Baillie Gifford™

Smarter models, sharper founders: growth investing in the AI era

January 2026

Baillie Gifford's Kyle McEnery shares his approach to meeting the entrepreneurs building the future – including encounters with AppLovin, Anthropic, NVIDIA, Roblox and Reddit.

Leo Kelion (LK): In 1955, four American academics applied for funding to study a new discipline. To secure the grant, they coined a new term: artificial intelligence. The gambit worked, and the following summer they hosted a workshop at Dartmouth College, New Hampshire. With just a $7,500 budget and a two-month deadline, they sought to make significant headway. Their goal? Puzzle out how to make machines use language, form abstractions and solve problems previously reserved for humans.

Well today, what we now call generative AI is finally living up to that promise. And one of the leading companies, Anthropic, has named its models after one of the workshop's organisers: Claude Shannon. I asked its Claude chatbot how much 70 years of AI research had cost. It told me $2tn, adding that most of that investment had come in the last five years. Whatever the accuracy of that estimate, it clearly suggests that the most significant returns still lie ahead.

Welcome to *Short Briefings on Long Term Thinking*. I'm Leo Kelion, and in this episode, I'm joined by Kyle McEnery, an investment manager in our Long Term Global Growth Team. You'll hear his thoughts on where AI is leading us and which companies could be among its chief beneficiaries. But before we begin, a quick reminder, as with all investments, your capital is at risk and your income is not guaranteed. Kyle, welcome to the show.

Kyle McEnery (KM): Thank you very much for having me.

LK: Kyle, I'd like you to introduce yourself to our listeners before we delve into AI. So, can you start by telling us a little bit about what you did before you came to Baillie Gifford and then what made you decide to join?

KM: Yeah, sure. So, before I joined Baillie Gifford, I was in academia. I was studying physics. So my PhD was in quantum mechanics, specifically quantum information or quantum computing. I'd

realised that academia isn't really what I wanted to do long-term, having had up to that point a lifelong love affair with physics. And I came across Baillie Gifford. And what really stood out to me was this idea that here was a group of people who were genuinely interested in understanding how the world works, you know, genuinely curious. And it really stood out to me. So, I joined, and I found out that actually my path was quite similar to a lot of my colleagues, in that we tend to take people who didn't really know that investing or finance was for them.

LK: And so you joined, you became an investment manager, and I believe you then headed up a team that looked into how you could use AI to enhance the investment process and in time, actually make the investment decisions itself. Can you just tell us a little bit about that project and what happened to it?

KM: Yeah, so you're absolutely right. By the end of my second year, I started thinking quite a lot about AI, or at the time it was kind of known more as machine learning. So as I mentioned, I was a physicist. And what you tend to find with physicists is that we're kind of jack of all trades. We know how to code. We know a bit about maths. We can kind of throw our hands to a bunch of different technologies, which tends to mean we follow what technologies are hot. And I was noticing that all of my friends in academia were suddenly leaving to become data scientists, machine learning engineers. So, I was like, OK, what's going on here? And I was only fresh into the job at this point. So naively, I thought, OK, investing, this is really just information processing. AI machine learning could be quite important.

Anyway, to cut a long story short, I pitched to some of our partners here at Baillie Gifford, this idea that, hey, maybe we should look at this. I thought it was quite interesting because I was really pushing on an open door. It's worth remembering that this was around 2016. At this point, we'd had a strong history of investing in a bunch of the largest tech companies, so I think we knew that AI was a thing that was coming. I was empowered very early on to get together a team of people. We ended up having six people, myself from investment side, as well as five machine learning engineers. They like to have different names.

Yeah, and we, as I said, we went after this problem of like, OK, how can AI be used to make us better long-term investors? So initially we started with this idea of like, we're going to augment people. We're going to create tools that use machine learning. So if people tell us they like certain stocks, we'll give them other examples of stocks they may like. But we actually pivoted away from that quite quickly after a year, because what we found out, and this is an important thing when it comes to all technologies, is the technological challenge of helping other people was easier than full automation. But actually we'd underestimated the human cultural challenge, right? I mean, we had teams that had very longstanding processes. It was actually quite hard to push machine learning models into what they did.

So, what we ended up doing was then moving to a fully automated endeavour where we tried to create a long-term investment strategy that was end-to-end, systematic [fully automated, with decisions made by predefined rules rather than human judgement]. So, we had machine learning algorithms that were learning from history and trying to forecast the future. And then we were tying

that in with systematic portfolio allocation to create portfolios. It took us about two years to build this. We were doing five-year investment horizon. And then we had it internally seeded by the company, because in essence, that's how we do R&D [research and development]. We want to see if this is something that we think could be good before we even remotely consider talking to clients about it.

LK: So that's using the company's own money.

KM: This is using the company's own money. Exactly right. And we ran that for a couple of years. But by the end of 2022, which was, as we'll get to, a relatively pivotal time in terms of AI, I approached some of the senior partners and said, I think we should stop this. Which at the time was kind of mad, right? Because this is exactly GPT [OpenAI's models, which power its ChatGPT chatbot] time. But to keep it brief, there was roughly two reasons why I felt like this particular project was something that was probably worth stopping and considering what else we should be doing.

