

Sustainability Report – 2023/24

Private & confidential

5 April 2024

### **SUSTAINABILITY REPORT 23/24**

### Contents

Sustainability Report (2023/4)	2
Contents	2
CEO's message	4
Material Topics	5
Our approach to defining material topics	5
Reward's support for the UN's Susutainable Development Goals	7
Performance against targets and goals	9
Stakeholder Engagement	0
Assessing our impacts	1
FY23/4 sustainability targets and long-term goals	1
Product	1
People1	2
Operations	2
Governance	2
Accountability	2
Technology enablement	2
Flexible working	3
Reward's core data	3
Client privacy and data security	3
Good Governance & Accountability	4
Ethical business conduct	6
Reward's Values	6
Do the right thing	6
Focus on the things that matter1	6
Fuel the fire	6

Version Control & Owner	17
Document Owner	17
Appendix A – Cloud Computing	18

### CEO's message.

I am proud to present the latest edition of our Sustainability Report outlining our progress and ongoing efforts to create long-term value for our stakeholders through responsible growth and authentic advancement. The past five years of our journey have been defined by making giant leaps in a short period of time. This progress was possible thanks to the transformative partnerships between Reward's employees and our stakeholders across the globe who have embraced our vision that together, we can make everyday spending more rewarding through the power of our platform.

Our people are the heart of what makes Reward so special. The Reward team is a committed group of talented individuals from an incredibly diverse range of professional backgrounds, life experiences and perspectives. The more we harness this diversity, the more we will achieve.

We remain committed to integrating sustainability into every aspect of our business and enhancing our environmental, social and governance (ESG) goals as a key part of our growing portfolio. For us, sustainability is a strategic imperative that drives our success as a company.

Despite ongoing uncertainty and turmoil in the world, specifically the Russian invasion of Ukraine and the enormous impact it has had on global trade, sustainability continues to play an important part in our business. This deeply concerning situation is a strong reminder of the importance of a society where all people can live in peace and safety. For the people of Ukraine, we sincerely hope for an end to the current conflict and a swift return to peaceful lives.

Since I founded the business in 2001, we have worked diligently to establish the strong fundamentals that allow us to strategically optimise operations, infrastructure and talent. These fundamentals embed sustainability within our operations and support our long- term development, growth and competitiveness.

Our aim is to reduce our environmental footprint, support clients on their sustainable journey, attract and retain top talent by being the best company to work for, and safeguard our future success through strong governance. As our impact on people and communities around the world grows, sustainability remains central to delivering on our purpose and driving business results.

We are now building on the important groundwork undertaken in 2022/23 and will continue our work in this area in 2023 and beyond: aligning governance of Group finances, data management and procurement with sustainability goals; driving supply chain transparency as a foundation for responsible sourcing decisions; accelerating our decarbonisation journey to contribute to global climate goals; engaging with value chain stakeholders to foster more sustainable practices and of course, continuing to prioritise the wellbeing of our teams worldwide, who are critical to our success.

I am confident that Reward will continue to make good progress on this front, and I would like to thank our people across the world for the efforts they have made in 2022/3 – and continue making daily – to realise our ambitions while creating fair and sustainable value, for the benefit of current and future generations.

We strongly support the United Nations Sustainable Development Goals on Business and Human Rights and will continue the drive towards embedding them in all we do.

For our progress to date and in anticipation of more to come, I am hugely grateful. Gavin Dein Founder & Chief Executive Officer

#### **Material Topics**

The external landscape is changing. Stakeholders are demanding a greater focus on sustainability and environment, social and governance ambition, performance and in turn, disclosures.

We have seen a notable increase in requests for information from our stakeholders including investors, lenders, clients, potential clients, employees, and potential employees. In response, we have endeavoured to increase the focus on governance and accountability of teams, as well as how those teams achieve their targets.

