Value Creation

Standards & Conformity Assessment together

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IEC Secretary of the
Conformity Assessment Board

OECD, UNECE, ISO, IEC
5th annual meeting
Palais des Nations,
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INTERNATIONAL ELECTROTECHNICAL COMMISSION

How do we make purchasing decisions ?

Based on confidence

- Brands we know and trust
- Retailers / suppliers we know and trust
- Trusted advice

How do we make purchasing decisions ?

Unknown Brands

- Low cost / risk
  → we take the risk
- Higher cost / risk
  → known supplier
  → trusted advice

How do retailers make purchasing decisions ?

Based on confidence

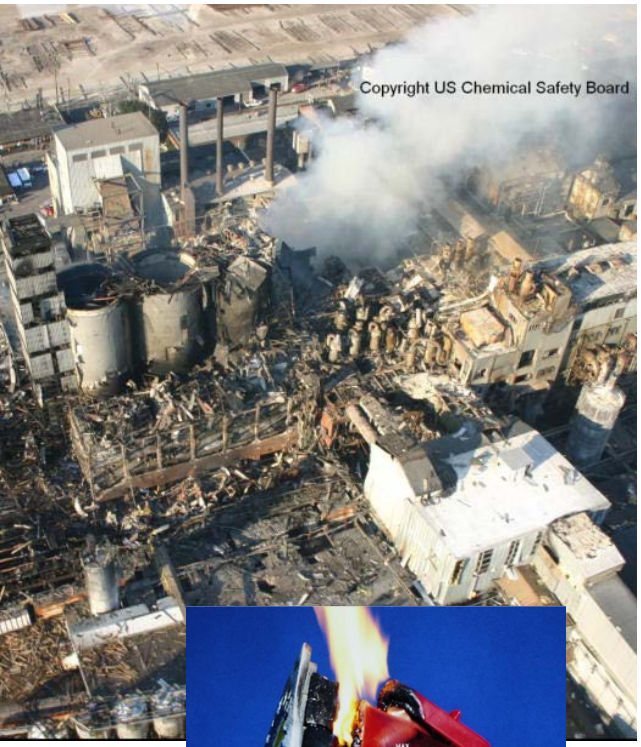
- Suppliers they know and trust
- Suppliers they audited themselves
- Trusted advice
  → 3rd party audits
  → certification

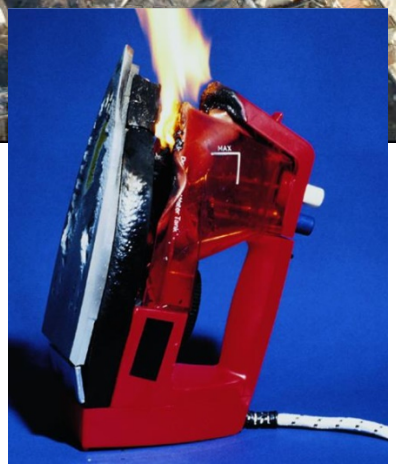
How are most purchasing decisions made ?

Based on confidence

- Confidence level needed depends on
  - → quality needed
  - → financial risk
  - → technical risk

Confidence = Value





Quality

→ International Standards

Risk

→ Appropriate level of Conformity Assessment

Confidence = Value

Standards and Conformity Assessment are like two sides of a coin…

…neither side has value without the other side

Standards +
Conformity Assessment = Value
= Confidence

Conformity Assessment (CA)

Checking that a product or service conforms to specified requirements

First party CA

→ Carried out by manufacturer, supplier

→ SDoC, eg CE marking

Second party CA

→ Carried out by customer
eg: checking in coming goods/materials

Third party CA

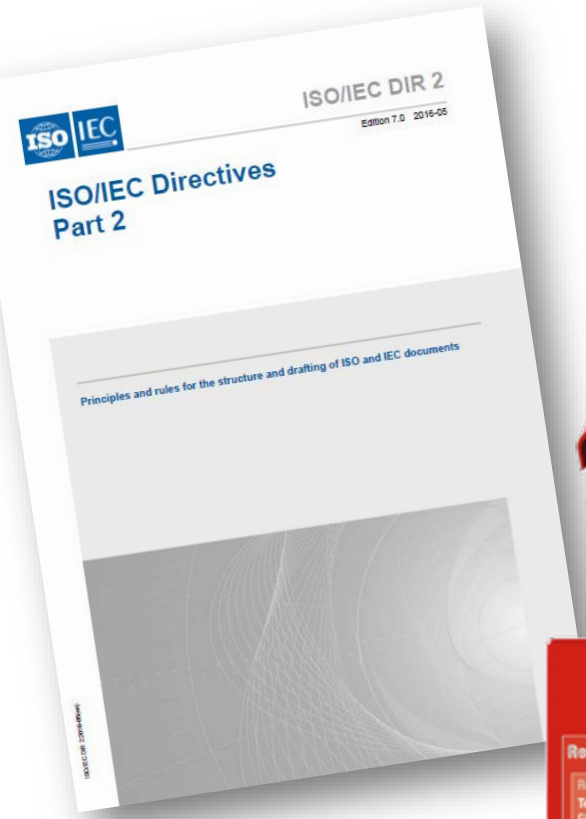
→ Carried out by independent organization

