



# explore

the new manufacturing

a program of the WVMA Educational Fund

## 2019-2020 WVMAEF ANNUAL REPORT





# 2019-2020 WEST VIRGINIA MANUFACTURERS ASSOCIATION EDUCATIONAL FUND ANNUAL REPORT

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Dear Friends,

The 2019 – 2020 school year was one of growth and adaptability for the West Virginia Manufacturers Association Educational Fund, Inc. (WVMAEF) and its Explore the New Manufacturing Program. Thanks to the support of the Claude Worthington Benedum Foundation, Chevron, and corporate and individual contributions, the WVMAEF expanded programming to more regions of the state, into high schools, and across virtual platforms. Despite COVID-19 disruptions, we engaged more than 1400 middle and high school students in WV during academies, workshops, video contests, and skills competitions.

Programs were transformed for increased connectivity and outreach to schools and manufacturers. Career Technical Education students stepped in to lead and facilitate labs, enriching the Explore Academy experience.

Hands-on team activities reshaped last year's presentations into Explore Workshops this spring. The student video contest extended to include more teams and a 3rd regional contest. *Scrap Competitions* were launched for welding and woodworking students, testing skill and creativity with scrap manufacturing material. Explore programs and events were quickly adapted to virtual formats when schools closed in March. The *What's So Cool About Manufacturing?* Student Video Contest awards ceremonies were modified to live social media events. *Virtual Scavenger Hunt* and *Assembly Line Challenge*, two online remote learning programs, were introduced across the state.

The WVMAEF has gained strong and loyal partnerships. The resultant of working with steadfast educators and talented students who demonstrate unparalleled leadership, the WVMAEF launched the *Emerging Elite in Manufacturing* and *Outstanding Industry Educator Awards* to publicly recognize and celebrate these champions. Through collaborative partnership, we also developed a blueprint for the manufacturing workforce continuum, a pipeline for retaining young talent in West Virginia and supplying industry the employees necessary to operate successfully.

Several moments from 2019-2020 stand out. Watching WV students solve challenges, proudly present their innovative solutions, crafting videos and art pieces continues to inspire me. The level of support from educators, parents, and local communities championing the young talent in their regions has been remarkable. Hearing how engagement with manufacturers has begun to come full circle with high school students choosing paths toward manufacturing careers as a result of participating in Explore Programs makes each effort worthwhile. For twelve days in May, I counted down the minutes until noon to announce that day's recipient for the Emerging Elite in Manufacturing and Outstanding Industry Educator Awards. Brainstorming improvements at our first Educators' Roundtable served as a reminder of the impact the WVMAEF has made and how much work is still left to do.

I look toward the 2020-2021 school year with enthusiasm and hope. Seldom have we encountered the obstacles and circumstances COVID-19 has placed upon us. But, with challenges come innovation and a new frontier of solutions. The WVMAEF is actively formulating new ideas to forge forward, and I anticipate manufacturers and schools across the state will continue to step up to deliver them as well. Please join our effort. Be part of the response. Get involved.

Best Regards,

Monica Cross  
Program Director  
West Virginia Manufacturers Association Educational Fund, Inc.

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Friends of the *Explore the New Manufacturing Program*,

Our operating themes this year have been change and flexibility. Despite many challenges, we have made substantial progress moving forward in the rollout of our programs and the expansion of educational and manufacturing partnerships. This coming year has us facing many unknowns. We will continue to be flexible but with the clear goal of opening the door of rewarding new careers to many more talented young West Virginians.

This year's critical effort was our long-range planning process, especially in terms of new grant applications or requests for our program's corporate support. One of the exciting results for me was the creation of a road map of how our vision could become a reality. The necessary partnerships and new programs to take our efforts from grade school to job placement fell into place. Like any plan, it will need to be tweaked and refined as we learn more, and things change.

The two greatest needs to accomplish this are additional funding sources and manufacturing partners. That is where you come in. After you read this *Annual Report*, please consider becoming a partner and supporting our efforts. If you have supported our program in the past, ask how you can become more actively involved. With your help, we can move along this continuum more quickly and achieve our goal. We are very excited about what can be. Please join us and make it happen!

Sincerely,

A handwritten signature in black ink, appearing to read 'Gary Clay'.

Gary Clay  
Board Chair  
West Virginia Manufacturers Association Educational Fund Inc.

