



An introduction to Recommendation ITU-T L.1480

March 17, 2023

*Enabling the Net Zero transition:
Assessing how the use of ICT solutions
impacts GHG emissions of other sectors*

Pernilla Bergmark, Co-Rapporteur ITU-T SG5 Q9

Context setting



Joint work on establishing the 1.5°C trajectories for the ICT sector

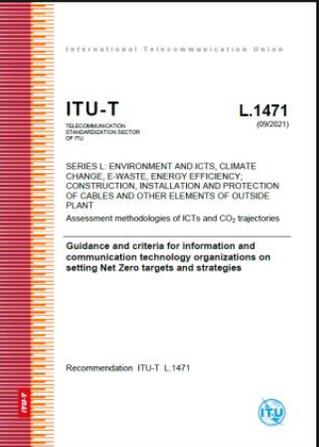



Figure 1: Summary of ICT sector and sub-sector trajectories including embodied emissions and operation

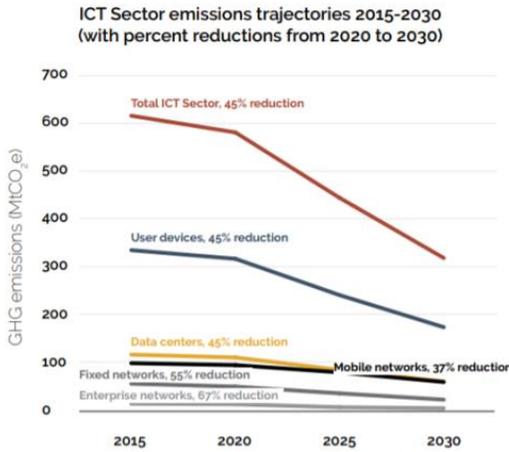
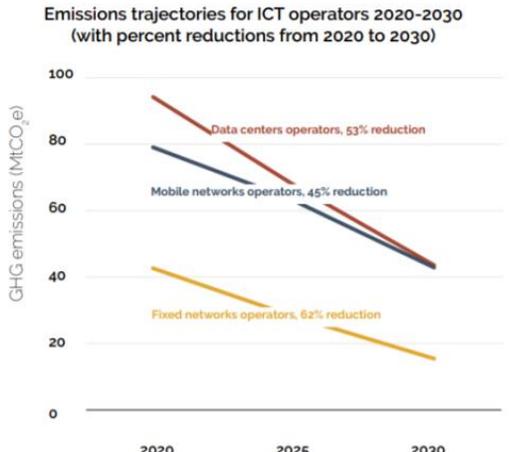


Figure 2: Trajectories for ICT operators for 2020-2030





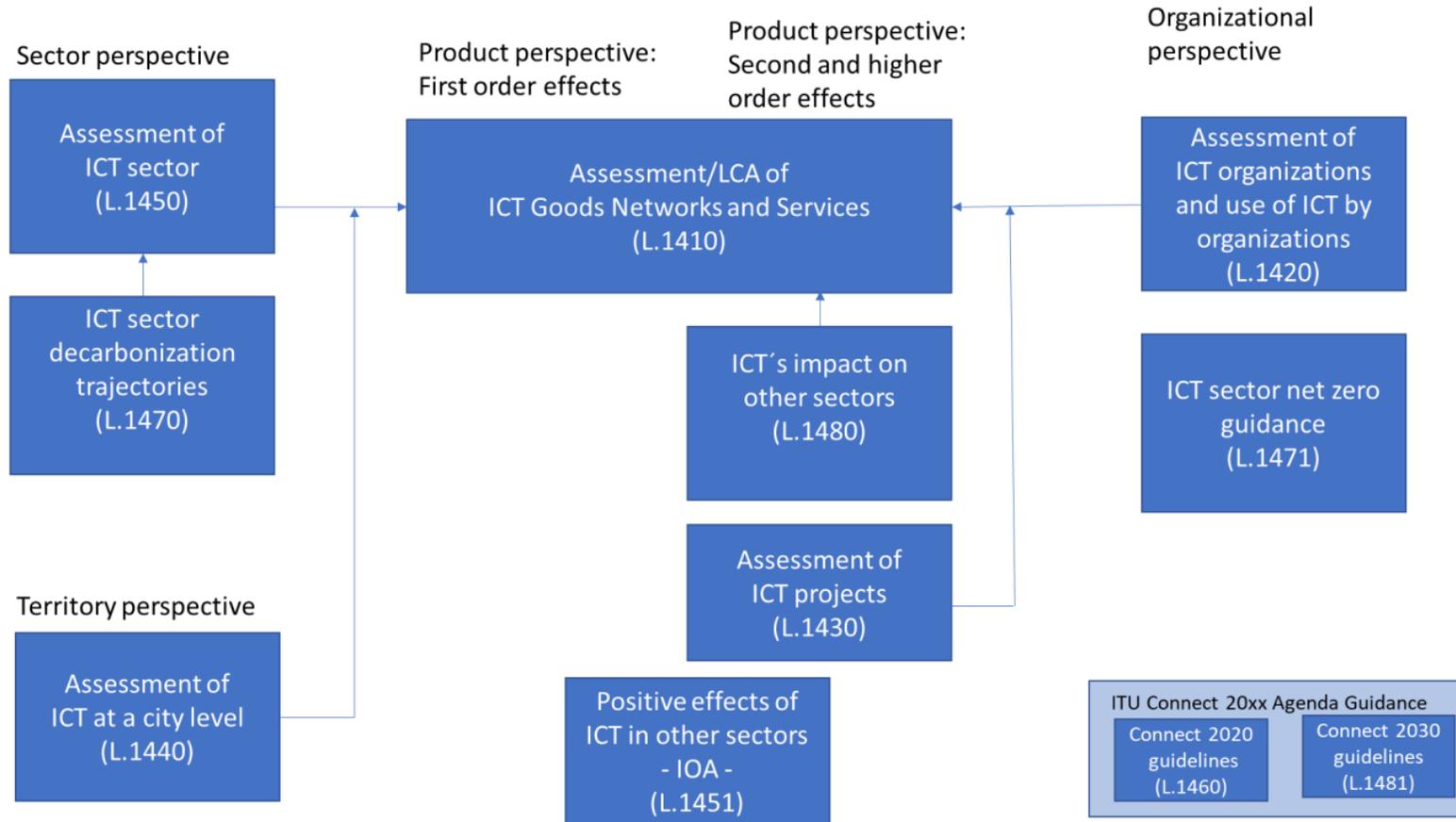



<https://www.itu.int/rec/T-REC-L.1470>
<https://www.itu.int/ITU-T/recommendations/rec.aspx?rec=14318>
<https://www.itu.int/rec/T-REC-L.Sup38-202010>
<https://sciencebasedtargets.org/sectors/ict>

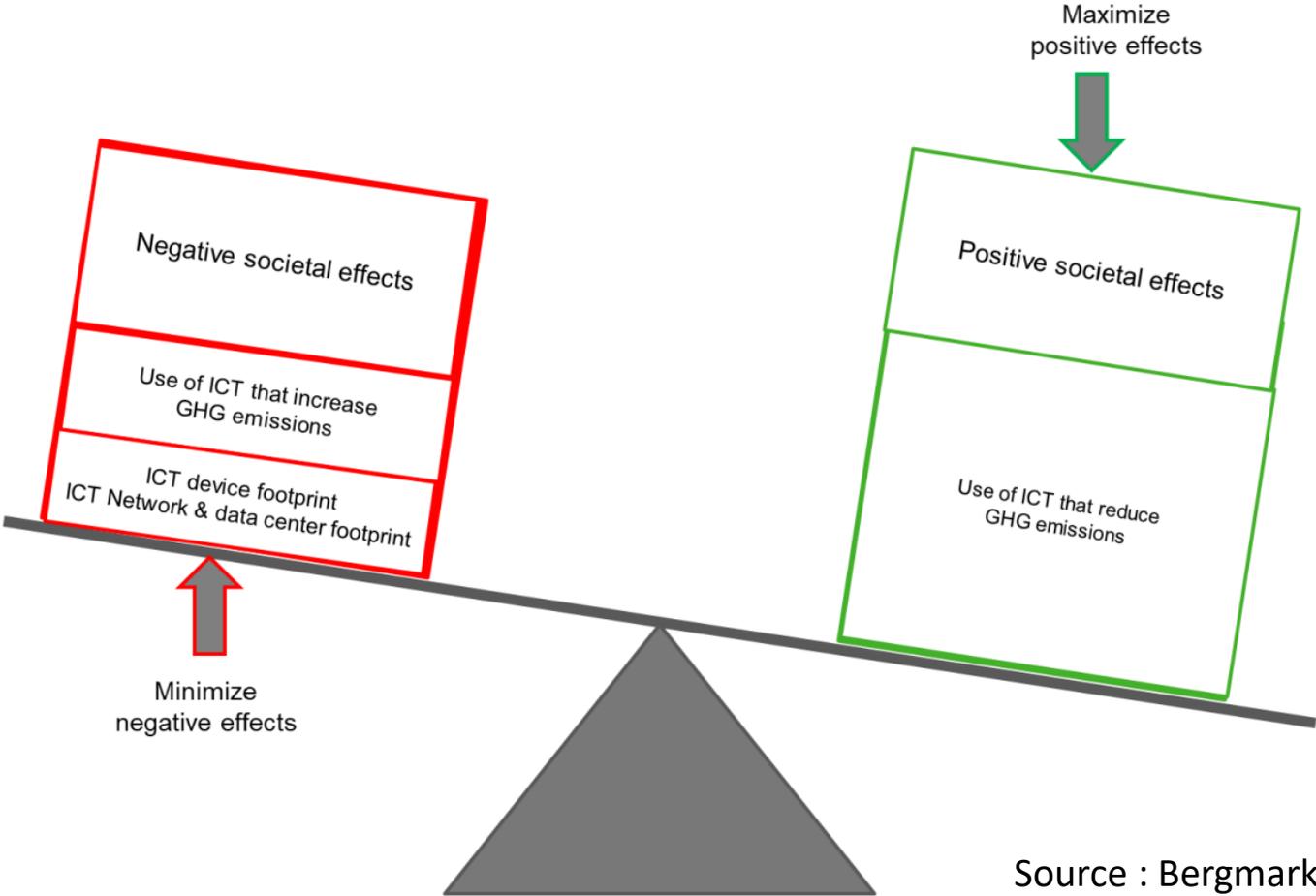


The L.1400 series of ITU Recommendations developed by ITU-T SG5

L.1400-series overview



A methodology for assessing both avoided and added emissions



Source : Bergmark, Coroama, Kamiya, Masanet 2021

L.1480 overview



Status

- Published December
- Available:
<https://www.itu.int/rec/T-REC-L.1480-202212-I/en>



ITU L.1480 methodology : types of assessments covered

- Assessment of the second order effect of one or several ICT solution(s) **implemented in a specific context by the user of an ICT solution** while considering also higher order effects.
- Assessment of the second order effect of one or several ICT solution(s) **implemented at different scales**, including at an organizational level (whether private or public organizations), at a city level, at a country level or at worldwide level, while considering also higher order effects.
- Assessment of the second order effect of one or several specific ICT solution(s) **from the perspective of an ICT organization** contributing to the ICT solution(s) while considering also higher order effects. This includes
 - Assessment of the aggregated effect of **all ICT solutions** provided by an ICT organization across **all customers**
 - Assessment of the aggregated effect of **one or several ICT solution(s)** provided by an ICT organization across **some customers**
 - Assessment of the effect of **one or several specific ICT solution(s)** implemented in an **actual context** for a specific customer.

ITU-T L.1480 assessment perspectives and depths

Three different time perspectives and three tiers of assessment



Three depths of assessment			
Sector	TIER 1	TIER 2	TIER 3
Full life cycle	YES	YES	YES
Higher order effects	Assess	Identify	(Identify)
Data	As specific as possible	As specific as possible	Screening
Context	Assess	Identify	(Identify)

Key concepts

First order effect

- Direct environmental effects associated with physical existence

Second order effect

- The indirect impact created by the use and application of ICTs.

Higher order effect

- The indirect effects other than first and second order effects occurring through changes in consumption patterns, lifestyles and value systems.

Net second order effect

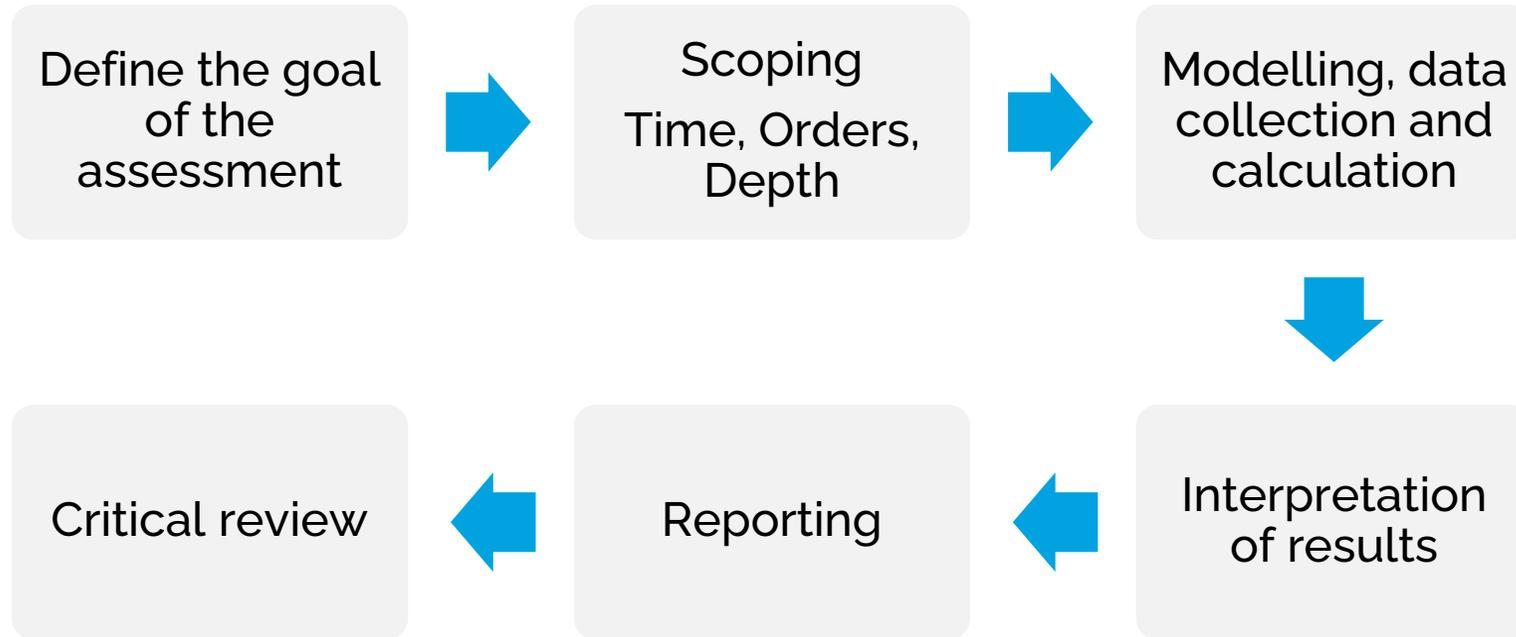
- The resulting second order effect after accounting for the emissions due to the first order effects of the ICT solution

Rebound

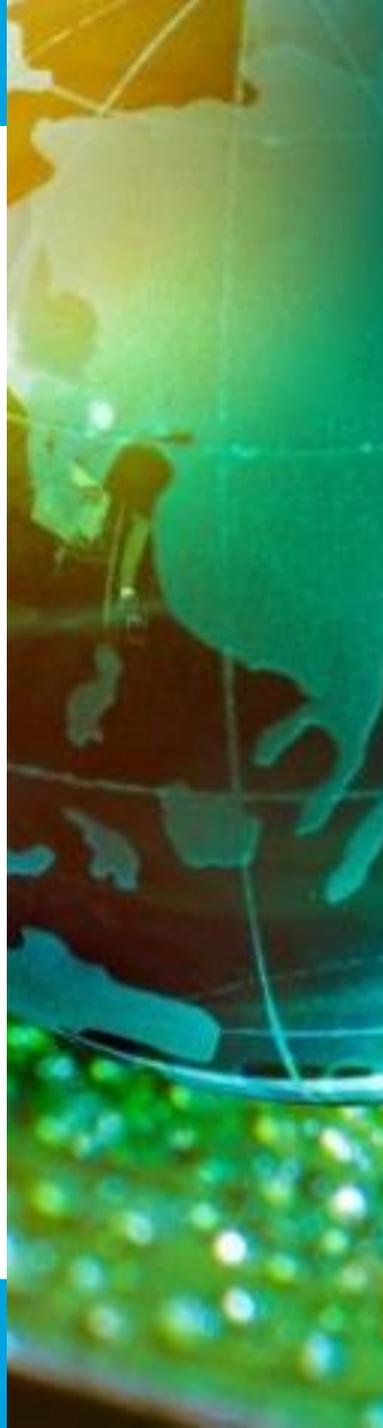
- Increases in consumption due to environmental efficiency interventions that can occur through a price reduction or other mechanism including behavioural responses.



