

EURAMET
European Association of National Metrology Institutes

EMRP state of play

Jörn Stenger, EMRP Chair

5th GA EURAMET
Sarajevo, 7 – 9 June 2011

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EURAMET
European Association of National Metrology Institutes

EU-cofunded joint metrology research

The EMRP

- coordinates national metrology research programmes of 22 European states
- has a jointly agreed strategic research agenda
- has a central management in EURAMET e.V.

The EMRP is an example of integration of research, management and finances


The diagram shows a horizontal timeline from 2005 to 2010. The 6th FP (orange) covers 2005-2006. The 7th FP (dark blue) covers 2007-2010. iMERA ERA-NET (orange bar) spans from 2005 to 2007. iMERA ERA-NET+ (blue bar) spans from 2007 to 2009. EMRP 169/185 (blue arrow) spans from 2007 to 2010.

Program	Start Year	End Year	Funding (M€)	EU Contribution (%)	Duration (years)
6th FP	2005	2006	-	-	2
7th FP	2007	2010	-	-	4
iMERA ERA-NET	2005	2007	63	1/3	3
iMERA ERA-NET+	2007	2009	63	1/3	3
EMRP 169/185	2007	2010	400	50%	7

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EMRP overall



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EMRP ERAnet-plus

Metrology for ...

2007	Measurement units
	Health
	Length
	Electromagnetism

all 21 projects end 2011

EMRP Article 169/185

Metrology for ...

2009	Energy	projects running
2010	Environment	constructing, starting soon
	Metrology for Industry	
2011	Health	call phase
	SI broader scope	
	New Technologies	
2012	Metrology for Industry	strategic preparation
	SI broader scope	
	Open excellence call	
2013	Energy	
	Environment	

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iMERA-plus



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Upcoming Events

11 entries found

Date	Event	Location
2011-05-18 - 2011-05-20	REUNIAM, JOSY, ULQHE and NanoSpin Workshop	Berlin, Germany
2011-05-27	Long Distance Workshop	Prague, Czech Republic
2011-05-30 - 2011-06-01	EuroNanoForum Conference	Budapest, Hungary
2011-06-09 - 2011-06-10	FP7 Health - Open Information Day	Brussels, Belgium
2011-06-15 - 2011-06-17	IMEKO-MI2011 Conference	Dubrovnik, Croatia
2011-06-22 - 2011-06-23	e-MASS Workshop	Bern-Wabern, Switzerland
2011-06-27 - 2011-07-01	qu-Candela Workshop	Braunschweig, Germany
2011-09-05 - 2011-09-07	Particulate Systems Analysis Conference	Edinburgh, UK
2011-10-02	Metrologie Conference	Paris, France
2011-11-02 - 2011-11-04	World Conference on Regenerative Medicine	Leipzig, Germany
2011-11-29 - 2011-12-01	EBCT & Brachytherapy Workshop	Braunschweig, Germany

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Euramet publication repository		EURAMET European Association of National Metrology Institutes
<p>Publication Repository ready for launch at GA!</p> <ul style="list-style-type: none"> • 100 entries, 11 of them open access pdf's (decision not to go for a pure open-access repository) • easy search functions • internal full access to all pdf's : EMRP committee members and delegates <p>Workflow</p> <ul style="list-style-type: none"> • authors send information about <i>all</i> their articles incl pdfs (where possible) to secretariat@euramet.org 		
11.08.01	5th GA EURAMET Sarajevo, 7 – 9 June 2011	5

Euramet information event 2008																		
	<p>Programme</p>																	
	<table border="1"> <tbody> <tr> <td>18:30</td> <td>Registration, welcome drink and finger food</td> </tr> <tr> <td>19:00</td> <td>Welcome address Erika Mann, MEP</td> </tr> <tr> <td>19:10</td> <td>EURAMET e.v., the Association of National Metrology Institutes Michael Kühne, EURAMET Chairperson</td> </tr> <tr> <td>19:20</td> <td>Metrology and society Elly Plooij-van Gorsel, former MEP (1994–2004) and Vice-President of the European Parliament (2001–2002)</td> </tr> <tr> <td>19:30</td> <td>Metrology as a driver of economic innovation in Europe Matthew Reed, Director Advanced Measurement and Imaging at Unilever Foods R&D, The Netherlands</td> </tr> <tr> <td>19:40</td> <td>The role of metrology for scientific research Daniel Esteve, Vice-President of the Science Council of the European Research Council and Research Director of the Commissariat à l'Énergie Atomique, France</td> </tr> <tr> <td>19:55</td> <td>The European Research Area and the EMRP Robert Jan Smits, Director, European Commission, DG Research, Directorate B – European Research Area: Research Programmes and Capacity</td> </tr> <tr> <td>20:10</td> <td>Q&A session Moderator: Robert Kaaris, Secretary of the Comité International des Poids et Mesures (CIPM)</td> </tr> <tr> <td>20:30</td> <td>Networking Buffet</td> </tr> </tbody> </table>	18:30	Registration, welcome drink and finger food	19:00	Welcome address Erika Mann, MEP	19:10	EURAMET e.v., the Association of National Metrology Institutes Michael Kühne, EURAMET Chairperson	19:20	Metrology and society Elly Plooij-van Gorsel, former MEP (1994–2004) and Vice-President of the European Parliament (2001–2002)	19:30	Metrology as a driver of economic innovation in Europe Matthew Reed, Director Advanced Measurement and Imaging at Unilever Foods R&D, The Netherlands	19:40	The role of metrology for scientific research Daniel Esteve, Vice-President of the Science Council of the European Research Council and Research Director of the Commissariat à l'Énergie Atomique, France	19:55	The European Research Area and the EMRP Robert Jan Smits, Director, European Commission, DG Research, Directorate B – European Research Area: Research Programmes and Capacity	20:10	Q&A session Moderator: Robert Kaaris, Secretary of the Comité International des Poids et Mesures (CIPM)	20:30
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iMERA-plus dissemination event 2011		
Draft agenda Brussels, ?? Nov 2011	18:30	Registration
	19:00	Welcome address NN, EU Parliament
	19:10	ERANetplus, COM funding strategy NN, COM
	19:25	EURAMET, mission and strategy Euramet Chair
	19:40	iMERApplus results EMRP Chair
	20:00	View of Research Council NN, RC
	20:10	Open discussion about dissemination moderator
	20:30	Buffet dinner
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EMRP Call 2011										
<ul style="list-style-type: none"> - average core budget of 2.7 M€ - cap at 4.2 M€ - total 2011 core budget figure: 77.4 M€ - total number of JRP: 29 - allow overbooking in stage 2: 1.7 – 2 - total number of SRTs: 49 – 58 		<p>TP Health II</p> <ul style="list-style-type: none"> • 76 PRTs • define 17 – 25 SRTs -> 20 • metrology, other than that not restricted 								
<p>Budget distribution for 2011 call</p> <table border="0"> <tr> <td></td> <td>HE : SI : NT</td> </tr> <tr> <td>EMRP committee orig.:</td> <td>33 : 33 : 33</td> </tr> <tr> <td>national commitments:</td> <td>34 : 34 : 32</td> </tr> <tr> <td>number PRTs:</td> <td>49 : 26 : 25</td> </tr> </table>			HE : SI : NT	EMRP committee orig.:	33 : 33 : 33	national commitments:	34 : 34 : 32	number PRTs:	49 : 26 : 25	<p>TP SI Broader scope</p> <ul style="list-style-type: none"> • 38 PRTs • define 13 – 17 SRTs -> 13 • focus on awaited redefinition, mise-en pratique, but also dissemination
	HE : SI : NT									
EMRP committee orig.:	33 : 33 : 33									
national commitments:	34 : 34 : 32									
number PRTs:	49 : 26 : 25									
		<p>TP New Technologies</p> <ul style="list-style-type: none"> • 41 PRTs • define 13 – 17 SRTs -> 17 • focus on nanometrology expected 								
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TP facilitators		EURAMET European Association of National Metrology Institutes	
		Guardian	Facilitator
2009	Energy (1 st)	LNE Luc → Albert	PTB Sommer
2010	Environment (1 st)	PTB Jörn	LNE Charlet
	Metrology for Industry (1 st)	CMI Jiri	PTB Schwartz
2011	Health (2 nd)	NPL Kamal	PTB Hans Koch
	SI broader scope (1 st)	JV Hans	NPL Ian Severn
	New Technologies	PTB Jörn	INRIM Massimo Pasquale
2012	Metrology for Industry (2 nd)	NPL Robin	<i>PTB Schwartz</i>
	SI broader scope (2 nd)	METAS Beat	
	Open excellence call	LNE Maguelonne	
2013	Energy (2 nd)	VSL Albert	
	Environment (2 nd)	PTB Jörn	

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Proposal regarding criteria for JRP prioritisation		EURAMET European Association of National Metrology Institutes	
<p><i>during review conference</i>: equal total score around budget line → for JRPs with equal total score ranking along Excellence + Impact and then Impact only</p>			
<p>Conformity with the supporting documents:</p> <ul style="list-style-type: none"> <input type="checkbox"/> JRP proposal conforms fully and addresses all the objectives <input type="checkbox"/> JRP proposal partially conforms & any deviation is appropriately justified <input type="checkbox"/> JRP proposal does not conform, OR any deviation is NOT justifiable 			
introduce weighting factors:			
1. Scientific/technical excellence			1.5
2. Relevance to the objectives of the EMRP			1
3. Potential impact			1.5
4. Quality and efficiency of implementation and management ...			1
<p>Minimum score 0, maximum score 5, half integer</p>			

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EMRP Call 2012		EURAMET European Association of National Metrology Institutes	
iMERA-plus 2007 call		A169	Targeted Programme (TP)
SI fundamentals	21	2009	Energy (1 st) 34
Health 1 st	21	2010	Environment (1 st) 44
Length	9		Metrology for Industry (1 st) 52
EM	12	2011	Health (2 nd) 30
Call scopes for 2012 approved by EMRP committee Can be distributed widely			SI broader scope (1 st) 30
			New Technologies 30
Call scopes for 2012 approved by EMRP committee Can be distributed widely		2012	Metrology for Industry (2 nd) 40
			SI broader scope (2 nd) 40
			Open excellence call 10
		2013	Energy (2 nd) 55
			Environment (2 nd) 35
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Call scope SI broader scope 2		EURAMET European Association of National Metrology Institutes	
<p>The overall strategic aim of the TP “SI Broader Scope (2nd)” is to underpin the development of the SI system and the dissemination of the units through research and development for fundamental and applied metrology.</p> <p>The TP SI Broader Scope (1st) was focused to prepare the implementation of the redefinition of the SI base units, 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. TP SI Broader Scope (2nd) of 2012 gives more weight to the stakeholder needs with respect to dissemination of the SI units. It specifically addresses the development of advanced techniques for providing traceability of measurement results to the users of metrology services.</p> <p>Furthermore, this call includes focused R&D advancing the specific metrology disciplines and the individual quantities within the SI with the aim to prepare a coherent European metrology landscape.</p> <p>Proposers shall be aware of the parallel call on TP Industry (2nd), which focusses on driving industrial innovation through metrological techniques and methods rather than dissemination of the units.</p> <p>.....</p>			
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Call scope Industry 2



The overall strategic aim of the **TP "Metrology for Industry (2nd)"** is to develop metrological methods and techniques for industry applications. It is aimed at **driving innovation in industrial production and for new products through exploiting top level metrological technology.**

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The **documentation of industry needs**, such as provided through the references given in the Proposed Research Topics, PRTs, will be of **key importance**. EURAMET will highly appreciate proposals from industry and expects their active participation in projects.

The EMRP generally is a publicly funded research programme with an open-access publication policy. TP "Metrology for Industry (2nd)", however, aims at driving industrial innovation. Projects are expected to have partners from industry and to include transfer of technology and knowledge into industry, which will require a careful consideration of intellectual property rights, possibly deviating from the general open-access policy.

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Call scope Open Excellence



The overall aim of the **TP "Open Excellence"** is to **enable new metrological methods and techniques in future** through excellent science. The projects themselves need not to address metrology as such.

As part of the series of Targeted Programmes (TPs) in the EMRP, the TP "Open Excellence" is unique. In contrast to all other TPs, which focus on specific strategic themes, it is thematically open. The TP "Open Excellence"

- aims at **excellent science exploring techniques or methods**, which have not been applied in metrology so far
- shall bring together the best scientists in Europe and beyond whilst exploiting the unique capabilities of the national metrology institutes and designated institutes

Euramet expects significant non-NMI/DI and international participation in the projects. An above-average budget for Research Excellence Grants and Mobility Grants will be available for this TP.

The single projects are expected to be focused and small with respect to budget and number of partners. They may carry a risk to fail which is higher than usual.

EMRP overall



Mid-term evaluation


- MSU has submitted report
- Group of assessors is forming and will start soon
 - first meeting June 20, paper work over summer
 - interviews on possibly onsite visits in September
 - final report November



Preparation for the next phase – „EMPIR“		EURAMET European Association of National Metrology Institutes
<p>Inputs:</p> <ul style="list-style-type: none"> • EURAMET member wish to see a successor programme similar to the EMRP • Research Council wishes to see a successor programme • COM prepares FP8 framework strategy: Strategy Europe2020, Flagship Initiative “Innovation Union” • EU Parliament seems to support Europe2020, but may wish to put more weight to basic research 		
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Preparation for the next phase – „EMPIR“		EURAMET European Association of National Metrology Institutes
<p>European Metrology Programme for Innovation and Research ("EMPIR")</p>		
<p>Thematic pillars:</p> <ul style="list-style-type: none"> • Advanced Metrology meeting the Grand Challenges Energy, Environment and Health • Innovation: Industrial implementation of advanced metrology for increased competitiveness • Exploiting and serving Basic Science related to metrology. 		
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Preparation for the next phase – „EMPIR“



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European Metrology Programme for Innovation and Research ("EMPIR")


Governance:

- Continue to pool member states resources such as through the mechanism of **Article 185**
- period of **seven years** with a total tentative budget of **500 - 600 M€**
- **all research institutions** based in FP8-associated countries, which are able to provide the required scientific-technical capabilities and financial contributions, shall be principally **eligible for project funds**
- **EURAMET** shall be the **implementation body**, building on EMRP structures and processes
- the calls of the EMPIR shall reflect the different nature of projects addressing basic science, grand challenges or innovation such as by optimized project selection processes and conditions for project participation

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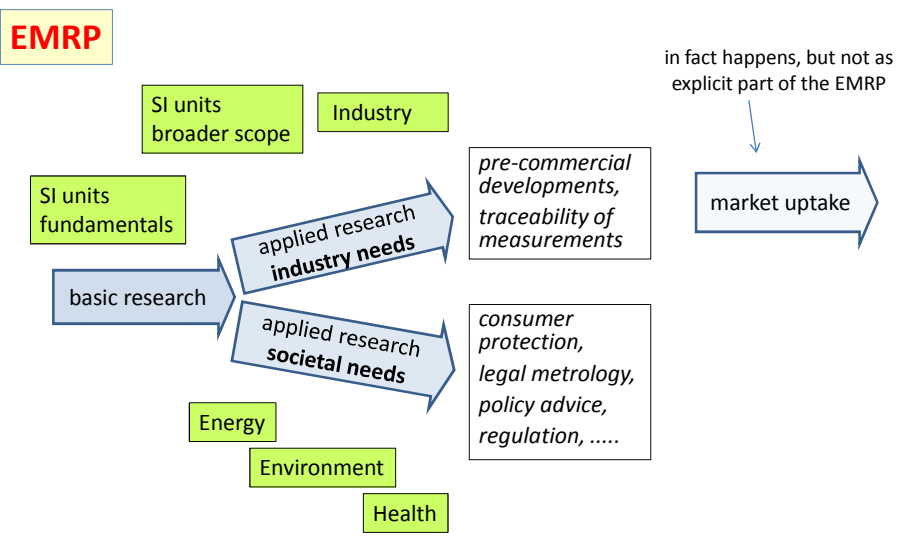
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Strategy of EMRP along innovation chain



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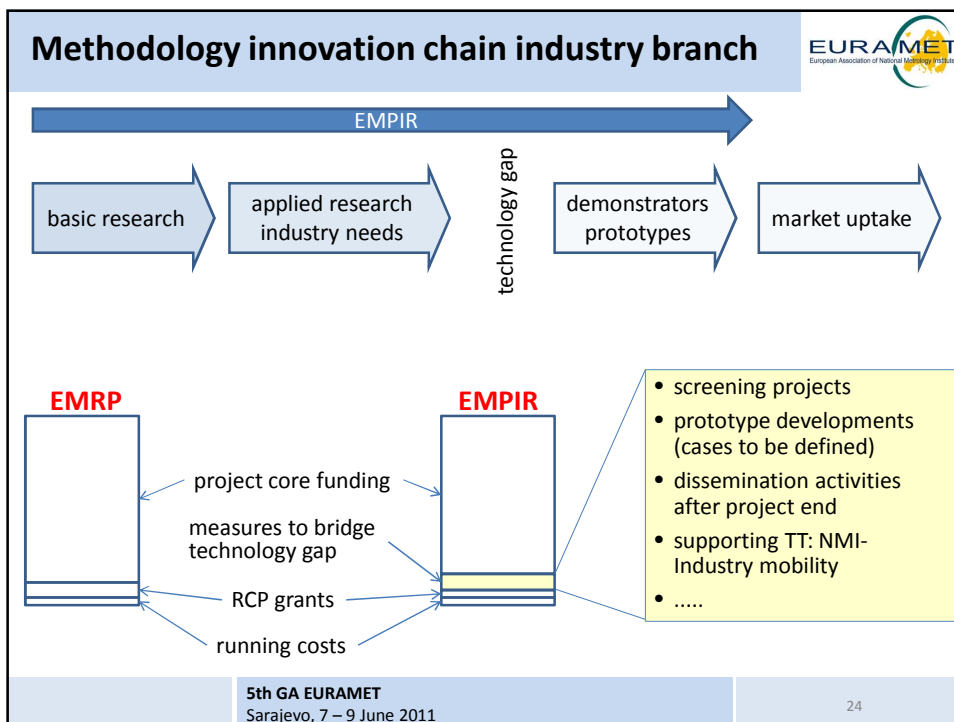
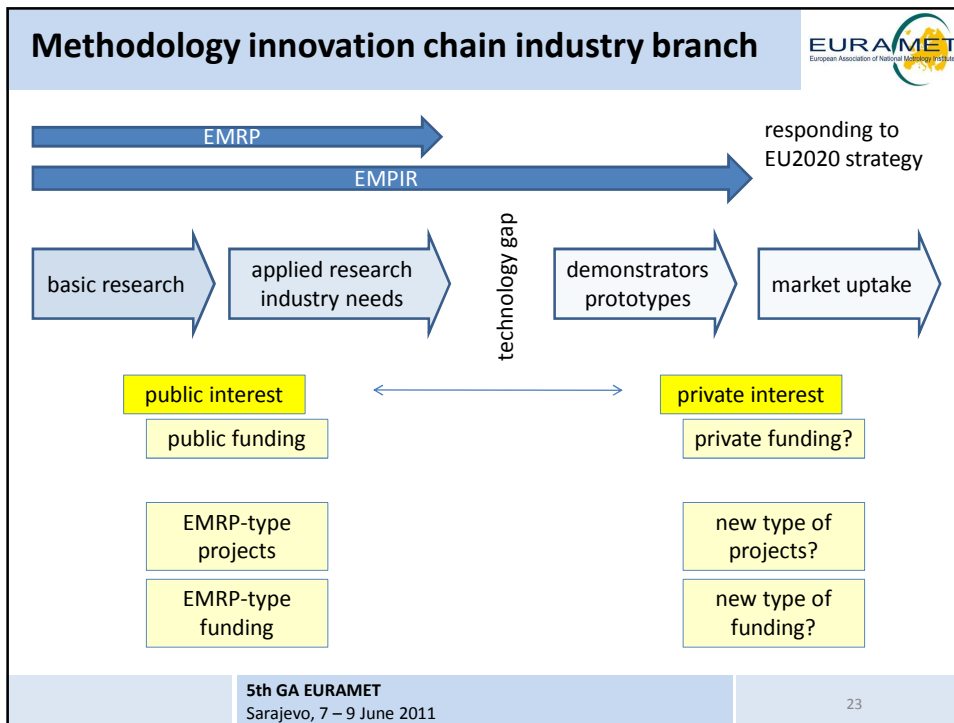
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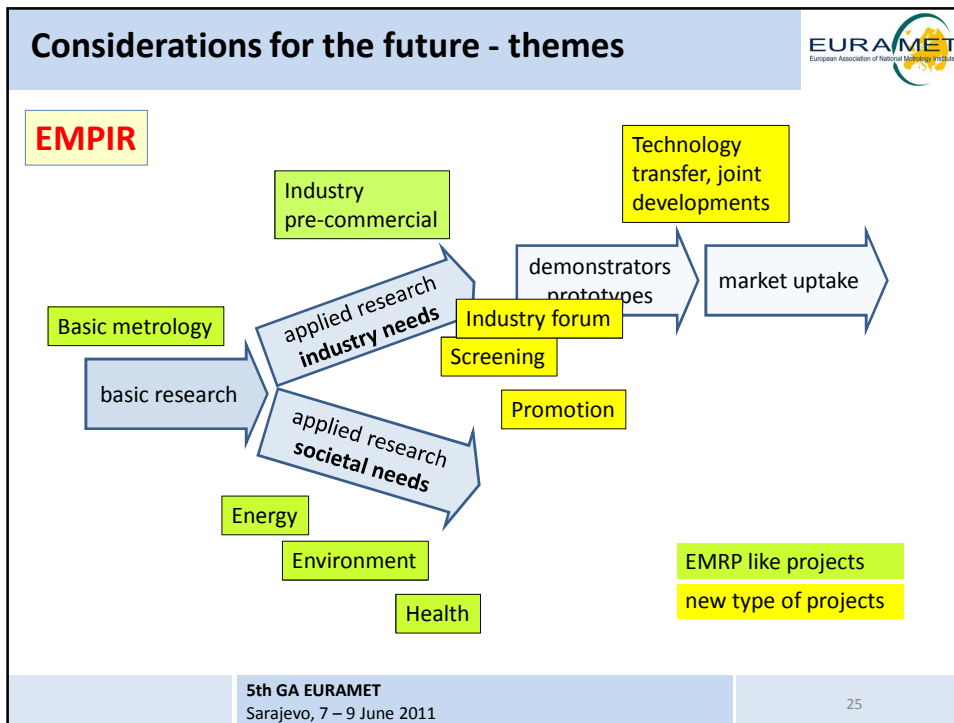
graph LR
    A[SI units fundamentals] --> B[applied research industry needs]
    A --> C[applied research societal needs]
    B --> D[pre-commercial developments, traceability of measurements]
    C --> E[consumer protection, legal metrology, policy advice, regulation, ....]
    D --> F[market uptake]
    E --> F
    G[SI units broader scope] --- B
    H[Industry] --- B
    I[Energy] --- C
    J[Environment] --- C
    K[Health] --- C
    
