




HEAnet Climate Action Roadmap 2024

Document control

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Purpose	To demonstrate how HEAnet are adhering to the Public Sector Climate Action Mandate, what activities have been undertaken to date and what our plans are to be fully compliant and achieve the targets set, by 2030.
Scope	HEAnet CLG

Document approval





Approved by	Role	Signature	Date
Ronan Byrne	Chief Executive Officer		28/06/2024

Change History





Date	New Version	Author	Summary of Change

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Indicators are used throughout the document to indicate compliance with the individual requirements of the Public Sector Climate Action Mandate 2024¹.

Indicator	Notes
	Fully compliant
	Partially compliant with work in progress
	Not in compliance with the work required to achieve compliance
	Requirement does not apply to HEAnet

¹<https://www.gov.ie/pdf/?file=https://assets.gov.ie/287069/227652c9-310a-486f-87f5-de31f2e731b1.pdf#page=null>

1 Introduction

1.1 Organisational context

HEAnet is Ireland’s National Education and Research Network, delivering high speed internet connectivity and ICT shared services to all levels of the Irish education sector. Over 1.2 million students, researchers and staff rely on our national education network every day.

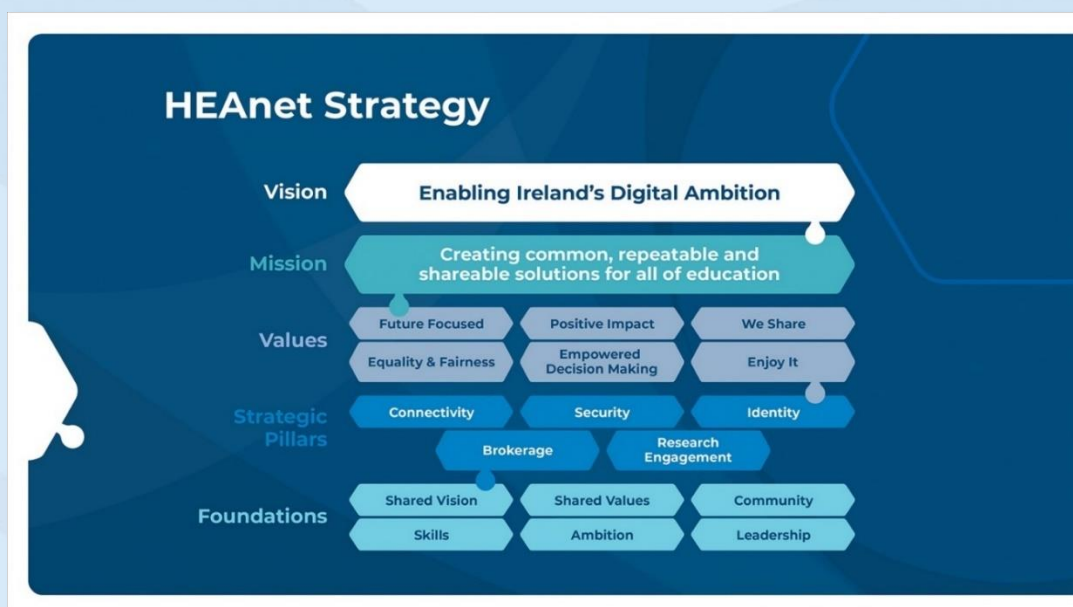
EduCampus Services (heretofore known as EduCampus) was incorporated in April 2015 as a subsidiary company of HEAnet to implement, maintain and support business-critical systems to clients in the education sector. EduCampus provides systems user supports to 20,000 staff and 140,000 students.

HEAnet is a Company Limited by Guarantee and not having a Share Capital. EduCampus is a Designated Activity Company, with 92% of its share capital held by HEAnet. Both Companies have charitable tax status and are registered with the Charities Regulator.

As registered charities, HEAnet and EduCampus comply with the Charities Act 2009, make an annual return to the Charities Regulator, file annual financial statements, and comply with the Charities Governance Code.

HEAnet and EduCampus operate under a group model (the “Group”), therefore some content may span both organisations, however, this document relates to HEAnet only unless specified. EduCampus maintain a separate Climate Action Roadmap.

