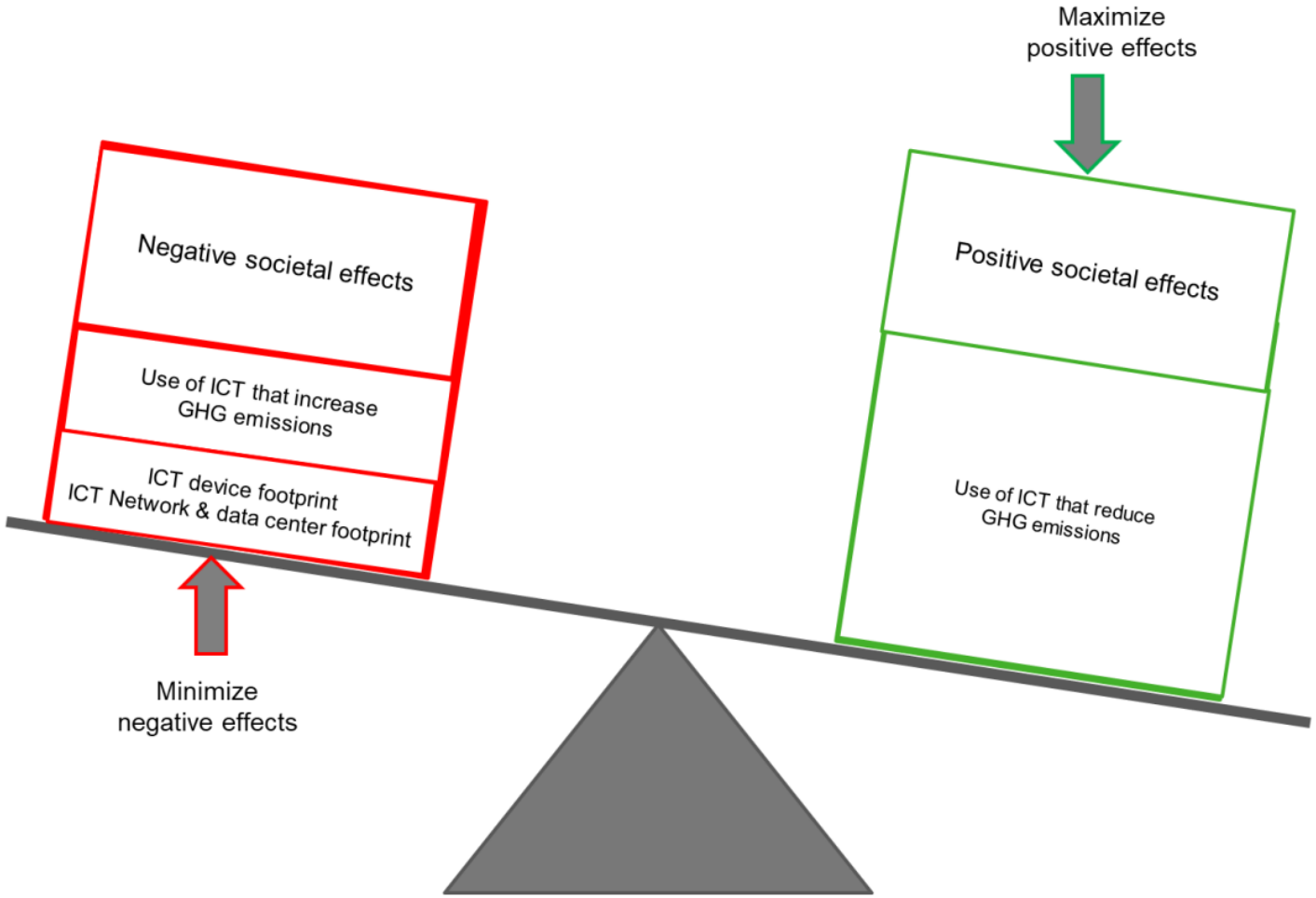
Understanding the role of assessments: unveiling insights for sustainable ICTs

Overview of Recommendations from ITU-T Study Group 5

Jean-Manuel Canet, Vice-Chair, ITU-T SG5

Ouagadougou Symposium, 9 May 2024

The double-edged nature of ICTs



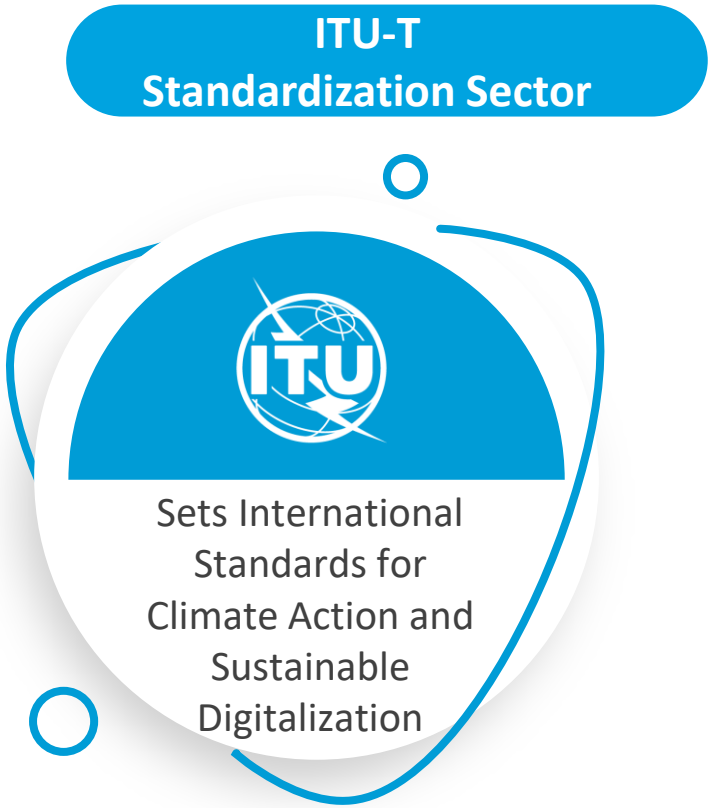
The ICT Sector and Climate Change

- ICT companies are playing a notable role in the race to a low-carbon transition.
- They are at the forefront of efforts to reduce greenhouse gas (GHG) emissions, with huge purchases of renewable energy, investment in carbon removal and issuance of green bonds.
- Digital products and services have a significant enabling impact by giving other sectors the means to reduce their own emissions.

The ITU has set the target for the ICT industry to reduce its own GHG emissions by 45% by 2030, compared to 2020 levels

Exploring standards, reporting and internal monitoring

How is ITU supporting the ICT sector?



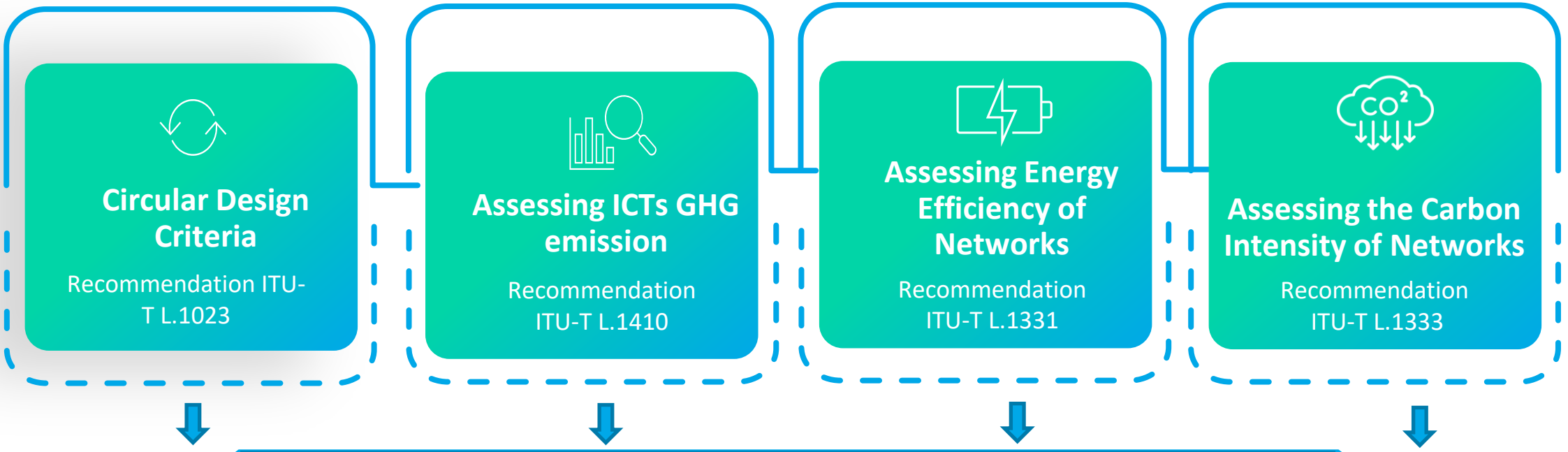
ITU-T Study Group 5

EMF, environment, climate action, sustainable digitalization, and circular economy

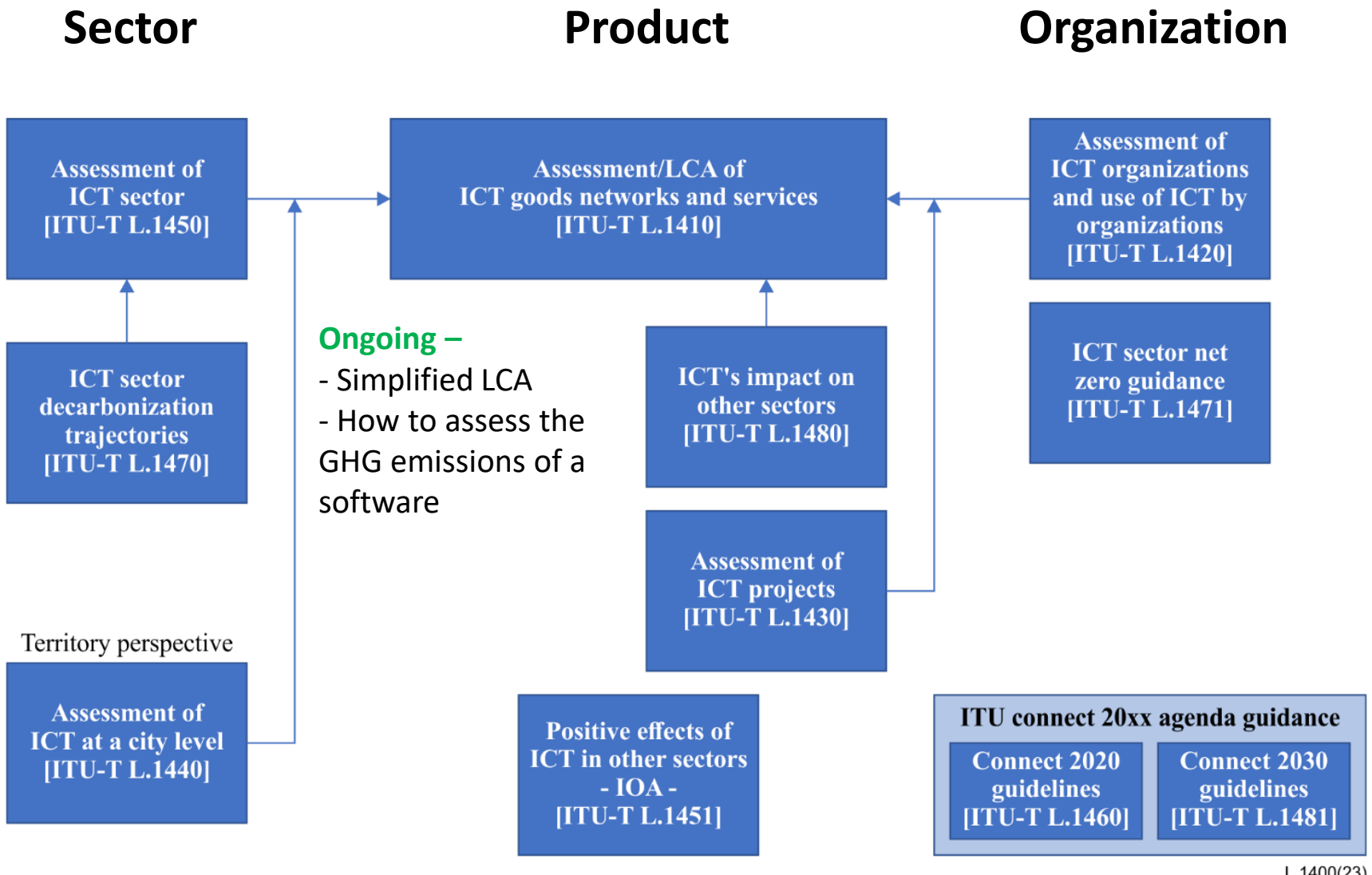
- Electromagnetic compatibility, resistibility and lightning protection
- Soft error caused by particle radiations
- Human exposure to electromagnetic fields
- Circular economy and e-waste management
- ICTs related to the environment, energy efficiency, clean energy and sustainable digitalization for climate actions

ICT sector's commitment to 1.5°C and the Sustainable Development Goals

ITU-T Standards Driving Sustainable ICTs



Enabling the Net Zero Transition



Ongoing –
GHG emissions database worldwide and national level

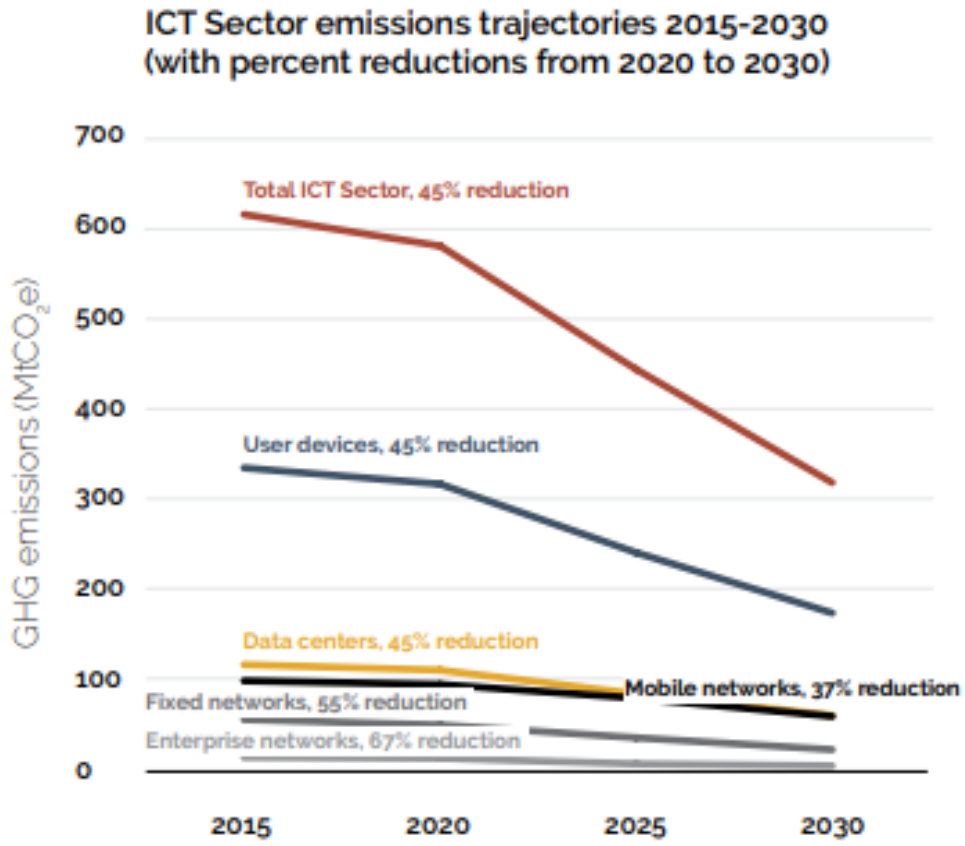
Ongoing –
- Simplified LCA
- How to assess the GHG emissions of a software

New Guidance on Scope 3 for telecom operators (L.Suppl.57)

Exploring standards, reporting and internal monitoring

Setting 1.5°C Trajectories for the ICT sector

Figure 1: Summary of ICT sector and sub-sector trajectories including embodied emissions and operation



GeSI ENABLING DIGITAL SUSTAINABILITY · GSMA · SCIENCE BASED TARGETS DRIVING AMBITIOUS CORPORATE CLIMATE ACTION · iea · ITU

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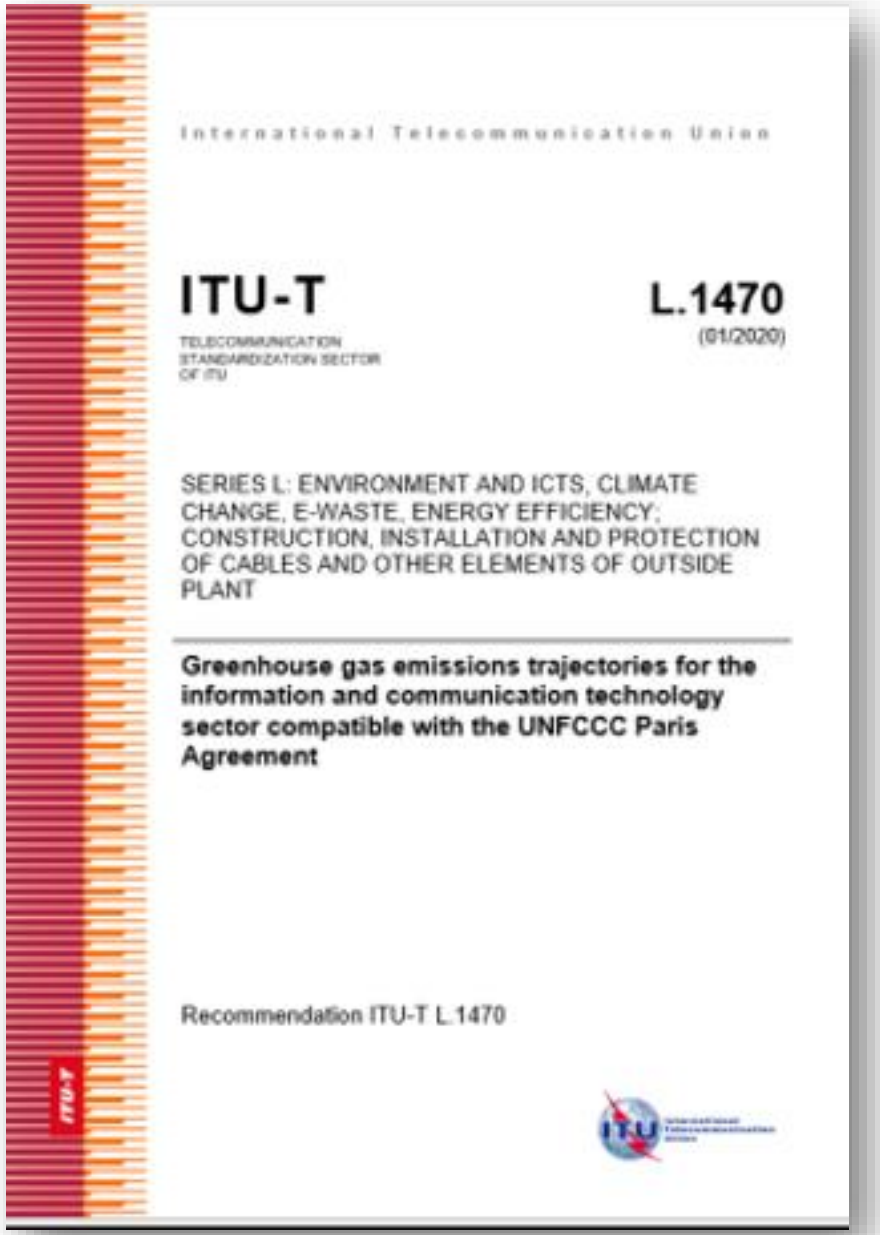
Several steps to decarbonize ICT activities:

