

Showcase Validation of DCCs

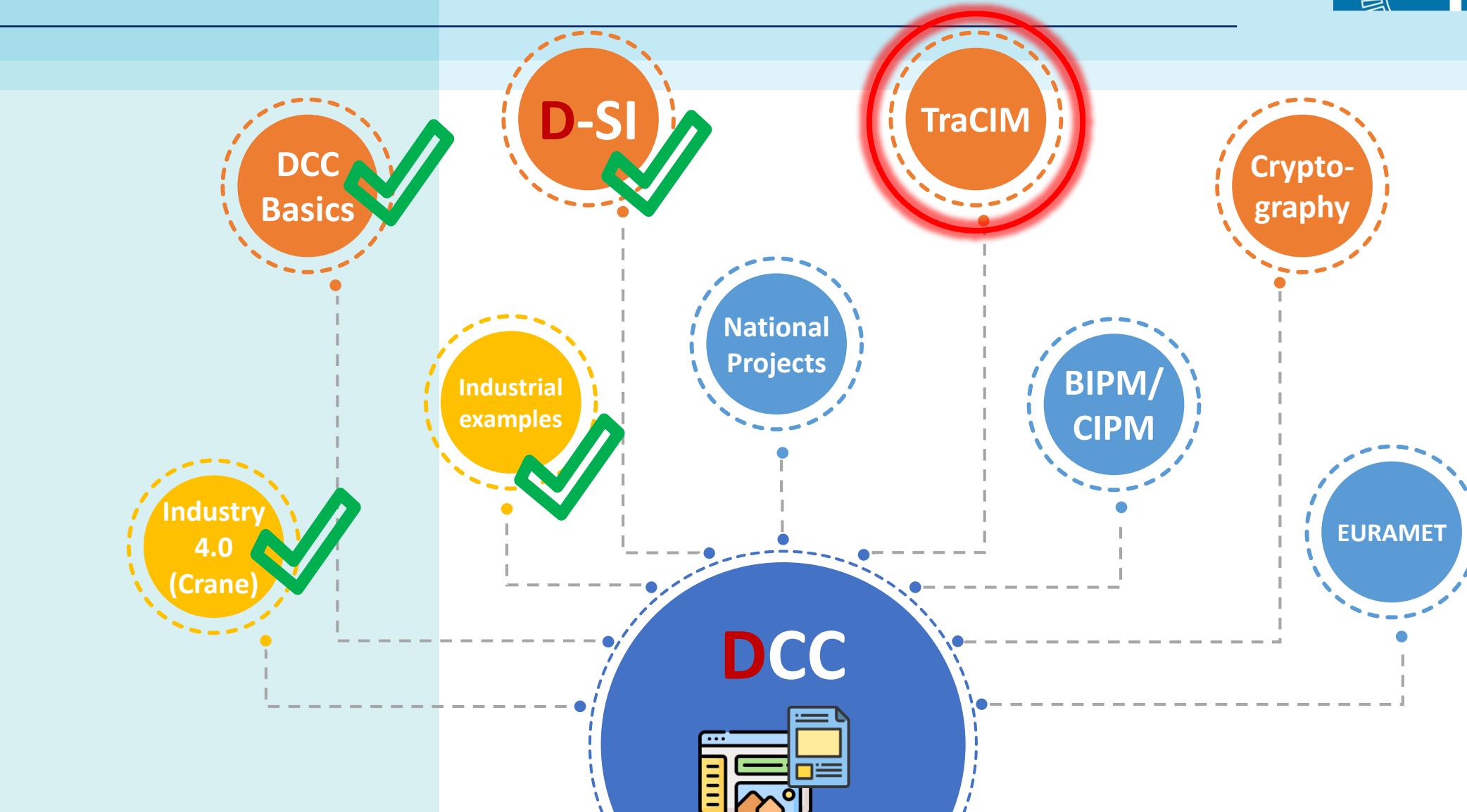
SmartCom

M4DT – Online Session III

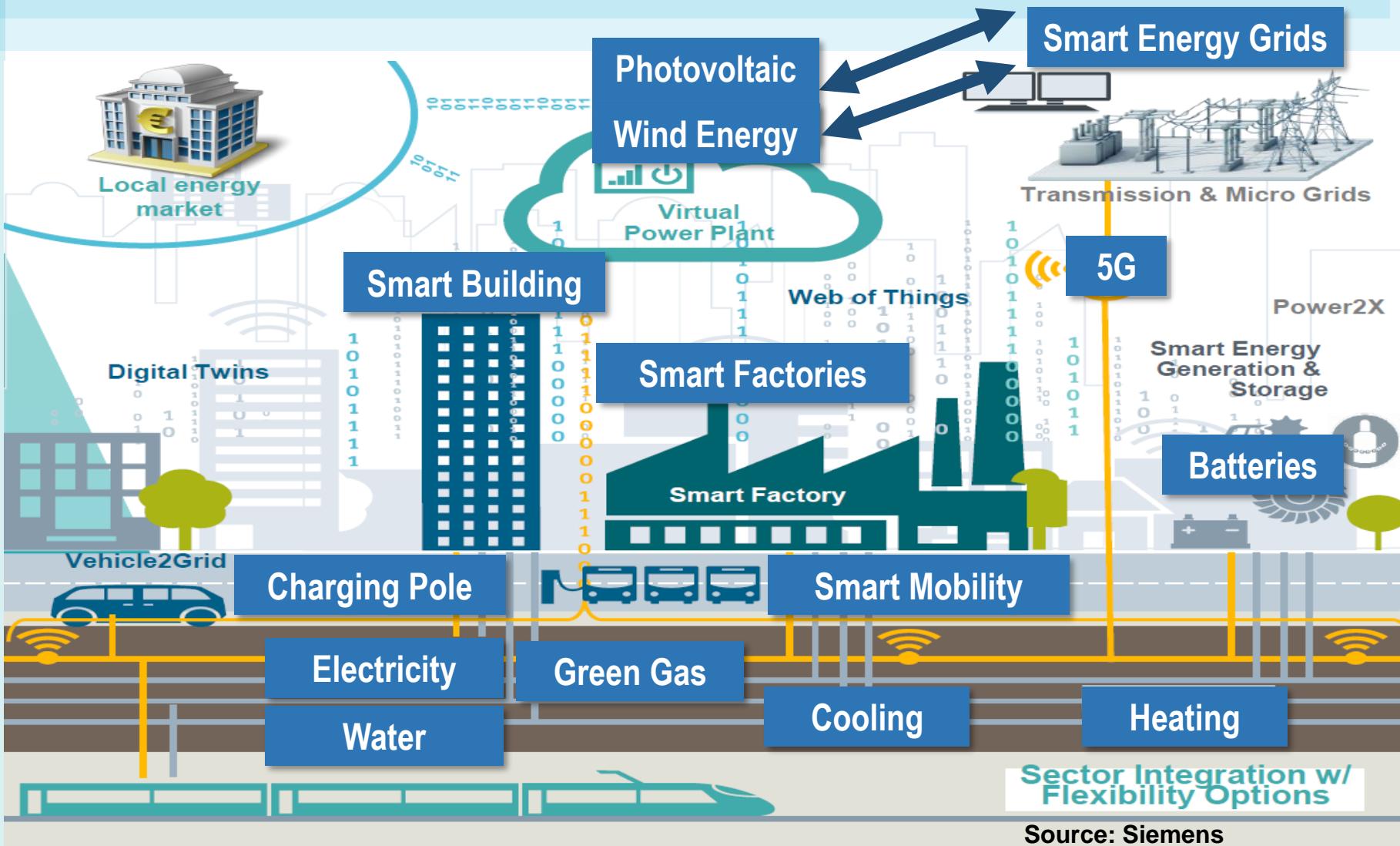
29-Sep-21

