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**COMMUNICATION FROM THE COMMISSION TO THE EUROPEAN
PARLIAMENT, THE COUNCIL, THE EUROPEAN ECONOMIC AND SOCIAL
COMMITTEE AND THE COMMITTEE OF THE REGIONS**

**Supporting growth and jobs – an agenda for the modernisation of Europe's higher
education systems**

{SEC(2011) 1063 final}

1. INTRODUCTION

The **Europe 2020 strategy, its Flagship Initiatives and the new Integrated Guidelines** put knowledge at the heart of the Union's efforts for achieving **smart, sustainable and inclusive growth**; the Commission's proposal for the Multiannual Financial Framework 2014-2020 supports this strategy with a significant increase in the budget devoted to investment in education, research and innovation. This is because education, and in particular higher education and its links with research and innovation, plays a crucial role in individual and societal advancement, and in providing the highly skilled human capital and the articulate citizens that Europe needs to create jobs, economic growth and prosperity. Higher education institutions¹ are thus crucial partners in delivering the European Union's strategy to drive forward and maintain growth.

Despite a challenging employment climate in the wake of the economic crisis, higher education represents a sound choice². Yet, **the potential of European higher education institutions to fulfil their role in society and contribute to Europe's prosperity remains underexploited**; Europe is no longer setting the pace in the global race for knowledge and talent, while emerging economies are rapidly increasing their investment in higher education³. While 35% of all jobs in the EU will require high-level qualifications by 2020⁴, **only 26% of the workforce currently has a higher education qualification**. The EU still lags behind in the share of researchers in the total labour force: 6 per 100, compared to 9 in the US and 11 in Japan.⁵ The knowledge economy needs people with the right mix of skills : transversal competences, e-skills for the digital era, creativity and flexibility and a solid understanding of their chosen field (such as in Science, Technology, Engineering and Maths). But public and private employers, including in research intensive sectors, increasingly report mismatches and difficulties in finding the right people for their evolving needs.

At the same time, higher education institutions too often seek to compete in too many areas, while comparatively few have the capacity to excel across the board. As a consequence, too few European higher education institutions are recognised as world class in the current, research-oriented global university rankings. For instance, only around 200 of Europe's 4000 higher education institutions are included in the top 500, and only 3 in the top 20, according to the latest Academic Ranking of World Universities. And there has been no real improvement over the past years. There is no single excellence model: **Europe needs a wide diversity of higher education institutions**, and each must pursue excellence in line with its mission and strategic priorities. With more transparent information about the specific profile and performance of individual

¹ This term is used to encompass all tertiary education institutions including universities, universities of applied science, institutes of technology, 'grandes écoles', business schools, engineering schools, IUT, colleges of higher education, professional schools, polytechnics, academies, etc. This is to take account of linguistic diversity and national traditions and practices.

² See Staff Working Document, Section 2

³ See Staff Working Document, Section 7.2

⁴ See COM(2010) 682 final.

⁵ MORE study on the mobility patterns and career paths of EU researchers (EC, 2010)

institutions, policy-makers will be in a better position to develop effective higher education strategies and institutions will find it easier to build on their strengths.

The main responsibility for delivering reforms in higher education rests with Member States and education institutions themselves. However, the Bologna Process, the EU Agenda for the modernisation of universities⁶ and the creation of the European Research Area show that the challenges and policy responses transcend national borders. In order to maximise the contribution of Europe's higher education systems to smart, sustainable and inclusive growth, **reforms are needed in key areas:** to increase **the quantity** of higher education graduates at all levels; to enhance **the quality and relevance** of human capital development in higher education; to create **effective governance and funding** mechanisms in support of excellence; and to **strengthen the knowledge triangle** between education, research and business. Moreover, the international mobility of students, researchers and staff, as well as the growing **internationalisation of higher education**, have a strong impact on quality and affect each of these key areas.

Section 2 of this Communication identifies **key policy issues for Member States and higher education institutions** seeking to maximise their contribution to Europe's growth and jobs. The **specific actions that the EU will take**, bringing its added value to support the modernisation efforts of public authorities and institutions are presented in Section 3. The Staff Working Document accompanying this Communication discusses the analytical evidence underpinning these policy issues and actions.