→ Independent from the supplier & end-user

→ Can be test-reports, audit-reports, type-certification, full certification, etc

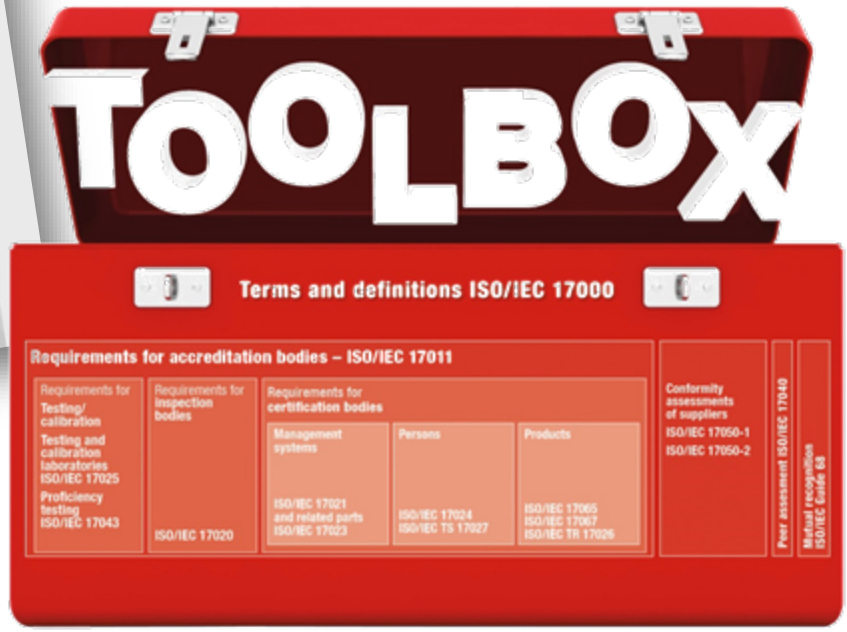
Conformity Assessment (CA)

Checking that a product or service conforms to specified requirements



ISO/IEC 17000 series

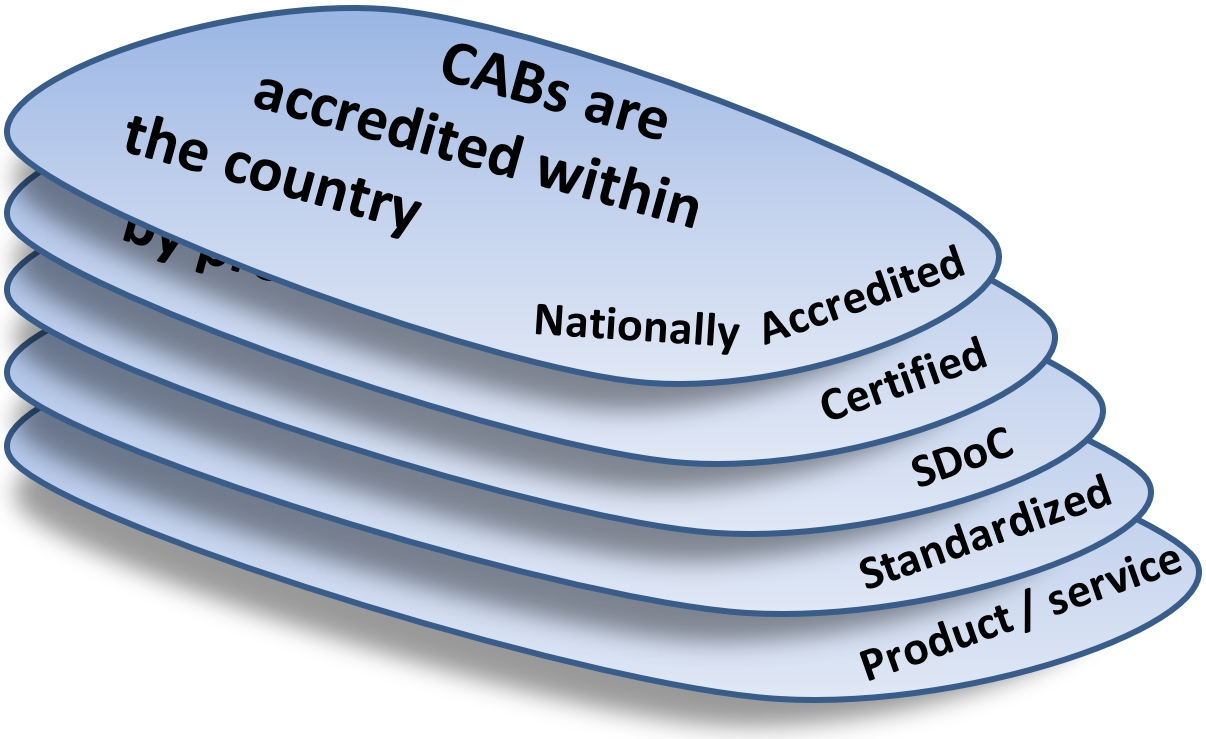
- → International standards for CA
- → Developed according to ISO/IEC Directives
- → Development managed by ISO/CASCO
- → Nicknamed ISO/IEC 17000 series toolbox