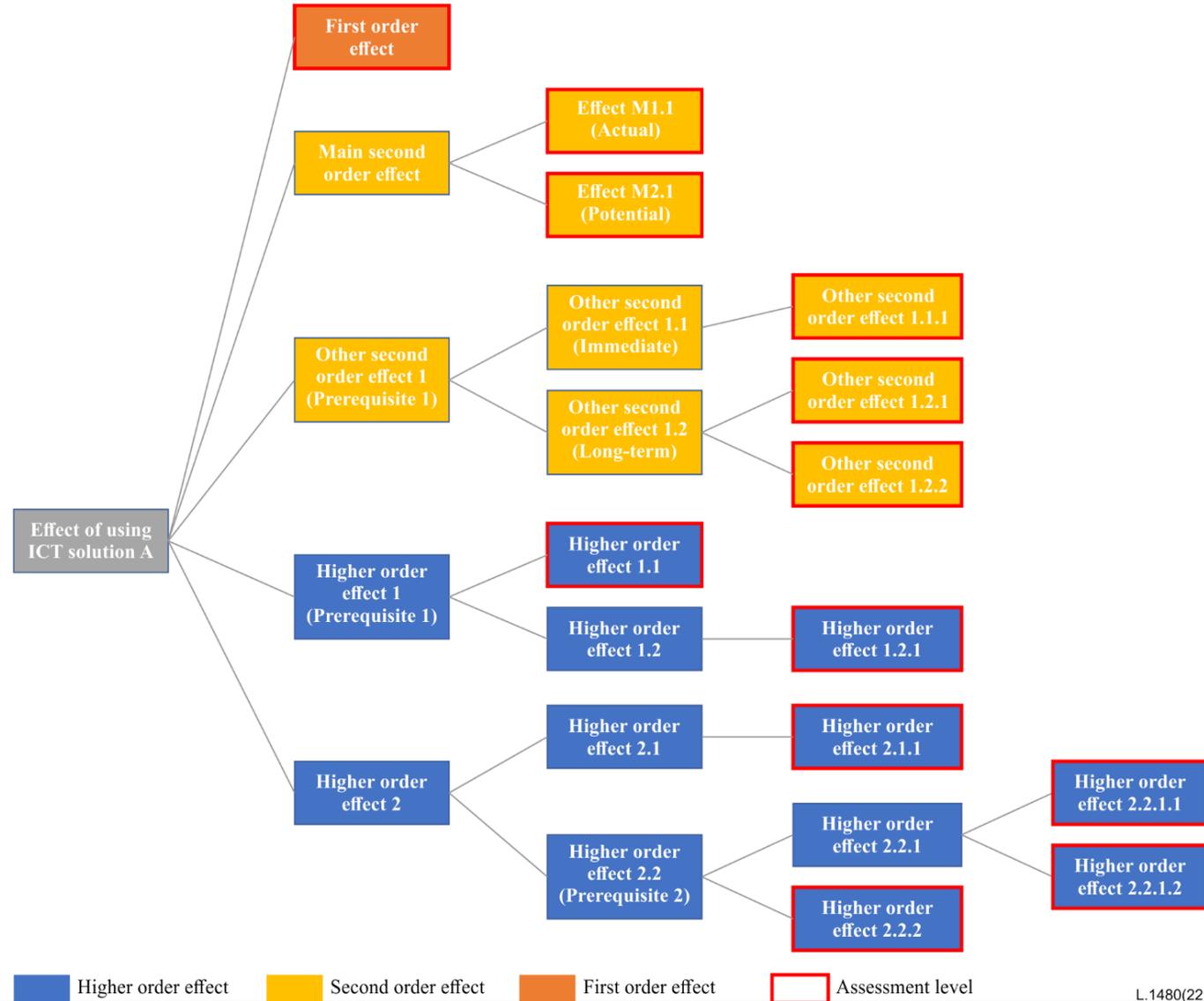
Six steps to assess an ICT solution



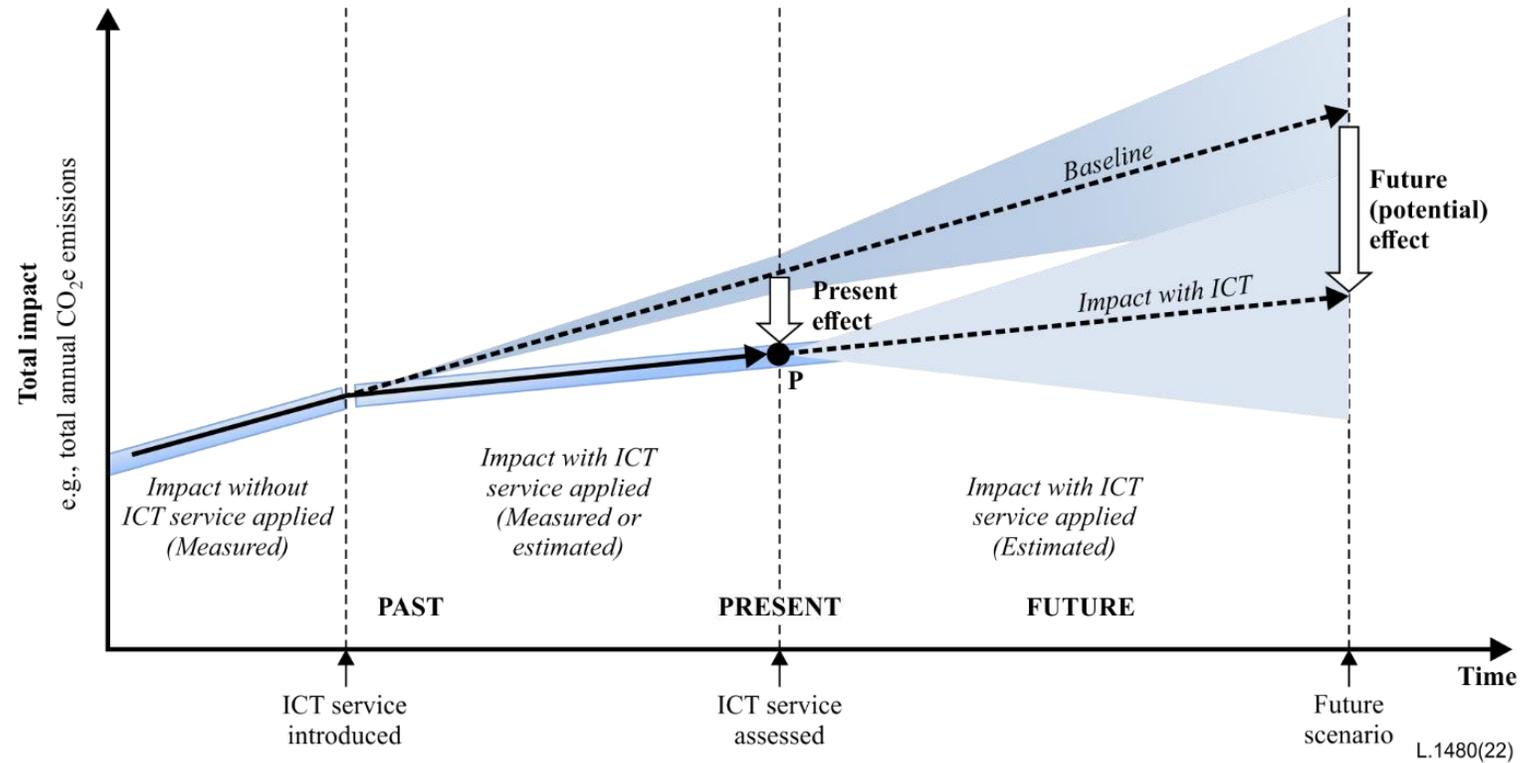
An example: Assessing the impacts of a virtual event