```

in fact happens, but not as explicit part of the EMRP

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Programme structure

EMRP	EMPIR
<ul style="list-style-type: none"> • Environment • Energy • Health 	<ul style="list-style-type: none"> • Basic scientific metrology
<ul style="list-style-type: none"> • SI broader scope • Industry 	<ul style="list-style-type: none"> • Environment • Energy • Health
<ul style="list-style-type: none"> • Open excellence 	<ul style="list-style-type: none"> • Precommercial • Innovation uptake projects

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EMPIR vs EMRP		 EURAMET European Association of National Metrology Institutes
Differences:		
<ul style="list-style-type: none"> • New type of projects associated with technology gap • Links with other programmes addressing technology transfer • Stronger international cooperation • Opened funded programme participation • Simplified rules 		
Similarities:		
<ul style="list-style-type: none"> • Initiative under Article 185 • EMRP governance structure 		
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Immediate actions		 EURAMET European Association of National Metrology Institutes
- Consider TP Industry II as kind of test bed for EMPIR		
<ul style="list-style-type: none"> • call scopes already clear: start approaching industry for their interest • initiate screening exercise on iMERA-plus TP EM and TP DIM 		
- Core Group to prepare skeleton paper for EMPIR by September		
- Keep on promoting EMPIR		
<ul style="list-style-type: none"> • chase ministries to <ul style="list-style-type: none"> • help promote EMRIR in the relevant committees • consider to link EMRP/EMPIR to national TT programmes • chase parliamentarians • approach stakeholders, esp. industry • EURAMET promote EMRP more widely, • convince of scientific impact, our capability to run a big research programme 		
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Actions 2012/13



In case there is a realistic option for EMPiR:

- review existing innovation technology transfer programmes - identify options for EMPiR (programme links, own programme parts in EMPiR)
- identify mechanisms of industrial stakeholder interaction (screening, industrial advisory groups, publicity plan)
- stakeholder interaction on full programme
- establish updated roadmaps and develop scientific programme (→ TCs)
- achieve national consensus on commitments and modus operandi for non-NMI/DIs

- initiate these processes at EMRP committee meeting 29 Nov 2011
- seek approval and support from Research Council