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In tech, it's easy to assume that our industry is environmentally friendly. We don't waste paper, work on state-of-the-art, energy-efficient computers, edit files that live in a pristine cloud, and conduct business meetings virtually, so we might think we're not harming the planet.

Right?

Think again...

DID YOU KNOW?

tech accounts for

4-5%

of global carbon emissions

*... that's more than all aviation,
shipping and rails...
combined*

Yet at the same time we also saw how digital helped

REVOLUTIONIZE THE WORLD

AI is now

2x

more accurate in
diagnosing certain
cancers

HEALTHCARE

Education can be accessed

in secs

since it's in your pocket
or within arms reach

EDUCATION

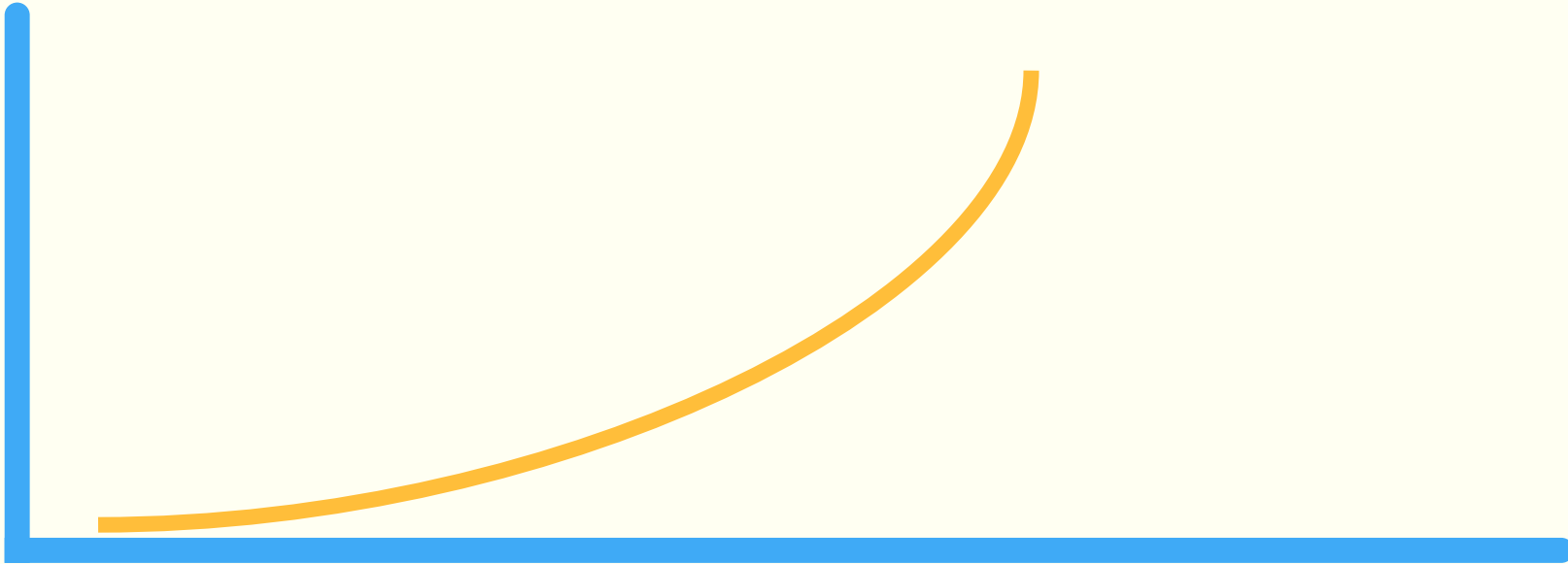
Companies switched in

weeks

from physical to online
during the COVID
pandemic

BUSINESS

Jovens Paradox of AI...



What's the issue?

Googamasoft cloud isn't green, not now and not in 2040, not even when they buy 100% green energy contracts

Yet, if you look at their sustainability pages, you might get convinced. I'm here to help you cut through the BS and get to the core of what drives cloud emissions



- Is Salesforce's definition of "net zero residual emissions" synonymous with the Science Based Targets initiative's (SBTi) definition of "net zero"?

