WHITE PAPER

TRIMIT E-commerce Returns Communication

TRIMIT version: 25.2 E-commerce version: JAN26_003
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Introduction

This white paper describes the **Returns Communication functionality** in TRIMIT E-commerce. The solution enables structured and traceable communication between customers, portals, and back-office users, fully embedded within TRIMIT Business Central. Instead of relying on external communication channels such as email, the feature brings all interactions into the transactional context, ensuring that communication is always linked to relevant business data.

The purpose of this document is to provide a combined business and technical understanding of the feature. It explains the value from a business perspective while also providing insight into how the functionality works, how it is configured, and how it behaves in real-life implementations.

This document focuses on TRIMIT-specific functionality and does not cover standard Microsoft Dynamics 365 Business Central features.

The functionality described is the functionality as of **TRIMIT 25.2 for Business Central W1 BC27.X**.
The pictures in this White Paper are based on the demo data for **TRIMIT 25.2,** which is based on Microsoft Dynamics 365 Business Central 2025 Release Wave 2, in the demo company **CRONUS TRIMIT W1 Ltd.** (based on CRONUS International Ltd. of Microsoft Dynamics 365 Business Central).

Core Concepts and Terminology

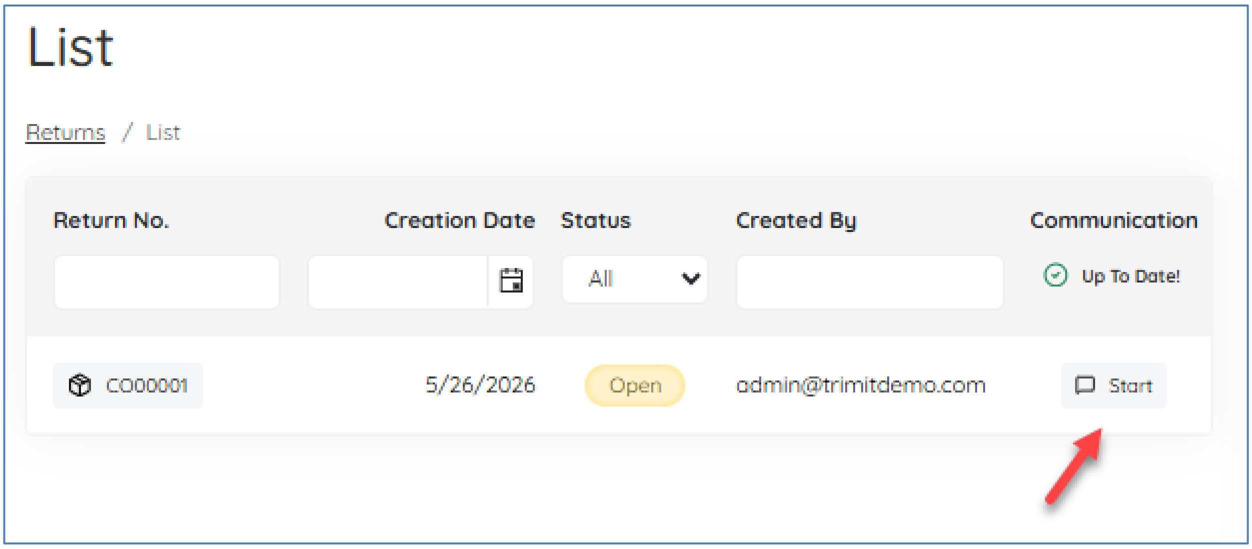
The solution introduces several important concepts which can be viewed below:

Term	Explanation
Returns Communication	Communication related to an existing return
Agent Communication	Communication initiated before a return exists
Communication Thread	Full conversation history
Complaint	Business Central object used to manage returns
Related Record	Document linked to communication
Thread Number	Identifier grouping messages

