ACHIEVING THE ENERGY TRANSITION





OUR SUSTAINABILITY COMMITMENTS CASE STUDIES





Act for the climate Opening the eyes of Omexom leaders and staff

CASE STUDY: TRIALLING CLIMATE FRESK

Raising climate awarness



In early December of 2022, Omexom conducted the first pilot trial of the "Climate Fresk" training regime for Omexom Business Unit Managers and Perimeter Directors, to raise awareness about climate change.

Information is the first condition for effective action to meet the challenges of the climate emergency. Climate Fresk is a tool for facilitating educational and collaborative scientific workshops on climate change.

It raises awareness and provides quality education. The facts in Climate Fresk are sourced from the most respected scientific publications, such as IPCC reports.

The fresk turns these scientific reports into a fun and interactive card game that makes the information more accessible and raises people's climate literacy.



It also helps the participants learn the drivers, mechanisms, and consequences of climate change.

There are five rounds of engaging with the cards and the concepts. As participants link the causes and effects of climate change, they are able to take a step back and understand the systemic nature of the challenges faced.

The game is followed by a debrief and discussion about the next steps of taking action to combat climate change.

The workshop shows that Omexom is dedicated to:

- Raising awareness of climate change
- Understanding the impact of our carbon emissions
- Promoting structural changes that have far-reaching effects

• Advocating for green values and choices to change workplace behaviour

It also provides assurance to our clients that we are raising the level of awareness about climate change across the organisation to promote awareness and act for the protection of our environment.



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Raising climate awarness

So far, four out of five Perimeter Directors and 10 out of 16 BU Managers have participated in the course, with the remainder to attend in March 2023.

Sustainable Development Goals (SDG) linked to this initiative are:





Electrix strives to ensure inclusive and equitable education through our corporate social responsibility commitments with schools and promoting lifelong learning opportunities for staff.

Electrix is taking urgent action to combat climate change and its impacts

Climate Fresk enables Omexom's employees to have an open and positive conversation about climate solutions.

Participants leave the workshop having formed a strong bond with each other, and with a strong sense of the environmental urgency facing our world today.

In addition, they are now well-equipped to implement the climate actions that they have identified to help guide the transition to a low carbon world.

2022

Act for the climate by reducing the direct and indirect emissions of our supply chain.

CASE STUDY: REDUCING WASTE BEFORE RECYCLING

Reduce and refine waste

Omexom is committed to acting for the climate by:

• Reduce our carbon footprint through a reduction of waste going to landfill.

• Improve the security of sensitive information.

 Act on our commitment to the natural environment by mitigating our impact through recycling.

To reduce our carbon footprint from Office generated waste through segregation and improve the management of confidential material by employees.

Recycling can have a significant effect on the environment and the way we live. Waste has a negative impact on the environment, with harmful chemicals and greenhouse gases released from rubbish in a landfill site.

In addition, huge amounts of energy are needed to make products from raw materials, which recycling can help reduce.

One of the green practices we successfully implemented in the Mt Wellington office in early August 2022 was the introduction of centralised communal recycling stations.

This change meant that we, as an organisation, recycle more in attempt to reduce our



environmental footprint, and help us separate our waste correctly.

Three recycling bins are as follows:

- YELLOW Mixed recycling for glass, plastic, and cans
- GREY Paper (non-confidential) and card

• RED – Landfill, for what is left that cannot be recycled.

The good news too is that the bins are completely recyclable at the end of their life.



Act for the climate by reducing the direct and indirect emissions of our supply chain.

CASE STUDY: REDUCE INDIRECT CARBON EMISSIONS

Reduce and refine waste

Omexom believes that efficient office waste management is a critical aspect of running a successful business. While personal office bins under desks may seem convenient, they can come with hidden costs and drawbacks.

Omexom collected our personal rubbish bins and donated them to our various CSR partners who needed them. There has since been benefits of centralizing waste disposal (see case study) in our office by eliminating individual office bins.

Cost Savings

By reducing the number of bins, we saved on expenses such as bin liners and the time spent by office cleaners emptying them. This change resulted in significant cost savings, allowing us to allocate resources more effectively.

Promoting Recycling

Personal bins can lead to haphazard waste disposal, undermining recycling efforts. By centralizing waste stations, Omexom encourages employees to make conscious recycling choices and increase overall recycling rates. This supports environmental campaigns and reduces unnecessary waste-related expenses.

Enhanced Productivity

Encouraging employees to get up from their desks to dispose of waste provides short breaks from screens and improves blood flow to the brain. This leads to increased focus, productivity, and employee wellbeing.



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Clean and Organized Environment

Centralized waste management created a cleaner and more organized workspace, free from cluttered personal bins. This fosters a professional and efficient working environment, positively impacting employee morale and collaboration.

Omexom embraced centralized waste management and has posiitoned our business towards a greener and more productive future. By implementing this change, our company demonstrates a commitment to sustainability, employee wellbeing, and operational efficiency.



Act for the climate by reducing the direct and indirect emissions of our supply chain.

CASE STUDY: REDUCE INDIRECT CARBON EMISSIONS

Carbon Impact Solution

On the 26th of April, Omexom Distribution depot embarked on a significant project aimed at transforming the lighting infrastructure of two main warehouses (Stores and Sealegs warehouses), the office buildings, and all office portacoms at our William Pickering site in Albany.

This endeavor was a vital component of our Distribution perimeter's sustainability plan, meticulously crafted and strategised since 2020. The comprehensive scope of this initiative involved the replacement of nearly 300 fittings and lights throughout the entire site.

The newly installed LED lights in the warehouses were equipped with innovative daylight sensors and motion detector sensors, ensuring that the lights would remain off during nighttime when no staff members were present.

These lights would only activate upon detecting movement within the depot at night. This intelligent lighting system not only improves energy efficiency but also enhances overall security and safety within the premises.

The current LED installation projects an impressive estimated savings of approximately 55-61% on the current lighting expenses, resulting in significant cost reductions.

Moreover, over the lifespan of the program, an impressive total of 81 tonnes of CO2 emissions are expected to be saved. These figures highlight the remarkable positive environmental impact of this project, aligning with our commitment to sustainability and environmental



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stewardship.

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The initiative has garnered overwhelmingly positive feedback from the depot's staff members and stakeholders, reflecting the collective enthusiasm and support for our sustainability efforts. By taking this significant step forward in reducing our carbon footprint, we are not only fostering sustainability within our company but also contributing to a greener and more environmentally conscious community.

Act for the climate by reducing the direct and indirect emissions of our supply chain.

CASE STUDY: REDUCE INDIRECT CARBON EMISSIONS

Carbon Impact Solution



Te Whangai Trust, renowned for their native plant nurseries and nationwide planting endeavors, received invaluable assistance from Omexom Aotearoa. Their collaborative effort focused on relocating a large potting shed from Te Whangai's nursery in Pukekohe to Miranda in Hauraki.

An Omexom team comprising staff from Mobility, Distribution, and Power Services, along with Support volunteers from Mt Wellington, came together for this task. The first day involved efficiently dismantling the shed and organizing the components for transportation.

On the following day, the team successfully loaded everything in Pukekohe and unloaded it in Miranda.





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While the project itself was relatively straightforward, it required physical exertion and hard work. The field personnel tackled the challenge with enthusiasm and resilience. The relocation of the potting shed emphasized the sustainable importance of recycling and reusing structures. By repurposing Te Whangai's existing shed instead of constructing a new one, valuable resources were conserved.

This approach reduces the environmental impact associated with manufacturing new materials, minimizing waste generation and energy consumption. It aligns perfectly with Te Whangai Trust's mission of creating a greener future through responsible resource management.

The successful relocation serves as a tangible example of integrating sustainable practices into environmental initiatives, showcasing the benefits of recycling and reusing to minimize ecological footprints.

Omexom's provision of equipment and labor underscores their commitment to Te Whangai's ecological vision. Together, they strive to create sustainable outcomes by preserving and restoring natural ecosystems.

Te Whangai Trust's ongoing efforts in cultivating native plant nurseries and planting indigenous species contribute to their overarching goal of ecological sustainability. With the support of organizations like Omexom, they continue to make a tangible difference in preserving our natural heritage.

