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EX08 – Damages with Question and Answer

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# Enhancement Revision History

| **Changed By** | **Date** | **Version** | **Notes:** | **SFDC** |
| --- | --- | --- | --- | --- |
| Timur Cetindag | 11/28/2023 | 0.1 | Original Document |  |
| Timur Cetindag | 12/03/2023 | 0.2 | Updated with Screens 3 and 4, and additional logic from review. |  |
| Timur Cetindag | 12/06/2023 | 0.3 | Updated Screen 7 section with Question and Answer record logging and warehouse activity tracking logging |  |
| Timur Cetindag | 12/12/2023 | 0.4 | Added filter to cycle count creation condition to omit forward locations for cycle counting |  |
| Timur Cetindag | 01/25/2024 | 0.5 | Updated Screens 5-6 with Yes/No buttons instead of dropdowns.  Updated logic on Screen 7 to display INFO message and disable CONFIRM button if the disposition cannot be determined. |  |
| Timur Cetindag | 03/08/2024 | 0.6 | Removed the Confirm UOM screen. Removed UOM from all screen mock ups.  Updated screenflow references to refer to updated screen numbers. |  |

# EX08 – Damages with Question and Answer

When damaged product is identified and accumulated into totes during picking, these totes are staged in a damages area for further processing. In this area, users are asked a series of questions regarding the condition of the inventory, and this customization combines their answers with Item and Vendor data to determine the instruction, or damages disposition, that the user must follow. Upon completion of each instance of the transaction, the inventory is adjusted out of WM inventory and an adjustment PIX is triggered per base by that adjustment(s).

## Summary Information

|  |  |
| --- | --- |
| **Customer Name:** | CVS Health |
| **Customer Code:** | CVSI |
| **Subproject Codes:** | EX08 |
| **Change Request Number:** |  |

## Overview

| **Functional Area** | **Enhanced** | **Additional Information** |
| --- | --- | --- |
| Data Processing and Logic | Y |  |
| Mobile Workflow | Y |  |
| MHE | N |  |
| Application UI | Y |  |
| Integration | N |  |
| Reporting | N |  |
| Labor | N |  |

## Assumptions

1. At least one question is configured with EX08DamagesQuestion = true.
2. At least one question is configured with EX08DonateQuestion = true.
3. When a positive adjustment must occur to complete the transaction, cycle count tasks are generated for all permanent storage locations assigned to that item where the Storage UOM < LPN.
4. The Donate question is skipped if any of the Damages questions are answered with a “Yes”.
5. If a matching combination of values such that the Damages Disposition cannot be determined, then the user is unable to proceed with the transaction.
6. The entered quantity on screen 3 is always in terms of UNITs.

## Dependencies

### Code Dependencies

Not applicable.

### Interface Dependencies

Not applicable.

## Glossary

Not applicable.

# Process Flows

## Damages with Question and Answer



# User Interface Changes

# Interface Changes

# MHE

# RF

# Mobile

## Damages Q&A

The Damages Q&A and is a custom Mobile Transaction that is developed to facilitate CVS’s Damages Question and Answer (Q&A) process. This mobile transaction requires the user to scan a source Ilpn, Item, unit of measure, and sometimes quantity, then answer a series of questions to determine a disposition, and the conclusion of the transaction either consumes the unit(s) with a specific reason code.

### Enablement

The extension is enabled from Extension Dashboard: Manage Deployment. A screenshot of a computer

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### Screen 1: Scan Ilpn

This screen requires the scan the source Ilpn from which the Q/A process will be performed. It is required that this Ilpn is not allocated as we do not want to handle units that are allocated to another DC process.

#### Display

The Ilpn Id is prompted to the user and the user is required to scan the Ilpn barcode to proceed.



