Federal Government Position Paper

cconcerning the communication from the European Commission on
"A Reinforced European Research Area Partnership for Excellence and Growth"

13 February 2013
1. Preliminary Note

In accordance with para 1 of Article 179 TFEU, the Union pursues the objective of achieving a European Research Area (ERA). In this context, the Union and the Member States coordinate their activities in the field of research and technological development in order to ensure coherence between national and Union policies. On the other hand, Union activities in the field of research and technological development must be adequately geared to basic research policy approaches and decisions of the Member States. The Commission may fix guidelines and indicators to monitor and evaluate the progress made in coordinating Union and Member State R&D policies. Within the framework of shared responsibility under para 5 of Article 182 TFEU, the Commission may take legislative action to the extent required for the implementation of the ERA. This shows that the establishment of the ERA is first and foremost a task for the Member States. However, the Commission supports this process, for example through the Research Framework Programme.

In its communication on "A Reinforced European Research Area Partnership for Excellence and Growth" of 17 July 2012, the Commission submitted proposals for further development of the process. The German Federal Government is presenting its position concerning these proposals in the following. The communication sets out five priorities which partly overlap with the current five ERA initiatives:

1.) More effective national research systems  
2.) Optimal transnational cooperation and competition  
3.) An open labour market for researchers  
4.) Gender equality and gender mainstreaming in research  
5.) Optimal circulation, access to and transfer of scientific knowledge also via the digital ERA

Priority 4 "Gender equality and gender mainstreaming in research" is new. The Commission published a special communication on 14 September 2012 concerning the fifth ERA initiative on international cooperation in research and development.

The following political positions are specified in greater detail in the annexes, which document the results of the workshops held by BMBF with research organisations, universities, industry, ministries and the Länder.
2. Positions

Germany was able to help initiate the development of the ERA during the German Council Presidency in 2007. The Green Paper on the European Research Area was discussed by the Member States and the associated states at the informal Council meeting in Würzburg in April 2007. The Federal Government takes the view that mainly positive results have been achieved so far. Europe needs the ERA. The aim must be to make the European Research Area as much an everyday reality for people in Europe as the common market and freedom of movement. This is why the Federal Government supports the communication as another important step in this direction. The Federal Government is willing to contribute to further progress on the implementation of the ERA, identify options for action and take concrete action. At the same time, differences must be acknowledged and even fostered where they are required for developing excellent research systems.

2.1 More effective national research systems (Priority 1)

(1) For many years now, public funds have been awarded in a competitive procedure to support science and research in Germany. The Federal Government sees no need to revise legal provisions.

(2) For science and research funding to be successful, international peer review principles like excellence, objectivity, transparency, confidentiality and ethics of science must not only be applied in the evaluation of project proposals but also in the evaluation of articles in scientific journals, of researchers in appointment procedures and of institutions. These principles are an integral part of the German science and research system. It is an agreed objective of our national Pact for Research and Innovation to launch suitable measures to ensure and optimize the quality, efficiency and performance of science and research institutions which receive institutional funding. Legal provisions are not required to achieve this.

2.2 Optimal transnational cooperation and competition (Priority 2)

a) Jointly addressing grand challenges

(1) Application of the principles of open access, voluntarism and variable geometry is a major prerequisite for the lasting success of transnational cooperation from the Federal Government’s point of view.

(2) The Federal Government considers that the implementation of joint research agendas is made more difficult by a growing number of thematically similar and partly competing initiatives, instruments, processes, agendas and governance structures at EU level. The large number of research and innovation agendas must remain transparent for research stakeholders with regard to subjects and structures; this is the only way for the European Research Area to win acceptance and gain a reputation. The Federal Government therefore requests that funding instruments that have proven their worth should continue to be applied on a long-term basis and that the suitability, objectives and coherence of new instruments and schemes should be reviewed before introducing them. Consolidation of successful initiatives would enable longer term cooperation between research groups in different Member States, and it would yield measurable results such as structural activities, joint publications and exchanges of researchers and methods.
particular, prior consideration must be given to whether this will serve the common goal of making the ERA a success.

(3) Societal challenges have an international dimension which requires cooperation with non-EU countries. The Federal Government expressly supports such cooperation and sees a major role for the Member States in developing the extraterritorial dimension of the ERA. As a rule, Member States have only concluded bilateral agreements with third countries so far. In future, it would be possible to conclude multilateral scientific and technological cooperation agreements that have been drafted by the SFIC in a variable geometry approach.

(4) Implementing transnational calls through alignment of national resources at European level has become a routine procedure for many research stakeholders in a large number of ERA-NETs. Together with other initiatives like the Joint Programming Initiatives, they are strategic initiatives whose substantial and structural impact goes beyond the mere implementation of transnational calls through alignment of national resources at European level. From the Federal Government's viewpoint, it would therefore be a mistake to measure the success of such initiatives using monetary indicators only. The success of the ERA should increasingly be measured with output factors rather than with input factors.

(5) Joint calls with single joint evaluation of the project proposals in accordance with international peer review standards are already an established option in European research and innovation funding. Usually bilateral or multilateral calls are issued which involve different countries and are coordinated between research organisations. The idea of launching and organising pan-European calls in all Member States does not improve quality – not least owing to the differences in national prerequisites and the related complexity. In the Federal Government's view it is therefore important that the Commission supports the Member States with regard to the processes that are being developed for joint calls on a voluntary basis. Horizon 2020 is a suitable instrument in this context.

(6) We generally welcome provision of support by the Commission for the implementation of international peer review evaluations (e.g. through giving Member States access to EU expert databases) and assistance in the formulation of common funding standards. The Federal Government believes that binding Commission requirements for internal processes and operations would be counterproductive. The Academic Freedom Act, which the Federal Government adopted recently, increases the operational autonomy of science institutions.

(7) Where transnational initiatives of the Member States include common evaluation procedures, the results of scientific and technical evaluation are usually recognized in Germany. But deriving a direct national claim to funding from positive international evaluation is only possible after verification of formal admissibility of the proposal on the basis of national budgetary rules.

(8) In transnational initiatives of research stakeholders, it is a task for the participating organisations to agree common funding principles on the basis of national budgetary and funding rules. Common funding principles on a voluntary basis have proven useful where they allow the Member States and their regions a certain degree of flexibility with regard to their interpretation and application. The Federal Government and the research stakeholder organisations take the view that legally binding solutions for all partners would obstruct rather than encourage interoperable national programmes.

(9) Germany's research stakeholders support current efforts to develop the models for cross-border cooperation such as the lead agency principle under the agreement
between Germany, Austria and Switzerland, the 'Money Follows Researcher' policy or the 'Money Follows Cooperation' line, apply them on a broader scale or test new approaches. The research stakeholder organisations are opposed to multilateral cooperation that would be mandatory for all national and regional funding activities in the area of research and innovation.

(10) The great number of existing multilateral initiatives, whether or not supported by the Commission, reveals growing transnational cooperation. The successful submission of proposals, for example for an ERA-NET, and the agreement on an Article 185 activity already involves the recognition or development of best practice for cross-border research cooperation. Before introducing an ERA label, the Commission should consider its added value and enable the Member States to participate in the process.

b) Effective investment in and use of research infrastructures

(1) The funding of ESFRI projects is first and foremost the responsibility of the participating Member States and international organisations. The option suggested by the Commission to link the national roadmap to national Structural Fund programmes with the aim of ensuring that the establishment of research infrastructures (RIs) is at least partly financed from structural funds may be a suitable approach and can be used by the Member States and regions to finance not only investments in the host country but also non-cash contributions to RIs in other Member States and possibly also to cover operating expenses.

(2) The responsibility of ESFRI to update the roadmap at regular intervals and adapt it to current developments is closely linked to the necessity to establish priorities with regard to the projects as required. The Federal Government supports efforts to extend the mandate of ESFRI.

(3) The budget earmarked for RIs under Horizon 2020 should support greater access of excellent researchers from Member States which are not partners in the RIs.

