User story 1: In-store pick & pack for omni-channel orders

Persona: Store Clerk

Task: Receive alert about new omni-channel orders, pick and pack items for delivery.

Scenario:

A – O2O orders (饿了么/美团/点评)

1. Receive real-time alert about a new O2O order on iPad
2. Click on “Start picking” button on the order, the system prints out the packing slip of the order, and shows the picking route & location suggestion automatically:

Example:

Pick up milk & cola from the “Refrigerated foods” section, and then pick up the shampoo from the “Personal Care” section.

1. Click on “Visual/audio aid” button to trigger visual & sound aid on the e-pricetag of the items to help store clerk locate the items quickly.
2. Pick the items from the corresponding shelves and put them into the bag.
3. Stick the packing slip onto the bag and put it into the dedicated area for the delivery guy.

B – eCom orders (APP/小程序/天猫/京东)

1. Receive pick&pack reminder for eCom orders once/twice a day per configuration.
2. Orders will be ranked by order date&time, with the earliest on top for pick&pack.
3. Click on “Start picking” button on the order list, the system prints out the packing slip of the first order, and shows the picking route & location suggestion.
4. Click on “Visual&audio aid” button to trigger visual& sound aid on the e-pricetag of the items to help store clerk locate the items quickly.
5. Pick the items from the corresponding shelves and put them into a basket.
6. Stick the packing slip onto the basket and put it into the dedicated area for packaging.
7. Click on “Next” button to proceed picking for the 2nd order.

Data Required:

* O2O and eCom orders
* Item location & inventory data in store

KPI Related:

Cycle time on Order fulfillment. – improvement.

No. of completed online order.

No. unfinished order.

User story 2: Stock replenishment

Personal: Store clerk

Task: Receive alert when item is below minimum stock level, pick items from store back-room, and restock on shelves.

Scenario:

1. Check today’s to do list in task management screen.
2. Complete task: Update shelf check configuration:

* Low-stock rate and warning level, upcoming action.
* Robot: Shelf/goods need to be checked, frequency.

1. Best patrol route generated according to current real-time customer flow.
2. Anomaly detected:
3. Stock shortage detected:

* warning will be sent out with real-time photo of stock. task propriety will be changed according warning level.
* The items should be ranked based on sales turnover & margin.
* Click on “Print” to print out the list, and use it to pick items in the backroom.
* Click on “Restock”, and the system shows the restock route & location recommendation.
  + Example:
  + Milk, yogurt, Cola are all low in stock but are in the same shelf area, they should be restocked together.
* Click on “Visual” to trigger visual aid on the e-price tag of the items to help store clerk to locate the items quickly.
* Put corresponding items onto the shelf, and items are marked as “restocked” on ipad.

1. Other anomaly detected

* Other anomaly situation detected: (Goods are not in right place, Poster is placed anomaly, etc..), warning will be sent out with real-time photo of stock. task propriety will be changed according warning level.
* Geo-location will be marked as red in backend office’s digital floorplan map.
* Clerk make corresponding action(fulfillment, put goods into right place..), the red dot disappeared.

1. This task is marked completed in Clerk’s to do list. The related KPI(Today’s completed No. of task, Completion cycle time, etc..) on personal dashboard get updated.

Data Required:

* O2O and eCom orders
* Item location & inventory data in store

KPI Related: Avg Cycle for task completion (with benchmark), No. for task completion today, No. of to-do task today, Realtime digital floorplan map(Heatmap, Route, highlight)

KPI Dashboard:

Personal: cycle time, No. of completion cycle time, No. of to-do task.

Overall store: OSA, Out of stock rate, Today’s sales. Top 5 product, overall task status.

坪效: Sales per unit, Realtime digital floorplan map(Heatmap, Route, highlight)

~~User story 3: Price & promotion management~~

~~Persona: Store clerk~~

~~Task: Receive alert when price & promotion begins or ends, print and replace the pop.~~

~~Scenario:~~

1. ~~Set up promotion plan for cola – buy 3, get 1 for free, for a week.~~
2. ~~E-pricetag will be automatically updated to reflect the promotion price during the period.~~
3. ~~One day before the promotion starts, when the store closes at 21:00pm (configurable), store clerk receives alert about upcoming promotion.~~
4. ~~Download the promotion pop and print them.~~
5. ~~System gives detailed instructions on where and how the pop should be displayed.~~
6. ~~Go to the corresponding shelf and put the pop as instructed.~~

User story 4: Robotic patrol module

Persona: Store clerk

Task: Make configuration in robot according clerk’s daily corresponding task, robot will do the routine check work and send out real-time warning/notification if any abnormal condition is detected.

Scenario:

1. Check today’s to do list in task management screen.
2. Complete task: Update shelf check configuration:

* Low-stock rate and warning level, upcoming action.
* Shelf/goods need to be checked, frequency.

1. Get best patrol route according current real-time customer flow.
2. Stock shortage detected, warning will be sent out with real-time photo of stock. task propriety will be changed according warning level.
3. Other abnormal situation detected: (Sewage, vast amount of rubbish, etc..), warning will be sent out with real-time photo of stock. task propriety will be changed according warning level.
4. Geo-location will marked as red in backend office’s digital floorplan map.
5. Clerk make corresponding action(fulfillment, cleaning..), the red dot disappeared.

Dashboard Metrics:

efficiency. No. of task completion, cycle time.

坪效: Sales per unit

Floorplan map: Heat map, route, highlight (need follow up action. )

User story 2: Task management -> Stock replenishment

Personal: Store clerk

Task: Receive alert when item is below minimum stock level, pick items from store back-room, and restock on shelves.

Scenario:

1. Check today’s to do list in task management screen.
2. Complete task: Update shelf check configuration:

* Low-stock rate and warning level, upcoming action.
* Robot: Shelf/goods need to be checked, frequency.

1. Receive real-time low-stock alert, task propriety will be changed according warning level.
2. The items should be ranked based on sales turnover & margin.
3. Click on “Print” to print out the list, and use it to pick items in the backroom.
4. Click on “Restock”, and the system shows the restock route & location recommendation.

Example:

Milk, yogurt, Cola are all low in stock but are in the same shelf area, they should be restocked together.

1. Click on “Visual&audio aid” to trigger visual&sound aid on the e-pricetag of the items to help store clerk to locate the items quickly.
2. Put corresponding items onto the shelf, and items are marked as “restocked” on ipad.
3. This task is marked completed in Clerk’s to do list. The related KPI(Today’s completed No. of task, Completion cycle time, etc..) on personal dashboard get updated.