[music]

Paul Thies: Not all digital innovations and new tech are developed by folks working out of their garages. Sometimes the next startup that's waiting to happen is being developed within an existing organization, even a big global one. What matters is having an entrepreneurial mindset that combines invention, business acumen, and zeal for the customer and solving their problems and approaching all of that like an owner, hence the rise of the entrepreneur. Hello, I'm your host, Paul Thies, and on this episode of If/When I spoke with two gentlemen from Jacobs' who are part of the team behind Alluvial, a new data insights solution that they run like a startup business, helping me to unpack their entrepreneurial journey. Our Alex Maru, director of incubation for data and technology and Alluvial product manager, and David Yardi, software architect. Alex and David, thank you both so much for joining me today. I'm excited to talk with you about Alluvial.

It's a product that is provided by Jacobs', and I understand you both are foundational to its genesis and to getting it out to the market and keeping it going. It's really fascinating to me this idea of entrepreneurship. You've got a multi-billion dollar global corporation but yet, it creates that space for innovators and entrepreneurs such as yourselves to come up with new products and new ideas that you can bring to the market in a sense like a startup within a big corporation. Hats off to both of you for having the moxie to do it. I'm really looking forward to learning about the dynamics at play and how you made that happen. Now, Alex, let me start with you. What inspired you to start up this product in the first place?

Alex: Thanks, Paul. I'd say the big thing is friction. We didn't go out and say, "Hey, let's build the thing. It's going to solve all the world's problems." It **[inaudible 00:02:21]** we need a better convenient way to deliver. People were having issues just sharing their dashboards with clients. That's where it came out of. It started with one project and then we moved to another project and then through word of mouth, people had their projects that they wanted to be able to deliver this way.

Paul: Let me ask you, you say dashboards. Explain a little bit about what the Alluvial solution is and how somebody would use a dashboard to serve a client and how this helps them do so.

Alex: Yes, good question. People will come with their data on a project. James is going to be contracted to design something on the earth. With that design or analysis, there's a ton of data that's being generated for that and all the way to delivery. Then afterwards in the data life cycle, people need those insights to make better decisions about what they're going to do with the design. There could be some collaboration that need to happen both at the operational level within the project or even at the meta-level, scope, schedule, budget what we call project controls. Meeting up the project controls with some of the design data as well is a big deal. That's really the idea there is to enable folks to be able to share that with their clients and for the clients to be able to log in and as stakeholders provide comments and everybody's working quicker towards delivery.

Paul: Okay. It sounds like it was first started as a value add so that folks within the company, i.e Jacobs' professionals who are trying to serve clients could provide better service or have some more insights into something that they're-- and how

they're serving clients. From what I understand, you realized there was a benefit that clients would actually pay for this solution. You what convinced you-- walk us through a little bit of that illumination, that light bulb moment where it was like, "Yes clients would pay for these insights, and here's something that we could productize and sell to them."

Alex: I say there's multiple ways clients are paying for it. The big way is it's freeing up billable throughput. What I would say we have the people who were trying to share their data and insights with their clients, they couldn't do that. They were landlocked. They had to worry about cloud hosting, they had to worry about getting licenses for the software that they were developing on. They had to worry about

here's an idea, let's go build it." You're right. Many times a lot of great ideas, things that we end up with started out in that iterative process. As you go through that journey, you start uncovering other use cases and you start having more and more aha moments it sounds like. Then suddenly you realize, "Hey, I think we may have something here."

Now, Alex, how do you take that excitement of that aha moment David was elaborating on? How do you convince management this is a product that deserves support? How do you get that buy-in so that it's like resourced properly and funded and all those kinds of things? I think that tends to be a question people won't ask. How can I take what I've got and take it to the next level?

Alex: This is going to run counterintuitive, but part of my job is I oversee incubation with specific initiatives. I do coach folks on this part and this is where I specifically own it as the product manager, think small. Actually, when you look at the on-ramp for what it takes to get to the place where you want to go with a product, platform, or solution, have a hyper-focus on that end result. Start smaller. Think about it in smaller steps and expand your horizon there. When you think that way, your end result of your level of effort is actually going to be smaller and easier to digest.

One of the taglines I say is disruption without interruption, respect the business, as usual, respect what might need to be disrupted, but provide some calculated pressure over time to get there. I think it's going to be a lot more digestible to the organization when it comes to innovation. You got to really just be prepared for a slog in a good way.

Paul: Yes. You've got to be committed to your idea. Right?

David: Yes.

Paul: It's not just a flash in the pan, but you've really you got to have that fortitude now. David, Alex is talking about obviously resources particularly in a digital space. In a company like Jacobs', there's so many projects going on and so much need for technology and software, and solutions. What are some of the resources that you as the software architect had to marshal to help get this thing built and launched and supported? What was that journey like bringing in the technical expertise beyond just yourself to stand this up properly?

David: In my role for the last five, six years I'm managing a team of global developers teams across the globe. As part of that, we've had developers at different skill levels as well as external influence from Microsoft. Some of their influence in this application was very valuable. We can get into that further, but based on the diverse nature and the different skill levels, we had the resources to start applying to some of these problems and just knock off some of the problems. It is a very solid team that we've been built on practices in patterns for five, six years, the same team, so we've leveraged that quite easily to apply the right person at the right time to move the bar. That has been a big benefit to us.

Paul: Now, talk to me a little bit about Microsoft, and what is their role in this. I know they're involved. Are there other external organizations that you worked with as well?

David: