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Abbreviations

Abbreviation	Meaning
ACARE	Advisory Council for Aeronautics Research in Europe
CEEC	Central and Eastern European Countries
CSA	Coordination and Support Action
DG MOVE	Directorate-General for Mobility and Transport of the European Commission
ECTRI	European Conference of Transport Research Institutes
ERA	European Research Area
ERRAC	European Rail Research Advisory Council
ERTRAC	European Road Transport Research Advisory Council
ETRA	European Transport Research Alliance
EURNEX	European Rail Research Network of Excellence
FEHRL	Forum of European Highway Research Laboratories
JPI	Joint Programme of Activity
JRI	Joint Research Initiative
JTI	Joint Technology Initiative
NoE	Network of Excellence
PPP	Public Private Partnership
UNIFE	Association of European Rail Industry
Waterborne	European Technology Platform WATERBORNE

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Executive Summary

Work Package (WP) 3 “Strengthening research institutions” focuses on how research organisations in the different modes of transport have already adapted to the European Research Area (ERA) objectives and will define actions to become, by the middle of the 21st century, excellent research organisations (scientific excellence, relevance excellence, governance excellence) providing high-quality world-class services. Following the overall DETRA objectives for a cross modal Transport Research Alliance, WP3 will give support to complete the ERA by strengthening the research, technological and industrial base of Europe in the middle and long term.

In order to improve, support and implement the ERA, the still existing needs, constraints and deficiencies of all the organisations involved have been analysed as a first step and are summarised in this report. The analysis follows the structure below:

WP3 Strengthening research institutions



- **Objectives:**
 - ERA completion & improve functionality
 - Overcome fragmentation, go for Single European Transport Area, Think Multi-Modal - Act in a Co-Modal Environment
 - Barriers , Constraints -> Recommendations
- **Structure**
 - Scenario, specific interviews, questionnaires
 - Feedback & Intermodal analysis
 - **1. Workshop (18. March 2011, Brussels, organised by FEHRL):** Priorities and trends & cross sector collaboration requirements (to be prepared for GREEN PAPER comments)
 - Interviews with selected members, stakeholders, ETPs policy
 - **2. Workshop (26. September 2011, Prague organised by EURNEX):** Focus CEEC, Recommendations, Feasibility check, Final adaptation to stakeholder requirements
 - **3. Workshop (December 2011, Berlin organised by EURNEX):** Results fine tuning of D33 among DETRA Partners, prioritisation, Procedures to ease implementation and preparation base for D3.3 and TRA 2012 Procedures to ease implementation
 - **Interviews:** National transport committee members, research organizations, national ministries, EC, Rail industries ,Operators, IM, ETP and Politics
The Interviews will be analysed with regard to Priorities, Trends, Cross sector collaboration and Necessary re-finements
 - **Deliverable D3.1** Report on needs, constraints and deficiencies (questionnaire and workshop results)
 - **Deliverable D3.2** Preliminary recommendations to foster ERA deepening
 - **Deliverable D3.3** “final recommendation and Trend report: fine tuning among WP3 partners
- **Presentation & Dissemination at final conference e.g. TRA 2012**

Participating partner:
[EURNEX](#), [FEHRL](#), [Humanist](#)

Figure 1: WP3 chart showing the way forward and logic

The final recommendations and trends (Deliverable 3.3) of WP3 will be based on an assessment of the questionnaires and the workshop results towards an affordable and progressive contribution to deepening ERA. This report (Deliverable 3.1) identifies the barriers, needs and constraints to create an ERA.

At a first glance, the barriers, constraints and needs including a set of recommendations identified in this report are essential findings but need further detailing:

Barriers and constraints to create and complete ERA

- Budget: financial difficulties to obtain EU funds for common research, bureaucratic procedures (lengthy and time-consuming)
- Cultural barriers
- Bureaucracy in collaborative projects
- Legislation and economics can be an obstacle for cooperation, especially when it comes to joint funding

As an example, the following needs, requirements and preferred recommendations to strengthen research institutions to become a valid member within the ERA are given:

- Use of existing instruments like CSA to strengthen self-standing NoE entities and launch a competitive call where these NoE's get support for moving further towards integration and ERA deepening/completion
- Recommendation from study results: Concerning the NoE's, the European Commission (EC) should assess on a case by case basis whether past achievements, potential, EU added-value and prospects of self-sustainability justify further funding under FP7. To foster an innovative step, the character of research institutions needs to be changed by preparatory research led by academia/research institutions with roadmaps defined by industries.
- Institutions can be strengthened through consolidation of the networks, projects and infrastructures towards capacity building or research programmes
- Strengthening of cohesion, knowledge-sharing, scientific knowledge excellence, innovative scientific/industrial research base by fostering frontier to focused/applied research to demonstration and prototyping through Joint Research Initiative (JRI) and Joint Technology Initiative (JTI) programming.
-

Refer also to the "DETRA/WP3 contributions to the Green paper¹ dated 09.02.2011 (Annex I).

Within the overall structure of WP3, the follow-on activities with special emphasis on CEEC experiences and needs, feasibility check and final adoption to stakeholders needs will provide resulting recommendations and procedures to support the implementation for presentations and dissemination at the final conference at TRA2012.

¹ Green paper¹ COM(2011) 48 dated 09.02.2011

1. Introduction to DETRA and WP 3 activities

1.1. DETRA

Concept and Objectives

The DETRA project aims to progress towards the realisation of the ERA in the transport sector. The concept of DETRA derives from the so-called Lyon Declaration². In 2008, the Lyon Declaration signatories, i.e. ECTRI, FERSI, FEHRL, EURNEX, HUMANIST, ISN and NEARCTIS, committed themselves to work together on deepening the ERA objectives in transport in order to address the Grand Challenges. This commitment resulted in the objective to create a European Transport Research Alliance (ETRA) that would strengthen the transport domain. Key priorities of this alliance are the examination of the strengths, weaknesses, opportunities and threats (SWOT) in the domain and the development of a common understanding and approaches to reduce fragmentation and overcome barriers.

Addressing the Grand Challenges

From the perspective of the DETRA partner organisations, our transport system is a part of either the problem or the solution for all pressing societal and political Grand Challenges addressed by the EU. These Challenges include climate change, energy, water and food, public health, ageing societies and globalisation. Some examples of these issues include the need;

- To make transport infrastructure and transport systems more resilient to a changing climate as well as to directly reduce the climate change impacts of transport,
- To reduce energy consumption in the transport system,
- To reduce transport system impacts on ground water supplies and consider transport and water in land-use planning,
- To increase the effectiveness of transport necessary for food production (including developing countries) and improve/innovate transport logistics to reduce food waste,
- To raise the standard of public health by increasing access to health facilities (including developing countries), increase the resilience of the transport system in pandemics and reduce traffic accident fatalities and injuries,
- To adapt transport and mobility systems for an aging population,
- To shape and maintain a transport system that reflects the needs of the developing globalisation and to help European transport system stakeholders to adapt accordingly.

Addressing these Grand Challenges will be one of the key priorities, if not THE key priority, of the Transport ERA. The DETRA partners believe that only through a well-functioning ERA will these challenges be met. Focusing on individual elements of the ERA will no longer be sufficient, because it is only the reinforced combination of elements of the ERA that will successfully address these challenges.

The project is based on consultations and inputs from main stakeholders and experts in order to provide a series of key deliverables setting out the current situation, identified barriers and recommendations for the next generation of the Transport ERA. The main

² http://ec.europa.eu/research/transport/news/items/a_european_vision_for_sustainable_transport_en.htm

project deliverables will focus on more cross-cutting aspects, as it is recognised that each of the ERA themes must be examined in detail, but reflect the need for greater integration between each element. For this reason, a project structure is proposed that reflects each ERA theme in a separate WP. Afterwards, these are integrated transversally into five major DETRA outputs covering the main strategic issues to be addressed in shaping a coherent Transport ERA programme to 2020. The project has seven WPs:

- WP1: Mobility for researcher
- WP2: World-class transport research infrastructures
- WP3: Strengthening research institutions
- WP4: Sharing knowledge
- WP5: Optimising research programmes and identifying priorities
- WP6: International cooperation
- WP7: Coordination and communication

1.2. Introduction of WP 3 “Strengthening research institutions”

WP 3 “Strengthening research institutions” focuses on how research organisations have already adapted to the ERA objectives and will define actions to become, by the middle of the 21st century, excellent research organisations (scientific excellence, relevance excellence, governance excellence) providing high-quality services.

Objectives

- Identification of perception of policy for ERA by research institutions
- Overcoming fragmentation and achieving transport sector research integration
- Identifying barriers causing weaknesses and characteristics successfully contributing to strengthen research institutions
- Regular assessment of progress by recommendations agreed upon accompanied by lead criteria and trends

Building the ERA & ERA completion

The important role of world-class research infrastructures that are integrated, networked and accessible to research teams from across Europe and the world is recognised. This facet includes not only individual ‘hard’ research infrastructures such as civil engineering laboratories facilities as well as the networks of electronic communication infrastructures that will link geographically-dispersed facilities with each other and researchers, but also the soft infrastructures based on databases and libraries. DETRA considers not only the technical requirements for facilities that will be required to address the still-emerging issues related to climate change adaptation, for example, but also the issues for an improvement of coordination of research infrastructure management to reduce fragmentation.

DETRA partners are committed to develop excellent research institutions that are engaged in effective public-private cooperation and partnerships. This has been a core element for many of the NoE activities, leading to the formation of research and innovation clusters including virtual research

communities. DETRA partners are therefore fundamentally involved and are driven to understand and overcome the challenges faced by research institutions.

Through their links with industry and notably through their roles in many European Technology Platforms (ETPs), DETRA partners are heavily engaged in developing effective knowledge-sharing between public research and industry. This knowledge sharing is not only limited to industry but also addresses the need for an effective exchange with the greater public.

International cooperation is another core concept for DETRA partners and therefore the wide opening of the ERA to the world is a key aspect for the purposes of raising the level of scientific expertise, addressing global challenges and creating a more dynamic and competitive sector. Moreover, a number of DETRA partner organisations have international partners within their memberships, including active institutes from Russia, Ukraine, South Africa, USA etc. Through these established links, the coherence between international cooperation and other ERA elements (e.g. mobility and research infrastructures) is well recognised.

Finally, a significant emphasis is placed on well-coordinated research programmes and priorities, including a jointly-programmed public research investment at European level involving common priorities, coordinated implementation and joint evaluation.

Importance of WP 3 for DETRA development

ERA is the basis for the collaboration of research organisations in Europe. This collaboration is crucial for the development of the DETRA alliance. Some research organisations have already adapted to the ERA objectives. Together with them, the actions still to be taken to become mid-21st century excellent research organisations (scientific excellence, relevance excellence, governance excellence) providing high quality services for the Knowledge Triangle can be defined.

Action Points

- Development of JRI and JPI (Joint Programme of Activity)
- Greater involvement of DG Move in specifying transport research tasks jointly with DG R&I and Infso, in order to include more policy-related research in the programme
- Inside institutions, the capitalisation of the experience of NoE draws on the fact that new research governance and management is part of the excellence, as well as the relevance for our customers (public bodies, society, and industry).
- Outside institutions: Besides the European Institute of Innovation and Technology? (EIT) and to accompany the research reforms, including articulation between frontier and focused research, there is a need to reinforce the research organisations (research corner of the Knowledge Triangle) as stated in the Lund Declaration.
- Joint programming should be further encouraged and expanded as a first step, with
 - The setting of common work programme content (avoiding overlapping, etc) throughout the ERA.
 - Common financing mechanisms and funds.
 - Simplification of administrative procedures based on the principle that “rules are abided” until one organisation is proved (through ex post auditing) as wrong.

2. Way forward and Logic of WP 3 “Strengthening Research Institutions” in the context of DETRA

The WP activities follow the logic of:

1. Questionnaires/interviews/analysis of relevant documentation
2. Workshops (within EURNEX regional structure and transport sector stakeholders e.g. ETPs)
3. Reports on recommendations and trends

WP3 Strengthening research institutions



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- **Presentation & Dissemination at final conference e.g. TRA 2012**

Participating partner:
[EURNEX](#), FEHRL, Humanist

Figure 2: WP3 chart showing the way forward and logic

2.1 Questionnaire and Interviews

The questionnaires were distributed among selected members of the DETRA institutions (FEHRL and EURNEX) in August 2010. The distribution was the responsibility of the DETRA partners. By mid September 2010, 36 questionnaires had been returned and by mid January 2011, 42 questionnaires had been returned and evaluated. Interviews were carried out with high-level partners from dedicated institutions.

2.2 WP3 Workshops

1. Workshop (18th March 2011, Brussels, organised by FEHRL): Priorities and trends and cross-sector collaboration requirements (to be prepared for GREEN PAPER comments)
 - Interviews with selected members, stakeholders, ETP policy
 - Decision for workshop in Prague, to be organised by EURNEX with focus on CEEC, recommendations, feasibility check, final adaptation to stakeholder requirements
2. Workshop (26th September 2011, at CVUT Prague, organised by EURNEX/CVUT):
This workshop focused on how CEEC research organisations can be supported to adapt to the ERA objectives and the actions still to be taken to become mid-21st century excellent research organisations (scientific excellence, relevance excellence, governance excellence) providing high-quality services for the Knowledge Triangle. It included the preparation of further recommendations to the EC, a feasibility check and the final adaptation of stakeholder requirements.
3. Workshop (February 2012, Berlin, to be organised by EURNEX):
Fine tuning of results, prioritisation, procedures to ease implementation and preparation for D3.3 and TRA 2012

2.3 Presentation and Dissemination at final conference e.g. TRA2012

The results of WP3 shall be disseminated at the final conference during a special session at TRA2012.

3. DETRA WP3 Questionnaire

Concept of WP3 “Strengthening research institutions” questionnaire

In a changing world characterised by the accelerating globalisation of research and technology and the emergence of new scientific and technological powers, the policy dimension of the ERA and the need for strong research institutions which feature among the world class players is more than ever a cornerstone for a European knowledge society.

Such a society is one where research, education, training and innovation are fully mobilised to fulfill the economic, social and environmental ambitions of the EU and the expectations of its citizens.

The ERA concept combines:

- A European “internal market” for research, where researchers, technology and knowledge freely circulate
- Effective European-level coordination of national and regional research activities, programmes and policies
- And initiatives implemented and funded at European level.

Some progress has been made since the concept was endorsed at the Lisbon European Council in 2000 and the latest Council conclusions in 2010 with regard to the deepening of ERA and simple robust instruments and programmes supporting excellent European research and innovation activities. However, there is still much work to be done to build ERA as an encouraging bottom up approach, particularly to overcome the fragmentation of research activities, programmes and policies across Europe. It is this strategic disconnect between the policy dimension and the concrete operations at the level of the supporting framework, instruments and programmes for excellent research institutions that needs to be tackled to fully contribute to the renewed Lisbon strategy.

