What is claimed is:

1. A self-driving vehicle (SDV) comprising:

a sensor system to dynamically detect a situational environment of the SDV;

a communications system in communication with a transport facilitation system in order to enable the SDV to service pick-up requests;

acceleration, braking, and steering systems;

a control system to execute instructions that causes the control system to:

process sensor data from the sensor system to autonomously operate the acceleration, braking, and steering systems throughout a given region;

receive a transport directive from the transport facilitation system to service a pick-up request from a requesting user, the transport directive indicating an inputted pick-up location by the requesting user;

autonomously operate the acceleration, braking, and steering systems along a current route to a pick-up area encompassing the inputted pick-up location;

determine a corresponding set of pick-up location options for the pick-up area; and

as the SDV approaches the pick-up area, perform a hierarchical operation to identify, via the sensor data, an optimal pick-up location to rendezvous with the requesting user.

2. The SDV of claim 1, further comprising:

one or more memory resources to store pick-up location data identifying a respective set of pick-up location options for each of a plurality of pick-up locations throughout the given region, wherein the corresponding set of pick-up location options is stored in the one or more memory resources.

3. The SDV of claim 1, wherein the executed instructions cause the control system to perform the hierarchical operation by (i) initially

determining a ranking of respective location options in the corresponding set of pick-up location options, (ii) determining an availability for each detected location option in the corresponding set of pick-up location options, and (iii) calculating a cost probability for each detected location option, the cost probability indicating whether a more optimal location option, in the corresponding set of pick-up location options, will be available to rendezvous with the requesting user;

wherein the executed instructions cause the control system to identify the optimal pick-up location based on the cost probability for the optimal pick-up location being a first cost probability calculated to be below a predetermined threshold.

4. The SDV of claim 1, further comprising:

one or more memory resources to store previously recorded sub-maps of the given region, and wherein the executed instructions cause the control system to process the sensor data by dynamically comparing the situational environment of the SDV with the stored sub-maps.

5. The SDV of claim 4, wherein the executed instructions cause the control system to perform the hierarchical operation by: (i) as the SDV approaches the pick-up area, scan the situational environment to positively identify the user, and (ii) prioritize one or more pick-up location options, in the corresponding set of pick-up location options, that are most proximate to the requesting user.

6. The SDV of claim 5, wherein the executed instructions further cause the control system to perform the hierarchical operation by disregarding respective pick-up location options, in the corresponding set of pick-up location options, that are occupied or unavailable.

7. The SDV of claim 1, wherein the executed instructions further cause the control system to:

when performing the hierarchical operation, determine that none of the corresponding set of pick-up location options are available; and

in response to determining that none of the corresponding set of pick-up location options are available, analyze the sensor data to determine whether traffic in the situational environment of the SDV is below a threshold.

8. The SDV of claim 7, wherein the executed instructions further cause the control system to:

when traffic is below the threshold, stop the SDV at a current location to pick-up the requesting user, wherein the current location corresponds to the optimal location.

9. The SDV of claim 7, wherein the executed instructions further cause the control system to:

when traffic is not below the threshold, transmit an update indicating that the SDV will loop around to make a second attempt at pick-up.

10. The SDV of claim 1, wherein the transport directive comprises identifier data corresponding to a mobile computing device of the requesting user, and wherein the executed instructions further cause the control system to:

when approaching the pick-up location, scan for wireless devices in a surrounding area of the SDV to identify the mobile computing device of the requesting user; and

establish a wireless connection with the mobile computing device of the requesting user.

11. The SDV of claim 10, wherein the executed instructions further cause the control system to:

determine, when performing the hierarchical operation, that none of the corresponding set of pick-up location options are available;

in response to determining that none of the corresponding set of pick-up location options are available, transmit, in accordance with the

hierarchical operation, a mapping feature over the wireless connection to the mobile computing device of the requesting user, the mapping feature enabling the requesting user to input a location at which to rendezvous with the SDV;

receive a response from the mobile computing device of the requesting user, the response indicating the inputted location on the mapping feature, wherein the inputted location comprises the optimal pick-up location; and

operate the acceleration, braking, and steering systems of the SDV to rendezvous with the requesting user at the inputted location.

12. The SDV of claim 1, wherein the executed instructions cause the control system to identify the optimal pick-up location amongst the corresponding set of pick-up location options as the SDV approaches the pick-up location.

13. The SDV of claim 12, wherein the executed instructions further cause the control system to:

in response to identifying the optimal location, transmit a location indicator to be received by a mobile computing device of the requesting user, the location indicator indicating the optimal pick up location to rendezvous the SDV with the requesting user.

14. The SDV of claim 13, wherein the executed instructions cause the control system to transmit the location indicator directly to the mobile computing device over a wireless connection with the mobile computing device.

15. The SDV of claim 13, wherein the executed instructions cause the control system to transmit the location indicator to the transport facilitation system to relay the location indicator to the requesting user's mobile computing device.

16. The SDV of claim 13, wherein the location indicator comprises a mapping feature to be displayed on a display screen of the requesting

user's mobile computing device, the mapping feature identifying the optimal pick-up location in relation to a surrounding area of the requesting user.

17. A computer-implemented method of facilitating a rendezvous between a self-driving vehicle (SDV) and requesting users, the method being performed by one or more processors of the SDV and comprising:

processing sensor data from the sensor system to autonomously operate acceleration, braking, and steering systems of the SDV throughout a given region;

receiving a transport directive from a transport facilitation system to service a pick-up request from a requesting user, the transport directive indicating an inputted pick-up location by the requesting user;

autonomously operating the acceleration, braking, and steering systems along a current route to a pick-up area encompassing the inputted pick-up location;

determining a corresponding set of pick-up location options for the pick-up area;

as the SDV approaches the pick-up area, performing a hierarchical operation to identify, via the sensor data, an optimal pick-up location to rendezvous with the requesting user.

18. The method of claim 17, wherein the transport directive comprises identifier data corresponding to a mobile computing device of the requesting user, the method further comprising:

when approaching the pick-up location, scanning for wireless devices in a surrounding area of the SDV to identify the mobile computing device of the requesting user; and

establishing a wireless connection with the mobile computing device of the requesting user.

19. A non-transitory computer readable medium storing instructions

that, when executed by one or more processors of a self-driving vehicle (SDV), cause the one or more processors to:

process sensor data from the sensor system to autonomously operate acceleration, braking, and steering systems of the SDV throughout a given region;

receive a transport directive from a transport facilitation system to service a pick-up request from a requesting user, the transport directive indicating an inputted pick-up location by the requesting user;

autonomously operate the acceleration, braking, and steering systems along a current route to a pick-up area encompassing the inputted pick-up location;

determine a corresponding set of pick-up location options for the pick-up area;

as the SDV approaches the pick-up area, perform a hierarchical operation to identify, via the sensor data, an optimal pick-up location to rendezvous with the requesting user.

20. The non-transitory computer readable medium of claim 19,

wherein the transport directive comprises identifier data corresponding to a mobile computing device of the requesting user, and wherein the executed instructions further cause the one or more processors to:

when approaching the pick-up location, scan for wireless devices in a surrounding area of the SDV to identify the mobile computing device of the requesting user; and

establish a wireless connection with the mobile computing device of the requesting user.