Circular economy in Cities ITU-T Study Group 5 activities

Paolo Gemma
Chairman of Working Party 2 of ITU-T Study Group 5
FG-AI4EE Acting chairman
U4SSC Vice chairman

ITU-T Study Group 5: Environment, climate change and circular economy

SG5 is responsable for:

Studying ICT environmental aspects of electromagnetic phenomena and climate change.

Studies on how to use ICTs to help countries and the ICT sector to adapt to the effects of environmental challenges, including climate change, in line with the Sustainable Development Goals (SDGs).

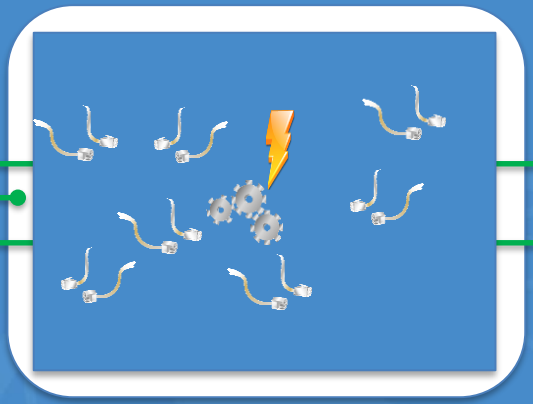
Lead Study Group for

- electromagnetic compatibility, lightning protection and electromagnetic effects
- ICTs related to the environment, climate change, energy efficiency and clean energy
- circular economy, including e-waste

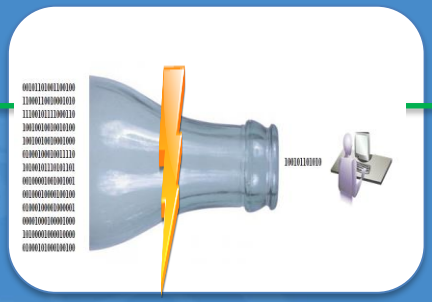
WP1/5 - EMC, lightning protection, EMF

WP2/5 - Environment, Energy Efficiency and the Circular Economy

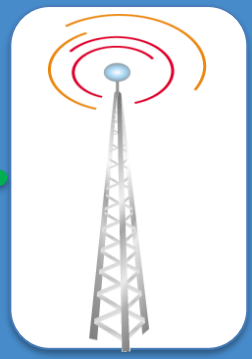
ITU-T SG5 Future key topics



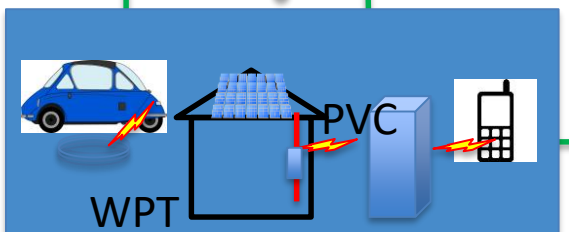
ICT protection



Internet data-centers protection



EMF exposure assessment from new and emerging technologies



EMC requirements in ICT facilities

Circular economy

KPIs to assess energy efficiency

ITU-T SG5 key international standards and supplements

Smart Energy, Energy Efficiency and Data Centre

- L.1300 – Best practices for green data centres
- L.1310 – Energy efficiency metrics and measurement methods for telecommunication equipment
- L.1320 – Energy efficiency metrics and measurement for power and cooling equipmet for telecommunications and data centres
- L.1370 - Sustainable and intelligent building services
- L.1380 Smart energy solutions for telecom site
- L.1305 Data centre infrastructure Management system based on big data and AI

Energy Efficiency and 5G

- L.1220 - Innovative energy storage technology for stationary use - Part 1: Overview of energy storage
- L.1221 - Innovative energy storage technology for stationary use - Part 2: Battery
- L.1222 - Innovative energy storage technology for stationary use - Part 3: Supercapacitor technology
- L.1210 Sustainable power feeding solutions for 5G network

