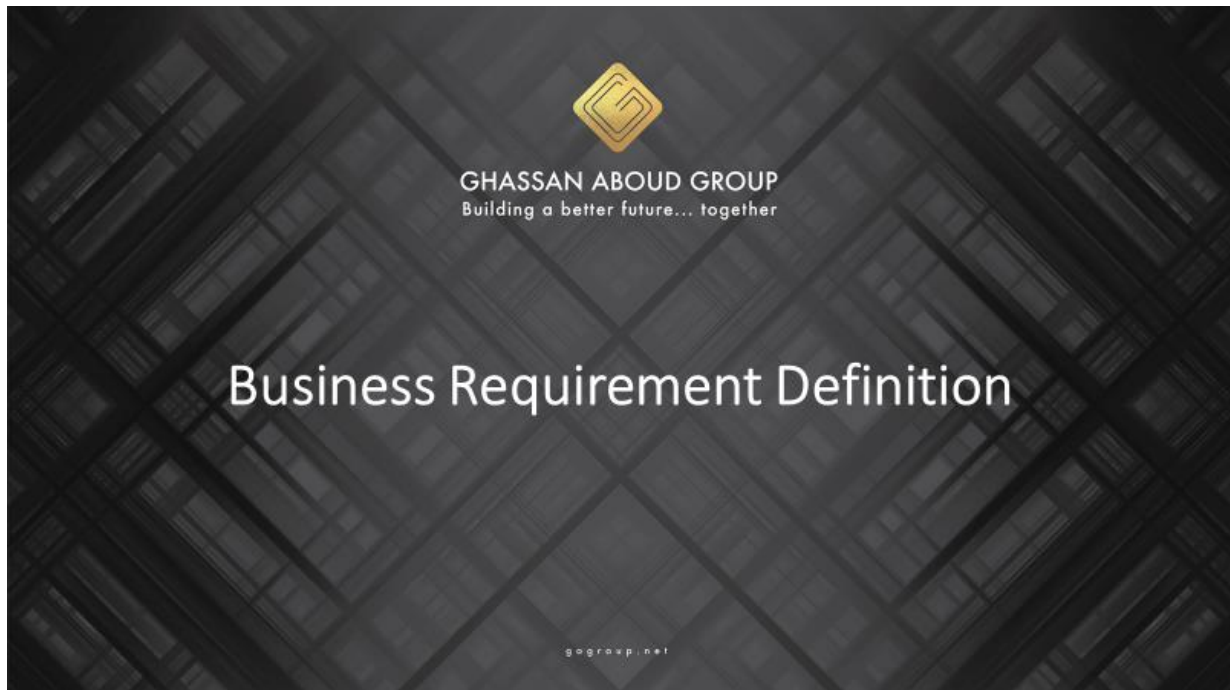




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HANDHELD APPLICATION ON ANDROID FOR IN-STORE PRODUCTIVITY IN GRANDIOSE SUPERMARKETS

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1 INTRODUCTION

Grandiose Supermarkets is the Retail division of the GAG. It currently operates 31 (thirty-one) stores in various locations in Abu Dhabi and Dubai. This number is poised to grow over the next 2 to 3 quarters.

Grandiose Supermarkets would like to build a new application on Android that runs on the HHT (handheld terminals) devices. The current application runs on the Windows CE Operating System, which will be deprecated in the future.

Additionally, the current application needs a refresh with newer demands that need to be accommodated in the upcoming application.

1.1 SCOPE

The below areas will be the major requirements for Grandiose Supermarkets.

- **Grandiose Handheld Application – General Requirements**

- Secure Login and Authentication
- Navigation and Scroll
- Connectivity
- Communication
- Backup
- Time and Date Setup
- Access Control

- **Item Lookup Requirements**

- Item lookup
- Item Transactional Details

- **Queue Busting Requirement**

- Queue Busting Requirements

- **Print Requirements**

- General Print Requirements
- Shelf/Item Label print Count
- Shelf Label Survey
- Barcode Printing

- **Backend Sales Requirement**

- Sales Order Management
- Sales Return Order Management

- **Receiving and Transfer Requirements**

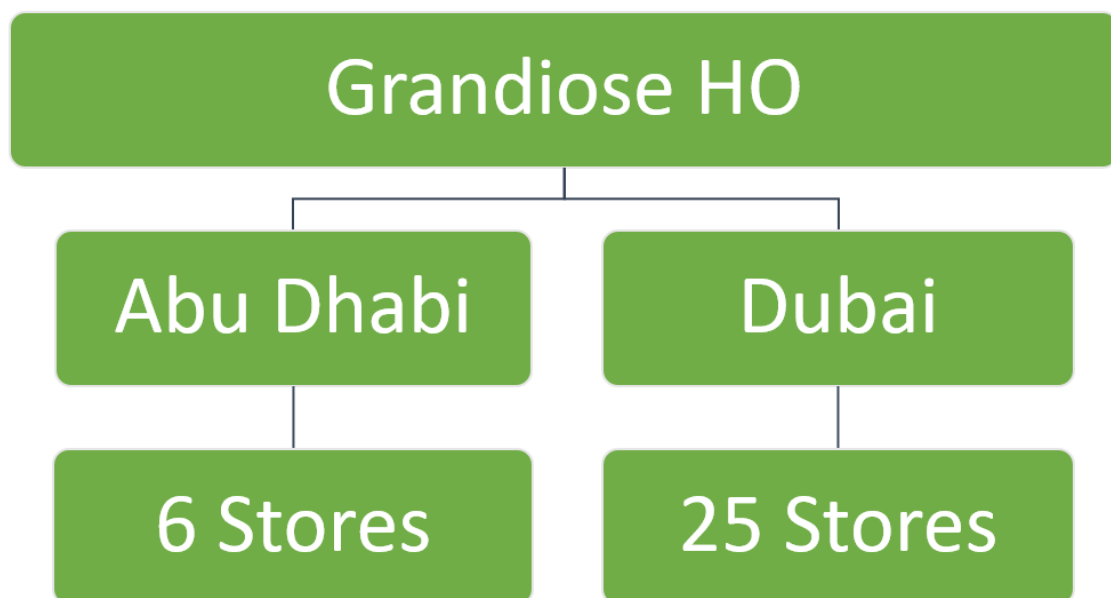
- Goods Receiving
- Purchase Returns
- Transfer IN (Transfer Receipt)
- Transfer OUT (Transfer Shipment)



- **Inventory Adjustment Requirements**
 - Stock Count (Physical Inventory Process)
 - Wastage and Shrinkage Recording
 - Internal Sale Recording
- **Item Shelf Report Generation**
 - Item Shelf Report
 - Report Generation Process
 - Data flow
- **Reporting Requirements**
 - Item Shelf Report Generation
 - Reports and Dashboards
- **Integrations**
 - Integration with LS-NAV

The detailed scope is presented in the sections ahead in the document.

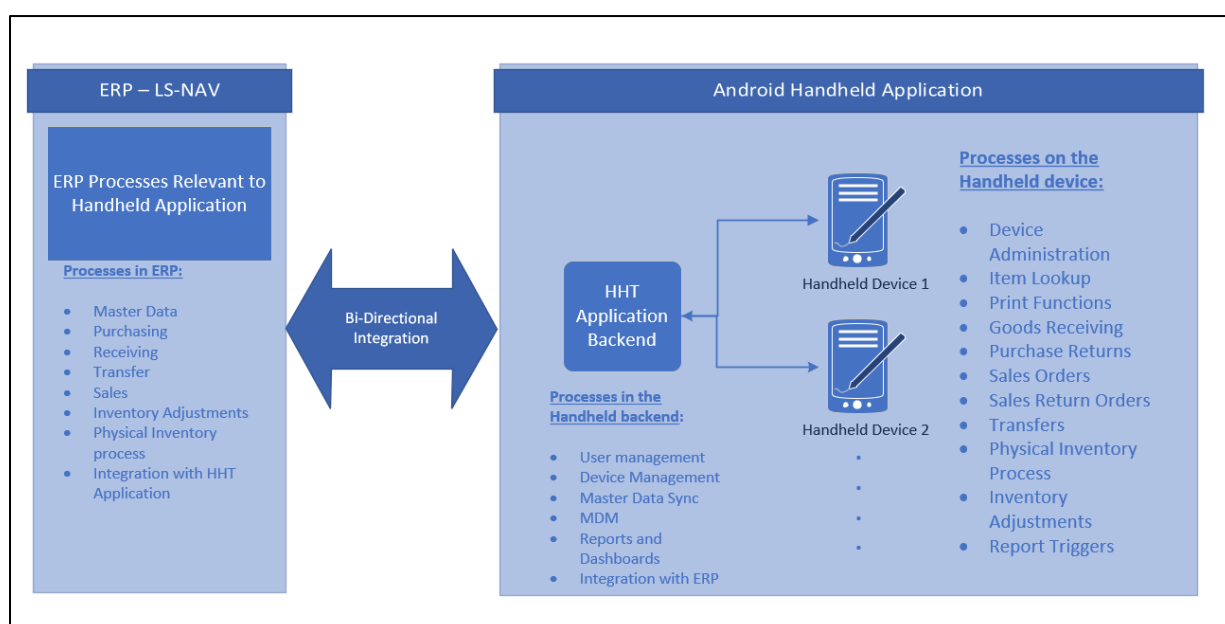
1.2 COMPANY STRUCTURE



Additional Stores planned for 2023.



1.3 PROCESS ORCHESTRATION



2 BUSINESS REQUIREMENTS

The following sets of requirements have been classified as per the use of the systems defined above

2.1 GENERAL REQUIREMENTS

2.1.1 SECURE LOGIN, AUTHENTICATION, AND ACCESS CONTROL

Feature	Description
Secure Login	<ul style="list-style-type: none">• Login through credential management• Preferably through Windows single sign-on (optional)• Password management
Access Control	<ul style="list-style-type: none">• Access based on credentials.• Access based on role definition.



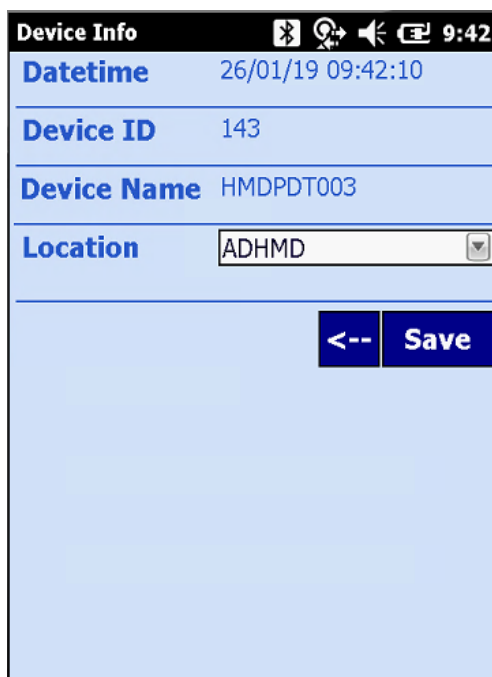
	<ul style="list-style-type: none">• Role to be a combination of permissions as defined in the backend.• User-Location mapping should be possible
--	---