Reward sees its materiality assessment as the foundation for its sustainable progress. It enables us to identify and prioritise the issues that matter most to the business and stakeholders. Reward regularly revisits its material topics to ascertain their continuing relevance for the company.

This year we renewed the material topics from previous years and have used these as the underlying basis for our sustainable path:

Products - (Productise Proposition)

Sustainable product portfolio

Innovation

People (Focus on People)

Diverse, motivated and empowered employees

Safety & well-being

Social engagement

Operations (Operational Excellence & Grow Direct Client and Channel Relationships)

**Resource efficiency** 

Fit for purpose supply chain

Circular economy

These are in addition to our Governance (Value Governance & Human Rights).

#### Our approach to defining material topics

We have used the principle of materiality to review our strategic priorities and address the relevant topics for all our stakeholders within this sustainability report.

The internal and external importance of each of these material topics is validated annually, considering different reviews and views from stakeholder groups.



Additionally, we conducted another review of our material topics to ensure they are still aligned with the priorities of our stakeholders and in order to comply with the GRI standards and as a result, followed the process as described in the GRI 3 – Material Topics.

For reference, material topics are subject matter that represent an organisation's most significant impacts on the economy, environment, and people, including impacts on their human rights.

Determination process of our material topics



#### Understanding the context of our organisation

The topics were determined using industry standards, rating schemes and reporting frameworks such as GRI Universal Standards, EcoVadis and our own general research.

Reward began its migration to AWS in 2019, not only to speed up production and to take advantage of technological advancements, but to also help with the reduction in hardware wastage and power reduction. Indeed, AWS themselves are focused on efficiency and continuous innovation across their global infrastructure and have a goal of powering their entire operation with 100% renewable energy by 2025 – something that will benefit Reward further.

The relationship Reward holds with its client banks, along with the FCA's directive to them to Treat Customers Fairly, has resulted in Reward continually helping banks to make every day spending more rewarding for every customer, no matter their access abilities, needs or wants.

Reward's drive towards a completely digital future, combined with truly transformational thought leadership comes from developing compelling points of view and unique propositions for a specific target audience, again guiding the banks and their customers to a more efficient and sustainable experience. Through the regular programme governance and appropriate media, Reward will continue to engage, advise and guide.



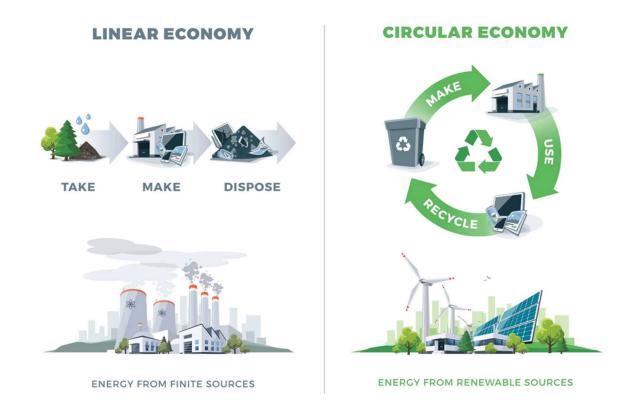
#### Reward's support for the UN's Susutainable Development Goals

Although not all the SDGs apply to Reward, the company still aims to have an impact in the areas where it can make a difference. This will be through our work for our clients, in our operations and in collaboration with others.

Reward use the SDGs to help clients develop and implement their strategy for contributing to sustainable development. As an example, moving from physical gift cards to digital and encouraging a total 'digital first' mentality. To meet growing client demand, we are strengthening our capabilities in this area through ongoing engagement with and through our relationship management and technical teams.

Reward's business strategy focuses on providing innovative solutions to its clients. In particular, we are focusing on leveraging technological advances across our core services and within our own business to drive productivity. In the last 12 months we have gained an additional certification - ISO 9001 - thus driving efficiency, speed and quality further.