Daniel Hutzschchenreuter

DCC – Showcases



Why validation of digital data?

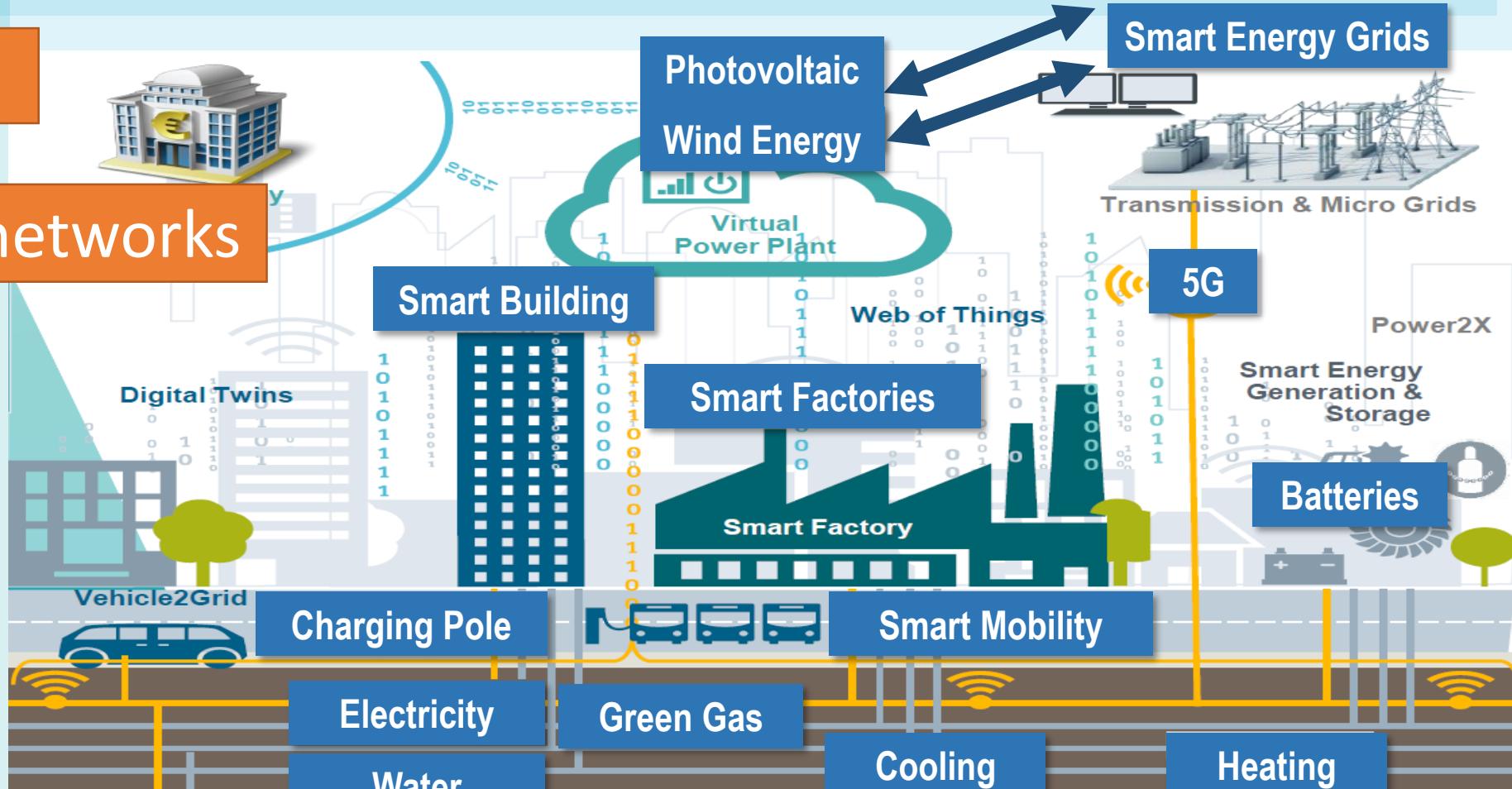


Why validation of digital data?



