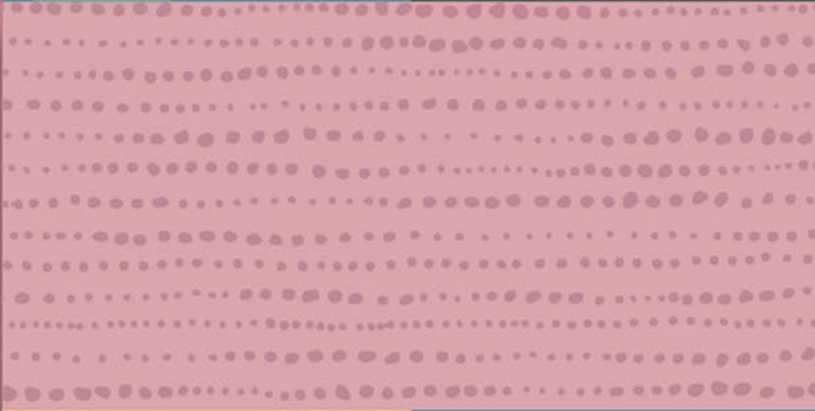


# Don't Underestimate the Impact of Green HR



A simplified model to HR's direct and indirect impact on environmental goals and climate action



# Introduction

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When the Environmental, Social and Governance (ESG) debate arises in an HR context, we often think about wellbeing and Diversity, Equity, and Inclusion (DE&I) initiatives. However, let's set that aside for now and focus on the following question:

## Can HR genuinely contribute to an organization's environmental goals?

We believe it can, and even more so than is generally believed. We need to move beyond the stereotype of HR's role in climate action as primarily indirect and limited to fostering an environment-friendly culture through awareness-raising and learning programs.

We need to explore the direct and indirect contributions that HR can make to reduce an organization's environmental footprint and drive climate action. Consequently, the focus on the Environmental aspect, will also involve the Social and Governance aspects, as the interconnected nature of these pillars necessitates joint efforts to achieve the intended changes.

The UK's total greenhouse gas emissions are provisionally estimated to be around 417 million tonnes of carbon dioxide equivalent (tCO<sub>2</sub>e).<sup>1</sup> With a population of approximately 67 million, this equates to nearly 6.2 tCO<sub>2</sub>e emissions per capita annually. In this article, we argue that several HR initiatives and programs can enable an organization with 1,000 employees to reduce its greenhouse gas emissions by 1,000 tCO<sub>2</sub>e annually in total, equivalent to a 1 tCO<sub>2</sub> saving per employee. **This represents a 16% reduction in the average per capita greenhouse gas emissions in the UK.**

The model in this article is oversimplified, as it is for an illustrative company operating in the UK, with a predominantly desk-based workforce of 1,000 employees (without manufacturing or retail operations). We have made quite a lot of assumptions to keep it simple as we do not intend to be prescriptive. Instead, our aim is to quantify, and by doing so illustrate, the potential impact of a holistic "Green HR" strategy, to the extent it is successfully designed and executed. We will expand on this model layer by layer, starting first from a strategic level and then how these could be cascaded to people programs and finally down to the delivery layer from a system infrastructure and governance perspective.

<sup>1</sup> 2022 UK Greenhouse Gas Emissions: Provisional Figures - Statistical Summary

# Strategy

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## Reward & Performance

Over the last decade, the prevalence of ESG metrics in executive incentive plans (e.g., annual bonus, long-term equity plans) has steadily grown largely due to increasing investor scrutiny and public awareness.

According to WTW's most recent research<sup>2</sup>, European firms continue to lead the way in the use of environmental measures, with almost two-thirds (65%) incorporating environmental measures into their executive incentive plans. These measures address areas such as climate change, carbon emission reduction, and responsible use of natural resources.

However, critics say that the environmental targets are not strict enough and can lead to greenwashing. In fact, a recent joint study by PwC and the London Business School (LBS) has looked at the carbon targets in executive pay at 50 of the top major European companies and found that the average pay out level was 86% of the maximum with over half of the companies paying out 100%<sup>3</sup>. This level of reward is high as both the reality and perception of success towards climate action is not matching this “performance”.