2. KEY ISSUES FOR MEMBER STATES AND FOR HIGHER EDUCATION INSTITUTIONS

2.1. Increasing attainment levels to provide the graduates and researchers Europe needs

The Europe 2020 education headline target stipulates that, **by 2020, 40% of young people should successfully complete higher education or equivalent studies**⁷. Attainment levels have grown significantly across much of Europe in the last decade, but they are still largely insufficient to meet the projected growth in knowledge-intensive jobs, reinforce Europe's capacity to benefit from globalisation, and sustain the European social model. Increasing higher education attainment must also be a catalyst for systemic change, to enhance quality and develop new ways to deliver education. Furthermore, while the impact of demographic ageing varies across Member States⁸, the group of school leavers from which higher education traditionally recruits is shrinking.

Therefore, Europe needs to **attract a broader cross-section of society into higher education**, including disadvantaged and vulnerable groups, and deploy the resources to meet this challenge;

⁶ COM(2006) 208 final

⁷ By 2020, 40% of 30-34 year olds in the EU should have completed tertiary or equivalent education

⁸ See Staff Working Paper, Section 3.4

in several Member States, reducing higher education drop-out rates is also crucial. This increase in aspirations and achievement cannot be addressed at the tertiary level alone: success also depends upon **policies to improve earlier educational outcomes and reduce school drop-out**, in line with the Europe 2020 target⁹ and the recent Council Recommendation on early school leaving¹⁰.

Europe also needs more researchers, to prepare the ground for the industries of tomorrow. To make our economies more research-intensive, reaching the 3% of GDP research investment target, the Union will need an estimated one million new research jobs¹¹, mainly in the private sector. In addition to improving the conditions for industry to invest in research and innovation, this calls for more doctoral candidates and equipping the existing workforce with research skills, and for better information on opportunities so that career paths outside academia become a genuine career prospect for early stage researchers. Tackling stereotyping and dismantling the barriers still faced by women in reaching the highest levels in post-graduate education and research – especially in certain disciplines and in leadership positions – can liberate untapped talent.

Key policy issues for Member States and higher education institutions:

- Develop **clear progression routes** from vocational and other education types into higher education. An effective way to achieve this is through **national qualification frameworks** linked to the European Qualifications Framework and based on learning outcomes, and through clear procedures for recognising learning and experience gained outside formal education and training.
- Encourage **outreach** to school students from underrepresented groups and to 'non-traditional' learners, including adults; provide more transparent information on educational opportunities and outcomes, and tailored guidance to **inform study choices** and reduce drop-out.
- Ensure that **financial support** reaches potential students from lower income backgrounds through a better targeting of resources.
- Design and implement national strategies to train and re-train enough researchers in line with the Union's R&D targets.

2.2. Improving the quality and relevance of higher education

Higher education enhances individual potential and should equip graduates with the knowledge and core transferable competences they need to succeed in high-skill occupations. Yet curricula are often slow to respond to changing needs in the wider economy, and fail to anticipate or help

⁹ To reduce the proportion of 18-24 years olds without upper secondary education and not in further education and training to 10% at most.

¹⁰ See Council Recommendation on policies to reduce early school leaving (adopted 7 June 2011)

¹¹ COM (2010) 546 final, p.9

shape the careers of tomorrow; graduates struggle to find quality employment in line with their studies¹². **Involving employers and labour market institutions in the design and delivery of programmes**, supporting staff exchanges and including practical experience in courses can help attune curricula to current and emerging labour market needs and foster employability and entrepreneurship. Better monitoring by education institutions of the career paths of their former students can further inform programme design and increase relevance.

There is a strong need for flexible, innovative learning approaches and delivery methods: to improve quality and relevance while expanding student numbers, to widen participation to diverse groups of learners, and to combat drop-out. One key way of achieving this, in line with the EU Digital Agenda¹³, is to **exploit the transformational benefits of ICTs and other new technologies** to enrich teaching, improve learning experiences, support personalised learning, facilitate access through distance learning, and virtual mobility, streamline administration and create new opportunities for research¹⁴.

