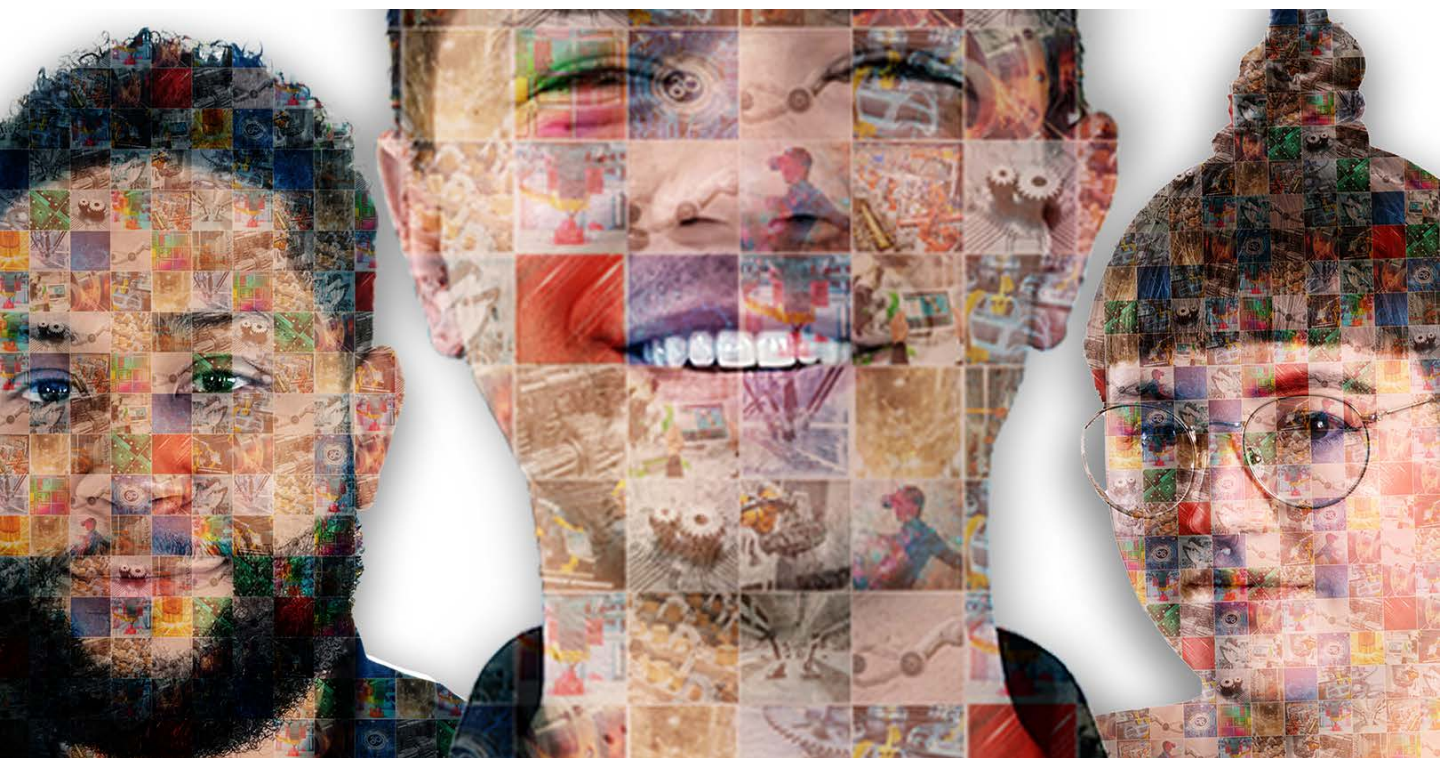


# IndustryWeek®



# Generation Now Leadership

A talent management  
guide from *IndustryWeek*.



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## GENERATION NOW LEADERSHIP:

# Manufacturing's Young Talent Steps Forward

We asked young manufacturers to share how they progressed into leadership positions. What we learned: Many different paths open doors to career advancement and positions of greater responsibility.

by Anna Smith, Jill Jusko

**T**he manufacturing industry has made it clear: We need more young people in manufacturing. A well-documented exodus by workers approaching retirement, compounded by early exits spurred by COVID-19, has left a raft of vacancies. Moreover, fresh talent spurs fresh ideas.

The need is everywhere, from the shop floor to the quality department, from the sales desk to the engineering lab, from the plant manager to the C-suite executive.

The influx of new talent has needs as well. For information, for guidance, for opportunities to grow in their current roles and advance into positions of greater responsibility.

In this climate, *IndustryWeek* launched a series aimed at young professionals looking to lead. We didn't offer advice elicited from seasoned manufacturing leaders (although they can be an excellent source of advice). Nor did we share results from polls or questionnaires (which may also provide important data).

Instead, we went straight to the sources, speaking to manufacturing leaders still early in their careers. We asked

them: *How did you do it? How did you get to that position so fast? What advice can you give me?*

Among the prompts for this series was a Reddit post focused on manufacturing and the supply chain. A Reddit user proposed a question regarding manufacturing and the supply chain, and the respondent was a manufacturing leader under age 30. With his response, the Reddit thread quickly took a turn to, "How did you achieve that position at such a young age?"

Similar and follow-up questions quickly rolled in from young manufacturers hungry for insights into leadership and career advancement. While Reddit may have gotten the thought process rolling, we at *IndustryWeek* wanted to assist as well.

To that end, we reached out to young manufacturing leaders and asked them to share their stories of "how I got here." The restrictions were few: We were looking for leaders 35 or younger, and they had to work in manufacturing across any of the myriad functions that comprise this business.

They responded, and we did as well. *IndustryWeek* editors collaborated on a series of articles about these young leaders, which we've collected in this *IndustryWeek* eBook, "Generation Now Leadership: Manufacturing's Young Talent Steps Forward."

Thank you for reading about the young people who are helping to shape the future of manufacturing. ■

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Generation Now stories focus on challenges and opportunities facing industry as multiple generations of leaders take on responsible roles in manufacturing. The final article in this eBook ran in the spring of 2022 and won a national award for manufacturing business writing.





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## GENERATION NOW LEADERSHIP:

# Falling Into Manufacturing at Smucker's

Despite no manufacturing background, Will Patrick enthusiastically jumped head first after a drastic career change.

by Anna Smith

**W**ill Patrick was doing fine in his sales position, but he wasn't fulfilled. Patrick wanted to coach people so they could thrive, although he didn't expect a career in manufacturing to fulfill this aspiration.

While searching for the right role, Patrick says he lucked out when he was

in his mid-20s and an opportunity arose. "I had a close friend who worked for a company called Crown Cork & Seal. ... He just opened up the door slightly for me to be able to at least just get an interview."

He joined Crown as a production supervisor in the metal packaging manufacturing division, a supervisory role more than a leadership one, but it was a start.

He found the work fascinating. "[I] was going home and talking to family about, 'Oh, we got to make cans today, and here's what we got to do. And here's the dimensions....' They didn't care about how cans were made and how lids were made, but I did."



Name: Will Patrick

Age: 30

Company: The J.M. Smucker Co.

Education: Bachelor of Arts (B.A.),  
Marketing; Master of Business  
Administration (in progress)

Position: Area Leader

Although he had no background in manufacturing, Patrick found many similarities between his previous work and his new endeavor. At its core, he describes sales to be about building relationships and achieving sales targets, and as a people manager in manufacturing, he has similar goals of building relationships through coaching and achieving production results.

Patrick also says that the techniques to learn new skills are the same in both careers, citing trial and error, reading books and going to seminars as some examples.

Patrick spent over three years at the company before deciding to seek out other leadership positions. “I had some opportunities to progress within my leadership and get promoted; it just wasn’t the right fit at the time,” he says. “I learned that there’s so much more I can be doing on the leadership side of things.”

That is when he found work at The J.M. Smucker Co. in April 2022 as an area leader. He describes his position as a step up from production supervisor.

“I am in charge of all three shifts of one production line.... It’s only approximately 40 employees that I’m in charge of from first, second, third shift.... So, I’m in charge of providing resources, scheduling product, scheduling vendors to come in, scheduling training, coaching those individuals, developing high-performance work teams, developing AM models, developing training models,” he says. “It’s a lot of developing programs to lead and coach individuals.”

In his role, Patrick emphasizes the philosophy of putting the needs of individuals first. “You have to care about people, you have to have empathy.”

He adds, “There’s this divide between salary and hourly, and there’s a wall.... One of our goals is to try to break that down and try to merge those the hourly folks because we consider them leaders on the floor, but how often are we actually developing them?”

Regarding career advancement, Patrick gives credit to several mentors throughout the years. He specifically mentions a department manager from his first manufacturing job.

“We would meet on a daily/weekly basis and just talk about more than just production, more than work, it was about life. And then what I can do to be a better person. What I could do to be a better leader. And then grow from that,” he says. He also has three people he considers mentors at Smucker.

Finding the right leadership path has not always been easy, however, given his lack of an engineering or continuous improvement background, Patrick says.

Patrick’s strategy to overcome these setbacks has been exceedingly simple: He learned about manufacturing by working in manufacturing. Working with two large organizations allowed him to hone

his skills and continue learning about lean manufacturing specifically. He has also learned the value of knowing who to go to for help or guidance.

Patrick also notes some challenges leading colleagues who are older than him. At his first management position in manufacturing, “our average tenure was 18 years.... Our average employees were almost there as long as I’ve been alive.”

“Focus on what type of leader you want to be, find information out there to hone in that leadership style, and then get that feedback, both positive and negative ... People don’t grow if we’re not providing that feedback.

Patrick says it takes a certain personality to be able to navigate this type of situation. He found that he had to create mutual respect; he wanted these colleagues to respect him and not just the role itself.

“If you come and say, ‘Hey, I don’t know anything. I’m here to learn from you and help us grow.’ I think that humbleness in age helps out,” he says.

Patrick concludes with two main pieces of advice for young professionals hoping to rise to a leadership position.

**Be great at your current role.** Regardless of the relationships and connections you build, you most likely will not be

considered for the next role if you are not doing your absolute best. Take advantage of your position before being promoted to develop the skill of leadership from books and mentors. He also advises that you take time to learn how you do not want to lead in the future.

**Figure out what type of leader you want to be and what that means to you.**

Patrick places importance on learning from others; he recommends one-on-one meetings with people who are above you, below you and at the same level as you in your company. “I wish I would have done that earlier, give people the opportunity to just tell me, ‘Hey, well, you’re doing a great job at this. And you stink at this. These are your opportunities you need to work on.’”

Constant and genuine collaboration will help you to identify strengths, opportunities and the next steps in your career path. “Focus on what type of leader you want to be, find information out there to hone in that leadership style, and then get that feedback, both positive and negative ... People don’t grow if we’re not providing that feedback,” he says. ■



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## GENERATION NOW LEADERSHIP:

# Fast-Track Training at Timken

With the unique opportunity to complete four jobs in one, Jim Tomson is preparing to be a knowledgeable and experienced leader.

by Anna Smith

**L**ess than two years out of college, Jim Tomson is already on his third manufacturing job and will start his fourth soon. And, before you start complaining about the job-hopping tendencies of Gen Z, know that he's doing this under the direction of a century-old company that knows a thing or two about developing talent.

While still in school, Tomson completed two co-ops with Timken: The first was in process development at the headquarters

in Canton, Ohio, and the second was in operations engineering at a South Carolina plant.

"This just got my foot in the door, gave me exposure to the company and just gave me my first glimpse of a lot of the tools that are used in the plants," he says.

After graduating from Schreyer Honors College at Penn State, Tomson was offered a full-time role in Timken's Operations Development Program (ODP), "a two-year-long program where you rotate through four different roles of quality engineering, continuous improvement engineering, and that's at one facility," he says. "Then I moved to another facility for another year, and I will do another two roles of supply chain (where he is now) and then supervision being the last one."



Name: Jim Tomson

Age: 24

Company: The Timken Co.

Education: Bachelor of Science (B.S.),  
Industrial Engineering

Position: Operations Development Program

The ODP is a leadership development program designed to give participants a broad look at the different fields in manufacturing. It typically takes employees through two facilities, but Tomson will have the chance to work at three. “It’s experience that is just unmatched anywhere else,” he says.

Tomson grew up surrounded by his family’s scrap metal recycling business, and he always had an interest in math and science. He figured a degree in industrial engineering could be a good mix between business and engineering.

“You’re only young once, and this is the opportunity to learn as much as you can, so then one day, you can execute on that knowledge that you develop.”

After graduation, Tomson decided to stay with Timken. “The amount of training and the amount of mentorship that I’ve just received from the company, I couldn’t see myself going anywhere else.”

Tomson is taking every chance he gets to learn, even if he doesn’t think it will directly apply to future jobs. “You’re only young once, and this is the opportunity to learn as much as you can, so then one day, you can execute on that knowledge that you develop,” he says.

Tomson describes his participation in this program as an investment.

“I’m just taking this opportunity to practice so many things: Develop my knowledge, practice my leadership skills and using them in conjunction to hopefully one day be a plant manager,” he says. “When I am asked later in my career to have more senior-level leadership, I’ll have all these experiences, I’ll be able to call upon all these things to look at the bigger picture. Because if you just have experience in one avenue, you’re not going to be able to see the business as a whole.”

Although he has stayed under the Timken umbrella, Tomson sees the value in being flexible and trying out different positions.

“Early in your career, if you’re able to stay mobile, not be afraid to change jobs, I think it’s really important to get a breadth of experience,” he says. “If you’re the person that’s saying, ‘Hey, I’m willing to move,’ not only do you have the ability to move within your plant, but then all the other plants as well.”

However, he says the main aspect of starting a successful career “comes down to your ability, aptitude and work ethic ... I think that’s first and foremost.”



Tomson values communication. “Any of these projects, you’re not just doing this on your own, you have to be able to work with a wide group of people.”