ITU-T SG5 key international standards and supplements

E-waste and circular economy

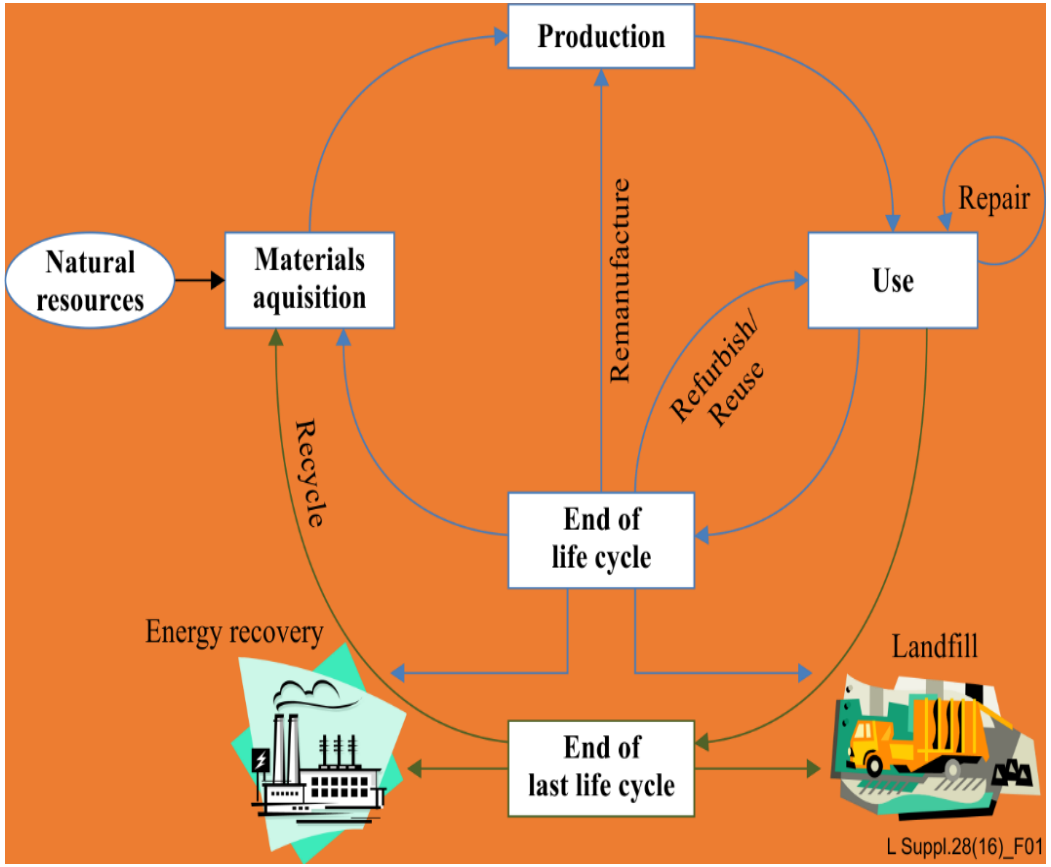
- L.1000 - Universal power adapter and charger solution for mobile terminals and other hand-held ICT devices (revised)
- L.1015 Criteria for evaluation of the environmental impact of mobile phones
- L.1020 Circular economy: Guide for operators and suppliers on approaches to migrate towards circular ICT goods and networks
- L.1022: Circular Economy: Definitions and concepts for material efficiency for Information and Communication Technology (on approval phase)

Climate change and assessment of ICTs

- L.1440 Methodology for environmental impact assessment of information and communication technologies at city level
- L.1450 Methodologies for the assessment of the environmental impact of the ICT sector
- L.1451 Methodology for assessing the aggregated positive sector-level impacts of ICT in other sectors
- L.1471 Trajectories of GHG emissions for the ICT sector
- L.1503 – Use of ICT for climate change adaptation in cities

L.1020 Circular economy: Guide for operators and suppliers on approaches to migrate towards circular ICT goods and networks

- Suggests approaches of circular economy (CE) for ICT mainly for Operator and their suppliers
- guide on how operators could work with their supply chain to improve CE aspects for ICT
- The goal is provide options to improve circularity and to enable operators and their suppliers to create business models for the promotion of circular networks for an optimum solution that uses all the loops of circularity – from sharing to recycling

