



CO2 Progress and Energy Action Plan

Strukton Groep N.V., January 1, 2023 until June 30, 2023



Strukton

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1 Introduction

This document reports on the developments at Strukton regarding the reduction of carbon emissions in the first half of 2023 (January 1st – June 30th).

Strukton is a leading service provider in sustainable infrastructure, with a focus on green transport and electrification. We want to contribute to the transition to a climate-neutral and circular economy through co-facilitating the energy transition, the re-use of materials, include and encourage circularity and sustainability throughout our supply chain, increase the percentage of sustainable energy and make a positive ecological impact with our activities. For over 10 years, Strukton has been certified at the highest level of the CO2 Performance Ladder. During the period 2009-2021 we have reduced the carbon footprint of our activities in the Netherlands by 47%. Due to this success, we increased our ambition towards 2030 at the beginning of 2022, aiming for a reduction of 75% in carbon emissions compared to 2009. In the past we have reduced our CO2 emissions through a variety of measures. Regarding mobility, we made adjustments in our car fleet (changing the standard from petrol to diesel-powered vehicles and promoting Electric Vehicles's), enabled and encouraged the use of a mobility card for public transport (NS-business card), and promoting hybrid work, also after COVID 19. Regarding our day-to-day operations, we closed down an (outdated) asphalt plant and implemented biofuels (e.g., HVO) for certain types of equipment. We also started initiatives to electrify equipment, re-use materials and introduce circular thinking.

Due to several organisational decisions and changes, we expanded our organisational boundary to include our operations in Belgium, the Nordics (Sweden and Denmark) and Italy. This has led us to set 2021 as the new reference year, as this was the first year data on carbon emissions was available for all different divisions. In the coming years, we expect to reduce our emission further through transitioning our fleet to electric vehicle's, retrofitting our equipment to electric propulsion and the use of biofuels in cases where this is not feasible, and decreasing the impact of our work locations in terms of carbon emissions and energy consumption. Last but not least, all corporate divisions and portfolio subsidiaries are working on raising awareness among staff. These combined efforts should lead to a reduction in carbon emissions of 50% by 2030 compared to 2021.

This periodic report is part of the control cycle within the energy management system that has been introduced in the context of the CO2 Performance Ladder. This periodic report includes all matters described in §9.3.1 points a to t of the NEN-EN-ISO 14064-1:2018: Description of the Organisation (a), Responsible Persons (b), Reporting period (c), Organisational boundaries (d), Current calculation method and conversion factors (f, m, n, o, r, t), Uptake of CO2 (g, h), Biomass (f, g), Direct and indirect emissions (i, j), Reference year (k, l), Changes in calculation method (k, l), Exclusions (h), Recalculate base year and historical data (j,k), Uncertainties (p) and Verification (s).

2 Basic information

2.1 Description of the organisation

We are a service provider leading in sustainable infrastructure, with a focus on green transport and electrification. It is with passion and energy that we integrate our century of craftsmanship with the latest technology and innovation. Safety, quality and sustainability always come first. In our 100 years of business, we have developed a strong basis in our home countries: Italy, Sweden, the Netherlands, Denmark and Belgium. We wish to contribute to the safety, quality and sustainability of infrastructure. Rail, roads and energy. We develop and integrate technologies and solutions to do so. We challenge customers to opt for contracts with room for sustainability and innovation. We are committed to operate

with care and integrity and in a sustainable way and wish to encourage our sector to do the same. We combine this approach with a focus on functionality, quality, life span and a good price-quality ratio.

2.2 Responsible officers

Name	Actors
Strukton Groep N.V.	Responsible assessment: Peter Kingma (SR)
Portfolio Holdings	Responsible assessment: Peter Kingma (SR)
Strukton Civiel B.V.	Responsible assessment: Abdelaziz Fifel (SC, SR&C & SIS)
Strukton Groep Enkelvoudig	Responsible assessment: Yvonne van de Biezen (Strukton Groep & SIS)
Strukton Integrale Projecten	Responsible assessment: Yvonne van de Biezen (Strukton Groep & SIS)
Strukton Power B.V.	Responsible assessment: Marcel van Kordelaar (SP)
Strukton Rail B.V.	Responsible assessment: Peter Kingma (SR)
Strukton Rail Italy B.V.	Responsible assessment: Massimiliano Serci (CLF)
Strukton Rail Nordics	Responsible assessment: Carolina Osterberg (SR Nordics)

2.3 Base year

Name	Default reference year
Strukton Groep N.V.	2021
Portfolio Holdings	2021
Strukton Civiel B.V.	2021
Strukton Groep Enkelvoudig	2021
Strukton Integrale Projecten	2021
Strukton Power B.V.	2021
Strukton Rail B.V.	2021
Strukton Rail Italy B.V.	2022
Strukton Rail Nordics	2021

2.4 Reporting period

This report covers the period from January 01, 2023 till June 30, 2023.

2.5 Verification

This report covers the period from January 01, 2023 till June 30, 2023.

The CO2 footprint in this document has not been verified by an (external) auditor. This only happens once a year in line with the certification audit by an external certifying body (CI).

3 Demarcation

3.1 Organisational boundaries

Name	Consolidation percentage
Strukton Groep N.V.	100%
Portfolio Holdings	100%
Strukton Civiel B.V.	100%
Strukton Groep Enkelvoudig	100%
Strukton Integrale Projecten	100%
Strukton Power B.V.	100%

Name	Consolidation percentage
Strukton Rail B.V.	100%
Strukton Rail Italy B.V.	100%
Strukton Rail Nordics	100%

3.2 Organisational changes

For the period up to and including 2020, the organisational boundary consisted of the divisions that carried out activities in the Netherlands. In 2021, due to an organisational change within Strukton Rail B.V., Strukton Rail N.V. (Belgium) was included in the organisational boundary.

In 2021, Strukton Rail B.V. ceased to exist following an organisational restructuring. Due to Strukton Rail B.V. being the intermediate holding company, the activities in Italy and the Nordics (i.e. Denmark, Sweden) were directly placed under management of Strukton Group. These divisions have therefore been included in the organisational boundary from 1-1-2022 forward, and are included on the certificate in 2023. The auditor agreed with the way in which this integration was implemented.

In 2022, the former regional organisations of Strukton Civiel and the former Strukton Civiel Projecten B.V. were allocated to either Strukton Roads & Concrete or Strukton Infrastructure Specialties. The other civil (specialist) companies active in the civil engineering are included separately as portfolio companies within the Portfolio Investment Holding.

3.3 Projects tendered with CO Performance 2 Ladder component

Once a year, a list of won projects that included a CO2 Performance Ladder component is submitted to the [SKAO website](#).

3.4 Current calculation method and conversion factors

The conversion factors to calculate the CO2-footprint were derived from several sources, in line with the local standards:

- For the Netherlands: <https://www.co2emissiefactoren.nl/>
- For Belgium: <https://www.co2emissiefactoren.be/>
- For Italy: Association of Issuing Bodies (AIB)
- For the Nordics: Swedish Energy Authority

3.5 Changes in calculation method

No relevant changes in the calculation method occurred during the reporting period on which this document reports. We adjusted the carbon emissions for the activities in Belgium in our CO2-footprint over 2021 with retroactive effect, as we inadvertently used the Dutch conversion factors instead of applying the Belgium standard.

3.6 Exclusions

Similar to previous years, the electricity used for the trains deployed by Strukton Rail Equipment is excluded from the footprint. We will examine whether or not this is relevant in the second half of 2023.

3.7 Absorption of CO2

Where possible and paid by the client, we use Olivine to reduce CO2 emissions by binding the CO2 in the air. Strukton also develops commercial concrete products made with miscanthus grass. This grass

absorbs 4 to 5 times as much CO2 during growth as forest in similar dimensions. After processing the CO2 is captured in the grass.

3.8 Biomass

Strukton does not use biomass.

