OSD Maintenance Challenge

Abstract Form	
Paper Title:	Replicating Tyndall AFB's Innovation Flight
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Abstract: (300-500 words)

Maintenance and acquisition communities provide ample opportunities for creative solutions to everyday obstacles faced throughout our Air Force and DoD. The issue, however, is their capabilities are disconnected preventing ideas from becoming realized. Maintenance personnel often identify shortcomings and have the manufacturing skill-set, but fall short on design and resources. Acquisitions often knows key players, can wrangle the resources, and design the solution, but do not have access to manufacturing without contracts. So the question becomes: How do we provide DoD maintenance and acquisitions with professional engineering, design, and manufacture capabilities enabling its solutions rapid transition from concept to certified operational demonstration?

Enter Special Devices Flight, a small test support flight at Tyndall AFB that does just what the question above asks. The flight is comprised of 15-20 enlisted maintainers and acquisitions officers utilizing $1.5M in specialized equipment and training who are able to complete over 110 unique projects annually. Divided up into three sections, Avionics, Fabrication, and Engineering, the Flight's solutions are regularly a tenth of the cost of contracted work and exceed its customer's time and performance expectations. The projects support a variety of initiatives including Operational Test & Evaluation, Live Fire Test & Evaluation, System Program Offices (SPO), MAJCOM Plans, and sister service requirements. It enables rapid solutions to fill supply gaps, increase efficiency, and empower Airmen.

The proposed solution for the Maintenance Innovation Challenge is to implement additional regionally based Special Devices shops globally where they can best serve the maintenance and acquisition communities. For example a shop at Nellis AFB could serve the western US test community, space operations, and depot at Hill AFB. Two other shops, one each in EUCOM and PACOM would provide access for 422,000 military and civilian personnel working in the region. These locations would enable a flexible outlet where innovations are realized quickly and at a substantial cost savings to the government. Maintainers can implement process improvement; Program Offices can overcome supply hurdles and modifications. An illustrative example occurred when OSHA deemed the Air Force out of compliance after finding no safety rails on any of its 12 altitude chambers. Contractors bid the job for $400K, but Special Devices was able to solve this Air Force wide dilemma for just $21K. Another example comes from a broken F-15 conformal fuel tank (CFT) bracket at Seymour Johnson AFB. The situation quickly escalated as there were no spare CFTs and supply had no brackets in inventory. Special Devices was contacted and began coordination with the SPO. The part was shipped, repaired, and installed back on the tank rendering aircraft fully mission capable within a week.

This concept of organic repair shops and embedded engineers within maintenance is not new and has been paying huge dividends for more than a decade. The Air Force Repair Enhancement Program (AFREP) for electronics and the Depot Liaison Engineer positions in the AOR are on the ground assisting maintainers daily. Additional Special Devices Flights would provide needed outlets for maintenance and acquisition innovations which would improve DoD maintenance agility while reducing overall costs drastically.