First of all, what we were trying to do was limited, right? So, I mentioned we were doing forecasting. We were using machine learning to learn from the past to forecast the future. But when you do, there's only a certain amount of historic data out there, right? The further back you go in time, the more sparse data gets. And really machine learning is all about, and we're seeing this with cutting edge of today, it's more – more data means bigger models, smarter models.

Whereas when you go long-term forecasting, you kind of have less data, which meant we had less sophisticated models. And the first problem I had was I felt like what we were creating was, actually limited. I looked at some of the other Baillie Gifford, the human-based funds. I was like, this isn't as nuanced or as interesting as those. Neither are we as sophisticated as the hedge funds. I was like, well, what's our point of difference here?

The second one is related to ChatGPT coming out. This was in and around the point that GPT-3 came out. And even like, as I was making the decision, GPT-4 was just about coming out as well. And I thought, hold on a second. GPT is in essence – felt like a generalised intelligence that was done, its format was a chatbot and it was on everyone's phone.

So, I was like, well, it's in everyone's pocket already. The distribution problem has been solved. And personally, I thought from my point of view, the best version of me is actually probably using this AI myself as an investor.

So yeah, between those two reasons, I thought, you know what, I think we should stop this. It kind of felt of the last paradigm, not the future. So yeah, I ended up coming back to do more traditional investment work. But I think the important thing to note is that that project has pollinated other stuff. You know, the people who are working on that for six years have gone on to do different things. And I think what we've seen is that the understanding of AI has propagated much more widely within the company as a result.

LK: So, ChatGPT coming out and the GPT models beneath it were a kind of wake-up moment for you.

KM: Yeah.

LK: And in a sense it was a wake-up moment for lots of people because it got widely adopted very quickly. Can you just give us a sense what it was about ChatGPT that really made it such a pivotal moment?

KM: Sometimes when you're working in the weeds, you can miss what's actually happening, right? I was quite downbeat on natural language processing which is in essence what this is, the ability of the AI to interact via natural language. Because I was seeing models in 2020, in 2021 that I thought were pretty crap. But actually, what's happening is that they're getting really good.

And yeah, so why was there a ChatGPT moment? I think there's two things. One is the distribution. Everyone had their hands on it and could play with it, which was really interesting. And then it kind of had like this viral effect. I mean, I think it was in again when GPT-3 came out, we were all doing like sonnets and haikus. I certainly remember talking to all my friends and saying, hey, this is kind of cool. But machine learning before this was about models. The most impressive things were like recommendation systems that were in Netflix or Facebook. This was something that we could all really understand. You're just talking to something.

And then what I'd say, GPT-3 was good, but then when GPT-4 came out, I think that was a step change for me, in particular, and I think for other people.

LK: Why?

KM: Well, it's just so smart. I understood that what was happening with these models is that it was just something that had been trained to figure out the next portion of a word, the next token [a chunk of text, such as a word or part of a word, used by language models]. I could not believe that that process which I had been grinding away on in different ways, could produce something where you could have a conversation.

The big moment for me was I was: I want to talk to the thing about something I know quite well. I said, could you ask me five questions of increasing difficulty about quantum mechanics and give me feedback on the answers? Well, the feedback it gave me was amazing, and it really felt like quite an interactive experience. But the thing that blew my mind was how well it spaced the difficulty, and it was more of a gut thing. I was like, this feels right. And I think that was something that for me spoke to proper intelligence underneath it.

LK: And then if you bring things up to date, these models have got even more advanced. We're on GPT-5 now, we've got Claude, we've got Gemini and a number of other models.

KM: I think we underappreciate how much they've actually changed, to be honest. I think we've normalised to it.

LK: Right. And not only are these chatbots getting better, but we're starting to see agentic AI – these things go off into the digital world and do tasks autonomously for us. It must feel to a lot of the listeners, and certainly to me, like the ground's moving beneath our feet. But for you as an investor with your task of trying to find the most exceptional companies out there, how does it change your thinking about doing that task?

KM: Well, first of all, it makes me very excited, right? When I think about AI, I think about a paradigm change, right? I think, and here's the operative word, change. And I think change is one of the most interesting things that can happen to a growth investor, because change suggests that there'll be opportunities. And really, if you boil down what we're trying to do is, we're trying to find those few exceptional companies that maybe they're extremely small or don't exist today, but in 10 years' time are going to be enormous change provides great opportunity for them.

So, I think, yes, it does feel like the ground is moving beneath our feet and there's a lot going on. And sometimes I think people get caught in this feeling that they need to understand everything. But I often just slow myself down and go, well, all that needs to happen is will AI provide the opportunity for like three or four exceptional companies to exist? And honestly, that's what gets me excited.

LK: So, let's discuss some of those companies, starting with Anthropic. Regular listeners to this podcast will have heard your colleague Robert Natzler from the Private Companies Team discussing how several of our portfolios invested in the firm in August 2025, after we became convinced about the scale of the opportunity for its coding tools.

KM: Yes.

LK: But for those listeners who may be a little bit less familiar with the company, can you just give us a sense of what its long-term potential is? Because it isn't just about making developers better at programming, is it?

KM: Sure. So, let's just start with the basics, right? That, at the moment, certainly on the western side of things, there's roughly four companies that are able to produce what we'd say is state-of-the-art models. So, this is Anthropic, OpenAI, Google, and xAI. They're called foundation models [very large AI models that can be adapted for many different tasks]. At the moment, we could consider them forming a new intelligence layer in the economy. I will stress though, it's important, we don't know where all this is going yet, but right now it looks like these companies are providing intelligence that can be used in so many different ways. Intelligence that's equivalent or better than a human that can scale in the way that a machine can.

But now specifically going back to Anthropic, each of the companies has their own flavour of what they're trying to do, right? And I think the thing that stands out for Anthropic is their focus on enterprise.

LK: Enterprise, you mean business customers?

KM: Yes, that's right. It's worth noting that Anthropic's founding principle is very much about AI safety. They feel very strongly about creating AI that is understandable, that is trustworthy. They are an early spinoff from OpenAI, because there was a kind of disagreement about what direction to take long term. But that has kind of come back to this idea that they're very well suited to the enterprise. So, you're right. Coding is probably the first killer app of the AI era. I'm sure there'll be lots more. But yes, it goes beyond that. It goes beyond all the different ways that intelligence can be used in the enterprise, in the economy. So, I was speaking to Anthropic in San Francisco a couple of weeks ago, and they were telling us about the customers they're winning. And it's right across the economy. It's in financials and banks. It's in healthcare companies. It's with cybersecurity.

And what was really striking was that the use cases they're talking about aren't just like simple generic things that would be the same across all the company. Each one was actually quite specialist to that industry. They're really working hard on figuring out how to apply this intelligence to solve really interesting specialist knowledge.

LK: Can you give me an example?

KM: OK, so for example, with the banks, with AIG [American International Group], it's like know your customer [financial checks used by banks to verify customers' identities and risks]. It's quite an important and complex process. It's really a huge opportunity ahead for that company.

LK: And it's sometimes described as being a race between these different labs and indeed between different countries, particularly the US and China. What do you make of this idea that whoever manages to match or even surpass humans in all their different capabilities with their models might take the whole market – that in some way, it's winner takes all?

KM: So, I'm not sure I believe that will be the way, but let's talk about why people believe that's what the mechanism is. In essence, it's a belief in a potential tipping point where an AI gets so good that it can improve itself very quickly. So, a lot of people in Silicon Valley are very interested in this idea of self-improving AI. If you actually look at all the releases, nearly always in the technical documentation, they measure how good the AI is at coding, but coding for improving AI. Let's say a company gets to a certain threshold three months ahead of other ones, that you'll have some kind of runaway effect. Whereas in essence, we'll be able to translate that three months into an enormous lead because AI moves very quickly. It's kind of like thinking about an exponential. Now that might happen. But what we're seeing at the moment, that hasn't happened yet.

What we're seeing so far is that a couple of companies have managed to get to the point of being able to create these models. And that requires know-how, but also the compute [the processing power required to train and run AI models] and the ability to build out that infrastructure. But we haven't seen any of them massively pull away. But what I'd say to listeners, the important thing is, it's about kind of being open-minded. Because I feel like what I've seen in the discourse around AI is that people are very reactive to the current signal.

I think at the minute when they see companies staying relatively close to each other, that signal that maybe none of them will pull away, which might be right. But it's not, as I've described this tipping point, that's not necessarily the case. It's this idea of people not being able to deal with nonlinearities. Things have been this way, they've all stuck together, so that will be the same way forever. It might not. Again, I will be on the fence. I don't know. Right now, it seems less likely that one of them is going to pull away, but let's see.

LK: And you talk about signal. I know one of the signals that Baillie Gifford looks for as to what companies might become durable is the leadership of those companies. You've spent time speaking to Dario Amodei, the CEO of Anthropic, and some of the leaders of the other AI labs. Can you tell me what your key takeaways are from those meetings?

KM: Sure. It's a real privilege to be able to spend time with these people. Because of our clients and the fact that we manage money on their behalf, we are in the position to speak with these people. And just to put a fine point on it, the thing that we do have to do is be long-term, facilitate these really interesting conversations, because I do think that it's something that's very helpful all around. But in terms of what I've learned, Dario was very thoughtful about how he thinks the future is going to go. He is a huge believer in the scaling laws.

LK: Just explain what those are.

KM: Sure. This is this idea that AI gets smarter purely by making the models bigger and really, when I say make the models bigger, it's you need more computers to train them, and you throw more data into them. This is crucial, right? Because we're getting technological improvement through a recipe that's known and predictable. And I think that is partly what spurred on quite a lot of the investment, right? Is that people actually have a decent bit of evidence – I mean, nothing's ever fully certain – that if they spend more money on compute, if they gather more data, they will have models that are smarter, have potentially really interesting emergent abilities. So that's really important, as opposed to the AI will get smarter if we come up with a really interesting new architecture or some scientific breakthrough that is as of yet unknown. He's been a strong believer of that even in his early days at OpenAI, and he's still a believer of that today. It's super interesting to get his insight onto these things.

