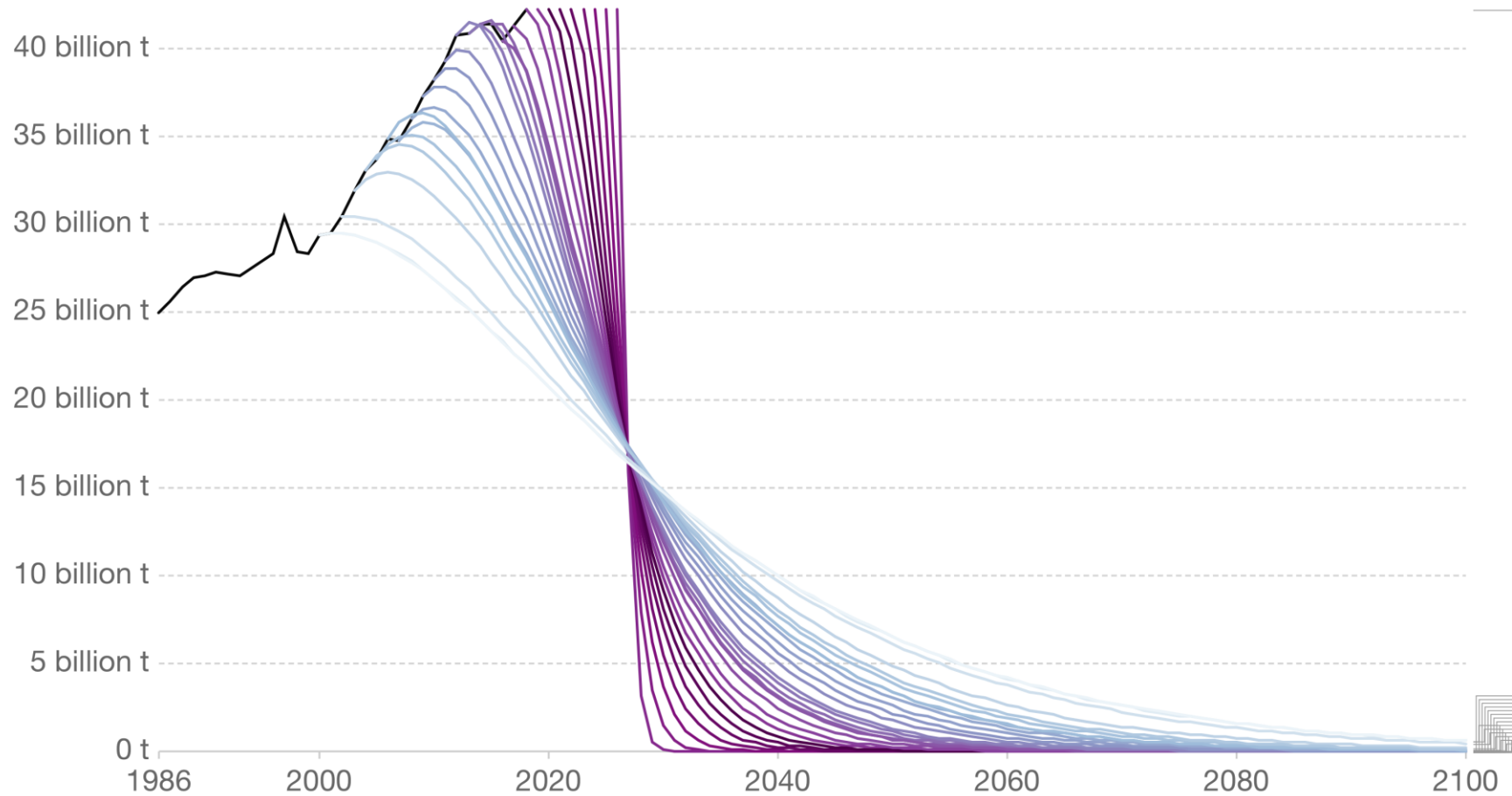


Enabling the Net Zero transition – the role of ICT and the importance of robust methodologies



