



Profiles of Mechanical Engineers



Matthew McGoff

**Technology Leader
Procter & Gamble
Cincinnati, OH**

Education:

BS, Mechanical Engineering, Georgia Institute of Technology

Job Description:

Technology Leader, designing the equipment and processes required for manufacturing new dry laundry products or innovating existing production lines.

Advice to Students:

"Schoolwork is a foundation and a fundamental you have to have. But if you don't physically get the hands-on, and understand how components go together and understand how processes go together, I think it's all for naught. You've got to have both parts of the equation."

Comments:

Matt urges engineering students to network as much as possible, starting through their ASME student chapter. Co-op experiences with a beverage company and small manufacturing firms enabled Matt to adapt more quickly to his initial responsibilities as a project engineer at P&G.

Video Transcript 1:

"While I was going to Georgia Tech, I did co-op with several companies. I co-oped with Coca-Cola for a couple of quarters. And I co-oped at a few small manufacturing shops, where I got some real hands-on experience. It helped me understand what I could expect in the real world. It also supplemented a lot of the course work that learned from Georgia Tech. In getting my hands on and actually experiencing real equipment and real processes, it was real valuable."

Video Transcript 2:

"One of the best stories I ever heard was: one of my peers was talking about his interview process, and asked the question, "How much will I be traveling." And the manager replied, "Well, gee, only about twenty percent of the time." A year later, this individual had been on the road ninety-eight percent of the time. He went back to that manager that recruited him and said, "You said twenty percent." And the manager responded, "Well, how long were you in the air?""

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Video Transcript 3:

"Network as much as you can. I had a unique opportunity, at Georgia Tech, to be president of the ASME chapter. And I got to know a lot of folks. Not only on campus, but at different campuses, as well as at the ASME headquarters. So, develop a good, strong network, and interface as much as you can."

Video Transcript 4:

"I think what Georgia Tech gave me that I probably couldn't have gotten anywhere else was just a basic understanding of engineering philosophies and process thoughts. And it's hard to believe, but the basics that you learn in physics, in your first thermos and fluids, are really what you use, predominantly, in industry. Understanding just simple things, like mass balance. Energy balances. Those are the basics that I think I learned at school that I don't think I would have necessarily picked up."

Interview:

McGoff: I'm Matthew McGoff. I'm thirty-three years old. My title is technology leader. And I work at Procter and Gamble. In the laundry business. My greatest satisfaction is at times like this, the completion of a major initiative, when I can look back over six, nine, or twelve months, and see how much we accomplished. I love going into projects where we don't have all the answers, where we're not sure that it's going to be successful, and where we have to push the organization to find a way to make it all work.

Q: Let's go quickly back to your undergrad experience. What made you decide to become a mechanical engineer?

McGoff: I think I was probably heavily influenced by my father, who's an engineer as well. And I enjoy that kind of work. I think I have an aptitude for it.

Q: How did you like going to Georgia Tech?

McGoff: Georgia Tech is an interesting school. It's a great school. It's more of an experience than an education. And you'll hear folks refer to Georgia Tech as "Ma Tech." People don't ask when you graduate; they ask when you got out. It's a tough school to go to, but real enjoyable. And when you leave -- when you do graduate, you know you've graduated and you've accomplished something.

Q: When you were an undergraduate, did you get any real hands-on engineering experience?

McGoff: While I was going to Georgia Tech, I did co-op with several companies. I co-oped with Coca-Cola for a couple of quarters. And I co-oped at a few, small manufacturing shops, where I got some real hands-on experience.

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Q: So, now, when you graduated and you had this experience, as well as your formal education, what do you think that added to your value as an employee?

McGoff: The co-op experience? It helped me understand what I could expect in the real world. It also supplemented a lot of the course work that I learned from Georgia Tech. In getting my hands on and actually experiencing real equipment and real processes. It was real valuable.

Q: Tell me a little bit about your first job out of college, and how you got it.

McGoff: My first job out of Georgia Tech was actually here with Procter & Gamble. I've been with Procter & Gamble since I graduated. And my first assignment was in the laundry business. Where we were coming out with a new initiative. I kind of fell into it. I interviewed with Procter & Gamble, as well as with several other companies. And I selected Procter & Gamble based on what I believed the company offered. And I just kind of fell into the laundry business.

Q: Tell me a little bit about Procter & Gamble. I know it's huge. Tell me a little bit about the company as a whole, and tell me a little bit about the group you work with.

McGoff: Procter & Gamble, as a whole, is a very interesting company to work for. I guess my selection of Procter & Gamble was based on the fact that they weren't defense-industry related. I knew I wouldn't have to look at the cyclic nature of hiring and downsizing. It's a very good company to work for, and a very broad company. The ability to go across different divisions, different categories, different businesses, is incredible. You can do recruiting one year, and you can do product engineering or product development another year.

Q: Tell me a little bit about who you work with. If you work on a team, who constitutes it? Is it just mechanical engineers, or what -- give me a little bit of insight into that.

McGoff: Where I work, right now, is in our process side of our dry laundry business. And what that really means is how we make the synthetic granules for Tide, Cheer, Gain -- all the dry laundry products. On the process side of it, we work with a very heavy chemical-engineering focus, where we make synthetic surfactants. We then process those into base granules, and put all of our additives in to deliver them. So, I work across product development as well as manufacturing. And my actual role is initiative engineering. So, whenever we come up with a new improvement to Tide -- and Jerry Seinfeld always jokes about new and improved, right? -- whenever we come out with new improvements, my job is to interface between development and our manufacturing sites, to make that new improvement happen. So, it may be new equipment and it may be process changes to facilitate the improvement.

Q: So, who do you need to work with to facilitate all that?

McGoff: From an engineering standpoint, I deal with both mechanical and chemical engineers. The emphasis is not on the degree. It's on process engineering. And if you can understand the fundamentals of process engineering, I don't think it's really necessary that you have either a chemical or a mechanical engineering background. So, I deal with both.

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Q: What about non-engineering staff? Like accounting or marketing. Human resources, recruiting?

McGoff: They join the team. We incorporate really a team concept on initiatives. So, it includes development, it includes manufacturing, it includes finance, it includes purchasing. As we look at bringing a new initiative in, whether it's a new raw material we're dealing with, or a process change, we incorporate all those elements as we execute initiatives.

Q: Tell me about the changes that you've gone through, here at Procter & Gamble. What you started as, and how you've kind of worked your way through. The different positions you've had. And what skills you think, or what things led you to each one.

McGoff: I started my career with Procter & Gamble in the old Engineering Division. When I joined the company, in '86, they still had an engineering organization, per se. And it was strictly focused on initiative engineering. As we evolved into what we call our "product supply organization," we became much more linked with the specific businesses we were supporting. After that, I went into a manufacturing assignment, where I got some hands-on manufacturing experience. And, now, I've come back to initiatives execution. From a growth standpoint, the first assignment was neat, in that I got to do some real hands-on engineering. As I moved into manufacturing, that was a unique experience, and I learned how, sometimes, the best laid engineering plans don't necessarily manifest themselves into wonderful processes. So, we actually got to live with some of my designs, and had to make them work. So, coming back to the initiatives execution, I'm going to come back with a lot of skills that I didn't have when I started at the company.

Q: What did you come here with, that, really, you can only probably get from a formal education, and what did you kind of learn as you moved through the ranks?

McGoff: I think what Georgia Tech gave me that I probably couldn't have gotten anywhere else was just a basic understanding of engineering philosophies and process thoughts. And it's hard to believe, but the basics that you learn in physics, in your first thermos and fluids, are really what you use, predominantly, in industry. Understanding just simple things, like mass balance. Energy balances. Those are the basics that I think I learned at school that I don't think I would have necessarily picked up. That's what I see that tends to be missing from some of our non-engineered resources.

Q: And what about the skills that you have now that really a formal education couldn't teach you? Or an engineering curriculum couldn't teach you. What have you acquired?

McGoff: I think what I've learned outside of Georgia Tech, here at Procter & Gamble, is that the hands-on is critical. The schoolwork is a foundation and a fundamental you have to have. But if you don't physically get the hands-on, and understand how components go together and understand how processes go together, I think it's all for naught. You've got to have both parts of the equation.

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Q: What do you think that the best aspects of your job, here, are? What makes your job exciting or, at least, satisfying, to you? Or if you're not satisfied with it, tell me why.

McGoff: The part when I'm most satisfied is typically, right now, the completion of a major initiative. When I can look back over the last six, nine, twelve months, and look back at what we accomplished. I love going into a project that we don't have an answer for. That we're not sure it's going to be successful. And I love pushing the organization to figure out how we can make it successful.

Q: So, there's got to be a down side to that. There's got to be a side that's frustrating to get all that done.

McGoff: Getting the work done can be frustrating, at times. Probably the biggest frustration that I've experienced at Procter & Gamble, and I know it's industry-wide, is organizational communication and alignment. My experience is that when development, manufacturing, finance, and logistics are all aligned, delivery of the objectives is easy. When they're not aligned, when they're not communicating, delivery of the objectives is almost impossible.

Q: How much time do you spend here? What's your typical workweek?

McGoff: I probably average forty-five to fifty hours a week, now. It depends really on the assignment and what the status of the work is.

Q: What about travel?

McGoff: One of the best stories I ever heard was -- one of my peers was talking about his interview process, and asked that same question. And the manager replied, "Well, gee, only about twenty percent of the time." A year later, this individual had been on the road ninety-eight percent of the time. He went back to that manager that recruited him and said, "You said twenty percent." And the manager responded, "Well, how long were you in the air?" Well, he traveled Mondays and Fridays. Guess what? It's twenty percent. It's really up to you. I've been on extended travel, where you're gone for nine months. And I've been able to balance that. As my personal situation has changed, I'm able to balance that. And I've been able to scale back. There's still a lot of travel that I could take that I don't.

Q: How do you get that balance between your personal life and your working life?

McGoff: My wife is also an engineer at Procter & Gamble. And that made it especially difficult, as we started a family, trying to balance it. And we actually, on a weekly basis, get calendars together and see who's covering what. It affects your choice of assignments and what work you take on. Because my highest commitment is to my family. So, it's never easy.

Q: So, what do you do when you're not at work?

McGoff: Chase kids and change diapers. . That's it. It doesn't sound glamorous. I've been with P&G ten years, now, so -- it's a change in our lifestyle, but it's one that I welcome.

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Q: Have you gone for your Master's?

McGoff: No, I have not gone for my Master's.

Q: Do you see yourself continuing your education? Is that a possibility for you?

McGoff: At this point, no. When I first joined Procter & Gamble, I was going to pursue a Master's. I don't think it's necessary. I don't see the need for it. And very few folks within the Product Supply Engineering Organization have pursued that.

Q: You're speaking to freshmen and sophomores in college now. What do you wish you had known when you were just starting out to study engineering, that you wish maybe someone would have told you?

McGoff: Network as much as you can. I had a unique opportunity, at Georgia Tech, to be president of the ASME chapter. And I got to know a lot of folks. Not only on campus, but at different campuses, as well as at the ASME headquarters. So, develop a good, strong network, and interface as much as you can. The second thing I'd tell them is get dirty. I mean, take every opportunity you can to tear equipment apart, dig into a process and understand how it works. Because that's when you're going to learn.

Q: Now, you've that you've just brought up ASME, if you don't mind, I want to ask you, do you think that ASME benefited you?

McGoff: I'm still a member of ASME. My activity has dropped off quite a bit, with some of the choices I've made. But I still maintain my membership. And I believe it actually had a lot of benefit for me. Probably one of the most beneficial things was getting to experience engineers in the industry already, who devoted their time to come back and participate. It gave me an opportunity to understand what the real work was.

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