dutch joint project. The European Medical School has started in the winter semester 2012/13. The bi-national project has created 40 new places for medical students in Oldenburg. Students will spend a total of one year of their studies at the partner university (Groningen or Oldenburg), gaining knowledge of the language and culture of the other country as well as in their studies.

<http://www.uni-oldenburg.de/en/medicine> (English)

<http://www.uni-oldenburg.de/european-medical-school/> (German) [Website update 2013]

Case C.11.24: **Polish-Ukrainian Projects / The European PhD College of Polish and Ukrainian Universities**

The idea of a Polish-Ukrainian university in Lublin, the biggest town near the border with Ukraine with centuries' old traditions of multiculturalism and cooperation and an important academic centre of Central and East European studies, was voiced in 1997 by Bohdan Osadchuk, professor of the Free University Berlin and an eminent Ukrainian émigré historian and journalist.

As a result, the Declaration regarding the establishment of the European Post-Graduate College of Polish and Ukrainian Universities and the subsequent Agreement establishing the ECPUU were signed in December 2000.

Following the first inauguration of the academic year held in October 2001 some hundred young researchers from Poland and Ukraine were admitted for post-graduate studies at the ECPUU. In 2002-2005, over 150 Ph.D. students were admitted to the ECPUU. In 2005, the first group of Ph.D. students admitted to the College in 2001, finished their post-graduate studies. Some dozens of them have already earned their Ph.D. degrees. Among the collaborating Universities are Maria the Skłodowska Curie University in Lublin, the John Paul II Catholic University of Lublin, the National Taras Shevchenko University of Kiev, the Ivan Franko National University of Lviv, and the National University of Kyiv-Mohyla Academy.

<http://www.centrum.umcs.pl/> (English)

Case C.11.25: **Saxon-Czech University Initiative** (DE-CZ)

The project Saxon-Czech University Initiative (Sächsisch-Tschechische Hochschulinitiative STHI) makes an innovative contribution to the sustainability and continuity of transboundary cooperation between several universities (the Technische Universität Chemnitz, the J. E. Purkyne-Universität Ústí nad Labem, and the University of West Bohemia) within the framework of tertiary education in the Saxon-Czech border area. The STHI project is co-financed by the Objective 3 Programme of the European Regional Development Fund and by means of the Free State of Saxony, the Czech Republic as well as the participating universities. The project started on 01 July 2009 and was running until 31 May 2012. The target of the project was the enhancement of intercultural competence as well as linguistic competence of the participants within the scope of different sub-projects. It, furthermore, aimed at the intensification of the exchange of scientific knowledge. This is of special importance because only a close collaboration between academia, economy and society can offer participating students a professional future in the Saxon-Czech border region.

<http://www.sthi.eu/welcome> (English)

<http://www.sthi.eu/willkommen> (German)

<http://www.sthi.eu/willkommen-cz> (Czech) [Website update 2012]

Case C.11.26: **"Studying without borders in Aachen and Limburg"** (DE-NL)

The alliance "Studying without borders in Aachen and Limburg" with its partners (seven universities, local authorities and others) exists since 2011. It aims to inform young people, parents, teachers as well as career and study advisors in schools, job agencies, universities and other institutions about the region as a cross-border, academic training and job market and make it more transparent.

<http://www.euregional-studyguide.com/de/start.html> (German)

<http://www.euregional-studyguide.com/en/start.html> (English)

<http://www.euregional-studyguide.com/nl/start.html> (Dutch)

Case C.11.27: **Uniska – The University Alliance of Inner Scandinavia** (SE-NO)

The Uniska includes seven universities (e.g. Karlstad University, University College of Lillehammer, and University College of Akershus). The cooperation between the regions goes back to the 1960s, while the UNISKA was introduced in 1998. In 2014, Uniska will close, but the cross border cooperation between the universities will continue in other forms.

http://www.brain-flow.eu/export/sites/brainflow/downloads/TEEM-Docs_Hamar/UNISKA_Hugo_TEEM_Hedmark.pdf (English)

Case C.11.28: *The Foundation for Science and Research of the Canton Thurgau, University of Konstanz and Konstanz University of Applied Sciences* (CH-DE)

The Foundation of the Canton Thurgau in Switzerland cooperates with both Universities of Konstanz in Germany on a number of different cross-border projects.