Conformity Assessment (CA)

Checking that a product or service conforms to specified requirements

Layers of value



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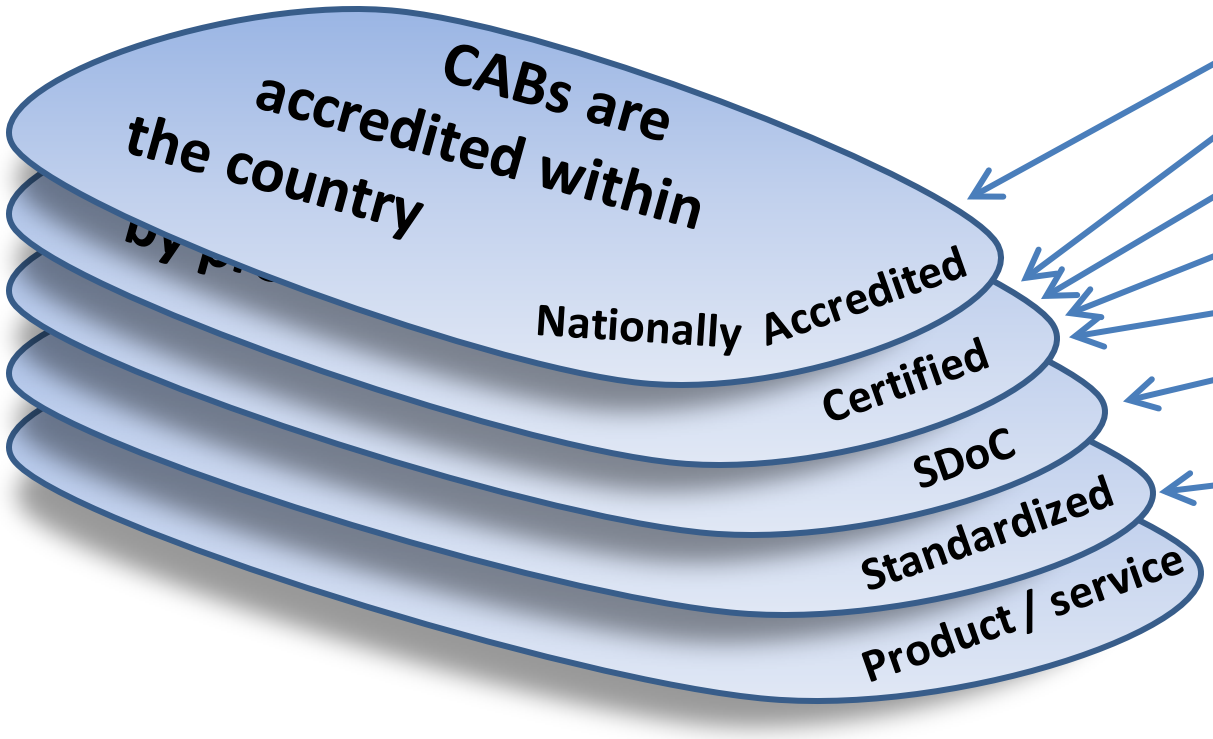

ISO/IEC 17011
ISO/IEC 17020
ISO/IEC 17025
ISO/IEC 17065
ISO/IEC 17067
ISO/IEC 17051-1

IEC & ISO standards

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Checking that a product or service conforms to specified requirements

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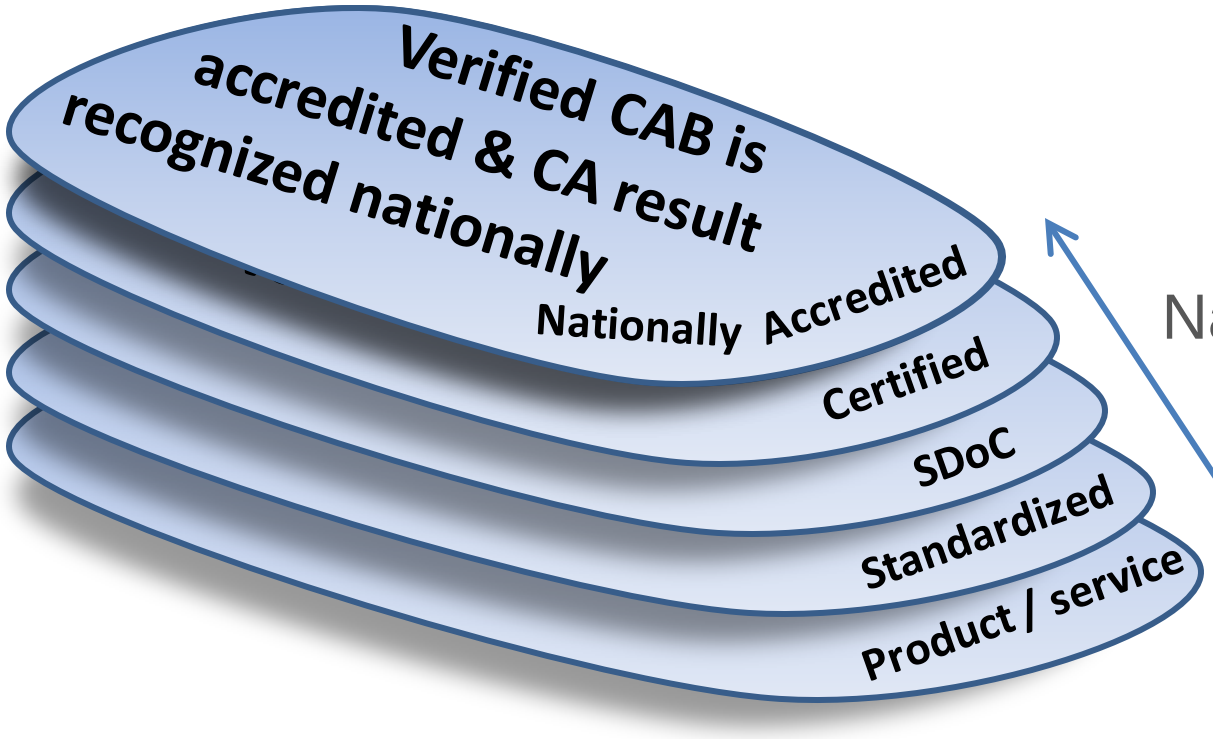