His mentor Louise Dalton has helped Tomson advance this skill. She was assigned to him as part of the ODP.

“She’s always there to help me, point me in the [right] direction on maybe who to ask or what to do. She might not always have the answers to a lot of my questions ... but she’s fantastic at knowing what questions to ask and who to ask them to.”

Many people have helped him develop strategy-level thinking.

“There’ve been mentors along the way, just naturally. I think every manager I’ve had also has turned into a mentor in some respect,” he says. “You spend most of your day here, so it’s only natural that these people start to want to take interest in your life and take interest in your growth.”

Tomson keeps an optimistic attitude when meeting and working with new colleagues.

In South Carolina, “I was the youngest person in the plant, except for maybe a few operators on the floor. But as far as engineers and salaried associates, I was definitely the youngest,” he says. “There’s a little bit of ‘Oh, this young college guy, this or that.’ And ‘Oh, he’s wearing his skinny jeans,’ ... There’s usually some banter that comes with working in a manufacturing plant, and that’s part of the fun.”

Tomson emphasizes the importance of respect when working with more experienced employees. “They have years of experience running these machines and with these processes. So, it’s important to understand that they’re, first and foremost, the subject matter experts.”

Time seemed to break down any walls between Tomson and his older colleagues.

“I get a lot of pride talking with the people that I work with. A lot of these people that work in manufacturing, they have amazing stories. You have veterans, you have parents, you have people that are sacrificing a lot ... It’s inspiring to be able to be working with these people.”

In summation, Tomson believes that trying out different fields and getting as much experience as you can is crucial to becoming a good leader. Not only does this provide self-discovery, but it allows the individual to have a more complete view of the business world.

“Knowing where you are and what you’re interested in is really important, because I mean, happiness is ultimately what we want, right?” he says. “I think people lose sight of that.” ■

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**Editor’s note:** On July 13, 2023, about two months after we ran this article, Jim Tomson announced that he had been promoted at Timken to operations supervisor. Congratulations to Jim for continuing his manufacturing leadership journey.



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## GENERATION NOW LEADERSHIP:

# Career Advancement by Design at Northrop Grumman

Sara Simser plots a course to manufacturing leadership.

Two keys: Always be learning and don't fear failure.

by Jill Jusko

**T**he Sara Simser story is one of hard work, focus, ability, opportunity and, occasionally, failure. Each input has played a role in her achieving a career target she set long ago: leadership.

In March 2022, Simser was named senior mission assurance and quality manager for Northrop Grumman's Armament Systems Business Unit. She leads a team of more than 90 individuals who

support six locations across Minnesota, Arizona and Missouri. Her team's responsibilities include program and supplier quality, inspection and calibration, and mission assurance.

What's important, she says, is "at the end of the day, we're delivering quality products to our customers."

Simser has moved steadily up the leadership ranks before and since joining Northrop Grumman via its acquisition of Orbital ATK. Much of that growth has been by design.

"I knew I wanted to get into leadership. I made that clear," she says. Moreover, Simser voiced her wishes during the hiring process. "I needed to know that I was joining ... an organization that had growth and development opportunities. And that they took them seriously."



Name: Sara Simser

Age: 34

Company: Northrop Grumman Corp.

Education: Bachelor of Arts,  
Communication Studies, University of  
Minnesota Twin Cities; Master of Business  
Administration, Hamline University

Position: Senior Mission Assurance and  
Quality Manager

She was equally serious on her side of the leadership equation. Simser created a development plan, got mentors, constantly learned about the products and processes, and engaged with customers. “It was very focused,” Simser says.

Even more, that focus remains. “I’m constantly working on honing in on those ‘flat’ areas—those areas that I need to be more well-rounded in,” she says. “I encourage people to reach out for that feedback. We only see so much of ourselves. And I continuously do that: I ask for that feedback in my one-on-ones, with my managers, with my peers.”

She’s constantly growing her network, which in turn has driven increased career opportunities. “The bigger your network is, the more people who know about you, and the stronger your mentorships can be, your sponsorships can be, the more opportunity you’re going to get,” she says.

Earlier in her career, Simser chased stretch assignments to grow her network, to show her ability. If something came up, “I would raise my hand.”

And while she was confident in her ability to execute, “it was also scary,” Simser says. “And I had to be okay with being afraid of failing. There are so many lessons that I learned from failing that have helped me grow as a leader and in this organization.”

One of those lessons was understanding that the people she worked with wanted her to succeed. “When you first start out doing [stretch assignments], you want to do it all on your own. ‘I want to show how awesome I am, how talented I can be, how much I can accomplish,’ and at the end of the day, you’re spinning your wheels,” she says. “You just need to raise your hand” and ask for help.

Simser is less apt to chase assignments today. Not because she lacks interest, but Simser says now projects come her way because of the network of people she has built. They have seen what she can do.

“But I still do reach out, especially in areas that people don’t know who I am. I think it’s important in our organization or industry to stretch outside of your swim lane,” she says. “To continue to grow in leadership, you have to expand, you have to expand the things that you are working on.”

Despite her early career success, Simser did not make a deliberate choice to pursue manufacturing as her livelihood. Simser received her undergraduate degree in Communication Studies, which she described as a “business degree without the numbers.” While on the job hunt, it just so happened she landed a project management role at a small aerospace manufacturing company.

“And it was amazing,” she says. “I got to learn our industry pretty quickly in a smaller capacity, but I loved our customer base. I love the rigor around manufacturing.”

Simser, nevertheless, stepped away from manufacturing for a few years

before it lured her back—and where she has remained. Outside of manufacturing, “I was bored. I was [thinking] I miss going to suppliers. I miss seeing things be made. There is always something happening, good or bad, on a manufacturing floor,” she says.

Her lack of a manufacturing-related degree (she does have an MBA) has not deterred career advancement, Simser says.

“There are instances where, when we’re getting really technical, I may need a few more minutes. But to be completely honest from a leadership perspective, I have incredibly talented people on my team that I work with. I have the subject matter experts,” she says. “I also believe my background has given me the ability to dig in and what to pull on to get an understanding, versus having all of the technical expertise.”

Likewise, her youth has presented Simser with both challenges and opportunities as a leader. Building respect and rapport may be a more drawn-out process than for someone older, for example. On the flip side, Simser says her age provides the opportunity to question why things are done a certain way and to make changes.

“That’s a great advantage for younger managers, and anybody just young in an organization—to be able to speak up and ask the questions,” she says. “We’ve got people that we work with who have been here for 40 years, and they’re excellent, amazing coworkers. But we all get stuck in the day-to-day, and

“ One thing that I do have to tell myself often is that my age doesn’t matter. My talent and my abilities are what show through and what matters.

it’s hard to see things from a different perspective.”

Being the youngest person in a room can be intimidating. “One thing that I do have to tell myself often is that my age doesn’t matter. My talent and my abilities are what show through and what matters,” Simser says.

