Softwire

Prepared by

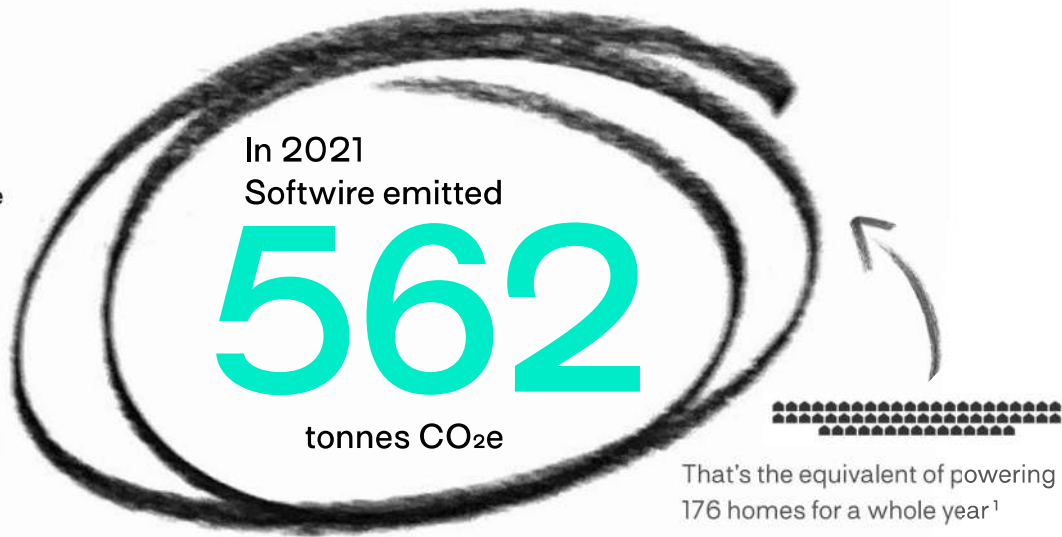◉ **Supercritical**

March 2022

2021
Carbon
Footprint
Report.

Overview.

The climate crisis is the single-biggest threat to humanity. As a forward-thinking company, Softwire recognises this. You've partnered with Supercritical to measure, reduce, and offset your emissions.

The first step is to understand your current impact. We've calculated Softwire's carbon footprint for the 2021 calendar year.

In 2021 Softwire emitted

562

tonnes CO_2e

That's the equivalent of powering 176 homes for a whole year [1]

27%

of emissions were created from employee remote working

Emissions associated with Softwire employees' remote working generated 150 tonnes of CO_2e emissions.

2.11t CO_2e

per employee

Your total footprint equates to 2.11 tonnes CO_2e per employee over the course of 2021. The average footprint for a person in the UK is 12.7 tonnes per year.

0.02

GHG intensity ratio

The ratio between your footprint and revenue in 2021. This is an industry standard way to normalise your footprint so you can track progress over time. As Supercritical grows, we'll be providing industry benchmarks to better contextualise this number.
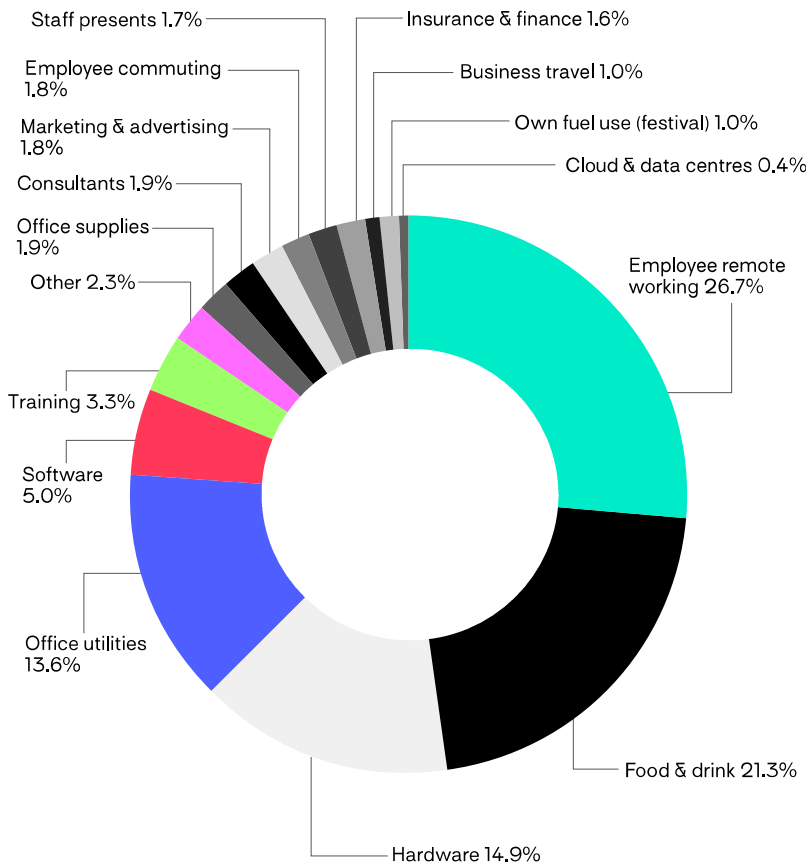
Category	Scope	Footprint (t CO_2e)
Employee remote working	3	149.97
Food & drink	3	119.48
Hardware	3	83.72
Office utilities	2 & 3	76.17
Software	3	28.20
Training	3	18.27
Other	3	12.65
Office supplies	3	10.74
Consultants	3	10.59
Marketing & advertising	3	10.25
Employee commuting	3	10.15
Staff presents	3	9.70
Insurance & finance	3	9.05
Business travel	3	5.65
Own fuel use (festival)	1	5.42
Cloud & data centres (*tbc)	3	2.07

Pie chart:
- Employee remote working 26.7%
- Food & drink 21.3%
- Hardware 14.9%
- Office utilities 13.6%
- Software 5.0%
- Training 3.3%
- Other 2.3%
- Office supplies 1.9%
- Consultants 1.9%
- Marketing & advertising 1.8%
- Employee commuting 1.8%
- Staff presents 1.7%
- Insurance & finance 1.6%
- Business travel 1.0%
- Own fuel use (festival) 1.0%
- Cloud & data centres 0.4%

Our methodology.

Supercritical's methodology is aligned with the GHG Protocol standard, the standard developed by the World Resources Institute (WRI), and used by governments & cities all over the world as well as over 92% of Fortune 500 companies.

Base year footprint

We begin by calculating a base year footprint; the total CO_2e emissions released as part of a company's activities over the period of a specified year. Companies choose the base year as the earliest whole year for which they have reliable data: for Softwire this is 2021. Calculating a base year footprint is necessary to set and track progress towards future emissions reduction goals. But since 2021 was a highly unusual year, you can expect many emissions categories to change going forward. We can use backcasting next year to help you understand which of the changes are due to your climate actions, and which are due to other background changes.

Emissions calculations

Most business activities don't have a direct measurement of the GHG emissions recorded for them. Instead, we use emission conversion factors to calculate the equivalent emissions created for activities. A number of governments & organisations create and maintain official GHG conversion factors, and the majority of emissions factors we've used to calculate Softwire's footprint have been provided by the UK Government's Department for Business, Energy & Industrial Strategy (BEIS) team[2].

For example, converting a 15km taxi ride into the amount of CO_2e emitted into the atmosphere, using the BEIS taxi km/kg CO_2e conversion factor (0.20369):

> **GHG emissions = activity data x emission conversion factor**
> **3.05 kg CO_2e = 15 x 0.20369**

Our approach to emissions scope

We use a comprehensive and progressive approach to mapping emissions, aiming to capture the majority of emission sources in your sphere of influence. Emission sources such as home-working and pension investment are often overlooked. However, they present a huge opportunity for your positive influence!

Deeper dive: Remote working approach

We wanted to provide more information on our remote working methodology, so you can understand one of the largest contributors to your footprint.

The pandemic meant that offices were closed for most of 2021. Working from home uses more electricity (charging laptops and powering external monitors) and heating (since more homes were occupied in the daytime).

To calculate the impact of employee home-working, first we estimate the additional electricity used. The two biggest contributors to home-working electricity usage are laptops and lighting. The average power consumption of a standard laptop[4] is 140 watts, and lighting is 10 watts.

> **Total laptop usage (kWh) = 140 watts x number of employees working from home x working hours per month**
>
> **Total lighting usage (kWh) = 10 watts x number of employees working from home x working hours per month**

Next we translate these into CO_2e emissions using the BEIS electricity conversion factor (0.233):

> **Work from home electricity emissions (kg CO_2e) = (Total laptop usage (kWh) + Total lighting usage (kWh)) x 0.233**

We then calculate the impact of the additional energy required to heat employees' homes during this period. It takes on average 4800 kWh to heat a home during working hours in the heating season, and research shows that one third of homes would already be heated during the day before lockdown. Using this information, we can calculate additional heating:

> **Total heating usage (kWh) = 4800 kWh x (66% x number of employees working from home)**

Lastly, we translate additional heating into CO_2e emissions using the BEIS natural gas conversion factor (0.184):

> **Work from home gas emissions (kg CO2e) = Total heating usage (kWh) x 0.184**

This gives us the total emissions created as a result of your employees working from home.