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Forschungszentrum Europa? Die EU-Erweiterungen seit 2004

BEAUFTRAGT VOM



Bundesministerium
für Bildung
und Forschung

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Mitte 2014 wurde das zehnjährige Jubiläum der sogenannten EU-Osterweiterung gefeiert. Im Mai 2004 wurden in der bisher größten Erweiterung zehn neue Mitgliedsländer in die Europäische Union aufgenommen. In den folgenden Jahren sind noch drei weitere Staaten hinzugekommen.

Aus diesem Anlass befasst sich die aktuelle Schwerpunktausgabe des *ITB infoservice* „Forschungszentrum Europa? Die EU-Erweiterungen seit 2004“ mit der Frage, wie sich die Aufnahme der neuen Länder auf deren Forschungs- und Innovationslandschaft, aber auch auf die gesamte EU ausgewirkt hat. Trotz immer noch großer Unterschiede zwischen den alten (EU-15) und den neuen Mitgliedstaaten (EU-13) wurde im Jubiläumsjahr eine grundsätzlich positive Bilanz gezogen.

Im Einführungsteil bekommen Sie zunächst einen Überblick über die neuen Mitgliedsländer, die Transformation seit der Erweiterung und welche Synergien sich durch die Zusammenarbeit über Ländergrenzen hinweg in Europa ergeben.

Der erste Block zeigt an Beispielen ausgewählter Länder (Estland, Polen, Kroatien und der Tschechischen Republik) wie sich durch den Beitritt zur EU die Forschungs- und Innovationslandschaften verändert und weiterentwickelt haben.

Der zweite Teil beschäftigt sich mit Kooperationen, die sich seit der Erweiterung verstärkt, und Netzwerken, die sich gebildet und vergrößert haben, sei es durch EU-Förderprogramme oder durch Studentenaustausch.

Im dritten Kapitel liegt der Schwerpunkt auf Innovationsstrategien und -programmen und den Potenzialen, die es noch auszuschöpfen gilt. Zum Schluss gibt es einen Ausblick aus Sicht eines offiziellen Beitrittskandidaten, aus dem serbischen Forschungs- und Bildungsministerium.

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Ausführliche Informationen zu den EU-13 bei Kooperation international

Fokus Bulgarien

→ <http://www.kooperation-international.de/bulgarien>

Fokus Estland

→ <http://www.kooperation-international.de/estland>

Fokus Kroatien

→ <http://www.kooperation-international.de/kroatien>

Fokus Lettland

→ <http://www.kooperation-international.de/lettland>

Fokus Litauen

→ <http://www.kooperation-international.de/litauen>

Fokus Malta

→ <http://www.kooperation-international.de/malta>

Fokus Polen

→ <http://www.kooperation-international.de/polen>

Fokus Rumänien

→ <http://www.kooperation-international.de/rumaenien>

Fokus Slowakei

→ <http://www.kooperation-international.de/slowakei>

Fokus Slowenien

→ <http://www.kooperation-international.de/slowenien>

Fokus Tschechische Republik

→ <http://www.kooperation-international.de/tschechien>

Fokus Ungarn

→ <http://www.kooperation-international.de/ungarn>

Fokus Zypern

→ <http://www.kooperation-international.de/zypern>



Einführung

Die „neuen“ EU-Länder und ihre Rolle für Forschung und Innovation in Europa

Das Jahr 2004 brachte eine tiefgreifende Zäsur in der politischen Landschaft Europas. Die insgesamt als Erfolgsgeschichte gesehene, sogenannte EU-Osterweiterung war die bislang größte in der Geschichte der Europäischen Union. Bildung, Forschung und Innovation sind wichtige Treiber, um Disparitäten in Europa abzubauen. Ein Meilenstein auf diesem Weg ist die Entwicklung des gemeinsamen Europäischen Raums für Forschung und Innovation (EFR), stellt doch die Integration der neuen EU-Länder weiterhin eine große Herausforderung dar.

Die Reform der nationalen Forschungs- und Wissenschaftssysteme sowie die erfolgreiche Beteiligung der Länder an den europäischen Forschungsrahmenprogrammen, derzeit Horizont 2020, sind dafür wichtige Wegmarken. Besondere Bedeutung für den Aufbau von Forschungsinfrastrukturen haben darüber hinaus entsprechende Mittel aus den Europäischen Struktur- und Investitionsfonds. Im Rahmen der europäischen Makroregionen (wie z. B. Ostsee und Donau) erschließt sich gerade für neue EU-Länder die Möglichkeit grenzüberschreitender Zusammenarbeit in unterschiedlicher Zusammensetzung („variable Geometrie“).

Die EU-Erweiterung 2004: Eine historische Zäsur für Europa

Am 1. Mai 2004 traten Estland, Lettland, Litauen, Malta, Polen, Slowakei, Slowenien, Tschechische Republik, Ungarn und Zypern der Europäischen Union bei. Die Gesamtbevölkerung der EU wuchs damit um etwa 75 Millionen Unionsbürger bzw. um ein Fünftel. Am 1. Januar 2007 kamen Rumänien und Bulgarien mit ca. 27 Millionen Einwohnern als neue Mitglieder hinzu und zum 1. Juli 2013 folgte schließlich Kroatien mit ungefähr 4 Millionen Einwohnern.



Die Erweiterung 2004 war für die EU nicht nur die zahlenmäßig größte, sondern auch die bis dato größte ökonomische und gesellschaftliche Herausforderung, galt es doch, Länder zu integrieren, die erst auf dem Weg zur Transformation zu Demokratie und Marktwirtschaft waren. Eine weitere Schwelle war die geringe wirtschaftliche Leistungsfähigkeit der neuen EU-Länder und ihr geringes Pro-Kopf-Einkommen. So stieg die Wirtschaftskraft der EU 2004 mit den damaligen Beitrittsländern lediglich um 5%.

Die EU-Kommission zieht zehn Jahre nach dieser Erweiterung eine positive Bilanz. Erweiterungskommissar Stefan Füle betonte im April 2014 anlässlich des Jubiläums, dass die Erweiterung als starker Anreiz für Reformen diene und das Wachstum in den beigetretenen Ländern durch verstärkte Investitionen und Produktnachfrage auch zum Wachstum in den alten Mitgliedstaaten beigetragen habe. Das Bonner Institut zur Zukunft der

Arbeit (IZA) folgt dieser Einschätzung und weist darauf hin, dass die Erweiterung von 2004 in der EU neben den zusätzlichen Wachstumsimpulsen zu einer signifikanten Wohlstandssteigerung geführt habe. Unter anderem konnten die Beitrittsländer ihre Wirtschaftskraft und ihre Bruttoinvestitionen teilweise deutlich steigern.

Forschung und Innovation in den mittelost- und südosteuropäischen EU-Ländern – die Entwicklung in den letzten zehn Jahren

Mit den Erweiterungen 2004, 2007 und 2013 waren nachhaltige und auch tiefgreifende Konsequenzen für die Forschungs- und Wissenschaftssysteme der Länder verknüpft, die bereits mit dem Ende der kommunistischen Ära in den 1980er und 1990er Jahren begonnen hatten. Dabei bleibt festzuhalten, dass sich sowohl die Ausgangslage als auch die Transformations- und Post-Transformationsprozesse der einzelnen Länder erheblich unterschieden. Die Länder weisen zudem große Unterschiede in ihrem wirtschaftlichen Entwicklungsniveau, ihren Forschungs- und Innovationsanstrengungen, dem Grad der Internationalisierung sowie der Mobilität und Vernetzung der Kompetenzen ihrer Wissenschaftler/-innen auf.

Deshalb beschreiben oft und gerne benutzte Begriffe wie „Braindrain“, „Innovationslücke“ und ähnliche die Situation im Einzelfall korrekt und greifen doch im Gesamtkontext zu kurz. Zunehmend wird – unter anderem von der Europäischen Kommission – in den Ländern Mittelost- und Südosteuropas auch ein hohes, bislang noch nicht genügend in Wert gesetztes Forschungs- und Innovationspotenzial gesehen, das einen bedeutenden Beitrag zum EFR leisten kann. Gerade über die EU-Strukturfondsmittel bauen Länder wie die Tschechische Republik eine hervorragende und international wettbewerbsfähige Forschungsinfrastruktur, beispielsweise in Form europäischer Exzellenzzentren, auf. Hier gilt es dafür zu sorgen, dass diese Infrastrukturen entsprechend nachhaltig wissenschaftlich genutzt werden und über ein effizientes Forschungsmanagement verfügen.

Sowohl ein Blick zurück als auch der Status quo zeigen, dass gleichwohl weiterhin große Anstrengungen notwendig sein werden, um die neuen EU-Länder (EU-13) in den EFR noch besser zu integrieren und auch jenen Befürchtungen

entgegenzuwirken, die von einem erneuten „Öffnen der Schere“ sprechen. Der Anteil für Forschung und Entwicklung (FuE) am BIP liegt in den meisten EU-13-Staaten teilweise erheblich unter dem EU-Schnitt von ca. 2 % (geschätzt 2,02 % im Jahr 2013, Daten Eurostat; siehe Tabelle Seite 7).

Lediglich drei Länder bewegen sich mit ihrem FuE-Anteil am BIP annähernd im Bereich des EU-Durchschnittes (Tschechische Republik, Estland) oder sogar darüber (Slowenien). Länder wie Rumänien und Bulgarien stagnieren dagegen seit ihrem EU-Beitritt 2007 lediglich um 0,5 %. Auffällig ist, dass in den EU-13 der Anteil der FuE-Investition aus der Wirtschaft vergleichsweise gering ist. Er liegt beispielsweise in Polen, dem bevölkerungsreichsten Land Mittelosteuropas, lediglich bei 32 %. Der EU-28-Schnitt liegt etwa bei 50 %, das Ziel liegt bei zwei Dritteln.

Auch bei den Innovations- und Wettbewerbsindikatoren lässt sich im Schnitt noch eine große Lücke zwischen den EU-15 und den EU-13 konstatieren. Der *Innovation Union Scoreboard 2014* stuft von den mittelost- und südosteuropäischen Ländern lediglich Estland und Slowenien als „innovation followers“ mit einer Innovationsleistung über oder im EU-Durchschnitt ein. Mit Litauen, Bulgarien und Rumänien sind es ausschließlich EU-13-Staaten, die in die schwächste Kategorie des Scoreboards, die „modest innovators“ fallen.

Zu den **EU-10** gehören alle im Jahr 2004 der Europäischen Union beigetretenen Länder: Estland, Lettland, Litauen, Malta, Polen, Slowakei, Slowenien, Tschechische Republik, Ungarn und Zypern.

Die **EU-12** umfassen die EU-10 mit Bulgarien und Rumänien.

Die **EU-13** beinhalten die EU-12 und Kroatien.

Zu den **EU-15** gehören alle Mitgliedstaaten der EU vor der sogenannten Ost-Erweiterung im Jahr 2004: Belgien, Dänemark, Deutschland, Finnland, Frankreich, Griechenland, Großbritannien, Italien, Irland, Luxemburg, Niederlande, Österreich, Portugal, Schweden und Spanien.

Als **EU-18** werden die Länder der Euro-Zone zusammengefasst (Stand 12/2014): Belgien, Deutschland, Estland, Finnland, Frankreich, Griechenland, Irland, Italien, Lettland, Luxemburg, Malta, Niederlande, Österreich, Portugal, Slowakei, Slowenien, Spanien und Zypern.

Die **EU-25** sind alle derzeitigen Mitgliedstaaten der Europäischen Union ohne Rumänien, Bulgarien und Kroatien.

Die **EU-27** sind alle derzeitigen Mitgliedstaaten der Europäischen Union ohne Kroatien.

Die **EU-28** sind alle derzeitigen Mitgliedstaaten der Europäischen Union.

Integration in den Europäischen Raum für Forschung und Innovation

Inwieweit sich die neuen EU-Länder erfolgreich an den primär exzellenzgetriebenen Forschungsrahmenprogrammen der EU beteiligen bzw. bislang beteiligt haben und ob sie dafür noch besondere Unterstützungsmaßnahmen brauchen, ist umstritten und wird kontrovers diskutiert. Die Argumentation ist stark abhängig von den dafür herangezogenen Indikatoren. In einem gemeinsamen Papier von 2011 wiesen die EU-12 darauf hin, dass sich die Leistungsfähigkeit und das Potenzial der EU-12 nicht entsprechend in der Beteiligungsrate der Länder am 7. Forschungsrahmenprogramm (FP7) widerspiegeln. Das Fraunhofer-Zentrum für Mittel- und Osteuropa (MOEZ) kommt

hingegen zu einer differenzierten Aussage. Demnach partizipierten am FP7 immerhin fünf mittel- und südosteuropäische Länder (Estland, Slowenien, Ungarn, Lettland und Bulgarien) mit einem höheren Anteil am FP7 als dies ihre FuE-Kapazitäten hätten erwarten lassen (dies auf Grundlage insgesamt geringer FuE-Kapazitäten). Auch bezogen auf das Bruttoinlandsprodukt (BIP) würden acht mittelost- und südosteuropäische Länder (Estland, Slowenien, Bulgarien, Lettland, Ungarn, Litauen, Tschechische Republik und Rumänien) eine höhere Beteiligung am FP7 erzielen, als dies ihrer wirtschaftlichen Leistungsfähigkeit im Vergleich zu den EU-15 entspräche. Als besonders erfolgreiche Staaten hinsichtlich ihrer Beteiligung am

FP7 nennt die MOEZ-Studie Estland und Slowenien. Auffällig sind die geringen Koordinationsaktivitäten durch Institutionen aus den mittelost- und südosteuropäischen Ländern (EU-10). Hierfür scheinen die geringen institutionellen Kapazitäten und Managementstrukturen Ursache zu sein.

Von den vier bevölkerungsstärksten mittel- und südosteuropäischen Ländern Polen, Tschechische Republik, Ungarn und Rumänien weisen die Tschechische Republik und Ungarn die höchste Erfolgsrate bei Anträgen im FP7 mit jeweils 20,3 % auf (EU-28-Schnitt: 20,5 %; Deutschland 24,1 %), Polen liegt bei 18,9 %, das drei Jahre später beigetretene Rumänien erreicht eine Quote von lediglich 14,6 %. Auch anhand dieser Zahlen wird die Heterogenität der Länder ersichtlich.

	2006	2007	2008	2009	2010	2011	2012	2013
EU-28	1,78	1,78	1,85	1,94	1,93	1,97	2,01	2,02 ^e
Euroraum	1,81	1,81	1,9	1,99	2	2,04	2,09	2,12 ^e
Deutschland	2,46	2,45	2,6	2,73	2,72	2,8	2,88	2,94 ^{ep}
Bulgarien	0,45	0,44	0,46	0,51	0,59	0,55	0,62	0,65 ^p
Estland	1,12	1,07	1,26	1,4	1,58	2,34	2,16	1,74 ^p
Kroatien	0,74	0,79	0,88	0,84	0,74	0,75	0,75	0,81
Lettland	0,65	0,56	0,58	0,45	0,6	0,7	0,66	0,6 ^p
Litauen	0,79	0,8	0,79	0,83	0,78	0,9	0,9	0,95 ^p
Malta	0,58	0,55	0,53	0,52	0,64	0,7	0,87	0,85 ^p
Polen	0,55	0,56	0,6	0,67	0,72	0,75	0,89	0,87
Rumänien	0,45	0,52	0,57	0,46	0,45	0,49	0,48	0,39
Slowakei	0,48	0,45	0,46	0,47	0,62	0,67	0,81	0,83
Slowenien	1,53	1,42	1,63	1,82	2,06	2,43	2,58	2,59 ^p
Tschechische Republik	1,23	1,31	1,24	1,3	1,34	1,56	1,79	1,91 ^p
Ungarn	0,99	0,97	0,99	1,14	1,15	1,2	1,27	1,41

Tabelle: Ausgaben für Forschung und Entwicklung – % des BIP (2006-2013)

Quelle: Eurostat

<http://ec.europa.eu/eurostat/tgm/table.do?tab=table&init=1&language=de&pcode=tsc00001&plugin=1>

e=geschätzt; p=vorläufig

Die weiterhin bestehenden großen Unterschiede in Europa hinsichtlich der Forschungsinintensität und Innovationsleistung der Mitgliedstaaten und Regionen stellen eine der großen politischen Herausforderungen Europas dar. Diese Innovationslücke zu schließen, ist daher Gegenstand gezielter forschungspolitischer Maßnahmen zur „Verbreitung von Exzellenz und Ausweitung der Beteiligung“ in Horizont 2020 in Verbindung mit zielgerichteten Investitionen aus den Europäischen Struktur- und Investitionsfonds (ESIF) der Kohäsionspolitik. Durch die Modernisierung der europäischen Forschungssysteme soll der Europäische Raum für Forschung und Innovation (EFR) auf

Die BMBF-Donauraubekanntmachung 2013 – Ein wichtiger Baustein zur FuE-Integration in Südosteuropa

Dem Ziel der Integration von FuE zwischen Donauoberlauf- und -unterlaufländern ist die erste Donauraubekanntmachung des BMBF 2013 gewidmet. Dieses Ziel, von der EU-Kommission 2011 in die Donauraumstrategie geschrieben, erfüllen die seit Ende 2014 gestarteten Projekte voll und ganz: Gerade Länder wie Rumänien und Serbien am Unterlauf gehören zu den gefragtesten Partnerländern in den FuE-Netzwerkprojekten deutscher Koordinatoren.

Der Aufbau von Oberlauf und Unterlauf verbindenden FuE-Netzwerken und die anschließende gemeinsame Vorbereitung von Forschungsanträgen stehen im Fokus der Bekanntmachungsziele von 2013. Umso wichtiger ist diese integrierende Wirkung, da der Donauraum Länder mit sehr unterschiedlicher EU-Zugehörigkeit und Wirtschafts- und Innovationskraft verbindet. Von den 14 Donauranrainerstaaten gehören neun zur EU (Deutschland, Österreich, Slowakei, Slowenien, Ungarn, Tschechische Republik, Bulgarien, Rumänien und Kroatien). Neben den drei offiziellen EU-Beitrittskandidaten Bosnien und Herzegowina, Montenegro sowie Serbien sind die Republik Moldau und die Ukraine beteiligt, die auf erste Beitrittsschritte erst noch hinarbeiten.

Die übergreifenden thematischen Schwerpunkte der seit Ende 2014 geförderten 31 Kooperationen liegen dabei vor allem in den Hightech-Strategie-Bedarfsfeldern Klima/Umwelt, Gesundheit/Ernährung sowie den Schlüsseltechnologien.

