I Wish...

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The content in this book is that of Stacey DelVecchio and does not represent Caterpillar or the Society of Women Engineer’s positions, strategies or opinions.
This book is dedicated to future engineering leaders who are challenged with making our profession all it can be.

And to the members of the Society of Women Engineers, who inspired me to do more.
During one of the many interviews I did during my term as the Society of Women Engineers President in 2013-2014, I was quoted as saying “I wish people would stop being impressed by the fact that I’m a woman engineer. We want it to be normal to see beautiful, social, intelligent women out there that are engineers.”

At the time, I was also a leader in engineering at Caterpillar, a company I was with for 30 years, but this quote always stayed closed to my heart. So much so, that upon my retirement from Caterpillar, it inspired me to capture all the wishes I had for the engineering industry, an industry that provided me with challenging and meaningful work for over 30 years.

So with my quote as my own inspiration, I share with you my other wishes....
I Wish

I Wish People Would Stop Being Impressed By The Fact That I’m A Woman Engineer. We Want It To Be Normal To See Beautiful, Social, Intelligent Women Out There That Are Engineers.

Stacey DelVecchio
SWE President
My good friend Jada once said, “I don’t like cake. I don’t eat cake. Don’t ask me to cut the cake.” I’m talking about cakes served in companies big and small for service anniversaries or retirements. We’ve made strides in this area: I know a lot of men who will step up to cut and serve cake. But it’s still way too common to see the woman in the room volunteer to do it.

While this may seem incredibly trivial to most men, it’s a situation that happens year after year and sends a message that it’s a woman’s role to cut the cake. If you think my message is outdated, it’s not. I recently celebrated my 30 year service anniversary and of course I had a cake.

While our admin had planned the event and so took charge of cutting the cake, she needed help plating the pieces. And who stepped up? One of the few women in the group. She wasn’t asked to do this, which is a sign of progress, but I wish men would just step up as well.
Early in my career, I knew two things about my professional aspirations. First, I wanted to be an engineering manager. And second, I knew I would not accept a job that required me to live in a different city than my husband. These two aspirations guided me throughout the years.

In 2003, when I was a wave one black belt, I turned down an opportunity to be a master black belt, despite the fact it was a promotion. I wanted to be an engineering manager and felt it would be a better fit for me.

At another point in my career, I turned down an opportunity to be a facility manager because my husband would not have had any career opportunities in the small town we would have moved to.

Accepting either of these opportunities would have been short sighted in my opinion. Of course, I would’ve
made more money, gotten a promotion, and had an interesting job. But as I reflect on my career, I still had amazing opportunities and interesting, challenging assignments without chasing a promotion.

Shortly after turning down that promotion to be a master black belt, I did become an engineering manager. While I would go on to other roles in the company, my time as an engineering manager was still one of my favorites. And I was able live in the same city as my husband.
people would assume others have good intentions.

I’ve spent the last 30 years at Caterpillar assuming people had good intentions. I didn’t look for the power play or the hidden agenda. You might call this naïve, but for the most part, it served me well.

I would also contend that it was a lot less stressful to have this approach. When I questioned someone as to why I was not invited to a meeting, and they would say they forgot, I believed them and asked to be invited.

When I asked an engineering group why they didn’t have my group 3D print for them, and they said they didn’t know we could do that, I believed them and shared the capabilities of our group.

I could go on and on. I’m pretty sure there were times when there was a power play or hidden agenda, but by taking people at face value, it made it a whole lot easier for all of us to correct the situation and move on. Asking
the question up front gave us a good point from which to move forward. There’s also something satisfying about assuming the best in others. And the icing on the cake is that I don’t lie awake at night trying to figure out what someone else’s intentions were. I just assume they are what they say.
While attending a White House Summit on Working Families in 2014, the message I heard repeatedly was the incredible need for flexibility where it makes business sense. We can balance all the craziness of our lives with a little flexibility.

I’ve often thought of flexibility regarding my own work situation. I was happy to have a boss who let me flex my hours, so I could exercise in the morning. He trusted me to get my work done and didn’t micro-manage the hours I was in the office. Seems simple, but most don’t manage this way. If everyone seems to think flexibility is so great – beneficial for employees as well as for companies – why don’t we see it everywhere?

I think about my parents’ work environment compared to working at Caterpillar. My parents owned a small nursery in Cleveland, Ohio. Our house was in the middle of the nursery. For anyone who owns their own business, you know there are long hours and no guarantees.
My parents worked their butts off. Our nursery was open seven days a week between Memorial Day and Labor Day. That meant my parents worked seven days a week. Some days were long, and some days were short, but they worked every day. However, a benefit of owning your own business is that you have a lot of flexibility. My parents could, and often did, stop in to school activities if an employee was available to watch the nursery. They didn’t have to ask anyone’s permission to spend some time with their kids, a definite perk of owning their own business.

But how do we recreate this perk in larger companies around the world? In my opinion, we struggle to offer people these liberties because we’re a little worried that they might try to do less. When people request flexible work, it doesn’t mean they’re going to work less, accomplish less, or be less committed; it’s often exactly the opposite. It does mean they’ll be able to bring some sanity to their lives when juggling multiple roles. Leaders need to trust their employees, provide more flexibility and help them find the balance they need.
In my career, I’ve been on all-male or mostly-male teams. As the only woman, I’ve received emails addressed to “Guys and Stacey” and “Guys and Gal”. Ugh. This didn’t make me feel like I was part of the team.

Now that there is frequently more than one woman on most teams, I see “Guys and Gals.” I realize this is an attempt to be inclusive, but the noun gal is not the word to use to show respect for the professional women on a team. The definition of gal is “a girl or young woman.” Contrast that to the definition of guy, which is “a man.” No one would actually address an email to “Men and Girls,” but that’s what is happening.

So how do you address an email? There are some who feel the noun guy is gender neutral, but others adamantly feel that guy is a male. Let me suggest we get around all this guy/gal terminology and simply use team.
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\frac{3a(y + C_2)^2}{13} + \frac{2}{3}\frac{(y + A)^{13}}{39} + (c_3 y + c_4 + qA(x + y))
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Where would we be without the parents, teachers, and mentors who have guided us throughout the years? **These are the people who helped us** when we were too immature or distracted to realize it. Without a doubt, I wouldn’t be where I am today without these people, or, at the very least, my path would have been a lot bumpier. While I hope I’ve thanked those who are still in my life, the ones that I often overlook are those who had an impact on me years ago. For me, I had unfortunately forgotten to thank them but have had a chance to since correct that.

Several years ago, in an interview I did with the *Cleveland Plain Dealer* (the newspaper in my hometown of Cleveland, Ohio), I mentioned that my teachers at Midpark High School had encouraged me to take advanced math and science classes. It was a small and innocent recognition of their impact on me, 30+ years after the fact, but recognition nonetheless.
The good news is that at least some of my teachers saw the article and my comments. Later that year, I was inducted into my high school’s Hall of Fame as a distinguished alumna. I was honored to receive this recognition, but what made it even more special was that my very favorite teacher of all time, Mr. Buddie, was being inducted as a distinguished staff member at the same time.

Mr. Buddie was my math teacher. My fondest memories are of his excitement in teaching calculus my senior year.

Yes...he really got excited about calculus, and as a math geek myself, his excitement was contagious.

Mr. Buddie’s induction ensured that some of my other teachers, Mr. Reinhard (chemistry), and Mr. Heckathorn (physics), were in attendance for the induction dinner.
This time, I was able to make sure they heard my thanks and appreciation for the great learning environment they created. They made me feel like I belonged. While I didn’t realize this was so special at the time, I now know they did indeed do something unique and special. I am thankful for their efforts and wish every girl out there could have the kind of learning experience they created for me. So be sure to say “thank you” to those who have helped you. Hopefully you’ll be timelier than I was!
Pre-meeting chatter and conversations at lunch are rich opportunities to make people feel included. There are many topics to discuss but often...it’s sports. And I don’t do sports. I thought this was just something we did in the U.S., but as I’ve traveled the world, I’ve learned it’s universal. The sports might be different, but it’s still a sports discussion.

Just to be clear: It’s in no way offensive to discuss sports. But if people on your team never engage in the sports discussion, find another topic. If you don’t know how, bring up a fascinating fact you heard on NPR or your favorite podcast. If you work with technically curious people, discuss interesting tidbits that are shared in these venues. I’m a big fan of CBS Sunday Morning, and every week there are numerous politically correct, intriguing stories that are perfect for that coffee break chit-chat. If you’re the person who always talks about sports, I challenge you to vary the topic. Or if you never engage because the topic is always sports, I challenge you to change the subject.
I frequently have a seat at the table where I’m the only woman or the only one who knows the real capabilities in my area of expertise: 3D printing. I can be fearless in correcting technical myths or broaching gender-related issues. I have a wealth of knowledge based on 30 years’ experience as an engineering leader in product development and 25 years as a Society of Women Engineers member. But when is it the right time to speak up with all this knowledge?

In my work as the additive manufacturing product manager, it was not unusual to be asked to join a group of executives who were discussing the future of 3D printing. They usually had widely varying opinions on the subject, from “3D printing is going to save the world” to “3D printing is only good for trinkets.” The reality is somewhere in between, and it was my job to speak up and explain the reality without sounding condescending or squashing someone’s enthusiasm.
I’ll admit to not always being patient in these situations, but I still strove to get the right balance. The important thing was that I, as the expert in the room, spoke up, even though I might be have been several levels down on the organizational chart.

Shortly after finishing my term as the global president of the Society of Women Engineers, I was in a new role at Caterpillar and had the opportunity to travel with several executives, who happened to be men, from my new organization. As veterans of Caterpillar, we knew each other by reputation but had not worked together.

During some casual conversation on the road, the topic turned to the importance of being on external boards and that based on the recognized need for diversity, new board positions were all going to women. I could tell they didn’t have all the facts. I did. I spoke up.

In both situations, was I intimidated by this group? Of course. However, I was the expert and I knew it was
important to engage openly in the discussion in a professional manner. The worst thing any of us can do is agree to comments or remain silent when we know people don’t have all the facts.

An engineer who is working all day, every day, on a project knows more about the status of that project than a manager who is several levels up. It’s hard, but I challenge you to speak up. If you don’t, people will make decisions without accurate information. There’s no way our leaders can know the real situation if the experts at the table don’t share what they know.
someone would find my red chair and share it.

I am hopeful you’ve heard of the National Center for Women & Information Technology (NCWIT) and their “Sit With Me” campaign. The campaign is about sitting to take a stand. It stems from Rosa Parks, who sat at the front of the bus to make a stand back in 1955. There is no doubt that Rosa made a difference by sitting to make a stand. If NCWIT’s campaign has a fraction of the impact that Rosa made, it would be a resounding success. “Sit With Me” invites you to validate and recognize the important role women play in creating future technology by taking a small but symbolic action: sit in a red chair and share your story.

Upon learning about this campaign, I bought a red chair. At a Society of Women Engineers event, we took pictures and shared them on social media. I then brought the chair to Caterpillar, but its symbolism soon became lost. I know my red chair is somewhere at Caterpillar, and I wish people would find it and sit to make a stand.
Shortly after taking the role as the additive manufacturing product manager, my group was moved into a larger “innovation group.” I was less than excited about this move because I’d never really seen myself as an innovative person (I’m more of an implementor) and was worried I might not thrive in a group of innovators. While I still don’t see myself as an innovator, working with this group of people who continually pushed the boundaries and challenged others to do the same changed the way I viewed what we should and should not do.

Ken, my new mentor and manager for a short time, looked beyond how things were historically done and expected all of us to do the same. I’m not suggesting that people break the rules, but I do want people to understand the spirit of the rule versus blindly following what’s been done in the past. Don’t ignore the established processes that
have made us who we are, but execute the processes to the right level of rigor.

I’ve seen 6 Sigma projects done in less than one month, which was appropriate for those specific projects. I’ve also seen projects take years because people felt that was what the process required. Look at your processes, use common sense, and keep to the spirit of the process. But go outside your comfort zone and challenge your peers and your managers to do the same.
I’m all for getting data and voice of the customer to support a decision, but **at some point, a decision must be made**. I’ve sat in meetings and heard people say, “No one told me to,” even when the data supported it and it was in their span of control. In my opinion, they were reluctant to make a decision because they’d be held accountable if something went wrong.

We all need to consider the consequences of any decision realistically. What was the risk of having one of my new employees give a tour of our Additive Manufacturing Factory to a group of new employees? Pretty low, even if the tour wasn’t exactly how I would have done it. The risk of failure was low, and the consequence of the failure was low, too. Or what was the risk of posting something on our Yammer site that hadn’t been proofed by multiple people? Pretty low. We could always edit the content or take it down.
But too often, we treat these decisions with the same rigor that we would the decision to go to production on a new product line. The risk of failure is different in this case and needs to be considered when making the decision. Consider the risk and make the darn decision. More often than not, you’ll find the risk of failure and the consequences of that failure are pretty minimal.
we would give people we don’t know a chance.

How many times have you heard, ”Network... network...network. It’s all about your network.” There’s a lot of truth to this, but how do we match up a person with the perfect job if no one in that job area is in their network?

Of course, posting the job is a great process to find potential candidates who aren’t in our networks. But opportunities don’t always present themselves in the form of a job posting. And often, when this happens, we go to the people we know for these opportunities. The people who have proven they can get the job done. There’s certainly logic in this, but there could just as likely be a rock star out there that we don’t know about.

I challenge leaders to give these rock stars a chance, even if you might not know them personally. Let’s admit we don’t know all the great people who can get the job done and take a chance on some of the lesser-known people, even if you need to take a little risk to do so.
people would take a blended perspective.

I’ve spent most of the past 30 years working on components at Caterpillar. I understand the value chain and importance of an enterprise perspective. It’s to our advantage to use parts that are similar to those already in the system. There are cost advantages and engineering efficiencies; plus, it benefits our customers.

An enterprise perspective means we take advantage of what we’ve learned, and then build on it, even if it’s going to a different product line. We don’t re-invent the wheel when someone else has already figured it out.

We’ve also built an entrepreneurial culture at Caterpillar, which is good, because we’re held accountable for making each product line the best it can be. We admittedly need a balance between these two perspectives, and when we do as we should, everyone wins. I wish people would remember that it’s not one or the other that makes us great, it’s a combination. Let’s not forget that.
before everyone could find their purpose.

Before I decided to run for president of the Society of Women Engineers (SWE), my friend Teresa asked me why I wanted to do this. The answer was easy for me: I felt I could make a difference. I wasn’t sure how, but I had a passion for the mission of the society, and the support of my family and Caterpillar. I wanted to take SWE to the next level. And I wanted to ensure that little girls knew engineering could be an exciting option for their future and that the women engineers in the profession were respected and supported by their employers.

I didn’t want to see any more women engineers leaving the profession.

The decision to pursue the SWE presidency helped me realize my purpose beyond the work in my day job. While I’d like to see everyone find their purpose, especially one that’s about more than just their day job, it’s also important to know your purpose can be big or little. If it’s meaningful for you, it’s a good one. Just find it and hold on to it during the good and the not-so-good days.
Several years ago, a manager name Dave taught me that if you’re going to choose to go to a meeting, be engaged. Don’t fail to contribute and sit in the back of the room and sulk or multi-task—be an active participant.

You may notice the essence of this advice in Caterpillar’s “Be Present” message, but this was well before “Be Present” was a thing. I have since taken Dave’s advice beyond just a meeting and extrapolated it to just about anything.

Years later, unbeknownst to me, a manager of mine decided to leave Caterpillar but had not yet resigned. He was disengaged, not caring what our team did. Since he was still my manager, I wish he would’ve stayed engaged.

I’ve seen people join a committee but not engage for several reasons. Work became more demanding or it was not what they’d expected. Instead of resigning, these people typically sit back and do nothing. My wish is for people to decide to stay or not, but decide quickly, act on their decision, and while there, engage.
VISION

A world with gender parity and equality in engineering and technology.
...we had a world with gender parity and equality.

Even though more women engineers are graduating now than ever before, we have just 14% women engineers in the workforce. While this percentage has improved, we’ve seen an extraordinarily small change in the past decade.

Where are the women going? They are going into other professions. Research shows that these women continue to work and have careers, but they choose to have a career in something other than engineering. I like to think of each of these women engineers as nuggets of gold, and they should be nurtured, developed, and feel included in their work environment.

Gender diversity at all levels leads to more successful, resourceful, and sustainable organizations. Let’s continue to nurture a culture of inclusion and make sure these professionals see a work environment that makes them want to stay in engineering.

Let’s reach for a world with gender parity in engineering and technology. And yes, this is the vision of the Society of Women Engineers.
Stay true to yourself.