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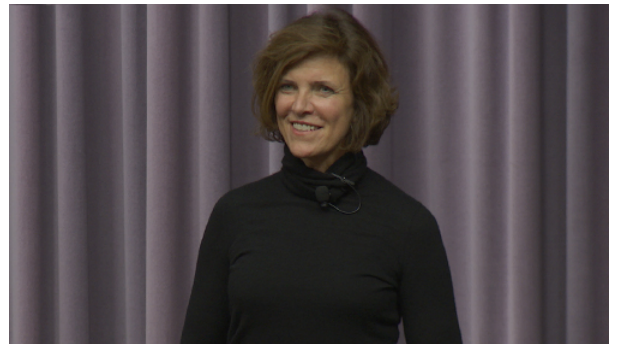
Growing a Creative Company [Entire Talk]

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Visionary architect and MacArthur Fellow Jeanne Gang discusses how the process of co-creation with clients and diverse teams leads to uniquely designed works that achieve aesthetic beauty and, at the same time, make bold statements. Founder and principal of Studio Gang Architects, Gang describes growing her firm without diluting creativity or camaraderie.



Transcript

Hello, everyone. So excited to be here, thanks for having me. I thought today, I'd start talking about - a little bit about growing a creative company because it might apply to some of the things you're doing. Growing the company a little bit of back-story on me, philosophy and then getting into some of the tricks of the trade of design and some lesson learned along the way. I want to start with this image of nests. If I were a bird, I think I would be some bird that would design nest like this. I think they're so amazing. They represent really pushing material to the limits of its structural integrity. They're beautifully designed for their purpose. They create community and they're made from materials that are reused, recycled and whatever is nearby.

So a really creative design for a nest. I started Studio Gang really thinking about how to address some of these major issues that we're facing: climate change, the growth of cities, the loss of biodiversity sometimes due to that growth of cities and also to enhance communities in which we live. And as we've developed as a company, we started to really try to seek out companies, organizations that have some of the same goals and that's when I really feel like we do our best work. So we've been working, trying to help organizations, used design and architecture to make their future more potent, more concrete, and through identity and through how architecture can help serve a company's philosophy. Just talking a little bit about one of the examples of where, I think, we really succeeded in doing something like that. This is a small project that the Lincoln Park Zoo in Chicago. They had a 19th century kind of reflecting pond, designed for strolling around built in 1908 and the pool over time had become really polluted and not in a very good shape and the zoo came to us and said, we want to improve this property, just make it more aesthetically appealing and represent who we are a little bit better. So with a problem like that, we really gathered around a number of experts not just our structural engineers, but also people that dealt with water quality, hydrologists, biologists and sat down really early in the process to think about what this pond could be besides improving it aesthetically. And because we started so early in the process together with the client, we really discovered what the potential could be for this pond. So today, it's probably in its fourth year of completion but we really just re-imagined the pond altogether and found out that it could do many more functions that it currently was doing.

So it was a reflecting pool, but now, just with deepening the pond from 3 feet to 20 feet, we were able to really improve that water quality, something that as an architect I wouldn't have known about but something that really allowed it to become a functioning infrastructure, a strong water retention pond and improve the water quality enough that it could actually be a habitat. So fish could winter over in this place. We also took it off the city water supply and just are using this runoff water cleaning it with plants to go back into the pond and at the same time, creating a place that's really attractive to people and the animals right in the middle of the city. So, this is some of the early ideas of the structure for a pavilion on the side that would become a learning pavilion for students. So a lot of the times we work with the builders, testing materials, pushing them to their limits. This is really made of a sustainable material, wood bent in two different directions, that's one of the great things about wood and it's also embodying all the carbon in it. So we made these pre-fabricated pieces and brought them to site to create

this pavilion and now it's really starting to function incredibly well both for people who wander around and stroll through it at night but also have activities there and also attracting animals. So Lincoln Park Zoo is really becoming more of the zoo without cages where animals come and voluntarily display themselves. So they went from having 40 nesting herons, black crowned night herons here to 400 pair in those years. So it's become pretty intense and then it's also attracting small mammals like these coyotes of which they're about 2,000 of them now.