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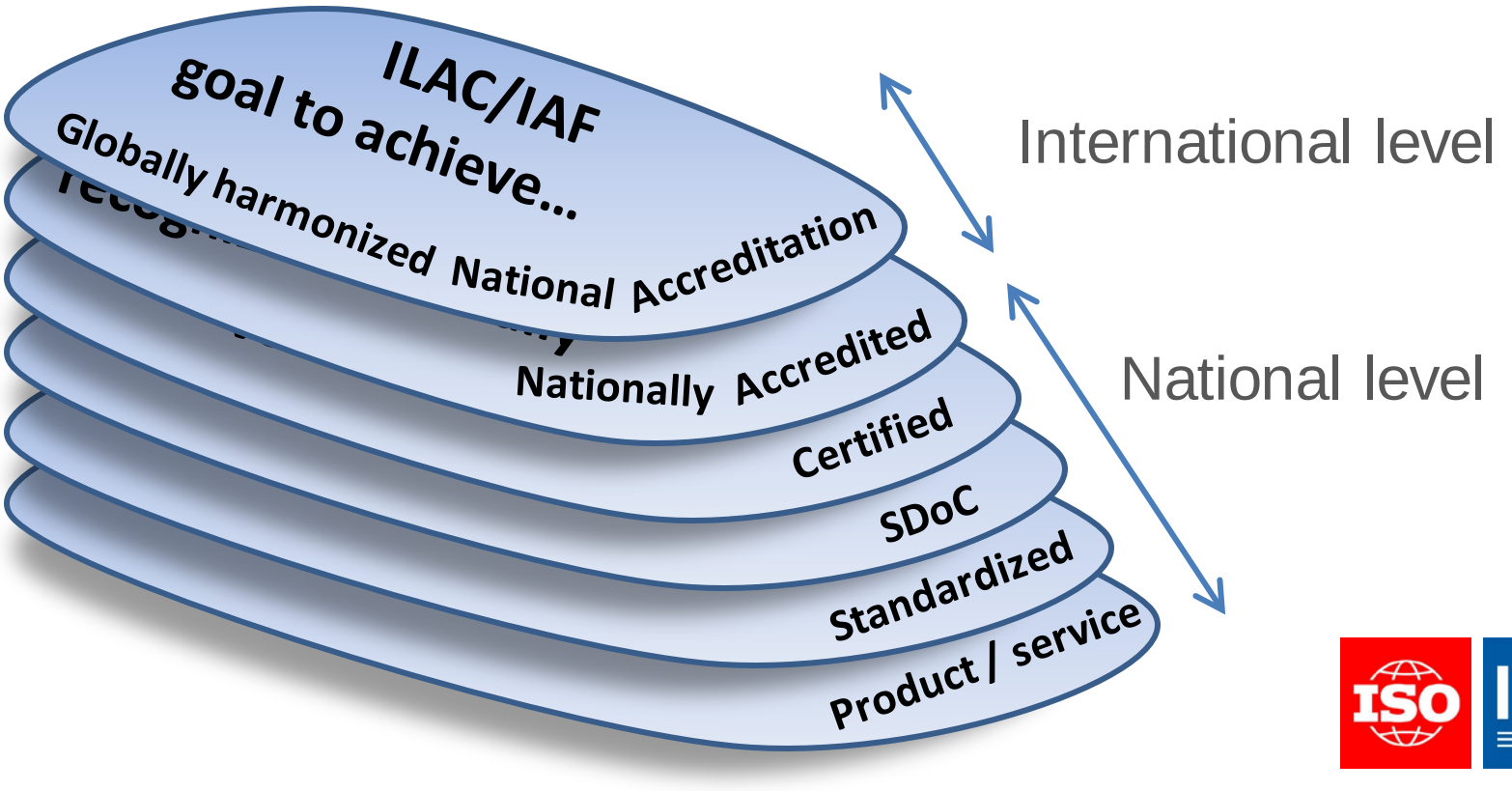

