

G08.03.05

EMRP, EMPIR

The highlight of the year: EMPIR approval

- 15 April 2014: Approval by EU Parliament
- 6 May 2014: Approval by Council
- Co-decision complete!

Preparation

7 EMPIR calls

proposed: 600 M€ (FC), 1/2 from EU

finalize
projects

5 EMRP calls

finalize projects

iMERA-plus

2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022

FP7

Horizon 2020

- EMRP project 'Quantum ampere: Realisation of the new SI ampere' (SIB07 Qu-Ampere) has been published as a leading story in Nature.
- Four EMRP projects presented results at the recent European Materials Research Society (EMRS) Spring Meeting in Lille, France (over 2,500 scientists and engineers, large industrial exhibition):
 - Traceable characterisation of nanostructured devices (NEW01),
 - Metrology for the manufacturing of thin films (IND07),
 - Novel electronic devices based on control of strain at the nanoscale (IND54)
 - Chemical metrology tools for manufacture of advanced biomaterials in the medical device industry (IND56).
- 22 events in the first 6 months of 2014 promoting outputs of EMRP projects have been announced at <http://www.euramet.org/index.php?id=emrp-events>.

Final EMRP Call – TP ENG II, TP ENV II

JRP number	JRP Name	Coordinator	Negotiator	Expected Start
ENG51	SolCell	Alexandre Bounouh (LNE)	Fiona	Jul
ENG52	SmartGrid II	Paul Wright (NPL)	Nikos	Jun
ENG53	ThinErgy	Fernando Araujo de Castro (NPL)	Lucy	Jul
ENG54	Biogas	Adriaan van der Veen (VSL)	William	Jun (May)
ENG55	PhotoClass	Stefan Winter (PTB)	William	May
ENG56	DriveTrain	Frank Haertig (PTB)	Katherine W	Sep
ENG57	VITCEA	Michael Gower (NPL)	Cliff	Jun
ENG58	MultiFlowMet	David Crawford (NEL)	Katherine W	Jun
ENG59	NoNeLi	Jan Jette Blangé (VSL)	Lucy	May
ENG60	LNG2	Oswin Kerkhof (VSL)	Lucy	Jun (Jul)
ENG61	FutureGrids	Jari Hällström (MIKES)	Fiona	Jun
ENG62	MESaIL	Elena Revtova (VSL)	Katherine D	Jul
ENG63	GridSens	Paul Clarkson (NPL)	Cliff	Jun

Final EMRP Call – TP ENG II, TP ENV II

ENV51	MeTra	Paola Fisicaro (LNE)	William	Oct
ENV52	HIGHGAS	Paul Brewer (NPL)	Cliff	Jun
ENV53	MetEOC2	Nigel Fox (NPL)	Katherine W	Jun
ENV54	MetroDecom	Jiri Suran (CMI)	Nikos	Sep (Jun)
ENV55	MetNH3	Bernhard Niederhauser (METAS)	Katherine D	Jun (Jul)
ENV56	KEY-VOCs	Annarita Baldan (VSL)	Kate	Oct
ENV57	MetroERM	Stefan Neumaier (PTB)	Fiona	Jun
ENV58	MeteoMet2	Andrea Merlone (INRIM)	Kate	Oct
ENV59	atmoz	Julian Gröbner (SFI Davos)	Kate	Oct
ENV60	IMPRESS	Rod Robinson (NPL)	Nikos	Jun

Industrial Metrology

EMRP Deputy Chair: Rado Lapuh

Subcommittee Research:

EMRP chair and EMRP deputy chair, Albert, Beat, Erkki, Jiri, Giovanni, Maguelonne, Robin
standing invitees: PM, EU rep.

Subcommittee Capacity Building:

EMPIR Chair, EMRP deputy chair, Miruna, Paul, Vida
standing invitee: PM, Head of Secretariat

New staff in central secretariat:

Tanasko Tasic

New staff in MSU:

Paula Knee, Dr. Kirstie Ostad, Dr. Mara Soares Silva

- New contract between EURAMET and NPL about MSU in place
- Research Council:
 - no ITRE seat anymore
 - Eurolab to propose a successor for U. Panne
 - aim to better represent industry and CB
 - new way of interaction

1) Co-decision, next formal steps

- national commitments, liability declarations, H2020 association
- Model Grant Agreement and Delegation Agreement under development
- ex-ante assessment expected in July

2) Implementation 2014

- mostly covered by draft annual workplan (i.e. call scopes, budgets)
- SC-R meeting 28-30 April, SC-CB meeting 7-8 May
- 2014 call IND and RPot

3) Further preparation 2015, ..

- Prenormative 2015: liaison CEN STAIR, different EMPIR instruments
- TP RPot 2015: lessons learnt from 2014

National Commitments for EMPIR

Country	liability declar.	commitment
Austria	Y	840.000
Belgium	Y	1.200.000
Bosnia Herzegovina	Y	920.000
Bulgaria	Y	840.000
Croatia	Y	700.000
Czech Republic	Y	8.600.000
Denmark	Y	3.710.000
Estonia	Y	910.000
Finland	Y	12.000.000
France	Y	27.000.000
Germany	Y	88.000.000
Greece		0
Hungary	Y	1.050.000
Ireland	Y	600.000

Italy	Y	24.000.000
Netherlands	Y	16.500.000
Norway	Y	3.750.000
Poland	Y	2.500.000
Portugal	Y	840.000
Romania	Y	2.000.000
Serbia	Y	700.000
Slovakia	Y	200.000
Slovenia	Y	2.249.333
Spain	Y	6.000.000
Sweden	N	5.131.000
Switzerland*		10.500.000
Turkey	Y	12.000.000
UK	N	83.000.000
TOTAL		315.740.333

* Switzerland's association status is currently on hold

Association status of the other non-EU countries is expected in time

Key differences

- Rules for participation (must be compliant with H2020 rules)
 - internal partners (NMIs, DIs): 100 % + 5 %, Coordinators, weighted voting
 - external partners (all others): 100 % + 25 %

To be continued:

- character of A185
- call stage 1 and 2
- partnering
- review conference

Call 2014: Budget and call timing

Call	2014 call durations	Call budget in M€*	Estimated EU contribution in M€
TP Metrology for Industry (Research and Innovation Actions)	PRT: 3 February -18 March SRT: 24 June – 9 October	43.50	22.89
TP Research Potential (Research and Innovation Actions)	PRT: 10 February – 25 March SRT: 24 June – 9 October	3.00	1.39
Support for Impact (coordination and support actions)	25 August – 30 September	1.00	0.44
Total		47.50	24.72

** This column presents a “project full costs view” as used under FP7 and the EMRP.*

yr	M€	TPs	M€
2014	50	IND RPot	43,5 3
2015	80	HEA SI NOR RPot	40 25 10 5
2016	95	ENV ENG FUN RPot	
2017	95	..	
2018	95	HEA ..	
2019	95	ENV ENG ..	
2020	90	..	

84 PRT's received, 33 SRT's drafted

31 PRT's received, 6 SRT's drafted

→ EMPIR committee to conclude
end of the week

Partnering conferences:

RPot: 30 June 1 July in Vienna

IND: 1 – 4 Jule in Berlin, 7/8 July in
Teddington

Review conference

IND 17-18 Nov,

Rpot on 19th Nov,

SIP on 20th, all in Prague

Scope: The overall strategic aim of the TP “Metrology for Industry” is to **develop measurement methods and techniques for industrial applications**. It is aimed at **driving innovation in industrial production** and facilitating **new or significantly improved products** through exploiting knowledge in the European measurement institutes. The innovations shall improve the competitiveness of European industry and **shall lead to increased economic turn-over**.

Documented industrial needs, such as provided through the references included in the PRT’s will be of key importance. EURAMET encourages proposals from industry and expects their active participation in projects. In addition to the development of technologies and methods, **contributions to standardisation shall be investigated as a potential part** of the projects. EURAMET wishes to generate benefit for industry whilst exploiting the unique capabilities of its member National Metrology Institutes and Designated Institutes. This TP will enable and promote collaborative research in the most demanding fields of industrial metrology going beyond the state of the art. As with all other TP's under EMPIR, this TP shall strengthen the mutual cooperation of European NMIs, leading to coordinated European metrology infrastructures where appropriate.

Scope: In order to respond to an existing capability gap in emerging EURAMET member countries and regions, Capacity Building instruments have been included within EMPIR. The overall strategic aim of the metrology capacity-building activities on different technological levels is to achieve a balanced and integrated metrology system in the participating states, enabling them to develop their scientific and technical capabilities in metrology. Competitive metrology capabilities affect all other aspects of the technical quality infrastructure of the participating NMIs and DIs, therefore directly contributing to increased European economic welfare.

RPOT projects are a Capacity Building instrument for the development of the potential for metrology research of the participating organisations which will subsequently provide input to other aspects of technology transfer, innovation and all other aspects of research. The needs identified within the PRT's should recognise that RPOTs will be **demand oriented**, will have a **European dimension** and **critical mass**, will focus on EURAMET's internal infrastructure and expertise to provide appropriate internal knowledge transfer to emerging members, will be **based on horizontal collaboration** for the development of new **metrological infrastructures in a coordinated way ("smart specialisation")** and will need to demonstrate significant impact to the entire quality infrastructure. RPOTs should include **some R&D** activities and in this respect they differ from the technical assistance nature of cooperation, however they do not need to address fundamental scientific challenges. An important element of RPOTs 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.

Scope: JRP's were the main instrument under the iMERA-Plus and the EMRP programmes and they will continue to be of major importance under the EMPIR programme. However, the JRPs have a clear focus on research, and a parallel, direct transfer of the results into application within the 36 months lifetime is not realistic in many cases.

In order to better exploit the scientific and technological achievements of the JRPs, and facilitate stakeholder uptake of the results, the new instrument "Support for Impact" is introduced. Expected project outputs under this call for proposals can be described by following (not exclusive) examples:

- a contribution to a documentary standard is approved by a Technical Committee/Working Group of a European or international Standard Developing Organisation
- a contribution to a regulatory process is approved by an European/international regulatory body
- a patent application is accepted by the European Patent Office
- one or more potential commercial beneficiaries approve the feasibility for the transfer of technology that was developed in a JRP.

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2017	95	..	
2018	95	HEA ..	
2019	95	ENV ENG ..	
2020	90	..	

Call	Call implementation	Type of Action
TP Metrology for Health	Two stages: PRT and SRT	Research and Innovation Action
TP Metrology for SI Broader Scope	Two stages: PRT and SRT	Research and Innovation Action
TP Metrology Research for pre- and co-normative standardisation	Two stages: PRT and SRT	Research and Innovation Action
TP Research Potential	Two stages: PRT and SRT	Research and Innovation Action
Support for Impact	One stage	Co-ordination and Support Action

Draft by BoD group Health

Scope: The overall strategic aim of the TP “Metrology for Health” is to support –through metrological research and development – the more reliable and efficient exploitation of **diagnostic and therapeutic techniques** and the development of **new technologies** to improve **healthcare and patient protection**, to limit costs and foster the competitiveness of related European industries and services.

Metrology for healthcare is a horizontal underpinning activity providing innovation and confidence in the development, testing and application of new technologies for patient diagnostics and therapy that improve reliability and comparability of results and reduce patient risk. In order to provide a consistent basis for the assessment of these properties it is necessary to define measurands that properly describe the relevant biological effects that allow traceability to appropriate standards.

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TP Health addresses metrology needs for the health sector, such as:

- Measurements and testing techniques to support reliability and traceability of medical and clinical data, allowing the comparability of predictive, diagnostic and treatment information.
- Improved measurement and imaging at the molecular and cellular level to support innovation in e.g. Bio/pharmaceuticals, advanced therapies, medical devices and technologies, engineered/synthetic biology and targeted drug delivery.
- Quantitative diagnostics including biomarkers, imaging and multimodal measurement processes supporting the development of patient care, preventative and personalized medicine and screening including point of care testing, nano-medicine and e-medicine.
- To support innovation to deliver real-time, non/minimally invasive measurements, personalised and modern therapies to improve quality, reliability and comparability of measurements to ensure safety and efficacy of treatments.
- Metrology in support of health protection of citizens. Including innovative measurements supporting, for example, food safety, radiation protection, antibiotic resistance, infectious disease diagnostics and monitoring.
- Data Analysis for healthcare, for example “normal/pathological “ patient reference datasets, applying metrological approaches to health related metadata, “big data” and clinical trial data.