Regulatory developments, consumer pressure, resource scarcity, supply chain volatility and climate change are driving businesses to develop more circular business models that create and secure enterprise value while simultaneously being good for the planet. As expectations, regulations, and business norms change in response to the increasingly urgent imperative to move to more circular practices, Reward has already accelerated the implementation of circular economy principles into core business activities.



Reward is continually progressing the drive to reduce waste and in particular, technical waste. Having commenced the move to AWS in 2019 to help improve Reward's environmental footprint (see Appendix A), there has already been a significant reduction in hardware and energy use as well as an increase in efficiency and speed.

In addition, staff laptops are refurbished and reused or donated to charities after their value to the business has been deprecated.

Reward will continue to drive towards reducing all waste across the company and will promote the circular economy in everything it does. Team leads will set objectives to reduce waste further within their domains and implement circular economy principals across their teams' activities.

Reward strives to operate sustainably in support of the SDGs and has adopted several policies that contribute to them. Of particular note, we have adopted a digital first mentality as this is where Reward can have the greatest impact across its own business, products and services.

From a people perspective, through our policies, behaviours and the company culture we strive to create and maintain, we prohibit discrimination on the basis of race, colour, religion, gender, sexual orientation, gender identity, age, national origin, disability or any other category protected by the laws of the communities in which we do business. Reward prepares an annual Modern Slavery Statement in accordance with UK requirements that is published on our website.

Reward is committed to taking practical steps to tackle barriers that racial and ethnic minority people face in recruitment and progression, and to make Reward representative of the societies in which it operates.

Our employees and all the people who work with us are the driving force behind our success. It is through their diverse ideas, backgrounds and experiences that we build this success. Reward embraces diversity, equity and inclusion (DEI) by fostering a sense of belonging, we aim to create an inclusive culture where everyone can be authentic, feel valued and have the chance to thrive every day. Building on our achievements in promoting gender equality, we continue to widen our focus and learn how to become allies to all underrepresented groups.

Our goal is to develop an inclusive, gender-balanced organisation with highly motivated and empowered employees.

Our commitment to combat bribery and corruption is fundamental to how we operate and is embedded into our key policies and operating practices. We are externally audited to validate this statement.

#### Performance against targets and goals

The following tables provide a snapshot of Reward's performance against our FY23/24 annual targets

Торіс	Target	Result	Comment
	No fines or non-monetary		Reward has not been
	sanctions for material non-		issued with any fines or
	compliance with laws and	Both targets met	sanctions for non-
Business Conduct	regulations		compliance with laws and
and ethics	90% of staff read and		regulations
	acknowledge the Ethics Policy		Acknowledement can be
			evidenced on BreatheHR
			that the policy was read
			and understood
	Each employee receives a	Target in progress	The training target is
	minimum of 25 hours training		probably being met but is
	(formal and on the job)		not always tracked and
Our People			formally logged. A
			reminder to do so will be
			reissued to the people
			managers
	No life impacting events for our		There have not been any
	employees	Target one met	life-impacting events for
			our employees
Health, Safety &	Complete at least two staff		One staff survey has been
Wellbeing	surveys		completed, a second one
		Target 2 in progress	later in the year to be
			schedued
	Reduce wastage by at least a		Reward already has a low
	further 25%	Target one in	level of waste, but are
		progress	currently formalising
Climate related risk	Develop all new programmes in		plans to reduce wastage
	AWS	Target two met	further.
			All new programmes are
			developed and hosted in
			AWS.

	Establish a client satisfaction	In Progress	Results and
Client Satisfaction	process		recommendations have
			not yet been published

			Reward does have a
( ontributing to cociety	Encourage staff volunteering		policy providing for
and local communities	for local charitable projects	Met	regular staff
			volunteering days.

#### **Stakeholder Engagement**

Reward engage regularly with key stakeholders as this helps us understand, prioritise and manage our sustainability impacts as an organisation as well as helping to evolve our client services.

Engagement with stakeholders is through a variety of mechanisms, including direct dialogue and quarterly business reviews. The frequency and nature of this dialogue is designed to enable regular communication with on a variety of subjects.

This feedback is integral to Reward's sustainability improvement process. The table below are key issues raised by stakeholder groups, along with our response.

Stakeholder Group	Frequency of engagement	t Method of Engagem	ent Topics
Clients	Daily and quarterly	Day to day dialogue and more formal QBRs	Technical competence Compliance Programme performance Sustainability (inc DE & I) Innovation Insight and thought leadership Continual improvement
Employees	Daily, monthly, on- going, annually	Monthly town halls Team meetings Open door leadership Formal and informal 1-2- 1s Formal annual employee reviews	Risk Management Compliance Employee learning and development Targets and objectives Business updates Sustainability Continual improvement
Board & Investors	Quarterly and on-going	Briefings Board reports Responding to sustainability requests	Performance against financial goals Performance against sustainability goals Business updates compliance
Suppliers	Monthly, quarterly and	Communications on	Information Risk and

on- going	policies and expectations	compliance
		Business Conduct and ethics
		Continual improvement
		Environmental and Sustainability improvements

#### Assessing our impacts

In line with our sustainability progress, Reward has assessed the impacts on the environment and people (including human rights). We have considered the impacts from our own operations as well as through the work we do for our clients. Some of the impacts are direct and some are indirect. For example, the clients we work for may have a range of impacts through a particular activity or project where we may or may not have had direct involvement.

Material Topic	Overview of Impact	ls our impact Negative or Positive?
Products	Reward works with many of the largest companies in the world, that in turn have impacts on climate, nature and livelihoods. Our products and services are related to helping our clients provide solutions to operate in a more sustainable way.	$\bigcirc$
People	If we cannot attract, develop, reward and retain talented employees, we will be unable to help our clients meet their challenges. Growing our diverse and inclusive work environment helps us create better solutions for our clients while respecting the rights of stakeholders	
Operations	Reward has a unique opportunity and responsibility to leverage its technical expertise and business acumen to shape a more sustainable world. As we strengthen our wants, needs and requirements on what must be done to address the environmental and economic challenges in our business, some stakeholders may not be able to meet our insights and perspectives within acceptable timeframes.	$\bigcirc$
Governance	Good corporate governance will fulfil our responsibilities to our investors, lenders, clients, employees, suppliers, society and the environment The inability of Reward to effectively respond to stakeholders' increased expectations on sustainability performance may negatively affect client engagements, investor and lender support, talent acquisition and retention, and regulatory compliance	$\bigcirc$



FY23/4 sustainability targets and long-term goals

#### Product

Move to a total cloud based platform, therefore negating the need for physical servers and data centre



Contractually encourage all suppliers and partners to implement sustainability improvements. This will be supported by the regular relationship governance process.

#### People

- Achieve workforce growth to meet client needs
- Career Frameworks published for 80% of teams by end of Jan 2024
- Engagement, employee net promoter score of +10 achieved by end of April 2024

#### **Operations**

- Based on the satisfaction surveys, develop a schedule for improvement
- Quantify and report sustainability impacts across all elements of Reward's business
- Reduce laptop wastage (recycle and/or donate at least 90% of old equipment)

#### Governance

No reportable breaches of data or privacy regulations

#### Accountability

Implement formal Board oversight of sustainability and sustainability topics Integrate sustainability criteria into performance management system for all line managers

#### **Technology enablement**

Transformation and innovation are vital to our success in meeting the sustainability challenges facing our business. At Reward, we understand the importance of having a technology platform in place that allows our employees to do their work, keep data secure and operate in an environment where we can deliver value for clients.

Reward's Information Technology (IT) systems comprise of many different tools that support the success of our company.

From finance programs and project management systems to our client administration platform, our tools are designed to fully support our employees in their daily jobs. Our systems are integrated and supported by specialised teams of IT experts. We are constantly monitoring new feature releases and updates for the technologies we use thus taking benefit from the additional efficiency they provide.