In Chicago, they're being tracked by researchers to see how they survive in this environment. So I think this is really interesting to see how public space and these kind of habitats can come into contact and provide it a more rich experience in the city. But it's use for classes. Like I said, people use the pavilion for yoga. A lot of the architects like to get married there but also the teaching opportunities and teaching kids about ecology are strong. It's also the news for some dance performances. And so it's really become this incredible, attractive, very vibrant space in the city and embodying a lot of the ideas that we've had. After winning the MacArthur Fellowship in 2011, it was almost like - I felt like validated for what we were doing kind of going in the right direction because our practice is really a little bit expanded outside of what a normal architect does getting into a lot of these areas. And so that fellowship really helped me kind of like get the confidence to just keep pushing that as well. So with another organization that we are helping to define their future was The Arcus Center for Social Justice Leadership at Kalamazoo College.

And they had the problem of not ever - there really isn't a building that's a typology for social justice buildings. I mean a lot of times social justice happens in hidden places. So we recently completed a building for them that we hope will help define who they can become. It's on this small column in Kalamazoo campus and made with this cordwood masonry. So I'm going to show you a little clip of how that building looks. So the result we will see, but if they have a new home and many of the things that we did in that building were very inventive because we've kind of resuscitated this technique that we found hidden, forgotten and brought the right people together to be able to see if we could make it work for an institution where a building has actually lasted 100 years. So another thing, I guess, for architects, if you think back just what we're doing is really expanding the definition. Back in the medieval times, the architect was called a master builder and at that time, the role was really all in one, an architect, designer, a builder and an engineer in one person. And what we've seen over time is that that role has separated out and become a series of specialists and doing different things, specially up till the Industrial Revolution, this is Corbusier but at that time, all of these different design types started spreading and shifting off and becoming individual. So now, we have not only architects, but theatrical designers, exhibition designers, we have lighting designers and then in engineering obviously we have many different fields of mechanical engineering, electrical engineering, plumbing engineering and so you would think that the architect is naturally a great collaborator because we actually have to bring all the things together just to make a building happen.

But in fact, that's really the problem. It tends to be more of a role of coordination and less about collaboration. So we've become really good at maxing out what collaboration can give you in terms of design ideas and design input. Now, I think really a 21st century creative team is much more diverse. It takes all of us working together in different teams and that's what we've become really good at, forming those teams and creating teams. And getting the right people together. So one of those things I think is important is really just having a diverse group, people with different points of view. Because with architecture, unlike product design, every single building is a unique thing and it will be - it's a one-off in a way. So this serial project quality of architecture requires a special attention to forming the team and making sure that you get those points of view in there. Within the office as well, there needs to be a kind of a very comfortable and open atmosphere that will allow people to test ideas, anyone can have an idea from the person who is an intern on day one to somebody who is an architect for the last 50 years.

So we try to create that atmosphere and make it possible so people feel comfortable seeing their ideas, drawing their ideas and getting them out there and that's the spirit. That's really just been cultured in their office. One project I recently worked on that was a design for an exhibition was the MoMA project, MoMA Museum of Modern Art. We designed - it was kind of a research study that was shown in the museum called Foreclosed: Rehousing the American Dream. And we were studying what happened to these inner ring suburbs, early suburbs in light of the foreclosure crisis. And so for that particular project, it wasn't only the interior team of our office and, by extension, our professionals but we really had to decide who we want to engage that had special expertise that we didn't have to address a problem as serious as foreclosure. So we're not just thinking about the building but we're also thinking about the economics of the situation, the situation with housing, public housing. And so for that project, I gathered a team that included an economist, a researcher, a landscape architect, an urban specialist, a housing activist. And we specifically came together for this project to try to understand the foreclosure. One of the things that we noticed when we started looking at Cicero was that a lot of the bungalows - the single-family homes had many mailboxes on them.