In meeting the increased demand for knowledge workers, **researcher training** in higher education must be better aligned with the needs of the knowledge-intensive labour market and in particular with the requirements of SMEs. High quality, industry-relevant doctoral training is instrumental in meeting this demand for expert human capital. Linking funding to the implementation of the EU **Principles on Innovative Doctoral Training**¹⁵ will allow Europe to train more researchers better and faster.

The reform and modernisation of Europe's higher education depends on the competence and motivation of teachers and researchers. Yet teaching and research staffing has often not kept pace with expanding student numbers which puts pressure on already strained capacities. Better working conditions including transparent and fair recruitment procedures¹⁶, better initial and continuing professional development, and better recognition and reward of teaching and research excellence are essential to ensure that Europe produces, attracts and retains the high quality academic staff it needs.

Key policy issues for Member States and higher education institutions:

- Encourage the use of **skills and growth projections** and **graduate employment data** (including tracking graduate employment outcomes) in course design, delivery and evaluation, adapting **quality assurance** and **funding mechanisms** to reward success in equipping students for the labour market.

¹² See Staff Working Document, Section 4.1

¹³ COM (2010) 245 final

¹⁴ See Staff Working Document, Section 4.3

¹⁵ These principles, prepared with the support of the ERA Steering Group Human Resources and Mobility, call for research excellence and creativity, an attractive institutional environment with critical mass and respect for the Charter and Code for attractive working conditions for researchers, interdisciplinary research options, exposure to industry and other relevant work sectors, international networking and mobility, transferable skills training and quality assurance.

¹⁶ Including in line with the 'European Charter for Researchers and Code of Conduct for their Recruitment'

- **Encourage a greater variety of study modes** (e.g. part-time, distance and modular learning, continuing education for adult returners and others already in the labour market), by adapting funding mechanisms where necessary.
- **Better exploit the potential of ICTs** to enable more effective and personalised learning experiences, teaching and research methods (eg. eLearning and blended learning) and increase the use of virtual learning platforms.
- Enhance the capacity of labour market institutions (including public employment services) and regulations to match skills and jobs, and develop **active labour market policies** to promote graduate employment and enhance career guidance.
- Introduce **incentives** for higher education institutions to invest in continuous **professional development** for their staff, recruit sufficient staff to develop emerging disciplines and **reward excellence** in teaching.
- Link funding for doctoral programmes to the **Principles for Innovative Doctoral Training**.

2.3. Strengthening quality through mobility and cross-border co-operation

Learning mobility helps individuals increase their professional, social and intercultural skills and employability. The ministers of the European Higher Education Area (EHEA) have agreed to double the proportion of **students completing a study or training period abroad to 20% by 2020**¹⁷. The EHEA has brought about far-reaching changes: the bachelor-master-doctorate structure and advances in quality assurance have facilitated individual mobility and strengthened institutions and systems. In parallel, the development of the **European Research Area (ERA)** is increasing complementarity between national systems to enhance the cost effectiveness of research investment and intensify exchanges and cooperation between institutions.

However, the recognition of academic qualifications gained abroad is still too difficult; the portability of grants and loans is restricted; “vertical” mobility¹⁸ remains limited; and obstacles hinder the free movement of researchers within the EU. The implementation of the Council Recommendation on promoting learning mobility¹⁹, and the use of European quality assurance tools such as the European Quality Assurance Register, would facilitate mutual trust, academic recognition and mobility.

Attracting the **best students, academics and researchers from outside the EU** and developing **new forms of cross-border cooperation** are key drivers of quality. They can also be important sources of income for institutions. Although some Member States are a very attractive study destination²⁰, the EU *as a whole* needs to attract the best students and researchers if it is to

¹⁷ See SEC(2011) 670 final.

¹⁸ Changing countries between bachelor, master and doctoral levels.

¹⁹ Council Recommendation on promoting the learning mobility of young people, 28 June 2011

²⁰ See Staff Working Document, Section 7.1

compete with the US²¹. Europe's attractiveness can be enhanced if a number of concerns are urgently addressed: increasing cost and uneven quality; difficult academic recognition; non-transparent recruitment and unattractive working conditions for researchers; and problems in obtaining visas to study and work, including for intra-EU mobility.

