STRATO-Tech RTD Response Template

1. **Company name:**
2. **Address:**
3. **POC:**
4. **Email:**
5. **Phone:**
6. **Provide an overview that explains the technology, its current development status, test/simulation data supporting performance claims, and next steps for its development (NTE 200 words)**

7. **State the primary STRATO-Tech problem statement this solution addresses. (highlight one)**
   - Rapid ground turn with minimum equipment: How fast can a KC-135 be landed at a remote airfield, refueled with as little equipment as possible, and put back in the air? The Pacific fight requires the maximum time in the air for our tankers, so we're looking for newer ways to do ground turns faster (and with less equipment and people).
     1. Upon request, companies will be given access to the current procedures for ground turns along with some scenario details, and would be encouraged to demonstrate whatever minimum equipment provides maximum value to turn that aircraft quickly.
     2. As an example, NIAR is designing and fabricating a tow bar to use with this KC-135 at their facility in Wichita and going the extra step to potentially design a collapsible one that would be of higher interest to the USAF.
   - Modernized Aircraft Battle Damage Repair: ABDR is a long-standing problem going back to the Battle of Britain. Strato-Tech will assess companies' capabilities to address the following ABDR scenarios:
     1. The first step in conducting ABDR is assessing the condition of the aircraft on the ramp. Strato-Tech seeks capabilities that can rapidly and accurately assess battle damage to skins, structures, wiring, electronics, pressure vessels, fiber optics, fuel tanks, communications and avionics.
     2. Most warheads are blast-fragmentation, and near-misses will pepper the plane with many small holes. Strato-Tech is looking for demonstrations of capabilities to address in-situ repair of these holes beyond current "riveted scab patches".
     3. Strato-Tech is seeking capabilities that can address expeditionary repair of aircraft structural components such as spars and ribs, etc.
     4. Modern aircraft are comprised largely of composite materials. Strato-Tech seeks capabilities that can rapidly and accurately assess the condition of these composite materials.

5. Strato-Tech seeks composite material repair solutions that can be readily deployed to remote locations without the traditional "baggage" of freezers, autoclaves, etc.
6. Metal parts needed to effect ABDR repairs may not be available. Strato-Tech seeks capabilities that can locally manufacture metal parts at the point of need in remote areas and potentially in a comms denied environment.
7. Aircraft technicians may not have access to experts in the engineering centers and ALC's. Strato-Tech seeks solutions that can greatly aid these technicians to generate sound flight-worthy engineering repair solutions in denied comms environments.
8. Current processes to detect aircraft pressure leaks are slow and inaccurate. Strato-Tech seeks capabilities that can rapidly and accurately detect pressure leaks in canopies, fuselage, etc.
9. Wiring and fiber optics will be damaged and require rapid troubleshooting and repair capabilities.
10. Communications and Avionics "black boxes" are crucial to aircraft operations. Strato-Tech seeks innovative capabilities to test the functionality of these components, isolate faults, and repair the subcomponents (wiring, connectors, circuit boards/cards).
11. Fuel tanks, cells and bladders will be damaged and Strato-Tech seeks novel fuel leak detection and repair capabilities.
12. Aircraft windscreens, canopies, and windows will be damaged. Strato-Tech seeks solutions to providing flight worthy repairs of these components.
13. Ground support equipment (GSE) and stands will be necessary to effect expeditionary maintenance and repair in remote locations. Strato-Tech seeks capabilities that can significantly reduce the GSE footprint and maximize reconfigurability for multiple aircraft types.

8. Provide an overview of ancillary or support equipment/services necessary to operate your solution; e.g., power requirements, compressed air, PPE, vacuuming, air filtration, lifting devices, etc. (NTE 200 words).

9. Describe the portability of your solution, including its weight and physical dimensions, and whether this solution requires a shipping container and/or trailer to transport (NTE 200 words).

10. Add any applicable spec sheets for the technology to the PDF.