



Development of Reference Materials

Prof. Dr. Hendrik Emons

Institute for Reference Materials and Measurements (IRMM)
Geel, Belgium

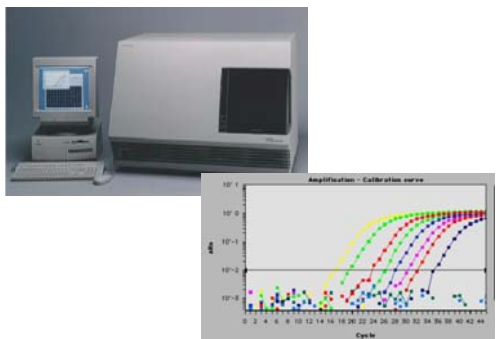


sample to be controlled

Sample preparation
(extraction/digestion...)

appropriate measurement procedure

Quantification



glassware etc., solvents



Competent staff

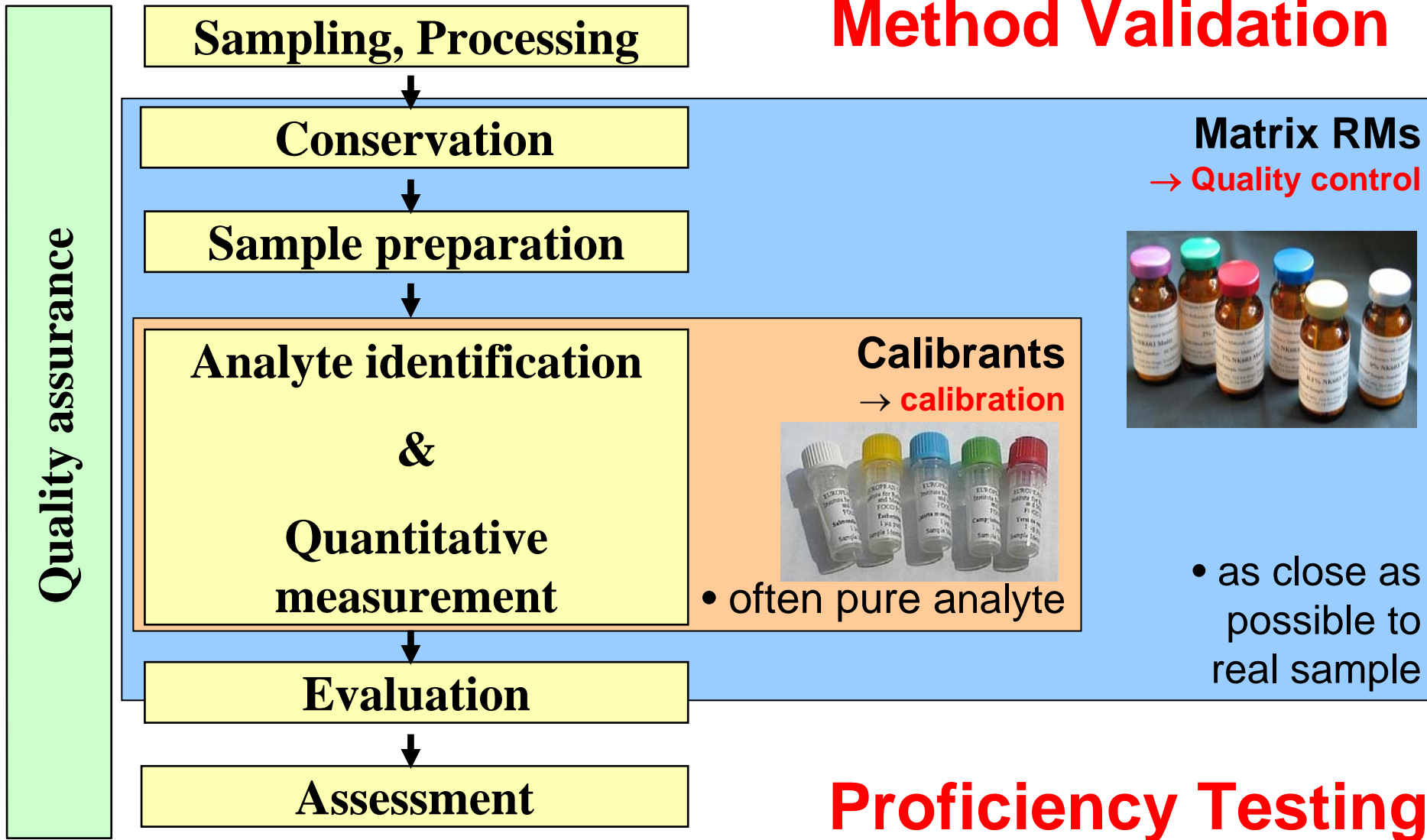
instrumentation



pipettes, filters, reagents

Result:
Regulatory decision?

