SaaSmile Plugin for eCommerce platform

1. Introduction and scope

SaaSmile [doos.me] is one of the leading logistics companies in KSA offering complete end-to-end logistics and supply chain solutions to their customers – both businesses and individual shoppers. SaaSmile aims to become the most preferred logistics service provider in Saudi Arabia.

Different logistics providers like UPS, Aramex, Thabit provide support to merchants to ship their products to their customers. To enable this delivery, the logistics providers offer plugins on eCommerce platforms e.g. Magento, Woocommerce, Shopify etc that allows merchants to book orders for shipment and fulfilment. These plugins are transparent to the users who use it as a part of their interface with their logistics providers.

This document specifies the requirements [business and technical] to develop a SaaSmile shipping plugin for the logistics providers whose customers use ecommerce platforms to sell their products. Merchants have to configure details for a specific logistic provider on their eCommerce site.

Note: If a merchant uses multiple logistics carriers [e.g DHL, Thabit, Sols etc] , then separate plugins have to be configured for each logistics carrier. These plugins will also print the AWB labels for tracking.

Levels of Access and Roles:
1. SaaSmile Admin (Doos.me)
2. Carrier Admin (Logistics/Carrier Partner)
3. Merchant Admin / Merchant User (ECommerce Business Owner)

This document discusses the requirements for the MAGENTO 2 platform only. It has been assumed that the requirements will be the same for the other ecommerce platforms.

Note: The development of the plugin in Magento 1 is frozen, as per the decision. The plugin development shall commence only on Magento 2 platform.

1.1 User Stories

XYZ Apparels uses Magento as its eCommerce platform. It uses 2 logistics providers - VPS and Yellowdart to fulfil customers' orders.

To enable XYZ Apparels ship their products to their end customers, logistics provider VPS has freight rates setup for XYZ apparels and also shares the user credentials with XYZ apparels.

Rita is the admin at XYZ Apparels. She configures the VPS plugin using the credentials provided by VPS. She also uses the same credentials to track orders shipped through VPS and check the CoD remittance from VPS.

Rita should also be able to create a manual AWB using the VPS plugin (If needed).

