



1 February 2024

Towards net-zero emission of T&D grids



Life Cycle Assessments @ TenneT

The Why, What & How

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The Why?

Our Sustainability Strategy

We strive to enhance the energy transition in a sustainable manner, leading the way in maximizing our societal contribution and minimizing our impact as a transmission system operator (“TSO”)

1

We contribute to society, creating maximum impact for **people** working for us and impacted by us



2

We commit to the environment, avoiding, minimizing and compensating our impact on the **planet**



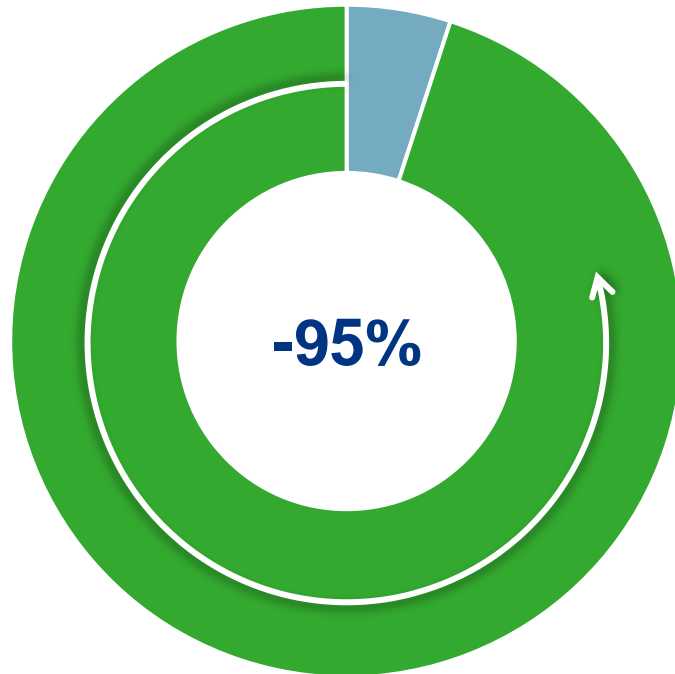
3

We strive for a profit which provides an adequate **return** on capital and an affordable cost of electricity supply for society

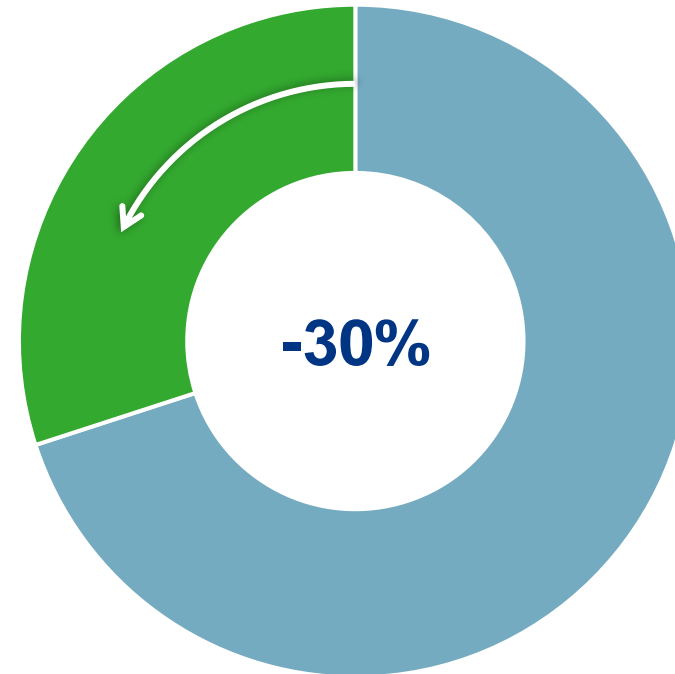


Our climate targets are in line with the Paris agreement And approved by science based targets initiative (SBTi)

Reduce our absolute **scope 1 and 2** greenhouse gas emissions **by 95% in 2030***