“A lot of young people need to hear that you deserve to be there. But take advantage of the fact that you’re young. Learn as much as you can and be proud of it and [don’t] be afraid to be the youngest person in the room.” ■





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## GENERATION NOW LEADERSHIP:

# Co-op to Advanced Manufacturing Management in a Decade at Freudenberg-NOK

If you start with the right company, you don't have to job hop to advance your career, says young leader Dan Keys.

by Jill Jusko

**D**on't tell Dan Keys that job-hopping is the only way to get ahead in your career. To the contrary, he's evidence that the maxim isn't true. At 32, this engineering manager has worked for Freudenberg-NOK Sealing Technologies for more than a decade and has advanced steadily in his leadership career. It's a matter of making the right choices, he says.

"I've put a lot of emphasis on picking the right company. I think that can't be [overstated] as far as looking toward that long-term alignment," Keys says. "I've been very satisfied with my career progression by staying with the same company."

Keys is engineering manager, Digitalization and Advanced Manufacturing, for the company's Oil Seals Powertrain and Driveline Division. It's a bit of a split role, he says. On the digitalization side, Keys leads connected factory innovations, business intelligence and related new technologies activities across 11 sites. In advanced manufacturing, he works with the internal machine building group and in-house integrator.



Name: Dan Keys

Age: 32

Company: Freudenberg-NOK Sealing Technologies

Education: Kettering University

Position: Engineering Manager, Digitalization and Advanced Manufacturing

The role is rewarding. “I have a lot of passion, being in manufacturing,” Keys says. “On the equipment building side, it’s very fast-paced, and we’re delivering these solutions [that] have very clear benefit to the process. That’s very motivating for me and my team.”

Keys’ career with Freudenberg-NOK began while he was still a mechanical engineering student at Kettering University in Flint, Michigan. He joined the manufacturer as part of a co-op program during his first year and essentially never left.

“The co-op program became a four-year learning opportunity for me to explore several departments [and] disciplines and participate on multiple high-visibility projects,” Keys says. “Once I joined up as a full-time engineer, I was able to immediately start contributing in my role.”

“I was very hungry to take on responsibility, take on projects and, on the technical side, very hungry to learn new skill sets as well.”

After completing the co-op, Keys joined Freudenberg-NOK as a process development engineer. Early in his career, he teamed up with a mentor at Freudenberg’s headquarters in Germany and, while his college studies had been in mechanical engineering, received training and shifted his focus to the software side of engineering, such as computer vision systems.

“That kind of pushed me into the integration and controls because you have to integrate these vision systems into manufacturing equipment,” Keys says.

Then began his first steps into leadership roles. “During that time, more and more equipment builds were happening, more and more integrations were happening, and I needed technicians to support me in that area.”

He got the technicians, with whom he still works, and added mentoring and training to his capabilities. As his skill sets increased, Keys showed the organization that he could “assume that leadership role as far as people management is concerned, which then allowed the organization to trust me with full engineering resources reporting to me.”

### Planning for Success

These opportunities to advance did not come Keys’ way by happenstance. While the engineering manager says Freudenberg does a good job helping employees put together career development plans, and putting resources behind those plans, he also went in search of opportunities to grow.

“I was very hungry to take on responsibility, take on projects and, on the technical side, very hungry to learn new skill sets as well. My self-development was always very strong. I would even intertwine my hobbies with my work skill sets,” Keys says. Whether it be 3D-printing or home automation projects, “that has been a big benefit for me as well because now there’s so much crossover between home automation and manufacturing, the Internet of Things.”

Speaking of hobbies: An aviation enthusiast (he lives in an airpark community), Keys is part owner of a 1974 Cessna 172 four-seater airplane. Skills he learned at Freudenberg aided in the installation of a new engine and upgraded avionics. “Especially on the avionics side, all of the communication buses that we utilize ... are very similar to industrial protocols that we use in the manufacturing facility. So, everything that makes all the instruments talk to each other are pretty much the same protocols for our connected factory initiatives.”

Moreover, Keys’ aviation enthusiasm garnered Freudenberg-NOK a new supplier. While searching for a local laser cutter to cut a new instrument panel he had designed in CAD, Keys discovered a supplier with a “beautiful online quoting tool,” quick turnaround and competitive pricing.

“And now pretty much every project at work, we use the same vendor,” he says.

Keys believes manufacturing in general, and Freudenberg in particular, provides ample openings to demonstrate leadership skills and show desire for career advancement.

“Especially manufacturing, there are gaps everywhere. There is opportunity in every place of a manufacturing facility. A lot of it comes down to finding those opportunities yourself,” Keys says.

At Freudenberg, “we employ a lot of different tools ... to show where the biggest opportunities are and really empower our staff to go out and correct them,” he says. “It’s a self-motivated program where there is opportunity to look for these big cost-savings initiatives, go out and be the champion of them, get whatever funding you need and execute. And hopefully at the end of the day, save money.”

## Early Victory

Keys describes an instance in which he was the champion of such an initiative; it happened early in his career and involved

the installation of an automated quality control system. The proposal was a bit risky and he had to convince the company that it could succeed – “I did all the development and programming myself for this, with support from some mentors.”

The project “was a huge success,” Keys says, and helped Freudenberg secure future business. “And I think I got a good reputation in the company for taking risks and getting people on board. [And] backing it up with results.”

The engineering manager gives a nod to his four-year co-op in providing him and the company with the confidence to go after this significant project. The program allowed Keys to rotate through different departments and participate in several high-visibility projects while still a college student.

“I was able to start building my relationship and my trust with the company and the team. I was able to kind of leapfrog my career once I came on full time,” he says.

Keys advises students to seek out every opportunity for internships, co-ops or similar programs, and says he specifically looks for work experience when he’s hiring a new college graduate. Moreover, he believes the need to keep growing skill sets can’t be overstated.

“The technical requirements for these positions are changing constantly. And having that drive, having that passion to grow yourself and to keep up with these emerging technologies is a huge screening tool for me.” ■





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## GENERATION NOW LEADERSHIP:

# Finding Passion at Precision Plus

“I came here in the hopes of just getting a 40-hour work week, and I ended up being quality manager within five years of starting,” says Maria Valadez.

by Anna Smith

**A**fter graduating from high school early, Maria Valadez wasn’t looking for a manufacturing career, just a full-time job that would fund her nursing career aspirations. But, with thousands of baby boomers retiring every year and an ongoing labor shortage, she quickly learned that there were huge opportunities at Precision Plus, a company that manufactures precision machined products.

She started as a technician in the secondary department, and within a few weeks, she was transitioning to quality assurance technician.

“The quality manager at the time, he actually approached me with the opportunity of learning the quality department. He told me that he saw potential, and he really needed somebody in there to learn all the techniques” because a generation of older workers was ready to retire within two to three years, she says, adding that the quality manager became a mentor.

Although she was still taking nursing classes and didn’t plan to stay in manufacturing, Valadez committed to learning and doing her best. However, soon after her promotion





Name: Maria Valadez

Age: 23

Company: Precision Plus

Education: Two-year degree for Business Management (in progress)

Position: Quality Manager

to the quality assurance department, she began to reconsider her future.