Key policy issues for Member States and higher education institutions:

- Encourage institutions to **build learning mobility more systematically into curricula**, and **eliminate unnecessary barriers** to switching institutions between bachelor and master levels and to cross-border co-operation and exchanges.
- Ensure the **efficient recognition of credits gained abroad** through effective quality assurance, comparable and consistent use of ECTS and the Diploma Supplement, and by linking qualifications to the European Qualifications Framework.
- Improve access, employment conditions and progression opportunities for students, researchers and teachers from other countries, including by fully implementing the **Directives on students and researchers**²² and the **EU Visa Code** to facilitate the issuing of Schengen visas to students and researchers undertaking short stays²³.

2.4. Making the knowledge triangle work: Linking higher education, research and business for excellence and regional development

The contribution of higher education to jobs and growth, and its international attractiveness, can be enhanced through **close, effective links between education, research and business** – the three sides of the “knowledge triangle”. The recent shift towards open innovation has resulted in increased flows of knowledge and new types of co-operation between education institutions, research organisations and business. But the capacity of higher education institutions to integrate research results and innovative practice into the educational offer, and to exploit the potential for marketable products and services, remains weak²⁴.

Working across the boundaries of research, business and education requires in-depth scientific knowledge, entrepreneurial skills, creative and innovative attitudes and intensive interaction between stakeholders to disseminate and exploit knowledge generated to best effect. **Public policies which encourage partnership** between professional institutions, research universities, business and high-tech centres can anchor education in the knowledge triangle, improve the continuum between basic and applied research, and transfer knowledge to the market more effectively. Improved management of intellectual property will facilitate this process²⁵.

²¹ ibid

²² Council Directive 2004/114/EC and Council Directive 2005/71/EC

²³ Stays of no more than three months within a six-month period

²⁴ Council Conclusions on the knowledge triangle - 20 October 2009

²⁵ See Recommendation on the management of intellectual property C(2008) 1329 final, 10.04.2008

As centres of knowledge, expertise and learning, **higher education institutions can drive economic development** in the territories where they are located; they can bring talented people into innovative environments and harness regional strengths on a global scale; they can foster an open exchange of knowledge, staff and expertise. They can also act as the centre of a knowledge network or cluster serving the local economy and society, if local and regional authorities implement smart specialisation strategies to concentrate resources on key priorities and maximise impact.

Key policy issues for Member States and higher education institutions:

- Stimulate the development of **entrepreneurial, creative and innovation skills** in all disciplines and in all three cycles, and promote **innovation in higher education** through more interactive learning environments and strengthened knowledge-transfer infrastructure.
- Strengthen the knowledge-transfer infrastructure of higher education institutions and enhance their capacity to engage in start-ups and spin-offs.
- Encourage **partnership and cooperation with business as a core activity of higher education institutions**, through reward structures, incentives for multidisciplinary and cross-organisational cooperation, and the reduction of regulatory and administrative barriers to partnerships between institutions and other public and private actors.
- Promote the systematic involvement of higher education institutions in the development of integrated local and regional development plans, and **target regional support towards higher education-business cooperation** particularly for the creation of regional hubs of excellence and specialisation.

2.5. Improving governance and funding

Higher education systems require adequate funding, and the Europe 2020 strategy highlights the need to protect the growth-enhancing areas of education and research when prioritising public spending. Yet, while spending levels vary substantially between Member States²⁶, total **investment in higher education in Europe is too low**: 1.3% of GDP on average, compared with 2.7% in the US and 1.5% in Japan. The current pressure for fiscal consolidation has inevitably led Member States to assess the cost-effectiveness of their public investments in higher education and research: while some have reduced spending, others have increased budgets in recognition of the growth potential of spending in these areas.