1.2 HEAnet Strategy



1.3 Progress to date

At HEAnet, we understand the importance of prioritising both the health of our business and our planet. As a leading provider of network infrastructure, and services to the education and research community, we have a responsibility to minimise our environmental impact. That is why we are committed to investing in measures that improve our resilience and decrease our carbon footprint.

We recognise the significant role that we play in connecting students, educators, and researchers to the digital world. Therefore, it is crucial for us to embrace a strategic Environmental, Social, and Governance (“ESG”) framework, which incorporates climate action.

In 2023, we engaged the expertise of a third party to guide us in developing our ESG strategy, with particular emphasis on climate action as a key component. Our ESG strategy includes key environmental goals and targets, aligned with the Public Sector Climate Action Mandate (the “Mandate”), and can be accessed via our website².

1.4 Climate Action Roadmap

We support the Paris Agreement and aim to reduce our greenhouse gas (“GHG”) emissions in support of the 1.5 degrees Celsius pathway recommended by the scientific community and consistent with the United Nations Global Compact.

This Climate Action Roadmap is HEAnet’s plan to reduce GHG emissions, improve our energy efficiency and meet mandated requirements. It sets out how we have performed up until now and the steps we will take to exceed the targets set in the Mandate. It also explains how we will reduce our impact on the environment by focussing on our people, and our ways of working.

This document is the first iteration of our Climate Action Roadmap and will be reviewed and updated annually to ensure adherence with the latest iteration of the Mandate.

² <https://www.heanet.ie/our-esg-strategy>

2 Our Targets

The public sector has established a track record of leading by example when it comes to climate action. In 2020, it met its target of achieving a 33% energy efficiency improvement. This was compared to a target of 20% for the whole economy.

The Mandate has again set ambitious emission reduction and energy efficiency targets for public bodies. Whilst we are not a public sector body, we are committed to complying with the Mandate. Our targets are to:



Reduce our greenhouse gas emissions by 51% by 2030



Increase the improvement in our energy efficiency to 50% by 2030

2.1 Measuring and monitoring progress

The first step in reaching our targets is understanding where we are starting from. For both GHG emissions and energy efficiency our baseline figure is the average for the three-year period 2016 to 2018.

2.1.1 GHG emissions

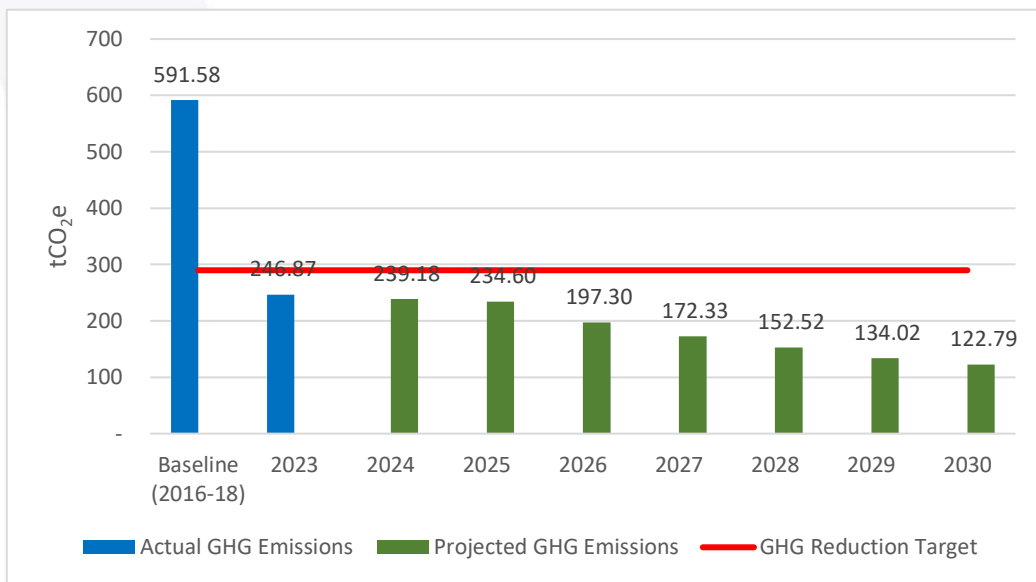
In general, when we refer to reducing GHG emissions, we are referring to the emissions that come from the energy we use i.e., emissions from the gas used to heat buildings and water, and the emissions that are produced offsite to generate the electricity used. Over 90% of our GHG emissions are based on electricity usage in our head office and data centre locations.