Sample screen for illustration from the current application

2.1.2 DEVICE ADMINISTRATION

Feature	Description
Device Information Page	<ul style="list-style-type: none">• Device ID• Device Name
Device Location Mapping	<ul style="list-style-type: none">• Device to be mapped to a particular store location.• Location mapping to automatically connect the handheld device to all the local printers in the store
Location Master Setup	<ul style="list-style-type: none">• Location/Stores to be mapped in the backend for device assignment.• All Location to contain the connection details of the local printers
Time and Date	<ul style="list-style-type: none">• Application to have the time and date synchronized with the server.



The image shows a mobile application screen titled "Device Info". At the top, there is a status bar with icons for Bluetooth, Wi-Fi, signal strength, and battery, along with the time 9:42. Below the title bar, the screen displays the following information: "Datetime" with the value "26/01/19 09:42:10", "Device ID" with the value "143", and "Device Name" with the value "HMDPDT003". The "Location" field is a dropdown menu currently showing "ADHMD". At the bottom right of the screen, there are two buttons: a back arrow button labeled "<--" and a "Save" button.

Sample screen for device information

2.1.3 APPLICATION BACKEND MANAGEMENT

Feature	Description
Backend Management of devices	<ul style="list-style-type: none">Application to have a backend for overall device management.
Master Data Management at the backend	<ul style="list-style-type: none">All the masters to be managed in the backend of the application.Masters such as Items, Item Attributes, Vendors, locations etc. will be shared through the integration

2.1.4 "OFFLINE" ACCESS

Feature	Description
Offline Access Option (Optional)	<ul style="list-style-type: none">System to have the capability to work in an "offline" mode in case network connectivity is unavailable or weak.Synchronize the data immediately, once the device is back.
"Offline Indicator"	<ul style="list-style-type: none">System to have an indicator when the application is "offline"

2.1.5 CONNECTIVITY OPTIONS

Feature	Description
Connectivity over Wi-Fi	<ul style="list-style-type: none">The Application has to support connectivity over Wi-fi



Connectivity over Bluetooth (Optional)	<ul style="list-style-type: none">The Application has to support connectivity over Bluetooth for specific functions
--	---

2.1.6 USER INTERFACE

Feature	Description
Interface requirements	<ul style="list-style-type: none">Simple and easy-to-use interface
Grid style buttons (preferred)	<ul style="list-style-type: none">The main screen should have all the available functionalities preferably in a Grid-based selection format.
Scroll	<ul style="list-style-type: none">The screen should be scrollable for reaching the icons not visible on the available physical space.

2.2 ITEM LOOKUP REQUIREMENTS

2.2.1 PRODUCT LOOKUP REQUIREMENTS

Feature	Description
Product Details View	<ul style="list-style-type: none">Item Details have to be fetched from the NAV database to be displayed on the HHT device.The item details from the Item master are as follows:<ul style="list-style-type: none">BarcodeItem CodeDescriptionUOM – Unit of MeasureRSP – Retail Selling price (Valid selling price of the store, where the HHT is mapped)VAT Product Posting GroupPrimary VendorPurchase PriceItem StatusBrandCost PriceNeed provision at the backend to add or remove the fields in this screen.Certain fields like cost price, purchase Price, etc. can be given to management users only. Need field-wise user-level access.
Data flow	<ul style="list-style-type: none">ERP Sends Data to HHT<ul style="list-style-type: none">ERP will invoke an API published at the HHT application (suggested API - PostProductDetailAPI) and publish the Product details based on the updates in ERP
	<ul style="list-style-type: none">Sample Screen Below



The image shows a mobile application screen titled "Price Check". At the top right, there are icons for information, search, volume, and battery, along with the time "10:33". The screen contains several input fields and labels: "Barcode" with the value "3061375119015", "Itemcode" with "100007", "Desc" with "1 PCS Loreal Excellence 5 Natural Light", "Variant" (empty), "UOM" with "PCS", "Price" with "50.25", and "Cost" with "42.45". At the bottom, there are three buttons: "<--", "Lookup", and "Clear".

Sample screen for item details

2.2.2 SALES HISTORY

Feature	Description
Transactional Details Lookup	<ul style="list-style-type: none">The application has to be able to fetch and display the Sales quantities of the item from the NAV transactional/ledger tables.Sales must be filtered as per the location, the user is mapped to.Sales to show in summary view in three pre-configured buckets like 30 Days, 60 Days, 90 Days buckets (these buckets should be configurable at the backend)
Data flow	<ul style="list-style-type: none">HHT Gets data from ERP.<ul style="list-style-type: none">While scanning the barcode, HHT to invoke GetItemLedgerAPI (suggested API) published in the ERP, and fetch the details
	<ul style="list-style-type: none">Sample Screen Below



BACK

Barcode

Item Code

Description

UOM

PriceCost

Sales History

1 Week	30 Days	60 Days	90 Days

Sample screen for Sales History of the item

2.2.3 INVENTORY POSITION

Feature	Description
Transactional Details Lookup	<ul style="list-style-type: none">The application has to be able to fetch and display the stock/Inventory position of the item from the NAV transactional/ledger tables.Inventory must be filtered as per the location, the user is mapped to.Inventory to show location-wise, as per the user access
Dataflow	<ul style="list-style-type: none">HHT Gets data from ERP.<ul style="list-style-type: none">While scanning the barcode, HHT to invoke GetItemLedgerAPI (suggested API) published in the ERP and fetch the details
Inventory	<ul style="list-style-type: none">Inventory details to be displayed are as follows:Filter: Location (As per the user location mapping)<ul style="list-style-type: none">Item CodeDescriptionVariant



	<ul style="list-style-type: none"> ○ Base UOM ○ Cost (Only for selected users) ○ Inventory, per location
	<ul style="list-style-type: none"> • Sample Screen Below

Item Lookup 10:36

☒ **Inventory** ☐ **Sales History**

Itemcode 100007

Desc Loreal Excellence 5 Natural

Variant

UOM PCS **Cost** 42.4

Loc Cod	Quantity
ADALQ	0.00
ADHMD	7.00
ADKHA	0.00
ADMIN	3.00

<--

Sample screen for inventory details of the item

2.2.4 ITEM LISTING

Feature	Description
Simple Item Listing	<ul style="list-style-type: none"> • The Application has to be capable of generating a simple list of items that have been scanned by the HHT. • The user will scan a selection of barcodes in the HHT. • The application has to save the list of barcodes and send to ERP. Below are the fields expected to send: <ol style="list-style-type: none"> 1. Doc No 2. Doc Date 3. Barcode 4. HHT No 5. HHT User 6. HHT Location
Dataflow	<ul style="list-style-type: none"> • HHT Sends data to ERP. <ul style="list-style-type: none"> ○ Once the scanning is completed, HHT to invoke PostItemListingAPI (suggested API) published in the ERP and send the data, which will save in a staging table in ERP



Impact/Process in ERP	<ul style="list-style-type: none">• Need to introduce, a new 'HHT Item Listing' page in ERP, with an option to retrieve data from the Staging table. Apart from the data sent by HHT, ERP has to add certain additional information. Below are the columns needed.<ol style="list-style-type: none">1. Doc No2. Doc Date3. Barcode4. Item Code5. Item Description6. HHT No7. HHT User8. HHT Location9. Item Category10. Item Section11. Item Family12. Item Sub Family13. Brand• Need export to excel option in the screen
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2.3 PRINT REQUIREMENTS

2.3.1 PRINT GENERAL REQUIREMENTS

Feature	Description
Printer Integrations Required	<ul style="list-style-type: none">• The following features have to be available as a part of the printing options in the application:<ul style="list-style-type: none">○ Desktop Printer Setup: To set up the default printer for both Shelf and Product label printing.○ Shelf Label Print: To print shelf labels by scanning the items.○ Product Label Print: To print the product label by scanning the items.○ Shelf Label Print Count: To print shelf labels for a bunch of items.○ Product Label Print Count: To print product labels for a bunch of items
	<ul style="list-style-type: none">• Sample Screen Below



Desktop Printer Setup Setup desktop printer
Shelf Label Print Print shelf label
Product Label Print Print product label
Shelf Label Print Count Count and print shelf label
Product Label Print Count Count and print product label
Back Return to home screen

Sample screen for printing options

2.3.2 SHELF LABEL PRINTING

Feature	Description
Shelf Label Printing	<ul style="list-style-type: none">Shelf Label printing from the handheld applicationGrandiose uses the Zebra printer ZT410/ZT410 and its variants for printing Shelf Labels in a particular format.The application should be compatible with all industry-standard printers.Application to be capable to print the shelf label of an item based on the scanned item barcode or the item number
Shelf Label Print Count:	<ul style="list-style-type: none">Printing the shelf labels for a large number of items in a single activitySystem to provide the option to scan a number of items and print the shelf labels in a single print.Application to be capable to scan the item's barcode and enter the quantity of labels to be printed for each item.Printing labels for multiple items by retaining the quantity of labels:<ul style="list-style-type: none">If 'Quantity' is flagged, no further user intervention should be required. The quantity given in the quantity box will be taken for all scanned items.



	<ul style="list-style-type: none">Once all the items are scanned, 1 click of the “print” option should enable the printing of all the required quantities of the labels. <p>Note - The difference between Label Print and Label Count is that in Label print, the label will be printed as soon as the barcode is scanned. Whereas in the count, it is only one print for many items</p>
Data flow	<ul style="list-style-type: none">No real time data picking from ERPHHT Application to take data from the local DB and print on the labels

Sample screens for the label printing





2.3.3 ITEM BARCODE PRINTING

Feature	Description
Item Barcode Printing	<ul style="list-style-type: none">Item Barcode printing from the handheld applicationGrandiose uses the Zebra printer ZT210 and its variants for printing the item barcodes in a particular format.The application should be compatible with all industry-standard printers.Application to be capable to print the barcode label of an item based on the scanned item barcode or the item number
Item Label Print Count:	<ul style="list-style-type: none">Printing the item barcodes for a large number of items in a single activitySystem to provide the option to scan several items and print the item barcode labels in a single print.Application to be capable to scan the item's barcode and enter the quantity of labels to be printed for each item.Printing labels for multiple items by retaining the quantity of labels:<ul style="list-style-type: none">If 'Quantity' is flagged, no further user intervention should be required. The quantity given in the quantity box will be taken for all scanned items.Once all the items are scanned, 1 click of the "print" option should enable the printing of all the required quantities of the labels. <p>Note - The difference between Label Print and Label Count is that in Label print, the label will be printed as soon as the barcode is scanned. Whereas in the count, it is only one print for many items</p>





