

# **European Metrology Programme for Innovation and Research (EMPIR)**

**Call 2015**

**Health**

**SI Broader Scope  
Research Potential  
Pre and Co Normative  
Support for Impact**

**Report of the Independent Observer  
Joseph Prieur**

**December 2015**

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# 1. Introduction

## 1.1 Terms of Reference

This report provides the findings of the Independent Observer (Joseph Prieur), following completion of the EMPIR Review Conference and Consensus Group meetings held in Rotterdam from the 18th to 27th November 2015.

The role of the Independent Observer is described in Section 6.5 of the EMPIR Call Process Guide 6: Evaluating EMPIR Projects (Document: P-CLL-GUI-106 Version: 1.1 Approved: EMRP Programme Manager 2015-06-16) <http://msu.euramet.org/downloads/documents/Guide6.pdf>

*The European Commission may send an 'Independent Observer' to the review conference and consensus group meeting(s). He/she does not participate directly in the evaluation procedure. He/she will have access to all areas of the evaluation process, and will report back his/her observations and opinions on the process to the European Commission*

The main function of the Independent Observer is therefore to ensure that the EMPIR evaluation process is being implemented in accordance and compliance with the rules that are set out in the Guide.

The specific tasks of the Independent Observer were defined by the EMPIR Programme Manager as follows:

- 1) To act as an independent observer during the EURAMET EMPIR 2015 selection process;
- 2) To prepare, and review the Call and Selection documentation;
- 3) To attend the Rotterdam Review Conference and Consensus Groups on the 18th to 27th November 2015;
- 4) To provide a draft report to the EMRP Programme Manager for factual checking by 9th December;
- 5) To take due regard of comments made by the EMRP Programme Manager on the draft. EURAMET comments will be limited to factual matters, the opinions remaining those of the observer.
- 7) To produce a final report by the end of December 2015 (subject to timely response to the draft by EURAMET);
- 8) The report may be produced in two parts, the first part (the present report) reporting on the process and in a form that could be made public, while recommendations to EURAMET on improvements to the process that could be made in future years could be reserved for a second part which would not be made generally available.

It was noted that:

- A) The final report will be provided - unabridged - to the European Commission by EURAMET and shall be of a suitable quality for this purpose;
- B) All relevant personnel, including the Referees, will be instructed to provide full cooperation to enable completion of the task;
- C) Full and unfettered access will be provided to all relevant aspects of the call and selection process to enable completion of the task;
- D) The independent observer is bound by confidentiality, and shall only discuss the outcome and provide the report to those who have a legitimate right of access (which includes, should they so choose to contact you directly, the relevant Unit of the European Commission). EURAMET reserves the right to publish the report.

This report therefore deals with the process that was carried out to implement the Review Conference and Consensus Group meetings and arrive at Single Ranked lists of proposals submitted for each of the EMPIR 2015 Calls (Health, SI Broader Scope, Pre and Co Normative, Research Potential and Support for Impact). The recommendations to EURAMET are included in a separate report. Both reports follow the format of the 2014 reports to ensure consistency of approach.

## 1.2 Approach

My observations are based on the following inputs:

- Briefing meeting with the EMPIR Programme Manager, Brussels, 30 September, 2015;
- Various guides, templates and forms available from <http://msu.euramet.org/downloads/>
- Review of copies (received from the EMPIR MSU) of the procedural e-mails and attachments sent to referees
- Review of Independent Observer reports and recommendations for the 2014 EMPIR Call;
- Review of Call documentation and briefing materials;
- Attendance at the Review Conference and Consensus Group meetings (18-27 November, 2015), involving:
  - Day 1: Support for Impact (18 November)
  - Days 2 and 3: Research Potential (19 and 20 November)
  - Days 5 and 6: Health (22 and 23 November)
  - Days 7 and 8: Pre and Co Normative (24 and 25 November)
  - Days 9 and 10: SI Broader Scope (26 and 27 November)
- Informal discussions during the Review Conference with Referees, the EMPIR Deputy Chair, the Programme Manager and other members of the Management Support Unit (MSU)

I am satisfied that I had free and open access to all information, presentations and discussions that constituted the 2015 Stage 2 evaluation of proposals.