... and 'Reference Materials' !



“a simple bottling
task”



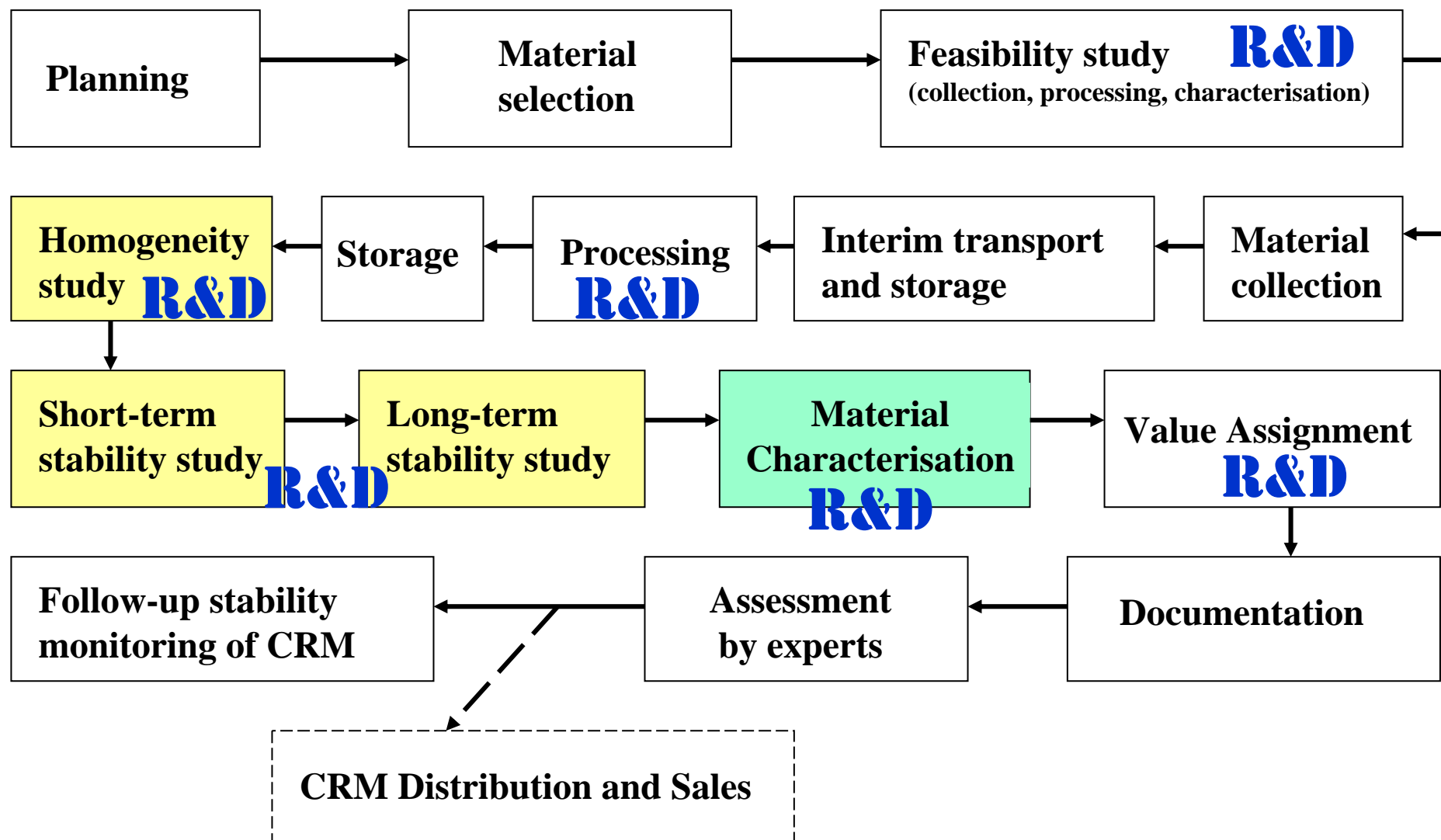
really ?