It is not. SBTi's definition of net zero states that, in order for a company to claim it has achieved net zero, it must reduce 90% of its gross emissions before offsetting any remaining emissions with carbon removal credits only (no carbon reduction or carbon avoidance credits).

Salesforce believes that – as a planet – we must reduce our emissions by 90% and do so as quickly as possible. But, realistically, we may not achieve this milestone until 2040-50. For every company, reducing emissions by 90% will also take time, especially with goals that rightfully include all of Scope 1, 2, and 3. Under SBTi's definition, no company can claim they are net zero for decades. We believe that companies should be able to claim they're net zero if they're fully committed to decarbonization and have demonstrated they're on the path to achieving the deep emissions reductions that will put the planet on a 1.5 degree trajectory, if they're also compensating for their remaining emissions with high-quality carbon credits to achieve net zero residual emissions across their full value chain, transitioning to using removal credits only over time.

Microsoft

Microsoft Cloud for Sustainability

Gain transparency into environmental asset lifecycles with Environmental Credit Service

Rosie Mastrandrea
Senior Director of Product Marketing for Sustainability

Mailey Gray
Principal Technical Program Manager for Carbon Standards and ESG, with Microsoft Cloud for Sustainability

Let's talk sustainability

Hear from experts about how Environmental Credit Service helps move the needle toward global net zero.

[Watch the video >](#)

What is a datacentre?
(according to GoogAmaSoft)



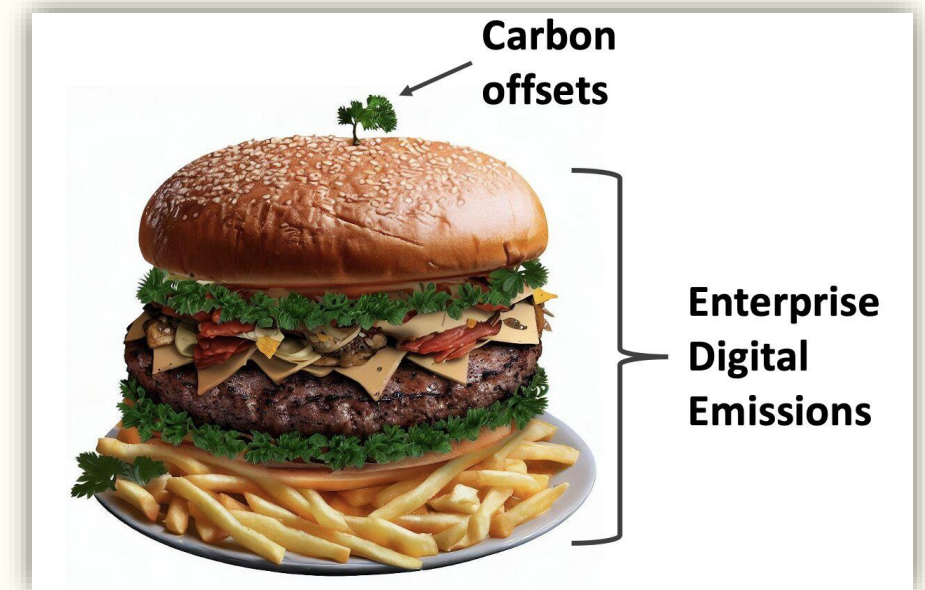
Gas power plant
1800MW

Windmills 27MW



Facts and easy assumptions

- All energy used by a computer is transformed into heat
- Its never free to reverse entropy
- Moving heat out of a datacentre is not cost competitive*
- Offsetting does not make neutral



*Berenschot 2020 rapport for gemeente hollands kroon

Some examples to get a grip on scale

Average NL DC numbers, gridmix energy 2022

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Nvidia H100 80GB: 700W

Running for 1 year in a

Average datacenter = 4800Kg Co2 = 2.5 Dutch cars for a year

Green datacenter = 561 Kg Co2 = 0.25 Dutch cars for a year

So how exactly is that net zero? And what about the waste heat?



How did we get here, why did we ever start building datacenters?

- Mainframe thinking, your application runs on 1 machine on 1 location
- They bought more mainframes
- Oops it got hot = datacenters

But but, we just run kubernetes clusters?!

