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Nathan Wood

THE
MOBILE
WORKFORCE
PODCAST

Mike Merrill:
Hello, and welcome to The Mobile Workforce Podcast, sponsored by AboutTime Technologies and WorkMax. I'm your host Mike Merrill, and today, we are sitting down with Nathan Wood. Nathan is the founder and CEO of SpectrumAEC and the executive director of the Construction Progress Coalition, otherwise known as CPC. Nathan is an expert in construction technology and has worked on over 100 project teams spanning the US, Europe, and the Middle East. These experiences have taught him when it comes to adopting technology and construction, it's not one-size-fits-all. His goal is to break down the human barriers in new processes and technology adoption and see contractors succeed like they've never been able to do before. Today, we're going to be talking about digitization privacy and efficiency. So, hello, Nathan. Welcome on the podcast today.

Nathan Wood:
Thanks for having me, Mike.

Mike Merrill:
You bet. When we talk about technology in construction, we have to talk about digitization. What can you tell the listeners about digitization and what it is and isn't?

Nathan Wood:
Yeah.

Mike Merrill:
Yeah, I love that. I love the term. You said, "born digital". Tell us a little bit more about that and what the differences are of something that's born versus not, digitally.

Nathan Wood:
Yeah. I think it goes all the way back to is your contract at the very beginning a smart contract that's digitally sealed and signed? How much of a digital paper trail you have across your entire project I think is one of the major drivers for the digitization of this industry and really the need for it. I think that the McKinsey reports and all the stuff that you read about this lack of data is the only thing we can shed light on. I think the unfortunate thing is once we do see that data, we're probably not going to like what we're seeing either. So, it's sort of this two-edge sword of we're not getting the data we need, and then once we find it, how do we actually reckon with what that data is telling us?

Mike Merrill:
Yeah. Got it. With that being said, what are some samples or examples that construction companies today have of both sets of that kind of data. Both originated and converted.

Nathan Wood:
I think anything that's coming out of your ERP, your accounting system, that is you've set up that PO, you've set up that job number, that's kind of that born digital that you want to stay digital all the way through to completion. Too often, those get printed out into paper tags and different things that lose that native digital. I think really where we're facing the biggest challenge, not necessarily keeping things digital inside of our companies, inside our company firewall, but that external exchange from the general contractor to the owner or the subcontractor to the general contractor. That's where we lose a lot of the data and why we end up with this duplication.

Mike Merrill:
Got it. So, I'm also imagining when you talk about data types that are born digitally versus otherwise, it sounds like transferring something that was

on a paper document or maybe a spreadsheet or somewhere where they're having to recreate, or retype, or regenerate is the disparity between the two. Is that right?

Nathan Wood:
That's where I look at digitization as actually a bad thing. It's the unnecessary effort that it takes to recreate something that is analog back into digital, whereas digitalization, add that extra A-L in there, is that streamlining, that connectivity, that integration across the supply chain that starts to smooth things out is kind of that next level. So, we kind of look from digitization to that next level of digitalization is a lot of the early efforts and early successes that we're seeing in the industry today.

Mike Merrill:
Yeah. When you're saying this, it's making me think of, we just had James Benham, the CEO of JBKnowledge on the podcast recently and of course he's a big proponent of the same approaches to technology and true solutions, and James talked about the older scanning solutions where we were digitizing paper, but all it was creating an image. So, he said that's a '90s solution to a 2021 problem.

Nathan Wood:
To be really nerding out, what he's actually talking about, it's electronizing because there's electronic is that scan that I can see on my computer but it doesn't actually have anything inherent to it. Making it digital has some level of inherent data, but, again, that effort versus digitization versus digitalization. Say that 10 times fast. It's that barrier there that is really the rub, the frustration, that we're seeing with technology adoption, because I think we all see the potential, but there's this barrier of frustration. We actually have to figure out the process change that enables this digitalization for us to have our cake and eat it too. Otherwise, we get frustrated with the technology not working when really it's not necessarily the technology's fault.

Mike Merrill:
So with companies today, what would you say is the key to successfully going down this path that you're talking about of efficiency versus what they might be doing today?

Nathan Wood:
Not looking to technology to solve the problems upfront. Technology is a huge component in the solution, but it's really the last step in that kind of three step process of addressing the people, and then addressing the process, and then addressing the technology that best fits it. Depending on who you ask, whether it's an IT director or someone in the BIM and VDC operations tech world or a superintendent on the field, you're going to get three very different answers as far as what they're looking for from technology. I think that the solution, the digitalization, is when you can get all three of those folks to align on the same thing and figure out what that kind of magic sauce is to use technology to translate their needs so that we can actually have our cake and eat it too.

Mike Merrill:
Yeah, I like that. What kind of an ROI can a company expect if they are able to leverage some of these advanced functionalities that are available today?

Nathan Wood:
As a former project engineer and BIM engineer, I can say that the unfortunate truth is that what you're saving is additional hours that one of those poor, young engineers would be doing that is pretty much captured in their salary anyway. But, from a quality of life? What other things could they be working on? There's so many intrinsic reasons, but usually when it comes to that ROI calculation, what my response is don't look at the return on investment, look at the revenue loss potential, RLP which is basically a hybrid calculation of how many hours are you spending unnecessarily doing things that could be automated with a little bit of investment in this integration, 1, and then 2), what risk are you posing yourself by having this person manually be doing this thing that could be automated through technology so that you're actually better managing your quality of data and your quality assurance.

So, there's really two different reasons why, but it's almost like, "Tell me what your ROI is on your insurance policy." I can't tell you the ROI, but I know that I pay it. I feel like the better you are with technology, the less you'll end up actually paying for it because you'll pay less for services. You'll have more of that internal. You'll be able to leverage it more, and you'll figure out how to create it as a profit center, like a lot of those that in the industry are able to do. I think it starts by recognizing that there's a big investment. There is a dip in that curve that you have to make and sort of a trust fall to get to that point where you're actually showing that it is a profit center and there is an ROI. But for a while, you have to almost treat the ROI calculation like an insurance policy.

Mike Merrill:

Hmm. Yeah. I like that analogy. I think it's very easy to visualize. So, if you're comparing a large organization to a small organization, between the two of them is the savings on that ROI proportional to their company size or do you see any differences between the two?

Nathan Wood:

I think the larger the company is and the longer that they've had existing system... I think it actually matters more not necessarily how large they are, but how long they've been in existence and how long their legacy systems have kind of grown roots within the organization. I think the biggest challenge that we're seeing now are organizations that were very forward-thinking 20 years ago and built systems when it was better to build it than it was to buy it, but now everything is software as a service and everything's in the cloud and they're not quite ready to make that jump from on-prem to the cloud because they're so embedded in the way that they've always done it. I feel like there's a big dilemma with big companies on that front, which gives a great opportunity for the smaller guys that maybe never had something, it was just Excel spreadsheets, or other things, or were kind of kicking around different tools, gives up an opportunity to really search the market, pick the right tool, get themselves set up right, and scale right at the right time.

Mike Merrill:

Another big topic in construction tech today is the discussion around privacy versus efficiency. Can you break down maybe what those issues are around privacy that you're hearing?

Nathan Wood:

Yeah. The best way I actually describe that is almost like a top-down versus a bottom-up need. We were talking earlier about this need for data consistency and dashboards and wanting to see all the data in one place. Generally, those that want to see that are at the executive level or at the IT level or at the management level, whereas those that are actually creating the data, those that are digitizing and doing that digitization work, they're frustrated and they just want the tools that are most efficient for them.

It's really this how do we bridge that gap between the most efficient tool for those in the field to capture and create data and also get that data to the same common source that IT or that executive, whoever wants it, from the top-down. Really finding that midpoint, that translation between the top-down data consistency needs and the bottom-up efficiency needs. Things like privacy, security, all those other aspects that are really top-down challenges are always contrasted by, "Well, but that's only going to create less efficiency, and my job isn't to do this paper pushing. It's to be out building or to be out managing." I think that's where that dilemma continues with technology. It's actually making something worse rather than fixing it.

Mike Merrill:

Yeah. In some cases, I know when we hear companies have concerns about adopting newer technologies, mobile technology, they'll say, "Well, you're making so-and-so's job easier, but now you're going to pile this on me" or, "Now, I've got one other process I've got to manage." I think messaging that out to your staff and having not only a consistent message, also overall buy-in from everyone. That "Look, we're going to give a little here. We're going to take a little there. In the end, generally, this is going to be better for the entire organization, so this is why we need to do it." It's about the team winning together, not any one person shouldering more or less than another, right?

Nathan Wood:

What makes that team is shared purpose and having that alignment on a common why? Why are we doing this in the first place? I think that's where a lot of times I see, especially in the consulting side, leaders get tripped up in they want to see the dashboard, but yet they can't effectively communicate the measurements that they really want to see. Again, until they can define very clearly what are those top five or six key performance indicators or critical success factors that you're measuring across projects, that is going to define this is how your project's performance is measured.

We believe this to be a fair measurement across all projects, and that everyone's had that conversation and agreement of what that is. Too often, technology gets rolled out and people are told that things are changing, and they're not really told why they're not given that full context. It's either because it's not communicated to them, or it was never actually determined in the first place. That's really the order of operations. Figure out what those measurements are, communicate them to the organization, and then deploy the changes, and I think the adoptions are much more likely to be successful

Mike Merrill:

I love the way you phrase that, and I think one of the things that we've got to be more aware of as an industry is that we're, by definition laggards in adoption of technology compared to other industries. A couple years ago, we did a data report where we surveyed companies from all over the US, different industries, and basically, the results came back and said that, generally speaking, most companies are using five to seven different apps to collect different data. That's still a high number. It would be better to be using less apps. Most of them are still using some form of paper or spreadsheets. They haven't gone fully digital. There's all these different findings, but generally speaking, we're finding that more companies are moving on board; the trend and the tide is turning, and so, that really leads into something that I really wanted to talk about today. That is this Construction Progress Coalition that you are heading up. What can you tell us about that and the mission there and why you're doing your work that you're doing there?

Nathan Wood:

Yeah. The high level story going back to 2012/2013 was actually prior to a Bluebeam Extreme Conference. Sasha Reed, who was with Bluebeam at the time, and Kyle Hughes, who was with Skanska at the time, got together with about a dozen contractors to talk about the shared pain of, "Well, why is it that some PDF, which again was an open ISO standard at the time export, why can't we use these files to more efficiently automate different processes like tagging and searching and hyperlinking that were new capabilities that were coming out from the technology." We sort of had this big epiphany of, "Well really, again, this wasn't how folks were using the Revit or AutoCAD or other designed tools or how they're using Bluebeam." It wasn't the tools themselves. It was actually how they were using them, and the process that they were using in the settings that they were using that was missing.

So, what we were missing was this, this sort of guidelines around, if you just do these basic things, make sure these certain settings are turned on, make sure you have a true type font so that we can search through and actually search the font rather than having to use optical character recognition, OCR, that makes it much less reliable for searchability and other things. Because you've seen some of these projects; they have 2,000, 3,000 drawings, and we have to be able to parse through that and in an effective way. It was really the early stages of this need for data standards, data interoperability, and changing our process, so the Construction Progress Coalition was born out of this PDF shared pain. We left, dropped the name Construction PDF Coalition, picked up Construction Progress Coalition, and joined forces with the Construction Open Standards Alliance, that I believe you guys may have done some work way back in the day with the AgcXML efforts and some of those early... Is there a story to that?

Mike Merrill:

We sure have. I have attended, in fact for years, meetings every month and regularly. We had two or three other team members, so we made sure that we were present and accounted for when that was going on. We work with all the other major ERP vendors in the space, and they also were a part of that. They were happy to see us involved and felt like it was important. We have a broad voice in the industry and

our experiences from large to small organizations, so many integrations with all these different vendors. It made sense for us to throw our hat in the ring and be a part of that.

Nathan Wood:
I think that's what's so interesting about this dual kind of combined story of these shared pains at the industry side, between architects, engineers, contractors realizing if we just do these things certain ways within existing tools we can make this work, while at the same time technology players, like at ISA, HUB, and Sage and SmartBid, and you guys were all kind of working on these AgcXML integrations. But, I think the industry wasn't quite ready for you. They weren't quite understanding; it was a little too far ahead, but it set a really great framework. We still have on the website today, those original AgcXML downloads and the RFI/CDX certification that we're starting to move forward with is still based on that fundamental framework.

Anyone that did work based on that original stuff is actually ahead of the game, but it's just taken that long for industry and technology to really catch up. Now it's not XML standards, it's APIs, so we have to understand what really is JSON, what are the capabilities of these different tools, and how do we bridge that language gap between what industry needs to communicate from requirements and what APIs can do from their end so that again, we can have that cake and eat it too. I can use my preferred time tracking or daily report or whatever app and that whatever system the GC requires and whatever system as a sub I require on my end, I can push one button and have that data go to the correct places all at once. We're getting close to that. We have sort of micro-examples on the RFI and submittal level thanks to these iPaaS integration platform as a solution type products, like Rivet and Avocados and others, that are doing this types of stuff. It takes both new markets who pays for this middle integration platform that we've never had to pay for before.

Mike Merrill:
Right.

Nathan Wood:
Do we trust the data? This whole privacy security issue. At the end of the day, it is addressing the efficiency challenge, and so CPC, as an organization, we're not a standards organization. We're a 501(c)(3) nonprofit that promotes and advocates for open interoperability standards. Groups like the XBRL, Extensible Business Reporting Language, that does a lot of work with CFMA and all of the Surety organizations, NSBP, SFAA, trying to get them all together because they're obviously seeing the need for data and connectivity across all of their projects. Ultimately, their data, a lot of it comes from contractors, so where can we identify opportunities for some shared gains where you get the same data you're sending to the owner, you can also send to Surety and not have to do that reporting twice.

I think until we can start to find more of those win-win opportunities, it's going to be hard to find that ROI on some of these integrations. The more we start searching, the more we realize like, "Oh, wow. There's some really big opportunities." As we all know, there's a ton of waste in soft costs in our supply chain that we can certainly cut out.

Mike Merrill:
Well, it's like climbing a mountain. You're going from one bench to the next to the next before you can get to the peak. Every time you get to the next part of that elevated area, your perspective changes, and you're on higher ground. You're in a better position. It just sounds like everything that you're advocating for is let's move this to higher ground. Let's get to a better place. As you do that, your opportunity to improve and pick up other efficiencies is going to continue to grow.

Nathan Wood:
Yeah. The Everest analogy. Yeah. I feel like we've just gotten to base camp. Just got out of the valley, and we're like, "Okay. Now, we can actually see where we need to go. We have some vision here." For a while. It was just kind of searching around for like, "What is it that we really need to solve?" I think we now have a better understanding of what is missing in this disconnect between industry requirements and technology capabilities.

Mike Merrill:
Yeah. Well, I can think back to your point. I can think back to, I don't know how many years ago, seven or eight it seems like, I'm speaking with James Benham, again who's been a guest on this podcast, and Dennis with Sage who's also been a guest, and I know Benny Baltrosky, at the time with eSUB. They were all a part of that COSA. We had the plaques on all our trade show tables, and we're proud members of COSA. My partners were asking me now, "What's his thing?" I said, "It's probably early right now, but I still think it's important to have our voice be a part of this. It may evolve and become something else, but I can tell you right now, if this is what James Benham is doing, it's probably a good thing that we should be looking at and also doing."

Nathan Wood:
He is a visionary. You got to give him that. Right?

Mike Merrill:
The point is that we have to be forward-thinking in this technology space. We're trying to help construction get better, and the only way that's going to happen as if trailblazers, like our organizations, get out there early. We started on PalmPilots, so we've been through the whole iterative history of PDAs all the way to smart phones and smart devices and tablets that we standardize on today. Interesting and fun to kind of have a flashback to the '80s it feels like.

Nathan Wood:
Right? Yeah. But, you guys were the early kind of elevated state of thinking that it is going to be open. It does need to have these interoperability points because regardless of if you ask me even if one system were to own an entire organization and, let's just say Sage for instance, fits every single tool for a company, they're still going to have to communicate that data to the owner that might be using e-Builder or Project READY or something else and a trade contractor. They might be using ISA or Procore or anything else, so that there's still going to be that need for external interoperability regardless. Both industry and technology are opening their eyes to that. I think it's an important inflection point for the industry.

Mike Merrill:
I agree. You mentioned Procore, and we're working on some things with them as well right now. They're super proactive. In fact, we've got them coming on the podcast here this next week. We've got a couple of different guests from their team scheduled, and we're anxious to have those discussions as well. But, earlier you mentioned CFMA, and I know that you have a survey that you've been working on with them as well. We're longstanding, almost from our inception, members of CFMA. We love CFMA. We've had Stuart Binstock on the podcast a couple of times already and will again in the future. What's this survey that you're working on with them? What can you share with us?

Nathan Wood:
I have to say, and plug, listen to Stuart's interview because I did listen, and the CIASP is also a collaboration partner with Construction Progress and love everything that Cal and Stewart are doing on the mental health end of things. On the CFMA and around this shared pain of specifically with data reporting, and it's, again, in partnership with XBRL US. Michelle Savage over there has been amazing, and they have about a dozen different Surety partners that are very active about looking for ways to, again, combine better interoperabilities, solve those shared pains.

We're working to finalize and distribute a survey that will go out to all CFMA members around identifying and really getting to think about "Where do I currently share a lot of this similar financial and with data to different parties? What if I could just hit a button and send it to all of them?" Probably a lot of folks that just hadn't even thought through that before, so hopefully, the questionnaire 1) gets us some really interesting data and interesting insights on where the opportunities are, but 2) just gets their brains thinking about how much duplicate data entry they're already creating, so they're creating their own kind of mental ROI as we build the solutions that best meet those needs.

Mike Merrill:
I love that. The market decides what solutions get created because they're going to be asking for those solutions, and they're going to pay money for them. When they are asking and they're paying money, then

organizations like ours are going to enlist them, and we're going to develop those things that they need. We do need to hear from the customers what their challenges are and how we can best solve them, and I think that's been happening for decades now. We're in a really good place, but we want to keep going. If you're listening to this, please plug in, do the research, learn about these organizations, and plug into not only within your own organization, but your networks. If you're a member of the AGC, we're big proponents of the AGC also. CFMA we talked about. The Construction Progress Coalition, CPC. So many great organizations to come and get involved with to up your game in a digital age that we're all living in now. When you say for better or for worse, I say it's certainly from the better. Wouldn't you agree?

Nathan Wood:
Oh, absolutely. It's so great. Since the early AgcXML group got together and was really kind of shocking the industry of, "Wait. Software would actually share data with each other? Aren't they competitors?" I think since then, Procore has been certainly a pioneer, and they've been early member and supporter of ours. Adios, frankly. As much as they'd been amazing in the industry, they really have pushed the industry towards subscription, towards cloud, better than a lot of the other platforms have been able to. I think the real dark horse in all of this is actually a Newforma, with coming from the architect engineering side, and the fact that they do control so much of that project. That really important project management, the RFI and the submittal data, is a really big pain point for the contractors and for the owners. They hold a lot of it from the designer side.

So, the fact that all these different players are coming to the table, recognizing that we have to share this data, and we have to be open with it to some level, but that the customer still has to decide from a privacy, from a security, "What am I willing to share? What am I not willing to share?" It makes the technology end of it much more complicated, but I think together, we can find that middle ground that is not too burdensome on technology and is meeting that 80% need for the industry.