Nach Ungarn als attraktivstem Partnerland mit 19 Beteiligungen resultieren Rumänien und Serbien mit 18 und 15 Beteiligungen. Die Plätze 4 und 5 in der Beliebtheitsskala teilen sich wieder auf Unter- und Oberlauf: Mit 13 Beteiligungen folgt Bulgarien vor der Tschechischen Republik mit 12. Im Mittelfeld liegen Kroatien, Slowakei, Slowenien, Österreich sowie die Ukraine mit jeweils zehn bzw. neun Beteiligungen praktisch gleichauf. Die Schlussgruppe bilden Bosnien und Herzegowina sowie die Republik Moldau mit jeweils zwei. Für Beteiligungen mit Montenegro hat es kein Projektantrag zur Bewilligung geschafft.

Bekanntmachung des BMBF zur Förderung eines Ideenwettbewerbs zum Auf- und Ausbau innovativer FuE-Netzwerke mit Partnern in Donauranrainerstaaten

→ <http://www.bmbf.de/foerderungen/21286.php>

eine breitere Basis gestellt werden. Diese Möglichkeiten auszuschöpfen, gilt insbesondere für die EU-13. Die Entwicklung integrativer Strategien für intelligente Spezialisierung (RIS3 - Research and Innovation Strategies for Smart Specialisation) ist eine verbindliche Vorbedingung für die Zuweisung der ESIF-Mittel. Eine in Ansätzen vergleichbare Rolle für den Aufbau moderner Wissenschaftssysteme spielen die Instrumente der Heranführungshilfe (IPA) für die aktuellen EU-Beitrittskandidaten.

Makroregionale Kooperationsmuster

Von besonderer Bedeutung für die regionale, grenzüberschreitende Kooperation der EU-13 sind die makroregionalen Strategien der EU im Ostseeraum, der Donaregion und jüngst auch in der ionisch-adriatischen Region. Diese Strategien wurden von der Europäischen Kommission seit 2009 als neuer strategischer Rahmen für europäische Zusammenarbeit geschaffen. Ihr Ziel ist es, verschiedene Politiken, Strategien und Instrumente in definierten größeren Räumen besser zu koordinieren und zwischenstaatliche Kooperation zu forcieren. Mit Blick auf eine wirksamere Entwicklung der Region sollen die Maßnahmen von Mitgliedstaaten, Regionen und Gemeinden, EU, Organisationen der Makroregion, Finanzinstituten und Nichtregierungsorganisationen transnational koordiniert werden, ohne neue Strukturen, Rechtsrahmen oder Förderprogramme zu schaffen. Die Makroregionen ermöglichen gerade auch in Bildung, Forschung und Innovation eine intensive Zusammenarbeit zwischen den jeweils beteiligten (Regionen der) EU-15, EU-13 sowie Nachbarländern.

Die deutsche Perspektive – von der wissenschaftlich-technologischen Zusammenarbeit zu neuen Formaten der Kooperation

Im Koalitionsvertrag der Bundesregierung „Deutschlands Zukunft gestalten“ wird für Deutschland die Bedeutung gemeinsamer Forschungs- und Entwicklungsprojekte mit den neuen Mitgliedstaaten Ost- und Südosteuropas hervorgehoben. Dies deckt sich mit dem bisherigen Engagement Deutschlands mit und für die Region.

Die wissenschaftlich-technologische Zusammenarbeit (WTZ) Deutschlands mit den Ländern der Region reicht – auf vertraglicher Basis – in die 80er Jahre zurück. Bis zum Zusammenbruch des Ostblocks erlaubte sie regelten Kontakt und Austausch vornehmlich zwischen Wissenschaftler/-innen beider Seiten zur Bearbeitung gemeinsamer Themen.

Mit Maßnahmen, die überwiegend aus dem TRANSFORM-Programm der Bundesregierung finanziert wurden, verfolgte das BMBF das Ziel, die mittelosteuropäischen Länder bei der Umgestaltung der Forschungs- und Technologiestrukturen zur Verbesserung des Wissenstransfers aus der Wissenschaft

in die Wirtschaft sowie beim Aufbau einer leistungsfähigen Forschungsinfrastruktur zu beraten und zu unterstützen.

Im Zuge des EU-Beitritts der mittelost- und südosteuropäischen Länder hat das BMBF im Jahr 2004 die Bekanntmachung „Internationale Zusammenarbeit in Bildung und Forschung, Region Mittel-, Ost- und Südosteuropa“ mit dem Ziel initiiert, dazu beizutragen, die neuen EU-Länder und Beitrittskandidaten in den EFR zu integrieren und ihn damit als Ganzes nachhaltig zu stärken. Bis zum Ende der Maßnahme 2013 konnten mehr als 130 Projekte mit Partnern aus den mittelost- und südosteuropäischen Ländern gefördert werden, um die Vorbereitung von Anträgen in den EU-Forschungsprogrammen und anderen forschungsrelevanten Programmen zu unterstützen. Etwa drei Viertel der geförderten Projektkonsortien waren bei der Beantragung von Fördermitteln in Nachfolgeprogrammen erfolgreich. Mit verschiedenen Förderprogramme, u. a. zum Auf- und Ausbau gemeinsamer Forschungsstrukturen in Europa und zur „Internationalen Zusammenarbeit in Bildung und Forschung, Region Mittelost- und Südosteuropa“ setzt das BMBF dieses Engagement fort.

Dr. Hans-Peter Niller

Download

Fraunhofer MOEZ: Studie zur Beteiligung der mittelost-europäischen EU-Mitgliedstaaten am Forschungsrahmenprogramm

→ http://www.bmbf.de/pubRD/Gesamtstudie_EU10_FP7_MOEZ_2012-05-14.pdf

Common Position Paper of the EU-12 Member States for the next Framework Programme

→ http://ec.europa.eu/research/csfr/pdf/contributions/prior/common_position_paper_of_the_eu-12_member_states.pdf

Weitere Informationen

Eine Bilanz zehn Jahre nach der EU-Osterweiterung

→ <http://www.iwkoeln.de/de/presse/gastbeitraege/beitrag/berthold-busch-und-michael-groemling-im-wirtschaftsdienst-eine-bilanz-zehn-jahre-nach-der-eu-osterweiterung-169548>

Zehn Jahre EU-Osterweiterung: eine positive Bilanz

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Die regionale Dimension von Forschung und Innovation

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Smart Specialisation Platform S3

→ <http://s3platform.jrc.ec.europa.eu/home>

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→ http://ec.europa.eu/regional_policy/cooperate/adriat_ionian/documents_en.cfm

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→ <http://www.oerok.gv.at/eu-kooperationen>

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From Candidate to Membership: The Transformative Power of the EU Enlargement

Thirteen countries from Central and Eastern Europe and the Mediterranean have joined the European Union since 2004. This has been the biggest ever enlargement of the EU and a historic step towards unifying Europe.

The new Member States – through their sheer number and dynamism – have made the EU stronger and culturally richer. The enlargement process has helped build and consolidate democracy in the European continent. It has strengthened security by providing a crucial anchor of stability in a period of conflicts and upheavals within and around our continent. It has greatly boosted the economies and improved living standards in the new Member States, thereby also benefiting the old Member States notably through new export and investment opportunities. An enlarged EU also carries more weight when addressing issues of global importance such as climate change or the international financial crisis. Overall, the accession of thirteen new Member States has increased the weight of the EU in the world and made it a stronger international player, in both economic and political terms.

Economic impact of the EU enlargement

The latest enlargements of the European Union have brought greater economic prosperity for all EU citizens. The institutional and legal frameworks and the common policies of the EU played an important role in ensuring this success. Macro-economic stabilisation, institution-building, regulatory convergence, improvements in governance, trade integration and capital movement liberalisation took place throughout the accession process, so that many benefits were already visible prior to 2004/2007. The accession process anchored economic policies, created a stable and competitive economic environment and spurred public investment in human capital and infrastructure, thereby creating ample opportunities for private initiatives. Investors from the old Member States, and from all over the world, quickly seized these new opportunities, bringing about an unprecedented inflow of private capital into the new Member States.

In 1996, when the new Member States embarked on the accession path, their average gross domestic product (GDP) was at 40 % of EU GDP. Today, they stand close to 60 % of EU-15 GDP or at over 70 % of EU-28 GDP. For the old Member States, enlargement extended the internal market. It opened trade and financial flows thus giving opportunities. Trade between old and new Member States grew almost threefold in less than 10 years preceding the accession.

Eastern Europe grew on average by 4 % annually in the period 1994-2008. It is estimated that the accession process itself contributed almost half to this growth e.g. 1.75 percentage points per year over the period 2000-2008. The economic dynamism of these countries generated three million new jobs in just four years from 2003 to 2007. This figure in relative terms means that job creation in Central and Eastern Europe was double than in the EU-15 in the same period.

Growth in the acceding countries contributed to growth in the old Member States through increased investment opportunities and demand for their products. It contributed 0.5 percentage points to cumulative growth of EU-15 in 2000-2008. Member States bordering Central and Eastern Europe benefited much more. According to the Austrian Chamber of Commerce, their country increased its GDP by extra 0.4 percentage points annually due to the ongoing enlargement (2004-2008).

A larger single market is more attractive to investors from all over the world. Foreign direct investment (FDI) from third countries to the EU has doubled as a percentage of GDP since accession (from 15.2 % of GDP in 2004 to 30.5 % of GDP in 2012) with the enlarged EU attracting 20 % of global FDI. Within the EU, around 20 % of FDI flows went to the new Member States. In countries which received higher shares of FDI, such as Poland, one in four jobs was created by foreign companies. These investments connected local firms with pan-European supply chains and provided for the transfer of technology. The jobs, which they created, have higher value added than the average.

Following the outbreak of the financial crisis in 2008, the foreign financial investors almost without exception remained in the new Member States. Economic

history shows that this would most probably not have happened if the countries and the firms had not been firmly integrated in the EU.

Research and enlargement

Research and innovation is not a policy traditionally associated with EU enlargement. The Union has little legal competence in this area, thus it limits its dialogue with aspiring countries to a subcommittee meeting per year and very quick negotiations. In the membership negotiations, the chapter on research policy is normally open and closed after just one meeting on both parties. In terms of funding, pre-accession assistance favours projects related to hard obligations in the areas of legal approximation with the EU rules and the political and economic accession criteria. Research is stated as a priority for socio-economic development, but comparatively little funds are eventually invested. An optimistic explanation is that the enlargement countries gain full access to the EU research programme, which enables their best researchers to work directly with EU peers. The pessimistic view is that research capacities in these countries are limited, therefore, research is less relevant than other priorities.

So far, the side-tracking of such an important policy for economic development has not left negative impact on the catching up or the capacity to integrate in the EU single market. The recent Transition Report published by the European Bank for Reconstruction and Development notes that in Central and Eastern Europe as well as in Southeast Europe the main drivers of growth are not increases in labour or capital participation but almost exclusively total factor productivity. Total factor productivity is associated with firm restructuring, which necessarily includes important aspects of innovation and technology transfer. This is not recorded as research and development activities, but signals to policymakers that enough innovative activity is present in the economy.

The new Member States remain less developed than the EU average and are the main beneficiaries of the EU's structural policies. In this context, much can be done and has been done to improve the quality of public investment by increasing the share of expenditure for R&D, transport, education, health and environment.

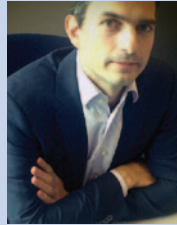
Southeast Europe

Today, the enlargement policy continues to drive transformation and anchor stability in the countries of Southeast Europe with an EU perspective. Economically, similar catching up patterns are taking place as previously. Until the economic crisis in 2009, the countries were catching up by growing on average over 5 % per year. Since then, convergence has slowed down. Significant new reforms will be needed in order to resume to growth.

Enlargement policy is not static. It evolves and is adjusted based on the lessons learned from successive accessions to ensure the smooth integration of new Member States into the EU. The accession process today is more rigorous and comprehensive, focusing on addressing the “fundamentals first”:

- The rule of law: Countries need to tackle issues such as judicial reform and the fight against organised crime and corruption right from the start of the accession process. They need to demonstrate a track record of concrete, sustainable results.
- Economic governance: Countries need to intensify reforms to meet the economic accession criteria, ensuring stable market economies and improve competitiveness. This will create conditions for investment and drive growth and job creation.
- Democratic institutions need to be further consolidated, with for example improved parliamentary scrutiny as well as reforms of public administrations. A stronger role for civil society also needs to be assured.
- Fundamental rights: Countries need to ensure these are fully respected, in particular the freedom of expression and the rights of persons belonging to minorities, including Roma. Vulnerable groups need to be protected from discrimination, including on grounds of sexual orientation.
- To overcome the violent legacy of the past, countries must ensure good neighbourly relations and regional cooperation. As an example, the EU's recent negotiating framework for Serbia includes the requirement for work towards normalisation of relations between Belgrade and Pristina to run in parallel with negotiations.

The European Union supports national efforts in all of the required areas for reform through targeted financial assistance (Instrument for Pre-Accession Assistance) with 11.7 billion euros foreseen for the period 2014-2020.



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Weitere Informationen

European Commission

→ http://ec.europa.eu/index_en.htm

Enlargement

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Transition Report, European Bank for Reconstruction and Development

→ <http://www.ebrd.com/downloads/research/transition/tr13.pdf>

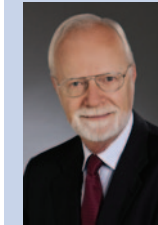
Neue Nachbarschaften – Synergien zwischen Ost und West

Interview mit Manfred Horvat, Honorarprofessor an der Technischen Universität Wien.

ITB: Welches waren und sind Ihre Tätigkeiten im Hinblick auf die Zusammenarbeit in Forschung und Innovation mit den neuen EU-Mitgliedstaaten der Erweiterungen von 2004, 2007 und 2013 (EU-13-Länder)?

Prof. Manfred Horvat: Meine Tätigkeit mit den EU-13-Ländern geht bereits weit zurück in die Mitte der 1980er Jahre. Ab dieser Zeit habe ich mich von meiner Position an der TU Wien und in Europäischen Universitätsgesellschaften dafür engagiert, Technische Universitäten aus diesen Ländern in westeuropäische Universitätsnetze einzubinden.

Am Beginn der 1990er Jahre war ich in TEMPUS aktiv und habe eine Reihe von Joint European Projects mit Partnern aus diesen Ländern koordiniert.



Prof. Manfred Horvat
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Von 1993 bis 2006 war ich in Österreich für die Implementierung der EU-Forschungsrahmenprogramme zuständig und habe in Österreich eine starke Organisation der Nationalen Kontaktstellen (NKS) aufgebaut, bis 2004 als Direktor des Büros für Internationale Forschungs- und Technologiekooperation (BIT), das dann als Bereich für Europäische und Internationale Programme (EIP) in die Österreichische Forschungsförderungsgesellschaft (FFG) integriert wurde.

Sowohl im BIT also auch in der FFG hat die Förderung der Zusammenarbeit mit zahlreichen Ländern der nunmehrigen EU-13 besondere Bedeutung gehabt und war in Übereinstimmung mit der österreichischen Priorität, diese Kooperationen zu stärken, aber auch die Länder bei ihrer Annäherung an die europäischen Forschungs- und Technologieaktivitäten zu unterstützen.

Beispielhaft zu nennen sind TEMPUS Twinning Projekte mit Polen (1999-2001) und Rumänien (2005-2006), in denen der Aufbau von Informations- und Beratungsstrukturen und die Ausbildung von NKS-Mitarbeiterinnen und -Mitarbeitern gefördert wurden, aber auch Kolleginnen und Kollegen in den Ministerien für die Arbeit in Programmausschüssen und die Ausarbeitung nationaler Strategien für die EU-Kooperation beraten wurden.

Ab Ende der 1990er Jahre hat sich der Tätigkeitsbereich auch in Richtung der Westbalkanstaaten (WBC) erweitert. Als Vorsitzender der Fünfjahres-Evaluation des INCO-Programms habe ich erste Maßnahmen für die Integration der WBC in die EU-Forschung vorgeschlagen, was dann zu ersten Ausschreibungen von *Coordination and Support Actions* führte. 1999 habe ich mit Unterstützung des österreichischen Wissenschaftsministeriums, der Europäischen Kommission und der damaligen schwedischen Präsidentschaft den ersten Workshop für *S&T Policy Makers* aus den WBC in Wien organisiert. Als Ergebnis wurde ein *Vienna Memorandum on the Integration of the WBC in EU RTD Activities* verabschiedet. In der Folge wurde mit Partnern aus anderen Ländern – insbesondere George Bonas aus Griechenland – ein *WBC Action Plan* und später auch die *Steering Platform for Research in the WBC* initiiert. Auf dieser Basis wurde vom Zentrum für Soziale Innovation (ZSI) auch das erste ERA-NET für die südosteuropäischen Ländern entwickelt; eine Initiative, die erstmals die Möglichkeiten der ERA-NETs für die internationale Kooperation aufzeigte. Das ZSI hatte in der Folge eine Pionierrolle für die Integration der WBC in den Europäischen Forschungsraum.

ITB: Welche Entwicklungen konnten Sie bei Ihren Aktivitäten beobachten, wo liegen die größten Herausforderungen, wo gibt es die besten Chancen und das größte Potenzial?

Prof. Manfred Horvat: Die von der EU geförderten Koordinations- und Unterstützungsmaßnahmen spielen eine wichtige Rolle für die Information und Bewusstseinsbildung über die Möglichkeiten der Beteiligung an den EU-Rahmenprogrammen. Dabei haben die Nationalen Kontaktstellen in Österreich und Deutschland eine besondere Rolle beim Training von Kolleginnen und Kollegen sowie beim Aufbau von Betreuungsorganisationen in den nunmehrigen

EU-13 gespielt. Als Erfolg ist zu sehen, dass diese inzwischen selbst in Beitrittskandidatenländern aktiv sind und ihre Erfahrungen weitergeben. Die Erfahrung zeigt, dass für den Erfolg in der Beteiligung an den europäischen Aktivitäten für Forschung und technologische Entwicklung eine gute Informations- und Beratungsinfrastruktur erforderlich ist.

Ich war und bin vom großen Engagement der Forscherinnen und Forscher in den EU-13 beeindruckt und von deren starkem Willen, in Europa zu kooperieren. Die Beteiligung von Organisationen aus den neuen Mitgliedsländern nimmt laufend zu und die EU-12 bzw. EU-13 sind inzwischen voll integrierte und geschätzte Partner.

Problematisch wird vielfach gesehen, dass der finanzielle Rückfluss, aber auch die Erfolgsrate von Projekten mit Partnern aus den EU-13, zu wünschen übrig lassen.

In finanzieller Hinsicht spielen die im Vergleich zu den EU-15 niedrigen Gehälter eine wesentliche Rolle, da wesentliche Anteile der EU-Finanzierung auf Personalkosten entfallen. Zusätzlich kann dies aber auch als Kennzeichen einer Übergangsphase und als Investition in den Integrationsprozess gesehen werden. Nebenbei soll nicht unerwähnt bleiben, dass auch einige EU-15 Länder bedeutende „Nettozahler“ sind.

