

Drone Swarm REQ ID	Requirement Description	Checklist QualityCriteria ID	Yes/No N/A	Reviewer	Date	Comments	Action(s)	Status of action(s)
SW-01	<i>When a mission is started, the swarm shall assign tasks to agents according to the mission plan, considering any available differences in agent capability.</i>	QC-1	Yes	E.Z	2025-10-28			No action needed
		QC-2	Yes	E.Z	2025-10-28			No action needed
		QC-3	Yes	E.Z	2025-10-28			No action needed
		QC-4	Yes	E.Z	2025-10-28			No action needed
		QC-5	Yes	E.Z	2025-10-28			No action needed
		QC-6	Yes	E.Z	2025-10-28			No action needed
		QC-7	Yes	E.Z	2025-10-28			No action needed
		QC-8	Yes	E.Z	2025-10-28	Testable via simulation, can check task assignment correctness.		No action needed
		QC-9	Yes	E.Z & Y.M.B	2025-10-28			No action needed
		QC-10	Yes	E.Z & Y.M.B	2025-10-28			No action needed
		QC-11	Yes	E.Z & Y.M.B	2025-10-28			No action needed
		QC-12	Yes	E.Z	2025-10-28			No action needed
		QC-13	Yes	E.Z	2025-10-28			No action needed
		QC-14	Yes	E.Z	2025-10-28			No action needed
		QC-15	Yes	E.Z	2025-10-28			No action needed
SW-02	<i>If an agent experiences a degradation in its functionality, the swarm shall reassign that agent's tasks to other functional agents, depending on the available resources of the functional agents.</i>	QC-1	Yes	E.Z	2025-10-28			No action needed
		QC-2	Yes	E.Z	2025-10-28			No action needed
		QC-3	Yes	E.Z	2025-10-28			No action needed
		QC-4	Yes	E.Z	2025-10-28			No action needed
		QC-5	Yes	E.Z	2025-10-28			No action needed
		QC-6	Yes	E.Z	2025-10-28			No action needed
		QC-7	Yes	E.Z	2025-10-28			No action needed
		QC-8	Yes	E.Z	2025-10-28	Testable via simulation, can check reassign tasks within time/priority constraints.		No action needed
		QC-9	Yes	E.Z & Y.M.B	2025-10-28			No action needed
		QC-10	Yes	E.Z & Y.M.B	2025-10-28			No action needed
		QC-11	Yes	E.Z & Y.M.B	2025-10-28			No action needed
		QC-12	Yes	E.Z	2025-10-28			No action needed
		QC-13	Yes	E.Z	2025-10-28			No action needed
		QC-14	Yes	E.Z	2025-10-28			No action needed

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SW-03	If an agent experiences a degradation in its functionality, the agent shall take on less critical task(s), provided the agent is capable of performing these task(s).	QC-15	Yes	E.Z	2025-10-28			No action needed
		QC-1	Yes	E.Z	2025-10-28			No action needed
		QC-2	Yes	E.Z	2025-10-28			No action needed
		QC-3	Yes	E.Z	2025-10-28			No action needed
		QC-4	Yes	E.Z	2025-10-28			No action needed
		QC-5	Yes	E.Z	2025-10-28			No action needed
		QC-6	Yes	E.Z	2025-10-28			No action needed
		QC-7	Yes	E.Z	2025-10-28			No action needed
		QC-8	Yes	E.Z	2025-10-28	Testable via simulation. Verify degraded agent.		No action needed
		QC-9	Yes	E.Z & Y.M.B	2025-10-28			No action needed
		QC-10	Yes	E.Z & Y.M.B	2025-10-28			No action needed
		QC-11	Yes	E.Z & Y.M.B	2025-10-28			No action needed
		QC-12	Yes	E.Z	2025-10-28			No action needed
		QC-13	Yes	E.Z	2025-10-28			No action needed
		QC-14	Yes	E.Z	2025-10-28			No action needed
		QC-15	Yes	E.Z	2025-10-28			No action needed
SW-04	The swarm shall employ a consensus mechanism that ensures correct collective behaviour, even if at least one agent provides incorrect data.	QC-1	Yes	E.Z	2025-10-28			No action needed
		QC-2	Yes	E.Z	2025-10-28			No action needed
		QC-3	Yes	E.Z	2025-10-28			No action needed
		QC-4	Yes	E.Z	2025-10-28			No action needed
		QC-5	Yes	E.Z	2025-10-28			No action needed
		QC-6	Yes	E.Z	2025-10-28			No action needed
		QC-7	Yes	E.Z	2025-10-28			No action needed
		QC-8	Yes	E.Z	2025-10-28	Testable via simulation		No action needed
		QC-9	Yes	E.Z & Y.M.B	2025-10-28			No action needed
		QC-10	Yes	E.Z & Y.M.B	2025-10-28			No action needed
		QC-11	Yes	E.Z & Y.M.B	2025-10-28			No action needed
		QC-12	Yes	E.Z	2025-10-28			No action needed
		QC-13	Yes	E.Z	2025-10-28			No action needed
		QC-14	Yes	E.Z	2025-10-28			No action needed
		QC-15	Yes	E.Z	2025-10-28			No action needed