WP3 “Strengthening research institutions” is focusing on how research organisations have already adapted to the ERA objectives and actions in a step-by-step approach with initiatives and measures still to be taken with short and mid-term visibility, finally building up excellent research institutions that feature among the world class players.

3.1 Methodology and definition of WP 3 “Strengthening research institutions” questionnaire in ERA

Methodology of WP 3 questionnaire “Strengthening research institutions” in ERA

The methodology of the questionnaire was developed as a basis to strengthening research institutions in the context of the upcoming ERA directive.

The aim of this questionnaire is to identify needs, barriers and constraints and roadmaps, as well as new opportunities supporting the achievements of the ERA objectives. The conclusions will help to streamline the recommendations given by the DETRA partners in the following areas:

- Creating enabling policies
- Mobilising the human capital
- Building collaboration mechanisms (based on existing success stories)
- Systematically addressing the main barriers to international research collaboration
- Improving data management and sharing

- Laying the groundwork for joint programming and funding

3.2 Distribution of questionnaire

The questionnaires for both WP3 and WP6 have been distributed among selected members of the DETRA institutions, namely FEHRL and EURNEX, in August 2010. The distribution was the responsibility of the DETRA partners. As already mentioned, by mid September 2010 36 questionnaires had been returned and evaluated and by mid January 2011 this figure had risen to 42 questionnaires.

Responses have been received from

- 18 transport research institutions with a special emphasis on rail
- 20 institutions related to road construction and engineering
- 4 other

3.3 Analysis and evaluation of responses (Annex III)

The analysis and evaluation of responses will focus on key performance indicators, benchmarks and lessons learnt across individual modes and throughout bi- and/or multi-lateral international cooperation.

The results of the questionnaire will lead to interviews with selected members/stakeholders that showed best practice and low performance towards an integrated, sustainable ETRA with regard to

- reducing fragmentation
- overcoming barriers
- fostering knowledge sharing and cohesion

and, within the framework

- fostering a European world-class research landscape that creates a more dynamic and competitive transport research sector.

The results of the analysis of the questionnaire have been used as the basis for workshop discussions in Brussels on March 18th 2011.

3.4 Interviews

The results of questionnaires, workshops and interviews will be followed up workshops such as the one held on September 26th 2011 in connection with CEEC countries in Prague. As preparation for the workshop, interviews were organised with national transport committee members, research organisations, university presidencies, national ministries, the EC, rail industries and their associations, e.g. UNIFE, operators (e.g. Deutsche Bahn and SNCF), infrastructure manager associations (e.g. European Rail Infrastructure Managers (EIM), the European Technology Platforms (ETPs - e.g. water Waterborne, rail ERRAC, automotive ERTRAC, air ACARE) and politics (regional, national and Europe).

The interviews were then analysed with regard to priorities, trends, cross-sector collaboration and necessary refinements.

4. Workshop summary and results of first WP3 workshop (Brussels, 18th March 2011)

The first workshop within WP 3 was organised by FEHRL on 18th March 2011 in Brussels. Major topics covered were the priorities and trends and cross-sector collaboration requirements (to be prepared for comments to the GREEN PAPER).

The workshop was attended by seven participants from two European association on transport research, one university and four institutions.

Introduction

WP3 “Strengthening research institutions” led by EURNEX focuses on how research organisations have already adapted to the ERA objectives and the actions still to be taken:

- Identification of perception of policy for ERA by research institutions
- Overcoming fragmentation and achieving transport sector research integration
- Identifying barriers causing weaknesses and characteristics successfully contributing to strengthen research institutions
- Regular assessment of progress by recommendations agreed upon accompanied by lead criteria and trends

Action Points

- Development of JRI and JPI (Joint Programme of Activity)
- Greater involvement of DG Move in specifying transport research tasks jointly with DG R&I and Infso, in order to include more policy-related research in the programme
- Inside institutions, the capitalisation of the experience of NoE draws on the fact that new research governance and management is part of the excellence, as well as the relevance for our customers (public bodies, society, and industry).
- Outside institutions: Besides the European Institute of Innovation and Technology (EIT) and to accompany the research reforms, including articulation between frontier and focused research, there is a need to reinforce the research organisations (research corner of the Knowledge Triangle) as stated in the Lund Declaration.
- Joint programming should be further encouraged and expanded as a first step, with
 - The setting of common work programme content (avoiding overlapping, etc) throughout the ERA.
 - Common financing mechanisms and funds.
 - Simplification of administrative procedures based on the principle that “rules are abided” until one organisation is proved (through ex post auditing) as wrong.

Synthesis of additional content according to Green Paper questions and other issues

EURNEX in cooperation with its Transport Research Alliance partners (FEHRL, HUMANIST, ECTRI etc.) has provided comments to the Common Strategic Framework with a major focus on strengthening Europe’s science base and the ERA.

A JRI dedicated to EURNEX member contribution and strategic and focused research and innovation for market uptake in 2025 supporting a competitive rail system in a co-modal environment might be a valid answer to today’s problems.

The connection between the “Green Paper on a common strategic framework for EU research and innovation funding” (Annex 1) and directive is most relevant to Green Papers Chapter 4 “Strengthening Europe’s science base and the European Research Area” (sub-chapter 4.4).

Therefore, DETRA WP3 with the workshop and special interviews provided specific answers to the key questions of the “Green Paper on a common strategic framework for EU research and innovation funding” for strengthening research institutions (refer also to “DETRA contributions to the Green paper” dated 09.02.2011):

1. How should the Common Strategic Framework make EU research and innovation funding more attractive and easy to access for participants?

- Simplification of the financial and administrative rules, including the respect of the entity using traditional external auditor-approved methods of accountability and EU financial rules in line with research and innovation.

- EU real added value and tackling of:

- Global European competitiveness
- Societal challenges including policies
- ERA completion
- Link between research and innovation tools or instruments (the first issue is to have EU funding linked to Member States and Regional Authorities for test beds, demonstrators, European large action) from lead market to European market implementation.

- The funding instruments have to be clearly located in the Knowledge Triangle and tackling the full innovation scheme (not necessary linear) with a distribution between EC or EIB instruments and those of Member States or Regions from lead market to European market implementation

- This could lead to new tools or instruments such as European Innovation Partnerships with simplified methods.

2. How should EU funding best cover the full innovation cycle from research to market uptake?

- Joint Integrated projects by academia and industry.

3. What are the characteristics of EU funding that maximise the benefit of acting at the EU level? Should there be a strong emphasis on leveraging other sources of funding?

- By supporting innovative projects up to demonstration/prototyping and market uptake

4. How should EU research and innovation funding best be used to pool Member States resources? How should Joint Programming Initiatives between groups of Member States be supported?

- Regional and structural fund have put more money than Framework Programme
- Idea of innovative partnership

5. What should be the balance between smaller, targeted projects and larger, strategic ones?

- Larger and strategic projects should be emphasised

6. How could the Commission ensure the balance between a unique set of rules allowing for radical simplification and the necessity to keep a certain degree of flexibility and diversity to achieve objectives of different instruments, and respond to the needs of different beneficiaries, in particular SMEs?

- Simplification will ensure a degree of flexibility

7. What should be the measures of success for EU research and innovation funding?

Which performance indicators could be used?