Die geringere Erfolgsrate weist auf das Problem hin, dass häufig Konsortien mit den Partnern gebildet werden, die man gut kennt, die aber nicht unbedingt die optimalen für die Aufgabe sind. Der Grund dafür kann darin gesehen werden, dass die Erweiterung zwar politisch vollzogen ist, aber unsere mentalen Landkarten zum Teil noch durchaus von der Zeit vor 1989 geprägt sind und wir viele Orte und Einrichtungen einfach noch nicht kennen. Wer kennt und kooperiert mit Universitäten in Städten wie Rzeszow, Kosice, Miskolc, Iasi, Cluj-Naboka oder Zadar, um nur einige Orte beispielhaft zu nennen? Hier ist noch sehr viel Informations- und Bewusstseinsarbeit erforderlich, um die dort vorhandenen Potenziale zu heben bzw. optimal für alle Beteiligten zu nutzen und die Forscherinnen und Forscher als selbstverständliche Partner in die europäische Kooperation einzubinden.

ITB: Aus Sicht eines etablierten EU-Mitgliedes, wie sehen Sie die Integration der EU-13-Länder seit 2004, insbesondere in Bezug auf Forschung und Innovation? Auf welcher Ebene gibt es Fortschritte, wo besteht Nachholbedarf?

Prof. Manfred Horvat: Die Erweiterung des Europäischen Forschungsraumes hat eine Stärkung der Wissensbasis und des Forschungspotenzials mit sich gebracht. In den 25 Jahren seit dem Fall der Mauer sind viele neue nachhaltige Partnerschaften entstanden, die Vorteile für alle Beteiligten bringen. Auch wenn Exzellenz als oberstes Prinzip des Rahmenprogramms gilt, trägt es bedeutend zur Kohäsion und zum Strukturwandel in Europa bei, was sich mittel- und langfristig auch positiv auf die wirtschaftliche und gesellschaftliche Entwicklung auswirken wird.

In Hinblick auf Innovation werden sicher noch gezielte nationale und europäische Maßnahmen zur Förderung der Wirtschaftsentwicklung in den EU-13 erforderlich sein, um die Unternehmen in die Lage zu bringen, das Potenzial der Forschungseinrichtungen zu nutzen. Aber auch auf Seiten der Universitäten müssen die erforderlichen Strukturen und Kompetenzen entwickelt werden, um mit Industrie und Kleinunternehmen sinnvoll zusammenarbeiten zu können. Dabei müssen simple Transferkonzepte überwunden und echte Kooperationsansätze entwickelt werden.

Viele Regionen haben die Synergien zwischen Forschungsrahmenprogramm und Strukturfonds genutzt und auch auf instrumentelle Erneuerung und Ausbau gesetzt. Mit Hilfe des europäischen Sozialfonds wurden an manchen Orten beispielhafte Doktoratsprogramme implementiert, die auch Forschungsaufenthalte in EU-15-Ländern umfassen, wodurch Austausch und Zusammenarbeit gefördert werden.

Modernste Forschungsinfrastrukturen an der Spitze der instrumentellen Entwicklung können ausgezeichnete Attraktionspunkte darstellen, die Forscherinnen und Forscher aus den EU-15 anziehen und so als Keimzellen neuer Partnerschaften dienen. Hier besteht Nachholbedarf, aber ein großes Potenzial für die Zukunft.

Schließlich sind gezielte Maßnahmen erforderlich, um weniger bekannte Universitäten und Forschungseinrichtungen auf die „Radarschirme“ potenzieller Partner aus den EU-15 zu bringen.

ITB: Die EU hat die Europäische Strategie für den Donaauraum beschlossen, in die viele der EU-13-Länder eingebunden sind. Wie kann Ihrer Meinung nach das dort formulierte gemeinsame Ziel, eine integrierte Entwicklung der Donauregion, erreicht werden?

Prof. Manfred Horvat: Die regionale Kooperation und Nutzung der vorhandenen Ressourcen soll in Zukunft eine noch wichtigere Rolle in Europa spielen. Die Donau verbindet wichtige EU-15-Länder mit vielen EU-13-Ländern, wobei die Bildung einer zusammengehörigen Region und eines entsprechenden vertieften Bewusstseins sicher noch ein hohes Ziel ist.

Eine integrierte Entwicklung der Donauregion wird nur zu erreichen sein, wenn die Strategie in den Arbeitsprogrammen abgebildet wird und damit auch Teil der vorhandenen Programme wie Forschungsrahmenprogramme und Strukturfonds wird. Koordinationsaktionen wie insbesondere das Danube-INCO.NET werden in diesem Zusammenhang eine bedeutende Rolle spielen. Dabei werden die langjährigen Erfahrungen von ZSI, FFG und PT-DLR sowie österreichisches (BMFWF) und deutsches (BMBF) Forschungsministerium eine hervorragende Basis abgeben. Die Vorbereitung der Arbeitsprogramme für die Periode 2016-2017 ist besonders wichtig, für die derzeit die Vorbereitung läuft bzw. die schon weit gediehen ist.

ITB: Welches werden in Zukunft die wichtigen Themen in Forschung und Innovation für die EU-13-Länder und die Zusammenarbeit im europäischen Kontext sein?

Prof. Manfred Horvat: Für die EU-13-Länder werden die Säulen des Rahmenprogramms – die großen gesellschaftlichen Herausforderungen, die industrielle Wettbewerbsfähigkeit sowie die Förderung der wissenschaftlichen Exzellenz – ebenso wichtig sein wie für die EU-15-Länder. Besondere Bedeutung wird der Erarbeitung und Umsetzung von Smart Specialisation Strategies zukommen,

die die Brücke von den Strukturfonds zum Rahmenprogramm für Forschung und Innovation bilden.

Synergien mit nationalen und regionalen Maßnahmen zur Stärkung der Innovationskraft der Unternehmen aber auch regionalen Verwaltungsinstitutionen werden besonders wichtig sein, um diese für die Zusammenarbeit mit Forschungseinrichtungen zu stärken aber auch vielfach erst vorzubereiten. Dies wird auch erforderlich sein, um Möglichkeiten für den Brückenschlag regional-international zu entwickeln.

Modernste Forschungsinfrastrukturen – nicht nur gemäß der ESFRI-Liste, sondern auch an Universitäten und in Forschungszentren – sollen die Voraussetzungen für die verstärkte Anziehung von ausgezeichneten Forscherinnen und Forscher auch aus führenden Forschungseinrichtungen aus besser entwickelten EU-15-Ländern und -Regionen schaffen.

Nicht zuletzt muss kontinuierlich die Verbesserung der Information und der Wahrnehmung der Forschungs- und Innovationssysteme, -strukturen und -einrichtungen in den EU-13-Ländern und das gegenseitige Kennenlernen und Schätzen zwischen EU-13 und EU-15 betrieben werden.

Die Fragen an Prof. Manfred Horvat stellte

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Weitere Informationen

Vienna Memorandum on the Integration of the WBC in EU RTD Activities

→ <http://wbc-inco.net/object/document/7588>

Österreichische Forschungsförderungsgesellschaft (FFG)

→ <https://www.ffg.at/>

Zentrum für Soziale Innovation (ZSI)

→ <https://www.zsi.at/>

Steering Platform for Research in the WBC

→ <http://wbc-inco.net/usefultool/16>

Dabei sein ist alles? (Ein-)Blicke in und aus den Ländern

Success Story Estonia: A Small Country with a High Spirit on Its Way up

Interview with Ülle Must, Director of the Research Cooperation Centre at the Estonian Research Council in Tartu.

ITB: You were very involved in your country in R&D and have been able to follow the development of the R&D landscape closely: What is your conclusion in retrospect of the last 10 years since the EU enlargement?



Ülle Must
Director of the Research
Cooperation Centre
Estonian Research Council
Tartu, Estonia

Ülle Must: Yes, indeed, me and my country's experience in the EU Framework Programme almost coincide. I started working in this field in January 2000, Estonia was the first candidate country to associate with the 5th Framework Programme from May 1999.

During this period two research, development and innovation (RDI) strategies have been developed and completed (Knowledge based Estonia I (2002-2006), Knowledge based Estonia II (2007-2013)). In 2014 the third Estonian RDI strategy (2014-2020) began. While previous strategies have focussed mainly on the development of our RDI capacity, the objective of the present strategy is to use the created potential for the development and economic growth of Estonia.

We Estonians like to refer to one of our national heroes from 19th century, Jakob Hurt, who said, "If we do not get big in terms of population, we need to get big in spirit". Our basic position was, and is: Estonian R&D should be internationally competitive and visible, discount on the cost of quality should not be done.

So, long-term planning, emphasis on competitiveness in the combination with EU support has enabled us to build a significantly high level scientific infrastructure, to

support cutting-edge science (Competence Centres and Centres of Excellence), and as a result we have been able, thanks to the various mobility schemes, to make Estonia attractive for many foreign scholars and students.

ITB: How do you assess the development of your country with regard to the co-operation in research and innovation with the old and new EU Member States?

Ülle Must: We can compare the success in research and innovation activities with the care of English lawn – the longer the time, the more beautiful the lawn, and so for hundreds of years. History has not given to us long periods of stability. But however, it has taught us the flexibility, and the ability of the rapid uptake of new opportunities.

Sustainable research and development activities are based on trust. Estonia has had the good fortune to have such neighbours as Finland. At the beginning of the restoration of independence, the selfless help of their research community helped us to overcome many barriers which up until now have been a problem of our fellow sufferers. Trust building is still a key element in international collaboration. To foster open communication, the *Estonian Research Information System* and *Research in Estonia* are the gateways to Estonian research landscape, they concentrate information on research and development institutions, researchers, research projects and various research results in Estonia.

ITB: What kind of developments did you observe during your activities, what were/are the biggest challenges, where do you expect the best opportunities and the greatest potential for your country?

Ülle Must: The Estonian RDI and economy structure formed historically in conjunction with a lot of factors. Although productivity has increased fast, there are still too few enterprises related to R&D and that cooperate with universities. An increase in the added value of all economic sectors is still a real challenge. Estonia is a small country with limited resources (persons employed in the field of science and technology constitute 0.27 % from EU corresponding figures), therefore it is not possible to participate in all activities; we have to make choices.

Increasing participation per se is not the objective. Much more important is the quality of participation and partnership. To foster this goal, we set up a funding scheme to support Estonian applicants whose proposals have crossed the evaluation threshold, and who have a core role in the applications.

ITB: From your point of view, how do you see the integration process of the EU-13 countries since 2004, particularly in relation to research and innovation? At what level do you identify some progress, where is pent-up demand in contrast?

Ülle Must: We all know that the innovation and knowledge divide within Europe between the old and new Member States has not decreased. The economic crisis has made the situation more critical. Public investments were dramatically cut in many European countries. This has led to growing distrust amongst EU Member States (see ERIAB reports). My personal belief is that even in the “big arena” personal chemistry plays a role. I would like to emphasize the importance of such type of collaboration as COST (European Cooperation in Science and Research) is.

ITB: How do you see the role of the Baltic Sea Region within the EU and how do you assess the cooperation of the Baltic Sea Region States?

Ülle Must: Cultural, historical and geographical affinity plays a big role in research collaboration. Those nine countries that have shorelines along the Baltic Sea have cooperated already since the 13th century (Hanseatic League); they have common problems to solve. I agree with the statement that the Baltic Sea strategy is the suitable test case for the EU. Cooperation with the Baltic and Nordic countries is also one of priorities in our RDI strategy.

ITB: What will be the important topics in research and innovation for the EU-13 countries and the cooperation in the European context in the future in general and for your country?

Ülle Must: It would be very important, that the Framework Programme and the Cohesion Funds synergies would not be just empty words. There is need to

attract new national donors (sectoral ministries), and to realize the long-time ideal – collaboration between different levels: inter-ministerial, research-industry level.

In the achievement of its strategic objectives, the European Union has established smart specialisation as a condition for use of the resources of the Structural Funds. Estonia has chosen the following growth areas:

- information and communication technology (ICT) horizontally through other sectors (use of ICT in industry, cyber-security, and software development);
- health technologies and services (biotechnology, e-health);
- more effective use of resources (materials science and industry, innovative construction, i.e. “smart house”, health-supporting food, chemical industry (more effective use of oil shale)).

Die Fragen an Ülle Must stellte

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Weitere Informationen

Estonian Research Council

→ <http://www.etag.ee/en/>

Estonian Research Information System

→ <https://www.etis.ee/index.aspx?lang=en>

Research in Estonia

→ <http://www.researchinestonia.eu/>

Reports of the European Research and Innovation Area Board (ERIAB)

→ <http://eravisions.eu/object/news/55>

European Cooperation in Science and Research (COST)

→ <http://www.cost.dlr.de/>

The Development of the Polish RDTI Landscape Within the Last Decade

Thanks to Poland’s accession into the European Union and, consequently, the availability of EU funds, Poland’s research, development, technology and innovation (RDTI) has undergone massive improvement in the last decade. In the past years, Poland’s innovation landscape has been defined by the European Union subsidies supporting research and development (R&D) under the Operational Programme Innovative Economy. Poland now prepares itself for the new 2014-2020 multiannual financial framework, with the Operational Programme Smart Growth now being negotiated with the European Commission.

It is worth to note that between 2007 and 2020 Poland is the largest beneficiary of EU funding, to the tune of estimated 173 billion euros (67 billion euros in 2007-2013). Among other things, this has translated into significant investments in research infrastructure, which has already begun to be used for the implementation of innovative projects. A good use of EU funds is one of Poland’s main priorities in the years to come, with an aim to spend them in such a way, so that they not only promote innovation, but also connect business and academia, thus boosting research commercialisation.

The Polish government has actively been working to address the priority issues. The aim is to ensure that the money from the 2014-2020 EU financial perspective serves the development of an efficient and sustainable support system for the co-operation between business and academia, which will continue to operate after the stream of EU money will have run out.

Despite these efforts, Poland is still regarded as lagging behind most of the Member States. I would like to underscore in this context that some of the EU reports do not reflect the current circumstances and describe the situation as it was a few years ago. In the meantime, there were intensive systemic changes in support of the development of innovation and a spectacular growth of spending on R&D. The results of those changes will become more tangible in the years to come.

With this in mind, I would like to highlight that Poland has enjoyed a progressive increase in the industry spending on research and development, and since 2007 the overall spending on R&D has increased by 35 %. More and more programmes are implemented in a public-private partnership, including the participation of venture capital funds, which absorb the risks associated with the implementation of innovative ideas.

The following data perhaps best illustrates how Poland's RDTI has recently changed. In 2012, the number of entities that carried out R&D activities was up by 23.1 % compared to the previous year. Poland's gross domestic expenditure on research and development (GERD) in 2012 amounted to 3,5 billion euros – an almost 23 % jump on 2011. In 2014, Poland is expected to spend 1 % GDP on R&D (0.77 % in 2011), which is due mainly to the commitment of the private sector. For the last two years, its participation in research and development has significantly increased and amounted to over 1.3 billion euros in 2012, which already represents 37 % of Poland's overall R&D expenditure.

Let me also quote a rapid increase in the number of patents issued in Poland: in 2011 almost 2,000 patents were granted for domestic inventions in Poland – almost 44 % more than a year before. A growing number of patents obtained by Polish scientists and entrepreneurs from the European Patent Office (EPO) and the Patent Office of the United States of America (USPTO) is another factor I would like to draw attention to. Please note that in 2012 there was an over 50 % increase in their number in comparison to 2011, and an almost 90 % increase in 2010. This is but another reason why I look forward with optimism to the future development of Polish innovation.



Flaris Lar 1 – an ultra-light jet plane acclaimed at the 50th International Paris Air Show Le Bourget in 2013 – is an example of how Poland makes best use of EU funds to develop highly innovative projects; source: National Centre for Research and Development (NCRD)

The National Centre for Research and Development (NCRD) has played a very important role in implementing the EU funded Programmes in Poland and, in consequence, in assisting the Polish R&D change for the better. Since 2011, the budget of the National Centre for Research and Development has continuously grown and currently amounts to 1.3 billion euros per year.

Every day the Centre pays 2.5 million euros for the development of R&D in Poland, with nearly half of that amount coming from the industry. In 2013, the NCRD launched a number of programmes for most entrepreneurial sectors of the economy, as we are conscious that entrepreneurs are essential to grow Poland's innovation capability. By way of these programmes, we have been able to convince and motivate the private sector

to fund or co-fund research. It is also reassuring that entrepreneurs increasingly come to a conclusion that their competitiveness cannot only be built through purchasing ready-made technologies from. This applies particularly to Polish companies that are about to enter foreign markets.

As a result, the NCRD has now become an important strategic partner for Polish entrepreneurs and its growing involvement in financing research and development is a proof that the public support mechanisms implemented, among others under programmes offered by the NCRD, have brought results desired. Furthermore, nearly half of Poland's companies are planning to increase R&D spending in the next two years, compared with 2013, and over 60 % of them envisage larger spending in the period of three to five years. I am therefore certain that programmes within the new EU financial perspective will be well used by Polish entrepreneurs.

To conclude, while I believe it is still too early to sum up the 2007-13 EU financial perspective and the benefits it has brought the Polish RDTI, I am sure that the commercialisation of ongoing research and development works will significantly accelerate Poland's future economic growth. There are many challenges ahead, but if we stay the course, Poland and its RDTI stand a good chance of becoming a power house in many areas of the economy. And that remains our key goal.



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Weitere Informationen

National Centre for Research and Development (NCRD)

→ <http://www.ncbir.pl/en/>

Innovation Capacities in the Context of EU-Accession: A Croatian Experience

The EU accession process which Croatia started in 2005 has provided a strong incentive to adopt large socio-economic and political reforms and to harmonize the legislation with the EU *acquis communautaire*. Through the Instrument for Pre-Accession Assistance (IPA), Croatia received more than one billion euros from 2007 to 2013 to build up its capacities for full membership in the EU which was achieved on 1 July 2013 when Croatia became the 28th Member State.

The effects of socio-economic convergence with the EU have been deteriorated by the six consecutive years of economic recession that hit Croatia in 2008 initiated by the global financial crisis but exacerbated and prolonged by internal and long-lasting structural deficiencies. It brought serious economic downturn that takes its toll not only on economic growth (around 12 % of cumulative decrease of GDP), employment (loss of 170,000 jobs) and social welfare (dramatic increase of the at risk-of-poverty rate of 18.5 %), but has a negative feedback on innovation, entrepreneurship, R&D funding and overall future prospects. Although the reasons behind are complex, the failure in major structural reforms needed for long-term growth, uncritical servitization of economy in the low-profit sectors and weak innovation capacities can be sorted out as the most critical. Yet Croatia remains one of the most developed countries in Southeast Europe, reaching 10,112 euros of GDP per capita in 2013 or around 61 % of GDP of the European average.

Croatia is currently slowly closing its competitiveness gaps with the EU-18 on labour market, productivity and rule of law, but the gaps are largest on innovation, technological competences, business sophistication and entrepreneurship climate.