HEAnet has no fleet of vehicles thus no emissions from this source. We are, however, responsible for emissions arising from business travel, with limited business-related flights to foreign destinations being the predominant source. These emissions are not included in our metrics; however, they will be included in the next iteration of our Climate Action Roadmap, in alignment with the SEAI timetable of reporting.

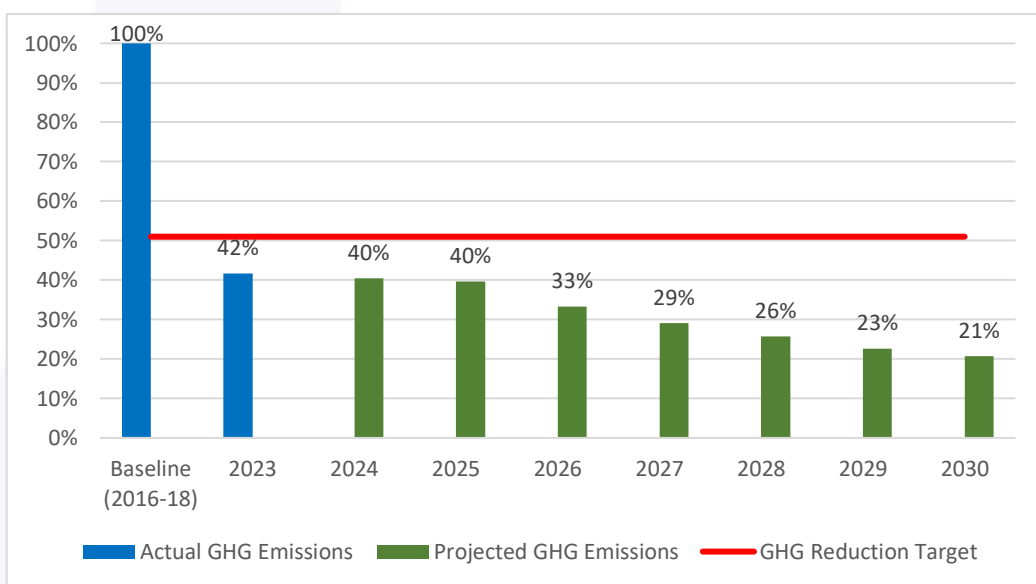
Our GHG emissions baseline figure is 599.69 tCO₂e³. Since our baseline, **we have decreased our GHG emissions by 344.72 tCO₂e or 58%, exceeding the target of 51%** set in the Mandate, as shown in the Gap to Target⁴ graphs 1 and 2 below.

³ Tonnes (t) of carbon dioxide (CO₂) equivalent (e), where “Carbon dioxide equivalent” is a standard unit for counting GHG emissions.

⁴ The SEAI Gap to Target (“GtT”) tool was not accessible to HEAnet via the SEAI M&R System, therefore graphs shown are our own creation. It is expected the GtT tool, will be made available later this year and the output will be used in the next iteration of our Climate Action Roadmap.



Graph 1: Gap to Target - GHG emissions (tCO₂e)



Graph 2: Gap to Target - GHG emissions (%)

Each year, we observe an increase in internet traffic, and we anticipate this trend will persist for the foreseeable future, which is reflected in our projected GHG emissions. However, the downward trend displayed in the graphs above is due to both the recent efforts in reducing our emissions and the projected increase in the electricity grid's efficiency between now and 2030. The efficiency of Ireland's electricity supply has generally improved over previous decades, due to the introduction of higher efficiency natural gas plants, the closure of older peat-fired stations, and increased direct generation from renewable sources⁵.

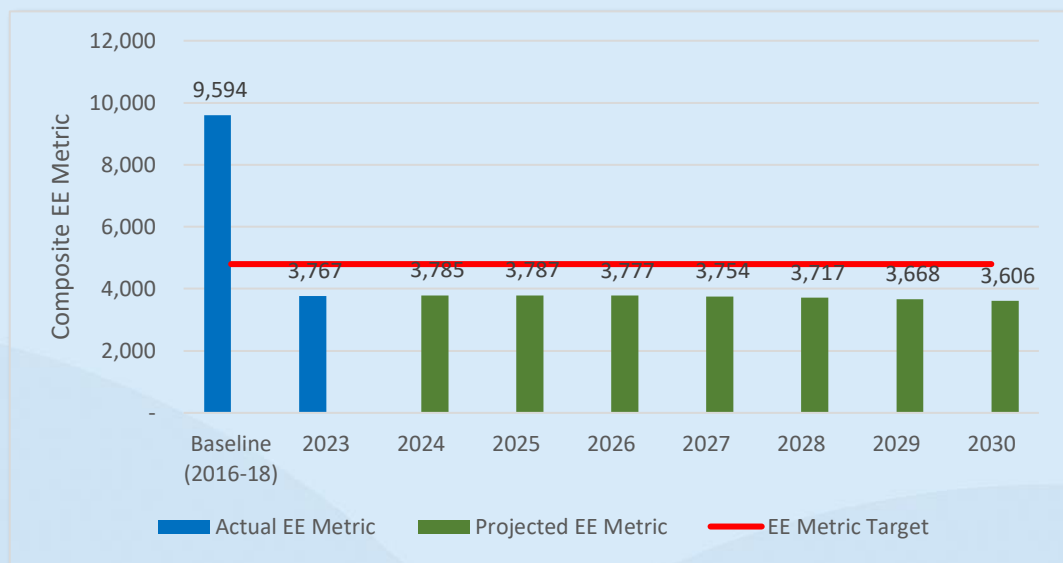
⁵ <https://www.seai.ie/data-and-insights/seai-statistics/key-statistics/electricity/>

2.1.2 Energy efficiency ✔

In simple terms, energy efficiency means using less energy to get the same job done. Using less energy will result in lower energy bills and less pollution. Many products, homes, and buildings use more energy than they need, through inefficiencies and energy waste.

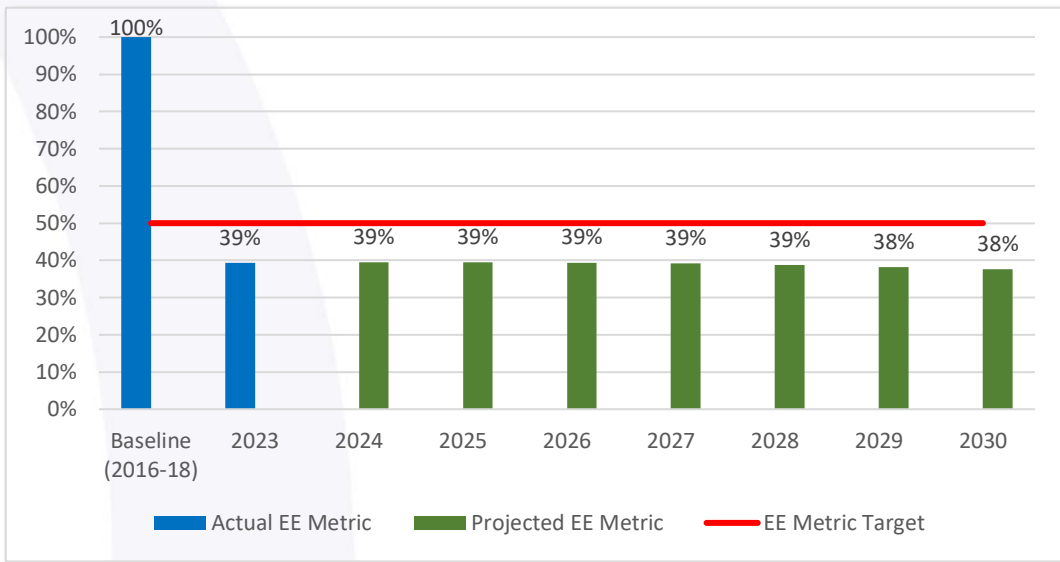
Our energy efficiency metric is comprised of floor area (m²), FTE (full time equivalent staff) and internet traffic⁶ (petabytes per year), which is the most appropriate composite metric to use as a reflection of our organisation.

