Feedbacks on simplified LCA for digital products

Thales CDI

March 26th 2025

www.thalesgroup.com
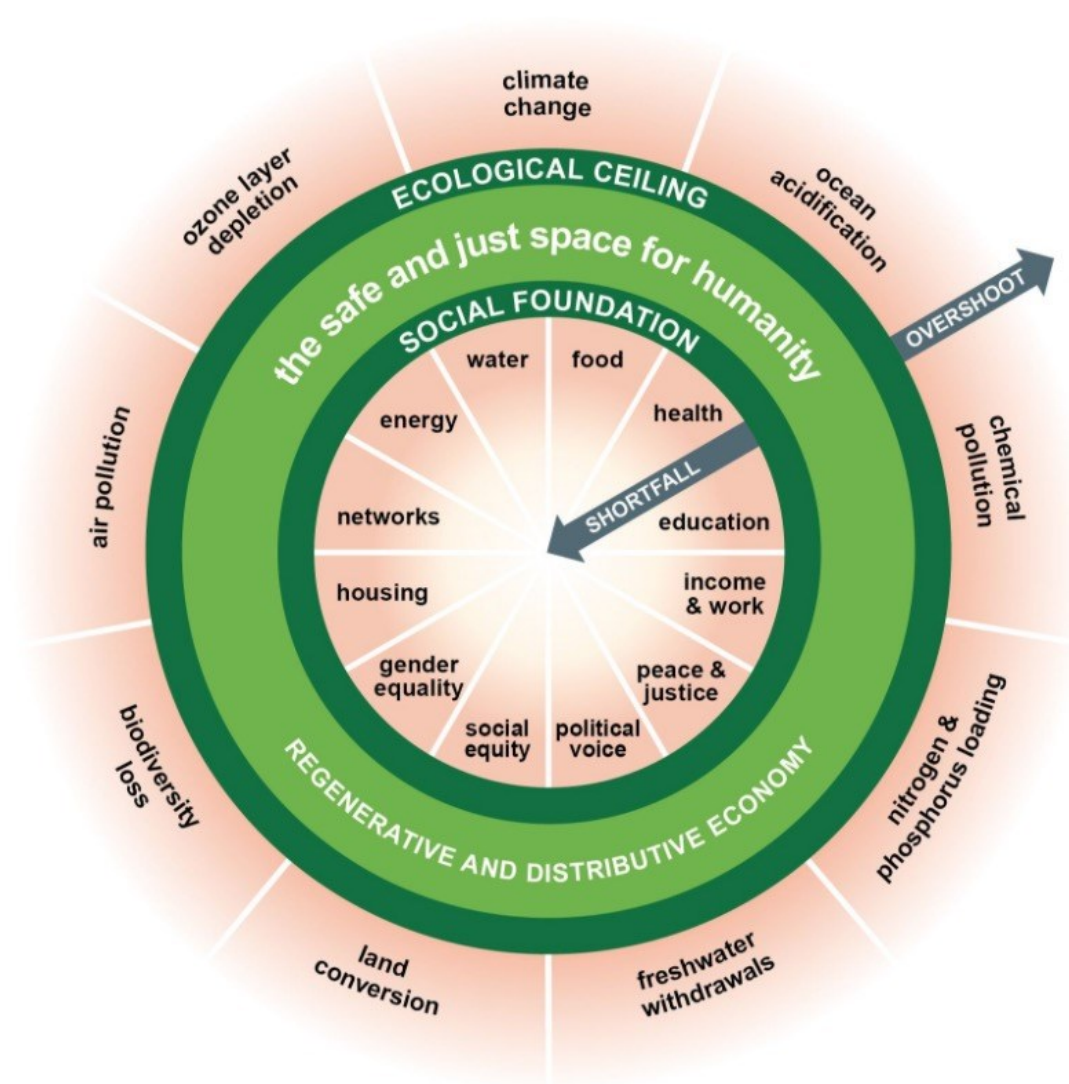
Source : Doughnut | Kate Raworth

