

Helping Countries and the ICT Sector to Achieve a Circular Economy

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Importance of Circular Economy



The world produces approximately 50 Mt of e-waste a year



Driving the Sustainable Development Goals



Support the shift to Net-Zero

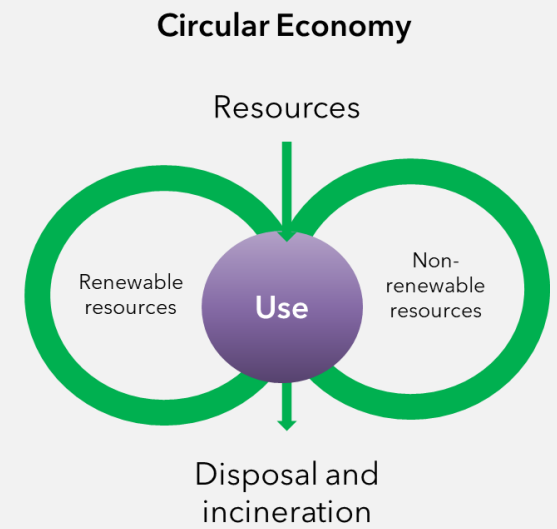
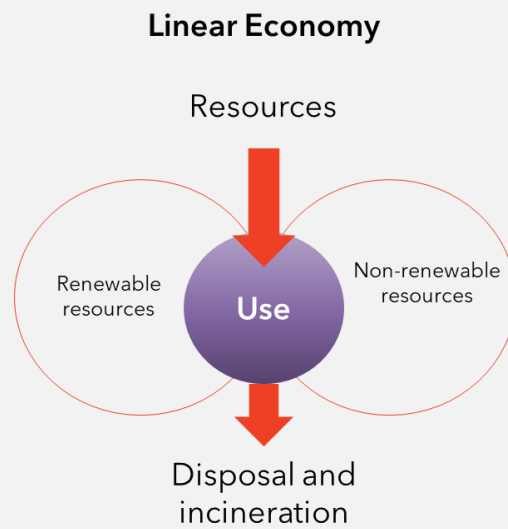


E-Waste management

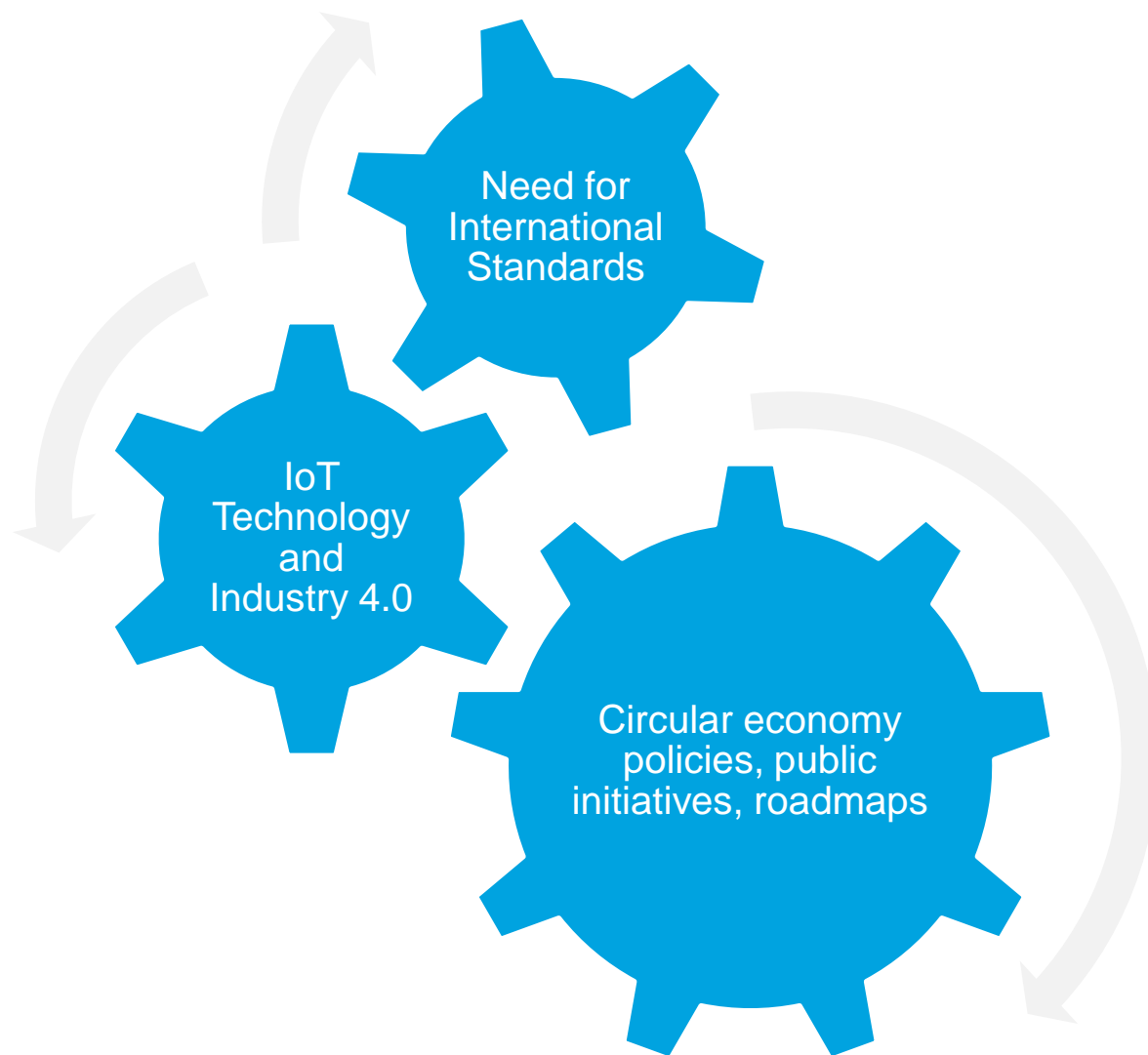


Global e-waste will reach 120 Mt by 2050

Shift to the Circular Economy



Supporting a Circular Transition



The Role of International Standards



ITU-T Study Group 5

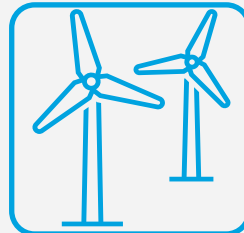


ICTs related to the environment,
energy efficiency, clean energy
and sustainable digitalization for
climate actions

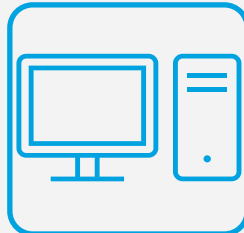


Circular economy and e-waste
management

EMF, Environment, Climate Action, Sustainable Digitalization and Circular Economy



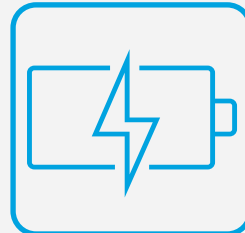
Q6/5
Environmental
efficiency of
digital
technologies



Q7/5 E-waste,
circular
economy and
sustainable
supply chain
management



Q9/5 Climate
change and
assessment of
digital
technologies
in the
framework of
the
Sustainable
Development
Goals (SDGs)
and the Paris
Agreement



Q11/5 Climate
change
mitigation and
smart energy
solutions



Q12/5
Adaptation to
climate
change
through
sustainable
and resilient
digital
technologies



Q13/5
Building
circular and
sustainable
cities and
communities

E-Waste Management ITU-T Recommendations and Supplements



Frameworks and guidelines

- ITU-T L.1030
E-waste management framework for countries
- Summarizes the different steps that countries need to adopt in order to put in place an e-waste management system.



Reduction

- ITU-T L.1000
Universal power adapter and charger solution for mobile terminals and other hand-held ICT devices
- Technical specifications for a universal charger compatible with a wide range of electronic devices



Take back systems

- ITU-T L.1021
Extended producer responsibility – Guidelines for sustainable e-waste management
- Describes and defines the role of EPR in dealing with e-waste.

E-Waste Management ITU-T Recommendations and Supplements



Recycling

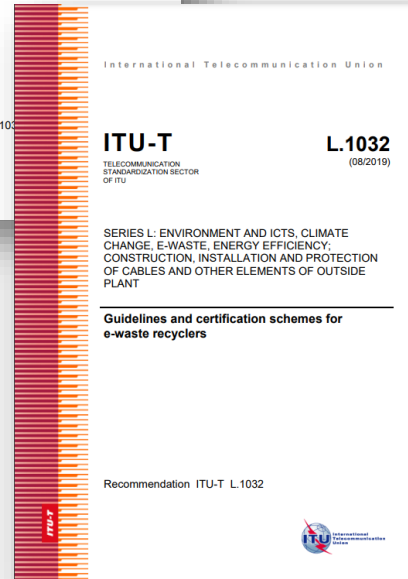
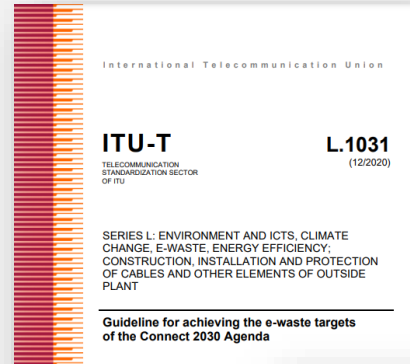
- ITU-T L.1100 Procedure for recycling rare metals in information and communication technology goods
- Basic guidelines regarding the importance of recycling rare metals and the procedures applied to preserve them.