So they were with all these names. So we thought something was going on with the traditional fabric in the suburb that wasn't the way it was designed in the beginning. And it turns out that it really was a reflection of what had happened in Cicero, this inner ring suburb with the transformation of the family from 20th century family to a many more mixed and individuals living together, extended families, unrelated adults that come to the city to work. So it was a much different makeup than what we originally thought. And so we wanted to get to the bottom of this and in order to do that, we felt we needed to engage people

that really lived there. So in a very careful and respectful way, we found a way to interact with residents who had gone through the foreclosure crisis and got their stories. So in a way, it was engaging people that beyond the professional circle but the real people who lived in these homes and one of the things that was really a discovery there was that the city of Cicero had been planning on extending a rail line to their suburb because they thought that that would solve some of the job losses. But what we found out by interviewing people was really that they were - everybody was working two and three jobs and moving all over in various places around the suburbs not going to the city center. And so for our proposal, we recommended a car share as another way to do a sustainable transportation system as opposed to extending a rail line from the city center, but we wouldn't have known that had we not engaged people. And then for our architectural project, we started to design a new kind of building that would allow this flexibility within the building, so people could add-on rooms when their relatives came to live with them for a while or they could rent a room out to someone else if they needed to make extra cash.

So it was an idea about doing a building that would support this community in Cicero. Another thing that we do in our practice which I think everybody should do is just make up projects. Sometimes, clients don't walk in through the door with a project that you want to think about and so what we've been doing over the years is as a problem begins to show itself, we might make that problem a project for ourselves. In this case, the project really ended up being a book and a series of steps that the city could take to improve its waterways. And it came about from a number of sessions we had been doing on the ecology around the river and the post-industrial river. Again, we met with a lot of people that were using the river and found out that even though it is an incredibly dirty river with raw sewage being ejected right into it, there are still a lot of people - public that use the river and so we interviewed them and we also figured out what the engineering problems were in terms of this waste, treating the river like a waste sewage canal. We also had flooding basements with increased severe storms through climate change. We have this carp species that's coming up the Mississippi, threatening to get into the Great Lakes. So it's another huge environmental issue, the bad water quality. But then they saw there is this great potential of space that could be used that is no longer being used for its industrial purposes.

So we felt this was like a perfect - the ingredients that make a really interesting project. And so we went ahead and made this book. The design that really came out of the book was these steps that we recommended for Chicago to renew the waterway. I should say too that I also took this problem to some students at Harvard Graduate School of Design and they came up with solutions to these incredibly difficult problems as well. So we had a whole slate of solutions that we displayed in the book. And I should say the step number - this one here, step number one was really about increasing the public's access to this waterway even though it is dirty and it is like you don't want to ingest this water, I tell you, but the idea that giving people more access to it, we create more stewards for this river and then ultimately improve its quality. So that was one of our recommendations. And what was really interesting as this book came out and there were some positive movement on the policies about the river like the Metropolitan Water Reclamation District would have to finally disinfect its sewage before putting it into the river and some other things. And I am not saying it's because of the book but the book was timed to be released - we collaborated with the NRDC, Natural Resources Defense Council and we timed it to release prior to these policy change opportunities. But step number one suddenly became a real project for us.

As our city got new leadership and they were looking for ways to increase access to this river, we ended up being kind of the experts at that and it wasn't - we didn't even know that there was a boathouse project in the works but it turned out that this was one of the ways that the city and the park district were thinking of giving people access to turn this more - this dirty river into a recreational frontier. And then I'll just tell you quick things about the design, we really didn't have a lot of time. We wanted to get this project going, they told us they wanted it opened in one year and again, it becomes - for the city, it is kind of like helping them with their identity, what will the city become. So we relied on some of our past knowledge of - this is Moy Bridge, photos of rowing around the 20th century and we also made some models of rowing - this is the positions of an oar during one cycle, and start to study those things. And we ended up turning that movement into the roof form for the building. And the benefits of that were to bring light into the shelter. I think we are using like 65% less energy than most buildings the typical building in the city. You can see these clear stories, they allow the sun to come in and warm the slabs. So we didn't actually have to use mechanical systems in this space. This is the boathouse with the team using it.

