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## The Aurora Open & Innovation Showcase

Over the past several years NPPD's energy education programs have transitioned into the Pathways to a Technical Future initiative. This strategic approach uses innovation as the key educational concept to develop technical workforce skills, soft skills, and the ability to figure things out. Two primary programs NPPD offers to our customers are the STEM Connections Lab and the CREATE Open powered by NPPD competitive robotics program. The Aurora Open & Innovation Showcase is one of six exciting robot tournaments that NPPD helps coordinate. Although all our events are exciting competitions, Aurora adds a little twist. By bringing in area businesses for hands-on skills booths, the Innovation Showcase and the Innovation Challenge are the highlight of NPPD Energy Education's efforts to maximize our impact by integrating business, community, and education.

- 51 robots actually competed (making this the largest CREATE open event)
- 74 volunteers worked the event!
- We had a business card challenge where teams visited our booths and then attached business cards to their robots -- best application won free registration to the Aurora Open next year.
- We had over 600 people attend! (Not including robot teams)
- We had four college teams compete in the Innovation Challenge - UNO engineering group, UNL Engineering Ambassadors, CCC Mechatronics from Columbus, and Southeast CC from Milford and their energy generations operators group. This challenge required teams to interview businesses and develop a product that integrated two or more of the businesses in a solution that integrates the businesses. (In reality, creating business to business connections)
- All four innovation teams were amazing and we ended up with a working app for custom designing jewelry, an entire steam to water to irrigation concept complete with a working condenser model and chart sized schematic printed on the vinyl cutter, a functional drone sensor pack that used Power BI data visualization to adjust the thermal imaging capabilities of the drone's camera, and a mock-up of an elevated structure lubricating attachment for a drone.
- Our businesses were engaged by hundreds all day long - Metal Quest's candy throwing robot went through 14 pounds of NERDS candy!! The student led business to business engagement worked better than expected!
- We had two full makerspaces with (5) 3D printers, a laser cutter, (3) vinyl cutters, (3) CNC mills, (2) Embroidery machines, tons of electronics, virtual reality, Fusion 360 stations, research stations, and an assortment of tools --- all of which were used almost constantly all day long by robot teams, innovation teams, and the public.

Overview Video: [https://drive.google.com/file/d/1\\_VaqWXskLTEWLe5kp9aXuhCjqrAn8uQN/view?usp=sharing](https://drive.google.com/file/d/1_VaqWXskLTEWLe5kp9aXuhCjqrAn8uQN/view?usp=sharing)