

Special Episode: [Skema.ai](#)'s Origin Story with Co-Founders Marty Rozmanith + Charlie Cichetti | Transcript

00:02

Speaker 1

Welcome to Green Building Matters, the original and most popular podcast focused on the green building movement. Your host is Charlie Cichetti, one of the most credentialed experts in the green building industry and one of the few to be honored as a lead fellow. Each week, Charlie welcomes a green building professional from around the globe to share their war stories, career advice, and unique insight into how sustainability is shaping the built environment. So settle in, grab a fresh cup of coffee, and get ready to find out why green building, green belly matters.

00:33

Speaker 2

Hey everybody. Welcome to the next episode of the Green Building Matters podcast. This is a special episode. You've noticed, gosh, over the last couple years we've shifted to more about technology. I think that can be a big part of this now. Decarbonization or resiliency movement. Today, the special episode, I've invited Jim Grady back. A few weeks ago, he interviewed me and one of our lead investors and board members at Schema, Robin Bienvenu. That was an amazing interview. We talked about what we're building at Schema, why Robin has invested multiple times, and really, where are things going? We talk data, we talk security and AI.

01:07

Speaker 2

But today Jim's going to actually interview Marty, my co founder and cto, one of my co founders at Schema, and we just want to talk a little more about the story, how we met, how all this all came together, some of the tech Marty's built in the AEC industry, kind of current state Schema, and then we'll talk a little more about AI because it's part of our day to day lives. So. So that being said, special episode. Jim, thanks for coming back. Just appreciate everything you're doing to help the entrepreneur and startup network here in Atlanta and I'll throw it to you and let's have a fun discussion.

01:39

Speaker 3

All right, Marty, great to talk to you and Charlie, you too. Before we start

though, after the greatest run maybe in MLB history, what is going on with the Sox, baby? This has been like unprecedented. Nobody's ever done this before.

01:55

Speaker 1

This is like the worst day to interview me since they lost four straight. So I think they just needed a pause. I think they put out a lot of exertion winning all those games and now they just needed to take a break and I forgot the exact strength.

02:09

Speaker 3

I know it'd never been done before. What was the total in a row?

02:13

Speaker 1

Like 20 something in a row. But it was like they were like 35 and 5 or something. It was some crazy long.

02:20

Speaker 3

That's never been done before, right?

02:21

Speaker 1

Never been done before. Well, that's there is a longer winning streak in 1946, I believe. But they tied that one.

02:28

Speaker 2

They didn't break it, but of course, yeah. The Braves have Boston ties. Tires. The Braves have Boston ties too. I'll never forget Marty and his wife Susan took me to a third base side. Great Fenway game a couple years ago. Man, that was fun. But you know, that's part of a gym. As we built Schema, our startup, which you've learned a lot about in the last few years. You know, we have a remote team. I'm in Atlanta, that's our headquarters. Marty and a lot of our team are in Boston. We've got some in Chicago, Minneapolis, San Francisco, Cisco and our brilliant developers over in Europe. So just that's how we built the company. But, but Jim, where do you want to take us here?

03:03

Speaker 3

So I think what's important is, you know, the whole AI world is developing really quickly and you guys are in the second largest maybe industry in the whole world, but definitely United States on medical. So some vision cast I think is appropriate, a little bit of history, kind of how you got here for people that don't know, and then some vision cast about where all this ends up. You know, could you have the four players with the owners and the architects, the construction and the suppliers. So how does that fit together? So let's, you know, take it as you will, but a little bit of history, how you came together, where that came from, why you are spending your time, talent and treasure on this.

03:44

Speaker 3

And then, you know, five years from now, two years from now, ten years from now, where does it end up? Where does. How much does AI really impact all of this and where do you end up as, you know, in the built world? So that's what I think we, if we get off the call having communicated something, I think that'd be informational for people and they'd have a better vision on kind of how you guys are thinking about it.

04:08

Speaker 1

Sure, I have some ideas, but I can't predict the future, but we'll try and sketch it out a bit.

04:14

Speaker 3

Yeah, but you're helping create that future, right? So that's the good thing about you guys put a lot of energy into it.

04:21

Speaker 1

So the super connector here and no Atlanta entrepreneur discussion would be complete unless we mentioned Errol Wolford, who was the person that connected Charlie and myself. So I've early, I've known Errol for a long time. Actually I knew him before I started working@revit 27 years ago or something. Like that, and actually introduced him to the founders of Revit. And he was a board member at Revit a long time ago. And, you know, I'm assuming the

people who are watching this podcast know what Revit is. And, you know, it's a. It's used by a lot of commercial architects to create the data for the project, specifically building models. So my background, actually, I started out life as a carpenter on a framing crew and learned construction, got into engineering, got a degree in engineering, and then went to work in architecture and structural engineering.

05:13

Speaker 1

So I have a background sort of in the practical side of things. And even though I've practiced architecture and worked as an architect on projects, I've always been interested in how that turns into what actually ends up getting built, which has always been sort of a curious, obtuse process for me because of the way that it's done. And I actually graduated college at a time when there was a pretty big recession in the market. And I ended up moving across the country and got a job in California. And so I ended up kind of seeing the technology that was being applied at the time from a very close seat and ended up getting involved in the American Institute of Architects chapter as the Computer Forum co chair and started holding competitions.

