

CLAIMS

What is claimed is:

1. A computer-implemented system for monitoring inventory transfer in real-time, the system comprising:

a memory storing instructions; and

at least one processor configured to execute the instructions to:

receive, from a user device in a first fulfillment center, a tote identifier associated with a tote configured to store one or more products for transfer;

receive, from the user device in the first fulfillment center, a selection of a first zone and a first aisle within the first zone to pick one or more products for transfer;

send for display to the user device in the first fulfillment center a first product and an expected quantity of the first product for picking at the first aisle;

receive, from the user device in the first fulfillment center, a product identifier associated with the first product and a physical quantity of the first product for storing in the tote;

modify a database to assign the product identifier and the physical quantity to the tote identifier;

receive, from the user device in the first fulfillment center, a container identifier associated with a container configured to store the tote;

modify the database to assign the tote identifier to the container identifier;

receive, from the user device in the first fulfillment center, a code associated with a vehicle for transferring the container from the first fulfillment center to the second fulfillment center;
modify the database to assign the tote identifier and the container identifier to the code associated with the vehicle;
modify the database to assign a first timestamp of receiving the code from the user device in the first fulfillment center to the code;
receive, from a user device in the second fulfillment center, the code associated with the vehicle;
modify the database to assign a second timestamp of receiving the code from the user device in the second fulfillment center to the code;
receive, from the user device in the second fulfillment center, at least one of the container identifier or the tote identifier; and
validate the transfer of the first product from the first fulfillment center to the second fulfillment center, based on the code and at least one of the container identifier or the tote identifier received from the user device in the second fulfillment center.

2. The system of claim 1, wherein the at least one processor is further configured to execute the instructions to prompt the user of the user device in the first fulfillment center to scan a location identifier associated with the first zone before receiving the product identifier associated with the first product and the physical quantity of the first product for storing in the tote.

3. The system of claim 2, wherein the at least one processor is further configured to execute the instructions to:
 - receive, from the user device in the first fulfillment center, a notification that the location identifier associated with the first zone cannot be scanned;
 - and
 - send for display to the user device in the first fulfillment center a notification to move to a second zone different from the first zone.
4. The system of claim 3, wherein the at least one processor is further configured to modify the database to assign a location identifier error to the first zone.
5. The system of claim 1, wherein, when the physical quantity of the product and the expected quantity of the product are different, the at least one processor is further configured to:
 - prompt the user of the user device in the first fulfillment center to identify a cause for the difference; and
 - modify the database to assign the cause to at least one of the product identifier or the tote identifier.
6. The system of claim 5, wherein the cause for the difference comprises at least one of a lack of the product in the first zone, a lack of capacity in the tote, or a product damage.

7. The system of claim 1, wherein the at least one processor is further configured to execute the instructions to display, on the user device in the first fulfillment center, a list of all tote identifiers assigned to the container identifier.
8. The system of claim 1, wherein, after receiving the tote identifier from the user device in the first fulfillment center, the at least one processor is further configured to execute the instructions to modify the database to assign the second fulfillment center as a final destination to the tote identifier.
9. The system of claim 8, wherein, after receiving the container identifier from the user device in the first fulfillment center, the at least one processor is further configured to execute the instructions to modify the database to assign the second fulfillment center as a final destination to the container identifier.
10. The system of claim 9, wherein modifying the database to assign the tote identifier to the container identifier comprises:
- comparing the final destination associated with the tote identifier and the final destination associated with the container identifier; and
 - modifying the database to assign the tote identifier to the container identifier when the final destination associated with the tote identifier and the final destination associated with the container identifier are identical.
11. A computer-implemented method for monitoring inventory transfer in real-time, the method comprising:

receiving, from a user device in a first fulfillment center, a tote identifier associated with a tote configured to store one or more products for transfer;

receiving, from the user device in the first fulfillment center, a selection of a first zone and a first aisle within the first zone to pick one or more products for transfer;

sending for display to the user device in the first fulfillment center a first product and an expected quantity of the first product for picking at the first aisle;

receiving, from the user device in the first fulfillment center, a product identifier associated with the first product and a physical quantity of the first product for storing in the tote;

modifying a database to assign the product identifier and the physical quantity to the tote identifier;

receiving, from the user device in the first fulfillment center, a container identifier associated with a container configured to store the tote;

modifying the database to assign the tote identifier to the container identifier;

