European Commission

Mutual Learning Exercise (MLE)

on Alignment and Interoperability of Research Programmes

National Coordination

National Governance Structures

Thematic Report No 3

[March– 2017]

Research and Innovation

Mutual Learning Exercise (MLE) on Alignment and Interoperability of Research Programmes National Coordination – National Governance Structures – Thematic Report No 3

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1   INTRODUCTION

This is the third of five reports that will be produced as the main deliverables of the Mutual Learning Exercise (MLE) on Alignment and Interoperability of Research Programmes. It is concerned with the role of 'National Governance Structures' for a more efficient and effective participation in the Joint Programming Process (JPP) including Joint Programming Initiatives (JPIs) and other public-to-public partnerships (P2Ps).[1]

The report builds on a Challenge Paper on "Governance" and the feedback provided by participating countries at the MLE workshops held in Brussels (3 October 2016), Vienna (16 October 2016) and Ljubljana (15 December 2016) and Oslo (16 February 2017). The analysis is also based on a round of interviews with MLE experts from the Member States (MS), as well as background evidence (including available national ERA Roadmaps) and the results of a self-assessment exercise. More specifically, it provides a self-assessment framework for Member States to better identify strengths and weaknesses of the national R&D system and scope for improvement.

The Report focuses on the six Key Governance Factors that Member States have recognised to enable alignment and interoperability, namely:

- Effective strategic decision-making structures for Joint Programming Processes

- Coordination between Ministries across policy domains

- Mobilising appropriate financial resources for JPPs

- Coordination between Ministries and Agencies conducive to JPP

- Offering and organising platforms for stakeholder involvement

- Ensuring that results and impacts are measured and disseminated

Each of the key factors is discussed with their barriers and illustrated with examples of good practice. This is followed by some general conclusions on 'opportunities for improvement' with more specific ideas on country-specific actions that have been inspired by the MLE.

Two other specific reports (considering the other key factors related to 'National Preconditions' and the forthcoming 'Communication Flows and Visibility') have been produced based on the Country workshops. They will complement the outcomes of this report. A final report of this MLE will subsequently be produced including case examples of progress achieved by the participating countries.

2   METHODOLOGY

A self-assessment framework has been developed as a learning tool to allow each participating country to carry out a customised analysis of the six factors related to National Governance Structures that enable alignment and interoperability. The self-assessment framework allows the user to:

- Assess the current national situation and rate its degree of alignment with each of the Key Governance Factors (score 1 – 5)

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[1] Throughout the report the terms 'JPP' and 'joint programming' are used in the widest sense to include not only the JPIs but also other P2Ps such as ERA-NETs and Article 185 initiatives.

- Assess the barriers to improvement of the governance and the degree of difficulty in overcoming them (very low, low, medium, high, very high)

- Propose opportunities improvement based on the self-assessment and peer learning

Eight country representatives completed the self-assessment table for their country (Austria, Denmark, Estonia, France, Norway, Portugal, Slovenia and Sweden).

The assessment framework is used as a learning tool, to help individual countries consider where and how they can improve alignment and interoperability. The self-assessment conclusions of each country are not published, as they are elaborated by only a small number of national representatives and as such do not represent an "official" self-assessment.

Figure 1 The self-assessment tool MLE Alignment and Interoperability: National Governance Structures

Key Factors		Degree of Alignment					Self Assessment				
GOVERNANCE		1	2	3	4	5	National Situation	Score for Alignment	Barriers to Improvement	Score for Barriers	Scope for Learning & Improvement
G1	Strategic decision making on P2P priorities	Ad hoc decision making on participation				Systematic criteria that governs national decision on P2P entry and exit	*Briefly describe the national sitiation*	*What score would you give (1-5) for the national situation*	*What would be the main barriers to improvement*	*How would you rate the barriers (very low, low, medium, high or very high)*	*What do you think could be done to improve that national situation?*
G2	Coordination between Ministries across policy domains	No other than one P2P funding Ministry involved. No coordination processes or structures with other Ministries				All relevant policy and funding actors for the P2P domain are involved	*Briefly describe the national sitiation*	*What score would you give (1-5) for the national situation*	*What would be the main barriers to improvement*	*How would you describe the barriers (very low, low, medium, high or very high)*	*What do you think could be done to improve that national situation?*
G3	Mobilising financial resources for P2P activities	Funding is committed to joint calls if available from national budget				Dedicated central funding pot for P2P with transparent rules for distribution	*Briefly describe the national sitiation*	*What score would you give (1-5) for the national situation*	*What would be the main barriers to improvement*	*How would you describe the barriers (very low, low, medium, high or very high)*	*What do you think could be done to improve that national situation?*
G4	Coordination between Ministries and Agencies	No cooperation between Ministries/Agencies in P2P. No formal rules on P2P governance				Effective coordination between Ministries Agencies with clearly defined roles and responsibilities	*Briefly describe the national sitiation*	*What score would you give (1-5) for the national situation*	*What would be the main barriers to improvement*	*How would you describe the barriers (very low, low, medium, high or very high)*	*What do you think could be done to improve that national situation?*
G5	Involvement of stakeholders	No processes to involve others outside direct participants				Formal frameworks with systematic processes to involve relevant stakeholders	*Briefly describe the national sitiation*	*What score would you give (1-5) for the national situation*	*What would be the main barriers to improvement*	*How would you rate the barriers (very low, low, medium, high or very high)*	*What do you think could be done to improve that national situation?*
G6	Measuring impacts and making them visible	No resources or processes are set up to gather and disseminate evidence for results and impacts				A systematic process is in place to monitor, evaluate and disseminate results and impacts	*Briefly describe the national sitiation*	*What score would you give (1-5) for the national situation*	*What would be the main barriers to improvement*	*How would you rate the barriers (very low, low, medium, high or very high)*	*What do you think could be done to improve that national situation?*