LK: So Kyle, you talk about the ever-increasing demand for computation, and that works to the favour of NVIDIA, which dominates the market in these AI accelerator chips. Baillie Gifford's been an investor in the company since 2016, and the stock's had quite a run since then. So, what's the investment case to keep it as a holding at this point?

KM: I have fond memories of this. I remember very early on in my time at Baillie Gifford, I think just before I started the AI project, I was at a conference, AI conference down in London. I remember a lot of it was sponsored by NVIDIA, and there was a professor there, he was a Cambridge professor who was also working with Amazon. And I remember at the end of his speech, he was like: "And thank you to NVIDIA because machine learning is dead without them." So, it was kind of intriguing, like, you know, you could see that in hindsight that it was crucial.

And also, just back to this point about, yes, we were invested in 2016, but it's important to note that we didn't know that AI was going to be like what it is today. I think it's crucial to kind of know that with all the investments, right, that we had an inkling that this could happen, but we didn't know. And we were probably talking just as much about Bitcoin mining back then.

But in terms of NVIDIA today, I probably think about it through maybe like three kind of lenses. One, what do I think about the underlying demand? Do I think there'll be more need for compute and AI? And I think about Jevons' paradox [efficiency gains can increase, rather than reduce, overall usage], this idea that like, will AI demand saturate or will, as we get cheaper AI and more AI, do we just want more and more and more? I'd probably be biased to suggest that I think we'll be very greedy, and we'll want more. And then you think about, well, look, NVIDIA, it's still the standard, right? With its CUDA software, it has the kind of the standard ecosystem that everybody uses, which I still think puts it in a very interesting position.

LK: And CUDA's programming, helping people program specifically for NVIDIA chips.

KM: Yeah. In essence, it allows people to get the best out of the hardware, which is something that's often misunderstood. And, also, NVIDIA spent an awful lot of investment in terms of building out the capabilities of CUDA extremely widely. Basically, what you find with NVIDIA is that when you want to do something, you can kind of just do it. And because they're so linked with all the labs, they tend to build in functionality that you don't realise you needed it, but they're kind of ahead of the curve.

But the last thing I'd point out as well is that we talked about founders and how important they can be. This is something that Baillie Gifford thinks about a lot is: you've got Jensen [Huang – NVIDIA's CEO], and I think he provides two really interesting amplifying effects on top of what I've just said. One is, I think he helps facilitate NVIDIA being very nimble despite their enormous size. Considering how big this company is, they are executing incredibly fast. They're getting down to year frequency in terms of releasing these new chips. Over the course of six years, NVIDIA improved the efficiency of the amount of AI tokens per joule of energy – which by the way is crucial because that is the big bottleneck – by something like 42,500 times. It's amazing what they're doing every year to improve it.

But then also, and this is important when you think about the long term, Jensen seems to have this really interesting knack of positioning NVIDIA into places that might work out well for it. Remember, this was a gaming chip company, and he kind of figured out, maybe this ML thing is something that's important. It's interesting for Bitcoins.

LK: ML. Machine learning.

KM: Sorry, machine learning, AI, thank you. And then he's been seeding this idea of robotics for an extremely long time, which, you know, again, maybe that'd be really good. And even further out, he's talking about quantum computing. So, I think the underlying demand is still really interesting and strong. Competition is heating up, but this is still the standard dominant ecosystem. And yeah, you've got a founder there who can kind of position the company in really interesting ways and ensure execution is still strong.

So I think when you look at those factors, again, without knowing exactly what's going to happen in five years, still a compelling couple of factors to hold the company.

LK: OK, Kyle, I want to move on to some of your other portfolio companies that maybe aren't the foundational AI companies that are putting it to use. So can we start, can you give me an example of a company that's maybe got an AI-driven product that it is putting into its customers' hands and presents a company with a transformational growth opportunity?

KM: Sure, I will, but I think it's really great moving off the foundational models because, kind of to reassert my point, AI is going to be everywhere and it's going to create a lot of change.

So, one company I point out, one that we invest in is Roblox. Simply put, Roblox is a gaming company. But another way you could look at it is as the early stages of the metaverse [shared virtual worlds where people interact, create and play online]. It is the users who build the games that other people play, and it's almost like a mini ecosystem.

Roblox is defined by its crappy, blocky graphics. I'm sure if any of our listeners have kids, they'll know all about Roblox. But what's really interesting is that for Roblox, the key is for it to be as simple as possible for its users to create games. And they've been on this road for a very long time in terms of trying to make this world, this metaverse exist.

And now with AI, they're actually training their own foundation model on their own data, the gaming data, which allows its users to much more easily create items within games, characters, gameplay itself. Now, this is still in the early stages, but it will just get better and better. And there is an example of a company that's had a vision that has been working towards for decades already, and here comes this technology, and this could unlock the next stage.

Again, I was speaking to the founder in November in their HQ, and he was talking to us about this idea that AI is going to allow lucid gameplay.