##### Elements

|  |  |  |  |
| --- | --- | --- | --- |
| Element | Literal | Prompt Type | Value |
| IlpnId | Ilpn Id | Entry | Ilpn barcode |

##### Action Buttons

Not applicable for this screen

#### Process

* IF the user taps “GO” without scanning an Ilpn, display base ERROR “Required”
* When the user scans a value in the prompt, perform base barcode format validation to where BarcodeType = “ILPN”
  + IF barcode format validation fails, display custom ERROR “Invalid Barcode” (INM::CVSI::0802)
* Validate whether the Ilpn is in a Not Allocated status
  + IF the Ilpn.Status != 3000 then display custom ERROR “Ilpn in invalid status” (INM::CVSI::0803)
* IF all validations pass then continue to Navigation

#### Navigation

* IF all the validations were successful upon Ilpn scan/entry then move forward to Screen 2: Item Scan
* IF the users taps the **Back** arrow, exit the transaction

#### Outputs

##### Labor Management

TBD

### Screen 2: Scan Item

This screen requires the user to scan the Item UPC for the item that they are handling. This screen assumes a single unit handling, so no quantity prompt is associated or linked to this display.

#### Display



##### Elements

|  |  |  |  |
| --- | --- | --- | --- |
| Element | Literal | Prompt Type | Value |
| IlpnId | Ilpn Id | N/A | IlpnId from Screen 1 |
| Item | Item | Entry | Item Barcode |

##### Action Buttons

Not applicable for this screen

#### Process

* IF the user taps “GO” without scanning an Item, display base ERROR “Required”
* When the user scans a value in the prompt, perform base barcode format validation to where BarcodeType = “Item”
  + IF barcode format validation fails, display custom ERROR “Invalid Barcode” (INM::CVSI::0802)
* Validate that item scanned exists
  + Query the Composite Item API by searching the Primary Barcode and Item Code fields for the scanned value to pull the Item Id
  + IF an item cannot be found for the scanned value, display custom ERROR “Item does not exist” (INM::CVSI::0804)
* Validate that the scanned Item exists in the Ilpn
  + Query DCI for an inventory record for the Ilpn and ItemId combination.
  + IF no record is found, display custom WARNING “Item not present in Ilpn” (INM::CVSI::0805)
* IF all validations pass or user accepts Warning, continue to navigation

#### Navigation

* IF the users taps the **Back** arrow, return to Screen 1: Scan Ilpn
* ELSE move forward to Screen 3: Confirm Quantity

#### Outputs

##### Labor Management

TBD



### Screen 3: Confirm Quantity

The user indicates the quantity that they are processing for damages for the item. The quantity entered is assumed to be in terms of Units/Eaches.

#### Display

￼

##### Elements

|  |  |  |  |
| --- | --- | --- | --- |
| Element | Literal | Prompt Type | Value |
| IlpnId | Ilpn Id | N/A | IlpnId |
| Item | Item | N/A | Item Short Description |
| Quantity | Quantity (Eaches) | Entry | Unit quantity |

##### Action Buttons

Not applicable for this screen

#### Process

* Once the user taps Go, perform the following validation(s):
  + IF the field is empty, display base ERROR “Prompt cannot be blank”
* IF the validation(s) pass, continue to navigation

#### Navigation

* IF the user taps the **Back** arrow, return to Screen 2: Scan Item
* Navigate to Screen 4: Answer Questions

#### Outputs

##### Labor Management

TBD

### Screen 4: Answer Questions

After the user scans the Ilpn and Item, MAWM asks the user a configurable list of questions. All configured questions are asked to the user in sequence, and these questions are all assumed to require Yes/No answers. If the user answers Yes to any question, then all subsequent questions are skipped, and the user is automatically navigated to the Confirm Disposition screen.

#### Display

This screen displays a series of questions to the user and refreshes the screen the with the previous answer and the next question upon confirmation of an answer value. In the example below, the user is prompted for the first question, and they select “No”. Then they are prompted for the second question, but the previous question and answer combination are retained as a row on the screen.



##### Elements

|  |  |  |  |
| --- | --- | --- | --- |
| Element | Literal | Prompt Type | Value |
| IlpnId | Ilpn Id | N/A | IlpnId |
| Item | Item | N/A | Item Short Description |
| Quantity | Quantity | N/A | Quantity |
| Question 1\* | Question.  QuestionDescription | N/A | Selected value |
| Question 2\* | Question.  QuestionDescription | Dropdown | Yes/No |
| Question N\* | ----- | ----- | ----- |

\* *These elements represent the second mock-up displayed with the assumption that the user has already provided an answer for question 1*

##### Action Buttons

Not applicable for this screen

#### Process

The base aux-svcs.Question entity is enhanced with the following extended attributes:

* EX08DamagesQuestion (Boolean)
* EX08QuestionPriority (Integer)

To load the questions to be prompted and the sequence in which they should be prompted, this extension queries the Question entity for any question where EX08DamagesQuestion = true, and then sequences this list by EX08QuestionPriorty in Ascending order.