(4) Access to RIs should be facilitated. But from the Federal Government's point of view, this must be agreed with the individual RI and maybe the competent Federal Ministry as well as with the host country, and existing capacities must be taken into account.

(5) When awarding funds under Horizon 2020, ERIC RIs must not be given preference over ESFRI projects which opted for a different legal form (e.g. XFEL, FAIR and PRACE).

(6) We welcome the Commission's efforts to enable Member States to make better use of structural funds when implementing ESFRI projects, thereby strengthening the capacities of disadvantaged regions in Europe, for example by funding regional partner facilities or promoting an environment for excellent RIs. Excellence must be a central criterion in decisions about where to establish RIs.

(7) ESFRI is a suitable player when it comes to drafting a charter for access to RIs together with the Commission. However, as a forum of the Member States and associated countries, ESFRI can only support solutions which leave the decision about access to the respective institution or host country.

(8) The evaluation principles, impact assessment criteria and monitoring instruments to be developed by the Commission together with ESFRI among others should be understood as recommendations and can only be used in regional, national and European programmes after consultation with the Member States concerned. Their application in regional or national programmes must by no means become mandatory.
(9) In view of the numerous new tasks which ESFRI is expected to assume (establishing priorities, developing criteria for evaluation, access, etc.) Germany thinks it it necessary that ESFRI be given the financial means it needs to pay for external support, e.g. by experts, in evaluation activities. Germany is willing to contribute funding for this purpose to a common pot which is to be supplied by the Member States.

(10) Member States must be directly involved in any efforts to coordinate European and national policies for the development and use of eRIs.

2.3 An open labour market for researchers (Priority 3)

(1) In its 2009 and 2010 reports on research partnership, the Federal Government had outlined that Germany's Basic Law and the Länder Higher Education Laws require open and increasingly international recruitment of professors. Open announcement is also the regular procedure for vacancies for junior research staff. Exceptions may be made in cases such as for short-term positions or where candidates must meet special requirements.

(2) For many years, German universities have made good progress with their efforts to establish and enhance courses for additional qualifications and more structured doctoral programmes. At the same time, Germany upholds the concept of individual choices regarding doctoral programmes. As a matter of principle, independent research must remain the core element of doctoral studies.

(3) Germany supports the principles of the Charter ("European Charter for Researchers") and Code ("Code of Conduct"), which it has already implemented taking into account the national conditions and the caveats expressed by the individual scientific organisations at the time of signature. Examples are the equal opportunities standards of the scientific organisations and quality assurance measures such as the "Family-friendly university"\(^1\) or the "Total E-Quality"\(^2\) award. Germany advocates providing advisory services, available on a voluntary basis, to improve the quality of hiring policies at scientific institutions since they have proven to have a more lasting effect. This is why Germany rejects the idea of introducing an accreditation mechanism for human resources management.

(4) Germany initiated the establishment of the EURAXESS portal, which has become an efficient instrument for job mobility in Europe. It is an especially suited medium for research vacancy announcements when a particular job profile calls for its announcement in English or if vacancies can in principle be posted in German as well. However, the Federal Government cannot agree to the requirement of publishing all vacancies in English on EURAXESS. Germany has a public job placement system organised by the Federal Employment Agency and operational mechanisms for advertising and seeking jobs in research via daily and weekly newspapers and websites. It would be beneficial for EURAXESS to become increasingly linked to these private advertisers such as Die Zeit or www.academics.de.

(5) Universities and non-university research institutions traditionally work in very close collaboration with industry in Germany. The doctoral degree is an academic title, and this is why universities must remain the principal responsible party during doctoral training, also with a view to uniform quality assurance. The Federal Government rejects the idea of introducing a special "industry PhD".

\(^1\) http://www.beruf-und-familie.de/index.php?c=22
\(^2\) http://www.total-e-quality.de/das-praedikat.html
The Federal Government prefers coordination to harmonisation of the pension systems at European level. Coordination should be standardised for all employees. Granting special status to researchers is not justifiable. Aiming to enhance the mobility of European researchers and to continue to remove obstacles to mobility, the Federal Government supports the Pension Institution of the Federal Republic and the Länder (VBL) in setting up an internet platform which will provide information to scientists from around the world about the benefits they gained and can expect in Europe. The Federal Government is also supporting the German Rectors’ Conference to provide universities and scientific organisations with regular updates on current developments in pension rights for mobile scientists. It also encourages the Conference to make suggestions for improvements.

2.4 Gender equality and gender mainstreaming in research (Priority 4)

(1) The Federal Government generally supports the objective of removing legal and other barriers to the recruitment, retention and career progression of female researchers. Due to our federal system and differences between the German Länder, a high degree of institutional autonomy is, however, necessary for implementation. It must be possible for the institutions concerned to assume responsibility.

(2) The Federal Government welcomes efforts to address gender imbalances in decision-making processes. Adequate support must be provided to avoid placing a disproportionate workload on the as yet small number of women in research. It must be possible for Member States and institutions to find their own solutions for increasing participation by women. In particular, there must be a possibility to apply a tailor-made cascade model. The Federal Government opposes fixed percentages which are determined without taking into account the different situations in the Member States and are therefore unrealistic.

(3) The Federal Government welcomes the call by the Commission to ensure that at least 40% of the under-represented sex participate in committees. However, a fixed quota may lead to a situation in which women researchers in areas where they have so far been heavily under-represented have to shoulder a disproportionately greater workload than their male colleagues due to committee duties in addition to research. Germany is therefore making a case for adopting a so-called cascade model or a cross-disciplinary target quota that would balance out numbers between the fields instead of applying a fixed quota. The institutions should implement this measure as they see fit.

(4) The Federal Government welcomes initiatives for institutional change to promote gender equality. Germany has already conducted a number of impact assessments or audits of procedures and practices to identify and/or prevent gender bias. The Federal Government notes that similar and meaningful indicators which have been agreed on with Member States are required to measure progress in this area.

(5) The Federal Government appreciates that the Commission will foster gender equality and the integration of a gender dimension in the design, implementation and evaluation of Horizon 2020 programmes and projects. Germany requests that gender equality and a gender dimension should become an integral part of all relevant documents, including the Rules for Participation.
2.5 Optimal circulation, access to and transfer of scientific knowledge (Priority 5)

(1) The Federal Government appreciates that the ERA initiative on knowledge transfer and intellectual property has been supplemented to include the issues of open access and open innovation. The Federal Government shares the view that these three elements of this priority are closely interlinked. Europe can strengthen its competitiveness with open access and open innovation. This requires institutions of higher education and research institutions in Europe to base their activities on comprehensive strategies for handling intellectual property. Cooperation between science and industry must occur on an equal footing, and institutions of higher education and research establishments must exercise a high degree of professionalism in their knowledge and technology transfer activities.

(2) Open access to scientific knowledge is a high priority for the Federal Government. The players in German research organizations are actively promoting open access, for example through the Priority Initiative “Digital Information”. Germany is in an excellent position with its repositories and Open Access journals. The Federal Government has initiated a number of activities to promote open access such as a dialogue between science organizations and scientific publishing companies. The Federal Ministry of Education and Research also plans to add a clause on open access to the auxiliary terms and conditions governing its project funding.

(3) The Federal Government and the stakeholders in German research organizations applaud the EU Commission's initiative to promote open access to scientific knowledge. The Federal Government has taken note of and is reviewing the recommendations issued to the Member States.

(4) It shares the Commission's view that the dialogue about open access must be about open access to scientific publications as well as to research data, and it must address questions concerning the long-term storage of scientific information.

(5) The Federal Government gives high priority to the topic of scientific information infrastructures, for they play a key role in the storage of scientific knowledge and in making it accessible. The German Council of Science and Humanities (Wissenschaftsrat) issued recommendations for the further development of scientific information infrastructures in July 2012. The Federal Government and the Länder have appointed a working group on the implementation of the Council's recommendations. The working group can thus review the various Commission proposals.

(6) The Federal Government sees a need for clarification as concerns promoting cross-border access to digital services and electronic identities. In particular, it sees the need for a more precise definition of digital research services.