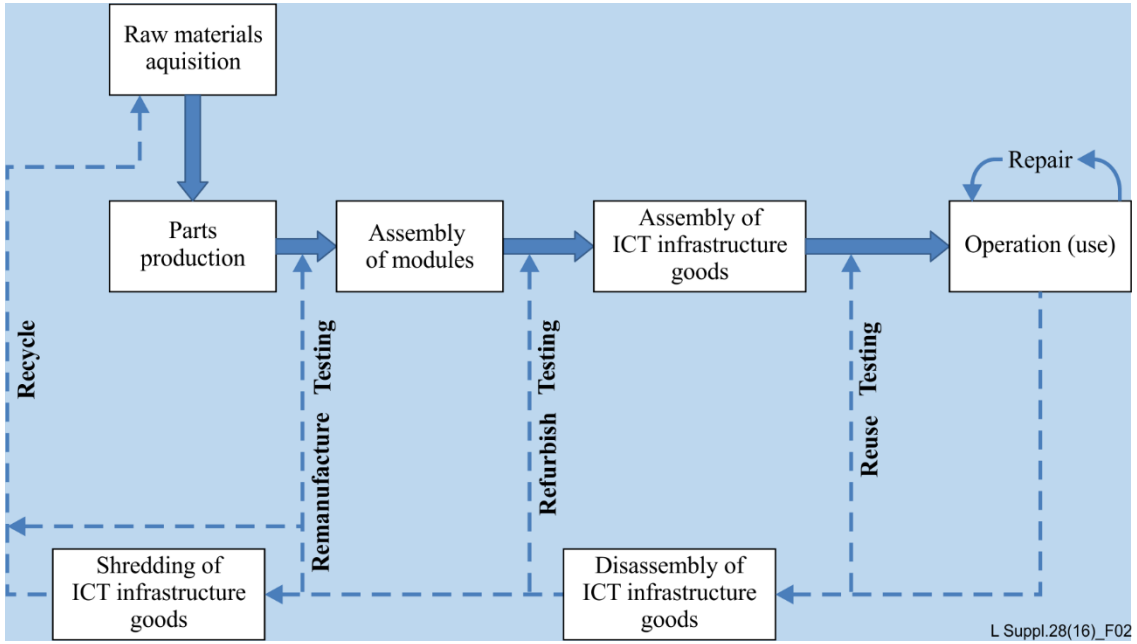


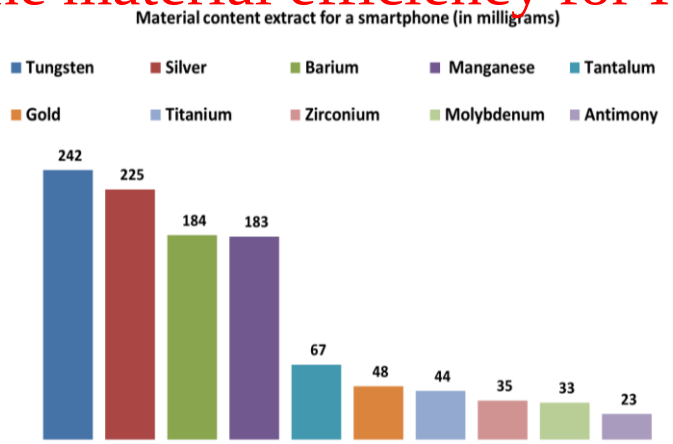
L.1022 Circular Economy: Definitions and concepts for material efficiency for Information and Communication Technolo

In final approval phase

circular economy (CE) aspects, parameters, metrics, indicators for information and communication technology (ICT) based on current approaches, concepts and metrics of the CE as defined in existing standards, while considering their applicability for ICT.

special considerations and challenges in a broader and more in depth context for all ICT defining parameters, metrics, and indicators with the intention to guide the vertical standardization of the material efficiency for ICT.





Focus Group on Environmental Efficiency for AI and other Emerging Technologies (FG-AI4EE)

Main objectives:

- Identify the standardization gaps related to the environmental performance of AI and other emerging technologies.

- Develop technical reports and technical specifications to address the environmental efficiency, as well as water and energy consumption of emerging technologies.

First meeting
12 December 2019 Wien

Management team:

Acting chairman: Paolo Gemma, Huawei Technologies Co., Ltd., China

Vice-Chairmen:

- Neil Sahota, Technossus, IBM & University of California
- Barbara Kolm, Austrian Economics Center & Austrian National Bank
- Kari Eik, Organization for International Economic Relations (OiER)
- Joel Alexander Mills, AugmentCity AS
- Mats Pellbäck Scharp, Ericsson (sustainability)
- Alice Charles, World Economic Forum (WEF)
- Lucy Lombardi, Digital & Ecosystem Innovation, TIM
- Peter Ulanga, Universal Communications Service Access Fund, United Republic of Tanzania