Act for the climate by reducing the direct and indirect emissions of our supply chain.

CASE STUDY: REDUCE INDIRECT CARBON EMISSIONS

Decarbonising the business

In 2022, Omexom made the decision to switch over from paper-based induction packs to digital versions, which allowed for greater flexibility (being easy to update) and lower costs. In addition, we saw a great many environmental benefits as well.



Economic, environmental, and efficiency savings:

• Time saving – from collating paper induction packs (4 hours to create 10 packs)

- Time saving no collation of courier packs
- · Eco-friendly paperless process
- Cost-savings approx. 109 pages of paper (printed on both sides) PER PACK
- Cost-savings delivery of courier packs (Cost approx. \$15 deliver/return pack)

Carbon reduction:

- Elimination of courier petrol/diesel costs
- Reduction of paper manufacturing costs
- · Elimination of printer use
- Elimination of plastic courier packs
- Elimination of filing cabinets to store documents



Overall, the decision to switch to digital induction packs in 2022 resulted in significant economic, environmental, and efficiency savings.

The time-consuming process of collating paper induction packs was eliminated, saving approximately four hours for the creation of 10 packs. Additionally, there was no need to collate and deliver courier packs, further saving time and costs.

From an environmental perspective, the adoption of a paperless process was highly beneficial. Each pack, which previously required approximately 109 pages of paper printed on both sides, was now saved, resulting in reduced paper consumption and manufacturing costs.

Moreover, the elimination of courier petrol/diesel costs, printer use, plastic courier packs, and filing cabinets for document storage contributed to carbon reduction efforts.

The transition to digital induction packs proved to be a win-win solution, delivering economic savings, environmental benefits, and improved efficiency.

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CASE STUDY: REDUCE INDIRECT CARBON EMISSIONS

Rain water harvesting

To help reduce fresh water use, Omexom Gas Services Perimeter has installed rain water harvesting tanks at 8 Douglas Alexander Parade, North Shore, Auckland.

The two 5,000L slimline tanks, fed off the stores canopy (approx. 35m2) are filling fast!

It is intended that the collected rain water, often called 'soft' water is used to reduce fresh water consumption for GSP:

- Filling non-potable water containers for dust suppression activities and site cleanup tasks

- Topping up the ditch witch drill machine water reservoir

- Hose use, when washing down light vehicles

Simple tasks often forgotten, include filling up vehicle wash bottles and cleaning windscreens before travel.

It is hoped that the harvested rain water will have a positive impact on the environment. In time it will reduce our reliance on 'town' water - lessen the depletion of reservoirs and lighten the burden on Auckland's overstretched and ageing water supply system. Every drop counts!





In 2023, GSP will be running reminders on why, and how we can use the harvested water, thereby avoiding running a fresh water tap.

So the next time you turn on the water, ask yourself where did it come from, and how can I help to collect and re-use this precious resource?



Act for the climate by reducing the direct and indirect emissions of our supply chain.

CASE STUDY: REDUCE INDIRECT CARBON EMISSIONS

Decarbonising the business

Haystack was chosen as Omexom's electronic/digital business card supplier for several compelling reasons, making it an ideal choice for environmentally conscious businesses. By opting for digital business cards, Omexom can significantly reduce our environmental footprint.

One notable feature of Haystack is its ability to instantly share business cards with anyone, eliminating the need for recipients to download a separate app. This not only simplifies the process but also reduces electronic waste by eliminating the need for additional software.

In addition, Haystack's cards are customizable, allowing businesses to showcase their unique branding and reduce the need for physical business cards, which often end up discarded and contribute to paper waste.

Haystack further promotes sustainability by offering card sharing via QR codes. This technology enables efficient sharing of contact information, minimizing the use of paper-based alternatives. It encourages a shift towards digital interactions, reducing the consumption of physical resources.

Furthermore, Haystack supports integration via API, facilitating seamless integra-



tion with existing business systems and reducing the need for manual data entry. This not only saves time but also reduces paper usage and promotes a paperless office environment.

In selecting Haystack as their digital business card supplier, Omexom uses an eco-friendly solution that reduces paper waste, promotes digital interactions, and supports sustainable practices.