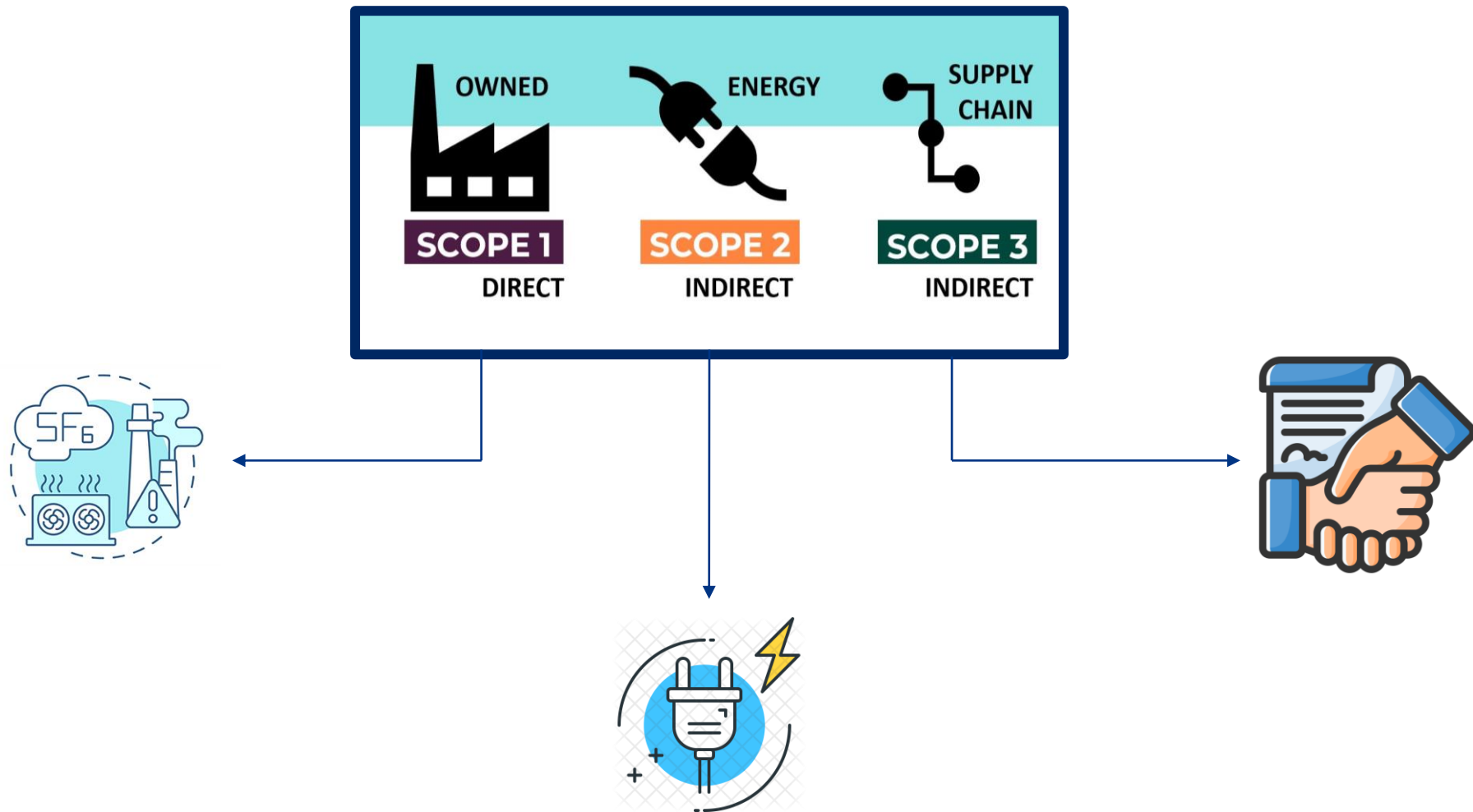


Reduce our absolute **scope 3** greenhouse gas emissions **by 30% in 2030***

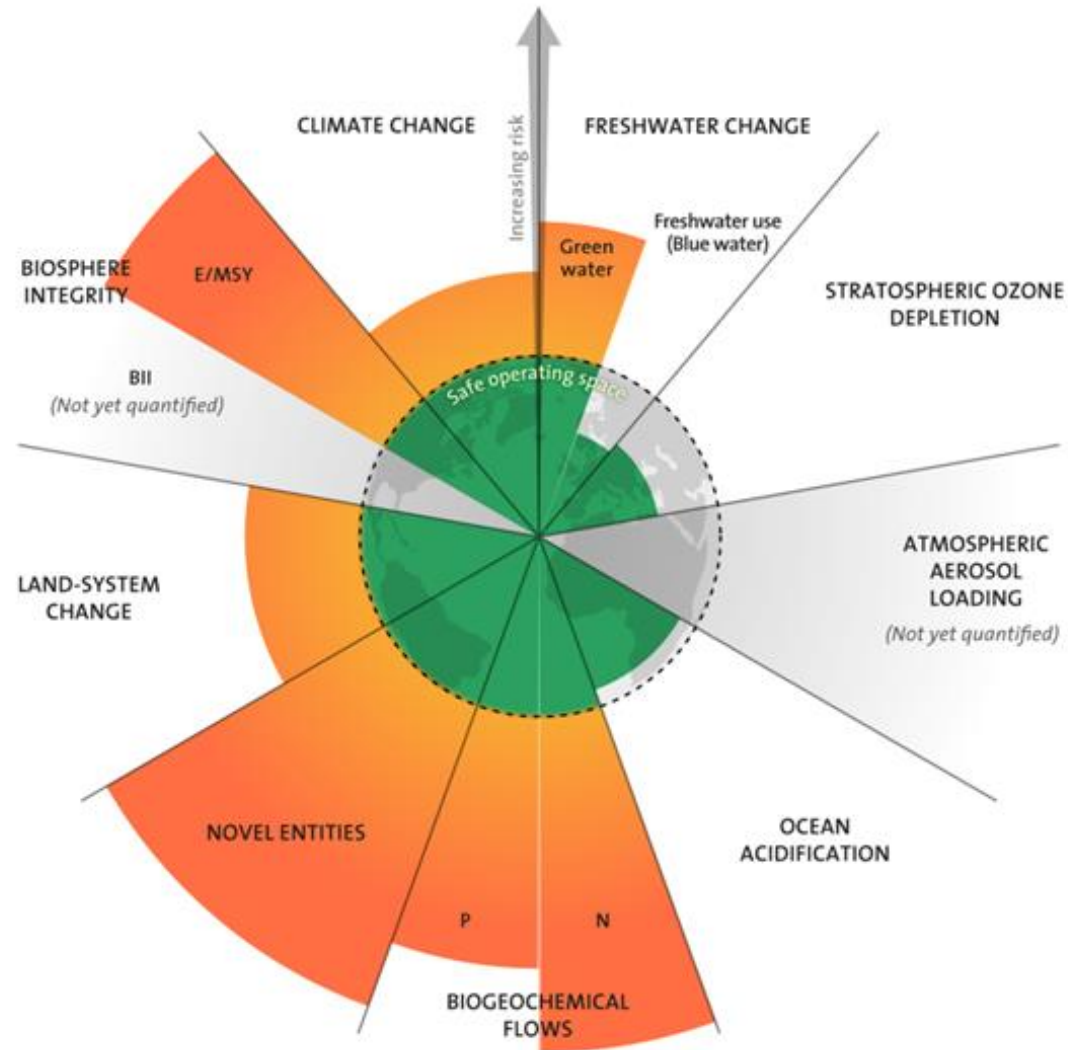


* Compared to 2019 baseline

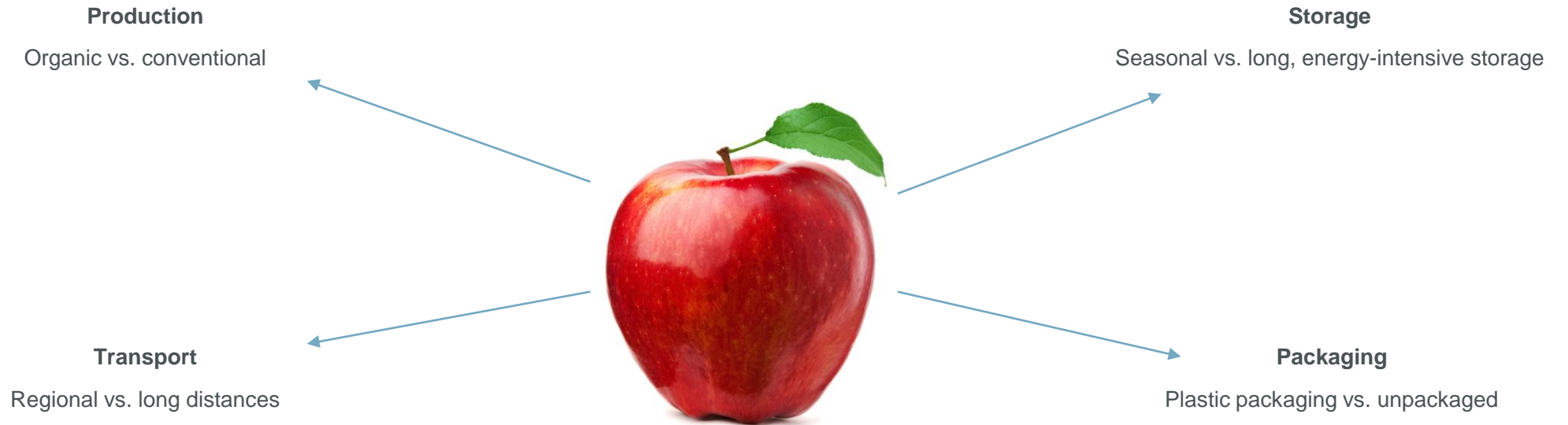
What are emission scopes?



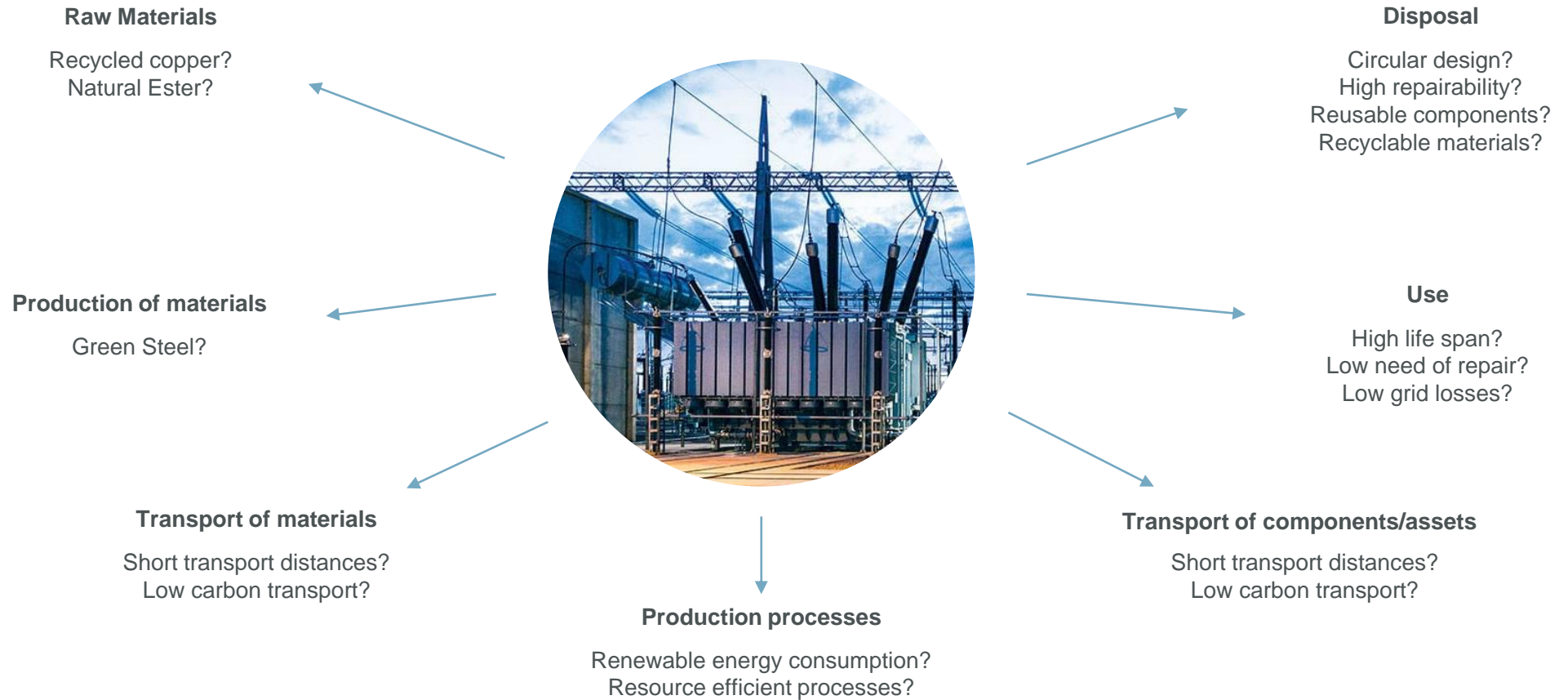
The Planetary Boundaries



The Supermarket - Dilemma



The Supermarket – Dilemma at TenneT



The What

Life cycle assessments

ISO 14040/44 & EN 15804

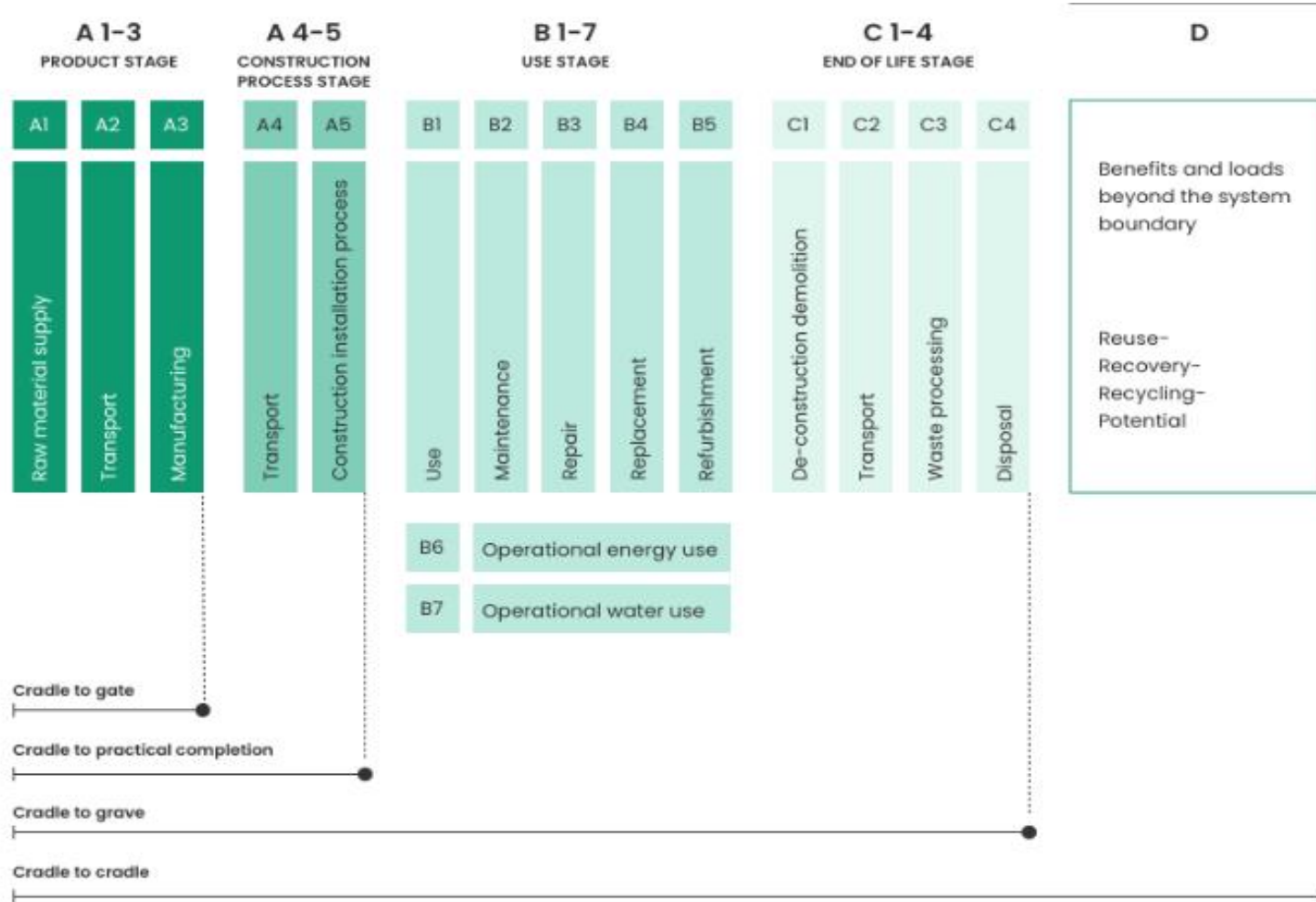
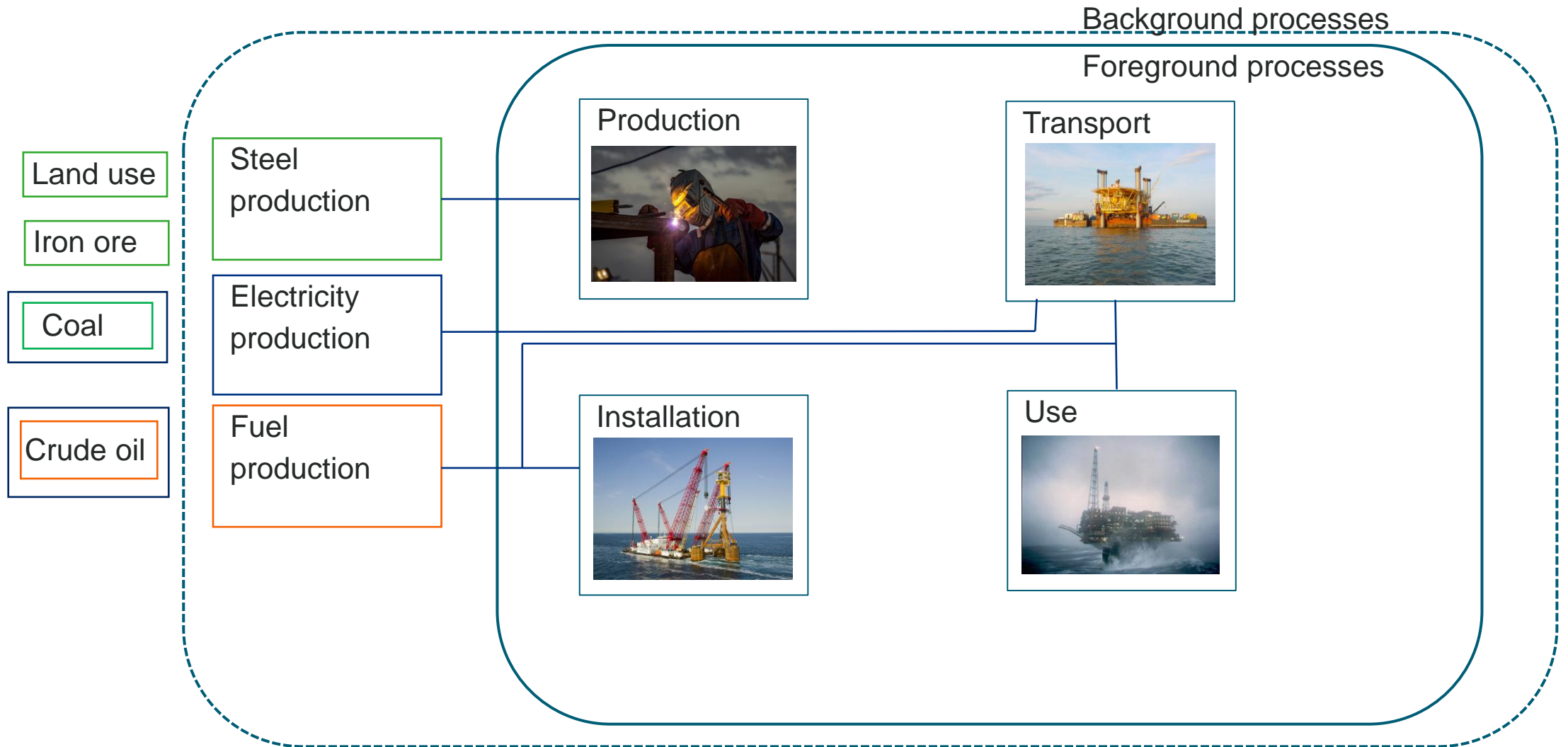
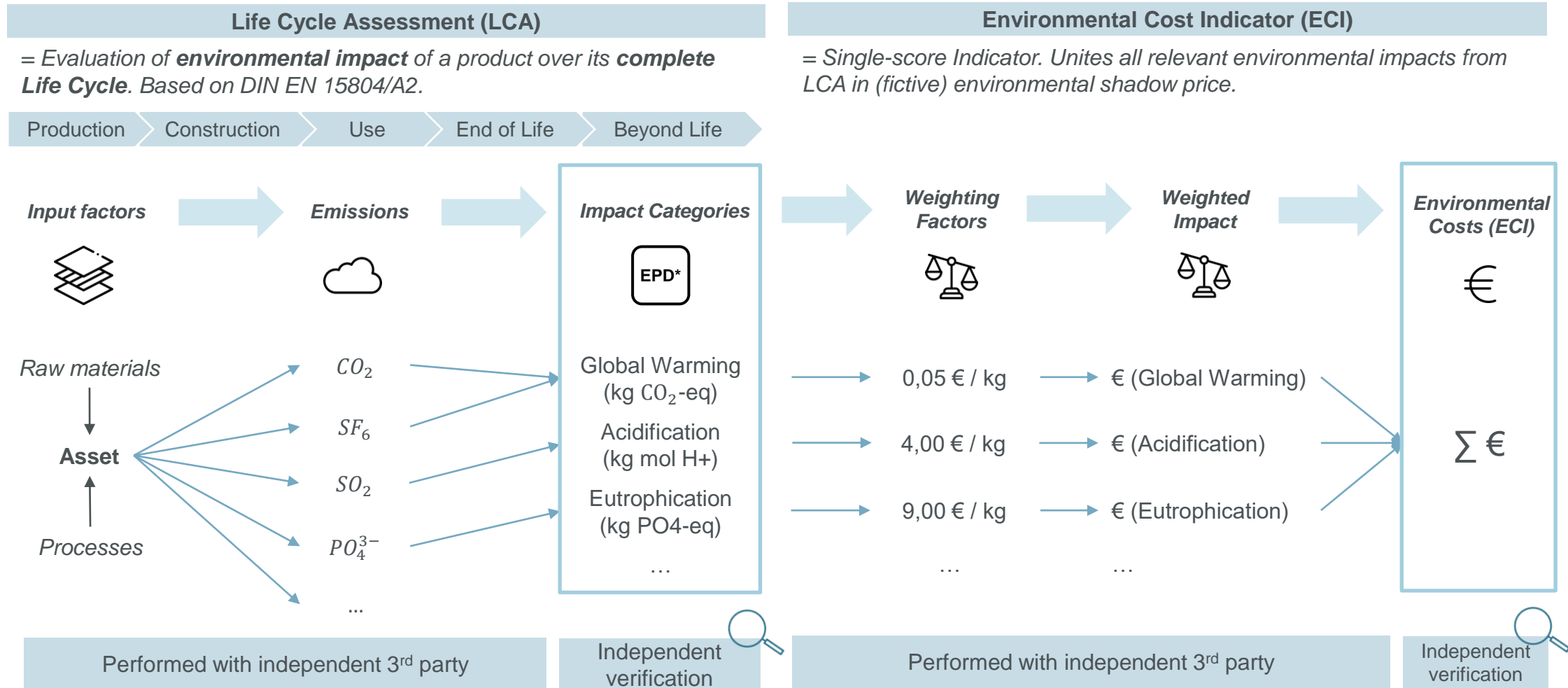


Illustration Method



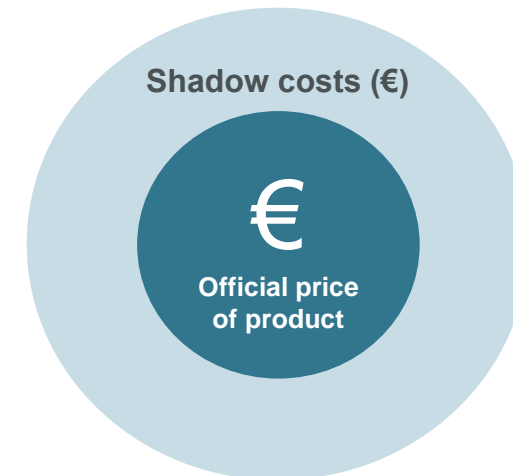
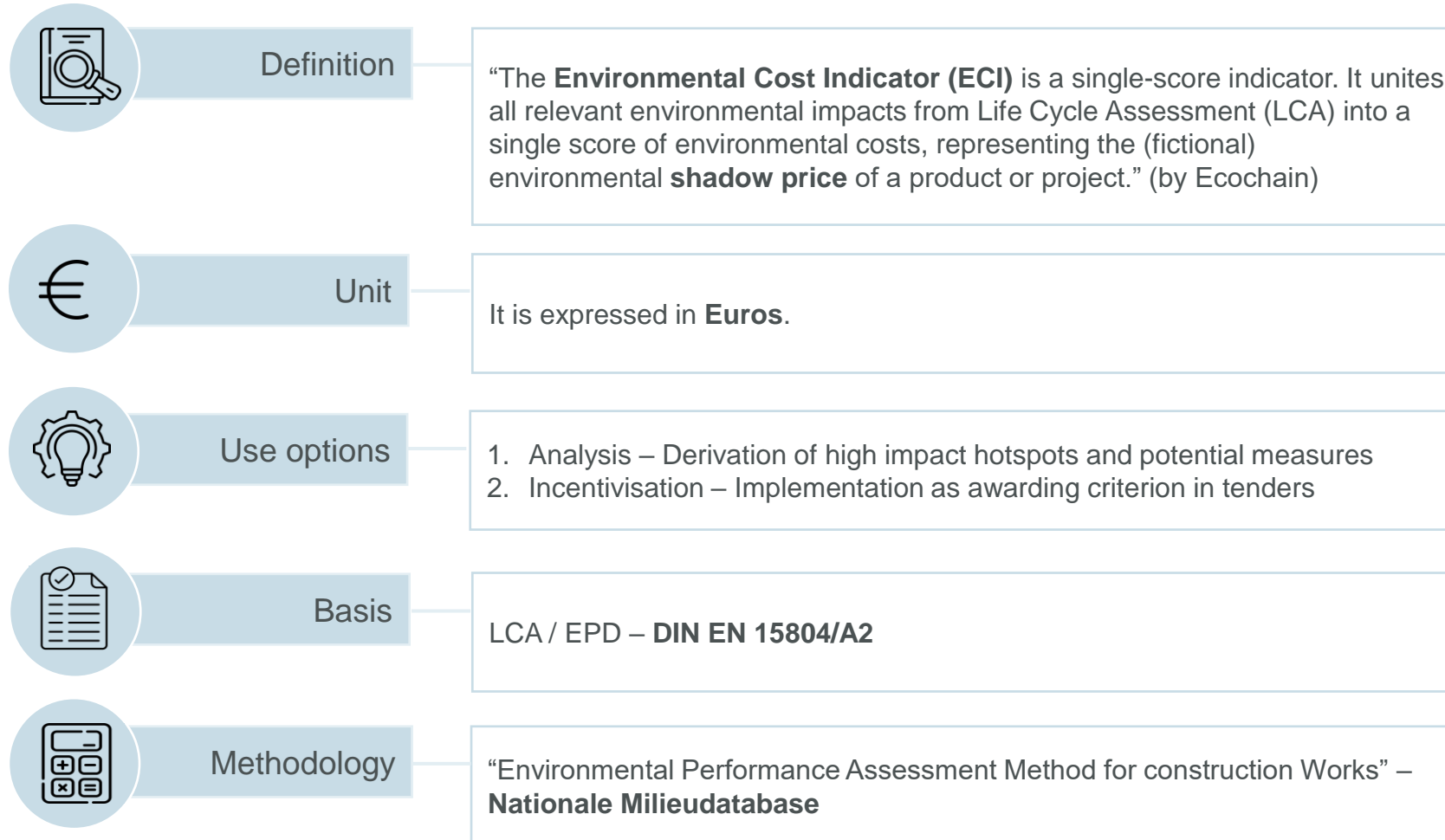
The How

How it works?