06:06

Speaker 1

And Autodesk became aware of who I was in the circle of architects out in Northern California. And I ended up getting introduced to the software world that way and eventually getting moved across the country to join a team at Autodesk to build the product before Revit, and got pulled into Revit because the founders recruited me from Autodesk because Autodesk was the big name that you always would look to if you wanted to hire talent in the market. So that's sort of the start of the journey. And where I come from, I've always been interested on the construction side of things, not just on the design side of things. And that was mainly my motivation for going into software, because I thought I can either keep designing buildings or I can affect the tools that everybody else uses to design buildings.

06:45

Speaker 1

And I just thought there'd be a lot more leverage in affecting the tools, which I think has proven to be true. And it has been a circuitous journey that I never would have predicted. So one of the things that I got to do was be the guy who ran the Revit requirements team for the first seven years of the product, which

is sort of my big stamp on that product. And, you know, a lot of things that people still see there today were put in there by my team a long time ago, even though it's been around for, you know, since 2000. And one of the things I did after leaving Revit was trying to start some companies that would do automated manufacturing and construction.

07:24

Speaker 1

And I figured out from those painful lessons, first, how hard it is to do, because having a model in design does not mean you actually have anything to build from, because people have to look at it, bid on it, and then make shop drawings from it. And so everything gets designed twice. And then lastly, even if you can figure out the technical challenges, there are lots of political, legal, and cultural challenges that nobody ever tells you about until you try and do it. You run, you know, head first into the brick walls that are there that you don't know about.

07:57

Speaker 3

That's the real world, right?

07:58

Speaker 1

Yeah, that's the real world.

07:59

Speaker 3

Right.

07:59

Speaker 1

And so, you know, a lot of what were getting into and trying to make these solutions that could increase the quality and efficiency and throughput of construction projects was mostly around, like, union labor agreements and insurance and legal stuff and politics. And it was an interesting education. And after, you know, taking a lot of lumps in that, including the financial crisis lumps, I decided that I just needed a more stable environment. So I went to go work for the big French \$40, \$50 billion competitor to Dassault to Autodesk, named Dassault Systems. Dassault had made the software for all the manufacturing industries out there. And so, you know, the airplanes that

you've been on, the cars that you've been in, a lot of those are designed, engineered, and then produced in Dassault software.

08:49

Speaker 1

And part of what I wanted to do was prove to myself whether or not that approach would work in this industry. And while I learned a lot about applying, trying this approach on a number of different projects with a number of big design build entities and owners, I came to the conclusion ultimately that technology approach wasn't going to work in this market. And so in 2022, decided that I would take what I had learned throughout all those decades and try and apply it myself and come up with a solution that might be a path to something that would be a winner in the market. At which point I reached out to Errol and said, here's what I'm thinking.

09:26

Speaker 1

You know, I need to build a company around this, and there's this opportunity, because it's always better if you can start with something instead of starting from scratch. And I had found this team in Europe that had built some prototypes for doing manufacturing and construction, and they tried to approach contractors and people who might be interested in automating some of the things they were doing, but they never really got to a point where they got traction. They had built a lot of interesting prototypes, they had built some things that could write data into Revit that was very high quality. And so I started having some meetings with them because part of my function at this big software company was to look at entrants in the market and see who might Dassault Systems want to invest in or acquire.

10:13

Speaker 1

Dassault passed on this, I put it on the roadmap, but they decided not to do anything there. And after a couple years I decided, you know, these guys have really good technology, but they just don't. They need help in their go to market. And I have done a lot of go to market. And so that's what I approached are all about, is putting together a team that could take this technology, rewrite the roadmap, make something a little different with the underlying technology and then bring that to market in a way that could impact the industry.

10:41

Speaker 1

And so that's what we did with Schema was we took this team that had written five years worth of code and you know, one month after entering the deal with these guys going to London, rewriting their whole roadmap, building a whole different variant of what they had started over the next year and then taking it to market in mid, mid 23 and a fascinating story.

11:03

Speaker 2

Yeah, well, and a couple things I'll fill in there is, yeah, Errol. Thank you, Errol, for introducing me and Marty and other colleagues like Brian and you know, Jim kind of hinted at it. I've known you. One thing that I think attracted Marty to take a leap of faith and work with me is faith driven entrepreneurship. A, you know, B, you know, he's been on the software side of the buildings, but before that physical side of buildings, I was on the physical side and then the consulting side, green buildings. And so we really put together a team that we've got architects, we've got some that were builders and we've got a lot of the team that's built software in the architecture, engineering, construction, AEC space.

11:41

Speaker 2

But in a minute, Jim, I want you to guide us hopefully so we can talk about actually where we're having a lot of success with Schema in 2026. And it's a little surprising and a little exciting. But yeah, Marty was one of my partners there. As we were finishing up our green building work, we exited those companies successfully, we raised some money and were able to acquire that tech and that brilliant development team in Europe. So yeah, we pulled in some heavy hitters early, but we also had some tech to start with. Marty and Nikita have led the team that have modified our software, took it to it and became Schema AI.

12:15

Speaker 3

Okay, so it's good history. So the, you know, I think what people like on these kind of things because they, if you're not careful, they end up being kind of sales pitches. Like, you listen, people talk and they tell about, you know, so what do you, you know, what's interesting a lot of times is the insights. Right. So what do you know now that you wish you had known when you did this?

