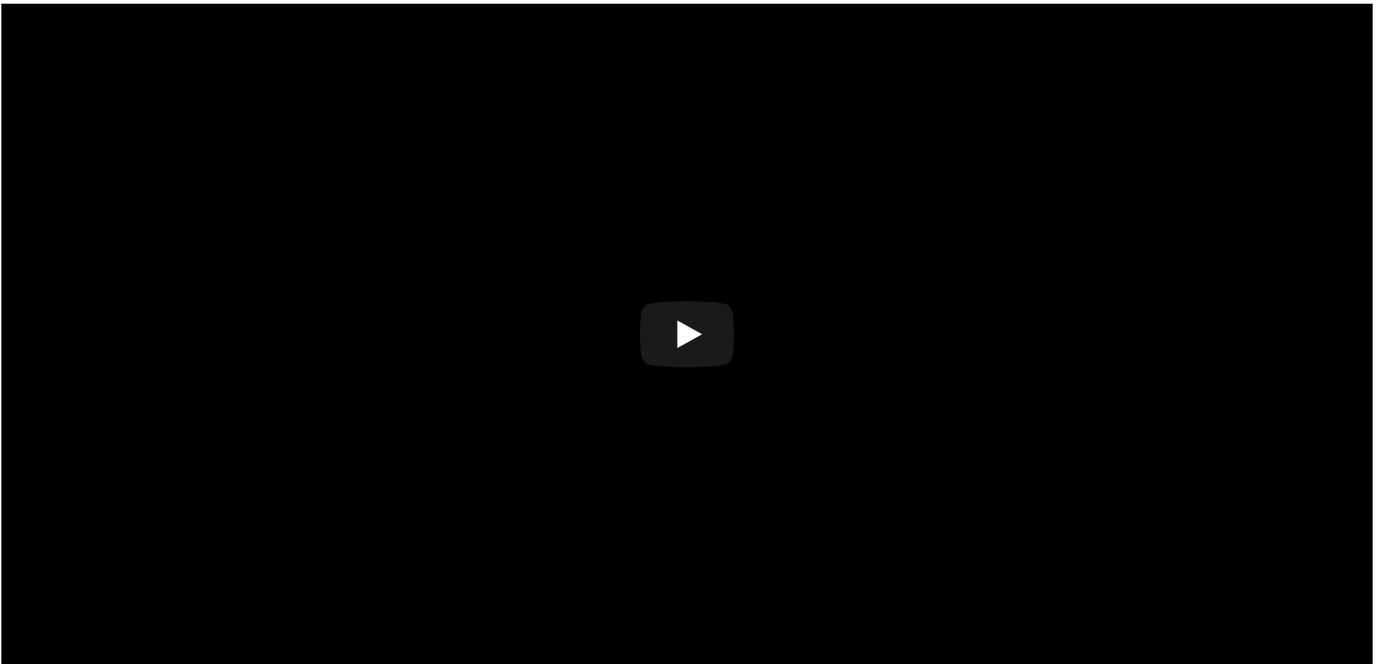


Into the Future: Modern Partnerships in Health Care Construction Delivery

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The economic conditions across construction sectors have been in a state of volatility since the COVID-19 pandemic arrived. It's no surprise that many businesses and organizations adopted a wait-and-see approach before investing significant capital into the construction of modernized or new facilities.

Notwithstanding, one of the outliers to this period of uncertainty is the health care construction sector. According to industry forecasts, health care construction spending is projected to further increase by 3% in 2021 to \$28 billion. And COVID-19 has actually spurred a number of advancements in health care facility development and delivery – chief among them is modular delivery.

In this podcast, Joseph McManus Jr., President of Centinel Consulting, joins VP and Business Manager Kim Neuscheler and VP, Healthcare Director-Florida Larry Blackburn of Turner Construction Company, one of the nation's top health care construction contractors, and Dann Finn, co-founder and COO of MDN Development LLC, the leader in modular design and delivery, to provide their boots-on-the-ground perspectives, key health care construction market trends and projections, and benefits of certain delivery methods as clients look for speed to market and ways to control cost escalation.

Transcript:

Joe McManus: Hello, everyone, and welcome. I am Joe McManus, president of Centinel Consulting and shareholder with the Carlton Fields law firm. Centinel is presenting this month's podcast on health care construction. The economic conditions across construction sectors have been in a state of volatility since COVID pandemic arrived. It's no surprise that many businesses and organizations adopted a wait-and-see approach before investing significant capital into the construction of modernized or new facilities.

Notwithstanding, one of the outliers to this period of uncertainty is the health care construction sector. According to industry forecasts, health care construction spending is projected to further increase by 3% in 2021 to \$28 billion. And COVID has actually spurred a number of advancements in health care facility development and delivery. Chief among

them is modular delivery.

Given this growth, Centinel Consulting is pleased to have today the nation's top health care construction contractor, Turner Construction Company, and by the way, the top contractor in the nation according to the latest ENR study of the top 400 contractors. And also we have health care developer, MDN Development LLC, the leader in modular design and delivery. With me today: Kim Neuscheler. She's a vice president and business manager and is in charge of the Tampa, Florida, office. Her focus has been through the years health care laboratory research projects and a number of other hospital clients. Larry Blackburn is also here. He's a vice president with Turner and he is a director, and he's in charge of the Florida region. Finally, from MDN we have Dan Finn, co-founder and COO. They're going to provide to you today their boots-on-the-ground perspectives, and we'll discuss key health care construction market trends and projections, as well as benefits of certain delivery methods as clients look for speed to market. We thought we'd start today with Kim and clients and what you see as clients' need in the area of the health care construction delivery.

Kim Neuscheler: Thank you, Joe. Really appreciate that introduction. You're right, in today's uncertain market, meeting the client's needs is of utmost importance. Two of the biggest things that we're seeing as challenges are speed to market and controlling cost escalation in the uncertain market that we have today based on the pandemic and other shortages, natural disasters that have affected manufacturing plants and things like that. With the future of health care properties requiring that they maximize their existing facilities both on and off campus, then how do we bring the services to them as quickly as they need them, especially now with a significant rise in COVID cases again having to be able to help the health care facilities maximize their existing spaces is key because there isn't sufficient time to build a new facility to help them treat the patients that are currently needing it. For example, in New York, Turner and other general contractors were hired by the government to build temporary COVID facilities and hospitals during the initial pandemic surge. The issue back then is we had access to a lot more supplies and materials than we do now after a full year of COVID and labor shortages and things like that. And so with another surge upon us it's going to be interesting to see if those types of facilities are required again, how do we meet the needs of the hospitals in our communities. Larry, are you seeing the same thing or hearing certain concerns from our health care partners? I know Lakeland and a few others here in Florida are seeing more surges and we're hearing of more hospitals maybe doing some more of these temporary facilities. Can you share with us what you're seeing as well?

Larry Blackburn: Oh, very much so, Kim, and in fact we just got a call last week from hospitals down in south Florida needing additional beds due to their current surge in COVID that was starting to phase around the country. Florida obviously is, unfortunately leading the pack with this surge, but the need for temporary beds is starting to pop back up again.

But current challenges in the market, the two main resources for any construction project are labor and material. We all know that. And obviously that's where we are struggling with shortages, mainly due to the impact of COVID, like you've mentioned, Kim, some of the other natural disasters that are going on. So current challenges with supply chains, longer lead times for really common materials. Another example, we have another client that we are working with that is building several orthopedic surgery centers around the country and had a project in Phoenix. They couldn't get the insulated roofing material, paper insulation roofing material, IsoBoard. The material is like gold all of a sudden. It was a wait time of almost five months, which was creating a serious setback on meeting their schedule.

So some of the mitigation strategies we help our clients with, we talk to them about making timely decisions, consider early release, buy material when you can and store it, if it's possible offsite. Consider buying commodity and other type products early and storing them in warehouses possibly. Look to buy raw materials early to lock in the price. The other issue we're dealing with is cost escalation with material shortages. Even when you work on engineering teams, avoid revise and resubmit on the product approval process. They will make correction noted to keep your place in line with the manufacturing system. That's another strategy to mitigate the shortages we're dealing with. And always be open to considering alternative products and other options for your material. That's something we looked at the facility in Phoenix I mentioned before. Instead of IsoBoard, we had to look at different types of insulated materials that might have been more readily available. And more importantly, include some extended lead times in your project schedule to account for this. So Turner, with our clients, we have very strong purchasing power in the supply chain. We are proactive in facing the supply chain problems and able to mitigate some of these delays that we've been experiencing.

And then on the labor shortage side, workers left the construction industry during the pandemic. There were quite a bit of delays or postponements in some projects, particularly in the health care market. Hospital systems cancelled elective surgeries because they needed to maintain the beds. They just put a focus on that and that's where they generate the most revenue, the elective surgeries. So they had to put the stop on some of the projects. So when we lost the laborers, it's become very difficult to get that back now that we are starting to come out of the pandemic near early in 2021.

Some of the things that we are doing to mitigate that, we're looking to prefabricate and modulate some of the building components. I know that's something Dan's going to chat on in a minute here. And, we do a thorough review of our subcontractors before we prequalify them for a project. Make sure they, what is their workload, their backlog look like, do they have the manpower needed to meet our schedule? So we vet that out in great detail to make sure when we bring them on board, we can mitigate that labor shortage as much as possible. [*simultaneous speaking*] Yeah, Joe.

Joe McManus: No, no, I was just saying that, for example, with the supply chain, for example, I mean, with all of my clients and all of the various industries it affects everybody.

Larry Blackburn: Very much.

Joe McManus: Everybody. And the same is true with the labor. And I think that Turner with their economic power, I see they've got the ability to mitigate those where, a smaller contractor has a tough time. It's sort of get-in-line is what I've seen, from a legal perspective. And I was intrigued, too, about your comment about the labor, and training. I know, Kim, you're huge in training. Looking at your bio and your work in New York, that's one of your focuses I do believe.
[*simultaneous speaking*]

Kim Neuscheler: That's right, Joe. I think one of the key things that we face is labor shortages, as Larry mentioned, and with that comes problems with the delivering on schedule. And as we know, speed to market is key. So you have to start looking at other avenues to create workforce and get them back into the market, whether it's a workforce development program, switching as Larry mentioned, to prefabricated components, going to offsite construction where you can do more work in a conditioned environment and have less labor force. You're doing single point connections onsite and things like that. So you have to be a lot more creative if you're going to handle what our clients need now, which is speed to market.

And then also controlling the cost at the same time. By taking some of the labor offsite and doing it in a more controlled environment, you're in a safer environment, you've got better quality control. You also have more economical labor rates in the factory than you do on the job site. And so you start to look at, OK well how can I be creative and establishing 1), how do we get more qualified labor so that we have more consistency on our projects and make sure that we can deliver quality of products to our clients. And then also, not only how do we increase the amount of qualified labor but how do we be cognizant of reducing costs as well. Because, with all of the labor shortages and material shortages, prices are going up. People are paying ridiculous prices for equipment, for materials, etc. and that's when you start to talk about, what MDN has discovered is volumetric modular and other prefabricated components. And so it's a combination. We constantly have to be reinventing ourselves to be able to meet the needs of the current environment because it's forever changing and we never know which challenge we're going to face next. [*simultaneous speaking*]

Larry Blackburn: Yeah exactly. Exactly!

Joe McManus: Kim, both you and Larry mentioned this offsite construction and that's a nice segue into Dan and his business there. Because it's just not a one-off thing. There's been an ASHE report, the health care engineers' group part of AHA, expressed that modular is here to stay and it really has exploded during the pandemic. And then there was a survey of property owners for construction users round table and CII, Construction Industry Institute. They stated that the shortage of skilled labor available for onsite work and increased pressure on project costs are the primary reasons for the popularity of offsite constructions. And additionally, the technology allowing for greater applicability and customization, heightened concerns regarding safety and risks and an increasing demand for higher quality are also driving this modular revolution. So, Dan, maybe you can give us your perspective. Tell us about your company and, if you can, about how did modular construction evolve in the health care delivery systems.

Dan Finn: Thank you, Joe. Yeah, I appreciate it. Well MDN Development and what we're really finding today is we're acting more as a modular consultant than actual developer. And I think the modular is accelerating and I think for all the reasons that's just been talked about by both Kim and Larry. We solved some of the problems. Modular are offsite construction, also a volumetric modular, such as those labor shortages. These laborers work in a factory in a controlled environment where, of course, the modules are built every day. And when one project is over, the next one comes along. They're continuing. It's not from site to site to site. So this offsite construction has really taken hold. I think part of it, as we mentioned because of the pandemic, necessity to get things done quicker. And modular brings a project to the market. It's speed to market and, of course, that's big, big dollars for an owner.

And then we can talk about other things too: the reliable labor, so we can control labor costs. It's more efficient use of skilled labor and in a safer environment. Very, very important. The workers work in less tight quarters. We can control - we've talked about the pandemic and COVID, excessive heat - all that is more controlled. And so we also have better quality control not just for that but in the actual work. The product you get is going to be much higher quality.

Modular construction has been around for a while but it's really coming to the fore now. And I think what we're seeing too is a matter of education. Like I said, we're becoming more consultants than anything and it's an education of these benefits. Because it can be less costly too, not only in labor cost but we're using the same materials, but there's less site cost. Simply because if it comes to market sooner you have less general condition cost, those kinds of things. So it's just a more efficient process. And I think modular is coming and in some cases, and Kim and Larry and I've talked about this in projects, where it's a combination of site-built and modular. So it's just a good marriage, if you will, of the two techniques and really, really coming forward.

Kim Neuscheler: Yeah, Joe and Dan the benefit of that is well, you're offsite building a lot of the components of the building not only - and we're not just talking about prefabrication of headwalls or prefabrication...

Dan Finn: No.

Kim Neuscheler: ...of exam rooms and bathrooms. You know what, we're talking about volumetric modular where you're building entire rooms and stacking them on each other. They're structural components. And as Dan mentioned, there's an education that's needed with that because our clients are getting more and more interested in it. It hasn't been done everywhere and there are concerns about, the unknown, with that. But at the same time that we're exploring that, and we're building in offsite facilities, we can simultaneously be building the site components onsite. And so, like, you reduce your schedule. As Dan mentioned, there are so many added benefits of offsite construction, whether its components of the building or whether it's full volumetric modular. So as we educate our clients about the benefits, whether it's cost, whether it's schedule, quality, safety - you name it, they are becoming more and more interested and more and more willing to step out of this standard site-built construction delivery method and look at these other options, which has been exciting. And, we definitely see it as part of the future, especially in light of the supply issues we're having with labor shortages and things like that. If we can make decisions early, that's one of the things that with the modular and volumetric modular that's a huge component is, we have to be willing to make decisions sooner. So, clients will have to standardize their products, maybe and standardize, the way their facilities look, which is a great thing when you think about it for branding. Someone sees a facility, oh that's this particular health care facility's building type. That's just easily recognizable that that's where they want to go. So, there are certain factors that, are benefited by going and switching to modular that maybe not everyone thought about before.

Dan Finn: Yes, I think, Kim, too that what you were talking about there what we're seeing there, of course, and you are aware of this, is a change in the health care industry and the delivery models and a lot of inpatient now going to outpatient which is driving a lot of ASC construction. And we actually have a prototype ASC from 20R, we can make a 30R, 4, 5, whatever is needed. Same thing with free standing EDs. And they are not just one-offs. So, again, these can be built in the factory. And talking about materials... Materials are so hard to come by so, there is a more efficient use because those materials can be stored in this offsite setting and reused. There is less waste. That makes it easier. And so then we can bring these things to market much quicker, even than this, the one-off. So the multiples are great. We are seeing a lot of that.

