

The Real World Design Challenge (RWDC) supports Science, Technology, Engineering and Mathematics (STEM) education in high schools through an annual competition that provides students with the opportunity to apply the lessons of the classroom to the technical problems currently faced in the engineering field; thus, the goal of the RWDC is to motivate and prepare students for the STEM workforce and teach innovation. The RWDC is Real World in the following ways: Students (1) solve Real Problems; (2) use Real Tools; (3) play Real Roles; and (4) make Real Contributions. Through their participation in RWDC each year students are challenged to optimize the design of a plane. Students are designing an Unmanned Aerial System (UAS) with the mission of precision agriculture. School teams of 3-7 students compete in State Competitions. The State Champions are invited to compete in the National Championship. The State Challenge runs from September through January and the National Championship runs from February through April. In 2015 the RWDC expanded internationally. We plan to export RWDC educational services to countries in Latin America, the Middle East, Asia and Europe in order to supply a workforce for US companies overseas.

What Teams and Participating Schools Get Each participating teacher gets \$1 million in professional engineering software. Teams also get access to professional mentors. Each student on the United States National Champion Team gets a \$50,000 scholarship to Embry-Riddle Aeronautical University. There is a registration fee for the National Challenge. The State Level Challenge is free for all teams. All of the curriculum materials are free and there are free training webinars for teachers and students.



Results

The RWDC seeks to involve women and minorities in STEM. The RWDC is going into its eighth year of operation. To date 2,674 teams over 17,000 students have participated in the Challenge with teams from all fifty states participating. Most recent data analysis showed that 42.2% of RWDC students' self-reported as being a member of a minority group. When RWDC Students were asked how they like STEM subjects; 80% found science fascinating; 65% found math fascinating; 82% found engineering fascinating; and 83% found technology fascinating. When asked about a career in STEM 77% found a career in STEM fascinating; 79% said it was appealing; 79% said it was exciting; 80% said it means a lot; and 81% said it was interesting. To date 98% of the State Champions have gone on to university study.

Recognition

President Obama has honored RWDC Students at the White House Science Fair! The RWDC teams have also received letters of recognition from President Obama. The RWDC received the Crown Circle Award, for "Extraordinary accomplishment and outreach in a leadership role in Aerospace Design Education" from the National Coalition for Aviation and Space Education. The National Lt. Governors' Association and the Aerospace States Association both unanimously passed resolutions supporting the RWDC. The FAA provided an award for "Outstanding service in support of Aviation and Space Education". And the RWDC was a finalist for the *Aviation Week* Workforce Award.



Bridge to the Future: Return on Investment
We are enhancing the RWDC by developing Bridge to the Future, an online forum, to connect students to engineering jobs and employers with qualified students. The goal of Bridge to the Future is to connect companies with high quality students/workers with significant demonstrated preparation, experience, and excellence in aeronautical engineering and business plan development. With Bridge to the Future companies can recruit the best and brightest students from the RWDC. Bridge to the Future tracks students from high school, through university study and professional practice. Companies can cherry-pick the best students and find the ones who best fit their needs. We will also link students with university scholarship programs in aerospace. Professionals judge the students' work evaluating and documenting achievement, merit and performance. Companies would be able to recruit students with a variety of success levels in the program that include: International Champions, National Champions, Top Three National Teams, National Merit Award Winners, State Champions, and State participants.

Investment in International Workforce Development

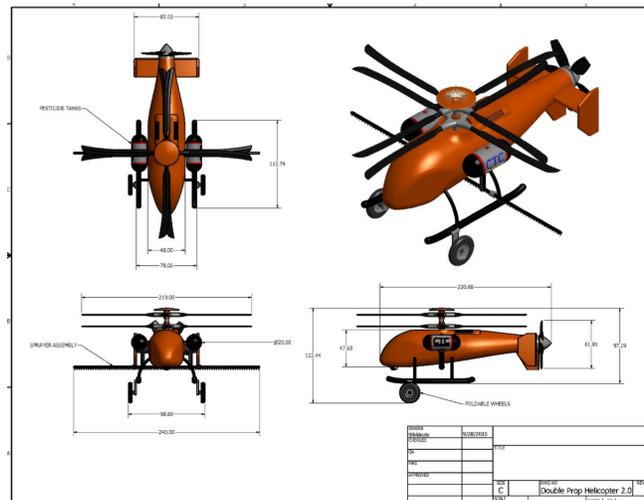
Our goal is to support US companies' workforce development in other countries where they have operations or where they want to establish operations. We will use the RWDC and Bridge to

the Future to help prepare the workforce and help companies employ the best and brightest.

Aerospace States Association is the host of the RWDC. ASA is a non-partisan 501(c)3 scientific and educational organization of state Lt. Governors, Governor-appointed delegates and associate members from the aerospace industry, and academia. ASA was formed in 1991 to promote a state-based perspective in federal aerospace policy development and to support state aerospace initiatives that enhance economic development opportunities and student/teacher education outreach. ASA maintains direct ties to the executive branches of state governments throughout the nation. ASA state chapters work to educate state lawmakers on the benefits and issues of the aerospace community and STEM education in their state.

For more information go to:

www.aerostates.org



For More Information and Getting involved Contact:

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