1. The **Biotechnology Institute (BITg) Thurgau** in Kreuzlingen was initiated in 1999. Academically, BITg is associated with the University of Konstanz. The Institute also participates in the university's lecturing and academic training programmes. Since 2004 BITg is recognized as a Swiss research institution and it is supported by the State Secretariat for Education and Research. http://www.bitg.ch/BITg_01_design.html (EN) http://www.bitg.ch/BITg_01_designDE.html (DE) [Website updated October 2013]
2. The **Thurgau Institute of Economics (TWI)** at the University of Konstanz in Kreuzlingen is mainly acting in the field of experimental economic research. www.twi-kreuzlingen.ch/en/home/ (English) www.twi-kreuzlingen.ch (German) [Website updated 2013]
3. The **Institut für Werkstoffsystemtechnik Thurgau** together with the Konstanz University of Applied Sciences in Tägerwilen, is mainly devoted to metallic materials research. www.witg.ch (German)
4. The College of Education, "**Pädagogische Hochschule Thurgau** (PHTG), in Kreuzlingen has a close cooperation with the University of Konstanz within the education sciences. There are two joint chairs in education and, in addition, a joint Master in early childhood education is offered. www.phtg.ch (German) [Website updated 2013]

Case C.11.29.a: *University of Flensburg–University of Southern Denmark* (DE-DK)

Since 1991 the University of Southern Denmark and the University of Flensburg, Germany, have a cross-border cooperation. Together the two universities offer double-degree programmes on a Bachelors and Masters level: BA International Management - BA int./SPRØK; MA International Management - Cand.merc.int. The studies focus on economics and business language, with the combination of German/Danish/English. Other study programmes, like European Studies, are offered in close cooperation – while the Bachelor-programme is offered in Sønderborg, the Master-programme is offered in Flensburg.

http://iim.uni-flensburg.de/index.php?id=studium-und-lehre&no_cache=1 (German) http://www.sdu.dk/Om_SDU/Byerne/Soenderborg/Flensburg (Danish) [Website updated 2013]

Case C.11.29.b: *Wissensregion/Videnregion Schleswig-Holstein – Syddanmark*

Starting in 2009 a cross border cooperation has been established between University of Southern Denmark, University of Applied Science Flensburg, University Flensburg, University of Applied Science Kiel, and Christian-Albrechts-University Kiel funded by Interreg IVa. The cooperation was enlarged in 2012 involving University College Lillebælt and University College Syddanmark. Initially the cooperation aimed at fostering cross border research cooperations, which has led to a broad range of joint projects, but now it also includes joint teaching activities (e.g. summerschools, lecturer exchange, etc.) as well as cooperation with the regional industry. An office has been established at University of Southern Denmark, Odense, hosting three Project Managers, coordinating the projects.

www.videnregion.eu / www.wissensregion.eu (English) [Website updated 2013]

Case C.11.29.c: *German Danish University Seed-Money-Cooperation*

This cooperation involves University Hamburg, Christian-Albrechts-University Kiel, University of Southern Denmark, and Aarhus University. Based on an agreement between the rectors of the four Universities, a joint budget has been set up to facilitate cooperation via workshops and conferences. Since 2011 more than 400 scientists have participated in 26 workshops or meetings.

<http://www.uni-kiel.de/forschung/de/service-informationen/foerderungsmoeglichkeiten-im-ueberblick/seed-money-fuer-kooperationen-mit-der-universitet-aarhus-und-der-syddansk-universitet> (German) <http://www.au.dk/en/internationalcentre/internationalcollaboration/auinstrategicalliances/partnership-with-universitaet-hamburg-christian-albrechts-universitaet-zu-kiel-and-sdu/> (English)

Case C.11.30: *University of the Greater Region* (BE-DE-FR-LU)

The Greater Region includes Saarland and Rhineland-Palatinate in Germany as well as the Grand Duchy of Luxembourg, the French region of Lorraine and Wallonia in Belgium.

After four years of collaboration in the frame of the "University of the Greater Region" project, which was funded by the EU INTERREG Programme, the universities of Saarland, Liège, Luxembourg, Lorraine, Kaiserslautern and Trier have established a cross-border confederation in 2013. The partner universities involved have a total of around 125,000 students and around 6,500 teachers and researchers. A jointly funded office based in the Villa Europe in Saarbrücken will take up its work in October [2013]. Its main missions will be the coordination of the UniGR pilot disciplines (Biomedicine, Border Studies and Materials Science) as well as fundraising and lobbying.

www.uni-gr.eu/en/nc/home.html (English)

www.uni-gr.eu/nc/startseite.html (German)

www.uni-gr.eu/fr/nc/la-page-de-depart.html (French) [Website update 2013]

Interesantes gráficos del informe *EUR 26620 EN – European Research Area – Progress Report 2014*. Comisión Europea, Luxemburgo, Oficina de Publicaciones de la Unión Europea,
http://ec.europa.eu/research/era/pdf/era_progress_report2014/era_facts&figures_2014.pdf