We use a single energy source – grid electricity. This is the energy we use to heat our office and power our data centres. **Our total energy efficiency has improved by 61% between our baseline and 2023, exceeding the target of 50%**, as shown in Gap to Target graphs 3 and 4, below.



Graph 3: Gap to Target - Energy efficiency metric

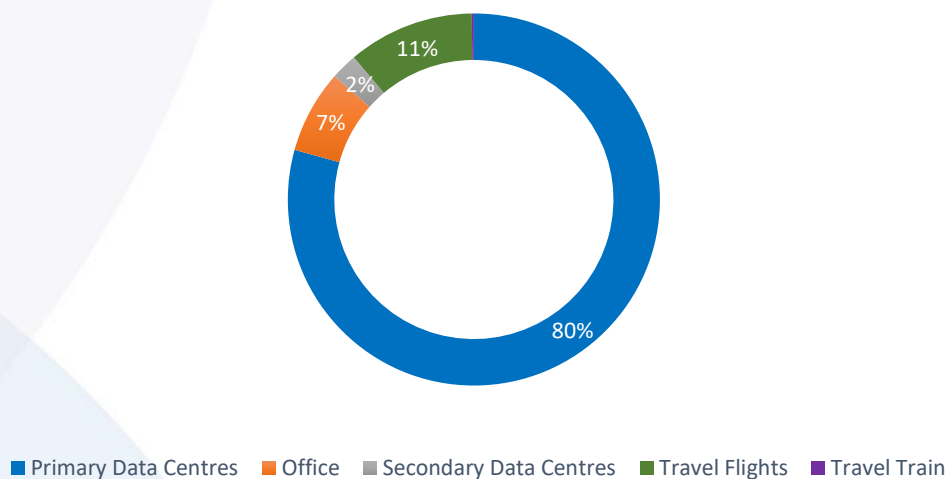
⁶ Provisional figures subject to approval from the SEAI



Graph 4: Gap to Target - Energy efficiency metric %

2.1.3 Significant energy usage

82% of our energy is consumed by our data centres. We operate infrastructure in several data centre locations to provide our services. Our infrastructure consists primarily of networking infrastructure such as switches and routers, but we also operate a large number of servers, storage and security related nodes. We have two primary data centres and five secondary data centres. We do not own the data centres, but rather lease co-located space from commercial data centre providers.



Graph 5: Source of GHG emissions

2.2 Actions taken

As demonstrated by the graphs above, HEAnet have been on a climate action journey for several years resulting in us meeting and indeed exceeding the targets set by the Mandate. The reductions shown in the graphs above, have primarily been achieved through the following actions.



In 2022, we completed the retirement of a data centre, resulting in the average reduction of 354,000 Kwh per annum.



In 2023, we relocated to leased premises at North Dock 2, in Dublin 1. The building has LEED Gold Certification, a BER of A3 and is also NZEB⁷ compliant.



Being a technology company, we have virtualised a significant portion of our existing technology infrastructure, with all new services being virtualised, leading to a reduction in the need for server infrastructure.

2.3 Planned activities

Whilst we have already exceeded the targets, we will continue to monitor and take action to reduce our environmental impact by undertaking the following activities:

- we will incorporate sustainability throughout our value chain by engaging our suppliers in setting environmental goals and taking steps to minimise their environmental impact;
- we will also work with suppliers to ensure that equipment usage is minimised and retire services that are no longer used;
- we will incorporate energy efficiency as a critical component into all new projects; and
- we will consolidate and virtualise equipment to reduce usage where appropriate.

⁷ 'Nearly Zero Energy Building' means a building that has a very high energy performance. The nearly zero or very low amount of energy required should be supplied to a very significant extent by energy from renewable sources, including energy from renewable sources produced on-site or nearby.

3 Our People – Leadership and governance

Our purpose is to generate positive economic, environmental, and social value for all those we serve. By helping to improve education outcomes, fostering opportunities for our staff and clients, and strengthening the communities in which we operate, we create long-term value. This value enables us to invest in our mission and achieve sustainable growth.

By integrating our ESG strategy including climate action considerations into our organisational strategies, we can create an enduring impact and fulfil our purpose as not-for-profit organisations. This approach is overseen by both the HEAnet and EduCampus Boards, who ensure responsible business practices and accountable leadership throughout both organisations.

3.1 Governance structure ✔

The diagram below illustrates the overall governance structure for ESG within the Group:

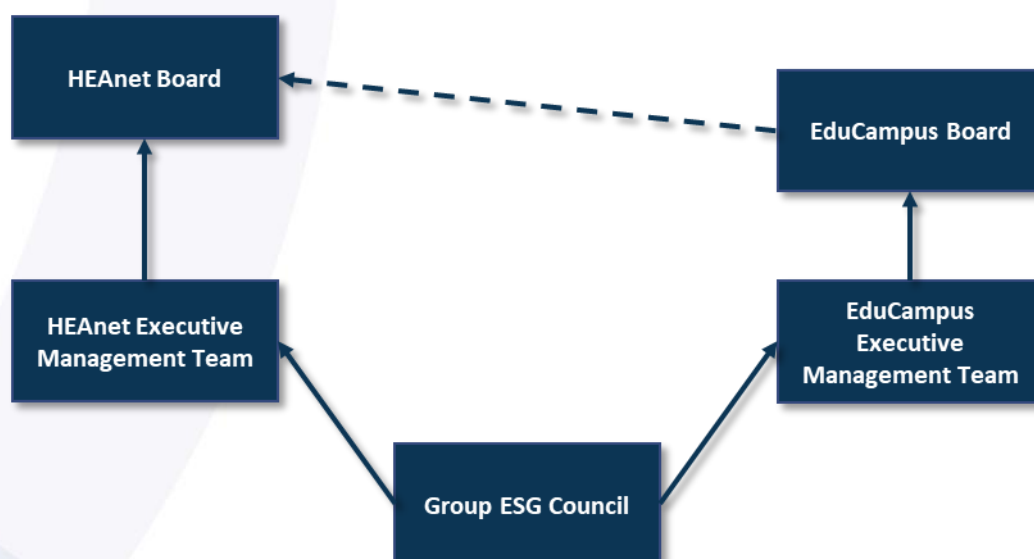


Diagram 1: Group ESG Governance Structure

3.1.1 Board Oversight

HEAnet and EduCampus have their own respective Board Directors. Both the HEAnet Board of Directors and the EduCampus Board of Directors will oversee the implementation of responsible practices consistent with the evolving governance environment. They will receive annual updates on all ESG initiatives, including GHG emissions, and energy efficiency metrics.

3.1.2 Chief Executive Officers

Under delegation from the respective Boards, the HEAnet Chief Executive Officer and the EduCampus Chief Executive Officer are responsible for the day-to-day operations of the respective organisation.

3.1.3 Head of ESG

The Head of ESG is the nominated Energy Performance Officer for the purposes of this document. The Head of ESG manages and co-ordinates Group sustainability related activities. They are responsible for chairing the ESG Council and supporting members of the Executive Management Team to develop and roll-out Group sustainability policies and practices throughout the Group.

3.1.4 Group ESG Council

We have a dedicated ESG team responsible for managing environmental sustainability, social and governance initiatives. The team will closely partner with other functions to drive sustainability initiatives.

4 Our People – Engaging our staff

Staff engagement has been, and will continue to be, instrumental in producing significant energy savings across HEAnet. While we will continue to implement technical solutions to reduce our energy use and emissions, we recognise that deep and sustained reductions are only achievable with ongoing buy-in from our staff.

