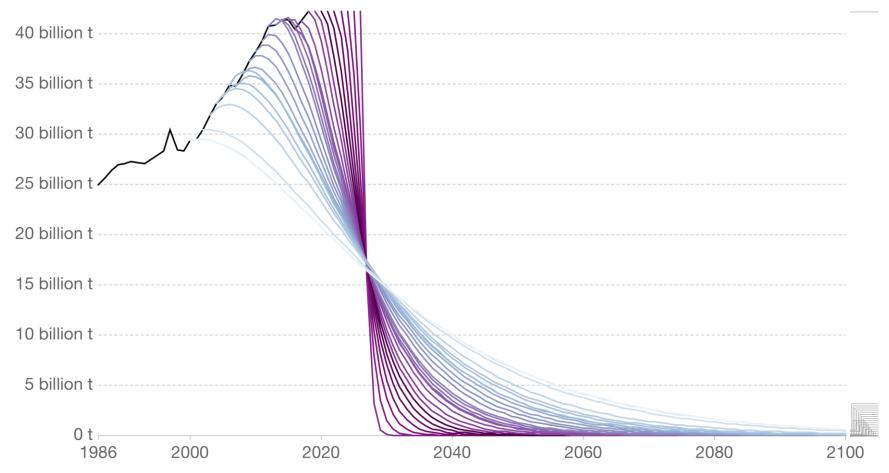
Enabling the Net Zero transition – the role of ICT and the importance of robust methodologies

The net zero transition – halving emissions by 2030 is a prerequisite

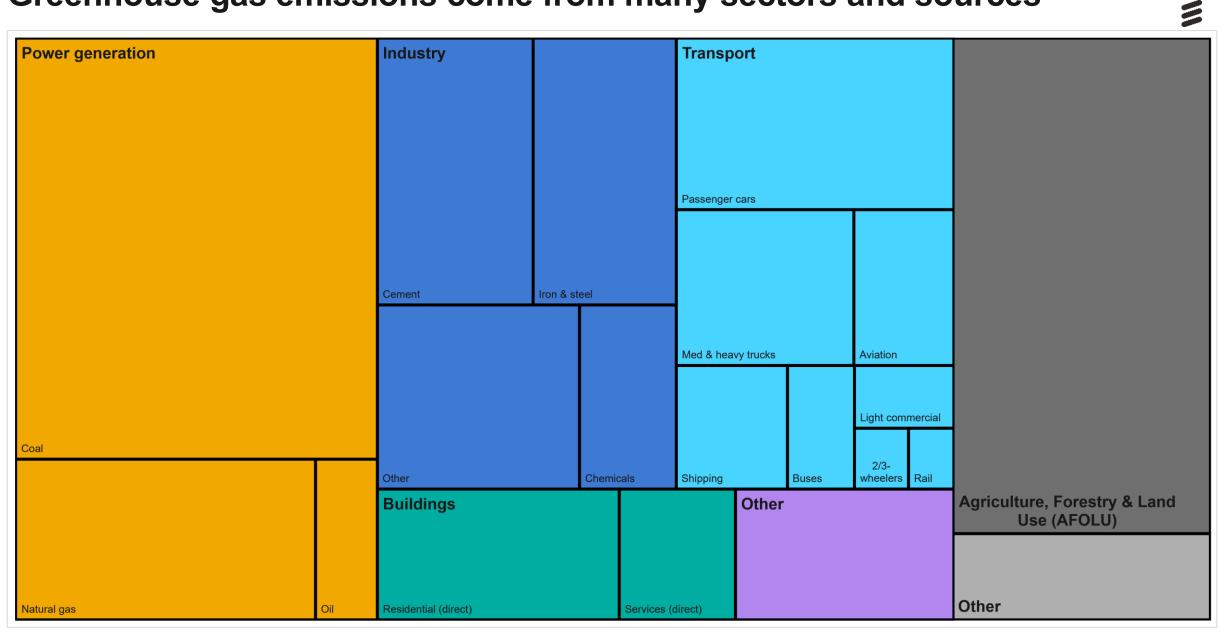




Source: Robbie Andrews (2019); based on Global Carbon Project & IPPC SR15 Note: Carbon budgets are based on a >66% chance of staying below 1.5°C from the IPCC's SR15 Report. OurWorldInData.org/co2-and-other-greenhouse-gas-emissions • CC BY

exponentialroadmap.org

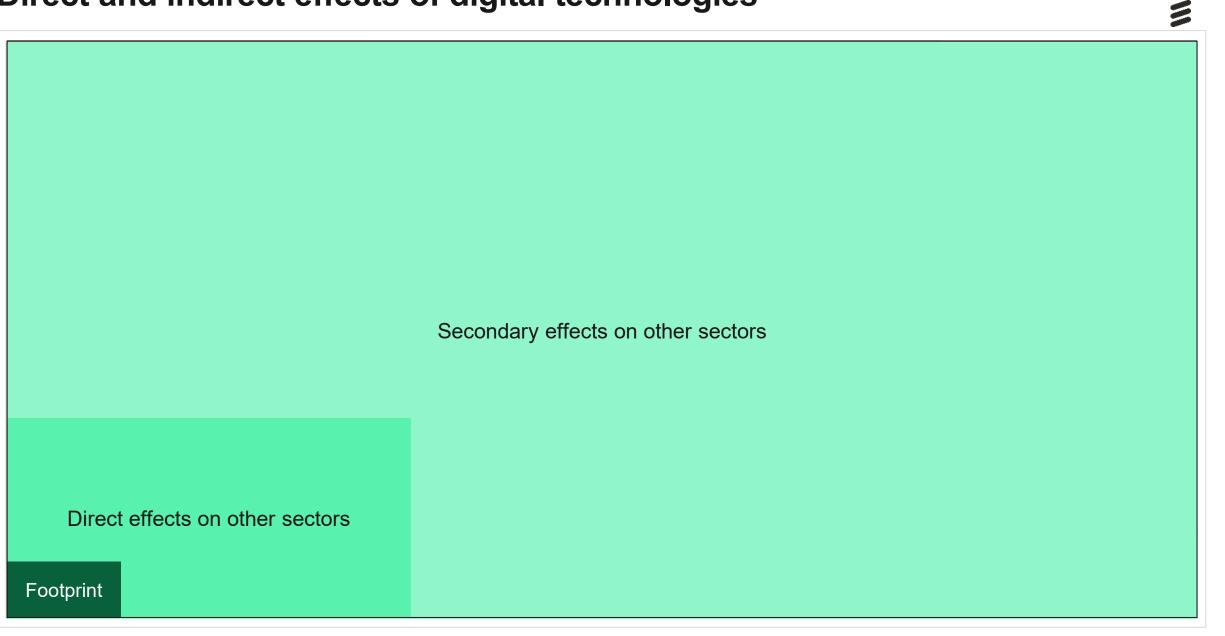
Greenhouse gas emissions come from many sectors and sources