According to Damian Carnell, founder of CORPGRO – a UK-based advisory firm specialised on ESG and executive remuneration – a bigger problem still is the number of companies which have not included any carbon measure in their executive incentive structure yet.<sup>4</sup>

This is in fact a big group; according to WTW's study of 326 companies listed in the top indices of nine European countries, 35% of the firms still do not use any environmental metrics in their executive incentive plans. In the joint study of PwC and LBS of top 50 European firms it is around 22%. When you look beyond the large, multinational, and blue-chip companies, green goals are far from being majority practice. Findings from Mercer & Reward and Employee Benefits Association's (REBA) research show that only 29% of UK firms currently link pay incentive targets to sustainability objectives for their CEOs or equivalent roles.<sup>5</sup>

Measuring carbon footprint and getting the data right is a great start. However, only when we take accountability, we will trigger change and create transformative action.

<sup>2</sup> 2022 WTW ESG Metrics in European Executive Incentive Plans

<sup>3</sup> PwC & London Business School: Paying for Net Zero

<sup>4</sup> CORPGRO: Soft Green Bonus or Remixed Incentive?

<sup>5</sup> REBA: Sustainability Is Driving Business Change (Transformation Engagement Series 2022 Report Four)

## Remote / Hybrid Working

Executive reward policy design can have a strategic and tangible impact, particularly for those aiming to be progressive. However, the results may be long-term and gradual. So, what else can be done today, here, and now?

Another strategic area is the implementation of flexible and hybrid working policies. One of the recent studies in the UK suggests that full-time remote working saves 2.157 tCO<sub>2</sub>e per year per employee, primarily driven by reduced emissions from commuting, optimised office space and energy usage.<sup>6</sup>

**Building on this benchmark above and assuming only 40% of the work is performed remotely, an organization with 1,000 employees, could reduce annual emissions by 863 tCO<sub>2</sub>e.**

Assumptions can be adjusted (e.g., workforce size, remote work take-up rate, average daily emissions) to make the numbers more accurate for your organization, but the bottom line remains the same: HR leaders can make a significant and lasting green impact with the working model they design for the future of their organization.



<sup>6</sup> Devon Climate Emergency: Assessing the GHG Emissions of Home Working Versus Commuting to An Office

# Program Design

## Awareness & Involvement

Not everyone thinks the same about the climate crisis. According to the recent public opinion poll by United Nations Development Programme (UNDP):

64%

of respondents consider climate change an emergency

36%

do not view immediate action as necessary.<sup>7</sup>

Environmental volunteering programs could be used by organisations to engage with this latter group and raise further awareness.<sup>8</sup> For example, at Oracle about **34,000 volunteers team up with environmental non-profits on more than 1,500 projects** to restore habitats, plant trees, clean up beaches and parklands, protect wildlife, and more.<sup>9</sup>

## “Green” Benefits

Approximately six out of ten organizations now spend between 16% and 25% of base salary per employee on benefits.<sup>10</sup> However, only a small number of HR leaders consider sustainability when determining their benefits strategy or making reward and benefits decisions. Recent research suggests this is limited to one in four organizations.<sup>11</sup> Nevertheless, there is some traction both from the supply and demand side. There are three examples we can explore.

The Office for National Statistics (ONS) in the UK estimates that an employee taking zero-carbon commute one day per week, across a year with 46 working weeks, will save about 272kg CO<sub>2</sub>e of emissions<sup>12</sup> (normally taking a car). **If you can achieve this for 5% of your workforce (assuming a 1,000 headcount), this results in a saving of about 13 tCO<sub>2</sub>e per annum.** A cycle-to-work scheme could reinforce this change in commute method; recent research among scheme participants shows that six in ten users said they would drive to work if they didn't use the scheme.<sup>13</sup>