4.1 Green team

The Group ESG Council shown in Diagram 1 above are the “Green Team” for the purposes of this document. The Group ESG Council consists of the following roles, which offers a diverse mix of skills and experience:

- Andy Byrne, Head of ESG / Energy Performance Officer (HEAnet)
- Karen Thornton, Director of Strategy and Business Planning (HEAnet)
- Niamh Dawson, Workplace Experience Team Lead (HEAnet)
- Jane Lennox, CEO Office (HEAnet)
- Rónán ÓhÓbáin, Networks Manager (HEAnet)
- Niall Kelly, Head of Strategic Development (EduCampus)
- Kate Meaun, Procurement and Contracts Manager (EduCampus)
- Denise Power, Project Manager (EduCampus)
- Siobhán O’Mahony, Office Coordinator (EduCampus)

4.2 Climate and sustainability champion ✓

The nominated climate and sustainability champion for HEAnet is Karen Thornton, Director of Strategy and Business Planning. Karen reports directly to the Chief Executive Officer and has responsibility for leading the PMO, and Innovation and R&D functions, with a focus on driving strategy execution and portfolio delivery within HEAnet. Karen holds a Diploma in ESG from the Corporate Governance Institute.

4.3 Staff training plans ✓

All staff will undertake sustainability training in 2024. Attendance will be recorded on their learning and development record in our Human Resources Management System.

4.4 Climate action and sustainability workshops ✓

We celebrated *World Environment Day* in June 2024 and partnered with an external provider to host a sustainability webinar for our staff.

A climate action and sustainability workshop for staff will be held in 2024, to actively address climate concerns, with an emphasis on reducing the organisation's carbon footprint.

4.5 Senior leadership training ✓

As part of the development of our ESG Strategy, all senior management undertook climate action leadership training in 2023. A refresher course will be undertaken in 2024.

5 Our Ways of Working

5.1 Reporting

Historically, HEAnet were not subject to the Mandate and thus were not required to report energy usage via the SEAI's M&R System. We are now registered with the SEAI and commenced reporting from January 2024.

To date sustainability activities have not been reported in our Annual Report. This requirement will be addressed in the 2024 Annual Report onwards. We will ensure our GHG emissions and energy efficiency metrics are published along with sustainability activities undertaken.

The Climate and Sustainability Champion regularly reports progress to the CEO and Executive Management Team and will report to the Board annually.

5.2 Energy and environmental management systems

The Head of ESG i.e., Energy Performance Officer is responsible for monitoring energy management to deliver GHG emissions reductions and energy savings.

HEAnet falls into the SEAI category of “Organisations with Annual Energy Costs €250k - €1M”⁸, therefore ISO 50001 certification is not required to follow the Mandate.

5.3 Green public procurement

We are committed to the sourcing of environmentally sustainable solutions in procurement and apply a minimum five per cent (5%) weighting to green award criteria at National and EU level tenders.

Our Brokerage Services Team establish high value Framework Agreements, Dynamic Purchasing Systems and run aggregated mini competitions under OGP Frameworks for HEAnet and clients.

There are several ways that HEAnet can apply green award criteria in tender documents:

- Technical Specifications – inclusion of environmental characteristics in technical specifications for goods and services, e.g. energy efficient equipment, recyclability, or materials with lower environmental impact and reduced resource consumption.
- Selection Criteria – inclusion of certification standards as part of the selection process to evaluate suppliers' commitment to sustainability.

⁷ <https://www.seai.ie/business-and-public-sector/public-sector/Exemplar-Energy-Management-Roadmap.pdf>

- Contract clauses – inclusion of performance clauses to safeguard ongoing compliance and sustainability efforts of supplier throughout duration of the contract.

In developing our green award criteria, HEAnet apply the most appropriate and proportionate measure, sourcing criteria from Green Public Procurement (“GPP”) Criteria Search⁹, an online search tool that allows the us to rapidly find, select, and download the GPP criteria relevant to a specific procurement project. The search tool is designed to facilitate use of green procurement, developed in collaboration with the EPA and the Department of the Environment, Climate and Communications.

We will continue to improve in the integration of GPP when procuring goods and services by staying informed of developments at a National and EU level and reviewing and refining our green award criteria.

5.4 Low carbon construction methods

This requirement is not applicable to HEAnet, as we do not construct our own buildings, instead, we opt to lease property.

5.5 Resource Use

We practice sustainable resource management to support our sustainability ambitions.