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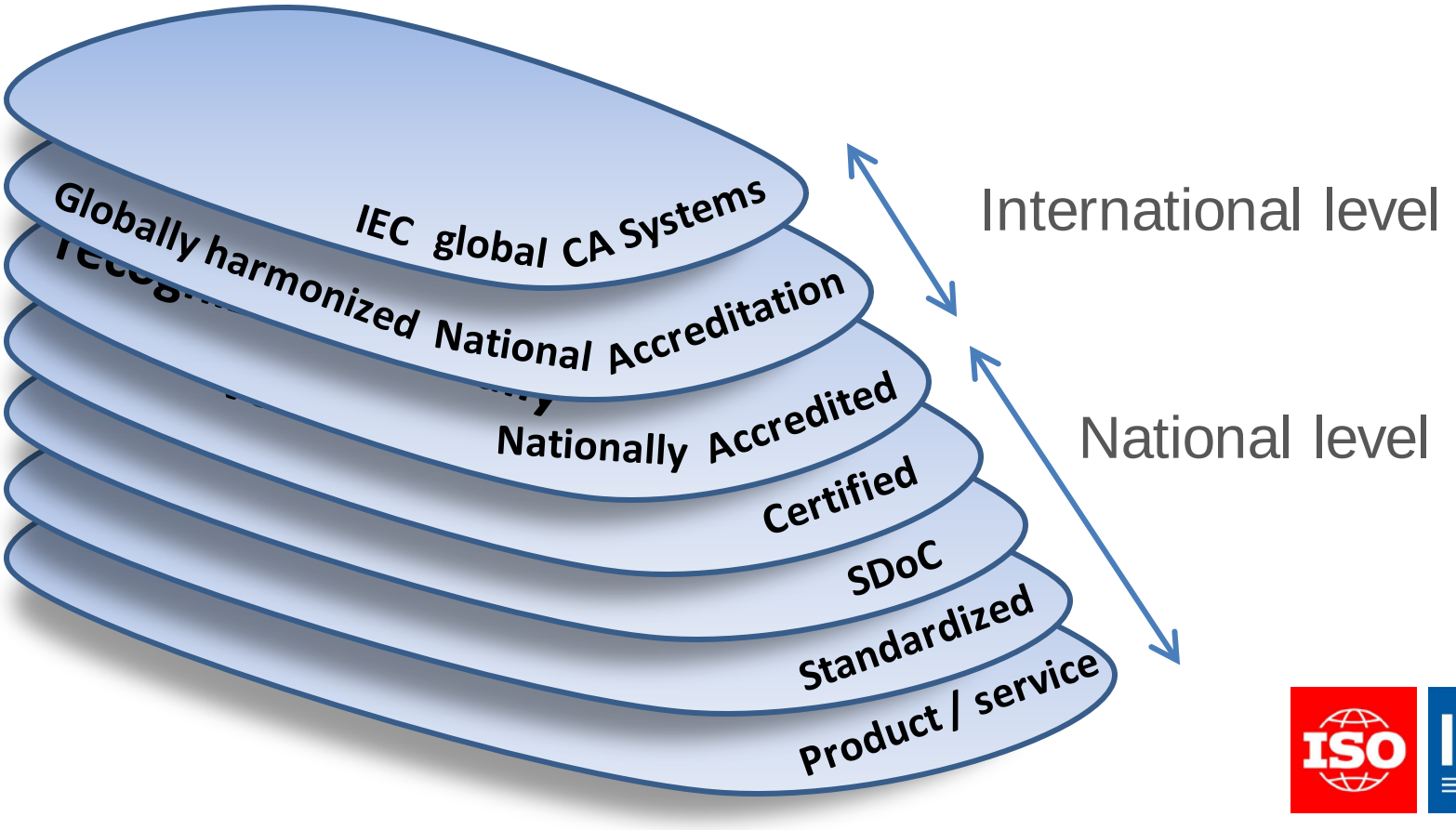

IEC standards development (SD) & conformity assessment (CA) activities

	SD	CA
IEC	✓	global services
ISO	✓	
ISO/IEC	17000 series	

IEC standards development (SD) & conformity assessment (CA) activities

Global CA services

- Membership organization
- Professional CA bodies (CABs)
- CABs anywhere in the world
- CABs must qualified to participate
- CABs help write the rules
- CABs must follow the rules
- CABs are regularly peer assessed to check that rules are followed

Conformity Assessment (CA)

Checking that a product or service conforms to specified requirements

Layers of value

Conformity Assessment (CA)