Like, would you still do it? Or like what have you going, Whoa, man, I wish I'd have known that, you know, like what's evolving now.

12:45

Speaker 1

I wish I knew how hard it was going to be to raise the capital.

12:48

Speaker 3

Yeah, that's always.

12:50

Speaker 1

It's been a way taller climb than originally anticipated, which has forced us to make hard choices about things. Some of the choices that we made initially have panned out to be correct, in my opinion.

13:01

Speaker 3

Like what? Give us some examples of what's. What did not come out correct. Right. Like the capital, obviously, like, oh, I thought we'd throw money at us, but it takes time to raise money.

13:11

Speaker 1

You know. Having built Revit, I knew how fussy architects were going to be, but I completely underestimated yet again how fussy they were going to be. So we, you know, one of the things that we had done was set a bar that architects would want to use the software. The reason we did that was in my experience at Dassault, I had worked with a large design builder named Len Lease in this type of transformation to go to model based design so it'd be more efficient in the construction process. And they made a piece of software called Podium that was very much analog of what you might make in say an automotive industry software to take a pre built parts bucket and put it together. And before we started this company, I asked the guys who wrote that platform how did the architects like it?

13:56

Speaker 1

And they told me they hated it. They wouldn't use it because they could only

work out of the parts bucket. They couldn't really come up with something, you know, completely different than the stuff that was in the parts bucket. And so one of the things that we really wanted to do was make it so that the design professionals would want to engage with this thing. And so we set our sights there by creating a pioneer group of people who were principals at Architecture firms and talking about these ideas and getting them into a group that would talk to us about what they were looking for. And we tried to get it so that, you know, people who are working on trace paper could pick this thing up in half an hour and actually use it.

14:35

Speaker 1

And a lot of the concepts that you see in Schema today came out of sort of setting the bar there. This idea of morphing, which is fundamental to what we do, is you can take an assembly that was used in a past project and you can reapply it, but it doesn't have to stay the same as it was in the past project because the future project has a different site and different shapes and things like that. So I think that was one of the things that we speculated on and got right. I think what we underestimated was how much the market might be looking for a replacement for Revit. There's really a lot of focus on automating 2D drawing deliverables. And what we do is we really automate the 3D model so that Revit can make the 2D drawing deliverables much more easily.

15:14

Speaker 1

But we don't directly focus on the 2D drawing deliverables. And that is probably something I would have done more of, you know, in hindsight. That said, there's a lot of companies now focusing on automating 2D drawing deliverables. And that's a tricky problem in a model based system having solved that would.

15:30

Speaker 3

Have vertically integrated you more or what would be the reason that you wish you'd have done?

15:36

Speaker 1

Well, not to say that there's technical solutions to this, but it's an aspiration like people don't want to lay out their details. And so there's this aspiration

now that AI has burst onto the scene, that AI will do all this ugly, boring stuff for me, which is okay, except for the fact that AI works on a different kind of math and you give it a problem 10 times and it doesn't come up with the same answer every time because it's a black box and it's based on probabilities. And so the difficulty of applying AI in a design process, especially when you have something that has to be engineered and meet codes, is that you have to be able to explain why you made certain choices. And so this is the problem. You can't always explain why it made certain choices.

16:22

Speaker 1

So we came up with a fundamentally different approach while still leveraging AI, which I, you know, I can get into the details and guts of if we want to but basically, we combine normal math with AI to solve the problem in a way that produces answers that are explainable every time.

16:40

Speaker 3

So is it. Is that a just a confining of putting guardrails up for AI, or is it. AI did it and you just have to be able to document what happened?

16:50

Speaker 1

Well, so I'll use a data center as an example. We've used this on stage. Data centers are actually. They involve less art and more engineering than the average project because they're really driven by two things, the amount of data you can process and keeping the things cool, and power efficiency. Essentially, those are the three metrics that drive data centers. And in order to optimize those three metrics, you have to. You have engineering solutions for the hallway with all the compute racks in it, you have for the cooling, for the electrical, for the site layout. And these are all things that don't require AI. They have discrete solvers that can figure out things and make suggestions. What's really interesting, though, is when you write a system that does that, it's an. It's a. A bunch of experts, right?

17:43

Speaker 1

And if somebody wants to drive that, you have to be an expert just to even talk to that, because there might be 150 different input parameters. And, you know, even the most skilled engineer trying to solve something with 150

independent variables is going to, like, get a massive headache. Where we've applied the AI is it can learn the 150 input parameters and when it tweaks one, what happens? And then you can describe the outcome you want. And this is exactly what agentic AI is supposed to do. You describe your goal and it figures out what to do to get to that goal. And so this is how we apply the AI. You could say, I need a project that has this much compute, I want to achieve this power threshold, and I need these types of chillers in the cooling.

18:31

Speaker 1

Give me three options, and it'll give you the three options. And you can look at it and say, why did you give me 43 chillers here when by my calculations, 38 would do? And we'll be able to explain the rationale because it will look at the solver and say, oh, I made that choice because of this constraint. And so it will trade off between constraints that are discrete math. And then it can tell you why it did that. And that's the more powerful thing, is not trying to ask an AI directly to solve problem, but rather to give the AI tools that it can use to solve the problem so that then it can explain why it made certain choices to solve the problem that way, which is. That's our fundamental approach to this, basically.