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# Outreach Outcomes: 2019-2020 Explore Academy Survey Results



## A GREATER UNDERSTANDING OF MANUFACTURING

Before the Academy, **only two-thirds** of students could identify one or more items manufactured in WV.

After the Academy, **almost all** were able to identify one or more items manufactured in WV.

Students, who are just beginning to explore potential careers in school, when answering questions about what type of job they hope to have tended to fall into two categories - **no clue** or **very specific money earning occupations**.

Survey responses confirmed that students **did not grasp the variety of career opportunities in manufacturing** before participating in an academy.

## THE FOLLOWING ARE A FEW EXAMPLES OF WHAT STUDENTS SAID THEY LEARNED WHILE ATTENDING AN EXPLORE ACADEMY:

*"That there are many manufacturing jobs options in West Virginia that don't require a college diploma."*  
- Musselman Middle School

*"Many different jobs come together and put their minds together for manufacturing."*  
- Warwood Middle School

*"(I learned) how important this industry is and how quickly it's growing."*  
- Taylor County Middle School

*"That there is a lot more to manufacturing (than) most people think and (it's) not all just labor jobs."*  
- Elkins Middle School

*"(I learned) types of things made in West Virginia gave me an idea of how the vo-tech is what type of classes I can take at the vo-tech center."*  
- Sissonville Middle School



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# EXPLORE ACADEMIES AND PRESENTATIONS

SPECIAL THANKS TO ALL THOSE WHO  
WERE INVOLVED IN 2019-2020 ACADEMIES

<b>AHF Products</b>	<b>Pierpont Community &amp; Technical College - Advanced Technology Center</b>
<b>Alcon Research Ltd.</b>	<b>Pietro Fiorentini USA</b>
<b>Blue Ridge Community and Technical College</b>	<b>PlyGem</b>
<b>Bombardier Inc</b>	<b>Procter and Gamble</b>
<b>BridgeValley Community and Technical College</b>	<b>Progressive Industries</b>
<b>Cabell County Career &amp; Technical Education</b>	<b>Randolph Technical Center</b>
<b>Capitol High School CTE students</b>	<b>Robert C Byrd Institute</b>
<b>Colonial Millworks, Ltd</b>	<b>Rubberlite, Inc.</b>
<b>DuPont</b>	<b>SI Group, Inc.</b>
<b>Eagle Manufacturing Company</b>	<b>Sogefi Group</b>
<b>Entsorga West Virginia, LLC</b>	<b>Technimark, LLC.</b>
<b>Ergon West Virginia Inc.</b>	<b>Toyota Motor Manufacturing WV, Inc.</b>
<b>The Fiesta Tableware Company</b>	<b>Wayne County Career &amp; Technical Education</b>
<b>Hino Motors Manufacturing U.S.A., Inc.</b>	<b>West Virginia Northern Community College Wheeling &amp; Weirton Campuses</b>
<b>Kingsford Manufacturing Company</b>	<b>West Virginia Wood Technology Center</b>
<b>Mister Bee Potato Chips Co.</b>	<b>WVU-Parkersburg - Caperton Center for Applied Technology</b>
<b>Mull Group, Inc.</b>	<b>The Ziegenfelder Company</b>
<b>ND Paper, LLC</b>	
<b>NGK Spark Plugs USA, Inc.</b>	

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## EXPLORE WORKSHOP PARTNERS

**Heartland Fabrication, LLC**  
**Stockmeier Urethane USA, Inc.**

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## EXPEDITION: INNOVATE PARTNERS

**Ben Franklin Career and  
Technical Center students and teachers**

**Braskem**

**Carver Career and Technical  
Education Center students and teachers**

**Clay Center for Arts and Sciences**

**DuPont**

**Level 1 Fasteners, Inc.**

**Robert C Byrd Institute**

**South Charleston CTE students and teachers**

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## VIDEO CONTEST PARTNERS

**4D Tech Solutions, Inc.**

**AMS Vendors**

**Argos USA**

**Bethany College**

**BioHiTech Global, Inc.**

**Blenko Glass Co.**

**Blue Ridge Community and  
Technical College**

**Cyclops Industries, Inc.**

**Eagle Manufacturing Company**

**The Fiesta Tableware Company**

**Mull Group, Inc.**

**NGK Spark Plug USA, Inc.**

**Pietro Fiorentini USA**

**Procter and Gamble**

**Quad Graphics Inc.**

**Technimark, LLC**

**Tecnocap LLC**

**Toyota Motor Manufacturing WV, Inc.**

**West Virginia Northern Community College**

**The Ziegenfelder Company**

## SCRAP PARTNERS

**AHF Products**

**Arts Monongahela**

**Colonial Millworks, Ltd**

**Greenfield Cabinetry, LLC**

**Progressive Industries**

**West Virginia Wood Technology Center**

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## EDUCATORS' ROUNDTABLE PARTNERS

**Mylan Pharmaceuticals**

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## EMERGING ELITE IN MANUFACTURING AND OUTSTANDING INDUSTRY EDUCATORS AWARDS

**West Virginia Wood Technology Center**

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## PARTNERS FOR SPRING EVENTS THAT WERE CANCELLED DUE TO COVID-19

**Appalachian Wood Pellets**

**Brake Supply Co, Inc.**

**Conn-Weld, Inc.**

**Covestro, LLC**

**New River Community and  
Technical College**

**Robert C. Byrd Institute**

**Sogefi Group, Inc.**

**Toyota Motor Manufacturing WV, Inc.**

**Troy Group, Inc.**

**Westlake Chemical Corporation**

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# WHAT PEOPLE HAD TO SAY

## EDUCATOR QUOTES

*“Our middle school students have had the opportunity to participate in the What’s So Cool About Manufacturing video contest for the past couple of years. Students really enjoyed the opportunity to visit the businesses and were thrilled about making videos. I think they all did a wonderful job. Manufacturing is huge in our area. Although old stereotypes about manufacturing are diminishing, to some degree, they still exist. It is extremely important to let students know as early as possible about all the opportunities available to them in the world of work. We work on this internally with teachers, counselors and staff. It is very nice to have WVMA come in and provide additional opportunities for our students to get “hands-on” experience.”*

– Christi Heaton, Director, Academic Counseling, Berkeley County Schools

*“Having served as the Director of Career, Technology, and Adult Programs for the last 20 years, I see firsthand the need for training and career opportunities for our students. Our middle school students have participated in the Explore the New Manufacturing Program in the last few years, and we have received great feedback.”*

– Scott Varner, Director, Marshall County Schools

*“It has been my honor to work with the 5 Raleigh County middle school I supervise to coordinate efforts to get students participating in the Explore the New Manufacturing Program. Exposure to the opportunities offered by career programs provides students with options available to them as they begin to formulate their personalized education plans for high school.”*

– Randy Adkins, Assistant Superintendent of Curriculum and Instruction, Raleigh County Schools

## MANUFACTURER QUOTES

*“We have teamed up with WVMAEF Explore the New Manufacturing twice this year and have begun investing our time and resources into helping our local schools utilize this resource to offer them the opportunity for a great career in not only our manufacturing environment, but others around our local area as well. We believe this is a great resource for our area and has also proven to be effective. I believe that without this resource available to our local area that our business could suffer and the demand for young, skilled employment could be even higher than it is now.”*

– John Clingerman, Quality Manager, Colonial Millworks LTD

*“It’s such a great opportunity to directly engage with local students. Manufacturing has so many career choices here at home in West Virginia. The academies give us a chance to talk about some of those opportunities while having a lot of fun with the students. I continue to be impressed with the quality of the students attending and look forward each year for these events.”*

– Brian Bence, Morgantown WV Director SI Group

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# OUTCOMES FROM THE 2019-2020 EXPLORE THE NEW MANUFACTURING PROGRAM ENGAGEMENT



## 2019-2020 At-a-Glance

PROGRAM	EXPLORE ACADEMY	EXPLORE WORKSHOPS	VIDEO CONTEST	SCRAP	INNOVATION CHALLENGE
School Level	Middle	Middle	Middle	High	High
Events Held	8	6	4	2	0
Students	865	359	140	38	0
Schools	32	5	17	5	0
Total Manufacturers	26	5	17	5	0
CTE Mentors	40	15	N/A	N/A	N/A
Canceled Events*	2	5	1	1	5
# of Students: Canceled Events	225	700	7	15	35
# of Manufacturers: Canceled Events	5	5	1	1	5
Change from previous year: Students**	+75	-696	+70	+38	0
Change from previous year: Schools	+10	+2	+7	+5	0
Change from previous year: Manufacturers	+3	-1	+7	+5	0

Program: % of Schools retained	77.8%	# of New Schools	31
Program: % of Manufacturers retained	85.7%	# of New Manufacturers	21

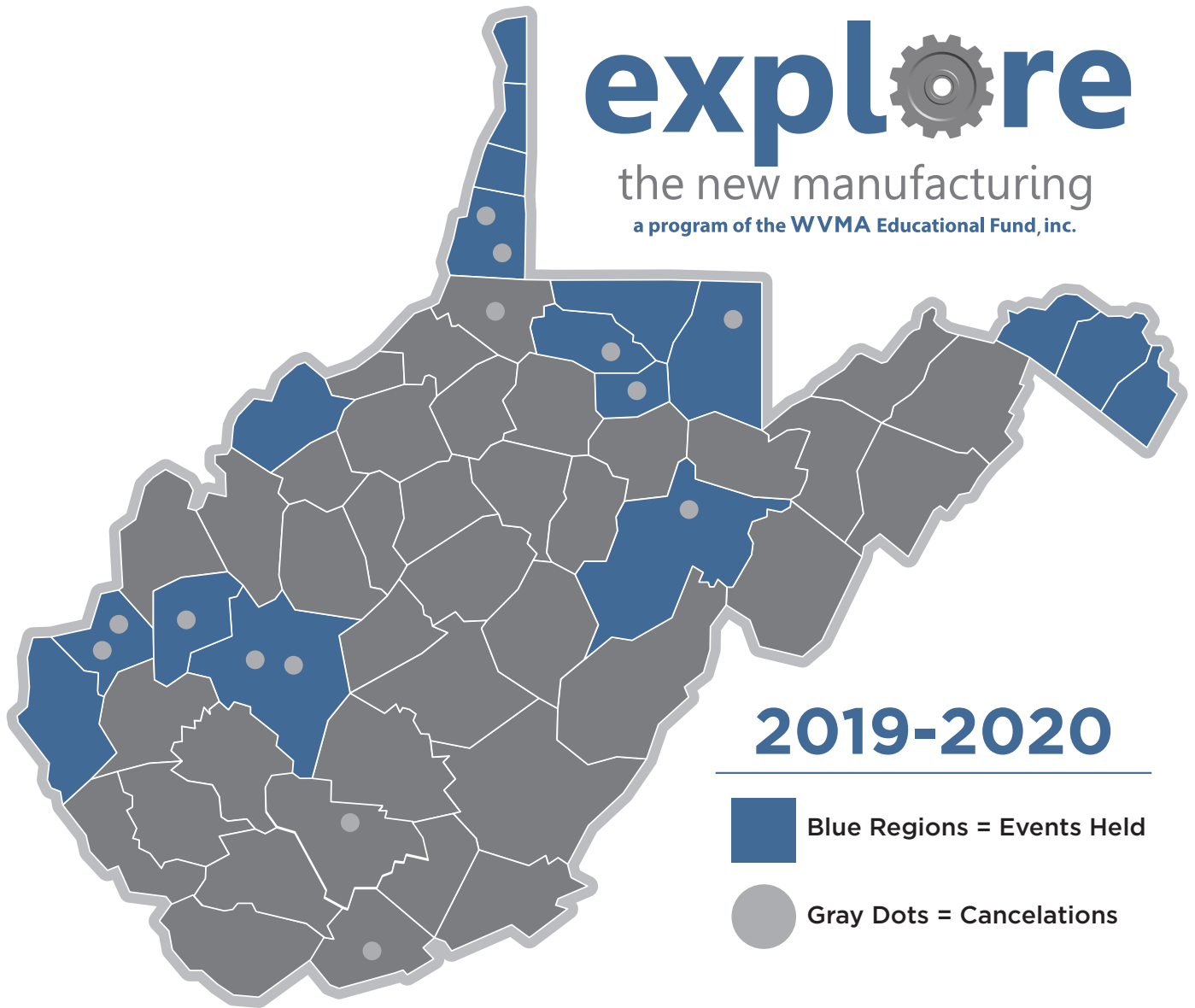
\*Cancellations due to COVID-19

\*\*Calculated using numbers from Explore events held

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## 2019-2020



Blue Regions = Events Held



Gray Dots = Cancellations

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# THANK YOU

**Thank you to the WVMAEF sponsors, donors and in-kind contributors. The Explore the New Manufacturing Program and its outreach initiatives is possible thanks to the generous support of these organizations.**

**JANUARY 2019 - JUNE 2020**

## **Explore the New Manufacturing Sponsors**

- Chevron
- Claude Worthington Benedum Foundation

## **Explore the New Manufacturing Donors**

- AC&S Inc.
- Argos USA LLC
- Covestro LLC
- Dinsmore & Shohl LLP
- DuPont
- Eagle Manufacturing Company
- Gary Clay
- Joseph and Debra Eddy Foundation
- Kathleen Fitzgerald & Paul Sheridan
- Mylan Pharmaceuticals
- Orders Construction Company
- SI Group
- Strong Treister Family Foundation

## **Gift In-kind Contributors**

- AHF Products
- Arts Monongahela
- Catalyst Connection
- Clay Center for Arts and Sciences
- Colonial Millworks
- Progressive Industries
- Robert C Byrd Institute
- West Virginia Community and Technical College System
- West Virginia Department of Education
- West Virginia Manufacturers Association
- West Virginia Public Broadcast System
- West Virginia Wood Technology Center



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## LOOKING AHEAD

As we prepare for an unprecedented reopening of schools this fall, we are excited about developing virtual connectivity between industry and education so that earlier efforts are not lost. We anticipate the new virtual platforms will expand outreach efforts to more areas around the state. Launching in October, Manufacturing Day Virtual Labs will feature manufacturers demonstrating processes and interactive labs for remote learning application. Both the Manufacturing Innovation Challenge and the *What's So Cool About Manufacturing?* Student video contest will be modified virtually for the coming year. We have also established an Educator's Roundtable to assist with evaluating programming strategies and program feedback. When possible, we plan to reintroduce our in-person programming while utilizing these new virtual formats to fill gaps where it is logistically hard to offer in-school events. We can't wait until we can again present an Explore Academy, an Explore Workshop, or a SCRAP competition. Regardless of the platforms, we are excited to work with dedicated educators and talented students across the state during the 2020-2021 school year. No doubt this year's *Emerging Elite in Manufacturing* and *Outstanding Industry Educators* awardees will be those who lead the way in navigating these uncharted waters.

Long-term, our approach calls for broader collaboration among partners in addition to widescale programming from elementary school through placement in the workforce. As the pandemic's whipsawing effect struck all aspects of our lives, forcing us to reflect on the potential challenges that impact the state's youth, workforce, employers, and economy, it carved out the paths and blueprint for the pipeline we now must build. Constructing a workforce continuum that will supply our state's manufacturers with skilled, trained workers needed to operate production facilities will be a substantial but equally important undertaking. Developing the pipeline that expands the dialogue between educators and manufacturers will extend communication to students and their parents about the opportunities for well-paying jobs locally that provide upward mobility options. From fostering awareness of our manufacturing heritage in elementary school to aligning with the highly technical world today's students work toward to obtain certification and training for modern manufacturing, each link is essential. Weaving connective bridges between the separate phases of the continuum and its partners will simultaneously provide the relationships and data necessary to address workforce shortages and retain young talent in West Virginia.

## CALL TO ACTION

We can no longer accept the workforce gap generated by the exodus of young folks leaving WV to pursue jobs because of the widely held perception jobs are unavailable without getting involved to offer awareness of the contrary. It's not alright to allow the outdated stigma that manufacturing jobs are dirty, labor-intensive, or preferential to males when the reality is the jobs are highly technical, and diversity in the workplace is a reality. Nor can we lay the burden of changing these falsities at educators' feet without actively providing support, engagement opportunities, and resources to dispel them.

Now, more than any other time in recent history, it is imperative to get involved. Frankly, if we do not adapt and step up to help our educational partners, progress will stall at a time that it is critical for us to deliver. If we do not, the long-term impact will compound the workforce challenges manufacturers continue to face. How can you get involved? **1. Partner and participate in our virtual programs this year or help connect the Explore Team with those manufacturers who will. 2. Help the WVMAEF expand its outreach by making a financial contribution today. 3. Contact us to learn how to get involved. Tomorrow's West Virginians will thank you!**

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