Checking that a product or service conforms to specified requirements

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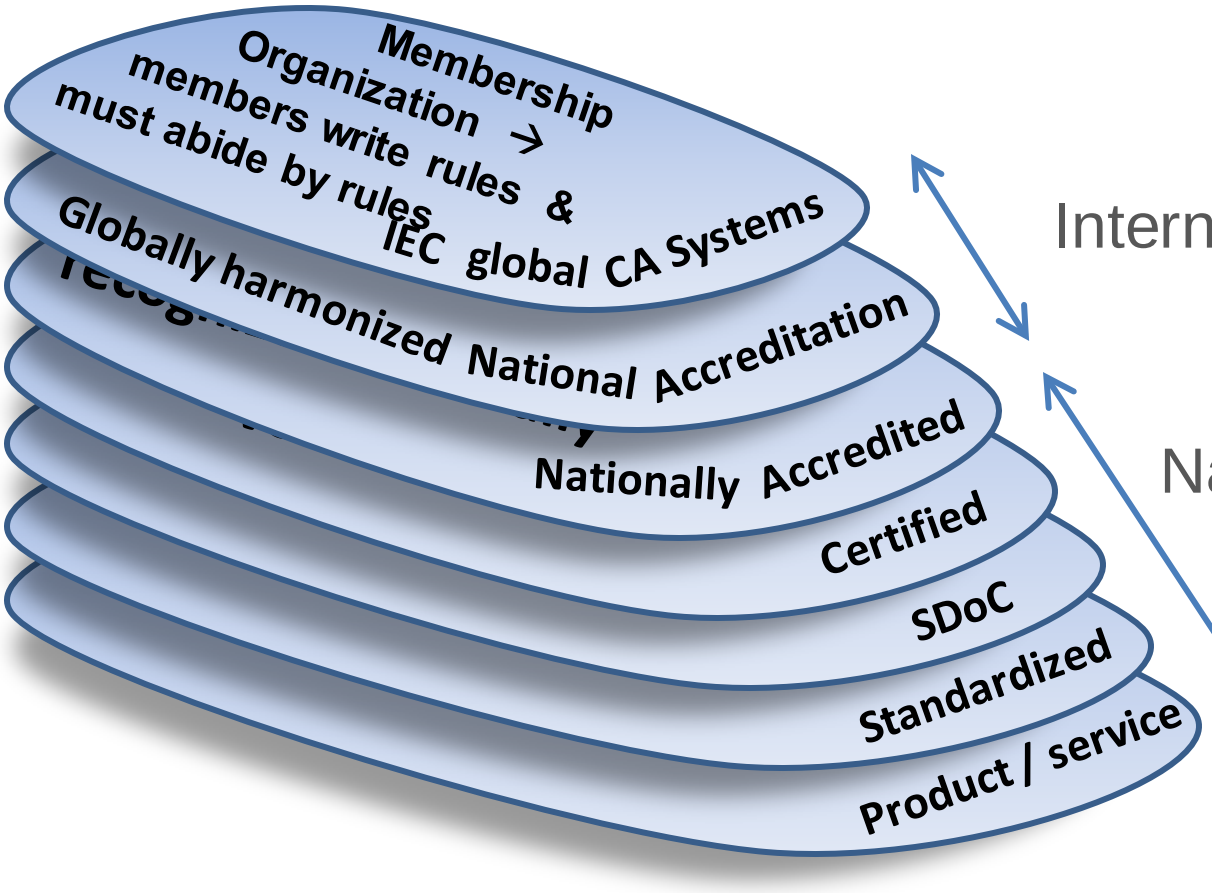