Then MAWM proceeds to prompt these questions in order of the sequenced list.

* IF the user’s answer is “Yes”
  + Then continue to Navigation
* ELSE IF the user’s answer is “No” and there is another question in the list to be prompted, refresh the screen with a row recording the question and answer, and then prompt the user with the next question and an answer dropdown with Yes/No options
* ELSE continue to navigation

#### Navigation

* IF the user entered “Yes” for a question, THEN navigate to Screen 6: Confirm Disposition
* ELSE IF there are no other questions remaining to be prompted
  + Search the Vendor entity by referencing the Item.VendorId and retrieve the value for Vendor.Extended.DamagesDispositionCode
  + IF the Vendor.Extended.DamagesDispositionCode = “DO”, then Navigate to Screen 5: Donate Question
  + ELSE navigate to Screen 6: Confirm Disposition
* IF the users taps the **Back** arrow
  + IF there exists a Question/Answer combination before the current prompt, then navigate back to that question and reprompt the user for an answer
    - Example: in the mock-ups above, if the user hits the back button when prompted for question 2, then navigate back to the prompt for question 1.
  + ELSE if there is no Question/Answer combination before the current prompt
    - Navigate back to Screen 3: Confirm Quantity
    - Example: in the mock-ups above, if the user hits the back button when prompted for question 1, then navigate back to the Screen 3: Confirm Quantity as displayed in that mock-up.

#### Outputs

##### Labor Management

TBD

### Screen 5: Donate Question

Some CVS vendors permit their product to be donated as a method to dispose of that inventory. For those vendor items, the user is prompted with an additional question to determine if the item can be donated based on its physical condition.

#### Display



##### Elements

|  |  |  |  |
| --- | --- | --- | --- |
| Element | Literal | Prompt Type | Value |
| IlpnId | Ilpn Id | N/A | IlpnId from Screen 1 |
| Item | Item | N/A | Item Short Description |
| Quantity | Quantity | N/A | Quantity |
| Question 1 | Question.  QuestionDescription | N/A | Selected value |
| Question 2 | Question.  QuestionDescription | N/A | Selected value |
| Question N | Question.  QuestionDescription | N/A | Selected value |
| Donation Question | Question.  QuestionDescription | Dropdown | Yes/No |

##### Action Buttons

Not applicable for this screen

#### Process

The aux-svcs.Question entity is extended with the following field for this screen:

* EX08DonateQuestion

To load the appropriate question record, MAWM queries the Question entity for a record where EX08DonateQuestion = true.

* IF multiple donate question exist, retrieve the question with the lowest EX08QuestionPriority value
* IF the priorities are the same, retrieve the question with the greatest/nearest UpdatedTimestamp
* Prompt the QuestionDescription to the user

After prompting the question, MAWM performs the following validations:

* IF the user taps “GO” without selecting an answer, display custom ERROR “Prompt cannot be blank” (INM::CVSI::0801)
* Once all validations pass when the user taps “GO”, proceed to Navigation

#### Navigation

* IF all the validations were successful upon Answer scan/entry then move forward to Screen 6: Confirm Disposition
* IF the users taps the **Back** arrow, return to Screen 4: Answer Questions, reprompt the last question in the question list, and continue displaying all previously answered Question/Answer combinations.

#### Outputs

##### Labor Management

TBD

### Screen 6: Confirm Disposition

Once all questions have been answered or the user has answered Yes to a least one question, MAWM searches the config-store for a record that matches the combination of Answers, Hazardous Waste Code, Vendor Disposition, and Item Disposition. In this record, the Damages Disposition is stored and displayed to the user on this screen to instruct their sortation SOP. When the user confirms the disposition on this screen, MAWM adjusts the unit out of the source Ilpn with a reason code that is configured on the config store entry and records the Answers in the base CommonAssignedQuestionnare entity for historical reference.

#### Display



##### Elements

|  |  |  |  |
| --- | --- | --- | --- |
| Element | Literal | Prompt Type | Value |
| IlpnId | “Ilpn Id” | N/A | IlpnId from Screen 1 |
| Item | “Item” | N/A | Item Short Description |
| Question 1 | Question.  QuestionDescription | N/A | Selected value |
| Question 2 | Question.  QuestionDescription | N/A | Selected value |
| Question N | Question.  QuestionDescription | N/A | Selected value |
| Donation\* Question | Question.  QuestionDescription | N/A | Selected value |
| Damages Disposition | “Damages Disposition” | N/A | Config-Store DamagesDisposition as determined by process section |

\*If the donation question screen was skipped, then do not display this row on the screen.

##### Action Buttons

|  |  |
| --- | --- |
| Action Literal | Result |
| “Confirm” | Complete transaction – reference P*rocess* section for updates and or screenflow |

#### Process

##### Damages Disposition Selection

* First MAWM loads the following data values:
  + For the Item scanned, load the ItemFacility.Extended.HazmatBucket value. This will be referred to as the **HazmatBucket** for the remainder of this section.
  + For the item scanned, load the Item.VendorId, then utilize this value to load the Vendor.Extended.DamageDispositionCode. This will be referred to as the **VendorDisposition** for the remainder of this section.
* IF the user answered “Yes” to any of the questions where EX08DamagesQuestion = true, then set the variable **DamagesAnswer = “Y”**
* ELSE (all answers were “No”), then set the variable **DamagesAnswer = “N”**
* IF the donate question was asked and the user answers “Yes”, then set the variable **DonateAnswer = “Y”**
* ELSE (donate answer was “No” or question was skipped), then set the variable **DonateAnswer = “N”**
* At this point there are 4 values defined:
  + **HazmatBucket**
  + **VendorDisposition**
  + **DamagesAnswer**
  + **DonateAnswer**
* MAWM next queries the config store for an entry matching the combination of these values.
  + Load the config store entry where ConfigStoreId = EX08DamagesDispositions
  + In the ConfigStoreData JSON, search for a record where the 4 variables mentioned above all match.
    - IF a matching record is found and multiple matching records exist, take the first matching record.
    - ELSE IF no matching record is found, display custom INFO “Damages Disposition cannot be determined” (INM::CVSI::0806) and disable the “CONFIRM” button on the screen so that the user cannot move forward. When the disposition cannot be determined, this enhancement cannot determine how to proceed with updates, therefore the user is blocked from progressing, and it is expected that the user backs out of the transaction to restart.
  + *See config section for sample Config Store Entry format for lookup reference*
* For the matching config store record, retrieve the values for **DamagesDisposition** and **ReasonCode**.
* Display the **DamagesDisposition** value on the screen in the Damages Disposition row.
  + The **ReasonCode** is referenced in the *Confirm Button*section.

##### Confirm Button

* When the user taps the Confirm button
  + IF the item/inventory is not present in the scanned Ilpn OR the CurrentQuantity < Entered,
    - First adjust the Item inventory into the source Ilpn with the **ReasonCode** value (positive adjustment) where AdjustmentQuantity = EnteredQuantity – CurrentQuantity
      * Note, IF the item is not present in the scanned Ilpn, AdjustmentQuantity = EnteredQuantity
    - Query the LocationItemAssignment entity for records for the matching ItemId and return the list of LocationIds
    - Query the Location entity with the list of LocationIds and only return locations where the SkuDedicationTypeId = PERMANENT, StorageUomId in (UNIT, SUBPACK, PACK), and LocationId != ItemFacility.Extended.ForwardLocationId
    - For the final returned list of locations, submit the locations for Cycle Count task generation by referencing the CountTaskCreationStrategy configured in InventoryParameters.Extended.EX08DamagesCycleCountStrategy
  + Adjust the Item inventory out of the source Ilpn with the **ReasonCode** value (negative adjustment)

#### Navigation

* Once all updates are complete, navigate back to Screen 1

#### Outputs

##### Question Answer Records

For each question and answer combination recorded in Screen 4 and Screen 5, create a record in the Question Answer Records UI (CommonAssignedQuestionnaire entity).

##### Warehouse Activity Tracking

After the user confirms the disposition code, create a warehouse activity tracking record with the following details:

* Transaction Id
* User Id
* Ilpn Id
* Item Id
* Quantity
* Reason Code

##### Labor Management

# Process Change/Addition

Not required for this extension.

# Reporting, Label, or Document

Not required for this extension.

# Other MA Solutions Impacted

Not required for this extension.

# Configuration

### Enable/Disable Extension

This is already outlined in section 8.1.1.

### Extended Attributes

| **Component** | **Entity** | **Attribute** | **Type** | **Value** |
| --- | --- | --- | --- | --- |
| Aux-svcs | Question | EX08DamagesQuestion | Boolean |  |
| Aux-svcs | Question | EX08QuestionPriority | Integer |  |
| Aux-svcs | Question | EX08DonateQuestion | Boolean |  |
| Vendor | Vendor | DamagesDispositionCode | String |  |
| Item-Master | ItemFacility | HazmatBucket | String |  |

### Messages

| **ErrorDefinitionId** | **ErrorText** | **ShortErrorText** | **Default**  **ErrorLevelId** | **Min**  **ErrorLevelId** | **Max**  **ErrorLevelId** |
| --- | --- | --- | --- | --- | --- |
| INM::CVSI::0802 | Invalid barcode | Invalid barcode | ERROR | ERROR | ERROR |
| INM::CVSI::0803 | Ilpn in invalid status | Ilpn in invalid status | ERROR | ERROR | ERROR |
| INM::CVSI::0804 | Item does not exist | Item does not exist | ERROR | ERROR | ERROR |
| INM::CVSI::0805 | Item not present in Ilpn | Item not present in Ilpn | WARNING | WARNING | ERROR |
| INM::CVSI::0806 | Damages disposition cannot not be determined | Damages disposition cannot be determined | INFO | INFO | INFO |

### Config Store

| **Config Store Id** | **Config Store Data** |
| --- | --- |
| EX08DamagesDispositions | [      {          "HazmatBucket": "09",          "VendorDisposition": "SV",          "DamagesAnswer": "Y",          "DonateAnswer": "N",          "DamagesDisposition": "Dumpster",          "ReasonCode": "DC"      },      {          "HazmatBucket": "09",          "VendorDisposition": "DO",          "DamagesAnswer": "N",          "DonateAnswer": "Y",          "DamagesDisposition": "Donate",          "ReasonCode": "DN"      },      {          "HazmatBucket": "",          "VendorDisposition": "",          "DamagesAnswer": "",          "DonateAnswer": "",          "DamagesDisposition": "",          "ReasonCode": ""      }  ] |

### Profile Impacts

Not required for this extension.

### Security

Not required for this extension.

# Project Impact Points

## Testing

### General Conditions

| **Condition Name** | **Description and expectations** |
| --- | --- |
|  |  |

### Exceptions

| **Condition Name** | **Description and expectations** |
| --- | --- |
|  |  |

# References

# Estimates and Acknowledgement

All services provided are pursuant to the terms and conditions of the Acknowledgement for Consulting Services or the Software Services Agreement previously entered into between our respective companies and these Agreements provide that such services are billed at the hourly billing rates in effect at the time services are rendered. This acknowledgement is to cover the estimate given below. Please note that the estimate below is good for only 60 days from the date the quote is provided.

## Estimated Cost

| **Solution:** | **Estimated $** |
| --- | --- |
| Active WM Extension |  |
|  |  |
| **Total:** |  |

## Acknowledgement

Your signature is required as proof of acceptance of the extension described above and the estimated cost in order for programming to begin.

|  |  |  |  |
| --- | --- | --- | --- |
| **CVS Healthcare** | | **CVS Healthcare** | |
| **By:**  *Signature* | \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | **By:**  *Signature* | \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |
| **Name:**  *Printed* | \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | **Name:**  *Printed* | \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |
| **Title:** | \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | **Title:** | \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |
| **Date:** | \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | **Date:** | \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |