

Simon Mainwaring:

From We First and Goal 17 Media, welcome to Lead With We. I'm Simon Mainwaring and each week I talk with purposeful business and thought leaders about the revolutionary mindsets and methods you can use to build your bottom line and a better future for all of us. Today my guest is Jonathan Webb, the founder and CEO of AppHarvest. AppHarvest is on a mission to deliver consumers options for more delicious, sustainably grown produce that is better tasting and better for the environment and people. Jonathan, welcome to Lead With We.

Johnathan Webb:

Thank you for having me, Simon.

Simon Mainwaring:

Now, for those who don't know you, I know that you're a Kentucky native, so I got to ask you a start off question which is, what's your favorite bourbon?

Johnathan Webb:

Well, that's a trick question. There is no favorite bourbon, or I will have 10 distillers call me after this podcast saying, "Why not us?"

Simon Mainwaring:

All right.

Johnathan Webb:

But actually I was right before this just sent a note to Rob Samuels who's family founded Maker's Mark. Today Maker's Mark announced that they're now a B Corp and just another trend in every company in every sector, trying to find a way where they can have purpose at the core of their business. So an easy one for me is I would say hats off to Maker's Mark on being a B Corp. And I'll probably go have a sip of Maker's tonight to toast.

Simon Mainwaring:

There you go. And growing up in Kentucky, what is one common mis sort of conception of the region, of Kentucky itself? What would you say?

Johnathan Webb:

Well, I mean, there's been this blanket concept of fly over country in general. And I think Kentucky's definitely been a part of that. And again, the concept that all these great ideas that are going to change the world come out of just a few places and San Francisco being the only hub for innovation, tech innovation. And that's just not true. And I hope that a part of AppHarvest and our story over time, I hope it inspires the next generation to empower young leaders that great ideas can come from anywhere. And we all have access to the same information.

Simon Mainwaring:

Let me ask you, your background is so fascinating in terms of the breadth of your ambition. I mean, you were the first to graduate from college in your family, and then you went to the University of Kentucky,

but then how did that lead to AppHarvest? Because I know that you graduated around the recession. So give us a little bit of sense of that journey because when you see the end result, it's so breathtaking, but it's amazing where you started and how quickly you accelerated this trajectory.

Johnathan Webb:

Yeah, I would love to say there was some great plan from day one, but there wasn't. I mean I've always been very curious as a kid and I definitely think kids from average, middle class American families have a great opportunity opposed to some kids that might grow up in more of a structured, higher end bubble, so to speak. If you're out in the world and you see it every day, you might make the argument that you're closer to seeing some of the problems that exist on going into a grocery store when I was young and really kind of at an early age understanding, "Is this food? Is this really food?" 80% of what's in here is some packaged box plastic thing that has a lot of chemicals.

Johnathan Webb:

And for me, just always being inquisitive, young, and being just aware of my surroundings, I think was part of... I benefit that my family I guess always encouraged that. But then, yeah, because of that, maybe saw some problems and wanted to try to figure out how to be a part of changing them. So for me, went to the University of Kentucky, graduated around the financial collapse in '07, '08, and the eastern part of our state, which is Eastern Kentucky, has always been known for coal mining and Eastern Kentucky and West Virginia, really some of the largest coal mining areas of the country. I got offered a job out of college to go into coal sales, did not take that job, and pursued a career in wind and solar. And seeing the early collapse of the coal industry is really what pushed me into the wind and solar industry on seeing one industry accelerate and boom and take off and another industry that had every macro reason why it was going to be a challenge in the next decade or two.

Johnathan Webb:

So I was fortunate to kind of see that from both sides, agnostically, and benefited from being a part of building large scale solar, getting outside of Kentucky for a little while and developing that. And ultimately that's what led me to starting AppHarvest and pursuing a career in food and hopefully helping being a part of the change in agriculture in the coming decades that we've seen, like the change in energy over the last few decades.

Simon Mainwaring:

But why agriculture and why do it in the region, the Appalachians and so on, why do it there? Was there something, was it the job losses during the recession? Or was it just a love for agriculture or was it the food problem outright? What motivated you down this path?

Johnathan Webb:

Yeah. I don't know if it's in the water or what it's in, but something about Kentucky and Wendleberry says it well. I mean, a lot of great Kentuckians have said it always brings you back here. But just place, I mean I was very rooted in place, and loved this place. And it was the community where I grew up. I went to public schools here. I went to our public university. And I always wanted to build stuff here, but at the time there was no industry of sustainable development here. So I left and built large scale solar outside of Kentucky. I was down in Georgia, in Maryland, and in other parts of the US. But then so why here and we can get to that and wanted to come back.

Johnathan Webb:

But then the food piece is, before AppHarvest, I was a part of building large solar and supported the US military. And I had a clearance and I was in and out of the Pentagon and we talk about energy security in the US and how our entire economy starts and stops with energy. We don't talk about food security. And if you start to really unravel the food system itself and how fragile it is, it's a rabbit hole that gets more and more startling. So the business of AppHarvest was really developed around the problem. And the problem is our world is land constrained, we're water constrained, we currently use 70% of fresh water in the world is used for agriculture production. The UN has said we need 50 to 70% more food by 2050. And some have said we would need two planet Earths to have enough land and water to produce that food.

Johnathan Webb:

So that's global macro, and then there's the US. And we import 70% of our fruits and vegetables into the US now. What we grow in the us has grown in California, where it's drought stricken, wildfires, Colorado River drying up, Lake Mead drying up. And it's pretty terrifying. But you look at technology, you look at the technology available, and you go, "Okay, well, we can solve many of these problems, maybe not day one all of them, but a lot of them by just simply deploying technologies at scale." And that's what AppHarvest was started to do. You use proven technologies, develop new technologies on top of that, execute at scale, and help be a part of rebuilding the supply chain of how we grow and where we grow fruits and vegetables.

Simon Mainwaring:

I don't think people realize the problem you're solving for is so personal. It's literally food on our table, now and in the future. And the food deserts and the lack of access to fresh produce around the country is a problem today and it's only going to accelerate exponentially over time. It's not some problem overseas. It's not somewhere else. It's here, right here in the United States. So as you mentioned, ag tech is a really powerful way to start solving for this at scale. For those who aren't familiar with the AgTech space and so on, what does it mean broadly and what specific kind of ag tech are you taking to market?

Johnathan Webb:

For those that are opposed to technology, I would say I'm a soil loyalist and I am skeptical of all man made technology. So I'm right there with you. But technology really started with the wheel and has just moved and progressed since. The last great technological revolution that hit American farming was the tractor. And if you look at when the tractor was first introduced, people were startled, they were terrified, and then they realized, "Oh, wait a second. I can get on top of it and ride it. And maybe it is good in some ways."

Johnathan Webb:

And then there are people that go, they don't like technology, but they like the tractor. And we have to, again, level set that technology, when it's always introduced, is scary. And then it's us as humans, how we use that technology to align with nature and try to do what's good for people and planet. And I definitely think that's where us as humans and industry over the last half century have failed. We've really used technology in many ways to destroy the planet, in many ways harm people, but have been able to profit over that over the last half century. And so AppHarvest itself, we said we wanted to align

with nature. We believe technology in its highest form is nature. Not the iPhone we're talking on or the computer, the seed itself, the plant itself, the organic matter in the world. That is technology.

Johnathan Webb:

Now let's use manmade technology to push and drive and support nature from behind. And ultimately that's what we're doing in these controlled environment agriculture facilities. We're trying to put the plant first, optimize for nature and what it's good at, use technology to push from behind. But yeah, you're going to see in the next decade or two, a whole host of technologies hitting agriculture that are really going to radically change the way we grow food, from robotics to AI to big data. And agriculture is a huge part of many of the global problems we talk about, whether it's...

