

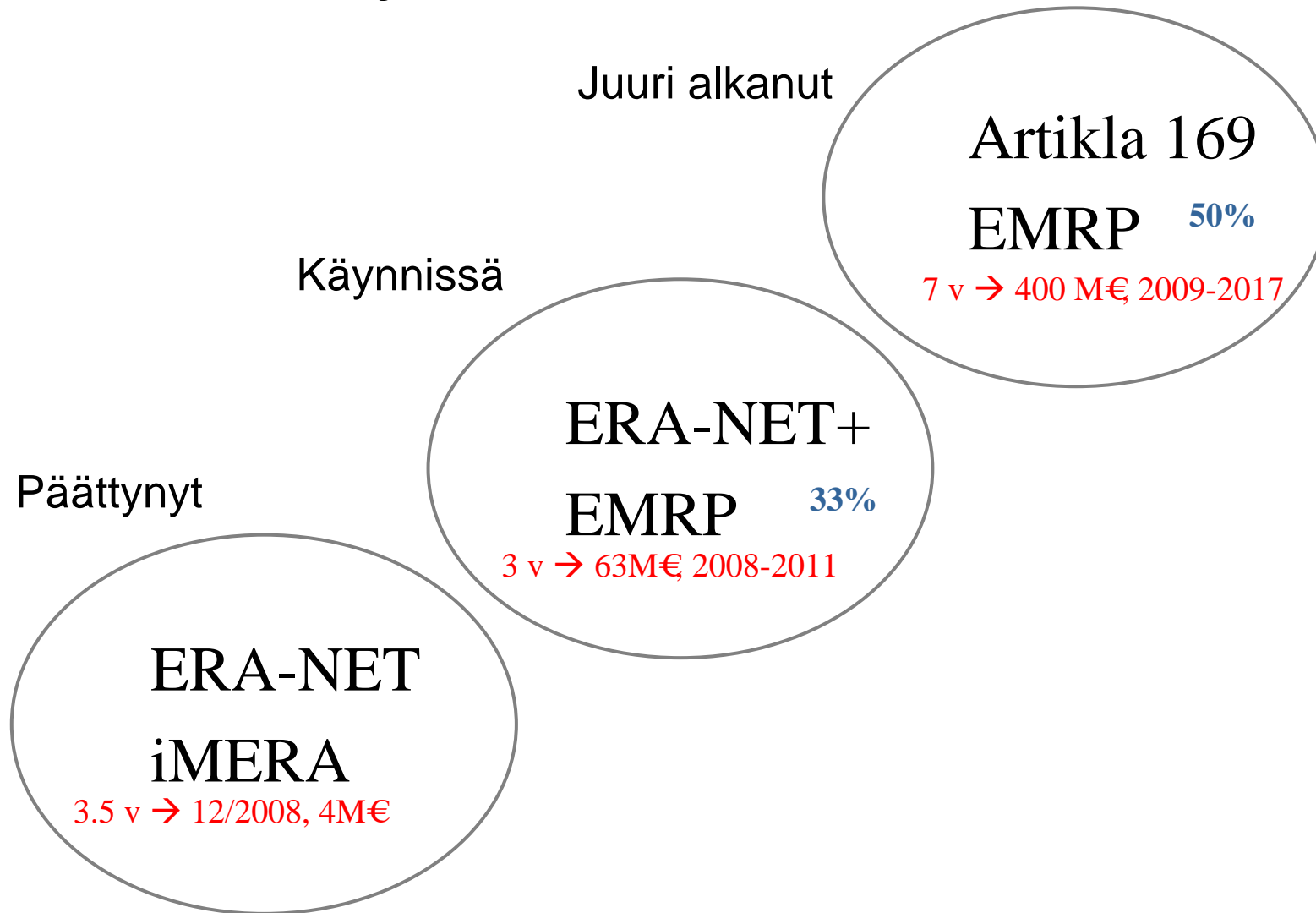
European Metrology Research Programme
(EMRP)

ja

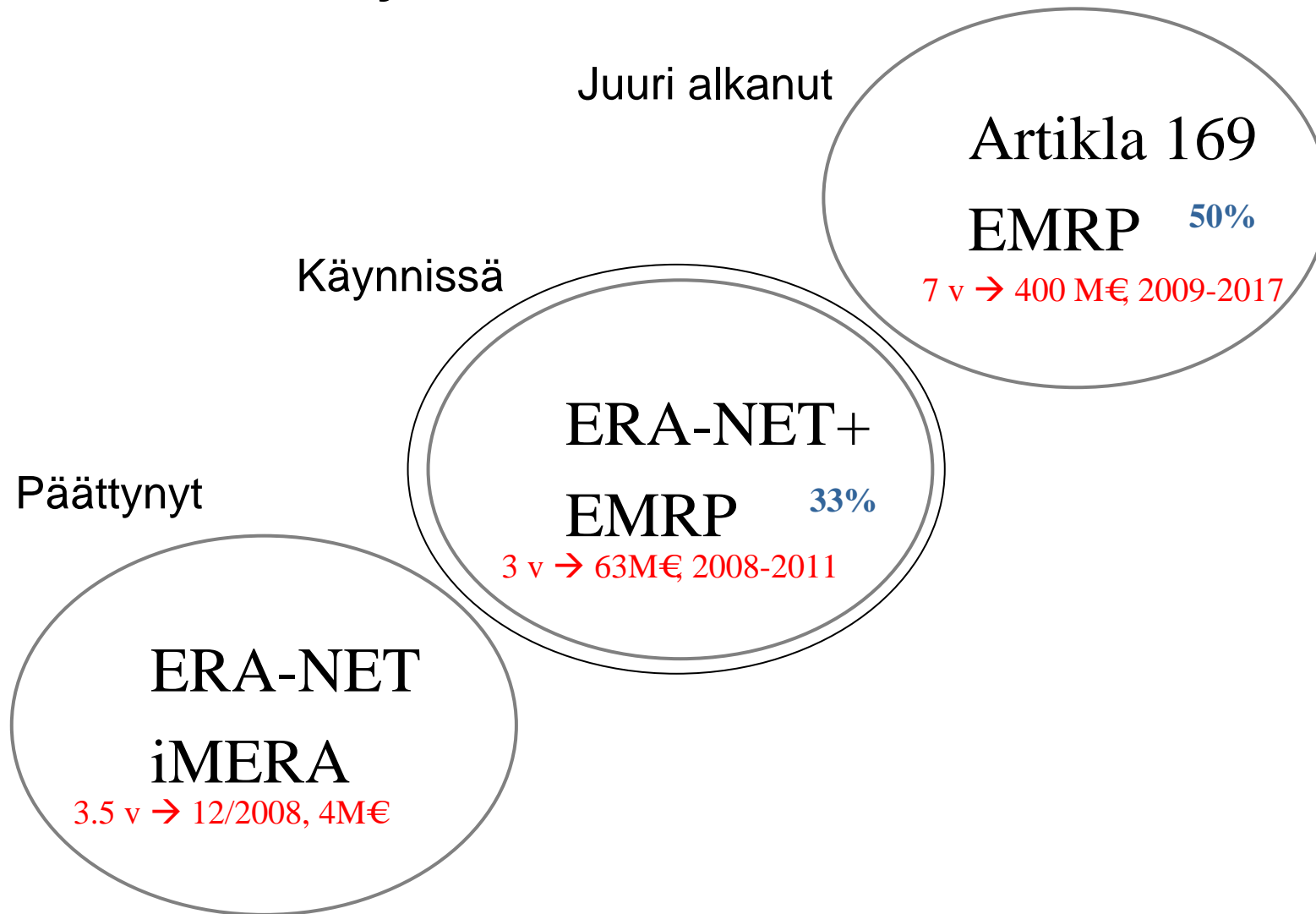
kansalliset rinnakkaishankkeet

Erkki Ikonen

EMRP-ohjelman vaiheet

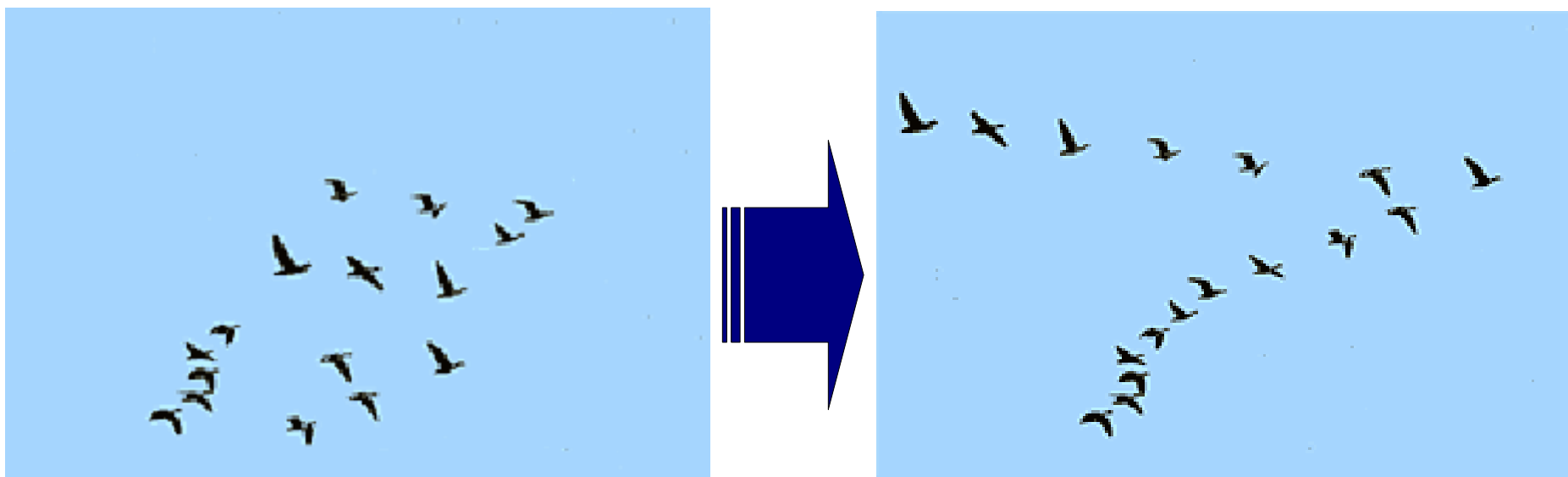


EMRP-ohjelman vaiheet



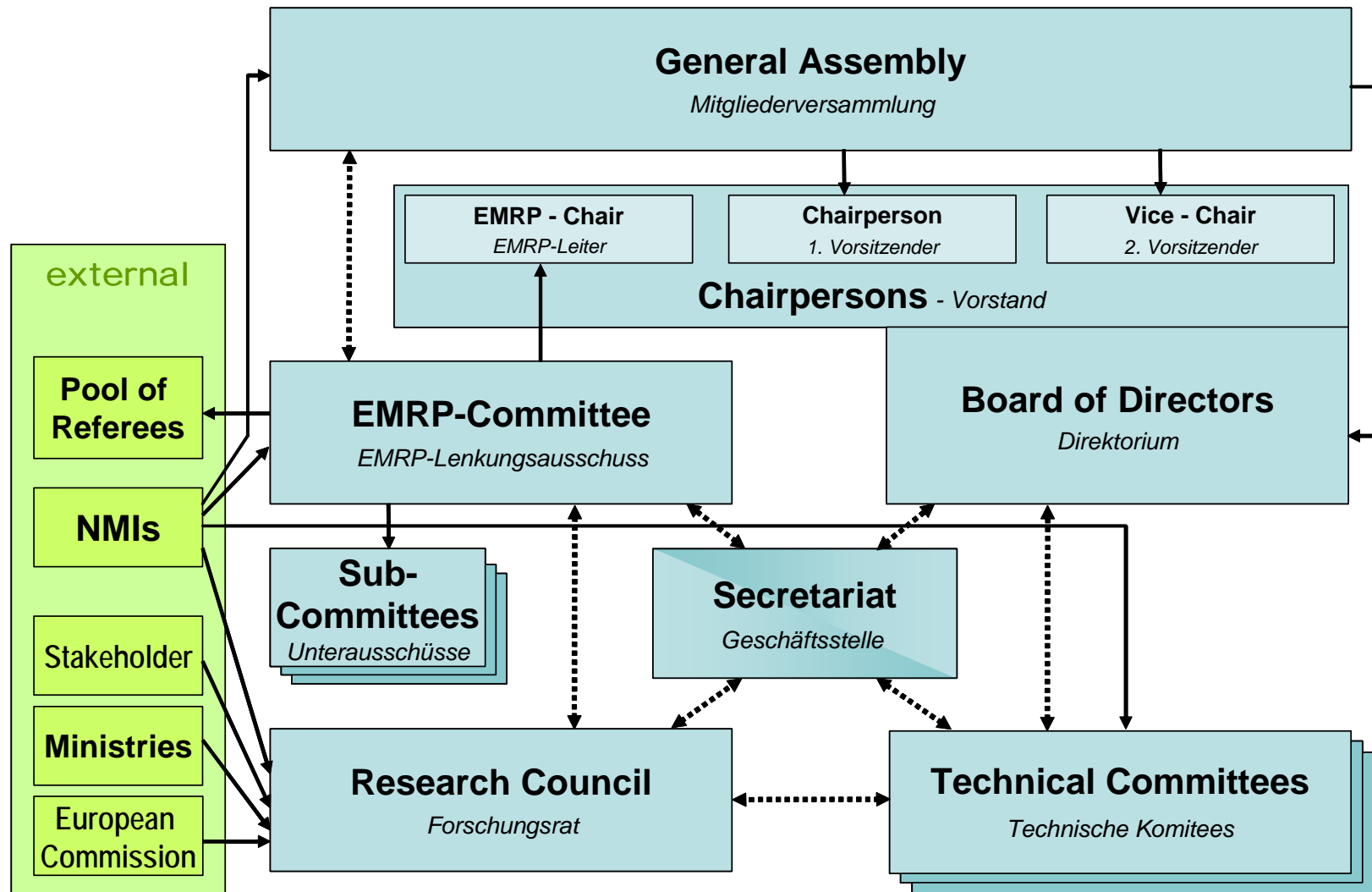
Coordination of national Programmes

Nature shows us the way: Birds coordinating their efforts



71 % gain of efficiency

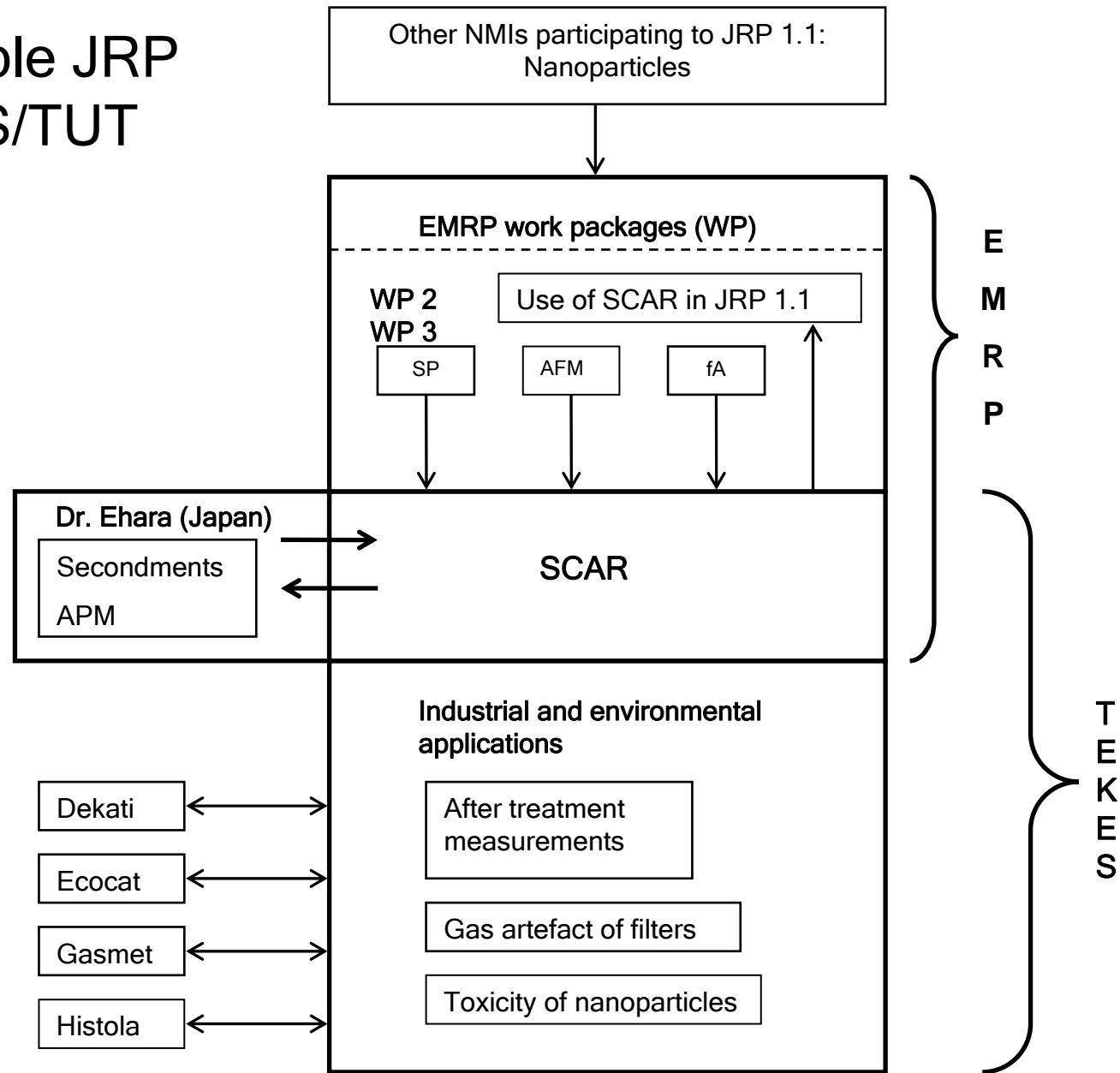
EURAMET e.V.



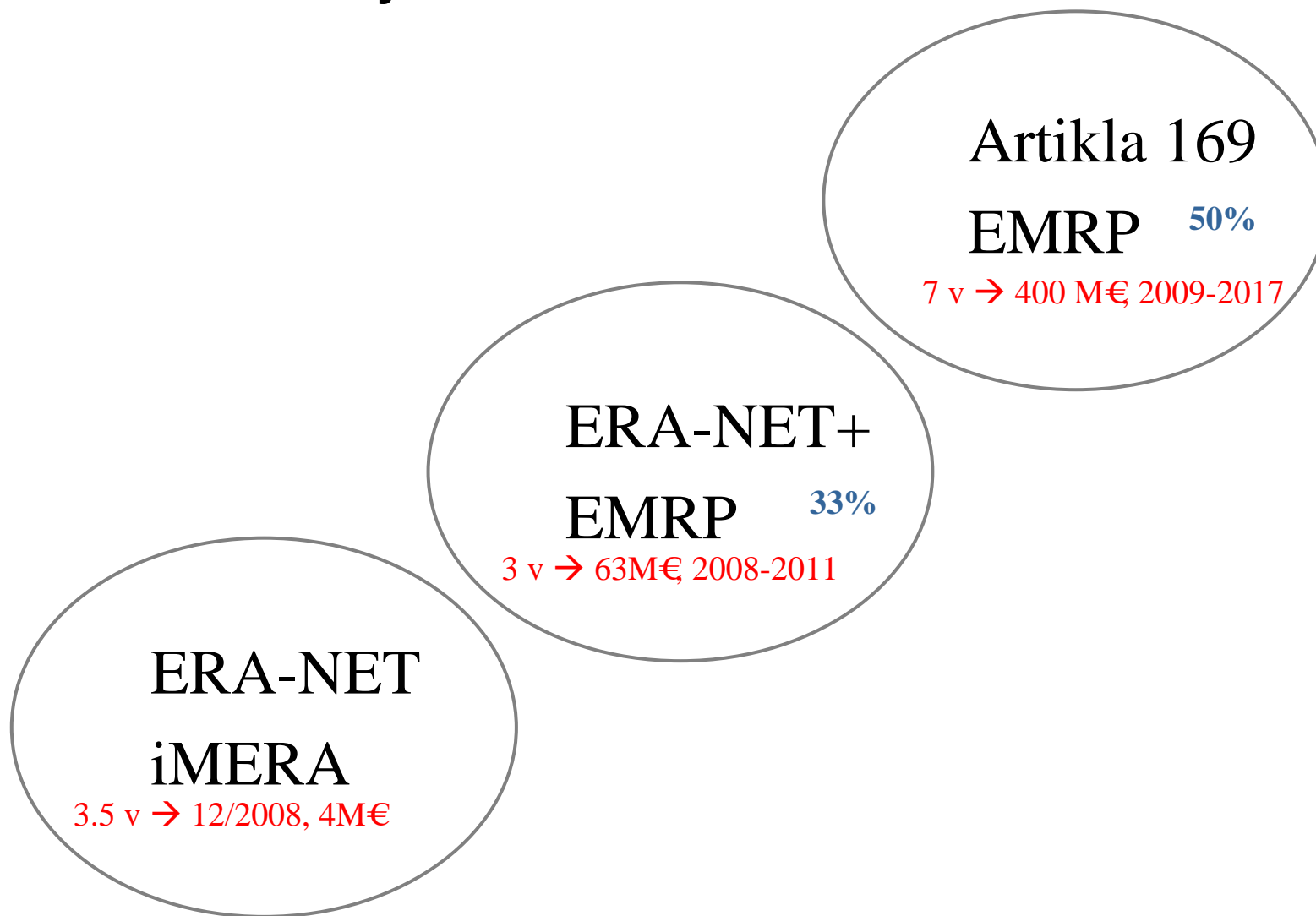
Käynnistetyt EMRP-projektit (ERA-NET+)

	Super rank	Cost/k€	Suomi/k€
Avogadro and molar Planck constants	1	3 220	
Watt balance	2	1 571	
Redefinition of the SI base unit ampere	3	4 602	305
Optical clocks for a new definition of the second	4	4 001	60
Traceable characterization of nanoparticles	5	2 259	239
Traceable measurements for biospecies and ion activity in clinical chemistry	6	4 142	
Next generation of power and energy measuring techniques	7	3 282	150
New Traceability Routes for Nanometrology	8	1 389	95
Traceability of complex biomolecules and biomarkers in diagnostics	9	3 744	
Next generation of quantum voltage systems for wide range applications	10	3 497	253
Absolute long distance measurement in air	11	2 201	255
External Beam Cancer Therapy	12	4 180	124
Traceable measurement of field strength and SAR for the Physical Agents Directive	13	2 862	133
Metrology on a cellular scale for regenerative medicine	14	4 617	(70)
Determination of the Boltzmann constant	15	4 428	
Increasing cancer treatment efficacy using 3D brachytherapy	16	3 661	130
Metrology for New Industrial Measurement Technologies	17	1 966	
Development of ultimate metrological QHE devices	18	1 036	52
Candela: Towards quantum-based photon standards	19	3 317	280
Breath analysis as a diagnostic tool for early disease detection	20	2 452	
Nanomagnetism and Spintronics	21	2 160	

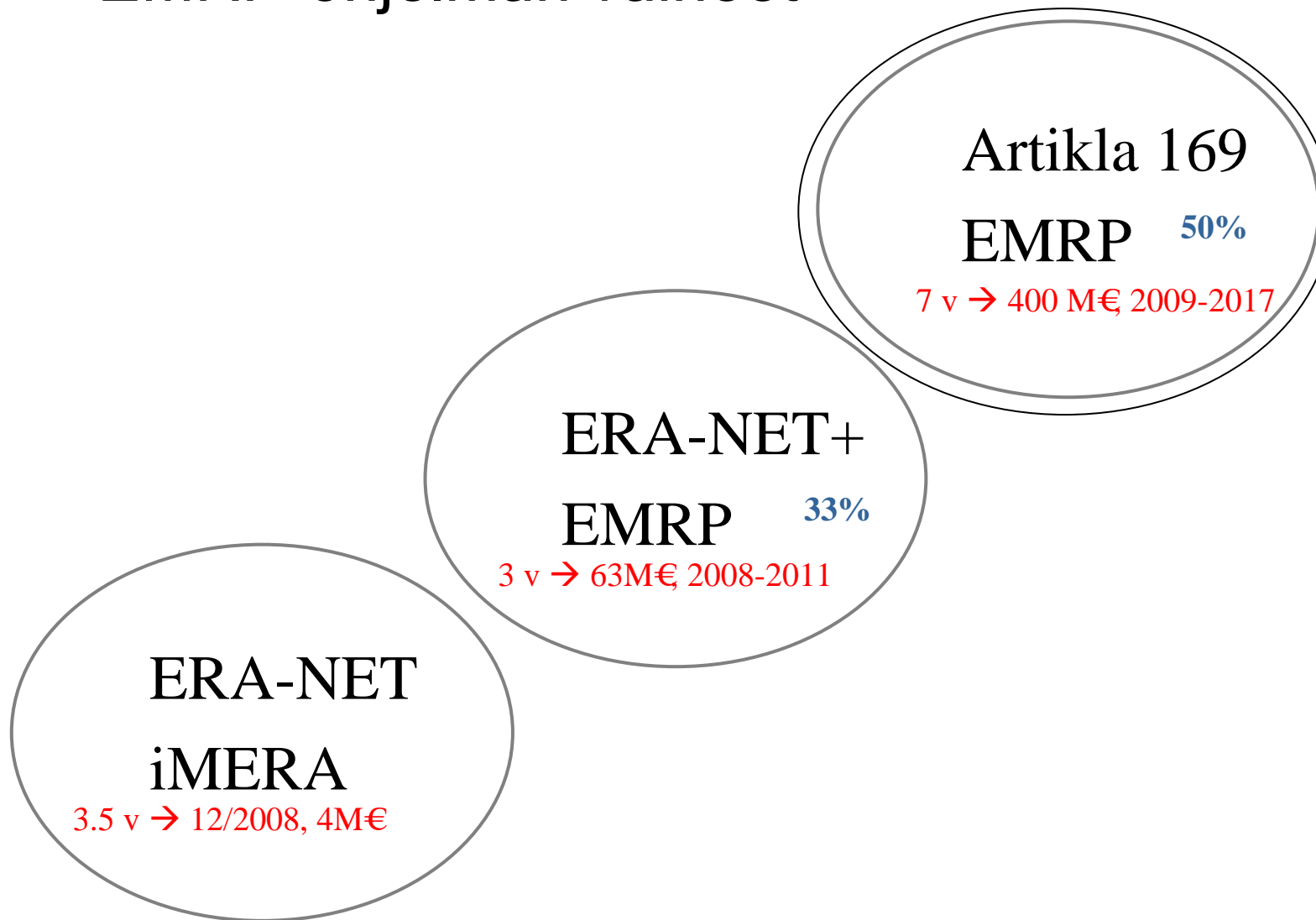
Example JRP MIKES/TUT



EMRP-ohjelman vaiheet



EMRP-ohjelman vaiheet



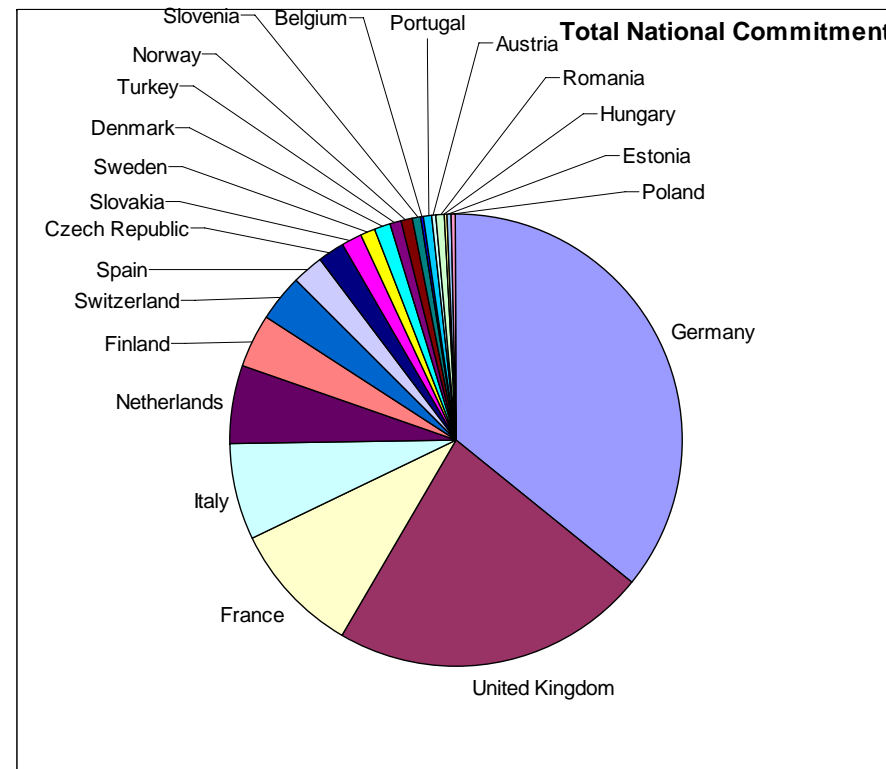
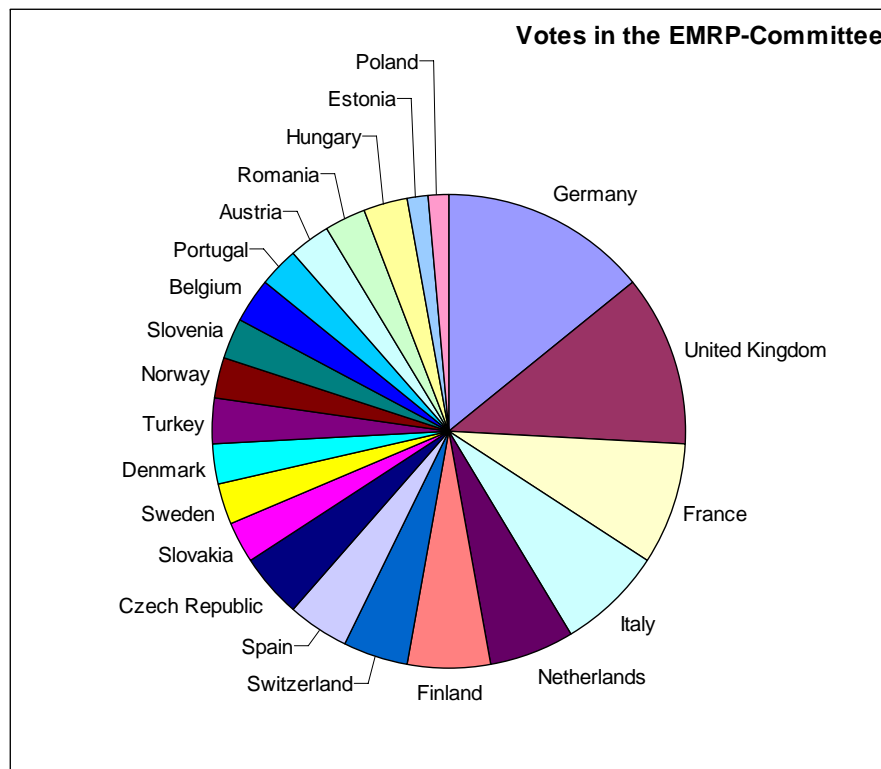
National budget (EMRP A169)

