## Ancoris



## How Ancoris GreenLab can help your organisation achieve its net zero goals through cloud technology



## Introduction

There are few more pressing matters in organisations - and indeed the wider world - than that of sustainability. The need for better sustainability practices, such as meaningful carbon emissions reduction, and products and services that are ecologically beneficial is widely accepted among individuals and organisations.

At Ancoris we believe organisations must do everything they can to support these goals and address their related technology challenges.



The world's data centres reportedly now <u>use more electricity</u> than the United Kingdom's total electricity consumption, to provide the power and cooling needed to maintain temperature-controlled environments that function 24/7.

As organisations and individuals generate more data than ever before, the technology industry is faced with the challenge of mitigating the impact data centres and other IT Infrastructure have on the environment, and on natural resource consumption.

Cryptocurrencies are also incredibly resource-intensive, especially 'proof of work' currencies such as Bitcoin and Ethereum. At the time of writing, they are massive drivers of data centre resource consumption.

<u>By some estimates</u> Bitcoin currently has a similar carbon footprint to Kuwait, consumes as much power as Thailand, and generates similar amounts of electronic waste as Holland does.



A single Bitcoin transaction is estimated to consume as much electricity as an average U.S. household does in about 75 days, and generates e-waste equivalent to throwing two iPhones straight in the bin. Technology infrastructure can use vast amounts of electricity and water to power servers and keep them cool. Demand for precious natural resources is ever increasing, and it is expected the upcoming decade will see continued growth in the need for mass computing, storage and networking capacity.



This will be a significant challenge to the <u>IEA net</u> <u>zero pathway's goal</u> of global energy demand in 2050 being 8% smaller than today.

Many organisations don't have the financial resources available for extensive, dedicated sustainability initiatives such as energy and/or carbon reduction in their data centres and wider technology operations though. Net-zero actions, like buying enough high-quality carbon offsets to offset carbon impact, and carbon-neutral actions like converting or upgrading data centres to be carbon neutral, are both costly.

<u>In this whitepaper</u>, we look at how cloud computing can help organisations improve the sustainability of their operations, and how Ancoris' new solution Ancoris GreenLab can help companies improve their carbon emissions, and set a course toward better sustainability practises in their technologies and their operations.



### How can cloud technology contribute to your net zero sustainability plan (and what might cause it not to)?

Adoption (or increased adoption) of Cloud technologies is a relatively easy way of using energy-efficient technology and reducing your carbon footprint. A key factor in the technology industry's reduction of its CO2 emissions has been the consolidation of onpremise data centres into larger-scale Cloud-based facilities.

Cloud Providers' data centres leverage economies of scale to manage power consumption efficiently, optimise cooling (and hence water consumption), deploy powerefficient servers at scale, and maximise server utilisation. Organisations can take advantage of these benefits as well as the improved security, scalability and potential operational and cost efficiencies migrating to the Cloud brings.



Cloud-based data centres still consume natural resources though. They need electricity to power them, water to cool them, and use other natural resources, such as metals and minerals. Some data centres use renewable energy sources such as wind and solar power to reduce their environmental impact, but not all electricity grids that power data centres are powered by renewable energy.

So as with many things, *'the devil is in the details'*. Further analysis needs to be done to make sure Cloud technology adoption and consumption is as sustainable and as resource-efficient as possible.

As individuals and organisations become increasingly mindful of their carbon footprint and their ecological impact, Cloud Providers are being pushed to provide evidence of the sustainability impacts of their services as a key feature, rather than as a 'nice-to-have' benefit.

## What are the carbon reduction benefits of Cloud technology?

Cloud technology offers unrivalled flexibility and accessibility for today's evolving workforce. With remote working the 'new normal' in light of the Covid-19 pandemic, Cloud-hosted productivity and collaboration software allows teams to interact seamlessly regardless of location.

## A carbon-zero focussed Cloud Technology strategy offers even more advantages to organisations through:



### **Better energy efficiency**

Having data stored in a Cloud-hosted environment reduces the need to operate and maintain physical technology infrastructure such as on-premise data centres. It can also greatly reduce energy consumption requirements due to the economies of scale outlined above.

**Choosing the right Cloud Provider** can enhance energy efficiency even further. Identifying and using Providers with the best energy efficiency position will mean your technology operations are even more efficient.



#### **Going paperless**

One of the <u>largest environmental impacts</u> in traditional offices and other workplaces has been the consumption of huge amounts of paper for printed reports, memos, internal records, etc.

The wider implication of this is on the world's tree reserves, with deforestation a constant threat to wildlife and Earth's ecological viability. A paper trail also has its other costs; ink and toner, electricity to power printers, the need for regular servicing, repair and maintenance.

Technology adoption has drastically reduced the need for paper documents. - a key benefit of creating, sharing and storing files in Cloud-based systems is they're accessible from anywhere, anytime, and to anyone (appropriate access controls notwithstanding!). Energy-consuming tasks like securely disposing of and recycling paper no longer needed are also greatly reduced.

3

#### **Cost savings**

Energy savings mean cost savings, which is even more important when energy prices are continually rising. By reducing the need for on-site energy, there are opportunities to reduce energy costs. And there are further benefits - as well as the savings on paper, ink, etc., mentioned above, the cost of operational processes can be reduced, via process optimisations such as reducing the number of 'swivel chair integration points'.

Further cost savings may come from reduced expenditure on physical office/workplace space as a result of remote or hybrid working. Organisations may be able to reduce their physical footprint, or move to 'on demand' consumption models for them. Hybrid working may save some costs, but it's not guaranteed to reduce an organisation's carbon impact. There is <u>evidence</u> hybrid working doesn't have a lower carbon footprint than full-time office based working.

<u>Cloud-based 'back office'</u> systems such as productivity and collaboration tools allow organisations to work in more flexible ways and take advantage of any such efficiencies. Humans have not evolved to be solitary animals though, and we believe some level of in-person communication and collaboration where it's possible is beneficial. There will always be a need to make sure some space is still available for physical interactions, especially for creative work and knowledge work.



#### A reduced carbon footprint

Reducing on-premise energy consumption has a great impact on an organisation's carbon footprint. By reducing energy usage on-site, you reduce the direct impact on the planet. By moving to an energy-efficient cloud provider, that footprint is even less impactful, helping to further reduce CO2 emissions.

5

#### **Customer and staff trust and affinity**

Individuals are increasingly eco-aware, and brands are now being held accountable for their sustainability credentials. Nearly <u>a third of consumers</u> have reportedly stopped buying from a particular company because of ethical or sustainability concerns. <u>More than half (51%) of Europeans</u> also believe responsibility for tackling climate change should fall with organisations and industry.

## What is the greenest cloud platform?

Many Cloud Service Providers claim to be the sustainable choice.

It goes without saying that not all of these claims can be verified, but some data is available. Google's data centres are <u>twice as energy efficient</u> as a typical data centre, and now deliver seven times the computing power as six years ago for the same level of electricity consumption.

Google has purchased enough high-quality carbon offsets and renewable energy to equalise its entire carbon emissions since 2017 (i.e. have a net carbon output of zero). Furthermore, Google has matched its global, annual electricity use with wind and solar purchases, meaning it's matched its energy usage with renewable energy since 2017.

During surges in demand, the Google facilities do sometimes use grid electricity which may be carbon based, but any residual energy (banked when demand is lower than expected) is released into the grid for others to use.



Google now has its sights firmly set on eliminating emissions altogether by 2030, intending to match its energy use with nearby carbon-free energy sources 24/7, 365 days a year.

Of course, there's a lot of planning that goes into this - and that means large datasets. Google practises what it preaches, <u>using machine learning to continually optimise its data</u> <u>centres and energy consumption</u>. One such operation sees the company analyse weather trends and data to adjust the temperatures in a particular data centre in response to the local climate, meaning reduced wastage on cooling systems.



# How Ancoris GreenLab can help <u>you</u> achieve your net zero goals

Net zero and carbon reduction are at or near the top of most organisations' to-do lists, though it can be hard to understand how to physically achieve ambitious goals and targets.

Ancoris GreenLab helps organisation leaders contribute to their organisation's net zero goals by providing insight into the carbon impact of on premise and hosted datacenter deployments.

<u>As a Google Cloud Premier Partner</u> with over a decade of experience working with Google, our team of specialists can help you leverage Google Cloud to transform into a more sustainable, flexible, and scalable organisation.

#### We'll help you understand:



The transformation and modernisation opportunities that can be achieved with Ancoris and Google Cloud Platform



What the financial, technical and, as importantly, carbon reduction plan for migration to Google Cloud Platform, the cleanest cloud, looks like

How a cloud migration can not only make your company more efficient, but also make a big dent in the carbon footprint of your technology stack

Ancoris GreenLab can help you understand the most efficient method of improving the carbon impact of your technology infrastructure, transforming and migrating your applications (or entire data centres!) to the cleanest cloud there is: **Google Cloud Platform**.



# Assess your carbon-efficiency credentials now!

Ancoris GreenLab contributes to your company's net zero goals by applying a "clean" perspective to your transformation and modernisation plans.

Our assessment helps you understand how to make sure your organisation is run in a more carbon-efficient, sustainable way. We'll help you uncover a path to a better, lower carbon future. There's nothing to lose, and lots to gain.

Contact us now to learn how Ancoris GreenLab can improve your organisation's carbon impact and start making the move towards your sustainability goals.

#### Think big. Think Green. Start now.



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