19:12

Speaker 3

And can you replicate that over and over again?

19:14

Speaker 2

Yes.

19:14

Speaker 1

And it produces the same result every time because when given the telling them what to do. Exactly. You give it the overall problem and the set of tools which are coded in Schema to assist the AI in making these trade offs and then the AI will consistently make the same trade offs because the tools are the de facto guardrails, basically.

19:36

Speaker 3

Yeah. And so, I mean, so effectively you got the best of both worlds, right? You

got, well, you got three really. You got speed, but you got creativity and you got replication.

19:45

Speaker 1

Go ahead, Charlie.

19:47

Speaker 2

Well, I was gonna say that's one of our competitive advantage right now on this tech. For over a few years, the team and the tech that Marty discovered that were able to go ahead and bring on was already building it for a couple more years. So we're like, you know, five, six years into our building our machine learning. And so we've got this great foundational tech that now we're pointing that in a minute. Let's talk quick service restaurant or Marty Sid Data Center. And like, it's pretty fascinating. And I think we did get that one right about how we aren't connected to the large frontier models yet. Right. Instead we do it our way. We protect our customer data. And the reasoning is only based on that customer data in general learning that's kind of kept within our tool.

20:30

Speaker 2

So that one I think we really got right and that's really helped us compare to others. So I just want to double down on that.

20:36

Speaker 3

All right, so. So let's talk about what does it not do that you wish it did right now? What's like, what's on the road map? Like, you go, man, this, we're missing this.

20:44

Speaker 1

We really need a lot of what's missing is the basic architectural functionality that an architect would want. There's a lot of functionality that's there. But you know, having built Revit, there's a lot more that needs to be done with curves and splines and artistic forms. And really we're just introducing that stuff. If I had it my way, I would have put it in there two years ago. But we just had to make some hard choices around what we solve for. And so that's just a

function. Yes, it's just a function of money and the ability to raise capital to be able to expand the tech team. And so we've been operating pretty lean since we started this thing.

21:23

Speaker 3

And so architects were your first market. So is that you plan on staying in that and then going to owners or.

21:29

Speaker 1

No, we've already gone to owners. And, and the reason is that if you think about what I described, where somebody can say the goal and it can give you three options, that's like an, that's like a feasibility tool that knows how to engineer the whole building. So it like it has to guess a lot less once it gives you the answer, because it's actually made the trade offs because it actually knows the rules. And so what we found is that, you know, a real estate planner and an owner or a capital program manager at a data center company can say, well, you know, what if I took these sites and I had these metrics, what would this do? And then they can get answer about whether this thing is workable or not.

22:10

Speaker 1

And then get on board with an engineer or an architect who can take the Revit output from that and do a sanity check on it basically to say, how does this look to you as a trained professional who would have to sign on this from a life safety and standpoint, would this meet? What would you have to do to this to get it to the point where you could produce a permit set so we could pull a permit. So mainly what we've stumbled into is something that can serve as a collaboration vehicle between the people on the owner's team trying to solve a capital problem and the architect and the engineering team that has to design that solution in an environment where there's a lot of time pressure. Because in construction, time is money.

22:53

Speaker 1

And so the whole idea of squeezing time while getting better answers and higher quality answers out of the process has been something that the owners have really responded to. And so certainly in among owners that have time pressure to deliver data centers is one of those quick serve restaurants is

another. Any date, any owner that has that kind of time pressure has been responding really well and this story has been resonating really well with them.

23:16

Speaker 3

So where could you go with the owners and what's like, what would be next on that roadmap that they would go, okay, this is like, you guys are the best at this, you know, for our needs, right? What, what is, what does that look like?

23:30

Speaker 2

Yeah, I could chime in a little there. You know, it's an interesting conversation where, you know, Marty literally was on the team, so are some of our other colleagues who helped build Revit. It's arguably the most successful tool in the architectural engineering, construction software, building design software industry. And you know, it's 1.2 billion a year revenue. Right. A lot of people use a gym. We didn't set out to be a Revit killer. We still may not be. But what's happening is this new way you design buildings and buildings. It's a connected ecosystem of design tech and construction tech apps, cloud based, share data, cherry on top, maybe have AI. And so we've leaned in and Marty's helped position us as he speaks on stage around the world that like look, we can be that connector.

24:14

Speaker 2

So, so to answer the question about where do we go from here, Jim, sometimes when we work with a Chick Fil a or a Walmart or these amazing growing brands that have multi building, multi year programs, renovations and new construction, they feel empowered that they have an in house design tool that can be used by non technical team members that produce highly technical results. Maybe a 75 plus percent design building that then the architect of record who's now hired later says, you know what, I can actually use that. I don't need to redraw it. Okay, let's get going. So that's our big 2026. Aha. We're leaning in too hard to ramp our revenue right now. I think there are some developers more on the multifamily side that think why do I even need an architect?

24:59

Speaker 2

So just know that me, Marty and our colleagues have to field that answer too.

25:02

Speaker 1

Right.