<sup>7</sup> UNDP: *The Peoples' Climate Vote*

<sup>8</sup> Oracle Cloud HCM Blog: *Three Ways HR Leaders Can Lead the Workforce on Earth Day*

<sup>9</sup> Oracle CDP Climate Change Response Report

<sup>10</sup> Mercer Marsh Benefits *Employee Benefits and Technology Trends Report*

<sup>11</sup> REBA: *Sustainability Is Driving Business Change (Transformation Engagement Series 2022 Report Four)*

<sup>12</sup> Office of National Statistics *Carbon Emissions Calculator*

<sup>13</sup> Bikebiz: *Cycle to Work Scheme Participation More Than Doubles*





There is also the inevitable change to company car benefits. If you provide company cars, either as a business requirement or as a perk, you could significantly reduce your carbon footprint by shifting from petrol/diesel cars. **Assuming an average annual mileage of 10,000<sup>14</sup> (including business, commute, and personal use) and 110g/km<sup>15</sup>, and about 50 company cars replaced with EV models, this shift could contribute to a saving of about 88 tCO<sub>2</sub>e.**

Note that we have not factored in additional short-term financial benefits (e.g., tax advantages) of EV cars or cycle-to-work schemes, which are commonly provided not only in the UK but also in many other countries.

Lastly, let's imagine you offer to match your employees' donations to plant trees up to £100 per annum. If we assume about 5% of your 1,000 workforce takes up this offer and contributes towards this donation up to the maximum amount, a total of £10,000 is contributed by your 50 employees (50 employees x £100 x 2). **This is equivalent to 2,000 trees to be planted per year based on £5 each<sup>16</sup>, expected to remove of at least 44 tCO<sub>2</sub>e from the atmosphere (or about 22kg per year for a mature tree).**



## Delivery

### Governance

While supply chain sustainability efforts typically prioritize business operations, logistics, and procurement, HR supply chains are often neglected despite their considerable impact. According to the REBA's recent research, a third of the organisations in the UK audit their pension providers for their sustainability practices. More strikingly, only between 10% to 20% of the organisations, audit their health and risk insurers, health and wellbeing providers, HR technology providers or their consultants and advisors.

**At a company with 1,000 employees with an average yearly salary of £50k, the pension investment will be close to £4m annually.<sup>17</sup>** By selecting a pension provider that offers ESG funds, a share of these contributions could be directed toward environmentally and socially responsible enterprises.

<sup>14</sup> National Travel Survey Statistics: Vehicle Mileage and Occupancy

<sup>15</sup> HM Revenue & Customs: Benefits in Kind Statistics (July 2021)

<sup>16</sup> National Trust: Plant a Tree

<sup>17</sup> Contribution Levels: Workplace Pensions in the UK

## Infrastructure

### Go Cloud

Transitioning Human Resources Information Systems (HRIS) to the cloud, like any other system, can significantly contribute to reducing an organization's carbon footprint. Cloud service providers invest heavily in energy-efficient infrastructure, such as renewable energy sources and cutting-edge data centres, to minimize their environmental impact. At Oracle we transform and adapt ourselves to a more sustainable future. To that end, we are keeping ourselves accountable and have set a target to halve our emissions by 2030, joined the Exponential Roadmap Initiative in 2021, declared our commitment to achieve Net Zero emissions by 2050.<sup>18</sup> For example, 100% of our Oracle Cloud Infrastructure (OCI) data centres in Europe are already powered by renewable energy.<sup>19</sup>

A recent customer-specific analysis<sup>20</sup> by Bureau Veritas identified that moving a customer-hosted on-premise application to its cloud equivalent on OCI reduced greenhouse gas emissions by 93%. The electricity consumption of the application decreased by 62%.

For our illustrative company, we have assumed three on-premise compute and one on-premise storage servers for its hardware infrastructure. **This hardware infrastructure is expected to generate 5 tCO2e emissions per year based on the assumed models (see Appendix), their expected annual power consumption<sup>21</sup> and UK carbon intensity factor of 194 gCO2e/kWh.**<sup>22</sup> These emissions could be saved almost entirely by transitioning to modern OCI running 100% on renewable energy.