## 1.3 Structure of the Report

The report aims to cover the whole of the 2015 Stage 2 process from launch of the Calls to the decision on the projects that will be funded. It therefore covers the period from the opening of the Call (June 23, 2015 for the JRPs, and August 5, 2015 for the SIPs) to the EMPIR Committee meeting of November 30, 2015 following the Review Conference and Consensus Group meetings of November 18 to November 27, 2015.

The report comprises of sections on the background/scope of the Call for proposals, selection of referees and the remote evaluation, the Review Conference. The report concludes with my findings regarding compliance with the rules and quality of the process.

A separate report has been prepared for EURAMET with comments and suggestions for improvement of the process.

## 2. Call for Proposal Process

In 2015 EURAMET issued calls for Joint Research Projects (JRP) for Health, SI Broader Scope, Pre and Co Normative and a call for Research Potential Topics (RPT) following a two stage process. Stage 1 was launched on February 2, 2015 and closed on March 17, 2015. A call for SIP (Support for Impact Projects) Coordination and Support Actions was also issued

### ***JRP Proposals***

For Health, SI Broader Scope and Pre and Co Normative, Stage 1 offers the chance for all stakeholders from any country to influence the R&D projects undertaken by the European metrology community by identifying the challenges, problems or opportunities for potential research topics (PRT)

For Research Potential, Stage 1 invites interested parties to submit Research Potential Topics (RPT). RPTs should include some research and development activities. However they do not need to address fundamental scientific challenges. An important element of RPTs is the collaboration between NMIs/DIs that are less experienced in a relevant field with NMIs/DIs with greater experience, with the aim of establishing and developing metrology capabilities and the potential for metrology research.

From the PRTs and RPTs submitted at stage 1, the EMPIR Committee defines a number of SRT (Selected Research Topics) which are considered to be of the highest priority and will provide the basis for Stage 2 calls for JRPs in each of the Targeted Programmes TPs (Health, SI Broader Scope, Pre and Co Normative, Research Potential). Stage 2 calls were published on June 23, 2015 and closed on October 8, 2015.

From the 143 PRTs suitable for prioritisation submitted at stage 1, the EMPIR Committee selected 57 "Selected Research Topics" (SRTs), 22 for Health, 6 for Research Potential, 12 for Pre and Co Normative, and 17 for SI Broader Scope. From the 57 published SRTs, 5 did not generate JRPs proposals (1 Health, 1 SI Broader Scope, 2 Pre and Co Normative and 1 Research Potential). The number of JPT proposals received is thus 52:

- Health 21
- SI Broader Scope 16
- Re and Co Normative 10
- Research Potential 5

- Some SRTs contained inputs from more than one single PRT as similar ideas were combined where appropriate. These SRTs were the basis of the Joint Research Projects (JRPs) which consortia were invited to submit.
- Some countries declared a strategic priority for inclusion in particular projects. Coordinators were requested to seek the involvement of partners from these countries.
- EURAMET provided a web based meeting area to facilitate communications between participants, to register an interest in participating in research, to advertise skills and or equipment and to identify potential consortium partners.

All 52 eligible JRP proposals were put forward to be evaluated at the Review Conference in Rotterdam (18-27 November 2015) with proposers' representatives (1 coordinator representative for each JRP proposal).

### ***SIP proposals***

For the second year, EURAMET issued a Call for Support for Impact projects (SIPs) The SIP call was published on August 5, 2015 and closed on September 29, 2015. In contrast to the JRP calls, the SIP call follows a single stage process. Specific features of the SIPs are as follows:

- The SIP projects are coordination and support actions with a clear focus on dissemination and exploitation activities based on research outputs from a completed iMERA-Plus, or an EMRP Joint Research Project selected in 2009 to 2011. Research and development activities are not eligible to be funded in SIPs

- A key requirement is an external request for the work from an organisation ready to take up the outputs of the project and move them on to impact outside the metrology community. Without such a willing recipient expressing support for the proposal and identifying the actions they will take with the outputs of the project, the proposal would have no evidence of the route to impact and should not be funded.

The Consensus Group Meeting for SIPs took place in Rotterdam on November 18, 2015 without proposers attending. Eight proposals were evaluated.