And we also use very straight and rectilinear elements to build the roof, so there is no curved elements but altogether because of the change in position just like with the oar, we got this beautiful warped surface for the ceiling. There is a row tank in there for kids to exercise in the winter months like now, because it's impossible to go into the river. But it's really become this hub in the community. And they do a lot of programs with vets and kids from all over the city that learn to row. So this is really a kind of very strong community building project that came out of the project that we made up which was the Reverse Effect book. As another technique, I think, for designers is really to - in our office is extremely research focused because we work on these different projects that are completely unique, they might have a different program, they might have different client in a different site in different part of the world, we have to really start to understand, get our head around the project. So we create a bibliography for every project and what that does is it allows people who join on the team later because sometimes a project might take five, six years, they can always go back to that resource, the bibliography which constantly grows throughout the course of the project. And they can get access to the initial materials that made us inspired in the first place. And so in a way I

call it just like developing a fluency within our office but also a lot of the times the books are recommended by our clients and we start to learn how to speak their language and every single project is like learning new language. One project I wanted to go into kind of like the ways, the techniques that we've been using for co-creation as well with our projects, bringing in that expertise from outside, one of the projects is called Northerly Island, it's a 90-acre park on the shores of Lake Michigan.

It was a former airport. The airport was pulled out and then we won a competition where together with a landscape engineering firm to redesign this project. So because it's such a public space, before it was kind of a private airport and we're turning this into a public space. We really wanted to get input from stakeholders. So one of the techniques that we use was doing charrettes which are work sessions with various people with different stake in the project and we broke up into teams and each team had designers on them and we developed about four schemes together with members of the public to discuss and talk about. And that really works well. With a public project it's very necessary actually. What we ended up designing was a place that would be almost like an outpost to the various museums nearby in the museum campus. So we had like places for bird watching, places for fish to spawn that correspond to the Shedd Aquarium and also star-gazing and things like that that kind of are related to the Adler Planetarium and, of course, The Field Museum. And then many different activities that at one hand help fund the whole project, but on the other hand, really get at that core belief of bringing nature into the city and increasing biodiversity and then letting that be a learning tool for kids.

So, they're can have camping for inter-city kids that can come right out in the city and camp overnight. We're going to have like a sunken ship that we're going to buy online and sink down in there. For fish, that's actually a great place for fish to spawn and lots of activities as well. One other way that we've been doing, it's almost like you have to design the tool for them to enable your partner, your client to help to be able to be a designer because many people aren't trained as designer. This was a renovation and a new office for the headquarters for the National Resources Defense Council and there are a bunch of attorneys that usually had their offices closed in with doors. And because we were going for a really great sustainability rating, a LEED platinum and also Living Building Challenge which is really hard to get, we needed to get everyone out of their offices and out into an open floor. So we realized that this was going to be very hard for the attorneys to do and they knew it was going to be hard and so we didn't want to be the bad guy that said, hey, you guys don't get an office anymore, so we brought a tool to them to use which was basically just this game like map and we cut out workstations of different sizes and then we literally let them arrange them in a way that they wanted to. And what was really interesting about the exercise is, they started to understand the tradeoffs and the things that they were going to - the benefits. These are like the different ones. We photographed these at the end.