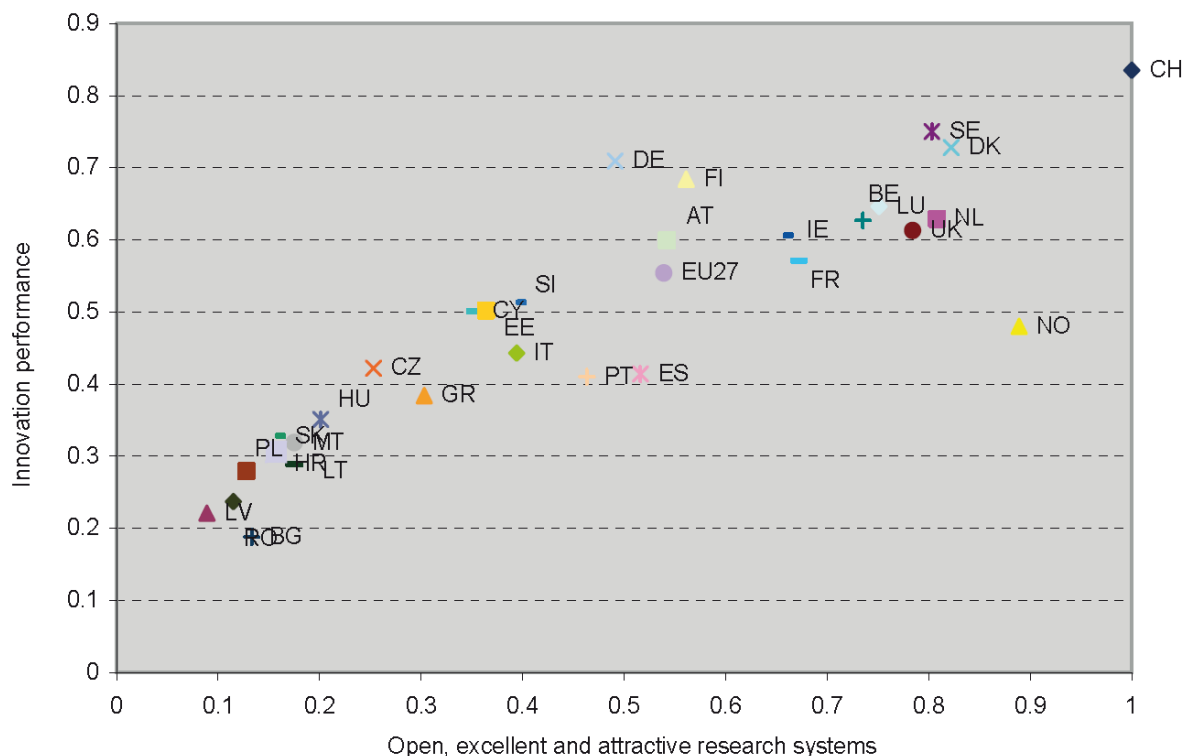


Fig. C.11.1: Sistemas de investigación y prácticas innovadoras atractivas, excelentes y abiertas
Fuente: cálculos de la Dirección General de Investigación e Innovación de la Comisión Europea basados en el Marcador de la Unión para la Innovación (Innovation Union Scoreboard) 2014

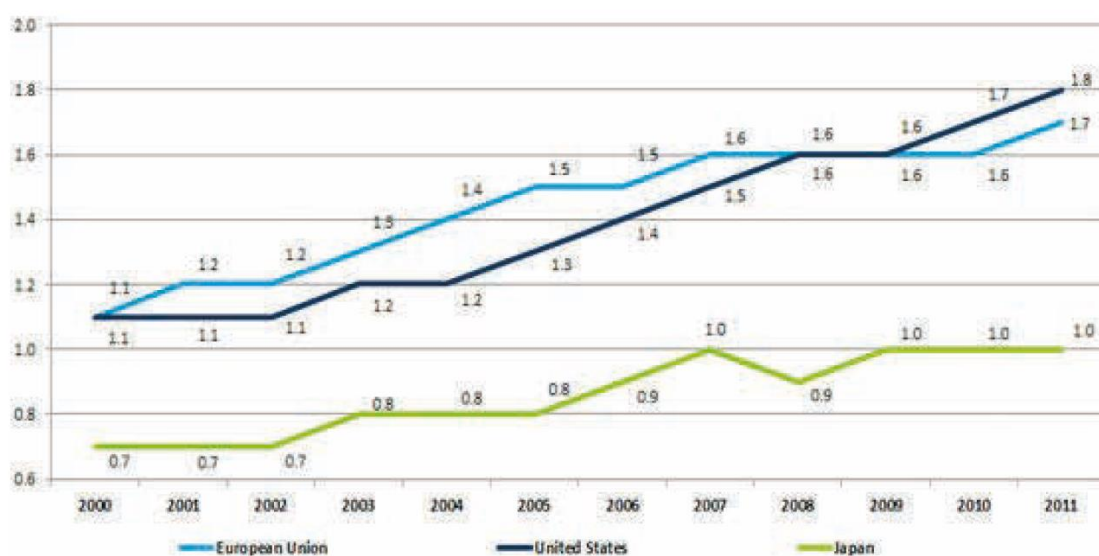


Fig. C.11.2: nuevos grados de Doctor por mil habitantes de 25-34 años de edad en la UE-27, los EE.UU. y Japón entre 2000 y 2011
Fuente: Eurostat, Estadísticas Educativas