Harry is the admin at VPS. He wants to view and track all shipments from XYZ apparels through its Airway Bills (AWBs). He uses the dashboard on the SaaSmile platform to view and track all AWBs. Either he or Bob, the carrier finance will validate the CoD collections from the customers and transfer the amount to XYZ apparels.
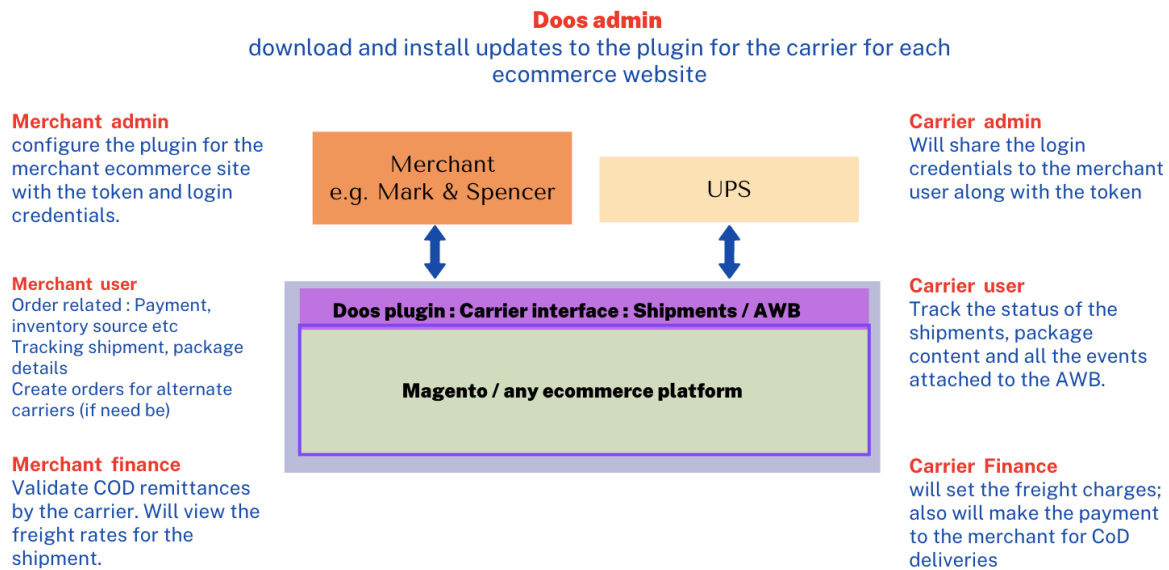
1.2 User Journey
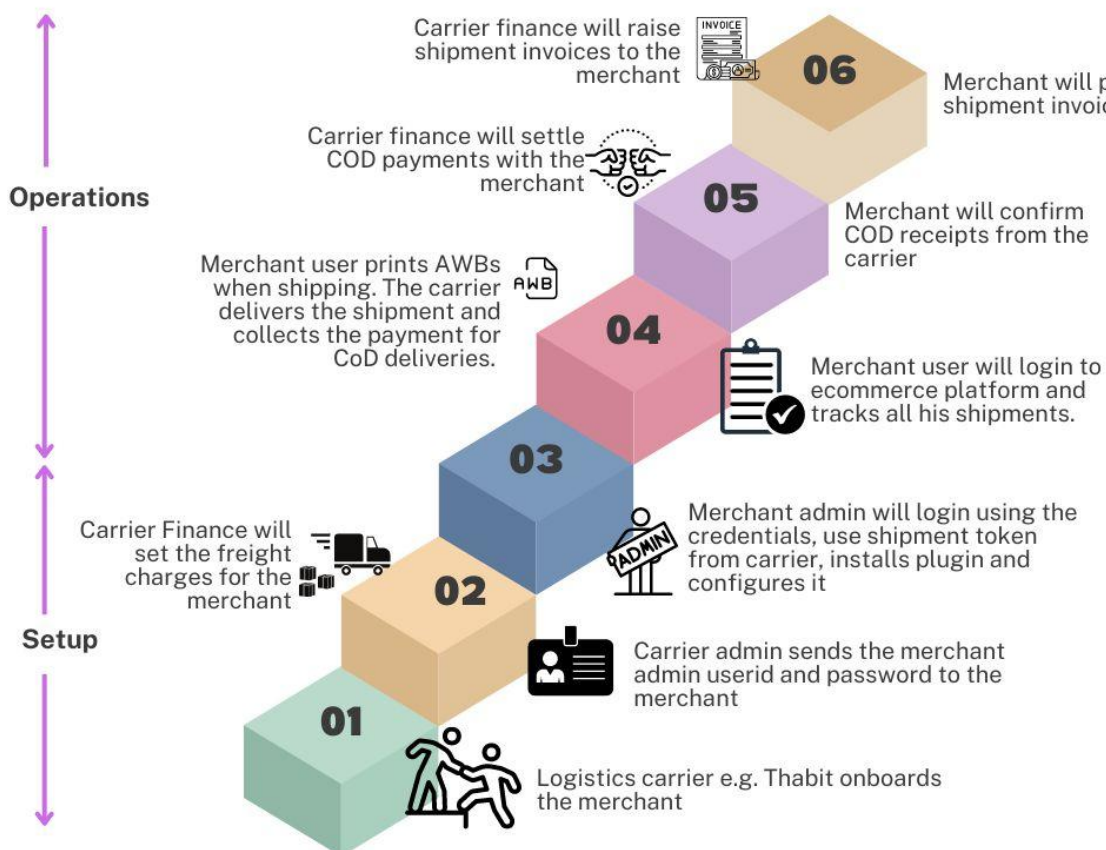
For the current implementation the logistics carrier will only create one userid for a merchant.

The carrier admin shared the merchant's user id and the password through email. Generating a token out of these is a part of the plugin.

1.3 Role players in the SaaSmile ecosystem

Doos admin
download and install updates to the plugin for the carrier for each ecommerce website

Merchant admin
configure the plugin for the merchant ecommerce site with the token and login credentials.

Merchant user
Order related : Payment, inventory source etc
Tracking shipment, package details
Create orders for alternate carriers (if need be)

Merchant finance
Validate COD remittances by the carrier. Will view the freight rates for the shipment.

Merchant
e.g. Mark & Spencer

UPS

Doos plugin : Carrier interface : Shipments / AWB

Magento / any ecommerce platform

Carrier admin
Will share the login credentials to the merchant user along with the token

Carrier user
Track the status of the shipments, package content and all the events attached to the AWB.