Alongside the green impact, cloud transitions improve:

reporting productivity by

**94%**

workforce efficiency by

**92%**

recruitment (time-to-hire) by

**90%**

onboarding (time) by

**79%**

and reduces legacy system costs by almost a third.<sup>23</sup>

**33%**

<sup>18</sup> Oracle, Reporting on Progress: Our Commitment to the Sustainable Development Goals

<sup>19</sup> Oracle Clean Cloud OCI (Gen2) Data Sheet

<sup>20</sup> Oracle Clean Cloud: The Pinnacle of Performance and Sustainability

<sup>21</sup> Oracle's Power Calculators

<sup>22</sup> Department for Business, Energy & Industrial Strategy, UK Conversion Factors 2022

<sup>23</sup> Oracle Cloud HCM Value Realization Report

## Go Paperless

Although potentially lower in the post-pandemic era, an average employee in the UK is estimated to use about 10,000 sheets of paper each year.<sup>24</sup> HR, due to the administrative nature of tasks involved, takes a fair share in this overall paper consumption. However, HR can contribute to environmental goals by fully digitizing its main processes and effectively creating a paperless employee experience from onboarding to record keeping, including payroll.

By implementing a fully digitized HR system, organizations can drastically reduce their paper consumption and work towards a more sustainable workplace. Even if we assume a 25% reduction in overall paper use driven by digitization of HR workflows, this could help the organization save about 2,500 sheets per employee and about 2.5 million sheets over 1,000 employees per year. **This is equivalent to saving 250 trees a year, which would remove about 5 tCO<sub>2</sub>e from the atmosphere (or about 22 kg per year for a mature tree).** Here, we are not even considering additional savings resulting from reduced cost and electricity consumption of printing, nor the extra space needed to store these printed copies inside the office.

<sup>24</sup> Restore Digital: Paperless Office





# Conclusion

In conclusion, HR plays an important role in driving environmental goals and climate action.

At a strategic level, HR leaders possess both the responsibility and capability to align their organizations, across all levels and geographies, towards a more sustainable future. Investments and supply chains can be reoriented to significantly reduce their carbon footprint. Promoting awareness and employee involvement through learning programs and volunteering helps foster an environmentally conscious culture, which in turn influences individual behaviour.

A holistic “Green HR” strategy not only enables organizations to achieve their environmental objectives but also positions them as responsible corporate citizens, contributing to a more sustainable future for all. We need to recognize that some of these initiatives and changes may have a lasting yet indirect impact. However, even the direct influence is considerable, although rarely quantified and owned by HR leaders.

By considering only the direct savings from the pillars summarized in the table below, a hypothetical organization in the UK with 1,000 employees can reduce its greenhouse gas emissions by about 1,000 tCO<sub>2</sub>e annually in total, **equivalent to about 1 tCO<sub>2</sub>e saving per employee.**

Today, UK’s total emissions is around 417 MtCO<sub>2</sub>e for a population of 67 million . This is equal to 6.2 tCO<sub>2</sub>e per capita (total emissions divided by population). **If we reduce carbon footprint by 1 tCO<sub>2</sub>e per individual, this is a saving of 16% driven largely by our companies and by our dedication to make this change. Let’s not underestimate the role and impact of Green HR.**



<sup>25</sup> 2022 UK Greenhouse Gas Emissions: Provisional Figures - Statistical Summary

# The Green HR Scorecard

Note: To maintain simplicity in the model, we have assumed a UK-based company with a predominantly desk-based workforce of 1,000 employees without manufacturing or retail operations.