Public investment must remain the basis for sustainable higher education. But the scale of funding required to sustain and expand high-quality higher education systems is likely to necessitate additional sources of funding, be they public or private. Member States are increasingly striving to maximise the value of resources invested, including through targeted performance agreements with institutions, competitive funding arrangements, and channelling

²⁶ See Staff Working Document, Section 6.1

finance directly to individuals. They are looking to **diversify funding sources**, using public investment to lever funds from elsewhere and drawing to a larger extent on private funding; tuition fees are becoming more widespread, particularly at masters level and above. It will be important to monitor and assess the effectiveness and impact of these new developments, including on students from poorer backgrounds, and on equity and mobility.

The challenges faced by higher education require **more flexible governance and funding systems** which balance greater autonomy for education institutions with accountability to all stakeholders. Autonomous institutions can specialise more easily, promoting educational and research performance²⁷ and fostering diversification within higher education systems. But legal, financial and administrative restrictions continue to limit institutional freedom to define strategies and structures and to differentiate themselves from their competitors. The efficiency of higher education institutions and so the effectiveness of public investment can be enhanced by **reducing restrictions**: on raising private revenue, on capital investment, on the ownership of infrastructure, on the freedom to recruit staff, on accreditation. Investment in **professional management** can provide strategic vision and leadership while allowing teachers and researchers the necessary academic freedom to concentrate on their core tasks.

Key policy issues for Member States and higher education institutions:

- Encourage a better identification of the real costs of higher education and research and the careful targeting of spending, including through funding mechanisms linked to performance which introduce an element of competition.
- Target funding mechanisms to the needs of different institutional profiles, to encourage institutions to focus efforts on their individual strengths, and develop **incentives to support a diversity of strategic choices** and to develop **centres of excellence**.
- Facilitate access to **alternative sources of funding**, including using public funds to leverage private and other public investment (through match-funding, for example).
- Support the development of strategic and professional higher education leaders, and ensure that higher education institutions have the **autonomy to set strategic direction**, manage income streams, reward performance to attract the best teaching and research staff, set admissions policies and introduce new curricula
- Encourage institutions to modernise their **human resource management** and obtain the HR Excellence in Research logo and to implement the recommendations of the Helsinki Group on Women in Science²⁸.

²⁷ See Staff Working Document, Section 6.2

²⁸ See Staff Working Document, Section 6.3

3. THE EU CONTRIBUTION: INCENTIVES FOR TRANSPARENCY, DIVERSIFICATION, MOBILITY AND COOPERATION

The key policy issues outlined in Section 2 must be addressed in the first place by national authorities and institutions. But the EU can significantly support their efforts to reform higher education systems through the different EU policy and budgetary instruments.

As concerns policy, the governance and reporting mechanisms of Europe 2020 provide the main instrument to monitor developments and support Member States' reform efforts, including through country-specific recommendations linked to the Integrated Guidelines.

At the same time, the EU should make better use of the policy tools available in the field of higher education, in particular the European cooperation framework in education and training 'ET2020'. The Commission can support transparency and excellence through **evidence-based policy analysis**. It can support **mobility of learners, teachers and researchers**. It can support **strategic cooperation** between European institutions, and, in a context of increasing global competition for talent, provide a common framework to support the **interaction of European higher education with the rest of the world**.

As concerns funding, the Multiannual Financial Framework 2014-2020 will offer an opportunity to ensure that EU instruments and policies – particularly education, research, employment, entrepreneurship, migration and Cohesion – work together effectively to support the modernisation of higher education. The Commission, in focussing EU spending closely on the priorities of the Europe 2020 Strategy and on the key drivers of growth and jobs, has proposed a substantial increase in the budgets for education programmes and for research.

3.1. Supporting reform through policy evidence, analysis and transparency

The Commission will focus on improving the evidence base for policy-making in key areas. The available information on the performance of higher education institutions focuses mainly on research-intensive universities, and thus covers only a very small proportion of Europe's higher education institutions²⁹: **it is essential to develop a wider range of analysis and information, covering all aspects of performance** - to help students make informed study choices, to enable institutions to identify and develop their strengths, and to support policy-makers in their strategic choices on the reform of higher education systems. Evidence shows that **a multi-dimensional ranking and information tool is feasible and widely supported by education stakeholders**.³⁰

In addition, **better labour market intelligence on current and future skills requirements** would help identify growth employment areas and allow for a better match between education and labour market needs. As stated in the New Skills and Jobs flagship initiative, the Commission will set up the "EU Skills Panorama" to improve intelligence on current and future skills needs.

²⁹ The question of excellence of institutions pertaining to the EU research targets will be the subject of further analysis.

³⁰ See Staff Working Document, chapter 1.1. A "U-Multirank" tool would enable users to profile institutions based on data on the quality of teaching (e.g. employability outcomes), research performance, the capacity for knowledge transfer and for supporting regional development and the degree of internationalisation.

Improving conditions for graduates to gain practical experience, for example through high quality traineeships, can further facilitate their integration in the labour market.

The European Commission will:

- **Launch U-Multirank: a new performance-based ranking and information tool for profiling higher education institutions**, aiming to radically improve the transparency of the higher education sector, with first results in 2013. By moving beyond the research focus of current rankings and performance indicators, and by allowing users to create individualised multidimensional rankings, this independently run tool will inform choice and decision-making by all higher education stakeholders.
- In co-operation with Eurostat, **improve data on European higher education learning mobility and employment outcomes**, and work towards a **European Tertiary Education Register**.
- Provide specific guidance and recommendations on raising basic and transversal skills and overcoming skill mismatches.
- In cooperation with Member States and stakeholders, analyse the impact of different funding approaches on the diversification, efficiency and equity of higher education systems, as well as on student mobility.

3.2. Promoting mobility

With the launch of the **European Higher Education Area**, the Bologna Process will reinforce mobility and cooperation. However, some mobility flows can be a challenge for those education systems which receive substantial inflows of students, or threaten 'brain drain' in countries where many talented people choose to study and then remain abroad. At the same time there are concerns about the quality of cross-border education, including in the case of so-called "franchised" provision.

EU mobility programmes such as Erasmus and Erasmus Mundus have achieved far-reaching positive effects for individuals and institutions. **Three million students will have benefited from the current Erasmus programme** by 2013, and mobility opportunities for higher education teachers and staff are also increasing. In parallel, the Commission is developing a '**mobility scoreboard**' to assess progress in removing obstacles to learning mobility³¹ within the EU. The Single Market Act³², a focused action plan to unlock the internal market's potential for growth, jobs and citizens' confidence, includes the revision of the Professional Qualification Directive to reduce barriers to mobility in the regulated professions. Mobility for researchers will be facilitated by the **European Framework for Research Careers**, a new transparency tool to be applied in the EURAXESS Jobs Portal.

³¹ Agreed in Council Recommendation on the learning mobility of young people, 28 June 2011

³² See COM(2010)206, 13.04.2011

Masters degrees allow students to acquire the kind of advanced skills that are particularly valuable for knowledge-intensive jobs and research. Cooperation and mobility at Masters level can be instrumental in strengthening centres of excellence across Europe, making this an area where the EU has clear potential to add value. However, current EU funding instruments do not currently support full degree mobility at Masters level, which generally requires financial support for 12 months or more³³. Moreover, restrictions on the portability of national loans limit their application for taking a full degree abroad, while commercial loans are typically inaccessible for students from lower income backgrounds. The European Commission has identified a need for further financial support for this group of students.

The European Commission will:

- Improve the recognition of studies abroad, by strengthening the **European Credit Transfer and Accumulation System** (ECTS), proposing incentives in EU programmes to improve implementation, and working through the Bologna Process.
- Propose an **Erasmus Masters Degree Mobility Scheme** (through a European-level **student loan guarantee facility**), operational from 2014, to promote mobility, excellence and access to affordable finance for students taking their Masters degree in another Member State regardless of their social background.
- In the context of the **EHEA**, contribute to strengthening synergies between the EU and intergovernmental processes.
- Support the **analysis of the potential of student mobility flows**, including within the Bologna process, to take into account the judgements of the European Court of Justice,³⁴ and of Quality Assurance standards to support the quality of franchise education.
- Promote the **European Framework for Research Careers** to foster cross-border researcher mobility, helping researchers to identify job offers and employers to find suitable candidates, profiling research posts according to four levels of competence³⁵.