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

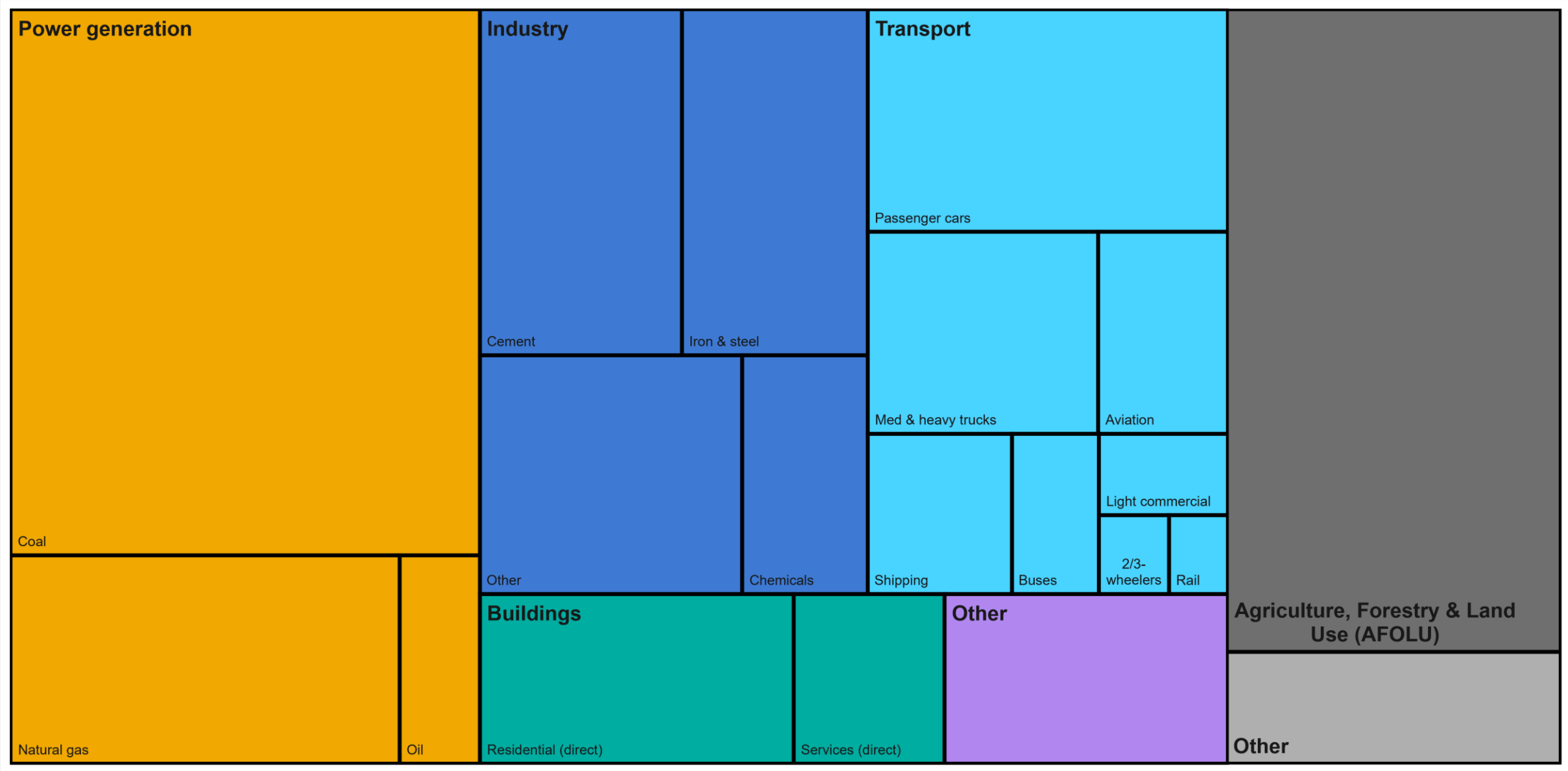


Source: Robbie Andrews (2019); based on Global Carbon Project & IPCC SR15
Note: Carbon budgets are based on a >66% chance of staying below 1.5°C from the IPCC's SR15 Report.
[OurWorldInData.org/co2-and-other-greenhouse-gas-emissions](https://www.ourworldindata.org/co2-and-other-greenhouse-gas-emissions)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