By embracing digital alternatives, Omexom not only enhances operational efficiency but also contributes to a greener future by minimizing environmental impact.



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CASE STUDY: REDUCE INDIRECT CARBON EMISSIONS

Decarbonising the business



Distribution Services were looking for an opportunity to sustainably dispose a large quantity of used substation batteries that were removed from Vector's network equipment.

DSD contacted Abilities Group to see if they could recycle the large quantity of batteries. Abilities Group is a non-profit, incorporated society dedicated to enriching the lives of people with disabilities.

A large proportion of their work involves resource recovery and recycling of paper and cardboard, metals, plastics, electronic components, and batteries.

Currently Abilities Group diverts more than 4,000 tonnes of material from landfill through their processes.



Luckily, the substation lead acid batteries are made up of around 90% of material that can be reclaimed through recycled.

The lead, plastic and acid components can be re-processed and manufactured into an array of other products.

Abilities Group were provided around 6,000kg of batteries for which they arranged for recycling which enabled all that waste ending up in landfill and provides a safe and responsible solution for the future.



Act for the climate by reducing the direct and indirect emissions of our supply chain.

CASE STUDY: REDUCE INDIRECT CARBON EMISSIONS

Forest re-generation

Over the past several years, Omexom estimation and bid teams have noticed increased client requests for solutions to minimise the carbon emissions on tendered projects.

In response, Omexom's procurement ecosystem innovations working group have researched and collaborated on an uncomplicated carbon reduction solution for clients that can be implemented rapidly and with minimal fuss.

A social enterprise organisation that create self-sustaining forest carbon projects and programmes in New Zealand and the Pacific Islands, Ekos offers a carbon offset mechanism which is both simple to use and offers tangible benefits.

Omexom has worked closely with EKOS on the validity of using the social enterprise's carbon calculator as a credible, transparent carbon-offset process which we could employ on a project-by-project basis.

Using data on a project's carbon use variables (including car mileage, wastage, electricity usage *etc*), the EKOS calculator is able to estimate the total volume of emissions, along with a price to offset the carbon impact.

Omexom has trialled EKOS carbon credits calculator on small and larger project bid submissions.

For example, as part of a transport client's LED replacement programme bid submission, our estimating team was able to roughly determine staff travel distances and waste esti-



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mates (cardboard, packaging foam *etc.*) across the duration of the project. Using the EKOS calculator, we were able to quantify both our emissions and its carbon offset costs: around one tonne of carbon, with a cost of a NZ\$20 donation to the Rameka Forest Carbon Project, a 91-hectare indigenous forest in Golden Bay, New Zealand.

On larger projects, in most cases the carbon emissions cost of our scope of works delivery activities remains negligible (between NZ\$100 - \$200).

Omexom has trialled this initiative in numerous tenders to our clients as a simple and credible solution to track and offset environmental impacts across multiple activity streams through the verified purchase of carbon credits.

How carbon offsetting works:

Carbon credits come from the growth of new forests and protecting existing ones from clearing and logging.

Businesses and individuals buy credits to offset their carbon emissions which is invested in forest conservation that measure, report, and offer verified carbon benefits.

For instance: The Rameka Forest Carbon Project falls under the Permanent Forest Sink Initiative - a subset of the NZ Emissions Trading Scheme whereby New Zealand Units (NZUs) are issued based on government rules for carbon sequestration rates by indigenous forest.

Once the NZUs are sold to a carbon offset buyer, they are cancelled in the New Zealand

Act for the climate by reducing the direct and indirect emissions of our supply chain.

CASE STUDY: REDUCE INDIRECT CARBON EMISSIONS

Carbon Impact Solution

Data centres are the critical enablers to global consumers' immediate demand and access to digital connection, information and entertainment all the time, at all times.

Escalating operational costs and environmental implications, tied to an exponential growth in data consumption, is driving global transformation in the IT industry's approach to the design and infrastructure of data centres.

On new build data centre projects, Omexom's strategic approach to its procurement and implementation solutions delivers increased power utilisation effectiveness (PUE), options to leverage environmental efficiencies and reduced whole of life costs for clients.

