



2026-2027 Robots + Drones

The Ultimate Team

What if the best solution isn't one robot or one drone—but two different technologies working together? In this challenge, your team will explore how robots and drones are beginning to work together, then imagine how they could team up to tackle a future challenge. Choose your problem, design the roles of your aerial and ground systems, and show how they communicate, collaborate, and get the job done.

The future of robotics may not be about building one machine that can do everything. It may be about creating the right team!

Grade Levels	Programs	Submission Type
Elementary/12U Middle School/15U High School/19U College	RECF Engage RECF Achieve RECF Inspire ADC ADC Pro	Visual Aid & Video

Prizes: Five finalists will be featured on the RECF.org website, and a winner will be chosen from among those teams. The 1st place winner at each grade level will receive an invitation to the 2027 RECF World Championship in St. Louis. The invitation is specific for the winning team and the winning team's program. The registration fee is the responsibility of the winning team.



2026-2027 Robots + Drones: The Ultimate Team Challenge - Judging Rubric

This rubric will be used by RECF Online Challenge judges to assess all eligible submissions after the submission deadline. Each criterion will be scored from 0 to 5 points. Finalists and winners will be recommended by volunteer judges based on their scores. *RECF staff will make the final determination of awardees at their sole discretion, with consideration given to volunteer judge recommendations and the minimum entry requirements.*

Criteria	Expert 4-5 Points	Proficient 2-3 Points	Emerging 0-1 Points
Research & Understanding	Research is accurate, relevant, and specific. Clearly shows that the team understands how robots and drones can work together and why working together is useful. The team uses what it learned from research to help develop its solution.	Research shows a good understanding of how robots and drones can work together and includes relevant information. Some areas may need more detail or a clearer connection to the team's solution.	Research shows limited understanding of how robots and drones can work together or contains significant gaps or inaccuracies. There is little connection between the research and the team's solution
Future Problem & Solution	Identifies a specific, meaningful, and plausible future problem and develops a thoughtful and creative solution. Clearly explains how both the aerial and ground systems help solve the problem.	Identifies a meaningful future problem and presents a clear solution. Both the aerial and ground systems have useful roles, although some areas may need more development.	The problem is unclear, lacks a meaningful purpose, or is not well connected to the solution. The role of one or both systems is limited or unclear.
Robot + Drone Collaboration	Clearly demonstrates how the aerial and ground systems work together and what they can accomplish together that would be difficult for either system to accomplish alone.	Explains how the aerial and ground systems work together and how they support the solution. Some areas may need more detail or stronger connections.	The aerial and ground systems are mostly presented as separate machines, with limited or unclear explanation of how they work together.
Human Impact & Future Feasibility	Thoughtfully explains who would use or benefit from the solution and how it could make a task safer, faster, easier, or more effective. Consider human involvement, safety, limitations, and why the solution could be possible within the next 10 years.	Explains who could benefit from the solution and addresses some human, safety, limitation, or future considerations. The team gives some explanation of why the solution could be possible within the next 10 years.	Provides limited or unclear consideration of people, human involvement, safety, limitations, or why the solution could be possible in the future.
Communication & Creativity	Clearly and creatively communicates the team's problem, research, solution, robotic systems, collaboration, and impact. The video and visual representation work together to make the team's ideas easy to understand. Creative choices strengthen the team's message.	Clearly communicates the team's main ideas and addresses the major elements of the challenge. The video and visual representation support understanding. Some areas may need greater clarity or development.	The video or visual representation is difficult to follow, unclear, or incomplete. Important ideas are not effectively communicated, or creative choices do not support understanding.