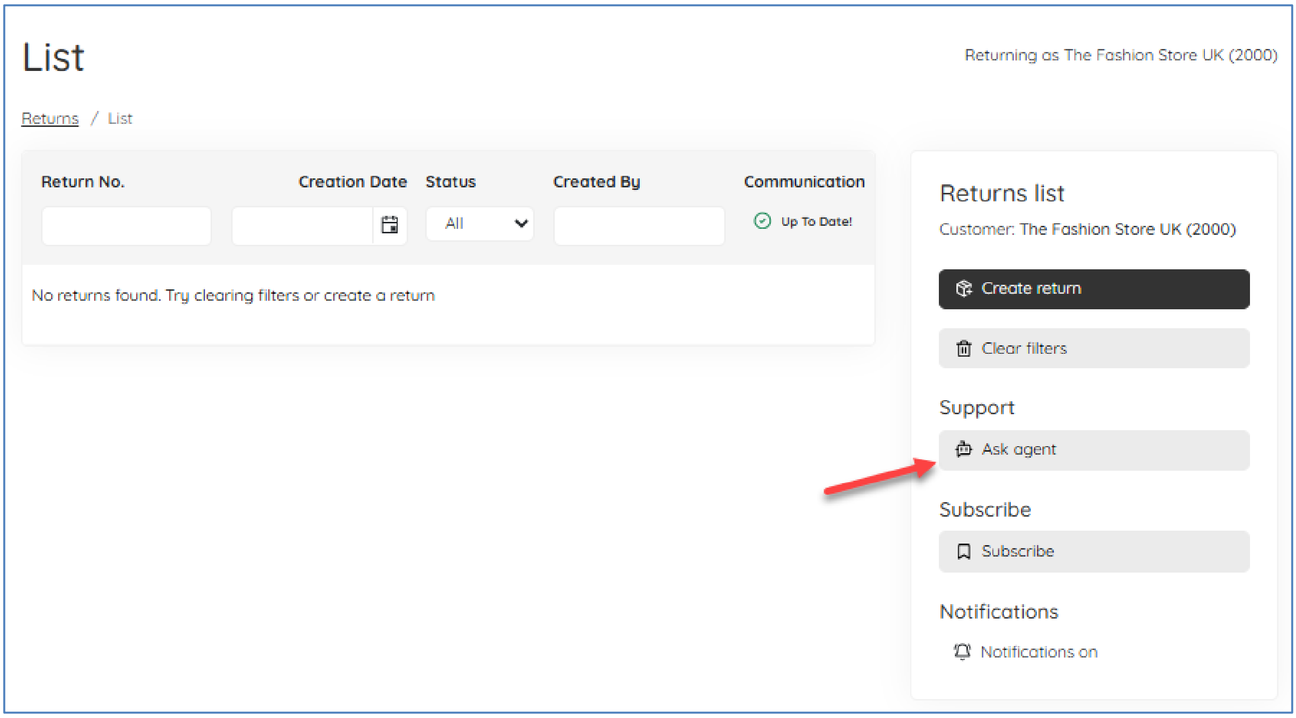
At the center of the solution is the concept of a **communication thread**. A communication thread represents a full conversation, consisting of multiple messages that are grouped together under a single identifier. This ensures that all dialogue between a customer and internal users is preserved and accessible as a continuous timeline.
Messages can be received from the portal or be purely internal between TRIMIT Business Central users. This distinction ensures that communication is clearly separated between internal and external use, preventing unintended exposure of internal discussions.
Communication threads also have a type, which determines their usage context. General communication is categorized as "Default", while communication tied to return processes is categorized as "Complaint". This distinction is especially important for notification routing and process handling.
A key capability of the communication module is the ability to relate a thread to business data. A communication can be linked to one or more records, such as a customer, a return (complaint), or a sales document. One of these relations is always defined as the primary context, which determines how the communication is presented in the system.
Two important usage patterns exist in the returns domain. **Returns Communication** is directly linked to an existing return and follows its lifecycle. **Agent Communication**, on the other hand, begins before a return is created and serves as a pre-return interaction that can later be attached to a complaint.
Although communication threads have their own identifiers, the E-commerce portal uses return numbers as the primary reference for user-facing consistency.

Business scenario overview

TRIMIT Returns Communication addresses typical challenges in product return processes where communication is fragmented or lost in external channels like email. The feature centralizes all communication in the TRIMIT ecosystem. Typical scenarios include customers requesting status updates, submitting missing details, or clarifying return conditions.
Below image shows a start communication button for an existing sales return (complaint) document within the TRIMIT E-commerce:



Additionally, communication can begin before a return is created using the **Ask agent** feature (see Agent Communication in Core Concepts), helping prevent incorrect return registrations.



Ask agent feature is also available on the customer dashboard in dock Returns.