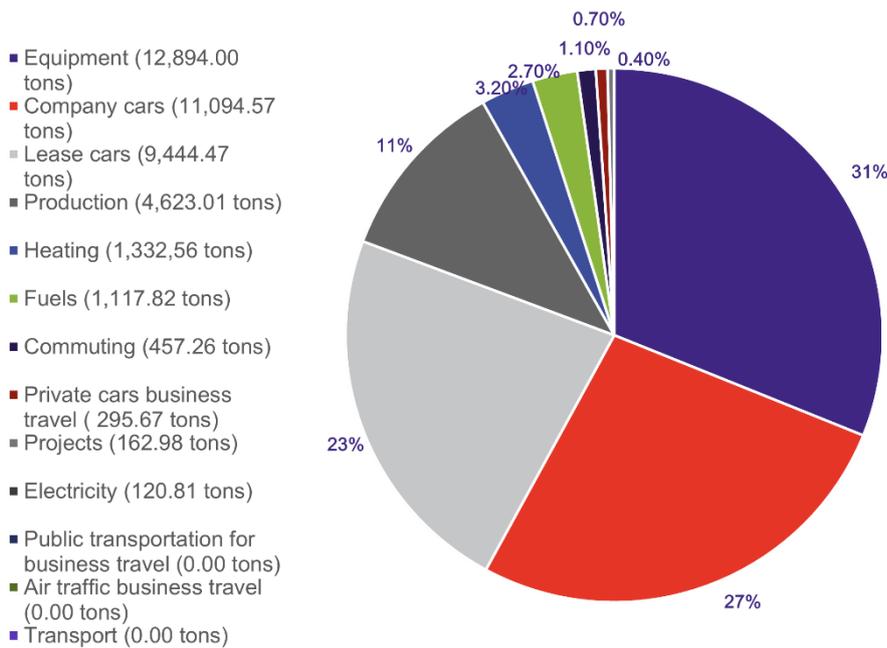
3.9 Uncertainties

Over the first half of 2023, we aligned reporting on carbon emissions with the reporting cycle of the supervisory board. Because the data on fuel consumption (both fossil fuels and electricity) used by our fleet isn't available on time, we extrapolate the data on fuel consumption during the first five months to estimate consumptions for the 6th month.

4 CO emissions

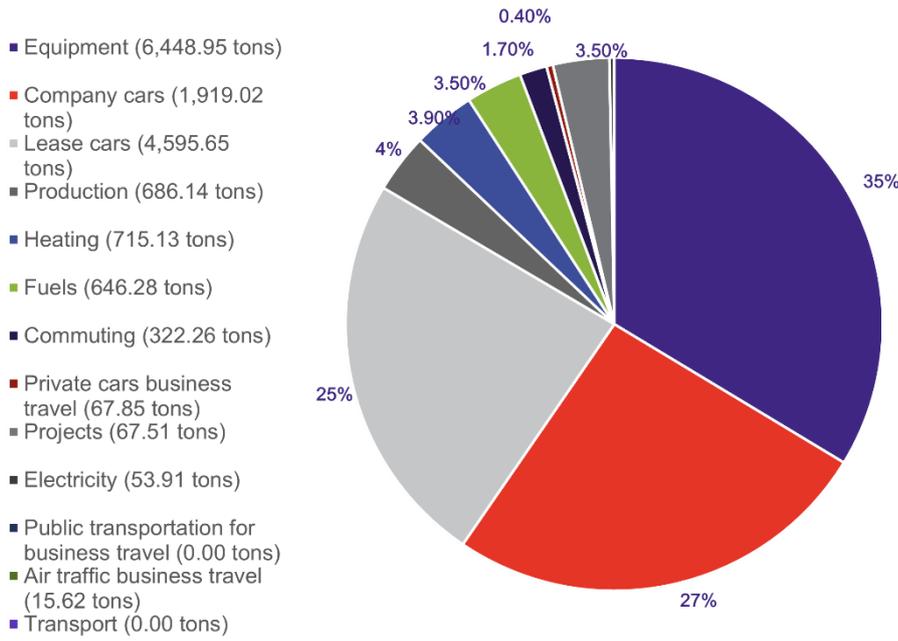
4.1 Footprint base year scope 1 & 2

Footprint base year (2021) scope 1 & 2 (41,544 tons)



4.2 Footprint reporting period (2023 – Q1-2)

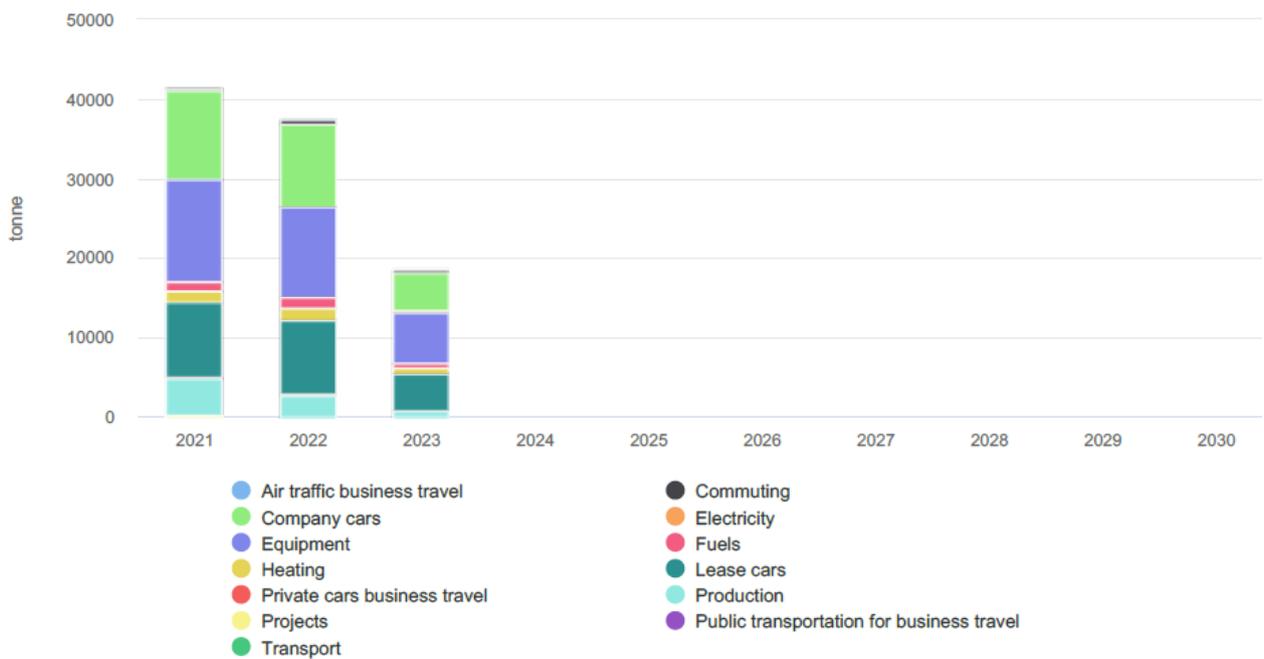
Footprint 2023 Q1 & 2 scope 1 & 2 (18,538 tons)



Please note that the 2023 footprint covers 6 months, whereas the base year footprint covers 12 months.

4.3 Trend over the years by category

CO2 emissions 01/01/2021 until 12/31/2030



Please note that the 2023 footprint covers 6 months, whereas the 2021 and 2022 footprints cover 12 months

4.4 Goals

Strukton's sustainability ambitions for the period 2021-2035 are:

- We want to be a climate-neutral organisation by 2035
- Our working locations (both office and project locations) are free of harmful emissions and residual waste by 2030
- We design our products and projects in a circular way, re-use materials and build with circular materials by 2030
- All our projects contribute to better soil quality and biodiversity by 2030

Our ambition to be climate-neutral by 2035 breaks down in the following goals to reduce carbon emissions:

- We reduce our total gross carbon emissions in 2030 by 50% compared to 2021, related to our operating income
- We reduce our carbon emissions resulting from business travel by 50% per FTE in 2030 compared to 2016
- We reduce carbon emissions in our value chain for the production and commissioning of (circular) concrete catenary supports by 55% in 2030 compared to 2023
- We reduce carbon emissions in our value chain for the production of ballast and ballasting tracks by 50% in 2030 compared to 2023

We have translated these long term goals into annual goals for the period 2023 – 2025. The annual goals for 2023 to 2025 (expressed as a percentage) are relative reductions compared to the gross emissions of the previous year. When we achieve a goal before the date provided, we will update our goals accordingly.

4.5 Direct company emissions (scope 1)

Mobility

We aim for a yearly reduction in carbon emissions of our car fleet relative to our operational income. A 5% reduction in 2023 relative to 2022, a 5% reduction in 2024 relative to 2023 and a 10% reduction in 2025 relative to 2024.

Production

We aim for a yearly reduction of carbon emissions in our own production facilities relative to our operational income. A 5% reduction in 2023 relative to 2022, a 5% reduction in 2024 relative to 2023 and a 10% reduction in 2025 relative to 2024.

Energy

We aim for a yearly reduction of carbon emissions caused by the consumption of natural gas at permanent working locations relative to the gross surface area. A 5% reduction in 2023 relative to 2022, a 5% reduction in 2024 relative to 2023 and a 5% reduction in 2025 relative to 2024.

4.6 Progress of reduction measures

The implementation of, and progress on measures to achieve the aspired reductions is described for each goal separately.

Our overall gross carbon emissions added up to 18,538 tons in the first half of 2023. Compared to the first half of 2022 (18,771 tons) we achieved a reduction of 233 tons (or 1.2%). Relative to our operational income we achieved a reduction of 0,81 tons CO₂ per million euro: 30.52 tons CO₂ per million € over the first half of 2022 as compared to 29.71 tons CO₂ per million € in the first half of 2023.

Mobility

Over the first half of 2023, the total gross carbon emissions resulting from business travel per FTE increased by 0.09 tons to 2.42 tons compared to the first half year of 2022. Additional measures are required to achieve our goal.