- National contribution defined

Participant Country	Annual k€		Total for 7 years k€		3rd balanced budget %
	core	res	core	res	
Austria	120	60	840	420	0.420
Belgium	120	60	840	420	0.420
Czech Republic	614	307	4295	2147	2.147
Denmark	319	160	2235	1118	1.118
Estonia	60	30	420	210	0.210
Finland	1148	574	8033	4016	4.016
France	2716	1358	19014	9507	9.507
Germany	10225	5112	71573	35787	35.787
Italy	2012	1006	14081	7041	7.041
Norway	200	100	1397	698	0.698
Portugal	120	60	840	420	0.420
Slovakia	361	180	2526	1263	1.263
Slovenia	180	90	1257	629	0.629
Spain	639	320	4475	2238	2.238
Sweden	341	171	2389	1194	1.194
Switzerland	918	459	6424	3212	3.212
The Netherlands	1547	773	10827	5413	5.413
Turkey	227	113	1588	794	0.794
United Kingdom	6406	3203	44845	22423	22.423
Romania	120	60	840	420	0.420
Hungary	120	60	840	420	0.420
Poland	60	30	420	210	0.210
	28571	14286	200000	100000	100.000

2-kertainen laskennallinen osuus
(verrattuna ERANET+)

Votes and Commitments



Aikataulu - EMRP A169

Viimeaikaisia ja tulevia tapahtumia

- Komission kirje EURAMETille 26.9.2008
- Komission esitys parlamentille 3.12.2008
- Parlamentin hyväksyntä 22.4.2009
- Ministerineuvoston vahvistus (touko-kesäkuu 2009)
- Ensimmäisen haun - Energia - avautuminen (15.5.2009)
- Review Conference - Energia (25.-26.11.2009)
- Toinen haku - Ympäristö ja Teollisuuslähtöinen metrologia - avautuu 2010

EMRP 2009 Energiahaku (33 M€)

- Stage 1 - Call for potential metrology research topics
 - Identifying the challenge, problem or opportunity for potential research topics
 - Offering the chance for all stakeholders to influence the R&D undertaken
- Stage 2 - Call for proposals for Joint Research Projects (JRPs)
 - A. The core activity is multi-partner trans-national projects.
 - The basis will be provided by the highest priority research topics from Stage 1
 - Will have as result collaborative R&D projects (Joint Research Projects - JRPs) executed primarily by the NMIs and DIs of the participating countries
 - B. The JRPs will be accompanied by grant schemes for other than NMI/DI

Projects and grants

NMI = metrologian kansallinen vastuutaho

DI = nimetty metrologiainstituutti

Grand Total: 400 million € (+ 100 million € reserve funding capability)

Activity Type	Community 200 M€		EMRP participating States 200 M€		Total 400 M€	
	%	M€	%	M€	%	M€
EMRP Projects - Module (Part A)	82 %	164	90 %	180	86 %	344
Researcher Grants Module (Part B) funding up to 100 %	18 %	36	2%	4	10 %	40
B1. Researcher excellence grants					7.5 %	30
B.2 Researcher mobility grants					1.5 %	6
B.3 Early-stage researcher mobility grants					1.0 %	4
Running Costs (Part C)²	-	-	8 %	16	4 %	16
Total	100 %	200	100%	200	100 %	400

Only to NMIs and DIs!

NOT to NMIs and DIs!

Both

Both

1-2 grants of each type
per project

Submission of potential research topics (by 28 June)

Provide information needed for the decision of EMRP Committee whether or not to include the topic in the dedicated call for proposals, particularly:

1. Has a clearly specified and justified scientific or technological challenge / problem / opportunity been identified and of what scale?
2. What is the likelihood of the European metrology research community effectively addressing the challenge / problem / opportunity, taking due account of the progress required beyond the current state of the art?
3. How significant would the impact be for stakeholders if the proposed topic were successfully addressed?

(Note: hopefully not all submissions from NMIs and DIs)

After the Call of topics

The EURAMET EMRP Committee (or a dedicated sub committee) will prioritize each topic description received by EURAMET that is within scope. Prioritization will take account of the programme priorities, objectives, potential impact and available budget, and the EMRP Committee may choose to merge submitted topics if it is appropriate to do so.

The highest priority topics will be published as part of a second stage “Dedicated Call” for proposals for specific Joint Research Projects (JRPs) (at the end of August).

Each topic will be accompanied by a supporting document – based on the original topic descriptions to enable eligible, interested parties to prepare and target their proposals in open competition.

JRP proposals are written by NMIs and DIs in September-October.

External organisations are eligible to participate either through unfunded participation as a partner where appropriate, and individual researchers or organisations have the possibility of participation through a limited number of funded researcher excellence and mobility grants.

Proposed JRPs are subject to independent expert evaluation in the Review Conference on 25-26 November.

Review Conference

At least 3 independent referees per JRP.

