NASA ORBITAL ALCHEMY CHALLENGE

MARCH-JULY 2022

PROBLEM STATEMENT

NASA sought to inspire innovators of all ages, skills, and interests to consider how humanity can make use of materials already in orbit to explore the cosmos in a more sustainable and cost-effective way. Every kilogram of space debris recycled is one less kilogram to launch from Earth, saving time, fuel, and money. The Challenge explored how a new industry can transform large orbital debris into an orbital opportunity by creating feedstocks from recycled spacecraft.

OUTCOME & RESULTS

TechConnect launched an open innovation call and uniquely branded website. Both individuals and teams were invited to apply, provided all participants were at least 18 years old or supported by an adult where a minor participation agreement is in place. Qualified applicants were citizens of non-NASA Export Control Program Category II countries - countries determined by the Department of State to support terrorism - and not citizens of China. Following a TechConnect-driven program, we awarded prizes totaling $46,000 on behalf of the client. Out of the top respondents, WidgetBlender LLC won first place and $25,000. In second place, C-botics earned $10,000. Three companies share the distinction of third place Crointel LLC with $5,000, Orbital Outpost X, Inc., and NVC Innovation with $5,000. NASA named the following honorable mentions: C-botics, iUMTEK with $1,000, Intellectual Bounty, and CubeCab. To circumvent IP transfer to NASA, TechConnect offered a work-around where entrants could deny funding in favor of visibility-only. Submissions offered solutions at all technology readiness levels, including those with potential commercial viability by 2030. In addition to prize money, winners receive the opportunity to meet NASA personnel and explore their ideas further. TechConnect enjoyed the opportunity to work with NASA on this space and sustainability-focused program!

31 ENTRIES

11 COUNTRIES

52% INDIVIDUAL ENTRANTS

$46,000 PRIZES

13 US STATES

48% TEAM ENTRANTS

TechConnect a division of ATI

NTL NASA Tournament Lab