

Talks at GS

**A Conversation with Barbara Humpton, CEO of Siemens USA
With Matt McClure, Investment Banking Division, Goldman Sachs**

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Matt McClure: Good afternoon, everyone and welcome to Talks at GS. I'm excited to welcome Barbara Humpton president and CEO of Siemens Corporation, which is the US division of Siemens AG. I believe you employ 40,000 people and have revenues \$17 billion.

Barbara Humpton: You've got it.

Matt McClure: So it's a massive business. Prior to her current role, Barbara was president and CEO of Siemens Government Technologies. And prior to that worked at Booz Allen Hamilton and Lockheed Martin, companies that we know well within our industrials group. Today we're going to talk to Barbara about her experience leading Siemens through the pandemic and how Siemens has navigated that, her views on America's infrastructure challenges and why she believes American manufacturing is poised for an era of modernization and transformation.

Barbara, thank you so much for taking the time. We're delighted to have you here. Let's start first with your background So I believe you attended Wake Forest University and your original plan was to become a math professor. Is that true?

Barbara Humpton: That's true.

Matt McClure: But then you ended up following a recruiting session awake joining IBM. So just talk me through that pivot.

Barbara Humpton: Yeah, of course. And I hope your lives are following similar serendipitous paths. Yes. I wanted to be a math professor like my parents because wow, what a life, right? They taught students during the year and then they had summers off with us. We loved it. I went to Wake Forest. Fantastic math professors. In fact, what I loved most were the theoretical math courses. I said, would never want to do anything with applied mathematics. Then lo and behold, IBM came recruiting at our doors and I thought, you know, I just want to see how I would do in an interview. And then I got an invitation to visit an IBM site. And I said, oh, I just want to see if I could maybe get an offer. And sure enough, I got a job offer. And I said to my parents, this is going to make me a better math professor someday and five years into it, my mom said, so when are you going back to graduate school? And I said, at that point, as long as I'm having fun, I'm going to keep doing this. And so here I am.

Matt McClure: There you go. Now before you joined Siemens in 2001, as I mentioned, you worked for Lockheed and Booz Allen and a number of their clients include people like the Department of Justice, Department of Homeland Security, the FBI. Just talk us through what it was like dealing with those organizations,

Barbara Humpton: I could tell you, but I might have to kill you.

Matt McClure: Don't kill me just yet, because we're not done, but how did those interactions help you as you as you took on the role of leading Siemens Government Technologies?

Barbara Humpton: Yeah, actually. So it's so funny how things look so much more clear in the rear view mirror. I mean, what I can see now is that my experiences at IBM and Lockheed Martin were very much grounded in solving big problems of national security. And so when I got the phone call for Siemens and was asked, would you like to join this powerhouse? I actually didn't know very much about it.

I went to a library and I found the annual report and began to read and just said, my heavens, this is a company that aligns with my own why. This is a company that's focused on mega trends like urbanization, climate change, the aging demographics of humanity. Oh, an ever-increasing global supply chain and the digitalization of everything. It's like, I can bring my technical skills to bear and help solve challenges that now are about global security. It drew me right in that and I just have never looked back.

Matt McClure: Let's talk a bit about your role today and in particular your views around the future of manufacturing which is a topic dear to my heart. So you've said, this is the moment to modernize American manufacturing and develop the workforce of the future. Just tell the audience what you mean by that. And what do you think the future of manufacturing might look like?

Barbara Humpton: One word: glocal, glocal. I think what we need to be focused on is taking advantage of global innovation, but we need to find ways to make things everywhere. And so I, and we're actually at that point in manufacturing where we have the tools we need to make that shift. Years ago and over these last few decades, we've seen manufacturing move around the globe, always searching for the low cost labor pool. And we're now at a point where we can say we can elevate the capability of every person. We can make people much more productive and now perhaps we, the return on investment, the business cases all center around the tools of manufacturing and less on what is the cost of the individual person involved in it, were there.

More than that though, we found that we have a need. We have a need to have local supply. I mean, what happens if a ship runs afoul of the Suez canal, right? We've seen the effects that can happen in the global supply chain. So the ability to be glocal and begin to establish manufacturing more locally, more regionally is something that we need to focus on now and watch this space because the pivot has begun.

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Matt McClure: Do you think that's been exacerbated post-COVID? We might not be totally post-COVID yet, but do you think most corporations have sort of had another look at their supply chain and whether or not [inaudible] was too global?

Barbara Humpton: Yeah. What I hear a lot now is and. Originally in the midst of COVID, what I heard from a lot of leaders was, oh, we're having talks with, say the US government about, should we reshore, but companies don't want to necessarily move. If they're in Asia and they're supplying to Asia, they want to be in Asia, but they want to also be able to supply the America. And so I think we're going to see this as an and operation. And yes, people making those decisions.

Matt McClure: What do you think that future means in terms of human talent, both in terms of training and recruitment and retention, is this good news? What's your view?

Barbara Humpton: I was sharing with Matt. I have a podcast called the Optimistic Outlook. I encourage everybody to look for it, subscribe. And the whole premise here is that it's these times of disruption that actually give us the chance to shape the future we want. So it's not a matter of what's happening to us. If the question is what are we going to do? So I being an optimist and working hard to shape this future, where, you know, talent is everywhere. And what we've been trying to do at Siemens is make sure that more young people get interested in the kinds of jobs that we know are exciting in manufacturing and infrastructure and transportation and drawing more people into that. With the same thing happening around the world, again, if we think globally, we'll find people who catch fire with these concepts.

So I'm optimistic about what this means. Jobs of our future obviously are going to be intertwined with a technology field that is changing very rapidly. We can't know today what we're going to need in ten or 15 years. And therefore, the exciting part of this is that we need people to light up

with the idea of curiosity and initiative are the only two skills you actually need to cultivate. Everything else can be learned as you go.

Matt McClure: How do you think Siemens clients are navigating this?

Barbara Humpton: Yeah, Siemens clients. This has been an interesting year because there have been plenty of companies and businesses, especially in certain markets where the tendency has been to originally hunker down and wait it out. And then eventually saying, oh, you know, I've got to figure out a new way of doing things. And so we're hearing from clients all over the place who were saying, I'm ready to begin to use more digital tools. I need help in how to do that. You'll see Siemens working with large consulting firms to just help businesses get through that change management activity that's underway now.

Matt McClure: And what about as you think about us towards a digitized future, my guess is there's going to be some bumps along the road. What are the kind of pain points that you would highlight for the audience?

Barbara Humpton: Yeah. And I'll give you a few, but I'm going to start – I'll start with just a quote from *Ready Player One*, if you ever saw that movie. You know, huge virtual world has been created and, and our hero finally meets the creator of that virtual universe and who says to him the great thing about the physical world and the real world, it's the only place you can get a hot meal, right? So our physical world is here. It's here to stay and it's here to embrace, but we are bringing digital tools to it.

A lot of people think – a lot of people who are running businesses think that they're going to need to bite off a major transformation in order to begin their journey. And the example, if they think

of our gosh, you know, two decades ago, everyone was embracing ERP. And to make that switch cost us a fortune, right? It was a real whole of company commitment and very difficult to manage.

This is a different kind of transformation. In this transformation, you can start small. You can pilot little things. You can put a couple of digital natives in with your grizzled veterans and just start playing around with, Hey, what tools do I have? Ooh, what data gets produced? How do I use that? And then boom, you can get ready to scale. So I, that's very different and exciting. And so for many, the real hurdle is just getting started. Once folks get started and they unleash the creativity of their teams, then the sky's the limit.

Matt McClure: Yeah, and my guess is if you're starting small and growing into an organically, then ultimately, you're probably going to be more successful.

Barbara Humpton: That's right.

Matt McClure: Let's talk a bit about the supply chain and particular, you know, whether or not the national supply chain coming into COVID was kind of under-prepared and your views on that.

Barbara Humpton: Yeah. Oh, well, we had evolved a global supply chain, right? We've been headed toward this global optimization. Ever lower prices in order to, you know, drive efficiency. But what if economies of mass production are not actually the goal now? What if mass customization where the goal? What if we had a world that was saying, I want my unique thing. This could lead to a very different style of supply chain. Now it turns out within Siemens, our supply chain organization turned out to be the heroes of the pandemic.

You heard story after story, first of companies that couldn't operate because they couldn't get PPE. And then companies who couldn't operate because they couldn't move, you know, materials

into locations. We've had actually customers now who are beginning to stockpile materials in order to be ready for what comes next, because what's coming next, right? None of us know what happens next. Everybody's saying I need to be ready. So we've got that kind of shift going on. Now I've got a personal goal, which I'm talking about every chance I get, which is what if instead of having a national stockpile of supplies that might be needed in case of an emergency, what if we had a strategic digital twin reserve? Have you heard about the concept of a digital twin? The idea that with computer modeling, you can in fact, make a twin of any physical object.

So we had customers who did this during the pandemic. Medtronic allowed Siemens to make a digital twin of one of their ventilators, and then a company that we were helping, they had just established themselves in Vietnam. They were an auto manufacturer. And what they did was they used our plant simulation to basically simulate what would it take for us to convert and make ventilators? They took that digital twin of the ventilator. They started producing ventilators in a matter of weeks. Remember what we went through in the United States? So as strategic digital twin reserve, you know, what if we could actually be prepared for come what may with flexible manufacturing and the know-how of people everywhere in the world.

Matt McClure: It's a great point. It was obviously impossible, you know, 20/20 vision to see COVID coming and be totally prepared for it.

Barbara Humpton: Bill Gates saw it coming.

Matt McClure: Fair point, but post COVID as a corporation, how do you prepare for the unknown or the next potential crisis? How do you think about that as Siemens?

Barbara Humpton: Yeah. Okay. So a term that I learned, gosh, in the year before, COVID I read Nassim Nicholas Taleb's book "Antifragile," and he says – have you heard of this concept of being

antifragile? Antifragile is the opposite of fragile. He looked everywhere for the term that represents the opposite of fragile. And you might think robust or resilient. No, all those things are about preserving status so that if something bad happens, you can come back to normal. Antifragile says you're actually gaining from disruption. So like, you know, why do you work out with heavy weights? You work out, you disrupt your muscles, and they grow stronger. Why do you take a vaccine? You disrupt yourself with the pathogen and your body grows stronger.

So this concept of antifragile, I introduced this just to say our goal is to be anti-fragile as a business. Now, Taleb thinks that corporations by default are fragilistas. They're people who take advantage of other people's fragility for the benefit of business. Our goal is to be anti-fragile, gain from disruption, but not at the expense of others' fragility, but by actually helping our communities get stronger. At Siemens where the backbone of the nation's economy. And so we have a role to play.

Matt McClure: How do you keep that momentum going? Because one of the things I find coming out of COVID is it forced a lot of organizations, including ourselves to kind of rethink how we did certain things, how we conduct business. Are we always getting on airplanes? Are we conducting business by Zoom, et cetera? So that was one of the kind of benefits that came out of the COVID era is that forced [inaudible] discussion of, okay, what should we be doing differently in light of it? But my guess is the further you get away from the crisis, the more that urge to kind of rethink things continually peters out. How do you keep that momentum?

Barbara Humpton: Right. That's why, first of all, you want to be really active in a crisis. As soon as conditions, as soon as you recognize we're in the middle of something that we don't control, it's not a matter of your own actions, right? You don't control this. All you control is your reaction.

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And so what we got focused on was what's happening now? How do we help? And then look across the horizon and ask, how do things change? One of the things we did early on was actually bring a specialist in risk management to speak to our US leadership team. And it was, I honestly did not know what he was going to say. It was can you tell us how you see the current situation and how we should be thinking about what comes next? And the picture he painted for us was shocking.

It went 24 months out into here's what's happening now. This was April of 2020. Here's what's happening now. Here's what you can expect to happen next. And I'm telling you everything that's happened in this last year, you know, it's just like, wow, we heard this. And so, you know, here's the picture of what's going on. I think it really pays to invite people in to scare you. To invite people in to tell you their view of what might happen. We've built this into our enterprise risk planning scenario, right? So that now quarter after quarter as a corporation, we're asking ourselves, okay, but what if, and that's keeping us fresh.

Matt McClure: And were you doing that pre-COVID or is that a post COVID [inaudible]?

Barbara Humpton: We've always had enterprise risk management program, but I will tell you, you have a different view once you've been through an experience like this. And then, hey, one more thing that I would say is it's really valuable to have the voices of experts in different disciplines at the table. What is your cyber experts saying right now? What about your physical security expert? If you don't have one in-house, where do you go get it? Where can you hear from people who really devote their time and expertise to deeply studying those things that most of us just don't have the time to look into? If we can give those people that microphone and allow them to scare us out of our wits, it can be a huge motivator.

Matt McClure: Yeah. Last question is supply chain. So a number of our clients have been really impacted by the semiconductor shortage, which has obviously been a huge topic for the automotive world

as well as others. How has Siemens been impacted by that, and any lessons learned as a result of that experience?

Barbara Humpton: Yeah, we absolutely have been impacted by this. And again, I'll go back to our heroes in supply chain because they have the really tough duty of working with our businesses and making sure that supplies get to the right place. And by the way, in some cases, it's not a question of where in Siemens should this go, but do we have a customer who needs this more than we do, right? So who in our society needs this supply and are we doing the right thing for the overall answer?

So we have learned a lot about, you know, just overall, the planning and the risk planning that goes into that. But it's one reason that by the way, we've been huge voices and supporting the CHIPS Act. I mean, I think what you all have seen is that, you know, sort of flipped this world around a couple of decades ago, the Europe and the US produced 75% of all semiconductors. And now, you know, it's quite the reverse. So we recognize it's a time to build. And I'll just reference back to point number one, global that, we do need to identify sources of supply in diverse regions of the world.

Matt McClure: Let's talk a bit about infrastructure, which is very much front and center on the national stage at the moment.

Barbara Humpton: I thought you'd never ask.

Matt McClure: We're getting there. You've outlined a broader vision for America's infrastructure challenges and what needs to get fixed. Just educate us a bit on your view on what went wrong, where we are now and what needs to happen.

Barbara Humpton: Well, I, okay. So first of all, when is infrastructure week? It turns out every week is infrastructure week right now because what's happened over the years, of course has seen things lapse and degrade. A lack of investment in the comments, right, has led us to a point where the American Society of Civil Engineers gives us failing grades and it's clear. And, and we have to invest in infrastructure to be able to perform as an economy. The voice that I've used, the message that I've been working hard to deliver is the idea that it's easy to think about the infrastructure of the last century.

What about the infrastructure that'll take us into the next century? What about the things that will allow for leadership in the next, the future is connected. The infrastructure that was built in the past that served us by connecting us, you know, physically is all well and good, but that infrastructure can and should be brought to life. Furthermore, we need new modes of transportation. We need a more connected vehicle grid with charging stations. You know, so electrifying creating an infrastructure that's more sustainable and infrastructure that's more equitable now is the perfect time because every dollar we spend is going to be supportive of economic recovery, and it can be a giant step forward to our more sustainable future.

Matt McClure: Where do you think we stand nationally versus, and I'm going to talk later on about China and the investment spend that they've been making?

Barbara Humpton: Yeah. well, China has been spending and spending you know, in terrific areas. You think about things like high-speed rail, you think about just the amount of new built infrastructure that's there. Those have all been sound investments from what I can see, and we can see the dramatic growth.

Siemens has enjoyed a wonderful dynamic market in China, especially over these last couple of years and in this moment, it's phenomenal. So that exists and you know, what I'll say is you can see

almost as a proof point that that ecosystem is valid. What we're seeing here in the US think of it as a translation. Things work differently in this system, right? It's more of the business community that takes a leadership role in most of the new infrastructure that gets developed. And yes, there is government investment in it, but this is very much a private sector driven thing. So for instance, high speed rail was more likely to be driven through the efforts of private, the private sector, looking at city pairs, looking at concession opportunities at nodes on rail lines. So there's a different way to get there. What I'm encouraging government to do is to think about the accelerating impact of government investment in order to make that future a reality.

Matt McClure: And do you think government buys into the concept that beyond just, you know, spending money in roads and bridges that some of the infrastructure initiatives can actually have real positive benefits towards addressing some of the societal challenges that we see at the moment?

Barbara McClure: Indeed, and we see this right now in the bid before the Senate. You know, first of all, we are, I'm so delighted to see that we are seeing these transformational technologies being included in the infrastructure bill but go across the country. The federal government is playing an absolutely vital role in setting this framework. For instance, something as simple as vehicle charging standards would be a brilliant move right, at the federal level. Now think about where the actual changes are happening, it's happening at the state and local level. And so when you talk to stakeholders there, you see a very clear focus on solving some of the inequities that have been created by infrastructure in the past, and are in a real desire to get it right with the next move that comes. So I believe this is where the true action is with those state and local players. And it's so much fun to interact with them on the decisions they're making now.

Matt McClure: If you don't mind, let's come back to China. So obviously Siemens has a massive presence there. Huge economy. Talk about how you think about the opportunity was in China.

Barbara Humpton: Yeah. Well, I have a colleague in China who is the CEO of Siemens China, and what's obvious to him is that the number one thing we need to be focused on as Siemens is to not overlook the national champions who are rising in China. In the past, perhaps we thought of ourselves as competitors of other international corporations who had placed a, you know, a foothold, if you will, in China. And yes, that's an interesting competition, but watch what happens next. And there are – is an incredible amount of talent being unleashed now in China and incredible amount of innovation. And so that's where Siemens is going to stay focused.

Matt McClure: The relations between China and the US at the moment seem like they're almost at an all-point of low. How do you navigate that commercially?

Barbara Humpton: Well, commercially, I'm going to pull out this word again, glocal, right? So think about what Siemens does. We're involved in industry. We're involved in buildings. We're involved in, you know, and when you think of buildings, hospitals to universities to multi-use commercial buildings, et cetera, and then transportation. All kinds of forms of rail and public transit. And you asked yourself, is China a great market for all of those things? The answer is absolutely yes. So we would ignore China at our peril. China needs to be a focus of the corporation, but we also recognize the importance of understanding the geopolitics, understanding the need to assure security for all nations. And so having a local team in China focused there obviously assuring our compliance with local rules, regulations, laws.

Having a team in the US that is local and Siemens USA has been here for 160 years. These 40,000 employees are driving a business that is in all 50 states and territories. Deep roots in the electrification of the US, deep roots in truly much of the innovation that's happened in the field of infrastructure and a deep knowledge of our regulatory systems, so the laws of the land. So I think what we're doing is we're looking at these two different markets separately and together and actually navigating, I think, successfully so far and hoping not to get caught in any, you know, you

hope not to get in a situation where there are truly catch 22s where you were forced to choose. I say, Siemens can't choose because the people of the world need our technology.

Matt McClure: Let's talk about diversity, equity and inclusion, which I know has been a massive focus of yours. If you could enlighten those on the efforts you've been making on that front at Siemens and how successful you've been at attracting women and other diverse talent into manufacturing.

Barbara McClure: Well, there's manufacturing. And then there's, you know, there's all the engineering, there's the sales roles, just every role that Siemens has in the US. If you looked at it traditionally, you would say, generally males went for these jobs. So, you know, question number one is, are there enough women to apply for roles like this? And so we've been active in working with basically the whole K through 12 system, and then obviously in higher education to make sure that people, you know, that that passion for STEM gets ignited in them at an early age.

And they aspire to jobs like ours, or even better with our customers. And in fact, a few years ago, we turned the work of the Siemens Foundation totally to the work of preparing the workforce of the future. So everything from working on apprenticeships, then seeing how we could extend those apprenticeships back into high school years. How soon could we get people really hooked on the kind of work we do? And so that's beginning to pay dividends now.

A lot of people will ask me, well, is there a business case for diversity? And for me, it's just this simple. Talent is well-distributed, pretty evenly distributed across all of humanity. So let me ask you, you know, when you try to build your organization, are you only going to consider half of the talent pool? No. I want to go for the best talent that's out there in whatever walk of life and what we're discovering is that if we merely go recruiting in new and different places, we meet different people and many people just want to be invited to the table.

Matt McClure: How are you measuring success on that front? Do you have specific goals and timeframes and KPIs, or how do you think about whether or not you're succeeding?

Barbara Humpton: Well, first of all, awareness is key. So yes, our human resources organization has helped us with metrics to understand where we are and to understand what's the pipeline look like in various regions and how well are we selecting from that pipeline. Is our workforce representative of the, you know, of the geography, et cetera? That's all well and good when we get to things like quota. I know a lot of companies are doing a great job of establishing a goal and going for it. I'll tell you that the Siemens goal – we've been very public about it – is to have more women in top management and the goal that's been set globally, Siemens USA has already surpassed that. So, you know, my goal is keep going, but I believe that what gets measured gets done and so situational awareness is key.

Matt McClure: Last question on this topic. And I don't know if this was a formal mentor or not, but apparently a mentor a while ago, when you were outside of your career, asked if you had to choose between being a mother and an executive. So any advice to people that have ever been asked that question?

Barbara Humpton: Well, no, imagine this. You get assigned a mentor. I mean, it's actually, it's a wonderful vote of confidence from a management team to say, we see you. We recognize your talent and we'd like to help cultivate that talent so we're going to assign you to an executive who will be your mentor. I was excited. I went to my first meeting with the mentor and in the course of conversation, just somewhere casually, he made the comment, well, you can't be a mother and an executive. You know, you'll have to choose if you're going to go for the brass ring.

At the time, Matt, I already had two children. So I was, you know, stunned, but, well, we continued our mentoring relationship, but honestly, I think I was cut from that cloth that I was taught that

these people who have so much experience in business clearly knew what they were talking about. I knew I had made the right choice for me in starting a family when I was young, my husband and I were so thrilled with this growing family of ours. I made the right choice and I thought, well, I'll just make the most of what I can do. And that just became my mantra.

So man, if I look back on it now and I got to work on the global positioning system, the ground control segment, I mean, right? We get directions now because the Air Force watch this incredible satellite constellation and I had the privilege of working on it. I got to help the FBI figure out what would the next generation of biometric identification look like. And did you know that lab on a chip was just being created for the healthcare community. And we showed the FBI how they could use that to do the DNA analysis that would help them make human identification and it cut the cold case load of the FBI by 60%, as soon as it rolled out. It's getting involved in things I was passionate about that kind of made the whole journey fun with the caveat that I was never going to be an executive.

Matt McClure: I've got to ask you. So in light of your current position, does that individual ever contact you and say, hey, in retrospect that maybe wasn't thinking about that the right way?

Barbara Humpton: Yeah. Nope. So it's fascinating. It's fascinating because we actually did have the chance to work together again much later when I had been selected for an executive role and I got this phone call in which he said hey, you know, maybe I could give you a few tips and pointers and maybe and I stopped him. I can't believe I had the guts to do this. I actually stopped him. I said, can we just pause for a minute? Because years ago, when you were my mentor, we had these conversations and it felt like you were patting me on the head and here we are now and I'm getting that same feeling again. And I know you don't mean to send these signals that you're here to take care of the women who are remarkably advancing in the organization, but that's the way it's coming across.

And he thanked me. He thanked me and we have stayed in touch since then. And so I will tell you that I have felt so happy to have that moment of being able to close the loop and so the encouragement I would give to people is to realize that as we're dealing with each other, sometimes we come across in a way we don't intend and the most graceful, the most gracious, sometimes the most loyal thing you can do is to actually speak up. Point things out and suggest a different way.

Matt McClure: That's great advice, Even if it's uncomfortable at the time. I think that's great. All right. So I'm conscious – I want to get the questions in the audience and we have a bunch on the screen, but we're going to do a really quick lightning round of quick questions, quick answers. So I did read that you and your husband loves to travel. What's your number one pick of where you want to go.

Barbara Humpton: Oh, next, we're going to Jordan. I just got the news today. We're going to Jordan. Yeah.

Matt McClure: Impressive. Recommended book for the summer. This is a personal one from me.

Barbara Humpton: Okay. Well, it's not even recent, but if you haven't read it, "AI Superpowers." Pertinent to the conversation about US and China.

Matt McClure: What app are you guilty of using most?

Barbara Humpton: The New York Times crossword puzzle.

Matt McClure: That's a very brainy app to disclose, I'm just going to say. And then last one from me Zoom or in person or a mix?

Barbara Humpton: I love both. I have loved Zoom, and by the way, one reason I love Zoom because, because I'm not as tall as many of the men I work with, but on Zoom, we are on eye level.

Matt McClure: That's awesome. Barbara, thank you so much. It's been fascinating discussion. Really appreciate you spending the time and sharing your perspectives.

Barbara Humpton: Thank you, Matt.