The latest *Global Competitiveness Report 2014-2015* ranks Croatia 74th of the 144 countries, and places Croatia, with the exception of Greece, on the bottom of the list of EU Member States. In terms of its innovation performance Croatia is considered a “moderate innovator” (one stage above “modest

innovator”) and the *Innovation Union Scoreboard 2014* ranks it 23rd out of 28 Member States with 42 % of all enterprises in Croatia classified as active in innovation terms, as opposed to the 53 % average for the EU-27.

Croatia’s relative strengths compared to the EU are in the international scientific co-publications, youth with upper secondary level education and non-R&D innovation expenditures while the main weakness is in patenting activity which is unusually low (30 times less patent applications per 1 million inhabitants than the EU average).

By contrast to non-R&D innovation expenditures, the total investments in R&D decreased in the last decade for almost a third, from the peak of 1.05 % of GDP in 2004 to only 0.75 % of GDP which is almost a third of the EU average expenditures of 2.06 % of GDP. It threatens the scientific and research activities which are relatively well developed despite the fairly small research community, around 6,500 researchers or 45 % of the EU average. Croatia has excellent research groups which successfully compete within the EU framework programmes and received more than 80 million euros of EU funding since the beginning of FP7, mainly for projects in healthcare, ICT, biotechnology and transport (e-Corda, November 2013).

Croatia is catching up with the EU in many other innovation-related factors such as the share of human resources in science and technology, employment in the knowledge intensive activities, medium and high-tech manufacturing, etc. (see table page 21). It is topping the list of the Member States in the number of young persons with upper secondary education (95 % of age cohort vs. 81 % in the EU-28).

The business sector employs only 17 % of all researchers and invests worryingly small amounts in R&D, around 0.34 % of GDP or 35 euros per capita; that is ten times less per capita investment than in the EU on average. About 80 % of all business R&D investment is concentrated in a couple of multinational companies (e.g. pharma, ICT, food industry) while innovation in SMEs is mainly incremental and outside their strategic focus. Apart from large companies, the innovation

potentials in production sectors are coming mostly from technological mastering and business sophistication in SMEs in medium-low- and medium-high-tech sectors which made, as reported by the 2013 SME Observatory for Croatia, around 48 % of a total of 11,560 SMEs in the manufacturing sector. Another 4.6 % or more than 500 firms are classified as high-tech. Around 30 % of SMEs in the service sector are engaged in the knowledge intensive service activities. From a total of employees in SMEs, in both the manufacturing and services, 30 % are employed in the knowledge intensive service activities and high-tech manufacturing.

It illustrates that Croatia’s potential advantage can be found also in high-skill/high-innovation products. The recent *Industrial Strategy 2014-2020* identified the pharmaceutical and ICT industries as the most promising among high-tech industries, while medium-tech includes a range of branches from electrical and metal to food or plastic industry. These industries are recognised as the “drivers” of the Croatian economy which deserve special attention and support in the forthcoming period.

The Draft of the Smart Specialisation emphasizes in addition the competitive potentials of the health sector (biomedicine) sustainable energy



OECD Reviews of Innovation Policy: Croatia 2013

Der erfolgreiche Übergang zu einer offenen Marktwirtschaft sowie institutionelle Reformen haben die Grundlage für den Beitritt zur EU im Jahr 2013 gelegt. Die finanzielle und ökonomische Krise in Europa hat aber auch die strukturellen Schwächen des Landes aufgezeigt: Kroatien besitzt noch keine ausgereifte nationale Innovationsstruktur. Als Stärken Kroatiens werden die günstige geographische Lage in Europa, die gut ausgebildete Bevölkerung sowie die Exportstärke in einigen forschungsintensiven Wirtschaftszweigen wie Pharmazie oder Produktion von elektrischer und elektronischer Ausrüstung gesehen. Ebenfalls positiv bewertet werden die innovativen Start-ups und bereits etablierte KMU. Dem stehen mit dem schlechten makroökonomischen Abschneiden Kroatiens in der europäischen Krise, den unzureichenden Rahmenbedingungen für Innovation durch einen nicht abgeschlossenen Reformprozesses sowie einer allgemein geringen Innovationsfähigkeit im Unternehmenssektor deutliche Schwächen gegenüber.

Es bieten sich verschiedene Ansatzpunkte zur Verbesserung des kroatischen Innovationssystems: bessere Nutzung der Möglichkeiten, die die EU-Mitgliedschaft bietet, besonders der Zugang zum europäischen Markt sowie die Möglichkeit, Investitionen in Wissenschaft, Technologie und Innovation aus Mitteln des europäischen Strukturfonds zu finanzieren. Wesentlich sind auch die Verbesserung der Regierungsführung und eine bessere Abstimmung der auf Innovation ausgerichteten Politikbereiche, möglichst auf höchster politischer Ebene, z. B. durch einen Innovationsrat unter dem Vorsitz des Premierministers.

	2009	2010	2011	2012	EU27 (2012)
GDP growth rate (%)	-6.9	-2.3	0.00	-2.00	-0.4
GERD (% of GDP)	0.85	0.75	0.76	0.75	2.06
GERD (euros per capita)	85.8	75.7	76.2	77	527.6
GBAORD – Total R&D appropriations (million euros)	312.446	324.603	334.206	318.465	90,690.521
R&D funded by business enterprise sector (% of GDP)	0.34	0.33	0.34	0.34	1.3
R&D performed by HEIs (% of GERD)	32.31	28.23	27.76	26.53	23.78
R&D performed by government sector (% of GERD)	27.16	27.53	27.38	27.48	12.37
R&D performed by business enterprise sector (% of GERD)	40.42	44.10	44.71	45.85	62.98
Human resources in science and technology (% of labour force)	31.5	32.17	30.9	32.3	42.9
Science and technology graduates (per 1000 inhabitants aged 20-29)	13.5	12.3	–	17.4	17.1
Tertiary education graduates (per 1000 population)	55.5	60.9	70.1	73.1	75.7
Employment in the knowledge intensive activities (% of total employment)	27.4	28.6	28.9	29.7	35.6
Employment in the knowledge intensive activities in the business sector (% of total employment)	9.3	9.9	10.3	10.4	13.8
Employment in high-technology sectors (high-tech manufacturing and knowledge-intensive services) (% of total employment)	2.6	2.7	2.7	2.7	3.8 (2011)
High and medium high manufacturing (% of total employment)	3.4	3.3	3.7	3.9	5.6 (2011)

Table: Basic indicators of research and innovation for Croatia; source: Eurostat

and environment, engineering and biotechnology (bio-economy) whose innovation relevance counts on rather well-developed national scientific resources.

Remarkable opportunity to address the needs in research, innovation and skills is provided to Croatia by the EU membership which gives Croatia access not only to the sizeable European market but, most importantly, to the EU Structural and Cohesion Funds with a fund of 1.5 billion euros annually in the period 2014-2020. However, the EU membership brings, on the other hand, serious challenges to the Croatian administration to absorb and manage the allocated EU funds and avoid to be a net contributor to the EU budget. Croatia is obligated to contribute approximately 520 million euros annually to the EU budget. It will certainly require not only substantial reforms in public administration in coming years but also acceleration of long-term neglected structural and fiscal reforms which remain a major impediment to innovation and growth.



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2004 – Accession to the EU and Its Impact on the Czech Republic's RTDI Landscape

Interview with Dr. Arnošt Marks, Deputy Vice Premier for Science, Research and Innovation in the Czech Republic.

ITB: You were involved in your country in R&D and have been able to follow the development of the R&D landscape closely: What is your conclusion in retrospect of the last 10 years since the EU enlargement? What is the impact on the RTDI landscape in your country?

Dr. Arnošt Marks: The Czech Republic's accession to the EU was and still is a great opportunity. The possibility to participate in the Framework Programmes for research and development and technologies and, in particular, in the programme Horizon 2020 opens up a space for scientific and technical cooperation. Indeed, the level of international cooperation is in a way a measure of quality of national research and it is also an important factor for improving it. As regards the programme Horizon 2020, it is the first EU programme in the negotiations in which we could participate. EU membership also brought an access to structural funds and an opportunity to significantly improve the research capacities in the Czech Republic.



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Deputy Vice Prime Minister
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Following rather modest interventions in favour of the R&D sector in the programming period 2004-2006, the structural fund resources increased considerably in the subsequent years. Research and development projects were supported in particular through two operational programmes (OP): the Operational Programme Research and Development for Innovations (OPR&DI) and the Operational Programme Enterprise and Innovations (OPEI). The total OPR&DI funds amounted to 2 billion euros from EU resources, and the state budget contributed about 230 million euros; as regards the OPEI, a total of 922 million euros from public resources (EU+CZ) were available and 859 million euros were generated from private resources. Programmes supported both the offer (OPR&DI) and

the demand (OPEI). The European funds were used to build research infrastructures (including six large ones with a value in excess of 50 million euros) and to commercialise and promote the R&D results. As regards the aid for small and medium enterprises, supported were the introduction of innovations in manufacturing and services, the strengthening of research and development capacities in businesses, as well as the preparations for the easier involvement of businesses in framework programme activities.

Hand in hand with the aforementioned investment support, human resources for the area of research and development partially increased. Those included both national human resources, as well as experts attracted from other countries, not only from the EU but also from other leading countries of global research and development. The European funds, in particular the funds from the Operational Programme Education for Competitiveness, were used also for this purpose. Other projects were also supported under this OP, for example, an aid for cooperation among researchers or networking. Approximately 3,500 new jobs were created in the area of R&D in the period 2007-2013, and the numbers of students who use the built infrastructures exceeded 5,000.

The programming period 2014-2020 has been prepared for over three years now. Activities supporting research and development are planned also for this programming period. The focus will move from the infrastructure building to the improvements of system functionalities and higher interconnection between the offer and demand and better links to other auxiliary tools. In line with the strategy Europe 2020 (thematic concentration), a considerable portion of European funds will be directed to the area of research and development. The portion will be even higher compared to the preceding period, although the total volume of European funds for the Czech Republic decreased by about one fourth. Again, the research, development and innovation will be supported mainly through two operational programmes: the Operational Programme Research, Development and Education (OPRDE) and the Operational Programme Enterprise and Innovations for Competitiveness (OPEIC). Both operational programmes will now be discussed with the European Commission, and the expected result should be the possibility to support this area with 3.1 billion euros.

ITB: How do you assess the development of your country with regard to the cooperation in research and innovation with the old and new EU Member States?

Dr. Arnošt Marks: Undoubtedly, research centres in the Czech Republic are important partners for European cooperation. They cooperate under framework programmes with the most important research institutions in Europe. We have quite good participation in joint technological initiatives; we are involved in pan-European infrastructural projects, such as the Jules Horowitz Reactor, the Extreme Light Infrastructure, etc. Nevertheless, differences in the general level of the old and new Member States still exist, and we should strive to diminish those differences. That is why we are pleased with special tools, such as ERA chairs, teaming and twinning for excellence (see page 46), which were created to improve participation of new Member States, as well as with the new initiative “policy support facility”. It is too early to evaluate their efficiency.

ITB: What kind of developments did you observe during your activities, what were/are the biggest challenges, where do you expect the best opportunities and the greatest potential for your country?

Dr. Arnošt Marks: I can see two major challenges for the Czech Republic. An improvement of the overall participation in the European research programmes is one of the challenges. It is not enough just to cooperate with the best European institutions. I consider the generally low participation of Czech entities to be an issue, which is not addressed in a satisfactory way; it also leads to the generally low participation in the approved projects. We should respond to it, for example, through more intensive support offered to the applicants for European projects who successfully passed the evaluation, but did not score high enough to receive a European grant.

Achieving synergies between the use of national financial funds and European financial funds is another major challenge. Not only Horizon 2020, but mainly the structural funds, a considerable part of which is or should be designed for the RDI area. I believe it is crucial for the future period to find an optimal solution. Sustainability of major projects is a specific challenge. Evidently, European

funds contributed to their building, but those funds cannot be used to cover their operating expenditure. A system of further financing should be set up, not only for the mandatory sustainability period (five years), but also afterwards. The functioning of the built infrastructures will still be partially paid for from public sources; however, the research centres themselves should generate a considerable percentage of their income through their activities. This should be done respecting the new framework for the state aid.

ITB: From your point of view, how do you see the integration process of the EU-13 countries since 2004, particularly in relation to research and innovation? At what level do you identify some progress, where is pent-up demand in contrast?

Dr. Arnošt Marks: I cannot speak on behalf of all new Member States, but in general I can say that great opportunities have opened up for us, and it is up to each Member State to use them. However, there is a problem of different starting lines for different new Member States. I can only say that the Czech Republic's starting position was not bad, but there are still big differences between us and the other Member States. On the other hand, achievements towards a change are great. We have invested in new, modern research capacities. We have created an opportunity for Czech scientists to take part in the leading European projects. We have supported their mobility and international cooperation. I expect the other new Member States did the same with respect to their particular situations.

ITB: How do you see the role of the Danube Region within the EU and how do you assess the cooperation of the Danube Region States, particularly with regard to your neighbouring countries?

Dr. Arnošt Marks: The Danube Strategy is an example of a regionally oriented programme. It is used by the Member States that are affected by this issue. Similarly, a programme focusing on research on the Baltic Sea was prepared. I believe the implementation of problem-oriented research initiatives is the correct way in addition to the basic and broadly defined framework programmes, because such research initiatives support in particular the regional cooperation, i.e. the cooperation of entities and people that are relatively close to each other and that

share common interests. The Czech Republic as such is not a Danube-region country, but the Czech Republic takes part in the programme, coordinating the area of sustainable energy.

ITB: What will be the important topics in research and innovation for the EU-13 countries and the cooperation in the European context in the future in general and for your country?

Dr. Arnošt Marks: I believe the common themes for all new Member States would include a higher level of internationalisation and involvement in European structures and networks, as well as adequate conditions for them. Of course, it is a sensitive topic, because some states can consider this issue as inadequately preferential treatment. Nevertheless, the participation of new Member States in European structures is not satisfactory, and a suitable solution should be looked for. It should be stressed, however, that the solution should be looked for not only on the European level but also “at home”. And this is fully true for our national environment. The most important topic for this area is to achieve through targeted national measures the research sphere’s interest in EU programmes (participation in conferences, partnership exchange, establishing cooperation with foreign partners and institutions) and in the financing from EU funds. And I can add this is not the issue of scientific institutions only; it would be inappropriate simplification. Many activities are designed to support cooperation between the industrial and research sectors, to support innovations. Internationalisation also includes attracting foreign workers to the newly built research centres. And, as I would stress again, the right use of structural funds.

Die Fragen an Dr. Arnošt Marks stellten

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Operational Programme Enterprise and Innovations

→ <http://www.czechinvest.org/en/opei>

Barrieren überwinden – gelebte Vergrößerung

Bulgarian-Romanian Interuniversity Europe Center: Learning to Overcome Borders

The Bulgarian-Romanian Interuniversity Europe Center (BRIE) was established within a project of the Stability Pact for South Eastern Europe on the grounds of the German Rector’s Conference initiative in 2000. The mission of BRIE is to reconsider legacies of the past in the region and to contribute to neighbour relations, based on culture of cooperation.

Therefore, BRIE has been constructed with a three-pillar identity:

- As a trilateral partnership (Bulgaria-Romania-Germany) BRIE is a follower of the Bologna process and belongs to the European educational and research area;
- BRIE contributes to the education of a new generation of professionals, committed to a united Europe;
- BRIE is a socially responsible network and implements educational and research projects on the grounds of regional, interregional, transnational and cross-border cooperation.



Signing of the Agreement for Cooperation and Mutual Assistance regarding the Development of BRIE between the Government of Romania and the Government of the Republic of Bulgaria by Solomon Passi, foreign minister of Bulgaria, and Mihai Ungureanu, foreign minister of Romania; photo: Mimi Kornazheva

The host cities of BRIE, Ruse and Giurgiu, are perfectly located to breathe today’s spirit of togetherness in Europe. Mirroring each other on the Bulgarian and the Romanian banks of the Danube and connected by a bridge, they have their direct destination to ten European countries along the river. Since 2007 the border line

has been fading away, thus facilitating the practices of cooperation. The place is also a vivacious check point of east-west waterways and north-south continental routes. Here VII and IX pan-European transport corridors meet to connect Western Europe with the Black Sea region, and Northern Europe with the Aegean Sea and Turkey. It is by this peculiar location, that the identity and the mission of BRIE have been shaped, i.e. to add value to the political, societal and economic stability of Europe as a post-national polity under construction.

BRIE brings together the University of Ruse, the Bucharest Academy of Economic Studies and German partner universities to provide two four-semester master programmes for international students: European Studies and Regional Cooperation as well as European Studies and Public Administration. Regional cooperation is a multi- and interdisciplinary field, which has become increasingly important after the fall of the Berlin wall. The processes of societal change presuppose adaptation to new relations in Europe, which have never been experienced before. The Public Administration on the other hand, is facing demands for reforms due to the multi-level governance in the EU and the globalization. BRIE responds to these challenges with relevant modularized curricula and extracurricular activities, which develop the competences of the students within the standards of the Bologna declaration. The first, second and the final semester are organized by BRIE-Ruse and BRIE-Giurgiu. The third semester takes place either at the European University Viadrina at the German-Polish border or the Chemnitz University of Technology at the German-Czech border and the University of Regensburg on the Danube. Regular Summer School at EU institutions in Brussels and Strasbourg provide practice oriented competences. Since 2013 BRIE students participate in the International Youth Academy *Is My Europe the Same as Yours* for Bulgarian, Romanian and Greek students, organized by the Economic Policy Institute and the Hanns Seidel



Visit at the European parliament within BRIE Summer School in European integration;
 photo: Mimi Kornazheva

Foundation in the Bulgarian-Greek border region. Since 2014 BRIE students join the Danube Summer School, which is organized by the European Danube Academy in Ulm/Neu Ulm, Germany. The master programmes have been accredited by German, Bulgarian and Romanian agencies. More than 200 students from 14

states belong to BRIE and to the BRIE Alumni Club: Albania, Armenia, Azerbaijan, Bosnia and Herzegovina, Bulgaria, the former Yugoslav Republic of Macedonia, Georgia, Kosovo, Moldova, Mongolia, Romania, the Russian Federation, Serbia and Turkey.

A milestone for the successful development of BRIE has been the signing of 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 in 2005. The Statute of BRIE, which is a part of the Agreement, defines rights

and obligations, as well as a management structure, which guarantees quality assurance, accountability and implementation of strategic decisions:

- BRIE Transnational Advisory Body (Beirat), chaired by Prof. Rita Süßmuth, president of the German Bundestag from 1988 to 1998. It is represented by key stakeholders of BRIE, such as regional governors, mayors, etc. The sessions of the Beirat, within which the strategic development of BRIE is approved, take place either in Bucharest or in Ruse.
- BRIE Transnational Board, involving the Rectors of the University of Ruse and of the Academy of Economic Studies, a representative of the German Rectors' Conference, as well as the directors of the two BRIE centers. The Board makes decisions on the principle of rotation, each Rector being the host of the session.
- BRIE Transnational Commission as an operational management team, presided by BRIE directors and involving coordinators of BRIE activities.