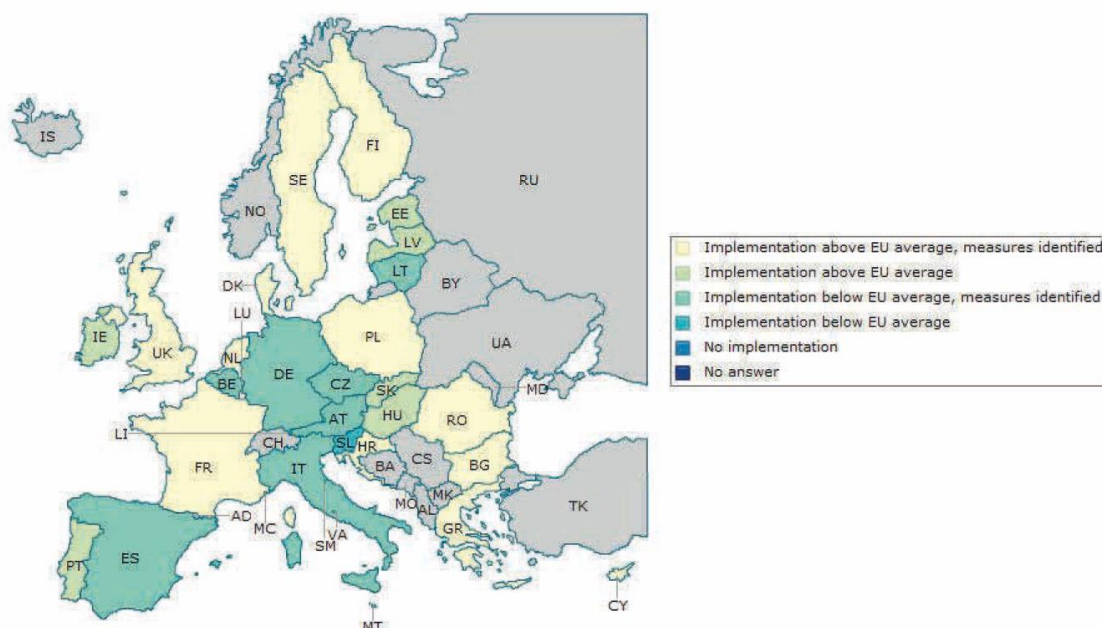


Fig. C.11.3: clasificación de los Estados Miembros de la UE de acuerdo a su apoyo a la financiación basada en proyectos dentro de la estrategia de Investigación e Innovación y la proporción de fondos basados en proyectos asignados por los financiadores (2013)

Fuente: DG RTD, Comisión Europea, 2013)

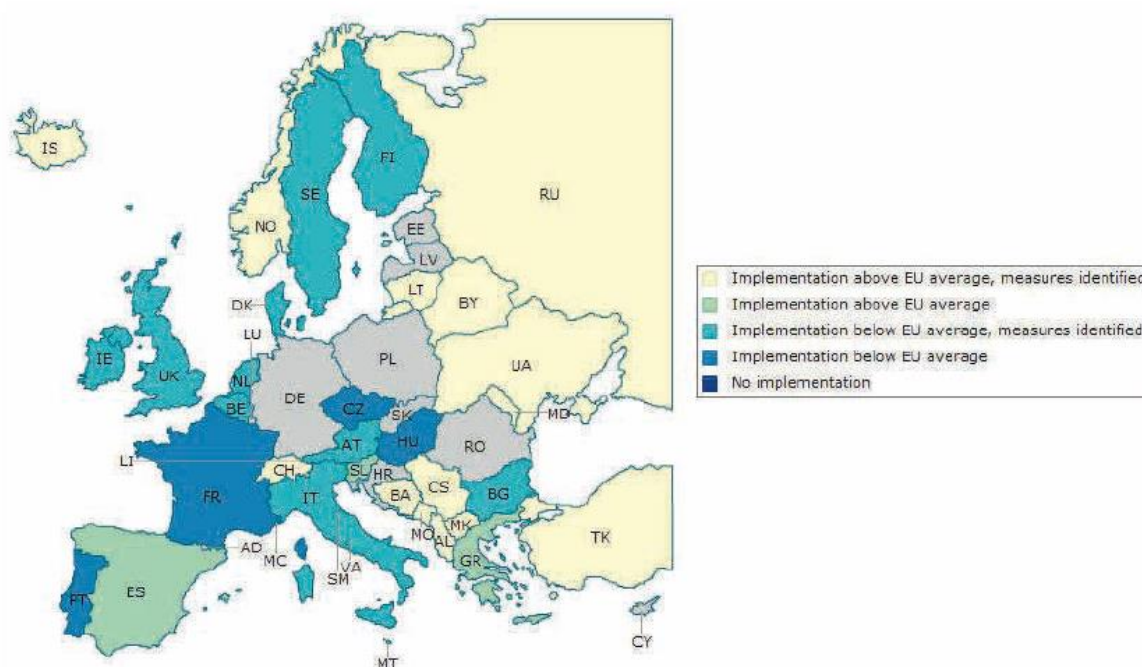


Fig. C.11.4: clasificación de los Estados Miembros de la UE de acuerdo a la identificación de medidas de apoyo a la financiación institucional asignada a los resultados de la evaluación institucional y la proporción de fondos asignados por los financiadores utilizando esta modalidad (2013)