Carrier Finance
will set the freight charges; also will make the payment to the merchant for CoD deliveries

Roles at the merchant side i.e. merchant admin, merchant user and merchant finance are collapsed into 1 role in this implementation. Merchant users are users of Magento ecommerce site who will fulfil the order.

1.4 Prerequisites / Assumptions

- The merchant has specific credentials [viz userid, password] with each logistics carrier to send shipments to his customers.
- SaaSmile shipping plugin will be available for each ecommerce platform and for each carrier. I.e. if SaaSmile wants plugins for ecommerce websites [Magento, Woocommerce, Shopify,and Salla] and merchants use logistics carriers [UPS, Aramex, Thabit], a total of 12 plugins will be available.
  Typically, merchants use only one ecommerce platform. Hence they need to configure plugins for only the carriers they use for that specific ecommerce platform.
- List of inventory locations for different products for the merchant is available and accessible for the Magento plugin
- The merchant's address is added as a part of the Magento plugin setup.

1.5 Terms:

RTO : Return to origin
COD : Cash on delivery
NDR: Non-delivery report
Shipping invoices: Invoices sent to the merchant by the carrier
Customer invoices: Invoices sent by the merchant to the customer

2.0 Plugin Requirements

2.1 Requirement 1: Download the ==Magento plugin== for each carrier

The Merchant admin will download and install the ***Magento*** ==shipping plugin== onto his ecommerce site.
The merchant will configure the plugin on his ecommerce site. He will use the credentials provided by the carrier to log into the plugin and activate the same. The merchant user must be able to complete this activity.

E.g. if the merchant uses the Magento platform and wants to use 2 logistics carriers [e.g. DHL and UPS], he has to download 2 plugins [one for each carrier].

Acceptance criteria
Magento plugin is available for each carrier and the merchant chooses the plugin for its specific ecommerce platform.

2.2 Requirement 2: The merchant details must be available in ==Magento plugin== for straight-through processing

Details of the merchant [address, inventory locations, tax details, bank details etc] must be available in the plugin from SaaSmile DB. Additionally, the merchant user must be able to add additional inventory locations.

==An input screen should be made available to make this possible==. The merchant must be able to complete this activity.

Acceptance criteria
Merchant details are available for access in the Magento plugin for straight-through processing.

2.3 Requirement 3: Get the shipment request token

On the ecommerce platform, the merchant will configure the Magento plugin. He will supply the carrier provided token or username/password credentials supplied to him.

When a merchant user books a shipment, the plugin will use the token to fetch the freight charges from the shipping carrier.

The token can be generated using the userid and the password supplied to the merchant. The shipment generated code should have an option for token refresh.
If the token expires, there will be a notification to refresh or apply the token/credentials again. ==This token will be available in the== SaaSmile ==database.==

Acceptance criteria
Shipment request token for a specific carrier for the transaction

2.4 Requirement 4: Create the AWB

When the order is placed by the merchant user, the plugin automatically pulls the order /shipping information to the plugin and assigns it to the carrier partner with AWB created.

2.5 Requirement 5: Selection of Inventory Locations

The plugin displays the inventory locations for the merchant and lists it for selection. The merchant selects the specific inventory location where the shipment has to be picked from. It displays the merchant's address as well.

The plugin sends these details to the carrier and receives the AWB# and labels for the shipment. These will be used to ship the physical item.

Acceptance criteria for Req 4 and 5

AWB# and the labels for shipment for shipping

2.6 Requirement 6 : Enable a dashboard view of the shipment status

The merchant admin/user and carrier admin can view the shipment status of the assigned AWBs.

When the carrier admin uses the dashboard, he will filter the details based on the selected merchant for a specified time period.

