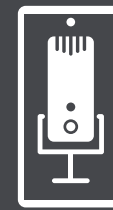


Episode: 32

# James Benham



THE  
**MOBILE**  
**WORKFORCE**  
PODCAST

## Mike Merrill:

And welcome to the Mobile Workforce Podcast. I am your host Mike Merrill and today we are sitting down with the James Benham, the CEO of JBKnowledge. James taught himself to code at an early age and that helped him spark his entrepreneurial spirit and after his first year at Texas A&M, James and a partner founded their company JBKnowledge. JBKnowledge is an information technology services company that specializes in application design and development, also electronic data interchange, as well as strategy consulting, mobile solutions, and web development.

In 2018 James launched another company called TerraClaim. It's also a claims management company and also has benchmarking systems. Lastly, James is also a podcast host like myself and not only does he host one podcast, but he hosts two. The first one is The Con Tech Crew and the other one is the Insure Tech Geek podcast.

So today we're excited to talk to James about the construction industry and how they are embracing technologies and how those things are laying out across the construction landscape. So hello, James. Welcome to the podcast today.

## James Benham:

Howdy, howdy, thanks for having me on, always good to be on somebody else's podcast other than my own.

## Mike Merrill:

Yeah, it's a nice switch up I'm sure for you. Great. Well, do you mind just sharing a little bit about your background and how you got into the positions that you're in?

## James Benham:

Sure yeah. I was born and raised in Baton Rouge, Louisiana, went to a high school for engineers. It was

like if you're old enough to remember the TV series Fame, it was like Fame, but for nerds. We built a lot of software in high school and then I went to Texas A&M, just an absolutely awesome, amazing university in College Station, Texas and they taught me about business and accounting and got my Masters in Business there, then did a couple internships with a big five consulting firm, and decided that wasn't my path. And so when I was back in college I decided to start this company JBKnowledge with my dad and one of my high school classmates who was an exchange student from Argentina named Sebastian Costa.

And so for 20 years we've been building software for construction companies and insurance companies. We built a big product called Smart Bid. Smart Bid ended up being a pretty dominant industry player and invitation to bid. We had about a third of all projects flowing through it at one point. Sold it three years ago to iSqFt Construct Connect, kept JBKnowledge, kept all my engineers, and we built a product for certificate of insurance tracking, which is a big problem at GCs and built a product for insurance claims management, which is a problem for a large organizations that self insure. Then we kept doing construction technology consulting, so that's kind of the path.

I stayed in College Station, love living there, married, two kids, two daughters, and I have a lot of hobbies. I'm like a compulsive hobbyist. I'm a pilot and I fly pretty much every week. All I really think about is flying. I play the guitar and piano and sing and do all that about every night, and hang out with my kids, go campaigning every month. If it's a hobby, I like doing it, and I'm really into tech in every way, shape, and form. I got hooked, just hook, line, and sinker when I was 11, and got my hands on my first computer and started writing code, and really haven't looked back since then. I've been blessed to be surrounded by awesome people. I've got 245 employees now at JBKnowledge and most of them are engineers and I've got the world's best business partners. We're fully employee owned and no outside capital ever and we've really

focused on building great companies and had a lot of fun doing it.

**Mike Merrill:**

My goodness, when do you sleep?

**James Benham:**

Usually five or six hours. Last night was five and a half and that was about it. It was between 12:30 and six. It was a short night last night. I'm on the Board of Regents of Texas Southern University in Houston, down here in Houston at the Four Seasons right now for some board meetings and just love education, so I've been trying to help them for the last seven months. It's a lot of fun, but does get a little tiring, but as they say you sleep when you die.

**Mike Merrill:**

Maybe, right? We'll see. Well good for you. I've known you for many years, well over a decade and I've never known you to be anything different than full of pizzazz and enthusiasm. I'm glad you're still maintaining that same love for life and passion.

**James Benham:**

Got to, man. Life's short and then you die. I joke that I have a carpe diem complex. My wife says I have FOMO, fear of missing out, and so I like to go get it done and have fun doing it. The world's full of opportunities on where you can spend your time. I try and spend it on areas I think are fun. Construction's one of those areas because it's just so rewarding. People are so amazing, technology can have such a huge impact on safety and health and productivity and profitability, that it's proven to be a worthwhile journey for the last 17 out of the 20 years that I've been really focused and in a specific industry verticles.

**Mike Merrill:**

Yeah, I love it. In this space, obviously I've been in this space a long time. I was a contractor before, but everybody knows James Benham as Mr. Tech for Construction and so I think a lot of people look up to you for that and also look to you for direction and maybe insights onto what's coming down the pipe. I

know you're also very well known for your annual construction technology report for the last nine years.

**Mike Merrill:**

So, what can you share with the listeners about that report and who is it for?

**James Benham:**

Yeah, we started it nine years ago because there was really no definitive work. There wasn't a really good work from Gartner or somebody else that would usually produce industry research that we thought was good enough for the specificity of what our clients were looking for. Again, we're kind of a weird bird as software company because we have a media group that does the ConTech Roadshow, which we do six of those a year and then we have the two podcasts, and then we have our report. That's our media group.

Then we've got our development group, which is huge here. It's a couple hundred people, and then we've got our product group and it's been really interesting. When we started it, because our consulting group was really trying to answer these questions like what are contractors using? What are they doing? How's adoption? And it was really interesting because this is about field, to see through the last nine years the explosion of mobile tech and the number of apps we had to cover, the number of mobile devices, mobile device utilization. The real objective with the report was to give a free report out there that people could download and read, and first understand market share, understand what tech they should look at, what apps are popular. Mind you, we serve thousands of companies. You see a lot of surveys and market research, then like 100 companies responding.

Our average is two to three thousand every year, and so it's a big enough market set that it helps people make spending decisions. We also really dive, because I have a degree in accounting and spend a lot of time looking at money, looking at how's money being utilized. We talk about the percentage of revenue that's spent on IT because it's a really low number in construction. That's one of the big things that's holding us back. You got to invest before you get return. That's part of, to answer your question, what the report's about. We're trying to get people to get

off of center and really recognize that technology's an investment, not an expense. They'll get their money back. It can make them more profitable, and then help them identify which tools they should start with that are pretty easy to implement that all their peers are implementing, that are delivering returns.

**Mike Merrill:**

Yeah, I love how you said it's about the money. I think one of the things that I always come away with is that there's an X factor on those dollars. This is sacred money. It's new money. It's different money than just raising your price. You're able to leverage that multiple times and grow it rapidly when you have an ROI on a technology investment.

**James Benham:**

Yeah, absolutely. Yeah, technology in general should all have some return allocated to it otherwise there's no point in buying it.

**Mike Merrill:**

Right.

**James Benham:**

Like why would you do it? In business there's no cool factor. There's no points assigned for style, really. There's one scorecard in business and it is how much cash does the business generate. That's it. That is the ... and by the way, it's not gross revenue. A lot of contractors get confixated on gross revenue and their building volume. I'm like, it's nice to have but it really doesn't indicate how good of a business you are. What indicates how good of a business you are is how much cash at the end of the year, do you generate every year from your activities that you can then use either for your own personal enjoyment or for other investment, one of those two, but that's the whole point of a business. This is capitalism. We're not talking about capunism, which is this weird hybrid communism, capitalism thing that goes on in China. We're talking about capitalism and we're here to drive profit and margin and wages, because the beautiful thing is more profitable companies tend to pay more money to their employees, too, and bigger bonuses. Everybody wins. Everybody wins when you have profitable

businesses and low profit businesses have a harder time paying wages and paying bonuses. So there's combination there-

**Mike Merrill:**

Yeah, I love that. So from the 2021 report, is there anything that is blaringly obvious that you've come away with?

**James Benham:**

I'd say, well, one of the glaringly obvious things is that spending is really not materially moving north. I would like to see it moving north faster. That's probably a disappointing side of things, that spending just isn't budging off of center. Secondly, we are continuing to see a big push into mobility. That wave is not a fad. It didn't die off. What we are seeing a desire from contractors to start consolidating some other mobile solutions, so maybe instead of using 10 they want to use five. You're seeing some consolidation, of course. You're seeing consolidation in general in the marketplace, but you see that, too.

When you look at it, they have a desire to consolidate. The number of mobile apps that each company uses is still pretty high. They're using five, six, seven mobile apps for a company. So that's still been pretty popular. The popularity of mobile devices in general and of connecting the field. I call it the difference between going paperless and going digital. Nine years ago we had a lot of companies that responded to the survey that were trying to go paperless, so they were really just creating scanning workflows that allowed for their field staff and office staff to keep using paper, but then scan it in and then route that digital representation of the document, which is a poor substitute for truly going digital. Going digital means you're going to originate digitally, you're going to log the data digitally, you're gonna route and work flow that data digitally. It's never going to get turned into an image. Any time you're routing an image that's paperless and it's really a 90s solution to a 2021 problem. So that's certainly something else that-

**Mike Merrill:**

Yeah, it's half a step better, but it's certainly not the be all end all that you want.

**James Benham:**

Yep. It's better than routing physical paper. It is, but there's still a whole bunch of mistakes that happen on the rekeying, there's mistakes that happen on RCORing or scanning or routing. There's a lot of room for error and that's the real problem. When you can't capture all the context you can with digital origination, so we're trying to get people moved into originating data digitally, take the photo with your phone, fill out some data, auto tag it, add GPS locations, put it into a structured or unstructured data that can be structured later. There's a real goal there and it's ideally to do away with paper forms, paper plans, paper specs. Those are really problematic. This industry has thrived on unstructured data and it would be nice to structure more of the data because then we can more easily do things with it, like make better decisions.

**Mike Merrill:**

I think it's fascinating. You mentioned five to seven apps. It's ironic because we did a survey report a year ago also, and that was the exact number. It was between five and seven apps is the average number the companies were using to collect job site data, so you're spot on with our findings as well.

**James Benham:**

Yeah. Yeah, yeah, and some are okay with it. Hell, I use- I use a lot of apps. You look at my phone and you're going, "Oh god Ben, how do you track that many apps?" I've got a couple hundred on here, but the reality is I love tying things into my phone. I really do. I just got a new washing machine from Maytag, the damn things got an app, and I never thought I'd love it, but I'm like, "I love the damn thing. It's amazing." Yeah, it's awesome because I can load clothes in there, like workout clothes and that kind of stuff, but you want to wash them the next day so it's not sitting in there getting moldy, so I can schedule, I can load them in and go on my phone and schedule when it starts. Then the really cool thing is it push notifications me when they're done.

I think it's important as nerds and as technologists that in our personal lives, we really try to go digital because it gives a lot of ideas about what's possible in the work world. That phrase kind of consumerization of IT, we ideally ... and this is happening a lot more, people are

so digital in their personal lives. They step into work and they're going, "My gosh, it's like I'm stepping back 15 years."

Mike, I drive a self driving Cadillac. My car drives me to Houston, so why is my construction equipment still requiring manual input? It's affordable now. You can get a Tesla Model Three really reasonably with great autopilot future functionality. So why is it so cheap to get that level of automation on a personal level and so accessible, and it's not in a business environment? That's what a lot of the students that I've taught over the last five years are saying is, "Hey man, I'm using all these digital tools and then I go to the workforce and it's like a time warp."

**Mike Merrill:**

Yeah, step back to the 80s.

**James Benham:**

Yeah, it's just not cool and they're not liking it-

**Mike Merrill:**

You bring up a great point. The rising generation, they're in college right now and in high school, I mean my junior high daughter just finishing up ninth grade. She's been doing online learning with Covid and everything else, of course, everything was digital. They've had school issued tablets for years now, so if you try and hand a new employee just fresh out of college or even high school a piece of paper, they're not going to know what to do with it, right?

**James Benham:**

Yeah, it's a bit challenging. I'm in Texas, land of the free, and we were face to face school all year, a little different, but my kid's school uses Google Chromebooks for everything and so they had to have a Chromebook, these Google classroom, everything's digital, I can log in and check the assignments, totally game changer. Then you step in your average company, it's like, "Man, where's all this centralization at?" It's something we got to be aware of. You can't just say, "I hate the thing. Thank god I'm retiring, I don't have to deal with this." What a terrible way to approach

that. You really got to ... I think it's helpful to embrace change, not for the sake of change, but for the sake of results and productivity and profitability.

**Mike Merrill:**

Yeah, so this is your 20th year, right, at JBKnowledge? Is that right?

**James Benham:**

Just turned 20 April 16th this year. 20 years ago I drove from my dorm room in my 1995 Ford Mustang to the Brazos County Courthouse and filed the paperwork. We've managed to survive 9/11 and the '08 economic crisis, and Covid, all this other garbage that easily put a lot of the gray hair on my head that I've got, and it's been quite a ride. Yeah, we just turned 20 as a company and of course, our products, Smart Compliance and TerraClaim are a little younger than that, but yeah it's been twenty years.

**Mike Merrill:**

Yeah, you mentioned mobility. That's the obvious one, but what else has changed in ConTech in those last two decades for you from your seat?

**James Benham:**

Yeah, mobility huge. I remember the first laptop I got was a year into business. The first year I just had a desktop computer. Then we got into laptops. Okay, in general, I got into construction tech, like I said, I think it was 17 years ago, it was 15 years ago. I've gotten into insurance 17 years ago. 2006, I jumped into construction tech with Smart Bid and the bidding system. I saw a boatload of paper, just reams and reams and reams of paper being used, a whole bunch of printing and shipping plan files, which is just dead now. That completely went away, right, which was good. It was a billion dollar revenue line for UPS and FedEx to print ship plan files. It was crazy, just think about all that waste. It's just waste. Don't feel sorry for FedEx and UPS, they're doing great. Online and eCommerce has done wonderful things. They don't need to print and ship plan files for us.

so certainly, the disappearance from, not everybody, but from a lot of people job sites, the majority of their

paper, they still use some, but not nearly as much. The advent of smartphones, so 2007 was when the iPhone came out and it really wasn't the first smartphone. Don't forget about that. I had a Palm Pilot back in the day and then the early stages of Android, but Apple was the first one to really nail it down and get it really right and get everybody excited and market and sell the hell out of it. That was the year after I started Smart Bid. I want to say we were one of the first three construction apps in the app store, but I don't really know if that's true. I know we were number one on the list at one point of construction apps with Smart Bid. If you think about it, it was for estimators. They didn't really have to have a mobile app because they were largely at their desk.

So you've seen mobile apps become a big deal. Automation has completely changed construction. Drones and sensors, right, so the miniaturization of chips, how chips become really inexpensive, semi conductors have become really inexpensive sensors and data are really pervasive, and then 4G and now 5G has had a massive impact on construction because now we can actually get real bandwidth at the job site fairly easily, which has a sea change of an impact on construction because now you're able to pull of a lot more tech like beyond a lot of site drones. Drones in general, like half of people we survey have drones. That's a huge change. You have your own ariel fleet over the job site that you can take aerial images of anytime you want and you can produce photogrammetry, and you combine drones with photogrammetry and that's a huge change as well, because they're able to measure and count and do all kinds of other existing condition assessments.

So all those technologies came along, and then you have the ERP players, are slowly getting in the line. It took awhile. They had to do some acquisitions and bring some other players in. The big guys had to start some new companies, so you saw like Jonah and CYNC start their own equivalent Cloud products. So all of that has come along pretty nicely, guys like Coins in the UK built a new platform that's all web mobile based. They've really come along and they've gotten with the times, and then of course the big thing that changed is the amount of venture capital and money flowing into fund new ideas have went up exponentially. So you have a lot more choices, almost too many choices.

**Mike Merrill:**

Yeah, that's why we're seeing the consolidation again, right? We're seeing them get gobbled up again.

**James Benham:**

Yeah, classic cycle, classic cycle. Classic cycle of fund, innovate, create, sell, acquire, consolidate, then now we're going to be back into the split off part of the cycle.

**Mike Merrill:**

So that's exciting that the drone thing is something else I've noticed, too. I remember, it's been about 10 years ago, I was in an insurance claims adjuster's office at a big company and they had developed, and it was top secret, they had this miniature helicopter. I think they spent like \$30,000 building this thing. It had a weed eater engine on it, it was nuts, and it was top secret to get something that could actually hover above a roof and take measurements. It's amazing that you can order it on Amazon and have one tomorrow if you're a 10 employee roofer in Chicago. And it sounds like from your survey that half of the companies have invested in those. That's a huge change.

**James Benham:**

Roughly, yeah. Half of the ones that we survey have invested in some type of drone. Now, many of them are under utilizing it. They're not using enough apps. They're using the base factory apps for drones. Thankfully DGI, DGI who of course, dominated the drone space for construction, has really got on the ball with their factory applications, but still. My personal favorite is Drone Deploy. There's a lot of really good construction drone apps out there.

**Mike Merrill:**

So you mentioned there are companies that are jumping on board, a lot of little larger ones, a lot of the ones that you've surveyed. What is the hesitancy behind the ones that still aren't jumping on board yet?

**James Benham:**

They just don't see it. When it comes down to it and I have conversations with them, they just don't. They think that the return numbers, the ROI, is fictional.