The different ones that they really came up with. So it was kind of a discovery process and it really helped to facilitate and move the project forward in a way that was beneficial to them and to us. Another thing is just iterating. These are models, many different models that we created for a creative director for a theater who was very concerned about the seating and the intimacy of the theater and went over just - and other things just making lots of models that people can relate to and connect to. We designed a 82-story tower in Chicago called Aqua and when I got into tall buildings, it was really a very different - it's a different kind of design process, very different than what we had done with cultural institutions and we are excited about the idea of increasing the density and the footprint in the city. But one of the challenges from a design standpoint was how do you know what something is going to look like that far away from the ground. So many a times, we're picking out materials for buildings, so you can kind of mock up things and prototyping, but with something that large, we had to come up with creative ways to prototype this project. One other things that we did early on was just model making, not only the building itself but everything around it, way around it to find out its relationship to its surrounding and its sidelines. As we got more into it, we really got into working with the builders and the developer about the means and methods, the way that the curvilinear floor slabs would be made because every single floor slab is different to create that kind of wave effect and in order to do that quickly without using lots of foam and bed materials, we found a steel piece, the right thickness that could be re-used over and over on every floor. But trial and error with these kinds of full scale mockups, I mean again, as well with - before building that doing a wind tunnel test, this is up in Canada, that's a giant facility where you can really start to see what the effects of the wind tunnel are and what was really exciting to find out in our design process was that by varying the floor slabs slightly, every single floor step, we're able to improve the quality of the space in the outdoor.

So in other words, it reduces the wind pressure so people can use their terraces more days during the year even though it's freezing in Chicago, but everybody likes to get outside when it's nice. And it's also kind of a - it gave us this social connection between neighbors that you normally don't get in a high-rise so people can see each other and people started evidently dating and things like that. We have material testing. One of the things that you can't get around unlike product testing, in architecture, you only have one shot to do it. So you really got to get the prototyping as close to the actual as possible. But in our experimentation and where we're trying to think about materials in different ways, we do projects that are smaller in scale like exhibitions or I told you about the MoMA exhibition or this one is at the National Building Museum where we were testing a material, taking it to its limit. We wanted to see how thin the marble could be and if it could work in tension. I wouldn't do that with a building. But with an exhibition, it was really exciting. We used a lot of different technical discoveries and trial and error to get it to this place where something like 650 pieces of 3-inch stone hanging from the ceiling of the museum without any

structural support or frame.

Again, we're working testing the materials in the engineering lab, pulling it apart, testing different connections. I think there is really a connection between how we innovate with material and how we innovate on the scale of city and trying to connect those ends of the spectrum. Another way is using data. We've collaborated with data analytics firms to - especially for visitor serving organizations so that we can kind of test our scenarios before going out and building it all the way out. And then finally, I think with these ideas about creativity, one of the things we've learned along the way is that the client might not always come to you with the precise question that the project needs to answer. They know - they might know they need the building and they know they need something iconic or they know that they need something that really is functional but framing the issue critically thinking about the issue is really an important part of design. So one of the things I'm really excited about right now is working with the National Aquarium in Baltimore where they are trying to go from being a kind of visitor serving, more entertainment venue to being more of a conservation organization that uses their aquarium to help emphasize their message. And in doing that really thinking about the ocean and many different facets has been really exciting for us. You can see there is a little bit of a water theme that goes through that work but water and environment and how those intersect with people and cities is really the color. And then I thought I'd talk just at the end about the difficulties that we've had in terms of growing the company.

Some people were asking me like how big do you want to be, how big do you want your company to be and as we got bigger and bigger projects those are the question. And I realized finally like there is not a question that I really feel like is the question I need to answer. The question I need to answer is how to - we want to do more impactful work, we want to do more projects that are going to change how we think about the environment. So the question is really how to grow it so that we're able to do that but to keep the things that we feel we are really good at and to keep the creativity like a small firm creativity even though we're growing to a bigger structure. So it was really kind of a challenge that we've been working on over the last couple years and we have this very collegial atmosphere in our office. We really share information, there is no hoarding of information, we like each other, we really get excited about ideas and so with more and more people, how do you maintain that? I mean people - we do a lot of things like we spend a lot of time there. So we do things like these pumpkin carvings and many other things, camp, things like that. But what I realized recently is the growth of us - like this is all of the firms, all the architecture firms that are in the American Institute of Architects, there's about 17,500 firms, 26% of them are sole practitioners, like one person. I started out that way too. I was one person when I started the firm.

But we stayed in - I guess, I was there for about a year at one person. And then we moved into this area which 71% of the firms are only two to 49 people. So they're relatively small and I think that most of them are on the smaller end of that. Now, we're about 80 people and so we are like moved into this, the upper 3%, there is only 2% of the firms that are over 50 and less than 100, there is only 1% of the firms that are over 100. So it's very interesting and it's also - so like seeing that is really giving us insight as to what our potential could be now that as we shift into this other area. By the way, about a third of all of the architecture graduates are employed in that from the top 3% of the firms - of the large firms. So one thing we've been doing, we continue - we grew our camp, we go to camp every year and to creativity camp and we expanded it and it's still accommodating us at 80 and we do different activities and different classes. Together, we try to have fun together. But at the same time, we did have to put structure in place. And so this was really about trying to figure out how people could be mentored and grow within the firm but it really didn't feel like us.

It was like suddenly we have this pyramid and this hierarchy and what do we really want that to be? So we spend a lot of time working on that. We have a diagram that represents our project orientation. So when we work on a project, the project is in the middle and we're all around it. But this one really just wasn't sitting well for us and so one day as we were just working on this, filling it out, I noticed that it actually looked better like this and that was kind of an aha moment because for us, it really is about support and growth. This is almost like a tree and where the ideas that are coming in and they are the nutrients and they're going out and branching up and each branch with people that have been there longer can support and mentor people that are coming in that are new up at the top. And the people that are new and up at the top have a chance of becoming a branch and becoming a tree. So I think the lesson here is just that even when you have to change organization to accommodate something like growth, you can still own it, you can still own that growth and make it be what you want it to be, you can design it. And so now our latest iteration is really going to be something more like this that we're working on which is the same thing only slightly curvier. So with that, I want to thank you and ready to take questions. Okay.

So obviously, space is really important to you. Can you describe the space that you've created in your own firm with these many people to foster this type of creativity and innovation? Okay. The question is really about space and what kind of space are we actually in, what kind of space do we inhabit to foster creativity and I think it's a great question. It's something that we evolved over time, we kind of grew into our space. We started in a small end of the office and then in the same floor, there was a poet society and there was a communist bookstore and there was ambulance chasing lawyer as well. And so - but after we started growing and get spaces, they moved out, we took over the whole floor and what we did was we reused all the materials that were already there. So starting with what's there, these incredible doors that look like a detective agency door and we made walls out of those and we made different rooms for collaboration with different atmospheres. So there is a silver room, an

orange room, a white room, a broom on a garden, a garden space and the teams move in and out of those spaces to collaborate. But as we have grown, we're starting to fill in every single space. We've actually got a new building that we're going to be moving into in the summer and so we've had the opportunity to actually plan from scratch what our space will be like.

And so what we decided to do is plan in more mobility and which has not been done yet for architects, we're usually stuck to our desks because we have a lot of stuff but we're devising ways to liberate people from their desks and be able to use more mobility for collaboration in many different - even more atmospheres throughout the office. Yes. So, I'm interested in the Aqua building design. I think it's very intriguing. So I'm originally from China and our cities are growing very fast. So in the past 20 years, there are a lot of skyscrapers and probably today in my city, I'm from a city that's adjacent to Hong Kong. So there are probably more skyscrapers under construction than skyscrapers in total in San Francisco. So I'm wondering since people became more isolated and they're more like being taken up by these huge buildings. The sense of culture and community has started to decline. And the city is trying to figure out a way how to preserve the culture and how to promote the humanity side of the city.

I was wondering if you have any insights on that. Okay. So just quickly summarizing the question, insights about high-density, tall buildings in big cities, how to make those even more human and with the loss of community that happens when smaller scale buildings get replaced by tall buildings. Right. From my understanding your design is more about environment, culture and community. Right. And so we thought a lot about that too. When I first got the commission for the Aqua Tower, we had never done a tower before. And so - but I was really excited to take that on. The condition in a city like Chicago which is kind of really like a - maybe like a post-industrial city where people are moving out of the city, had a different significance there.