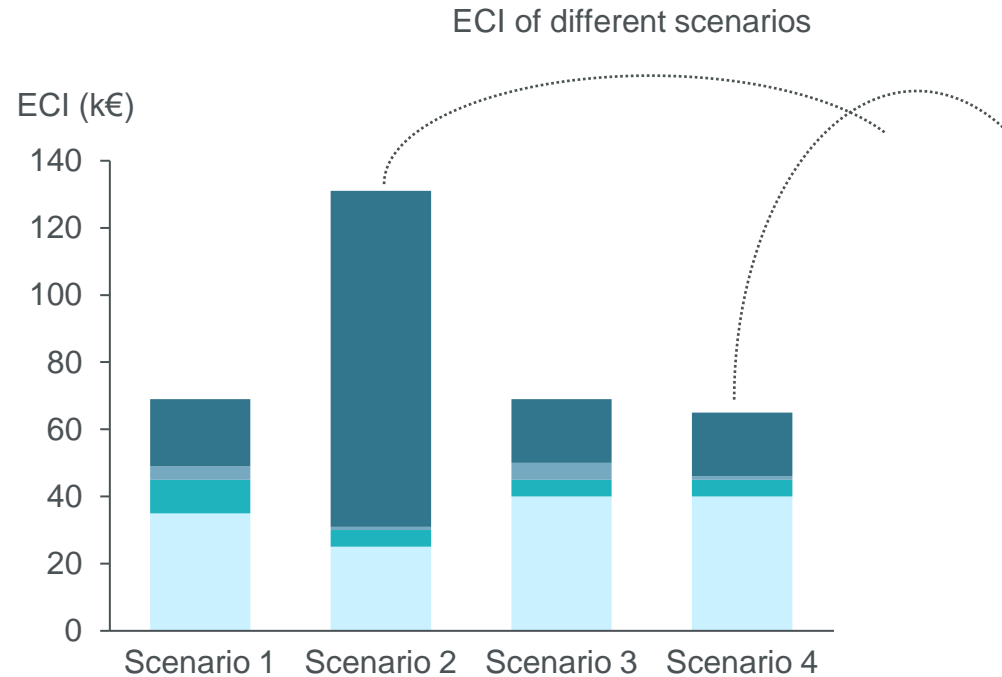


*) An Environmental Product Declaration (EPD) is a standardised short version result of an LCA. It contains information about all environmental impacts of a product.

The environmental cost indicator



The ECI as an instrument for analysis



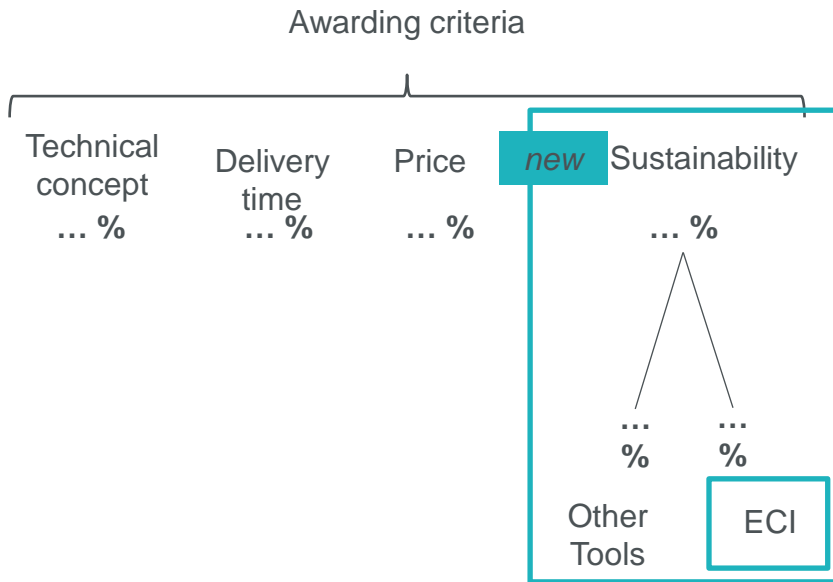
- Production - Raw material supply, transport, production
- Construction - Transport
- Construction - Installation
- Use

- For each life cycle stage, scenarios are calculated by comparing values for materials, transport, production processes of the analyzed product.
- ECI upper and lower limit are calculated (by engineering party) to determine acceptable range of environmental costs
- Based on these insights, emission hotspots can be discovered, reduction potentials derived and measures developed.

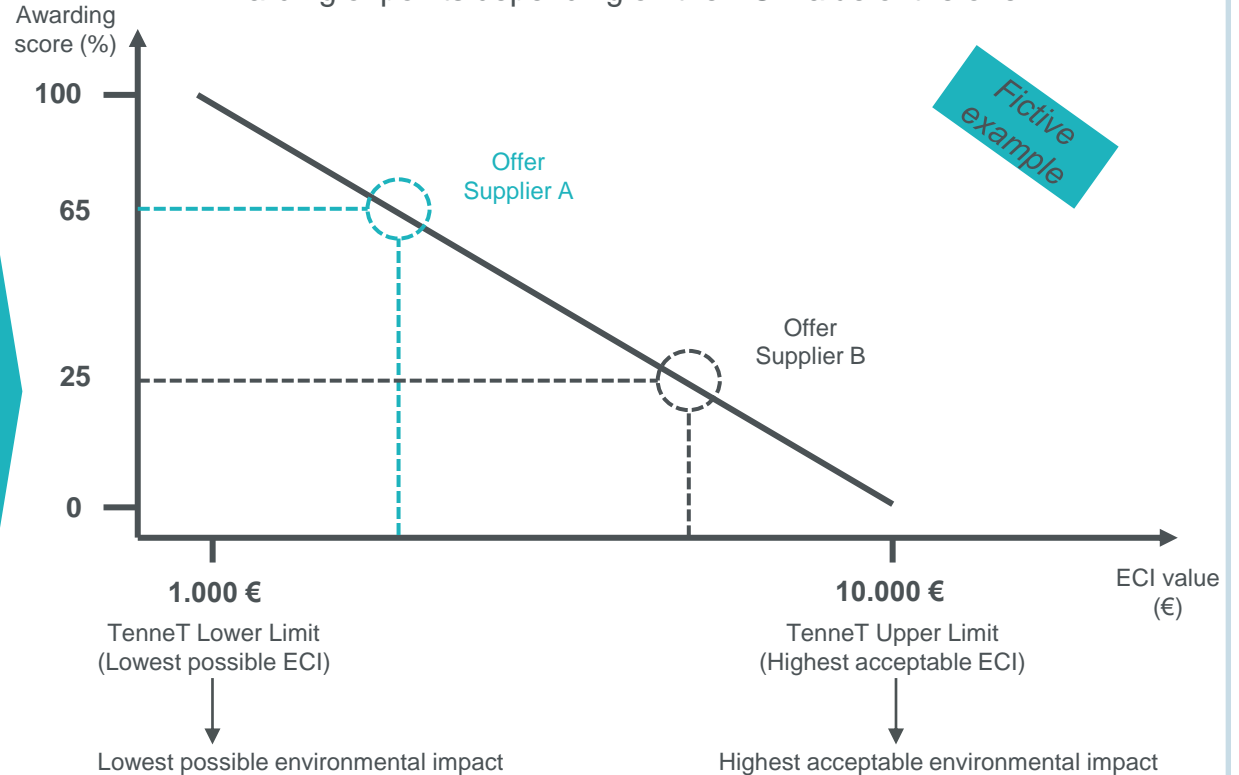
The ECI as incentive and awarding instrument