Since 2007 (when Bulgaria and Romania became EU Member States) BRIE has been implementing EU financed projects, related to the cross-border region and its changing profile. The EU-PHARE educational project BRIDGE (Bulgarian-Romanian Initiative for Democracy as a Guard-Post of Europe) was focused on exploration of educational needs of border police servants and provision of joint training for 18 Bulgarian and 18 Romanian border guards in 2008. The content of the training has been related to European integration, cross-border cooperation, neighbour language skills and to development of competences with regard to the prospective accession of the two countries to the Schengen zone.

EU research project BRAINS (Bulgarian-Romanian Area Identities: Neighbourhood Study) established a cross-border cooperation framework, based on a common interest for the development of an integrated identity of the whole border region, from a bottom-up scientific perspective and within the concept of RO-BUL-NA (Romanian-Bulgarian Neighbourhood Area). The 2011-2013 project united efforts of Bulgarian, Romanian and German researchers. Opinions of 4,000 Bulgarian and Romanian respondents on the potential construction of a cross-border political, economic and cultural regional identity have been investigated. Best practices at the German-Polish border and the German-Czech border have been studied to provide benchmarking reference points for strengthening cross-border cooperation at the Bulgarian-Romanian border. The project takes into account the fact, that in the EU-25 cross-border cooperation is being gradually replaced by integration, a holistic view over the territory and its integrated governance, but in the EU-27 the Romanian-Bulgarian region is rather divided than united and represents a challenge for the achievement of the goals of European territorial cooperation. The cross-border region has been labeled poor and lagging behind. This label affects the identities of the people, and deprives them of expectations for a positive change. It hides strengths and is contra-productive, when it comes to motivation for transformation. Catalyzing change in such an identity means to assure drivers of human effort needed to overcome the current negative socio-economic condition. Therefore, the project re-negotiates the identity of the local people. It views the European Union as an environment for construction and positioning of new identities, including the identity of the cross-borderer as the identity of the citizen belonging to a space, where barriers have been removed and where the lands beyond the

border are not perceived as foreign any more. For this particular space the project research team has proposed the name of RO-BUL-NA as a core of the identity of the cross-borderer and of the regional brand. BRAINS is an innovative applied study of the Romanian-Bulgarian cross-border region, which identified its salient assets and provided research findings, which can be considered a source of optimism: No borderers can be said to exist in the Bulgarian-Romanian cross-border region, but there is a potential for the construction of a cross-border identity. This conclusion opens windows of opportunities for cross-border identity policy as a milestone for strengthening the multi-level governance of RO-BUL-NA and raising its profile in Europe and worldwide.

Through one of those windows BRIE academics and students will continue learning to overcome borders.



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Weitere Informationen

Bulgarian-Romanian Interuniversity Europe Center (BRIE)

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

Stability Pact for South Eastern Europe

→ <http://www.stabilitypact.org/>

Das PHARE-Programm und die Erweiterung der Europäischen Union

→ http://www.europarl.europa.eu/enlargement/briefings/33a1_de.htm#resume

BRIDGE (Bulgarian-Romanian Initiative for Democracy as a Guard-Post of Europe)

→ <http://brie.uni-ruse.bg/en/pages/about-brie/projects/bridge.php>

BRAINS (Bulgarian-Romanian Area Identities: Neighbourhood Study)

→ <http://www.brie.ase.ro/BRAINS/en/default.html>

DARIAH – Networking for the European Research Area

DARIAH, the Digital Research Infrastructure for the Arts and Humanities, is committed to enhancing and supporting digitally-enabled research in the arts and humanities across Europe. One of DARIAH's underlying principles is to help European countries establish or strengthen their own arts and humanities research infrastructures. For countries that have joined the EU since 2004, this is particularly crucial. This article explores how through its Members, Cooperating Partners and affiliated projects, DARIAH helps to facilitate the sharing of digital arts and humanities knowledge throughout the European Research Area and beyond.

DARIAH integrates national digital arts and humanities initiatives in Europe and operates a platform to enable trans-national research. It offers a portfolio of services and activities centred around research communities and develops a research infrastructure for sharing and sustaining digital arts and humanities knowledge.

By bringing together national activities from our Member countries, DARIAH will be able to offer a broad spectrum of services including training initiatives, such as summer schools and trans-national curricula, a knowledge repository with standards and good practices for digital asset management, and guidance on repository certification. Platforms for data sharing and digital publishing will be offered alongside technical systems for persistent identification, authentication and long-term preservation.

A short history of DARIAH

DARIAH emerged as a Research Infrastructure on the ESFRI Roadmap in 2006. ESFRI, the European Strategy Forum on Research Infrastructures, is a “strategic instrument to develop the scientific integration of Europe and to strengthen its international outreach”. A key tool in this process is the ESFRI Roadmap. Developed iteratively, the ESFRI Roadmap identifies “new Research Infrastructures (RI) of pan-European interest corresponding to the long term needs of the European research communities, covering all scientific areas, regardless of possible location”. The first Roadmap was published in 2006, followed by updates in 2008 and 2010. In September 2014, ESFRI launched their third Roadmap update for

2015-2016. The current focus of ESFRI's work is to help the research infrastructures on the roadmap “move towards implementation”.

DARIAH's appearance on the ESFRI Roadmap in 2006 helped to secure funding from the European Commission's 7th Framework Programme (FP7), for the preparatory phase project, Preparing DARIAH (2008-2011). Led by Data Archiving and Networked Services, an Institute of the Royal Netherlands Academy of Arts and Sciences and the Netherlands Organisation for Scientific Research (NWO), Preparing DARIAH had 15 partners, including institutions from Croatia (Ruđer Bošković Institute), Cyprus (Cyprus College) and Slovenia (Institute of Contemporary History), which joined the European Union since 2004.

The aim of the preparatory phase project was to lay the groundwork for establishing a sustainable research infrastructure for digital arts and humanities research across Europe. Issues including the legal, organisational, financial, technical, human and social aspects of establishing a research infrastructure were explored.

One of the key outcomes of the preparatory phase project was to establish a consortium of countries that were committed to the construction and operation of DARIAH. By the end of the preparatory phase project in February 2011, six countries (Croatia, France, Germany, Greece, Ireland and the Netherlands) had signed a Memorandum of Understanding (MoU), formally expressing their willingness to establish a legal entity for DARIAH. Of these countries, Croatia, at that time was not yet a Member of the European Union. In addition, the University of Vilnius, Lithuania, who joined the European Union in 2004, signed a MoU formally expressing its wish to become a Cooperating Partner in DARIAH.

Following the successful completion of the DARIAH preparatory phase project, DARIAH moved into the transition phase. A key goal of the transition phase was to establish DARIAH as a European legal entity, the DARIAH-ERIC.

Towards a sustainable infrastructure for European arts and humanities research

ERIC, European Research Infrastructure Consortium, is a specific European legal framework for research infrastructures, such as DARIAH, involving several

countries. It is “designed to facilitate the joint establishment and operation of research infrastructures of European interest”. It is a relatively new legal framework, which formally came into force on 28 August 2009. The first ERIC to be established was the Social Science ERIC, SHARE (Survey of Health, Ageing and Retirement in Europe) in March 2011. Since then, a total of nine ERICs have been established.

On 15 August 2014, the DARIAH-ERIC was established with 15 countries as Founding Members (see infobox). The establishment of this European legal entity for DARIAH is an important first step in facilitating the long-term sustainability of our work for the European arts and humanities research community and beyond.

DARIAH and the “largest enlargement so far”

May 2004 marked an important milestone in the history of the European Union, when 10 countries (Cyprus, Czech Republic, Estonia, Hungary, Latvia, Lithuania, Malta, Poland, Slovakia and Slovenia) became European Union Member States, in the “largest enlargement so far”. Three years later, Bulgaria and Romania joined, with Croatia being the newest Member State joining on 1 July 2013.

One of the underlying principles of DARIAH is to help European countries establish or strengthen their own arts and humanities research infrastructures. For the newest countries in the EU, this is of tremendous importance.

DARIAH-ERIC Founding Members and coordinating institutions:

Austria (Austrian Academy of Sciences, Institute for Corpus Linguistics and Text Technology), Belgium (Ghent University, Ghent Center for Digital Humanities), Croatia (Institute of Ethnology and Folklore Research), Cyprus (Cyprus University of Technology), Denmark (Aarhus University, DIGHUMLAB), France (Centre national de la recherche scientifique, Huma-Num), Germany (University of Göttingen, Göttingen State and University Library), Greece (Academy of Athens), Ireland (National University of Ireland, Maynooth), Italy (National Research Council), Luxembourg (Centre Virtuel de la Connaissance sur l'Europe), Malta (Malta Libraries Council), the Netherlands (Royal Netherlands Academy of Arts and Sciences, Data Archiving and Networked Services), Serbia (Belgrade Centre for Digital Humanities) and Slovenia (Institute of Contemporary History).

Case study: DARIAH in Slovenia, Dr. Jurij Hadalin, Institute of Contemporary History

The Slovenian branch of DARIAH (DARIAH-SI) established itself around the Institute of Contemporary History and the Research Centre of the Slovenian Academy of Sciences and Arts, which are among the leading institutions for arts and humanities research infrastructures in Slovenia. The consortium brings together expertise and content from 19 research institutes in the wider arts and humanities in Slovenia including curation of cultural heritage in archives, museums and libraries.

As the digital humanities community in Slovenia is relatively small and unevenly developed, DARIAH-SI works closely with other ESFRI research infrastructures, such as CESSDA (Consortium of European Social Science Data Archives) and CLARIN (Common Language Resources and Technology Infrastructure) to widen progress in this area. In addition, humanities researchers who are “less digitally mature” are a particular focus for DARIAH-SI’s activities.

One of the key resources for digital humanities in Slovenia is the DARIAH-SI web portal (available in Slovenian only). This portal not only provides a reference point for digital humanities scholars in Slovenia, but also access to Slovenian digital humanities collections. Providing access to such collections via the DARIAH-SI web portal, will not only encourage the use of at least minimal standards for these collections, it will also enable a broader audience to use them in a simple and user-friendly way. In addition, to increase the amount of digital content accessible via the DARIAH-SI portal, a next important step will be to connect and to enrich the content using new tools and the expertise within the network. An upgrade of the portal, including a migration to a new platform, is expected in early 2015.

Training and knowledge exchange is essential to strengthening the digital humanities community in Slovenia and therefore is a core component of DARIAH activities in Slovenia. For example, *Markup language XML-TEI in the humanities: an introductory workshop on digital humanities* was held in October 2014 and attracted 40 participants from across Slovenia. The workshop provided an introduction to XML and TEI for humanists, using a range of examples including

primary sources for historical research, manuscripts, biographical data, born-digital content as well as linguistically annotated corpora and dictionaries. It complements the earlier series of workshops on copyright in the digital age as part of the DARIAH-SI initiative. Further workshops, including one on open data, are being planned for early 2015.

In 2011, the Slovenian government highlighted the digital humanities as one of 10 priority areas for Research Infrastructure Development (Research Infrastructures Roadmap 2011-2020). DARIAH has been selected as one of 14 infrastructures. Digital humanities and social sciences were also presented as one of the priorities in the 2011 Resolution on Research and Innovation Strategy of Slovenia 2011-2020. The Slovenian involvement in DARIAH-EU already resulted in boosting digital humanities related activities at the national level, including upgrading the digital expertise of humanities researchers and facilitating access to best practices and tools at the European level. A key goal is to enable a long-term stable budget at national level. Following the formal establishment of the DARIAH-ERIC in August 2014, an official launch of DARIAH-SI in Ljubljana is being planned for Spring 2015. A more in-depth overview of the Slovenian digital humanities landscape was published on the H-Soz-Kult webpage in November 2014.

DARIAH in Croatia

Despite being the newest Member State in the European Union, the Croatian participation in DARIAH also goes back to the preparatory phase project, in which the Ruđer Bošković Institute was a partner. Croatia was also one of the first countries to sign the DARIAH MoU in December 2010 and in August 2014 became one of the 15 Founding Members of the DARIAH-ERIC. In preparation for the establishment of the DARIAH-ERIC in November 2013, the Croatian Ministry of Science, Education and Sports appointed the Institute of Ethnology and Folklore Research as the National Coordinating Institution for DARIAH in Croatia. The

task of the National Coordinating Institution is to reach out to the key institutions in the humanities and cultural heritage community in Croatia, to help strengthen DARIAH activities in Croatia nationally. Already, contact has been established with the Faculty of Humanities and Social Sciences, University of Zagreb, the University Computing Centre Srce, the National and University Library in Zagreb, the Croatian State Archives, the Faculty of Humanities and Social Sciences, the University of Rijeka, Institute for Anthropological Research and the Croatian Academy of Sciences and Arts.

Newest DARIAH Members: Cyprus and Malta



The Hack4LT event, Lithuania; photo: Darius Verseckas

As the final steps in the process of establishing the European legal entity were being put in place, requests were received first from colleagues in Cyprus and subsequently in Malta, asking if it was still possible to become Founding Members of DARIAH. Within a matter of weeks, the formal Letters of Commitment from the Ministries in Cyprus and Malta had been received. Cyprus has particular expertise in Digital Heritage, for example, the Digital Heritage Research Lab at the Cyprus University of Technology, which is the National Coordinating Institution for Cyprus. The International Conference on Cultural Heritage, EuroMed 2014, was also hosted in Cyprus in November 2014. For Malta, the Malta Libraries Council is the National Coordinating Institution with particular expertise in Digital Libraries, Big Data and Digital Cultural Heritage as well as a growing interest in citizen science in the humanities and arts.

Sharing digital arts and humanities knowledge: Lithuania

Following their initial MoU signature in May 2011, the University of Vilnius has continued to actively participate in DARIAH. For example, in 2013, Vilnius University organised the first cultural heritage and digital humanities hackathon in Lithuania. The event Hack4LT, which brought together 20 young software developers to work with humanities and social sciences data sets, was inspired

by DARIAH and Europeana. DIGHUMLAB-DK, who coordinates DARIAH activities in Denmark, worked closely together with DARIAH colleagues from Vilnius University to realise the workshop. The DARIAH infrastructure therefore helps to facilitate the sharing of experiences in using digital methods and tools. Prof. Erik Champion from Aarhus University, DIGHUMLAB (now: Curtin University, Australia) who led DARIAH's Virtual Competency Centre *Research and Education* shared his experience with DARIAH colleagues in Vilnius.

Widening participation: a network of research communities

Moving beyond DARIAH's Member countries, DARIAH works also closely with research communities via an increasing network of affiliated projects. For example, with archaeologists via ARIADNE (Advanced Research Infrastructure for Archaeological Data Networking in Europe), medieval and modern historians via CENDARI (Collaborative European Digital Archive Infrastructure) and Holocaust researchers via EHRI (European Holocaust Research Infrastructure).

Within DARIAH's affiliated projects, there are partners in many of the countries who joined the European Union since 2004. For example, EHRI has project partners in the Czech Republic (Jewish Museum in Prague and Terezin Memorial), Hungary (Holocaust Memorial Center) and Poland (Emanuel Ringelblum Jewish Historical Institute). The EHRI Fellowships programme is especially aimed at candidates from Central and Eastern Europe. Since 2010 EHRI has enabled researchers in Bulgaria, Hungary, Poland, Romania and Slovakia to spend some four weeks in EHRI partner institutions as research fellows. Finally, as part of EHRI's efforts to widen participation in Eastern Europe, in May 2014, the International EHRI Conference *Holocaust Documentation in Eastern Europe* was held in Krakow, Poland.

Similarly, ARIADNE has a wide partner base from enlargement countries including Bulgaria (National Institute of Archaeology with Museum, Bulgarian Academy of Sciences), Cyprus (Cyprus Institute), Czech Republic (Institute of Archaeology of the Academy of Sciences of the Czech Republic), Hungary (Hungarian National

Museum/National Heritage Protection Centre), Romania (Asociatia Arheo Vest) and Slovenia (Scientific Research Centre of the Slovenian Academy of Sciences and Arts).

The CENDARI project organises an annual CENDARI Visiting Research Fellowships programme, which is intended to support and stimulate historical research in the two pilot areas of medieval European culture and the First World War. The fellowships are particularly designed to support researchers from countries without equivalent facilities as well as early career scholars with limited access to research infrastructures. For example, the CENDARI Visiting Research Fellows for 2014, have enabled researchers in Croatia, Estonia and Slovenia to undertake a research fellowship in one of the CENDARI Hosting Institutions.

International collaboration – looking towards the future

From the countries that have joined the European Union since 2004, four countries (Croatia, Cyprus, Malta and Slovenia) are DARIAH Founding Members. Additionally, the University of Vilnius is actively pursuing the possibility of Lithuania joining DARIAH. Discussions with Poland and the Czech Republic regarding their membership of DARIAH are starting to take shape. In Romania, the Transilvania Digital Humanities Centre (DigiHUBB) was launched at Babeş-Bolyai University in Cluj-Napoca in Summer 2014. Perhaps, an important first step towards Romania's participation in DARIAH.

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Download

ESFRI Roadmap 2006

→ http://ec.europa.eu/research/infrastructures/pdf/esfri/esfri_roadmap/roadmap_2006/esfri_roadmap_2006_en.pdf

ESFRI Roadmap 2008 update

→ http://ec.europa.eu/research/infrastructures/pdf/esfri/esfri_roadmap/roadmap_2008/esfri_roadmap_update_2008.pdf

ESFRI Roadmap 2010 update

→ http://ec.europa.eu/research/infrastructures/pdf/esfri-strategy_report_and_roadmap.pdf

ESFRI Roadmap 2015/2016 update

→ http://ec.europa.eu/research/infrastructures/pdf/20140909-143726_September%202009_Launch_Call_Roadmap_2016.pdf

Government of the Republic of Slovenia: Research Infrastructures Roadmap 2011-2020

→ <http://www.arhiv.mvzt.gov.si/fileadmin/mvzt.gov.si/pageuploads/pdf/znanost/RISS/SIR.pdf>

Resolution on Research and Innovation Strategy of Slovenia 2011-2020

→ http://www.arhiv.mvzt.gov.si/fileadmin/mvzt.gov.si/pageuploads/pdf/odnosi_z_javnostmi/01.06.2011_dalje/01.06._RISSdz_ENG.pdf

Weitere Informationen

DARIAH

→ <http://dariah.eu>

DARIAH Founding Members

→ <http://dariah.eu/about/our-partners.html>

European Strategy Forum on Research Infrastructures (ESFRI)

→ http://ec.europa.eu/research/infrastructures/index_en.cfm?pg=esfri

European Research Infrastructure Consortium (ERIC)

→ http://ec.europa.eu/research/infrastructures/index_en.cfm?pg=eric

The Slovenian Digital Humanities Landscape – A Brief Overview by Jurij Hadalin

→ <http://www.hsozkult.de/searching/id/diskussionen-2458?title=the-slovenian-digital-humanities-landscape-a-brief-overview?q=slovenia&sort=&fq=&total=244&recno=3&subType=debate>

Hack4LT

→ <http://www.kf.vu.lt/en/hack4lt>

DARIAH Affiliated projects

→ <http://dariah.eu/about/collaboration.html>

ARIADNE

→ <http://www.ariadne-infrastructure.eu/>

CENDARI

→ <http://www.cendari.eu/>

CHARISMA

→ <http://www.charismaproject.eu/>

DASISH

→ <http://dasish.eu/>

DiXIT

→ <http://dixit.uni-koeln.de/home.html>

EHRI

→ <http://www.ehri-project.eu/>

NeDIMAH

→ <http://www.nedimah.eu/>

The European Institute of Innovation and Technology: Making Innovation Happen

Europe is not short of leading businesses, research centres and universities, but when we look at the global innovation performance presented in the European Commission's Innovation Scoreboard, we lag behind South Korea, the United States and Japan.