Fuente: DG RTD, Comisión Europea, 2013)

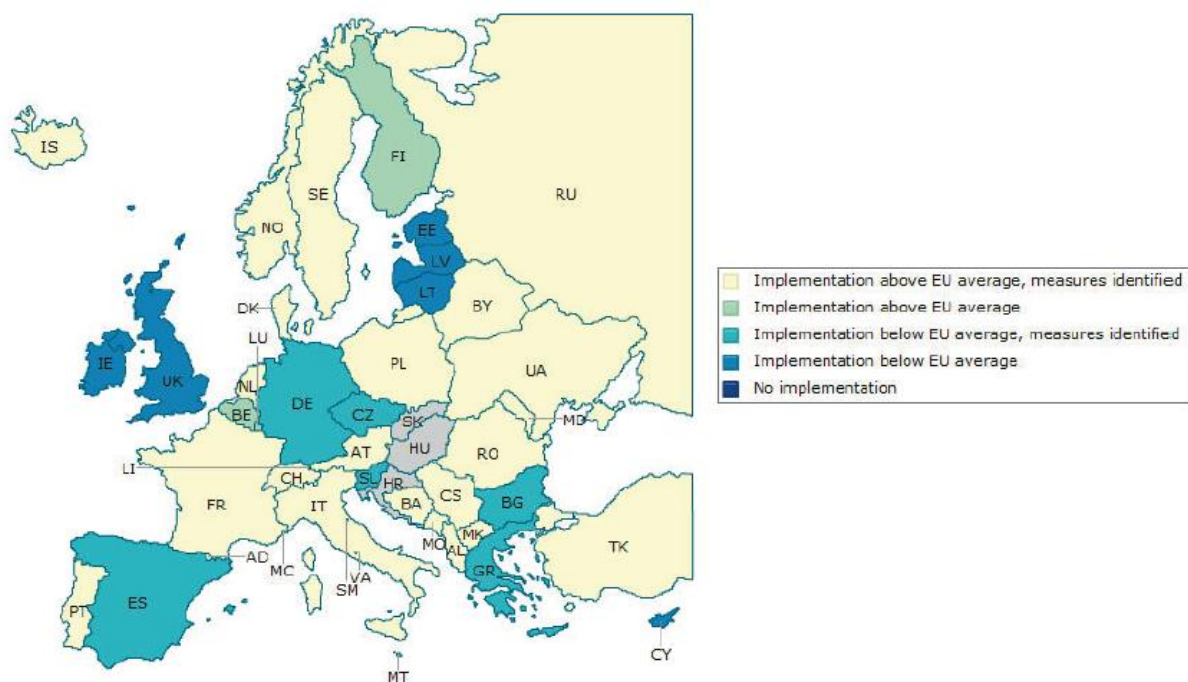


Fig. C.11.5: clasificación de los Estados Miembros de la UE de acuerdo a las medidas de apoyo a la puesta en marcha de agendas de investigación conjuntas y el apoyo financiero aportado
Fuente: DG RTD, Comisión Europea, 2013)

