



## 2022 MFG Sustainability Student Case Competition

*“Cradle-to-Career... Finding Local Solutions to Local Problems by Connecting Students to Industry”*

➤Do you have a vision for the future?

➤Do you want to help solve complex problems in your community?

➤Do you believe that young people can help to meet the global Sustainable Development Goals by 2030?

Local manufacturing businesses are looking for good ideas about how they can be more sustainable in all aspects. As a way to connect students with industry, the New Mexico Manufacturers Extension Partnership (NM-MEP) and the United Nations Association of the United States of America (UNA-USA) Albuquerque Chapter are inviting you to share your solutions for sustainability challenges in manufacturing as part of MFG DAY 2022. General company background will be provided. Research requests to include virtual meetings and field trips will be handled on a case-by-case basis. Contact [denisew@newmexicomep.org](mailto:denisew@newmexicomep.org) for more information.

### Entry Guidelines:

- Submit a 3-minute recorded audio-visual presentation in digital file format (shared via email attachment, link to Google Drive or Dropbox, posted to Facebook, shown on school website, etc.) by **Wednesday, September 21, 2022**.
- Clearly state the manufacturer's problem and your proposed solution in your entry.
- Identify applicable SDG(s) in your entry.
- Complete and include Page 2 of this form with your entry.
- A panel of judges from the local business community will be scoring entries based on [this rubric](#).
- All submissions will be shared publicly during the month of October in observance of MFG DAY.
- Winners will be announced on Friday, October 28, 2022.



➤SEE MORE about MFG DAY:

<https://www.themanufacturinginstitute.org/students/manufacturing-day/>

➤LEARN about the 17 Sustainable Development Goals (SDGs):

<https://sdgs.un.org/>

➤REVIEW the SDG Industry Matrix for Industrial Manufacturing:

[https://d306pr3pise04h.cloudfront.net/docs/issues\\_doc%2Fdevelopment%2FSDGMatrix-Manufacturing.pdf](https://d306pr3pise04h.cloudfront.net/docs/issues_doc%2Fdevelopment%2FSDGMatrix-Manufacturing.pdf)



## 2022 MFG Sustainability Student Case Competition

*“Cradle-to-Career... Finding Local Solutions to Local Problems by Connecting Students to Industry”*

**Student Name:**

**School:**

**Phone:**

**Email:**

<input type="text"/>	<input type="text"/>	<input type="text"/>
----------------------	----------------------	----------------------

**Challenge selected:** Choose ONE from the provided list and see more detail online at <https://newmexicomep.org/manufacturing-day/manufacturing-day-2022-along-the-550-corridor/>. Contact Denise Williams about facility tours and production meetings for research, [denisew@newmexicomep.org](mailto:denisew@newmexicomep.org) or (505) 860-9961.

**Why did you choose this challenge?**

**What SDG(s) does your solution address?**

**Would you consider working in MFG since learning more about this challenge? Circle one.**

YES

NO



## 2022 MFG Sustainability Student Case Competition

*“Cradle-to-Career... Finding Local Solutions to Local Problems by Connecting Students to Industry”*

### MFG Sustainability Challenges:

**MFG A: Bidii Baby Food**, in Navajo Reservation and Gallup, NM, local family-owned Navajo producer of Neeshjizhii Bi' Taa' Niił, Navajo Dried Steam Corn Cereal. <https://www.instagram.com/bidiibabyfoods/>

**Challenge A1:** To be a more sustainable agricultural producer and traditional foods manufacturer in their community, Bidii Baby Food would like to focus on the **Social Area of gender equality** so that more men-ALL people in the Navajo Nation are supported in learning about traditional production techniques, forging collaborative partnerships, and developing entrepreneurial ecosystems.

**Challenge A2:** To be a more sustainable agricultural producer and traditional foods manufacturer in their community, Bidii Baby Food would like to focus on the **Economic Area of new investment/expenditures** so that more members of the Navajo Nation are supported in learning about and practicing personal and business financial planning to include budgeting, saving, cost analysis, and re-investment.

