CLAIMS

1. A method for adaptively allocating one of a plurality of service requests to a service provider, each of the plurality of service requests requiring the service provider to move from one location to another to complete the each of the plurality of service requests, the method comprising:

detecting a first predicted severity level of a lack of available service providers for completing available service requests condition at a destination location indicated in a service request of the plurality of service request during an estimated arrival time window within which the service provider is estimated to move to the destination location from a pickup location to complete the service request;

detecting a second predicted severity level of the lack of available service providers for completing available service requests condition at a current location of the service provider during one of a current time window, a time window subsequent to the current time window and the estimated arrival time window;

~~increasing~~ adjusting a priority level of the service request based on the first predicted severity level ~~and/or decreasing the priority level of the service request based on~~and the second predicted severity level; and

allocating one service request associated with a highest priority level from the plurality of service requests to the service provider.

2. The method according to claim 1, further comprising:

determining if a level difference between the first predicted severity level and the second predicted severity level is higher than a threshold level, wherein the priority level ~~increment and/or decrement~~adjustment in relation to the service request is carried out in response to the determination of the level difference.

3. The method according to claim 2, further comprising:

in response to determining the level difference between the first predicted severity level and the second predicted severity level is higher than the threshold level, magnifying the priority level ~~increment and/or decrement~~adjustment in relation to the service request by a pre-configured multiplier value.

4. The method according to claim 1-3, further comprising:

receiving the estimated arrival time window, wherein the estimated arrival time window is estimated based on previous travel durations required for the service provider and/or other service

providers to move from the current location to the pickup location and then from the pickup location to the destination location.

5. The method according to any one of claims 1-3, further comprises:

calculating a initial priority level of the service request of the plurality of service requests based a travel distance and/or a travel duration for the service provider to move from the current location to the pickup location, wherein the priority level ~~increment and/or decrement~~adjustment in relation to the service request is carried out using the calculated initial priority level.

6. The method according to any one of claims 1-5, further comprising:

at every regular time interval, detecting an updated first predicted severity level of the lack of available service providers for completing available service requests condition at the destination location during the estimated arrival time window and an updated second predicted severity level of the lack of available service providers for completing available service requests condition at the current location of the service provider, wherein the priority level ~~increment and/or decrement~~adjustment in relation to the service request is carried out based on the updated first predicted severity level and/or the updated second predicted severity level respectively.

7. The method according to claim 6, wherein the received first predicted severity level and the received second predicted severity level, the plurality of service requests and the service provider relate to a same service type of a plurality of service types.

8. The method according to any one of claims 1-7, further comprising:

receiving service provider information; and

evaluating a constraint of the service provider to complete the service request of the plurality of service requests or to be allocated to the service request associated with the highest priority level from the plurality of service requests based on the service provider information, the constraint relating to at least one of a vehicle type and an account balance; wherein the step of allocating the one service request associated with the highest priority level from the plurality of service requests to the service provider is carried out based on a result of the evaluation.

9. A system for adaptively allocating one of a plurality of service requests to a service provider, each of the plurality of service requests requiring the service provider to move from one location to another to complete the each of the plurality of service requests, 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 at least one processor, cause the system at least to:

detect a first predicted severity level of a lack of available service providers for completing available service requests condition at a destination location indicated in a service request of the plurality of service requests during an estimated arrival time window within which the service provider is estimated to move to the destination location from a pickup location to complete the service request;

detect a second predicted severity level of the lack of available service providers for completing available service requests condition at a current location of the service provider during one of a current time window, a time window subsequent to the current time window and the estimated arrival time window;

~~increase~~ adjust a priority level of the service request based on the first predicted severity level and~~/or decreasing the priority level of the service request based on~~ the second predicted severity level; and

allocate one service request associated with a highest priority level from the plurality of service requests to the service provider.

10. The system according to claim 9, wherein the at least one memory and the computer program code is further configured with the at least one processor to:

determine if a level difference between the first predicted severity level and the second predicted severity level is higher than a threshold level,

wherein the at least one memory and the computer program code is configured with the at least one processor to ~~increase/decrease~~adjust the priority level of the service request in response to the determination of the level difference.

~~12~~11. The system according to claim 10, wherein the at least one memory and the computer program code is further configured with the at least one processor to:

magnify the priority level ~~increment and/or decrement~~adjustment in relation to the service request by a pre-configured multiplier value in response to determining the level difference between the first predicted severity level and the second predicted severity level is higher than the threshold level.

12. The system according to any one of claims 9-11, wherein the at least one memory and the computer program code is further configured with the at least one processor to:

receive the estimated arrival time window, wherein the estimated arrival time window is estimated based on previous travel durations required for the service provider and/or other service

providers to move from the current location to the pickup location and then from the pickup location to the destination location.

13. The system according to any one of claims 9-11, wherein the at least one memory and the computer program code is further configured with the at least one processor to:

calculate an initial priority level of the service request of the plurality of service requests based a travel distance and/or a travel duration for the service provider to move from the current location to the pickup location, wherein the at least one memory and the computer program code is configured with the at least one processor to ~~increase/decrease~~adjust the priority level of the service request using the calculated initial priority level.

14. The system according to any one of claims 9-13, wherein the at least one memory and the computer program code is further configured with the at least one processor to:

at every regular time interval, detect an updated first predicted severity level of the lack of available service providers for completing available service requests condition at the destination location during the estimated arrival time window and an updated second predicted severity level of the lack of available service providers for completing available service requests condition at the current location of the service provider, wherein the at least one memory and the computer program code is configured with the at least one processor to ~~increase/decrease~~adjust the priority level of the service request based on the updated first predicted severity level and/or the updated second predicted severity level respectively.

15. The system according to claim 14, wherein the received first predicted severity level and the received second predicted severity level, the plurality of service requests and the service provider relate to a same service type of a plurality of service types.

16. The system according to any one of claims 9-15, wherein the at least one memory and the computer program code is further configured with the at least one processor to:

receive service provide information; and

evaluate a constraint of the service provider to complete the service request of the plurality of service requests or to be allocated to the one service request associated with the highest priority level from the plurality of service requests based on the service provider information, the constraint relating to at least one of a vehicle type and an account balance; wherein the at least one memory and the computer program code is configured with the at least one processor to allocate the one service request associated with the highest priority level from the plurality of service requests to the service provider based on a result of the evaluation.