They're skeptical about the ROI. They're carrying a lot of risk already and there's already so many things that could go wrong on a job site. I respect this. It's hard to be a contractor. There's a lot of ways to lose money. Being a contractor's like playing a game of a thousand and one ways to go bankrupt. It's challenging. It's a high risk and sometime high reward, sometimes low reward, but it's definitely a high risk, low margin business that maybe people feel like they have to make up on volume.

That's pretty challenging and so you introduce this concept of change and more of it gets really tough for them to stomach a massive change and I respect that and understand, but it doesn't make it any less frustrating for me and everyone else in the tech sector when they cite a lot of the same old reasons. The reality is the end of the day, they'll be willing, and I'm a pilot so I like to fly, all of my neighbors at the airport are all contractors, all. They have really big expensive airplanes and they don't like spending money on tech. Now, why is that?

They're willing to drop three million dollars on a new King Air, which has marginal incremental value to their productivity. They'll say it has a ton of incremental value, and it has value, but not for the dollars they have to burn to run it, operate it, buy it, acquire it, etc. Then they'll under invest in IT, which has the opportunity to get a much bigger jet.

Exactly. It's like you're putting the cart before the horse in some of these things because you understand a plane. A plane gets you to your job site faster and you can easily ... anybody can justify anything. If a business owner wants to justify something, if they want to lie to themselves long enough, they can do it. And one thing my dad told me to do a long time ago in business, because he's my personal mentor in business, always has been. He said, "James, no matter what you do, don't lie to yourself." He goes, "You can choose to not disclose everything to everybody else, but at the end of the day don't lie to yourself and pretend you're profitable when you're not. Don't pretend that things are good when they're not." Don't pretend like your proactive investors have seen so many construction CEOs stand up and say, "Man, we're a proactive tech forward company. We're going to innovate blah, blah, blah, blah, blah," and you go talk to their employees

and they're like, "Man, that guy won't even approve an iPad purchase.

Then they say, some of the more dangerous ones will make really snide comments about IT guys. What they do is they denigrate the IT department and it's kind of like classic jock behavior, "Oh, look at the nerd over there." What they do is they give everyone permission to just dog on technology because the reality is most people are so busy and they work so hard in construction, because construction's filled with hardworking people, that it's a lot to ask them to change their process and rethink things.

So if you give them permission, if you give them a moral license to just deny or dog anything new that comes up, then they'll take it because they don't want to do the work.

**Mike Merrill:**

Shooting themselves in the foot.

**James Benham:**

Absolutely. Look, why do our margins suck? We're the bottom. We're the bottom. We're also the industry that has improved productivity the least of all industries and we're at the bottom of margin and so why? Isn't it obvious? Isn't it obvious there are other high risk industries that make far larger margins because they've invested heavily in technology in form and process and they've gotten the results.

It's tough because I always want to balance and walk the line of respecting the road contractors have to walk and respecting the risk they have to take, but at the same time not giving everybody a free pass just to dog the stuff they don't like or understand. Simply because they don't want to change. And look, the desire to not change is very strong in many, like the force is strong with you, Luke. I've been watching the Mandalorian, which I love, and I'm not a Star Wars guy. I'm a Star Trek guy.

**Mike Merrill:**

It is pretty good.

**James Benham:**

Mandalorian's amazing. The force is good with some. The force is strong with some and it's not with other.

**Mike Merrill:**

Yeah, I think it is interesting. You're in the same position that I am where you're technology driven, technology facing, you're trying to help and it's exhausting trying to convince some of these same companies. I, like you, I can think of a dozen huge companies that we've been talking to for over a decade that are still in their own way on some of these things. It doesn't make any sense at all to me.

**James Benham:**

Well, it doesn't make any sense when their peers have made so much more money than them and have reduced their risk profile so much because there's two sides of the coin. It's becoming more productive and also becoming safer and less risky, which that's a big part of contractor losses is insurance risk management claims. It's two sides to the coin. My hope has been for them to catch it and understand that they have to invest to get return. They have to take risk to get reward. They have to invest in technology and people and process and adopt, learn to experiment, and of course walking the line with not experimenting too much because then you burn your people. There's always a balancing act and so I don't want to paint it with just gross generalizations because ... We do a lot of consulting with construction companies and every single company is kind of a different grab bag.

**Mike Merrill:**

Yeah, I think that the fear of change seems to be the largest thing that we run into. We say it all the time and we can back it up with statistics, we rarely lose to a competitive solution, it's usually no decision or delayed decision or, "We're going to get to it later," something else became a priority.

**James Benham:**

Yeah.

**Mike Merrill:**

So you've talked many times about the three B's of construction. What can you share about those and how do they relate to ConTech solutions? Is that ringing a bell to you, big data, big business, and block chain?

**James Benham:**

Yeah, it's not big business. It was, yeah, big data, and then I think BIM, and block chain were the three that I-

**Mike Merrill:**

Yeah, BIM. Sorry, yeah.

**James Benham:**

Yeah, okay. I just want to make sure that we're on the same page. Big data is really exciting. The insurance sector, which is the other half of my business, I spend a lot of time on insure tech. They are really learning how to leverage big data in a massive profitable way because they're using big data for automating, underwriting, and claims handling decisions. For dramatically reducing the amount of forms they ask people to fill out because they can automatically populate the data on properties and people and equipment, because they're using public records and they're using data aggregation repository. It's really oppressive what is going on in insure tech.

We got to take a big lesson from them because we require way too much manual entry of stuff. I'm going to give you an eetie bittie weetie little tiny example, just one eetie-

**Mike Merrill:**

How small?

**James Benham:**

Tiny example just addresses. Back in the day, which was like a Wednesday, you just type a whole address in. It takes you, let's say it takes 30 seconds of really fully type a whole address in, street number, street name-

If you're in Utah, then lord help you through your addressing system works. So, I still can't figure out how streets or address in Salt Lake City-

**Mike Merrill:**

It's a grid system.

**James Benham:**

But you still got ... It's a grid system, but New York grid system is easier for me than Utah's grid system, so I'm going to say that. All right, so then you have to figure you type the whole address out with the city, state, zip, country, county. Then we end up with these zip code databases, so you type in the zip code, it auto populates city, state, zip. Now, because we have ridiculously good mapping data, I mean ridiculously good Mike, amazing how good our mapping systems are. You can use the Google Maps API and you just start typing the first part of the address and then it auto completes. It cuts a 30 second transaction to about five. That's a wonderful example of how much you can leverage big data and that's just the thin tiny little sliver off the top.

Then when you're talking about property data, let's say you're keying in data on a property and you want to know all the details about that property and what's the year of that property. There's a bunch of databases you can tap into to automatically pull that data into your project systems so you don't have to manually key all the stuff in and you can make better decisions.

So big data's really, really exciting. It's a lot of potential. Also in analytics, once you start aggregating all the data across all of your different verticals you can start making better decisions, data base decisions, not emotional decisions. When I started looking at work comp claims, which happen a lot in construction, I found that my emotions told me one thing, that could be more factors like diabetic, overweight, smoker, we're going to contribute to a worker having a tough time recovering, and in fact, it contributing to a cost of the claim. The reality is once you started peeling through the data, their lawyer contributes as much as any other factor.

Yeah, not just the fact that they had a lawyer, which lawyer they had contributed heavily to how much that work comp claim was going to cost. I didn't discover that until I really started peeling through millions of records on work comp claims. So that's big data.



BIM, there's been a lot of mandates in the UK, the level two mandate. There's been a lot of mandates, not a lot of mandates here in the US, but BIM continues to have the opportunity to revolutionize the way things are built and the quality that they build them because you want to find the mistakes before you start building. There's no better way to clash detect and find mistakes than by doing fully coordinated multi trade BIM.

I absolutely still stand by BIM having the ability. Now, I talk about block chain and here's the interesting thing. These are all underlying tools, so what's actually happening with block chain is really interesting because it's being implemented in a lot of places now, but they're just not out in the open

It's all under the covers, behind the scene.

It's all under the covers. They originally had it over the covers. They were actually using it to par their product marketing and everybody's like, "I don't know." Unfortunately, they immediately associated block chain with bitcoin and that became a big problem. So people are still using block chain, but they're using it under the covers to accomplish the same thing without really talking about it. Big data, block chain, BIM, BI is something ... That was a fourth B, that we do a lot of talking about and that's just business intelligence, really getting people used to not just analyzing data in Excel, but moving into a tool like Power BI or Tabolo, because that's allowing them to make much better nonemotional decisions.

We use Medibase ourselves. It's an open source BI tool system and we love it, really helps us analyze our enterprise data. So that's actually the fourth B is BI. Those still should be watched. Now block chain, man, it's in the news all the time because they're talking about all the different cryptos, which are all on block chains, either on Ethereum or whatever you're on. I just don't think they're going to talk about it as much, even though it's going to be a huge games changer.