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Johnathan Webb:

Of many of the global problems we talk about, whether it's climate and carbon, whether it's water and soil degradation, whether it's chemicals in our food that harm us and harm the planet, and we can use technology to better align with nature. But it's definitely going to be a challenge over the next couple of decades, and it's going to take private sector along with regulators and government and consumers ultimately, consumers demanding better products for people and planet.

Simon Mainwaring:

And the consumer piece is so important as you say. And I think one of the common misconceptions is, any produce, tomato or otherwise that's made through "technology" might be, have a lesser taste or nutrients and so on. They don't have the microbes and nutrients in the soil that are inherent in nature. Help us understand, you're saying that the technology is actually enabling what is naturally occurring in nature's process. Would that be fair?

Johnathan Webb:

Yeah, there's a million different ways to do it and there's a million different ways food is grown today and it's not a zero sum game that this is perfect and this is bad. I mean, I am a soil loyalist in the sense that if you can grow food where you live, in your backyard, do that and eat it. I do that. I try to eat as much food out of what we grow is possible, and then I try to supplement that with stuff I buy at the store, including AppHarvest.

Johnathan Webb:

So first, can you grow it on your own and eat it? Great. Do that, always. But at some point, will that become a luxury? As acid rain increases, as soil is degraded more and more and poisoned over time. As climate change makes a... Look at Kentucky, we have record low temperatures in January. We had record high temperatures in December. Look at California where you've got wildfires, that ash falls onto outdoor fields. The fields then are no longer, the fruit is no longer edible.

Johnathan Webb:

So it's a challenge to grow outdoors and will only get worse over time. But if you can do it and you can do it properly, absolutely put that first. But from there on, it's how you use the technologies. In some ways can be great and other ways, it might be compromising to the plant, the planet or people. And it's

really not a zero sum game and what we've tried to do again, is develop a model that optimizes for the plant, creates a good, healthy, fresh product for people and then in turn, has very minimal impact on the environment.

Johnathan Webb:

We run completely on rainwater. We have no agricultural runoff where all the rainwater that goes in our facility only leaves as a fruit and vegetable, and we run completely on recycled rainwater. So how we handle our water, then we use 90% less water than open field agriculture. That, for us, there's five or six [inaudible 00:14:06] big things that ag does to impact the people on planet. And you could argue water is one and then land usage is another, and again, what we're working to do is yes, create a good product that is healthy and good and tasty for you as a consumer, but ultimately has far less impact on the planet so that we can free up land and water for future generations.

Simon Mainwaring:

And I think what's so staggering about ag tech and what you're doing is the increase in yield that's possible to free up that land and so on. Give us a sense of that proportion, just how exponential it is.

Johnathan Webb:

Yeah. So our first farm in Morehead, Kentucky is nearly 3 million square feet, 60 acres under glass. And we have a retention pond that holds a 75 Olympic sized swimming pools in the retention pond.

Simon Mainwaring:

Wow.

Johnathan Webb:

It's big. I mean, I think at one point as according to CNET, it would be one of the 20 largest structures behind Gigafactories and a few others. So 60 acres sounds big, but what can we do to offset outdoor production? So in that 60 acres, we produce the equivalent of about 2,500 acres of open field production in Mexico or California. Two years ago, I guess maybe two and a half now, three years ago, was with the late great EO Wilson. Spoke at the Half Earth Summit at Berkeley. And EO and Half Earth have set out on a mission for biodiversity to preserve land and water for biodiversity.

Johnathan Webb:

Well, if we do not rain in the amount of land and water we're using to grow our food, give up on the concept that we will ever be able to return land and water back over to the wild, because we will keep chewing up land and water as we continue to expand as a species. And we will dominate all that land and water for us to grow food. So to be able to take 60 acres and grow 30 times yield per acre, and replace 25 acres of an open field production and do it with 90% less water, we're freeing up tremendous amounts of water and tremendous amounts of acreage that yes, in our lifetime, we could see tens and millions of acres of land turned back over to the wild.