(7) The Federal Government points out that the development of measures to promote open access to scientific knowledge, digital services for researchers and e-infrastructures at European level must take into account the actions already in place in Member States as well as its implications at international level. The Federal Government believes that there must be a close exchange with Member States to make use of synergies and to avoid duplication of efforts.

(8) The Federal Government shares the Commission's view that improved access to scientific knowledge requires cooperation between Member States, research funding
organizations, researchers, scientific publishing companies, institutions of higher education and their libraries, innovative industries and society at large. The reasonable concerns of all the stakeholders must be taken into account as the issue of Open Access evolves.

(9) The Federal Government has promoted open innovation and the transfer of knowledge and technology on a large scale under its High-Tech Strategy since 2006. One of the basic principles of the High-Tech Strategy is to improve cooperation between science and industry so that scientific knowledge can be transferred more quickly and applied more efficiently. Novel initiatives include the newly launched "Research Campus - Public Private Partnership for Innovations", "2020 - Partnership for Innovation", "Innovation Orientation in Research" and the Validation of the Innovation Potential of Scientific Research - VIP" funding programmes.

(10) Despite the great potential which the Federal Government sees to increase Europe's competitiveness with open innovation, it must remain up to the stakeholders in research to decide either in favour or against it. The Federal Government sees it as the task of Member States and research stakeholder organizations to create the best possible conditions for open innovation to the best of their ability and with the support of the European Commission.

(11) Germany has made good progress in this respect. In addition to the above-mentioned measures, there are funding programmes under the High-Tech Strategy such as SIGNO and EXIST and the High-Tech Start-Up Fund whose objective is to achieve effective transfer of scientific knowledge and orientation towards innovation within the science system.

(12) In 2010, the Joint Science Conference (GWK) in Germany put the implementation of the Commission Recommendation on management of intellectual property in knowledge transfer activities and on a Code of Practice for universities and other public research organizations (IP Charter) on the strategic agenda. The Competitiveness Council had voted on implementation of the Charter on 30 May 2008. The implementation of the IP Charter in Germany is thus already a national strategy that takes into consideration the principle of federalism as well as the needs of the regions and institutions since it grants the Länder and institutions the necessary scope in how to implement the Charter.

(13) The Federal Government also sees a need for continued support of the recognition and professionalization of knowledge transfer activities. A great deal has been done in this area in Germany, and further initiatives are planned for the future. The Federal Government and the Länder have founded 23 patent exploitation agencies since 2001, which are united with other technology transfer agencies under the TechnologieAllianz network. The TechnologieAllianz is also the main contact for interested commercial enterprises. Furthermore, many universities and research institutions have their own knowledge and technology transfer offices. Both systems together provide a basis for knowledge and technology transfer on a broad scale.

(14) Despite the progress made in matters of recognition and professionalization of knowledge and technology transfer at institutions of higher education and research institutions, cooperation between science and industry has yet to become a process
between equal partners across the board. This is why universities and research institutions that have so far not been sufficiently involved in knowledge transfer should pursue broad strategies for cooperation and the management of intellectual property in order to become even more reliable partners for industry. Specialized MBA training programmes and other postgraduate study courses in technology transfer are being considered.

(15) International networking of the knowledge transfer offices is useful if it strengthens European competitiveness. A Code of Conduct should ensure that attention actually focuses on this criterion. We must avoid an unchecked drain of know-how from Europe's institutions of higher education and research establishments to non-European companies as this would harm Europe's competitiveness.

(16) We welcome the European Commission's plan to adopt a comprehensive policy approach to open innovation and knowledge transfer and to hold consultations with the appropriate stakeholders. We assume such consultations will, as a rule, take place in close coordination with the Member States. Furthermore, the Federal Government proposes that the Commission consider whether national initiatives such as EXIST and SIGNO might be implemented and developed successfully at European level. An exchange programme for technology transfer based on the principle of the ERASMUS programme is encouraged.

(17) Owing to widely differing national conditions, it will be difficult to develop a model consortium agreement to enhance knowledge transfer which can actually be applied without major modifications in all 27 Member States. This is why the Federal Government believes a more promising approach is to set up a website at EU level which is linked to important national websites and documents (such as Lambert Agreements, BMWi sample agreements, AT sample agreements).

(18) The Federal Government supports the view that the transfer of scientific knowledge to policymakers and society must be strengthened. The Federal Government believes an appropriate approach to optimizing the transfer of applicable knowledge to these areas may be to make specific demands of research relevant to politics and society – demands that promote transfer and that involve the researchers, the research-funding agencies and contracting authorities as well as partners in the realization of the project. Furthermore, the ways and means of integrating stakeholders in society in the process of identifying the need for research must be strengthened.
3. Transparent monitoring: ERA monitoring mechanism (EMM)

(1) The planned ERA monitoring mechanism including the indicators should be developed by the Commission in close cooperation with the Member States. The various ERA topics and target groups require a differentiated view of possible indicators, their value and statistical basis. The Federal Government considers a top-down approach not to be a suitable solution.

(2) The competent working groups of Eurostat must be closely involved in indicator development in order to ensure reliable and sustainable data collection. The Federal Government takes the view that data for the ERA indicators must largely be collected as part of official statistical work and must not result in additional reporting duties for the Member States and research organisations.

(3) The Federal Government is in favour of taking the year 2008 with the Commission’s ERA Green Paper as a basis for evaluating and measuring ERA progress. The informal Council meeting in Würzburg provided the basis for all ERA initiatives with the exception of the ESFRI process. The success of individual initiatives will grow and become visible in the course of time as content develops in these complex transnational processes. The progress of structural measures in the ERA cannot be measured after just a few months as a basis for sustainable policy decisions. Drafting a 2013 progress report on the basis of 2011 statistics – as proposed by the Commission – would make political evaluation more difficult as it would only show minimal progress of the ERA or none at all.
Annex 1: Optimal transnational cooperation and competition

Jointly addressing grand challenges

Results of the BMBF Workshop concerning the European Research Area:

“Optimal transnational cooperation and competition – Jointly addressing grand challenges”

on 26 September 2012

I. Member States are invited to

1. Step up efforts to implement joint research agendas addressing grand challenges, sharing information about activities in agreed priority areas, ensuring that adequate national funding is committed and strategically aligned at European level in these areas and that common ex post evaluation is conducted

a) On the basis of the Council Conclusions of December 2008, the Member States have actively pursued the implementation of joint research agendas for the 10 themes identified by the High Level Group for Joint Programming (GPC). For example, the 10 Joint Programming Initiatives (JPIs) created intergovernmental governance structures, developed common research visions and strategic research agendas and launched the first transnational calls. The Federal Government takes the view that these themes have been properly defined and correspond to the national priorities of the German High-Tech Strategy. Moreover, the process is conducted with sufficient intensity, leading to sustainable capacity and confidence-building between the countries and stakeholders involved.

b) At the same time, however, the Federal Government considers that the implementation of joint research agendas is made more difficult by a growing number of thematically similar and partly competing initiatives, instruments, processes, agendas and governance structures at EU level. This requires a major coordination effort through mutual information and alignment of the numerous funding activities at regional, national, transnational and European levels between government departments, higher education institutions, research establishments and business enterprises. The large number of research and innovation agendas must remain transparent for research stakeholders with regard to subjects and structures; this is the only way for the European Research Area to win acceptance and build up its reputation. The Federal Government therefore requests that only funding instruments that have proven their worth should continue to be applied on a long-term basis and that the suitability, objectives and coherence of new instruments and schemes should be reviewed before they are introduced.

c) Implementing transnational calls through alignment of national resources at European level has become a routine procedure for many research stakeholders in a large number of ERA-NETs. This experience should be put to use more extensively in future. For example, thematically related ERA-NETs could be combined and developed further to form Umbrella ERA-NETs. In this context, the JPIs must not be mistaken for large ERA-NETs, however. They are strategic initiatives whose substantial and structural impact goes beyond the implementation of transnational calls through alignment of national resources at European level. The Federal Government therefore opposes the idea of measuring the success of transnational cooperation, for example under JPIs, using exclusively monetary indicators such as the sum total of jointly spent funds.
d) Any initiative to implement joint research agendas and transnational calls should include an analysis and evaluation of research and innovation policy, programmes, objectives and impact. The type and scope of the method of evaluation to be applied (ex post, ex ante, accompanying) depends on the problem to be addressed and the need for information. From the German viewpoint, there is currently no need to discuss any operative details or an ex post evaluation with regard to the 10 JPIs.

e) The principles of open access, voluntarism and variable geometry are major prerequisites for the lasting success of transnational cooperation.

2. Ensure mutual recognition of evaluations that conform to international peer-review standards as a basis for national funding decisions

Where transnational initiatives (such as ERA-NETs, Art. 185 activities) include common evaluation procedures, the results of scientific and technical evaluation are usually recognized in Germany. This is based on the rules set out in the guide of the BMBF on transnational cooperation and the procedural rules agreed in individual initiatives. At the same time, the formal admissibility of a funding application must be reviewed in accordance with relevant budgetary and funding rules of the national or regional funding organisation, ideally before the international peer review is carried out. The Federal Government rejects derivation of a direct national claim to funding from positive international evaluation without verification of formal admissibility. The Federal Government takes the view that mutual recognition of evaluations should not be a basis for national funding decisions outside transnational initiatives (e.g. in the case of purely national funding activities such as regional R&D programmes).

3. Remove legal and other barriers to the cross-border interoperability of national programmes to permit joint financing of actions including cooperation with non-EU countries where relevant

a) The BMBF guide on transnational cooperation provides a good procedural basis for ensuring cross-border operability with regard to national programmes which aim to encourage transnational cooperation; however, no political or legal claim to general cross-border funding of projects can be derived from this. National programmes will continue to be mainly addressed to national stakeholders. Transnational cooperation means joint funding of activities on the basis of the ‘virtual common pot’ funding model (with each Member State funding its own national contribution to the project).

b) Societal challenges have an international dimension which requires cooperation with non-EU countries. Transnational initiatives (e.g. JPIs, Article 185 activities) are generally open to international cooperation. The procedural rules agreed here between the Member States include the necessary legal and administrative prerequisites. The Federal Government expressly supports cooperation with non-EU countries.

II. Research stakeholder organisations are invited to

1. Agree on common funding principles – eligible costs, reporting requirements, etc. to make national research programmes compatible, interoperable (cross-border) and simpler for researchers

a) Standards for research and innovation funding in Germany are high by international comparison. Jointly agreed and mutually recognized funding procedures, evaluation methods and results and funding principles are already part of various existing
models for cross-border cooperation at both the European and the international level. German funding organisations have gained broad experience with common funding principles, for example in connection with the coordinated or synchronised ERA-NET calls.

b) Agreeing on common funding principles is a task for the participating research stakeholder organisations. National budgetary and funding rules provide the basis for this. Common funding principles have been useful where they rely on voluntarism and allow the Member States and their regions a certain degree of flexibility with regard to their interpretation and application. Legally binding solutions for all partners would obstruct rather than encourage interoperable national programmes. This is why Germany's research stakeholder organisations are opposed to legislative measures at EU level.

c) Reporting requirements in transnational projects must follow a decentralised approach, one major reason being national requirements regarding the language to be used. The implementation of transnational ERA-NET calls has shown that eligible costs in joint programmes can differ between research stakeholders in different countries without affecting the quality and efficiency of the projects or impeding access to funding. The mutual recognition of national and regional accounting practices must therefore continue to be a central aspect in the simplification of procedures in European research and innovation cooperation.

2. Further develop and deploy the Lead-Agency, Money-Follows-Cooperation Line, Money-Follows-Researcher and other models for cross-border cooperation

a) Germany's research stakeholders support current efforts to develop the models for cross-border cooperation further, apply them on a broader scale and test new ones. This includes considering the suitability and practical orientation of specific models for cross-border cooperation in individual cases. The research stakeholders are opposed to multilateral cooperation that would be mandatory for all national and regional funding activities in the area of research and innovation.

b) Under the agreement concluded between Germany, Austria and Switzerland in the field of basic research, German research stakeholders have been able to gain valuable experience with the lead agency principle – experience that can be made available to encourage a European learning process. Confidence-building between participating research stakeholders over time is a central factor for success, but it is not a matter of course. At the same time, the large-scale application of the lead agency principle involves great communicative and administrative efforts which must not be underestimated. The work of the ERA-SGHRM Working Group on access to and portability of grants can be taken as a basis for further action.

c) Enabling the 'Money Follows Researcher' policy is important for developing the European Research Area. But the mere number of cases in which this policy is pursued is not a reliable indicator of the success or failure of this instrument. Consideration must be given to certain preconditions. In cases where local capacities are to be developed (for example clusters or collocation centres), the suitability of this policy must be checked because the money which is to follow the researcher may be needed locally. It should also be noted that the recipient of funding may be a legal or natural person depending on the type of measure. In such cases of research collaboration, the location of the institution is a key factor.
d) Under the 'Money Follows Cooperation' line, an individual project carried out abroad as part of a cross-border research collaboration can be supported with national funds by exception and with good scientific reason. Such funding will only be provided in cases where the project abroad is required for the implementation of the collaborative research and cannot be carried out at national level. The number of such cases is no indicator of the success of cross-border research funding.

3. Pilot the use of synchronised calls with, where possible, single joint international peer review evaluation of proposals as a basis for funding decisions

Joint calls with single joint evaluation of the project proposals in accordance with international peer review standards are already an established option in European research and innovation funding. Usually, bilateral or multilateral calls are issued which involve different countries and are coordinated between research organisations. We do not approve of the idea of launching and organising pan-European calls in all Member States because this does not improve quality – not least owing to the differences in national prerequisites and the related complexity.

III. The Commission will

1. Pursue, stimulate and participate in Public-Public Partnerships to address grand challenges as set out in the Communication on Partnering in Research and Innovation to leverage Member States' contributions and ensure close coordination with relevant activities under Horizon 2020

a) The Federal Government welcomes Commission support for the JPIs in the form of practical assistance and the promotion of exchanges of experience between national stakeholders. The various Coordinated Support Actions (CSA) offered under the 7th Research Framework Programme are essential for cooperation between the Member States. The Federal Government takes the view that Horizon 2020 should continue this approach. The scope and type of financial participation by the Commission in individual JPIs, for example through existing or new public-public partnerships, requires consideration by the participating Member States in each individual case and a Council decision as appropriate.

b) The open method of coordination (OMC) must also be used in future to develop shared agendas between the Union and the Member States.

c) The strategic role of the programme committees under Horizon 2020 must also cover the definition of priorities in the work programmes for the topics of the 'Societal Challenges' focus. This will ensure a high degree of complementarity between the research agendas of the JPI and the individual topics of this focus area.

2. On the basis of the information supplied by Member States, map activities in agreed priority areas, with a view to identifying strengths, weaknesses, gaps and duplications

a) Measures taken at EU level, for example via the Joint Research Centre, to support monitoring efforts and provide information about the activities of the Member States and their regions are of great importance for realising the European Research Area. This is why existing schemes such as ERAWATCH should be developed further.
b) Different approaches are pursued by Member States when setting priorities to address the grand challenges. JPIs must offer sufficient scope for intelligent specialisation by participating Member States. The identification of strengths, weaknesses and gaps and/or the definition of performance indicators by the Commission should therefore be coordinated closely with the Member States.

c) The term "redundant research", which is often used when referring to duplication is problematical. Scientific competition for the best solutions is needed to establish a European Research Area which encourages diversity and is based on a system that is both competitive and adaptable.