### **Mike Merrill:**

Interesting. Yeah, I love the way you phrase that. It's the underlying technology that's driving these things. That's back to contractors need to have confidence and trust and get on board with the rest of planet Earth, the other businesses out there that are leveraging

technology to be more efficient as opposed to avoiding it or trying to see what they can do to keep away from some of those changes that are maybe uncomfortable.

### **James Benham:**

Pretty much, man, pretty much.

### **Mike Merrill:**

Wildly profitable, right?

### **James Benham:**

Yes, can be.

### **Mike Merrill:**

When we talk about the word artificial intelligence, it used to be people think of iRobot or other things. What does that mean to you when you hear AI when it comes to construction technology?

### **James Benham:**

We're not in general AI, we're not there yet. That's Hal in 2001 Space Odyssey. I don't think about that. I think about the specific forms of AI like machine learning that are really transforming individual skills. Natural language processing, which is being used for NLP search like Dato or what pipe is doing with ripping apart spec books. There's a lot of machine learning tools being used, SmartVid is using Computer Vision, which is another subset of AI. I'm just really excited that all these little specialty areas inside of AI, like machine learning and deep learning, Computer Learning, and NLP are all being utilized now at commercialized products that are mainstream. They're definitely mainstream and so when you look at all those tools I just mentioned, all mainstream tools, heavily adopted, people are using them everyday. We're auto tagging, we're doing index search, we're doing contextual search, we're looking for intent. It's awesome things you can do around AI.

Then of course, you see the mapping and decision making trees. Again, other parts of deep learning and machine learning being used for spot the robot from-

**Mike Merrill:**

Right.

**James Benham:**

From Boston Dynamics, is using some very specific forms of ML to get around. Exciting outcomes. The most exciting outcome for AI is that it's actually mainstream, products are actually using it, it is real, it's not fake. It's not just a giant if/then, conditional statement. It is [crosstalk 00:36:47].

**Mike Merrill:**

What about digital printing? Are you seeing that used more widely yet or commercialized? Yeah, 3D printing, sorry.

**James Benham:**

3D printing? Yeah, slowly but surely. Small scale 3D printing, yes, like even form work contractors are using it to test their form work before they go make it. Fast Brick is one of my favorites with the Hadrian X Robot out of Australia. They're getting certification. They're passing engineering tests. They're printing with blocks instead of with concrete and they're being successful. Their government is stamping and sealing, that's the really big hurdle for 3D printing.

You look at Icon out of Austin, they're hella far. They're on fire. They're 3D printing houses. So 3D printing is real. Dubai said 25% of their buildings in the next four years are going to have to be 3D printed. They're laying out super aggressive 3D printing targets and then Apis Cor, the big 3D house 3D printing project in Russia in the middle of winter under a tent, some crazy stuff is happening with 3D printing.

Most important thing in 3D printing is that government bodies are starting to approve it for people to actually live in it, which was the major step because we started seeing 3D printing of houses out of China.

**Mike Merrill:**

Right.

**James Benham:**

Eight, nine, 10 years ago, but you're finally starting to see countries that have really tight building standards say, "Hey, this works. People can live [crosstalk 00:38:12]."

**Mike Merrill:**

Yeah, they're efficient and they're now safe. They're deemed safe.

**James Benham:**

Deemed safe. Yeah, we'll see how that all works out.

**Mike Merrill:**

Well, lots of great things. Obviously you're a great advocate for construction technology and the adoption of opportunity. Is there anything else that we haven't covered that you think is important for people to hear and understand about construction technology and the impacts it can have on their business?

**James Benham:**

No, I'll just leave you with this. Just enjoy the ride and geek out, become a tinkerer. Go to Best Buy and buy stuff and then return it if you don't like it. Discover the love of playing with things. It's really part of my DNA and part of my team's DNA that we just geek out on what we do. I ask my clients to do the same thing. Whatever it is you do, geek out on it. Life is too short to be boring. Life is too short to be meaningless and the beautiful thing about improvement is I believe improvement gives purpose. It allows you to look back and see what you accomplished, even if nobody else knows, you will always know. That's the thing.

I think as humans we got to be in the experience business because no one can take those away from you and that's what's so fun about innovating and changing and adopting technology, is you can look back and you can see what you got done. You got to discover the joy of being a tinkerer. When you're a kid, you break up a new Lego box [crosstalk 00:39:46] still build Lego. I still do. I just rebuilt all the Lego from my childhood. My daughter, my 11 year old, and I just finished a 5,000 piece Lego piano that actually functions. It is still a blast to make, so if you got to play with technology toys, or

you got to go back to Lego or Connects or whatever you got to do to rediscover that inside, I encourage people to do it.

