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AND INNOVATION COMMITTEE**
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NOTE

Subject: Report of the GPC Working Group on Alignment

Delegations will find attached revised Report of the GPC Working Group on Alignment, as adopted by the GPC on 28 October 2014 via written procedure.

***Alignment in the context of
Joint Programming Initiatives***

REPORT

OF THE GPC WORKING GROUP ALIGNMENT

Chaired by Mogens Hørdér

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Executive Summary

The mandate of the GPC Working Group on Alignment

A crucial element of the Joint Programming Process is the alignment of national and European strategies and research programmes with Strategic Research Agendas (SRAs) of Joint Programming Initiatives (JPI). The Working Group was tasked with drafting a report to the GPC with the objective of exploring the concept of alignment in order to develop a common understanding of the ways alignment is undertaken in the context of Joint Programming; producing practical recommendations to implement actions that lead to alignment and making proposals for establishing measurable targets to help monitor the progress of alignment.

A common definition of Alignment for Joint Programming

The state of alignment for a particular JPI is changing and developing over time. Alignment is the strategic approach taken by Member States' to modify their national programmes, priorities or activities as a consequence of the adoption of joint research priorities in the context of Joint Programming with a view to implement changes to improve efficiency of investment in research at the level of Member States and ERA.

Recommendations for the Member States

- Stronger interministerial coordination is needed, involving commitment and funding from several ministries (and their related funding agencies).
- New ways of engaging institutions should be addressed by policy makers, by developing a coordinated approach for institutional and project-based funding.
- Alignment is catalysed when there is a national top-down (i.e. strategic) programme/strategy in the domain. Member States do not necessarily need thematic programmes that exactly mirror a JPI's SRA but they do need a national strategic approach towards the respective challenge. It is essential that this engagement is visible and long-standing.

Recommendations for the JPIs

- JPIs should look into aligning all actions spanning the programming cycle: from joint foresight, development of SRAs to joint processes of research practices, funding, implementation and ex-post evaluation and mobilization of in-kind resources.
- JPIs should use different actions and tools based on their type of challenge, on the kind of existing national programmes and on the available economic, human and technical resources and based on the phase of development they are in at a given point in time.

- Different actions that enable alignment within participating Member and Associated States are brought together in a JPI. Good practices should be further developed and eventually become best practices, shared among JPIs and promoted throughout Member States.

Recommendations for Alignment in the perspective of ERA and the role of Alignment in the coherence of Horizon 2020 and JPIs

- The alignment of national policies/programmes towards JPIs is pivotal for the role of JPIs in ERA.
- JPIs should become platforms for strategic programming and foresight for Member States working jointly together according to the identified good practices for alignment.
- The European Commission should facilitate the process of alignment by mapping, monitoring and evaluating the synergetic actions taken in the domains of societal challenges between Member States and between Member States and the EU-level.

Recommendations for monitoring of the progress of Alignment

- The JPI should continuously define which good practices for alignment it will apply and then monitor the implementation of these.
- The Member State should identify how much its own “programmes, priorities and activities” have changed since its commitment to the JPI and/or the adoption of the SRA.

Recommendations for the role of the GPC in the context of Alignment

- Monitoring of alignment activities should be undertaken by both JPIs and Member States by developing a strategy for monitoring their alignment activities.
- The role of the GPC would not be to monitor alignment accomplished in different JPIs or different Member States, but to develop a common approach for monitoring alignment. This can be done either by a dedicated GPC working group on this issue or by delegating some tasks to the new ERA-Learn 2020 project.
- The GPC should regularly review the progress of alignment as achieved by the individual JPIs and Member States.

Additional information on Alignment of the Report

Important additional information on the material collected and analysed by the Working Group can be found in the annexes of the report.

Members of the GPC Working Group Alignment

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1. Introduction

Alignment is the key to successful Joint Programming.

The first phase of Joint Programming included identifying societal challenges to be addressed by JPIs and was guided by the GPC and approved by the EU Council. The current second phase is involving the process of alignment of national research programmes and activities around a common focus or societal challenge.

By aligning and coordinating the institutional and competitive funding committed nationally, which accounts for 88%¹ of GBOARD² in Europe, we can better exploit our resources for maximal societal impact and thereby improve efficiency of resources for research in Europe.

Member States need to engage fully in the alignment of national research programmes and activities in order to unlock the potential of Joint Programming and move from the current second to a third phase of Joint Programming.

A future third phase sees Member States working together in a systematic and strategic way to identify societal challenge (or core research question) and then implementing the full policy cycle -including developing roadmaps, funding research, undertaking ex-post and ex-ante evaluations- leading to alignment.

1.1. Mandate of the GPC Working Group Alignment

The Working Group was established as a follow up by the GPC in response to the outcome of the conference on Joint Programming by the Irish Presidency and the European Commission in February 2013.

The Working Group agreed on a mandate for the group in its first meeting in September 2013:

¹ Source: Eurostat, DG Research and Innovation and IPTS calculations: Total EU-27 GBOARD minus funding for transnationally coordinated research, minus FP-programme funding (for 2010)

² GBOARD: Government Budget Appropriations or Outlays for Research and Development

“A crucial element of Joint Programming is the alignment of national and European strategies and research programmes with Strategic Research Agendas of Joint Programming Initiatives (JPIs). Much emphasis has been put on the need for alignment, however little has been indicated on how to achieve it. The Working Group recognizes that alignment is a concept that is open to many interpretations.

The objectives of the group are:

- to explore the concept of alignment and to develop a common understanding of the ways alignment is undertaken in the context of Joint Programming
- to produce practical recommendations to implement actions that lead to alignment
- to make proposals for establishing measurable targets to help monitor the progress of alignment
- to identify the possibilities for implementing alignment in parallel with Horizon 2020

Working methods of the group:

The Working Group will explore the ways alignment is perceived by the existing JPIs and will investigate how the differences in the scope of the various JPIs might influence the way alignment with national research programmes might be turned into practice.

The Working Group will look into the potential for alignment given that at the national level research funding systems include many different actions.

The Working Group will put emphasis on developing practical recommendations for achieving alignment within the European Research Area considering the barriers mentioned above.

The Working Group will present its report to the GPC June 2014.”

1.2. Understanding alignment: the role of Joint Programming in the context of ERA

ERA policy is a shared competence between Member States and the EU. Even though legally speaking, the Treaty of Lisbon (TFEU) would give the power (Art. 182.5) to the European Union to establish the necessary measures for the implementation of ERA, so far a partnership approach with Member States has been chosen to make ERA a reality. The responsibility to develop ERA rests with the Member States because research policy is mainly handled at the national level. With the creation of ERA in Lisbon in March 2000 the European Council formulated the ambitious aim for Europe to become the most competitive

and dynamic knowledge-based economy in the world by 2010. With that vision in mind, Member States agreed in Barcelona in March 2002 to raise R&D expenditure levels to 3% of GDP by 2010. So since 2000, the Union has started to coordinate national research policies.

The EU Framework Programmes (FPs) have always had structuring effects on the national research systems but it was with the introduction of “ERA instruments” as of FP 6 (ERA-NETs, Art. 185 initiatives) that this structuring influence became more evident and moved from the project level (involving researcher and/or research unit level) to the Member State/funding bodies – the programme - level³. With the FP, the European Commission disposes of a tool that can incentivise this coordination financially. Only 1,47%⁴ of GBOARD is transnationally coordinated funding, financed by Member States. Broadly speaking, about on average 8% of the overall available European GBOARD is funded by the FP. Around 88% of GBOARD is confined to Member States (2010 figures for EU-27).

Joint Programming Initiatives (JPIs) are country to country collaborations involving the full policy cycle as well as the different layers of the national research systems (from the policy-making level to the level of the individual researcher). An ERA-NET is a program to program collaboration based on joint calls. There are several favourable gains from the move from collaboration within a project to cooperation and coordination of programmes. Most importantly a programming approach provides for joint vision development and strategic agenda setting. It also ensures a longer-term period of available funding and is more likely to build critical mass.

Whilst programme cooperation remained to be done ex-post for ERA-NETs and Art. 185 initiatives (existing programmes joining up), a more ex-ante approach was introduced with Joint Programming, where new programmes addressing societal challenges were jointly created by Member States at the EU-level and where no EU funding was involved a priori. Joint Programming is a process designed to ensure the optimisation of existing and future research efforts at the level of the Member States and by doing this, contributes to the structuring of research efforts in the ERA.⁵ Amongst many other positive effects, a coordinated approach in public research policy making can enhance national and overall European efficiency and effectiveness, avoid unnecessary duplication in research funding, create critical mass by pooling funds and enhance the level of scientific excellence by

³ Arnold, Erik et alia: “Understanding the Long Term Impact of the Framework Programme” Final report, December 2011

⁴ IPTS' calculations based on EUROSTAT data for 2010, see ERA Communication Synthesis Report 2013: http://publications.jrc.ec.europa.eu/repository/bitstream/111111111/30386/1/ipts_erasynthesisreport_final.pdf; p. 24

⁵ Commission Communication COM(2008) 468 final: “TOWARDS JOINT PROGRAMMING IN RESEARCH: Working together to tackle common challenges more effectively”

streamlining and standardising research evaluation practices and by generating a greater pool of scientists that compete with each other.

Grand societal challenges have been introduced as a vehicle and catalyst to capture political and public imagination for larger efforts that also engage Member States resources.^{6 7} The idea was to bring together national programmes to tackle grand societal challenges, as defined in the Strategic Research Agenda (SRA) of the JPI.

In order to embrace fully this double nature of Joint Programming(structuring ERA and addressing societal challenges), alignment of national policies towards a defined SRA of a JPI is the prerequisite to realise Joint Programming.

2. Key Stakeholders involved in alignment for Joint Programming

The aim of this report is that the key stakeholders involved in Joint Programming observe and implement the recommendations made for alignment.

The key stakeholders identified are the GPC, the Member States (as well as Associated States), the JPIs, the European Commission, the research institutions and the researchers.

- From a political perspective, the GPC plays a critical role in ensuring political recognition and support for the JPIs. The GPC is considered as the forum where exchange of information about developments at national level in priority areas takes place in order to align national research strategies with the JPIs' SRAs agreed priority areas.
- Member States have been invited to step up efforts to implement joint research agendas addressing grand societal challenges, to share information about activities in agreed priority areas, to ensure that adequate national funding is committed and to strategically align programmes and activities at European level in these areas.
- JPIs were entitled to make use of the variable geometry principle and were tasked with setting up their own management and scientific boards and develop their SRA. They are expected to recognize that alignment plays a crucial role in the implementation of the SRA.

⁶ Report of the ERA Expert Group: Challenging Europe's Research: Rationales of the European Research Area (ERA); 2008

⁷ The Lund Declaration: Europe must focus on the grand challenges of our time; July 2009

- The European Commission plays a pivotal role in the development of coherence between Horizon 2020 - the current most important instrument for ERA - and the JPIs, recognizing them as important actors in ERA.
- The research institutions and the individual researcher in Member States that participate in JPIs are very important stakeholders. Research institutions may develop institutional strategies towards the JPI domain. Many of the actions towards alignment are well known to researchers. Becoming a stakeholder for alignment is adapting the way research is planned and conducted in the context of a specific JPI.
- Ultimately, JPIs being in place to address societal challenges through joint European research, European citizens are key stakeholders for Joint Programming as well. Citizens are involved in JPIs usually via Stakeholder Advisory Boards. Civil Society Associations' concerns are taken into account by JPIs either directly or through the government (ministries) acting as transmitter.

3. Information gained and collected by the Working Group Alignment

The members of the Working Group recognized that alignment is a concept that has been open to many interpretations - by e.g. individual JPIs, by Member States, the GPC and by the European Commission. To get closer to a common understanding of the concept of alignment the Working Group decided on a methodology based on four types of information sources:

- 1) The Working Group researched key documents published within the latest 2-3 years by the European Commission and the GPC (see Annex I).
- 2) The members of the Working Group representing mainly Member States had different experiences and expectations as to what the role of JPIs is - and in particular how alignment should be interpreted. The group therefore did a “group internal analysis” of the concept of alignment (see Annex).
- 3) The 10 JPIs were asked to report their experiences in implementing Alignment through a structured questionnaire (see Annex II)
- 4) Finally a workshop on alignment was organized by the Working Group together with the European Commission in which representatives of all JPIs, of the Member States, the GPC and the European Commission participated (see Annex IV).

Several physical meetings as well as teleconferences were organized, assisted by the European Commission who acted as Secretariat of the Working Group.

4. The Recommendations of the GPC Working Group Alignment

According to the objectives stated in the mandate the Working Group has drafted:

- A) A proposal for a definition of alignment in the context of Joint Programming
- B) Recommendations for actions to enhance alignment for the JPIs, for the Member States and for ERA (ie for the GPC and the European Commission)
- C) Recommendations for monitoring the progress of the implementation of alignment.

The Working Group hopes that with this report a contribution is made to a common understanding of the concept of alignment in the context of Joint Programming Initiatives within ERA. Hope is that the report adds to a gradually commonly accepted standard as to how alignment can take place.

5. Recommendations

5.1. A proposal for a definition of alignment in the context of Joint Programming

The approach of the Working Group has been to explore different pathways towards alignment and thus to come closer to a definition that will be achievable by Member States for current and future Joint Programming Initiatives.

Alignment concerns Member States and JPIs alike and the form it takes will depend on the individual JPI and the individual Member State. There is no unified approach to alignment towards the 10 JPIs even within the same Member State because of the interdisciplinary nature of Joint Programming addressing societal challenges that involves multiple actors (stakeholders in society, research funders/ministries, researchers etc.).

The state of alignment for a particular JPI is changing and developing over time. This rolling process of alignment is in line with the three phases of the Joint Programming process as described in the Expert group review from 2012⁸. However, the aim of alignment of the SRAs of national programmes with the SRA of a JPI, in order to best possibly address the societal challenge, is the same of all JPIs.

The definition that will cover the above approach is:

⁸ Acheson Helena et alia: "Review of the Joint Programming Process"; Final Report of the Expert Group (October 2012); http://ec.europa.eu/research/era/pdf/jp-expert-group-22102012-report_en.pdf

'Alignment is the strategic approach taken by Member States' ^[1] to modify their national programmes, priorities or activities as a consequence of the adoption of joint research priorities in the context of Joint Programming with a view to implement changes to improve efficiency of investment in research at the level of Member States and ERA.'

The practical steps to undertake for achieving alignment are to decide on and implement practices towards alignment by JPIs as well as Member States.

A list of good practice for alignment activities combined with a suitable exchange and learning platform should be kept up to date by an adequate forum in close cooperation with the GPC and the JPIs.

In this report, a first listing of good practice for alignment can be found in Section 5.2.). Annex III and IV includes further examples of good practice and experiences of JPIs and Member States in implementing such practices are described. The Workshop on Alignment as described in Annex IV is an example of a platform for exchange of good practice.

5.2. Recommendations for actions to enhance alignment for the JPIs, for the Member States and for ERA

5.2.1 Recommendations for the role and engagement of Member States in the alignment of national research programmes and JPIs

Member States' internal research governance structures

The Working Group's findings support the notion that there are different ways of how Member States can organize themselves for enhancing alignment (see Annex IV, case studies Member States as presented in the GPC Workshop on Alignment on 12 March). There is no need for a unified European approach to internal research governance of Member States in order to participate in JPIs and diversity in this respect is not an obstacle.

However there are two points that deserve careful consideration and possible mitigation:

- Because of the cross-cutting nature of societal challenges, stronger interministerial coordination is needed, involving commitment and funding from several ministries (and their related funding agencies).
- Because of extensive amounts of untapped potential of research performing organizations (institutional funding), new ways of engaging institutions should be

^[1]As this is organised differently in the various Member States/Associated States, the responsibility lies with the national level to determine who these national programming authorities are.

addressed by policy makers, by developing a coordinated approach for institutional and project-based funding.

Member States and their authorities should be aware of the importance of good administrative practice to enhance alignment and decrease barriers towards it. They should invest in the build-up and continuous training of sufficient human resources in ministries and agencies in order to create and ensure awareness about the benefits of alignment in Joint Programming (including the adaptation of operational funding rules).

National engagement in the JPI domain

The need for national and regional policy frameworks in the research fields of the JPIs, has led many Member States to develop national action plans, roadmaps and strategies in the domain of the JPIs they participate in with a view to underpin their commitment to the SRA of JPIs. Indeed alignment is catalysed when there is a national top-down (i.e. strategic) programme/strategy in the domain.

However Member States do not necessarily need thematic programmes that exactly mirror or mimic a JPI's SRA but they do need a national strategic approach towards the respective challenge. It is essential that this engagement is visible and long-standing.

National research programme/national strategies in the JPI domain developed with the input of national researchers will catalyse, develop and create identity and ownership for the JPI nationally.

Special awareness is necessary within a Member State for JPIs that are funded entirely bottom-up, ie national programmes do not exist in that domain. If at the same time, the amount of funding in that domain is small, it becomes nearly impossible for a Member State to participate in a meaningful way. A bottom-up approach to research funding makes it difficult to identify areas for alignment. In these cases, the engagement of institutional funding for the SRA of a JPI is a good approach but ideally a mixed top-down and bottom-up approach is to be preferred.

Decision makers at different levels in the key stakeholders need to be aware of the JPIs SRAs and their long-term visions and they should be involved in the definition, validation and final approval of the adopted SRAs.

Externally demonstrated national political commitment for the JPIs

Political commitment and will is best expressed by the nomination of national high-level senior representatives to the GPC and in the Governing Boards of the JPIs. Nominations should be for a longer period to support the understanding of the nature of Joint Programming

For a better understanding of how alignment action can bring value to the national context, communication at all levels (EU, GPC and JPI and individual Member State level) has to be improved and be more political and strategic.

For an integrative communication at national level, those responsible for the national research policy and funding in the respective area should ideally also be in charge of the JP involvement of the respective Member State. It would be optimal if they are at the same time the national representatives in the JPI Governing Board.

5.2.2. Recommendations for actions of JPIs to enhance alignment

The spectrum of alignment

JPIs will benefit from the alignment of national research programmes of participating Member States because it will increase the basis of their available means to implement the commonly defined SRA for addressing the societal challenge of the JPI. Therefore it is in the interest of JPIs to look into aligning all actions spanning the programming cycle: from joint foresight, development of strategic research agenda to joint processes of research practices, funding, implementation and ex-post evaluation. Mobilization of in kind resources (e.g. joining up research infrastructures) are also important joint actions of Joint Programming.

Alignment is a long term development

JPIs are not funding instruments, but intergovernmental transnational coordination bodies, all long term and in the midst of development. Whereas joint calls have been a first joint activity for some of the ten JPIs, JPIs' activities should go far beyond joint calls. JPIs should use different actions and tools based on their type of challenge, on the kind of existing national programmes and on the available economic, human and technical resources and based on the phase of development they are in at a given point in time.

Good practices of alignment

Different actions that enable alignment within participating Member and Associated States are brought together in a JPI. In addition to a systems oriented definition and profiling of the term „Alignment“ –as already discussed in the section on definitions of this report- good practices for alignment in JPIs (like the knowledge hub or the thematic programming or others) are as important. Good practices should be further developed and eventually become best practices, shared among JPIs and promoted throughout Member States.

Networking approaches (e.g. Knowledge Hubs, Thematic Programmes, Centres of Excellence) are well suited to themes where most Member States have priorities. They also

allow Member States to identify gaps in their research strategies and practices. They easily allow combining in-kind and institutional funding with in cash support, and smart specialisation.

However, also other important actions have been applied by current JPIs. All together these constitute a number of actions that should be considered “Good Practices for Alignment”. It is important to stress that actual good practices will change over time depending on the three phases of the JPI.

“Good Practices for alignment in the Context of JPIs”- as of 2014

1. *Explore and prepare for alignment*

- Mapping of current research and gaps among participating Member States
- Differentiation of tools for exploration and assessment (mapping, workshops, syntheses, white papers) suited for the needs of the different topics
- Evolutionary vision from 3 to 10 years for the development from weak to stronger alignment.

2. *Actions for JPIs to achieve alignment of national policies/programmes*

- Networking and capacity building among research groups and stakeholders - eg Knowledge Hubs and Thematic groups
- Calibration and standardization of methodologies
- Identifying capacity building approaches to facilitate better networking across and between disciplines and researchers
- Any activity heavily building on large infrastructures or large institutionally funded players
- Most appropriate areas should be selected carefully taking into account the cost for mid-term adaptation versus the long-term reward
- Definition of approaches that may facilitate wider access to national technology platforms or infrastructure, and promote the sharing of data and resources
- Institutional Alliances: Institutional cooperation, complementarity, sharing of infrastructure and staff
- Standardize – where possible - internal procedures in Member States where relevant for joint actions

- Focus on research areas where nationally funded research is existing aiming at building joint critical mass – eg centres of excellence
- Alignment leads to joint transnational calls (eg funded by ERA-NET Cofund) and joint transnational calls lead to alignment
- Development of transnational procedures for prioritizing, evaluation and decisions on funding
- Consider that excellence as an ultimate priority for funding does not always constitute the most efficient way to enhance alignment
- Coordinated funding decisions in each country (time, amount and topic).
- Catalyzing development of national strategies
- Identifying capacity-building approaches to facilitate better networking across and between disciplines and researchers
- Linking, harmonizing and sharing information between investments under national programmes in the JPI research field
- Smart specialization/labor sharing

5.2.3 Recommendations for alignment in the perspective of ERA and the role of alignment in the coherence of Horizon 2020 and JPIs

The role of JPIs in ERA

It is essential to be aware that JPIs do not only address societal challenges but also play a structuring role in the ERA landscape. The alignment of national policies/programmes towards JPIs is pivotal for this role of JPIs in ERA. In fact, Joint Programming is the most strategic and all encompassing process developed within the ERA so far, and has the potential to be the vehicle for the other, more operational elements of ERA.

JPIs are Mini-ERAs in that they in themselves address all the important ERA actions (from effectiveness of national research systems to knowledge transfer and dissemination). Thus JPIs should be made more visible at all levels of ERA.

The advantage of JPIs as Member States' cooperations at the public research programme level in the complex ERA landscape is the long-term focus of its activities. Alignment introduces changes in approaches for research policy from the political level to the level of the individual researcher.

JPIs should become platforms for strategic programming and foresight for Member States working jointly together according to the identified good practices for alignment. This would be comparable to how the European Commission is proceeding with internal strategic programming of the Horizon 2020 Work Programmes.

The role of the European Commission is important in facilitating the process of alignment in Joint Programming and within the individual JPIs. It could do so by mapping, monitoring and evaluating the synergetic actions taken in the domains of societal challenges between Member States and between Member States and the EU-level. It could assist in defining current or new common societal challenges, eg by providing forward looking activities to feed priority setting for societal challenges. Furthermore, the European Commission should envisage continuing to support the individual JPIs in their endeavour of alignment. Finally, the European Commission could explore the potential of JPIs - bringing together the right people from Member States – to discuss the content, funding and implementation of new Art. 185 initiatives.

The way forward with alignment for Joint Programming in ERA

It is essential that the work started by the GPC Working Group Alignment continues (at the appropriate level), in collaboration with the GPC, and that best practises are “logged” for future use.

The Working Group welcomes the efforts undertaken by the EC to support the assessment and exploration of current and possibly new approaches to alignment in the context of the follow-up project of ERA-Learn, JPI to Co-work and Netwatch. The Working Group considers such arenas to be the right place to build further on this exploratory GPC report on alignment. However, the Working Group wants to emphasise that involvement of the GPC should be ensured in activities that an eventual successor project will undertake in its quest to push alignment further ahead.

Such involvement will ensure a continuum that will benefit the alignment by Member States and JPIs, meaning that a log of good practice for alignment is updated steadily and its use assessed. Ideally this is done through workshops and further analysis on the topic. In the future, it will also be important to concentrate more strongly on alignment using a broader spectre of means, ie institutional funding or smart specialisation. With scarce Member States’ resources as regards cash funds channelled via national programmes to the JPI, the alignment of institutional strategies will inevitably come more into the picture.

5.3. Recommendations for monitoring the progress of alignment

Monitoring of alignment activities should be undertaken by both JPIs and Member States. The role of the GPC would not be to monitor alignment accomplished in different JPIs or in the different Member States, but to develop a common approach for monitoring alignment.

1. The JPIs individually should develop a strategy for monitoring their alignment activities:

The JPI should continuously define which good practices for alignment it will apply and then monitor the implementation of these. With time it can test different alignment activities. Overall JPIs will gain experience and a growing number of good practices will be applied and implemented.

2. The Member States should individually develop a strategy for monitoring their own alignment activities based on their situation:

The participating country of a JPI should identify how much its own “*programmes, priorities and activities*” have changed since its commitment to the JPI and/or the adoption of the SRA.

A change could be

- a change in the content of research (e.g. degree of similarity in objectives or themes),
- a change in the volume of research,
- a change in the way the programme/activity is executed (e.g. degree of collaboration),
- a change in research output.

In case of volume, one can consider e.g. number of programmes/activities, number of joint programmes/activities, number of researchers or institutes involved (the size of JPI community), or the amount of funding allocated to these, either in real terms or relative to other research.

The overall alignment of each of the participating countries should provide an indicator to how much a JPI is aligned to its own priorities.

The GPC should regularly review the progress of alignment as achieved by the individual JPIs and MS.

Annexes

Annex I: Key Documents on the concept of alignment in the context of Joint Programming

The Working Group has reviewed 4 key documents on Joint Programming published since 2012. In the following references are made to those sections of the four documents where the concept and roles of alignment are highlighted in the documents.

1. Review of the Joint Programming Process

Final Report of the Expert Group (October 2012)

“The overall conclusion reached by the Expert Group is that the Joint Programming process has got off to a good start, although the process can only reach its full potential if commitment and financial support from national level administrations continues. In some cases participating public authorities are already working to orientate and *align* their programmes and their funding in order to contribute to the overall implementation of JPIs in a coherent manner. However, the full delivery of “joint programming” as originally envisaged, that is going beyond programme alignment and joint calls, remains uncertain.” (Executive Summary (page 5))

“MS need to move away from the idea that Joint Programming is about bringing new funds to address specific research ideas in single joint calls, to *a realisation that it is about aligning existing national programmes* to tackle major societal challenges and ultimately to engage in a full policy cycle together in order to arrive at true “joint programming”. (page 6)

“MS should increasingly inform and align national strategies and research programmes with the JPI SRAs.” (Recommendation 9 (page 8))

“Joint Programming is a process designed to ensure the optimisation of existing and future research efforts at the level of the Member States. Optimisation means reinforced cross-border cooperation, improved coordination and better alignment of publicly funded research programmes in Member States in a limited number of fields and, overall, contributing to the structuring of research efforts in the ERA.” (JP in brief (page 9))

“The Expert Group sees this new concept of Joint Programming as having three distinct phases. There is the current suite of JPIs identified and guided by the GPC and approved by the EU Council; a second phase involves the alignment of national research programmes around a common focus or societal challenge. The final phase which involves “true” Joint Programming involves Member States (MS) working together in a systematic and strategic way to identify the next societal challenge (or core research question) and then implementing the full policy cycle (including developing roadmaps, funding research, undertaking ex-post and ex-ante evaluations).” (JP-policy vision (page 12))

“The majority of responding countries identified limited budgets for R&D as a major obstacle to their participation in joint programming. Despite the fact that aligning research programmes was one of the drivers for establishing the process, and through this achieving efficiencies, it seems to the Group that thus far convincing most programme owners about such efficiencies has not been successful.” (Challenges/difficulties (page 17))

“MS have yet to fully experience the benefits that can arise. There is still some misconception about what Joint Programming entails – some perceive it as an extended ERA-NET, rather than a process that could eventually lead to the alignment of national programmes. The Expert Group considers that the research agendas of JPIs and the objective to align national programmes should remain the focus of the Joint Programming process and be the primary motivation for MS participation.” (Conclusions (page 23))

“The concept of Joint Programming as a means of aligning existing national programmes is not yet fully understood.” (page 24)

“Joint Programming is primarily about the alignment of existing and planned national research programmes in order to tackle grand challenges more effectively and efficiently. However this concept has yet to be fully adopted and acted on by national programme owners and policy makers.” (Political challenge (page 36))

“MS need to move away from the idea that Joint Programming is about bringing new funds to address specific research ideas in single joint calls, and is more about aligning existing national programmes to tackle major societal challenges.” (Conclusions (page 44))

2. Communication from the Commission: A Reinforced European Research Area Partnership for Excellence and Growth

17.7. 2012 (COM(2012) 392 final)

“Joint Programming also has the potential for better anchoring co-operation with international partners. But implementation to date falls short. The crux is to enable transnational research and innovation by exploiting synergies between national and international programmes, strategically aligning different sources of national and other funds at EU level rather than cross-border funding per se. The level of alignment is presently too low to make a serious impression on big and complex challenges.” (Optimal transnational co-operation and competition (page 7))

“Member States are invited to 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.” (page 8)

3. 2012 Biennial Report of the High Level Group for Joint Programming (GPC)

ERAC –GPC 1301/13

“GPC wishes to call on JPIs to step up efforts to implement SRAs, ensure that JPIs build upon national programmes, that adequate national resources are committed and strategically aligned at European level in these areas.” (Recommendation (page 21))

“GPC calls for complementarity, coherence and alignment between Horizon 2020 and JPIs and their SRAs.”(Recommendation (page 27))

4. Report on the Joint Programming Conference; February 2013, Dublin

“Politically, the message was clear: Member States need to renew their commitment to Joint Programming and need to engage fully in the alignment of national research programmes in order to unlock the potential of Joint Programming and move from planning to implementation.” (Executive Summary (page 2))

“It became clear that joint calls may be an excellent testing ground for joint activities but only the alignment of research programmes will ultimately make a change in using research resources more efficiently and in building the ERA.” (Executive Summary (page 2))

“Similarly, Commissioner Geoghegan-Quinn regards Joint Programming as being at a critical juncture where agenda setting has to be moved forward to implementation, which she believes will be “achieved first and foremost through the alignment and coordination of national research programmes and activities.” (Introduction (page 6))

“Increasingly inform and align national strategies and research programmes with SRAs.” (The way ahead (page 17))

“Since its start in 2008, the Joint Programming process and the Joint Programming initiatives have gained considerable momentum and have led to the development of strategic research agendas, visions ahead and first joint activities, which in general have taken the form of common calls. Even if these have been the major criteria to prove that the JPIs are functioning, it became evident during the Dublin conference that these steps do not suffice. The way ahead in Joint Programming has to lead to alignment of national research programmes and implementation. These are the two cornerstones of success.” (Main conclusion (page 20))

Annex II: The group internal analysis by the Working Group Alignment

In a first brainstorming by the GPC Working Group (September 2013) alignment was characterised by the members in a number of statements. They are part of this report because they represent views on alignment that is found broadly among members of JPIs and among representatives of member states

- Alignment should lead to coordination and will reduce fragmentation
- The existence of a Strategic Agenda for the research area is a prerequisite for Alignment
- Alignment will lead to synergy and to complementarity
- Alignment is bi-directional: Common (JPI) SRA vs the SRA of member states
- Alignment is about identifying best practices
- Alignment is not about theory but must be practical and lead to changes
- Active alignment will disclose barriers to collaboration
- Alignment occurs at different levels in the JPIs –some not even introduced
- Alignment is not (only) joint calls
- Alignment is not ERA-Net
- There are many actors in the process of alignment: Ministries (principles), Research Councils(Funding), JPI Secretariats, Research Institutions
- Alignment is about to change the mind of science-administrators, scientists, funders
- Member states have decided to join the JPI and thus the wish and needs of the scientists are in accordance with alignment
- Alignment must show added value to existing research activities
- Alignment is an arrangement of groups and forces in relation to each other-
- Alignment is to reach more critical mass in an area.
- Alignment is important for small countries to increase the scientific quality and research capacity

Further considerations of the GPC Working Group Alignment (May 2014)

- Alignment in itself is also a product of coordination, coordination should precede alignment
- Coordination and alignment can only be achieved through active collaboration also on the work floor of scientists and research institutions; if research institutions want to collaborate and to align, their ministries will follow (in many cases it's not the other way around)
- In-kind contributions to common activities and programmes are key to the success of alignment; every in-kind contribution is a direct sign of alignment, much more so than cash-contributions, as people, infrastructure and other capacity linked to national institutions are linked to national agenda's while money is not (or not always); assessments of the success of a JPI's alignment should always include in-kind contributions

Annex III: Outcome of a Questionnaire to the 10 JPI Chairs on JPI implementation strategies of alignment, February 2014

In 2012, an Expert group put in place by the European Commission made a review of the progress of Joint Programming within the Joint Programming Initiatives.

In February 2014 the Chair of the Working Group sent a questionnaire to the 10 JPI Chairs on the state of implementation of alignment in the context of their JPI.

All 10 JPIs have reported back on three areas in the development of alignment:

Questions and Answers on the Strategic Research Agenda

-Has the JPI developed a Strategic Research Agenda (SRA)?

-Has the SRA been introduced to member states participating in the JPI?

-Has the SRA been introduced to EU member states outside the JPI?

- Eight out of ten have a final SRA- two are in the process-and expect to have the final SRA before end of 2014
- All ten JPIs have introduced the SRA/SRA in process to MS that participate in the JPI - some at a "Launch Event"
- Six JPIs have introduced the SRA to MS outside the JPI –and some have introduced the SRA globally-to nations or organizations

Questions and Answers on the principles of alignment

Has the JPI discussed, defined, searched for a definition of alignment within the context of JPI?

Has the JPI developed a policy, roadmap or strategy for alignment of the SRA and national or regional research strategies?

Has the JPI developed a policy, strategy for the alignment of activities (incl. infrastructure) within the JPI and similar activities within national or regional research activities (incl. infrastructure)?

- 3-5 JPIs have developed a strategy for alignment of the SRA and national strategies – although not always successful
- 3-5 JPIs –not the same as above-have a strategy for alignment of national activities and infrastructure eg through JPI actions and calls

Questions and Answers on the practice of alignment

Where does the JPI see the most appropriate area for implementing alignment?

- Linking and harmonizing between investments under national programs
- Already funded research
- Identifying capacity building and networking across and between disciplines
- Simultaneous ,open calls in different countries with a mutual alignment of themes
- Activities based on heavy infrastructure
- Defining priorities transnationally

Has the JPI in particular been successful in implementation of alignment?

Successful practice of alignment by JPIs

- Knowledge Hubs
- Mapping of current research and gaps
- Joint transnational calls – Joint transnational and coordinated calls (ERA-NET Cofund as a first step)
- Catalyzing development of national strategies
- Calibration and standardization of methodologies
- Development of transnational procedures for prioritizing, evaluation and decisions on funding
- Differentiation of tools for exploration and assessment (mapping, workshops, syntheses, white papers) suited for the needs of the different topics (JPI Climate). Evolutionary vision from 3 to 10 years from very weak alignment to stronger alignment.
- Identifying capacity building approaches to facilitate better networking across and between disciplines and researchers
- Any activity heavily building on large infrastructures or large institutionally funded players should be a good candidate for a strong alignment. Most appropriate areas should be selected carefully taking into account the cost for mid-term adaptation versus the long-term reward.

- Additionally, the alignment of internal procedures would greatly help the development of joint activities.
- In research areas where there is already nationally funding research. Through alignment, critical mass can be met and duplications avoided. Institutional Alliances - See the last page of JPI Climates questionnaire
- Coordinated funding decisions in each country (time, amount and topic).
- Institutional cooperation, complementarity, sharing of infrastructure and staff, for example
- Define approaches that may facilitate wider access to national technology platforms or infrastructure, and promote the sharing of data and resources (infrastructure).
- Collect positive experiences from past alignment efforts and made available to new activities – a strong role for GPC to promote success story that could be transferable from one JPI to another one.
- Dialog between all stakeholders, ministries, funding agencies, scientific community related to JPI-agenda and participation.
- Dialog between JPIs (a role for GPC?)

Has the JPI experienced failures-barriers to the development of alignment?

- The lack of national priorities of research within the field of the SRA of the JPI
- Bottom-up approach to research funding makes it difficult to identify areas for alignment
- More than one funding agency in one MS and non-synchronized timing of funding transnational – Lack of coordination at national level on strategic research agenda and funding
- Lack of capacity building on JP/Alignment in MS- leads to lack of trust and confidence –and building of experience
- Excellence as THE ultimate priority does not always lead to alignment
- Awareness of the added value of cross-border collaboration is low

Annex IV: Summary Workshop Alignment, 12 March 2014, hosted by the GPC and the European Commission

The main objective of the workshop was to gather input for the forthcoming report of the GPC Working Group “Alignment with JPI Strategic Research Agendas” (due by mid-June 2014). The workshop outcomes met the expectations of the Working Group:

- The workshop focused on relations between JPIs and national programmes (i.e. did not go into relations between JPIs and Horizon 2020);
- The Working Group obtained an overview on how JPIs develop and apply different types of alignment;
- Various proposals for the roles and engagement of Member States in aligning national programmes to JPIs were discussed;
- Visions for the contribution of alignment of national programmes to JPIs and to their role in ERA were proposed.

The workshop gathered around 80 participants who were invited on the following basis by the GPC incoming and outgoing Chairs (Rolf Annerberg and Fulvio Esposito):

JPI Chairs were asked to additionally nominate one more representative from the JPI with insight into alignment, i.e. from the governing board or from the scientific advisory board.

GPC members and observers were asked to additionally nominate one person at strategy and policy level involved in national programming (other ministries, funding agencies) and involved in the Joint Programming process.

The morning session was chaired by the GPC Chair Fulvio Esposito, the afternoon session by the Chair of the GPC Working Group Alignment Mogens Horder (Denmark, Member Executive Board of JPND). The workshop was structured according to the three different levels involved in the Joint Programming process: the Member States level, the JPI level and the EU-level (including both ERA and H2020).

The questions in the afternoon world café groups were based on these 3 levels:

Q1: JPI-level: Where do you see JPIs fit as of today and in which directions should they evolve in the future? Can you give examples of how JPIs have applied the identified types of alignment or different ones?

Q2: MS-level: How do you see the role and engagement of Member States in aligning national programmes to JPIs, currently and for the future?

Q3: ERA-level: How do you see alignment of national programmes to JPIs contribute to the position and role of JPIs in the European Research Area as of today and in the future?

2. All JPIs are now at the stage where alignment (bi-directional: from national level to JPI and vice versa) becomes an issue for them: Eight of them have an SRA and launched joint calls (this was identified as not being alignment and usually based on fresh money). Now comes the time where alignment means going deeper:

- into the national institutions (by aligning institutional funding);
- into the national interministerial governance (by coordinating the scattered responsibilities for addressing societal challenges);
- into the cooperation of national funding agencies participating in a JPI;
- into the synchronisation of processes by the research funding agencies to coordinate the funding streams;
- and into the role of JPIs in ERA and vis à vis the FP as a whole.

Country Case Studies presented at the Workshop to illustrate bi-directional alignment between MS and JPIs

The selection of the 3 countries that were presented at the workshop was done based on their very different internal governance structures. The sample contained a small associated Country in northern Europe (Norway), a large country in Southern Europe (Italy) and another Northern European Country (Finland) from a sectorial ministry point of view. All three countries are research intensive.

It became evident that all three countries have responded differently to ERA and Joint Programming. Each has developed its own approach but at closer look there are many similarities and both JPIs and MS share a number of general patterns and common challenges.

Norway

Norway is organised according to the sector principle, whereby each ministry is responsible for research funding and research institutions within its remit. There is one single research council, the Research Council of Norway (RCN), which cooperates with and manages funding for all ministries. Within RCN, most research funding is organised in research programmes with programme boards of experts and programme administrators. Norway has joined all 10 JPIs and the SET plan. For each JPI, one ministry is appointed as the responsible ministry.

The responsible ministry (1) appoints the delegate and the expert to the governing board of the JPI and (2) defines the role of RCN, in dialogue with other ministries and RCN.

Each JPI is a “programme” within the RCN who dedicates a committed JPI coordinator for each JPI. An advisory group (people from other programme boards, networks, research institutes, industry, etc), may give advice to the representatives in the governing board. The advisory group is linked with H2020 reference groups/networks. The JPI coordinator is often the Norwegian expert in the JPI’s governing board. The JPI coordinators in RCN meet regularly to discuss management of the JPIs, and are closely connected to relevant national research programmes.

Essentially, the JPI is not a separate programme in Norway: No difference is made between national calls and transnational calls. In fact, national calls are even being cut down to the benefit of the transnational call because it has been proven easier for researchers to cooperate in a joint call.

The impact that JPIs have on the national landscape in Norway are manifold.

- JPI Climate, JPI Oceans, JPI FACCE, JPI HDHL and JPI Urban Europe: Areas of national importance with recently developed governmental research agenda / white paper
- JPI Oceans, JPI FACCE, JPI HDHL, JPI AMR and JPI Urban Europe has inter-ministerial groups coordinating activity
- JPI Climate, JPI FACCE, JPND, JPI Water Challenges, JPI Urban Europe and JPI CH, JPI HDHL: Norway has participated in several calls– leading to high activity, shared forces nationally and internationally
- JPI CH, JPI Water challenges and JPI AMR: stronger focus on topics after joining JPIs– might see a slight turn of SRA, coordinated activity in Norway and with JPI partners
- JPI Urban Europe and JPI Oceans: relates to several research programmes in RCN
- JPI Oceans: Institutional funding has been mobilised

Italy

Despite being a big, research intensive country, Italy has decided to "mirror" Horizon 2020 by adopting a national "Italian Horizon 2020 Research Strategy". On the basis of these EU drivers and foresights, a national research framework programme has been defined. Italy used an addition/subtraction process to define the Italian specific objectives (= priorities) within the larger societal challenges, based on the EU objectives. No parallel, but a

complementary structure to the FP has been established that way, inspired by national and EU needs and by national excellences and interests.

Programme committees (PCs) will be composed of the representatives of the main funding agencies and institutions of the national research and innovation programmes. A PC can manage one or more programmes. One agency will assess the impact of all funded projects and of the work programmes. The chairs of the PCs compose the informal coordination committee.

The success of the implementation of this new approach based on programmes in Italy still needs to be seen and also, if the new government will fully take up the developed design by the old government.

Finland

A Research and Innovation Council is advising the Finnish government. The ministries that mainly responsible for research policy are the Ministry of Education, Science and Culture which is funding the Academy of Finland as well as the Ministry of Employment and the Economy which in turn is responsible for funding TEKES (the Finnish Funding Agency for Technology and Innovation). Universities and government research institutes are funded by the different ministries.

For Finland, alignment for RPOs will be driven by the available funding. This means that because of the increased dependence on external funding sources, universities and public research institutes will need to align their strategies, research agendas, programs as well as research infrastructures.

A recent example for this is the creation of the Natural Resources Institute Finland and with it its Strategy for 2015 – 2030 that is very strongly directed towards societal challenges.

The Finnish strategy of alignment for RFOs is to mirror broadly the H2020 outline nationally.

The Academy of Finland works along the lines of the Excellent Science strand of H2020. Tekes mirrors the H2020 strand of industrial leadership and “Strategic Research” will be the companion of the part of H2020 that is addressing societal challenges. “Strategic Research” is a new funding instrument for policy relevant scientific research. Funding will be available from 2015. The volume will increase gradually from 22 M € to 70 M € per year during 2015 – 2017. The funding can be used as national contribution in EU joint calls.

The challenges for Finland regarding alignment is the need to keep up national commitment at all system levels to common EU goals in research policy. Because Finland is a member in 9 of the 10 JPIs, allocation of limited resources (people and money) as well as strategic

planning and prioritisation of research topics is not always easy. Sometimes there is also a gap between the flexibility of public funding instruments and strategic planning processes.

Main points collected from the 5 world café groups

Q1: JPI-level

There can be at least four types of Alignment for JPIs:

1. The joint call (e.g. MS-funded and or ERA-NET) – funding streams in national programs are aligned to the joint call;
2. Sharing of work (smart specialisation) – some countries stop activities in certain areas, which are only carried out by others. Results are shared amongst JPI members;
3. Establish areas where no one country can do the work alone – all will work in common with little purely national activities in that area;
4. Sharing of resources (e.g. research infrastructures as in Oceans JPI) or common prioritisation of institutional funding (without common calls) as in the European Energy Research Alliance.

→ Where do you see JPIs fit as of today and in which directions should they evolve in the future? Can you give examples of how JPIs have applied the above 4 types of alignment or different ones?

1. Types of alignment

JPIs are not a funding instrument, but intergovernmental coordination bodies, all long term, under development. They use different instruments and tools based on national programmes and resources/institutional funding.

Therefore all examples for types of alignment are valid.

Alignment Type 1: the joint call: most JPIs are doing this now, albeit with small call volumes compared to national calls. It was the first step and started as of 2009. However, the group agreed that a joint call is not alignment. Alignment leads to a joint call and alignment can result from a joint call, but per se, a joint call is not alignment.

Joint Calls are a first way of “aligning” national programmes by forcing MS Research Funding Organisations (RFOs) and Agencies to (i) choose similar priorities, (ii) Synchronize the timing of calls, (iii) Develop coherent peer review processes – compatible with all national regulations, (iv) Synchronize contracting and funding cycles...

Type 2 and 3 are developing at the moment. The future should focus more on aligning and exploring than on investment (type 1).

Sharing of work (smart specialisation) may be an option, especially at the regional level, even if there are not many examples in the JPIs yet. However, some scepticism also exists, due to big country-level differences and bad experiences from the Networks of Excellences of FP6. There is a need to involve regions not only because they play a key role in several Member States, but also because they have experience in Smart Specialisation.

Type 4 is not equally important for all JPIs.

Sharing resources is the main way to go in JPIs. The good examples are: Knowledge Hubs (DEDIPAC in JPI-HDHL; FACCE-JPI), Infrastructures (research vessels in JPI Oceans, observation centres of JPI Climate), Research Alliances (JPI Urban Europe) and sharing the costs of coordination activities (FACCE-JPI; JPND; JPI Oceans).

Alignment covers much more activities spanning all the programming cycle: from joint foresight (a powerful aligner for future activities) to joint processes and ex-post evaluation. Mobilization of in kind resources (e.g. joining up the usage of infrastructures – especially common ones such as ERICs) is the “next frontier” of Joint Programming.

Collaboration between JPIs on both scientific and societal level is needed since there are substantial overlaps between them.

2. Granularity of JPI SRA

There is a lack of identity for JPIs to the policy as well as researcher community. The identity is easier to achieve if the JPI is very focused (like AMR or JPND) but harder to achieve if the JPI theme is very broad (Ageing, A Healthy Diet for a Healthy Life, Urban Europe). For Alignment to work effectively the appropriate governance in a JPI needs to be in place. The JPI must be able to work on a strategic level and have the appropriate stakeholder involvement.

3. Alignment tools

Alignment is an enabling environment for JPIs and different types of alignment are brought together in a JPI. However, instead of looking for definitions of the term „Alignment“, we should identify good practices in JPIs (like the knowledge hub or the thematic programming or others) and support and promote their use. Networking approaches (e.g. FACCE’s Knowledge Hubs, FACCE’s Thematic Programmes, JPND Centres of Excellence...) are well suited to themes were most MS have priorities. They also allow other countries to identify “blind spots”. They easily allow to combine in-kind/“institutional’ funding and in cash support of some researchers. Leverage is very high (50 k€ of management costs support > 1M€ projects in a typical Knowledge Hub)

Q2: MS-level

How do you see the role and engagement of Member States in aligning national programmes to JPIs, currently and for the future?

1. National strategies in the JPI domain

Internal Coordination/alignment in MS/AS is needed in order to enable an effective alignment at European level. MS/AS do not necessarily need thematic programmes that fit into a JPI's SRA but they do need a national strategic approach towards the respective challenge. Member States should develop national action plans (JPND, AMR), Roadmaps (Cultural Heritage), Strategies (FACCE) to mirror their commitment to the SRA of JPIs. This would ensure alignment, provided that top players in Ministries and RFOs / Agencies have been involved in the definition and validation/approval of the adopted SRAs.

A systemic change is needed in MS. JPIs and GPC can facilitate the communication and interaction in MS. Decision makers at different levels in governments and administrations need to be aware of SRAs and their long-term visions. Even if many countries will do the similar things anyway, the challenge is to fit the different timelines and increase coordination.

Sometimes the best way to commit to Joint Programming is a national programme in the domain of the JPI. These are often missing. Indeed alignment is easier when there is a national top-down (i.e. strategic) programme in the field. However, in some cases, an SRA can only be truly transnational, structuring the ERA and 'imposing' priorities to national activities where programmes do not exist, even if it is more challenging to design and maintain one in an environment where there is little or no strategic programming.

The fact that national research programme/national strategies in the JPI domain are developed with the input of national researchers is helping to develop and create identity and ownership for the JPI nationally.

In Norway, in the JPI Climate, no difference is made between national calls and transnational calls. In fact, national calls are even being cut down to the benefit of the transnational call because it has been proven easier for researchers to cooperate in a joint call.

The fact that a JPI has to be organised entirely bottom-up (national programmes don't exist in that domain) is difficult. If at the same time, the amount of FP funding in that domain is small, it becomes nearly impossible. Awareness has to be created in order to create the JPI. The question is if you can you have alignment without top-down programmes at all. Then, coordination of institutional funding should come in. Lessons learnt by EERA show that structuring research organisations at the EU level can give them a European vision.

Ideally, it should be a mixed top-down and bottom-up approach. It is a challenge for MSs to involve research organisations much more closely in the JPIs. However, it really depends on the JPI – sometimes a national programme is not needed and the international programme is the national programme.

At MS level, Joint Programming and alignment occur ‘naturally’ at the bottom of the programming pyramid (with Ministries at the top, RFO/Agencies under, then RPOs/Universities and individual researchers at the bottom) whilst difficulties occur at the top. ERA-NETs and P2P more in general have helped develop alignment at the top but there are still more barriers/challenges than successes in Joint Programming between Member States due to different programming structures, logics, processes, timing.... across Member States.

Good practices and experiences with alignment from other JPIs and other countries are needed to push alignment further. Finally: How far does alignment go – where does it start and end?

2. Political commitment for the JPIs

It was suggested that in the GPC and in the Governing Boards of the JPIs, high-level senior members should be reinvigorated so to have also the political commitment (but high-level people will need assistance). It is essential to understand that JPI Governing Board Members are not representing only their agency or ministry but the whole Member State.

To understand better how alignment action can bring value to the national context, communication from all levels (EU, GPC and JPI level) has to be improved and more political.

Political will and commitment of MS/AS to support JPIs and the Joint Programming process is needed. MS/AS need to engage themselves actively in the alignment process. That way, MSs will also not get the impression that national programmes are influenced externally.

MS/AS need to be represented in the JPIs at the appropriate level. Those persons who are responsible for national research policy and funding in the respective area need also to be in charge of the JP involvement of the respective MS/AS. This is a prerequisite for alignment.

Political will and decisions at very high political level are needed to make the changes happen in all levels (including various agencies, institutes and organisations that fall in area of several ministries). More inter-ministerial coordination is often needed. Governments need to make decisions – even if the governments change, their decision remains.

3. Different countries have specific rationales / see different advantages in joining a JPI:

MS1 saw the opportunity to learn from other MSs to define quality national strategies

MS2 saw an opportunity for the research ministry to learn and coordinate ‘operational ministries’ that control most of the resources through ‘mirror groups’ for each JPI

MS3 (on the contrary) had difficulties in participating to JPIs due to the lack of a mechanism/structure to express a national point of view

MS4 was spurred to participate by its science and research base, who wanted to have the opportunity to participate in Joint Calls

The alignment may be faster in smaller countries that don’t have resources to do everything and therefore need the other countries more than, in comparison, the big countries.

Q3: ERA-level

How do you see alignment of national programmes to JPIs contribute to the position and role of JPIs in the European Research Area as of today and in the future?

1. JPIs and ERA

JPIs are Mini-ERAs because in themselves they address many ERA actions (from effectiveness of national research systems to knowledge transfer and dissemination) and are therefore key for ERA.

JPIs can contribute to widening active participation (involving other countries) by focusing less on cash calls, but sharing other things, like infrastructure, human capacity and data.

The advantage of JPIs in the complicated ERA landscape (with numerous initiatives and therefore missing the big picture) is the long-term focus of its activities. It is easier to align, when there is plenty of time. And accordingly, the changes take their time and one cannot expect real changes very quickly.

In the future, JPIs may hopefully become platforms for strategic programming and foresight for MSs, similar to how the European Commission is proceeding with internal strategic programming of the H2020 WPs.

We need to recognize the role of JPIs to underpin policy development. JPIs have the final goal to deliver the basis for (societal and/or technological innovation) and the evidence base for political decisions or policy development. This role needs to be recognized better in order to underline the political significance of JPIs.

2. JPIs and the FP

The European Research and Innovation Area (ERIA) can be represented by a ‘Landscape’ of rather fixed national - and European - structures and programmes. Recently, P2Ps and PPPs have appeared on this landscape creating an evolving ‘Eco-system’.

This 'Eco-system' adapts/reacts to changes in the 'ERIA Landscape' with synergies and competition developing between the partnerships. The launch of Horizon 2020 EU level is a major change in the Landscape which will influence the 'Eco-System', e.g. by Art.13 of the H2020 regulation calling for synergies with national programmes and Joint Programming "*in particular in areas where coordination efforts are made through the JPIs*".

Whilst they occupy different positions in the knowledge triangle, JPIs, European Innovation Partnership (EIPs) and Knowledge and Innovation Communities (KICs) of the European Institute of Technology (EIT) are interacting for several Societal Challenges without a clear rationale or overall strategy for many areas.

The Standing Committee on Agricultural Research (SCAR) is playing an important role for possibly 'Aligning' the EIP, the two JPIs, the new KIC and the several ERA-NETs active in Agricultural Research.

But SCAR is unique in its legitimacy (the Common Agricultural Policy) its mandate (Overseeing and coordinating national research programmes, Partnerships and Contributing to prioritisation in Horizon 2020) and bodies to play a similar role have not been identified in other areas.

We need to avoid „fragmentation at a higher level“ and therefore need not only to make sure that JPIs interact with each other but also that all initiatives at European level (H2020, PPPs, P2Ps, KICs, COST, etc.) are taken into account when engaging into alignment

JPIs should address complementarities to the FP. Some JPIs have good collaboration with the EC and there is a coherent approach in order to avoid duplication with the FP. In the case AMR and the health challenge of H2020, a division of labour seems to be in place: some parts are better placed with FP instruments (e.g. new research fields rather H2020 in order to build up capacity), some parts are better for industry (PPP-IMI) and in some parts the JPI can make a difference. For some parts, duplication is even good.

If there are strong national research groups, this should rather be a domain for a JPI. FP has over the years built up strong research networks – the JPI can pick up from that.

The role of the European Commission is important in facilitating the process: The support through Coordination and Support Actions for coordination and networking activities is important since all MS have money and instruments for research, but they may not have instruments for coordination activities.

Future vision is that there is a better link between national programmes and European programmes. JPIs are paving the way to this direction by building the trust and providing evidence how to get better return for the investments.

3. JPIs combining ERA and the Innovation Union

JPIs would rather focus on the generation of research/knowledge, whilst EIPs would rather focus on Market Pull/Development. This is the accepted Rationale for the area of Demographic Change/Ageing, where the Active and Healthy Ageing EIP cohabitates with two JPIs and a new KIC.

In line with Art.13, a global 'strategy' for the interaction between different partnerships should be developed by Member State and the European Commission for each Societal Challenge (possible Joint Strategic Programming between Member States, Partnerships and Horizon 2020).

JPIs have a strong legitimacy to possibly develop such a coordinating role for public research:

- Their Management boards – if they represent well key players in Ministries/RFO can be effective in allocating public funds from national research programmes (which represent 88% on average of public funding for Research and Innovation in the ERA);
- Their Scientific Advisory Board – if they adequately represent the scientific community, can identify the key research challenges;
- Their Stakeholder Advisory Boards – if they represent the stakeholders, give JPIs its legitimacy for addressing Societal Challenges via public Research and Innovation actions/programmes.

JPIs should not only 'map' national programmes, but also other Partnerships active in their research area or addressing the same challenge, including other JPIs. This will allow them to optimise their reciprocal activities at an ERIA 'meta-level'.

The fact that JPI coordinators are members of EIP Steering Bodies is seen as positive for this possible role of being aware of and influencing the generation of public knowledge in an areas/for a Societal Challenges and possibly fostering its flow towards markets and innovation.

Strong Partnerships (and by extension areas in which Partnerships interact proficiently) are strong attractors for international, non-EU, partners. Several JPIs have developed partnerships and actions beyond Europe, either attracting non-EU members (Canada in JPND and AMR) or acting as the EU strand of international partnerships (FACCE and AMR).

An effective ERIA where Partnerships interact effectively should not focus only on joint actions and calls, but also nurture the flow of researchers and programme managers in the ERA.

Workshop on Alignment – Brussels, 12 March 2014 – List of Participants

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Annex V: List of JPIs and their contact points

<i>JPI</i>	<i>Participating Countries and Observers Countries (25/06/2014)</i>	<i>JPI SECRETARIAT CONTACT</i>
<p>Neurodegenerative Diseases (Alzheimer)</p> <p>Chair : P. Amouyel philippe.amouyel@pasteur-lille.fr http://www.neurodegenerationresearch.eu/ <input type="checkbox"/></p>	<p><u>28 countries</u>: Albania, Austria, Belgium, Canada, Croatia, Czech-Republic, Denmark, Finland, France, Germany, Greece, Hungary, Ireland, Israel, Italy, Luxemburg, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey, United Kingdom</p>	<p>secretariat@jpnd.eu</p>
<p>Agriculture, Food Security and Climate Change (FACCE)</p> <p>Chair: Niels Gottke, nigoe@fi.dk http://www.faccejpi.com/</p>	<p><u>21 countries</u>: Austria, Belgium, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Ireland, Israel, Italy, The Netherlands, Norway, Poland, Romania, Spain, Sweden, Switzerland, Turkey, United Kingdom</p>	<p>1. Isabelle Albouy albouy@paris.inra.fr 2. Tim Willis tim.willis@bbsrc.ac.uk</p>
<p>A Healthy Diet for a Healthy Life</p> <p>Chair: Pamela Byrne pamela.byrne@abbott.com http://www.healthydietforhealthylife.eu/ <input type="checkbox"/></p>	<p><u>18 countries</u>: Austria, Belgium, Canada, Denmark, Finland, France, Germany, Ireland, Italy, Norway, Poland, Romania, Slovenia, Spain, Switzerland, The Netherlands, Turkey, United Kingdom</p> <p><u>Observers</u>: Cyprus, Czech Republic, Estonia, Latvia, Malta, New Zealand, Slovakia, Sweden</p>	<p>Jolien Wenink wenink@zonmw.nl</p>

<p>Cultural Heritage and Global Change - A new challenge for Europe</p> <p>Chair: A. P. Recchia</p> <p>recchia@beniculturali.it</p> <p>jpi_ch@beniculturali.it</p> <p>http://www.jpi-culturalheritage.eu/ □□</p>	<p><u>17 countries:</u> Italy, Belgium, Cyprus, Czech Republic, Denmark, France, Ireland, The Netherlands, Lithuania, Moldova, Norway, Poland, Romania, Slovakia, Spain, Sweden, United Kingdom</p> <p><u>Observers:</u> Austria, Bulgaria, Estonia, Germany, Greece, Israel, Latvia, Portugal</p>	<p>Cristina Sabbioni</p> <p>c.sabbioni@isac.cnr.it</p> <p>jpi_ch@beniculturali.it</p>
<p>European Energy Research Alliance part of SET Plan</p> <p>Chair: Hervé Bernard (CEA, France)</p> <p>Herve.Bernard@cea.fr</p> <p>http://www.eera-set.eu/</p> <p>http://setis.ec.europa.eu/</p>	<p><u>24 countries:</u> Iceland, Ireland, United Kingdom, Norway, Finland, Sweden, Denmark, Latvia, Netherlands, Germany, Poland, Belgium, France, Spain, Portugal, Switzerland, Czech Republic, Slovakia, Austria, Romania, Slovenia, Italy, Greece, Turkey</p>	<p>Dominique Maziere</p> <p>Dominique.MAZIERE@cea.fr</p> <p>Deputy :</p> <p>massimo.busuoli@enea.it</p>
<p>More Years, Better Lives - The potential and challenges of demographic change</p> <p>Chair: Prof. Paolo Maria Rossini</p> <p>paolomaria.rossini@afar.it</p> <p>paolomaria.rossini@rm.unicatt.it</p> <p>http://www.jp-demographic.eu/ □□</p>	<p><u>15 countries:</u> Austria, Belgium, Canada, Denmark, Finland, France, Germany, Italy, Netherlands, Norway, Poland, Spain, Sweden, Switzerland, United Kingdom</p> <p><u>Observers:</u> Turkey</p>	<p>C. Wehrmann</p> <p>Christian.Wehrmann@bmbf.bund.de</p> <p>e</p> <p>demographic@vdivde-it.de</p> <p>Annette Angermann</p>

<p>Antimicrobial Resistance - An emerging threat to human health</p> <p>Chair: M. Ulfendahl mats.ulfendahl@vr.se</p> <p>http://www.jpiamr.eu/ □</p>	<p><u>19 countries:</u> Belgium, Canada, Czech Republic, Denmark, Finland, France, Germany, Greece, Israel, Italy, Netherlands, Norway, Poland, Romania, Spain, Sweden, Switzerland, Turkey, United Kingdom</p>	<p>Dr pontus.holm@vr.se</p> <p>secretariat.jpiamr@vr.se</p>
<p>Healthy and Productive Seas and Oceans</p> <p>Chair: Dirk Van Melkebeke dirk.vanmelkebeke@ewi.vlaanderen.be</p> <p>http://www.jpi-oceans.eu</p>	<p><u>20 countries:</u> Belgium, Denmark, Estonia, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Lithuania, The Netherlands, Norway, Poland, Portugal, Romania, Spain, Sweden, Turkey, the United Kingdom</p> <p><u>Observers:</u> Malta</p>	<p>Kathrine Angell-Hansen ka@rcn.no</p>
<p>Connecting Climate Knowledge for Europe (Clik'EU)</p> <p>Chair: Heikki Mannila Heikki.Mannila@aka.fi</p> <p>http://www.jpi-climate.eu/ □</p>	<p><u>14 countries:</u> Austria, Belgium, Denmark, Estonia, Finland, France, Germany, Ireland, Italy, Norway, Spain, Sweden, The Netherlands, United Kingdom</p> <p><u>Observers:</u> Slovenia, Turkey</p>	<p>Dr. Armin Mathes</p> <p>Armin.Mathes@dlr.de</p> <p>Centralsecretariat@jpi-climate.eu</p>
<p>Water Challenges for a Changing World</p> <p>Chair: Marina Villegas marina.villegas@mineco.es</p> <p>http://www.waterjpi.eu/</p>	<p><u>19 countries:</u> Austria, Cyprus, Denmark, Estonia, Finland, France, Germany, Ireland, Israel, Italy, The Netherlands, Norway, Poland, Portugal, Romania, Spain, Turkey, United Kingdom, Moldavia</p> <p><u>Observers:</u> Belgium, Greece, Hungary, Latvia, Sweden</p>	<p>Waterjpi.secretariat@mineco.es</p>

<p>Urban Europe - Global Challenges, Local Solutions</p> <p>Chair: Ingolf Schädler</p> <p>ingolf.schaedler@bmvit.gv.at</p> <p>http://www.jpi-urbaneuropa.eu/</p>	<p><u>13 countries</u>: Austria, Belgium, Cyprus, Denmark, Finland, France, Ireland, Italy, Malta, the Netherlands, Norway, Sweden, Turkey</p> <p><u>Observers</u>: Portugal, Spain, United Kingdom</p>	<p>H.G. Schwartz</p> <p>hans- guenther.schwarz@bmvit.gv.at</p> <p>info@jpi-urbaneuropa.eu</p>
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