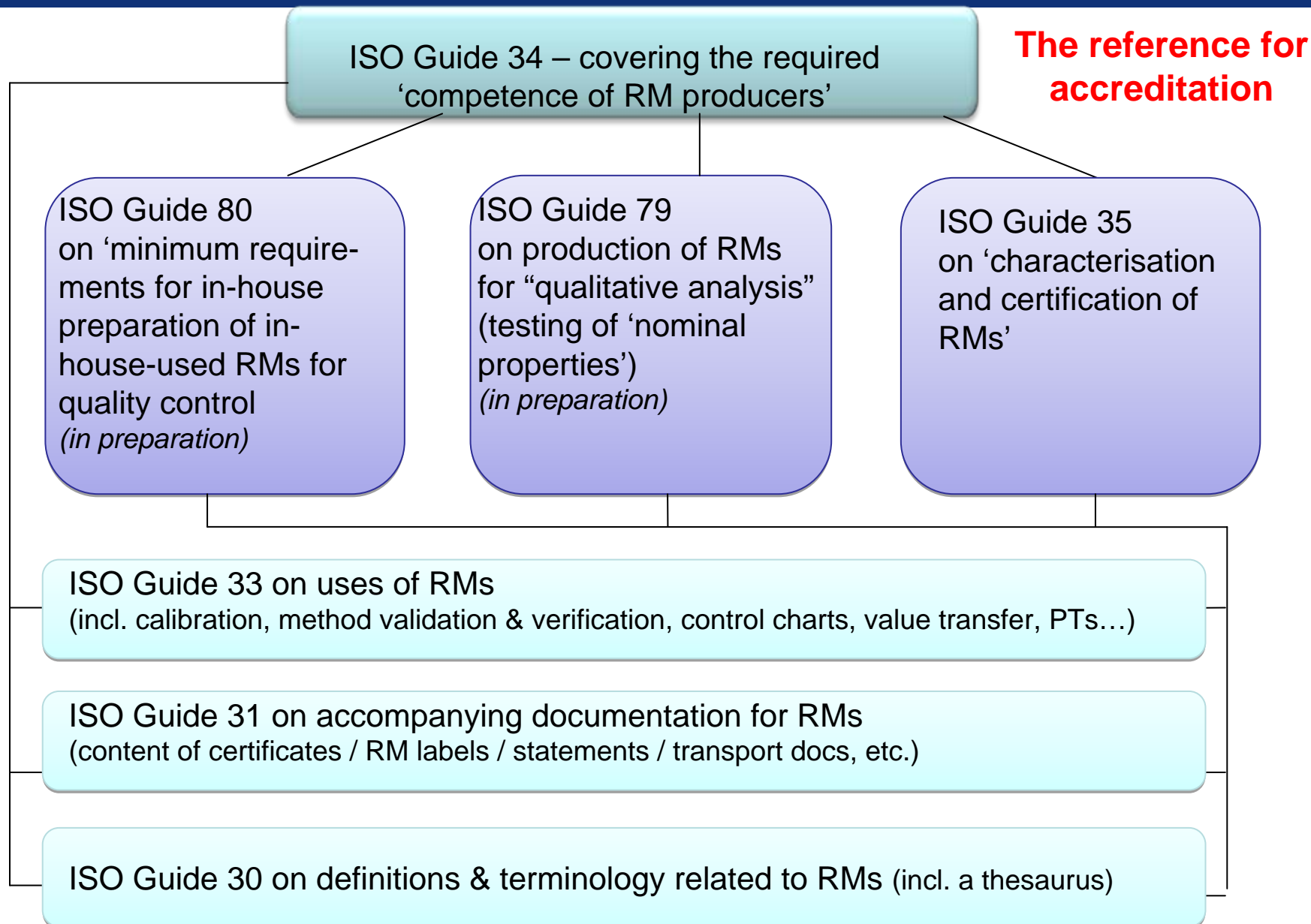


RM production needs:

- ❑ Understanding of fundamental metrological principles & specific application requirements
- ❑ Development & application of science-based concepts & methods

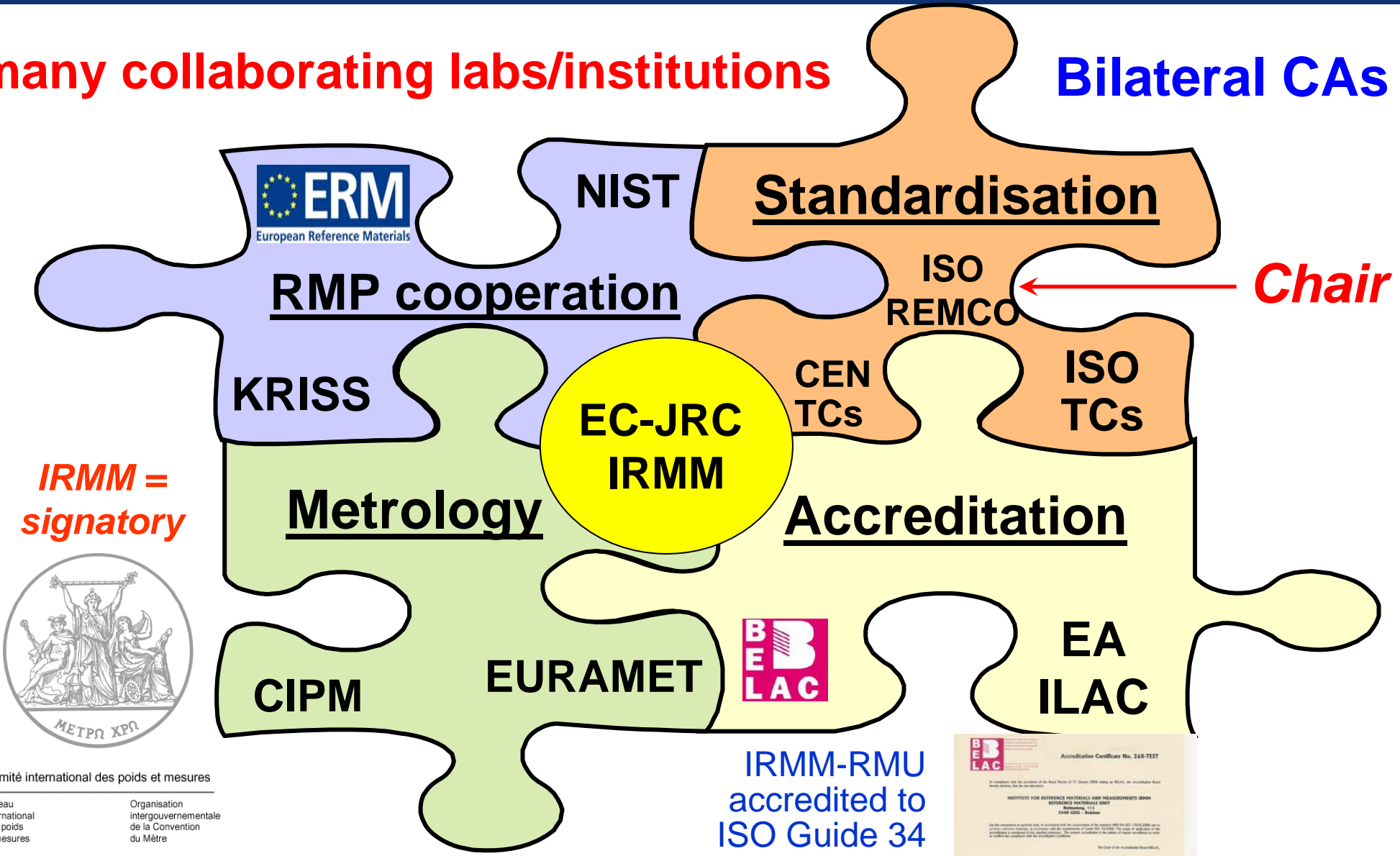
PROBLEM DEFINITION





many collaborating labs/institutions

Bilateral CAs



IRMM = signatory



Comité international des poids et mesures

Bureau international des poids et mesures

Organisation intergouvernementale de la Convention du Mètre

IRMM-RMU
accredited to
ISO Guide 34
ISO/IEC 17025



RM producer support

focused
participation
in CRM
projects
at IRMM



on-site
support for
implementing
ISO Guide 34



RM user support

*Training courses
in Turkey*