“My mindset changed when the opportunity of paid tuition through the company came through. I was told, ‘If you take business management and you have a certain grade... it’s 100% [paid] tuition,’” she says. “I’m very motivated, and I taught myself to always get As. So, I took the opportunity and really enjoyed business management.”

After working as a quality technician for about a year and a half, Valadez kept climbing up the ladder. She was promoted to quality assurance lead in September 2020 and worked her way up to quality manager in January 2022.

“Every boss or lead that I would have always saw more potential in me,” she says. “Obviously, sitting on the bench [where entry level personnel finish various components], I didn’t think of a leadership role; I just progressed myself there naturally. But I think it all changed when I saw myself just being really passionate about my work and having the opportunity to really learn more about leadership.”

Valadez, now only six credits away from achieving her business management degree through Gateway Technical College, has found purpose in her work at Precision Plus and referenced how the manufacturer was able to create parts for ventilators during the pandemic. She says working in manufacturing has been an eye opener for her, realizing that the field is not a stereotypical dingy environment that many grow up believing. “It’s not what people make it seem to be.”

Six quality technicians and two quality engineers report to Valadez, who describes herself as a hands-on manager.

She says it was challenging to be such a young leader at first. “I was kind of scared because I didn’t know if it was going to work out,” Valadez says. “You have to know that everybody’s mindset works differently, and you have to find a way to work with them and find a way to have them trust you.”

“It’s always good to step back and break down the process and really dig into the hows and whys so that the new generation coming in can understand the whole process.”

Valadez received helpful advice from other young managers at Precision Plus, and she was motivated seeing how much they cared for the company, she says.

Her youth has also given Valadez a different perspective. “It’s always good to step back and break down the process

and really dig into the hows and whys so that the new generation coming in can understand the whole process,” she says.

But being young is not the only competitive advantage she provides. As a woman, she is dismantling stereotypes and signaling a transformation in the manufacturing space.

“I’m in a position where it’s mainly male orientated. And I, a young female, managing a quality department, I think I really make that shift of the generations,” she says.

Although her career has taken an unexpected route, she has found success with her driven attitude. “Every manager and leader that I worked under has always complimented me: ‘You’re always the go getter. You’re always the problem solver. You’re always thinking above and beyond, out of the box.’”

To others who may be apprehensive about pursuing a nontraditional career path, Valadez encourages them to take the plunge.

“If there’s a company willing to invest in you, really help you grow as an individual and put you in a leadership role, I would take that opportunity,” she says. “I think people really just need to find what motivates them and really helps them grow.” ■



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## GENERATION NOW LEADERSHIP:

# From Military to Manufacturing at Graphic Packaging International

A training program for military veterans opened advanced manufacturing opportunities for Mahlon Robinson.

by Jill Jusko

**F**ormer military policeman Mahlon Robinson celebrates his one-year anniversary this month at Graphic Packaging International, where he works as an automation controls supervisor and enthuses about his experience at the manufacturer's Kalamazoo, Michigan, mill.

The job challenges him. The company appreciates his efforts. And because he “hates the heat,” even the location is a benefit, Robinson says, as he prefers the cooler climates of the northern states.

It's not a position Robinson envisioned several years ago when he was updating his resume in search of better opportunities. It took an unexpected encounter with a program aimed at helping U.S. veterans gain the skills needed by advanced manufacturing (and aid in addressing the workforce shortage) to set him on a high-tech career path. Now the former military man is making his mark in manufacturing.



Name: Mahlon Robinson

Age: 29

Company: Graphic Packaging International

Background/Education: Army veteran, electrical apprenticeship program, Academy of Advanced Manufacturing

Position: Automation Controls Supervisor

### Maintaining a Highly Automated Manufacturing Environment

Little more than a year ago, the Kalamazoo site completed a massive expansion project (well over \$500 million), adding significant automation and the latest technologies. It also upped the company's need for the computing and problem-solving skill sets Robinson brings to his position.

On any given day, Robinson transitions among a variety of tasks: assisting with process control changes to the automated machinery, troubleshooting equipment issues and working with electricians and millwrights to get those issues resolved, and coaching new operators who may not be familiar with the touchscreens they use to monitor or operate equipment.

It's work that feeds his interests. "It's more mentally challenging than it is physically," he says. "And also, just not everybody can do it."

Robinson's path from the military to manufacturing was not a direct one. Upon completing his six-year military service with the U.S. Army, he became an industrial electrician, having heard from a former fellow soldier that there was money to be made in the electrical trades. He learned the trade on the job; he learned via an apprenticeship program; and he even got into several manufacturing plants as a contractor to do electrical work. It was a physically demanding position.

Four years later, it was time for a change. Robinson updated his resume, uploaded it to Indeed.com and the next day received an email from a recruiter who asked if he might be interested in a program opportunity. The recruiter was talking about the **Academy of Advanced Manufacturing**, a joint

initiative between Rockwell Automation and the **ManpowerGroup**. The academy recruits veterans with technical skills and assesses their likelihood of success in the program and in advanced manufacturing jobs.

Initially Robinson was skeptical. "I read the email. It sounded way too good to be true," he says. He asked his then fiancée, now wife, for her opinion, and both agreed it wouldn't hurt to apply, "not thinking anything would ever happen."

But something did happen and in just a few months Robinson was on his way to Milwaukee to participate in the 12-week AAM training program, which was provided – along with the room and board – free of charge. He learned a host of technical skills related to programmable logic controllers, HMIs and other facets of interpreting and troubleshooting automation systems. A goal, Robinson says, was to reach a skill level "where we are able to just take our computer up to the machine, diagnose the issue and then go from there to keep it running."

Moreover, soft skills such as leadership and interpersonal communications were part of the coursework.



Then came Robinson's introduction to Graphic Packaging. The manufacturer was among the AAM partner clients who have an interest in hiring successful graduates. Following interviews with several interested companies, Robinson accepted Graphic Packaging's offer.

"They just seemed like the best fit for me," he says, explaining that the manufacturer's needs were the most closely aligned with the computing work he wanted to do. A year later, he's pleased with his decision. The company values his opinion and has given him the space to try new things, Robinson says.

Often he's the first line of defense when it comes to troubleshooting an equipment issue. "It's kind of a good and bad feeling. Knowing that you're the person that everyone is relying on. That's also kind of scary, but it makes every day interesting," he says. "Going to work, not knowing what's going to happen. And knowing that you could be the reason that everything goes smoothly or the reason that everything goes bad."