Establishing the consequence tree

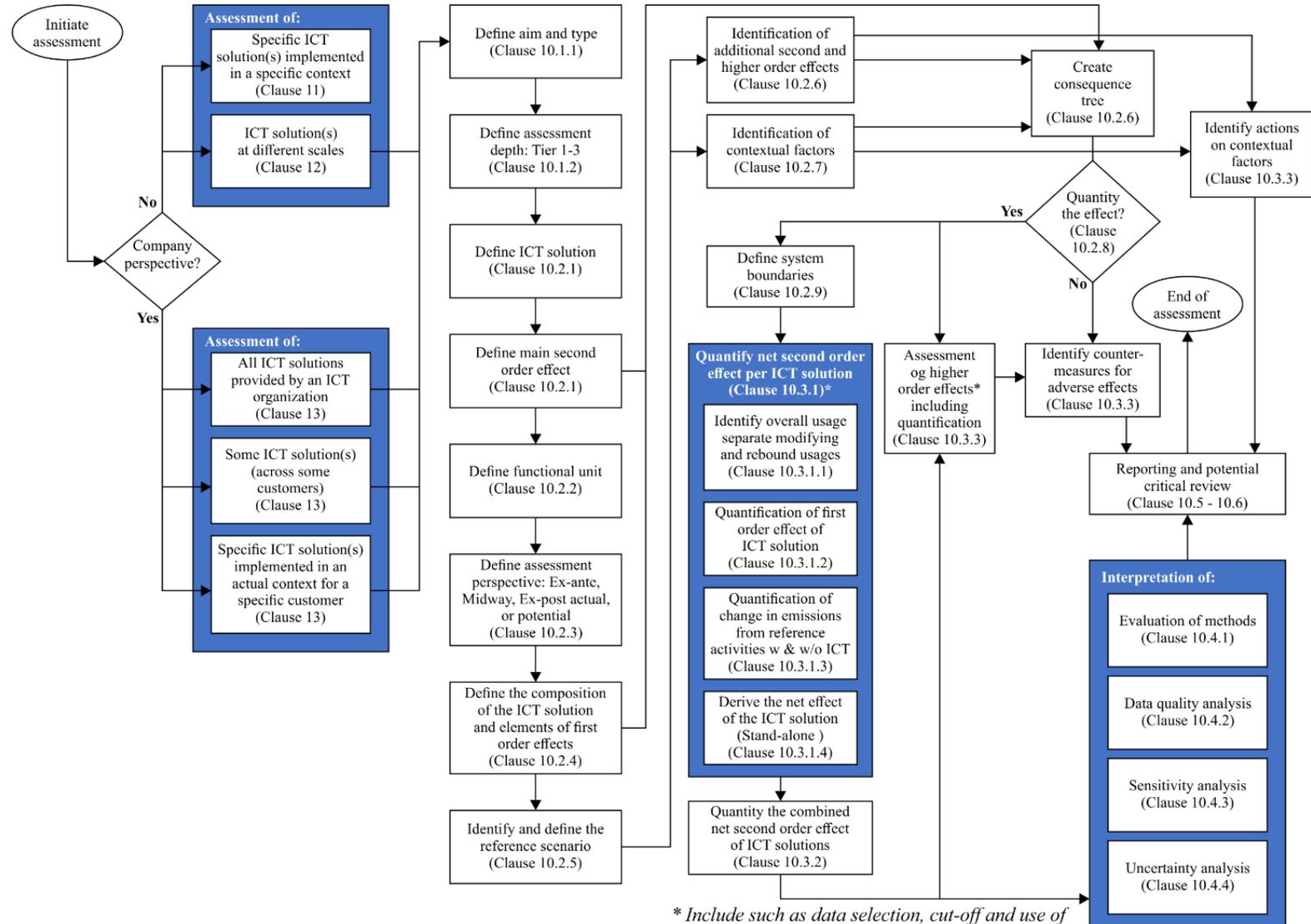


An example of analysis



Source : ITU L.1480 (based on Coroama & Bergmark et al)