LK: What does that mean?

KM: Lucid dreaming gameplay. In essence, it's this idea that users can create games in real time on the fly while people are playing with them. So, he gave this example of a user creates this game in a Colosseum [Roman amphiteatre], but then all of a sudden it changes into a castle on a whim. This is

the type of thing that will be possible, and it's kind of just interesting to see how they will use this technology to create something that could be enormous, that could be something truly valuable.

LK: OK, so that's Roblox. Can you give me an example then of a company that's using AI to improve its own operational efficiency?

KM: So, a company I call out here is AppLovin, an advertising company. If you're playing a game on your phone, it will help service the advertising of other games too. It's now moving beyond that into ecommerce. But I think the really interesting thing that sets AppLovin apart is just like a unique focus on operational efficiency. It has minimal amount of people needed to make this run, and its economics are amazing. And their founder is so focused on basically trying to help scale up every single one of its employees with AI to be the best they can be. And basically, his vision is of a company where everyone who works for it is performing at the peak of their level. It can sometimes sound quite negative when you've less people working in a company, but here's a company that feels hungry, it feels really efficient and nimble. It feels like a company that, well before its time, it understands what success looks like for a company in the next era. So, I'm very excited about that.

LK: And AppLovin's chief executive, Adam Foroughi, I think has said that he believes in time many public companies will be able to run with fewer than 100 employees thanks to AI. Now, that will send a shiver down the spines of some of our listeners. But from an investment point of view, what's the benefit of having a chief executive founder who's so radical in his thinking about where this technology could lead us?

KM: It's massive. It's just an enormous leverage point. It can't be overstated. When you have a founder, you've someone who the buck can stop with. They can say, look, we're going this direction and that's what's happening. I mean, I called it out with Jensen before saying, look, we're going to do it like this, this is what's happening, let's go. Historically, Elon Musk has been somebody that has done very well at fighting entropy, fighting bloat. I think that's essential. But yeah, Adam is just someone who's frighteningly driven. Quite inspiring, to be honest with you.

LK: And what other AI themes are you looking at?

KM: You can look at something like Reddit, another company that we invest in. It's not really about the technology at all, but again, it's about what becomes valuable as AI permeates. And Steve Huffman, their founder, has talked about Reddit being the most human place on the internet. The underlying value here is something like, there's real communities having proper conversations, right? And that's something that is likely to become increasingly valuable purely because of what's happening elsewhere. So again, that's different ways of looking at where value may come from. It's not always just to do with AI.

LK: I spend a lot of time on Reddit just trying to work out where AI is going.

KM: Do you?

LK: But at the same time, we're seeing these AI companies train themselves on Reddit. We're seeing them answer users' queries using data that they've taken from Reddit. Is there also a challenge there for the platform that it doesn't get hollowed out by this?

KM: Again, I think it's really important that the founder, Steve, is back running the company, and actually he's got a very good executive team around him. But in terms of hollowing out, this is the challenge of running any company, right? Reddit need to balance the fact that what's the value proposition for its users – that is this community – with other opportunities in terms of both how it advertises, which is probably more crucial to the business case, plus AI.

But going specifically onto your point, this is this idea that you get like passive consumption of Reddit, where people who aren't actually involved, just kind of the information gets taken from them. This is probably the number one thing that Reddit are thinking about. And I was speaking to Steve just a couple of weeks ago, and honestly, that was one of the main things he wanted to talk about was like, for him, the most important thing is onboarding users. What do I mean by that? Anybody who interacts with Reddit passively, in whatever shape that is: how can you get them potentially involved in Reddit?

Going back to founders, he's so knowledgeable and he can speak so eloquently about all the high-level stuff going on with AI. But actually, he really just cared. He's obsessed with this product. He just really cared about this one small thing that he thought was the crucial lever for his business.

LK: So Kyle, in much of what we've talked about generative AI, we've been talking about the impact of large language models. When you invest, you're looking to hold a company for five to 10 years or longer. So, if we look over that time horizon to maybe what comes next, there's a lot of talk about spatial AI, about world models and about the implications for physical AI. Can you just make sense for our audience what all of that means and how it's influencing your thinking?

KM: So if you think about LLMs, large language models, the idea is that AI learns about the human world via our writings. It turns out through our kind of corpus of texts, because that's all the AI knows, it can actually figure out a huge amount about our world. But clearly, the next step is to get it to learn about the physical world in terms of like the raw data. You know, rather than just to read about physics, to actually be able to like see how a ball bounces, to like understand the things. Now this stuff is already happening.

So first of all, we start with images. Then we're moving on to videos. We've got these multimodal models [AI systems that can process multiple types of data, such as text, images and video]. And now companies are moving more towards building up these world models where they can figure out more about the real world. This problem is actually something that about six years ago was getting much more airtime, right? Because, you know, autonomous vehicles were probably the big AI endeavour, right? Which is all about this embodied AI learning from the world. So, I think that that is absolutely the next leg of things. So, we've got autonomous driving. We'd historically invested in Tesla. We now actually invest in a company called Horizon Robotics, which is involved in this from a Chinese perspective.