### Still Learning and Growing

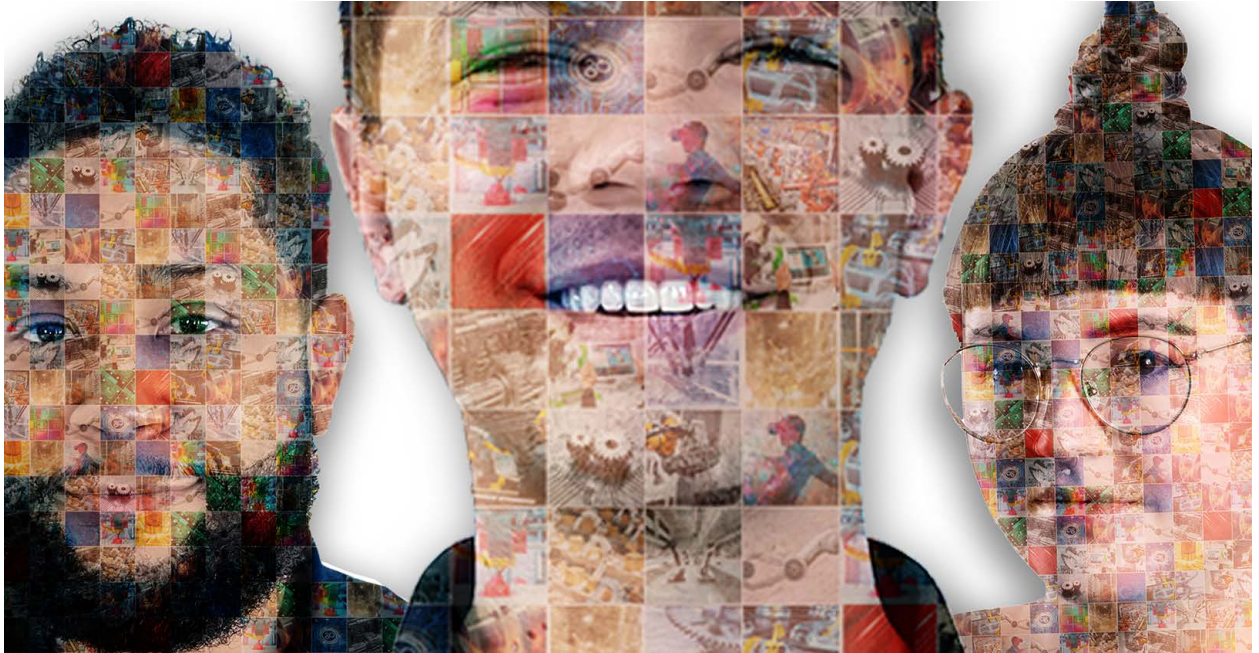
On a recent afternoon, Robinson received a presidential leadership award from the company. It's an example of how quickly he's earned recognition for a job well done. The salaried supervisor admits he is still learning, though, and says the large size of the Kalamazoo site presents opportunities to do just that.

"It gives me a lot more capabilities to learn and grow. I'm not just looking at the same thing every day," he says. "It's really enjoyable. And I like being able to ... teach and coach the operators and learn from the engineers and my boss as well."

"I've always heard you learn more when you teach, and I definitely feel that is a true statement."

Robinson is early in his manufacturing career, but it's never too soon to look ahead. He's been mapping out potential career paths with his boss. It's an interesting exercise because his position is a new one at Graphic Packaging (he's one of just a few), created in response to the increasing automation among the company's facilities. As a result of its newness, the "what's next" component to his career is still under construction.

Still, the future excites him, and Robinson is appreciative of the training program that opened opportunities. "I'd recommend [the AAM training] for any veteran who has the background to go through it." ■



# From Gen Z to C-Suite: an Intergenerational Conversation on Innovation

Gen Z's and top leaders in manufacturing gather for a Zoom roundtable—and come up with 10 takeaways for creating an intergenerational culture of innovation.

by Laura Putre, Anna Smith

Just as the doors of Generation Z's future were flung wide open, the world tap-danced into the abyss. The year was 2020. Gen Zs were entering high school and college, starting internships and jobs, setting out on the path to real adult life. All that was put on hold because of COVID-19, of course.

Generation Z, whose eldest members are around 25, isn't the only youthful

cohort to have its formative years end abruptly (baby boomers had Vietnam to thwart their plans). But they are a unique group of young people, shaped by singular events.

They've watched family members endure crippling debt from the Great Recession and the student-loan crisis, randomly downloaded Duolingo on their parents' iPhones to teach themselves basic Korean before the age of 3 and have had to come up with workarounds for things that should be straightforward, like having a prom or going to school every day to learn algebra.

Their formative experiences fostered creativity, practicality and the full embrace of technology—exactly the qualities that



How are Gen Z workers different than workers of other generations? “The thing that I also always say is that culture keeps me at a company. So once I’m in the door, if the culture isn’t right, that’s something that Gen Z has no qualms about: They’ll leave, right? And I think that’s something that’s different than other generations.”

**Audrey Van de Castle**, senior manager, Technology and Maker Initiatives, Stanley Black & Decker

manufacturing needs in its workforce to MAKE IT in the future. But what manufacturing needs is not the point of this story. Manufacturing must figure out what *Gen Z* needs to desire and pursue a career in manufacturing, and to thrive and stay in manufacturing because their contributions are valued.

To get the debate rolling, *IndustryWeek* put together a Zoom conversation in February 2022 with nine manufacturing leaders, young and older, about how to create an innovation culture that’s truly intergenerational. To have an intergenerational culture, of course, you first must have actually *have* different generations that work for you, so our discussion also touches on how to attract, welcome and engage Gen Z in the workplace.

The 10 takeaways from our hourlong conversation were wide-ranging and illuminating, especially when the observations came from Gen Z participants. They hit upon some common themes around workplace culture, and the ways Gen Z workers think or work or innovate differently than older colleagues.

Manufacturers, take note: many wise-beyond-their-years, ambitious potential employees are interested in what manufacturing has to offer, if you do the work to answer their questions, show them a path forward and listen instead of shut down.

### 1. Giving new hires a feel for the company requires more investment than showing them where the lunchroom is on their first day.

Remember the days when a corporation was a mysterious entity, its siloed-wisdom nuggets parceled out by some grizzled co-worker when the mood hit? Well, they’re gone now. From day one on the job, the Gen Zs on our panel valued meeting, learning from and connecting with people in different roles and at different levels, and gaining a high-level view of the organization and how its discrete components unify.

Audrey Van de Castle, a self-professed “process nerd” and rising leader at Stanley Black & Decker declared that if the culture isn’t about openness and learning, she’ll leave. “I really value transparency and clarity in leaders,” she says. “I want to know why decisions are being made—especially if they’re affecting me—or even have a seat at the table.”



Mitchell Brezina, a recent Purdue University materials engineering graduate, chose Parker Hannifin for its leadership development program that schools recruits in different functions and opportunities at the company, “from quality to operations to lean,” and “from aerospace to motion controls.”

That high-level view is important. The scope of Parker’s manufacturing and the differentiation of its precision engineered components across 10 different segments can be difficult for an outsider—even an outsider who is studying engineering—to get a handle on. Brezina says the program, which has taken him to plants from California to New York, “has been a great opportunity to network and meet a whole lot of different people” as well as show him what career paths are possible.

## 2. Diversity, equity and inclusion must go deep.

DE&I ranks very high with Gen Z, and it’s not just about branding and/or recruiting—it is important through all facets of the company.

Van de Castle puts DE&I—“getting more women and minorities into the skilled trades, construction, manufacturing and all that fun stuff”—right up there with working with tools as a passion. She is the co-chair of Stanley Black & Decker’s Women’s Network employee resource group, and co-founded a second ERG, Women in Operations Network.