The priority areas for research reflect those of the Horizon 2020 Programme to address major health-related societal challenges.

Scope: The TP “SI Broader Scope III” is **part of a sequence** of calls for metrology R&D underpinning the development of the European metrology capabilities in the National Metrology Institutes (NMIs) and Designated Institutes (DIs). The call implements the long-term strategy of EURAMET to **develop a joint, coherent and efficient European metrology landscape** at internationally competitive level by 2025.

The related iMERA-Plus Call 2007, TP "SI Fundamental", concentrated on the measurement of constants of nature and basic measurement principles to support the envisaged redefinition of the SI base units, as requested by the General Conference on Weights and Measures (CGPM) under the Metre Convention. Under the EMRP, the TP SI Broader Scope of 2011 and 2012 went a step beyond and prepared the implementation of the redefinition, which is likely to take place in the next few years, and support developments of practical realisations (“mise en pratique”) of the redefined base units and affected derived units.

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The call 2015, which will be followed by another call in 2018, will build on the achievements of the first two calls. Both calls together provide the opportunity to **consider and propose longer-term and larger-scale approaches** bringing the European measurement capabilities in the internationally leading position.

Proposals will be preferred which aim at the development of a **joint, sustainable, and coordinated European landscape** of metrology capabilities. **The impact criterion** of the proposal selection process **will reflect this objective**.

The call comprises the development of new advanced techniques for providing traceability of measurement results to the users of metrology services. All technological disciplines may be addressed, if stakeholder needs are documented or can be convincingly anticipated.

To enhance the impact of the R&D work and to include world leading expertise, the involvement of the larger community such as the metrology R&D resources outside Europe, as appropriate, is expected.

Scope: The overall strategic aim of the TP “Pre- and co-normative research (2015)” is to develop **metrological methods and techniques required for standardisation**.

Proposed topics shall **address** specific documented **demands of European and international Standards Developing Organisations (SDOs)** for metrological research, e.g. the development of traceable measurement methods or the provision of validated data sets, which are required for documentary standards. The demand shall be demonstrated by a clear reference to the measurement needs within strategic documents published by the SDO TCs or WGs, (e.g. in the Business Plans or Work Programmes) or by a letter signed by the convenor of the respective TC/WG.

EURAMET encourages proposals from industry and regulators and their active participation in projects.

EURAMET wishes to generate benefit for European and international SDOs whilst exploiting the unique capabilities of its member National Metrology Institutes and Designated Institutes. This TP will enable and promote collaborative research going beyond the state of the art. As with all other TP's under EMPIR, this TP shall strengthen the mutual cooperation of European NMIs, leading to coordinated European metrology infrastructures where appropriate.

“STAIR-EMPIR” operating under CEN/CENELEC BT WG STAIR

1 Status

STAIR-EMPIR is formed as a group working under CEN/CENELEC BT WG STAIR and is open to the participation of stakeholder representatives as detailed below. Its duration will be till end 2015 (but renewable for periods of 2 years) or till the end of the BT/WG STAIR (whichever comes first).

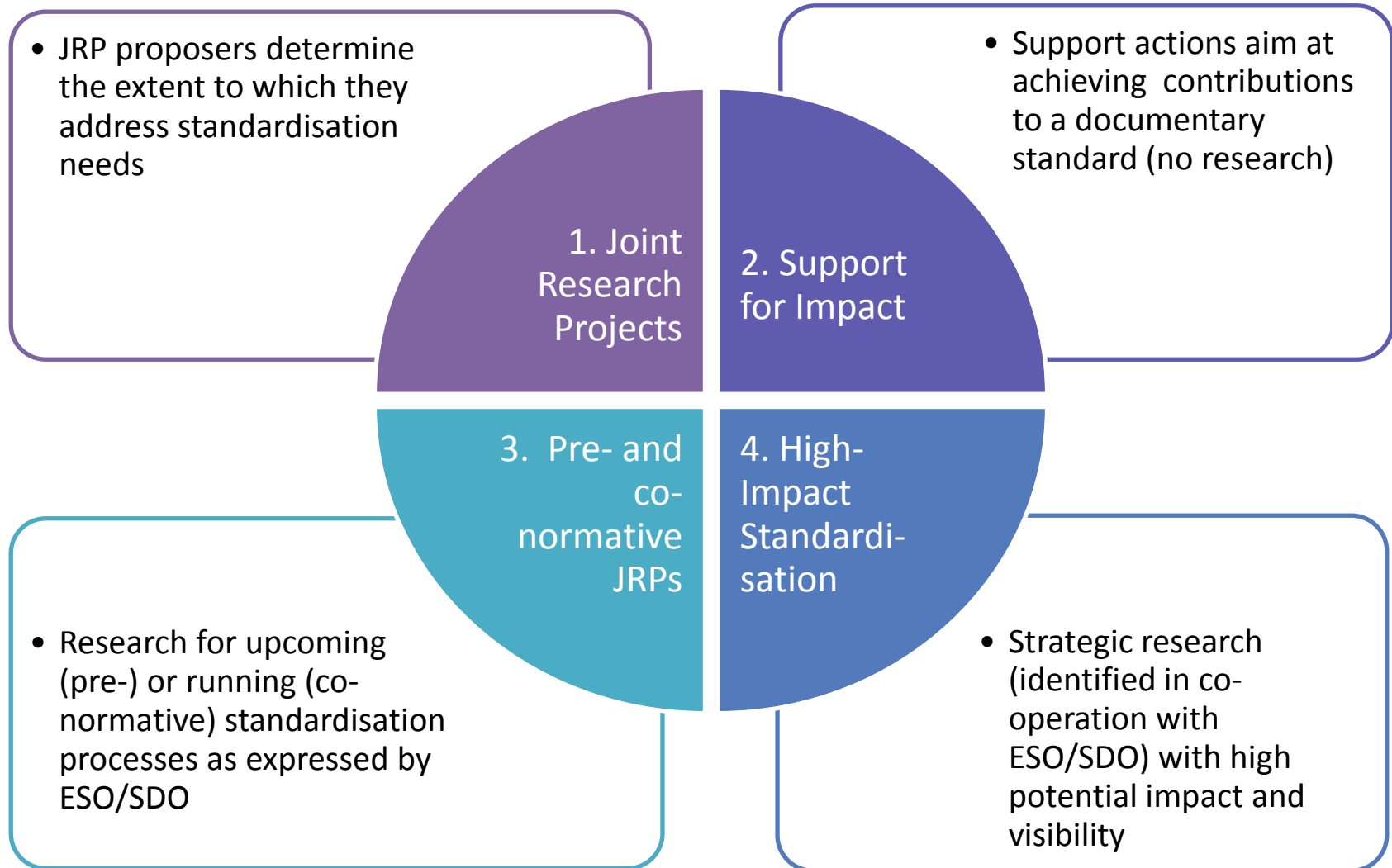
2 Scope

STAIR-EMPIR is formed to facilitate dialogue and communication between the metrology research communities in Europe and CEN and CENELEC members and standardization activities.

3 Objectives

The objectives of STAIR-EMPIR are:

- operational objective: to supervise the process of identifying the most needed metrological research expertise for forthcoming and running standard developing projects
- strategic objective: to offer a platform where standardization and metrology can meet to discuss longer term strategic metrology needs, seen from an industry perspective



- Thanks to **Duncan Jarvis** and his MSU team for the tremendous work
- Thanks to **Michael Huch** for his contributions to bring us through the co-decision
- Thanks to **Wolfgang Schmid** and his team of the general secretariat for the broad support wherever needed
- Thanks to Barbara Tafel (legal advisor) for her extraordinary support