L.1480 assessment procedure

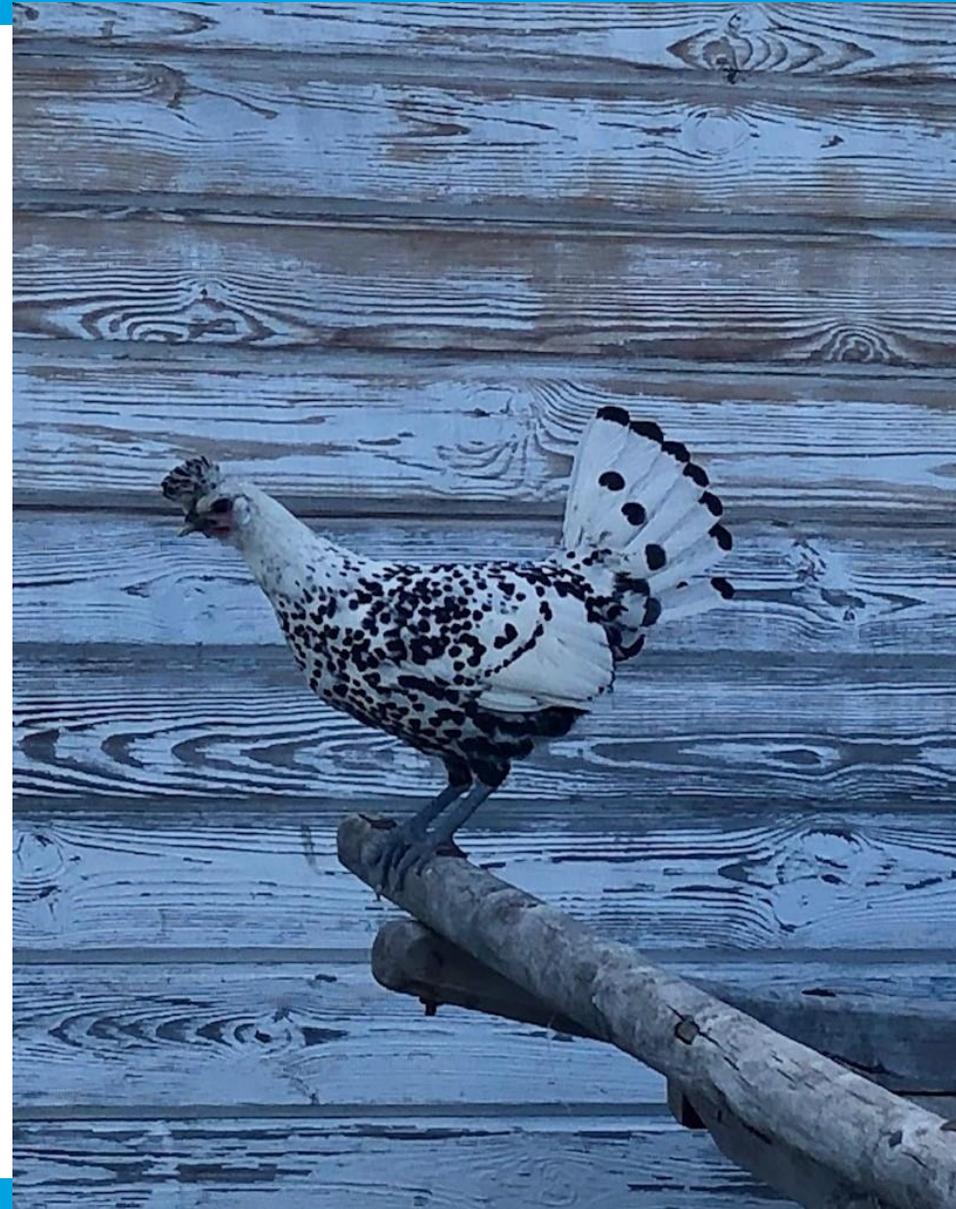


* Include such as data selection, cut-off and use of emission factors (Clause 10.3.4-6)

L.1480(22)

Guidance for assessment of virtual meetings

- Under development
- Recommendation ITU-T L.1480 as a basis
- Specific guidance for the assessment of virtual meetings
- First and second order effects
- Best practices
- Virtualization of meetings is an important component of organization's Net Zero strategies



Thank you !