So the people that would live there, we found out were people who are - maybe their kids went away to school and they might be coming back downtown for culture. A lot of graduate students live there and people that work nearby in the loop. So it was a little bit different situation. But we still felt that there was something that bothered all of us because we - at our office, we like to go outside and step outside in the balcony and socialize, we felt like there is an opportunity to make a more social tall building. And so we gravitated toward what the terrace could do so that you could step outside and be part of the building and part of the city at the same time and also have these views to other people obliquely, maybe similar to like what it will be like to see someone across the yard and across the fence of the yard instead of going for this total privacy which is what the pressure is to do. And then you could see someone without having the five minutes of going down the elevator and going outside. So there was that and also social space on top of the podium part of the building and the innovation there, I think, was just like convincing everyone that it would be to everyone's benefit if we didn't separate the people who own apartment or rent apartments from the people who own their condominiums from the hotel. There's three different uses in there. So we combined all of those into the amenities there on the roof of the podium and that has been extremely successful because people are really - meet their neighbors and so there is a lot of social space within the building. So I think that's important to consider in each place it's going to be specific like what were people doing before for community and how can that be translated into this vertical.

But the importance of going vertical is really, I think, mostly about reducing the carbon footprint, making cities more dense, but at the same time making them livable and improving quality of life instead of sprawling out across the countryside which is what has been going on here. So, thank you. Yes. You mentioned, I guess, architects originally were kind of jack of all trades and then slowly increasingly till today there is more specialization, more like specialized consultants. The trend in architecture with building information modeling seems to be that in order to effectively use that you kind of need to bring those parties together and the incentives and even firms are kind of structuring themselves, I think, to more so do that including more design structures and engineers. How do you see the industry changing in light of what's happening technologically and how people are collaborating? Yeah. That's a great question. How is the industry changing with respect to the specialization given the building information modeling, software that we're using now as a platform? It's a very positive development the opportunity to have everybody working on the same model, is a great - is a great way to bring everyone together. It seems so obvious but it just hadn't happened until now. And even now, sometimes certain parties are not brought into the model or don't want to be part of it like oftentimes the builder isn't up to that yet.

So a lot of the knowledge that's built into the model doesn't get distributed. So - but it's a great way to start merging and bridging those gaps between the different specialists. I don't think the specialists are going away, but I do think that the - we all will know more about each other to work and that will improve everybody's work. And I do see blurring boundaries in our firm but in other firms too where you start to get closer to one of those other professions and start to maybe do something that would have been in their territory and they might do something that would have been in your territory. But the model is a great tool to bring everyone and get them all focused on the building as opposed to many of the other things that go on in collaborations. So it's positive. Let see. I will get back there and... Yeah. I am curious how you divide your personal time between like meeting the clients, building relationships and doing actual architecture and designing buildings.

Personal time? Yeah, I think it's a very good question. So that's evolved a little bit too. But still at this point in the office, I am still involved in all the projects and what we've done in our structure is bring up more design principles that are almost like doppelgangers and we can communicate very fluidly and they're excellent designers and they've been with us a long time. So there is a kind of ability to spread it out a little bit more. Oftentimes, I'll get really involved in a certain phase and then my involvement will be more - less frequent in other phases and maybe get back frequent again during construction, things like that. So still trying to manage that and there isn't a lot of like personal time. It's a lot of I do what I love to do and I do it all the time. So - and I think a lot of us feel like that. We have to make ourselves take breaks and things like that. That's a nice thing about a creative profession or occupation is like you actually like doing it so much.

And the other thing I should mention too on your question is just that we've brought in people to - we've started to bring in people that can do - take things off of my plate that I used to have to do. So when I first started the company, I was doing the quick books and doing the time and doing the - I was the tech person starting up the network and we would have 15 people suddenly go down on their computers and I would be at a meeting, I wouldn't let anyone let anyone touch it because I built it. But I got over that. And now, there is somebody who cares about that as much as I did at one point. And as well as financial things and human resource things and things that - so that's actually helped liberate my time and it's also made us a stronger organization. Okay, go ahead. You talked a little bit about your design and work structure. It was a little complicated since you've scaled up. What was another thing that was really complicating scaling up from just yourself to 70, 80 people that you are right now? I think probably the hardest time was when we were about 10 people, that's when you really are doing every single thing. And so as soon as the - what helped us was getting a mix of projects, some larger and some - the small ones sometimes takes as many people to do a small project as it does to a large project.