There are also significant differences between EU Member States, with Sweden, Denmark, Germany and Finland being strong leaders, performing three times better than some other Member States. Why? The answer: the fragmentation of the European innovation landscape. And that is where the European Institute of Innovation and Technology (EIT) comes in.

The EIT is an EU body set up in 2008 with the unique objective of overcoming this fragmentation to boost the EU and its 28 Member States; innovation capacity and competitiveness. Today, as the economic recovery from the 2008 crisis remains fragile, this goal is critical to bringing prosperity to EU citizens.

Innovation through integration

What the EIT does is bridge the gap between ideas and business creation. We connect European centres of excellence to create effective European innovation networks.

By creating an unprecedented level of cooperation among business, research and higher education, we boost the innovation process from idea to product, from student to entrepreneur and from lab to market. For innovation to thrive, a real change of mind-set is needed. That's why we put talented individuals from all sectors and backgrounds at the centre of innovation.

We bring together key actors involved in innovation within structured partnerships: our Knowledge and Innovation Communities (KICs). The EIT's first three KICs were designated in December 2009: Climate-KIC (climate change adaptation and

mitigation), EIT ICT Labs (future and information and communication society) and KIC InnoEnergy (sustainable energy).

KICs are independent legal entities, based upon a contractual framework linking together highly excellent partners committed to working together to solve major European innovation challenges. When the KICs were designated, they brought together 72 partners. Today they are bringing together more than 500 partners across Europe, making it one of the most successful public private partnership projects within the EU.

Our smart investment strategy combines 25 % investment from the EIT with 75 % investment from the KIC partnerships. This leveraging and pooling of resources is a first for an EU body and ensures the buy-in and commitment of KIC and their partners to the long-term achievement of the EIT's mission and goals right from the start. The EIT's smart funding strategy is closely aligned with the EIT's objective of producing long-lasting impact. Indeed, we also expect KICs to gradually become sustainable in the long-term.

The KICs' portfolios of innovation projects, education curricula and entrepreneurship programs are managed according to business logic and follow a bottom-up approach. They bring diverse and complementary teams from the variety of partners together into a number of physical locations (co-location centres = innovation hubs) – where university researchers and teachers work together with R&D staff and business planning and marketing managers from both large corporations, SMEs and entrepreneurs and start-ups.

German connections and Climate-KIC's Green Garage

Each of the existing KICs is working closely together with partners across Germany: Climate-KIC's German co-location centre is based in Berlin and they work very closely with the region of Hessen; EIT ICT Labs' co-location centre is also in Berlin and they have established a satellite site in Munich; and KIC InnoEnergy's German activities are managed from Karlsruhe with close cooperation with partners in Stuttgart.

One of the EIT's Community activities in Berlin is the Green Garage where Climate-KIC Germany helps start-ups to turn the climate challenge to a business opportunity. This incubation facility is the perfect starting point for hands-on, climate-driven, innovative and business-minded ventures and is the only dedicated cleantech incubator in Germany. What happens in a creative and innovative environment such as this is well illustrated by two start-ups who met during their time in the Green Garage and decided to join forces to improve the charging infrastructure. PlugSurfing, Europe's leading app for e-cars charging and biggest community of electric vehicle drivers, and Ebee Smart Technologies, a technology company specializing in charging infrastructure and charging infrastructure components, teamed up and integrated their services. Ebee installed two more charging stations in Berlin and those can be accessed by PlugSurfing users.

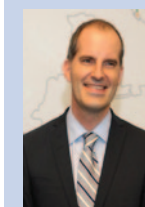
Additionally to the start-up cooperation PlugSurfing also managed to partner with E.ON, one of the largest energy utilities in Germany. Adding to the 1,800 charging stations already available on a pay-as-you-go basis via the PlugSurfing app and in conjunction with Intercharge, the addition of E.ON as a partner to PlugSurfing opens up the charging corridor along the A9, one of Germany's main motorways.

Horizon 2020 and beyond

The EIT is an integral part of the much larger EU programme for research and innovation called Horizon 2020. Within this programme, the EIT has been allocated more than 2.7 billion euros to achieve its goals and to further develop our activities between 2014 and 2020, which is almost an 800 % increase since our first funding period (2008-2013).

Over the next seven years, we will consolidate and further develop our three existing KICs; launch five new KICs by 2018 with the first two selected among a number of competing partnership consortia at the end of 2014: one for healthy living and active ageing and one for raw materials. In addition to these two new KICs, we will be selecting two new KICs in 2016 (food for future: sustainable supply chain from resources to consumers and added-value manufacturing) and one in 2018 (urban mobility). Another goal is to increase the scope of our outreach activities ensuring

wider participation in all of our activities, in particular through the EIT Regional Innovation Scheme (EIT RIS). We are excited about this next growth phase and are very much looking forward to cooperating with new partners from the EU Member States.



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Weitere Informationen

European Institute of Innovation and Technology

→ <http://www.eit.europa.eu>

Climate-KIC

→ <http://www.climate-kic.org/>

EIT ICT Labs

→ <http://www.eitictlabs.eu/>

KIC InnoEnergy

→ <http://www.kic-innoenergy.com/>

Vorlieben für die Region? DAAD-Stipendien in den EU-Beitrittsstaaten seit 2004

Die Osterweiterung der EU begann 2004 mit der Aufnahme Polens, Tschechiens, der Slowakei, Ungarns, Sloweniens und den drei baltischen Staaten, 2007 folgten Bulgarien und Rumänien. Im Juli 2013 trat als vorläufig letztes neues Mitglied Kroatien der Gemeinschaft bei. Diese politische Entwicklung hatte große Auswirkungen auf die Hochschulbeziehungen zwischen Deutschland und der Region.

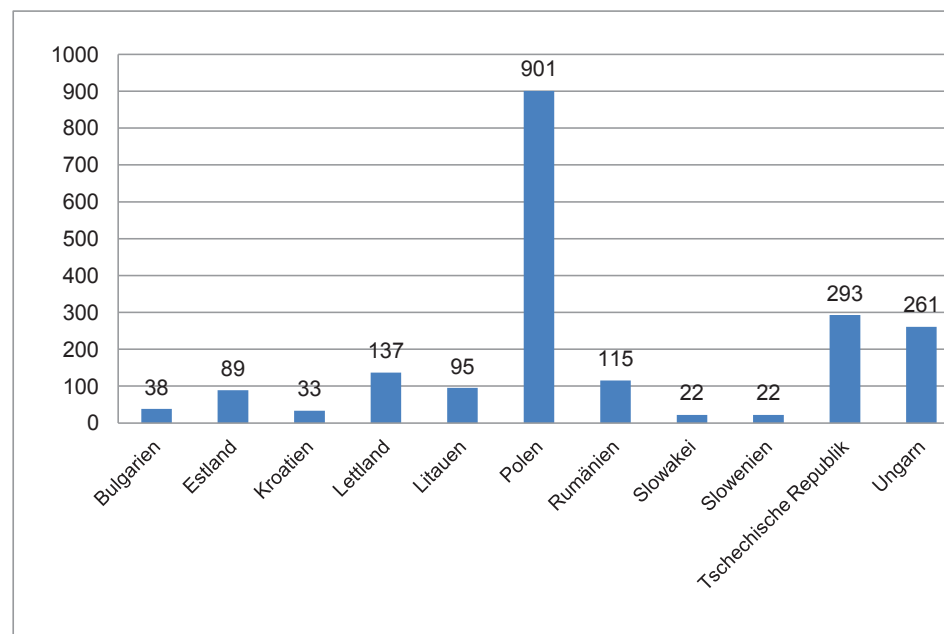
Der Austausch mit den neuen Mitgliedsländern hat sich in erheblichem Maße intensiviert, so dass allein die Zahl der Kooperationen zwischen deutschen und polnischen Hochschulen heute bei gut 1.300 liegt, Tendenz weiter steigend (HRK-Hochschulkompass). Der DAAD hat mit seinen Programmen – darunter auch neue Programme wie das vom BMBF finanzierte Go-East-Programm – diese Annäherung wesentlich unterstützt. Daneben tragen aber auch die EU-Programme (v. a. Erasmus) in hohem Maße dazu bei, dass die neuen EU-Länder als Partner stärker in den Fokus der deutschen Hochschulen und ihrer Studierenden, Graduierten und Wissenschaftler gelangt sind.

Ein Blick in unsere Gefördertenstatistik: Im Jahr 2013 studierten oder forschten 2.704 Deutsche mit Unterstützung des DAAD an Hochschulen in



Um deutsche Studierende zu motivieren, Ostmittel- und Südosteuropa und die noch weiter östlich liegenden Länder der GUS kennen zu lernen, startete der DAAD im Jahr 2002 die Initiative „Go East“ aus BMBF-Mitteln. Die Initiative bietet Stipendien zur Teilnahme an einer Sommer- oder Winterschule sowie Semesterstipendien im Rahmen von Hochschulkooperationen. Spitzenreiter unter den Zielländern war seit 2004 für knapp die Hälfte der Go-East-Stipendiaten Polen. Seit 2010 trat in den neuen EU-Mitgliedsländern Erasmus an die Stelle der Go-East-Semesterstipendien. So konnte das sehr gut nachgefragte Sommerschulprogramm ausgebaut werden, welches inzwischen die Hälfte des Go-East-Budgets ausmacht (2013: 52 %, 600.000 Euro, davon für Sommerschulen in neuen EU-Ländern: 100.000 Euro).

den östlichen EU-Nachbarländern. Auch wenn wir immer noch ein Ungleichgewicht im akademischen Austausch beobachten – es gehen weniger Deutsche mit DAAD-Förderung in die Region als aus ihr nach Deutschland kommen (2013: 5.681) – lässt sich doch eindeutig ein steigendes Interesse der deutschen Studierenden, Graduierten und Wissenschaftler an den neuen EU-Ländern erkennen. Ein besonders positives Beispiel ist Ungarn: Der DAAD verzeichnete im Austausch mit Ungarn 2013 insgesamt 1.180 Geförderte, davon 709 Ungarn und 471 Deutsche. Berücksichtigt man, dass zudem ca. 1.200 Deutsche als Selbstzahler an ungarischen Universitäten Medizin, Zahnmedizin oder Pharmazie studieren und ca. 2.100 Ungarn umgekehrt an deutschen Universitäten eingeschrieben sind, ergibt sich ein Bild solider gegenseitiger Beziehungen. Kennzeichnend für die Mobilität in die Region ist es zudem, dass deutsche DAAD-Geförderte vor allem Kurzaufenthalte im Rahmen von Kooperationsprojekten absolvieren, während



DAAD-Förderung für deutsche Studierende in „Go East“ 2004-2013 nach Zielländern;
Quelle: DAAD

Studierende und Graduierte aus den neuen EU-Ländern eher für ein- bis mehrjährige Studien oder Forschungen an deutsche Hochschulen kommen. Einen wichtigen Beitrag zu den akademischen Beziehungen mit den neuen EU-Mitgliedsländern leisten – neben den Individualstipendien – also die DAAD-Kooperationsprogramme (Projektförderung).

Ein erprobtes und von vielen Vertretern der Natur- und Ingenieurwissenschaften geschätztes Kooperationsprogramm sind die mit BMBF-Finanzierung durchgeführten Programme des projektorientierten Personenaustauschs (kurz: PPP). Hier wird vor allem die Mobilität von jungen Wissenschaftlern und Wissenschaftlerinnen (Masterstudierenden, Doktoranden, Postdocs) in bilateralen Forschungsprojekten unterstützt. Deutsche Doktoranden und Doktorandinnen erhalten so z. B. die Möglichkeit, für einen gewissen Zeitraum an einem kroatischen Partnerinstitut, innerhalb eines von der deutschen und der kroatischen Partnerinstitution gemeinsam betriebenen Projekts, zu forschen – umgekehrt kommen kroatische Graduierte sowie Wissenschaftler/-innen zu Forschungen an das deutsche Partnerinstitut. Solche PPPs bestehen z. B. mit Polen, Ungarn oder Kroatien. Sie sind für über hundert Wissenschaftsstandorte in Deutschland ein „Motor“ des bilateralen Hochschulaustauschs mit den neuen Mitgliedsländern, denn aus den intensiven Austauschbeziehungen entsteht oft eine enge und dauerhafte Zusammenarbeit.

Weitere Programme, die die Kooperation zwischen deutschen Hochschulen und den Partnern in Ostmittel- und Südosteuropa unterstützen, sind beispielsweise:

- Deutschsprachige Studiengänge: So kooperiert die UCTM (Universität für Chemietechnologie und Metallurgie Sofia/Bulgarien) mit der TU Hamburg-Harburg, wo gemeinsam ein Studiengang „Chemische Verfahrenstechnik“ (mit Vergabe von Doppeldiplomen) aufgebaut wurde. Die Lehre findet auf Deutsch statt. Es besteht ein reger Dozenten- und Studierendenaustausch, in den auch weitere deutsche Partneruniversitäten eingebunden sind.
- Germanistische Institutspartnerschaften: Die ELTE (Budapest) und die Universität Heidelberg kooperieren im Bereich der Germanistik, es besteht

ein reger Austausch von Studierenden und Dozenten, der über das „GIP“-Programm gefördert wird.

In den überregionalen Strukturprogrammen des DAAD zur Internationalisierung der deutschen Hochschulen sind Projekte mit Partnern aus den neuen EU-Mitgliedstaaten erst in den letzten Jahren mehr und mehr vertreten. Derzeit unterstützt der DAAD z. B. die Mobilität von Studierenden und Dozenten in 13 (von insgesamt 125) internationalen Doppeldiplomstudiengängen deutscher Hochschulen mit Partnern in Litauen, Polen, Ungarn, Tschechien und Rumänien. Es handelt sich vorrangig um kultur-, politik- und wirtschaftswissenschaftliche Studiengänge, z. B. auch ein multilaterales Masterprogramm der Universität Konstanz mit der Warsaw School of Economics und weiteren Partnerhochschulen in Großbritannien, Schweden und den Niederlanden. Im 2013 neu aufgelegten, hochdotierten und konsequent multilateral ausgerichteten Programm „Strategische Partnerschaften und Thematische Netzwerke“, das ein breites und höchst flexibles Spektrum an Mobilitätsmaßnahmen unterstützt, sind Kooperationen mit Hochschulen in den östlichen EU-Beitrittsländern in ersten, vielversprechenden Ansätzen realisiert. So bezieht z. B. die Goethe Universität Frankfurt in die DAAD-geförderte „Strategische Partnerschaft“ die Karlsuniversität Prag ein, zusammen mit weiteren leistungsstarken Universitäten aus dem Kreis der Städtepartnerschaften Frankfurts a. M. (University of Birmingham, University of Toronto, University of Pennsylvania und Tel Aviv University). In der Programmlinie „Thematische Netzwerke“ kooperiert etwa die BTU Cottbus-Senftenberg zum Thema „Dependable Cyber Physical Systems“ ausschließlich mit Partnern aus Polen, Tschechien und Estland.

Fazit: Der vom DAAD geförderte akademische Austausch mit den neuen EU-Nachbarn ist in eine Vielzahl teils langjähriger, teils neuer, innovativer und zunehmend überregional konkurrenzfähiger struktureller Kooperationsprojekte eingebettet. Eine „Vorliebe“ für die EU-Länder in Ostmittel- und Südosteuropa im Rahmen individueller Mobilität unserer deutschen Stipendiaten ist hingegen noch Zukunftsmusik; hier wirken die kulturellen Schranken der jahrzehntelangen Teilung Europas und gewiss auch manches Vorurteil nach. Die Studierenden, Graduierten und Professor/-innen, die der DAAD bei ihren Studien, Forschungen und

gemeinsamen Projekten in der Region unterstützt, sind jedoch nur zu oft voll des Lobes über die Qualität der Hochschulen und betonen die für beide Seiten ausgesprochen lohnende Zusammenarbeit mit ihren Partnern in den östlichen EU-Beitrittsländern.



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Weitere Informationen

DAAD: Länderinformationen: Mittel- und Osteuropa, GUS

→ <https://www.daad.de/laenderinformationen/mittel-osteuropa/de/>

Go-East-Initiative

→ <https://goeast.daad.de/de/>

Hochschulkompass

→ <http://www.hochschulkompass.de>

Forschung und Innovation – Strukturbildner für die Regionen

Smart Specialisation as a New Framework for Innovation Policies in New EU Member States

Smart specialisation has become one of the cornerstones of the EU's new Cohesion Policy. Policy makers in EU regions and Member States have to design and adopt innovation strategies for smart specialisation (RIS3) in order to invest European Regional Development Funds in research and innovation. This ex ante conditionality is a novel element of the current and streamlined European Structural and Investment Funds (ESIF) for the period 2014-2020, which integrate all relevant funding instruments for regional and rural development, fisheries and social affairs. The process stresses the need to concentrate resources by developing distinctive and original areas of specialisation based on existing strengths. Strategies must be developed in an entrepreneurial discovery process involving non-state stakeholders from research and educational institutions, businesses and citizen organisation. The same RIS3 conditionality applies to old and new Member States alike.

In the 2014 Innovation Union Scoreboard, none of the EU Member States that joined after 2004 (EU-13) exhibits above-EU average performance (see figure on page 37). This stark variation in terms of RDI capabilities is a challenging situation for the new Member States. Based on a first assessment of most Partnership Agreements and Operational Programmes at the beginning of the negotiations, the legally binding framework for ESIF spending, new Member States had more difficulties than old Member States in fulfilling the required conditions. Yet, real improvements were made on the ground in new Member States, most of which have gone through a difficult transition from socialist state planning to free market democracies. In 2008, the new Member States that joined in 2004 had a higher absorption rate of European Regional Development Funds than the more established members, i.e. they were more effective in spending their allocated funds. Using the vast ESIF resources strategically, coupled with the synergetic

use of Horizon 2020 funding, can be powerful instruments to narrow this innovation gap.