Solution Overview

The Returns Communication solution connects multiple layers:

- **E-commerce portals (B2B / Sales Agent)** – customer interface
- **TRIMIT Business Central** – core processing and storage
- **Notification services** – delivery of alerts

All communication is:

- Stored centrally

- Linked to business records
- Presented as a threaded conversation

There are two independent notification mechanisms:
- Email notifications are generated directly from TRIMIT BC
- Web and push notifications are handled through Modelyn
- Modelyn email scheduling is currently not used in production

Key Capabilities
- Thread-based communication history
- Multi-record linking (customer, complaint, etc.)
- Automated notification handling
- Internal vs external visibility control

Scope and Usage Considerations

The Returns Communication functionality is designed to handle structured, thread-based communication related to returns and pre-return interactions within TRIMIT E-commerce and Business Central.
The following considerations define the intended scope of the solution:

Scope of usage

The functionality is primarily intended for:
- Communication directly related to return processes (complaints)
- Pre-return inquiries handled through Agent Communication
- Scenarios where communication must be linked to business records and retained for traceability

Out-of-scope scenarios

The functionality is not intended to replace all forms of communication. In particular:
- General customer communication not related to transactional context
- High-volume notification scenarios where no user interaction is required
- External communication workflows managed outside TRIMIT or E-commerce portals

Process dependency

The solution assumes that communication is part of a structured return process. Linking Agent Communication to return records is a manual step and must be incorporated into operational procedures.

Portal-specific behaviour

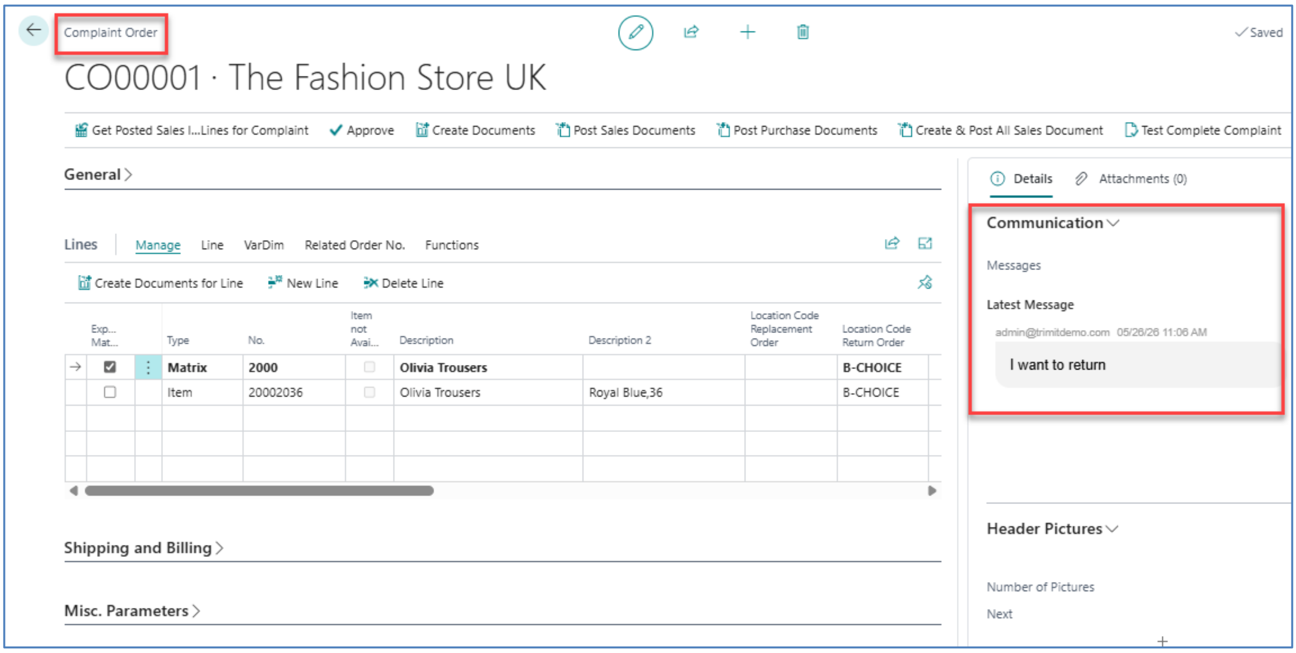
Communication visibility and notifications are dependent on the originating portal (B2B or Sales Agent). The same communication thread may not be visible across different portal types.