Johnathan Webb:

We could see fresh water come back to its stable place where we're not depleting our aquifers, we're not taking 70% of fresh water globally and using it for agriculture production, we can use a fraction of that. And as a result, again, let localized ecosystems and wildlife come back. So there is a way that

humans can continue to expand and reduce our footprint, but we have to use technology. And I'm not saying AppHarvest is the end all be all solution, we're not. There's a lot of other wonderful, innovative companies and great ideas on how we can get there, but we got to do something, and doing nothing is not the answer and unfortunately, the food and agriculture discussion is really not in the global ethos.

Johnathan Webb:

We talk about carbon, there's the Paris climate accord, there's the nonstop discussion on carbon reduction and humans have lost the ability to zero in and focus on one thing. If we solve for carbon, and we don't solve for land and we don't solve for water and we don't solve for biodiversity, by the time we solve for carbon, what in the hell is the world going to look like?

Simon Mainwaring:

Let me ask you about that. What is stalling that conversation? Because like you, I'm frustrated, there's a lack of leadership out there in terms of prioritizing the right issues. Allocating resources, advocating for regulatory and policy change and so on. Is it, are there just too many incentives to keep things the way they are? Is it there just too many problems to face all at once? Has the issue become dramatically polarized and therefore stagnant? What's in the way?

Johnathan Webb:

Yeah. I mean, we as humans and I'm one of those, where we all get caught up in our echo chambers and we become this self-fulfilling prophecy of sorts and follow the leader. I don't know. I mean, there's a lot of really smart people in the world. And for some reason, all we talk about is carbon. There's a lot more problems than just carbon. And, I don't know. I mean, it's hard, right? I mean, I don't get it. I mean, you go to these conferences and I do too. And we have to walk and chew gum at the same time. We've lost the luxury to solve one problem then go to the next. We need to solve ten problems simultaneously while putting the next ten problems on the bench and putting those up as well. And whether we're able to do it or what we hand our kids, who the hell knows, but we...

Johnathan Webb:

Carbon got it, everybody get it. I mean, if you don't understand carbon needs to be solved, then I don't know what world you're living in. And there's no point in even preaching it anymore, but we have to go beyond just carbon and we have to solve for land and water and biodiversity and a number of other issues. But the food thing and here's what exciting about food and agriculture. Yes, we need policy. Yes, we need regulatory framework. Yes, we need private industry. And a lot of that can follow with consumer trends. We can be helpless in many ways. It is almost impossible for you to go build a solar project to power your... I mean, you could do it, but I mean, theoretically walking out your door to go build a solar project to power your community. I mean, it's a little bit of a challenge. But to rally your community, to go be conscious on what they eat and where your food comes from, anyone can do that.

Johnathan Webb:

We don't need to be victim powerless on this. We can be empowered. And the food conversation... Yes, it's complex and maybe far more complex in many ways than just, fossil fuels versus renewable energy. But the good thing is people can be empowered and this can happen like wildfire across communities. But it's going to take people making those choices in their daily life and how that happens, who knows?

Simon Mainwaring:

Yeah. Well, I mean, it sounds like part of the solution is this proof of concept that you're doing with AppHarvest. You've got to actually show the retailers, show consumers that there isn't a compromise on taste or nutrient, show the retailers that there is greater efficiencies and it gives them a more effective, sustainable, sustainability story to tell. I mean, when you already started the company, five years ago now, what were some of those obstacles? Was it getting the funding? Was it getting retailer buy-in, was it sort of the technology itself and the innovations weren't there? What was it like getting this off the ground? Because we so desperately need it clearly.

Johnathan Webb:

I mean, it really started with maxing out credit cards and trying to... I went all in on this one and just very little resources, finding the first-

Simon Mainwaring:

The original friends and family, the credit card. Yeah, yeah.

Johnathan Webb:

Yeah. I mean really my credit cards initially, and then trying to even... I mean, those were maxed out and then that was scary. But, if you, and I don't encourage people to necessarily do that, per se, there are other ways. But for me, I went all in on this one and I deeply believed in the concept, so I knew we would turn the corner. I didn't know how or when or exactly the scale at which it's definitely accelerated, even a little bit beyond what I think I would've anticipated. And I'm an eternal optimist, but, yeah, it was going to the Venture Community, founder of AOL, Steve Case had a fund rise of the rest, convincing them put in \$150,000 early on, to be able to hire a couple of engineers to develop plans. I thought

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Johnathan Webb:

... to be able to hire a couple of engineers to develop plans. I thought we had, I thought at that point, man, we had really hit it. And then here we are fast forward, we raised \$500 million in 2021 and it's humbling and startling at the same time because the smarter... And look, and when I say smart, I just mean aware. There people that have high school degrees that work on our team and they're brilliant. And there's people that have PhDs and went to MIT and they're brilliant. But the commonality is everybody understanding that this food problem is everybody's problem. And there are no good answers right now, but if we don't collectively figure it out, who is? So again, what we're doing is not the end all be all. And yes, our proof of concept, selling to the largest grocers like Costco, Walmart, Kroger, we're doing that, but it just going to take time.

Johnathan Webb:

And then even outside of that, the consumer part, there are great products in the grocery store today. There's great products at your farmer's markets, but consumers have to really be empowered to start working together to vote with their dollar, to drive consumer trends. And man oh man, it can change things overnight. I mean, these grocers do listen to the consumer. Regulators listen to the consumer. These politicians who... We work closely with our governor, who's a progressive Democrat. We also work with Mitch McConnell, who's a Republican, both of which reside here in Kentucky, far left, far

right. They listen to their constituents and when those constituents and consumers say, "We, as the US have the largest economy in the world and we deserve a better food system," people listen.

Johnathan Webb:

And so I keep going back to the consumer because there is so much the consumer can do in the food and agriculture space that by asking the hard questions and putting good food on your family's plates, and expanding that outside of your household to your neighbors, it can take off like wildfire. And that's why I am optimistic about how quickly we can change the food system in the US, but it's going to take everybody together and it's not going to take one university or one company to do that, but it will take a consumer movement with all these other stakeholders.

Simon Mainwaring:

So I mean, what you're speaking to is this huge tension that almost every new purposeful company faces where you're revolutionizing something upstream, you're re-engineering the supply chain, you're producing something in a new way, but then you've got to unlock the power of the market forces to drive change by speaking to consumers so that you incentivize retailers or customers of yours to actually adopt what you're doing. How do you get your arms around both? And what are you doing to kind of educate consumers about the virtues of what you're doing?

Johnathan Webb:

So we've kind of dual tracked this. You can't retool a supply line overnight. So we sell into that current supply model. So if you go into a large box grocer and go to Costco or Kroger or Walmart, you go look for a tomato, and you pick it up and you see a little sticker. You might see our AppHarvest name or Hills on it. Very discreet and just in the supply at scale. And later this year, we'll have strawberries, we'll have salad greens, we'll have a whole host of variety of tomatoes creeping their way into the produce aisle, not raising prices. Frankly, displacing imports that again, Simon about two weeks ago, the LA Times did an article that the US government shut down imports from Mexico because of forced labor on farms. So in 2021, you as a consumer can go to maybe one of your favorite places to buy fruits and vegetables and could be coming from forced labor, could be coming from child labor, could be using illegal chemical pesticides. I mean, this is 2021 for God's sake. I would like to think we're better than this, but discretely, we're selling through those current supply lines and we're in the grocer.

Johnathan Webb:

Separate to that, we created a direct to consumer model on our website, Fight the Food Fight, making salsa and other value added products for the more very conscious consumer that wants to seek us out and find us. And we're dual tracking that with a vast majority of our production going into the traditional supply lines. But over time, it will take more than just AppHarvest having this conversation. It going to take consumers that ultimately, again, drive regulators that ultimately drive grocers.

Johnathan Webb:

When people ask me who our competition is, it's not about us versus imports. It's about us versus illegal activity in farming that should flatly be unacceptable. I mean, I don't get it. I shock the fact that a consumer in the US has to question, does my food have 18 different chemical pesticides, come from a farm with forced labor and child labor? I mean, what are we doing here? And look, the tailwinds are moving. It's the question, will it take five years, 10 years, 20 years but those consumer tailwinds are moving.