4. Support Member States and research funding organisations in implementing joint international peer review evaluations and setting common funding standards – e.g. through an ERA Mark label recognising best practice in cross-border research operations

a) We generally welcome the provision of support for the implementation of international peer review evaluations (e.g. through giving Member States access to EU expert databases) and assistance in the formulation of common funding standards. However, the Federal Government cannot accept binding requirements for internal processes and operations nor can we accept direct interference by the Commission in operations at national and regional funding organisations.

b) The Federal Government disapproves of introducing an ERA label. The great number of existing multilateral initiatives, whether or not supported by the Commission, reveals growing integration. Furthermore, the successful submission of proposals, for example for a CSA or an ERA-NET, and the agreement on an Article 185 activity is already an acknowledgement of best practice in cross-border research cooperation.
Annex 2: An open labour market for researchers

Results of a BMBF workshop on the European Research Area:
"An open labour market for researchers"

on 30 August 2012

Member States are invited to:

1. **Remove legal and other barriers to the application of open, transparent and merit-based recruitment of researchers;**

   In its 2009 and 2010\(^3\) reports on research partnership, the Federal Government had outlined that Germany's Basic Law and the Länder Higher Education Laws require open and increasingly international recruitment of professors. Open announcement is also the regular procedure for vacancies for junior research staff. Exceptions may be made in cases such as for short-term positions or where candidates must meet special requirements.

2. **Remove legal and other barriers which hamper cross-border access to and portability of national grants;**

   This topic was addressed at a workshop on "optimal transnational cooperation" held in Bonn on 26 September 2012.

3. **Support implementation of the Declaration of Commitment to provide coordinated personalized information and services to researchers through the pan-European EURAXESS network;**

   The Federal Government will provide support to EURAXESS Germany, located at the Alexander von Humboldt Foundation, in encouraging the individual service centres throughout Germany to implement the declaration of commitment. These service centres' concomitant duties to collect data and ensure monitoring must be clearly defined and contained to a necessary minimum.

4. **Support the setting up and running of structured innovative doctoral training programmes applying the Principles for Innovative Doctoral Training;**

   - German universities – some in partnership with non-university research institutions – began making reforms in the doctoral studies programmes some 20 years ago to guarantee the critical mass of the research environment and the variety of research methods that a doctoral candidate needs to be successful in his/her doctoral studies. In general, this had led to the establishment of courses for additional qualifications and more structured doctoral programmes at all universities and at a number of non-university research institutions. This process has been aided at European level by the Salzburg II recommendations issued by the European University Association (EUA).

   - The Federal Government upholds the concept of giving qualified university graduates an individual choice of the type of doctoral programme most suited to him/her. As a matter of principle, independent research must remain the core element of doctoral studies.

\(^3\) [http://www.bmbf.de/pubRD/deutscher_beitrag_zur_partnerschaft_fuer_forscher.pdf](http://www.bmbf.de/pubRD/deutscher_beitrag_zur_partnerschaft_fuer_forscher.pdf)
5. **Create an enabling framework for the implementation of the HR Strategy for Researchers incorporating the Charter & Code;**

- Germany has implemented the principles of the Charter & Code taking into account the national conditions and the caveats expressed by the individual scientific organizations at the time of signature. The process is aided by the voluntary agreement of the scientific institutions and organizations and by the legal instruments available to labour and management through collective agreements, by the equal opportunities standards of the scientific organizations, and by quality assurance measures such as the "Family-friendly university" audit⁴ or the "Total E-Quality⁵ award.

- The German Rectors' Conference will hold a workshop on the subject of the Charter & Code on 16 October 2012. It is addressed to administrative heads and staff of the human resources departments at universities to provide information about the Charter & Code in view of the ERA Framework Communication and on how the Commission's Human Resources Strategy for Researchers may be implemented.

- Germany sees no need for the creation of a European accreditation system as it does not deem it to be an appropriate means to achieve this goal. Germany instead advocates providing advisory services, available on a voluntary basis, to improve the quality of hiring policies at scientific institutions since they have proven to have a more lasting effect.

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**II. Research stakeholder organisations are invited to:**

6. **Advertise all vacancies on the EURAXESS Jobs portal using the common profiles established in the European Framework for Research Careers**

- Germany has a very functional commercial employment market and thus does not require any special regulation. The requirement to announce all vacancies via EURAXESS would be tantamount to using public funds to compete with commercial providers on a highly functional market – which is not acceptable in Germany.

- All vacancies are announced in Germany in accordance with national legislation. No separate regulations may be drawn up for researchers as a professional group.

- The EURAXESS portal is generally seen as a complementary instrument. Germany believes it is an especially suited medium for vacancy announcements when a particular job profile calls for its announcement in English or if vacancies can in principle be posted in German as well.

- Germany welcomes the European Framework for Research Careers as a useful and voluntary instrument that serves transparency in the advertisement of scientific positions. However, Germany does not believe it is suited for a description of career profiles as it does not, for example, take into account people with other vocational backgrounds nor does it reflect career jumps made within the stages of the framework.

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⁵ [http://www.total-e-quality.de/das-praedikat.html](http://www.total-e-quality.de/das-praedikat.html)
7. Fill research positions according to open, transparent and merit-based recruitment procedures proportionate to the level of the position in line with the basic principles of the Charter & Code and including non-EU nationals.

- As stated in para 6, Germany has a functional commercial employment market – especially for professorship vacancies (see above). It would be beneficial for EURAXESS to become linked to these private advertisers such as Die Zeit or www.academics.de.

8. Develop strategies to support the career development of researchers in line with the HR Strategy for Researchers

- Germany recognizes the need for greater transparency in the critical junctures of a scientific career and thus its predictability. Intensive efforts are therefore being made in Germany to develop new career paths in order to become even more attractive to qualified young scientists and other third country nationals. The topic is under discussion within the Alliance of German Science Organizations. Furthermore, some organizations are already drafting and adopting guidelines for the HR Strategy. The Kisswin\textsuperscript{6} project, an online communications and information platform for young scientists, was launched to further enhance transparency. It acts as a compass for a career in German science. Since it first appeared in 2008, the Federal Government Report on the Promotion of Young Researchers (BuWiN)\textsuperscript{7}, which provides information on developments in young researcher support in Germany, identifies deficits and formulates possible courses of action in reforming various different areas, has contributed significantly to improving the situation of young researchers in Germany. Measures for the support of young researchers and for human resources development at non-university research organisations are set out in the monitoring report of the Pact for Research and Innovation\textsuperscript{8}.

9. Define and implement principles for accessibility to and portability of national grants;

This topic was addressed at a workshop on "optimal transnational cooperation" held in Bonn on 26 September 2012.

10. Provide structured doctoral training based on the Principles for Innovative Doctoral Training;

See Item 4

11. Develop and implement structured programmes to increase mobility between industry and academia;

- Universities and non-university research institutions traditionally work in very close collaboration with industry in Germany. Many doctoral degrees, particularly in engineering and in sciences such as chemistry, are completed in an intensive exchange with, and often within, industry. In this respect, the situation in Germany is exemplary.

- Germany therefore rejects the creation of a distinct "industry PhD" so as not to upset the uniform quality assurance of doctoral degrees at universities. The doctoral degree is an academic title, and this is why universities must remain the principal responsible party during doctoral training. Award of a doctoral degree enables its holder to pursue either an academic or a non-academic career. This must remain so in future in order to facilitate a switch from the university or non-university research institution environment to...

\textsuperscript{6} http://www.kisswin.de/
\textsuperscript{7} www.buwin.de
\textsuperscript{8} www.pakt-fuer-forschung.de/
the private sector. Germany therefore believes that the introduction of a new instrument will not achieve this goal.

### III. The Commission will:

12. **Strengthen collaboration and coordination in the EURAXESS network so that it becomes a means for researchers to access tailor-made assistance;**

   See para 6.

13. **Support the setting up of a European Accreditation Mechanism for Charter & Code-based human resources management in universities and publicly-funded research institutions;**

   As described in para 5, Germany opposes the introduction of an accreditation mechanism for human resources management.

14. **Support the work of a 'pathfinder group' of countries for the achievement of automatic recognition of comparable degrees;**

   Germany handles matters of recognition in compliance with existing European rules and regulations\(^9\) and on the basis of national legislation.

15. **Take initiatives to address social security barriers for researchers in the EU and further facilitate the entry and stay of third country national researchers by:**

   **Resuming work on a pension portability Directive setting minimum standards for the acquisition and preservation of supplementary pension rights;**
   - Germany prefers coordination to harmonization of the pension systems at European level. Coordination should be standardized for all employees. Granting special status to researchers is not justifiable.
   - As a matter of policy, this area is in the remit of the ministers of labour and social affairs (Employment, Social Policy, Health and Consumer Affairs Council).
   - The Federal Government is however supporting the Pension Institution of the Federal Republic and the Länders (VBL) in setting up an internet platform which will provide information to scientists from around the world about the benefits they gained and can expect in Europe. It is also supporting the German Rectors’ Conference to provide universities and scientific organizations with regular updates on current developments and on European trends in pension rights for mobile scientists. It also encourages the Conference to make suggestions for improvements.

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\(^9\) Convention on the Recognition of Qualifications concerning Higher Education in the European Region (Lisbon Convention)
Annex 3: Gender equality and gender mainstreaming in research

Coordinated results of workshop (2 October 2012); experts' comments have been added to preliminary version

"Gender equality and gender mainstreaming in research"

An expert workshop on the topic "Gender equality and gender mainstreaming in research" took place on 12 September 2012 in Berlin with regard to the Commission communication of 17 July 2012. German experts in the field attended the workshop. Germany expressly supports prioritizing the objectives of "Gender equality and gender mainstreaming in research" as a focus of the European Research Area. The following position on the various aspects of the communication was relayed at the workshop:

<table>
<thead>
<tr>
<th>Member States are invited to:</th>
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<tr>
<td>1. Create a legal and policy environment and provide incentives to:</td>
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<tr>
<td>1.1. remove legal and other barriers to the recruitment, retention and career progression of female researchers</td>
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<td>• There is general agreement as concerns the aim. Assuming a differentiated position, however, requires that the concerned institutions be able to take individual responsibility in this regard. Due to our federal system and differences between the Länder, a high degree of institutional autonomy is necessary for implementation.</td>
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<tr>
<td>1.2. address gender imbalances in decision making processes</td>
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<td>• The Federal Government supports this objective. However, there is a risk that the introduction of specific targets might lead to a disproportionate workload placed on women. This is especially true in science fields in which women have also been heavily under-represented in training up to now. Member states and institutions must be able to adopt their own rules and regulations to implement the process appropriately under their own conditions. In particular, there must be a possibility to apply a tailor-made cascade model that advances appropriate participation of women. It is unrealistic and therefore rather ineffective to determine fixed percentages without taking into account the different situations in the Member States.</td>
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<tr>
<td>1.3. Strengthen the gender dimension in research programmes</td>
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<td>• Germany's view is that the gender dimension in research programmes must be treated as a separate topic. There is consensus that excellence and high quality in research require consideration of the gender dimension, and this is more about a criterion of excellence than it is an aspect of equal opportunity. The relevance of the gender dimension varies depending on the research field concerned. However, research proposals should regularly be required to provide information about the review of the relevance of the gender dimension. In cases where the gender dimension is disregarded, a reason must be provided.</td>
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10 We draw attention to the fact that the German title should more clearly refer to the gender dimension in research.
2. Engage in partnerships with funding agencies, research organizations and universities to foster cultural and institutional change on gender (charters, performance agreements, awards)

- Bringing about institutional and cultural change as concerns gender equality in research can only be achieved with the widespread commitment of all stakeholders. The competent bodies in Germany will therefore undertake efforts to establish gender studies to integrate the gender dimension, especially in new training and degree programmes such as science management, or to build gender modules into these programmes. A change in culture requires open and transparent communication about existing deficits and the need for action. Decision-making power must therefore lie with the Member States and the corresponding institutions. Measures such as dual career programmes, part-time or cooperative management can thus be implemented as needed and communicated to a broader public.

3. Ensure that at least 40% of the under-represented sex participate in committees involved in recruitment/career progression and in establishing and evaluating research programmes.

- The Federal Government welcomes the call by the Commission to ensure that at least 40% of the under-represented sex participate in committees (the German Council of Science and Humanities issued a parallel recommendation – BT Drs.2218-12). However, a fixed quota raises the risk of placing a greater workload on women, especially in areas of science and research where women have been heavily under-represented up to now. Germany is making a case for adopting a so-called cascade model or a cross-disciplinary target quota that would balance out numbers between the fields instead of applying a fixed quota. The institutions should implement this measure as they see fit.

II. Research stakeholder organisations are invited to:

4. Implement institutional change relating to HR management, funding, decision-making and research programmes through Gender Equality Plans which aim to:

4.1. conduct impact assessment/audits of procedures and practices to identify gender bias;
4.2. implement innovative strategies to correct any bias;
4.3. set targets and monitor progress via indicators.

- Germany applauds the initiative and is already in the process of implementing several impact assessments/audits of procedures and methods to determine and prevent gender inequities. They include:
  o Equal opportunities strategies under the Women Professors Programme
  o National Pact for Women in MINT Careers (2008-2014)
  o "Family-friendly university" audit (Hertie Foundation)
  o "Families at University" (Robert Bosch Stiftung)
  o Total E-Quality
  o Joint Science Conference decision on Equal Opportunities in Science and Research of 7 November 2011
  o Reports drafted as part of the DFG's Research-oriented standards on gender equality initiative (2011).
  o Collection and systematic evaluation of statistical data (since 1980ff) on quotas of women at universities and non-university research institutions by the Joint Science Conference of the Federal Government and the Länder (GWK)
  o Equal Opportunities for Researchers Campaign
We note that similar and meaningful indicators which have been agreed on with Member States are required to measure progress in this context.

### III. The Commission will:

5. **foster gender equality and the integration of a gender dimension in Horizon 2020 programmes and projects from inception, through implementation to evaluation, including through the use of incentives;**

6. **propose in 2013 a Recommendation to Member States with common guidelines on institutional change to promote gender equality in universities and research institutions.**

The Federal Government expressly supports the integration of the gender dimension in the programmes and projects of Horizon 2020. It calls for close tracking of gender-equity goals by means of targeted measures as well as binding and consistent integration of the gender dimension (as relevant) in calls for proposals funded by the EU – starting at programme level through to the application stage and project implementation. The Federal Government also supports stronger integration of equality of opportunity in the proposed Rules for Participation. We welcome the development of common guidelines on institutional change to promote gender equality in universities and research institutions. The Federal Government recommends involvement of the national experts of the Helsinki Group to draft such guidelines.
Annex 4: Optimal circulation, access to and transfer of scientific knowledge

Results of the BMBF Workshop concerning the European Research Area:
Optimal circulation, access to and transfer of scientific knowledge
on 24 September 2012

I. Member States are invited to:

1. Define and coordinate their policies on access to and preservation of scientific information
   - There are many different activities and initiatives in Germany to improve access to, and on the preservation of, scientific knowledge which have been initiated by research players as well as the Federal Government and the Länder. Both research organisations and many institutions of higher education have Open Access policies.
   - The Federal Ministry of Education and Research is engaged in a dialogue with the Alliance of German Science Organizations and the German Publishers and Booksellers Association (Börsenverein des Deutschen Buchhandels) about possible compromises that can be made to encourage Open Access between science and publishers. Furthermore, the BMBF will launch a strategic dialogue on the subject of "innovation-friendly copyright for the digital science community". The BMBF also intends to add a binding open access clause in its auxiliary terms and conditions for project funding. Publications which result from research funded by BMBF are to be made accessible via Open Access in future.
   - The Federal Government plans to continue its activities to promote Open Access and is currently reviewing various approaches to implement it. The Alliance of German Science Organizations and the Conference of Ministers of Education and Cultural Affairs have emphasised their call for introduction of an indefeasible right to secondary publication (cf. Federal Government Decision of 12 October 2012 - Drs. 54/12).
   - The Federal Government is reviewing the extent to which coordination needs to be intensified. The council for information infrastructures proposed by the Wissenschaftsrat (German Council of Science and Humanities) could act as a clearing house between the Federal Government and the Länder for coordination at the national level.
   - Global developments in the field of Open Access must be taken into consideration when planning national activities.
   - The Federal Government shares the Commission's view that improved access to scientific knowledge requires cooperation between Member States, research organizations, researchers, scientific publishing companies, institutions of higher education, libraries, information infrastructures, innovative industries and society at large. The reasonable concerns of science as well as those of scientific publishers must be taken into account as the issue of Open Access evolves.