There are 3 main groups for the shipments:

The following image is for representation purposes only.
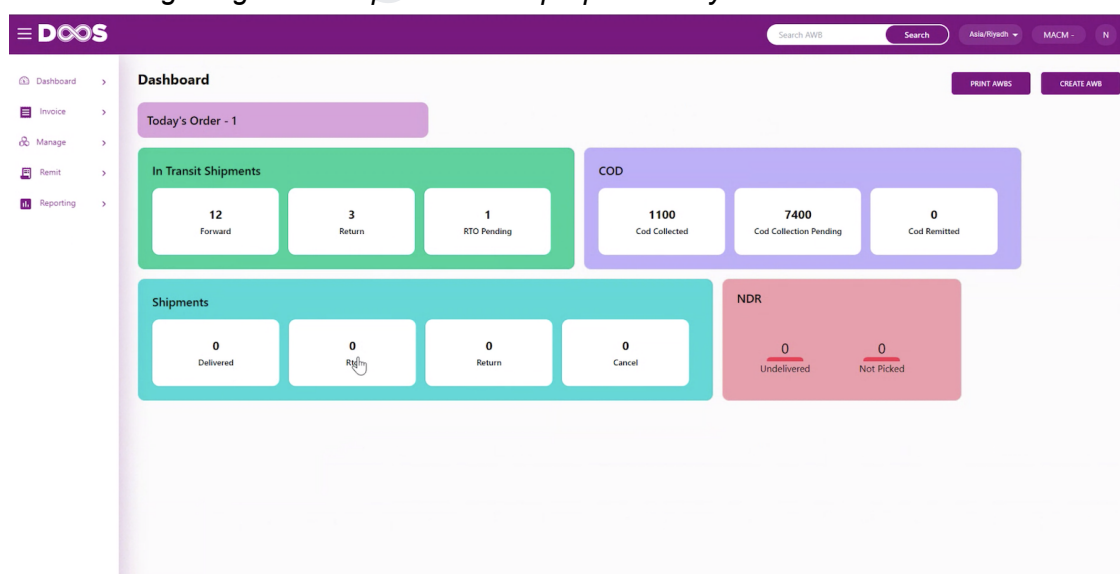
In Transit Shipments: These are shipments which are created but not yet completed. They can be in any of the following statuses:

> **Forward**: Shipments which are not yet delivered or RTO.
> **Return**: Shipments which are of customer return type but not yet delivered to the merchant.

COD:

> **Collected**: Total COD amount which has been collected by the driver, but not yet remitted to the merchant.
> **Collection Pending:** Total COD amount which is not yet collected ie. the COD AWBs which are not delivered to the customers yet.
> **COD Remitted:** Total COD amount which has been remitted to the merchant until date.

Shipments: It shows all the shipments which are completed. It will have filters for Today, Last 7 Days, Last 30 days, Six months.

> **Delivered**: All the forward shipments which have been delivered.
> **Returned**: All the returned shipments which have been returned to the merchant by the customer.
> **RTO**: All the forward shipments which have been marked RTO i.e. send back to the merchant.

NDR (Non-Delivery Report): This section would have AWBs which need merchant's input for further processing.

> **Undelivered**: All the forward AWBs which are in Customer Support stage. For Undelivered, the merchant should be able to update a comment and select either RTO or Retry. This update must be sent to SaaSmile .
> **Not Picked**: All the return AWBs which a driver is not able to pick up due to some reason. For Not picked, the merchant should be able to update a comment and select either Cancel or Retry. This update must be sent to SaaSmile.

Acceptance criteria

The merchant user and carrier admin are able to login and check the details of the shipment on the dashboard.
The dashboard details of both these users must tally.

2.7 Requirement 7 : Enable a detailed view of the shipment status from the dashboard for each shipment status [In-transit, COD, Shipments, NDR]. This should also be downloaded in a csv format.

There should be a section for displaying data in tabular format with below columns and filters on these columns. Clicking on Any of the above cards would put corresponding filters and display data.

The following image is for representation purposes only.

The following will be displayed:

1. AWB#
2. Order#: This is the merchant's (external) order reference number.
3. AWB Type [Delivery, Return]
4. AWS Status [List of possible values to be included]e.g. Customer support stage
5. Service: Standard, SDD, NDD etc.
6. Source City
7. Source Area
8. Destination City
9. Destination Area
10. Created At: Created Date & time in local timezone.
11. Picked At : Picked up date & time in local timezone.
12. Delivered At : Delivery date & time in local timezone.
13. Parcel count : No filter needed
14. Payment mode: COD or prepaid
15. COD Amount : No Filter needed
16. Currency
17. Shipment value
18. Shipment weight
19. Attempts

Acceptance criteria
CSV report of all the shipments for a given shipment status
List of the records for the selected shipment status on the screen

2.8 Requirement 8 : Enable tracking view of a selected AWB

When the merchant admin selects a particular shipment using the AWB, he must be able to view all the events that have occurred on that shipment at different points in time.

