



THE MANUFACTURING WORKFORCE PLAYBOOK

MANUFACTURERS





EVERY DAY IS MFG DAY!

There is currently no bigger conversation in manufacturing than workforce. While we talk about advancing technology and all the amazing things that are going on, we always circle back to the fact that we need more people.

At SME, our mission is to advance manufacturing to drive competitiveness and resiliency, and to support our national security. That's why we created this manufacturing resource that can highlight ways to engage, support and develop your relationships with your local schools, students, community and future workforce. The goal is to provide you with ideas, concepts, engagement opportunities and talk tracks to help you to engage with different schools and programs. The next workforce has changed significantly in the past 10+ years, and that does not always indicate negative changes.

We have programs like MFG Day, but every day can truly be MFG Day when we have continuous engagement and conversations with the next generation. We also want to focus on impact: impact of your business in your community and in your educational organizations, and impact of the products that you design, create and manufacture. Keep in mind that the future workforce values experiences as much as opportunities, and that employers today can offer more than they could to previous generations.

We also want to take a moment to acknowledge Diversity, Equity, Inclusion and Access as we move through growing our workforce. We have been engaged and working with several programs to find traditionally under-represented populations and wanted to highlight a few organizations that create awareness and train individuals for careers in manufacturing:

- [Uniquely Abled Project](#)
- [Lake County Development Disabilities & Auburn Career Center](#)
- **FMA (Fabricators & Manufacturers Association) has expanded its Nuts, Bolts & Thingamajigs Camps to host [Inclusion camps](#)**
- [Girl Scouts North East Ohio](#)

One last thought is to leverage your manufacturing community. The manufacturing community is a powerful one; it is a great time to engage with local and state resources such as your local manufacturing association and Manufacturing Extension Partnerships (MEP). For a broader scope, we encourage engaging with national organizations such as SME, NAM, and Manufacturing USA. These organizations serve to leverage the power of many to help overcome challenges and obstacles.

Thank you for opening your doors to provide the opportunities to create awareness, spark excitement and engage our next workforce. We look forward to hearing your feedback and what is working for you.

Sincerely,

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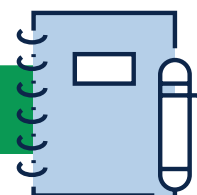


Opening doors to students, classes, teachers and administrators can be very exciting, but it can also be a little nerve-wracking if you do not have a curated experience put together for students. When we look at manufacturing careers, we are looking at roles from technician to PhD, as well as at non-technical roles like HR, marketing, finance, and sales, to name a few. Take a walk-through your production areas – including bathrooms and break rooms – knowing that all spaces in your company are important to the overall image that individuals have of manufacturing.

FOR STUDENTS

Focus on the technology and culture of your organization versus your current open positions. We have to highlight opportunities to truly engage students in the tour – providing opportunities for conversation and a few key components to start with:

- Students should have the experience of seeing many types of roles – both technical and non-technical – and different technologies while engaged on a tour, including:
 - **Production** – Technician, operator and programmer level positions.
 - **Quality & inspection** – Seeing the process and precision that takes place.
 - **Engineering** – Showing how the engineering team works and integrates with sales, marketing, the production area, etc.
 - **Marketing** – A pathway that can lead to other roles including sales.
 - **Finance** – For students who love planning and numbers, this could be a great opportunity to grow understanding.
 - **C-level** – Have someone from the C-suite casually bump into your tour group to say hello, share information about their pathways into manufacturing, and mention that they hope to see the visitors join their team in the future.
- Students should feel welcomed and engaged as they move through your facility.
- Students should interact with employees who resonate with them.
- Encourage your current workforce to engage and share what they enjoy about their position, as well as about their pathway in your company.
- The newer generations value workplace culture almost as much as pay and benefits, so be sure to highlight components of your culture: company picnics, wellness incentives, celebrations, and internal contests/competitions.
- Encourage questions and have small giveaways or prizes for students who engage in the tour; something to remember the experience and your organization. This is also a great way to get your logo and company brand out into your community.
- Have QR codes where applicable to help connect the technology, tour and next steps for the students.



Take a walk through your production areas — including bathrooms and break rooms — knowing that all spaces in your company are important to the overall image that individuals have of manufacturing.

FOR YOUR COMMUNITY



Opening doors to your community can help shift perceptions and show what today's advanced manufacturing really looks like as well as demonstrate how much your organization supports your community.

You will still want to focus on technology, but with career influencers (parents, teachers, caregivers) you want to also highlight the pathways and different opportunities you provide for your employees. Remember that technician to PhD conversation? It's a great time to talk about all of the talent you are seeking, not just production positions.

- Visitors should have the experience of seeing many types of roles while engaged on a tour. They should hear about different pathways and also see individuals who have chosen non-technical roles in manufacturing (see student section above).
- Highlight training opportunities and tuition reimbursement policies, as well as basics of benefits and time off policies.
- Individuals and families should feel welcome and engaged as they move through your facility.
- Individuals and families should interact with employees who resonate with them.
- Encourage your current workforce to engage and share what they enjoy about their position, as well as about their pathway into your company.
- Highlight components of your culture: company picnics, wellness incentives and employee recognition, as well as community service projects.
- Have QR codes where applicable to help connect the technology, tour and next steps for tour participants.



There are many ways to engage with schools – we want to highlight a few below. Please keep in mind that we can never start too early. Most schools have (STEM) science, technology, engineering and math programming, and advanced manufacturing pathways. And don't forget about Project Lead the Way (PLTW) programs, which offer project-based learning driven by engineering.

Examples of schools include your traditional high schools, career tech centers, community and technical colleges, and tech centers, but don't forget your local elementary and middle schools, private schools (parochial, Montessori) and even home school students.



ADVISORY COMMITTEES

Career & technical schools have advisory committees. This generally means coming to the school to attend meetings two to four times a year. Advisory committee members help steer the content that is delivered, the skill sets that students are prepared for, and even large purchases for the program.



GUEST SPEAKER IN THE CLASSROOM

Imagine the excitement of a student seeing someone who went to their school and played the same sport – someone they can relate to – talking about their pathway into manufacturing. Maybe it was a career and technical education (CTE) pathway or four-year university, or maybe they stumbled into the industry and fell in love with creating something that makes our world better. Have some of your newer team members visit schools to highlight their STEM careers.



VALUE-ADDED DONATIONS

After confirming with instructors and administrators, there are many ways that you can add value to programs with donations. Value-added donations include raw material that the students can use for projects, time that's donated by lab aides, and good-quality equipment, toolboxes and supplies.



AFTER SCHOOL PROGRAMMING

Many schools have after school programs for robotics, engineering and other STEM clubs. This is a great time for employees to be mentors or coaches, or even donate to sponsor teams.



What better way to “try before you buy” for both the student and the employer? Students have the opportunity to earn and learn while taking high school and college programs, or while they’re off school for the summer. Below are a few ways that current CTE pathways are working to engage students directly in industry.



STUDENT SHADOW

An on the job training opportunity that allows an interested student to follow and closely observe your employee performing the role of interest. This generally takes place during one day and is unpaid.



INTERNSHIP

An opportunity to provide a lot of insight and experience into our industry. Interns should be responsible for a wide range of opportunities to meet employees and understand multiple departments and job functions. Internships are created to help new employees learn all facets of a company and job role, and should increase not just industry knowledge, but student skills. Internships should last for several weeks, or over the summer break. Internships can be paid or unpaid.



CO-OP (COOPERATIVE) EMPLOYMENT

An opportunity to provide consistent hours, time commitment and insight for individuals. Co-ops will last longer than internships and should have a progression in responsibilities as the education of the student progresses. Co-ops can happen during the school year – with students attending school programming for several hours and then working for the duration of the day – or over summer break. Co-ops provide an opportunity for students to develop skills and behavior through hands-on learning and exposure to a professional manufacturing environment. Co-ops are paid opportunities.

The goal of this opportunity is to see if the student is a good fit for your organization and if your organization is a good fit for the student. Make sure students have the opportunity to interact with several departments and several employees during their time as co-op employees.

Look for feedback on what students enjoyed about your co-op opportunity, as well as thoughts on how you could improve future programs.

The individuals you are meeting may not have preconceived notions of manufacturing. So avoid references to dark, dirty or dangerous, as you may be creating images, vs. changing perceptions.

- ✓ Talk about advanced technology, hands-on learning, experiences with job shadowing and internships.
- ✓ Avoid using buzz words, acronyms and industry terminology – try using some of the conversations below.
- ✓ At the high school and career center level, focus on technology. When you have adults, you can absolutely focus on jobs and career mobility, as it will be directly applicable.

INSTEAD OF CNC – USE THE TERM SUBTRACTIVE MANUFACTURING

- Ask who knows what 3D printing is. Explain that it is additive manufacturing, or adding material to make a product.
- Highlight a CNC machine, talking about subtractive manufacturing and how products are made through removal of material.
- Show the computer programming on the screen.
- Talk about the types of software you will use in the program.

INSTEAD OF MECHATRONICS – TALK ABOUT AUTOMATION

- Mechatronics is a word that doesn't always make sense if you are not in our industry.
- Automation is a word that students have heard.
- Make the analogy of sending a text message vs. a letter – that is a form of automation.
- Talk about troubleshooting skills, and opportunities for students to compete and travel.

TALK ABOUT MINECRAFT!

Minecraft is a world of X, Y and Z! If you have programming on CNC or robotics machines, show how the world of Minecraft is directly applicable to skills in manufacturing.



WHAT'S NEXT?

Potential Next Steps

One of the most important steps in any event is, what's next? How are you going to re-engage the potential students, schools and career influencers for the next step?



Tour a local career tech or training center



QR codes for quick application



Host community days to bring in your community

Make sure you have a way to register for events, as well as a way for attendees to stay in touch with you.

manufacturing, we always strive toward continuous improvement. Your engagement with your community, schools and future workforce should also include this same principle.

IDEAS

Have all your upcoming events on a flyer with a QR code that visitors can scan while standing there. Forward to parents while they are there.

Have visitors follow your social media, including: **TikTok and YouTube.**

