Inside Data Centre Podcast.

WITH ANDY DAVIS

Title

Matt Monaco, PowerHouse Data Centers: Developing at scale.

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Transcript

This is the Inside Data Centre podcast. We talk to the people who power the data centre sector to give you insider info on everything happening in DC today. Here's your host, Andy Davis.

Andy Davis

Welcome to the Inside Data Centre podcast. Today I'm joined by Matt Monaco, Senior VP, Asset Management and Development at American Real Estate Partners and Powerhouse Data Centres. Good morning, Matt.

Matt Monaco (0:41 - 0:43)

Good morning, Andy. Thanks for having me.

Andy Davis (0:43 - 1:01)

Thanks for coming on. Very soon into your career with Powerhouse, just saying, only been there three months. So looking forward to get the view of somebody that's very new to the company and also covering a bit of your experience within the world of data centres.

Before we go into everything, do you wanna give a quick introduction of who you are and what your role is at Powerhouse?

Matt Monaco (1:03 - 1:28)

Yeah, happy to. So as Andy said, my role is Senior Vice President of Asset Management and Development. And that's definitely a good description along with a few other things that need to be done along the way.

But I definitely spend a lot of time on those two as well as acquisitions and just keeping busy with all those things.

Andy Davis (1:29 - 1:51)

Definitely. And we'll go into it soon, but there's a lot of development happening at the moment with Powerhouse. So you're certainly in a busy spot within the organisation.

Before we go into all of that, I always like to hear how people started their career in this industry and how you've developed your way to where you are today. So can you give us a quick insight to how you first started out your career and how you ended up in the world of data centres?

Matt Monaco (1:52 - 2:29)

Yeah, happy to. So I actually started my career in management consulting focused on the telecom sector. But before that, I'll just give a quick sort of piece on what had happened before that.

I actually majored in music when I was in college and then realised my senior year that that wasn't the best direction for me. So I pivoted and went to business school and then ended up in management consulting. The good news is I still have time for music and I play in a band here in the DC area.

That's a lot of fun, but just a hobby.

Andy Davis (2:31 - 2:46)

It always amazes me how we start our careers I'm a sports science graduate, which I think I've said a few times and have nothing to do with sport now other than watching my daughters play football, but you're music. So I'm sure there's some other musicians out there as well. Maybe we could start a data centre band at some point.

Matt Monaco (2:47 - 3:36)

Let's do it. Let's do it. Let anyone know they can reach out.

We could do that for sure. So I started in management consulting, did a lot of work there around the telecom sector, had some time working at Verisign and the internet side of the world. And then I had kind of stumbled into the data centre world as I think a lot of us have just through some contacts that I worked with earlier in my career.

I was looking for a change and reached out and the next thing I knew I was working in Equinix and learning about data centres. So I spent roughly the last 10, 10 and a half years over at Equinix running asset management globally there. And then I've just made the move to Powerhouse in the last few months here.

Andy Davis (3:37 - 3:40)

And how are you finding it so far? It's being recorded as well, so.

Matt Monaco (3:41 - 3:59)

Yeah, for sure. I'll be careful. No, it's been fantastic.

As you said, there's so many exciting projects out there and there's really so much opportunity and so many chances to serve our customers right now and in the market.

ndy Davis (4:00 - 4:18)

Yeah, definitely. And I think we were talking before we come online that I had Luke on around 12 months ago. I think I need to check the date and there was a lot happening then and I was scanning through the news that's happened since I spoke to Luke and my list was getting longer and longer.

So we're going to have to do a bit of a whistle-stop tour of some of the latest developments for Powerhouse, I think.

Matt Monaco (4:19 - 4:20)

That'd be great.

Andy Davis (4:21 - 4:40)

So recently in your part of it, Powerhouse obviously changed the structure of the leadership team, brought in some new hires such as yourself, which has really, I suppose, developed you for future growth. But why was it important for the organisation to sort of address the structure and also how does it help you move forward in the future?

Matt Monaco (4:42 - 5:36)

Yeah, I mean, really bringing on some of the folks that we've added recently, Pete McGrath, who joined us from AWS, Will McCausland, who came in from Dominion Power, and a few other moves, those are among the biggest, definitely set us up to scale, larger campuses, doing more campuses at the same time. Obviously, having the expertise on the utility side with Will's 15 years at Dominion is hugely important, just given how critical power is right now. No one will be surprised to hear me say that.

And yeah, it's really about scaling up and being able to do more, do it faster, and be able to execute multiple projects at the same time across the geography.