Evolving our systems into global core capabilities reduces operational risk, increases efficiency, and supports project- level innovation. We have set a target to finalise a roadmap for digital enablement of our core service offerings in the next year and to deliver that in the years ahead. Our core systems include AWS, Exchequer, Remote Working/Virtual Engagement tools virtual customer engagement platform and Tableau.

Through our capabilities and data management excellence, we:

Support our people with organisational infrastructure, support roles and access to training for these systems;



Standardise our processes with standard operating procedures, technical hubs and governance;

Invest in technology by consolidating licensing and support as well as centralising related tools and innovations for reuse.

#### **Flexible working**

It has been shown that employees are more productive at work where they have workplace flexibility.

At Reward, we are striving to create an adaptable work environment to allow employees to respond in the most effective way possible to business demands while having control and influence over their own work environment.

Reward's IT Systems are designed to fully support the mobile demands of employees. Allowing secure remote access to IT systems and services from outside the office means we can productively work while on the go, on different site locations or at different offices.

#### **Reward's core data**

- Access to trusted data is necessary for Reward's core platform to deliver a quality service to our clients. We:
- Continuously identify and curate master data that are the terms and values common across our business;
- Manage a data discovery infrastructure to facilitate access to documented, high quality data;
- Support data literacy efforts to upskill all Reward employees and cultivate a "data first" mindset.
- Approaching every client project as a 'data' project reduces our client's risk from poor quality or inadequate data and allows Reward to continuously innovate.

#### **Client privacy and data security**

It is vital to Reward and all employees that the company is able to ensure the confidentiality, integrity, availability, protection and responsible use of information.

With ever-increasing privacy threats in our day-to-day life, we all have the need to remain vigilant to protect our and our client's data. To help our employees understand how to do this, in 2006 we launched a mandatory information and data privacy awareness training program to coincide with our PCI DSS certification. This solution has been in place continuously and successfully since that date and has also helped secure ISO 27001 compliance in 2021 and ISO 9001 in 2023.

Further, we revise our policies at least annually to reflect the most current legislation. We have up-to-date data processing agreements to use with third parties that stipulate the latest requirements for handling our data.

We continue to review all third parties with whom we share data to ensure their technical operating measures are robust and will provide the protections we expect. We also continue to work through all functions of our organisation to capture and identify processes and people where data is handled and provide the requisite training to staff to ensure protections are, at a minimum, adequate.

Reward builds on proven security frameworks to ensure we have a robust, agile and resilient cyber security posture, able to adapt to evolving cyber risks and threats. Our ongoing ability to detect, respond and recover from cyber-attacks, with a cyber-risk aware workforce, is required for earning and maintaining our clients' trust.

It is vital that Reward is able to ensure the confidentiality, integrity and appropriate availability of information. Everyone has a responsibility to access information and systems in an acceptable manner, maintain the confidentiality of information and keep our information assets secure.

Information security at Reward concerns the implementation of processes and good practices that are designed to protect print and electronic materials; specific consideration is given to any form of confidential, private and sensitive information from unauthorised access, (mis)use, disclosure, destruction, modification or disruption.

Good information security is a combination of physical and technical measures, together with appropriate policies, procedures, training and guidance. Threats to information systems range from physical, such as theft of hardware, to human factors such as social engineering, phishing emails or human error. All of these result in a disruption to services as well as unnecessary risk and cost.

Our first layer of protection is our people. Reward employees understand their responsibilities in protecting both our people's data and information, as well as that of our clients. Data stored on Reward's networks are secured by multiple defensive layers, whilst we also ensure data is protected in transit and at rest. As is good business practice, we also back up data regularly to ensure effective an efficient recovery in the event of a disaster.

Reward partners with leading cloud-based solution providers for its critical services – specifically AWS - and we leverage their inherent robust reliability and user productivity, with security being continuously updated and enhanced. Reward has developed appropriate policies, processes and procedures as necessary to comply with the European Union's & UK's General Data Protection Regulation as well as PCI DSS Level 1, ISO 27001 and ISO 9001 requirements.