“Being able to live your truth and have that kind of social and empowerment angle in our day-to-day job, I think that’s really critical, and something that I really value,” she says.

Van de Castle didn’t join SB&D seeking to be a diversity champion, but the SB&D culture opened her to new interests around diversity that “made my experience much more fulfilling.” Even her lean manufacturing knowledge translates to her diversity work. When the Women’s Network EBRG identified that SB&D had few female operations leaders, the group’s next step was to “5 Why it” to determine a root cause. Their finding: Women are passed over or not even considered for early-career leadership roles, and become “stuck,” never making to the upper management track. Their action: developing a training program for hourly women with high potential that teaches communication leadership, how to manage a team and lean Six Sigma.

“We actually had a lot of women that were participating get promoted to supervisory positions *during* the program,” says Van de Castle. “[The company] was hungry for supervisors.”

Her EBRG work, she says, is “one of the things that has kept me here.”



What attracted you to the company you work for?  
 “Everyone’s opinions—from team members building products on the floor all the way to the C-suite—are valued in the problems that we’re seeing today. That has been really important.”

**Mitchell Brezina**, lean leadership associate, Parker Hannifin

## 3. Innovation flourishes when connected with purpose.

Gen Z is looking to be engaged differently, notes Marcel Allen, an HR leader at additive-manufacturer Proto Labs. They seek a strong purpose for their work and a clear idea of what’s ahead. “And that’s



What advice would you give to leaders in older generations? “Business leaders today need to be really conscious and cognizant of the organizational structures to ensure that we promote that type of collaboration across generations, right? So your traditional hierarchical top-down management structure isn’t going to fit the needs of the upcoming generation.”

**Marcel Allen**, HR manager, Proto Labs



both before and during their employment,” he adds. If they’re not engaged or don’t feel the culture is a good fit, they have no qualms about leaving (see: The Great Resignation).

Through social media campaigns and awards programs, Protolabs has begun highlighting how other companies use its capabilities to “fill in the gap between production and prototyping.” A Cool Idea Award grant of \$25,000 recognizes innovative external projects in education, sustainability, philanthropy and medical devices. A partnership with a YouTuber showed the world that Protolabs’ technology (a custom-designed pneumatic system) could make a thief-detering “Glitter Bomb” more effective, and more awesome.

At SB&D, a partnership with startups at the Tech Stars incubator netted a machine oil “that’s compostable and very green and launched it at Home Depot,” tying purpose into a quickly realized successful product launch, says Van de Castle. At Parker, when Brezina was being recruited, the company’s focus on electrification and reducing greenhouse gases stood out, as well as its emphasis on collaboration and encouraging a diversity of ideas to be shared across teams. “Everyone’s opinions are valued in solving the problems that we’re seeing today,” he says.

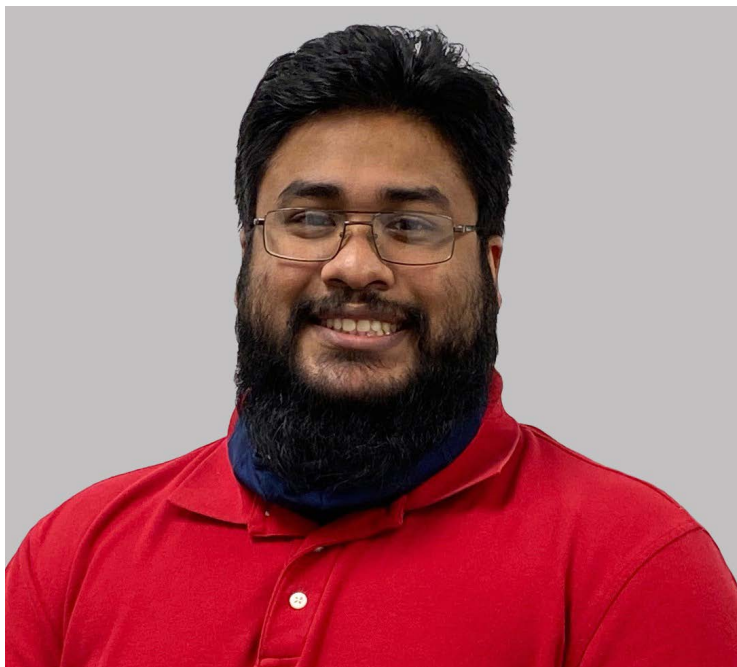
Another place companies should be thinking broadly about purpose is in their acquisition planning, says Van de Castle. SB&D’s purchase of MTD, “a big, gas-powered outdoor equipment company” might seem like a risky move, she says, but Stanley excels at the electrification piece, so the focus is on “injecting our innovation and battery technology into it to make maybe a zero-turn riding mower that’s fully electric—and maybe even solar powered.”

#### 4. Passions in work vs. personal life are no longer distinct.

The pandemic blurred lines between work and personal life—and that brought flexibility in completing tasks. “I really appreciate that,” says Van de Castle. “But, I also [appreciate] being able to blend the things that I’m passionate about when I’m not working—equality and diversity, and being able to use my company as a platform to help further that. And that I think is something that’s really fulfilling for anyone, but also especially the younger generations.” Social media can help with the blurring between work and the outside world, she advises. “Your employer brand externally really has to be present on social media. LinkedIn, and I think even TikTok is a good place to start getting into.”

#### 5. Having a clear future yet being able to learn and try new things in the moment brings engagement and productiveness.

Gen Z is looking for “a culture of growth, innovation, learning and development, so they can see what’s next or ahead of them,” says Allen. Protolabs allows employees to collaborate widely and



What are Gen Z's strengths?  
 “We are more adept at getting to the answer faster than most, or trying our best to get as much information from a lot of sources as fast as we can ... We grew up with this technology, seeing how it rolled through. And we’re now living with it, even moving faster than we grew up with.”

**Joe Benjamin**, manufacturing engineer,  
 Raymond Corp.

experiment with different approaches during their day—which fits with the dynamic nature of the business, “thousands of customers who all have different needs,” he says.

Joe Benjamin, a recent engineering graduate who started as a material attendant at Raymond and has since been promoted, craves learning new tasks and taking on responsibility. “I am now one year in manufacturing engineering,” he says. “I’ve taken on a solid role here. I’m helping support one of our assembly lines. I’m taking over from another one of our associates who is moving on to another discipline in that regard. And I’m very excited and happy with what’s going on right now. And excited to keep going forward.”

At Flex, automation engineer Harsh Patil says learning opportunities include regular group calls where subject-matter experts on certain topics share their knowledge with the engineering and operations communities all across Flex, around the world. “You can ask questions and get answers,” says Patil. Engineers and plant managers share their pain points in virtual tours of Flex factories across the globe, “and we can engage with the site leaders or even key stakeholders in that particular project.”

## 6. Structure without bureaucracy is the gold standard.

Manufacturing is all about process, and some Gen Zers yearn for process. Benjamin is among those devotees. “What really

drew me to Raymond is how, although we’re a medium-sized company, how large our scale is and how we do things,” he says. “The logistics of how we carry out things is what really draws me in. I’ve always liked organization along the line and making sure things flow.”

Along with describing all their cool tech, manufacturers could benefit from playing up process with potential recruits. Patil previously worked at a manufacturing-tech startup, but he actually prefers Flex for the time-tested processes that are part of its culture.

“Since Flex is such a large and old organization, some things are very organized and structured,” he says. “That in itself helps a lot, especially with things like onboarding and task allocation.” The efficiency extends to innovation as well. “Once a problem is presented to us, we come up with solutions, develop solutions and also deploy those solutions fairly quickly, just like any startup could,” he says.

It's important, however, not to confuse a structured culture with a command-and-control culture. A second-generation manufacturer, industrial furnace maker Onex Inc. chose to make the shift to what company President Ashleigh Walters calls "a continuous improvement structure," where the hierarchy is flatter and everyone is encouraged to innovate.

"You're not going to get a lot of innovation with a command-and-control style culture because you've got leaders or managers telling people what to do," Walters says. "They're not allowed think for themselves. For me, it was a real struggle and a real challenge to get people thinking for themselves because they have been told what to do for so long. So, we really use lean to develop problem-solving skills."

Lean can not only provide structure, it can facilitate cross-generational collaboration. Raymond's Tony Topencik, who has worked at the company 29 years and is now oversees operations and quality, says Raymond uses two TPS tools to bring shop-floor people together in intergenerational problem-solving: A Kaizen blitz to solve a challenging problem in a specific process area in two to three days, and a second activity that includes several weeks of planning, three weeks of execution and a week of follow up with high-performance team.

## 7. Digital must permeate the entire organization, not just shop floor processes.

Being digital-forward should extend to recruiting, training and business processes. "Filling out Excel sheets is just not something that we want to do in the long run," Patil says of Gen Zs.

"In a lot of manufacturing, the methodology is, 'If it ain't broke, don't fix it,'" says Van de Castle. "I've been doing it this way for 30 years and using a pencil and paper to record this data. So that's just what I'm gonna keep doing." And so, I can understand why to the younger generations, manufacturing is not attractive.

"When we're hiring and training, our retention goes up when we're using digital methods. So, by being digital forward, and using technology in these traditionally archaic-seeming spaces, that's a way we're able to attract the younger

How does your workplace foster innovation? "Flex has a lot of opportunities to share knowledge and learn from others. This is presented in terms of subject-matter expert calls ... these are scheduled either quarterly, monthly, even sometimes biweekly, and they will be on different topics. So there could be an SME call on automation and robotics this week, and next week, it could be additive manufacturing. These are open to the entire operations and engineering community across all Flex."

**Harsh Patil**, automation engineer, Flex



generations. I'm not going to go to a place that makes me fill out a paper application. It's just not going to happen, right?"

## 8. Asking questions is a good thing.

Annika Langéen, who directs sales for the Americas for global cutting tool company Sandvik Coromant, says that Gen Zs characteristic inquisitiveness and openness to new ideas should be embraced as an important part of innovation. They dare to question and are open to sharing their opinions, "and that is a really great contribution to the organization," she says. "So even though they may come new into both the industry and the company, they put the questions out there, and that's really powerful."

Benjamin is one of those super-inquisitive Gen Z recruits. Two years ago, when he took his first grown-up job at Raymond, he wanted to "learn about all of our trucks that we make, how they function." A community college student at the time, he worked his way into helping test vehicles, asking questions that brought in his engineering studies. "Maybe it was a little unorthodox every now and again, for they just want a simple test," he says. "But I was always curious, like, 'If we did this, how would it affect that?'"

He was also curious about his career trajectory. Raymond leaders made it known they liked to hire from within, "and I just let my managers know, 'Hey, I'm still interested in staying with this company and using more of my background and my education to help further the cause here.'"

"And it wasn't too long after that, someone saw that I was very proactive in everything that I was doing, going above and beyond," he says. "I was always looking at things from a systems perspective: 'When we put these two bolts here, let's take it a step back. What happens if we apply it this way, or if the torque is applied in this manner?' Giving them a wide-angle perspective rather than that focused view is something that I enjoy doing."

Benjamin's inquisitive mind, says Topencik, is "a welcome feature that we're really seeing and enjoying from the Gen Z associates."

## 9. Shake off the old clichés already.

Several younger panelists said they don't understand why manufacturing doesn't trumpet its high-tech even more. Industry leaders are overconcerned with overcoming the "dirty, dark and dangerous" image, an old idea about manufacturing that their generation isn't even aware of.

Brezina remembers being flat-out puzzled when an older colleague mentioned manufacturing's behind-the-times reputation.

"Maybe that's the case where you've got old machines or don't invest in something," Brezina says. "But I think there's a newer push for that innovation, where we're getting out of the 'if it ain't broke, don't fix it' mindset. We're pushing the boundaries and looking for new ways to solve our modern-day problems."

Walters, an engineer by training, plays up the excitement of equipment and processes when she describes her company. Onex is not a dying old furnace manufacturer; it's an employee-owned maker of epic, state-of-the-art machines and a servicer of fascinating older ones. "We're at the beginning of supply chains for aerospace and defense," she says. "We are building and servicing industrial furnaces that are either melting or forging specialty steels, alloy steels, that are going to be machined into your aerospace and defense parts for the most part."

Benjamin notes that the fast-changing nature of technology has kept everyone hopping, including Gen Z, making cross-generational collaboration around technology even more important. "I guess we're more adept at getting the answer faster than most or trying our best to get as much information from a lot of sources as fast as we can. But we're now living with technology every minute, and it's even moving faster than we grew up with. So, we're keeping up."

## 10. Part-time (and plant tours) can be a pipeline for recruiting people with new perspectives.

Walters observes that smaller manufacturers are waiting too long to reach out to Gen Z. "I think we all talk about going to the high schools to recruit, right?" she says. "That's not a five-year plan. Eighth graders are your five-year plan." It's important to bring families in the community into the plant, "so they can see how

fast the production is and talking to them about all the great things that you're making and where they go in the world."

This summer, with hiring difficulties, Protolabs experimented with loosening requirements around age and experience, lowering the cutoff to 15 years old for part-time work, creating customized cells for those younger workers around tighter safety requirements and providing them with mentors in a work-study-type program.

"What we found is, they are some of our most engaged individuals," says Allen. "We have probably had 30 high schoolers coming through the program. It really has been another pipeline for us."

When he was a teen, Allen "didn't understand what it truly meant to work in manufacturing. I never would have thought to put too much time and attention into thinking how my products are made," he said. "I just consumed them. So, introducing that at an early age, I think is very good. It's going to be really critical.

"I think we can also be really proud representing this industry because I think this is one of the industries that can give most people fantastic opportunities and be relevant to them. We have so many opportunities here. So, where we really need to focus is, 'How do we get the word out?' You can enter this industry in so many different ways and immerse in the opportunities that we have. I think we are a little unique in that way." ■

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