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Applied Policy Project Proposal
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My project will work with a Federally Funded Research and Development Center to develop policy recommendations for the federal government to streamline regulations of

1.) Satellite reuse
2.) The treaty of peaceful uses of outer space
3.) Space Situational Awareness

I am working to confirm a project topic with my client, as well as beginning work on a MOU with them, upon their final confirmation that they are able to work with me.

Space debris for US Gov = All materials in orbit around earth have been constructed on the ground with materials launched from there. As we continue to launch more satellites and structures into space, the more area they take up. Repurposing old satellites allows for cost reductions in payload weight and a reduction of orbital debris, however the US lacks reuse regulations on ownership and responsibility.

- Reusability of space debris in space
- Incentives to clean up
- De-orbit standards for licensing
- Fund reuse programs for orbital debris manufacturing
    - Cost reduction of on-orbit manufacturing
    - Lighter for refueling launches
    - Need for technical development of space robotic systems
        - Potential of 3D printing

Issues:

- Ownership of orbital debris is unclear
    - UN Peaceful Uses of Outer Space : who owns debris, company, country?
        - who has right to reuse?
            - anyone?
            - does it have to be bought?
        - who takes the blame if it goes wrong?
    - NASA Orbital debris guidance

Stakeholders:

- Launchers
- Sat. Manufactures
- SSA management
- Agencies instituting Removal regulations

Challenges:

- Unknown SSA structure
- STM important for reuse
- Existing Regulations
- Outer Space Treaty - ownership (buying the dead satellite or is it free, who is responsible for failure)
- Rise of Small Sats/ cubesats (non maneuverable)
    - Constellation launches private and military

Potential methods for reuse

- Repurpose the satellite
- Melt down and use material in 3D printing new

- The only way to research this future technology is in space which is cost prohibitive and often stifling to new entrants and innovation.