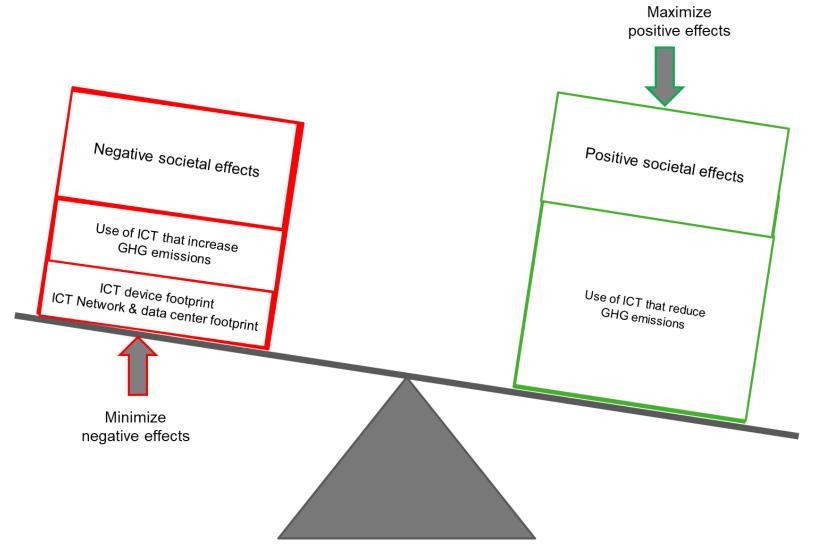
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Source: Our World in Data (2020). Emissions by sector. IEA (2020), Energy Technology Perspectives.

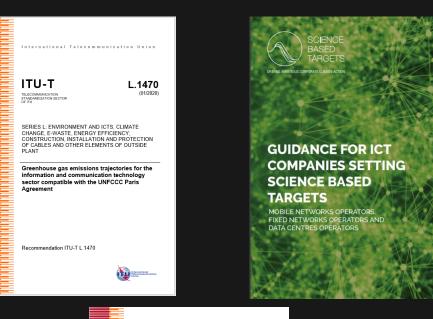
Direct and indirect effects of digital technologies

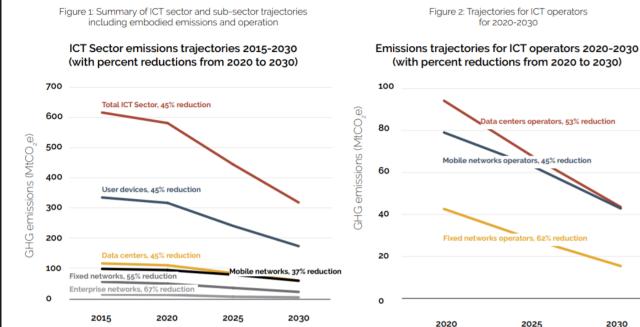


The role of ICT in the Net Zero transition



1.5C aligned trajectories for the ICT sector towards Net Zero





ITU-T 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

International Telecommunication Union

Guidance and criteria for information and communication technology organizations on setting Net Zero targets and strategies

Recommendation ITU-T L.1471

ÎTU

L.1471 (09/2021



https://www.itu.int/rec/T-REC-L.1470 https://www.itu.int/ITU-T/recommendations/rec.aspx?rec=14318 https://www.itu.int/rec/T-REC-L.Sup38-202010https://sciencebasedtargets.org/sectors/ict

2030

New interlinked technologies provide great opportunities across sectors - but also risks

Digital technology	Opportunities	Risks	ENERGY SUPPLY
5G IoT	Materials & energy efficiency Circular flows	Maintaining high-carbon industries and processes Magnifying unsustainable consumption	INDUSTRY
AI, ML, Deep learning	Knowledge		BUILDINGS & CITIES
Digital twin	Behavioural changes System optimization		TRANSPORT
Blockchain	Transparency & coordination		FOOD CONSUMPTION
Social media, e-commerce	Engagement, nudging, information	Engagament, nudging, desinformation	NATURE BASED SOLUTIONS



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The multifaceted climate impact of ICT

Indirect impacts

Second and higher order effects

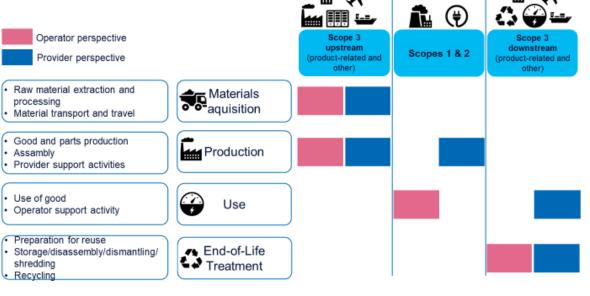


Direct impacts

First order effects

Product perspective Life cycle stages (LCA)