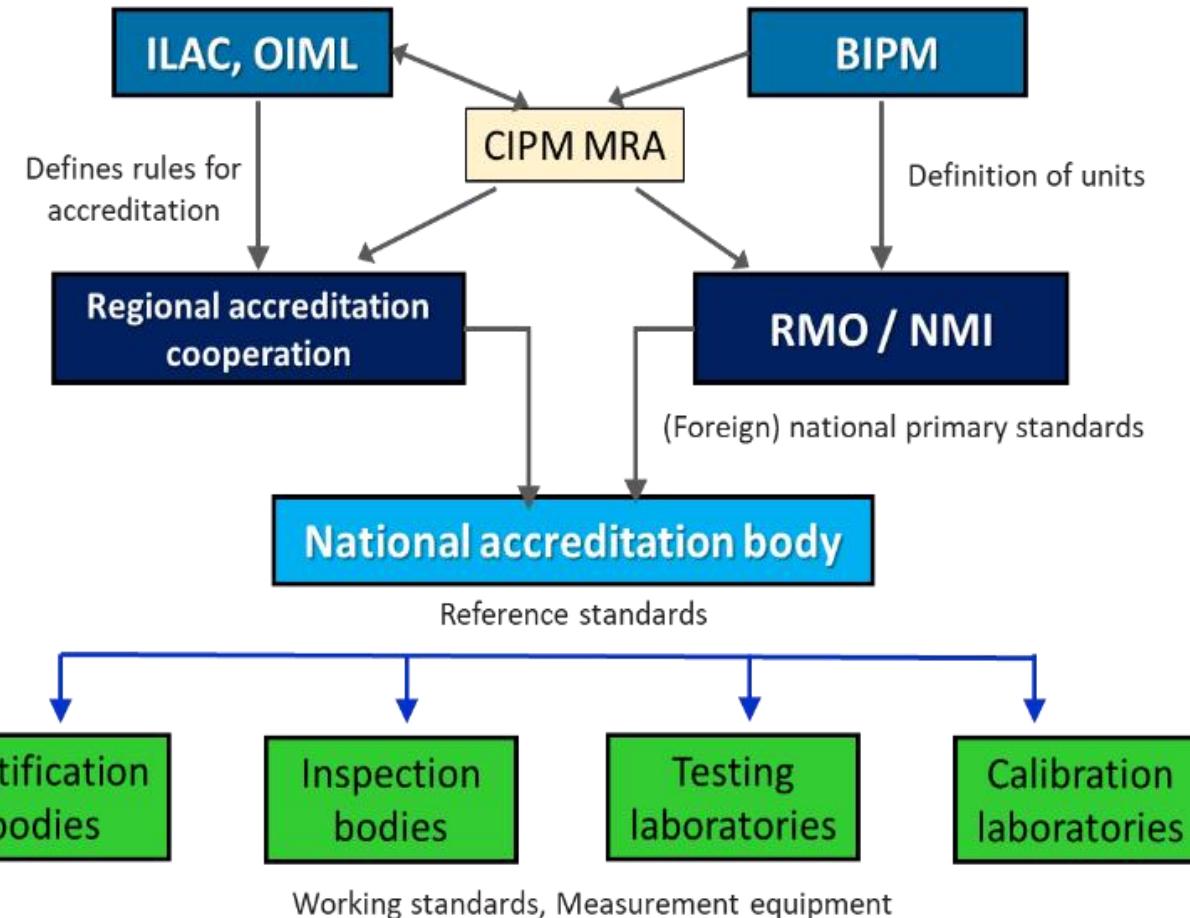
High automation

Massive sensor networks

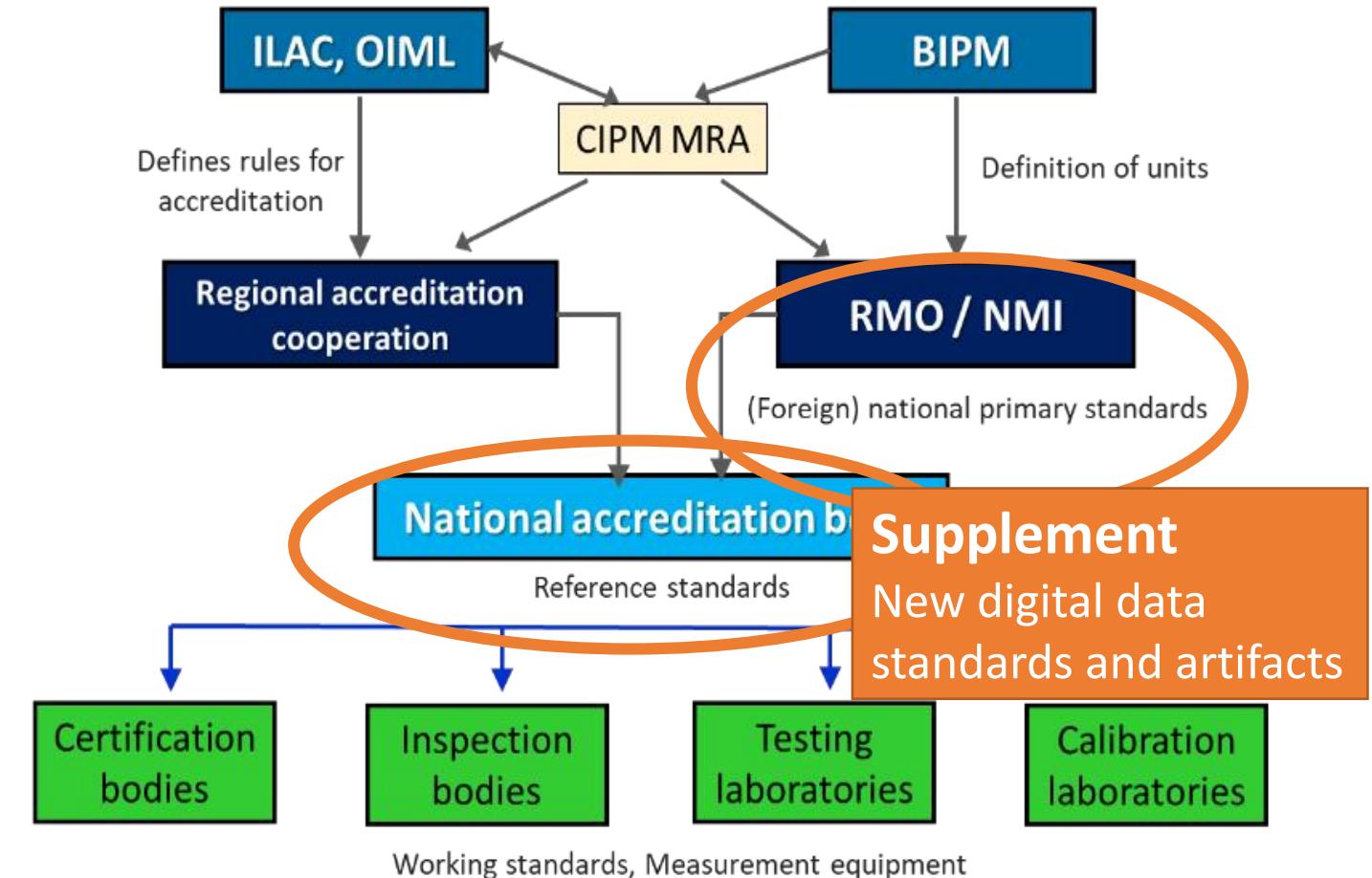


Need to ensure the quality of data that is exchanged

National and International Quality Infrastructure



National and International Quality Infrastructure



Quality of measurement data