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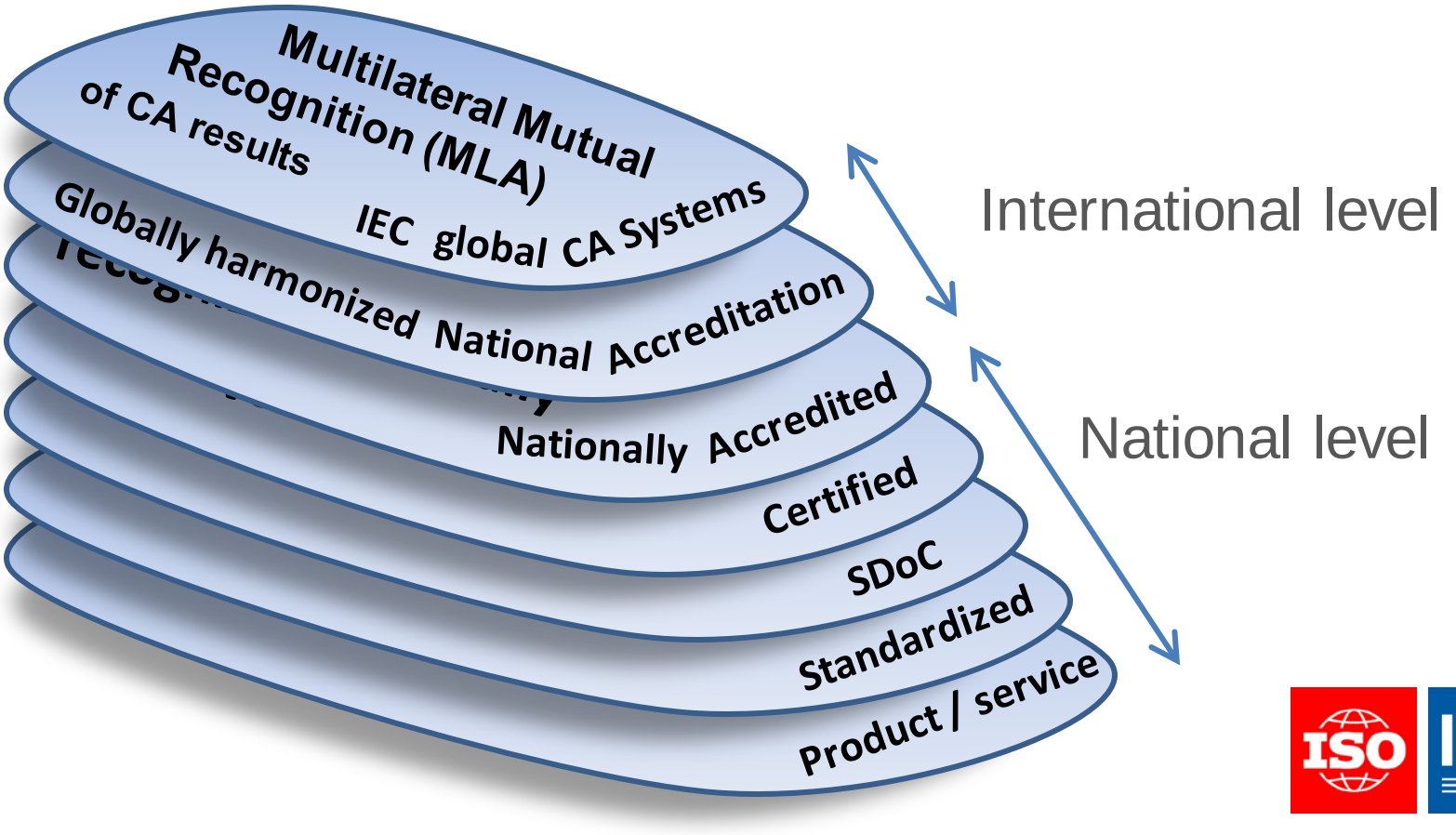

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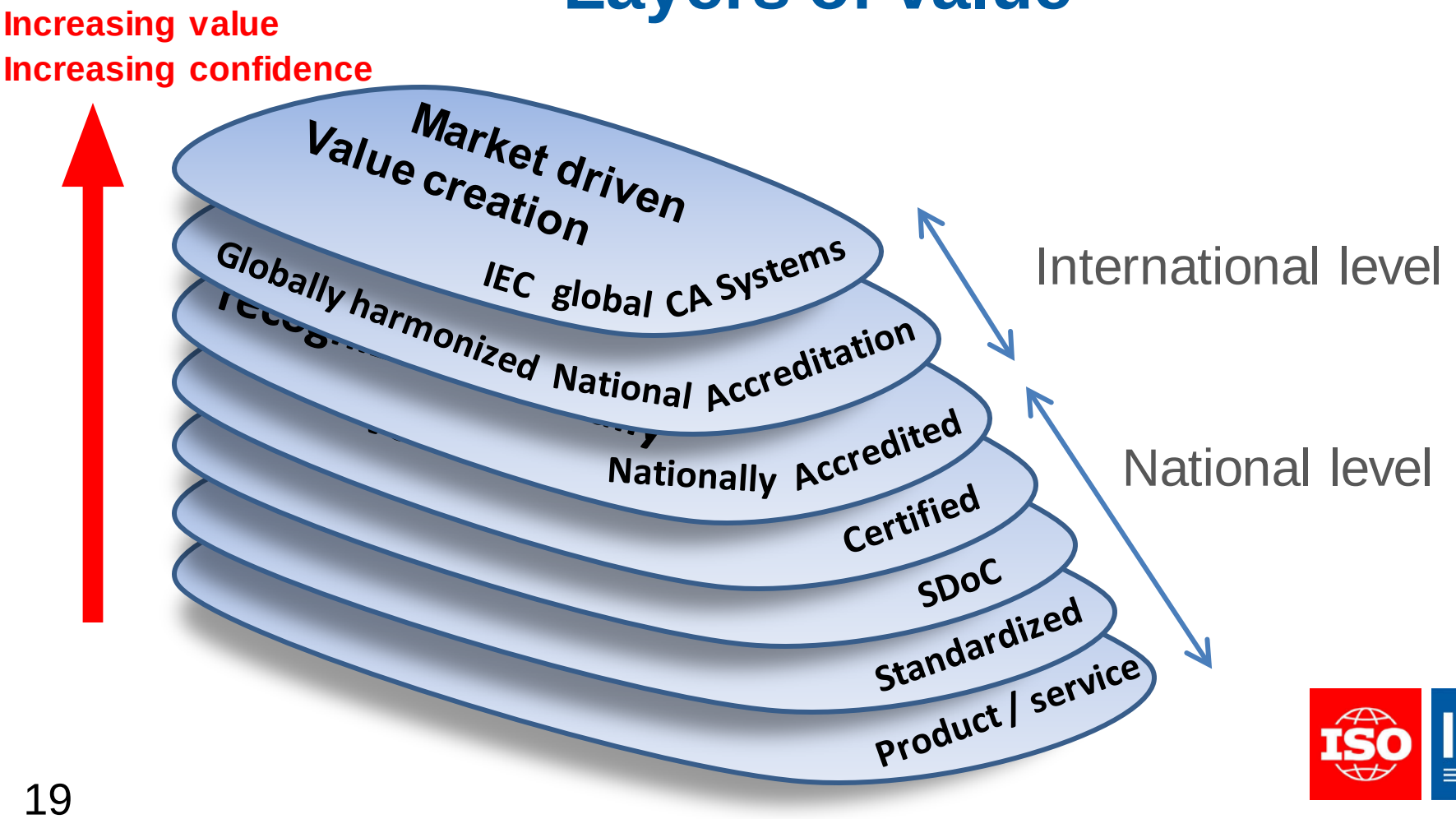