- Assess baseline
- Set medium term and long-term targets
- Elaborate a transition plan (which includes reduction and adaptation plan)
- Implement it / adjust it



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Reduce emissions sufficiently quickly:
some examples

CATEGORIES:

OPERATING ENERGY-EFFICIENT NETWORK

1. Multiple power saving features
2. Alternative energy supply
3. Consolidation and virtualization
4. Free cooling and location optimization

EFFICIENCY IN BUILDINGS AND SERVICES

5. Monitoring solutions for efficient buildings
6. Focus on energy conservation measures
7. Alternative mobility concepts
8. Videoconferencing and audioconferencing

ALTERNATIVE ENERGY

9. Self-production of renewable energies
10. Purchasing renewable energy the certificate of origin and PPA
11. Energy supply innovation

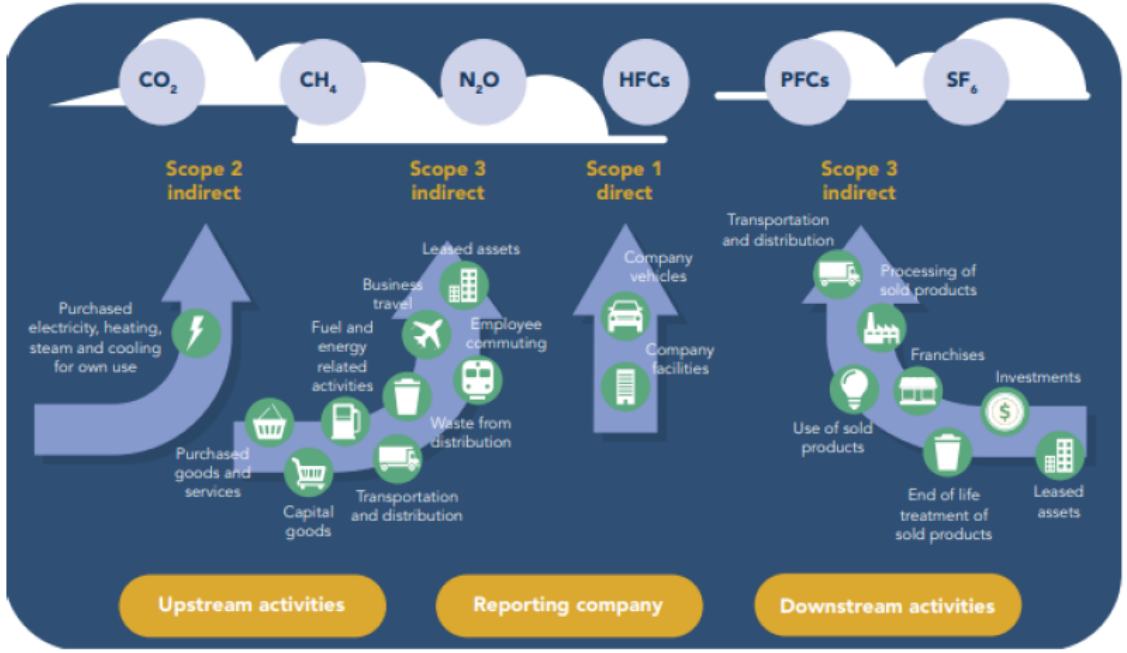
APPLICATION OF THE CIRCULAR ECONOMY PRINCIPLES

12. Eco-design of products and services
13. Reuse of network equipment
14. Optimizing the life cycle and end-of-life of customer products and services
15. Selling repairable products

L.1470(20)_F16

Reporting Standards

What is the GHG Protocol?



The GHG Protocol is a corporate accounting and reporting standard which companies can use to calculate carbon dioxide equivalent (CO2e) emissions.

Scope 1 emissions result directly from the company operations.

Scope 2 refers to indirect emissions not controlled by the company.

Scope 3 refers to upstream and downstream emissions related to a company's activities.

Assessing and Reporting on Scope 3 Emissions

Scope 3 emissions cover a wide range of economic activities that are divided into 15 Categories.

Upstream activities	Downstream activities
Category 1: Purchased goods and services	Category 9: Downstream transportation and distribution
Category 2: Capital goods	Category 10: Processing of sold products
Category 3: Fuel- and energy-related emissions[92]	Category 11: Use of sold products
Category 4: Upstream transportation and distribution	Category 12: End-of-life treatment of sold products
Category 5: Waste generated in operations	Category 13: Downstream leased assets
Category 6: Business travel	Category 14: Franchises
Category 7: Employee commuting	Category 15: Investments
Category 8: Upstream leased assets	

Assessing and Reporting on Scope 3 Emissions

The document establishes guidance to harmonize methods for telecommunication operators to assess and report their Scope 3 GHG emissions, and to increase coverage and transparency.

This guidance prioritises in particular:

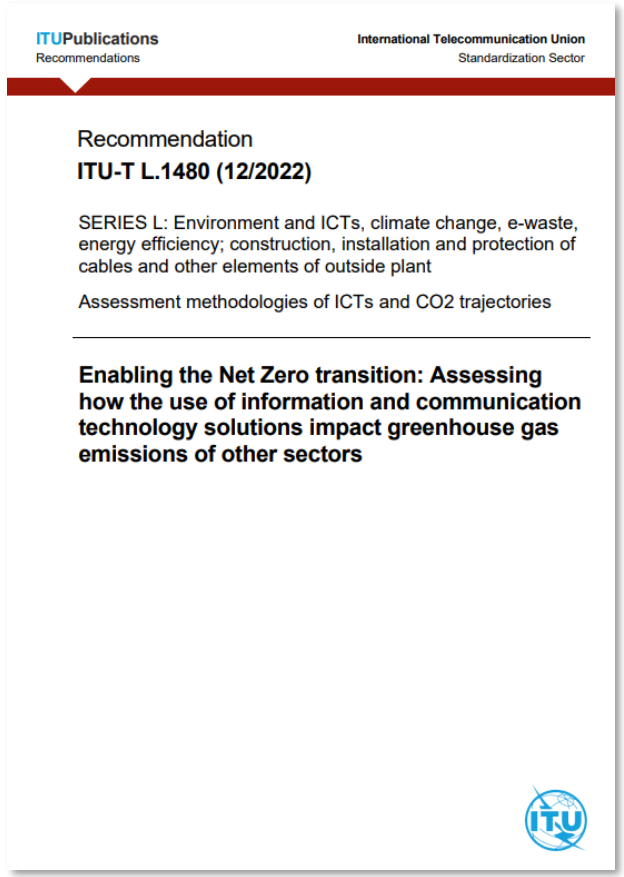
- Categories 1-2 and 11 (which address the life cycle impact of companies' portfolios),
- Categories 8 and 13, related to leased assets
- Category 3 (which is closely linked to Scope 1 and 2)

Exploring standards, reporting and internal monitoring

Guiding Principles

	Descriptions
Goal is reduction	• Estimating emissions should be used to drive reduction efforts
Hot-spotting	• Focus time and effort on largest emission sources
Keep it simple	• Use the simplest approach that will give required accuracy and best support reduction goals
Scale	• Covering more emissions can help with business decisions
Improve accuracy over time	• Data availability and quality are improving each year
Suitable for all	• Approaches for both beginners and those more advanced
Follow science-based principle	• Related to Net Zero standards from ISO [b-ISO 14064-1] or the Science Based Targets Initiative [b-SBTi] or ITU-T Recommendations [b-L.1470] and [b-L.1471]
Focus on mitigation	• Carbon offsets, whether purchased by the telecommunication operator or a supplier/customer shall not be considered as a valid means of reducing CO2e inventories.