We also comply with our major banking client's additional requirements. Reward is annually audited by external security experts, passing every audit on every occasion, continuously and successfully.

#### **Good Governance & Accountability**

At Reward, we are guided by the moral compass of a responsible company.

Governance at Reward encompasses the processes, structures and systems that guide the direction and strategy of our company and provides checks and balances at the group level. In a privately held company such as Reward, good corporate governance is required to fulfil our responsibilities to our external investors, lenders, employees, suppliers, clients, society and the environment.

Building a common culture of high business ethics standards in a global organisation with a strong local presence in different markets and cultures is a challenge. However, we aim to implement our business ethics throughout our entire value chain – including partners and customers.

With good governance, we gain confidence from our stakeholders and ensure our ability to attract capital, serve our clients, partner with suppliers, meet the expectations as well as attract, develop, reward and retain



our talented employees.

Good governance relies on strong accountability mechanisms across strategic and operational leadership, that includes clear performance metrics and reporting.

At Reward, we believe that our strong governance system - based on our purpose and values - makes us more resilient. We make long-term decisions that are purpose-driven, and our stable ownership and strong values make us an

attractive employer. We hold each other accountable for our commitment to abide by our policies and certifications, and we also monitor our subcontractors and suppliers to make sure they are performing to the same standards to which we hold ourselves.

We condemn and prohibit any activities that go against our values such as bribery and corruption, anticompetitive behaviour and violations against human, especially children's rights. We encourage fair discussion of issues and concerns through several whistleblowing channels, investigate the cases reported and take appropriate action when our own ethical performance – and the ethical performance of our business partners – comes into question. There were no significant instances of non-compliance with laws and regulations and no fines were paid during the reporting period.

#### Accountability

We are each accountable, as an individual and as a team member, for the sustainability of Reward's success. Personal accountability for delivery of quality work to our clients will drive Reward's success now and in the future.

#### Collaboration

We are one organisation globally. We believe in the principles of partnership and mutual support across the world. Commitment

As professionals, we will conduct ourselves with dedicated effort to our principles, to our performance excellence, and to our clients. Reward's leaders will lead by example so that all employees understand that Reward's principles and commitment to excellence are supported by management.

#### **Empowerment**

We will support our employees with the tools and training to realise their full potential. Integrity We will apply our values and ethical principles to our actions and our relationships. By focusing on Reward's reputation and future success, we will uphold our duty to serve the best interests of Reward and Reward's clients.

#### Respect

By placing a high value on individuals, we will emphasise health, well-being and the freedom from discrimination or harassment at work. We support diversity in our workforce and respect for the customs and laws of the many countries where we work.

#### Service

We believe in client and community service. Client service includes a commitment to excellence combined with entrepreneurial, innovative and client-oriented behaviour. Community service includes encouraging our people to contribute to their local communities.

#### Transparency

We understand that effective corporate governance requires all employees to support transparency by providing accurate information in a timely manner. We will promptly address concerns that are brought to our attention with an appropriate regard for the rights of individuals. Further, we will not allow retaliation



against employees who bring legitimate concerns to the attention of management

#### **Ethical business conduct**

Ethical business conduct is essential to Reward's success and sustainability.

We conduct business with uncompromising honesty and integrity, adhering to laws, regulations and our Ethics policy, and expect everyone at Reward to act accordingly.

#### **Reward's Values**

Reward has a strong set of values that reflect the spirit in which we conduct our day-to-day activities.

We adhere to high standards of ethics and business morals in all our operations and relations. We conduct our business in an environmentally and socially responsible manner and behave appropriately towards all of our stakeholders – our customers, suppliers, colleagues, shareholders, the communities in which we operate and other parties that interact with Reward.