3   KEY FACTORS FOR THE IMPROVEMENT OF NATIONAL GOVERNANCE STRUCTURES

The six Key Factors for Governance are considered below in more detail.

Each of the factors is discussed in a similar way including an overview of the main results of the self-assessment by participating countries in the MLE and a summary of the main barriers encountered by Member States. It then highlights some good practices examples and concludes with a general overview of opportunities for improvement. Country-specific opportunities for improvement that were inspired by participation in the MLE can be found in Section 4.

3.1   Effective strategic decision-making structures for JPPs

A first Key Factor that effects JPPs, is **the need for a clear and effective decision making processes** to join an upcoming JPP opportunity and similarly the decision to end the participation in a JPP. The decision to **join** a particular JPP is often done in an ad hoc and pragmatic manner. As the process is ad hoc, the financial resources for such a new opportunity are not secured beforehand. The main drawback of a lack of a clear decision making process is that criteria for prioritisation of JPPs (join/not to join, funding allocation) are not clear and are not used in a rational manner (e.g. joining depends on whether a sectoral ministry has additional funds available) and not necessarily in line with national R&I strategies and priorities. In some countries with centralised responsibility for R&I, the decisions are made swiftly and efficiently. However, they are not always transparent or clearly codified.

Experience from the MLE countries showed for this particular Key Factor there is a big difference between the decision making to join a JPI or an Article 185 Initiative, compared to decisions for instance to join ERA-NETs. In many countries JPIs, with their societal challenge focus, need the involvement of sectoral ministries, as well as high level political representation in JPI governing boards. The funding requirements ask for a long term commitment. This makes decision making more complex and slow. Political agendas can override transparency criteria. The decisions on ERA-NETs on the other hand can often be taken by a single research funding agency and require less high level political involvement while financial commitment is limited to co-funding one or more calls.

- Overview of the results of the self-assessment tool:

The pattern of results from the self-assessment framework shows that most MLE partners consider their strategic decision making process to have a medium to very high alignment. The barriers to change are not considered as either very high or low so this is a factor where improvements can be made. Aspects that ask for improvement are the speed of decision making (if many policy actors are involved in the process) and making decisions more explicit and transparent. There seems to be a trade-off in countries that have a centralised decision making system for the participation in JPPs, where decisions can be made swiftly. However, in these centralised systems it takes more effort to involve other ministries (See Section 3.2) and mobilise funding outside the government's R&I budget.
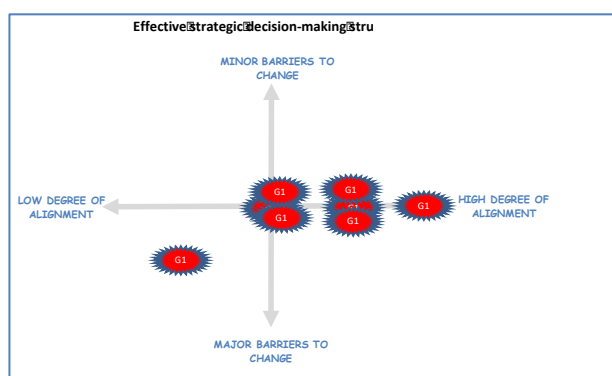
- Good practice examples:

The good practice examples mostly relate to making the decision criteria for joining (and leaving) JPPs more explicit and codified. The criteria to prioritise JPPs should be aligned

with relevant policy strategies, and take account of the competencies and interests of the research performing communities (e.g. the question whether there is research capacity/excellence and critical mass to take part, whether the stakeholder community is motivated to join). The policy strategies to align with are national research and innovation strategies (see the Report on 'National Preconditions') but in case of JPPs addressing societal challenges also relevant sectoral policy strategies. In the ideal case, all relevant stakeholders involved in decision making adhere to the agreed decision criteria. Estonia, Slovenia and Austria have codified their decision criteria for involvement in JPPs. In Portugal, the decisions are prepared taking into consideration the framework created by the S&T internationalisation strategy.

- Opportunities for improvement

> In **Austria**, relevant Ministries and Agencies have agreed to a common set of selection criteria for JPPs in order to prioritise which ones to join. This common set of criteria is codified. However, there is no enforcement policy for all stakeholders to actually use these criteria systematically. A point for improvement would be to reach consensus that all adhere to the common criteria.
>
> **Portugal** also has a clear set of criteria which are used to prepare the decisionto enter international collaboration activities. Decision making is with one Ministry so these criteria are used systematically, even though the final decision belongs, always, to the policy-maker.

