3M News Center

The Sky's the Limit in 3M Disruptive Design Challenge

Student teams from four universities compete in real-life test of engineering solutions designed to improve humanitarian aid delivery

Who has what it takes to solve a sticky design problem, using adhesives and tapes, and build solutions that have the potential to improve lives? Teams from four schools with the nation's finest engineering programs – Iowa State University, University of Minnesota, North Dakota State University and University of Wisconsin-Madison – are about to face that test this week, during the finals of the 3M Disruptive Design Challenge (DDC).

This marks the inaugural year for DDC, a hands-on, interactive competition that 3M's Industrial Adhesives and Tapes division created to expose and educate the next generation of innovative engineers to the various uses and design benefits of chemical bonding and adhesive solutions. Often, alternative systems are excluded from engineering school curriculums. These bonding solutions help solve many design challenges including, strength, fit, flex, impact, aesthetics, noise, weight, speed, sealing and assembly. 3M wants to help close the knowledge gap by giving future engineers at the collegiate level the experience of applying these technologies to show how they promote the freedom to design. These skills, resources and applications will follow them into the workforce and help reshape the way they design tomorrow.

"These students represent the next generation of scientists and engineers who will make discoveries that improve lives by connecting science and technology to ideas," said Shirin Saadat, IATD Technical Director, 3M. "The 3M Disruptive Design Challenge offers them an opportunity to hone technical skills, tap into their creativity and perhaps most importantly, experience the importance of collaboration, which is fundamental to 3M's values, all while gaining valuable experience with product solutions that are not frequently taught in the classroom."

To help put these teams of future engineers' skills and creativity to the test through a real-life simulation, 3M teamed-up with not-for-profit humanitarian aid organization Direct Relief to design the challenge scenario. 3M has been a partner with Direct Relief for thirty years, and together this partnership helped with the delivery aid of 1,813 tons of medications, vaccines, and medical supplies in all 50 states and 81 countries abroad in FY2016. In continuing with this commitment and passion, this year's DDC scenario is inspired by the distribution of relief supplies to remote and inaccessible locations in the aftermath of a disaster.

Each student team will develop an emergency relief delivery container designed to overcome current relief challenges, with a focus on ensuring the container carrying relief supplies survive an air-drop in-tact. Direct Relief indicates that on-the-ground relief efforts can become compromised if supplies are damaged during transport and delivery. With this in mind, teams will be judged on the resiliency, moisture resistance, technical process and repurposing capabilities of their design – which must include the use of 3M Industrial Adhesives and Tapes as an alternative to traditional mechanical fasteners.

On April 13, the competition will culminate at 3M headquarters in St. Paul, Minnesota, when each team's container is dropped forty-meters to the ground from a crane, mimicking a real-life air drop.

As part of the competition, students are documenting their design journey and posting content on their social channels using the hashtag #BuiltToBond. Each team will receive a 3M immersion, including a tour of the 3M Innovation Center, and attend an on-site networking event.

The winning team will be selected by two guest judges and a 3M representative: Grant Imahara, an electrical engineer and roboticist; Patricia Bacuros, director, philanthropic investment for Direct Relief; and Shirin Saadat, IATD Technical Director, 3M.

Each member of the winning team will earn a $1,500 prize.

For more information about the 3M Disruptive Design Challenge, visit www.3m-ddc.com.

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