

International Organization of Legal Metrology

Organisation Internationale de Métrologie Légale

Digital Transformation in the Quality Infrastructure

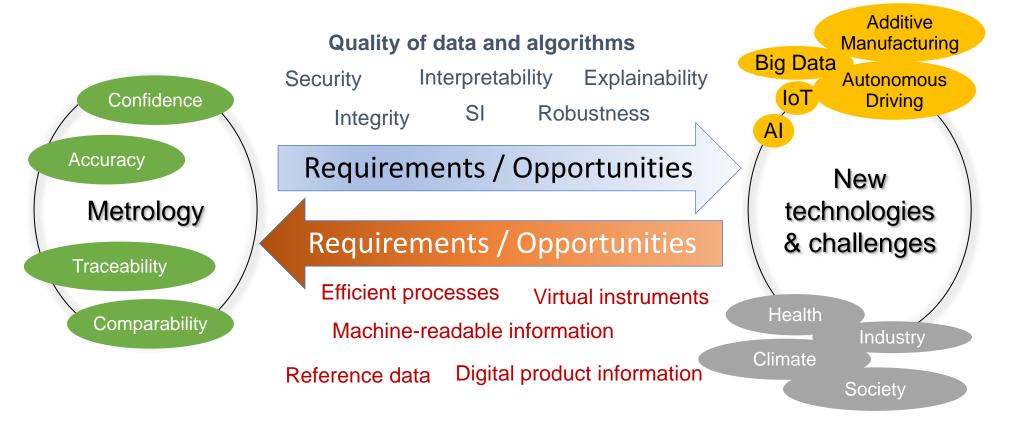
Introducing the OIML Digitalisation Task Group (DTG)

Sascha Eichstädt

Nominated Chairperson of the OIML Digitalisation Task Group



Metrology and digital transformation

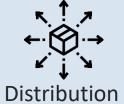




The QI in the product lifecycle







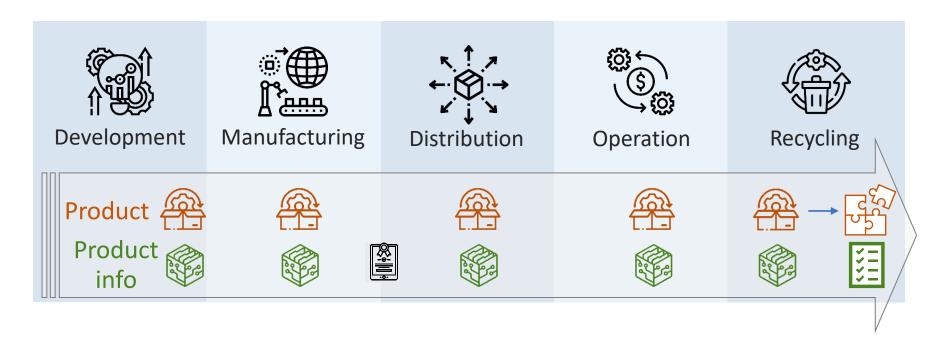




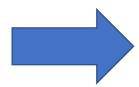
Operation



The QI in the product lifecycle



Digital transformation in the QI



Smart standards and certificates, cloud platforms, artificial intelligence, digital product pass



Digital technologies for the quality infrastructure

- Common data formats and interoperable digital interfaces for automated and streamlined processes
- Machine-readable information from standards, regulations, certification and accreditation for intelligent manufacturing
- Application of digital twins for the assessment of products and new services in the quality infrastructure
- Continuous quality and conformity assessment for an effective handling of software updates and self-learning Al



Digital transformation as a joint effort

<u>م</u> ۸۸	CODATA COMMITTEE ON DATA OF THE ISC
А А А	IEC INTERNATIONAL ELECTROTECHNICAL COMMISSION
А 88	ILAC INTERNATIONAL LABORATORY ACCREDITATION COOPERATION
	IMEKO INTERNATIONAL MEASUREMENT CONFEDERATION
A A A	ISC INTERNATIONAL SCIENCE COUNCIL
A A A	ISO INTERNATIONAL ORGANIZATION FOR STANDARDIZATION
<u>۾</u> 88	OIML INTERNATIONAL ORGANIZATION OF LEGAL METROLOGY

Joint statement of Intent

On the digital transformation in the international scientific and quality infrastructure

[...]

We the undersigned undertake to support in a way appropriate to each organisation the development, implementation, and promotion of the SI Digital Framework as part of a wider digital transformation of the international scientific and quality infrastructure.



+ CIE



Tasks for the OIML Digitalisation Task Group

Member States represented in the DTG:

Australia, Austria, Canada, China (P.R.), Czech Republic,
 Germany, India, Japan, Korea (R.), Switzerland, United States

Corresponding Members represented:

Argentina, Iraq, Latvia, Malaysia

Organisations / Institutions in Liaison represented:

CECIP, IEC Ex

Invited Observers:

CEEMS AG Chairperson, Peter Mason

Nominated Chairperson:

Sascha Eichstädt, PTB

Nominated Deputy Chairperson:

Yang Ping, NIM

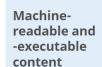


Task 1: Digitalisation of standardization and regulation

Consulting OIML in preparing for the digital era (Smart Standards, digital platforms, artificial intelligence,...)



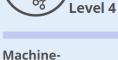




Content completely (semantically) discovered

Semantic search and selective access on content level

Earmarked information delivery across several documents



interpretable content

Information models describing and explaining the content and the relationships between items of information

Self-learning analysis together with automatic validation and optimization

Value-adding services possible e.q. conformity check, question answering, predictive content supply

Fully integrated digital value chain is possible



Machinecontrollable content

The content of a standard is be amended automatically and adopted by automated decision-making processes.

Digital standards are based on a system of artificial general intelligence with cognitive capabilities.

Digital standards adapt constantly to the current state of the art of technical and regulatory framework conditions.



Digital document

Digital representation

Machinereadable document

Structured document format

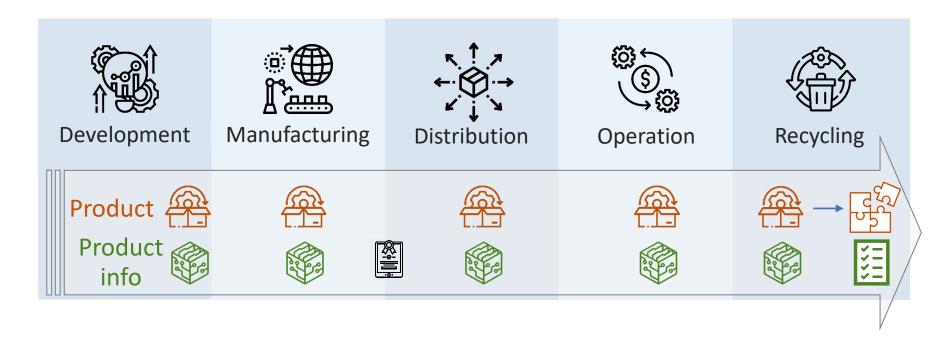
Software processing with high manual workload

Level 2

IDIS Whitepaper "SCENARIOS FOR DIGITIZING STANDARDIZATION AND STANDARDS" 2021



Task 2: Strategic items for the role of OIML



- Digital product pass as reliable and secured information about certification status
- Digital processes and communication between QI bodies beyond country borders



Task 3: Efficient utilization of digital tools

Supporting OIML-CEEMS to overcome technology gaps between Member States as well as between legal metrology and industry



https://www.cdo.ptb.de/

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For further information:

https://www.oiml.org/en/publications/bulletin/

April 2022 "Inaugural meeting of the OIML Digitalisation Task Group (OIML DTG)"