At a strategic level, we can observe an innovation-oriented culture has taken root and has been expanding during the smart specialisation process in the new Member States over the past two years. Many new Member States have conducted sound analyses of their RDI strengths, weaknesses, opportunities and threats for their RIS3. Different methods were used to identify and define specialisation areas. Apart from SWOT analyses, policy makers employed various other methods like technology or knowledge mapping, scenario planning, foresight and benchmarking comparing e.g. industrial capacities with R&D capacities. These analyses have a relatively strong evidence base looking back at RDI projects over the past 7-8 years and their outcomes (publications, patents and information about innovative activities of local companies). These methods and stakeholder involvement were instrumental to broadly define RIS3 priority areas. New Member States also elaborated preliminary concepts to ensure the follow-up to the findings of monitoring RIS3 implementation.

On the other hand, there are still several aspects that new Member States will have to continue working on in greater depth. The most important issue in the RIS3 process is a broad stakeholder involvement within the entrepreneurial discovery process. This approach should be visible at each step of the work on smart

specialisation strategies. The most challenging point for new Member States has been involving businesses (esp. SMEs) and citizens' representatives in this process. Lack of trust and in some cases lacking awareness of the importance of innovation among entrepreneurs were critical factors which in some cases were difficult to overcome. The main interactions with stakeholders took place in the form of consultations, working groups and surveys. Often ICT tools were used to support these interactions.

The development of relevant policy-mixes leveraging, not substituting, private investment is still in progress. It is important that these measures consider the specificity of chosen priorities and clearly address entrepreneurial needs. Policy makers must take into account that funding preference is given to SMEs. Additionally, measures to support knowledge transfer from universities and research

institutions to the market have to be fine-tuned. Infrastructure investments should primarily seek to improve current infrastructure rather than to create new RDI facilities from scratch. Instruments should focus on possible R&D-oriented operation and services and not merely construction projects.

Monitoring and evaluation is also a point which still needs more targeted actions. Issues to consider are varying multi-level governance structures (national and regional levels, sharing of responsibilities), choosing appropriate outcome (result) indicators (measuring progress in the

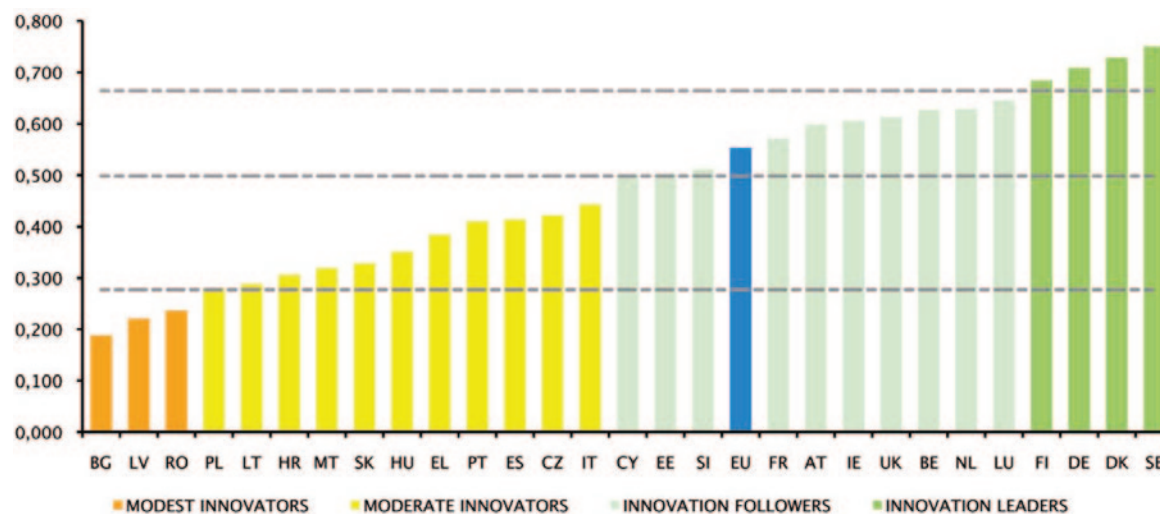


Figure: EU Member States' Innovation Performance 2011/12
 Aggregate score is based on 25 indicators going from 0 to a maximum possible performance of 1; source: Joint Research Centre (JRC)

implementation of smart specialisation strategies) and effectively ensuring results feed back into the re-adjustment of strategies.

A major challenge has been to systemically combine analytical evidence and stakeholder input in order to prioritise original areas of specialisation based on existing strengths. Compared to old Member States that in most cases have more effective and established innovation systems, very similar and fashionable RIS3 priorities have been chosen. Manufacturing, materials, energy and information and communication technologies feature very prominently in strategy documents across Europe. It will be important to track during the implementation phase if new Member States truly have the necessary capabilities and critical mass to find their niches in these highly competitive areas.

Finally, the strategy process for smart specialisation has been by and large driven by national governments. The table below shows that the vast majority of new Member States submitted national RIS3. Only in Poland and the Czech Republic regional RIS3 have been formally adopted or included in the national strategy. The absence of veritable regional strategies may at first sight make governance processes easier. Yet, it also makes it more difficult to meaningfully and continuously involve stakeholders. Dealing with these multi-level governance issues will be vital for larger Member States from the EU-13.

	EU-15	EU-13
National RIS3	4	11
Regional RIS3	7	–
National & regional RIS3	4	2

Table: Overview of multi-level governance and RIS3

The numbers show in how many Member States RIS3 – submitted to formally meet the new ex ante conditionality – have been developed and adopted

To facilitate RIS3 processes, the European Commission set up the S3 Platform, based at the European Commission’s in-house science service, the Joint Research Centre (JRC), which now covers a community of learning and practice in 15 EU states (out of which 13 are new Member States) and 153 EU regions (incl. almost all EU-13 regions). The Platform has so far organised peer reviews

for strategies from 15 Member States and 50 regions. It also provides guidance materials, good practice examples, analytical tools and training to policy makers to inform strategy formation and policy making. Stairway to Excellence (S2E), a recent project based at the Platform, provides policy support to close the innovation gap and to promote excellence by exploiting synergies between ESIF and Horizon 2020.

With the hindsight of three years of activities, there is a good evidence base to argue that policy learning has indeed supported the involvement of and dialogue among innovation stakeholders. Strategic discussions on important innovation and development issues have taken place in almost all new and old Member States. Now it will be important to institutionalise and continue these discussions to ensure that the new Member States are on the right path towards smart, sustainable and inclusive development.



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Weitere Informationen

Smart Specialisation Platform - S3

→ <http://s3platform.jrc.ec.europa.eu>

Innovation Union Scoreboard

→ http://ec.europa.eu/enterprise/policies/innovation/policy/innovation-scoreboard/index_en.htm

Joint Research Center (JRC)

→ <https://ec.europa.eu/jrc/>

The RIS3 of Lithuania – Result of a Successful Participatory Strategy Process

Interview with Arūnas Karlonas, Director of the Agency for Science, Innovation and Technology (MITA) of Lithuania.

ITB: Could you please describe MITA and the role it played in the development of the RIS3 strategy?

Arūnas Karlonas: MITA plays a main role in the implementation of Lithuania's Innovation Development Programme which is the basis for action plans for the time period 2014-2020. Together with MOSTA – the Research and Higher Education Monitoring and Analysis Centre



– and a network of experts, MITA takes part in the process of RIS3 development and its implementation. After the thematic RIS3 priorities have been determined and the national RIS3 programme has been adopted, now, in the next stage, the action plans are being developed. Cornerstones for business potential are excellence, strengths in research, technological development and innovation and the capacity to foster collaboration among different stakeholders to respond to national, regional and global challenges.

ITB: What are the envisaged thematic priorities in Lithuania? How have they been identified?

Arūnas Karlonas: The identification process took place in two phases. The first involved an analysis of Lithuania's scientific potential, an assessment of opportunities for the use of research, development and innovation (RDI) infrastructure, an overview of the strengths and potentials of the Lithuanian economy and an assessment of key long-term challenges in Lithuania and Europe. 614 research and business representatives took part in a survey; 103 stakeholders attended

discussions. Based on this, an International Independent Expert Team identified six priority areas that, in October 2013, were approved by the Government of the Republic of Lithuania:

- Energy and sustainable environment
- Health technologies and biotechnologies
- Agro-innovation and food technologies
- New production processes, materials and technologies
- Transport, logistics and information and communication technologies
- Inclusive and creative society

In a second phase a limited number of priorities within the priority areas and corresponding roadmaps for implementation have been proposed. Key decisions were unanimously and transparently taken during discussions of experts/stakeholders involving over 150 representatives of research and business communities. In order to enable informed decisions, expert discussions were based on reports and consultations. Additional participatory methods that reached approximately 1,000 research and business representatives involved an e-platform and a survey of experts in each area.

ITB: Could you give examples of successful projects or measures implemented by MITA that could be named as a good practise and to be followed under the framework of RIS3?

Arūnas Karlonas: MITA released initiatives aimed at fostering entrepreneurship and start-ups: “Incubation of Technology Start-ups” and “Innovative Business Promotion”. These initiatives gathered teams of senior business and research professionals to help young people realize their innovative technology business ideas and exploit their full potential. To ensure synergies between various stakeholders, a wide network of universities and science and technology parks was invoked to support young technology companies by providing them with skilled mentors, office space and other services. The initiatives have already helped to create over a hundred new technology ventures. As an encouragement, five most promising start-ups got the possibility to participate in various acceleration programs all

around the world, including Silicon Valley. Discussions have already begun on how to further improve these schemes for the programming period of 2014-2020.

ITB: Looking back to your experiences with the RIS3 process: What are your recommendations for other regions?

Arūnas Karlonas: Lithuania was among the first EU countries having evaluated the perspectives, potentials and challenges in every field with high growth potential and had identified key global and national trends, assets and challenges that are likely to have the largest effect on innovation, markets' growth and welfare. Our main recommendation is to fully involve all partners in developing and implementing smart specialization strategies and to support the strategy process by the provision of data or other evidence. This reduces the risk of pursuing narrow sectoral interests and, at the same time, supports the search for collaboration opportunities and synergies. Priorities identified in this way are different from those which are obtained on the basis of data analysis only: substantiation of such priorities would be analytically more consistent, but their relevance and implementation could be problematic.

Die Fragen an Arūnas Karlonas stellte

Dr. Silke Stahl-Rolf, Tel. 0211/6214-632, stahl-rolf@vdi.de

Weitere Informationen

Agency for Science, Innovation and Technology (MITA)

→ <http://www.mita.lt/en/0>

Slovenia: Private Investments in R&D as Key for Strengthening Competitiveness

Interview with Dr. Peter Wostner, Secretary at Slovenia's Government Office for Development and European Cohesion Policy.

ITB: According to the Innovation Union Scoreboard (IUS), Slovenia's innovation performance has been steadily increasing since 2007. In the 2014 edition of the IUS Slovenia ranks 4th with respect to private investments in R&D and 5th concerning human resources. How have these excellent results been achieved?

Dr. Peter Wostner: One of the key policy responses of the Slovenian government after the outbreak of the crisis was to significantly strengthen innovation related expenditures. Between 2009 and 2011, R&D related expenditures from the budget have for example almost tripled compared to the previous three year period. This support was to a great extent focused on the private sector with the logic that the crisis should be used for strengthened competitiveness instead of preservation of jobs through simple subsidies. Such a strategy was to an important degree made possible by the European Cohesion Policy in the framework of which almost 25 % of all available resources are being dedicated to innovation and Research and Technical Development Infrastructure (RTDI), i.e. the 6th highest share among all EU Member States. This has made an additional incentive to companies' already strong engagement in R&D on which Slovenia also intends to build its RIS3 strategy.

Dr. Peter Wostner
Secretary
Government Office for Development and
European Cohesion Policy
Ljubljana, Slovenia

ITB: Formulating a vision and setting concrete and realistic goals are key tasks in the RIS3 process. What is Slovenia's vision? And what are your goals for the year 2020?

Dr. Peter Wostner: Slovenia wants to position itself as an attractive innovation country focused on the development of medium- and high-tech comprehensive solutions in strategically defined niche markets where Slovenia has capacities

and competences not just to compete on the global market but also to become a trend setter. In order to make this possible, an ambitious and comprehensive RIS3 strategy has been prepared. By 2020, Slovenia will be on a par with the five most successful innovation followers (Luxembourg, the Netherlands, Belgium, United Kingdom, Ireland, Austria) according to the IUS in all key innovation dimensions.

How shall this be done? By setting clear priorities to be supported by a strategic approach and targeted but comprehensive support that will not just focus on financing but will also include human resource development, structural and administrative reforms, economic diplomacy, etc.

Priorities are fully complementary to the global industrial trends, including those that are at the forefront of German industrial policy with which we intend to strengthen our connections even further (e.g. by developing technology bridges). Slovenia intends to focus on the following five priorities: SI_industry 4.0 – Smart factories (this priority is directly linked to the German initiative), Smart buildings and homes, Smart cities and communities, Smart use of resources, and Health.

ITB: What are the instruments with which you intend to achieve these goals? Are there any interfaces with EU programmes such as Horizon 2020?

Dr. Peter Wostner: Internationalization is at the core of our RIS3 strategy, thus making full use of all the available funding sources. The policy mix is based on strategic (public-private) partnerships, around which RTDI, human resource development, internationalization, networking and other support activities will be structured. In doing this, strengthening of international linkages between firms as well as knowledge institutions is very high on the agenda (e.g. initiatives like Teaming, JTIs, etc.).

Die Fragen an Dr. Peter Wostner stellte

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Weitere Informationen

Government Office for Development and European Cohesion

→ <http://svrk.gov.si/en/>

South Moravian Region: RIS>4

Interview with Petr Chládek, Regional Innovation Strategy Manager for the South Moravian Region in the Czech Republic.

ITB: While other European Regions work hard on a RIS3 strategy, you have presented a RIS>4. What is special about RIS>4?

Petr Chladek: We are actually introducing the fourth generation of Regional Innovations Strategies (RIS) in our region. The region formulated the first generation of RIS in 2002 and was the first region in Central and Eastern Europe to do



so. Then we continued with the second generation in 2005 and with the third in 2009. Today, the Smart Specialization Strategy is for us the fourth major step in innovation policy of the South Moravian region. That is why we brand it RIS>4.

ITB: What is the specific challenge for your region and what is your vision for 2020?

Petr Chladek: The “formal” regional vision for 2020 is to develop the innovation potential of the South Moravian Region to the same level as that of the most innovative regions in Europe (measured by intensity of private investment into R&D, number of European Research Council grants, share of foreign university students).

However, the true challenge for the region is to build on today’s regional strengths. In South Moravia 30 % of the global market in electron microscopy is developed and produced and 40 % of the antivirus industry is present in the region and its neighbouring regions. Actually the quest is to use these strengths and to try to create new related industries which will benefit from the current ones and in turn will also nurture these two strong industries.

ITB: Sound governance structures are crucial for the successful implementation of a Smart Specialization Strategy. What is the role of regional actors and how do you work together with neighbouring regions and the national level?

Petr Chladek: The RIS governance structures involve more than two hundred people. We have established five working groups aligned to our horizontal priorities (innovative governance, excellence in science, innovative companies, European quality education, and attractiveness of region) which regularly meet and discuss new instruments/projects which should be realized. Members of these working groups come from knowledge intensive companies, universities, research organizations, NGOs and public bodies.

Besides working groups, we are now preparing new structures called innovation platforms. These platforms will stimulate debate between companies in the key industries and relevant researchers in order to create new common research projects or just to formulate new entrepreneurial opportunities which can be used as possible themes for people keen on starting business.

The highest governance structure is the Steering Committee, where political representatives of the Region, the City, universities, Chamber of Commerce and companies approve project proposals formulated in working groups.

Cooperation with other regions and at national level is organized on the platform of the regional RIS managers (there are 14 regions in the Czech Republic and each region has one RIS manager) and Ministry of Education and Ministry of Industry, which are responsible for managing the national innovation policy.

ITB: Can you recommend any specific instruments or methodologies you used in the RIS>4 process?

Petr Chladek: Probably the most difficult was to first invite companies and university representations to draft the strategy framework (see figure on the left). It was necessary to explain the value and importance of the process to the owner of one of the biggest companies in the region. He then went and explained this to all key stakeholders and convinced them to participate in the process. Thanks to this, we had 35 people in the room for six hours where we could discuss the vision, mission, objectives and managing principles. Getting the leaders on your side is what I would recommend.

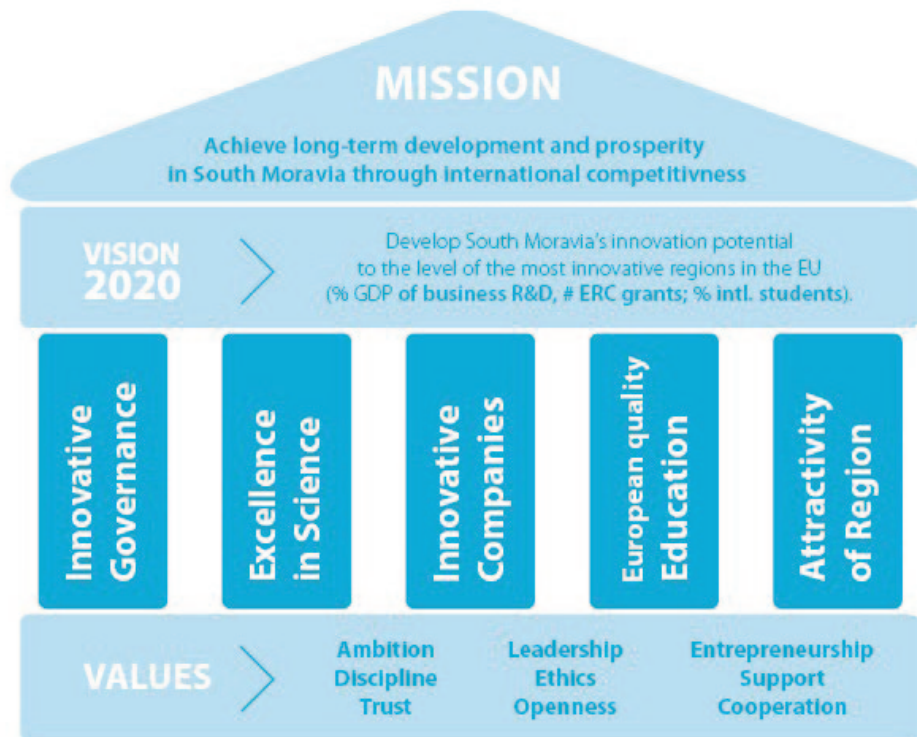
Die Fragen an Petr Chládek stellte

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Weitere Informationen

South Moravian Innovation Centre (JIC)

→ <http://www.jic.cz/home>



Draft of the strategy framework; source: South Moravian Innovation Centre

Zusammenarbeit in Mittelost- und Südosteuropa: Kooperations-Netzwerke in Forschung und Innovation

Zeitgleich zum EU-Beitritt von zehn Ländern 2004 begannen unter deren Beteiligung verschiedene europäische Netzwerkprojekte, die sich der Koordination von Forschungspolitiken und -förderung widmeten. Die intensive Zusammenarbeit in diesen Projekten war trotz der ausgeprägten regionalen Disparitäten erfolgreich.