3.3. Putting Higher Education at the centre of Innovation, job creation and employability

Europe's future capacity for innovation will depend upon higher education institutions fully embracing their role within the knowledge triangle, alongside business and non-university research organisations.

³³ Erasmus supports credit mobility, rather than full degree mobility, while Erasmus Mundus supports mobile students attending specific Erasmus Mundus Masters programmes only.

³⁴ Case C-73/08 Nicolas Bressol and Céline Chaverot and Others v. Gouvernement de la Communauté française

³⁵ Common profiles (first stage/recognized/established/leading researcher) for all sectors and participating countries, as called for in the Innovation Union (2010). Report adopted by the ERA Steering Group on Human Resources and Mobility, May 2011.

The **European Institute of Innovation and Technology** (EIT) provides a genuine model of integrating higher education in the knowledge triangle. Through educational programmes of high academic standing, the EIT and its Knowledge and Innovation Communities (KICs) promote knowledge-intensive entrepreneurship building on multi-disciplinary, innovative research. The EIT will increasingly focus on disseminating the lessons learned, thus providing examples of integrated partnerships, new governance and funding models to increase the innovation potential of higher education institutions in cooperation with business. The Commission intends to propose further steps to develop the knowledge triangle in its proposal regarding the Strategic Innovation Agenda, foreseen by the end of the year.

There is further scope to support the interaction between higher education and the wider economy at EU level, to support the flow of knowledge. Recent European pilot projects to foster the development of structured partnerships – "**knowledge alliances**" - bringing together businesses with higher education institutions to design and deliver new courses have already produced promising results and should be developed further.

The **Marie Curie Actions** are also an effective tool for stimulating knowledge transfer, while the **new European Research Area framework** to be presented in 2012, will support measures to remove obstacles to researcher mobility and cross-border cooperation³⁶. The Commission is also developing **European Industrial Doctorates** and **Doctoral Schools** to foster innovation in training for the researchers of tomorrow.

The success of the Erasmus placements, introduced into the Erasmus programme from 2007, illustrates the demand for opportunities to gain practical, work-relevant experience as part of higher education study programmes. Traineeships are an important mechanism for matching graduate skills with labour markets needs, as well as for the personal development of students. However, internships and placements today do not always provide the right conditions for students to develop their skills and receive appropriate recognition for experience gained. More needs to be done to **improve the quality and relevance of traineeships**.

The European Commission will:

- Adopt by the end of 2011 a **Strategic Innovation Agenda** designing the future of the EIT, its priorities, and proposal for new KICs to be launched.
- Build on the pilot project recently launch to strengthen the interaction between universities and business through **the knowledge alliances**
- Strengthen within the Marie Curie actions a **European Industrial PhD Scheme** in order to support applied research
- Propose a **quality framework for traineeships** to help students and graduates get the practical knowledge needed for the workplace and obtain more and better quality

³⁶

In line with the Code of Conduct for the Recruitment of Researchers and European Charter for Researchers

placements. It will also create a single and centralised platform for traineeship offers in Europe

3.4. Supporting the internationalisation of European higher education

Future co-operation in higher education within the EU should be part of a wider strategy to engage with partner countries across the world, to promote the EU's values and expertise, and support higher education in developing countries as an integral part of the EU's development policy and of a comprehensive approach to education sector development. The Commission will promote consistency between EU and national actions for research through the Strategic Forum for International Scientific and Technological Cooperation.

The internationalisation and openness of higher education systems requires a joint approach from a wide range of policy areas and stakeholders, to attract the best students, staff and researchers from around the world, to increase international outreach and visibility, and to foster international networks for excellence. The Commission will explore the possibility to design a *specific strategy for the internationalisation of higher education*³⁷:

The European Commission will:

- Promote the EU as a study and research destination for top talent from around the world, by supporting the establishment and development of internationalisation strategies by Europe's higher education institutions.
- Develop **relations** on higher education with partners beyond the Union, aiming to strengthen national education systems, policy dialogue, mobility and academic recognition, including via the Enlargement strategy, the European Neighbourhood Policy, the Global Approach to Migration, and the Bologna Policy Forum.
- Make use of existing **Mobility Partnerships** to enhance and facilitate exchanges of students and researchers.
- Consider proposing amendments to the **students and researchers Directives**³⁸, to make the EU even more attractive to talent from non-EU countries, and examine whether the processes and the accompanying rights should be facilitated and/or strengthened. .
- Strengthen the tracking of non-EU doctoral students as a percentage of all doctoral students, as indicated in the **Performance Scorecard for Research and Innovation** to measure the attractiveness of EU research and doctoral training to the rest of the world.