Optimising energy consumption

As an energy management tool, the IT industry uses PUE as its standard metric to measure energy efficiency. A PUE value represents the ratio of computing equipment power usage to the data centre's total consumption.

Mostly run off uninterrupted power supply, data centres are high energy users.

The opportunity to reduce reliance on the grid for its energy requirements through solar generation is highly constrained by the space available to install the large number of photovoltaic panels that would be needed.

As a sustainable source of energy saving, with significant knock-on gains in carbon reduction, Omexom investigated the viability of capturing ambient energy from a 1,080+ panel solar array along the data centre's extensive unused roof space.



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CO ₂ Emission Calculator	
Fuel type	
Electricity	~
Amount consumed	
681734227.20	
Units	
kWh	~
Calculate Clear form	
Tonnes of CO ₂	
87,739.20	

In adopting this approach to the pricing of a new data centre build project, we determined that — with an investment payback period of around 7.5 years — the annual projected energy and carbon cost savings totalled more than \$93K from solar backfeed generation and an offset of >87,000 tonnes of CO² emissions.

While this output represents a fraction of the data centre's overall energy consumption, generation from the rooftop PV array, coupled with battery storage, could reduce non-critical loads such as fuel polishing, engine heaters, office air conditioning and lighting.

Act for the climate by reducing the direct and indirect emissions of our supply chain.

CASE STUDY: REDUCE DIRECT CARBON EMISSIONS

Reducing travel and fleet emissions

During various Covid-19 lockdown periods throughout 2020, our gas business took the initiative to leverage its existing materials supply chain outlet network.

In Auckland, our gas connections' crews supply LPG and natural gas services to more than 3,200 residential customers within a \sim 5,000km² area.

At the time, all gas supply materials were supplied from our northern Albany depot.

With essential stock items running low due to pandemic supply chain issues, and a re-supply round trip averaging at around 80km, using a single supply point to service a large geographical area was proving problematic.

As a solution to averting interruption to our client customer service delivery, our connections team partnered with key electrical materials supplier Cory's in a two month supply trial.

Under the agreement, our crews could source yellow polyethylene (PE) pipe - an essential material required in every gas connection - from the closest of four Cory's depots around the wider Auckland region.

Proving hugely successful, Cory's distribution points across Auckland are now used by all connection crews as supply points, reducing vehicle use, petrol consumption.

Eliminating long re-supply round trips has increased our crews' ability to complete a higher volume of customer connections in a shorter timeframe, delivering greater client value.

The environmental benefits of this key sup-



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plier partnership is tracked as part of our sustainability reporting and includes consolidated fuel, time and emissions savings, as well as environmental impact benefits from the recycling of waste PE pipe.

Our Gas Business

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Omexom provides extensive regional-based maintenance, construction and connection services on behalf of natural gas utility infrastructure network clients Vector and FirstGas.

We also provide metering systems services on assets that control and measure the gas supply delivered to homes and businesses through a piped mains distribution network.

Preserve natural environments by eliminating incidents, minimising loss of biodiversity while optimising water consumption.

CASE STUDY: INNOVATION

Transmission tower soak pit design

Transmission tower maintenance is a routine activity undertaken by Transpower's contracted service providers under its asset management delivery programme.

Corrosion on tower structures is conventionally addressed by painting remediation; using a blasting medium to clean the rust areas which are then covered by multiple layers of zinc primer and paint to extend the life of tower's steel structures.

At sites in flat paddocks, Omexom has proposed an alternative way to increase the life of the tower steel and foundation bolts by installing drainage around the pilecap to an underground soak pit 5–10 metres away from the tower, solving ponding issues.

The benefits of this soak pit design would not only reduce corrosion, thereby extending the maintenance window significantly, but also extend the life of the tower steel by up to 15 years.

Omexom project manager Finau Fonua devised and promoted this alternative soak pit design to Transpower as an effective solution to avoid water ponding at footer connection points and pilecaps which sit below the soil substrate.

Since its creation, our client Transpower has accepted the design and work methodology with trial sites already completed.

Client Benefit & Operational Value

Fonua's innovative soak pit design promotes environmental stewardship and protects the natural environment.