Simon Mainwaring:

Yeah. And I mean, one of the big points there really is that you've got to take these kind of high concepts, these global problems, and distill them down to that moment of decision when a consumer's standing there in a shopping aisle as to whether they buy your product or not. It's as simple as one piece of fruit. So how do you distill that? Because sometimes consumers feel overwhelmed or helpless in the face of these huge macro issues. So how do you kind of reverse engineer out of their mindset rather than trying to ask them to get their arms around these big problems?

Johnathan Webb:

Well, again, I mean the unfortunate thing Simon is, and we've thought about this a lot. Martha Stewart's on our board, Martha's been very helpful for me. She's in retail and food, just an icon. And the issue is, I'm not sure there's an easy way out of it for the consumer. The consumer has got to choose to be aware and then choose to make choices based on that awareness. I don't know there's an easy way out. I mean, we're trying to get to in a decade, hopefully people can look at the AppHarvest Hills and think of it like you would think of any other icon. And that AppHarvest Hills has trust and transparency, all this complicated stuff you don't need to necessarily worry about. And you know those Hills stand for people and planet and we're going to do the best we can to get you a good, healthy, fresh food item that's good for you, good for your family, and good for people and planet.

Johnathan Webb:

But in the short term, it's really, you got to care about what you eat. It's your body. You got to care about what you put in your family's body. And if you don't care about that, I mean, you can make an argument, then how are you going to ever care about the planet? How are you ever going to care about environmental issues? Like even if you can't even have enough time to care about what you eat and you put into your child's mouth, how are you possibly going to care about the environment? Because if we can't get a good healthy food system, I don't know what the next step is.

Simon Mainwaring:

I totally agree. I mean, the whole, obviously the emphasis on leading with we is that everyone has a responsibility and here we are putting carbon in the air, chemicals in the soil, plastics in the ocean, and then compromising our own future. And the thing that really rubs me the wrong way about this wonderful dialogue around stakeholder capitalism is everyone talks about sharing in the rewards of capitalism, more fairly, including the planet, but not enough people talk about sharing and the responsibilities. And we're not powerless as consumers, as you say. Every single choice we make in what we put on our kitchen table, in terms of what we buy, what companies we support, is a vote on the type of future that we want. What do you think, is it going to take? You said that the momentum is building, the tailwinds are there, and so on. In your experience, in the line of sight you have running AppHarvest, do you see that it just kind of builds a momentum of its own, which takes on the life of its own? Or do you see that we wait till that last minute where the issue becomes so acute that we have to do something different and it's a crisis response? What do you think is going to happen to get us there?

Johnathan Webb:

I mean, it's a little bit of both. It seems like, but I mean I am an optimist. Incredibly I, again... There's the two paths. There's the post apocalyptic world Mad Max world, or there's the avatar type world where technology meets nature and we live in this wonderful, beautiful place called earth. I believe we're going to go in the direction where technology and nature and people and planet work together.

Johnathan Webb:

But the exciting thing for me is I'm having these conversations in rural communities. Appalachian towns where people, again, we think this is just happening with PhDs in Boston or London. No, it's not. Like people care. And if we give them options, that most importantly is affordable. I mean, again, a majority of Americans are just worried about putting food on the table for God's sakes. The amount of uncertainty they're faced with. The credit card debt, the mortgage, your kids going to school, the school prices are going up.

Johnathan Webb:

We as this business community have to create solutions that are affordable. And I think if we do that, consumers time and again are showing they do care. Maybe not as quickly and maybe aren't getting there as fast as we'd want, but they do care. And the trend, it keeps going up, but making sure it's inclusive and everybody's a part of the ride. We can't do this and then at the end of it, great, we've got a couple of super elite restaurants in New York that have this wonderful gourmet meal from all this great sourced stuff. That doesn't and solve the problem. So for the 0.01% of the world, we've created a food system that works. And then for the 99% of the world, hey, go F off. Good luck. No, it's the complete opposite. We need to be focused on the 90%. The 10%, you'll figure it out. The 90%, and that's what's exciting for me.