Circular Economy

- ITU-T L. 1020 Circular Economy: Guide for Operators and Suppliers on approaches to migrate towards circular ICT goods and networks
- Provides guidance to operators and suppliers on how to improve circularity of products through supply chain actions.

Standards Supporting Countries



Step 1 Develop a comprehensive e-waste inventory

Step 2 Develop a sustainable e-waste management system

Step 3 Outline the requirements for successfully implementing e-waste programmes



GROWTH



INCLUSIVENESS



SUSTAINABILITY



INNOVATION



PARTNERSHIP

Strengthening Collaboration



Collaboration with other organizations



Working Together Towards Energy and Environmental Efficiency



Innovative Energy Storage



Innovative energy storage technology for stationary use:

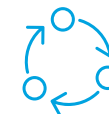
- **ETSI TS 103 553-1/ ITU-T L.1020** Part 1: Overview of energy storage
- **ETSI TS 103 553-2/ ITU-T L.1021** Part 2: Battery
- **ETSI TS 103 553-3/ ITU-T L.1023** Part 3: Supercapacitor

Energy Efficiency



- **ETSI ES 203 228 Ver. 1.1.1 / ITU-T L.1030**
Energy efficiency measurement and metrics for telecommunication networks
- **ETSI ES 203 228 Ver. 1.2.1/ ITU-T L.1031**
Assessment of mobile network energy efficiency

Circular Economy



“Assessment of material efficiency of ICT network goods Circular economy”

- **ETSI EN 303 800-1/ ITU-T L.Mat_frame**
Part 1: General for server and data storage equipment.
- **ETSI EN 303 800-2/ ITU-T L.ME_DD**
Part 2: Server and data storage product secure data deletion functionality.
- **ETSI EN 303 800-3/ ITU-T L.ME_AF**
Part 3: Server and data storage product availability of firmware and of security updates to firmware.
- **ETSI EN 303 800-4/ ITU-T L.ME_RM**
Part 4: Server and data storage product critical raw materials.
- **ETSI EN 303 800-5/ ITU-T L.ME_DIS**
Part 5: Server and data storage product disassembly and disassembly instruction.

Raising Awareness



ITUWebinars

Sustainable digital transformation dialogues

28-30 September 2021

ITU

ITUWebinars

10th Green Standards Week

Driving Sustainable Digital Transformation through sustainable e-waste management and circular economy

14-16 December 2021
16:00-19:00 CET

<https://itu.int/go/GSW2021>

ITU

ITUPublicaciones

Unión Internacional de Telecomunicaciones

Implementación de los estándares internacionales del UIT-T para la gestión sostenible de residuos de aparatos eléctricos y electrónicos:

En ruta hacia una economía circular en Costa Rica

En colaboración con:

ITU

Digital Product Passport (DPP)

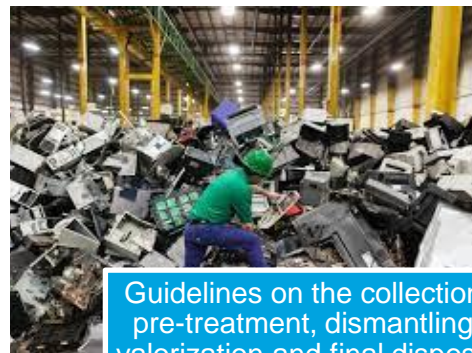
**Requirements for a global digital
sustainable product passport to achieve
a circular economy**



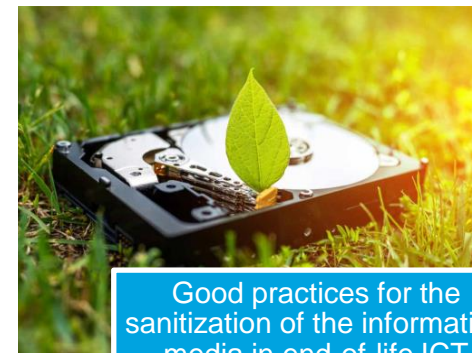
A joint ETSI/ITU initiative for a production of a common standard

Advancing Climate Response and Enhancing Environmental Protection

Take part in the key initiatives, moving the industry towards circularity



Guidelines on the collection, pre-treatment, dismantling, valorization and final disposal of WEEE



Good practices for the sanitization of the information media in end-of-life ICT devices



Public procurement of ICTs to mitigate the adverse effects of e-waste



Requirements for a global digital sustainable product passport to achieve a circular economy

Thank you!

Questions? Interested in learning more?

Let us know!



Email

tsbsg5@itu.int



Website

[SG5: Environment, climate
change and circular economy](#)