| | | Units | | Minutes | Unitless | Unitless | Kilograms | Meters/second | Meters/second | Unitless | Unitless | Unitless | Unitless | Unitless | Unitless | Unitless | Unitless | Cubic centimeters | Hours | 1-10 scale |
|---|--|--|---------|--------------|--------------------|-----------------------|-----------------|----------------------|---------------|-----------------------------|------------------------------|---------------|----------------|--|---|--------------------------------------|------------------|-------------------|-----------------|----------------------------|
| | Product: UAS Subsystem: Airframe | Performance Measures | | Battery life | Lift-to-drag ratio | Motor/prop efficiency | Airframe weight | Average flight speed | Stall speed | Spiral stability eigenvalue | Static margin (with payload) | Cn,beta (yaw) | Cl,beta (roll) | Number of components that fall off the plane | Number of damaged components on landing | Number of AMA safety code violations | Lift coefficient | Storage volume | Time to rebuild | Focus group ease of repair |
| | Market Requirements | Imp | ortance | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 |
| 1 | Capable of flight for extended period of time | | 9 | | | | | | | | | | | | | | | | | |
| | Capable of traveling an extended distance | | 9 | | | | | | | | | | | | | | | | | |
| 3 | Minimize flight path deviation | | 9 | | | | | | _ | | | | | | | | | | | |
| 4 | Components are protected | | 9 | | | | | | | | | | | | | | | | | |
| 6 | Complies with AMA safety code Capable of carrying UGV and water bottle | | 3 | | | | | | | | | | | | | | | | | |
| - | Fast and cheap rebuild | | 3 | | | | | | _ | | | | | | | | | | | |
| | | Lower Acceptable | | 40 | 5 | 0.2 | 0 | 10 | N/A | -0.1 | 0 | 0.05 | -0.15 | 0 | 0 | 0 | 0.35 | 0009 | N/A | 5 |
| | | Ideal | | 75 | 20 | 1 | 2 | 13 | 10 | -0.05 | 0.1 | 0.1 | -0.1 | 0 | 0 | 0 | 0.5 | 10000 | 0 | 10 |
| | | Measured Predicted Target Upper Acceptable Ideal | | N/A | N/A | N/A | 10 | 30 | 20 | 0.4 | 0.15 | 0.15 | 0.1 | 0 | 0 | 0 | 1 (0 | 12000 | 24 (0 | 10 |
| | | Target | | 09 | 7.5 | 0.35 | 4.5 | 14 | 10 | 0 | 0.1 | 0.1 | 0 | 0 | 0 | 0 | 2.0 | 0008 | 10 | . ω |
| | | Predicted | | 09 | 7.5 | 0.405 | 4.5 | 14 | 1- | 0.3187 | 90.0 | 0.10452 | 0.06032 | 0 | 0 | 0 | 0.7 | 7974 | 10 | 80 |
| | | Measured | | 50 | 5 | N/A | 4.5 | 14.5 | 11 | N/A | 0.057 | N/A | N/A | 0 | 0 | 0 | 0.7 | 10766 | 8 | 9 |