Adding the ECI as awarding criterion

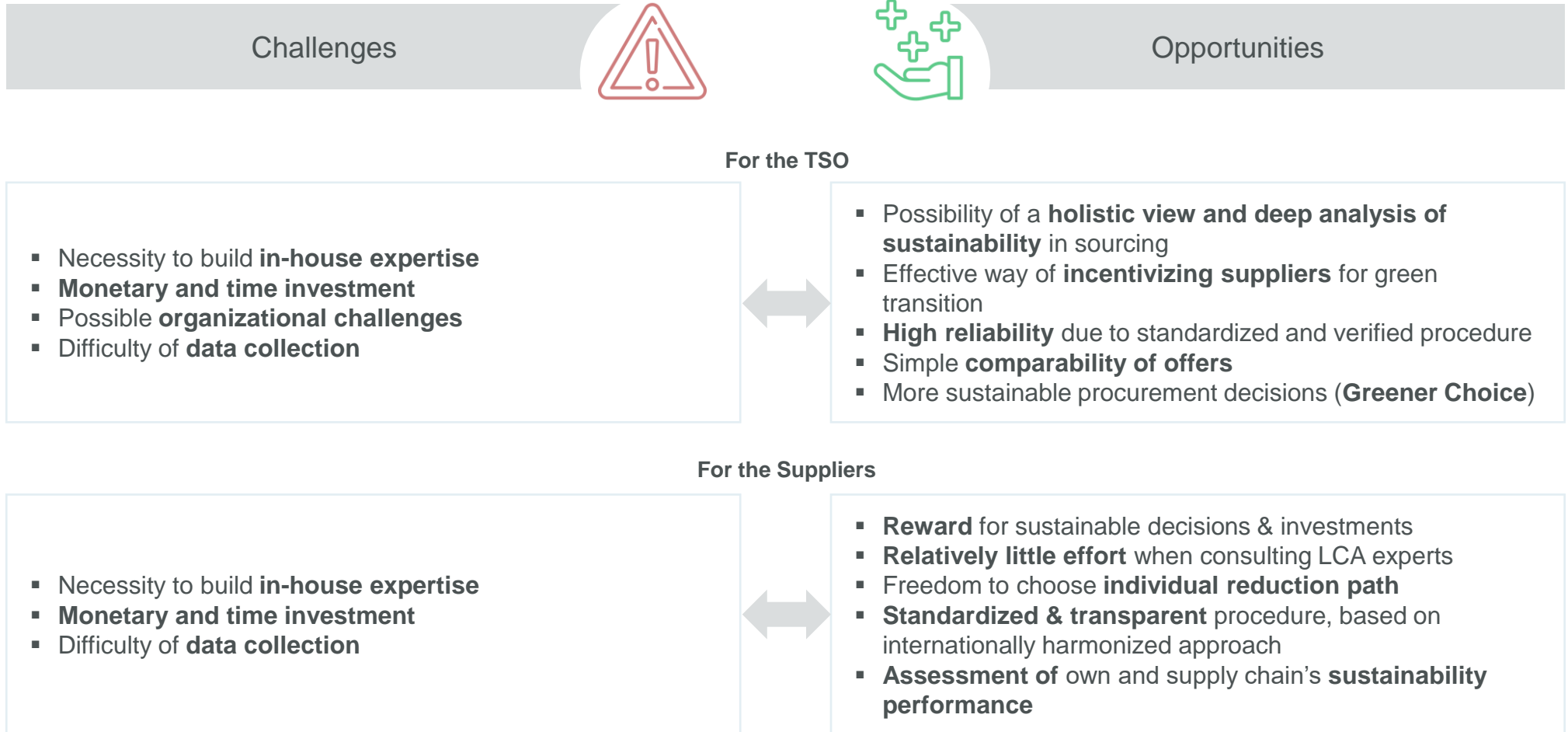


Awarding of points depending on the ECI value of the offer



The lower a supplier's ECI value (and the closer towards the lower limit), the higher the awarding score of the supplier and the better their chances to be awarded in the tender.

Challenges & Opportunities for TenneT & Supplier





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Questions?

TenneT is a leading European grid operator. We are committed to providing a secure and reliable supply of electricity 24 hours a day, 365 days a year, while helping to drive the energy transition in our pursuit of a brighter energy future – more sustainable, reliable and affordable than ever before. In our role as the first cross-border Transmission System Operator (TSO) we design, build, maintain and operate 23,900 km of high-voltage electricity grid in the Netherlands and large parts of Germany, and facilitate the European energy market through our 16 interconnectors to neighbouring countries. We are one of the largest investors in national and international onshore and offshore electricity grids, with a turnover of EUR 4.5 billion and a total asset value of EUR 27 billion. Every day our 5,700 employees take ownership, show courage and make and maintain connections to ensure that the supply and demand of electricity is balanced for over 42 million people.

Lighting the way ahead together.

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