5.5.1 Food waste

There is no canteen or food service offered to staff. Kitchen facilities are provided for staff to bring their own food, resulting in extremely limited food waste. A compostable bin is provided for food waste.

5.5.2 Paper

As a technology company, most processes in HEAnet are digitised, resulting in very limited paper being used for printing. All printers are set to double sided black and white printing, to reduce the environmental impact, and recyclable paper is used.

5.5.3 Water

We believe that access to clean, safe, potable water is a human right. Suitable drinking water refill points are available for all staff.

⁹ <https://gppcriteria.gov.ie/>

The HEAnet office is not accessed by the public, therefore the requirement to measure and monitor usage of the refill points is not applicable.

5.5.4 Single use ✓

No single use kitchen products are available for use e.g. disposable cups, plates, cutlery. Reusable dining ware is available for staff use.

5.5.5 Other Materials ✓

There are dedicated general waste, recycling, and compostable waste bins available in the kitchen area for staff use.

5.6 Staff Travel ✓

Due to the nature of the HEAnet business, some staff travel is required. Our Travel Policy states that work associated travel must only be undertaken when necessary, must be consistent with company objectives, and where feasible, alternatives, such as video conferencing, should be considered. Reporting on staff travel commenced in 2024.

5.7 Sustainable commuting ✓

Due to its prime location in Dublin's city centre, our office is accessible via bus, train, and LUAS services. We promote these alternative modes of transport, and the Travel Tax Saver incentive scheme is available to all staff.

For those travelling by bicycle, secure and accessible bicycle parking is available in the basement of the building. On-site bicycle maintenance amenities are provided for individuals facing any issues during their commute to the office.

In 2024, HEAnet achieved the Smarter Travel Mark Silver Level accreditation with the National Transport Authority, which recognises and celebrates organisations that support active and sustainable travel on the commute and beyond for their workforce, resulting in a reduction in single-person car usage.



5.8 Parking ✓

After relocating to our new office in 2023, the parking capacity has significantly reduced.

5.9 Building energy certificate ✓

The Building Energy Certificate is on display within the office, to clearly show energy use.

5.10 Fossil fuel heating

This requirement is not applicable, as our office does not rely on fossil fuel heating.

5.11 Building stock plans

We inhabit a single office, therefore the requirement for a building stock plan, identifying buildings to be retrofitted is not applicable.

Instead of retrofitting our previous office, a decision was made by the CEO and HEAnet Board to move to a more energy-efficient building. As mentioned above, we relocated to leased premises at North Dock 2, in Dublin 1, in June 2023. The building has LEED Gold Certification, a BER of A3 and is also NZEB compliant. Electricity consumed by North Dock 2, has been verified as being sourced from 100% renewable electricity generation.

5.12 Procurement of zero emission vehicles

This requirement is not applicable, as we do not own nor lease any vehicles.

6 Our Wider Climate Actions Plans

6.1 Data centre engagement

As previously stated, we have leased space in two primary data centres which consume a significant amount of energy. We are engaging with our data centre partners to encourage them to improve the energy efficiency of their data centres by adopting green technologies, implementing energy management systems, and investing in renewable energy sources.

6.2 Network equipment

We are investigating if existing equipment can be better utilised to ensure maximum efficiency. Some examples include retiring existing equipment, performing consolidation or utilising virtualisation. For future projects environmental usage will become a key component for hardware to ensure that maximum efficiency is achieved.

When identifying new equipment, we are asking vendors to provide energy usage data, and including green requirements in tender documentation, as described in section 5.3 above. We consider the consolidation or reduction of our network footprint, rather than automatically replacing like for like during upgrade cycles.

6.3 E-waste management

We will review our procedures for the responsible disposal and recycling of electronic equipment. Through collaboration with certified e-waste management companies, we ensure the proper handling of end-of-life devices, thus mitigating the adverse environmental impacts linked to improper e-waste disposal.

During the relocation to our new office in 2023, we recycled 2,178 Kgs of Waste Electrical and Electronic Equipment (“WEEE”) at a licenced waste facility, with a certified e-waste management company.



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