25:02

Speaker 2

We didn't want to build an AI tool that kills the architect. But if you're a prototypical building layout, a four story Hilton hotel in the suburbs, unfortunately the designer fees are already looked at as a commodity. So we try to separate it into two buckets. Jim. Some of our early adopters, customers and even investors on our cap table over the last few years are large architecture firms that if they're building a 50 story building, you know, in New York City, you know, they want to use Schema to really help with their workflow and protect their best practices as a firm. But if you're just one of these kind of buildings that maybe the owner already looks at you and your design fee as a commodity, we've got to handle that conversation, if that makes sense.

25:44

Speaker 2

So I think that'll be an interesting one to unpack. Can Schema down the road, can we actually produce detailed drawings that can go for permit and maybe you do have as a developer an architect in house that stamps it question mark. For now though, we're going to some really cool growing brands that still hire architects, but they're excited to hire the architect of record later. So they can get together and that way there's not change orders. They finally iterated, iterated, hit a button in Schema. And now this is something everybody else can use. And then bonus, the contractor suppliers can get their quantity takeoffs and everyone has access to some really good information that can be trusted. And these 3D BIM files that our industry should have been doing for 20 years, but maybe is just now doing.

26:35

Speaker 3

So there's some kind of, there's an economic savings in there because of the padding of each area. Is that the idea from an owner's standpoint, like Chick Fil A or.

26:46

Speaker 2

We're hoping that owners that we're working with don't immediately say, hey Mr. Mrs. Architect Contractor, you don't have to do as much design, you don't have to do as much counting of things. You have less fee and more that everybody feels comfortable to cut the fluff. You know, Jim, we call it the CYA tax. So what if we could just.

27:06

Speaker 3

And that's what, 10 to 25%?

27:09

Speaker 2

It is 10 to sometimes 25% of every project. It's one thing if materials cost more, labor costs more. There's this 10 to 25% one of us.

27:19

Speaker 3

That's at every level though.

27:20

Speaker 2

So that ends up getting one of our investors, 45 year executive Craig Russell at Disney, he's consulting back. He's one of our angel investors. He's opened a lot of doors for us. He said, charlie, even at Disney, when we're opening a new hotel around the world, we'd add 10% just because what if we missed something? So, so actually I think, Jim, the immediate savings for an owner is not just saving time and then getting to revenue faster, it's everybody to build up some confidence. If they all have a login, if the owner pays a project fee to Schema and every single party has access to the same information at the same time, there's no excuse to add that fluff and that CY tax. And so we're going to ride that out.

28:03

Speaker 2

We hope the owners think that's enough of a benefit, let alone open the doors faster. But there is a chance that they're going to push on the laggards and design that don't innovate and say, hey, I'm doing some of your work. We'll let them have that conversation later. Hey, quick question. You spent months, maybe years earning LEED certification, so why are you still hanging a generic

plaque on the wall with buildingplaques.com, you can showcase what actually made your project achieve lead, highlight your scorecard, your design strategy, your team, architects, engineers, contractors, owners, all in one clean, modern display. Their plaques are fully customizable in minutes, built with durable architectural grade materials, and arrive ready to install. This isn't just a plaque. It's a storytelling tool for your building. If you're proud of the work, show the work, go to buildingplaques.com and design yours today.

29:03

Speaker 3

All right, so what does your competition say about you guys that you don't do, like, oh, yeah, they're good at that, but they don't do this and this. How do they stack you up?

29:12

Speaker 2

Well, and I'll throw it to my colleague Marty here, but, you know, it's an interesting thing where we've been in this AEC software industry, and those are the conferences we go to. And we got some other peers that we API connect with and we complement each other, and some others have raised money and we're all a little different. And then over here, we're kind of going after owners and we're creating something an owner can hand off. So we're getting into some new territory where there's really not anybody. But I don't know, Marty, what. What do you see from what's out there and in the marketplace?

29:40

Speaker 1

Well, the corner of the room that we wanted our value proposition to be based around was the ability to not have the architects start from scratch. The ability to use those things that they had developed on projects, again, in a flexible way, and then the ability to get the data that they need in order to produce their permit set so they can get paid. That's the value proposition for the architect. What it means is that you have to do a little bit of planning so that you can take things from your past projects and decide what kind of kit of parts you're going to make to reuse. So it depends on which competition you're talking about.

30:18

Speaker 1

There are feasibility tools in the market that will do this type of planning, but they're usually very focused on either one building type or another, and they will usually do abstract planning, if you will. So an apartment unit might be a block, not the entire layout that you would have to put into a permit set like we have. So for feasibility tools, you know, we. We're a design tool. We sort of go into feasibility because of the way we've constructed the software which I described. But we're really a design tool that produces results that an architect could look at, an engineer could look at, and in very short order stamps so they could get a permit for it. The folks that are the design tool competition are really just trying to make cloud versions of Revit.

31:04

Speaker 1

And so they focus on starting from a blank page and how can they model all of the features of Revit which have been built over the last 25 years. And so they would say about us that we have gaps in those features and we're fine with that because we're not trying to build a copy of Revit in the cloud. We've got this corner of the room that reuses that data and produces high fidelity output in that format. But it's not a file based system. It's a live data synchronization between Schema and Revit. And so we run as a standalone web application and a designer can use it just in a web page without having to install anything. We also run as a Revit plugin, we also run as a SketchUp plugin. We also run alongside Rhino.