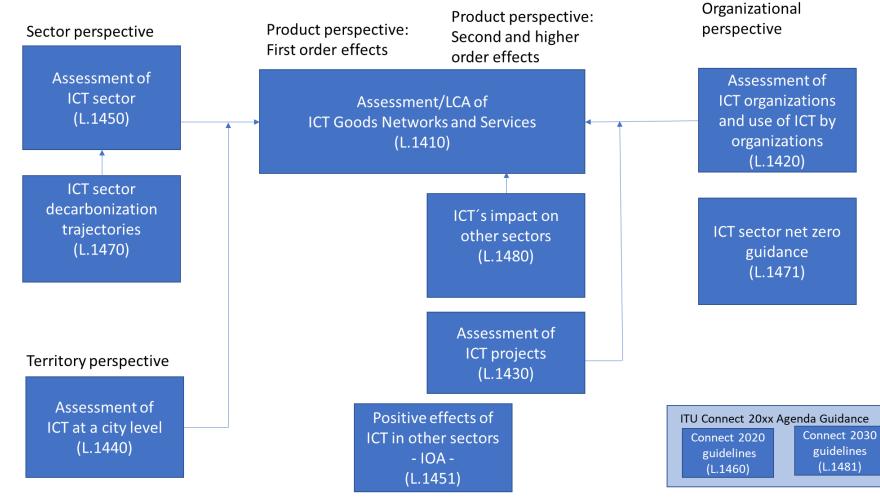
Organizational perspective Scopes



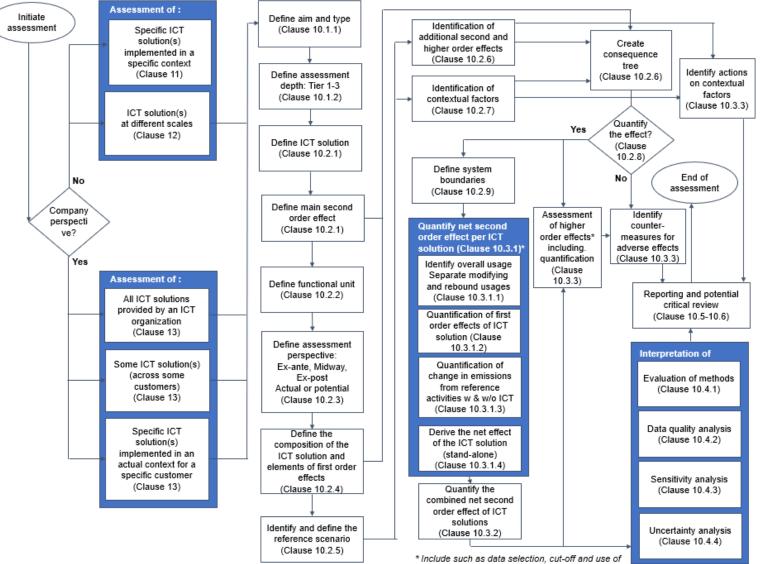
Product perspective with an LCA and organizational carbon footprint view.

The assessment standards by ITU

L.1400-series overview



L.1480 in summary



emission factors (Clauses 10.3.4-6)

Key take aways

The ICT sector can and must roughly halve its emissions by 2030 from a baseline representing 1,4% of global emissions 1.5C aligned – ITU and partners has developed trajectories and guidance for Net Zero

ITU has a portfolio of assessment standards for impacts at different levels.

Preventing irreversible climate disruption is the race of our lives, and for our lives. It is a race that we can and must win (A. Guterres) Many opportunities to help other sectors move towards Net Zero – but depend on HOW we use technology

L.1480 on impacts in other sectors coming soon.