#### Do the right thing

- We show we care, going above and beyond for each other and clients
- We celebrate our differences and know they make us better as a team
- We take time to listen to and to see things from different perspectives
- We openly share knowledge and inspiration
- We aim to give back more than we take out

#### Focus on the things that matter

- We celebrate success both big and small, professional and personal
- We roll our sleeves up and get stuck in
- We trust each other with the responsibility and authority to make things happen
- We actively invest time and interest in ourselves, our clients and marketplace
- We focus our energy by keeping our eyes on the prize

#### **Fuel the fire**

- We wear our curiosity on our sleeve, asking questions both big and small
- We anticipate obstacles and break down barriers
- We find simple and smart solutions to the challenges we encounter
- We celebrate and support stepping outside of the comfort zone
- We keep our fire burning inspiring and encouraging those around us to do the same



#### Version Control & Owner

VERSION	DATE	COMMENTS	
0.1	2nd August 2023	Initial draft	

Document Owner

Tracy Gonçalves – Head of Information Risk & Security & Payments tracy processer and the tracy report of the tracy report of the trace of the trace



#### **APPENDIX A – CLOUD COMPUTING**

The environmental footprint of the online world is constantly expanding as its energy consumption rises to meet demand, but there are benefits too that must be set against the costs. Greenpeace estimates that by 2025, the technology sector could consume 20% of the world's total electricity; this increase from 7% currently is attributed to the expansion of cloud computing and the further development of new technologies, such as artificial intelligence, that require a great deal of computing power.

Despite these claims, many recent reports by companies such as Microsoft have stated that the growth of cloud storage has had a minimal impact on energy consumption and further improvements in efficiency will negate the impact of ever- expanding storage and processing.

Most UK companies care about their impact on the planet.

In fact, 90% of UK businesses rank sustainability as a top priority, yet, they only allocate 8% of the budget to environmental, social, and governance (ESG) initiatives, according to Google Cloud research. It's also hard to prove if those initiatives even work - only 36% of those business say they have the right tools to measure impact.

#### So What is Cloud Computing?

Cloud computing, despite existing since the early 1960s, was developed as a marketing term in the late 1990s. The idea is that data can be collected, analysed and stored in specialised, shared data centres all over the world before being accessed through a multitude of web-enabled services. Cloud computing is fast becoming the go-to solution for commercial and government systems, with applications ranging from personal productivity tools such as Office365 to large database solutions powered by Microsoft Azure.

In 2018 it was estimated that 3.6 billion people were accessing a huge range of cloud computing services including Google Drive, Office365, Oracle, Netflix and Dropbox. Currently, the largest providers of cloud computing are Amazon Web services (AWS), Microsoft Azure and Google Cloud Platform. Reward has employed AWS.

#### **Electricity Demands**

The main impact of cloud computing is the vast amounts of electricity required to power the servers and keep them cool. In 2012, the IT sector consumed more electricity than the entirety of Russia and just under half the total consumption of the US. Demand for cloud computing will only continue to grow; an IDC Study claims that by 2025, worldwide annual data traffic will increase by 60% to 175 Zettabytes (175 trillion Gigabytes), with cloud computing applications driving the majority of this growth.

However, there are benefits to cloud computing.

#### Cuts greenhouse gas emissions

Firstly, cloud computing has the power to cut the amount of greenhouse gases (GHGs) that are pumped into the atmosphere significantly. Traditional, on-site data centres create a considerable amount of GHGs as a result of the substantial amount of energy they use, for running and cooling the equipment. In addition, the manufacturing, transporting and packaging of all the individual technology required substantially adds to the emissions generated. However, with the switch to cloud computing, these emissions could be considerably reduced, as by using shared data centre facilities, employed to power cloud-based applications, there is no longer a need for so much individual equipment to be used, cutting the emissions this creates.



These larger-scale, shared data centres can also be run far more efficiently than individual facilities, optimising cooling and maximising server utilisation rates, thus reducing the overall emission of GHGs.

In fact, Equinix who operate data centres used for some cloud services have stated that it now operates its facilities so efficiently, that it has avoided emitting over 260,000 metric tons of carbon dioxide (CO2) since 2011. Indeed, a recent forecast by market research company International Data Corporation (IDC) showed that the continued adoption of cloud computing could prevent the emission of more than one billion metric tons of CO2 from 2021 to 2024.

#### Reduces the need to travel

In addition to directly cutting emissions of GHGs, cloud-based computing can also indirectly lower emissions, by providing online communication tools that reduce the need for users to travel as much.

For example, by deploying a cloud-based communication solutions such voice, video conferencing and messaging facilities, businesses can enable their employees to work remotely with ease – as Reward has done. This can empower teams to collaborate and communicate efficiently wherever they are based, thus reducing, or removing, the need for lengthy commutes, with the associated emissions this creates.

Indeed, with transport reportedly being the highest emitting sector of GHGs, producing 27% of the UK's total emissions in 2019, this is a great way to improve a company's carbon footprint. Moreover, not only does this benefit the environment, but could also save organisations serious money, as research shows that using such technology can help companies cut travel costs by 30%.

#### Helps shrink the e-waste mountain

However, the green benefits of switching to cloud computing certainly do not end there, as it has also shown it is helping to reduce the escalating mountain of electrical waste, or 'e-waste'.

This is because it enables greater 'dematerialisation' that refers to the replacement of physical equipment with virtual equivalents. As the UK reportedly generated the second most waste electrical and electronic equipment (WEEE) per capita in the world in 2019, this is a pressing environmental issue that urgently needs to be addressed. Indeed, the e-waste mountain is now said to be growing by as much as 53 million metric tons every year.

However, by switching to cloud computing, companies can reduce the amount of individual, on-site hardware needed, as the service is delivered through shared servers, that inevitably cuts down on the amount of equipment being disposed of, when it eventually expires.

In addition, it goes without saying that by switching to such technology, companies could also save money as there will no longer need to invest in so much on-site hardware, pay for its maintenance, or replace it when required, but instead can just pay for the exact amount of service you need.

In fact, a recent report in Computer Weekly suggests that through such dematerialisation, enterprises could become far more profitable and productive, as well as sustainable, by 2030.

#### Slashes energy consumption

Cloud computing could also help businesses go greener by slashing the overall amount of energy being used. As mentioned, traditional, on-site data centres require a great deal of energy to run and cool the equipment,



while shared data centres, used for cloud services, can be run much more efficiently, consuming far less overall energy.



A contributory factor to this may also be that many businesses might not be able to buy the most energysaving equipment for their own individual data centre usage because of the cost, instead choosing cheaper, less-efficient alternatives. However, cloud data centres can supply the same maximum-efficiency equipment to all companies.

Indeed, a six-month study on this subject found that by moving commonly used software applications employed by 86 million US workers over to the cloud, energy usage could be cut by 87%, saving enough energy to power Los Angeles for a year!

It should be noted that Reward has almost completed a total migration to cloud based services thus benefitting from AWS' highly energy-efficient data centres typically using five times less energy per kW of IT load than the average data centre. Needless to say, by switching to cloud-based computing, run from facilities off-site, the environment may not be the only one to benefit, as companies could also make some savings by cutting their own energy bill, with no need to fund an onsite data centre solution.

#### Uses renewable energy sources

Finally, the cloud also has another major green benefit up its sleeve. Many cloud data centres are now being powered by renewable energy sources, such as solar, wind, hydropower and geothermal that are far more environmentally friendly than fossil fuel power, emitting few or no GHGs.

The importance of moving to such sustainable energy sources is key, and was certainly a hot topic discussed at COP26, as coal power is the single biggest contributor to climate change. In fact, according to the UN, currently around 80% of global energy and 66% of electrical generation are supplied by fossil fuels and that contributes about 60% of the GHG's responsible for climate change.