**MFG B: Sulzer**, in Farmington, NM, a global leader in fluid engineering specializing in pumping, agitation, mixing, separation and purification technologies for fluids of all types. <https://www.sulzer.com/>

**Challenge B1:** To be a more sustainable fluid engineering and mechanical services provider in their community, Sulzer would like to focus on the **Social Area of human capital** to recruit, train, and promote individuals with the skills and experience necessary for production in an ever-changing marketplace.

**Challenge B2:** To be a more sustainable fluid engineering and mechanical services provider in their community, Sulzer would like to focus on the **Environmental Area of greenhouse gas emissions** to shift from current production methods that use fossil fuels to new processes that use renewable energy sources like wind and solar.

**MFG C: Brady Trading LLC**, in Flora Vista, NM, a local woman-owned startup that reclaims and repurposes takeoff and waste materials from the production of custom window treatments to make new home goods and fashion wares. <https://affordableblindpros.com/>

**Challenge C1:** To be a more sustainable materials processor and home goods manufacturer in their community, Brady Trading would like to focus on the **Environmental Area of waste management and energy consumption** to more efficiently collect, store, and transport reclaimed materials from first-generation production to second-generation reuse.

**Challenge C2:** To be a more sustainable materials processor and home goods manufacturer in their community, Brady Trading would like to focus on the **Economic Area of local supplier/purchasing** to identify and connect material sources, workforce, new product development, and markets for second-generation production.

**MFG D: Emerging Technology Ventures, Inc. (ETV)**, in Alamogordo, NM, a woman-owned small business that develops autonomous air and ground platforms, integrated sensing, and predictive analytics for use in precision agriculture, critical infrastructure inspection, Defense, and public safety. <https://www.etvamerica.com/>

**Challenge D1:** To be a more sustainable technology manufacturer and integrator in their community, ETV would like to focus on the **Social Area of human capital** to recruit, train, and promote individuals with the skills and experience necessary for production in an ever-changing marketplace.

**MFG E: Mezel Mods**, in Rio Rancho, NM, a woman-owned small business that uses 3-D printing technology to develop and manufacture custom components and replacement parts for pinball gaming machines and other novelty items. <https://mezelmods.com/>

**Challenge E1:** To be a more sustainable 3-D printed accessories manufacturer in their community, Mezel Mods would like to focus on the **Environmental Area of waste management** to use less plastic and use more eco-friendly packaging for shipping of delicate materials; need recyclable or biodegradable alternatives for wrapping, packing slips and labels.

**Challenge E2:** To be a more sustainable 3-D printed accessories manufacturer in their community, Mezel Mods would like to focus on the **Environmental Area of waste management** to produce less plastic waste in the 3D printing manufacturing process, find alternatives to dispose of plastic waste (filament), and maintain quality/color of products in adopting new reused/recycled materials.

**MFG F: Jack's Plastic Welding**, in Aztec, NM, a local small business manufacturer of a standard product line that includes inflatable boats, dry bags, and waterproof self-inflating mattresses, as well as an industrial product line that deals with the oil and gas, medical lift bags, water line inspections, and components for amusement rides, scuba divers, sailboat racing, water exercise equipment, climbing gear, medical patient simulators, and emergency spill containments. <https://www.jpwinc.com/>

**Challenge F1:** To be a more sustainable manufacturer of inflatable and waterproof products in their community, Jack's Plastic Welding would like to focus on the **Economic and Environmental Areas of purchasing/expenditures and waste management** to mediate the regulations, costs, availability, and disposal of oil-based raw materials (PVC) used in production.

**Challenge F2:** To be a more sustainable manufacturer of inflatable and waterproof products in their community, Jack's Plastic Welding would like to focus on the **Economic Area of net value added** to balance employees' economics so that skills, attitudes and cost of living that will match their production deliverables.

**Challenge F3:** To be a more sustainable manufacturer of inflatable and waterproof products in their community, Jack's Plastic Welding would like to focus on the **Social Area of human capital** to help employees invest more in the company's proprietary ways of production and training for long-term livelihood.

**MFG G: Sun Glass**, in Farmington, NM; Durango, Cortez and Pagosa Springs, CO, a local small business fabricating and installing custom orders out of glass and polymer materials for homes, businesses, autos, and a variety of other applications to include social distancing solutions for public safety. <https://sunglassfarmington.com/>

**Challenge G1:** To be a more sustainable glass products provider in their community, Sun Glass would like to focus on the **Social Area of human capital** to facilitate a deeper knowledge exchange between experienced workforce and newer employees so that necessary skills are passed on and the company's caring 'people-first' culture is maintained.

**Challenge G2:** To be a more sustainable glass products provider in their community, Sun Glass would like to focus on the **Environmental areas of energy consumption and waste management** to continue centralizing and streamlining operations to reduce transportation/fuel costs, as well as reducing deposits of glass material waste in landfills.

**Challenge G3:** To be a more sustainable glass products provider in their community, Sun Glass would like to focus on the **Economic area of new investment and net value added** to improve operations technology and workforce training so they can offer a wider range of services for auto glass installation and electronic component calibration, as well as deliver more energy efficient glass products to residential, commercial, and historical preservation projects.

**MFG H: Aztec Rogue Foods**, in Aztec, NM, is a local producer and retailer of healthy snacks and tasty prepared foods that are packaged for people to take with them while they enjoy an active outdoor lifestyle. They use locally sourced ingredients when they can. <https://www.aztecroguefoodsllc.com/>

**Challenge H1:** To be a more sustainable packaged foods producer in their community, Aztec Rogue Foods would like to focus on the **Economic Area of revenue/net value** to realize greater efficiencies while making multiple product lines in a small commercial kitchen with limited space.

**Challenge H2:** To be a more sustainable packaged foods producer in their community, Aztec Rogue Foods would like to focus on the **Economic Area of local supplier/purchasing** to realize greater cost-savings and value-added by continuing to buy direct from growers and other small businesses in nearby communities.

**Challenge H3:** To be a more sustainable packaged foods producer in their community, Aztec Rogue Foods would like to focus on the **Social Area of human capital** to offer internships so that young people can learn more about general manufacturing business and retail operations while gaining soft skills like networking and leadership.

**MFG I: The Original Sweetmeat**, in Waterflow, NM, established in the late 1950's, is a local family-owned producer and retailer of traditional agricultural food products to include butchered sheep, lamb, goat, as well as steamed corn

and other prepared foods. The company is enhancing their business operation to offer walkup custom livestock processing services for backyard growers. <https://www.facebook.com/The-Original-Sweetmeat-106370704314203/>

**Challenge I1:** To be a more sustainable livestock processor in their community, The Original Sweetmeats would like to focus on the ***Social Area of human capital*** to educate young people in traditional agricultural practices and cultural preservation to ensure the business of being a small local processor can continue for future generations.

**Challenge I2:** To be a more sustainable livestock processor in their community, The Original Sweetmeats would like to focus on the ***Environmental Area of waste management and energy consumption*** by continuing to streamline operations for zero waste and work to help more people in the local community grow and safely process their own meat products so they can use the whole animal and save on transportation, packaging, and storage costs instead of buying only choice pieces from large factory farms at the grocery store.

**Challenge I3:** To be a more sustainable livestock processor in their community, The Original Sweetmeats would like to focus on the ***Economic Area of revenue/net value and local supplier/purchasing*** to encourage growth in the local marketplace for homegrown foods using traditional agricultural practices that will encourage greater self-sufficiency and cultural preservation by supporting small backyard growers and entrepreneurial ecosystems.