



Orbital Debris Remediation – Accelerating Active Debris Removal (ADR)



VOTE 1: Which two of the following focus areas are the most important to act on to help make debris remediation meaningful as soon as possible?

FOCUS AREA	Select Two
Diplomatic: international governmental dialogue	
Legal: treaties and laws	
Economic: financial innovation	
Programmatic: contracts and procurement	
Technical: analytic and engineering	

VOTES 2-6: For each focus area circle the action that you feel is most important to help “make active debris removal real.” Alternatively, if you have a more crucial action to suggest than any of the ones listed, you may write it in below.

2. Diplomatic

- A. China, Russia, and US to agree remediation of massive derelict objects is critical.
- B. Third party reach out to Russia, China, and/or US for bilateral agreement to start joint ADR effort.
- C. United Nations (maybe COPUOS) establishes new initiative for global debris remediation.

New Action: _____

3. Legal

- A. Modify Liability Convention to more clearly address/reduce liability for ADR operator during a removal mission.
- B. Modify Outer Space Treaty to incorporate salvage clause for hardware over ten years old; couple with economic innovations.
- C. Define hostile activities better to preclude RPO and grappling from being outlawed as a weapon.

New Action: _____

4. Economic

- A. Create Global Fund (by some international governmental organization or coalition) for removal of a derelict object from the “Top 50” list.
- B. Establish ADR insurance as requirement for launch.
- C. Take the message of debris remediation priority to the public; public outrage may drive budgeting.

New Action: _____

5. Programmatic

- A. Require ADR contracts to primarily be based on mass removed from orbit.
- B. Government space programs release tenders to international pool of ADR providers funded by fee levied on all future space launches.
- C. Orbital capacity modeling should drive ADR priorities and pricing (i.e., more than just mass of derelicts matter).

New Action: _____

6. Technical

- A. Eliminate requirement for controlled re-entry of large debris objects for ADR missions. (Uncontrolled re-entry later leads to a higher casualty rate than uncontrolled re-entry now due to increased population in the future.)
- B. Focus on fragment removal over intact object removal.
- C. Prove mathematically doing nothing will cost more than executing ADR missions; requires technical analysis.

New Action: _____

Details of Respondent

Name (optional): _____ **E-mail** (optional): _____

Years of Experience (circle one): 1 to 5yr 5-15 yr 15-25 yr 25-35 yr 40+ yr

Work Location (circle one): Asia South America Europe Africa Australia North America