### 3. Selection of Referees

EURAMET select referees from their own Referee Database set up in January 2014 for the EMPIR Programme. All potential referees for EMPIR are required to register with EURAMET in accordance with Guide 8 (Registering as a Referee for EMPIR)

[http://msu.euramet.org/downloads/documents/Guide\\_8\\_Register\\_as\\_a\\_Referee.pdf](http://msu.euramet.org/downloads/documents/Guide_8_Register_as_a_Referee.pdf)

EURAMET also maintains privileged access to the European Commission's Horizon 2020 Expert Database which may be used in certain circumstances to identify potential referees. In such a case, selected referees have also to register on the EURAMET database

The selection process started immediately after issuing the call for stage 2 proposals, by checking willingness and availability to participate and areas of expertise from potential referees. Potential referees were provided with detailed information about the calls, about their expected role and involvement, and practical information about the logistics of the evaluation process, and they were invited to declare promptly any possible conflict of interest which may arise, should they be selected. The final selection process for the calls 2015 involved the matching of Referees to the 2015 SRTs based on the use of keywords in their profiles and confirmation of availability for the Review Conference and lack on conflict of interest.

EURAMET selects referees based on skills, experience and knowledge; geographical diversity, gender, private and public sectors (where appropriate) and an appropriate turnover of referees from year to year.

Proposals are evaluated by at least three appropriate referees.

Referees evaluate the JRPs and SIPs on a personal capacity, not as representatives of their employer, their country or any other entity or affiliation. They must act independently, impartially and objectively. They must maintain the confidentiality of the documents before, during and after the Review Conference and Consensus Group meetings. They must declare any links to a particular consortium. They sign the Form 6a (Code of Conduct and Declaration) prior to commencement.

The referees are responsible for 'evaluating the merits of each application against the given evaluation criteria' and reporting results on the relevant forms while maintaining confidentiality. This generally includes attendance at the review conference or consensus group meetings for the evaluation of proposals.

Selected referees were notified on October 22, 2015 and non-selected referees were notified on October 26, 2015

The EMPIR analysis of the Referees was provided for review:

|  |    |       |                  |          |
|--|----|-------|------------------|----------|
| Male   | 43 | 76.8% | Nationalities    | 20       |
| Female   | 13 | 23.2% | Albania          | 0 0.0%   |
| Average age  | 54 |       | Austria          | 2 3.6%   |
| Age <30  | 1  | 1.8%  | Belgium          | 0 0.0%   |
| Age 30-34  | 1  | 1.8%  | Bulgaria         | 1 1.8%   |
| Age 35-39  | 3  | 5.4%  | Denmark          | 1 1.8%   |
| Age 40-44  | 7  | 12.5% | Finland          | 3 5.4%   |
| Age 45-49  | 13 | 23.2% | FYR of Macedonia | 1 1.8%   |
| Age 50-54  | 6  | 10.7% | France           | 7 12.5%  |
| Age 55-59  | 7  | 12.5% | Germany          | 13 23.2% |
| Age 60-64  | 7  | 12.5% | Greece           | 1 1.8%   |
| Age 65-69  | 4  | 7.1%  | Hungary          | 0 0.0%   |
| Age 70-75  | 7  | 12.5% | Ireland          | 0 0.0%   |
| Org country  | 10 |       | Italy            | 6 10.7%  |
| Consultancy firms  | 0  | 0.0%  | Lithuania        | 0 0.0%   |
| Higher Education Establishments                                  | 26 | 46.4% | Malaysia         | 0 0.0%   |
| Non-research Commercial sector including SMEs                    | 5  | 8.9%  | Malta            | 1 1.8%   |
| Non-research International Organisations (Association of States) | 2  | 3.6%  | Montenegro       | 0 0.0%   |
| Non-research Public Sector                                       | 0  | 0.0%  | Netherlands      | 5 8.9%   |
| Private / Commercial Research Centres                            | 5  | 8.9%  | Poland           | 2 3.6%   |
| Private Non-profit Research Centres                              | 2  | 3.6%  | Portugal         | 0 0.0%   |
| Public Research Centres  | 12 | 21.4% | Romania          | 2 3.6%   |
| Others   | 0  | 0.0%  | Serbia           | 0 0.0%   |
| No information given   | 0  | 0.0%  | Slovenia         | 1 1.8%   |
| Previous EURAMET referee   | 35 | 62.5% | Spain            | 1 1.8%   |
| Previous EC evaluator  | 35 | 62.5% | Switzerland      | 0 0.0%   |
|  |    |       | Turkey           | 0 0.0%   |
|  |    |       | Ukraine          | 0 0.0%   |
|  |    |       | United Kingdom   | 5 8.9%   |
|  |    |       | United States    | 0 0.0%   |

The above table shows a wide variety of referees with due consideration of previous evaluation experience (more than 1/3 are newcomers, in line with typical European Commission practice for Research Framework Programmes Horizon 2020), background (type of organisation), nationality and age. The combined representation of Higher Education Establishments and Public Research Organisations is about 2/3. As far as gender is concerned, just below ¼ of referees were female referees.

## 4. Remote Evaluation

The closing date for phase 2 proposal submission was October 8, 2015 for all TPs (Health, SI Broader Scope, Pre & Co Normative, and Research Potential) and September 29, 2015 for SIPs. Remote evaluation commenced in October with an email (on October 22, 2015) to the Referees from the EMRP-MSU, which thanked them for agreeing to act as an EMPIR Referee. The emails were customised by Targeted Programme and provided the following information:

- Evaluation group they would join;
- Full list of proposals that they would evaluate;
- Link to a password-protected web-page containing the Information for Referees, including all of the proposals for their Targeted Programme;
- Matrix showing which proposals each person would specifically focus on at the Review Conference;
- Preview of what they would be required to do at the Review Conference or Consensus Group Meetings (and what documentary material would be provided);
- Guidance on selective reading;
- Concluding remarks on what they should do if they discover a conflict of interest;
- E-mail address and telephone number for the EMRP-MSU.

It was noted that referees may be asked to focus on subjects other than their most specialist subjects to ensure the group includes at least 2 “specialists” and one “generalist” and that this meets EC requirements, aiming to balance the tendency to mark favourite subjects slightly higher. Referees were instructed to focus preparation on the JRP proposals in their own group, but also familiarise themselves with the JRPs in other groups to enable meaningful plenary discussions.

The following guides were recommended for reading:

JRPs -

- Guide 4: Writing Joint Research Projects (JRPs) (which explains what a good JRP proposal would look like);
- Guide 6: Evaluating EMPIR Projects (which explains the evaluation and marking process);
- Form 6c: JRP Evaluation (the JRP marking sheet).

SIPs -

- Guide 7: Writing Support for Impact Projects (SIPs) (which explains what a good SIP proposal would look like);
- Guide 6: Evaluating EMPIR Projects (which explains the evaluation and marking process);
- Form 6d: SIP Evaluation (the SIP marking sheet).

The password-protected web-pages were specific to each Targeted Programme and contained more detailed information, including:

JRPs -

- Guide 4: Writing Joint Research Projects (JRPs): a set of instructions given to the proposers on what to include in their proposal.
- Guide 6: Evaluating EMPIR Projects: explains how the evaluation process will work, explains role and gives marking guidance for JRPs.
  - Form 6a: Code of Conduct and Declaration;
  - Form 6b: Payment to Referees;
  - Form 6c: JRP Evaluation (marking sheet).
- Call Budget and Features: EMPIR Call 2015.
- JRP Proposals in zip files: documents submitted by the proposers together with the SRT supporting document published by EURAMET listed by Group.
- Logistics information for the Review Conference or Consensus Group Meeting including agenda and hotel/travel information.
- Link to the Call web page so that they could see the briefing information for the proposers.

SIPs -

- Guide 7: Writing Support for Impact Projects (SIPs): explains how to write a Support for Impact (SIP) proposal for an EMPIR Call.
- Guide 6: Evaluating EMPIR Projects: explains how the evaluation process will work, explains role and gives marking guidance for EMPIR Projects.
  - Form 6a: Code of Conduct and Declaration;
  - Form 6b: Payment to Referees;
  - Form 6d: SIP Evaluation (marking sheet);
- Call Budget and Features: EMPIR Call 2015;
- SIP Proposals in zip files: documents (Protocol and Support Letters) submitted by the proposers;
- Logistics information for the Consensus Group Meeting including agenda and hotel/travel information;
- Link to the Call web page so that they could see the briefing information for the proposers.

For Support for Impact projects the collated referees' evaluation forms (6D forms) were made available. Referees were reminded that they must NOT discuss proposals with proposers nor other referees during this remote evaluation phase. However at this point, referees may also choose to read other proposals within their group for later comparison with those assigned to them. The discussion at the consensus group meeting would be about referees agreeing a set of marks and supporting comments for each proposal in order to produce a ranked list.

## 5. Review Conference and Consensus Group Meetings: Preliminaries

The Review Conference and Consensus Group meetings were scheduled over 10 days from 18 to 27 November 2015 (with Day 4 on 21 November being a free day) to cover all aspects of the 2015 Call. A specific document providing all relevant information was given to all participants (Referees, JRP Representatives, Observer)

Day 1 focussed on Support for Impact  
Days 2 & 3 focussed on Research Potential  
Days 5 & 6 focussed on Health  
Days 7 & 8 focussed on Pre & Co Normative  
Days 9 & 10 focussed on SI Broader Scope

Participants were the EMPIR deputy Chair, the EMRP programme manager and his deputy, an EU Commission representative, the MSU staff, the Referees, JRP representatives and the Observer

Support for Impact was one day only as no proposer representative was in attendance

Two days were devoted to each TP. The first day started with a Welcome address (to both Referees and JRP Representatives) by the EMRP Programme Manager, followed by 2 parallel dedicated briefing sessions (one for the referees, another one for the JRP representatives). The day continued with the poster sessions where each JRP representative was invited to display and describe his (her) poster to the relevant referees in order to:

- Have interactive discussions with the referees;
- Present the key aspects of the proposal in a clear and concise manner;
- Help the referees evaluate the proposal against the three evaluation criteria; and
- Prepare the representative for the subsequent question and answer session.

The afternoon of the first day was devoted to discussions between referees on the formulation of questions to the JRP representative on each proposal, followed by the Q/A session with the JRP representatives. Two members of the MSU team acted as facilitator and note taker during each of these sessions, for each evaluation group.

The second day started with a brief reminder of the tasks ahead, followed by the marking session for each evaluation group (for TPs with a high number of JRPs, referees were split in several groups of 5 or 6 JRPs). This was then followed by the plenary session where all JRPs (from all evaluation groups) related to the same TP were ranked.

The sections below summarise the process for the briefings, discussion within each specific Group of Referees (chaired by the facilitators) and discussions with the JRP Representatives. The process for the marking of individual JRPs and developing consensus on the Single Ranked List is discussed in the following section 6.

### 5.1 Briefing for the Referees

The Referees were briefed on EURAMET, the context of the 2015 EMPIR Call, the objectives of the EMPIR Programme, the national contributions, the call budget, and on the evaluation process (evaluation criteria and marking rules for JRPs or SIPs) and the expected output (i.e. essentially ranked lists) of the whole exercise. The Referees were reminded of their roles, their obligations and the tasks.

For Health, pre & Co Normative, and SI Broader Scope the Referees were split into their allocated Groups with the facilitator and note-taker. Research Potential had one single group. The referees introduced themselves within their groups and were instructed that, although each proposal has been pre-allocated to 3 referees, they were entitled to contribute to the discussions on all proposals within their group. They were also invited to familiarise themselves with proposals from other groups to be in a position, if necessary, to discuss the preliminary ranked list established by the MSU.

## **5.2 Briefing for the JRP Representatives**

A parallel briefing session was organised for the JRP Representatives. The Programme Manager outlined what they should expect at the Review Conference i.e. an explanation of the evaluation process. They were then briefed on what to expect if successful. This included the steps required to agree a contract with EURAMET, including the timescales.

## **5.3 Poster Sessions with the JRP Representatives**

The Poster Sessions were scheduled to allow 15-20 minutes of discussion between the Referees and the JRP Representative for each proposal. Referees were asked to focus initially on the posters for which they were nominated as specialists or generalists, then on others in their group and finally on any other posters outside their own groups. At the end of the formal poster session, there was a dedicated open slot where any referee could go and talk to any JRP Representative.

The sessions were facilitated in a time-efficient manner designed to prevent excess time being allocated to one poster over another. This was strictly adhered to by all participants. The timing, at 15-20 minutes per referee, allowed for animated discussion with the JRP representative and few sessions finished earlier than the allotted time. The meeting room layout fitted the sessions well, given the small informal meeting style of 1-2 Referees simultaneously with the JRP Representative.

