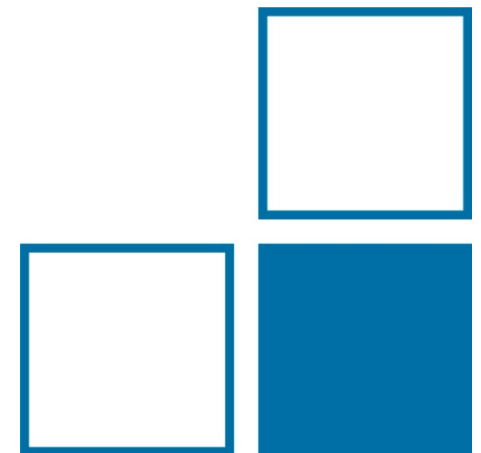


Multinational research cooperation

EMPIR

Jörn Stenger

PTB and EURAMET



European Association of National Metrology Institutes

bilateral cooperations since \approx 1900
EUROMET since 1990
EURAMET e.V. since 2007

Members:

37 European NMIs

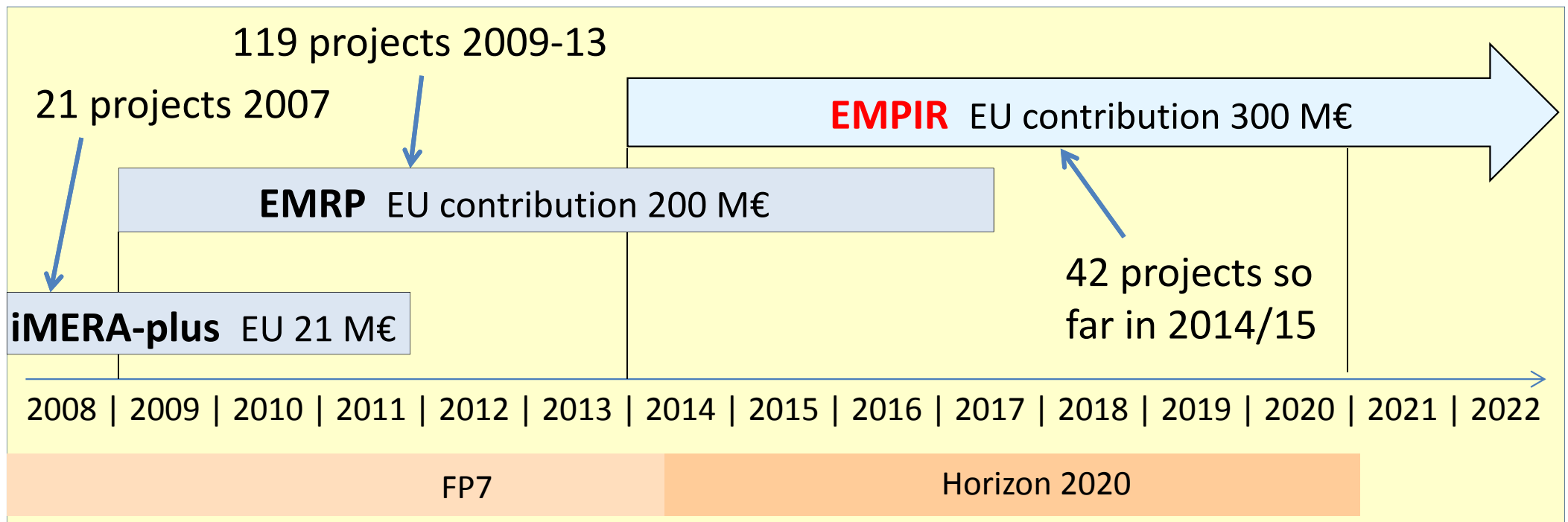
Associates:

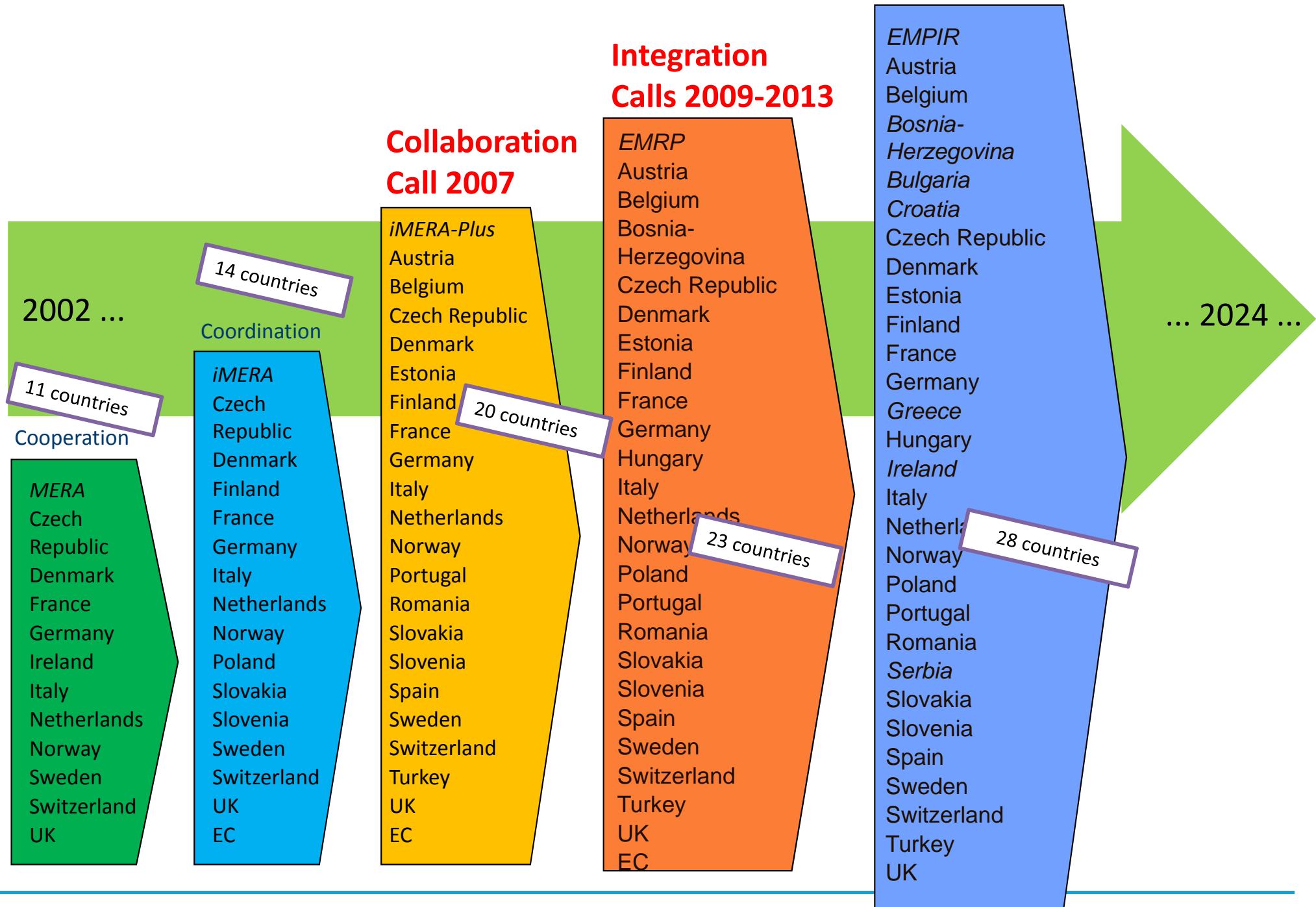
- 71 Designated Institutes
holding national standards

metrologists:
NMIs: \approx 5000
DIs: \approx 1500

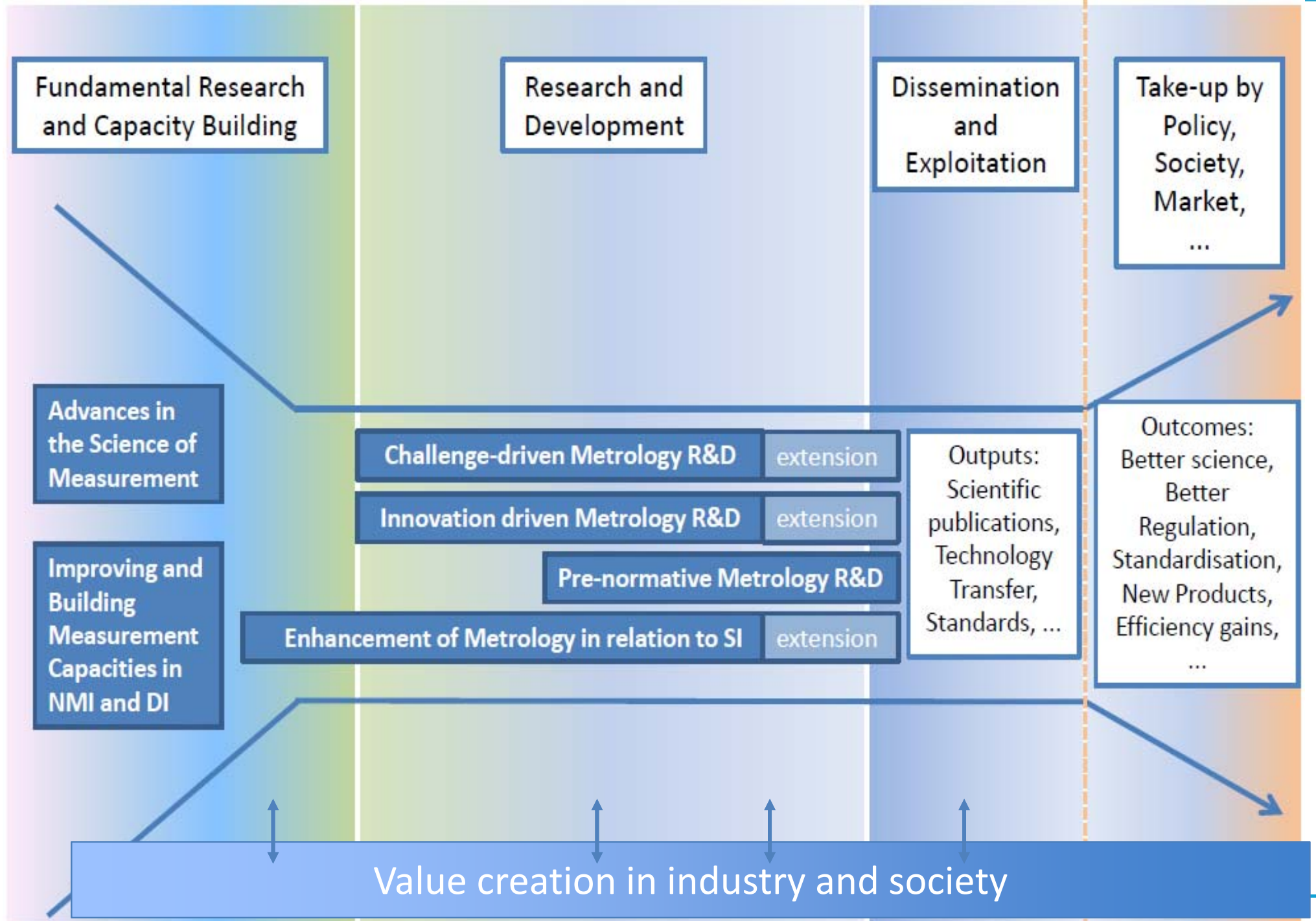


- Main programme for joint European research on metrology
- Implemented by EURAMET e. V.
- Lifetime: 2014 – 2024 with annual calls between 2014 and 2020
- Different thematic calls
 - Fundamental Metrology
 - Grand Challenges
 - SI traceability
 - Innovation in industry
 - Standardization
 - Capacity building

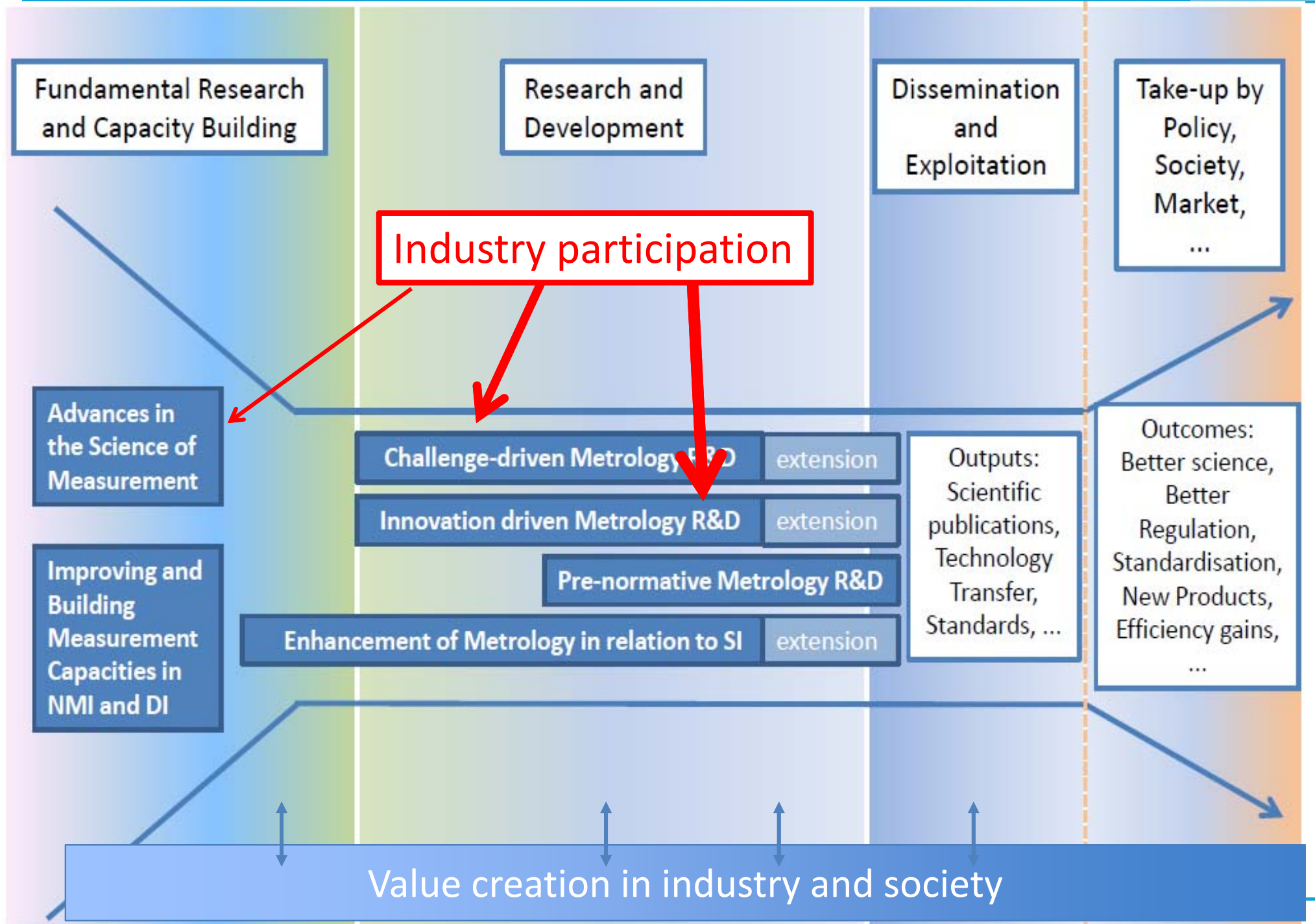




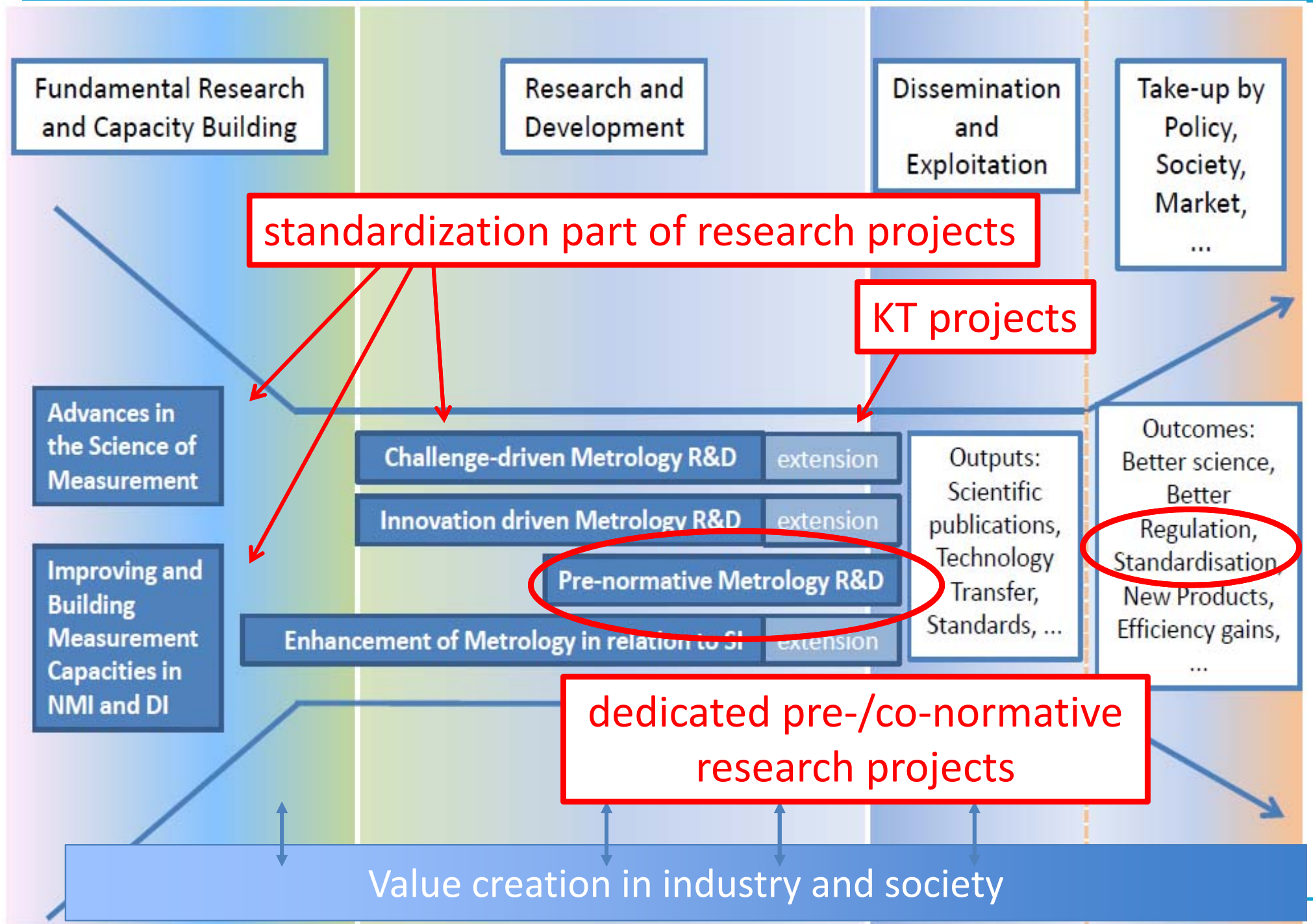
Metrology research along the value creation chain



Industry participation



Program tools for **standardization**



Joint research project „Metrology for Smart grids“ 2010 – 2013



Joint research project „Metrology for Smart grids“ 2013 – 2016



Standardization transferproject „Standard tests and requirements for rate-of-change of frequency measurements in smart grids 2016/17

- Various contributions to innovation and standardization from both the JRPs and the transfer project; PMU, grid stability, power quality, ROCOF



Enables better research

- scientific exchange, research output

Opens doors

- approaches possible, that were not possible alone
- external partners, that were not known before

Creates network

- establishment of partnership beyond projects

Reaches out

- strongly affects NMI development and investments
- quantum step for EURAMET as RMO
- EMRP/EMPIR governance is model for other transnational programs

Is not always easy, still has challenges

- reporting and administration, duplication vs coordination



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