A few products from Thales CDI

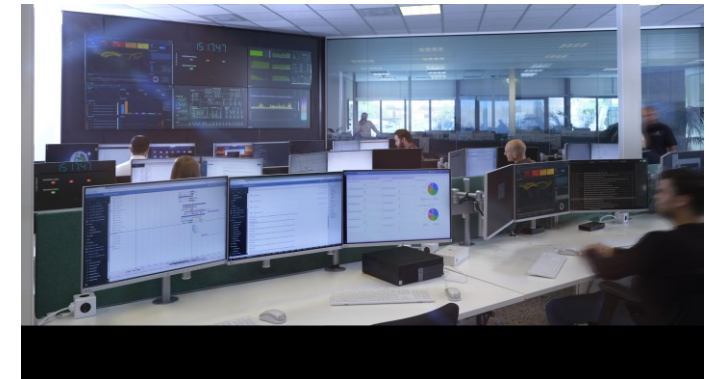**Mobile Connectivity Solutions**
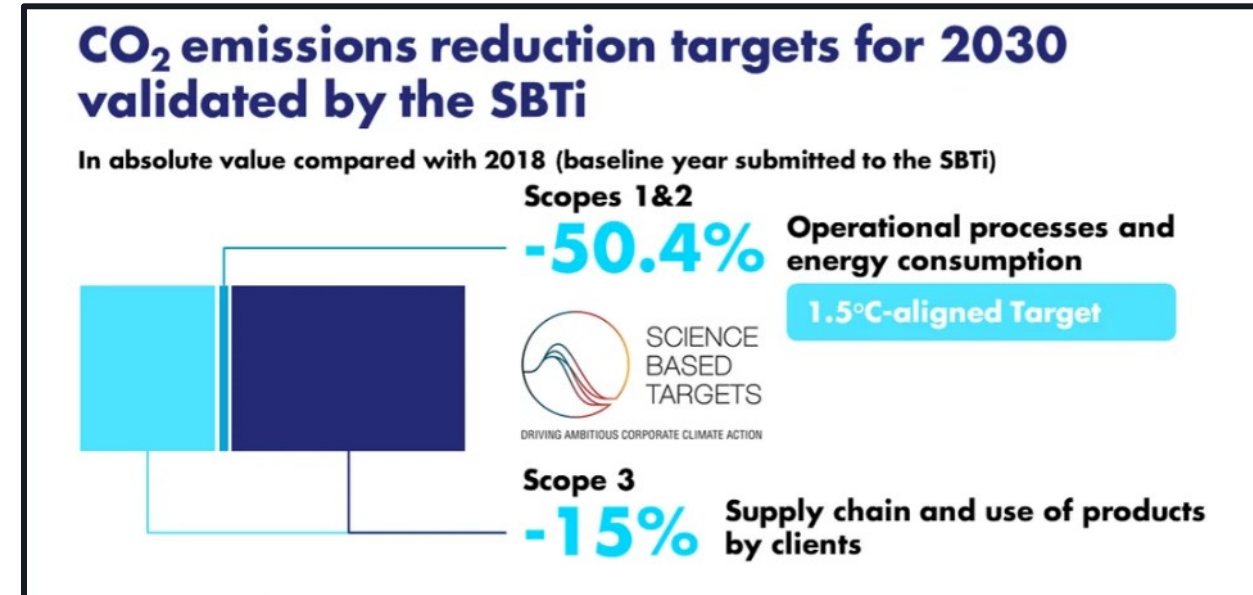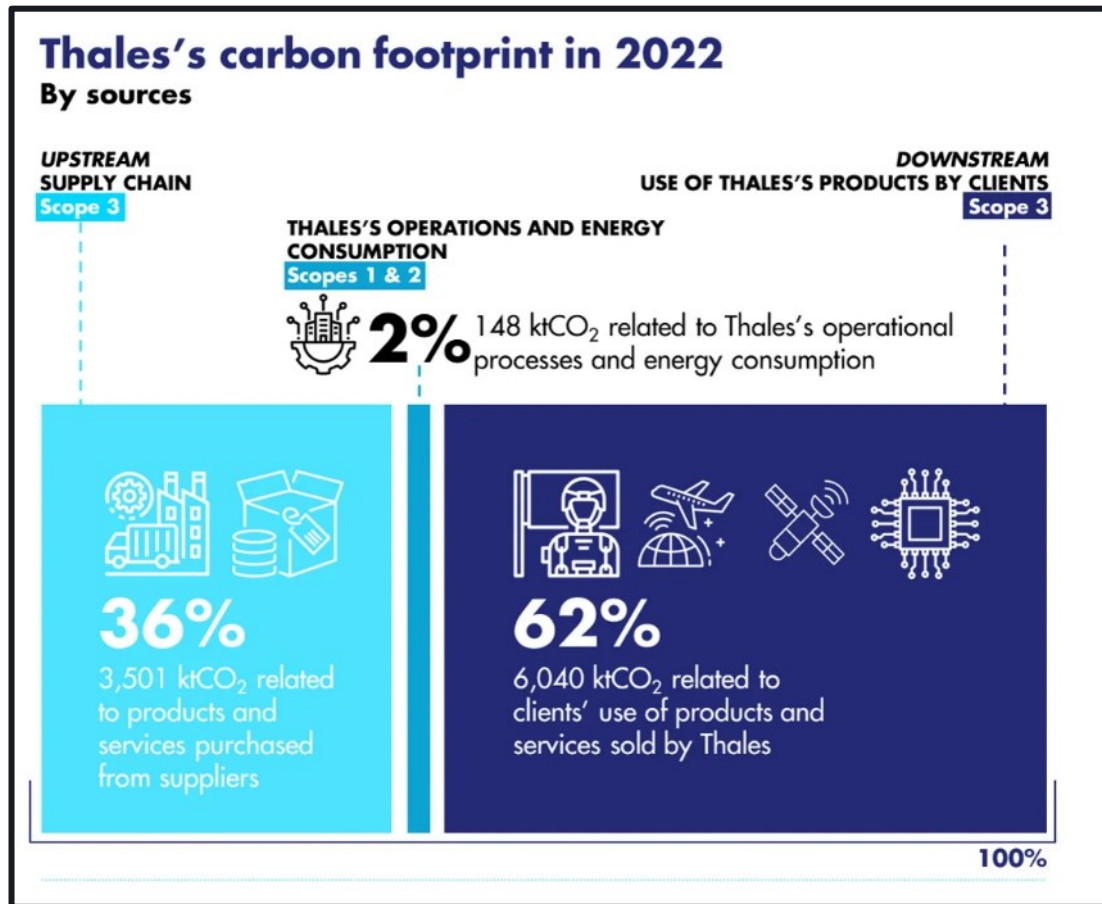
Payment Services