Andy Davis (5:37 - 6:00)

Yeah, and as we're going to go on to now, your developments are quite large as well. So you definitely need that sort of real structured team in order to deliver the scale that you guys are delivering. In August, I think it was, you announced a JV with Blue Owl and Teresa Technology Parks, focusing on AI HPC data centres.

This is one of many announcements that we're going to cover. What can we expect from that joint venture?

Matt Monaco (6:01 - 6:34)

Yeah, I mean, as it says on the tin, there's certainly a lot of focus around supporting the AI growth that's out there, working with CoreWeave, but also some discussions with others that are out there in the space, both sort of your AI pure play providers, but also with more traditional hyperscalers, both for AI workloads and potentially some hybrid sites that are doing a bit of both. But this one is definitely focused on AI.

Andy Davis (6:34 - 6:47)

Yeah, from a development perspective, how different is it developing for the AI HPC space as opposed to the hyperscale? Because that's obviously a question that I'm asked quite a lot around, how do these data centres differ? So I'd be interested to hear your viewpoint.

Matt Monaco (6:48 - 8:05)

Yeah, I mean, I think that there's obviously a lot of similarities. I think that the higher densities is the biggest difference. Just again, in terms of the cooling, moving from what has historically been more air cooling into liquid cooling, there's discussions about different types of liquid cooling that's out there, whether it's using in-row coolers or the more pure form, if you will, of liquid cooling, liquid to the chip, which is something that's really taking off in a big way with a lot of the new NVIDIA stuff that's coming out. That's all gonna be liquid to the chip. And that certainly seems to be the way things are going.

There's been a bit of a standards war, if you will, between rear door heat exchangers and immersion and this and that. And I think there's no clear direction yet, but I do think sooner rather than later, we're gonna be moving to more of a clear view on which one of

those is gonna scale up. If you think about VHS and Betamax or some of those, I think we're getting closer to an inflection point on that.

Andy Davis (8:06 - 8:27)

Yeah, and geographically in the US, how does it differ? Are these facilities being developed in the same regions as Hyperscale or are you seeing a bit of a spread away from them? Because in Europe, we've kind of gone full circle.

The original talk on AI HPC was, we can build these anywhere now, whereas now they're all starting to locate back towards the key market. So what are you seeing in the US?

Matt Monaco (8:29 - 9:40)

Yeah, I think there's a mix. I mean, there are certainly workloads out there that are not location specific. A lot of the training workloads, as we see are really flexible as far as the location, really going wherever there's scalable power and water and land at the right price that makes it suitable to be able to do those in secondary or tertiary markets.

But I think as a practical matter, having the workloads either in the core markets or call it five milliseconds away, four milliseconds away, the Richmond developments that you mentioned with the Carissa partnership are in that kind of five milliseconds or less zone. And for a lot of workloads, that works just fine given the needs replication and things like that, as opposed to other very, very sensitive workloads that need to be certainly much closer than 150 miles, give or take.

Andy Davis (9:41 - 9:52)

Yeah, and another development with Carissa as well was Chesterfield County, where you're looking to develop I think it's 300 megawatt facility. So what's the view on that one? Is this a separate to the AHPC or is this within it?

Matt Monaco (9:54 - 11:16)

Yeah, so the digital drive project, which is kind of on the same campus, if you will, with the Carissa project that had been mentioned before, this one definitely has an eye towards AI as well. But I think that there may be other workloads as well. There's certainly a lot of the service providers, there's always a value for service providers in clustering together.

And so this is something that we look at when we're developing these campuses. This one is, as you said, 300 for digital drive. We've got one in Spotsylvania County that's 900.

And just being able to provide that kind of scalability either for a single customer or being able to provide multiple customers a place where they can be on the same campus in some cases we found has some value based on things that they may be doing together and or just based on the fibre and all of the efficiencies you get building a cluster construction also becomes much easier once you've got a good critical mass of the trades and all the right people in place to build these machines.

Andy Davis (11:16 - 11:23)

Yeah, which is the hard part. And I think I love the way as well we just drop in 900 now as if it's perfectly normal.

Matt Monaco (11:25 - 11:36)

It's mind boggling. The numbers just keep going up and up and there's a few in the pipeline that are a gigawatt plus which definitely gets everyone's attention.

Andy Davis (11:37 - 11:56)

Yeah, it does, doesn't it? The gigawatt is certainly the headline grabber these days. But on that point though, I've asked a few people this, how big is too big?