31:49

Speaker 1

So our goal was so that anybody doing any design using whatever tool can run us inside or alongside so they can take the benefit of the workflow and take the benefit of the data reuse with the least amount of friction possible. Because as I mentioned, the things that I learned in the past are all about the culture, the legal and all those things that.

32:13

Speaker 3

Yeah, all that tangible stuff. Yeah.

32:16

Speaker 1

So it's the removal of the friction which we focus on, not the replacing the existing tool. Because the minute you say, okay, now you're just going to throw

that away and use this. Now you have a big a switching cost problem on your hand. Now you have a big cultural convincing problem on your hand. So we've tried to avoid all that.

32:33

Speaker 3

Huge. Yeah, right now it makes sense. So. So again, five years from now, owners, I guess you could do architects too, or all four. What's the world look like then? What's like, what is going to happen where people go, man, we had no idea. So I really changed a lot.

32:50

Speaker 1

Yeah.

32:50

Speaker 3

What happens then?

32:52

Speaker 1

So, you know, if I had to paint a picture. So the kind of buildings we talk about that are prototype driven and very regular, you know, like a quick serve food or a big box retail, they might all being done this way at that point. It'll be really interesting when we get into the buildings that are not like that. So think of so like a data center is again a very engineering driven problem. But think about something that is very unique and iconic, like a stadium. We've worked with companies that design stadiums. They understand how they would apply Schema in that, but it's not in the part of the stadium that you see when you walk up to the stadium, which is the big curvy part with the bowl, with the seating and all that.

33:27

Speaker 1

A lot of those companies have already written their own computer math to solve that stuff because they're optimizing for, you know, the high price ticket need the best view of the field and all that.

33:38

Speaker 3

Yeah.

33:39

Speaker 1

And so you need to be able to take sort of what they've already done and be able to integrate with that, as I say, so that you're not getting into a big switching cost problem. And so a lot of those companies, you know, that back of house that you see when you go to the concession stands and the toilets and the locker rooms and all that stuff, that's all the same from every stadium one to the other. And they have to adapt that to basically this big bowl in the middle all the time. And then they have to put a roof on it and the skin on it and all that stuff. And so we have the ability to cut time and uncertainty and risk out of that process, but not for 100% of the scope.

34:16

Speaker 1

And so future projects are going to have things that really are iconic, similar to the way they're done today and built in the field, or prefabbed and delivered to site. But a lot of the things that are surrounding that, like the concession stands and the, and all the other things, those might turn into products that are delivered and just dropped in and installed.

34:40

Speaker 3

And almost like a plug in, really.

34:42

Speaker 1

Exactly. You know, like when you have a car, you don't make the entire dashboard assembly inside the car. Somebody makes that somewhere else and then on a day it shows up and they drop it into the car. And that's exactly what we think is going to happen here. It's just a matter of how we're not. Because the point of final assembly is the most expensive place to do anything. We are likely to have some sort of prefabrication and automation of that prefabrication. How that happens in the supply chain is something I don't have the answers to. You know, there was a company, a big company, Katera, that tried to do this by replicating the manufacturing model of doing an oem. And they burned through a couple billion dollars to prove that's a very difficult way of doing it.

35:27

Speaker 1

And so we think they're going to be flexible approaches. We think Dassault had advocated this concept of micro factories that are near site. I do think that will play a role in it. And it will be a combination of a lot less site built things and a lot more near site built things and a lot more productized factory things, but with something that orchestrates them all and with something that also works with a bunch of the existing tools because the architects in many cases add a lot of value there for the overall concept of the project. And so it's not an easy black and white answer. I actually think it's going to be very messy for at least 10 years because of the legal structures that are in place and the cultural friction and the political circumstances. Right.

36:15

Speaker 1

So that's the trick is how you navigate those waters when they're very choppy waters.

36:21

Speaker 3

So, so if you're talking to owners then out there, because that seems to be kind of where you guys are going at the moment, right? Where you know, you're working with architects still, but really this owner thing has opened up quite a bit. Is what would you say would be the main reasons to use Schema for them? Like why should they actually. Like what would be on their hit parade to go, oh, we need to talk to them because of X, Y and Z. Yeah.

36:46

Speaker 1

Time to market pressure, right?

36:48

Speaker 3

Is it time to market? That's the key.

36:50

Speaker 1

Yeah. You know, a Walmart on average \$2 million a week. Right. Every week it's not open, \$2 million. So that's new build and that, you know, even in renovation you've got the same issues. Like, you know, I think Walmart does

like you know, seven, eight times as many renovations as new builds. So these then this is a lot of projects in one year to pull off as an owner. And so the, when you can apply, you know, even modest savings in a replicable way across a large portfolio, that's. That can turn into a big number.

37:24

Speaker 2

Yeah.

37:25

Speaker 3

Okay.

37:25

Speaker 2

I would add, Jim, it's definitely that get that first customer in a renovation, a new construction. And some of the owners we're working direct with on the retail and quick service restaurant side are looking at Schema as not just a design automation tool, but as a business tool. It's like, hey, we get a. You're saying if we could build five more chick fil A's in 2026, the next year we can actually move 60 plus million revenue to 2026. Like that's a big deal. And so we're starting to have those business conversations. And again, our secret sauce right now is because non technical team members can use our tool and get a highly technical result that the design team that now you bring on a little later, can take where the owner has left off. It's a big deal.