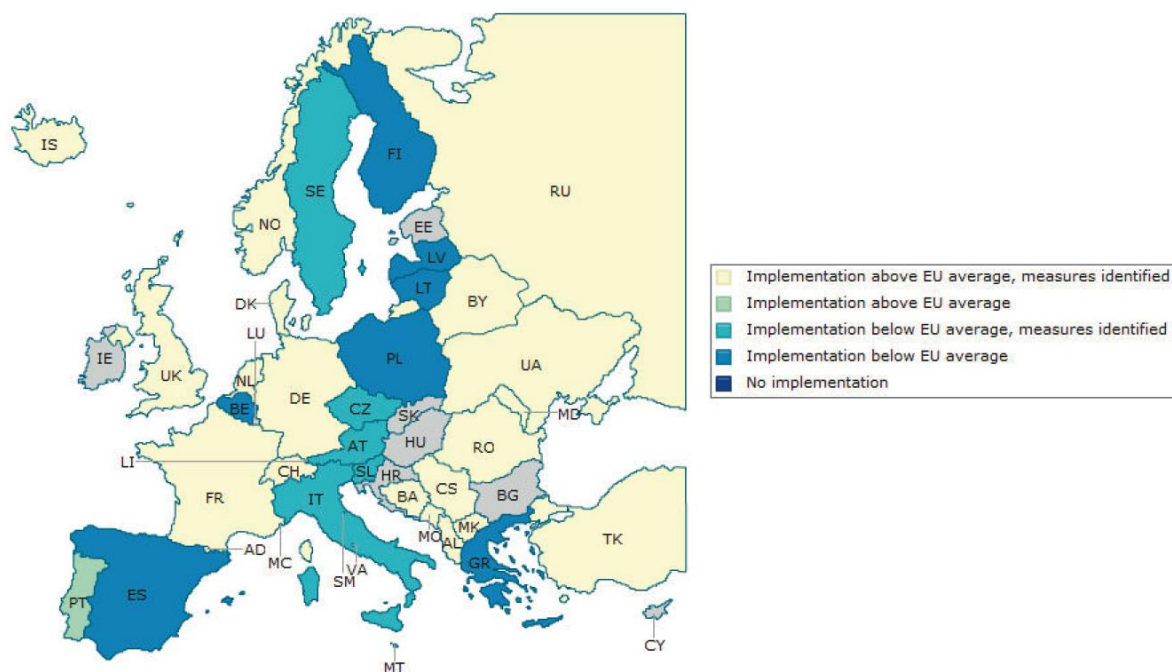


Fig. C.11.6: clasificación de los Estados Miembros de la UE de acuerdo a las medidas de apoyo a la colaboración con países terceros y la proporción de fondos asignados por los financiadores a este tipo de actividad (2013)
Fuente: DG RTD, Comisión Europea, 2013)

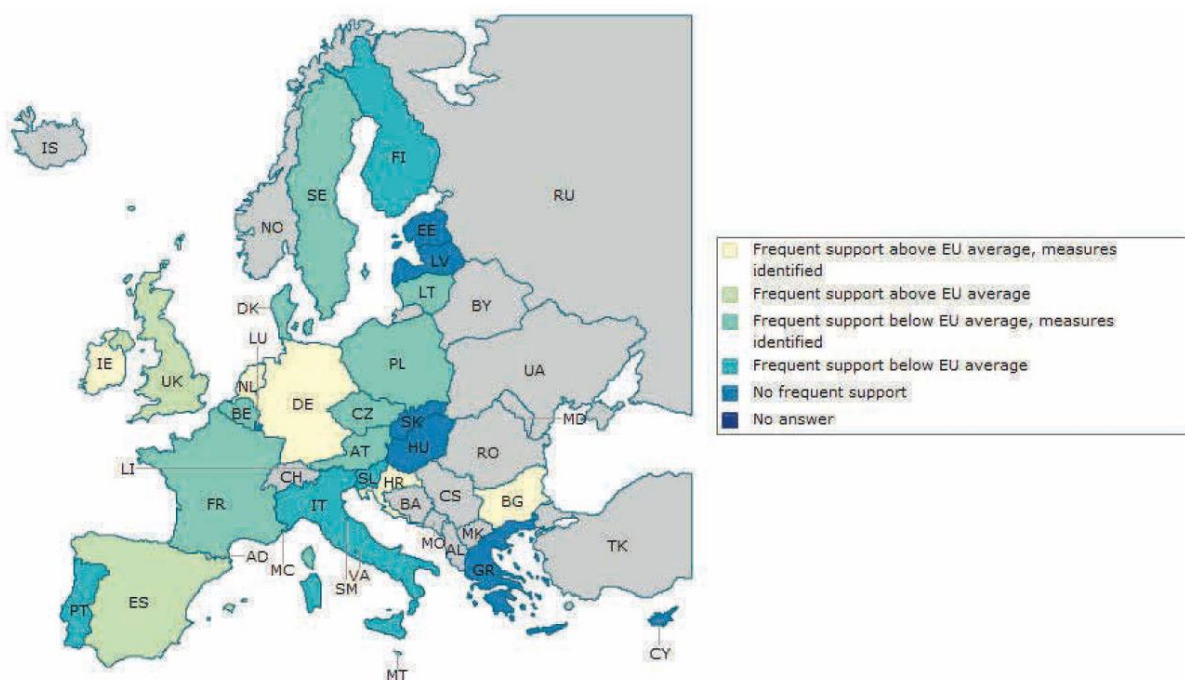


Fig. C.11.7: clasificación de los Estados Miembros de la UE de acuerdo a la existencia de una estrategia de transferencia del conocimiento y al apoyo proporcionado por organizaciones de financiación de la investigación (2013)

Fuente: DG RTD, Comisión Europea, 2013)