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A design and work methodology that **reduces reliance on an acute and ecotoxic product** in a routine maintenance delivery activity is priceless.

The use of a sealant material which is potentially harmful to people, animals and the environment less frequently contributes to preserving the natural environments and lessening the potential for harm.

Aggregated nationally across asset class and associated maintenance regime, this solution also offers exponential grillage replacement cost savings and **optimises time and materials productivity** over the life of the asset.

Extending the life of the asset by up to 15 years further **reduces the carbon cost of steel replacement**, contributing to Transpower's zero carbon future goals.

Optimise resources to better manage waste reduction, promote the use of recycled materials & low-resource building techniques and material

CASE STUDY: INNOVATION

Data centre desian



Exponential growth in the data storage market globally is transforming the design of data centres to meet growing consumer demand and reliance on seamless digital service access and connectivity.

On new build projects, Omexom's strategic pricing approach to its data centre procurement and implementation solutions tackle sustainability challenges head-on and incorporate more progressive solutions into a client's development scope.

Facilities management considerations are crucial for designing optimal, efficient and resilient infrastructure assets for long term sustainability and able to meet unpredictable future loads.

Service reticulation and cabling solutions

Modular design brings high reliability, reduced project deployment time and reduced whole of life costs to offset the space constraints on new urban build projects.

In a recent data centre build, Omexom worked with our key cable management supplier Mechanical Support Systems (MSS) to develop a containment system that can reduce material wastage by 5-15% based on materials and design adaptions.

Significant capital expense and environmental cost savings can be realised by adopting an off-site fabricated MEP rack solution using multicore cabling within this system.

In a typical data centre facility build, onsite install wastage for cabling and support materials ranges between 10%-20% depending on



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complexity. Factory-controlled support cutting and fabrication drops wastage to below 5% and at significantly lowered energy costs.

Additionally, factory fabrication delivers total cost of ownership (TCO) benefits from:

- lowered costs rectifying defects and avoiding on-site changes, and
- a faster install reducing overall work programme duration.

Once we factored in labour and material costs, multicore electrical cabling within this containment system consolidated further gains in capital and operational expenses, namely:

- requiring almost 40% less space than cables with similar functionality,
- » fewer cable clamp quantities, and
- » a reduced risk of thermal heating due to a more robust cable construction.

Factory manufacturing offers further safety benefits with 80% of the systems assembled at ground level in a factory environment. Once delivered to site, the modular containment system significantly reduces traffic in highly congested work area, and working at height activity hours.

Optimise resources to better manage waste reduction, promote the use of recycled materials & low-resource building techniques and material

CASE STUDY: INNOVATION

Digital transformation

Omexom IT team's eco-friendly printer rollout secured the coveted position as the company's top environmental initiative.

Printers across our 30 sites and offices have been replaced with a suite of new eco-friendly printers reducing our overall electricity, toner and paper costs.

A reduction in printing usage is largely attributed to a two-step print process, requiring the assigned user to use a swipe card at the machine to release their print job.

This "follow you" functionality prevents printed documents being forgotten at the printer and resolves the security risk of sensitive documents lying around the printer area. All unactioned print jobs expire after 24 hours.

Improved scanning features providing options for users to scan to email, OneDrive, and other optional cloud services contributed to reducing the overall pages printed and decrease in colour printing.

Carbon costs are also lowered by a remote servicing capability. Adaptable to any office or site requirements, printer technicians can diagnose maintenance issues remotely, saving travel to sites in most instances.

Should a site visit be required, the technician arrives with all the necessary parts thanks to a remote pre-visit diagnostic.

Under the historical multi-vendor procurement model, all service channels agreements required a printer technician travel to site, at times multiple times, to resolve equipment or performance issues.



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Over the four month trial we were able to track the following behaviour changes and environmental gains:

29% ↓

in paper usage over five month trial implemented at one office



SCOPE 1 INDIRECT EMISSIONS SAVINGS

3,373 kg differential saving in greenhouse gases linked to paper production carbon costs



equivalent bulb hours

savings in manufacturing energy used to produce the paper represented as energy consumed by a standard light bulb in hours



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