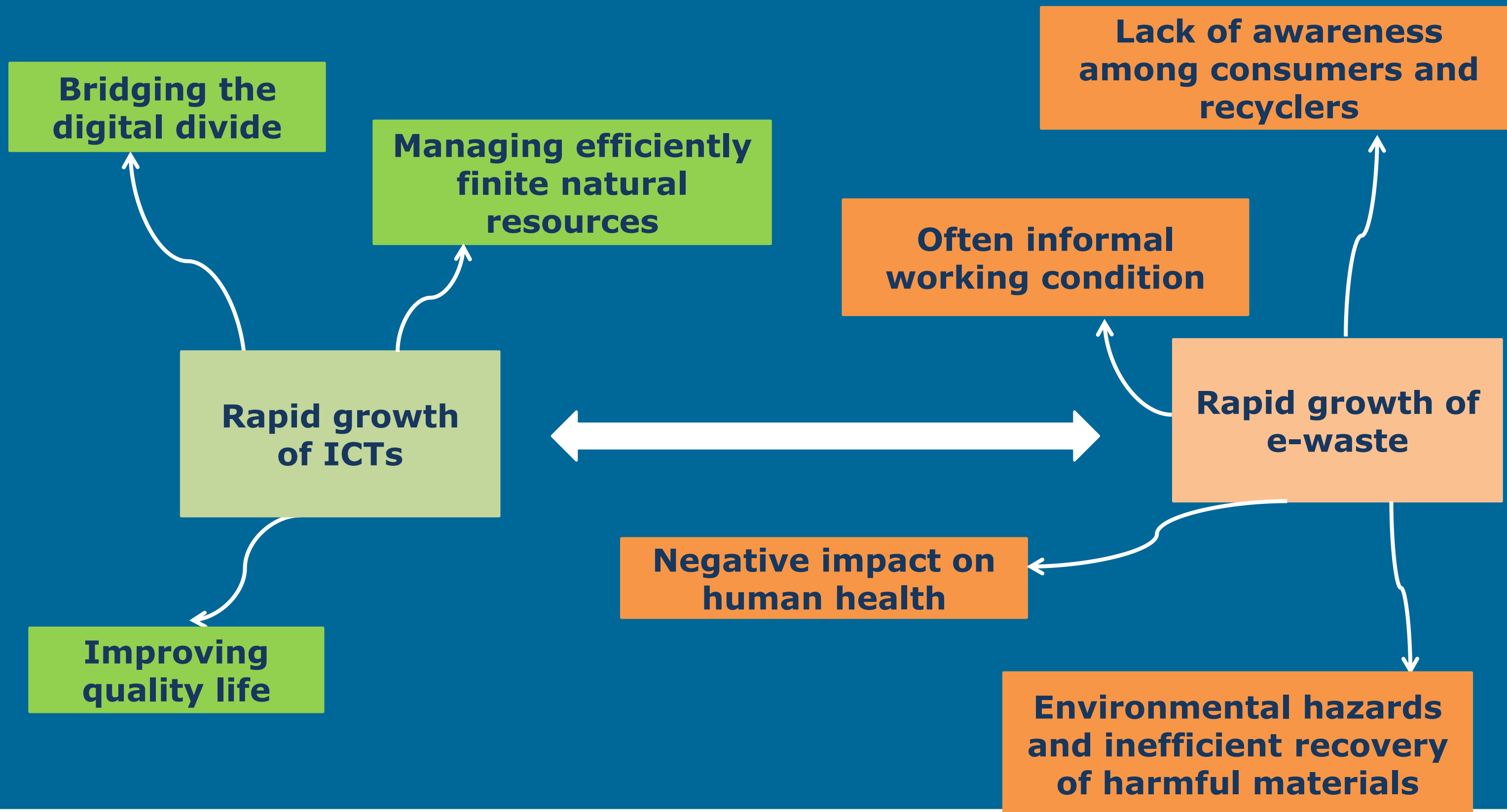


Environmental Sound Management of E-Waste

Cristina Bueti, Adviser, ITU



The e-waste problem



E-waste is the fastest growing waste stream

67

million metric tons of electrical and electronic equipment put in the market

53

million metric tons e-waste disposed of worldwide

For every **1** million cell phones that are recycled, **16** tons of copper, **350** kilos of silver, **34** kilos of gold and **15** kilos of palladium can be recovered.



The best way to deal with e-waste is avoid it!

- Designing for easy disassembly and recycling of equipment
- Avoiding use of heavy pollutants
- Minimization of the use of resources
 - ✓ Regulations and standards
- Prolonging lifetime of equipment
- E-waste management



Standardization can fill the gap and lead the market

What ITU does to improve environmentally sound management of e-waste...

- **Assist countries** to develop and implement policies on e-waste management
- **Help companies** becoming more sustainable and socially responsible
- **Research** and development
- **Raise awareness**



Leading with vision... envisioning a sustainable future

Raising awareness on the role of global standards in facilitating an integrated waste management approach to:

- generate decent employment,
- curb health problems,
- cut greenhouse gas emissions and
- recover a wide range of valuable metals including silver, gold, palladium, copper and indium – by **turning an e-challenge into an e-opportunity**.



ITU-T Study Group 5

“Environment & Climate Change”



Lead study group on ICTs and climate change

- **Q 13/5 - Environmental impact reduction including e-waste**



Ongoing activities of Q13/5

- International standards (ITU-T Recommendations)
- Technical report on life-cycle management of ICT equipment
- Best practices on e-waste management in developing countries including information on country success stories
- Implementation guide on e-waste management



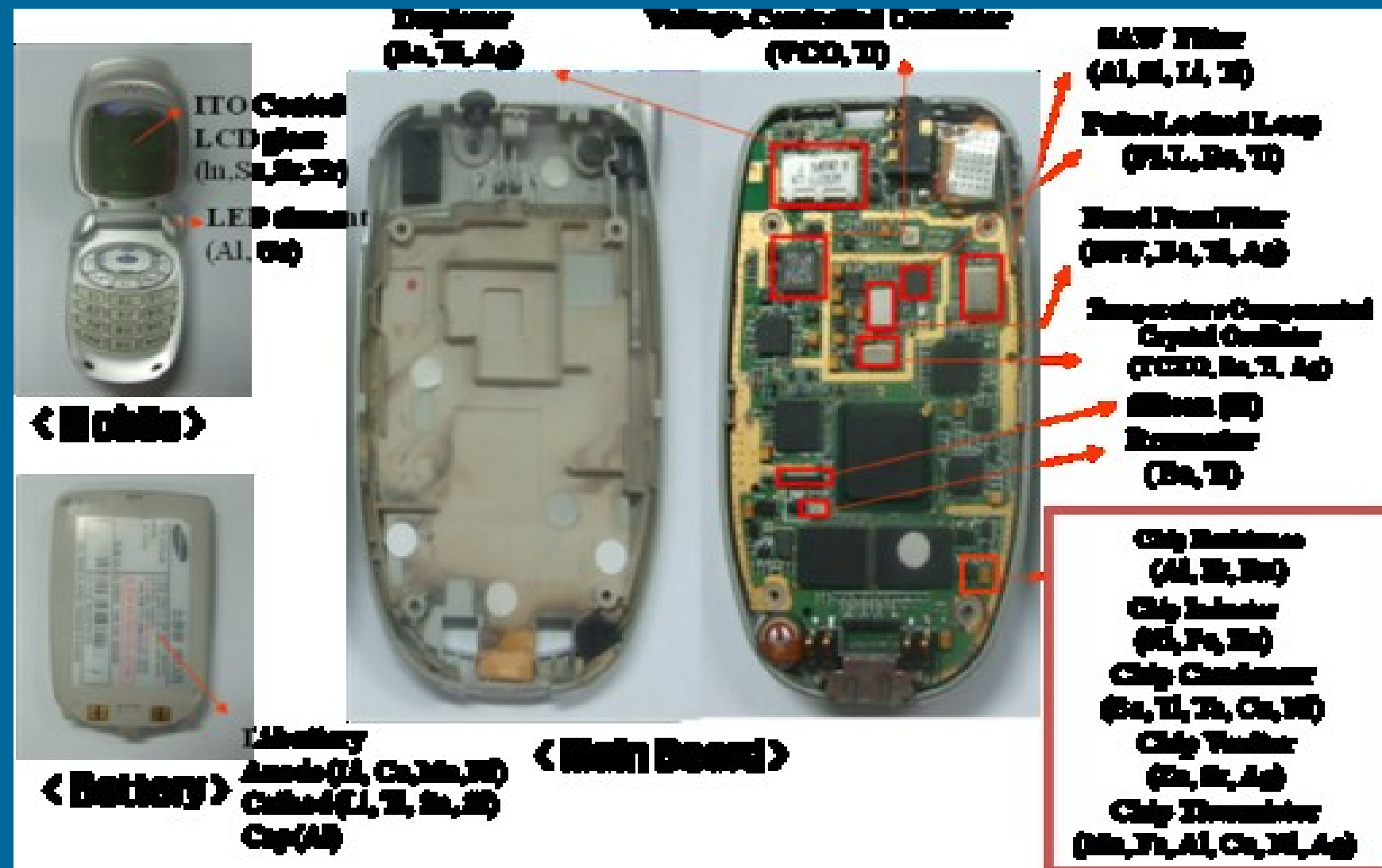
One adapter size fits all



- Saves 82,000 tons of e-waste per year
- Saves at least 13.6 million tonnes of CO2 emissions annually



Recycling Rare Metals in ICT Products

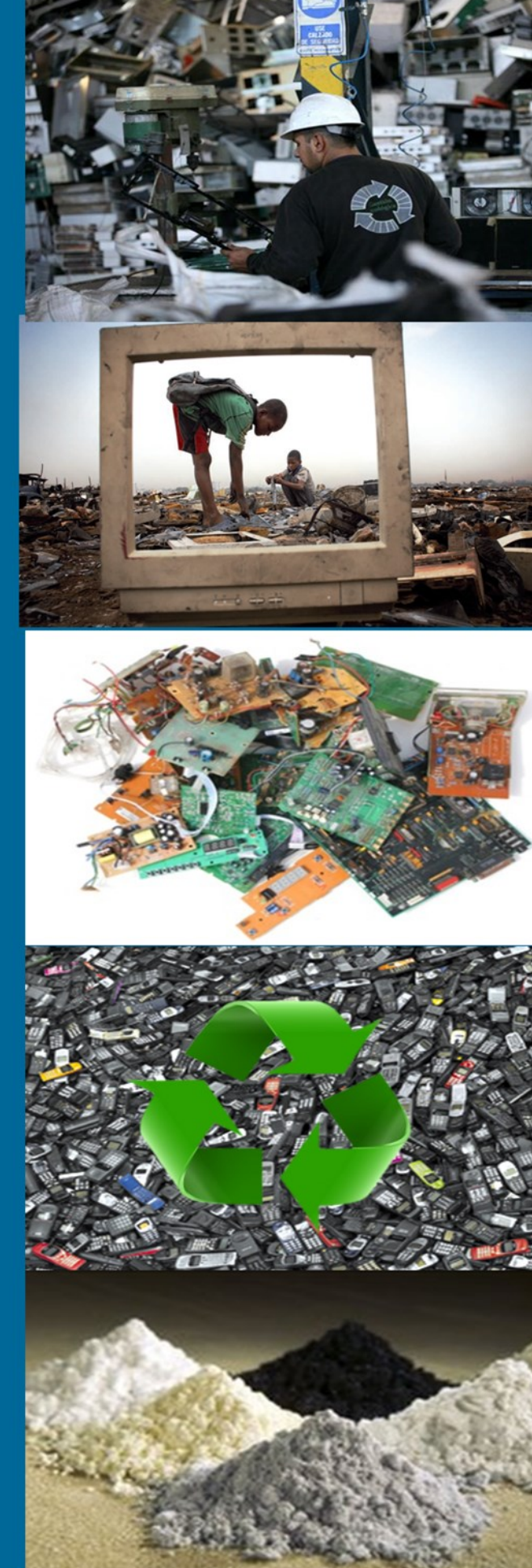


- Recommendation ITU-T L.1100 provides information on the recycling procedures of rare metals in ICT goods.

Research & development: Identifying standards and policy needs



An Energy-Aware Survey on ICT Device Power Supplies



GeSI
GLOBAL e-SUSTAINABILITY
INITIATIVE



Toolkit on end-of-life management for ICT equipment

An outline of the various EOL stages (and accompanying legislation) , and support for creating a framework for environmentally-sound management of EOL ICT equipment.

End-of-life management

Material recovery and recycling

Clean supply chains

Offsetting and mitigation



Global Portal on ICTs, Environment and Climate Change

Launched in February 2014



ITU-T GREEN ICT STANDARDS



ITU develops Green ICT Standards to create, enable and ensure regulation for Green ICTs; continuing its aim on closing the standardization gap.

CLIMATE CHANGE



Promoting the use of ICTs in both climate change adaptation and mitigation, for the prevention of environmental degradation and the reduction of GHG emissions.

SMART WATER MANAGEMENT



Promoting ICT use towards a smarter more sustainable way to manage water resources.

SMART SUSTAINABLE CITIES



sustainable cities.

Maximizing contributions of ICTs to smart grids and smart meters, smart buildings and urban planning as well as smart mobility and electric vehicles towards the development of smart

E-WASTE



Empowering institutional and governmental capabilities on the reduction of E-Waste and municipal waste.

GREEN ICT PROCUREMENT



Strengthening capacities within institutions to procure the appropriate Smart Logistics and Green ICTs.

CLOUD COMPUTING AND DATA CENTERS



Realizing the potential of cloud computing and data centres on environmental sustainability and climate change mitigation and adaptation.

GREENING ICT SUPPLY CHAINS



Advocating the Greening of ICT supply chains for sustainability as well as the use of ICT tools to help measure, certify and lower the impact of the supply chain of other products



Next steps for policy makers

- Policy makers should have **long-term sustainability ambitions**
 - ✓ Consider e-waste management in the **design** of ICT policies
 - ✓ Implement **international standards** at the national level
 - ✓ Encourage concerted cooperation in handling e-waste at the national, regional and international level
- Foster public-private **partnerships**
- Raise **awareness** at consumer level
- Encourage concerted cooperation in handling e-waste at the national, regional and international level



Get engaged in ITU's activities!



Background Information





ITU-T's mandate

Resolution 79 – “The role of telecommunications/ information and communication technology in handling and controlling e-waste from telecommunication and information technology equipment and methods of treating it”.



- Consented at World Telecommunication Standardization Assembly (Dubai, 2012);
- Contribute to alleviate the negative impact of e-waste on the environment and health.



ITU-T Recommendations

Power Supply series

- Recommendation ITU-T L.1000: Universal power adapter and charger solution for mobile terminals and other hand-held ICT devices.
- Recommendation ITU-T L.1001: External universal power adapter solutions for stationary information and communication technology devices.
- Recommendation ITU-T L.1002: External universal power adapter solutions for portable information and communication technology devices.
- Recommendation ITU-T L.1005: Test suites for assessment of the universal charger solution.

Batteries

- Recommendation ITU-T L.1010: Green batteries solution for mobile phones and other hand-held information and communication technology devices.

E-Waste

- Recommendation ITU-T L.1100: A method to provide recycling information of rare metals in ICT products.
- Recommendation ITU-T L.1101: Measurement methods to characterize rare metals in information and communication technology goods.



Links & Additional Information

- ITU-T/SG5 “Environment & Climate Change”
itu.int/ITU-T/studygroups/com05/
- ITU-T and Climate Change
itu.int/ITU-T/climatechange
- ITU Symposia & Events on ICTs and Climate Change
itu.int/ITU-T/worksem/climatechange



Thank YOU
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