- Need to think of policy-making otherwise JRI without researchers
8. How should EU research and innovation funding relate to regional and national funding? How should this funding complement funds from the future Cohesion policy, designed to help the less developed regions of the EU, and the rural development programmes?
- Need to think of policy-making otherwise JRI without researchers
9. How should a stronger focus on societal challenges affect the balance between curiosity-driven research and agenda-driven activities?
- JTI (Joint Technology Initiative)
 - JRI (Joint Research Initiative)
15. How should industrial participation in EU research and innovation programmes be strengthened? How should Joint Technology Initiatives (such as those launched in the current Framework Programme) or different forms of 'public-private partnerships' be supported? What should be the role of European Technology Platforms?
- Public Private Partnership (PPP)
21. How should the role of the European Research Council be strengthened in supporting world class excellence?
- By implementation of European Research Council suggestions
22. How should EU support assist Member States in building up excellence?
- Support of the successful NoE's as a best practice example
23. How should the role of Marie Curie Actions be strengthened in promoting researcher mobility and developing attractive careers?
- Simplification of Marie Curie application procedures
25. How should research infrastructures (including EU-wide e-Infrastructures) be supported at EU level?
- The answer to this question will be provided by DETRA WP2 as an outcome of the project

5. Workshop summary and results of second WP3 workshop (26 September 2011, at CVUT Prague organised by EURNEX/CVUT):

- Focus on CEEC,
- Recommendations, feasibility check, final adaptation to stakeholder requirements
- Agenda

This workshop focused on how CEEC research organisations can be supported to adapt to the ERA objectives and the actions still to be taken to become excellent research organisations (scientific excellence, relevance excellence, governance excellence) by the middle of the 21st century providing high-quality services for the Knowledge Triangle.

Workshop (February 2012, Berlin, to be organised by EURNEX):

- DETRA WP members
- Fine-tuning of results
- Prioritisation
- Procedures to ease implementation
- Preparation base for D3.3 and TRA 2012

Presentation and Dissemination at final conference, e.g. TRA 2012

The results of WP3 shall be presented during a special session at TRA 2012.

6. Conclusion and Way forward on recommendation, constraints and barriers

Embedded in the overall DETRA objectives to develop the ERA, WP3 “strengthening research institutions” is focusing on analysing, identifying needs and barriers and making recommendations to foster ERA completion. While DETRA partners by their statutes and actual work are already engaged in overcoming fragmentation, sharing knowledge and applying cross-modal lessons learned, there are still constraints and barriers to overcome and needs for sustained and enforcing support to be settled in order to support the Knowledge Triangle in a co-modal, multidisciplinary approach to tackle the Grand Challenges.

In order to take the best advantage of European scientific excellence, there is a need to reinforce the research corner of the Knowledge Triangle by “simplification”, joint programming, setting up a common financial mechanism and continuing to transfer frontier research, applied/focused research, development and demonstration to market uptake. The long-term strengthening of the scientific, technological and industrial base of Europe requires the concerted and reinforced development of skills, key enabling technologies and competences.

The final recommendations and trends (Deliverable 3.3) of WP3 will be based on an assessment of the questionnaires and the workshop results towards an affordable and progressive contribution to deepening ERA. This report (Deliverable 3.1) identifies the barriers, needs and constraints to create an ERA.

At a first glance, the barriers, constraints and needs including a set of recommendations identified in this report are essential findings but need further detailing:

Barriers and constraints to create and complete ERA

- Budget: financial difficulties to obtain EU funds for common research, bureaucratic procedures (lengthy and time-consuming)
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- Bureaucracy in collaborative projects
- Legislation and economics can be an obstacle for cooperation, especially when it comes to joint funding

As an example, the following needs, requirements and preferred recommendations to strengthen research institutions to become a valid member within the ERA are given:

- Use of existing instruments like CSA to strengthen self-standing NoE entities and launch a competitive call where these NoE’s get support for moving further towards integration and ERA deepening/completion
- Recommendation from study results: Concerning the NoE’s, the European Commission (EC) should assess on a case by case basis whether past achievements, potential, EU added-value and prospects of self-sustainability justify further funding under FP7. To foster an innovative step, the character of research institutions needs to be changed by preparatory research led by academia/research institutions with roadmaps defined by industries.

- Institutions can be strengthened through consolidation of the networks, projects and infrastructures towards capacity building or research programmes
- Strengthening of cohesion, knowledge-sharing, scientific knowledge excellence, innovative scientific/industrial research base by fostering frontier to focused/applied research to demonstration and prototyping through Joint Research Initiative (JRI) and Joint Technology Initiative (JTI) programming.

Refer also to the “DETRA/WP3 contributions to the Green paper³ dated 09.02.2011 (Annex I).

Within the overall structure of WP3, the follow-on activities with special emphasis on CEEC experiences and needs, feasibility check and final adoption to stakeholders needs will provide resulting recommendations and procedures to support the implementation for presentations and dissemination at the final conference at TRA2012.

³ Green paper³ COM(2011) 48 dated 09.02.2011

ANNEXES

7. Annex I: DETRA Contributions to Green Paper (Deliverable D7.2)



DETRA contribution to the

GREEN PAPER

**From Challenges to Opportunities: Towards a Common Strategic
Framework for EU Research and Innovation funding**

COM (2011) 48 dated 9.2.2011

INTRODUCTION

What is DETRA

The concept of DETRA derives from the Lyon Declaration. In 2008, the Lyon Declaration signatories, ECTRI, FERSI, FEHRL, EURNEX, HUMANIST, ISN and NEARCTIS committed themselves to working together on the deepening of the European Research Area objectives in transport in order to address the Grand Challenges. From this commitment grew the objective to create a European Transport Research Alliance (ETRA) that would strengthen the transport domain.

Key priorities of this Alliance were to examine the strengths, weaknesses, opportunities and threats (SWOT) in the domain and develop common understandings and approaches to reducing fragmentation and overcoming barriers.

What is the scope of DETRA

The DETRA project will provide a detailed examination of the current status and structure of transport research, bringing together the competences of all the partners together with their networks and associated links to provide the most comprehensive assessment of all the aforementioned aspects of ERA development. The project will then set out, and begin implementation, of the next steps in developing the Surface Transport ERA. See <http://detra.fehrl.org/> for more information.

GREEN PAPER CHAPTER 2 CONTRIBUTION - EU Research and Innovation from Challenge and Opportunities

Agreement on the main content especially in terms of:

- Challenges
- Global European competitiveness
- Global European research and innovation system competitiveness
- Step change in the European and innovation performance
- Simplification
- R&I public funding better efficiency with aligned efforts between the EU, the MS (and Regions), industry (industrialists OEMs and various tiers suppliers, service operators and infrastructure operators), and scientific community
- Alignment of EU funding and other funding resources from research to market uptake in line with the concept of EIP.
- Need for world-class scientific knowledge from frontier research to focused research or technological research to market innovation and standardisation and smart regulation.

GREEN PAPER CHAPTER 3 CONTRIBUTION - Lessons from EU research and innovation programmes

Agreement on the six focus areas.

GREEN PAPER CHAPTER 4 CONTRIBUTION – Towards a common strategic Framework for EU Research and Innovation funding

The Lisbon Treaties change a little bit the scope of the various EU research and innovation policies to be addressed:

- The European research (and innovation) area
- The European competitiveness
- The basic knowledge for policy making and addressing societal challenges (the so called other chapters of the Lisbon Treaties),

aligned with the priorities of the Europe 2020 Strategy and its initiatives, especially:

- Innovation Union
- Digital Agenda for Europe
- Europe Efficient
- Industrial Policy
- Youth on the Move,

surface transport and mobility shall be a societal challenge in itself linked to the other Grand Challenges (climate change, energy transition, health and food, ...).

So far, we agree on the titles of the four sub-chapters and for convenience we address general issues concerning this subtitle and the most relevant questions to be treated through the common strategic framework for EU research and innovation funding.

4.1 – Working together to deliver on Europe 2020

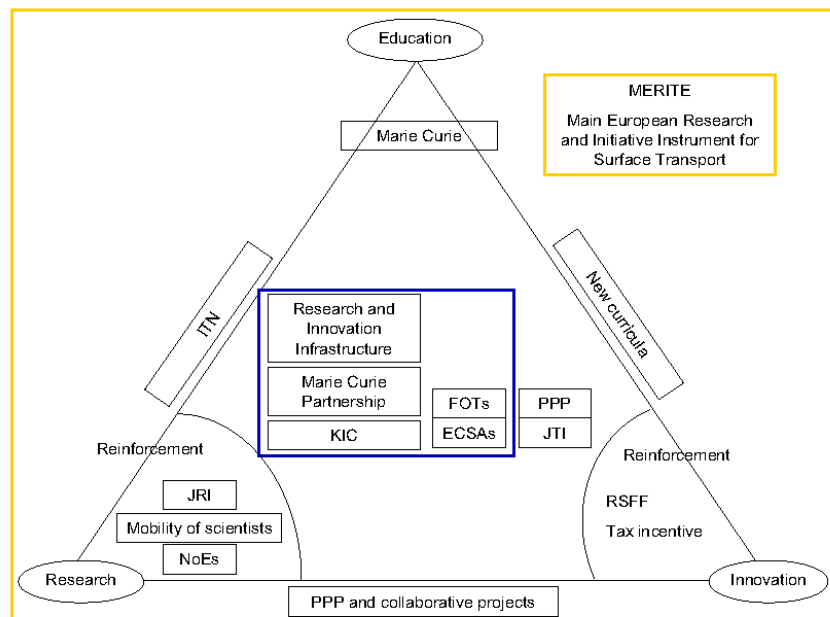
- Simplification, flexibility and speed of delivery, synergies, leveraging are critical issues for the future.

The complementarity but also the real focus of cohesion policy funding to the research and innovation programme funding shall be looked after in the full innovation life cycle or chain.

- Agreement to simplify the financial rules in the vein of the EC proposal COM(2010)815 final from December 2010. If pooling could be regarded as the best of funding alignment or convergence and synergetic articulations as a full first step to attain is critical.
- What is important is: European excellence and relevance of this excellence towards the societal challenges, the global competitiveness and the policy making, as well as the leverage of all types of funding in the global competition.

In any case, all activities (instruments or tools) have to be:

- Replaced within the Knowledge Triangle, some corner or some lining up could be tackling more the weakness or the strengths or opportunities at global level.



- Placed within the innovation life cycle or chain that is not any more necessary linear.

So we answer the following questions that are the most relevant from our point of view.

Question 1

How should the Common Strategic Framework make EU research and innovation funding more attractive and easy to access for participants? What is needed in addition to a single entry point with common IT tools, a one-stop shop for support, a streamlined set of funding instruments covering the full innovation chain and further steps towards administrative simplification?

- Simplification of the financial and administrative rules, including the respect of the entity traditional external auditors approved methods of accountability and EU financial rules in adequation with research and innovation.
- EU real added value and tackling to:
 - Global European competitiveness
 - Societal challenges including policies
 - ERA completion
 - Articulation between research and innovation tools or instruments (the first issue is to have EU funding articulated to MS and Regional Authorities for test beds, demonstrators, European large action) from lead market to European market implementation.
- The funding instruments have to be clearly situated in the Knowledge Triangle and tackling the full innovation scheme (not necessary linear) with a repartition between EC or EIB instruments and those of MS or Regions

- This could lead to having new tools or instruments such as European Innovation Partnerships with simplified methods.

Question 2

How should EU funding best cover the full innovation cycle from research to market uptake?

- EU funding framework shall be aimed at dedicated parts of the Knowledge Triangle, and at the full innovation cycle (not necessary linear).
- With the utmost EU added value and an alignment between:
 - EC + EIB proper funding
 - MS and Regions funding.

There is a need for an integrated research structure with academia, scientific and industrial research completing the ERA, heading for mid-and long-term innovation and building upon the full innovation cycle from preparatory/frontier (breakthrough research, applied/focused research, development and demonstration to market uptake).

- In any case, this EC funding shall cover not only frontier research:
 - The transformation of frontier into focused research including technological research.
 - The scientific evidence for a global European leadership for standard and smarter regulation, including grounds for tools of policies development, monitoring and assessment, the main tests, simulations and demonstrations supported by test beds to pave the way from lead market to a global competitive European market.
- Focused research programme in partnership “driven by agenda” as well as “bottom up” or “more bursting focused ideas” are needed if we want to tackle societal challenges, global European competitiveness and the excellence and relevance of the European research and innovation area.

Question 3

What are the characteristics of EU funding that maximise the benefit of acting at the EU level? Should there be a strong emphasis on leveraging other sources of funding?

- Cooperative research for global European competitiveness and grand societal challenges including demonstrations and simulation and large scale actions.
- Cooperative research to support the enhancement of focused research through networks of research organizations.
- Support for focused research infrastructures, test beds networking.
- Support for new focused research infrastructures, test beds preparation.
- There could be an emphasis on leveraging MS and Region funding and leveraging bankable research and innovation private investment.

Question 5

What should be the balance between smaller, targeted projects and larger, strategic ones?

- The larger strategic ones should be “agenda driven” such as the ones based on research and innovation ETP or eSafety agendas or around standardization or policy making.
- They shall represent the large part of the full landscape.
- But to avoid unlegibility for excellent and relevant scientists and to authorise even innovation and creativity within the research supply side of the ERA, some bottom-up sub-programmes or projects could be created in a broader way than FET or adapted to

European vivid networks of scientists including mainly focused research scientists (societal challenges, education & training, or competitiveness are focuses).

- It could complementary also address policy making without direct interest for industry, but linked to societal challenges.

Question 6

How could the Commission ensure the balance between a unique set of rules allowing for radical simplification and the necessity to keep a certain degree of flexibility and diversity to achieve objectives of different instruments, and respond to the needs of different beneficiaries, in particular SMEs?

- The first point is to have dedicated financial rules for research or innovation.
- To keep flexibility and diversity to achieve instruments' objectives, what is of utmost importance:
 - Annual work programmes and strategic research and innovation agendas have to be regularly updated during the next Multiyear Financial Framework period.
 - Instruments have to be clearly aimed at a part of the whole Knowledge Triangle or the full innovation scheme, so adapted to the programme main stakeholders
 - Industrialists
 - suppliers tiers 1 to 4
 - service operators
 - system providers
 - infrastructure operators
 - academia (not only frontier but also focused).
- They have not to be "blocked" by risk averse or risk taking, and to take into account the real inhabit of the different stakeholder communities.

Question 8

How should EU research and innovation funding relate to regional and national funding? How should this funding complement funds from the future Cohesion policy, designed to help the less developed regions of the EU, and the rural development programmes?

- The research and innovation funding shall be articulated between EU level Member states and regional or local authority levels.
 - eg. Test beds / demonstrations.
- Member States intergovernmental competitive programmes could be co-funded by EU (for SMEs or JPIs).
- Test beds or research and innovation infrastructures should be funded for their creation or development not at EU level except cohesion and regional funds, but by MS or regional and local authorities.
- Networked research organisations research programmes should be co-funded at EU level for the completion of ERA or background scientific evidence for competitiveness or policy making.

4.2. Tackling societal challenges

- Clear partnerships tools with clear funding instruments and strategic research and innovation agendas (or implementation agendas) are critical to plug in supply and demand side together.

- Forum of stakeholders and flexible and lean but resilient governance are of utmost importance.

Question 9

How should a stronger focus on societal challenges affect the balance between curiosity-driven research and agenda-driven activities?

- See answer to question 5.
- “Agenda driven” activities are critical to be carried out.
- But there is a strong need to have a bottom-up new idea driven research coming from the transformation and adaptation of frontier research outputs in adequate focus research outcomes and even new ideas tackling with organizational and systems driven research or innovation, eg. new ideas not coming from the curiosity driven research to be scientifically assessed or developed.

Question 10

Should there be more room for bottom-up activities?

YES, see answer to questions 5 and 9.

But you can have also bottom- up activities in “agenda driven” activities where you are not sure of the eventual real implementation of this agenda when various ideas or pathways are available.

Question 11

How should EU research and innovation funding best support policy making and forward-looking activities?

- Forward looking activities are critical for the setting-up of research agenda even policy or societal challenge driven agendas.
- In this respect, you can have partnership research and innovation between industry and research organisations (option 1), or partnership between only research organizations (option 2):
 - Besides supporting policies, EU research and innovation funding, the scientific evidence for standardization funding question where option 1 is preferable.
 - For supporting policies, the experience in transport research shows that you can have both options mainly when the policy making is based on harmonised standards.
 - But option 2 should be preferable if you are aiming at an EU policy to involve the full landscape of the MS ad hoc scientific communities, and preparing harmonisation of scientific evidence.

4.3. Strengthening competitiveness

Question 14

How should EU funding best take account of the broad nature of innovation, including non-technological innovation, eco-innovation and social innovation?

- Taking care of demonstration, innovation modelling, simulation, even large scale activities is very relevant at EU level to take into account the broad nature of innovation.
- Non technological innovation, eco innovation or societal innovation needs at least observation and evaluation research.

- EU funding has not to take care of all the innovation cycle, EU innovation funding leveraging bankable or private funding could be thought but with a very strong lever effect.
- EU funding could support the setting-up of European Innovation Partnerships aimed at developing a full strategic research innovation and implementation agenda for European large scale activities of importance for the EU future and transformation/transition with simplified methods.

Question 15

How should industrial participation in EU research and innovation programmes be strengthened? How should Joint Technology Initiatives (such as those launched in the current Framework Program) or different forms of 'public-private partnerships' be supported? What should be the role of European Technology Platforms?

- Keep flexibility in the industrial participation in EU research and innovation program strengthening.
- ETPs could take a supportive role for fostering innovation if
 - There is a representative participation of industry/operator/customer, academia/research in integrated organizations willing to integrate and share knowledge like EURNEX/HUMANIST & SME
 - They are clearly providing
 - Visionary outlook,
 - Strategic research areas with defined functional/societal requirements for the transport and mobility future
 - And are fostering mid- and long-term strategic research (with preparatory/frontier research applied/focused research, R&D, development and demonstration to market uptake
- European technology platforms could have a role if they are broadening the scope of their activities and stakeholders involvement following the model of the current eSafety Forum, with a financial support for example for the involvement of Research Alliance, Innovation Alliances.
- In surface transport research and ICT relevant research, flexible PPPs have been successful (EGCI, PPP FI, PPP Manufacture) because of their simplified management and governance, and also because of the industry landscape.
- European Innovation Partnerships could be a tool if MS are agreeing because of their parallel funding.

Question 17

How should open, light and fast implementation schemes (e.g. building on the current FET actions and CIP eco-innovation market replication projects) be designed to allow flexible exploration and commercialization of novel ideas, in particular by SMEs?

- See answers to questions 5, 9, 10, 11, 14.
- For SMEs it should be made through the support of networking of regional and national innovation clusters.

Question 19

Should new approaches to supporting research and innovation be introduced, in particular through public procurement, including through rules on pre-commercial procurement, and/or inducement prizes?

- YES for public procurement and pre commercial procurement where please apply the traditional space or military innovation and research model.
- For inducement prizes, we have two examples or non-example to raise:
 - The eSafety awards could be transformed in inducement prizes.
 - There is a strong need because it is not covered by the Nobel Prize or Field medals to have a well-known contest for scientists from industry and academy for research organizations in surface transport area that could be called the Fresnel European Medal for the first type and the Transport European Research Organization of the Year.

Question 20

How should intellectual property rules governing EU funding strike the right balance between competitiveness aspects and the need for access to and dissemination of scientific results?

- An IPR Framework for ERA strengthening is needed
- IPR rules shall be at the forefront of international cooperation and we have to take care of the type of cooperation agreement with automatic transfer of IPR outside EU or EEA; but they have to be different vis a vis the type of couples funding - type of subject of research planned outcome and leverage; when possible open access.
- Eg. If we are near patent or software copyright we have to protect the outcome where it is a competitive advantage of Europe:
 - for fully public competitive funded research open access could be at stake
 - for sensitive issues protect them.
- Dissemination is critical for many scientists of industry or academia and also for the tax payer:
 - Patenting is a first option if relevant
 - Other types of publications could be made
 - Keep the current status of deliverable, public, partner, closed to partner.

4.4. Strengthening Europe's science base and the European Research Area

- Global competitiveness could fail if there is not a certain level of continuity on the effort to tackle with such a type of grants and institutional support schemes¹.
- To tackle global European competitiveness, as global scientific evidence based standardisation and so far smarter regulation and policy making and evaluation, even it can be necessary, it is insufficient to deal only with:
 - Breakthroughs and frontier research.
 - Research infrastructure listed in ESFRI road map; we need as at the enforcement of the first European Treaties to reinforce also the scientific excellence and relevance of

¹ Representing half of the R&D public funding at MS level

focused research that is transforming frontier research into adequate scientific knowledge for applications and development or innovation:

China and India are investing strongly also in engineering sciences and other focused research domains very critical for transforming the transport system.

- We also need a new generation of measurement, testing and research and innovation infrastructures, to create the real adequate scientific knowledge to tackle with societal challenges and competitiveness or to deal with smarter policy; this is including test beds for demonstration or simulations, field tests and large scale actions to deal with market uptake processes and individual and societal acceptance of innovation.
- For research and innovation infrastructures, as well ESFRI agenda, it should be suitable to use localised targeted funds such as the cohesion and regional funds.
- On Marie Curie action, Academy Industry Partnerships and Initial Training Networks are critical to deal with new focused multidisciplinary issues linked to societal challenges and relative transformation to system such as transport as well the IRSES scheme.
- On International cooperation in our transport domain, that should be linked to the global European competitiveness of industry and the global European leadership in harmonization of scientific evidence for standardization and policy making. So far, Europe has not to be naïve and IPR rules are critical.
- On the ERA, we agree there are not only funding issues but also organisational and legal issues or policy initiatives.

Question 23

How should the role of Marie Curie Actions be strengthened in promoting researcher mobility and developing attractive careers?

Researcher mobility and attractive career can also be making switch between academia labs and industry labs. So Marie Curie and Industry Academia Partnership scheme is critical as well Initial Training Network Schemes or IRSES (International Staff Exchange Scheme).

- But the main issue is to have a legal framework on the ERA completion drawn from the current version of the "Lisbon Treaties".

Question 24

What actions should be taken at EU level to further strengthen the role of women in science and innovation?

- First to have an EU educational policy strengthening the background for science and innovation careers.
- Second to push women within scientific careers not only in academia but also in industry at various stages of their career.
- With support of inducement prizes and legal framework. ?

Question 25

How should research infrastructures (including EU-wide e-Infrastructures) be supported at EU level?

The cost of such research infrastructures is out of financial scale with the current FP7 budget.

TEN scheme as well Cohesion and Regional funds shall be used for research infrastructure creation and development.

Besides ESFRI it shall be useful to fund with EU research and innovation soft and hard focused research and innovation infrastructure integrative initiatives and to create a parallel to ESFRI agenda for EU research and innovation infrastructures including test beds, and innovation ecosystem infrastructures.

Question 26

How should international cooperation with non-EU countries be supported e.g. in terms of priority areas of strategic interest, instruments, reciprocity (including on IPR aspects) or cooperation with Member States?

- Be flexible and not naive on this subject.
- Some societal challenges are global.
- Some economic competitiveness concerns should be tackled including IPR issues.
- Some international cooperation to enhance globally the European leadership in standardization efforts could be relevant.
- Some research harmonization of scientific evidence for rule making could be at stake.

In some cases, supporting the creation of the research and innovation background infrastructures could be useful.

Question 27

Which key issues and obstacles concerning the ERA should EU funding instruments seek to overcome, and which should be addressed by other (e.g. legislative) measures?

- Mobility of research staff from academia and/or industry.
- Creation of Focused Joint Research Initiative to enhance the excellence and the relevance of the ERA supply side of research organizations.
- Support to the demand side through ETPs, for such as eSafety tackling with research innovation.
- Support to a parallel to ESFRI agenda on European research and innovation infrastructure agenda.
- EU funding instruments should favour ERA deepening research structures willing to integrate and share knowledge

8. Annex II: Analysis of Questionnaire

The following section contains an analysis of the DETRA WP3 “Strengthening research institutions” questionnaire (distributed in September 2010)

- Italic letters: content of questionnaire
- Standard letters: answers

Section 1

Are you aware of ERA and its objectives and to what extent do you agree and have fulfilled the objectives for strengthening research?

- ERA objectives
- European Transport research landscape to be a world class player
- Reducing fragmentation by integration
- Setting priorities in programmes and projects
- Common understanding of scientific and applied research and industry
- Knowledge sharing
- Providing added value to the customer and European society EU27

Are you aware of ERA and its objectives? And does your institution’s mission statement regard ERA?

Most yes or partially

How are ERA objectives fulfilled (strongly – fulfilled – not fulfilled)

Most fulfilled or strongly

Barriers and Constraints

- Budget
- Bureaucracy
- Administration
- Competition
- Time
- Cultural barriers
- Lack of funding
- financial, difficulties to obtain EU funds for common research, bureaucratic procedures
- Legislation and economics can be an obstacle for cooperation, especially when it comes to joint funding.
- Huge quantity of work to answer to calls for tenders with uncertain results
- Different national legal frameworks for mobility or benchmarking of governance of programmes or institutions, so still low development of intergovernmental actions.
- Lengthy and time consuming procedures and not sufficiently taking into account within assessment exercises of the same criteria’s (publication, IPR protection and management, focused research towards full free research).
- Mix of intergovernmental with the full landscape bilateral, regional, of all EU members and the commentary methods.
- **Non convergence of national and EC Research and Innovation Strategy and Policy.**
- Excellence is not understood as a compound scientific excellence, relevant excellence and governance excellence with two different types of issues: the programmes and the research organisations.

What corrective measures are needed (inside your institution, from outside, e.g. EC)

- Greater involvement of DG Move in specifying transport research tasks in order to include more policy related research in the programme
- Inside institutions, the capitalisation of the experience of NoE draws to the fact that new research governance and management is part of the excellence as the relevance for our customers (public bodies, society, and industry).
- Outside institutions: Besides the EIT and to accompany the research reforms including articulation between frontier and focused research or transformative and adaptive research, there is a need to reinforce, as the Lund Declaration says, the research organizations (research corner of the Knowledge Triangle).
- better financing, reduction of bureaucracy

Joint programming should be further encouraged and expanded as a first step, with

- Setting common work programme content (avoiding overlapping etc) throughout the European Research Area.
- Common Financing mechanisms and funds.
- Simplification of Administrative procedures based on the principle that “rules are abided” until one organization is proved (through ex post auditing) as wrong doing.
- Sharing of research infrastructures (both soft and hard).
- Eliminate mobility constraints
- Enhance support of research from public sources

Which Instruments & Programmes

(E.g. NoE, JPI, and Marie Curie) are supportive already and which need better political and financial support

- Marie Curie, COST Action, EUREKA, ETPs
- Successful NoE’s (and in transport, there is a good experience), Marie Curie ITNs or I3 have opened the way to ERA building. NoE’s did not succeed in creating the expected “critical mass” of research cooperation. Their loose structure proved elusive, and not binding enough.
- Collaborative Projects (STREPS or IPs) seem to be the most successful instruments because: They have specific scope and objectives, Measurable results and outcomes
- JPI goes further ERANET because this is a dynamical process and not a static process of coordination.
- The new instruments described in the Lyon Declaration Signatories Task Force Deliverable A, including big bricks of partnerships such as PPPs, ERIPs, FOTs, ELSAs and JTIs and also reinforcing research organizations in a manageable manner (Joint Research Initiative, see draft written down for DETRA and Lyon Declaration Signatories Task Force).
- Strong links between the cooperating research organizations
- Strong application / market orientation.

What role does ERA play in your daily work, what is your advantage?

ERA provides us a vision of the general guidelines and research needs. It also creates and reinforces the network between researchers and institutions.

The ERA building involves daily PhDs, post PhDs, next seniors, seniors, administrators and engineers and technicians.

At international level Cooperation with the excellent international teams

- first an interfacing to other excellences,

- second allows to make relevant choice of cooperation taking into account the value of scientists, the value of the organization, the added value of the thematic issues for the future,
 - And also to know our competitors to whom our stakeholders are addressing.
- Mostly knowledge exchange and sharing
 - Dissemination of research results has been quite a problem and it still is. We try to stimulate awareness about this fact and keep stressing the importance
 - Strong links with other research teams at the international level provides a number of benefits and advantages to us that can be summarised as follows:
 - Exposure to different cultures and innovatory processes is always a rewarding and value adding experience;
 - Use of more research infrastructures;
 - Creating more capabilities to tackle complex problems and issues;
 - Finding more opportunities to get involved in innovatory projects;
 - Creating more training opportunities for young researchers;
 - Establishing Networks and Networking capabilities that can be utilized in the future.

Section 2

Strengthen Research Institutions by integration and knowledge sharing

- Target is to strengthen your Research Institution within the framework of ERA and its relevant integrated networks e.g. EURNEX, Humanist, what are the obstacles for a fruitful lasting integration, covering your interests within ERA objectives.
- Financial risks
- Missing coverage of funds for start up and continued extra effort for integration
- Regulatory/legal barriers e.g. IPR
- Administrative barriers/bureaucracy
- “traditional” supply chain/closed shop mentality
- Cultural differences
- Language
- Regional, national, European interests
- EC Top down and bottom up supportive measure to speed up
- In-house policies & guidelines
- Personal relation built up
- Any other constraints/obstacles

Section 2.1

What are your most preferred/urgently needed recommendations/requirements to strengthen your Research Institutions as a valid member within ERA dedicated Networks as world class player.

- Involve the top level executive in the framing of ERA and supporting the development made by their scientists.
- Create the ad hoc environment
 - Partnerships with industry, societal organizations or public bodies
 - Research infrastructure
 - Resources for mobility (in and out)
 - Resources for customers oriented research and to anticipating research
 - Resources for adequate projects or programmes management
- More intensive participation in international projects
- Focus on coordination of international projects
- Publication and dissemination results

- Overcome administrative barriers / Administrative bureaucracy
- financial support
- Continuation of national and international research cooperation
- People of our main offices expert in preparing proposals

What is necessary for strengthening your institution?

- Funding, in the light of the decline in the proportion of European research
- Financial motivation of the staff in order to enrol young people interested in research and development
- continuous awareness raising and knowledge sharing
- Capacity and long term finance for the projects
- Coverage of funds for start up and continued participation
- Lower administrative barriers and simplify bureaucracy
- Shorten the time between application for project and start of project
- Develop support for implementation of results of projects in the states of participating partners
- Laboratory oriented research

What is your mission statement for ERA?

- The official Vision 2020 and its Lyon and Lund Declarations.
- Mission statement does not refer to ERA; Knowledge however is our core business so it links to ERA indirectly. But aims to:
 - Prevent flooding
 - Ensure adequate good quality water
 - Ensure safe, unimpeded movement on roads and waterways
 - Generate reliable information
 - Better value for money, Quality and economy
 - research work on technical innovation due to EU needs
 - To gain new knowledge through transnational collaboration
 - To win more research funding hence to grow our rates of publications and citations
 - to contribute to implementation of progressive results into the national environment through international activities
- Effective knowledge sharing

Strategic measures

- Strengthening the ERA is the only possibility to keep contact to world class research with all the consequences for the European economic area.
- Participate to clusters; create partnerships with research organizations and universities or industry.
- Overcoming administrative barriers/bureaucracy
- More Research and Development per money unit
- Creation of a Research, Development and Demonstration strategy

Strategic measures which will influence positively quality and sustainability of research activities of the institute in the future and will contribute to *strengthening* the role in the European research area.

- Information field (support management and communication, etc.),
- Organization field (adaptability of the organization form, etc.),
- Personal field (support to initiatives and activities of employees, education, etc.)
- Marketing field (analyses of needs in transport, etc.)

- Collaboration of internal and external affairs

Section 2.2

Strengthen collaboration with others

- Organizational support (e.g. office for external affairs at your institution)
- Create a European Research International Cooperation Directorate attached to a “Vice-President” in charge of the strategy.
- To create resources and staff for jobs needed for good governance and management of projects and well interfaced to seniors and future seniors, or to address complexity including assembling of different scientific expertise approaches.
- No office for external affairs but directly involved in European and international affairs.
- Education of project managers and project participants and steering groups
- International Cooperation Division
- Allocation of resources into ERA-NET ROAD and handling of joint calls.
- Specialisation of selected employees in projects and activities which will support cooperation with other partners.
- In case of a project leadership it is almost essential to get support by an external organization doing the administrative work. For us it is difficult to keep the man-power for this work because the number of projects with a leadership differs too much.
- Answer: we already have an office for external affairs at our institution, but it could probably be more effective if they could act more as providers of international projects

What is essential for lasting integration?

- Overcoming of cultural and knowledge level differences
- Trust, common understanding and commitment
- Political support in national Governments and Parliaments
- Membership in relevant international associations
- Involvement in multilateral and bilateral cooperation with similar institutions
-

What are the barriers and constraints?

- Budget
- Bureaucracy
- Administration
- Competition
- Time
- Cultural barriers

Section 3

What are your most needed recommendations / requirements to strengthen your research institution within a European Research Area network as world class player?

- Commitment to investment in research, in particular recurrent costs.
- European schemes that drive our National policy makers to invest in ERA (e.g. matching funds initiatives)
- engagement in international cooperation which will result in participation in European projects
- Participate to JRI's.
- participate to the networking of international clusters

Focus on:

- Research expertise – top-of-the-line R&D inside chosen areas

- Procurement – ability to enter and administer calls
- Legislation – insight into the handling of contracts and collaboration agreements
- Economics – safe and secure administration of the money flow between partners
- Networking – ensuring strategically sound decisions in all layers
- Communication – disseminate results to right target groups at the right time
- Recruitment – collaboration with the educational world
- Language – skilled negotiation and deployment of agreements

9. Annex III: Questionnaire on: WP 3 Strengthening Research Institutions in ERA



DETRA
Developing the European Transport Research Alliance

EC Project no.: 266051

Questionnaire on:
WP 3 Strengthening Research Institutions in European
Research Area

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Section 1

Are you aware of ERA and its objectives and to what extent do you agree and have fulfilled the objectives for strengthening research?

ERA objectives

- European Transport research landscape to be a world class player
- Reducing fragmentation by integration
- Setting priorities in programmes & projects
- Common understanding scientific & applied research and industry
- Knowledge sharing
- Providing added value to the customer and European society EU27

1.1. Are you aware of ERA and its objectives?

Does your institution's mission statement regard ERA?

Answer:

How are ERA objectives fulfilled (strongly – fulfilled – not fulfilled)

Answer:

If not, why?

Answer:

Barriers and Constraints

Answer:

What corrective measures are needed (inside your institution, from outside, e.g. EC)

Answer:

Which instrument & programmes (e.g. NoE, JPI, Marie Curie) are supportive already and which need better political and financial support.

Answer:

What role does ERA play in your daily work, what is your advantage.

Answer:

1.2. Recommendations from your daily experiences in your European cooperation.

Provide recommendations from your daily experiences in your European cooperation

Answer:

Section 2

Strengthen Research Institutions by integration and knowledge sharing

Target is to strengthen your Research Institution within the framework of ERA and its relevant integrated networks e.g. EURNEX, Humanist, what are the obstacles for a fruitful lasting integration, covering your interests within ERA objectives.

- Financial risks
- Missing coverage of funds for start up and continued extra effort for integration
- Regulatory/legal barriers eg. IPR
- Administrative barriers/bureaucracy
- "traditional" supply chain/closed shop mentality
- Cultural differences
- Language
- Regional, national, European interests
- EC Top down and bottom up supportive measure to speed up
- In-house policies & guidelines
- Personal relation built up
- Any other constraints/obstacles

2.1. Strengthen your institution

What are your most preferred/urgently needed recommendations/requirements to strengthen your Research Institutions as a valid member within ERA dedicated Networks as world class player.

Please name min 3 max 5 measures to be taken.

What is necessary for strengthen your institution

Answer:

What is your mission statement for ERA

Answer:

Strategic measures

Answer:

2.2. Strengthen collaboration with others

Organizational support (e.g office for external affairs at your institution)

Answer:

What is essential for lasting integration?

Answer:

What are the barriers and constraints?

- Competition
- Budget
- Time
- Cultural barriers
- Bureaucracy in collaborative projects
- Administration

Answer:

Section 3

What are your most needed recommendations / requirements to strengthen your research institution within a European Research Area network as world class player?

Answer: