

## Looking into our carbon footprint revealed some unexpected truths



Angie Ma

For some time now, it's been almost impossible for businesses to plan effectively for the future without acknowledging the role of climate change in that future. But, now that the Intergovernmental Panel on Climate Change has released its sobering report, it's become clear that we can't just plan around climate change; we need to consider how we can play an active role in shaping the future of our planet.

Tech companies can no longer deny that they play an active role in the climate crisis; as a sector, our reliance on cloud computing means that we have a greater carbon footprint than the aviation industry. Today, the question is not so much if we should act, but how we can most effectively reduce our emissions.

The good news is that companies are beginning to think seriously about how they can help reach one of the world's most important climate change goals: halving carbon emissions by 2030 and reaching net zero emissions by 2050.

In 2021 the Tech Zero taskforce was launched — a group led by the green energy company Bulb, currently rumoured to be a takeover target for rival Octopus Energy, for technology companies of all sizes — with the view that, by working together, companies can make significantly faster progress on reducing their emissions. As a founding member, we've spent the last six months considering how we can reduce our emissions and set a net zero target by the end of 2021.

The first step in the process is to find a way to understand how much carbon your business is emitting. As it turns out, this isn't a simple task: you need significant expertise to work out your carbon footprint in line with the greenhouse gas protocol.

In the end, we opted to engage a carbon measurement, reduction and offsetting specialist (and fellow Tech Zero member), Supercritical, to help us measure our emissions. This involves looking at the obvious culprits — areas such as travel, commuting

and office utilities — but also some more easily overlooked areas like events and procurement. This process revealed some unexpected truths. For example, 66 per cent of our emissions for 2020 were from increased electricity and heating due to employees working from home during the pandemic.

Of course, understanding our emissions is only valuable if we also know how to address them. For most companies, reaching net zero will mean reducing emissions as much as possible, and then finding ways to offset the carbon emissions that can't be completely eliminated. "Offsetting" essentially means that, for every unit of carbon we produce, we invest a proportionate amount in endeavours and technologies that reduce carbon emissions elsewhere.

During the process of working with Supercritical, we learnt two important things about carbon reduction and offsetting.

First of all, we learnt that the options for carbon reduction and offsetting are incredibly diverse. There's biochar, plant and animal material turned into charcoal which, when mixed with soil, stores around 2.7 times more carbon than traditional soils. Or enhanced weathering, which involves spreading minerals which absorb carbon dioxide during chemical reactions that take place when in the presence of water. Or more straightforward direct air capture methods that use chemical reactions to capture carbon dioxide from the atmosphere.

If those methods don't appeal, tech companies can even invest in fuel innovation by funding novel technologies that reduce carbon or allow it to be sequestered for longer as a way of offsetting your impact.

Secondly, it quickly became clear that we couldn't just think about how to offset the carbon we're emitting today. We also had to think about how our emissions will change in the future, and how we might need to evolve our strategy to make sure that we maintain a net zero status. For us (and other fast-growth companies) adding hundreds of new employees and scaling up our cloud

compute for projects rapidly increases our carbon footprint. This means that any offsets we invest in now need to be scalable.

This impacted how we chose to proceed with our carbon offsetting. While tree planting is a popular way to offset carbon, they only absorb the carbon for about 60 years before it's released back into the atmosphere. With that in mind, we made the decision to primarily invest in offsets that will permanently reduce the carbon that we emit through our day-to-day operations (ie the carbon is sequestered for 10,000 years), like biochar and bio-oil sequestration, which will permanently remove the carbon that we emit in 2020 within the next six months.

In the past, tech companies could fly under the radar when it comes to carbon emissions, leaving more obvious contributors like the oil and gas industry to take most of the attention from the public.

That changes now. From Amazon updating its leadership principles to prioritise sustainability, to HP making it a primary goal to develop the industry's most sustainable portfolio, the world's biggest tech companies are making climate change a priority. We've even seen over 150 tech companies signing up to be part of Tech Zero, only months after it launched.

Whatever route the rest of the industry decides to take, it's clear that our actions over the next few years — our offsetting strategies, our investment in carbon-reducing innovations, and our commitment to net zero — will fundamentally determine the outcome of the climate crisis. The tools, expertise and support are there; tech companies need only embrace them.

Most of us joined the tech sector because we like finding smart solutions to difficult problems. Addressing the climate crisis is likely to be society's greatest challenge to date — and it's time for tech companies to face that challenge head-on.

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