exponentialroadmap.org

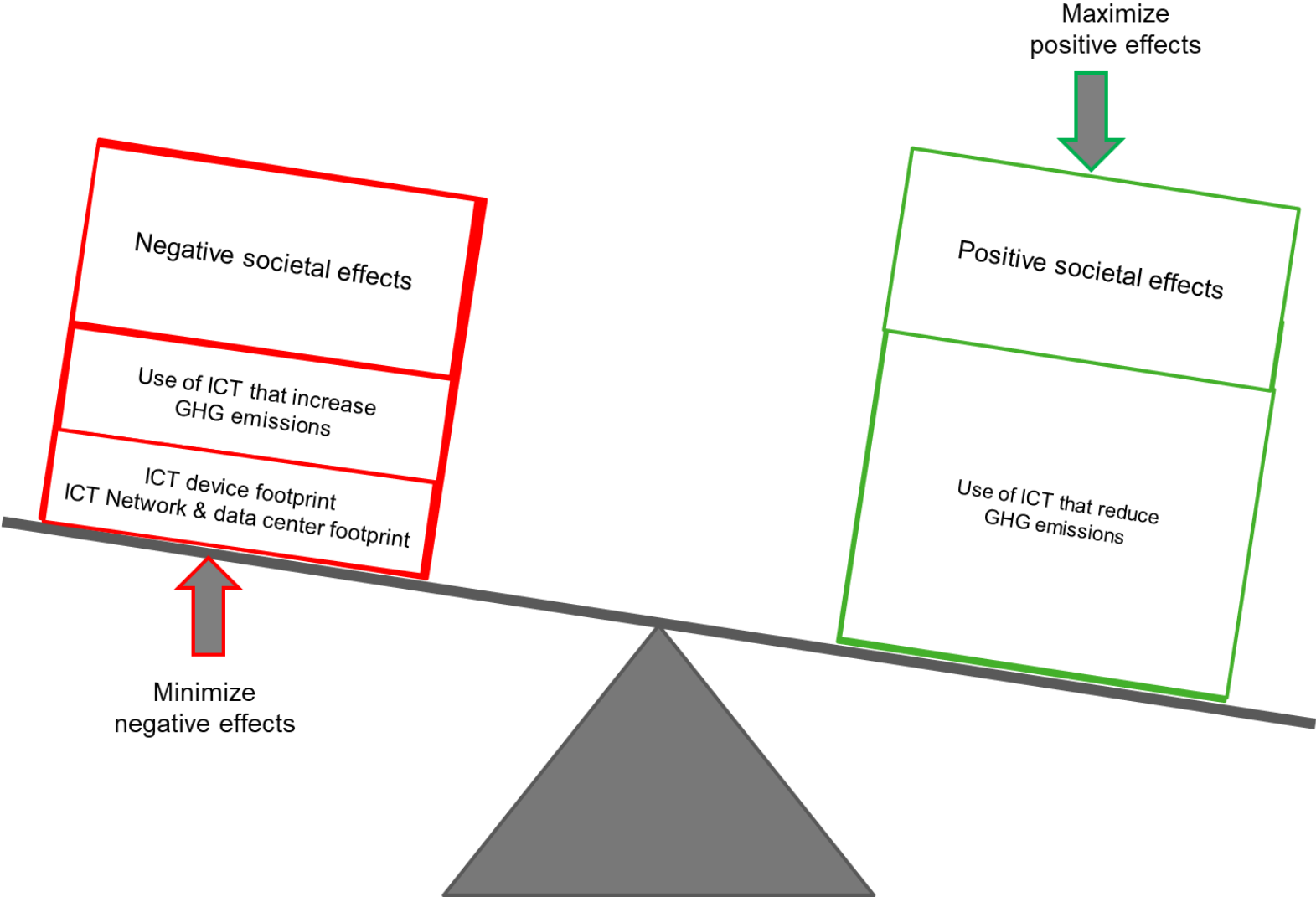
Greenhouse gas emissions come from many sectors and sources