When does this scale end? I know it's an impossible question to answer but do you have any insight into when you think we'll reach a point where the scale kind of stops?

Matt Monaco (11:59 - 13:37)

It's a good question and no doubt there's a limit somewhere. I think that a gigawatt certainly seems to be a good number for the largest players. I think for that next tier of players, certainly they're not looking for footprints that are quite that large.

But I think it really comes down to the networking that's happening within the buildings but also between the buildings to the extent that being able to scale up, especially with a lot of these AI clusters, being able to scale up and to have very close proximity really matters a lot from a networking perspective. The bandwidth is just so high and all the machines are talking to each other with such an immense amount of data that that proximity, just from a physics perspective, that proximity becomes really important not only for what's going to be installed day one but I think it's also a strategic advantage for a service provider to have that runway built in, whether it's in the building and there's already a shell up or to be able to bring that next shell online and to be able to scale a cluster as a unit rather than having a property that's even on the other side of town doesn't afford that same type of functionality and performance as it would having everything in a single campus up to 500, 700, whatever the number may be.

Andy Davis (13:38 - 13:58)

Yeah, and you're definitely seeing that in the UK as an example that the sites are moving to areas where they can scale up because obviously land is a lot harder to come by over here than it is in the US, but they're starting to look for areas where there is the ability to scale rather than in those city-based hubs where you can scale but not by a lot.

Matt Monaco (14:00 - 14:01)

Right, right.

Andy Davis (14:02 - 14:10)

And you announced another JV with Townlane for Charlotte. I think it's 122 acres, another major development. What are the plans for Charlotte?

Matt Monaco (14:12 - 15:10)

Yeah, so that one we're also really excited about, thrilled to be working with the Townlane team on this one. That one's also 300 megawatts up to 2.5 million square feet. This one also has a great story around carbon-free energy that's well in excess of 50% given our opportunity to work with Duke there and take advantage of nuclear and other carbon-free power sources.

We really like the market in Charlotte. There's been a lot of activity there. There's new subsea connectivity coming through from Myrtle Beach and other locations and we really do like the market and we'll be focusing on hyperscale, certainly a lot of active discussions with hyperscalers as well as some others about that opportunity and yeah, really excited about that market.

Andy Davis (15:11 - 15:20)

And you touched on nuclear there. We should probably cover that point. Power, big challenge.

Do you think nuclear is the solution or is nuclear one of the solutions?

Matt Monaco (15:21 - 17:03)

Well, Andy, like I'm guessing you have, I've been asked the question many times. I think that there's so many opinions out there. I think that this is taking advantage obviously of an existing nuclear plant and nuclear infrastructure that's already in place that's being operated by the utility.

I think as far as like SMRs and thinking about more purpose-built kind of dedicated facilities, obviously a lot of media coverage around this with AWS and Talon and things like this. I think that nuclear is definitely, it will have its time but I think that there's still a lot of work to be done in terms of regulation, in terms of how communities are thinking about it. I believe in it as a power source and I think that it will be needed over time but I think that it's not something that's happening in the next few years.

So I think that there's a focus on, again, looking at existing grids and also figuring out other sources of reduced carbon energy or carbon-free energy that are available more in the near term because that's really our focus. We're focused on these campuses where there's power available in the next two to three years and definitely figuring out how to deliver those in the most sustainable and green ways as we can.

Andy Davis (17:04 - 17:18)

And that brings us on to the future. So as I said, I interviewed Luke about a year ago and we had to cover all those news stories. What are we gonna be covering in the next 12 months?

I know you've always got a lot going on, only so much you can say but what does the future look like for Powerhouse?

Matt Monaco (17:19 - 18:09)

Yeah, so really excited to say we've got 57 buildings that are in planning, in development or complete at this stage. There's over four gigawatts of capacity that's associated with those. So certainly very excited about the opportunities in front of us, which includes those JVs that we talked about but also some others as well.

I'll also point out that this includes both PowerShell opportunities as well as turnkey opportunities. The JV with Carissa to support CoreWeave is a turnkey which we're definitely excited about and see more opportunities to do those as well as our more traditional Powerhouse Powered Shell.

Andy Davis (18:10 - 18:17)

Always a lot going on though. That's why I love Powerhouse. It's a company worth following.

I always say to people, keep an eye on what you're up to because there's always so much happening.

Matt Monaco (18:20 - 18:24)

We definitely have a few things on.

Andy Davis (18:24 - 18:46)

Keeps you busy, keeps you busy. And before I let you go, I just wanna cover some more industry specific topics. As you said, you've been in the industry for quite a long time and keen to hear your views. There's always a lot of challenges in this sector.