Just recognize that in business, the ultimate goal is to generate cash and this is one of the things that can have such a [crosstalk 00:40:18]-

**Mike Merrill:**

I love that. So more on a personal level James, what is one of your superpowers or your strengths that you feel like you really can lean on, helps drive you?

**James Benham:**

I'm fairly quick at figuring things out. That has served me well as a consultant. It's served me well as a software developer. I can generally step in and figure things out pretty quickly and I'm a fairly quick learner. That's also because I just never stopped learning. It's one of the reasons I love being a regent at Texas Southern, because I can help people learn. I love teaching. I love learning. I really enjoy the process of educating and I think great companies are great teaching companies, too.

I think that's probably one of the things that I've been better at over the last 20 years that's really helped me with my team and has helped me to enjoy the day more and help my people to upgrade more. I think that's been a lot of fun. I really enjoy teaching, really enjoy leading our folks and I really enjoy trying to get people excited. Motivation is this funny thing. Sometimes it's hard to come across and sometimes it's easy to lose. Anytime you can motivate a group, that's what leadership is. Leadership is motivating ordinary people to do extraordinary things. That's the important part of life and business, so I think that's probably one of [crosstalk 00:41:50]

**Mike Merrill:**

Yeah, I love that. I believe the same. I think that great leaders are people that empower others to implement their good ideas, not to just come up with all the good ones on their own, right?

**James Benham:**

Yeah, exactly.

**Mike Merrill:**

So tell me this, what's a big challenge that you've overcome in business and how did you solve that?

**James Benham:**

I'll say this to wrap our conversation up. The biggest challenge was we were hitting the ceiling in our business several years ago. We didn't have an actual methodology we followed, and so I discovered and found this methodology called EOS, Entrepreneurial Operating System. It allowed me to put a really defined way of achieving vision traction and health, and fixing our meetings. We have awesome meetings now. Fixing our planning, we have planning documents, we follow them. Fixing our process, we have process, and we follow it.

I stopped flying by the seat of my pants. I started running our business on the process and it was like just putting really high octane fuel in the engine. It started performing so much better. We started having so much more fun. My Chief Operating Officer Sebastian and I, who's just my right hand man, started getting along a lot better. That was a huge issue. We were stressed out. We were burnt out. The wheels were falling off seven years ago and really getting serious about implementing a process, US isn't the only one, but it's my favorite eosworldwide.com, I have nothing to do with EOS. I'm not a planner, but it changed my life. It changed my business. It fixed the biggest business problem, and by the way, my personal life made it a lot better, too, because I was able to not be so stressed all the time. I was able to put a system in place and delegate and elevate, and really trust my people.

That's by far the biggest challenge we had in business that we were able to tackle with a process. It was a lot of change and some technology and a whole lot of people. It was same thing: people, process, technology.

**Mike Merrill:**

What a great tribute and we'll be sure to link that in the show notes so that listeners can check that out. I'm interested personally as well.

**James Benham:**

Yeah, hire an implementer. I hired the world's best implementer. He's now working for me, but there's over 250 implementers of EOS now. Hire one, pay them the money, it's worth every penny you pay them. We made the money back ten fold.

**Mike Merrill:**

Love that.

**James Benham:**

It was the best decision we could have made.

**Mike Merrill:**

Last thing, what is one takeaway that you want the listeners to come away with from our conversation today?

**James Benham:**

Embrace change. Don't fight it. Don't embrace change for the sake of change, but embrace change for what it is, the potential to dramatically improve your life and your business.

**Mike Merrill:**

Well said. Well thank you, my friend. I've sure enjoyed our conversation today, looking forward to connecting with you again in the future and maintaining this relationship on technology for construction.

**James Benham:**

Thanks Mike, appreciate you, appreciate your business, and let's go geek out. OK?

**Mike Merrill:**

Sounds good. Thank you to the listeners today for listening to the podcast with James and I. If you enjoyed our conversation and were able to gain some insights and somethings that you can implement in your business, please share this episode with your friends and colleagues. We also love those five star ratings and reviews, of course. Those help us to continue to bring valuable guests like James on and grow our podcast platform. Again, our goal is not only to help you improve in business, but in life.