2.4 QUEUE BUSTING REQUIREMENTS

2.4.1 QUEUE BUSTING REQUIREMENTS

Feature	Description
Queue Busting Requirements - General	<p>The HHT application has to assist in the queue busting operation in the store.</p> <p>The feature will be used to assist the scanning of items for customers who are in the queue and then this list has to be invoked in the POS for easy checkout.</p>
Item Scanning and list generation	<ul style="list-style-type: none">Scanning of all the items picked by the customer.Generation of list and communication with the POSFeature to review/delete/edit the items and the quantities.Finalizing the list and quantities scannedOn finalization, barcode to be generated that is scannable at the POS
POS Actions and role	<ul style="list-style-type: none">POS to be able to scan the barcode representing the list of items.On scan all the items to be visible on the POS screen through an API call
Dataflow	<ul style="list-style-type: none">There should be an API published at the HHT end, for the ERP to invoke and get the details. API name suggested is 'GetPOSHoldBill'
Impact/Process in ERP	<ul style="list-style-type: none">A 'Retrieve Hold bill' button will be created in POS. While clicking on this button, POS will ask the cashier to scan the barcode of the Hold bill.ERP to fetch data directly from the HHT backend and display on the POS interface.

2.5 SALES ORDER MANAGEMENT

2.5.1 SALES ORDER CREATION

Feature	Description
Sales Order Creation - General	<p>The HHT application has to be able to enable the creation of the Sales Orders in the system.</p> <p>The feature will be used to assist the store team to process bulk orders from the backend without going through the POS</p>
Sales Order Generation Process (With the SO already present in the ERP)	<ul style="list-style-type: none">Pre-requisite: Creation of a Sales Order document in the ERP with the header information in the systemThe User will select the 'Sales Order' option from HHT Sales menu.



	<ul style="list-style-type: none"> • HHT Application to retrieve the SO number against which the items are to be entered. • User scans the items and enter qty of each. • Once all details are recorded, User presses 'Upload' button to get it available in NAV. • "Import" the information scanned on the HHT in the NAV system against the specific Sales Order in the system
Sales Order Creation Process (Directly from the HHT Application)	<ul style="list-style-type: none"> • Application to be capable to create a new Sales Order from the HHT directly without header information being present in the NAV system. • Sales Order number to be created in the NAV system during import of scanned item quantities.
Data flow	<ul style="list-style-type: none"> • HHT Gets data from ERP. <ul style="list-style-type: none"> ○ While scanning the Sales Order document Number, HHT to invoke GetTransAPI (suggested API) published in the ERP and fetch the details. ○ Transaction Type to be filtered as 'Sales Order.' • HHT Sends data to ERP. <ul style="list-style-type: none"> ○ Once the scanning is completed, HHT to invoke PostTranAPI (suggested API) published in the ERP and send the data, which will save in a staging table in ERP. • Transaction Type to be sent as 'Sales Order'
Impact/Process in ERP	<ul style="list-style-type: none"> • A provision would be available in the Sales Order screen in ERP to fetch the Sales Order details from the Staging table

2.5.2 SALES RETURN ORDER CREATION

Feature	Description
Sales Return Creation - General	<p>The HHT application has to be able to enable the creation of the Sales Return Orders in the system.</p> <p>The feature will be used to assist the store team to process bulk return orders from the backend without going through the POS</p>
Sales Return Order Generation Process (With the Return Document already present in the ERP)	<ul style="list-style-type: none"> • Pre-requisite: Creation of Sales return document in the ERP system against an existing Sales Order • User to select the 'Sales Return' option from HHT Sales menu. • Retrieve the Sales return document number from the system. • User scans the items and enter qty of each, against the Sales Return document. • Once all details are recorded, User presses 'Upload' button to get it available in NAV. • "Import" the quantities in the NAV system against the specified Sales return document.



Sales Return Order Creation Process (Directly from the HHT Application)	<ul style="list-style-type: none"> Application to be capable of creating a new Sales Return from the HHT directly without header information being present in the NAV system. Sales Return number to be created in the NAV system during import of scanned item quantities.
Data flow	<ul style="list-style-type: none"> HHT Gets data from ERP. <ul style="list-style-type: none"> While scanning the Sales Return document Number, HHT to invoke GetTransAPI (suggested API) published in the ERP and fetch the details. Transaction Type to be filtered as 'Sales Return.' HHT Sends data to ERP. <ul style="list-style-type: none"> Once the scanning is completed, HHT to invoke PostTranAPI (suggested API) published in the ERP and send the data, which will save in a staging table in ERP. Transaction Type to be sent as 'Sales Return'
Impact/Process in ERP	<ul style="list-style-type: none"> A provision would be available in the Sales Return screen in ERP to fetch the Sales Order details from the Staging table, which should update the qty in the line - if the barcode/line already exist, or insert new lines – if the barcode does not exist in the line

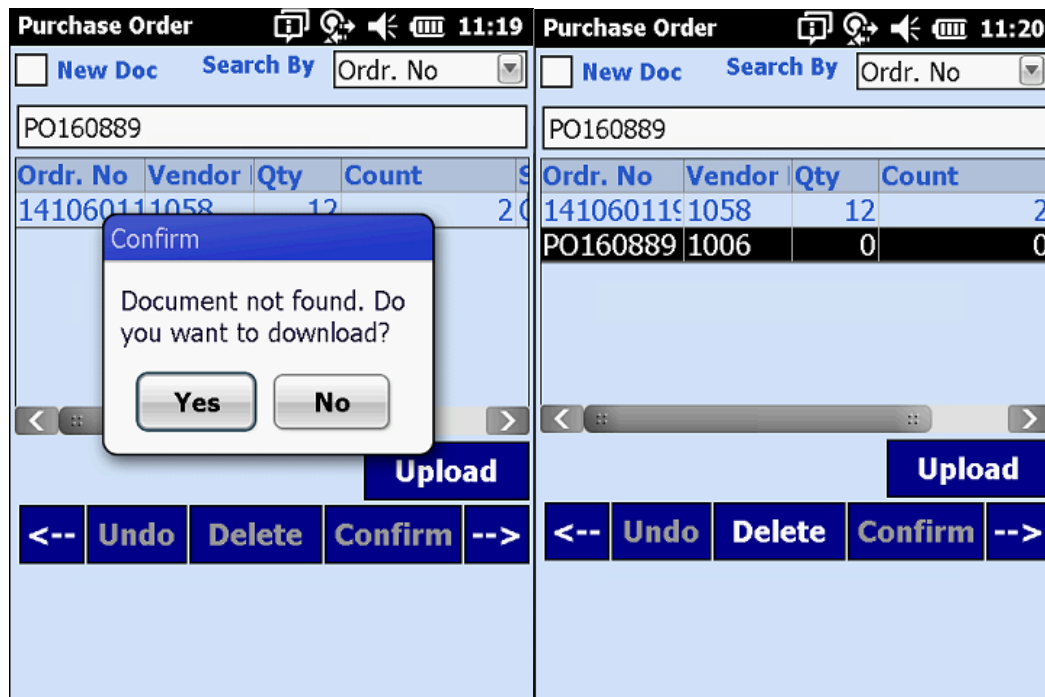
2.6 INVENTORY MOVEMENT REQUIREMENTS

2.6.1 GOODS RECEIVING THROUGH THE HANDHELD APPLICATION

Feature	Description
Goods receiving Capability	<ul style="list-style-type: none"> Goods Receiving to be possible from the Handheld Application with integration from the NAV system. The application has to be capable to enable the receipt of goods against Purchase orders in the ERP. The HHT will be used by the Receiving Area in the store to count the goods being received and to push the data into the NAV system
Goods receiving Process. (With the PO)	<ul style="list-style-type: none"> Pre-requisite: The "Purchase Order" to be released in the ERP. The user will select the "GRN" option in the HHT, choose the entry from the list (which is already filtered by the user/HHT location), or search for it by scanning/entering the PO number. The PO and all its lines are then available on the HHT for receiving. Scan each item being received and enter the quantity. Update the quantities as received for the PO with a single click at the end of the process.



Goods receiving Process. (Without the PO)	<ul style="list-style-type: none">• The system should also facilitate the receipt of goods without a Purchase Order in case of emergencies.• The user should be able to create a “New receiving document” on the HHT to scan and receive the supplied quantities.• Option to be available for a select set of users and not for all the users
Data flow	<ul style="list-style-type: none">• HHT Gets data from ERP.<ul style="list-style-type: none">◦ While scanning the PO Number, HHT to invoke GetTransAPI (suggested API) published in the ERP and fetch the details.◦ Transaction Type to be filtered as ‘GRN.’• HHT Sends data to ERP.<ul style="list-style-type: none">◦ Once the Receiving is completed, HHT to invoke PostTranAPI (suggested API) published in the ERP and send the data, which will save in a staging table in ERP.◦ Transaction Type to be sent as ‘GRN’
Impact/Process in ERP	<ul style="list-style-type: none">• A provision would be available in the GRN screen in ERP to fetch the GRN details from the Staging table.• If the second scenario (if the PO does not exist), the ERP user will have to follow the standard purchase process.



Sample screens to facilitate the receipt of goods through the use of HHTs.



2.6.2 PURCHASE RETURNS FROM THE HANDHELD APPLICATION

Feature	Description
Purchase Return Capability	<ul style="list-style-type: none">The application has to be capable to perform the return of goods against specific GRNs and/or Invoices
Purchase Return Process (With the Purchase Return Document already present)	<ul style="list-style-type: none">Pre-requisite: Creation of a "Purchase Return" document in the ERP against a GRN or an invoice.The user will select the "Purchase Return" option in the HHT (which is already filtered by the user/HHT location), choose the entry from the list, or search for it by scanning/entering the document number.HHT to get data from ERP and show the details on the screen.Scan the barcodes of the item being returned and enter the quantities to return.Update the quantities as "returned" in the NAV system through the integration
Data flow	<ul style="list-style-type: none">HHT Gets data from ERP.<ul style="list-style-type: none">While scanning the Purchase Return document Number, HHT to invoke GetTransAPI (suggested API) published in the ERP and fetch the details.Transaction Type to be filtered as 'Purchase Return.'HHT Sends data to ERP.<ul style="list-style-type: none">Once the scanning is completed, HHT to invoke PostTranAPI (suggested API) published in the ERP and send the data, which will save in a staging table in ERP.Transaction Type to be sent as 'Purchase Return'
Impact/Process in ERP	<ul style="list-style-type: none">A provision would be available in the Purchase Return screen in ERP to fetch the GRN details from the Staging table

2.6.3 TRANSFER OUT (TRANSFER SHIPMENT)

Feature	Description
Transfer OUT capability	<ul style="list-style-type: none">The application has to be capable to enable the transfer of items from the current location to other locations.
Transfer OUT Process	<ul style="list-style-type: none">Pre-requisite: Creation of "My Transfer OUT" Record document in the ERPThe user will select the "My Transfer OUT" option in the HHT, choose the entry from the list (which is already filtered by the user/HHT location), or search for it by scanning/entering the document number. (Note: In the list, HHT to show only the open Transfer Orders created in the system, filtered by HHT location. For example, if the HHT belongs to the 'ABC' store, the list should show only Transfer Out from the ABC store)



	<ul style="list-style-type: none"> Retrieve the Transfer shipment document number from the system against which quantities are to be entered. The user scans the items and enters qty of each, against the Transfer shipment document. Once all details are recorded, the User presses the 'Upload' button to get it available in NAV
Data flow	<ul style="list-style-type: none"> HHT Gets data from ERP. <ul style="list-style-type: none"> While scanning the Transfer OUT Document Number, HHT to invoke GetTransAPI (suggested API) published in the ERP and fetch the details. Transaction Type to be filtered as 'Transfer OUT.' HHT Sends data to ERP. <ul style="list-style-type: none"> Once the scanning is completed, HHT to invoke PostTranAPI (suggested API) published in the ERP and send the data, which will save in a staging table in ERP. Transaction Type to be sent as 'Transfer OUT'
Impact/Process in ERP	<ul style="list-style-type: none"> A provision would be available in the My Transfer Out screen in ERP to fetch the details from the Staging table

2.6.4 TRANSFER IN (TRANSFER RECEIPT)

Feature	Description
Transfer IN capability	<ul style="list-style-type: none"> The application has to be capable to enable transfer receipt of items that are transferred from other locations
Transfer IN Process	<ul style="list-style-type: none"> Pre-requisite: Creation of "My Transfer IN" Record document in the ERP The user will select the "My Transfer IN" option in the HHT, choose the entry from the list, or search for it by scanning/entering the document number. (Note: In the list, HHT to show only the open Transfer Orders created in the system, filtered by HHT location. For example, if the HHT belongs to the 'ABC' store, the list should show only Transfer IN to the ABC store) User scans the items and enters qty of each, against the Transfer Receipt document
Data flow	<ul style="list-style-type: none"> HHT Gets data from ERP. <ul style="list-style-type: none"> While scanning the Transfer IN Document Number, HHT to invoke GetTransAPI (suggested API) published in the ERP and fetch the details. Transaction Type to be filtered as 'Transfer IN.' HHT Sends data to ERP. <ul style="list-style-type: none"> Once the scanning is completed, HHT to invoke PostTranAPI (suggested API) published in the ERP and send the data, which will save in a staging table in ERP. Transaction Type to be sent as 'Transfer IN'



Impact/Process in ERP	<ul style="list-style-type: none">A provision would be available in the My Transfer In screen in ERP to fetch the details from the Staging table
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2.7 INVENTORY ADJUSTMENT REQUIREMENTS

2.7.1 STOCK COUNT THROUGH THE HANDHELD APPLICATION (PHYSICAL INVENTORY PROCESS)

Feature	Description
Stock Count Capability	<ul style="list-style-type: none">The application has to be capable to support the Physical Inventory process of counting the stock in the inventory.
Stock Count Process	<ul style="list-style-type: none"><i>Pre-requisite:</i> Freezing of the stock in the system by the Store Operations staff. NAV system to prompt the users to close all the Open Purchase Orders, complete the GRN issuance for all the received items, and freeze the inventory levels for the duration of the physical inventory process.User to select the 'Stock Count' option in HHT. (Unlike other screens, there is no retrieval of the Stock Count header document from ERP)Application to accept the details of the scan such as the Bin number etc.Application to provide the capability to perform the Stock count for all the items in the store or a specific category/family/sub-family only.The user scans the items and enters qty of each item. <p><i>Note: The system to have the capability to pre-define the quantities for future scans, to save time during the stock take. In this case, the system will not prompt the user to enter the quantities. It will take the quantity from the pre-defined number upon each scan.</i></p> <ul style="list-style-type: none">Once all details are recorded, the User "saves" the information on the HHT for review.Results of the last scan are to be available on screen for a review of the details. In case corrections are required, then the User should be allowed to do the same.Users to "Upload" the details of the scan to the NAV database with the click of a buttonOption to perform a new scan to be made available at this stage.
Data flow	<ul style="list-style-type: none">HHT sends data to ERP.<ul style="list-style-type: none">The 'Upload' function in the Stock Take screen in the HHT to invoke the PostTranAPI (suggested API) published in the ERP and send the data, which will save in a staging table in ERP.



	<ul style="list-style-type: none"> Transaction Type to be sent as 'Stock Count'
Impact/Process in ERP	<ul style="list-style-type: none"> A provision would be available in the Stock Count screen in ERP to fetch the details from the Staging table

Sample screen to count the inventory.

2.7.2 WASTAGE RECORDING

Feature	Description
Wastage Recording Capability	<ul style="list-style-type: none"> The application has to be capable to record the items being marked as "Wastage" in the store, in the system.
Wastage/Shrinkage Recording Process	<ul style="list-style-type: none"> Pre-requisite: Creation of Wastage Record document in the ERP The user will select the 'Wastage Recording' option in the HHT (which is already filtered by the user/HHT location), choose the entry from the list, or search for it by scanning/entering the document number. HHT to get data from ERP and show the details on the screen. User to scan the Barcodes and input the quantities. "Upload" the results into NAV
Data flow	<ul style="list-style-type: none"> HHT Gets data from ERP. <ul style="list-style-type: none"> While scanning the Wastage Document Number, HHT to invoke GetTransAPI (suggested API) published in the ERP and fetch the details. Transaction Type to be filtered as 'Wastage.' HHT Sends data to ERP. <ul style="list-style-type: none"> Once the scanning is completed, HHT to invoke PostTranAPI (suggested API) published in the ERP and send the data, which will save in a staging table in ERP.



	<ul style="list-style-type: none">○ Transaction Type to be sent as 'Wastage'
Impact/Process in ERP	<ul style="list-style-type: none">• A provision would be available in the Wastage screen in ERP to fetch the details from the Staging table

2.7.3 INTERNAL SALE RECORDING

Feature	Description
Internal Sale Recording Capability	<ul style="list-style-type: none">• The application has to be capable to record the items being marked as "Internal Sale" in the store, in the system.• An Internal Sale is when items are consumed within the store for in-house purposes and not sold to the customer e.g., cleaning supplies used for cleaning activity in the store.• E.g., Packaging used for creating new items or moving from 1 department to another
Internal Sale Recording Process	<ul style="list-style-type: none">• Pre-requisite: Creation of "Internal Sale" Record document in the ERP• The user will select the "Internal Sale" option in the HHT (which is already filtered by the user/HHT location), choose the entry from the list, or search for it by scanning/entering the document number.• HHT to get data from ERP and show the details on the screen.• User to scan the Barcodes and input the quantities.• "Upload" of the results into NAV
Data flow	<ul style="list-style-type: none">• HHT Gets data from ERP.<ul style="list-style-type: none">○ While scanning the Internal Sale Document Number, HHT to invoke GetTransAPI (suggested API) published in the ERP and fetch the details.○ Transaction Type to be filtered as 'Internal Sale.'• HHT Sends data to ERP.<ul style="list-style-type: none">○ Once the scanning is completed, HHT to invoke PostTranAPI (suggested API) published in the ERP and send the data, which will save in a staging table in ERP.○ Transaction Type to be sent as 'Internal Sale'
Impact/Process in ERP	<ul style="list-style-type: none">• A provision would be available in the Wastage screen in ERP to fetch the details from the Staging table



2.8 REPORTING REQUIREMENTS

2.8.1 ITEM SHELF REPORT GENERATION

Feature	Description
Item Shelf Report	<ul style="list-style-type: none"> The application has to be capable to generate an item-shelf details report in NAV of the items that are scanned from the store shelf.
Report Generation Process	<ul style="list-style-type: none"> User to select the "Item-Shelf Report Generation" option from the HHT menu. Scan the barcodes of all the items on the shelf, for which a report is required. Once done, click on 'Upload' to send the data to ERP
Data flow	<ul style="list-style-type: none"> HHT Sends data to ERP. <ul style="list-style-type: none"> Once the scanning is completed, HHT to invoke PostItemListingAPI (suggested API) published in the ERP and send the data, which will save in a staging table in ERP. Transaction Type to be sent as 'Item Shelf Report'
Impact/Process in ERP	<ul style="list-style-type: none"> New Item Shelf Report to develop in ERP, which will run by the user and choose the Shelf Report Entry number to produce the output (Customization in NAV required) The report format is as follows

Item number	Bar-code	Desc.	Item Category				Promotion	Selling price	Previous Day Sales		Sales last 7 days		Sales last 4 weeks	
			Dept	Section	Family	Sub family			Qty	Val	Qty	Val	Qty	Val

2.8.2 REPORTS AND DASHBOARDS

Feature	Description
Reports	<ul style="list-style-type: none"> All standard reports and statistics for events in the HHT Application
Dashboards	<ul style="list-style-type: none"> Standard Dashboards in the HHT Application backend



2.9 INTEGRATIONS

2.9.1 LS-NAV INTEGRATION

API	Published in	Purpose
PostProductDetailAPI	HHT backend App	For ERP to send product/master details
GetItemLedgerAPI	ERP	For the HHT app to Get Sales/Inventory details
GetTransAPI	ERP	For the HHT app to Get Transaction/Doc header
PostTranAPI	ERP	For the HHT app to POST Transaction/Doc lines
PostItemListingAPI	ERP	For the HHT app to POST Item Listing and Reporting data inputs
GetPOSHoldBill	HHT backend App	For ERP to Get the POS Queue Busting transaction details

3 ASSUMPTIONS & DEPENDENCIES

3.1 ASSUMPTIONS

3.2 DEPENDENCIES & CONSTRAINTS

Grandiose Supermarkets is using LS-NAV 2017 as its ERP and POS system for all its Point-of-sale operations – Back Office and POS Operations.

The current application is already integrated and is based on Windows CE platform and will continue to work in parallel.

4 TRAINING REQUIREMENTS

Complete user training to be provided to super users (and other relevant users), identified by each stakeholder team, focusing on end-to-end functionalities of the system. Training videos and multiple copies of user manuals customized for Grandiose use to be provided as a soft copy.

5 TEST REQUIREMENTS

Test cases to be prepared based on the business requirements of each stakeholder team during the Functional requirement and design phases of the project.



6 GLOSSARY OF TERMS

Abbreviation	Explanation
GAG	Ghassan Aboud Group
HO	Head Office
ERP/NAV	Enterprise Resource Planning Software (for Grandiose it is LS-NAV 2017)
POS	Point of Sale
HHT	Handheld Terminal