National and International Quality Infrastructure

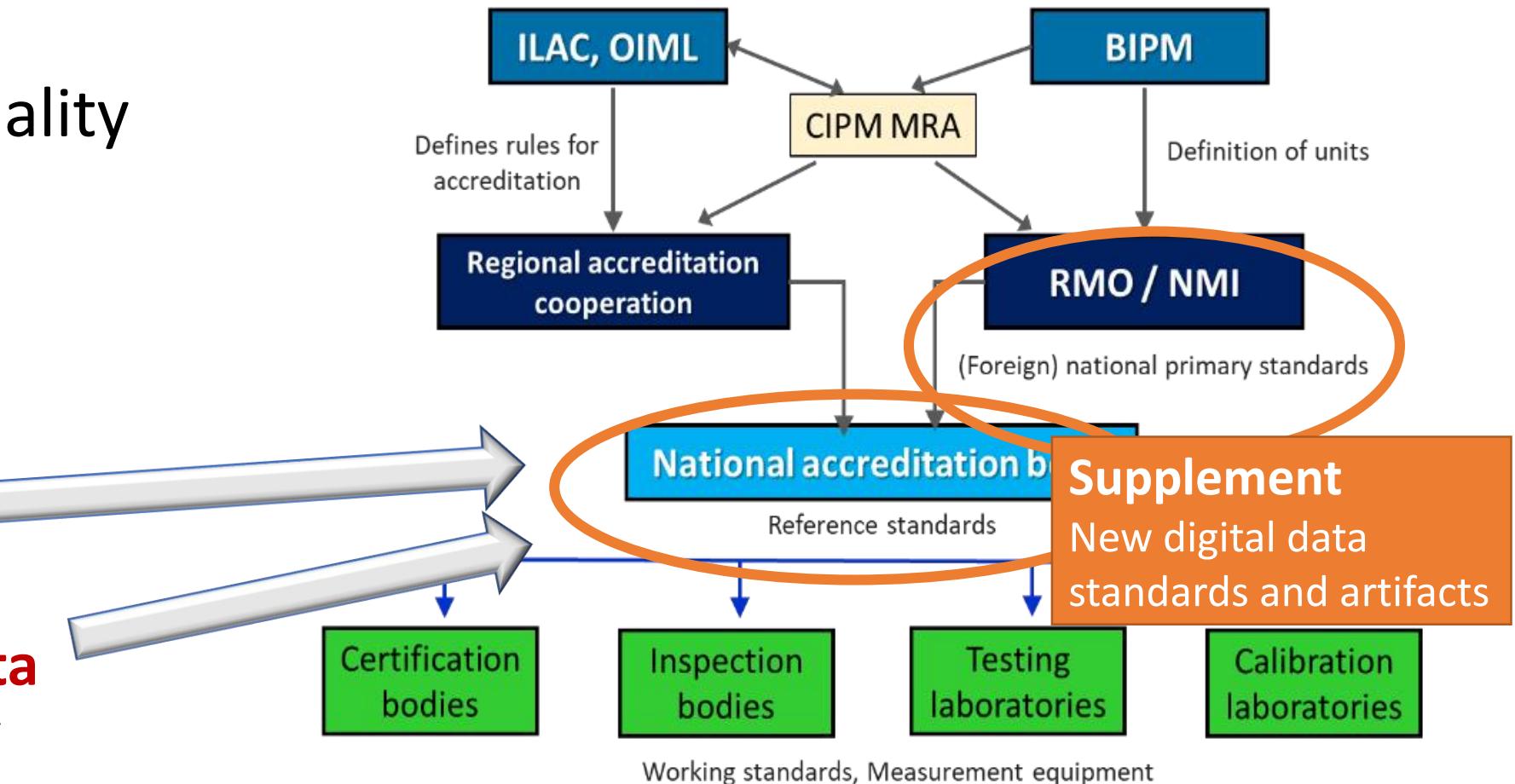
Data formats

D-SI & DCC

Algorithm Test Data

e.g. Coordinate Metrology
since 1993

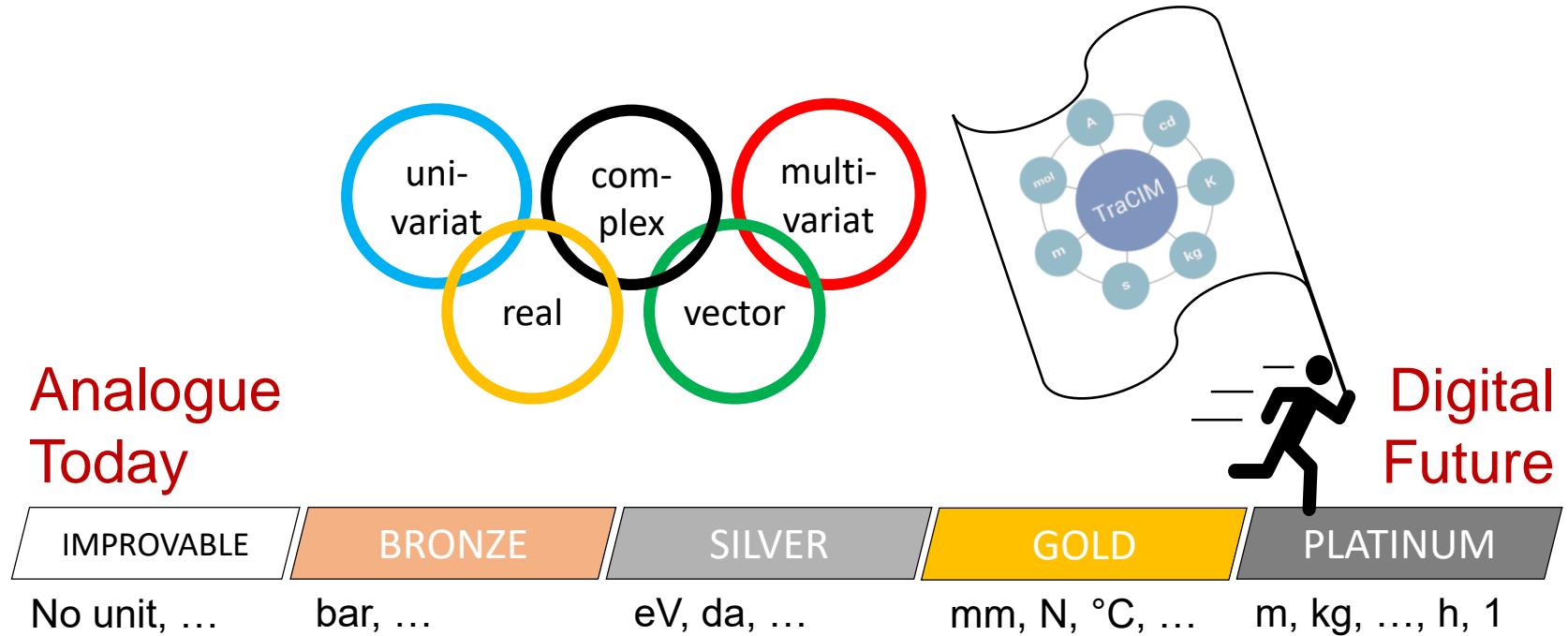
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SmartCom validation for D-SI & DCC



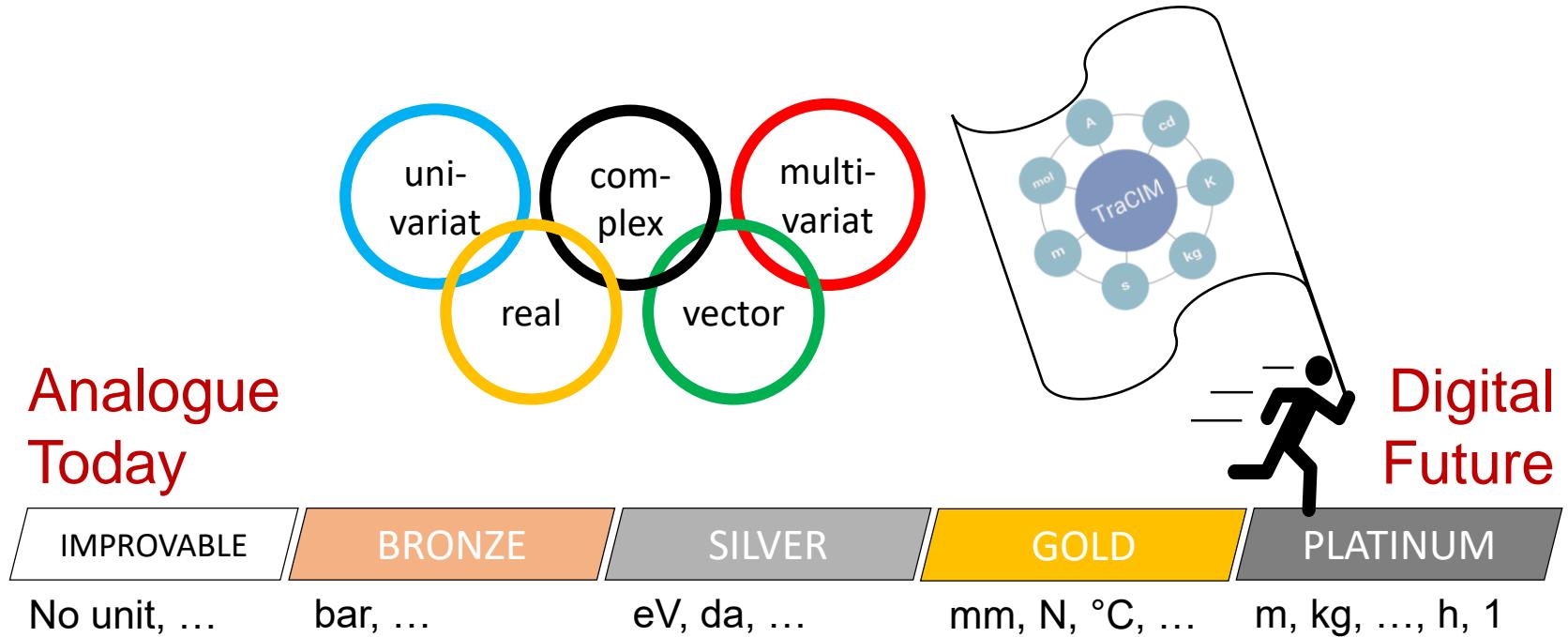
**Online validation
of data formats
and DCCs in
digital
communications**



SmartCom validation for D-SI & DCC



**Online validation
of data formats
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communications**



Validation of usability of metrological data for machines

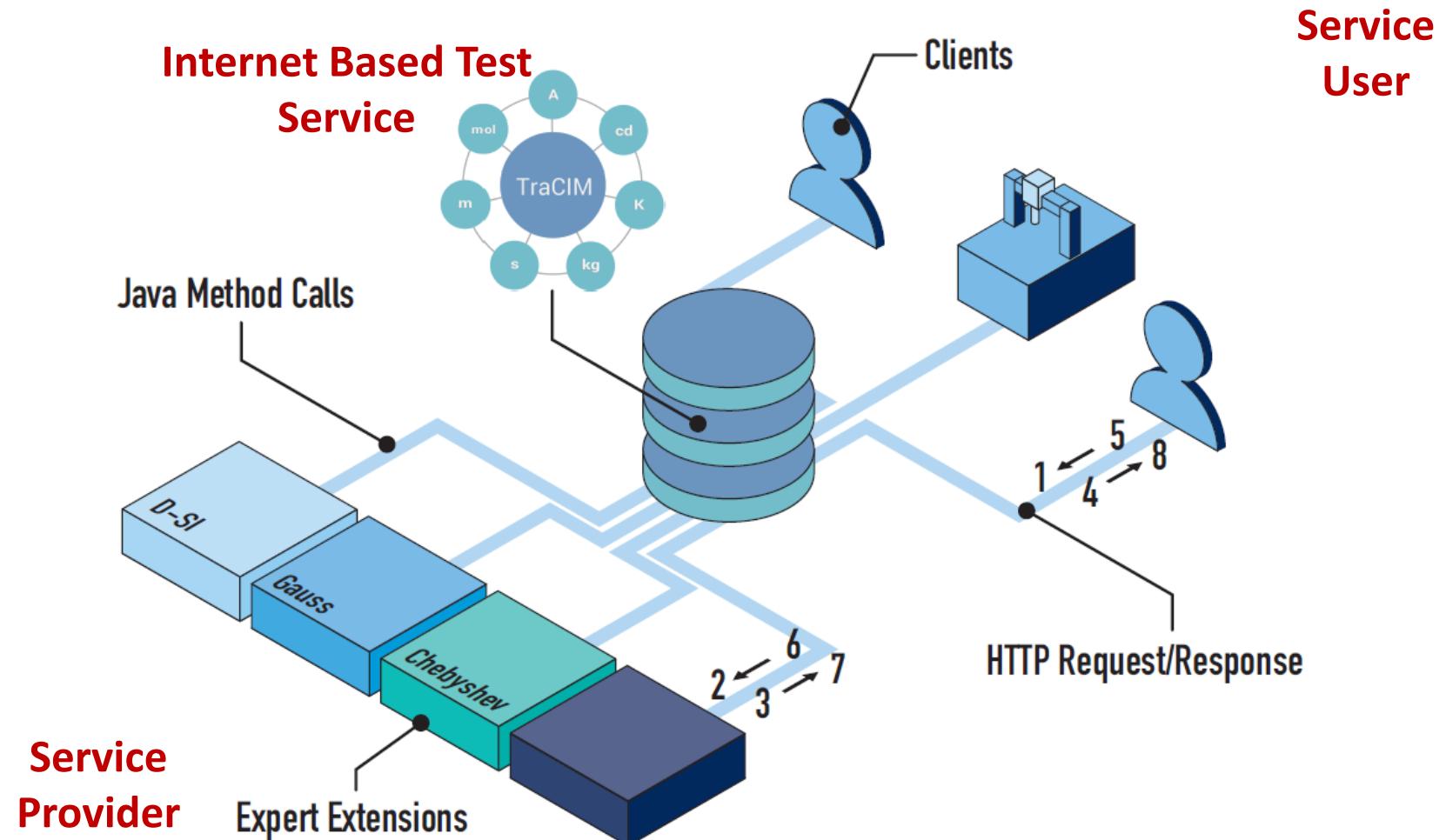
Support DCC and D-SI data development

The TraCIM online validation system



Traceable Computational Intensive Metrology

- Web-based, long term available services with high reliability
- Following Quality rules by metrology institutes under the TraCIM e.V.

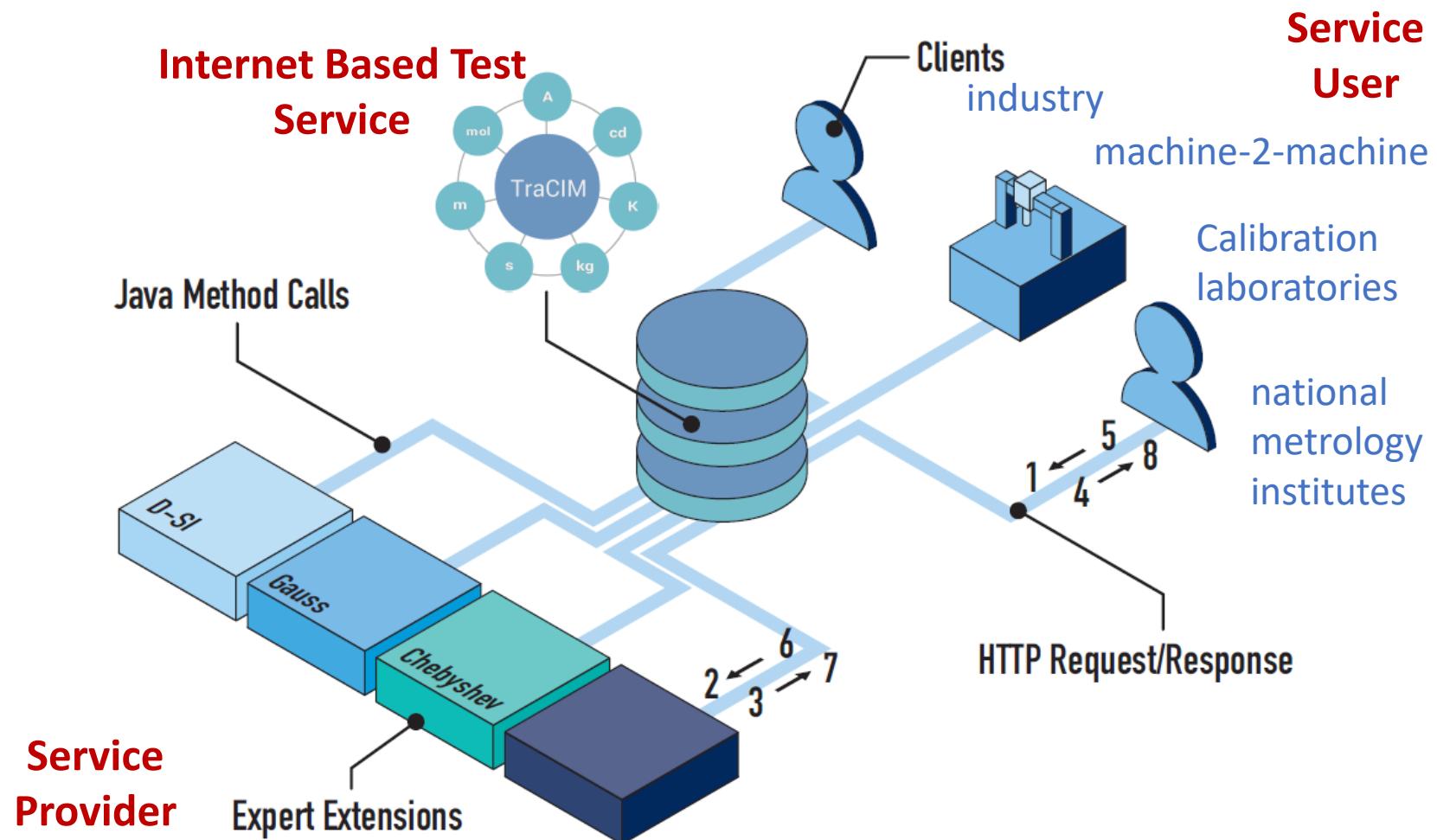


The TraCIM online validation system



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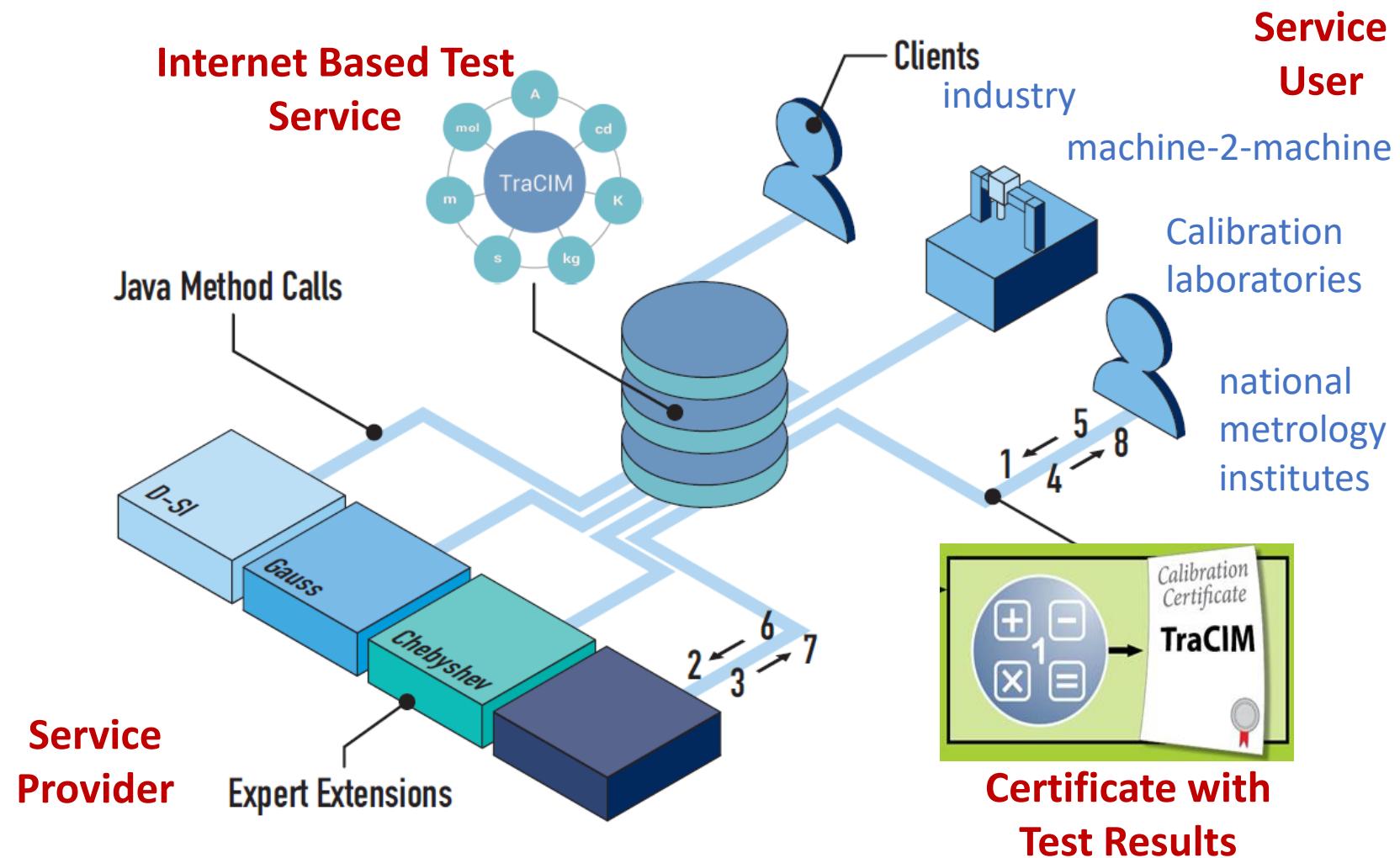


The TraCIM online validation system



Traceable Computational Intensive Metrology

- Web-based, long term available services with high reliability
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TraCIM online validation example



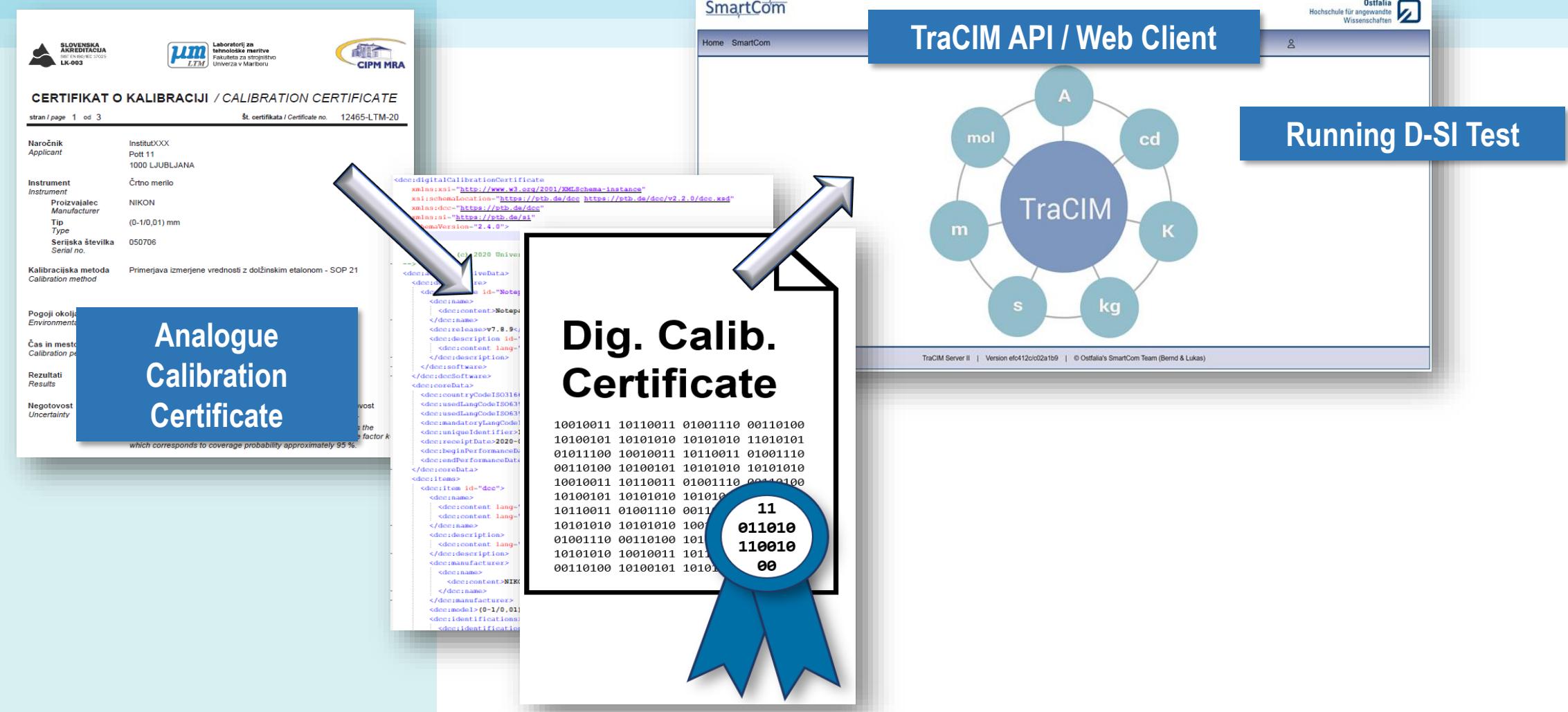
The screenshot shows a calibration certificate page with the following details:

- SLOVENSKA KALIBRACIJA** SBR EN ISO/IEC 17025
LK-003
- Laboratorij za kalibracijo in servis**
Fakulteta za strojstvo
Univerza v Mariboru
- CIPM MRA**
- CERTIFIKAT O KALIBRACIJI / CALIBRATION CERTIFICATE**
- stran / page 1 od 3 št. certifikata / Certificate no. 12465-LTM-20
- Naročnik / Applicant**: InstitutXXX
Polt 11
1000 LJUBLJANA
- Instrument / Instrument**: Črno merilo
- Proizvajalec / Manufacturer**: NIKON
- Tip / Type**: (0-1/0,01) mm
- Serijska številka / Serial no.**: 050706
- Kalibracijska metoda / Calibration method**: Primerjava izmerjene vrednosti z dolžinskim etalonom - SOP 21
- Pogoji okolja / Environmental conditions**: Not applicable
- Čas in mesto / Date and place**: 2020-01-01, Ljubljana
- Rezultati / Results**: Analogue Calibration Certificate
- Negotovost / Uncertainty**: which corresponds to coverage probability approximately 95 %.

A large blue rectangular area contains the text: "Analogue Calibration Certificate". Below this, smaller text reads: "which corresponds to coverage probability approximately 95 %."