Pillar	Impact
<b>Strategy</b>	
<b>Reward &amp; Performance</b> Align executive pay with environmental goals	Indirect Starting from the top, align incentives and reward to environmental goals
<b>Remote/Hybrid Working</b> Introduce 2 days remote / 3 days on-site working policy	Direct <b>863 tCO<sub>2</sub>e</b> , assuming approx. 2.157 tCO <sub>2</sub> e savings per annum per employee if 40% of the work is done remotely
<b>Program Design</b>	
<b>Awareness &amp; Involvement</b> Raise awareness about the climate change and get employees involved	Indirect HR-sponsored volunteering, communication and learning programs to raise awareness
<b>ESG Pension Funds</b> Invest in a sustainable future	Indirect <b>£4m</b> could be invested annually to ESG pension funds assuming £50k average salary for 1,000 employees
<b>Green Benefits</b> Offer benefits to encourage zero or low carbon transport such as Cycle to Work Scheme in the UK	Direct <b>13 tCO<sub>2</sub>e</b> , based on 272kg CO <sub>2</sub> e saving per employee (assuming 5% of 1,000 employees) taking zero-carbon commute one day per week a year (normally taking car)
<b>Green Benefits</b> Replace existing company cars with electric vehicles (EVs)	Direct <b>88 tCO<sub>2</sub>e</b> , assuming you replace 50 company cars with an average usage of 10,000 miles per annum based on 110g/km CO <sub>2</sub> emission
<b>Green Benefits</b> Donation programs such as tree planting	Direct <b>44 tCO<sub>2</sub>e</b> , 50 employees contribute up to £100 generating a total £10,000 to plant 2,000 trees (22kg CO <sub>2</sub> /year removed from atmosphere per mature tree)
<b>Delivery</b>	
<b>Governance</b> Audit/track carbon footprint of HR supply chain	Indirect Audit supplier carbon footprint for HR service providers and suppliers
<b>Infrastructure</b> Go Cloud	Direct <b>5 tCO<sub>2</sub>e</b> , assuming three on-prem compute and one storage servers are replaced by cloud (100% renewable energy)
<b>Infrastructure</b> Go Paperless	Direct <b>5 tCO<sub>2</sub>e</b> , assuming HR reduces overall paper use by about 25% per employee saving 2.5m sheets per year (equivalent to 250 trees x 22kg CO <sub>2</sub> /year)

# How can Oracle help?

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Our clients already contribute to a more sustainable future, every day, by utilising and benefiting from Oracle Cloud Applications and Infrastructure. Examples include:

- [Oracle Cloud Infrastructure \(OCI\)](#) helps our customer minimize their carbon footprint by leveraging the high efficiency of our green cloud solution.
- [Oracle Cloud HCM \(Human Capital Management\)](#) empowers organizations to not only completely digitalize their HR processes, but also to provide a consistent and consumer-grade employee experience through [Oracle ME](#) for a diverse workforce, promoting flexibility and remote work, which are key factors in reducing carbon emissions. To increase awareness, they encourage volunteering and elevate employee engagement in climate action, initiating targeted learning programs and special campaigns via [Learning Journeys](#), and [HCM Communicate](#).
- With [Oracle Cloud ERP \(Enterprise Resource Planning\)](#) and [SCM \(Supply Chain Management\)](#), our clients evaluate their product lifecycle circularity, monitor the sustainability footprint and environmental performance of their suppliers, including their suppliers and service providers to HR.
- With [Oracle EPM \(Enterprise Performance Management\)](#), specifically ESG reporting & planning, our customers consolidate, manage, and standardize their core ESG data throughout the enterprise, including ERP, HR, and other operational systems, which often come in varying standards and formats.
- And now with [Oracle Fusion ESG](#) (Environmental, Social and Governance), we are pleased to be offering the ability to capture more ESG data in finance, procurement, supply chain, and workforce management applications and build ESG Analytics on these native data elements to simplify data collection process and build sustainability awareness across their enterprise.

To hear more from customers, please review our environmental sustainability case studies.

## Contributions

I would like to thank to [Celine Haffner](#), [Damian Carnell](#), [Ian Murty](#), [Ion Smarandache](#), [Mihai Ghita](#) and [Remy Bos](#), for their valuable contributions in preparation of this article.

**Egé Edi Siva**

Strategy Director, EMEA Cloud Applications

June 2023

# Appendix

## Calculations and Assumptions

**Note:** Metric tonne is assumed for CO<sub>2</sub>e.

### Remote work:

- 9.3 kg saving per day X 232 remote working days = 2.157 tCO<sub>2</sub>e saving per employee per annum
- On average, 2 days remote / 3 days office, then 40% x 2.157 tCO<sub>2</sub>e = 863 kg saving per employee
- Total workforce of 1,000 employees X 863 kgCO<sub>2</sub>e = 863 tCO<sub>2</sub>e

### Commute:

- Zero-carbon commute one day per week x 46 working weeks = 272 kgCO<sub>2</sub>e saving
- Assume 5% of 1,000 employees do this
- 272 kg CO<sub>2</sub>e x 1,000 x 5% = 13.6 tCO<sub>2</sub>e per annum in total

### Company Car:

- 10,000 miles usage per annum (or 16,093 km)
- 16,093 km x 110 g/km emission = 1,770,278 gCO<sub>2</sub>e (equal to 1.77 tCO<sub>2</sub>e) per car
- Total 88.51 tCO<sub>2</sub>e for 50 cars

### Donations:

- %5 of the employees donates at least £100 per annum to planting trees
- This is matched by the organisations 1:1 so total contribution is £200
- 50 employees x £200 = £10,000 total funding
- 10,000 divided by £5 (cost per tree) = 2,000 trees
- 2,000 trees X 22 kgCO<sub>2</sub> to remove each year = 44 tCO<sub>2</sub>e saved

### Hardware and Cloud Migration

\* For simplicity we exclude the carbon footprint of manufacturing the servers

#### Compute

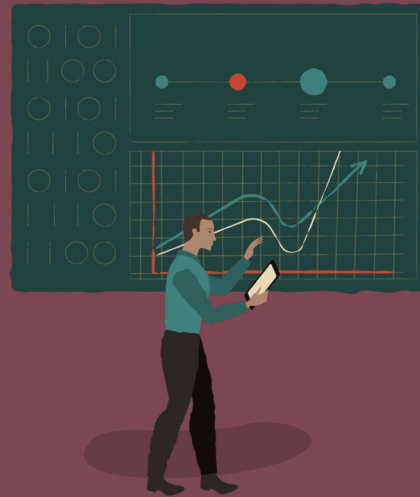
- 3x X9-2 Servers each with 2x Intel Xeon 4314 Silver CPUs, 512GB RAM, 2x SATA boot drives, 2x generic PCIe Adapters
- Average power utilization per server: 0.66kW (assumed server utilization between 75% and 100%)
- Energy consumption per year per server (x 24 hours x 365 days): 5,782 kWh/year
- Average UK carbon intensity 194 gCO<sub>2</sub>e emitted per kilowatt-hour of electricity
- Annual CO<sub>2</sub>e emissions per server is 1.12 tCO<sub>2</sub>e
- 3.36 tCO<sub>2</sub>e for all three servers

#### Storage

- 1x ZS9-2 Storage configuration: 1x Mid-Range Controller with 2x 24-Core 2.1 GHz Intel Xeon processors per controller, 512GB RAM, 2x DE3-24C SAS3 Disk Enclosures each with 20x 18TB HDDs
- Average power utilization per server: 1.1kW (assumed server utilization between 75% and 100%)
- Energy consumption per year per server (x 24 hours x 365 days): 9,636 kWh/year
- Average UK carbon intensity 194 gCO<sub>2</sub>e emitted per kilowatt-hour of electricity
- Annual CO<sub>2</sub>e emissions per server is 1.87 tCO<sub>2</sub>e

#### Paperless:

- 10,000 sheets of paper are used per employee per year (on average)
- Reduce this usage by 25%, so saving about 2,500 sheets per employee per year
- 2,500 sheets x 1,000 employee = 2.5 million sheets of paper in total
- 2.5 million sheets of paper / 10,000 sheets (per tree) = 250 trees
- 250 trees x 22 kgCO<sub>2</sub> = 5.5 tCO<sub>2</sub>e saved



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