Identity & Biometric Solutions

Cyber Security Products

Cybersecurity Premium Services

Thales's strategy for a Low-Carbon future

Thales's carbon footprint in 2022
By sources

UPSTREAM SUPPLY CHAIN
Scope 3

THALES'S OPERATIONS AND ENERGY CONSUMPTION
Scopes 1 & 2

DOWNSTREAM USE OF THALES'S PRODUCTS BY CLIENTS
Scope 3

2% 148 ktCO$_2$ related to Thales's operational processes and energy consumption

36% 3,501 ktCO$_2$ related to products and services purchased from suppliers

62% 6,040 ktCO$_2$ related to clients' use of products and services sold by Thales

100%

CO$_2$ emissions reduction targets for 2030 validated by the SBTi

In absolute value compared with 2018 (baseline year submitted to the SBTi)

Scopes 1&2
-50.4% Operational processes and energy consumption
1.5°C-aligned Target

SCIENCE BASED TARGETS
DRIVING AMBITIOUS CORPORATE CLIMATE ACTION

Scope 3
-15% Supply chain and use of products by clients

Source: Strategy for a Low-Carbon future | Thales Group

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Why we perform LCA in Thales CDI?

"According to you, to what level of eco-design will you position your approach?"

> **Train the teams on ecodesign**

‣ Raise awareness among teams

‣ Train teams on ecodesign

> **Measure and reduce the environmental impact**

‣ Determine most impactful products

‣ Determine the impacts

‣ Choose the relevant ecopractices

> **Customers' requests**

‣ Answer customers on environmental impacts

‣ Answer customers' requests on LCA

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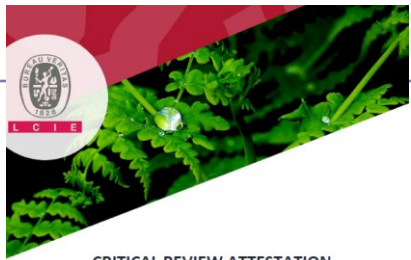
How we perform simplified LCA for digital products in Thales CDI?

Simplified LCA

Simplified Life-Cycle Assessment based on ISO, ITU and ADEME methodological recommendations

An infrastructure tier approach

Data centers · Networks · Terminals

A multi-step approach

Design · Manufacturing · Use & operation · Maintenance · Decommissioning · End of life
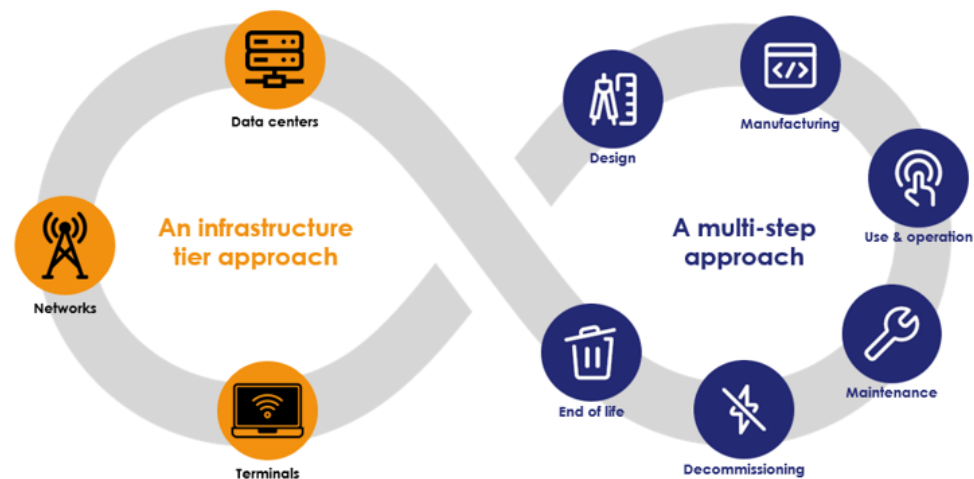
LCA with critical review

First Life-Cycle Assessment (LCA) with critical review

CRITICAL REVIEW ATTESTATION

LIFE CYCLE ASSESSMENT CRITICAL REVIEW REPORT

ESIM SOLUTION - ODC CONSUMER

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How we perform simplified LCA in Thales CDI?

> EIME tool from Bureau Veritas

NEGA OCTET

Level 0: semi conductor
Level 1: components
Level 2: equipments
Level 3: system
Level 4: service