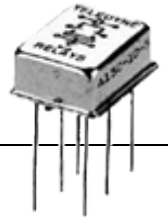
IEC CA Systems

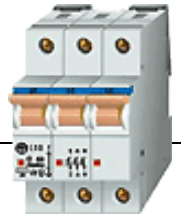
Global conformity assessment Systems

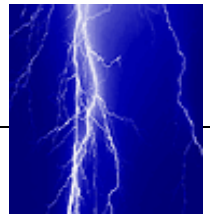
- IECEE
- IECEx
- IECQ
- IECRE

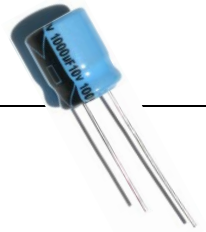
IECEE CA Schemes

CB-Scheme







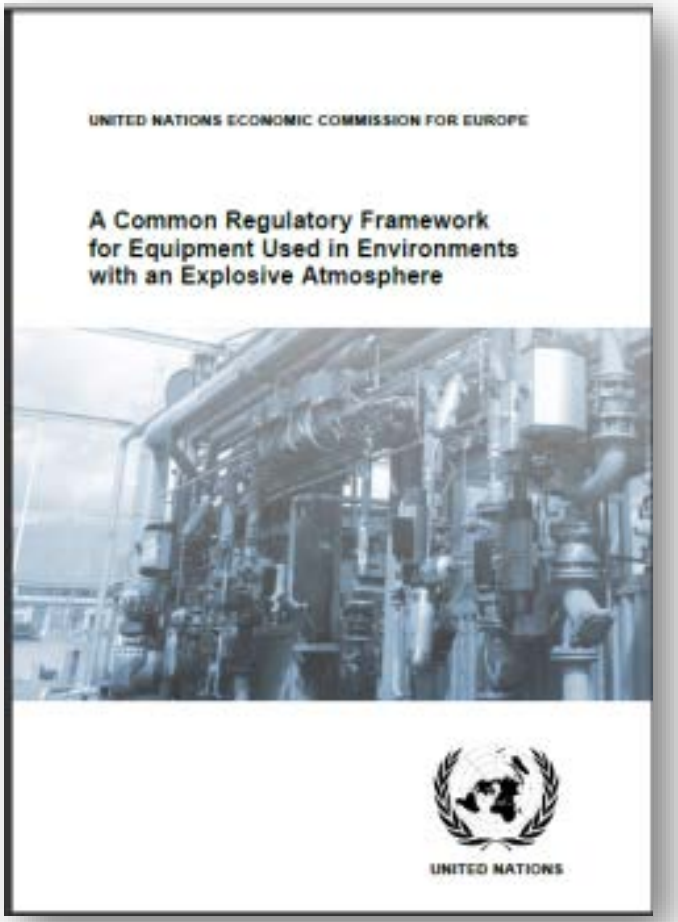


IECEx – explosive atmospheres

- Equipment Scheme ← unit certification
- Service Scheme ← process certification
- Certified Persons Scheme ← people certification
- Mark Licensing Scheme ← licencing

IECEx – explosive atmospheres

world's best practice



In 2011, United Nations recommended IECEx as WORLD'S BEST PRACTICE for conformity assessment for Ex environments.

IECQ – Quality

- HSPM – Hazardous Substances ← process
- ECMP for avionics ← supply chain
- Counterfeit Avoidance Process Scheme
- LED lighting Scheme

IECRE – Renewable Energy

Wind Energy

Marine Energy

Solar PV Energy

IECRE – Renewable Energy

Market drivers

- **Financial risk management**
  - Apply world's best practices
  - IEC global CA are current world's best practice

IO Cooperation

International CA cooperation

- IEC → international product standards
- ISO → international QM system standards
- ISO/IEC → international CA standards
- IEC → global CA services

- IEC & ITU → global TL qualification
- IEC & OIML → global legal metrology equipment scheme
- IEC & ILAC/IAF → unified assessments
- IEC & UNECE → UN CRO Ex environments
  → UN CRO cybersecurity

Questions

Thank you

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