



ETSI Summit on Sustainability

ISO/IEC JTC 1 SC 39 "Sustainability" & working with ETSI

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30.03.2023



ISO/IEC JTC 1 activity on sustainability



- ▶ Back in late 2011, ISO/IEC JTC 1 membership decided to establish SC 39 to deal with Sustainability for and by Information Technology
 - ▶ Title: Sustainability, IT and data centres
 - ▶ Scope: Standardization of assessment methods, design practices, operation and management aspects to support resource efficiency, resilience and environmental sustainability for and by information technology, data centres and other facilities and infrastructures necessary for service provisioning
- To avoid any duplication of work and to support innovation, SC 39 will engage in active liaison and collaboration with other JTC1 entities, ISO TC 207, ISO TC 242, ISO TC 257; IEC TC 100, IEC TC 111, IEC PC 118, SMB SG 4, IEC/TC 57/WG 2 and IEC/TC 9; ITU-T SG 5; and any other appropriate body including external organizations (e.g. consortia)
- ▶ Membership: 24 P-Members, 8 O-Members

ISO/IEC JTC 1/SC 39 Liaisons



With IEC and ISO

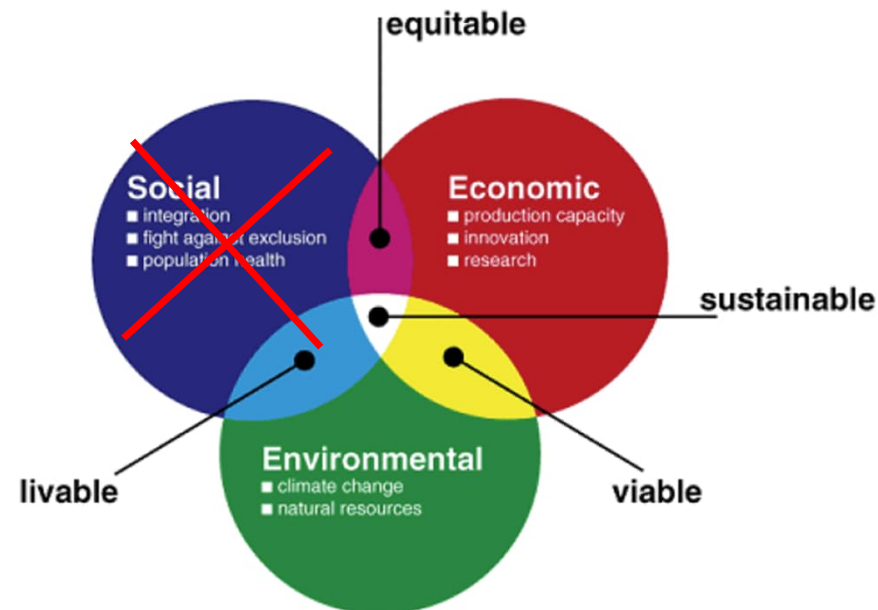
- ▶ IEC/TC 100 Audio, video and multimedia systems and equipment
- ▶ IEC/TC 111 Environmental standardization for electrical and electronic products and systems
- ▶ ISO/IEC JTC 1/SC 38 Cloud Computing and Distributed Platforms
- ▶ ISO/IEC JTC 1/SC 41 Internet of Things & Digital Twin
- ▶ ISO/IEC JTC 1/SC 42 Artificial Intelligence
- ▶ ISO/TC 207 Environmental Management

Organisations in Liaison (Category A & C)

- ▶ Ecma International
- ▶ ETSI European Telecommunications Standards Institute
- ▶ ITU International Telecommunication Union
- ▶ SPEC Standard Performance Evaluation Corporation
- ▶ TGG The Green Grid
- ▶ CENELEC/TC 215 Electrotechnical Aspects of Telecommunication Equipment

ISO/IEC JTC 1/SC 39 Sustainability

- ▶ Definition of sustainability used by SC 39
- ▶ „Meet the needs of the present without compromising the ability of future generations to meet“
Brundtland Report 1987



Source JTC 1/SC 39 N 0033

ISO/IEC JTC 1/SC 39 Structure



- ▶ Chair: Mr David Reiner (US)
- ▶ Committee Manager: Mr Bill Ash (US)

- ▶ WG 1: Ressource efficient data centres
Convenor: Mr Niek van der Pas (NL)

- ▶ WG 3: Sustainable facilities and infrastructures
Convenor: Mr Jens Dittrich (DE)

- ▶ WG 4: Eco-design of digital services
Convenor: Mr Pierre Decroqc (FR)

ISO/IEC JTC 1/SC 39 activities



WG 1: Ressource efficient data centres (2012)

Task: Development of key performance indicators for resource-efficient data centres and related topics

Publications

ISO/IEC 30134 (series) – Data centres Key Performance Indicators (9 parts)