2. Ensure that public research contributes to Open Innovation and foster knowledge transfer between public and private sectors through national knowledge transfer strategies
   - The Federal Government supports this proposal and has already made good progress in its implementation, also by international comparison. Since 2006 our High-Tech Strategy has been pursuing an interdisciplinary national approach to promote "open innovation". One of the priorities of the High-Tech Strategy is to improve cooperation between science and industry so that scientific knowledge can be transferred more quickly and applied on a commercial scale more efficiently. A number of different competitions and funding initiatives are implementing the Strategy. On the BMBF side these include the Leading-Edge Cluster Competition, the "Research Campus - public-private partnership for innovations", the newly launched "2020 - partnership for innovation" funding programme, and the "Validation of the Innovation Potential..."
of Scientific Research - VIP" measure which is supporting researchers at institutions of higher education and public research institutions to have their research findings reviewed at an early stage for technical feasibility, economic potential and ability to open up new fields of application. The campaign to promote orientation towards innovation in research is also advancing the targeted development of new methods and instruments with which to intensify the transfer of knowledge from non-university research institutions. The Federal Ministry of Economics and Technology is supporting programmes such as "EXIST - university-based business start-ups" and the funding initiative "SIGNO – Protection of ideas for commercial use" for institutions of higher education, businesses and inventors. The High-Tech Start-Up Fund, which the Federal Government has invested in, provides funding for high-risk technology start-ups in their early stages of development.

- The High-Tech Strategy is promoting modernisation and strengthening of the science system with its focus on innovation and cooperation with industry. This will intensify long-term strategic cooperation between science and industry to the benefit of both sides.
- In a resolution of 30 May 2008, the Competitiveness Council expressly voiced support of the Recommendation by the European Commission on management of intellectual property in knowledge transfer activities and on a Code of Practice for universities and other public research organisations dated 10 April 2008 (IP Charter) and called for adoption of the Code of Practice. The Joint Science Conference subsequently took up implementation of the IP Charter as a priority on its strategic agenda in 2010. The implementation of the IP Charter in Germany is already a national strategy. It gives the Länder and relevant institutions the necessary scope in deciding as to how to implement the Charter. This will ensure that the principle of federalism and the individual regional and institutional circumstances and needs are taken into account in an appropriate manner. Another aspect of the national strategy to implement the IP Charter is the integration of the Charter’s principles in the provisions governing intellectual property rights in STC agreements.

- The Higher Education Laws in all of Germany’s 16 Länder have now identified knowledge and technology transfer as a task for institutions of higher education. Moreover, the Länder Hesse, Lower Saxony, North-Rhine Westphalia (NRW) and Thuringia have taken up the development of an intellectual property strategy in the target and performance agreements between the Länder and the universities. The transfer agencies at the institutions of higher education are engaged in a wide range of activities. The PatentScouts project in NRW, for example, has created an instrument within its science-to-business transfer strategy that will help to implement the patent and commercialisation strategies of the institutions of higher education. The patent scouts will be at the disposal of universities in NRW for a certain period of time to provide researchers with information and guidance and support efforts to identify patentable research findings. The programme to promote technology transfer between universities of applied sciences and small and medium-sized companies in Baden-Württemberg promotes networking between universities and local businesses and provides funding for projects that are especially significant for the region.

3. Harmonise access and usage policies for research and education-related public e-infrastructures and for associated digital research services enabling consortia of different types of public and private partners

- Germany is focusing a great deal of attention on the topic of information infrastructures in research. Last year, the Commission on the Future of Information Infrastructure in Germany (KII) followed a request from the Joint Science Conference (GWK) and delivered a comprehensive concept on the future of information infrastructure for Germany. The Wissenschaftsrat issued recommendations for the further development of scientific information infrastructures in Germany in July 2012.
Both the Commission on the Future of Information Infrastructure in Germany and the German Council of Science and Humanities have identified need for action in this area, including the need for more coordination and development of models of access and use.

The German Council of Science and Humanities has made comprehensive recommendations on further development, especially on the institution of a council for information infrastructures. The Federal Government and the Länder have appointed a working group on the implementation of the Council's recommendations.

4. Adopt and implement national strategies for electronic identity for researchers giving them transnational access to digital research services

- National activities have already been instituted in this thematic field. The field is closely linked to the further development of the scientific information infrastructure. Possible strategies can be discussed in the course of establishing a council for information infrastructures.

II. Research stakeholder organisations are invited to:

5. Adopt and implement open access measures for publications and data resulting from publicly funded research;

- The German research organisations have engaged in a variety of activities to promote open access. The German research organisations (Alexander von Humboldt Foundation, German National Academy of Sciences Leopoldina, Deutsche Forschungsgemeinschaft (DFG), German Academic Exchange Service (DAAD), Fraunhofer-Gesellschaft, Helmholtz Association, German Rectors' Conference (HRK), Leibniz Association, Max Planck Society (MPG), Wissenschaftsrat) have launched the Priority Initiative "Digital Information", which encourages the creation of a sustainable integrated digital research environment in which every researcher can access all published knowledge and the relevant primary research data from anywhere in Germany. Almost all research organisations and numerous universities have their own open access policies. www.open-access.net has been established as a central information platform on open access in Germany.

- Furthermore, there are a great number of repositories and open access journals in Germany. Germany has well-developed structures that give access to scientific information, even by international and European standards. Currently, Germany has a total of 220 repositories (http://www.base-search.net/about/en/about_countries_land_up.php?menu=2&submenu=enu=1&subpage=1). 52 are full-text repositories in the Digital Repository Infrastructure Vision for European Research (DRIVER, http://www.driver-repository.eu/), and 5 repositories are networked in the Open Access Infrastructure for Research in Europe (OpenAIRE, http://www.openaire.eu). There are currently 259 open access journals published in Germany (cf. Directory of Open Access Journals (DOAJ), http://www.doaj.org).

- Research stakeholder organisations in Germany welcome the Commission proposals. They emphasise that both the golden and the green path should be pursued when promoting open access. They also point out that standard embargo periods should be fixed for the green path which would not exceed 6 months in the natural sciences and 12 months in the humanities.

- Consideration should be given to the incentives which universities, research institutions and funding organisations could give to academics and researchers to publish with open access. But open access can merely supplement the specific quality criteria that are currently applied in recruitment, career assessment and evaluation processes.
6. Implement and promote the uptake of electronic identity and digital research services;

- The recommendations of the Wissenschaftsrat for the further development of scientific information infrastructures in Germany up to 2020 also refer to a number of issues in this thematic field.
- Various activities of the scientific community, publishing houses and research organisations are dealing with this topic (e.g. eduGAIN, participation via DFN-AAI, ORCID). Electronic identities that are not linked to a specific institution are only available to researchers in Germany to a limited extent.
- The scientific community points to the fact that suitable infrastructures are needed for the systematic backup of research data. The science organisations already adopted principles for handling research data in 2010, and the Wissenschaftsrat addressed this topic in its above-mentioned recommendations. Scientific data is a heterogeneous and complex field. Repositories may play an important role here, for example regarding organisation, archiving, access, etc.
- Consideration must be given to the option of providing incentives for researchers which encourage them to grant free access to research data.
- This is where the Federal Government sees a need for clarification. The term "digital research services" is rather unspecific. It must be more clearly defined.

