

Flying Water Vendor - Requirements

Requirement ID L1 Requirements

Rationale

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| 1 | The FWV shall deliver a payload of weight TBD to customers on the water. | Derived from stakeholder needs. Stakeholders specified that they require the system to deliver merchandise of a TBD payload from onshore to customers on boats. |
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| 2 | The FWV shall load a payload of TBD weight and TBD volume. | Payload and volume to be defined by an appropriate and reasonable customer order max size and weight. |
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| 3 | The FWV shall interface with customers to confirm destination and payment. | Derived from Stakeholder needs. Customer specified they need the system to interface with customers to confirm destination and payment. |
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| 4 | The FWV shall conform to local laws and regulations. | Derived from Stakeholder needs. Safety of the waterfront is necessary; the system needs to agree with local standards. |

Verification Method	Requirement ID	L2 Requirements
Demonstration	1.1	The flight system shall have adequate power to fly to and from any location on the water while carrying payload of TBD weight.
	1.2	The flight system must make contact with the target boat.
Demonstration & Testing	2.1	The items available for order must fit into the delivery system, and no heavier than TBD weight.
	2.2	The ground system shall load the specified payload onto and the charge the flight system while it is onshore.
Demonstration	3.1	The flight system shall transmit its current location to the customers a TBD number of times per minute.
	3.2	The ground system shall notify customers when the final destination has been reached to within a TBD range from the operations center.
	3.3	The ground system shall confirm with customers that payment has been accepted before the delivery process has begun to within a TBD range from the operations center.
Demonstration	4.1	The ground system shall adhere to county, state, and national laws to the satisfaction of the relevant officials.
	4.2	The flight system shall be manufactured and operated according to county, state, and national laws.

Rationale	Verification Method
Derived from stakeholder needs, specifying that the system must deliver merchandise to boaters via the flight system.	Demonstration
The flight system must get close to the target boat and actually drop the package to still make a return flight.	Demonstration
There is a TBD size of the order; meaning the items available for order are of small-medium size.	Inspection
The ground system sources the merchandise to be loaded onto the flight system as well as a charging station in order for the flight system to complete each order.	Inspection and Demonstration
The customer will need to track the delivery of the payload as the FWV is in transit from the operations center to the final destination to ensure a quick and convenient delivery.	Demonstration
The customer must be notified when the FWV has reached its final destination in order to ensure that the payload is delivered to the right person.	Demonstration
To ensure that payment is received for each payload delivery, the operations center must confirm that the customer has paid and then the customer must be notified in anticipation of their delivery.	Demonstration
The maintenance of these laws shall be up to local officials to enforce. Worker's rights and food safety laws are a few examples of the laws needed to be maintained.	Inspection
Government organizations such as the FCC and the FAA have strict guidelines of operating procedures for autonomous drones. Adequate research and inspection into both these and local restrictions must be completed.	Inspection and Demonstration