CLAIMS

1. A computer-implemented method for generating a route for a vessel, comprising:

determining, by a processor, a first route between a pickup location of a user and a waypoint location of a vessel, the pickup location being one that is indicated in an order request including a pickup time, the pickup location and a destination location;

determining, by the processor, if a vessel meets a first minimum vessel health status level to complete the first route based on a first vessel speed;

determining, by the processor, a second route between the pickup location and the destination location;

determining, by the processor, if the vessel meets a second minimum vessel health status level to complete the second route based on a second vessel speed wherein if the second minimum vessel health status level is not met by completing the second route based on the second vessel speed, allocate a third vessel speed lower than the second vessel speed;

determining, by the processor, if the vessel meets the second minimum vessel health status level to complete the second route based on the third vessel speed, wherein if the second minimum vessel health status level is not met by completing the second route based on the third vessel speed, allocating a fourth vessel speed lower than the third vessel speed;

determining if the vessel meets the second minimum vessel health status level to complete the second route based on the fourth vessel speed; and

allocating, by the processor, the vessel to the order request, wherein a confirmation of the order request is sent to the user device and a vessel device of the vessel

2. The method of claim 1, wherein the first minimum vessel health status level and the second minimum vessel health status level include a remaining vessel battery capacity and the condition of the vessel.

3. The method of claim 1 or 2, wherein the second minimum vessel health status level is determined based on the vessel health status level by completing the first route.

4. The method of claim 1, wherein if the first minimum vessel health status level is not met by completing the first route based on the first vessel speed, allocate a second vessel that is next closest in proximity to the pickup location of the user.

5. The method of claim 1, wherein if the second minimum vessel health status level of the vessel is not met by completing the second route based on the fourth vessel speed, allocate a second vessel that is next closest in proximity to the pickup location of the user.

6. The method of claim 1, wherein determining the first route further comprises calculating a first estimated travel time and distance based on the waypoint location of the vessel, weather data and sea state data.

7. The method of claim 1, wherein determining the first route further comprises allocating the first route with a shortest time or distance based on the first estimated travel time and distance.

8. The method of claim 1, wherein determining the second route further comprises calculating a second estimated travel time and distance based on the waypoint location of the vessel, weather data and sea state data.

9. The method of claim 1, wherein determining the second route further comprises allocating a second route with a shortest time or distance based on the second estimated travel time and distance.

10. The method of claim 1, wherein the pickup location is a predetermined point of interest.

11. The method of claim 1, wherein determining the first route further comprises: obtaining a predicted weather data of the first route, wherein the predicted weather data includes a weather forecast and a current sea state level; determining if the current sea state level is within a predetermined threshold.

12. The method of claim 1, wherein determining the second route further comprises: obtaining a predicted weather data of the second route, wherein the predicted weather data includes a weather forecast and a current sea state level; determining if the current sea state level is within a predetermined threshold for the second route.

13. The method of claim 11, wherein if the current sea state level is not within the predetermined threshold, allocate a second vessel that is next closest in proximity to the pickup location of the user.

14. The method of claim 12, wherein if the current sea state level is not within the predetermined threshold, allocate a second vessel that is next closest in proximity to the pickup location of the user.

15. A system for generating a route for a vessel, the system comprising:

at least one processor; and

at least one memory including computer program code;

the at least one memory and the computer program code configured to, with the at least one processor, cause the system at least to:

determine, by a processor, a first route between a pickup location of a user and a waypoint location of a vessel, the pickup location being one that is indicated in an order request including a pickup time, the pickup location and a destination location;

determine, by the processor, if the vessel meets a first minimum health status level to complete the first route based on a first vessel speed;

determine, by the processor, a second route between the pickup location and the destination location;

determine, by the processor, if the vessel meets a second minimum health status level to complete the second route based on a second vessel speed wherein if the second minimum vessel health status level is not met to complete the second route based on the second vessel speed, allocate a third vessel speed lower than the second vessel speed;

determine, by the processor, if the vessel meets the second minimum vessel health status level to complete the second route based on the third vessel speed, wherein if the second minimum vessel health status level is not met by completing the second route based on the third vessel speed, allocate a fourth vessel speed lower than the third vessel speed;

determine if the vessel meets the second minimum vessel health status level to complete the second route based on the fourth vessel speed; and

allocate, by the processor, the vessel to the order request, wherein a confirmation of the order request is sent to the user device and a vessel device of the vessel.

16. The system of claim 15, wherein the first minimum vessel health status level and the second minimum vessel health status level include a remaining vessel battery capacity and the condition of the vessel.

17. The system of claims 15 or 16, wherein the second minimum vessel health status level is determined based on the vessel health status level for completing the first route.

18. The system of claim 15, wherein if the first minimum vessel health status level is not met by completing the first route based on the first vessel speed, allocate a second vessel that is next closest in proximity to the pickup location of the user.

19. The system of claim 15, wherein if the second minimum vessel health status level is not met by completing the second route based on the fourth vessel speed, allocate a second vessel that is next closest in proximity to the pickup location of the user.