Enabling the Net Zero transition: ITU L.1480


ITUPublications
Recommendations

International Telecommunication Union
Standardization Sector

Recommendation
ITU-T L.1480 (12/2022)

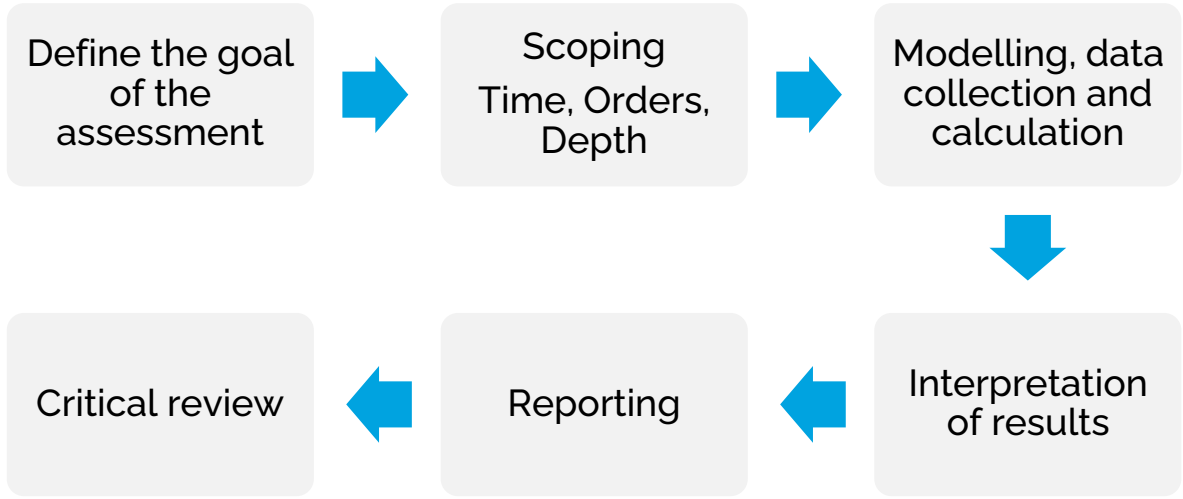
SERIES L: Environment and ICTs, climate change, e-waste, energy efficiency; construction, installation and protection of cables and other elements of outside plant

Assessment methodologies of ICTs and CO2 trajectories

Enabling the Net Zero transition: Assessing how the use of information and communication technology solutions impact greenhouse gas emissions of other sectors

- Provides a methodology on **how to assess ICT and digital technologies solutions impact GHG emissions**

Six steps to assess an ICT solution



Example: Assessing the impact of a virtual event

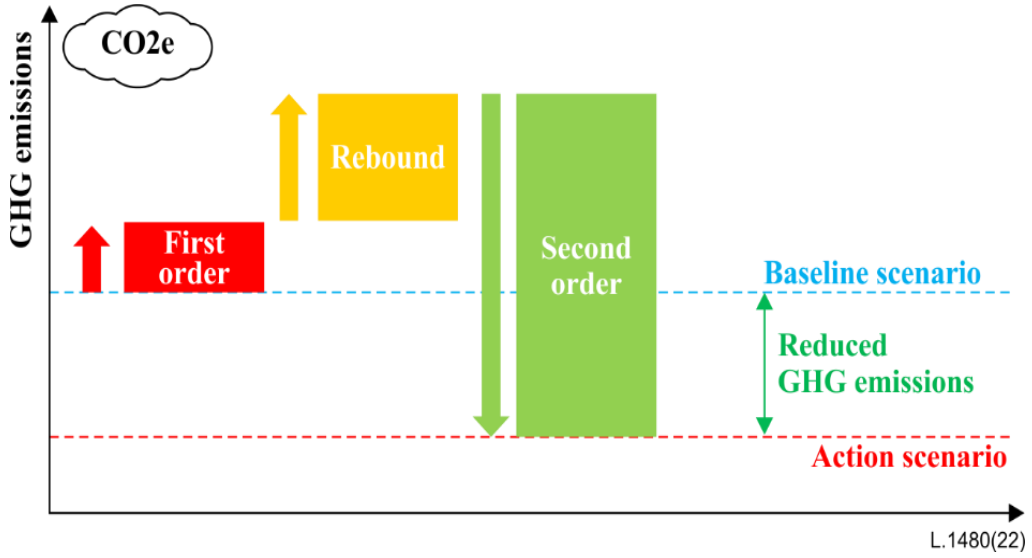
Some examples of ICT solutions

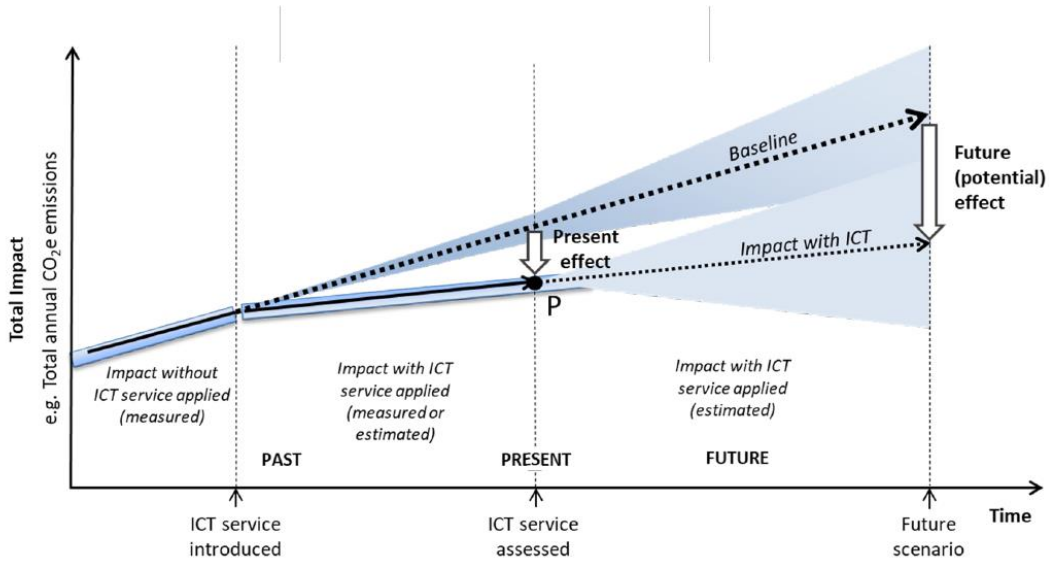
Sector	Solution	Mechanism
Energy supply transformation and consumption	Improved metering and forecasting of electricity supply and demand	Optimization
	Optimization of grids, including load balancing through demand response	Optimization
	Improved energy system through demand side management	Optimization
Industry	As-a-service and sharing solutions	Optimization and/or substitution
	Circularity	Optimization
	Production efficiency	Optimization
Buildings	Intelligent building energy and resource management	Optimization
	Optimized use and sharing of buildings	Optimization and/or substitution
Transport	Virtual meetings	Substitution
	Remote work	Substitution
	Route optimization	Optimization
	Fleet management and logistics	Optimization
	Ecodriving	Optimization
	Shared mobility	Optimization and/or substitution
Agriculture and forestry	Precision agriculture	Optimization
	Precision forestry	Optimization
Nature-based sinks	Forest protection	Providing information and managing data Facilitation, accessibility, affordability and rising motivation

Digital education and training for all sectors allowing a quicker and more efficient transition

Reskilling and Upskilling

The effects considered in L.1480





Consider different effects positive and negative

Different scenarios considered

Green Digital Action @COP28

Green Digital Action aims to **enhance collaboration, fast-track industry-wide commitments** to addressing climate challenges, and put **digital solutions** at the forefront of **climate action**.

ICT Sector GHG emissions:

Commitment 1:
Companies commit to:

- Setting (or already have set) 1.5 degree aligned science-based targets;
- Create and publish transition plans

Commitment 2:
Contribute to an ICT sector database creation on products and services.

- Invitation to join existing standardization efforts in **ITU-T SG5.**

Commitment 3:
Companies commit to:

- Report data on all GHG emission scopes and categories yearly, publicly and submit results to a public ITU database.

Green Digital Action @COP28

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Green Standards:

Call to Action
From Commitment to action: Implementing Standards for a sustainable future

Action Plan and launch of a peer-learning working group to strengthen industry and country collaboration on the implementation of **environmental sustainability standards.**

IEC ISO ITU

Statement by the World Standards Cooperation
COP 28, Dubai UAE

As the world's leading developers of international standards, we pledge to uphold the principles that allow sustainability to be built into their development by design, and to delivering the standards that make both business and environmental sense.

Key Messages (1)

Importance of ICT Sector Setting Net Zero Targets and delivering reductions:

Driving global sustainability: ICT sector's commitment to net zero emissions, guided by international standards such as those from ITU, amplify the impact on combating climate change.

Measuring Scope 3 Emissions of the ICT Sector:

Understanding the full impact: Measuring Scope 3 emissions enables ICT companies to assess their supply chain and product use impacts. This empowers the ICT sector to **take responsibility for emissions on all value chains, fostering transparency and informed decision-making**."

Key Messages (2)

Keeping the ICT Sector's House in Order:

Ensuring accountability: By adhering to standards and addressing internal emissions and environmental practices, the ICT sector strengthens its credibility and integrity.

Helping other sectors to reduce their impact on environment :

Ensuring accountability: By assessing in a robust manner the impact of the use of ICT solutions, using the standard L.1480, the ICT sector strengthens its credibility and integrity.

Collaborative Action for Collective Impact:

Partnerships for progress: Collaborating with stakeholders across sectors, the ICT industry amplifies its impact, accelerating the transition to a low-carbon economy.

Join the GDA commitments

Green Digital Action

- Commit to science based targets for emission reduction and development of decarbonization transition plans
- Commit to annual public reporting of GHG emissions and submission to an ITU database(coming soon)

Join for these commitments here.

Join the standardization efforts of **ITU-T Study Group 5 "Environment, EMF and Circular Economy"**

Thank you!

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SG5: Environment, climate change and circular economy