Improvements can be achieved by codifying the selection criteria for entering and leaving JPP participation. This can be done by aligning these criteria to the S&T strategy and priorities as well as to the societal challenges that countries need to address. The definition of these selection criteria should involve all relevant policy stakeholders.
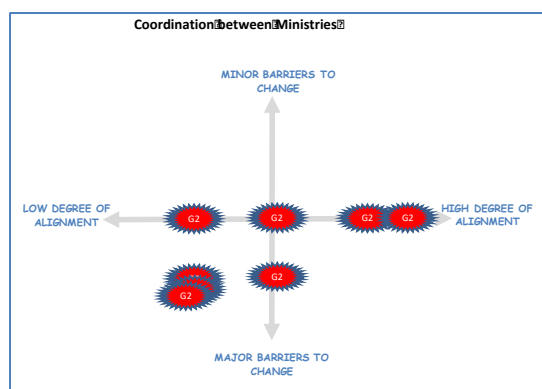
3.2 Coordination between Ministries across policy domains

In most countries, there is a disconnection between those ministries that have the policy lead for particular societal challenges and those ministries/agencies that hold the research and/or innovation budgets. A more integrated and inclusive approach is needed to prioritise societal challenge research and ensure that the outputs are exploited by both policy stakeholders and the market. This should ideally be embedded within the national R&I strategy and associated governance systems.

> **Slovenia** has an adopted a Procedure for integration into European initiatives and projects of the EU FPs for R&I with the following criteria: - Sufficient critical mass of researchers in SI; - Strengthening the excellence of researchers in SI; - The volume of innovative industries in SI in this area; - The potential synergies with other schemes of co-financing research and innovation.

- Overview of the results of the self-assessment tool:

The Key Factor Coordination between Ministries shows quite some differences between countries in the self-assessment scores. This is typically a governance factor that is highly dependent on the structural set up in a country and the degree to which sectoral Ministries have a mandate, a budget and competences to engage with research and innovation questions. It varies from countries that are highly aligned (in these cases sectoral ministries are highly involved, coordinate with the research and innovation ministries and are likely to allocate additional budgets to JPPs) to those where alignment is

low. The latter case can usually be found in countries where a single Ministry or Agency has a sole role in research and innovation policies and sectoral Ministries have no interest or formal mandate to be involved.

- Main barriers to change:

As the coordination between Ministries is embedded in the national governance structures (e.g. the formal division of labour between Ministries) and in long standing policy cultures, this particular Key Factor has medium to high barriers to change. In some MLE countries the role of Ministries is legally bound and sectoral Ministries have no mandate to engage in research and innovation policies. There is perhaps limited human capacity in these sectoral Ministries to engage in the JPP. Typically, there are some sectoral domains that do have a tradition of in-house research and innovation policy, such as in the Agriculture and Health policies. If coordination is achieved this is mostly at an intermediate level. High level commitment from sectoral ministries is generally very difficult to achieve.

- Good practice examples:

Each country has a different structure of Ministries and Agencies with responsibilities and funding opportunities in the JPP. Examples are thus often specific for each country. Nevertheless, the Inter-Ministerial coordination structures that are set up in countries such as Sweden, Austria, Estonia and France demonstrate that regular and systematic meetings help to inform and exchange approaches to JPP and could contribute to alleviate the human resources barriers for JPP management.

> In **France**, each individual Joint Programming Initiative (JPI) has, alongside the official JPI Governing Board (GB), a Mirror Group. The Mirror Groups are not (yet) formalised. Typically, the French representatives in a JPI Governing Board would be one person from the Research Council ANR and one person from one of the five so-called national research Alliances (thematic clusters of research centres and universities). The JPI Mirror Groups are chaired by these GB members, coordinated by the Ministry for Higher Education and Research (MESR), and include representatives from other sectoral Ministries (Health, Environment, Agriculture, Culture), specific RPOs and in some cases, other funders or private sector representatives. The interesting aspect of the Mirror Group is that it allows the involvement of other Ministries in the discussion on priority research topics and interesting outcomes of research projects. It is for information sharing mostly and to agree on the position of ANR as the voting representative of France in JPI GB. Some Mirror Groups such as for Environment do not only cover JPIs but all European initiatives in its thematic area (with a goal of priority setting and dedicate budgets to transnational calls).
> The Mirror Group typically meets twice a year. The involvement of sectoral ministries varies and depends on their own internal R&D policy capacity and budgets. Almost 90% of all RDI budgets in France are run by MESR so the strategic involvement of other Ministries is not always easy to achieve.

- Opportunities for improvement:

As mentioned above the barriers to change are medium to high. An Improvement that a number of MLE countries are intending to make is to organise more regular formal and informal coordination meetings with representatives from other Ministries and Agencies.

3.3 Mobilising additional financial resources for JPPs

An effective JPP governance would also allow funding to be flexibly mobilised for priority JPPs. The Preconditions Report already discussed the availability of sufficient R&I budget and dedicated funds for international collaboration activities and societal challenges. The national governance structure can influence the possibilities for raising additional funding, both positively and negatively. If sectoral ministries are involved early in the JPP negotiations, their financial contribution could help to raise the available budget. If the funding system of a country has a considerable share of competitive programmatic funding, it is easier to allocate a share of that for JPPs. If on the other hand a large share or all R&I funding is institutionally based and/or allocated by means of individual grants, organising co-funding for JPPs is more difficult and is more difficult to fit into the (multi-)annual budget cycle.