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SW-05	<i>The swarm shall reach a collective decision for each task that requires coordination.</i>	QC-1	Yes	E.Z	2025-10-28			No action needed
		QC-2	Yes	E.Z	2025-10-28			No action needed
		QC-3	Yes	E.Z	2025-10-28			No action needed
		QC-4	Yes	E.Z	2025-10-28			No action needed
		QC-5	Yes	E.Z	2025-10-28			No action needed
		QC-6	Yes	E.Z	2025-10-28			No action needed
		QC-7	Yes	E.Z	2025-10-28			No action needed
		QC-8	Yes	E.Z	2025-10-28	Testable via simulation		No action needed
		QC-9	Yes	E.Z & Y.M.B	2025-10-28			No action needed
		QC-10	Yes	E.Z & Y.M.B	2025-10-28			No action needed
		QC-11	Yes	E.Z & Y.M.B	2025-10-28			No action needed
		QC-12	Yes	E.Z	2025-10-28			No action needed
		QC-13	Yes	E.Z	2025-10-28			No action needed
		QC-14	Yes	E.Z	2025-10-28			No action needed
		QC-15	Yes	E.Z	2025-10-28			No action needed
SW-06	<i>The swarm shall coordinate all agents to distribute the search area such that each agent searches a different portion the search area.</i>	QC-1	Yes	E.Z	2025-10-28			No action needed
		QC-2	Yes	E.Z	2025-10-28			No action needed
		QC-3	Yes	E.Z	2025-10-28			No action needed
		QC-4	Yes	E.Z	2025-10-28			No action needed
		QC-5	Yes	E.Z	2025-10-28			No action needed
		QC-6	Yes	E.Z	2025-10-28			No action needed
		QC-7	Yes	E.Z	2025-10-28			No action needed
		QC-8	Yes	E.Z	2025-10-28	Testable via simulation		No action needed
		QC-9	Yes	E.Z & Y.M.B	2025-10-28			No action needed
		QC-10	Yes	E.Z & Y.M.B	2025-10-28			No action needed
		QC-11	Yes	E.Z & Y.M.B	2025-10-28			No action needed
		QC-12	Yes	E.Z	2025-10-28			No action needed
		QC-13	Yes	E.Z	2025-10-28			No action needed
		QC-14	Yes	E.Z	2025-10-28			No action needed
		QC-15	Yes	E.Z	2025-10-28			No action needed
SW-07	<i>When local conditions of an agent require immediate action, the swarm shall allow the agent to make independent decisions.</i>	QC-1	Yes	E.Z	2025-10-28			No action needed

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		QC-2	Yes	E.Z	2025-10-28			No action needed
		QC-3	Yes	E.Z	2025-10-28			No action needed
		QC-4	Yes	E.Z	2025-10-28			No action needed
		QC-5	Yes	E.Z	2025-10-28			No action needed
		QC-6	Yes	E.Z	2025-10-28			No action needed
		QC-7	Yes	E.Z	2025-10-28			No action needed
		QC-8	Yes	E.Z	2025-10-28	Testable via simulation		No action needed
		QC-9	Yes	E.Z & Y.M.B	2025-10-28			No action needed
		QC-10	Yes	E.Z & Y.M.B	2025-10-28			No action needed
		QC-11	Yes	E.Z & Y.M.B	2025-10-28			No action needed
		QC-12	Yes	E.Z	2025-10-28			No action needed
		QC-13	Yes	E.Z	2025-10-28			No action needed
		QC-14	Yes	E.Z	2025-10-28			No action needed
		QC-15	Yes	E.Z	2025-10-28			No action needed

Drone Swarm REQ ID	V&V Method	Test ID	⌚ Result	Responsible
TC-SW01	Simulation	TC-SW01	Passed	E.Z
TC-SW02	Simulation	TC-SW02	Passed	E.Z
TC-SW03.1	Simulation	TC-SW03	Passed	E.Z
TC-SW03.2	Simulation	TC-SW03	Passed	E.Z
TC-SW04	Model checking	TC-SW04	Passed	E.Z
TC-SW05.1	Simulation	TC-SW05	Passed	E.Z
TC-SW05.2	Simulation	TC-SW05	Passed	E.Z
TC-SW06.1	Simulation	TC-SW06	Passed	E.Z
TC-SW06.2	Simulation	TC-SW06	Passed	E.Z
TC-SW07.1	Simulation	TC-SW07	Passed	E.Z
TC-SW07.2	Simulation	TC-SW07	Passed	E.Z