Johnathan Webb:

I mean, where this company is based, we've hired 500 people in the middle of COVID. We're going to hire a thousand people this year. These are average working class people that love this conversation. They love this company. They're going to war for this mission. I mean, literally every day, showing up, going to work, not just for a paycheck, but because they care about these causes. That to me, that encourages me every single day. I can't watch the news. I can't look at social media, but I can go into our facilities and I can see our team. I'm just, I'm filled with fire to go to war with that team. And if we can keep expanding that and create a more inclusive economy that brings people in and creates solutions with them...

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Johnathan Webb:

... people in and create solutions with them, we'll be good. And now the question is, to your point, will this happen gradually or will we hit a tipping point? Well, I don't know. The last couple of years have looked a little bleak, so you might argue we've already hit the tipping point and maybe we can rebuild out of it. So who knows, but let's stay optimistic and try to make the table as big as possible for everyone.

Simon Mainwaring:

I couldn't agree more. We're talking about solving for a global and a national crisis a lot, but at the same time, just listening from a business point of view about the value proposition you're talking about, your ability to attract talent, to get the most out of your people and their productivity, to build a resilient and sticky culture that people want to stay with, join, and give jobs in the local region, and then take something of value to market at a greater scale, with all the efficiencies you need to compete, and so on, I mentioned all of that because I think sometimes, we look at all these crises, ocean acidification, loss of biodiversity, the climate crisis, the food crisis as doom and gloom scenarios. But what I'm hearing

from you is that they're marketplace opportunities in disguise, and when you solve for them effectively at scale, all the business benefits start tumbling out of them. Would you say that's fair?

Johnathan Webb:

Bingo. Yeah. And we just need an older generation of Wall Street investors to hang their hat up and let the new guard come about, because we'll get there. I mean, the transition of wealth from this very small group of elite to the next generation, it's going to happen, Simon. I mean, look, I'm a 36-year-old CEO. I hope to do this. I want to do this for 30 years. This is my first decade, I'm a couple of years into the company, but I know very, very wicked intelligent 25-year-olds, 30-year-olds, 40-year-olds, 45-year-olds, they're pounding away at this, and the wall is going to break. The business opportunities that are available, you can either continue to try to defend the past, or eventually, that wall will crumble and you can build into the future.

Johnathan Webb:

All of these challenges are opportunities, and again, that's why, again, that avatar world of technology meets nature, this is the opportunity. I mean, all these challenges and human innovation going around the challenges in front of us, building business models, it's just the right thing to do. Now, are we early in it? Are we early in the ESG boom of capitalism? Probably. We're probably in our first inning and still fighting against the deep entrenched way of thinking that shareholders... Yes, capital shareholders, 100%. But the right thing to do for your shareholders is to make sure you have employees that want to work for your shareholders, to make sure you have communities that want your shareholders to win, to make sure you have broader stakeholders in government that want your...

Johnathan Webb:

It has got to be an overall wrapped solution, and again, starting or kind of going back to where we started, anyone who questions this, I encourage you to look at Coal Country and look at those coal companies back in the early 2000s that I even reached out to and said, "Why don't you look to diversify? Be an energy company. Why do you need to..." Who cares? I mean, you're in the business of making money for your shareholders. Does it have to just be coal mining? No, no, no, no, no. Our sales are going up. We're good. And then the collapse. You look at Kentucky alone, we did 130 million tons of coal a year probably 10, 15 years ago. We did 30 million tons of coal last year, so a massive drop off. Change can happen fast. It can happen in every industry fast. We just have to keep our nose to grindstone and have to keep pushing uphill.

Simon Mainwaring:

Yeah, we see those forces changing across the whole legacy energy sector. The migration is happening. The forces are building. After a certain point, they're unstoppable, and then you see it with... There's so many companies that are self-disrupting to stay ahead of this. If we cast your line of sight five, 10 years down the line, and these forces keep building, what does the future of agriculture look like at AppHarvest, but even beyond?