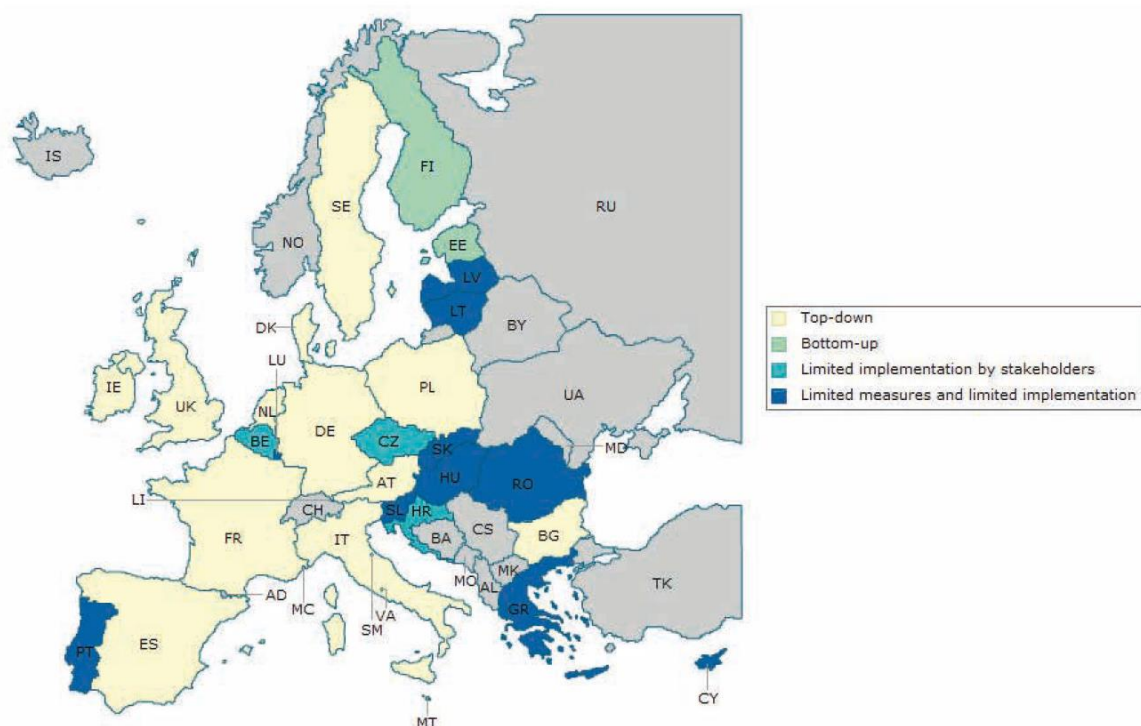


Fig. C.11.8: clasificación de Estados Miembros de acuerdo con sus políticas de apoyo al EEI y su puesta en marcha

Fuente: DG RTD, Comisión Europea, 2013)

Estos resultados sugieren que no hay un único camino al Espacio Europeo de Investigación. La puesta en marcha del EEI sobre la media de la UE está pilotada en ocasiones por los financiadores y RPOs (*Research Performing Organisations*) (bottom-up), mientras que en otros casos son las políticas nacionales y regionales (top-down). En los casos en que la puesta en marcha esta por debajo de la media de la UE, debe hacerse un esfuerzo mayor por parte de las RPOs y en algunos casos también de las administraciones nacionales y/o regionales.

BIBLIOGRAFÍA:

- ...

References J by J.L. Elfgén (*):**

- Agnew, J. (2001). How many Europe's?: The European union, eastward enlargement and uneven development. *European Urban and Regional Studies*, 8(1), 29–38. doi: 10.1177/096977640100800103
- Agrawal, A., Cockburn, I., & McHale, J. (2006) Gone but not forgotten: Knowledge flows, labour mobility and enduring social relationship, *Journal of Economic Geography*, 6(5), pp. 571–591.
- Azagra-Caro, J. M., Carat, G., Pontikakis D. (2009). University-industry cooperation in the Research Framework Programme. JRC Scientific and Technical Reports. European Commission Luxembourg: doi: 10.2791/31066
- Centrope (2006). Vision 2015.Full Report. Published by the Federal Provinces of Burgenland, Lower Austria and Vienna.
- Charles, D., Damianova, Z., Maroulis, K. (2009). Contribution of policies at the regional level to the realisation of the European Research Area. Full Report, ERAWATCH publication.
- ETEPS (2010). The regional impact of technological change in 2020. Framework Service Contract 150083-2005-02-BE, Ref SC36.
- European Commission (EC) (2010a). Communication from the Commission to the European Parliament, the council the European Economic and Social Committee and the Committee of the Regions, Regional Policy contribution to smart growth in Europe 2020. COM(2010) 553 final, Brussels, 6.10.2010.
- European Commission (2010b). Investing in Europe's Future. Fifth report on economic, social and territorial cohesion Luxembourg: Publications Office of the European Union, 2010 doi: 10.2776/29620
- European Commission (2010c). Communication from the Commission Europe 2020, a strategy for smart, sustainable and inclusive growth. COM(2010) 2020 Brussels, 3.3.2010
- European Commission (2008). A more research-intensive and integrated European Research Area. Science, Technology and Competitiveness key figures report 2008/2009. Luxembourg: Office for Official Publications of the European Communities, 2008. doi: 10.2777/27864
- European Commission (2009a). Europe's regional research systems: current trends and structures. Directorate-General for Research Capacities. EUR 23619
- European Commission (2009b). Exploring regional structural and S&T specialization: implications for policy. Luxembourg doi: 10.2777/49086
- European Commission, *Report EUR 26620 EN – European Research Area – Progress Report 2014*. Publications Office of the EU, Luxembourg, 2014
- European Council (8 March 2011). Conclusion of European Council 4 February 2011, Euco 2/1/11 Rev 1
- Fernández-Zubieta, A., Guy, K. (2010). Developing the European Research Area: Improving Knowledge Flows via Researcher Mobility. JRC Scientific and Technical Reports. European Commission Luxembourg: doi:10.2791/46436
- Fiore A., Grisorio M. J., and Prota F., (2011). Regional Innovation Systems: Which Role for Public Policies and Innovation Agencies? Some Insights from the Experience of an Italian Region. *European Planning Studies*. Vol. 19(8), 1399-1422 doi: 10.1080/09654313.2011.586173