Mike Merrill:
That's great. Is there a place that the listeners can participate in the CFMA survey still? Is that still available or open that?

Nathan Wood:
It is actually to be sent out, so hopefully by this time, as this is being released, there'll be emails going out. It will be only for CFMA members, so if you are CFMA member, keep an eye out for it. It's basically the XBRL contractor to Surety CDX survey is the name of that to look out for. It's related to submitting WIP report data and those shared pains that are facing it, so keep an eye out if you're a CFMA member for that email to click on that survey.

Mike Merrill:
That's fantastic, and I think many members of the CFMA are listeners and many of our listeners are members so works both ways. Appreciate your plugging that as well; that's exciting stuff. I'm glad to hear that's going on. We'll make sure to link that in the show notes so that they can click right from our show and plug into that survey.

Nathan Wood:
Great. Thank you.

Mike Merrill:
Awesome. So a couple things just to wrap up more on a personal level. I've had a great conversation, learned a lot today, even personally excited for everything that you continue to do. I appreciate that good work, but on a personal level, if there was one skill that you've developed in your professional life, what would you say that is and you would attribute it to it as your superpower?

Nathan Wood:
Hopefully, Sasha Reed's listening to this. I would have to say patience. I am not a patient person at all. I am a self-admitted millennial that is very impatient with the change of this industry. But, through my headbutting and getting knocked down a few times and getting

back up, I think this combination of patience and persistence has really paid off. Say that 10 times fast.

Mike Merrill:
That's a good one, Nathan. I appreciate that. What about a business challenge that was difficult to overcome? What was it? How did you get through it?

Nathan Wood:
Oh, man. I think trying to stay to the defense of the IPD contract. I think there's a lot of animosity, and sort of disdain for this new fancy, risky collaborative contract of integrated project delivery. That's where I come from. That experience both the good, the bad, and the ugly. I would swear by IPD, but I think you have to be very careful with it and really understanding the importance of culture and leadership and how you use the system and not just rely upon the system to work for you. The biggest business decision and what I've found, the more I work with folks at the CMAA and other organizations that are more on the construction management side, is I feel like IPD has gotten a very bad rap over the years. So, I would always try and come to the defense of the target value delivery methodology and the whole alternative thinking on systems level approaches to business models.

Mike Merrill:
Love that. Well, for those nerds out there, they're going to love that answer.

Nathan Wood:
Target value! Yeah. I know how many TLAs, three letter acronyms, can you fit in one answer.

Mike Merrill:
Love it. All right. So, the last thing. If there was one takeaway that you wanted to ask or hope that our listeners have at the end of listening to our discussion today, what would that be?

Nathan Wood:
I think that deciding on technology platforms and making these decisions, whether it's one platform or many, is a decision that shouldn't be taken lightly. Executives and leaders that may not be in a technology position do need to at least have a base knowledge and educate themselves enough on different perspectives. I think too often we found that executives leave the decision in the hands of one IT person or one BIM or VDC or innovation person, and too often, you don't get that full spectrum of input and perspectives from those different stakeholders. The more you can make a broader decision when going into those technology decisions and use methodologies, like the choosing by advantages, CBA, another acronym for you. I think that decision making process and getting everyone involved in that is the biggest sort of advice that I've been giving out recently.

Mike Merrill:
Love it. That's great, Nathan. Thank you so much. It's been a fun discussion, and I've appreciated having you on today. I hope you enjoyed it as well.

Nathan Wood:
Thank you, Mike.

Mike Merrill:
You bet. Thank you to the listeners today for joining us on The Mobile Workforce Podcast. If you enjoyed the conversation that Nathan and I had today or were able to gain some helpful insights or intelligence that you can apply to your professional life, we ask you to please share that with your colleagues and coworkers and also give us a five-star rating and review on the podcast platform that you are listening to this episode. That feedback that you share with us is very valuable and helps us to continue to bring on great guests, like Nathan and others. Again, thank you for your listenership. Our goal, as always, is not only to help you improve your business, but your life.