

Sustainability Now

"BYO Umbrella: The Trillion-Dollar Adaptation Opportunity"

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Bentley Kaplan

Hello and welcome to Sustainability Now, the show that explores how the environment, our society and corporate governance affect and are affected by our economy. I'm Bentley Kaplan, your host for this episode. And on today's show, we're going to be talking about climate adaptation. Not whether we need it, because that particular ship has sailed — or, depending on where you live, it's been flooded. Instead, what we're going to dig into is where the adaptation economy actually is. Who's selling, who's buying, and how investors can find their way in when most companies aren't exactly putting up signs saying "adaptation, get it here." So, thanks for sticking around. Let's do this.

Let's start with something pretty uncontroversial. Some demand for things like water treatment, air conditioning or flood defenses would exist in any climate, right? Buildings need cooling. Cities need water. But on top of that, a change in climate is adding demand of its own. More heat, more drought, more floods, more fire, and more need for the stuff that helps companies, governments and households cope with all of it. And that extra slice of demand is the adaptation opportunity.

And here's the thing. The market around it is still being figured out. Some companies make the technology, some pay for it or insure it, and some mostly just buy it to keep their lights on. At the moment, there's no standardized way to map all of that. But there are different approaches, each of which will tell you something a little bit different. I'm going to run through three examples quickly, because the contrast is pretty useful. But a heads up: the third example is the one that we're going to be spending the rest of the episode on.

So, one approach starts with the building itself, right? A physical asset. Take a factory, a warehouse or a data center. Work out what physical hazards it's going to face, and then ask a very practical question — would spending money to protect this thing actually pay off? And that's a question that we explored very recently with our brand new colleagues from First Street, basically looking at companies that are both badly exposed to climate hazards and not well prepared for them. Now, you might assume that for a company sitting in harm's way, the answer is yes, across the board, right? Fire up adaptation solutions on all cylinders. But it isn't. Because when our team looked across hundreds of thousands of sites, the benefit turned out to sit in a very small number of them. Which may be somewhat reassuring, right? The job isn't to flood-proof the entire company, it's to work out which few buildings are carrying the bulk of the risk. And this type of asset-level analysis is very good at telling you where the need is sharpest.

The second approach starts from the other end, with the whole market. GIC, Singapore's sovereign wealth fund, teamed up with Bain to put a number on it, looking at a tightly defined list of 21 adaptation products and services. They reckon the market brings in around USD 1 trillion a year today, and it could hit about USD 4 trillion by 2050, with roughly half of that growth coming from warming itself. Now, what will maybe raise an

eyebrow in this work is that this number doesn't meaningfully change under different warming scenarios, at least up until 2050. And that's because the warming we're going to get over the next 25 years is, plus-minus, already pretty much baked in. But a third approach to understanding the adaptation economy — and the one we'll be focusing on for the rest of this episode — involves going company by company and asking, so guys, what do you actually sell? Mathew Lee is a serial guest on the show, and of late, he has been rummaging through company reports to find where this economy is hiding. And he found that 43% of companies in the MSCI ACWI Index, which covers big listed companies around the world, sell at least one adaptation product or service. We will definitely get into this number in a second, but before we do, here's the catch. For this type of work, companies mostly don't report adaptation as its own line in their accounts. So I asked Mathew how you find something that nobody's really bothered to label, and how you decide what actually counts and what doesn't.

Mathew Lee

Most of the time, adaptation and resilience related solutions currently fall under broader business descriptions and product lines. If I am in charge of building new buildings or retrofits that help improve resilience, that probably falls under more broader construction and engineering services that I provide when I report out my revenue every year. It really requires a little bit more digging to establish that direct connection with adaptation and resilience related activities.

The second layer and complication here is that companies don't always provide that context along with the annual report, right? So it won't perfectly line up that in that line under construction and engineering, they say, by the way, this includes the following three adaptation activities. Context that links a company to adaptation and resilience revenue is almost equally scattered across these different sources. So you need to do a broader search to establish that connection. And in this day and age, with the classification capabilities of large language models, it's a lot easier to do than, say, a couple years ago. The key thing here we also made sure to do is to tag it contextually to the specific hazard, physical risk hazard it would be addressing. And that's how we established that connection.

Bentley Kaplan

Right. So there are really two jobs going on there. The first is plucking out adaptation products or services. Adaptation revenue tends to be tucked inside much bigger business lines, and the clues that something is an adaptation product are scattered across sustainability reports, company websites, and product descriptions. The second job, and this might be the more important one, is not getting carried away with what you find. If you take a company's entire construction division and slap an adaptation label on it, you're giving it far too much credit. Mathew's safeguard is to link each product to a specific climate hazard that it's meant to deal with.

That's also worth keeping in mind for a number like that 43% that I mentioned earlier. That's a disclosure count, not an investability screen. It just means that the company flagged at least one adaptation product somewhere in its reporting — not that adaptation is a meaningful slice of what it actually sells. If we weight that by how much revenue genuinely sits behind it, the truly investable slice of that pie would probably shrink appreciably.

Now, a skeptic might still grumble, right? Take cooling for a data center. You'd need a good chunk of that no matter what the climate was doing. So is that really adaptation, or just air conditioning with better PR? When I put this to Mathew in our longer recorded conversation, he told me that extra demand doesn't always mean selling more units. Sometimes it means the same equipment just running harder and for longer because it's hotter outside. In other words, the bare minimum a facility needs just to keep ticking over is going up. It's a more subtle kind of growth, but it's still growth. So once you've found these companies, what do they actually look like? My mental image of adaptation is basically a big wall in front of a building to keep rising flood levels out. But it turns out to be a much bigger world than that.

Mathew Lee

We try to also sort these findings of company level disclosures into broader industries and sectors to see, are there certain trends or certain specialties that an industry might be focusing on? The IT software firms are more focused on weather prediction software and that type of solution, you know, wildfire prevention and monitoring. Perhaps more interestingly, was the hardware focus, of course, of industrial companies. Adaptation and resilience solutions often do require infrastructure upgrades. I think those often are the costliest. It's a very different type of product than your typical software as a solution that maybe has dual use or multiple use, and adaptation is one of many applications of that technology.

The financial sector, of course — when they talked about this topic, it was more in the discussion of the project finance schemes and insurance and advisory activities, which we also know is very necessary to scale up adaptation and resilience solutions deployment.

There are interesting questions here in terms of industries that don't seem to have a lot of uptake. Consumer staples, I think, is one that does stand out. They might not be selling, but they very much are a sector that will implement perhaps a lot of the innovations, both from the software side or from the industrial side, into their activities, because they are heavily reliant on agriculture outputs, right? There's a lot of supply chain, cold chain, for example, cooling dependencies. So even if a sector is not the largest from our study in terms of solutions development, they very much might be a large procurer of them.

Bentley Kaplan

Okay. So this is where the picture starts to come into focus. You've got software companies selling weather prediction and monitoring. You've got industrial companies selling the heavy, expensive gear. And then you've got banks and insurers providing the money, the cover and the advice that help it all get built. And that's actually something we spoke about a few episodes back with David Carlin and my colleague Pam Palena, where for insurers, helping clients become more resilient was a growing business opportunity. But the bit about consumer staples might be my favorite, right? These are the companies making the stuff that ends up in your grocery cart. And they barely show up as sellers of adaptation. But given how much they rely on farms and on keeping food cold as it travels, they could be some of its biggest buyers.

Remember, as I mentioned earlier, there is an uneven skew in which companies and locations are going to face the most severe climate hazards, and where spending on adaptation is going to bring your biggest bang for buck. The most exposed locations need a big jump in spending, and the companies that own them become the first

customers. And partly that's because what they need is expensive. A flood barrier costs a lot more than cooling vests for outdoor workers. But further down that curve, there's still plenty worth doing to keep a business running smoothly, even if it's a bit less dramatic than holding back a river.

Now, not all of these solutions are at the same stage of life. Some have been around for decades. Others are still being worked out. So I asked Mathew about two very different examples. Water, which is about as grown up as adaptation gets, and wildfire, which is growing quickly, but from a much smaller starting point.

Mathew Lee

Oftentimes, investors form a thematic approach to investing in adaptation and resilience solutions, but they might not want to treat all solutions as equal. The reason for that being some technologies and solutions have much more mature business models and just more commercially ready and deployed technologies versus others. Some of this interacts with physical hazards and sort of how prevalent they are, but some of it also is just how mature the business model of deploying that solution is, too.

So a good contrast here would be water treatment versus wildfire prevention. So water treatment is an example. Water desalination. We know how to do this. Of course we could do it better and more efficiently. But there is a very clear deployable business model and revenue model around this. Whereas the emerging areas that maybe are still very much up for new innovation and maybe don't have a clear market leader yet, can be areas like wildfire monitoring and prevention and safety verticals. So we do see over the last three years, we saw that it was the sharpest increase in terms of companies proposing products and solutions, describing them in their disclosures. But unlike water, it's much earlier stage.

Bentley Kaplan

So that's a really handy distinction. Water is one of the few corners of adaptation where businesses are established enough that you can actually put a number on the revenue. For the companies in our sample, it came to around USD 60 billion in 2025 alone. Wildfire is at the other end of the spectrum. Companies talking about fire-resistant materials jumped by more than 160% in three years. That sounds dramatic, but it's from a small group of companies, and nobody's quite cracked the business model yet. Neither of these is better than the other. They just suit very different investors. If you want proven revenue today, you're looking at one end. If you've got patience and a strong stomach for early stage technology, you might be looking at the other.

Which brings us to the big question — what should investors actually do with all of this? Before we get to Mathew's answer, though, I just wanted to give you some recent history. It's something he'll touch on, and it's important context for the current investment environment. You see, for years, the conversation about paying for adaptation has mostly lived in the world of development finance. Aid budgets, multilateral development banks and blended finance. For those not in the know, the blended finance model involves public or philanthropic money being invested alongside that of private investors, and basically any hits, if they do come, come first for the public or philanthropic investment, which helps to de-risk the situation for private investors. This has kind of been the default for a good reason. A lot of adaptation looks like a public good. A seawall doesn't really have paying customers. So if you want one built, somebody has to subsidize it. Mathew's point is that this is no longer the only route into the market. And if you're a commercial

investor, it may not even be the most obvious one. So I asked him where he would start, whether you're buying shares, lending money, or investing in private companies.

Mathew Lee

Yeah, I think we're just coming back from New York Climate Week here. One idea that comes to mind is so much of adaptation and resilience investing and the discussion around the investment gap is still centered around, like, blended finance, more impact investing, international development type of a framing. For investors, there's definitely two separate ways to still scale up and be an early mover here, right? One is this thematic basket approach of actually identifying the relevant solutions and scaling them, because we know the demand for them is going to continue to increase.

On the private side, we've seen some investors already start to distinguish as a sleeve specific to climate adaptation, to enhance the value proposition of infrastructure funds and projects that they are developing. That also helps to solidify and distinguish an infrastructure fund from just all other infrastructure funds, right? Adding to the value proposition. So getting exposure now at certain valuations may be more competitive or more appealing.

Bentley Kaplan

So that reframing really matters. Pre-existing assumptions that funding adaptation must still navigate development banks, governments and complicated deal structures are definitely shifting. Investors in listed companies can look for firms whose products match the places where preparation is weakest. Private investors can carve out adaptation as its own slice of their infrastructure plans.

But there is an elephant in the room, and I suspect plenty of investors will recognize it. If you've spent the past few years building low carbon portfolios, adaptation can feel like a contradiction. The skeptic's version goes like this — pick a lane. Either the world misses its emissions targets and adaptation booms, or we cut emissions fast and the adaptation market shrinks. Backing both looks like betting against yourself.

I don't think that argument really holds up anymore. At least not on the timelines that most investors care about. The warming that we'll see between now and 2050 is, broadly speaking, locked in. That's why the GIC's estimate barely moves across different climate scenarios. Cutting emissions now doesn't meaningfully decide whether we need adaptation over the next 25 years. Instead, it decides how big that bill gets after that. These aren't competing bets. They pay off on different timelines.

Two honest caveats, though. "Locked in" describes the temperature path, right? Not the cost. Credible damage estimates still range enormously, from a few percent of GDP to closer to 20%, depending on who you ask. And none of this means adaptation is some obviously mispriced trade waiting to be picked up. Even the most rigorous research out there is up front that there's no good evidence of a standing "adaptation premium" in returns. The case isn't that the stocks are cheap, it's that the demand underneath them is real and still badly under measured.

There's also a simpler reason that capital might move here faster than it moved into something like clean energy. Cutting emissions is a collective bet. Everyone benefits, so everyone might be waiting for someone else to pay first. Adaptation is more like buying your own umbrella. Protect your factory from flooding, and you're the one who stays dry. At the end of it all, adaptation isn't a white flag on climate change, and it isn't a bet against the transition, either. It's a recognition that the climate has already changed, and

the economy is already responding — unevenly, in specific hazards, specific places, at very different stages of readiness. The job now for investors is about joining all of the dots. What's being sold, where it's needed, and what time horizon you're working to. Harder than a trillion dollar headline might suggest, but a lot more workable, too. And that is it for the week. A massive thanks to Mathew for helping us track down a growing economy that's still a little tricky to spot. If you do want to go deeper, check out his blog. It's called "Capturing the Trillion-Dollar Adaptation Investment Opportunity." The quick take with our First Street colleagues is called "Adaptation Benefits Are Concentrated in a Small Number of Assets," and both of them are up on msci.com, free for all to access. And for the full method, please do check out the MSCI Institute's paper called "The Hidden Adaptation Economy." It is absolutely worth a read. As always, if you like what we're doing, let us know. Leave a review, rate the show, or share it with a colleague who still thinks adaptation is just building a taller wall. Thanks again for tuning in. And until next time, take care of yourself and those around you.

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