- We no longer need DCs for the majority of all software, just computers with a decent uptime.
- Everybody doubts distributed security, we understand vaults

Why do we keep building datacentres then?

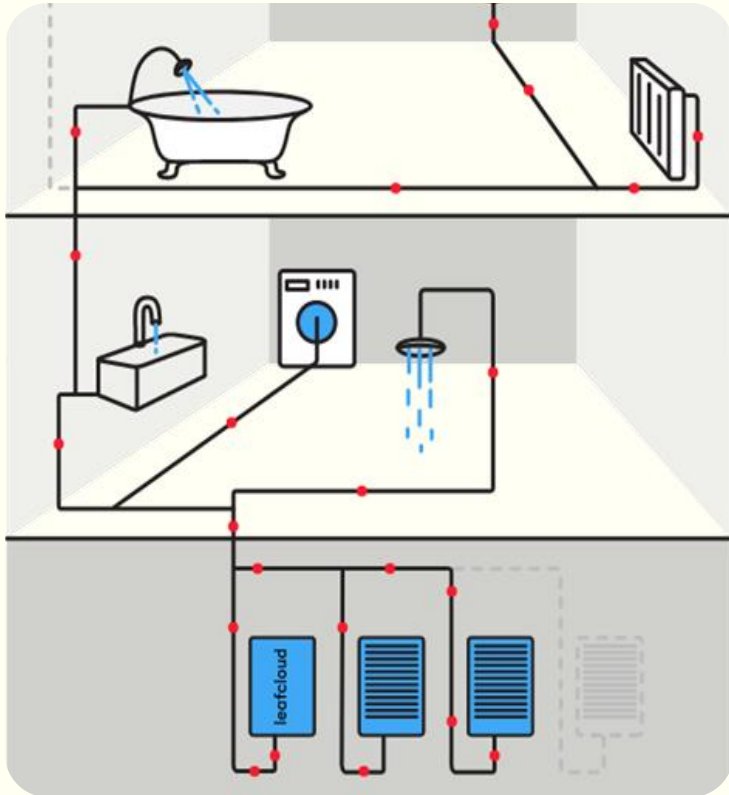
- Wildly profitable business, why change a winning team?!
- Make real requirements, not nice to haves



So the real question is, how can we...

CURB THE CARBON OF DIGITAL TECH WITHOUT CURBING ITS ACCELERATION POWER?

We have developed a **distributed cloud** solution which allows us to install servers in locations where residual heat is of direct value, such as hotels or apartment blocks



reusing heat



- ✓ Residual heat is directly used to heat water that is used within the same building (heating, showers, washers)
- ✓ Eliminates the extra 20%-60% energy consumption used by air conditioners
- ✓ Decreases the usage of natural gas otherwise needed to heat buildings

existing buildings

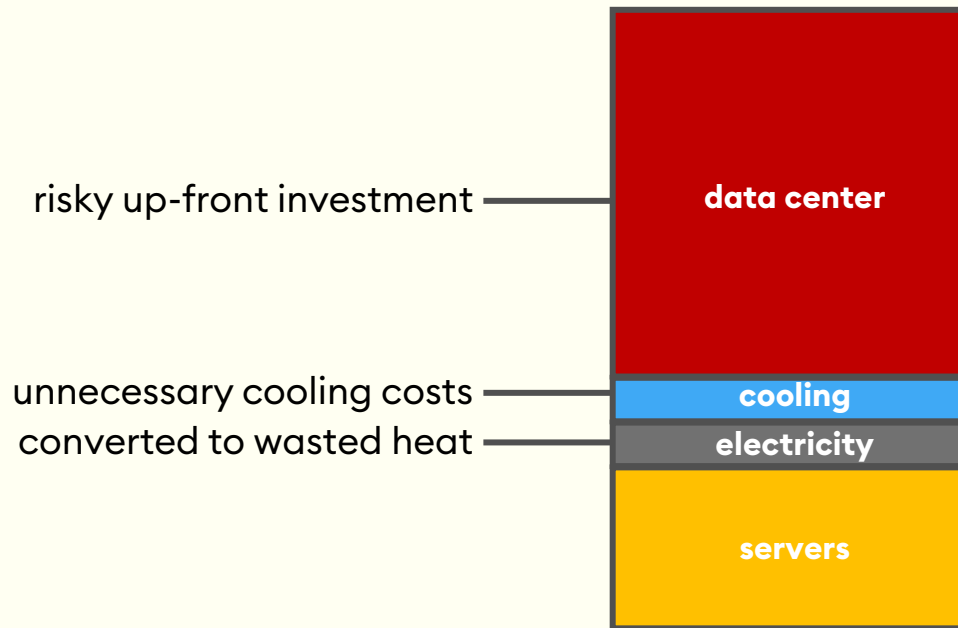


- ✓ Existing buildings such as apartments blocks, hotels and schools are used to house servers
- ✓ Eliminates the need to build entire facilities just to house servers
- ✓ Prevents large capital investments and uncertain capacity forecasts

This distributed design also allows us to significantly lower operational costs and capital investments of cloud computing by moving the servers out of the data center

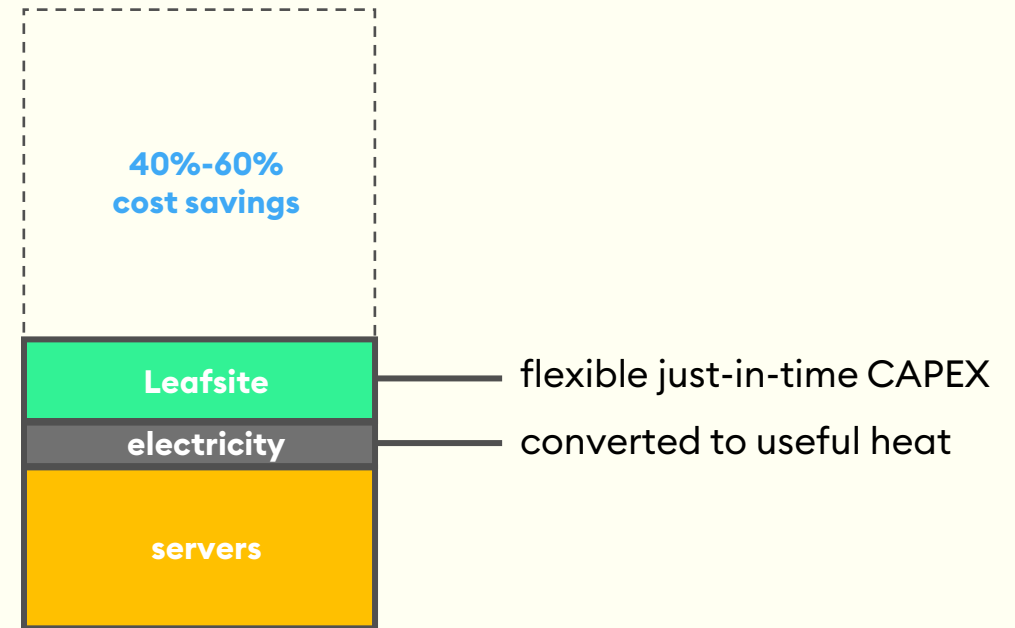
traditional data center

illustrative breakdown of costs of running traditional data centers



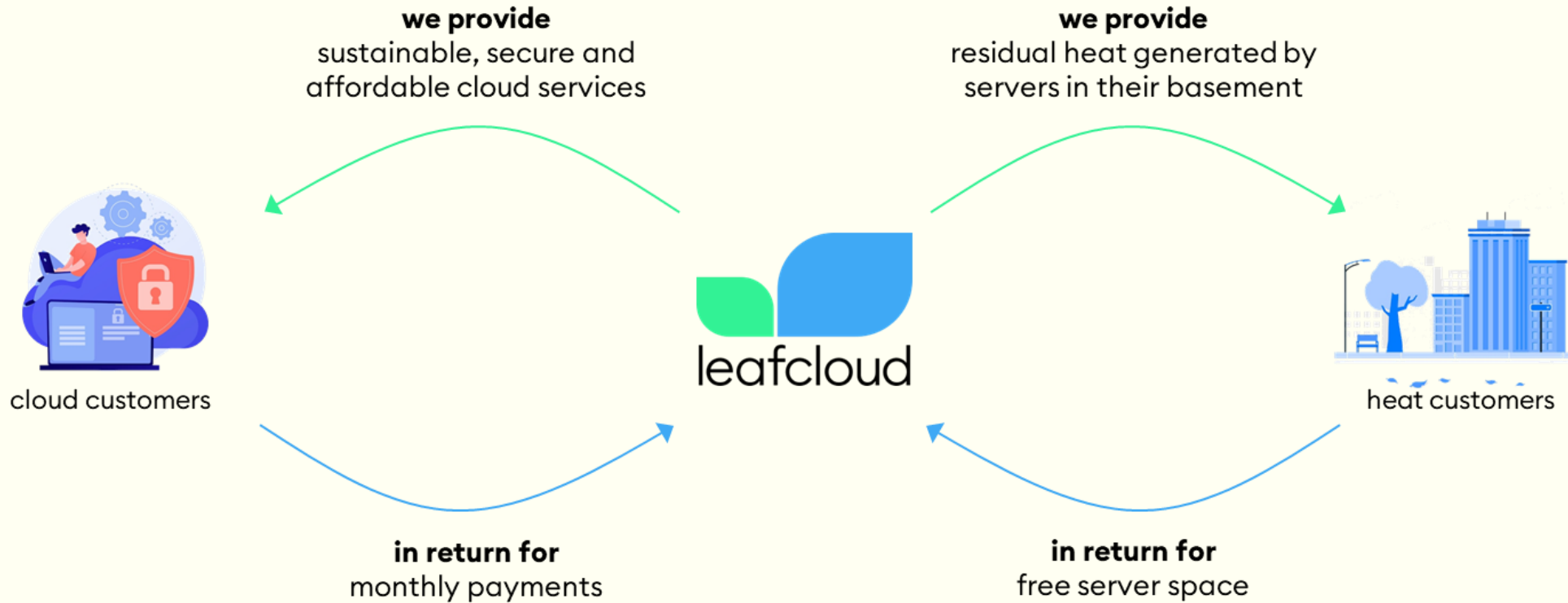
Leafcloud design

illustrative breakdown of costs saved using Leafcloud's design

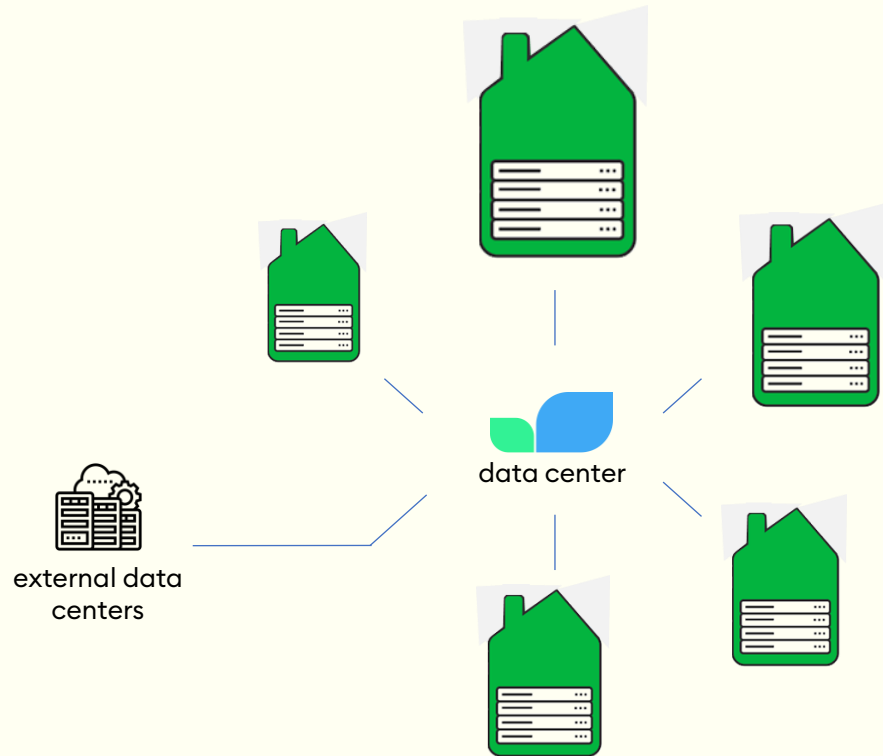


the added bonus

On top of the traditional cloud business model, we save costs by trading our residual heat to apartment buildings in exchange for rent-free space to run the servers



We are able to ensure a secure, reliable and European cloud solution for our clients, by distributing only the computing power and not the storage



secure

- No data storage on Leafsites, but in secure tier-3 datacenters with encryption & access controls
- All network traffic is fully encrypted
- Camera installed at each Leafsited
- Openstack, secure, reliable and open source
- ISO27001 certification & SOC2 (in 2023)



reliable

- Automatic failover between Leafsited
- Redundant capacity distributed over sites in case of site failure
- uptime 2023 99,99999%



local

- Data is always stored in Europe, no obligation to provide data to the US government
- No dependency on big tech players that focus on locking in customers in their ecosystem
- Dutch and certified makes it a compliant choice

Some examples to get a grip on scale

Average NL DC numbers, gridmix energy 2022

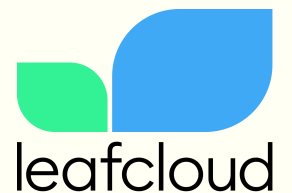
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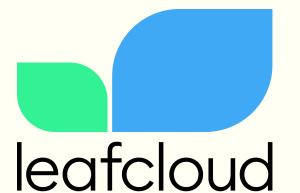
Running in our Leafsites preventing fossil fuel use = -1000Kg co2 = -0.5 Dutch cars



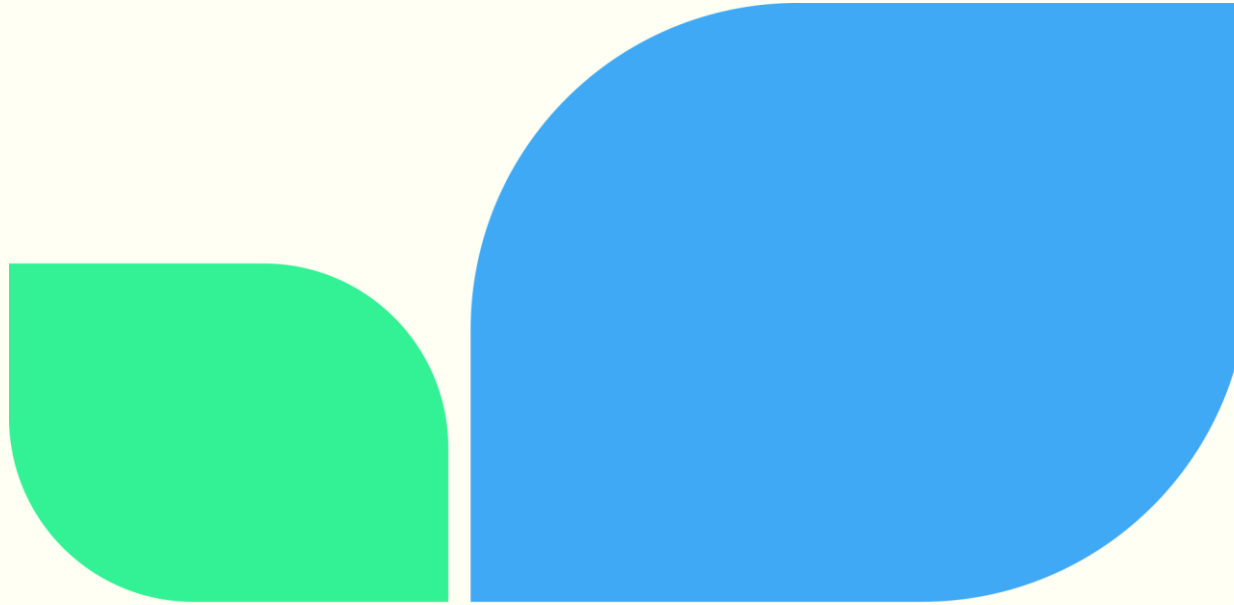
How much impact does that have

Moving workloads from an average DC to a Leafs site with heat reuse

Moving to a better cloud does more than leasing electric cars for employees, and costs less as well



Please ask away!



leafcloud

Enables your growth without
additional CO₂ emissions