receiving, from the user device in the first fulfillment center, a code associated with a vehicle for transferring the container from the first fulfillment center to the second fulfillment center;

modifying the database to assign the tote identifier and the container identifier to the code associated with the vehicle;

modifying the database to assign a first timestamp of receiving the code from the user device in the first fulfillment center to the code;

receiving, from a user device in the second fulfillment center, the code
associated with the vehicle;
modifying the database to assign a second timestamp of receiving the code
from the user device in the second fulfillment center to the code;
receiving, from the user device in the second fulfillment center, at least one of
the container identifier or the tote identifier; and
validating the transfer of the first product from the first fulfillment center to the
second fulfillment center, based on the code and at least one of the
container identifier or the tote identifier received from the user device in
the second fulfillment center.

12. The method of claim 11, further comprising prompting the user of the user
device in the first fulfillment center to scan a location identifier associated with the
first zone before receiving the product identifier associated with the first product and
the physical quantity of the first product for storing in the tote.

13. The method of claim 12, further comprising:
receiving, from the user device in the first fulfillment center, a notification that
the location identifier associated with the first zone cannot be scanned;
sending for display to the user device in the first fulfillment center a notification
to move to a second zone different from the first zone; and
modifying the database to assign a location identifier error to the first zone.

14. The method of claim 11, further comprising:

when the physical quantity of the product and the expected quantity of the product are different, prompting the user of the user device in the first fulfillment center to identify a cause for the difference; and modifying the database to assign the cause to at least one of the product identifier or the tote identifier.

15. The method of claim 14, wherein the cause for the difference comprises at least one of a lack of the product in the first zone, a lack of capacity in the tote, or a product damage.

16. The method of claim 11, further comprising displaying, on the user device in the first fulfillment center, a list of all tote identifiers assigned to the container identifier.

17. The method of claim 11, further comprising modifying the database to assign the second fulfillment center as a final destination to the tote identifier after receiving the tote identifier from the user device in the first fulfillment center.

18. The method of claim 17, further comprising modifying the database to assign the second fulfillment center as a final destination to the container identifier after receiving the container identifier from the user device in the first fulfillment center.

19. The method of claim 18, wherein modifying the database to assign the tote identifier to the container identifier comprises:

comparing the final destination associated with the tote identifier and the final destination associated with the container identifier; and
modifying the database to assign the tote identifier to the container identifier when the final destination associated with the tote identifier and the final destination associated with the container identifier are identical.

20. A computer-implemented system for monitoring inventory transfer in real-time, the system comprising:

a first user device in a first fulfillment center, the first user device being configured to display zones in the first fulfillment center, aisles in each zone, and an expected quantity of products to be picked in each aisle;
a second user device in a second fulfillment center;
a memory storing instructions; and
at least one processor configured to execute the instructions to:
receive, from the first user device, a tote identifier associated with a tote configured to store one or more products for transfer;
modify the database to assign the second fulfillment center as a final destination to the tote identifier;
receive, from the first user device, a selection of a first zone and a first aisle within the first zone to pick one or more products for transfer;
send for display to the first user device a first product and an expected quantity of the first product for picking at the first aisle;

receive, from the first user device, a product identifier associated with the first product and a physical quantity of the first product for storing in the tote;

modify a database to assign the product identifier and the physical quantity to the tote identifier;

receive, from first the user device, a container identifier associated with a container configured to store the tote;

modify the database to assign the second fulfillment center as a final destination to the container identifier;

modify the database to assign the tote identifier to the container identifier, wherein modifying the database to assign the tote identifier to the container identifier comprises:

- comparing the final destination associated with the tote identifier and the final destination associated with the container identifier; and
- modifying the database to assign the tote identifier to the container identifier when the final destination associated with the tote identifier and the final destination associated with the container identifier are identical;

receive, from the first user device, a code associated with a vehicle for transferring the container from the first fulfillment center to the second fulfillment center;

modify the database to assign the tote identifier and the container identifier to the code associated with the vehicle;

modify the database to assign a first timestamp of receiving the code from the user device in the first fulfillment center to the code; receive, from the second user device, the code associated with the vehicle;

modify the database to assign a second timestamp of receiving the code from the second user device to the code;

receive, from the second user device, at least one of the container identifier or the tote identifier; and

validate the transfer of the first product from the first fulfillment center to the second fulfillment center, based on the code and at least one of the container identifier or the tote identifier received from the second user device.