³⁷ As called for in Council Conclusions on the internationalisation of higher education, 11 May 2010.

³⁸ As well as Recommendation 2005/761/EC to facilitate the issue by the Member States of uniform short-stay visas for researchers from third countries travelling within the Union to carry out scientific research

3.5. Strengthening the long-term impact and complementarity of EU funding

EU investment in higher education is proposed to be channelled through three main funding mechanisms of the 2014-2020 MFF:

1. Education Europe: the single programme for education training and youth

To contribute to the Europe 2020 goals, the Commission will propose a single **programme for education, training and youth**, with simplified entry points and management. The programme will focus spending on priorities such as quality and innovation in teaching, enhanced links with the world of work, and better recognition of skills gained through mobility. It will contribute to the Bologna 20% mobility target, focussing resources on: mobility opportunities based on quality and excellence (including through Erasmus Masters Degree Mobility); intensive cooperation and capacity-building partnerships across Member States and with global partners; specific initiatives to recognise and reward excellence in teaching, and encourage student entrepreneurs and innovative university-business cooperation.

2. Horizon 2020: the Framework Programme for Research and Innovation

The new Horizon 2020 programme will cover all relevant EU research and innovation funding currently provided through the Seventh Research Framework Programme, the Competitiveness and Innovation Programme and other EU innovation initiatives, such as the EIT. Horizon 2020 aims to make EU funding more attractive and easier to access. It will ensure a high degree of policy coordination and maximise synergies between initiatives, and will enable simpler, more efficient streamlined funding instruments covering the full innovation cycle.

3. Cohesion Policy instruments

In the 2007-2013 funding period, around €72.5 billion EU cohesion funding will be spent on education and training, and €60 billion on research and innovation. A strategic use of the EU's **Cohesion Policy** can significantly enhance the social, economic and territorial contribution of higher education. The **European Regional Development Fund** can invest in building or renovating higher education institutions, providing equipment and promoting digitalisation, and support incubators, spin-offs and other forms of university-business partnerships. The **European Social Fund** (ESF) can finance modernisation processes, increase participation and attainment particularly for students from under-represented backgrounds, enhance educational content and the match between programmes and labour market demand. The MFF proposal for 2014-2020 allocates a minimum of €84 billion to the ESF, of which over €40 billion could be expected, based upon past experience, to be made available for education and training.

3.6. Next steps towards smart, sustainable and inclusive European Higher Education

In setting out this Communication, the Commission has consulted widely: with higher education institutions' leaders, teachers, researchers and students, with businesses and social partners, with governments and with international bodies. It will **continue to engage with these stakeholders**

along with the European Parliament, the Committee of the Regions and the Economic and Social Committee, the European Investment Bank and Eurostat, to take forward this agenda for action.³⁹

The Commission will also draw upon external expertise to develop progressive policies and identify innovative practices. As a first step, in 2012, it will establish **a high-level group with a rolling mandate to analyse key topics for the modernisation of higher education**, starting with the promotion of excellence in teaching and reporting in 2013.

Modern and effective higher education systems are the foundation of an open, confident and sustainable society; of a creative, innovative and entrepreneurial knowledge-based economy. The shared efforts of Member State authorities, higher education institutions, stakeholders and the European Union will be crucial for achieving the goals set out in this Communication and underpinning Europe's wider success.

³⁹ For example, work with the EIB on a European Student Loan Guarantee, with the Committee of the Regions on the role of higher education in regional development, and with Member States through the Thematic Working Group on the Modernisation of Higher Education.