Larry Blackburn: It is truly the future of construction, now. I've been with Turner over 40 years, so I've seen quite a bit of change. And, a couple other things, you hit a lot of the benefits, but the competition is also growing. More and more of these modular companies are popping up around the country now. So that's going to drive competition which will also drive cost down for our clients. It was interesting, another example on the labor side, I was talking to one of the modular companies and they had no problem getting labor. And one of their carpenters said, "We would have taken a \$1 or \$2 an hour cut to go work in a temperature controlled warehouse because it would be a guaranteed 40 hours. You wouldn't lose a day due to weather." It would actually give even more overtime because they are starting to get busy. So you start to see that shift of labor. We target 30-40% or more of our projects now to be either prefabricated or modularized that would help alleviate that labor shortage that we are facing on our jobsite.

Joe McManus: Yes, I mean, if I'm a small contractor, all right, and I'm facing labor shortages to start off with, right, and now I'm facing OSHA pressure because of my distancing requirements and the heat problems that we've got for example, out West, why wouldn't I be pushing for more modular construction. I went to an annual meeting of the American College of Construction Lawyers this last year and they had a modular institute speaker. And it was staggering the amount of what they could deliver, I mean, power plants, just segments of power plants. And the ability to, to be able to deliver the same product over and over and over with that kind of consistent quality has got to be a great push. And Kim, you brought this up, is that we are also getting pulled by the health care industry, right? Because they are changing their types of structures that they want. Can you give us some insight into that?

Kim Neuscheler: Sure. Predominantly, they are looking for flexibility, regardless of the building type. Now Dan mentioned it, too. They are going a lot more towards outpatient care facilities than inpatient and so you have more ambulatory surgical center. You have more free-standing emergency departments and micro-hospitals and things like that that are put out into the communities into the neighborhoods closer to the people that are going to need those services. So you make it more convenient. Regardless of the building type, whether it's modular construction or if it's normal site-built construction, the most important thing that we're seeing with our clients is design flexibility - to be able to use those spaces for a variety of different uses, whether it's a medical or surgical patient room, being able to switch that immediately to an ICU patient room, when we're considering the possible pandemic surge. So the issue becomes how do you design the mechanic, electrical and plumbing systems to be able to accommodate whichever type you need to go to? Each facility and each type of surgical center, whatever, will have their own requirements for air changes per hour and negative pressure versus positive pressure rooms when you're talking about critical care patients. And so, understanding the needs of the clients and how many different ways they may need to configure a room and maybe you have some redundancies built in so that if you're in one stage of a project or process, you know you can use the room for this type of facility but then in the event you have a pandemic, you can look at, OK, implement additional measures where you can have negative pressure rooms and get better air circulation and oxygen to the rooms that need it and other services like that. So, I think the criticality is flexibility and being able to, whether it's convert existing to have more flexibility, or whether it's new. Owners want to know that they can use their facilities for a variety of different services.

Larry Blackburn: I could give you an example, we touched on speed to the market. So we were working with a client in

central Florida. They were going to build a three-story, 82,000 square foot medical office building with urgent care, physician offices, exam rooms. We partnered with Dan and his modular partners to build 56 exam rooms and four procedure rooms. So, while we are developing the site, bringing the structure up, Dan and his team are building these rooms in an environmental controlled warehouse and then delivering them just in time of project. They were going to bring them in and set them in place. What was a 13-month schedule, we could deliver that facility in 11 months now. We would shave two months - that's 15%, roughly, off of the schedule. So, that's the speed to market our clients are looking for us to deliver on.

Dan Finn: Absolutely, Larry. Of course, I can't agree more of what I call the five benefits to modular constructions. #1 It's speed to market, so early delivery and that's done through more simultaneous construction opportunities, a streamlined construction process. So it's a little bit faster. And of course, we have talked about this: the reliable and efficient labor and labor cost. So it's more an efficient use of the skilled labor. We talked about how hard it is to find. So use that as efficiently as possible. Better safety. And Joe was mentioning the excessive heat, being able to control the whole COVID protocols, those kind of things. Better quality control in the controlled factory work environment. And, of course, minimum site impact. So, yeah. I think, again, it's a great partnership. Modular is going to excel at that and keep coming and coming and be a great partner to site-built. So, offsite and site-built I see going hand-in-hand to take us into the future.

Joe McManus: When you say partnerships, you're talking about the entire subcontractor community and architects getting together with the modular manufacturer. How do you see the cooperation going and what do you see? Is it going to be as collaborative as it sounds?

Dan Finn: Yes, I think that's been our experience, Joe. And I think Kim and Larry are good examples of that, working with a site-built contractor and they have accepted this. It's been a matter of when we first got together and talking to Kim and Larry about all the benefits we're talking about right now. But I do see it going hand-in-hand into the future. I think it's going to be accepted well for all the reasons. I think it's very positive. I am very excited about it and MDN can hardly wait to take the next project return.

Kim Neuscheler: And Joe, just to add on that, one other key thing with modular and the advancement of and in the spirit of collaboration, it's required, it's necessary because you have to start early on and in coordination and having the design team, side-by-side with the fabricator and the contractor to make sure that everything is coordinated in advance, because like I mentioned earlier in our segment, we have to know where all those services go, where all the pipes are laid out, where the duct is laid out. Normally, we would do it onsite and you would do coordination and all the technologies that we have now. So whether it is volumetric modular or partial modular and prefabrication or site-built, coordination is so important. And you need to work together in order to set the locations for all of your services and make sure you have enough room for above the ceiling and in the walls for everything that is required in a health care facility or any other facility for that matter. So, the more that we can work together upfront, the more seamless it'll be, especially when you get into volumetric modular where you're stacking units on top of each other, you're guaranteed the same point of one unit. Your MEPs are going to be in the same location in the unit below. You're just stacking one on top of the other and even side-by-side. So as you're fabricating in a more controlled environment, you can guarantee a little bit better where all of your services are going to be because the workers are working, more at grade than up in the air at elevated work levels. And it's just a little bit easier to coordinate and to actually construct.

So the collaboration has to start from the beginning or you won't be able to make the decision soon enough to make volumetric modular or just modular in general worthwhile. You won't gain the benefit. And if you're not collaborating, you just lose all of that. But the thing that we talk about and we try to foster on all of our projects is the right environment which has all of this collaboration involved in it. I mean, we want to make sure that every team member is marching to the same goal, making sure that we give the client a quality product. And in order to be able to do that, we need to be able to talk to each other and talk the same language.

Dan Finn: Absolutely. Thank you for that, Kim. You mentioned stacking. For our audience, I just wanted to mention to give a better mind picture, if you will, of modular construction. Think of Legos, and these Legos are built in the factory, taken to the site and then stacked and put together. And, as you said, everything meets - all the mechanical, the electrical, plumbing. They're finished in the factory 80-85% complete and then put together and stacked, if you will, very efficiently. And then the final finishing is done. And that's part of where the partnership, if you will, with a general contractor like Turner who comes in play. And a good partnership with that collaboration and design upfront is key and critical. And that makes everything else work.

Joe McManus: Two of my largest health care fights had to do with clearances. Laying out and not having enough space between the end of the bed and the other areas. And what happens is, you seem to eliminate that or certainly mitigate that with the consistency of modular construction. From my own liability point of view, I find modular refreshing on that line. Kim, maybe we can - and for all of you - for those health care executives who are going to be listening to this podcast and those directors of facilities, do you have any final takeaways that you want to provide to us? This has been very illuminating.

Kim Neuscheler: I think aside from the different building types that we're seeing more and more in the industry with the ASCs and the FSEDs and the urgent care centers, whatever, bringing the services to the community, which I know

the community support, some of the organizations that I worked for in New York, they were doing that also. And instead of having to go all the way into the city to receive services, they can drive a couple miles down the road and receive the services.

Another thing that is really informing the offices of the future and the health care facilities of the future is the rise in telemedicine with the pandemic. So, everyone is still considering what their office and/or health care space needs are because certain things can be addressed through telemedicine now. And so I think that the more we're open to being flexible in our thought process, whether it's how we use spaces and whether we do modular construction or, site-built construction. The more we're flexible and collaborate along the way to figure out the best solution - sometimes it's a hybrid - Dan mentioned it earlier. Sometimes we have a hybrid where certain components of a job are site-built and then certain components are modular or pre-fabricated offsite construction. The more we can work together to figure out a solution that's best for that particular project, the more we'll come to provide a better quality product and figure out how to get it speed to market as quickly as possible. It just comes down to partnership and partnership on all sides.

Joe McManus: Dan, Larry, any further food of thoughts for those heads of facilities and executives that we can ...

Larry Blackburn: Sure, Joe. There may be someone listening and wanting to raise their hand and ask a question about testing and certification - we haven't touched on that yet. That's something we figured out, as well. Typically, it involves a third-party testing agency that is brought into the factory, or the warehouse, where the modular units were being built and those inspections and certifications are done and they are on hand when that finished product is delivered to the job site. I want to make sure we touched on that.

Dan Finn: Yes. Good point, Larry. Thank you. Yes, I think that third-party inspection process is now accepted - correct me if I'm wrong - is it 32 or 38 states that it's accepted and used?

Kim Neuscheler: I believe it's even more than that, Dan. I think it's in the 40s.

Dan Finn: Yes. OK.

Kim Neuscheler: Yes.

Dan Finn: Yes, it's increasing every day as we talk about it because modular is being accepted more and more and as you would say, Joe, for those, the directors of facilities that are vice president of construction, whoever, I would say, ask questions, and you can contact, again, MDN Development, Turner - we are partners and as we said, we are going to be partners in the future but go ahead, ask us the questions. We are here to educate. This will be something that will benefit all of us, so when I say partners, it's not just about developers and general contractors but it is owners. This is a great partnership that is coming forward.

Kim Neuscheler: I think one final thing that I will offer in addition to what Larry said for facilities and filing - the other benefit of what we can do now with all the technological advancements that there are with biometric modular, site-built construction, it's the handover - the turnover package at the end for servicing the buildings in the future. So facilities and operations just want to know that they are going to get an easy-to-maintain facility and the more you go with the biometric modular, you can be assured that each damper is in the same spot for the same room or, in the corridor, however it might be, wherever this device or any other device is located, knowing that that deliverable that you get at the end and the certainty that you get with the quality control of a biometric product, that's a huge benefit to the owner - they don't have to guess. It's the same place every time and then that turnover package at the end of the day has all the information - whether it's your owner's manuals and your coordinated drawings, your product data, your warranty information. That's a benefit with the building information modelling that we do nowadays and all the coordination techniques. Biometric modular is just another ways to give an added layer of certainty to being able to easily maintain your building in the future. I would just say, don't rule it out. It's definitely a viable option. We are seeing more and more people interested in this delivery approach.

Joe McManus: Well, I wanted to follow up on Dan's offer that listeners who are interested and have those questions can reach out to Dan at MDN or Larry or Kim at Turner or, of course, me at Centinel Consulting.

We've reach the end of our day. I want to thank Kim and Dan and Larry so much for participating here and what I think has been a very exciting development in the health care construction delivery.

Kim Neuscheler: Thanks, Joe. It has been our pleasure to be here.

Larry Blackburn: Thank you, Joe. I really appreciate it.

Dan Finn: Bye