38:08

Speaker 2

I think the other thing with owners though is just consistency. You could say prototype, but it's really just can their best practices be guaranteed to make the cut? If you're a company that's going to Canada for the first time, you want to hire a local architect, you may literally have to hire a local architect. Gosh. How do we make sure our best practices, let alone our customer experience, is similar? And so a tool like Schema can be that intelligent system that protects that for you.

38:37

Speaker 3

Okay, so what's the. They do that? I mean it sounds like it would, you know, sky's the limit, right? If you're Sam's Club or whatever, you could just build that

ad infinitum, right? You could automate the whole process and you just push a button, you got a Sam's Club. So where, what's the trade off though? Like what do they learn? If they use it for X years and go, it's great. But here's the trade off because most things have a trade off of some kind, right?

39:02

Speaker 2

We're learning a lot about retail and planograms and merchandising. So maybe another customer that we're working with trying to ramp right now is, you know, it's a flooring supply store. And you know, if you're in Miami, you have different tile and marble than in Atlanta, Georgia. So. So we're actually learning while the box may be somewhat similar, the end caps, the merchandising, the flow, you know, maybe you're a big box retailer to compete with Amazon, you need to actually have different shelves so that. Sure, I could walk in and buy the socks or someone ordered from my retail website, those socks are going out. It's as. My retail store is also a distribution center. So actually by prototype they're ever changing. That's what we're learning. They're changing often.

39:49

Speaker 3

But going back to the question, so there's no trade off then, per se. In other words, this is a no brainer, inevitable pursuit for retailers. Is that what you guys are advocating?

40:01

Speaker 1

There's a trade off?

40:01

Speaker 3

If you're not thinking about this, you need to be thinking about it because you get more stores open quicker, blah, blah, blah. There's no real trade off. It's like a really good solution.

40:13

Speaker 1

You know, we don't know what we don't know. So right now it's early days applying this in the owner space. These Owners hire these trained professionals because they actually have to own the project and be the stamp of record. And. Right. So there's a certain amount of friction you can't remove

from the process because of the legal constraints. And so for us, that's usually going to be a trade off. We're going to have to recognize that you've got a licensed professional at the end of the chain that is going to have to sign this and be responsible. And so we have to respect their wishes as part of the project team. But at the same time, we want to make it easy to interact with the owner. A lot of what we've been looking at is taking.

40:59

Speaker 1

And so the reason that they hire these architects and engineers is that they don't want to bring all these core competencies in house because that's not what they do for a living. Right. They're a retailer. But. And so, you know, to the extent that we can equip, because they don't just work with one architect or one engineer. You know, a big company works with hundreds of architects and engineers because they're all solving local problems. Right. And so to the extent that we can become. I've always believed that people will do whatever's easiest. If we give them a way of making things that are consistent and keeping error out of the process just as the default way it works, then they'll use it because it's just easier.

41:36

Speaker 1

We've looked at the kind of content systems that architects using Revit today use, and can we integrate with those content systems so that they actually use us without realizing that they're using us?

41:46

Speaker 3

Okay, right.

41:47

Speaker 1

So like, there's ways of getting into that corner of the room without necessarily having to, you know, shove yourself in front of somebody's face and say, hey, now you're using this.

41:59

Speaker 3

Right.

41:59

Speaker 1

They can just realize they're using this because the owner supplied the data. That way, you know, produced an outcome. And now they realize that, oh, this actually is an interesting idea and I should leverage it more intentionally. Right. So there's a lot of different modalities to get the architects involved on these projects with the owners, but there's very good reasons that the owner wants architects and engineers involved that really are mandated legally and from a labor standpoint and just, you know, local politics.

42:28

Speaker 3

Yeah. Having a human. Human layer to, you know, that's the.

42:31

Speaker 1

Other reason we haven't tried to do things that don't have humans in the loop. We. We've sort of always assumed humans will be in the loop.

42:37

Speaker 3

Right, right. So. So on my side at least, you know, tidying it up is, do you have any other insights that, you know, for the owners or the, you know, the architects or, you know, what other insights do you have right now that are these unique insights that people need to think about?

42:54

Speaker 1

Yeah, I think, you know, for the owners, it's pretty straightforward. They'll look at it from a business metric standpoint. My insight is for the architects, because I got to see the adoption of Revit when it was trying to displace AutoCAD 26 years ago, when nobody knew what Revit was.

43:09

Speaker 2

Right.

43:09

Speaker 1

And so one of the rules at that time was people would say, I don't want to

change my process. And one of the things we would point out to them is if you don't change your process, you're not going to get any better result because you just keep doing everything the way it is now. It's going to stay the way it is now. Right. And so that's one of the things that prompted people to adopt a different approach to doing this, because they didn't want certain things that they would have to do with AutoCAD all the time, which would end up, you know, coordinating 400 drawings manually. Like, you know, people using that today consider that just insanity. Revit eliminated that. So, you know, this is for us, the. We've been looking at how architects and engineers are adopting AI tools.

43:49

Speaker 1

And right now, it's a lot of playing around the edges, right? The way that they make their fee and the deliverables that they produce, they're. That generally is the same as it's been. Right now what they're doing is making client deliverables in a different way from the standpoint of how they might visualize it or how they might explain it. But at the end of the day, what they have to deliver on the permit set, that process is staying the same. Until something affects that process, you're not going to get higher quality or better efficiency or more predictability or better outcomes for the owner. And so we're hoping to be able to impact that in the least friction way that actually moves the needle as opposed to just playing around the edges.

44:31

Speaker 3

Okay, so let me ask a couple more things and we'll wrap it up. Is. So what. What do you, Marty, what are you most, like, ginned up about this whole industry schemas place in it and all that? What is your most exciting? You know, what do you think about? I mean, this is really exciting. And then I'm gonna do the flip side of that which is what concerns you the most?

44:51

Speaker 1

You know, what excites me industry wide.

44:53

Speaker 3

Or industry within Schema within industry? You know, just like the whole thing, like when you sit there and think about it, what gets y' all fired up? And

what do you get? Like, oh, man, I'm worried about that.

45:02

Speaker 1

In order to do a company like this, there's only one way to approach it. You have to fall in love with solving the problem. There. There are problems out there that, especially on the design side, are very difficult because they involve intuition and they involve experience and stuff like that. And what really revs me up is when we have a customer meeting and we show, you know, something we've implemented to really move the needle on our approach. And the customer goes, oh, that's really good. I want to try that. This content integration stuff I talked about, we showed it to a couple customers. They're like, when can I have it?

45:38

Speaker 1

So that's the kind of stuff that gets my motor running is when I'm actually, you know, talking to people that are in the middle with their elbows dirty and they go, oh, this, can I have that now?

45:49

Speaker 3

Yeah, even.

45:49

Speaker 1

Right. So that's what fires me up.

45:51

Speaker 3

Yeah.

45:52

Speaker 1

And for the industry, you know, the more of that we can get to so that we can get more predictable outcomes. When we get into starting to plan how we're going to actually deliver the built result and not just the drawings of the built result, that's when things will, I think, start to. People will start to realize that there's a path towards improving the whole problems of the sector because. Right. The cost of construction affects tons of stuff. First off, it affects, like

insurance, it affects housing affordability, it affects all kinds of things.

46:26

Speaker 3

Right. I mean, whether you do it or not can be a no go. Right? Go, no go. Exactly.

46:31

Speaker 1

Right. So it has a lot of economic outcomes that are indirect. But, you know, I think once we can affect the underlying economics of a project that has ripple effects that will excite a lot of people in the industry.

46:46

Speaker 3

Okay, so what keeps you awake then? Because this didn't work, man, we missed it. I'm really worried about that.

46:55

Speaker 1

What keeps me awake is the hype around AI. I have this phrase for it, which is the industrialization of bullshit. If AI causes a lot of people to waste their time making bullshit, then it's going to distract them from the things that actually move the needle. And for a company that's trying to move the needle, that's my biggest worry.

47:16

Speaker 3

Yeah. In other words, it's just a tool. It's not the right. You know. Yeah, yeah. I think a lot of people are. Either they're concerned about it or they're actually realizing it as you try to get things done with it.

47:29

Speaker 1

Yeah.

47:30

Speaker 3

Especially the randomness of it if you're not careful. So. All right, Charlie, any other comments or anything else you. I forgot to ask or whatever. I try to keep

you in one. Keep it real. Right. Get this needs to be news, right? Not. Not just like Planet Tunes.

47:47

Speaker 2

You're good at that, Jim. You've been in the trenches. No. Awesome conversation. I'm excited for those that listen to this later, not just our normal podcast listeners, but some of our current investors, some that might want to become a customer. Just. And you've kind of heard a little more of that origin story of how Marty and I got connected. What Marty had done before. Taking the sleep of faith. Yeah, I would just say, look, we're, you know, we've got an 18 plus person company. We're going places. We've had a big clarity moment this year to also sell direct to owners, working with some amazing names and brands. So we're just gonna second half of the year, just focus there. We still love our architects and straight to other contractors.

48:30

Speaker 2

We're gonna go pretty far with owners, retailers, quick service, restaurant as we build out the team. You know, Marty's been asking for more developers for a long time. You know, we're gonna see where else we could take Schema. But anyone listening that's even thinking of, you know, doing a startup, if you're in the Atlanta ecosystem, make sure you connect with Jim. And if you're up in Boston, talk Red Sox with Marty. If you're here in Atlanta, let's grab coffee. So, Jim, just thanks for being a special interviewer today, Marty. Always enjoyed the time we get to spend together and just thanks, man, for spending this.

49:02

Speaker 3

You're very insightful, Marty. I think that was some really good stuff. I mean, you know, kind of frames up how you think about AI and the whole industry. You know, I think the vision, you know, the vision on this stuff is, I mean, you know, it's going to innovate, Right. And. And it sounds like for the owners, particularly you guys, you know, the golden rule, right. They have the goal so they can actually drive some of this innovation through the other players. Right. And kind of say, I want you to use this, which could end up being really good if you get a foothold into the owners, like, Schema could benefit from that because then the tool might be, you know, a Schema tool for architecture, you know, suppliers or construction. Right. So. All right, we're good. Thank you guys.

49:47

Speaker 2

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