7. Ensure optimal interaction and linkages and strategic partnering between academia and industry and define joint collaborative research agendas to maximize the use of research results;

- The Federal Government started its Commercialization Campaign in 2001 with the aim of encouraging greater commercial use of research results produced by universities. Following regional innovation strategies, the Federal Government and the Länder established 23 patent and commercialization agencies (PVA) whose approximately 100 innovation managers support almost all German universities and various non-university research institutions with their expertise in specific disciplines or industrial branches. The PVA are cooperating with other technology transfer agencies in a national German network, the TechnologieAllianz (http://www.technologieallianz.de/home.php). The TechnologieAllianz is thus among the central contact points for companies which are looking for innovative research results from Germany that are already protected by intellectual property rights. Furthermore, many universities and research institutions have their own knowledge and technology transfer offices.
- Despite an increasing awareness of the importance of intellectual property at universities and research institutions and despite the professionalization of knowledge and technology transfer in recent years, cooperation between science and industry still needs to be developed to become a process between equal partners. This is why universities and research institutions that have so far not been sufficiently involved in knowledge and technology transfer should pursue broad strategies for cooperation and the management of intellectual property in order to become even more reliable partners for industry. Strengthening Europe’s competitiveness should always remain a goal of cooperation between universities, public research institutions and non-European companies, and an uncontrolled knowledge drain should be avoided by all means.
- The science organisations point out that open access policies are not about whether research results will actually be published but merely define the preferred form of publication. They do not conflict with the strategic goal of knowledge and technology transfer. All stakeholders agree that the principle of giving access to research data includes exceptions to protect legitimate interests (e.g. trade secrets, data protection).
8. Improve recognition and professionalization of knowledge transfer activities and strengthen the role of knowledge transfer offices

- Many universities and research institutions have already professionalized a major part of their knowledge transfer activities, for example through the PVA. In recent years, professional knowledge and technology transfer offices have been established at universities and research institutions with the aim of supporting and developing the relations between science and industry. As a result, knowledge and technology transfer services can be provided on a broad scale.
- The vast majority of universities and research institutions (non-representative BMBF survey) offer special training for staff and students to enhance their skills in the area of knowledge transfer (e.g. information material, seminars, workshops, lectures, courses, certificates, training programmes, information events, working groups, networks, talks, patent scouts, innovation funds, patent licence, start-up advice). In addition, universities are considering the possibility of establishing study programmes in the field of knowledge and technology transfer and some are already making concrete plans. Munich Technical University (TUM) is considering the introduction of postgraduate studies in the field of technology transfer. Other institutions may follow, for example by offering special MBA training programmes. The German Länder should check whether the structural funds can be used to co-fund qualifying study programmes and the certification of knowledge and technology transfer.
- Quality assurance will be an important aspect in future knowledge transfer activities in Germany in view of industry's need to initiate new, trusting collaborations with universities and research institutions. A case in point is the EU's BONITA project, which was initiated and coordinated by the Centre for Computing and Communication Technologies (Technologie-Zentrum Informatik und Informationstechnik TZI) of Bremen University. The project partners developed the process reference model ISO15504 innoSPICE. This model covers the innovation cycle processes related to intellectual property at the level of participating institutions and analyses and evaluates the structures which encourage or hinder knowledge transfer and innovation.
- Moreover, additional incentives for institutions and researchers should be created in order to enhance the recognition and visibility of knowledge and technology transfer activities. For example, incentives could be provided to encourage institutions to develop outstanding strategies for the management of intellectual property which could serve as best practice. This option is being considered at the Federal Government and Länder level. Germany already suggested this activity at European level within the ERAC Knowledge Transfer Working Group (input to ERA Framework).
- Another possible incentive for staff of knowledge and technology transfer offices at universities and research institutions may be the introduction of performance-related pay arrangements (e.g. a bonus system or the possibility of longer-term employment contracts). This issue is being discussed at Länder level.
- International networking of the knowledge and technology transfer offices is useful if it strengthens European competitiveness. A Code of Conduct should ensure that attention actually focuses on this criterion. We should avoid a situation in which uncontrolled knowledge drain from European research institutions to non-European companies damages European competitiveness.
- It is important to prevent duplication of structures at European level which actually or seemingly compete with each other. It is therefore a welcome development when organisations and networks at European level such as ASTP plan closer cooperation and/or mergers with similar institutions.
- The available resources and capacities of research institutions pose a challenge in the implementation of the above approaches at the research institutions. For example, gaps in resources could to some extent be filled with money from the structural funds. In particular, it will be a task for the management of the various research institutions to address the topic of knowledge transfer and offer support for implementation activities.
III. The Commission will:

9. Establish open access to scientific publications as a general principle for all EU funded projects in Horizon 2020. For research data, develop a flexible approach that takes into account different scientific areas and business-related interests;

- Germany welcomes the Commission initiative to establish open access to scientific publications as a general principle for all EU-funded projects in Horizon 2020 and to develop a flexible approach for research data.

10. Continue to fund projects related to open access;

- Germany welcomes the Commission's plans to continue to fund projects related to open access.

11. Adopt a Communication and Recommendation to Member States on access to and preservation of scientific information in the digital age;

- Germany has taken note of the communication and recommendation to the Member States. We welcome the European Commission's increasing commitment to the topic of open access. Detailed consideration of the communication and recommendation will still take some time.

12. Propose a roadmap for e-infrastructure development to support e-Science through open access to research tools and resources;

- We welcome the activities of the European Commission in the field of e-infrastructure development and support for e-Science. In this process, it is extremely important to ensure that national activities are taken into account. This is why we approve a participatory approach involving institutions in all Member States, similar to that of the OpenAIRE infrastructure supported by the Commission.
- A broad national process has already been initiated in Germany to encourage the further development of the scientific information infrastructure. A working group of the Federal Government and the Länder is preparing a proposal for a decision to implement the recommendations of the Wissenschaftsrat.
- The proposal for a roadmap for e-infrastructure development should be based on national activities and needs to be drafted in close cooperation with the Member States.

13. Support activities to raise stakeholder awareness of open access and e-Science;

- Research stakeholders in Germany are strongly aware of the need for open access, and they are already involved in numerous activities on this topic.

14. Develop through assessment of existing initiatives a comprehensive policy approach to open innovation and knowledge transfer, and consult stakeholders on it;

- We welcome the Commission's plans.
- However, the Commission should not only develop a comprehensive policy approach but also consider whether existing national incentive schemes such as EXIST, SIGNO and High-Tech Start-Up Fund as well as Research Campus and the Pact for Research and Innovation may be implemented and developed successfully at European level.
Furthermore, future **programmes to support technology transfer** could encourage European exchanges between industry and science following the guiding principle of the ERASMUS programme.

Germany also suggests that considerations regarding suitable certification in science with the aim of safeguarding knowledge and technology transfer standards should be discussed and reviewed at European level.

15. **Work with stakeholders to develop a set of model consortium agreements to enhance knowledge transfer**;

Germany cannot agree to the Commission proposal for developing new model consortium agreements at European level to enhance knowledge transfer. At national level we have the sample agreements for research and development cooperation of the Federal Ministry of Economics and Technology (BMWi), which have proved to be a successful model and are currently being revised to prepare their third edition. European model agreements which can be applied in 27 Member States would not be a suitable instrument because national conditions and legislation (e.g. relating to inventions of employees) can vary greatly. Moreover, there are already useful documents such as the IP Charter, which governs basic aspects of collaborative and contract research, and the European Research Area Guidelines on Intellectual Property (IP) Management in International Research Collaboration Agreements between European and Non-European Partners of the ERAC Knowledge Transfer Working Group.

With a view to facilitating European exchanges, a central, regularly updated website could be set up which is linked to important national websites and documents (such as Lambert Agreements, BMWi sample agreements etc.).

16. **Facilitate a Member State forum for regular exchange and reporting on national developments on the provision, take-up and use of digital research services.**

In Germany, various national activities have already been launched to support digital research services, which are to be expanded as recommended by the *Wissenschaftsrat*. A forum initiated by the European Commission may add to the importance of this topic.