The following image is for representation purposes only.

Tracking details
1. UserName : The user who performed the action.
2. Time : When the action was performed
3. Reason: This has the reason in case of delivery or pickup failure.
4. Event: The event which happened on the AWB.
5. Status: status of the AWB
6. Lat-long: The lat long coordinate (should be a link to google map) where the event occurred.

Acceptance criteria
The merchant user is able to view all the events on a particular shipment using the AWB #.

2.9 Requirement 9 : Enable package view of a selected AWB

When the user selects a particular shipment using the AWB, the user must be able to view the details about that package.

The following image is for representation purposes only.

Package Details:

This table data should show the Items in the AWB.

1. Item Title
2. Item Type.
3. Action - Download POD: This should download all the files which has been upload by the delivery person as proof of delivery or pickup
4. Action - Print AWB Label: This would download the AWB label (PDF file) for the AWB.

Acceptance criteria

The merchant user is able to view all the package details of a particular shipment using the AWB #.

2.10 Requirement 10 : Finance menu : View freight rate for different shipment types

The freight rates for the different types of shipments [viz Forward, Return and RTO] will be set up by the carrier finance in SaaSmile. These are pre-discussed between the merchant and the logistics carrier. These should be available for view by the merchant in the Magento plugin.

Default rates are available that are applicable to all merchants.

The freight rate screen should display the different delivery types and the rates agreed between the merchant and the carrier. This is non-editable i.e. view-only to the merchant.

The different fields in this screen are:

Merchant id: Name of the merchant: Carrier:

Service type: Standard *<Currently, fixed. This should be selectable in the future.>*

Slab type: 1-100   SAR X
                101-500   SAR Y

Merchant - Freight Rate Setup
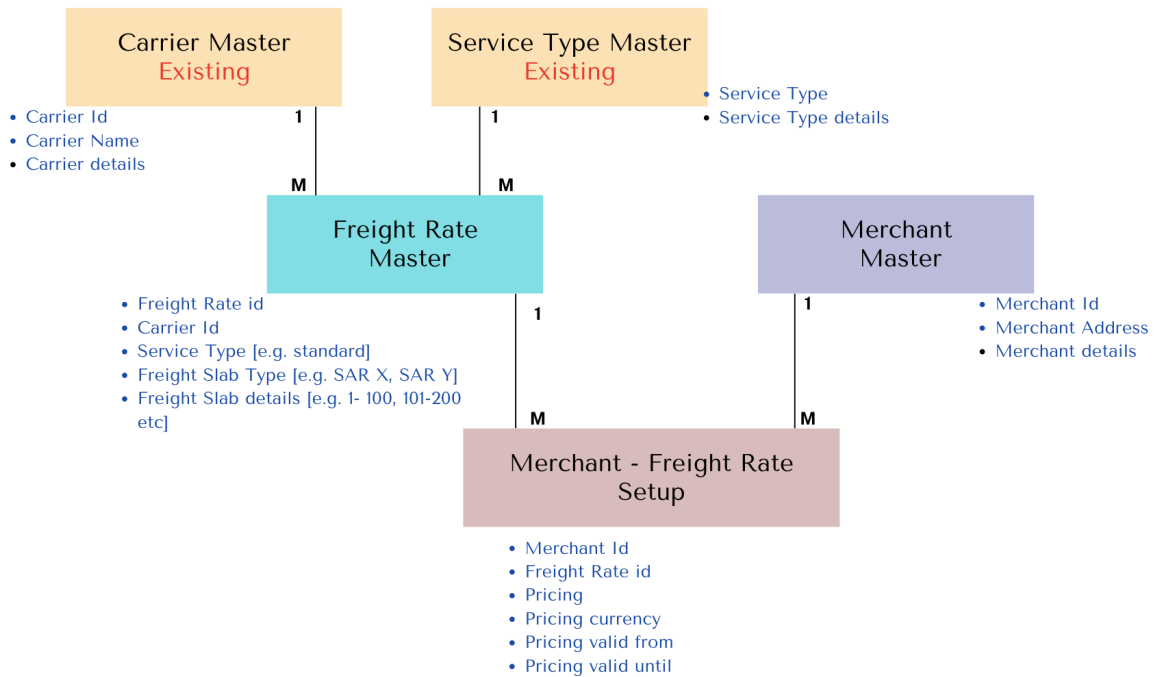
Acceptance criteria
The freight rates are set up before the plugin is available for the merchants.
The merchant user is able to see these on the screen.