Johnathan Webb:

Controlled environment agriculture, CEA, it's really the third wave of sustainable infrastructure. You look at 20 years ago in the US and you look at renewable energy, it was a nascent boutique thing, and then over 20 years, tens of billions of dollars have flooded in, renewable energy took off in every state and became a dominant force. 10 years ago, it was electric vehicles. Little company called Tesla went public

in 2010. Now every major automotive company in the world is aggressively moving towards electric vehicles. I'm sitting in Kentucky, where Ford announced two months ago the largest economic development project in the history of Ford, and they're building a \$5 billion battery facility in Kentucky and a \$5 billion battery facility down in Tennessee.

Johnathan Webb:

And then now, we're sitting in the infancy of controlled environment agriculture, where you use infrastructure, you use technology to grow a lot more food with a lot less resources, freeing up land and water, getting harsh chemicals out of the growing practice, and treating people fairly. We're in inning one. Now the question is, what's it going to look like in 10 years? I don't know, but I do know I'm on the phone with ambassadors to countries in the Middle East, I'm talking to people in Southeast Asia, and here we are, this little company in central Appalachia that's headquarters here, having a conversation on global food security.

Johnathan Webb:

I'm optimistic, but it will take consumers, it will take the larger retailers, and it will take government to decide that we want to have a better food and agriculture system, and it's not going to be one or two companies on its own. It'll be a collective together. But the future is incredibly bright for agriculture. There's a massive amount of innovation. And again, the focus on the plant, and I think as we evolve in the agriculture world, it's critical that we put nature first, we put the plant first, and we understand what we're using as technology to push from behind, help that plant.

Johnathan Webb:

The technology's the plant. I mean, I walk into our facility and I see a tomato plant that's nearly 20, 30 feet in the air. It started with a seed, and for God's sake, somebody wants to tell me an iPhone is technology? I lose my mind. An iPhone is not technology. Somehow, some way through where we got here, the freaking seed has evolved to the point to where it goes to a 30-foot thing in the air that gives you all this food you can eat. So getting back to that place where technology is really nature and our job is to harness it and push it from behind, it's a wonderful place we can get to in agriculture, but hopefully, it won't take drought in California, it won't take wildfires, it won't take continued poisoning of our soils and waters, and poisoning, ultimately, of us as people for us to wake up and go, "We need to do something better and we need to do it quick." Hopefully it happens in five years, but if it takes longer, we're going to keep pushing.

Simon Mainwaring:

I am very much aligned with your optimism. I don't think that we're learning something new, Jonathan. I think we're remembering what we forgot, which is the inherent wisdom of nature. I don't think it's cause for pessimism. I think this is the necessary painful but miraculous rebirth of business, where we stop denigrating and stealing from nature and start serving nature, and when we do, we're going to fall in love with the natural world all over again, as it sort of reveals its inherent regenerative capacity and actually provides for what we need if we just work with it, rather than against it.

Simon Mainwaring:

So I want to thank you for the leadership and congratulate you on the success of AppHarvest, and I expect nothing, obviously, than great success because the need is so great, but also just as a proof point

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of what's possible when we start to embrace that wisdom that we sort of walk past every day and start to work with nature. I think it's an extraordinary example, and thanks for sharing the insights today.

Johnathan Webb:

Thank you, Simon.

Simon Mainwaring:

Thanks for joining us for another episode of Lead with We. Our show is produced by Goal 17 Media, and you can always find more information about our guest in the show notes of each episode. Make sure you follow Lead with We on Apple Podcasts, Spotify, Google Podcasts, and now, on all United flights on their entertainment consoles.

Simon Mainwaring:

If you really love the show, share it with your friends and colleagues. You can also watch our episodes on YouTube at WeFirstTV. And if you're looking to go even deeper into the world of purposeful business, check out my new book, Lead with We, which is available at Amazon, Barnes & Noble, and Google Books. See you again soon, and until then, let's all lead with we.

PART 4 OF 4 ENDS [00:42:27]