eime PROJECT

eime DESIGN

Model product life cycle

eime ANALYSIS

Analyse product impacts

eime COMPARISON

Compare product versions

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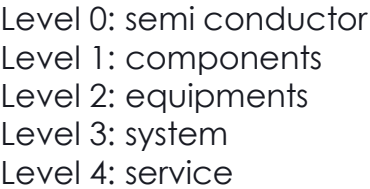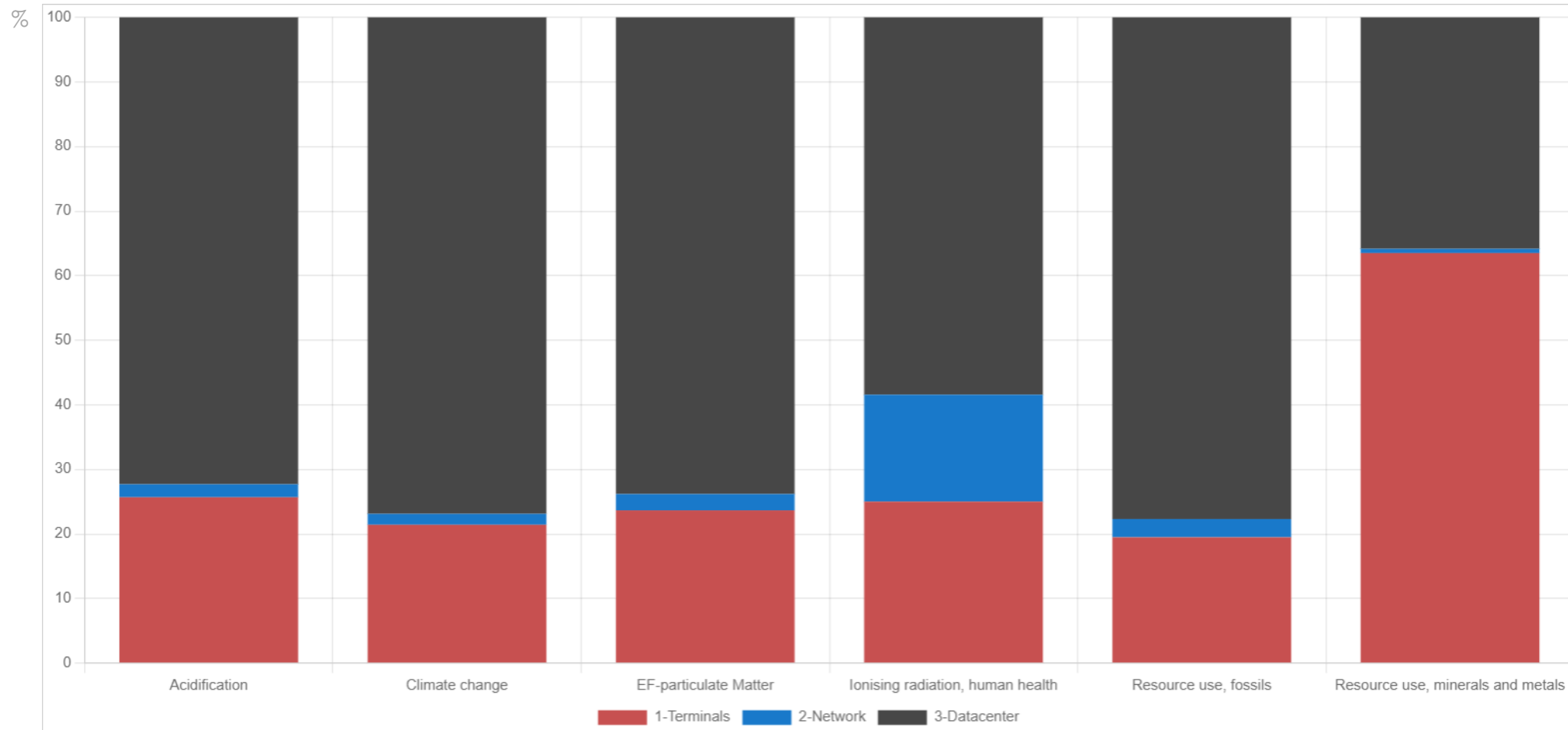
An example of simplified LCA results

> Impacts by tier

Most of the impacts due to datacenters.

Except on minerals and metals resource use due to terminals.

What challenges are we facing?

> Data & database

- ‣ Lack of primary data (third parties)
- ‣ Lack of transparency (public cloud providers)
- ‣ Choice of databases and database updates (serverless)

> Methodology

- ‣ Lack of PEF for precise products
- ‣ Choice of functional units
- ‣ Choice of allocation formula

> Business growth

- ‣ Interlinks between business growth, cloud elasticity and the global environmental footprint of the solution
- ‣ Another measurement tool for global environmental footprint

Next steps

Collective improvements on LCA methodology for digital products

- Improve transparency of third parties and availability of data
- Share methodologies and allocation factors for specific use cases
- Consolidate database(s) for digital solutions

Comparative LCAs

- Comparison between physical SIM and eSIM?
- Comparison between physical banking cards versus digital and virtual cards?

Estimate indirect environmental impacts of our digital solutions

- Estimate second- and higher-order effects of our digital solutions

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Thank you

Aurore Tual

Digital Eco Design Program Manager

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✉️ **aurore.tual@thalesgroup.com**