We touched on a couple already. Power probably being the one that most people speak about. But what do you think is some of the biggest challenges we're gonna face?

Seems crazy saying this now, but as we head into 2025.

Yeah, I mean, I think that power still continues to be the biggest challenge that's out there and just figuring out the ways to get it ramped up, be able to get these large tranches of power. And it's also, there's a kind of a Venn diagram that I think about because successful data centre development is about power, but it's also about water. It's also about fibre.

It's also about jurisdictions that really want data centres. It's about latency to whatever is important for that particular workload. There's a sweet spot in the middle where all of those overlap.

So I think all of those elements, there's some challenges with all those elements, but I think power and certainly something we focus on relentlessly is building great relationships with utilities and really working collaboratively with them to figure out where is the power now? Where will power be available in the future? What are the things we can work on together to be able to bring power faster or be able to bring more power?

That's definitely something we focus a lot on. And I think water is also worth talking about. It is more impact in some jurisdictions than others.

There's a data point, I'd heard about a Google data centre on average needs 450,000 gallons a day. And that's certainly a significant amount of water in many areas. And so I think continuing to figure out the right mix as far as the best ways to cool and figuring out locations that have the power and also have a significant amount of water is gonna be important.

A couple more questions. If you could ask everyone in the sector to start or stop doing one thing, what would it be?

Yeah, that's a good one. I think the way we think about density is changing and evolving. And I think that the thing to start doing is to lean into that and accept that that's going to be dynamic.

I remember starting my career in Equinix and we had 3kVA /rack, 5kVA /rack, these types of numbers. And there are data centres out there in the world that are on the continuum everywhere from three to five to eight to 10. And as I said, some of the sites that we're looking at now are 100 or 120 or sometimes even a bit more.

I think there's no perfect density or a point where things stop. I think that as the technologies change and as the way that the overall industry, the infrastructure industry is changing, I think that densities are gonna continue to fluctuate. I do think they're gonna continue to go up, but the rate of change may change.

And I think that that's the opportunity to just kind of lean into the fact that densities are going to continue to be dynamic and be ready for the designs that are out there and then continue to evolve them for performance and sustainability as things change over time.

Yeah, it kind of made me think as well about how the scale we always talk about bigger, bigger, bigger, don't we? That's kind of the gigawatt gets the attention, but there's so much great work being done down the scale as well. There are still small data centres.

I think sometimes we forget that they're not all one gigawatt massive facilities in the US, for example.

Matt Monaco (22:56 - 23:07)

For sure, it's all about whatever the workload is and being able to have the right data centre for whatever the workload is. That's well said.

Andy Davis (23:08 - 23:13)

And final question, if you could give one piece of advice to anyone looking to work in the sector, what would it be?

Matt Monaco (23:14 - 23:54)

Yeah, I mean, there's certainly a lot of opportunity in the industry right now. So if you are interested in the data centre industry, it's a good time to get into it. I think that, I guess this is more than one thing, but I would say read as much as you can, learn about the industry, use your network, reach out to people you know, do informational interviews, just do all the things you can to learn about the industry.

And then as I always say to my team, just be persistent in reaching out and engaging folks until you find the right fit.

Andy Davis (23:55 - 24:09)

Yeah, definitely. It's much easier to read information now as well. That's what I always forget.

I think when I started 15, 16 years ago, you couldn't find any news on the industry. Whereas now, partly my fault, there's news everywhere. If you want it, you can find it.

Matt Monaco (24:10 - 24:17)

For sure. I think you've done a lot to help with that actually and help get the information out. So good work on that one.

Andy Davis (24:18 - 24:34)

Appreciate it. We do try, but thanks for your time, Matt. Really enjoyed the chat.

As I say, there's always so much going on with Powerhouse. It always seems like we cover too much in such a short space of time. But I think we got through all the key points.

Where can anyone get hold of you if they want to learn more about you or about Powerhouse?

Matt Monaco (24:36 - 24:45)

Yeah, I would just check out my LinkedIn page is probably the best way to reach me. And there's plenty on our website as well, powerhousedata.com.

Andy Davis (24:46 - 24:59)

Yeah, we'll add the website into the show notes when we release the episode. But thanks for your time, Matt. We'll do it again in probably 12 months when we'll be going through gigawatt campuses and no doubt many more activity.

But thanks for your time. Great to catch up and we'll speak again.

Matt Monaco (25:01 - 25:02)

Sounds good. Thanks, Andy.