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BRIGHAM YOUNG UNIVERSITY
AUVSI CAPSTONE TEAM (TEAM 45)

Requirements Matrix

ID	Rev.	Date	Description	Author	Checked By
RM-001	0.1	09-07-2018	Fall camp draft	Brady Moon	Jacob Willis
RM-001	0.2	09-14-2018	Revisions after design review	Derek Knowles	Kameron Eves
RM-001	1.0	10-08-2018	Expansion for stage approval	Kameron Eves	Brandon McBride
RM-001	1.1	10-08-2018	Reordered requirements to match priority	Jacob Willis	Brady Moon
RM-001	1.2	10-17-2018	Fixed inconsistency in autonomous flight requirement	Andrew Torgesen	Kameron Eves

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Product: UAS
Subsystem: N/A

Notes:
UAS = Unmanned Aerial System
UGV = Unmanned Ground Vehicle

	Market Requirements	Importance	1 Flight Time (Minutes)	2 Post Processing Time (Minutes)	3 Autonomus Flight Time (Minutes)	4 Percent of Waypoints Hit (Percent)	5 Average Minimum Distance to Waypoint (Feet)	6 Percent of Obstacles Hit (Percent)	7 Percent of Correct Characteristics Identified (Percent)	8 Percent of Images Correctly Geolocated (Percent)	9 Percent of Objects Submitted in Flight (Percent)	10 Percent of Objects Autonomously Submitted (Percent)	11 Payload Drop Distance to Target Location (Feet)	12 UGV Stop Distance to Target Location (Feet)	13 Complies with AMA Safety Code (Yes/No)	14 Penalties (Count)	Market Responce
1	The UAS shall be capable of autonomous flight.	20%			●	●	●					●				●	Very Good
2	The UAS shall be capable of avoiding static obstacles.	20%						●								●	Very Good
3	The UAS shall be capable of visual object classification.	20%							●	●	●	●				●	Very Good
4	The UAS shall be capable of delivering a payload.	20%											●	●		●	Very Good
5	The UAS shall be capable of safe operation.	10%									●				●	●	Good
6	The UAS shall be capable of a timely completion of the mission.	10%	●	●			●									●	Good
	Importance		6%	2%	8%	2%	10%	20%	4%	6%	6%	4%	10%	10%	10%	2%	
	Upper Acceptable		40	10	40	100	100	100	100	100	100	100	75	10	Y	15	
	Ideal		20	0	20	100	0	0	100	100	100	100	5	0	Y	0	
	Lower Acceptable		3	0	3	0	0	0	0	0	0	0	0	0	Y	0	

Figure 1: Top-level requirements matrix for the unmanned aerial system.