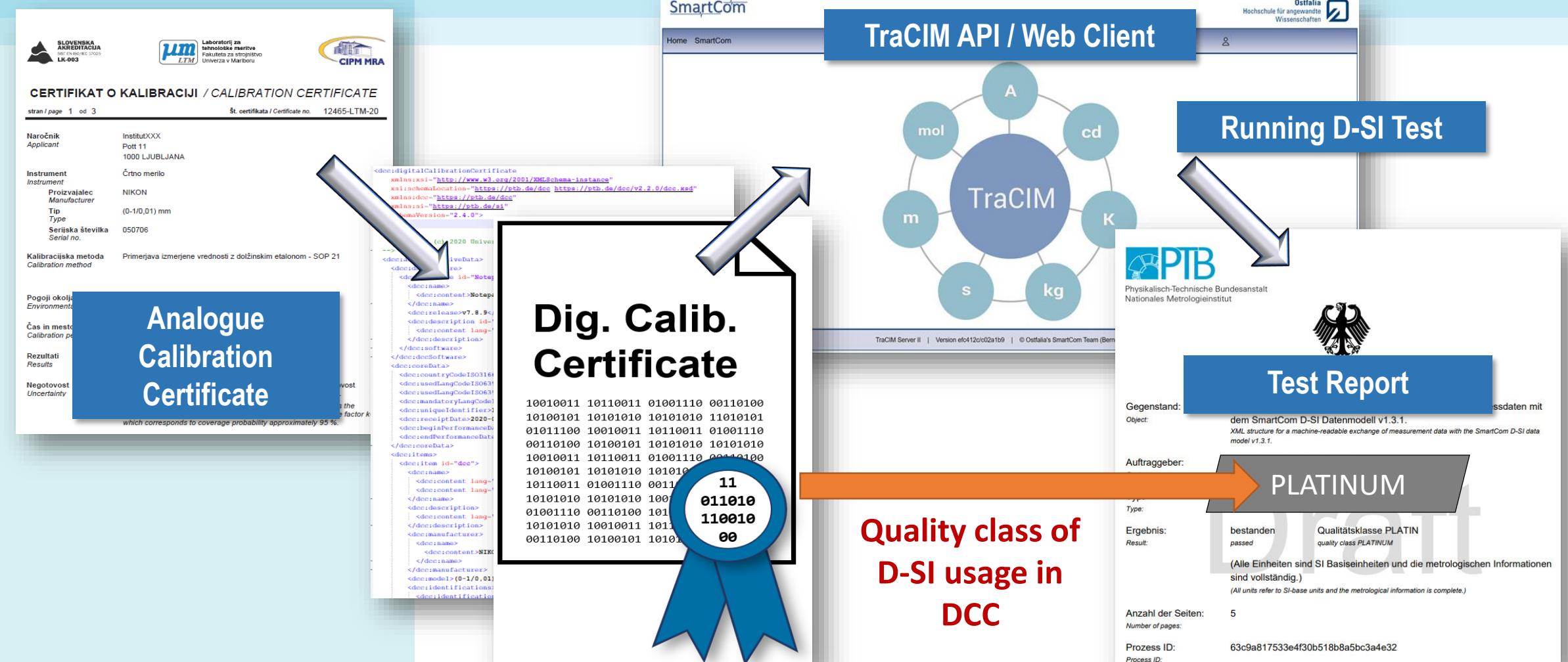
To the right of the certificate, a white box displays XML code for a digital calibration certificate, including namespaces and schema locations. A blue ribbon seal is overlaid on the bottom right of the certificate area.

TraCIM online validation example



Demonstration system: <https://smartcom-tracim.ptb.de/tracim-server-2.0/>

TraCIM online validation example



SmartCom - Documentation



Good practise guide SmartCom validation

DOI: 10.5281/zenodo.3816696

User manual D-SI validation

DOI: 10.5281/zenodo.3953555

Thank you for your attention!



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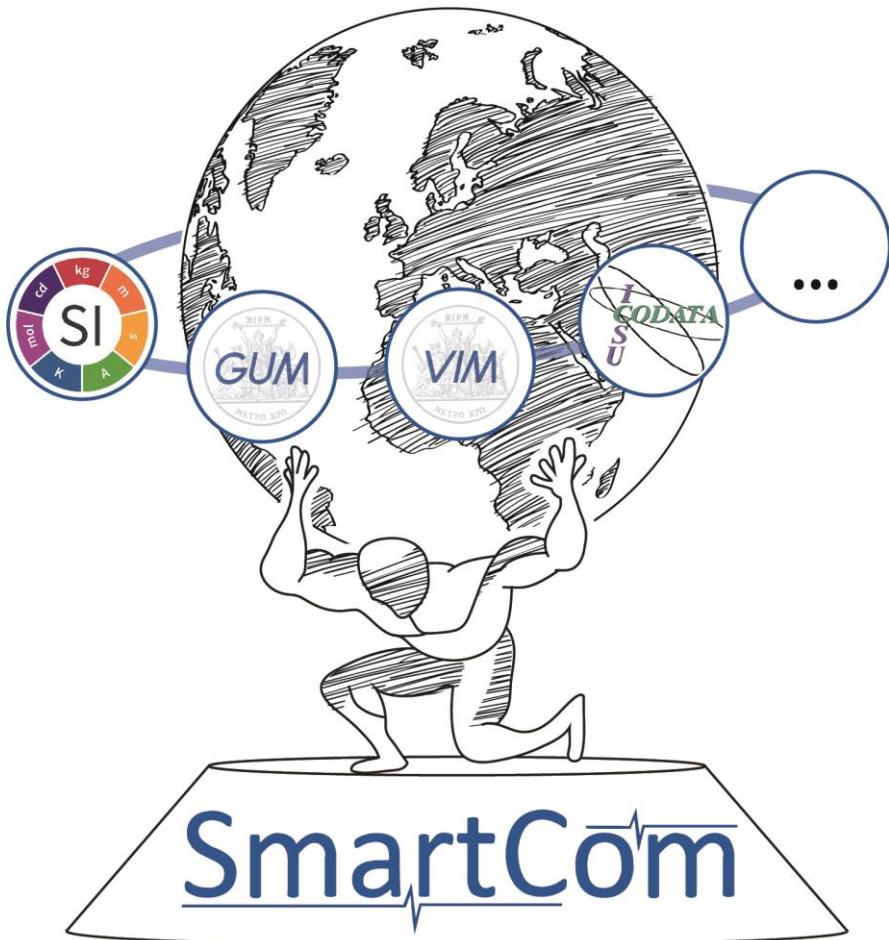
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Credit: The presentation uses mind maps from [Slidesgo](#) and [Freepik](#)