Beyond that, you've then got robotics, humanoid robotics. which is something that really comes at the intersection of both of these trends. I was fortunate enough to be able to speak over the summer with the ex-head of Tesla's Optimus programme, which was their humanoid robotics. And it was fascinating just to him just kind of grounding me in the reality of where the data was, and that still quite a lot of it of training robots is literally an operator will control a robot manually, and then they'll use that data to train the robot.

LK: So, this is what they call imitation learning.

KM: Yeah, it's very low scale, right? And remember that everything to do with machine learning is you just want to be drowning in data. But then they move on to the next stage, which is they get first-person videos from the internet, and then they want to move to third-person data. But the big unlock would be simulation. You basically just simulate the physics and give it to the robot. NVIDIA are doing a lot of work in this, by the way. This is quite computationally intensive.

So actually, the hope is that some of these world models that they're building can actually be a cheaper way to provide some of this simulation data, synthetic data. And then after that, and maybe in parallel, is actually a focus on science. you know, first of all, in healthcare, but also having AI actually be able to help in scientific endeavours and actually create innovations.

LK: It feels like we could do a whole episode on this topic. We probably should in the future, but I know one of your colleagues, John MacDougall, is going to be publishing a paper shortly on physical AI. So, we'll update the show notes when that's out to help listeners find it.

Kyle, as we start to bring things to an end here – I just wonder, it feels to me like you're having to think very deeply about this topic, but at the same time, is it fair to say that you're having to hold your beliefs and predictions quite lightly because things are moving so quickly?

KM: Yeah – 100 per cent. It feels like an incredibly noisy time. I try to remain pragmatically optimistic. I think that's what we want to do, like make sure that I understand what's going on, but try and bias myself to what could go right.

So, I'm very open-minded. I think, at a simplistic level, I think things are improving. I think the technology is getting better. I believe that people are going to come up with really interesting ways to use it. I think they're already doing that, to be honest with you. Yeah, I think we have to be humble as to like how that's actually playing out.

I want to understand what's going on. But really, all I care about is, you know, again, what am I looking for? Like one, two, three companies that I think because of this change could be really interesting to hold onto for the next 10 or 15 years. So, I don't need to know everything about the whole field.

LK: Kyle, before I let you go, I'd like to finish this podcast by asking my guests what they're reading or have recently finished. So, what's new on your bedside table?

KM: So, I tend to be, like lately, I tend to be quite like a fiction reader, especially sci-fi, to kind of wind down. I suppose the last non-fiction book I read, which was unfortunately quite a popular one in the AI circles as well, was Richard Rhodes' *The Making of the Atomic Bomb*.

LK: Why is that relevant to AI?

KM: Oh, OK. Well, this is a slightly separate topic, but I mentioned earlier about ideologies and people in the AI community tend to be quite good first-principle thinkers, and they tend to extrapolate about the dangers of AI. So, they often think about themselves often as like the creators of the atomic bomb. What could that unleash? How should they think about what they're building?

But I mean, kind of going away from that, it was an incredibly fascinating book because it started with the discovery of the nucleus, and then it goes all the way to, unfortunately, the dropping of the bomb. But I like, I love reading books like that where you get to stand back and just see the full sweep of history. I think it's very humbling and it helps you kind of remind you of like all the things that kind of go into play. And, again, if you zoom in, a lot of noise happens. I find that really helps kind of set my brain quite nicely for the job.

LK: Kyle, it's been fascinating hearing from you. I hope we can get you back on because this field is moving so quickly.

KM: Delighted. Thank you so much, Leo.

LK: And I hope you enjoyed this conversation too. If you're interested in reading more about the topic, Kyle and his Long Term Global Growth teammates will publish an article on infinite compute as part of their forthcoming 'Transformations' series of papers a little later in the year. And if that's too long to wait, Kyle's colleague John MacDougall is about to post an article on physical AI to the Baillie Gifford website.

Check out the show notes for other reading suggestions and a glossary of some of the terms that cropped up in this episode. And subscribe to *Short Briefings* via YouTube, Spotify or any podcast app to be first to know when the next edition's out. But for now, that's it. Thanks for listening, and I look forward to briefing you again soon.

Show notes

With developments in generative AI progressing at such a furious pace, how can investors cut through the noise to identify the companies that will really matter? Baillie Gifford's Kyle McEnery shares his approach to meeting the entrepreneurs building the future – including his encounters with AppLovin, Anthropic, NVIDIA, Roblox and Reddit.

Background:
Kyle McEnery is an investment manager in our Long Term Global Growth Team (LTGG) and previously led Baillie Gifford's Artificial Intelligence Research Project.

In this conversation, he tells host Leo Kelion why AI's ever-increasing capabilities make this one of the most exciting times to be a growth investor, and how leadership and culture act as signals in the noise to help identify companies with the greatest long-term growth potential.

In addition to discussing which of the firms enabling and using today's language-based 'frontier' AI models are leading the pack, he explains how efforts to understand and simulate real-world physics could unlock further progress.

Portfolio companies discussed include:
Anthropic – developer of the Claude AI models, which excel at coding, among other tasks.
NVIDIA – the semiconductors firm whose accelerator chips are powering many of the advances in generative AI.
Roblox – the video games platform whose Cube 3D technology allows creators to build objects and environments out of text-based descriptions.
AppLovin – the ad-tech company whose AI-first strategy keeps the business lean and nimble.
Reddit – the online discussion forum, whose authentic human conversations are gaining in value as a counterpoint to AI-generated output.

Resources:
AI and the future of everything: a long-term perspective
Anthropic: why we are backing the AI frontrunner
Long Term Global Growth Strategy (institutional investors only)
LTGG philosophy and process (institutional investors only)
Private companies: from Anthropic to Zetwerk
Short Briefings on Long Term Thinking hub

Companies mentioned include:
Alphabet/Google
Amazon
Anthropic
AppLovin
Horizon Robotics
NVIDIA

Reddit
Roblox
Tesla

Timecodes:

00:00 Introduction – Dartmouth College's artificial intelligence workshop
01:50 From quantum to AI via asset management
02:50 Creating and then culling a machine-learning initiative
08:05 ChatGPT's wake-up call
10:35 Exceptional companies at the dawn of generative AI
12:10 Anthropic's appeal to business customers
14:55 A winner-takes-all opportunity?
17:05 Dario Amodei and the scaling laws
19:10 NVIDIA's foundational role in neural networks
22:55 Making video game items in Roblox with AI
25:00 AppLovin – a company built for the next era
26:55 Reddit's valuable conversational communities
29:35 World models, spatial AI and the physical world
32:35 Staying open-minded and humble
33:35 Book choice

Glossary of terms (in order of mention):

Generative AI:
AI systems that create new content such as text, images or code rather than just analysing data.
Machine learning:
AI techniques where systems learn patterns from data rather than being explicitly programmed.
End-to-end, systematic (investment strategy):
Fully automated, with decisions made by predefined rules rather than human judgement.
Agentic AI:
AI systems that can plan and carry out tasks autonomously rather than just responding to prompts.
R&D:
Research and development.
GPT:
OpenAI's models, which power its ChatGPT chatbot.
Natural language processing:
AI that enables computers to understand and generate human language.
Token:
A chunk of text, such as a word or part of a word, used by language models.
Foundation models:
Large AI models that can handle a wide variety of tasks.

Know your customer (KYC):
Financial checks used by banks to verify customers' identities and risks.
Scaling laws:
The idea that AI performance improves predictably as models, data and computing power increase.
Compute:
The processing power required to train and run AI models.
Jevons' paradox*:*
The counterintuitive idea that efficiency gains can increase, rather than reduce, overall usage.
CUDA:
NVIDIA's software platform for programming its chips for high-performance computing.
Jensen:
Jensen Huang, NVIDIA's co-founder and chief executive.
Metaverse:
Shared virtual worlds where people interact, create and play online.
Large language models (LLMs):
AI systems trained on vast amounts of text to understand and generate language.
Multimodal models:
AI systems that can process multiple types of data, such as text, images and video.
World models:
AI systems that learn how the physical world works in order to predict and simulate it.
Embodied AI:
AI that learns through physical interaction with the real world, such as robots or vehicles.
Imitation learning:
Training AI by having it copy actions demonstrated by humans.

Calton Square, 1 Greenside Row, Edinburgh EH1 3AN
Telephone +44 (0)131 275 2000 / bailliegifford.com

Important information

The views expressed should not be considered as advice or a recommendation to buy, sell or hold a particular investment. They reflect opinion and should not be taken as statements of fact nor should any reliance be placed on them when making investment decisions.

This communication was produced and approved in January 2026 and has not been updated subsequently. It represents views held at the time of writing and may not reflect current thinking.

Potential for Profit and Loss
All investment strategies have the potential for profit and loss, your or your clients' capital may be at risk. Past performance is not a guide to future returns.

This communication contains information on investments which does not constitute independent research. Accordingly, it is not subject to the protections afforded to independent research, but is classified as advertising under Art 68 of the Financial Services Act ('FinSA') and Baillie Gifford and its staff may have dealt in the investments concerned.

All information is sourced from Baillie Gifford & Co and is current unless otherwise stated.

The images used in this communication are for illustrative purposes only.

Baillie Gifford & Co and Baillie Gifford & Co Limited are authorised and regulated by the Financial Conduct Authority (FCA). Baillie Gifford & Co Limited is an Authorised Corporate Director of OEICs.

Baillie Gifford Overseas Limited provides investment management and advisory services to non-UK Professional/Institutional clients only. Baillie Gifford Overseas Limited is wholly owned by Baillie Gifford & Co. Baillie Gifford & Co and Baillie Gifford Overseas Limited are authorised and regulated by the FCA in the UK.

Persons resident or domiciled outside the UK should consult with their professional advisers as to whether they require any governmental or other consents in order to enable them to invest, and with their tax advisers for advice relevant to their own particular circumstances.

Financial Intermediaries

This communication is suitable for use of financial intermediaries. Financial intermediaries are solely responsible for any further distribution and Baillie Gifford takes no responsibility for the reliance on this document by any other person who did not receive this document directly from Baillie Gifford.

Calton Square, 1 Greenside Row, Edinburgh EH1 3AN
Telephone +44 (0)131 275 2000 / bailliegifford.com

Europe

Baillie Gifford Investment Management (Europe) Ltd (BGE) is authorised by the Central Bank of Ireland as an AIFM under the AIFM Regulations and as a UCITS management company under the UCITS Regulation. BGE also has regulatory permissions to perform Individual Portfolio Management activities. BGE provides investment management and advisory services to European (excluding UK) **segregated** clients. BGE has been appointed as UCITS management company to the following UCITS umbrella company; Baillie Gifford Worldwide Funds plc. BGE is a wholly owned subsidiary of Baillie Gifford Overseas Limited, which is wholly owned by Baillie Gifford & Co. Baillie Gifford Overseas Limited and Baillie Gifford & Co are authorised and regulated in the UK by the Financial Conduct Authority.

Hong Kong

Baillie Gifford Asia (Hong Kong) Limited 柏基亞洲(香港)有限公司 is wholly owned by Baillie Gifford Overseas Limited and holds a Type 1 license from the Securities & Futures Commission of Hong Kong to market and distribute Baillie Gifford's range of collective investment schemes to professional investors in Hong Kong. Baillie Gifford Asia (Hong Kong) Limited 柏基亞洲(香港)有限公司 can be contacted at Suites 2713-2715, Two International Finance Centre, 8 Finance Street, Central, Hong Kong. Telephone +852 3756 5700.

South Korea

Baillie Gifford Overseas Limited is licensed with the Financial Services Commission in South Korea as a cross border Discretionary Investment Manager and Non-discretionary Investment Adviser.

Japan

Mitsubishi UFJ Baillie Gifford Asset Management Limited ('MUBGAM') is a joint venture company between Mitsubishi UFJ Trust & Banking Corporation and Baillie Gifford Overseas Limited. MUBGAM is authorised and regulated by the Financial Conduct Authority.

Australia

Baillie Gifford Overseas Limited (ARBN 118 567 178) is registered as a foreign company under the Corporations Act 2001 (Cth) and holds Foreign Australian Financial Services Licence No 528911. This material is provided to you on the basis that you are a "wholesale client" within the meaning of section 761G of the Corporations Act 2001 (Cth) ("Corporations Act"). Please advise Baillie Gifford Overseas Limited immediately if you are not a wholesale client. In no circumstances may this material be made available to a "retail client" within the meaning of section 761G of the Corporations Act. This material contains general information only. It does not take into account any person's objectives, financial situation or needs.

South Africa

Baillie Gifford Overseas Limited is registered as a Foreign Financial Services Provider with the Financial Sector Conduct Authority in South Africa.

Calton Square, 1 Greenside Row, Edinburgh EH1 3AN
Telephone +44 (0)131 275 2000 / bailliegifford.com

North America

Baillie Gifford International LLC is wholly owned by Baillie Gifford Overseas Limited; it was formed in Delaware in 2005 and is registered with the SEC. It is the legal entity through which Baillie Gifford Overseas Limited provides client service and marketing functions in North America. Baillie Gifford Overseas Limited is registered with the SEC in the United States of America.

The Manager is not resident in Canada, its head office and principal place of business is in Edinburgh, Scotland. Baillie Gifford Overseas Limited is regulated in Canada as a portfolio manager and exempt market dealer with the Ontario Securities Commission ('OSC'). Its portfolio manager licence is currently passported into Alberta, Quebec, Saskatchewan, Manitoba and Newfoundland & Labrador whereas the exempt market dealer licence is passported across all Canadian provinces and territories.

Israel

Baillie Gifford Overseas Limited is not licensed under Israel's Regulation of Investment Advising, Investment Marketing and Portfolio Management Law, 5755-1995 (the Advice Law) and does not carry insurance pursuant to the Advice Law. This material is only intended for those categories of Israeli residents who are qualified clients listed on the First Addendum to the Advice Law.

Singapore

Baillie Gifford Asia (Singapore) Private Limited is wholly owned by Baillie Gifford Overseas Limited and is regulated by the Monetary Authority of Singapore as a holder of a capital markets services licence to conduct fund management activities for institutional investors and accredited investors in Singapore. Baillie Gifford Overseas Limited, as a foreign related corporation of Baillie Gifford Asia (Singapore) Private Limited, has entered into a cross-border business arrangement with Baillie Gifford Asia (Singapore) Private Limited, and shall be relying upon the exemption under regulation 4 of the Securities and Futures (Exemption for Cross-Border Arrangements) (Foreign Related Corporations) Regulations 2021 which enables both Baillie Gifford Overseas Limited and Baillie Gifford Asia (Singapore) Private Limited to market the full range of segregated mandate services to institutional investors and accredited investors in Singapore.

Calton Square, 1 Greenside Row, Edinburgh EH1 3AN
Telephone +44 (0)131 275 2000 / bailliegifford.com