2.11 Requirement 11 : View shipment Invoices for payment

The carrier finance will generate and send shipment invoices based on agreed freight rates to the merchant. The merchant should be able to view it in the Magento plugin.

The shipment invoice should have the following details:

Details to be taken from the carrier-to-merchant shipment Invoice, AWB and the carrier-to-merchant payment tables.

Field name	Description	Data source	Existing / New	Comments
Shipment Invoice#	Primary key	Invoice #	E	
Shipment Invoice period	Derived field from the date	Invoice date	Label	From the 1st of the month to the last day of the month
Generation date	Invoice date	Invoice date	E	
Generated by	User	Invoice	E	

		generated by		
Shipment Invoice amount	Label			
Amount w/o tax		Invoice amount	E	
Total Tax		Tax amount	E	
Total	Computed field	Sum of invoice amount + tax		
Total AWBs		AWB table	E	
Customer Invoice status	Status [Paid/unpaid/dispute]	Invoice status	E	Need list of possible values
Customer Invoice details	Label			
Customer Invoice - PDF	Hyperlink for the pdf version	Data from AWB table	E	Format of this report to be decided
Customer Invoice details	Link for the excel version	Data from AWB table for this invoice	E	
Payment details	Label			
Payment mode	List of values [bank transfer, card etc]		E	Need list of possible values
Payment txn #		Payment txn #	E	
Payment date		Payment date	E	
Payment detail	Image of the payment shared by the merchant		E	
Carrier's comment			E	

Acceptance criteria

<mark>The merchant user is able to view the shipment invoices in the Magento plugin and this should tally with shipment invoices for a merchant @ carrier end.</mark>

2.12 Requirement 12: Upload shipment invoice payment details

<mark>Magento plugin</mark> should allow merchants to upload shipment invoice payment details. <mark>The actual payment itself is outside the system. Only the proof of payment is included using the Magento plugin.</mark>

An input should open for the merchant, to update the payment details made against a particular shipment invoice :

Field name	Description	Data source	Existing / New	Comments
Shipment Invoice#	Primary key	Invoice #	E	Display only
Shipment Invoice period	Derived field from the date	Invoice date	Label	Display only
Payment details	Label			
Payment receipt #		Payment receipt #	E	Max 20 characters
Payment mode	List of values [online / cash / card etc]		E	Need list of possible values
Payment detail	Image of the payment shared by the merchant		E	Up to 3 images can be loaded and stored
Merchant's comments			E	Max 30 characters

The status of the Shipment invoice would update to 'paid'.

Acceptance criteria
The merchant user should be able to upload payment details for a shipment invoice.

2.13 Requirement 13 : <mark>View</mark> COD Remit details

The carrier finance would create the COD remittance invoice in SaaSmile. He will also make the payment and upload the payment proof in SaaSmile portal. The proof and comment would be visible to the merchant here, which would be confirmed by the merchant. The Magento plugin should display the Remittance paid by the carrier to the merchant.

Following fields should be displayed.

Details to be taken from the carrier-to-merchant remittance Invoice, AWB and the carrier-to-merchant remittance payment tables.

Field name	Description	Data source	Existing / New	Comments

Customer Invoice#	Primary key	Invoice #	E	
Customer Invoice period	Derived field from the date	Invoice date	Label	Monthly basis
Generation date	Invoice date	Invoice date	E	
Generated by	User	Invoice generated by	E	
Remit amount	Label			
Total AWBs		AWB table	E	
Customer Invoice status	Status [Paid/unpaid/dispute]	Invoice status	E	Need list of possible values
Remit details	Label			
Remit - PDF	Hyperlink for the pdf version	Data from AWB table	E	Format of this report to be decided
Remit details	Link for the excel version	Data from AWB table for this invoice	E	
Payment details	Label			
Payment mode	List of values [bank transfer, card etc]		E	Need list of possible values
Payment txn #		Payment txn #	E	
Payment date		Payment date	E	
Payment detail	Image of the payment shared by the merchant		E	
Carrier's comment			E	

Acceptance criteria

The merchant user must be able to view the payment status of the remittance invoices.

