What is claimed is:

1. A centralized hub system for improving automatic waste transport and collection using a self-driving robot, the system comprising self-driving inlet robots and a web-based integrated management server,

the self-driving inlet robots each comprising a body portion, a sensor portion, a waste collection behavior portion, and a controller,

the body portion being formed with at least one between a top inlet and side inlet for receiving waste and a first outlet for discharging waste, and comprising a moving means,

the sensor portion comprising a lidar sensor, a radar sensor, a GPS, and a weight measuring sensor that are mounted to the body portion,

the waste collection behavior portion comprising a first waste collection arm and second waste collection arm that are mounted to the body portion and grip waste and put the same into the top inlet and side inlet, respectively, a compression plate that opens and closes the top inlet and compresses the waste in the body portion by vertical movement, and a side door rotatably mounted to the body portion so as to open and close the side inlet, and

the controller being configured to control the operations of each component of the waste collection behavior portion and the moving means of the body portion and to preset a capacity limit for the waste stored in the body portion and control the moving means in such a way as to enable self-driving to a pre-designated waste disposal site if the amount of waste disposed into the body portion is higher than the capacity limit, and

the integrated management server being configured to receive, store, and manage at least one among user identification information, waste type information, waste measurement information, charging information, and payback information transmitted from the self-driving inlet robots, and being installed in a pre-designated place where the self-driving inlet robots gather together,

wherein the self-driving inlet robots operate as either a first type which makes a measurement on a waste item based on either weight, volume, or number and then charges a fee or not based on the measurement information, or a second type which makes a measurement on a recyclable waste item based on either weight, volume, or number and then pays back a fee or not based on the measurement information,

the system further comprising a self-driving vehicle robot comprises a driving body portion, a disposal means, a sensing portion, and a controller,

the driving body portion comprising a first inlet on the top and a second inlet on the side, which are for putting waste in, a second outlet for discharging waste, and a transportation device,

the disposal means being mounted to the driving body portion, for putting the waste stored in the self-driving inlet robot into the driving body portion,

the sensing portion comprising a GPS for self-driving and other sensors, and being mounted to the driving body portion, and

the controller being configured to control the operations of the transportation device of the driving body portion and the disposal means, based on a signal sensed by the sensing portion and a preset driving program,

wherein the self-driving vehicle robot drives itself, collects waste, and self-drives and returns to a pre-designated waste disposal site, in response to an operation request signal received from the outside or on a preset self-driving cycle.