Such as PUE, REF, ITEEsv, ITEUsv, ERF, CER, CUE, WUE

ISO/IEC 21836 – Server Energy Effectiveness Metric (SEEM)

ISO/IEC 23544 – Application Platform Energy Effectiveness (APEE)

ISO/IEC TR 20913 – Guidelines on holistic investigation methodology for data centre KPIs

ISO/IEC TR 21897 – Impact of the ISO 52000 series on energy performance of buildings

ISO/IEC TR 23050 – Impact on data centre resource metrics of electrical energy storage and export

ISO/IEC TR 30133 – Guidelines for resource efficient data centres

ISO/IEC JTC 1/SC 39 activities



WG 1: Ressource efficient data centres

Task: Development of key performance indicators for resource-efficient data centres and related topics

Ongoing work

ISO/IEC TS 8236 – Provisioning, forecasting and management – Part 1: Data centre IT equipment

ISO/IEC 30134-2 – Power Usage Effectiveness (revision of 1st Edition)

ISO/IEC 30134-4 – IT Equipment Energy Efficiency for servers, ITEEsv (maintenance Edition 1)

ISO/IEC 30134-5 – IT Equipment Utilization for servers, ITEUsv (maintenance Edition 1)

ISO/IEC JTC 1/SC 39 activities



WG 3: Sustainable facilities and infrastructures (2017)

Task: Development of standards for sustainable facilities and infrastructures

Publications

ISO/IEC TS 22237 (series) – Data centre facilities and infrastructures (7 parts)

(international version of CENELEC's EN 50600 series Ed 1)

ISO/IEC 22237 (series) – Data centre facilities and infrastructures

(Parts 1, 3 and 4 of TS upgraded to IS)

ISO/IEC TS 22237-30 – Data centre facilities and infrastructures – Earthquake risk and impact analysis

ISO/IEC JTC 1/SC 39 activities



WG 3: Sustainable facilities and infrastructures (2017)

Task: Development of standards for sustainable facilities and infrastructures

Ongoing work

ISO/IEC 22237-2 – Data centre facilities and infrastructures – Building construction

ISO/IEC 22237-5 – Data centre facilities and infrastructures – Telecommunications cabling infrastructure

ISO/IEC 22237-6 – Data centre facilities and infrastructures – Security systems

ISO/IEC TS 22237-31 – Key performance indicators for resilience

ISO/IEC TS 8236-2 – Provisioning, forecasting and management – Part 2: Data centre facility infrastructure

ISO/IEC JTC 1/SC 39 activities



WG 4: Eco-design of digital services (2023)

Task: Development of a specification for eco-design of digital services

Ongoing work

ISO/IEC TS 20125 – Digital services eco-design

Based on AFNOR SPEC 2201

The logo for AFNOR SPEC 2201, featuring the text "AFNOR SPEC" and "2201" in white, bold, sans-serif font on a dark purple background. To the right of the text are three diagonal white stripes on a purple background.

**AFNOR SPEC
2201**

The logo for "ECODESIGN OF DIGITAL SERVICES", featuring the text "ECODESIGN OF DIGITAL SERVICES" in white, bold, sans-serif font on a dark purple rectangular background. The background of the entire image is a green circuit board with a green leaf in the bottom right corner.

**ECODESIGN
OF DIGITAL
SERVICES**

APRIL 2022

ISO/IEC JTC 1/SC 39 Publications



ISO/IEC 19395 Smart Data Centre Resource Monitoring and Control
(Endorsement of ECMA-400)

ISO/IEC TR 30132-1 IT – IT sustainability – Energy efficient computing models – Part 1: Guidelines for energy effectiveness evaluation
(developed by WG 2 Green ICT)

ISO/IEC JTC 1/SC 39 – European impact



All activities of JTC 1/SC 39 are mirrored by CENELEC/TC 215

- ▶ In particular:
 - ▶ TC 215/WG 3 is in close cooperation with both SC 39/WG 1 and WG 3
 - ▶ TC 215/WG 3 adopts SC 39's publications as European Norms and other deliverables as appropriate (e.g. ISO/IEC 30134-X → EN 50600-4-X)
 - ▶ TC 215/WG 3 offers the result of it's European work to JTC 1/SC 39 as a basis for international adoption (e.g. Data Centre Maturity Model for EM & Sustainability)
 - ▶ TC 215 will deal with the new work of SC 39/WG 4

- ▶ Excluded from this endorsement programme is ISO/IEC 21836 „SEEM“, as this topic is already addressed by ETSI EN 303 470 „Energy Efficiency measurement methodology and metrics for servers“ (relevant in the context of ecodesign).

- ▶ SC 39/WG 1 is looking forward to cooperate with ETSI on the revision of EN 303 470 to keep International and European standardization technically aligned.

Thank you very much for your interest



Thomas H. Wegmann
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