2.14 Requirement 14 : Confirm remittances

Approval for multiple remittances at the same time should be possible on the Saasmile platform.

The carrier admin logins to the SaaSmile platform, confirms the remittance to the merchant. He has to reconfirm this. A pop-up message "You are confirming the settlement of the invoice. This step can't be reverted" will be displayed.

The status of the invoice would be updated to 'paid'.

Acceptance criteria
The carrier finance should be able to approve multiple remittances payable to the merchant.

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2.15 Requirement 15 : Confirm receipt of remittances

The merchant user logins to the plugin, confirms the receipt of the remittances.

The status of the invoice would update to "completed".

Acceptance criteria
The merchant user should be able to confirm receipt of remittances from the merchant.

2.16 Requirement 16 : Create a manual AWB for an order in the ecommerce system's Order management

This feature allows a merchant to create a manual AWB for an order in the ecommerce's Order management system. Merchant admin/user will use the shipment interface on the plugin to create AWB. To create an AWB through this option, following fields need to be set by the merchant.

1. Shipment Type: Whether it is "Delivery" or 'Return". Mandatory
2. Source Address: Mandatory
   In case of "Delivery", this should display the address of the "Inventory Location" (as described in step 4. It should also have an option to fill in a new address.
   In case of "Return", this should display a form to fill in a new address.
3. Destination Address: Mandatory
   In case of "Delivery", this should display a form to fill in a new address.
   In case of "Return", this should display the address of the "Inventory Location" (as described in step 4. It should also have an option to fill in a new address.
4. New Address form should capture the following fields.
   Lat long: Allows the user to drop the pin on google map. Mandatory
   City: auto populated based on dropped pin. Mandatory
   Area: Auto populate based on dropped pin. Mandatory
   Address Line 1 : Mandatory
   Address Line 2: Mandatory
   Name: Mandatory
   Email ID: Mandatory

Country code : Drop down with pre populated values. Default should be 966 (Saudi code)

Phone number. Mandatory

5. Number of packages: Number of boxes for the shipment. Mandatory
6. Weight: Weight of the AWB. Mandatory
7. Payment Type : COD or prepaid. Mandatory
8. COD amount : If payment type is COD, then this field is mandatory, In case of prepaid, this field should be disabled.
9. Insurance amount : Optional field
10. Total shipment value : Optional field
11. Order ID: Mandatory field
12. Promised delivery date: Optional field.
13. Preferred delivery date and time: Optional field.
14. Preferred pickup date and time: Optional field.
15. Service type: Only one option "Standard" should be auto selected.
16. Description: Optional field. 25 characters field
17. Instruction: Optional field. 25 characters field
18. Enable OTP: A check box
19. Package details: This is an optional field. Depending on the number of packages entered in step e, it should ask to enter package details. Each package can have 0 to 5 items. For each item, the user should be asked to enter

    item Title: Text Field

    item type : Text field

20. On submitting the above values, SaaSmile would return an AWB number. The user should be able to copy this value for reference.

Acceptance criteria
The merchant user should be able to create an AWB for an order.

3. Technical requirements

Requirement 20:
● As SaaSmile would be hosting multiple carriers, each carrier would have the same plugin with their logo and name.

Requirement 21:
● Each carrier partner will have four different plugin published at respective marketplace (WordPress, Magento, Shopify & Salla)
● At the time of new carrier partner onboarding, white labelling of the latest version of the plugin should be done. Ie. duplicating the plugin and adding the new carrier partners logo, brand theme etc. (this process will be done manually from the developers side)
● All carrier partners plugins will be 100% identical, in terms of the functionalities, UI and UX. The brand logo and color theme will change based on the carrier partner's brand.

- The plugin should have the tagline 'Powered by SaaSmile'.
- Plugins updates will be pushed to the marketplace - the carrier partner's merchant can update from there. (They can either update manually or set auto-update from the ECommerce admin panel)
- The information and databases on SaaSmile platform and plugin should be identical and centralized.
- An efficient cloud server with high accessibility and modular structure is recommended.

4. Information architecture

Given for representation purpose of the relationship between the different entities. The production version of the existing DB should be shared for dev purposes.