- Garlick, S., Kresl, P., Vaessen P. (2006). Supporting the Contribution of Higher Education Institutions to Regional Development. The Øresund Science Region: A cross-border partnership between Denmark and Sweden. Peer Review Report. OECD publications.
- Gunasekara, C.(2006). The generative and developmental roles of universities in regional innovation systems. Science and Public Policy. Volume 33, Number 2, (1), 137-150(14). doi: 10.3152/147154306781779118
- Hollanders, H., et al., (2009) Regional Innovation Scoreboard (RIS) 2009, Full Report, Pro Inno Europe.Maastricht
- Hospers, G.-J. (2003). Beyond the Blue Banana?. Intereconomics. Springer Berlin / Heidelberg 38(2), 76-85. doi: 10.1007/BF03031774
- Hospers, G.-J., (2004) Place marketing in Europe. Intereconomics. Springer Berlin / Heidelberg, 39(5), 271-279 . doi: 10.1007/BF03031785
- Jakob, E.; Friesecke, M.; Beck, J.; Bonnafous, M. (Eds.) *Bildung, Forschung und Innovation am Oberrhein. Formation, recherche et innovation dans la région du Rhin supérieur. Dokumente zum 12. Dreiländerkongress vom 2. Dezember 2010 in Basel. Documents du 12ème Congrès Tripartite du 2 décembre à Bâle.* Schriften zur Grenzüberschreitenden Zusammenarbeit, Band 5. Dike Verlag Zürich/St. Gallen, Nomos Verlag Baden-Baden, 2011
- von Malchus V., (2007).Koooperation von Universitäten, Hochschulen und Forschungsinstituten in den Grenzgebieten des Gemeinsamen Europäischen Hochschulraumes, Arbeitsgemeinschaft Europäischer Grenzregionen (AGEG), Gronau 2007
- Marimon, R., Lietaert, M., & Grigolo, M. (2009). Towards the a Fifth Freedom: Increasing the Mobility of Researchers in the European Union. Higher Education in Europe, 34(1), 25-37.
- Nickel, S., Zdebel T., Westerheijden, Don F. (2009). Joint Degrees in European Higher Education. Obstacles and opportunities for transnational programme partnerships based on the example of the German-Dutch EUREGIO. Gronau/Enschede
- OECD (2009). Investing for Growth: Building Innovative Regions. Background Report Meeting of the Territorial Development Policy Committee (TDPC) at Ministerial Level 31 March 2009
- Petrakos, G. (2001). Patterns of Regional Inequality in Transition Economies. European Planning Studies, 9(3), 359- 383
- PL-BY-UA (2008). Cross-border cooperation programme, Poland-Belarus-Ukraine, 2007-2013. Final Version approved by EC 6 Decision C (2008)6411) November 2008.
-
- Technopolis Group (2011). Innovation Patterns and Innovation Policy in European Regions - Trends, Challenges and Perspectives. Regional Innovation Monitor, 2010 Annual Report. Brussels
- Technopolis Group (2011). Innovation in the Baltic Sea Region. Final Report to the European Commission, Directorate-General Regional Policy. Retrieved at 22.09.2011 at <http://www.technopolis-group.com/site/news/index.htm>

Online Sources JL Elfgén:

- EUCOR (2011). European Cancer Centre. Retrieved at 22.08.2011 from: <http://www.eucor-uni.org/de>
- Oresund Committee (2011). OM OSS. Organisational Structure. Retrieved at 10.09.2011 from: <http://www.oresundskomiteen.org/om-oss/>
- Tendens Oresund (2011a). Traffic across Oresund. Retrieved at 31.08.2011 from: <http://www.tendensoresund.org/en/traffic-across-oresund>
- Tendens Oresund (2011b). Students across Oresund. Retrieved at 02.08.2011 from: <http://www.tendensoresund.org/en/education/the-regional-level>
- Tendens Oresund (2011c). Population. Retrieved at 09.08.2011 from: <http://www.tendensoresund.org/en/population>

Other references:

- ...