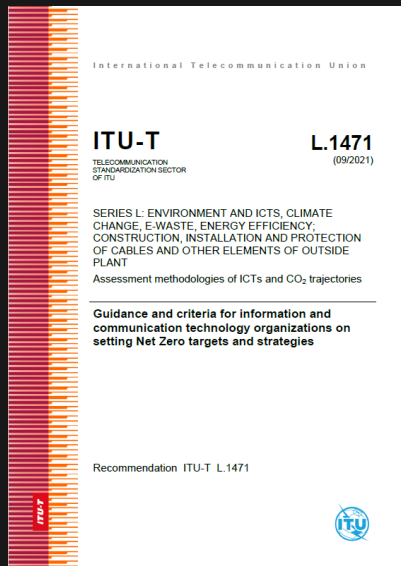
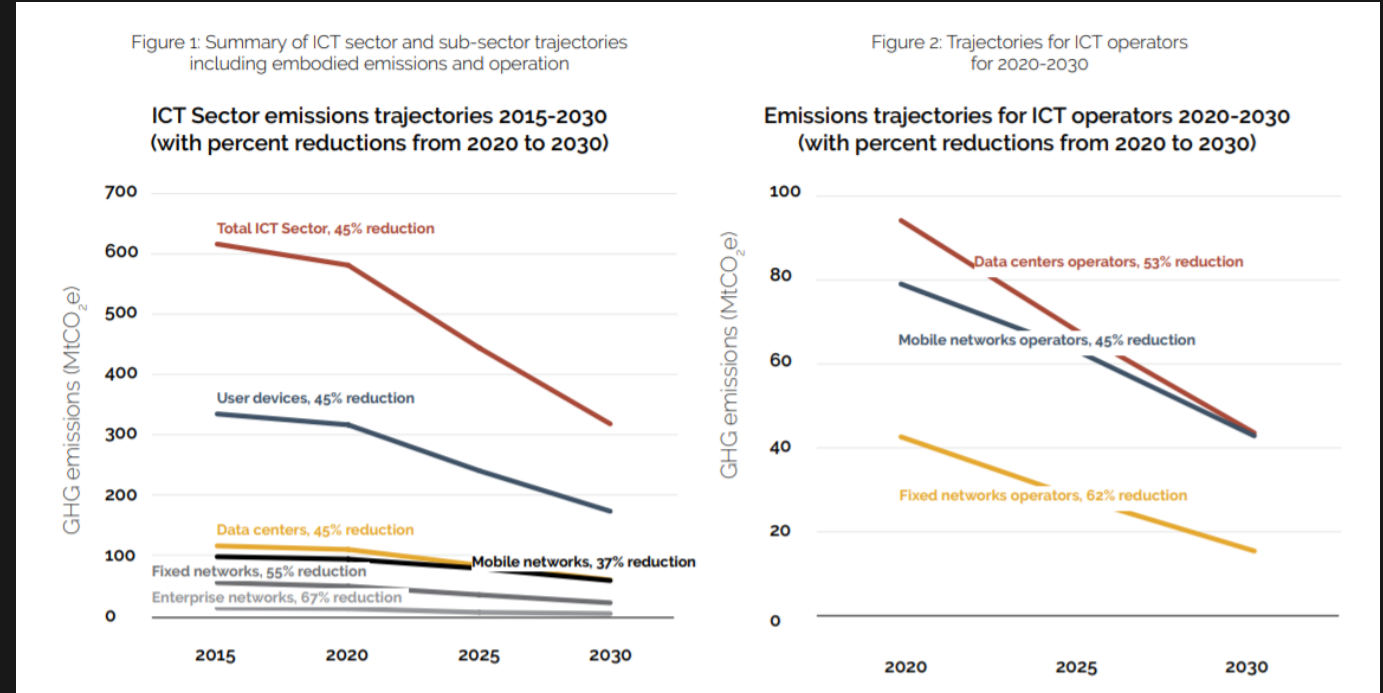
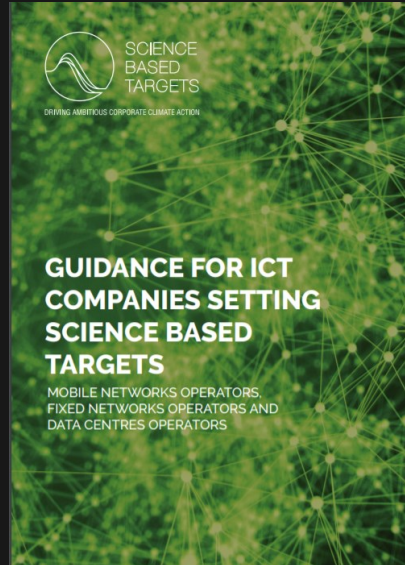
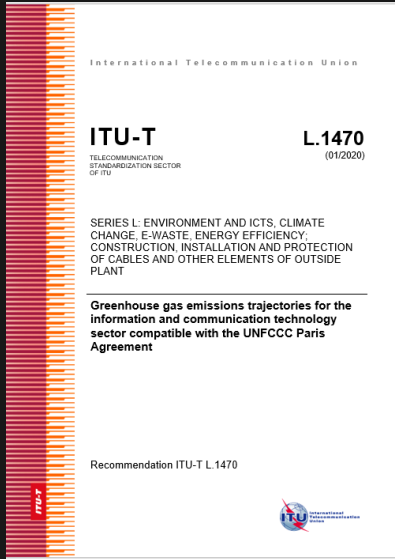
Direct and indirect effects of digital technologies



The role of ICT in the Net Zero transition



1.5C aligned trajectories for the ICT sector towards Net Zero



<https://www.itu.int/rec/T-REC-L.1470>

<https://www.itu.int/ITU->

[T/recommendations/rec.aspx?rec=14318](https://www.itu.int/ITU-T/recommendations/rec.aspx?rec=14318)

<https://www.itu.int/rec/T-REC-L.Sup38-202010->

<https://sciencebasedtargets.org/sectors/ict>

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



Digital technology	Opportunities	Risks
5G	Materials & energy efficiency	Maintaining high-carbon industries and processes Magnifying unsustainable consumption
IoT	Circular flows	
AI, ML, Deep learning	Knowledge Behavioural changes	
Digital twin	System optimization	
Blockchain	Transparency & coordination	
Social media, e-commerce	Engagement, nudging, information	



The multifaceted climate impact of ICT



Indirect impacts

Second and higher order effects

Avoided emissions

Scope 4

Enablement

Handprint

Rebound

Abatement

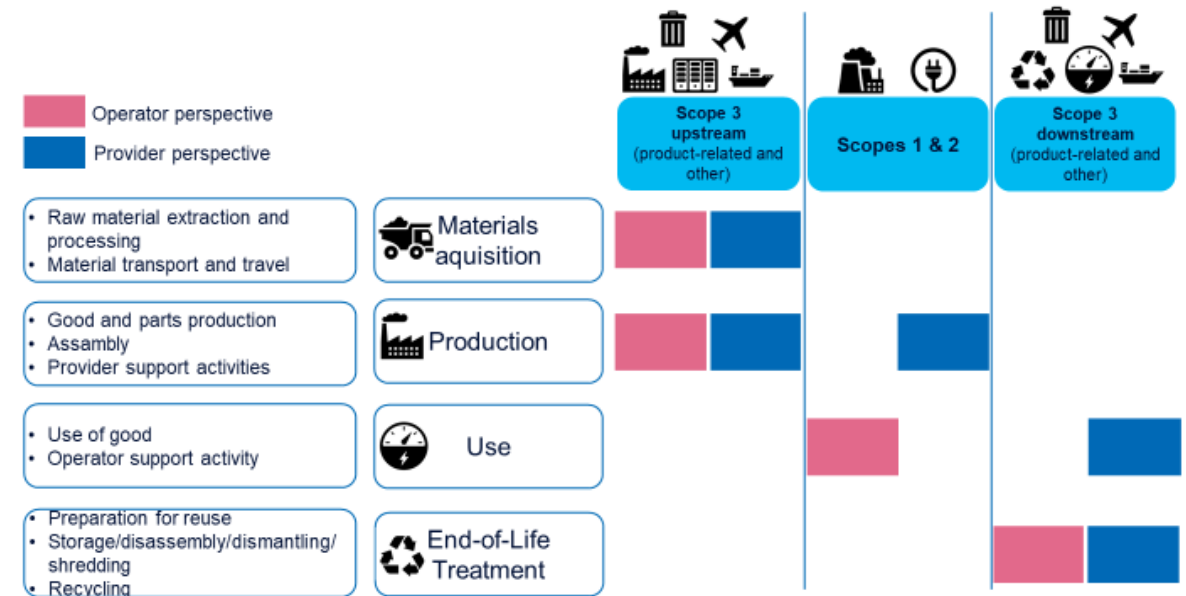
Added emissions

Direct impacts

First order effects

Product perspective
Life cycle stages (LCA)

Organizational perspective
Scopes

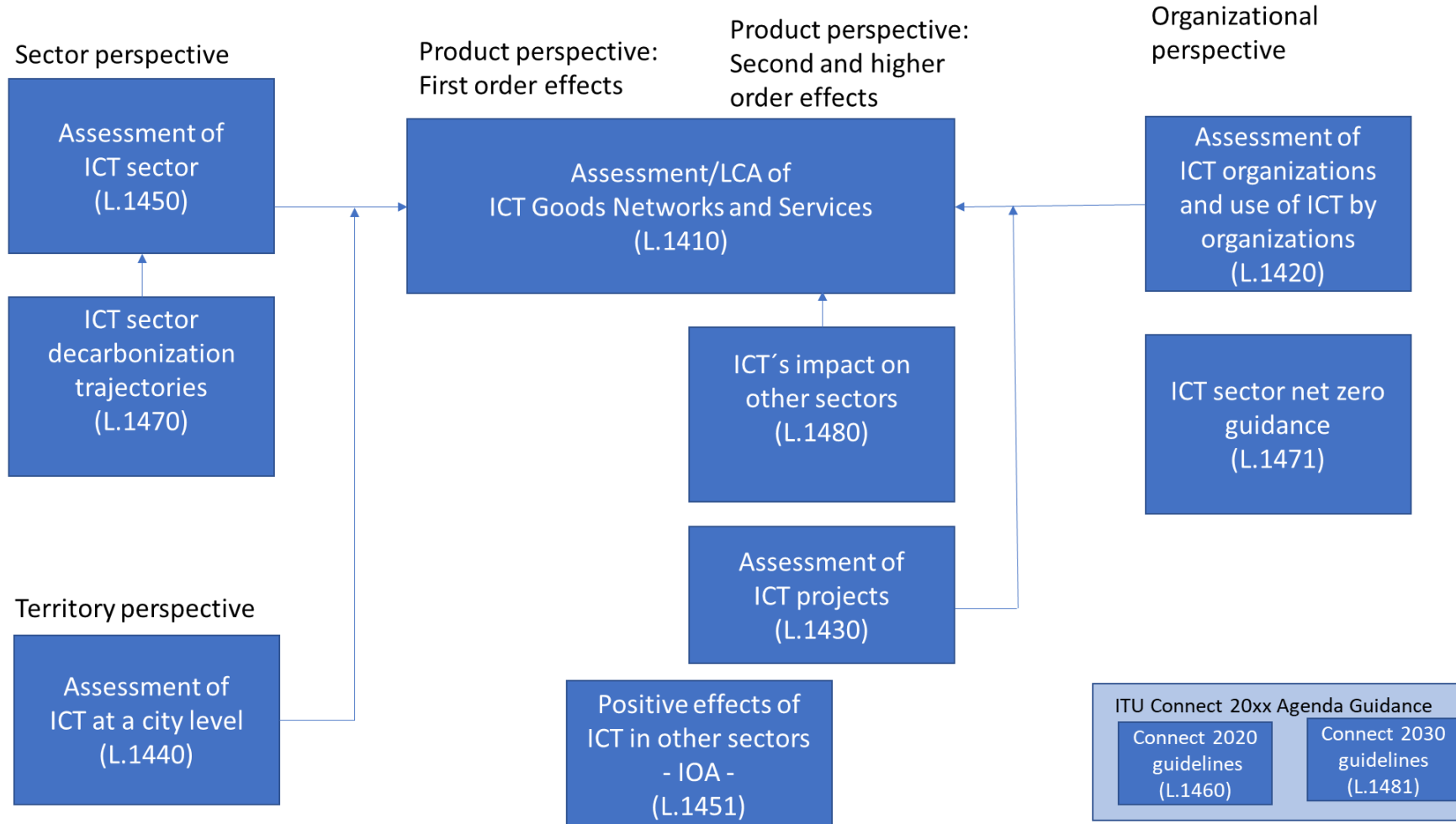


Product perspective with an LCA and organizational carbon footprint view.

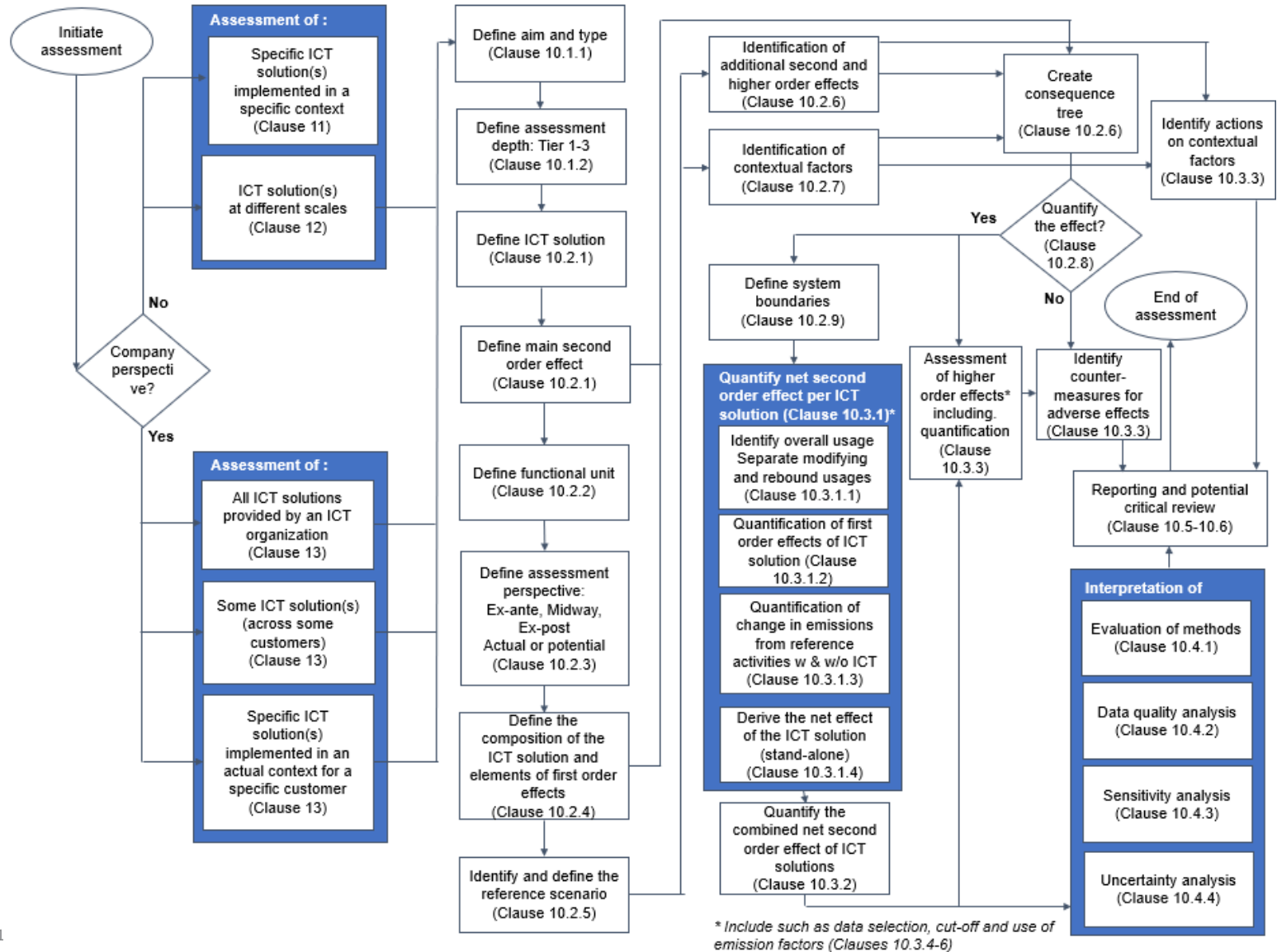
The assessment standards by ITU



L.1400-series overview



L.1480 in summary



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.