IEC Conformity Assessment

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IEC Conformity Assessment

- background
Conformity Assessment activities
Like two sides of a coin

Standards = knowledge
Conformity Assessment = application of knowledge
Standards + Conformity Assessment = Value
Value Creation

- IEC international Standards support all three types of CA
  - 1st party CA – performed by manufacturers
  - 2nd party CA – performed by end users
  - 3rd party CA – performed by independent party

- However, the IEC’s CA activities support only 3rd party CA.

- IEC creates a framework for global certification by qualified, commercial test laboratories & certification bodies and international valorization of those certificates through a mutual recognition arrangement.

- One standard, one test performed anywhere, one certificate accepted everywhere.
IEC Conformity Assessment

- current activities
Schemes for conformity testing and certification of electrotechnical equipment and components
IECEE covers

- IT and office equipment
- Electronics, entertainment
- Electrical equipment for medical use
- Installation accessories and connection devices
- Safety transformers and similar equipment
- Lighting
- Switches for appliances and automatic controls for electrical household appliances
- Industrial Automation
- Portable tools
- Photovoltaics
- Household and similar equipment
- Measuring instruments
- Low voltage, high power switching equipment
- Installation protective equipment
- Capacitors as components
- Batteries
- Cables and Cords
IECEx

Worldwide system for certification to standards relating to equipment for use in explosive atmospheres
IECEx

- Automotive refuelling stations and petrol stations
- Oil + gas extraction
- Oil refineries, rigs and processing plants
- Gas pipelines and distribution centres
- Chemical processing plants
- Printing industries, paper and textiles
- Hospital e.g. operating theatres
- Aircraft refuelling and hangars
- Surface coating industries
- Textiles
- Mining
- Sewerage treatment plants
- Grain handling and storage
- Woodworking areas
- Sugar refineries, storage, packaging + distribution
- Metal surface grinding, especially aluminium dusts and particles.
- Transportation
- Pharmaceuticals
- Food processing
- Furniture manufacturer
- + many others …
IECEx

World best practice based on IECEx best practice.
IECQ
Quality Assessment System for Electronic Components
IECQ

that these comply with these

Replaces multiple 2nd Party assessments of suppliers with One “IECQ Supplier Assessment”.

Benefits to Industry
- Cost Savings
- Savings in Resources
- Consistency in Supplier assessments

• Confidence in Supply Chain
• “On-Line” Certificates
IECQ AP – CAP:
Approved Process – Counterfeit Avoidance Programme

• Avoid and detect fraudulent or counterfeit electrical / electronic parts entering the supply chains: aerospace, avionics, military, telecommunications, biomedical, automotive, railway and high tech consumer electronics.

IECQ HSPM:
Hazardous Substance Process Management (ex: lead / mercury)

• Process based management of hazardous substances
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- recent developments
Stakeholders

- OEMs
- Systems Integrators
- Utilities
- Technology developers
- Certification Bodies
- Engineering Consultants
- Industry Associations
- Financiers
- Insurers
Marine Energy

Diving force → Risk reduction for financiers & insurers
Some questions

• How to do systems-approach conformity assessment?
• How to do CA in the absence of some standards?

Some more questions

• Is a sum-of-parts approach sufficient?
• Is a black-box approach necessary?
• Would a risk management approach be sufficient?
# Systems-Approach to CA

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<th>System Stage / Component</th>
<th>Conformity Assessment Needed?</th>
<th>Needs / Scope/ Inclusions</th>
<th>Outcomes / Certifications</th>
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IEC Conformity Assessment

- recent developments
ACAS what is it?

Affiliate Conformity Assessment Status

- Status → Pledge
  - Be an IEC Affiliate Country
  - Officially declared the adoption of IEC Int. Standards as national standards
  - Willingness to recognize IEC CA certificates
  - Made the commitment to use the ACAS Learning Modules

- Status → objective
  - Train to use IEC Standards
  - Benefit from IEC CA activities
ACAS history

Affiliate Conformity Assessment Status

• F2F at IEC General Meeting in Oslo, Oct. 2012
• Dialogue 16, Affiliate Country survey, end 2012
• First results January 2013
• Proposal to CAB in April 2013
• Decision by CAB in June 2013
• ACAS launched, August 2013
ACAS package benefits

- Regional awareness events
- Documentation and guides on Conformity Assessment at the IEC
- Webinars (upon request)
- Learning modules on IEC website and CD-ROMs (under development)
- A resource database (under development)
- Active participation in each system, based on prerequisite training conditions
Thank you!

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