Relative to our operational income, we see a reduction of 0.24 tons in carbon emissions resulting from business travel. Our total carbon emissions resulting from business travel per million euro operational income added up to 15.25 tons CO₂ in the first half of 2023 as compared to 15.42 tons in the first half of 2022 and 18.73 tons in 2021. The following initiatives and measures were implemented during the first 6 months of 2023.

Molhoek-CCT realised the placement of a smart charging plaza with room for up to 5 electric vehicles in the village of Raalte (NL). 16 Electric vehicles chargers were placed at Strukton's Dutch head office in Utrecht to accommodate the increasing number of electric vehicles.

We are conducting pilots with electric vans (E-LCV's) for mechanics. Mechanics across different business lines are asked to swap their van with an ICE for an electric van and to share their experiences.

A change in the lease arrangement is being prepared for the subsidiaries within the Netherlands in the near future.

Electric vehicles will be the standard and ICE-powered vehicles will only be possible by exception.

Both the Nordics and Belgium stimulate the choice for an electric car among their employees.

Equipment

In the first half year of 2023 carbon emissions as a result of equipment relative to our operational income added up to 11.54 tons per million euros, resulting in a reduction of 0.37 ton per million euro's compared to the first half year of 2022 (11.91 tons per million).

Although we have achieved a reduction, a number of initiatives are taken to further the reduction. Strukton Rail Netherlands has bought an electric-powered quad and two electric (mini)excavators. Additionally, they started with retrofitting aerial working platforms for catenary work with a hybrid powerline. Lastly, optimisation and testing of the battery-powered locomotive is ongoing.

Strukton Rail Netherlands has the ambition to carry out a renewal project in the north of the Netherlands without emitting (carbon) emissions.

Energy

In order to reduce the use of energy Strukton is centralizing the different office locations throughout the Netherlands as much as possible in Utrecht.

We are exploring the possibilities and limitations of PV-panels at our technical service location in Zutphen (NL). Considering the potential, this has to be done in consultation with the local network operator.

Scope 3

Next to the reduction of our scope 1 and 2 emissions we also try to downsize the emissions within scope 3. We are conducting pilots with catenary structures made from circular concrete. The whole process (from extracting old catenary structures to pouring new structures) is carried out by several Strukton subsidiaries.

We are piloting a new type of sleeper (bamboo sleeper) at an industrial site. This type of sleeper would considerably reduce the amount of carbon emissions over its life cycle compared to the commonly used concrete sleeper.

In the coming months, several different initiatives regarding optimisation of availability and usage of (solar) energy will be presented.

4.7 Employee contribution

Several initiatives are deployed across the organisation to increase employee awareness regarding (the importance of) sustainability. For example, sustainability is a topic during the introduction for new employees at Strukton Rail Netherlands and Strukton Infrastructure Specialities. Sustainability is also discussed during quarterly meetings in the various divisions. Additionally, a study was conducted by an external student among project and contract managers regarding their sustainability views, needs and intentions.

5 Initiatives

Strukton actively participates in initiatives and actions including:

- [Europe's Rail Joint Undertaking](#)

- [Closing the Loop initiative for circular viaducts](#)
- [Solaroad](#)
- [De Coalitie Anders Reizen](#)
- [Manifest Duurzaam GWW 2030](#)
- [Green Deal Verduurzaming betonketen](#) (national concrete deal)
- [De Duurzame leverancier](#)
- [Asfalt Impuls](#)
- [Bewuste Bouwers](#)
- [Emissieloos Netwerk Infra \(ENI\)](#)
- [De Groene Koers](#)
- [Bereikbaarheidsalliantie A2](#)
- [Programme Natural Capital in Construction Sector](#)
- Transition paths of ProRail and Rijkswaterstaat
- [Nature builders \(part of Infranatuur - Delta plan recovery of biodiversity\)](#)

Together with the Dutch public contracting authority ProRail and other major Dutch railway contractors we have initiated periodic consultations on how to increase sustainability across the value chain. Among the topics discussed is the approval process of new (more sustainable) products and how this can be sped up.

Other actions in the first six months of 2023:

[Coalitie Anders Reizen](#): In February 2023, 24 companies including Strukton signed the 'Anders Vliegen' statement, promising that they will reduce the CO2 emissions of business flights by 25% compared to 2019 and to implement 12 measures on that behalf. In July, Anders Reizen introduced a Summer Checklist for companies to swap from plane to train.

[De Duurzame Leverancier](#) organised a Circular Market in March 2023.

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