

# Element's commitment to Carbon Reduction

Element is committed to minimising our environmental footprint and achieving carbon net zero by 2040.

Element predominantly has indirect emissions. Element has no Scope 1 (as defined in the [GHG Protocol](#)) direct emissions from vehicles or mechanical production; and minimal Scope 2 emissions of electricity and gas use. This includes employee household usage due to the company being mostly remote, and two small rental offices, one of which is being covered by the landlord. The majority of our carbon footprint consists of indirect Scope 3 emissions. However we recognise that reduction of Scope 3 emissions are crucial to minimising our environmental footprint.

## Baseline Emissions Footprint

Element estimated* baseline year emissions: <sup>1</sup> financial year 2022	
EMISSIONS	TOTAL (tCO <sub>2</sub> e)
Scope 1	Zero - Direct Emissions
Scope 2	0.821 tCO <sub>2</sub> e - Indirect Emissions for Energy Consumption Rennes Office
Scope 3 <sup>2</sup> (Included Sources)	Business travel: 117.78 tCO <sub>2</sub> e Commuting. 0.33 tCO <sub>2</sub> e Waste: 0 tCO <sub>2</sub> e ( serviced offices)
<b>Total Emissions</b>	<b>118.93 tCO<sub>2</sub>e</b>

\* Note: This is an initial high level calculation based on estimates as available at the time of writing. A comprehensive emissions audit is still under way. This policy will be updated once this is complete.

<sup>1</sup> Calculated using GHG Reporting Protocol corporate standard <https://ghgprotocol.org/corporate-standard>

<sup>2</sup> Calculated following GHG scope 3 Calculation guide.

[https://ghgprotocol.org/sites/default/files/standards/Scope3\\_Calculation\\_Guidance\\_0.pdf](https://ghgprotocol.org/sites/default/files/standards/Scope3_Calculation_Guidance_0.pdf)

## Emission reduction strategy and projects

Element is committed to a renewable ethos adapting our products to be less energy intensive and more sustainable. This carbon reduction strategy and the actions required to achieve Element's Net Zero ambitions by 2040.

We have invested heavily in designing the Matrix Protocol to provide robust decentralised access control and permissions without wasting any energy: Matrix uses a minimal energy footprint and is a protocol designed specifically for low-latency decentralised communication, which doesn't use blockchains of any kind.

We are also focusing research and developing a lightweight software solution (codenamed Hydrogen) which requires less computing power and is able to run on older devices, thus helping twofold, by extending the lifespan of already existing devices and therefore contributing to the reduction of waste and by making refurbished devices a viable option for users. We are also actively developing Low Bandwidth<sup>3</sup> and Ultra Low Bandwidth Matrix transports in order to reduce bandwidth and thus radio energy consumption by up to 65x, as well as working on bandwidth-efficient message routing algorithms (Pinecone<sup>4</sup>) and peer-to-peer Matrix<sup>5</sup> in order to eliminate server energy consumption entirely, where possible. Finally, we are also working on next-generation server implementations<sup>6</sup> which use roughly 5x less compute resources than our current generation.

We will implement a phased approach to getting better emission data on our products and services. This information will then be incorporated into the strategic decision making process in running our business. This will translate to choices for products and suppliers we use, which in turn will lessen our supply chain dependency to focus on suppliers with a commitment to net zero and shorter transportation distances for goods.

Further to this we commit to improving daily operations choices in running our business such as purchases which are from local, sustainable sources and are designed to be reusable. This will cut down on transport emissions and waste.

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<sup>3</sup> <https://matrix.org/blog/2021/06/10/low-bandwidth-matrix-an-implementation-guide>

<sup>4</sup> <https://matrix.org/blog/2021/05/06/introducing-the-pinecone-overlay-network>

<sup>5</sup> <https://matrix.org/blog/2020/06/02/introducing-p-2-p-matrix>

<sup>6</sup> <https://matrix.org/blog/2020/10/08/dendrite-is-entering-beta>

# Emission reduction targets

## **Electricity**

A small percentage of our employees use our offices so our Scope 2 electricity and heating costs are relatively low from rental premises. We commit, if feasible, to source electricity suppliers which use renewable energy to offset this footprint. This combined with small changes such as a switch-off policy, ensuring heating and cooling is off when the offices are empty and energy efficient lighting should continue to improve our position. We also commit to supporting our employees in lowering their work from home electricity.

The data centres providing infrastructure for our product are aiming to run using 100% renewable energy by 2025, which is a significant step towards making our product net zero carbon emissions for our hosted customers.

## **Waste**

We do not have specific data on waste generated by Element as this is managed by the building landlord. We plan to address waste generation through behaviour changes and education of employees. Recycling bins are provided in all offices.

For IT equipment we are implementing processes for either refurbishment and reuse, or ensuring that e-waste is sent to recycling plants. We are also looking at favouring suppliers who offer paper or cardboard packaging instead of plastic.

## **Business travel & commuting**

Element as a remote first company has the advantage of lower commuting emissions with office attendance being voluntary. However due to employees being located across the globe our business travel emissions are significantly higher with flights being our largest source of CO<sub>2</sub> emissions.

For business travel we will look to find lower carbon transport options, as well as offering and recommending less carbon-intensive modes of travel where possible such as rail travel rather than a flight. If flights are the chosen option we are in the process of defining carbon offset plans to compensate.

## Management commitment

The Management team will give its full support to this carbon reduction strategy and the actions required to achieve Element's Net Zero ambitions by 2040.

This Carbon Reduction Plan has been completed in accordance with PPN 06/21 and associated guidance and reporting standard for Carbon Reduction Plans<sup>7</sup>.

Emissions have been reported and recorded in accordance with the published reporting standard for Carbon Reduction Plans and the GHG Reporting Protocol corporate standard and uses the appropriate Government emission conversion factors for greenhouse gas company reporting.<sup>8</sup>

Scope 1 and Scope 2 emissions have been reported in accordance with SECR requirements, and the required subset of Scope 3 emissions have been reported in accordance with the published reporting standard for Carbon Reduction Plans and the Corporate Value Chain (Scope 3) Standard.

This Carbon Reduction Plan has been reviewed and signed off by the Element Executive.

*Amandine le Pape*

Signature

Amandine le Pape, COO

May 2022

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<sup>7</sup><https://www.gov.uk/government/publications/procurement-policy-note-0621-taking-account-of-carbon-reduction-plans-in-the-procurement-of-major-government-contracts>

<sup>8</sup> <https://www.gov.uk/government/collections/government-conversion-factors-for-company-reporting>