In den folgenden Jahren erhielten einige südosteuropäische Länder des Westlichen Balkans, die ebenfalls in diesen Netzwerk-Projekten aktiv beteiligt waren, den Status von (potenziellen) Beitrittskandidaten zur Europäischen Union. Die 2012 verabschiedete makroregionale EU-Strategie für den Donauraum verbindet nun – ebenfalls im Rahmen eines Netzwerkes – noch enger die Kooperation von EU-13-Staaten mit Ländern des Westlichen Balkans.

Als Netzwerkprojekte im 6. und 7. Forschungsrahmenprogramm (FRP) dienten ERA-NETs der Koordinierung von Forschungsaktivitäten zwischen Programmträgern in den EU-Mitglieds- und assoziierten Staaten auf nationaler und regionaler Ebene. Grundlage hierfür waren Vernetzung und gegenseitige Öffnung von Förderaktivitäten sowie Entwicklung und Durchführung gemeinsamer Ausschreibungen und Programme.

Als neue Instrumente des 7. FRP und in Horizont 2020 unterstützen INCO-NETs den bi-regionalen Dialog zwischen Europa und definierten Partnerregionen zur Stärkung der Internationalisierung des Europäischen Forschungsraumes (EFR). Zielsetzung ist u. a. die Identifizierung und Priorisierung von Forschungsbereichen für Kooperationen, die im gegenseitigen Interesse liegen und von beiderseitigem Vorteil sind.

EU-Beitrittskandidaten in der Region Südosteuropa

Offizielle Beitrittskandidaten sind Albanien, die ehemalige jugoslawische Republik Mazedonien, Montenegro und Serbien.

Potenzielle Beitrittskandidaten sind Bosnien und Herzegowina sowie die Republik Kosovo.

Als erstes ERA-NET in Südosteuropa startete im September 2004 das im 6. FRP geförderte EU-Projekt Southeast-European ERA.NET (SEE-ERA.NET) zur Integration der Staaten des Westlichen Balkans in den EFR. 17 Partner (Ministerien, Förderagenturen) aus 14 mittelost- und südosteuropäischen Ländern waren an dem auf fünf Jahre angelegten Projekt beteiligt. Kernpunkt war Ende 2006 eine gemeinsame Pilot-Ausschreibung für multilaterale Forschungsprojekte von Wissenschaftlerinnen und Wissenschaftlern aus den an SEE-ERA.NET beteiligten Ländern, die vorrangig auf die Westbalkan-Staaten ausgerichtet war. Von den über 300 Anträgen wurden 26 Forschungs- und Netzwerkprojekte sowie fünf Summer Schools mit einem Budget von 840.000 Euro gefördert. Ein im Projekt erarbeitetes „White Paper“ definiert politische Strategien und Empfehlungen für die künftige Zusammenarbeit mit den Westlichen Balkanländern; unterfüttert wurde es durch einen „Joint Action Plan“ mit konkreten Projektideen und Initiativen.

Folgeprojekt war 2009 im 7. FRP das vierjährige europäische Netzwerk-Projekt SEE-ERA.NET PLUS, dessen zentrale Aufgabe ebenfalls eine gemeinsame Ausschreibung für „Joint European Research Projects“ (JERPS) in Mittelost- und Südosteuropa war. An dieser Ausschreibung im September 2009 beteiligten sich 15 Länder. Von den 190 eingereichten Interessensbekundungen wurden 23 Projekte mit einem Gesamtbudget von rund drei Millionen Euro gefördert.

Parallel dazu lief von Beginn 2008 bis April 2014 ein europäisches INCO.NET-Netzwerkprojekt, dessen Ziel der bi-regionale forschungspolitische Dialog zwischen der EU, den Westlichen Balkanländern und weiteren an das 7. FRP assoziierten Staaten war: das WBC-INCO.NET. 29 Partner aus 16 mittelost- und südosteuropäischen Ländern waren daran beteiligt. Das WBC-INCO.NET diente der Koordination der Forschungspolitik in und mit den Westlichen Balkanländern. Ziel war es, laufende Projekte und Initiativen zu bündeln, um Synergien zu nutzen und bestehende Lücken mit neuen strukturellen Maßnahmen zu füllen. WBC-INCO.NET baute auf die im SEE-ERA.NET zusammengetragenen Ergebnisse auf und arbeitete eng mit dem Nachfolgeprojekt SEE-ERA.NET PLUS zusammen. Das INCO.NET unterstützte darüber hinaus die „Steering Platform on Research for the Western Balkan Countries“, einer hochrangigen Dialogplattform zur Forschungspolitik der EU-Kommission, der EU 28 und der Westlichen

Balkanländer. Auch nach Beendigung des INCO-NETs finden weiterhin Treffen der Steering Platform statt.

Die regionale Zusammenarbeit der Länder des Westlichen Balkans und der neuen mittelost- und südosteuropäischen EU-Mitgliedstaaten wurde in den letzten zehn Jahren unter anderem durch die drei genannten Netzwerkprojekte deutlich gestärkt. Die Projekte leisteten einen wichtigen Beitrag zur Heranführung der Länder an den Europäischen Forschungsraum.

Strategische Fundamente erhielt die regionale Zusammenarbeit durch die im Oktober 2013 veröffentlichte „Western Balkans Regional R&D Strategy for Innovation“ der Weltbank sowie die vom Regional Cooperation Council erarbeitete „South East Europe 2020 Strategy – Jobs and Prosperity in a European Perspective“.

In den vergangenen Jahren wurden auch von der EU mit der Entwicklung von Makroräumstrategien für verschiedene europäische Regionen integrierte Rahmenwerke für die Kooperation im EFR geschaffen. Als erste wurde 2009 die EU-Strategie für den Ostseeraum (EUSBSR) vom Europäischen Rat angenommen. Sie legt die Grundlage für eine engere Zusammenarbeit der Länder des Ostseeraumes und bezieht vier neue EU-Mitgliedstaaten der EU-Erweiterung von 2004 ein (Estland, Litauen, Lettland und Polen). Es folgte 2011 die EU-Strategie für den Donaauraum (EUSDR). Die EU-Strategie für die Adriatisch-Ionische Region (EUSAIR) wurde im November 2014 in Brüssel vorgestellt. Bis Mitte 2015 soll ein Entwurf für eine weitere EU-Strategie für den Alpenraum erarbeitet werden.

Als die EU-Strategie für den Donaauraum 2012 von 14 Ländern und der Europäischen Kommission beschlossen wurde, erhielt die Donauregion in Mittelost- und Südosteuropa eine fühlbar größere Bedeutung. Viele der

EU-Strategie für den Donaauraum 2012

Die EU-Strategie für den Donaauraum 2012 wurde von folgenden Ländern beschlossen: Deutschland (insbesondere Baden-Württemberg und Bayern), Österreich, Ungarn, Tschechische Republik, Slowakei, Slowenien, Bulgarien, Rumänien, Kroatien, die an das EU-Forschungsrahmenprogramm assoziierten Staaten Bosnien und Herzegowina, Moldau, Montenegro und Serbien sowie das Drittland Ukraine.

EU-13-Länder sowie mehrere Länder des Westlichen Balkans sind daran beteiligt (Ungarn, Tschechische Republik, Slowakei, Slowenien, Bulgarien, Rumänien, Kroatien, Bosnien und Herzegowina, Montenegro und Serbien). Ziel ist es, Synergien zu entwickeln und bestehende Forschungspolitiken und Initiativen zu koordinieren. Hierdurch sollen gemeinsame Herausforderungen zusammen angegangen und der Donaauraum wettbewerbsfähiger gemacht werden. Eines der Leuchtturmprojekte zur Stärkung von Forschung, Innovation und Bildung, ein künftiger „Danube Region Research and Innovation Fund“ (DRRIF), soll ein mögliches Szenario für die Koordinierung von Fördermechanismen der Donauländer beschreiben. Zu diesem Zweck widmet sich eine DRRIF-Arbeitsgruppe der Koordinierung von nationalen, regionalen und EU-Fördermitteln in der Donauregion.

Zur Umsetzung von Teilen der EUSDR läuft seit Januar 2014 das europäische Netzwerkprojekt Danube-INCO.NET, das dem regionalen forschungspolitischen Dialog der Donaauraumstaaten dient. An dem auf drei Jahre angelegten Projekt sind 19 Partner aus 14 Ländern der Donauregion beteiligt, darunter mehrere der EU-13-Länder. Ergänzend zu den Aktivitäten der DRRIF-Arbeitsgruppe der EUSDR werden dabei unter anderem auch Vorschläge für die Koordinierung von Fördermaßnahmen sowie für eine mögliche spätere Erweiterung zu einem gemeinsamen Förderprogramm erarbeitet.

Mit dem von Deutschland initiierten, sogenannten Ulm-Prozess wird im Rahmen einer vom Bundesministerium für Bildung und Forschung (BMBF) geleiteten Arbeitsgruppe zur Intensivierung der Forschungszusammenarbeit in der Donauregion beigetragen. Das BMBF unterstützt in diesem Kontext über Bekanntmachungen bi- und multilaterale Vernetzungsprojekte mit Partnern aus der Donauregion.

Als Fazit lässt sich festhalten, dass die europäischen Netzwerkprojekte ein wichtiges zielführendes Instrument zur Heranführung der südosteuropäischen Länder an den Europäischen Raum für Forschung und Innovation waren und auch weiterhin sind. Für die regionale Zusammenarbeit ist darüber hinaus mit den EU-Makroräumstrategien seit 2009 ein neuer Kooperationsrahmen geschaffen.

Dr. Ulrike Kunze, Ralf Hanatschek, Dr. Ralf Hagedorn, Dr. Hans-Peter Niller

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SEE-ERA.NET White Paper

→ http://www.see-era.net/attach/203_262_11300_14_2.pdf

Western Balkans Regional R&D Strategy for Innovation

→ <http://www.worldbank.org/content/dam/Worldbank/document/eca/WBRIS%20Strategy10-21-13%20web.pdf>

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SEE-ERA.NET

→ <http://www.see-era.net/start.html>

WBC-INCO.NET

→ <http://wbc-inco.net>

Danube-INCO.NET

→ <http://danube-inco.net>

EU-Strategie für den Ostseeraum (EUSBSR)

→ <http://www.balticsea-region-strategy.eu/>

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Unlocking the Full European R&I Potential in the ERA: The “Widening Participation” Approach of the EU

Despite serious efforts by the European Union and the Member States, significant gaps remain among European regions in terms of research and innovation performance. This is due partly to different levels of economic development, but most importantly to deep structural differences linked to many diverse factors (geography, specific localisation issues, socio-economic and cultural aspects, etc.).

The most significant factors of functioning research and innovation systems include: a mix of strategies, initiatives, and programmes guiding investment choices; principles such as transparency, autonomy, openness and competition in funding research and innovation; support for participation in international research and innovation activities; and a critical amount of research funding.

It is estimated that out of the EU's 266 regions, in 2009 only 35 had a R&D intensity (R&D investment as a percentage of their GDP) above 3 %, which remains a target within the Europe 2020 strategy. Taken together, these 35 regions accounted for 45 % of all R&D expenditure in the EU. 10 of the most R&D intensive regions in 2009 were located in the EU's Nordic countries. Together, they account for 9.3 % of the EU's R&D expenditure (2012 EUROSTAT regional yearbook).

These figures show significant disparities between central, eastern and southern European countries' regions and the northern and western parts of the EU, termed the “innovation divide”. Thus substantial large-scale and consistent policies are required to help lagging regions in Europe reverse these trends, to identify the correct strategies for investment and to catalyse structural interventions that would make a difference in European competitiveness.

Globalisation has put particular strain on regions as it has completely redrawn the map for producing goods and services, offsetting a large number of European regions that cannot cope with increasing competition.

The logic of spreading excellence and widening participation

The EU, in the new financial period running from 2014 until 2020, is determined to deal with these challenges through promoting the integration of different policies in support of research and innovation, first and foremost the European Structural and Investment Funds (ESIF) and Horizon 2020 – the EU's Framework Programme for Research and Innovation. Regions working in partnership under the umbrella of the ESIF can harness their full potential while addressing Horizon 2020's qualitative, challenging and competitive calls for proposals. Participation helps all players (companies, universities, public research organisations) advance in science and technology towards more innovation.

Horizon 2020, on the other side, has no regional or geographical-based focus. Instead it targets institutions, companies and people. In addition to accompanying measures that ensure excellence in research and innovation, Horizon 2020 provides tailored support for low-performing EU Member States through the specific part "Spreading Excellence and Widening Participation". Just over 800 million euros are reserved for activities under this part. Among the actions funded are teaming and twinning, which are most relevant for German actors.

Teaming

Under Horizon 2020, top research institutions are teaming up with countries or regions low-performing in research, development and innovation. The goal is to create new centres of excellence in these regions, or to upgrade existing centres. The teaming should help during the early stages of development to advance a country's or region's research and innovation capacities, following the initial development of a business plan (phase 1). All applications for funding must match the recipient country's or region's smart specialisation strategies. Following a successful first phase, significant seed finance may be provided in a second phase for initial implementation steps.

Twinning

Twinning is intended to strengthen a specific research field in an emerging institution, by linking a university or research centre in a low-performing country with at least two internationally-leading institutions in Europe. This is underpinned by staff exchanges, expert visits, short-term on-site or virtual training sessions, workshops, support for conference attendance, organisation of joint summer schools or similar activities, dissemination and outreach activities. Twinning applicants are encouraged to explain their institution's links with the host location's smart specialisation strategy.

The measures have been designed to complement the activities financed through the European Structural and Investment Funds. Since the budget is limited in the face of these huge structural challenges, it is hoped that the projects financed will spread out to other parts of the EU and inspire similar activities to be replicated elsewhere. In addition, the challenge is to integrate research and innovation in the context of comprehensive R&I strategies for smart specialisation. Collaborative approaches like twinning and teaming of European partners can be an important driver to promote the internationalisation of businesses, technology transfer and to create knowledge-based regional economies and societies.

Such partnerships can only be successful when providing benefits not only for emerging R&I organisations, but also for institutions leading in their field. The latter can gain from such collaborations in many ways, including increased international visibility, enhanced capabilities through joint learning, creativity and development of new approaches, increased mobility (inwards and outwards) of qualified scientists, and access to new "markets" of knowledge, of science-to-business connections and of research partners in Europe.



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Horizon 2020 Work Programme
2014-2015: Spreading Excellence and Widening
Participation

→ http://ec.europa.eu/research/participants/data/ref/h2020/wp/2014_2015/main/h2020-wp1415-sewp_en.pdf

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Weitere Informationen

Smart Specialisation Platform

→ <http://s3platform.jrc.ec.europa.eu/>

Membership in the European Union: Opportunity or Risk? The Perspective of an EU Candidate

Joining the EU is a major challenge that pervades many activities of the Republic of Serbia. It seems to me that, in science, the challenge is set on a very significant level and fairly attracts much attention. However, comparing to numerous other areas of life and work, science in Serbia has a long background and significant experience in cooperation with European institutions and European scientists.

Namely, science in Serbia was one of the first areas that emerged onto the European scene, after a very difficult period of wars and isolation, which affected Serbia during the last decade of the 20th century.

The scientists were the ones who were continuously trying to maintain connections and who even managed, after this period, although in difficult circumstances and with great effort, to restart cooperation with foreign colleagues and build this area of great importance.

The challenge was enormous, but, from today's perspective, international contacts from that period largely helped Serbian scientists to overcome the difficulties they faced and to not lose the faith and hope in a better tomorrow.

In the years that followed, science largely managed to consolidate itself, and our experts started again to participate and play an (important) role in European and world scientific events, competitions and collaborations. However, it seems to me that it is only in recent years that cooperation has begun to reach a satisfactory level.

European Commission's programmes

Serbia got largely involved in EU framework programmes (FP) for research and innovation. Excellent results have been already achieved within FP6, where Serbia, participating as a so-called third country, was not obliged to pay contributions to this framework programme budget. Such status resulted in relatively modest budget which our organizations could achieve in European Commission projects.

However, the fact that our research organizations, at that moment and in such circumstances, participated in over 100 projects, was a very satisfying result. During that period, research capacities were strengthened in centers of excellence, which was of great importance. Out of 30 assigned projects to Western Balkans countries, 16 were won by Serbian research organizations, which contributed a lot to the modernization of their work, professional strengthening and connection with European scientific centres.

Serbia participated in the Seventh Framework Programme for the first time as an associate member, with very favourable conditions in terms of payments, and Serbian researchers achieved very good results: over 320 Serbian applicants, included in almost 250 mainlisted projects (out of which 42 with Serbian coordination), attracted over 55 million euros. They were particularly good in the following FP7 priority areas: Research Potential, Information and Communication Technologies, Marie Curie Actions, Research Infrastructures, Food, and Environment. Serbian researchers mostly cooperated with Germans with 376 collaborative links that were realized.

New Horizon

The Republic of Serbia joined the new framework programme Horizon 2020, on 1 July 2014, when Srdjan Verbić, the Minister of Education, Science and Technological Development, signed an Agreement in Brussels on the inclusion of Serbia in this programme, which is, by far, the largest European programme for research and innovation funding.

Our scientists have already won the first projects, whereas the Ministry of Education has constantly been working on promoting Horizon 2020, trying to point out the great opportunities it creates, not only for scientific organizations, but also for the SME sector, governmental and non-governmental organizations, as well as for individuals.

The expectations of Horizon 2020 are great, because Serbia got involved in an EU research and innovation programme, completely equal to other participating countries. Horizon 2020 is of great significance for Serbia as it involves our scientific and business communities into global trends and enables progress in

the fields of research, and development of knowledge, innovation and high technologies based economy. It also promotes cooperation and helps establishing important contacts, and, moreover, it helps attracting significant funds that come directly into science and research.

This is an extremely important motivation, considering the difficult economic situation in the country. The budget allocations for science are quite modest, which could result in a very difficult position of scientists and very limited improvement of research quality. However Serbia is committed to increase further investments in science and research, in research infrastructures, but also in creation of a favorable environment for successful participation in Horizon 2020.

Just getting closer to the European Union, from the perspective of the Serbian administration, means much work that requires a number of changes, but Serbia is clearly determined to persevere on this path. The Government of the Republic of Serbia and the Ministry of Education, Science and Technological Development are dedicated to the implementation of European standards into the system of education and science.



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