The referees will be responsible for:

- Evaluating the merits of each JRP against given criteria;
- Participating in the Review Conference to be held on November 25 and 26, 2009;
- Evaluating researcher excellence and mobility grants after the Review Conference;

Potential referees for the Targeted Programme “energy” are invited to register in the EU database of referees using the following link:

<https://cordis.europa.eu/emmfp7/>. (use keywords: metrology, energy)

Tulevat EMRP-haut

2010 - 2013

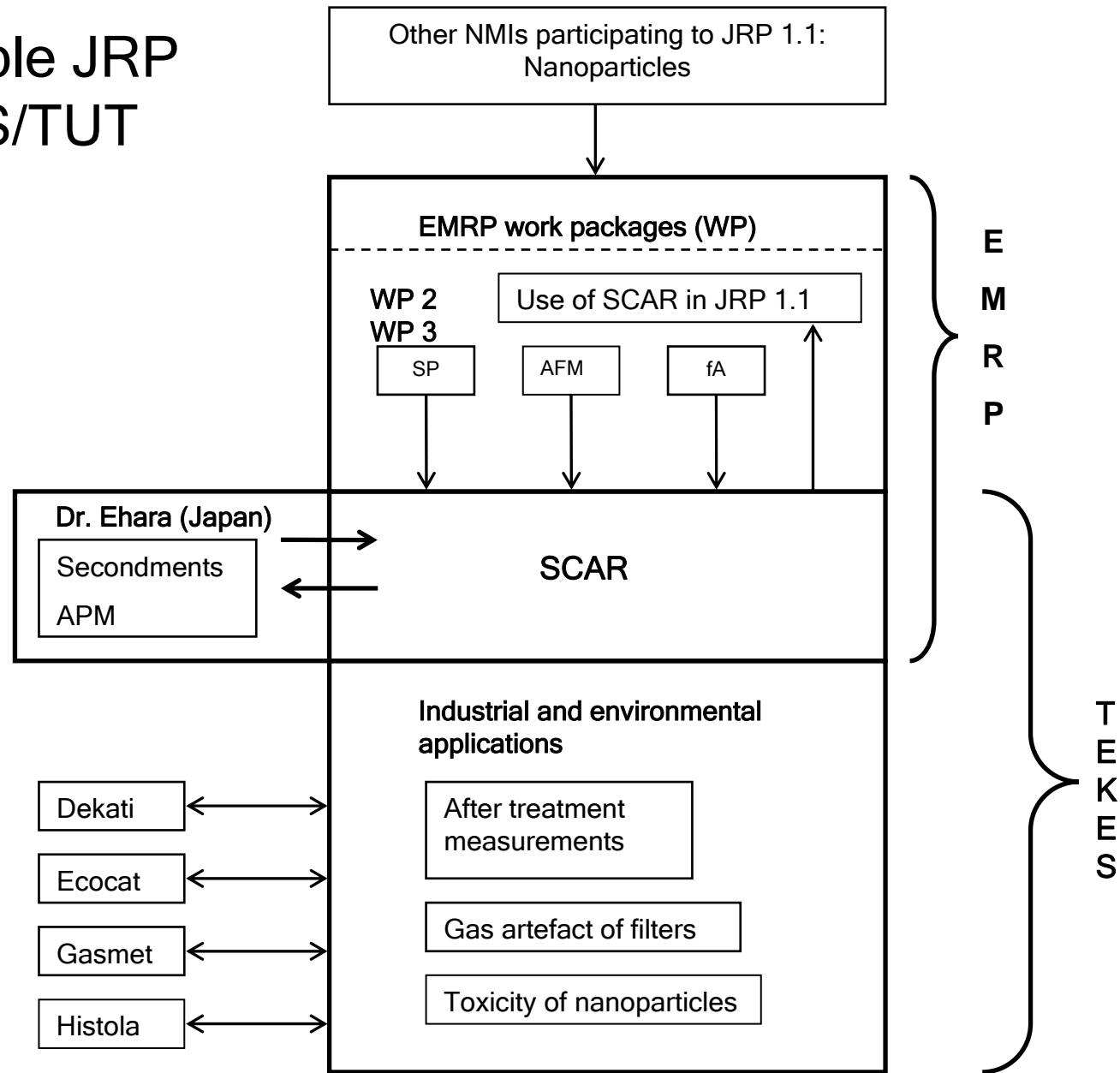
Call Timetable

2008	2009	2010	2011	2012	2013	2014	2015	2016
iMERA-plus								
execution phase TPs SI, Health, EM, Dimensional								
EMRP-169								
	call 1	execution call 1						
		call 2	execution call 2					
			call 3	execution call 3				
				call 4	execution call 4			
					call 5	execution call 5		

A169 - Call details, size and responsibilities

	Year		Targeted Programme (TP) Programme size (€)	EMRP guardian/ subcommittee chair
call 1	2009	a)	Energy (1 st) 33 M€	<i>LNE (Erard)</i>
call 2	2010	b)	Environment (1 st) 46 M€	<i>PTB (Stenger)</i>
		c)	Metrology for Industry (1 st) 46 M€	<i>CMI (Tesar)</i>
call 3	2011	d)	Health (2 nd) 29 M€	
		e)	SI broader scope (1 st) 29 M€	
		f)	New Technologies 29 M€	
call 4	2012	g)	Metrology for Industry (2 nd) 38 M€	
		h)	SI broader scope (2 nd) 38 M€	
		i)	Open excellence call 10 M€	
call 5	2013	j)	Energy (2 nd) 53 M€	
		k)	Environment (2 nd) 34 M€	

Example JRP MIKES/TUT



Yhteenveto

- 400 M€:n eurooppalaiset resurssit tarjolla mittauksiin liittyvien haasteiden ratkaisemiseksi yhteisprojekteissa (170 M€ korvamerkitty energia- ja ympäristöaiheisiin)
- tutkimusaiheiden 1. haku 15.5.-28.6.2009 (energia)
- TEKESin ja CLEENin rinnakkaishankkeet tarjoavat tulosten hyödyntämiskanavan
- kaikki hakuinformaatio: www.emrponline.eu