

						Product: UAS Subsystem: Airframe																		Units									
Market Requirements						Importance		Performance Measures																									
1	Capable of flight for extended period of time					9	●	●	●	●										Battery life	Minutes												
2	Capable of traveling an extended distance					9	●	●	●	●	●									Lift-to-drag ratio	Unitless												
3	Minimize flight path deviation					9														Motor/prop efficiency	Unitless												
4	Components are protected					9														Airframe weight	Kilograms												
5	Complies with AMA safety code					9														Average flight speed	Meters/second												
6	Capable of carrying UGV and water bottle					3		●	●	●	●	●								Stall speed	Meters/second												
7	Fast and cheap rebuild					3														Spiral stability eigenvalue	Unitless												
8	Looks decent					1														Static margin (with payload)	Unitless												
						Lower Acceptable		Ideal		Upper Acceptable		Target		Predicted																			
50	60	60	60	N/A	75	40																											
5	7.5	7.5	7.5	N/A	20	5																											
N/A	0.405	0.35	N/A	1	0.2	0																											
4.5	4.5	4.5	10	2	13	10																											
14.5	14	14	30	10	10	N/A																											
11	11	10	20	10	-0.05	-0.1																											
N/A	0.3187	0	0.4	-0.05	0.1	0																											
0.057	0.06	0.1	0.15	0.1	0.05	0																											
N/A	0.10452	0.1	0.15	0.1	-0.1	-0.15																											
N/A	0.06032	0	0.1	-0.1	0	0																											
0	0	0	0	0	0	0																											
0	0	0	0	0	0	0																											
0	0	0	0	0	0	0																											
0.7	0.7	0.7	1	0.5	0.35	0																											
10766	7974	8000	12000	10000	6000	0																											
8	10	10	24	0	N/A	5																											
6	8	8	10	10	5	5																											
	8	8	10	10	10	5																											