- Overview of the results of the self-assessment tool:

The pattern of responses from the self-assessment indicates quite a spread of national situations. It also suggests that the barriers to improvement are generally perceived as medium to high. In line with the previous two Governance functions it is challenging to involve sectoral ministries and agencies in the JPP, let alone for them to contribute to the budget provision of a JPP. The MLE participants mentioned JPI FACCE as an example where Ministries of Agriculture do take an active (financial) role. Countries that have multiple

Agencies organized by scientific domain, by type of research (e.g. fundamental and applied) or by policy domain (e.g. an Agency for Environment, Health, Agriculture) need more effort to coordinate budget decisions in case of the multi-disciplinary topics that particularly many JPIs address.
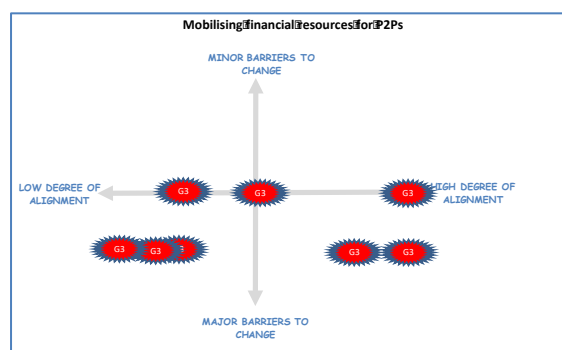
- Main barriers to change:

Changing the 'hard' structure and budget systems for Ministries, Agencies and funding systems for research performers (e.g. institutional funding shares) ask for major national restructuring that does not occur frequently and needs high level political commitment. These changes are mostly outside the reach of one Ministry or Agency. If multiple Agencies are involved in the JPP then change depends on willingness and capabilities to cooperate. Opportunities for change can be found in 'soft governance' structures such as co-ordination meetings and so on.

- Good practice examples:

A good practice example of a Co-funding model in Estonia is explained in the Text Box below. As already reported in the Preconditions Paper, Sweden has a dedicated budget for participation in joint programming that is under the control of the managing organisation for the research councils. This budget tops-up the contribution from each research council for participating in various JPPs. The managing organisation decides which JPP collaborations to finance depending on policy considerations and financial commitments from the individual research councils.

Co-Funding Model Estonia

For Estonia, a small country, it is essential to prioritise the EU initiatives that it can support with sufficient national funding. With very few exceptions Estonia does not have thematic programme funding. In order to secure sufficient national funding for ERA-NET participation, the Estonian Research Council in cooperation with the Ministry of Education and Research has developed a new approach that has already proved successful. For ERA-NET topics that overlap with national priorities (defined in the RDI strategy Knowledge Based Estonia 2014-2020) the Estonian Research Council has involved the relevant sectorial ministries. The Research Council has offered co-funding for ERA-NETs provided that the sectoral ministry also allocates funding to the ERA-NET. In that kind of co-funded ERA-NETs Estonian Research Council is also providing support in managerial issues. and is usually involved with activities related to organising a joint call. The sectoral ministry is responsible for concluding contracts directly with Estonian scientific groups of funded projects. The Scientific Counsellors that have recently been introduced in each ministry work together with the Research Council to articulate the potential need and interests (= overlaps with sectoral R&D plans/strategy) of the sectoral ministry. This can help define the key research topics that are of interest to Estonia. So far a key challenge has been that budget allocations for RDI vary considerably across ministries. Consequently, in some ERA-NET topics there is hardly any national budget available. Another issue that needs resolving is a clear allocation of funding shares between ministry, the Estonian Research Council and the EU for each ERA-NET call. There is no set rule for funding shares of different Estonian organisations, funding of each ERA-NET call is discussed and agreed on an individual basis (depending on funding possibilities of Estonian Research Council and sectoral ministry). In practice the sectorial ministries are not always able to allocate their share. Nevertheless, in the period 2014-2016 Estonia has managed to take funding commitments in 2-3 new successful projects of ERA-NET joint calls per year.

An example is JPI Water activities related ERA-NET: WaterWorks 2014.

- Funding organisations from Estonia were Estonian Research Council and Estonian Ministry of the Environment.
- Both funding organisations participated as full members of the consortium
- Estonian Research Council was responsible for the activities related to organising a joint call and dealing with other management issues (e.g. management team meetings etc).
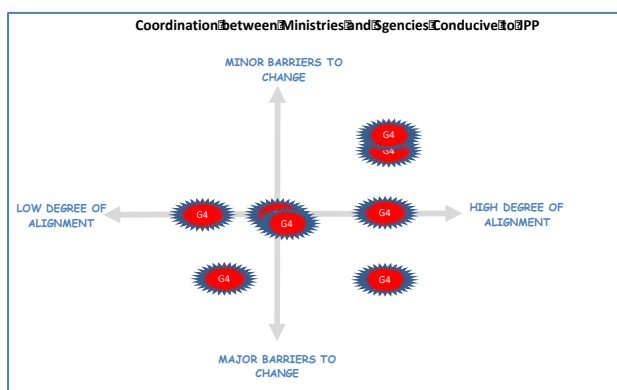
- Opportunities for improvement:

Opportunities for improvement are inspired by some of the good practices mentioned above. Organising informal and formal meetings at least twice a year with all Agencies and Ministries involved in JPPs will be taken up by a number of MLE countries. These coordination platforms could be thematically oriented (e.g. bringing together all stakeholders involved in environment related JPPs) or generic (e.g. bring together all stakeholders involved in JPI governance). Developing incentives to participate in JPP for research performers (universities and research centres) with high levels of institutional funding but low levels of dedicated JPP funding is a challenge for which no clear examples have been identified at this moment, other than information exchange and providing these researchers more visibility.

3.4 Coordination between Ministries and Agencies

One of the Key Factors that was identified in the National Coordination Challenge paper is the coordination between Ministries and Agencies. If this relationship works well, information is exchanged on JPP matters, decisions on calls for JPPs can be made more effectively, the burden of governing JPP can be shared (and thus helping with scarce human resources). An effective cooperation between Ministry and Agency has a positive effect on the participation in JPP governance structures: the burden of the governance tasks is shared and there are replacements in case individuals are not able to attend all meetings. If the coordination does not work well both sides might not be informed about decisions to take part in JPPs. The information on what happens in the governing boards and in cooperation with the European Commission is not shared. Budgets for participation will likely be more fragmented and the research community might not get similar information from all policy stakeholders. The institutional set up of Agencies in MLE countries is so diverse, that transferring of learning models on this Key Governance Factor is challenging.

- Overview of the results of the self-assessment tool:

The self-assessment results again indicate a rather mixed picture. Most of the countries report a medium to high alignment. Most countries see the barriers to change as medium, some as low and some as high. The interviews with MS representatives suggests that the Ministry-Agency cooperation is not the most urgent governance issue to address and indeed this is not a Governance factor that MLE participants have picked as one that needs Actions for Improvement.

Coordination between Ministries and Sgencies Conducive to JPP

MINOR BARRIERS TO CHANGE

LOW DEGREE OF ALIGNMENT

HIGH DEGREE OF ALIGNMENT

MAJOR BARRIERS TO CHANGE

- Main barriers to change:

As with the previous Governance factor, the Ministry – Agency coordination is deeply embedded in the national governance structures and cultures. Overall there seems to quite an effective cooperation in the MLE countries. It is mostly in countries that have multiple agencies for different domains and types of research that barriers of changing 'silo thinking' are considerable.

- Good practice examples:

In **Norway** responsibility for S&T policy is not only with the Ministry of Education and Research but with various sectoral Ministries as well. The Research Council Norway (RCN) coordinates the input of the Ministries for a particular topic and would actively help the Ministries to define their research questions if they are not used to deal with S&T policy making. There is one EU coordinator who speaks to all Ministries (see Text Box below).

In **Germany** a voluntary Working Group with all agencies involved in JPPs, gathers three to four times a year. The goal of these meetings is to exchange information and inform each other.

Inter-ministerial responsibilities for JPP in Norway

The Research Council of Norway (RCN) coordinates all JPP activities. International collaboration is 'mainstreamed' in RCN, meaning that each thematic section of RCN has the responsibility for international collaboration. In addition, unlike many other countries, RCN is steered by multiple ministries and not just by the Ministry for Education and Research. Each sector Ministry is responsible for a research strategy, funding and some also for research institutes within its remit. This multi-ministerial involvement stimulates the buy in to international collaboration on key societal challenges topics.

For JPIs the coordination is also divided across ministries. Ministry of Education and Research is responsible for the research policy, (also on JPIs) and is a member of the High Level Group for Joint Programming (GPC). A new governance system is in progress and is foreseen to cover all JPIs and the SET-plan. Each JPI has a lead Ministry, usually a sectoral ministry, which is best positioned to take part in the JPI governance. This Ministry is also responsible for the national programmes in similar topic areas and contributes to the funding. The JPI Governing Boards typically would have one representative of RCN and one from the responsible Ministry. A JPI is organised as an activity within RCN with a dedicated JPI coordinator, whose aim is to integrate the JPIs in the national research system. The links with the national programmes and activities on similar topics are made within the RCN division that coordinates a JPI, and in some cases across divisions. All JPI Chairs meet once a month, if needed, to exchange information and give inputs to / follow up decisions of High Level Group for Joint Programming (GPC). The meetings are chaired by RCN's member of GPC, and the GPC delegate from the Ministry of Education and Research participates.

For each JPI, the plan is to have an Inter-Ministerial Group involved in the policy domain meets twice a year to exchange information and give inputs to / follow up decisions of the Governing Board meetings. As an example, the Seas and Oceans JPI has an inter-ministerial group that involves seven different ministries. Each JPI has an External Advisory Group with various stakeholders and gives advice to RCN on the particular JPIs, which advises the lead ministry. The lead ministry usually takes part in these advisory group meetings.

A novel way to improve coordination and commitments of RCN's involvement in ERA-NETs, has been that the heads of the relevant divisions, rather than programme managers, take the decision on which ERA-NETs to join. This is done in order to have a holistic approach on participation, and an overview on which ERA-NETs Norway are engaged in.

The interesting lesson from Norway is that the governing structure of the JPIs include active involvement of multiple ministries broadens the commitments in the JPI process and the likelihood that JPP involvement gets translated into national policy. However, for many countries this would require a much larger human resource capacity than is available today. Nevertheless, Estonia is planning to set up a similar coordination structure as Norway, to coordinate with Ministries better. Another point for consideration is that this works well in Norway as the multiple ministry involvement is part of the general research governance structure and culture. This approach would be more difficult to follow in countries where responsibility is (legally) bounded to one Ministry. Maybe there is a need for a change on this to tackle the grand societal challenges.

- Opportunities for improvement:

In general terms, various countries have or are in the process of developing working groups and inter-agency /inter-ministerial platforms to exchange JPP experience and share the burden of JPP governance.

3.5 Offering platforms for stakeholder involvement

The involvement of stakeholders from the policy community, research performers and members of civil society can contribute to a relevant and user oriented research programming. It can also contribute to strengthening societal support for research and innovation and a faster dissemination of the research and innovation results. This Governance factor has overlap with the Communication Factors that is the subject of MLE Report No.4 on Communication Flows & Visibility. In this governance report the focus is on stakeholder involvement early in the research programming cycle.

There is quite a number of interesting show cases across the MLE countries on the involvement of stakeholders. These vary from mirror groups involving other Ministries in JPP decision making (France), to advisory and feedback groups from representatives of the science community, to internal coordination bodies across Ministries and Agencies between overlapping JPIs. The interviews have shown that a lot of activity has already started on this particular governance topic. These are also mechanisms where the MLE representatives have some room for manoeuvre and can learn from examples that have been set up in other governance structures.

- Overview of the results of the self-assessment tool:

With one exception, all MLE countries assess having a medium to high alignment in the involvement of stakeholders. The one country that considers its alignment as low, also regards the barriers for change as minor. Indeed, this is the Governance Factor where changes and improvements seem less complex than for any other Governance Factor. The activities regarding this factor are mostly 'soft' governance structures that are developed in most cases informally and only in a few cases formally.

Involvement of Stakeholders in JPP Governance
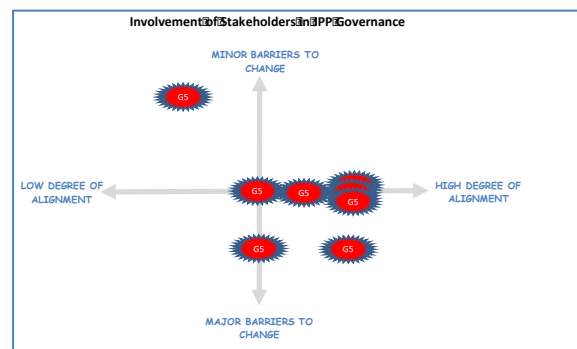
- Main barriers to change:

The main barriers to change is the lack of human resources to organise these stakeholder platforms. Another barrier could be that stakeholders are not known to the policy stakeholders or not motivated to join these platforms.

- Good practice examples:

> **Norway** is organising thematic Reference Groups that meet 1-2 per year.
>
> **Denmark** has a strong informal networking between stakeholders in a thematic area.
>
> In **Sweden** reference groups exist for some research areas, less so in others.
>
> In **France**, the Ministry involved the regional networks that have been set up in strategic technology domains.
>
> **Portugal** has recently introduced Public Participation Laboratories, an initiative aiming at the involvement of citizens, local and regional actors, public and private entities in the development of thematic R&I agendas contributing to new models of public policies design. It is clear from the national examples that the level of stakeholder engagement strongly differs between thematic areas. It also depends on the level of self-organisation of the stakeholders in those thematic areas and whether these areas are very focused (e.g. cancer research) or very broad (e.g. climate change).

- Opportunities for improvement:

Countries that have not yet set up these types of reference groups or do not have these systematically across all domains can be inspired by the examples from the countries listed above. The main challenge is to do this on a regular basis and to identify the appropriate stakeholders who will show commitment to provide input over a period of time.

### 3.6 Measuring Impacts and dissemination of results

We can clearly observe that measuring impacts of JPP is poorly developed across all MLE countries. In the MLE preparation we found very few, if any, examples where data is gathered systematically on JPP participation. We could not identify one example of an evaluation of outputs and impacts across the MLE countries. This is an area where huge improvements could be made. This issue ties in with the issue of visibility (see MLE Report No.4 on Communication Flows & Visibility) and political support for JPPs (MLE Report No.2 on National Preconditions), that could be much stronger as impacts are better communicated. Indeed, some countries communicated success stories. This was mostly addressed to the scientific community to raise awareness of the JPP opportunities.

In terms of expected impacts, the emphasis of most policy makers is to look at the impacts from the scientist perspective (better scientific co-operation, working with the best in Europe, better international impact of science). Our interviews showed that only a few look at potential impact in terms of its contribution to societal challenges.

- Overview of the results of the self-assessment tool:

A majority of MLE countries assess themselves having a low or very low degree of alignment. In addition, the majority see high barriers to change this low position. The basis of measuring impacts is missing and the political pressure to demonstrate impacts is not very strong. It has not been a priority in most countries, despite reduction of S&T funding for JPP activities.
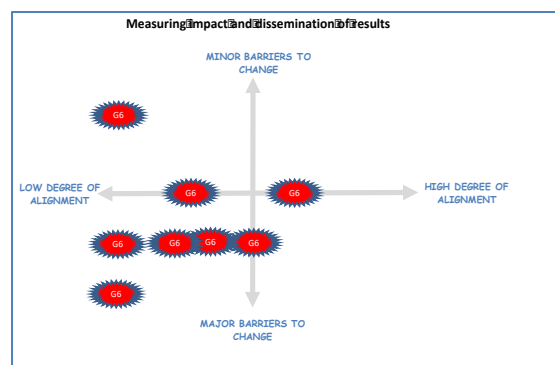
- Main barriers for change

A first key issue is the lack of key performance indicators that are suitable to assess JPP participation. Objectives and expected targets are not clearly defined. The most appropriate level of measuring impact (national, European) undecided. Consequently, there are few monitoring data available that are relevant to measure the intended objectives of JPP activities. The lack of an evaluation framework for JPP activities hampers the start of monitoring and evaluation activities. In addition, as JPPs are less visible in the national political arena they receive less scrutiny (in terms of ability to show impacts) compared to national S&T programmes.

- Good practice examples

A good first step taken for this monitoring activity is to map which stakeholders are currently involved in the JPPs. Both Austria and Estonia are in the process of using this as a basis for further monitoring.

- Opportunities for improvement

To improve on this Key Governance Factor would need some serious efforts:

- Ensuring that resources (staff and budget) is available for setting up and executing the monitoring and evaluation framework
- Definition of key indicators for progress and identification of data needs, data collection responsibilities and sources to measure these indicators
- A real-time monitoring system to collect and analyse data
- Regular evaluations of progress made

Several countries have indicated that they would be willing to learn from the ERA-Learn activities on this topic. Defining an evaluation framework and adapting that to the national policy objectives would form a necessary basis for further work.

4   THE WAY FORWARD: OPPORTUNITIES FOR IMPROVEMENT

As discussed above, the MLE participants used the learning & improvement framework to carry out an informal assessment of their national situation and barriers to improvement in relation to the six Key Governance Functions. This allowed them to consider their country's strengths & weaknesses and where there is most scope for learning and improvement. On this basis, an exchange of ideas took place during the Vienna and Ljubljana country visits.

This chapter presents a summary of the main opportunities for change that were identified by each of the national representatives that participated in the MLE workshops.

Austria

Austria scores average against the six governance factors and the barriers to improvement seem to vary from low to high. Several interesting possibilities for improvement were identified:

- In order to improve priority setting the criteria to enter JPPs should be followed more systematically across all policy stakeholders. In addition, criteria when participation should end should be defined.

- There is room for improvement in the collaboration between Agencies

- Mechanisms need to de developed to mobilise more institutional funding for societal challenge research. These could be incentives for Universities to commit to societal challenges

- Another option is to work to increase the involvement of the sectoral ministries. One of the tools to elevate the subject to the policy level is a national theses paper2 on 'Alignment in Austria' that was presented at the MLE workshop in Vienna. This could for instance be achieved with JPI ambassadors (well known researchers) to create more political support

- While Austria has a good monitoring system evaluation of JPPs is not well developed as clear performance criteria are lackin.

Some examples of approaches used in other countries were also considered to be interesting for learning such as the Estonian scientific counsellors or scientific ambassadors (well known researchers) who promote JPI and their ERA Co-Fund approach to involve more ministries, Germany (regular working Groups between all Agencies) and Norway where Agencies help sectoral Ministries to formulate their research questions. To improve the definition of key performance indicators (KPIs) Austria hopes to make use of the ERA-Learn approach. This could help with disseminating results better.

Denmark

Denmark has a medium score on most Governance factors while it has a very good tradition and processes to involve stakeholders in the JPP. Several Ministries are involved in JPP decision making although each have their own decision making process to enter JPPs. However, available funding is not very high thus stakeholders do not have JPPs high on the agenda. Improvements that are suggested:

- A better common approach and explicit decision making process across all Ministries would help prioritisation. A high-level group ("Strategic Reference Group") representing

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2 https://rio.jrc.ec.europa.eu/en/policy-support-facility/mle-alignment-and-interoperability-research-programmes-national-coordination

Ministries/ Industry /Research has been set up with the purpose of having a forum for discussing strategic questions, for instance prioritisation of JPPs. In addition a workshop for JPP participants is foreseen for May 2017.

- The measurement of impacts should be launched. A first step foreseen is the mapping of Danish participation in JPPs as part of an analysis of Danish success in H2020

Denmark could learn from the mapping exercises that have been done in Estonia and the monitoring of JPP data in Austria.

Estonia

Estonia scores medium to high on the Key Governance Factors. The cooperation between Ministries works well and a clear decision making process is in place. Due to budget constraints, there is a stronger willingness to work together across the different Ministries and Agencies to be able to participate in priority JPPs as can also be seen in the Co-fund model described in this report. Estonia has started mapping the stakeholders involved in existing JPPs. The scientific counsellors are helping to give more visibility to JPPs. The improvements suggested concerns the Key Governance Factors on stakeholder involvement and measuring impacts:

- Map the JPP activities related events in Estonia with the target groups (ask input from different ministries, ETAg, main universities)

- Start discussion about measuring impacts of JPPs with scientific counsellors in the future.

- Analysis of feedback from Ministries and other organisations on results different JPP initiatives related to interim evaluation process of H2020

France

France has a very well developed mostly informal governance system and scores quite high on coordination between Ministries and Agencies and stakeholder involvement. The Mirror Group approach described in this report demonstrates extensive stakeholder involvement in the JPP process. Funding is mostly centralised in one Ministry so decision making can be efficient. However, despite the societal challenge orientation of the new national research strategy, the other ministries are not regarded as having sufficient 'involvement'. A number of opportunities for improvement were suggested:

- Making the decision making process more explicit without losing flexibility

- Develop better working relations with Ministries not yet involved in the JPP. Particularly actions to include the Health Ministry are foreseen

- Mobilising resources for JPI fees in a systematic manner. This will involve having a recurrent budget line for this

- Developing a framework for measuring impact and learning from what ERA-Learn has developed for this purpose

France could learn from explicit criteria for JPP participation developed in countries such as Austria, Estonia and Portugal.

Norway

As already noted in the Preconditions Report Norway has a well organised JPP-framework based on an international strategy where the government and the Norwegian Research Council collaborate in a dedicated and flexible manner. It scores high on strategic decision

making, coordination across Ministries. The funding is centralised so decision making has a common approach. Where Norway aims to improve its current governance is to:

- Develop a more holistic strategy across all societal challenges and priorities at the national level in order to prioritise certain JPP topics

- To develop stakeholder mirror groups across all JPIs

- Develop tools to measure the impacts of JPPs better is one of the priority actions for Norway.

Norway is keen to learn from impact frameworks developed in ERA-Learn and by individual JPPs. The French mirror Group approach could give interesting learning opportunities when setting these up for all JPIs in Norway.

Portugal

The Portuguese Science and Technology system is strongly internationalised and the decisions on international collaboration are made centrally by one Ministry taking into account the national priorities. Decision making can be fast, albeit that funding needs to be decided on a case-by-case situation. Thus, Portugal scores medium to high on most Key Governance factors. The factors to improve for Portugal are:

- To involve other Ministries in the JPP. Due to the centralized responsibility for all S&T matters other sectoral Ministries are difficult to engage. Thus, there is no Inter-ministerial coordination. The restructuring of S&T policies might allow for some stronger involvement of other Ministries. In the short term, more regular meetings with other Ministries could help improve their understanding of JPPs

- Stronger engagement of stakeholders in the JPP. New approaches have been formulated but these need to be implemented in the near future

- The impact measurement needs more resources and a validated methodology to be able to get started

Portugal could take inspiration from stakeholder involvement, reference and mirror groups as developed in Denmark and France. As for other countries, the Impact assessment framework as developed in ERA-Learn could be useful.

Slovenia

Slovenia has high and low scores on Key Governance Factors. It has clear criteria for selecting whether to participate in JPPs. Its decision making is quite centralised within one Ministry. The involvement of other Ministries in the JPP and in the allocation of funding is a barrier. As there is little programmatic funding in Slovenia and research funding is mostly institutional the opportunities for participation are limited. The decision making has less barriers for ERA-NETs but even more barriers if it concerns bigger initiatives such as JPIs. Improvements that could be made are:

- Improve the selection criteria for selecting new JPPs. Existing selection criteria could be fine tuned for JPPs

- Improving the coordination between Ministries. It is foreseen to set up a coordination structure for all Ministries/ Agencies involved in JPP. In addition the possibility is assessed to widen the Law on Science and Research and assign responsibilities for other Ministries regarding societal challenges. Informing other Ministers on JPP will be taken up as an action.

Slovenia can learn from AT and EE examples to set common criteria across Ministries to select JPPs and examples such as the French Mirror groups to involve sectoral Ministries in JPP.

Sweden

Sweden scores fairly high on most governance factors. With its highly decentralised system, where various Agencies and Councils allocate funding for JPPs in their domain, the governance role and influence of the Ministries is quite different compared to other countries. Human resources for JPPs are also spread thinly across these different policy stakeholders. In Sweden, the coordination challenges lie between Ministries, between Ministries and 'their' Agencies but also across the different Agencies. Actions for improvement considered are:

- Develop a national organisational structure that encompasses the funding agencies as well as the governmental offices to create a better communication and knowledge transfer on all levels. This will also enable a higher level of coordination with working groups, development and implementation of best practices etc.

- Encourage the national JPI actors to increase their stakeholder communication and involvement by setting up broad and inclusive reference groups.

- Increase monitoring of impact of the JPIs by making use of the enhanced functionality of a newly launched application and monitoring database system.

- Use the national research programmes that will be introduced in Sweden later this year for mapping of stakeholders and impact monitoring.

A national organisation for JPI-governance is being set up. This is inspired by both the Norwegian model for cross-ministerial communication and the French model with mirror groups.

Turkey

Turkey is seeking improvement on two Governance Factors:

- To involve other stakeholders in a wider sense in the JPP process, together with the research and innovation actors. This requires that understanding on research and innovation policy is disseminated across policy stakeholders besides the research and innovation domain

- To improve the information on impacts. This requires the development of indicators for international S&T cooperation in general and JPP in particular.

[Summary about 10 lines]

Studies and reports