## **5.4 Preparation for Formal Interviews**

After the poster sessions, the JRP Representatives had a 3 hour period prior to their formal Q&A sessions, allowing them to 'regroup' i.e. to consider the content of their informal discussions with the Referees and to contact other consortium members as needed prior to the Q & A session.

The Referees returned to Breakout Sessions chaired by the MSU facilitators to discuss their first impressions of the proposals and develop questions for the subsequent Q&A Sessions with the JRP Representatives. The facilitators explained the purpose of the session, which was to agree a shortlist of final questions for the formal interviews with the JRP Representative.

For each JRP proposal, the lead Referee was invited to chair the process and reach a consensus on the final questions. I attended several sessions, sometimes for all proposals within a group, sometimes for 1-2 proposals only. In all cases the MSU facilitators played a strong role, maintaining the focus of the Referees on the questions and helping to formulate the questions, while allowing for detailed discussion of individual views on the proposals. Discussion topics common to each Group included e.g. discrepancies between the SRT and JRP and differentiation between incremental advances and real innovation, or variations in the understanding and perception of a proposal between the remote reading and the poster presentation. Within each group it was also agreed which referee would be the formal lead referee to raise the questions to the JRP representative in the Q & A session

## **5.5 Formal Interviews with JRP Representatives**

The final Breakout Sessions were the Q&A sessions chaired by the lead referees with assistance from the MSU facilitators. The JRP Representatives had a maximum of 10 minutes to answer the prepared questions. The representative was told how many questions he will receive and was free to decide how long, within the specified time slot, he would spend answering any question. The facilitator acted also as a time keeper for the Q/A session for each representative, in order to ensure equal treatment for all of them. It was agreed that

- JRP Representatives attended for their proposals on an individual basis;
- The nominated lead Referee for each project asked the questions;
- When time permitted, other Referees could ask additional questions.

- If there was still some time left, the representative could make some comments

It was noted that JRP Representatives were generally very competent, responding well in a challenging situation (with 6 to 10 Referees and the MSU facilitator and note taker, and sometimes the observer present).

The Referees were reminded that they should not interact with the JRP Representatives after the session.

## **6. Review Conference and Consensus Group Meetings: Evaluation**

### **6.1 Marking the JRPs and SIPs**

The Referees were reminded of the tasks and scoring criteria, with particular emphasis on the Horizon 2020 changes related to the limited grant preparation phase, by the Programme Manager prior to commencement of the Sessions. They were reminded that the proposals should be assessed as they are and not as they could be if some improvements were to be made. The sessions were chaired by the MSU facilitators with the assistance of the Referees.

A consensus mark was agreed for each proposal against the evaluation criteria and one marking sheet was completed per proposal. The referees who had read the proposals under discussion also led the process while all Referees could comment.

The facilitators maintained focus on the task at hand while complying with process requirements. They used a standard Marking Wall Chart (matrix sheet with all of the JRPs / SIPs (vertical) and the criteria (horizontal) to work up the scores. The EMPIR Marking Guidance (0 = Fail to 5 = Excellent; half marks may be given) was clearly displayed and frequently reminded to the referees by the facilitators.

The facilitators initiated the discussion by inviting, on each criterion, one of the referee to express his comments resulting from all inputs received ( remote reading the proposal, poster session, Q & A session). Other referees could then contribute to the discussion. An agreed set of comments was then obtained with positive and negative comments against which a mark was proposed for each criterion. After reviewing all proposals within the group, the scores were finalized.

In all marking sessions which I attended, after application of the weighting factors, there were no ties left and therefore it was a simple formality for the referees to establish a ranked list of proposals within their groups on the basis of the total weighted scores.

During the marking sessions the Programme Manager circulated between the Groups to draft emerging scores, to obtain a preliminary view of the Single Ranked List and to prepare for the subsequent presentation of the list to the Referees.

Obviously there are some variations in the time needed to score individual proposals and to arrive at an agreed set of supporting comments for each criterion. The facilitators have the difficult task to act as time keepers while ensuring a fair process and an outcome that all referees can agree upon. The procedure was scheduled and efficiently facilitated, and the observed variations are believed to be of no consequence on the outcome of the process.

### **6.2 Single Ranked List**

The Single Ranked List for the JRPs / SIPs was developed by the EMRP-MSU using a pre-defined Excel template for ease of review and data sorting.

For each TP, the first draft of the Single Ranked List was presented to the plenary meetings of the Referees by the Programme Manager.

In all cases, the explanations given by the Programme Manager on the ranking, the procedure to untie proposals with equal scores, and the line where the cumulated requested funding reached the available budget, were all very clear. All referees were in agreement with the proposed ranking. There were no situations where proposals very close to the line had to be untied. The Programme manager explained that the proposed ranked lists were to be submitted to the EURAMET EMPIR Committee for approval.

The Referees were thanked by the Chair, asked to sign the ranked lists and again reminded to hand in all documentation and to delete all electronic files prior to departure. They were also invited to fill in a questionnaire to provide a feed back to the MSU team on their opinion about all aspects of the whole evaluation process.

## 7. Conclusions

The main conclusions that I can draw from review of the 2015 EMPIR Call documentation, the process and my attendance at the Review Conference and consensus meetings include the following:

- The process and procedures were carried out in accordance with the rules established in Decision No. 555/2014/EU of the European Parliament and of the Council on participation of the Union in EMPIR (15 May 2014), Regulation (EU) No. 1290/2013 of the European Parliament and of the Council laying down the rules for participation and dissemination in Horizon 2020 (11 December 2013, with one derogation for the funding rate) and the draft Horizon 2020 Model Delegation Agreement for Article 185 Initiatives (September 2014).
- The overall evaluation process was conducted in a very efficient manner and the referees were carrying out their work in full compliance with the guiding principles of independence, impartiality, accuracy, objectivity and consistency.
- The Call documentation and all correspondence with the Referees were comprehensive, of a very high standard, in keeping with the maturity of the EMRP-MSU team and their procedures which have been developed and refined over a substantial series of EMRP and iMERA Calls and the EMPIR 2014 call
- The Review Conference was organised in a highly professional manner, ranging from the logistics (selection of venue, scheduling of activities, quality of catering) to the facilitation of the individual sessions (time efficiency, technical competency and unbiased nature).
- The Call outcomes (Single Ranked Lists) were of high quality suited to submission to the EMPIR Committee for timely approval.

The Call process and procedures are fitting well with Horizon 2020 guidelines. From informal discussions with referees, JRP Representatives and members of the MSU team, it was clear that all involved persons have now become familiar with the specific features of Horizon 2020 applicable to the EMPIR programme, in particular the limited grant preparation phase necessitating that proposals should be evaluated as submitted and not on potential if certain changes are made.

One of the major differences with the Horizon 2020 evaluation process is the interactive activity between the JRP Representatives and the Referees for the Health, Research Potential, Pre and Co Normative, and SI Broader Scope calls through the poster sessions and the Q/A sessions. From witnessing these sessions, and listening to the participants, I am convinced of the benefit of these sessions. Although they are short (about 30 minutes for poster sessions and 12 minutes for Q/A sessions), they provide a well appreciated opportunity for referees to meet the JRP representatives and get clarifications about the proposals. For practical reasons it would not be possible for calls generating hundreds of proposal but I believe this direct interaction between referees and JRP representatives is possible and welcome because the European metrology community is not extremely wide and the interaction is not of a large scale. The Poster Sessions were dynamic, comprising rigorous challenging/defending of the proposals as well as providing a networking activity for the metrology community. The formal Q/A sessions added to the challenging/defending activity and could be viewed as a training ground for career development. The feedback from both JRP Representatives and Referees was very positive. The career development and networking nature of the activity should make it worthwhile.

**As an independent observer, I am convinced that the whole process was conducted in full compliance with established rules, and that resulting ranked lists reflected, for those projects above the funding line, the best projects which should be funded.**

## **8. Acknowledgments**

In closing this report, I would like to thank the EMPIR Deputy Chairs, the EMPIR Programme Manager and the entire Management Support Unit team for their excellent support before, during and after the Review Conference. Every effort was made to assist me, to explain the relevant context and to provide me free and unrestricted access to all information and documents. Their support and their assistance throughout the entire process were outstanding and contributed greatly to making the observation work not only a smooth but also a very enjoyable exercise.