But you don't want to give up the small project because sometimes they're really important to your mission or to your creative spirit. So getting a balance of projects was - getting that first big project because convincing people that you can do it. I feel like half of my time to spent convincing people we can do it. And so once you get that balance, and then there is more cushion to be able to take on projects that might not be profitable or they might be labor intensive or doing something like the book which was there is no paying project - there is no paying client for that. So it's hard to get the right balance and actually it's still hard because you might have some very large projects all at once and then you need that - you're looking for that project that you really - is going to make everything come together and other times you would have a bunch of small projects that take up all the people and there's not any profit to cushion everything. So that is still - that's always the hard part about architecture design. Okay. So here it goes - to you now, yeah. You talked about building green and sustainability and that's all well and good. But at the end of the day, architecture firms have to make money.

Curious for a medium size architecture firm like yourself, can you articulate the business case for building green? Yeah. Articulating the building case for designing a green building, from the architect's standpoint or from the client's? From architect's. From the architect's standpoint. It's been - I guess, the business case is that we want to be the best at what we do and so to master that is putting us into a category of best and so doing something like the NRDC where it was the first time, it was a Living Building Challenge which indeed took us a lot more time to do that to figure it out. But achieving it then put us just in the category there can't be. We are the only ones that have done that on a commercial renovation and that's what we believe in. So I think it's a matter of being excellent the excellence case, I guess, but it's also a benefit obviously for all of our clients because they will see the productivity increase in their own workspaces and all the things, the benefits that come with like a healthy environment like that. That's kind of the way I am looking at it. Sure, you talked about your business growing as that's happened, I am sure you are now turning away opportunities and clients and projects. How do you determine which projects you're going to take and which ones you aren't? What are some of the qualifiers that take something off the list perhaps? Yeah.

Okay, so we - the question is really - yeah, the question is really about how do you decide what products to take or turn away at this point. And it's true that we do have to make those decisions and we meet every week on our projects, the opportunities that come through the door and if they meet our philosophical criteria, if the client or the partner know that we will be working with is impressive in their philosophy and if we also take something if we think that we can really - if it's complex and we think that we can actually make it different make a difference. And then like sometimes it's really just the city or the place like we always wanted to do a project in that city. So there's sometimes intangible things that help you decide and there are times when you have to turn away something you really want to do just because you're going to make sure that you have the capacity to do the projects well. So, yeah, that's become a little bit easier but at first, it's very hard to turn away something after all the years spent scraping by getting projects serially one by one. Yes. ...during Great Recession, in architecture how did you manage that? Yes. How do we manage during the Great Recession starting in 2008? Well, yes, basically we had this really great mix of projects, we never went - there was a big boom with residential projects like after Aqua and it was built, it was done right before the recession, just got in under the wire. But before that, a lot of architects had turned their practices towards solely doing those because they're very profitable and - if there was a boom, but I think focusing on that one type of project led a lot of firms to actually have to close their doors but we had just a really good mix of not - we made a lot less money after 2008 for just a number of years and - but the great news was we didn't have to lay anyone off, we kept our size solid, we had a little bit of natural attrition there but kept solid and then we used that time to retool some of our things like improving our BIM

software knowledge and we did a lot of planning also like planning for growth which was good because it took us a long time to figure out how we wanted to grow and we spent a lot of time thinking about that and we had different models. All of our planning for growth we did with our office.

So it wasn't like a group of the leadership thinking of it and coming and giving it, we had sessions where we would come up with different models from everybody, from the newest person and we tried one out for while, it didn't quite work and then we finally, like I said, made it our own and so we managed through that period. I am sure you'll agree this was totally inspirational. Please join me in thanking Jeanne Gang.