These considerations should be taken into account when designing business processes and deciding where Returns Communication should be applied.

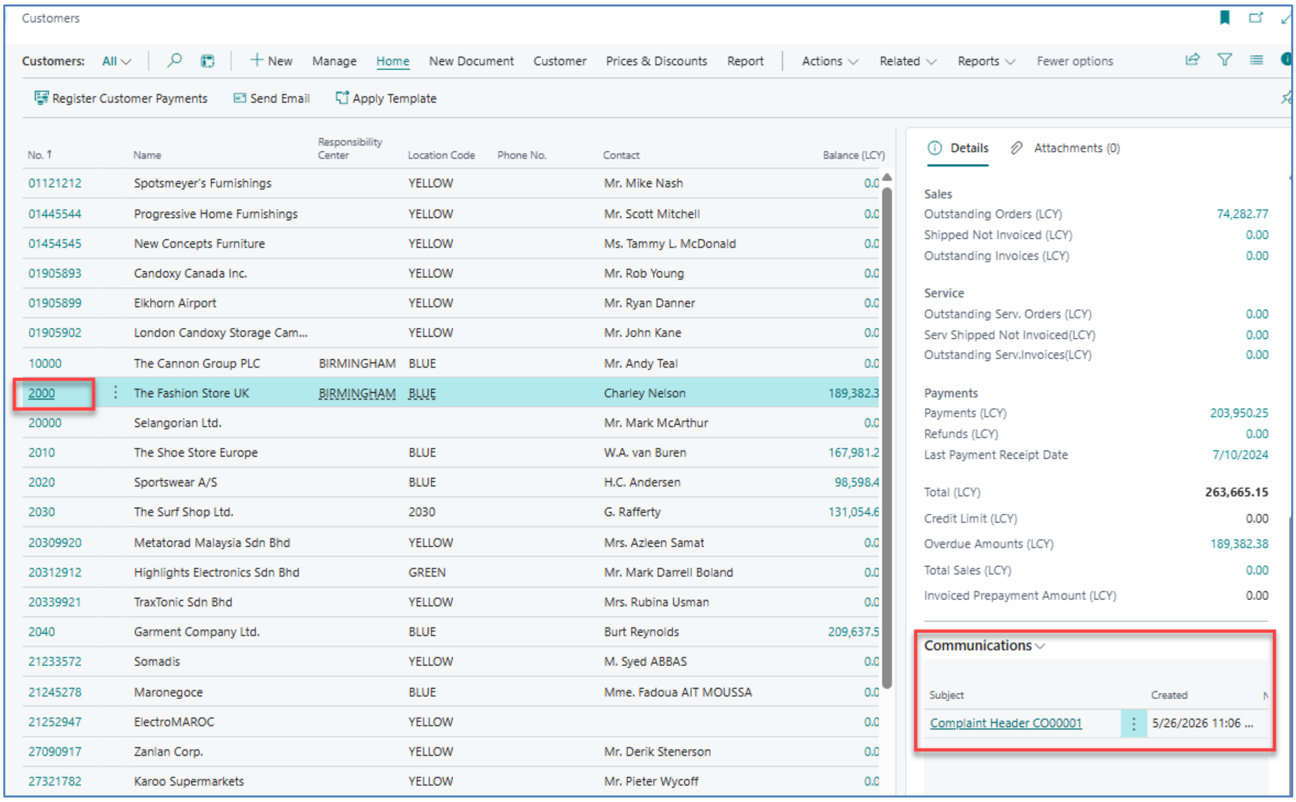
Communication Flows

There are multiple communication flows depending on the stage of the return process. If a return exists, communication is directly linked to it. If not, communication starts independently and may later be associated manually. Internal users can respond through TRIMIT BC, maintaining a consistent conversation thread. Notifications are distributed through multiple channels to ensure visibility. Communication records are being related to the respective modules, in this case to complaints and customers inside TRIMIT. E.g. existing communication can be found on a complaint card as well as on a customer card, see images below.

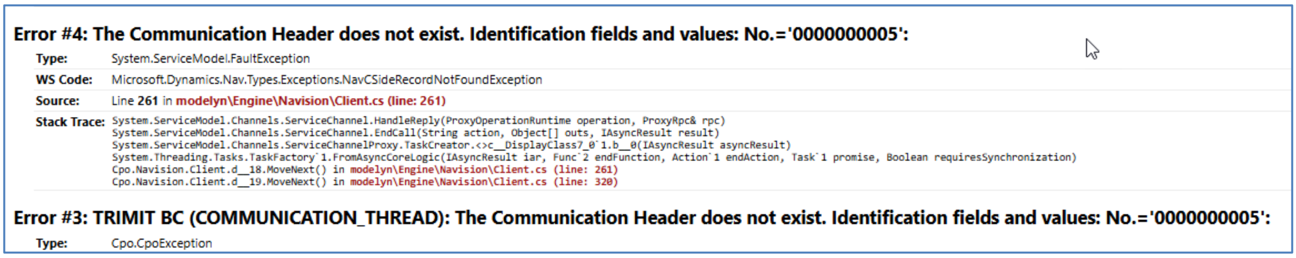
Communication display on a complaint card:



Communication display on customer list:

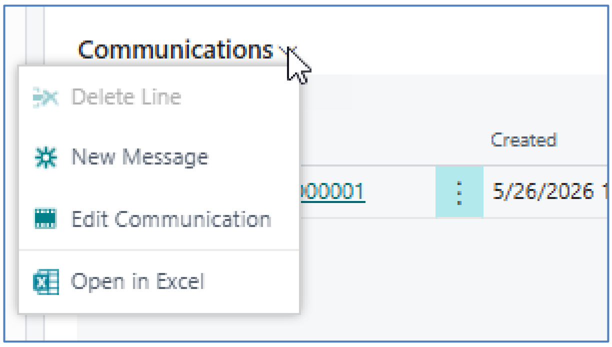


NOTE: deletion of the messages in the communication thread in TRIMIT is technically possible but not recommended due to E-commerce dependency. Deletion can cause the following hard error on portals: *Communication header does not exist.*



View or edit a communication thread from a customer list in TRIMIT:

- Select a customer from the customers list in TRIMIT BC
- Expand the FactBox pane
- Locate FactBox Communications
- If there are several communication threads – select the needed one
- In the FactBox header click on the arrow down and select New Message



- Select the type of message
- Write down the message and click **Send and Close**

The same method is applicable to communication threads in ***Complaint Order List***.

End-to-End Example: From Customer Inquiry to Completed Return

The following example illustrates a complete end-to-end scenario showing how Returns Communication supports the return lifecycle across TRIMIT E-commerce and TRIMIT Business Central.

Step 1 – Pre-return inquiry (Agent Communication)

A customer logs into the TRIMIT E-commerce portal and uses the **Ask agent** function in the Returns dock to ask whether a product is eligible for return. A new **Agent Communication thread** is created without an associated return (complaint).

Step 2 – Agent response

A back-office user receives a notification in TRIMIT Business Central and responds to the inquiry directly from the Communication FastTab on the Customer or Communications page. The response is added to the same communication thread.

Step 3 – Return creation

Based on the guidance received, the customer submits a return request through the portal. A return (complaint) document is created in TRIMIT Business Central.

Step 4 – Linking communication to the return

The existing Agent Communication thread is manually linked to the newly created complaint using *Communications → Related → Relate Record*. This transition from Agent Communication to Returns Communication is manual and must be explicitly performed in TRIMIT BC. From this point forward, the communication is treated as **Returns Communication**.

Step 5 – Ongoing return communication

Additional messages, requests for documentation, and status updates are exchanged within the same communication thread. Notifications are sent according to the configured notification methods.

Step 6 – Return completion

Once the return is processed and closed, the communication thread remains available as a complete, auditable history linked to the return record.

Create a return from Agent Communication

When E-commerce users want to ask a question via Agent Communication the return (complaint) is not created automatically. Instead, users can create and submit a return from the E-commerce portal. To relate the agent communication to the complaint in TRIMIT it is required to do it manually via Communications page.

Relation to Return Records

To establish a connection between the communication thread and a return record, one of the following actions must be performed:

- **Create a new return,** independently but based on the existing communication, or
- **Link the communication to an existing return** that currently does not have an associated communication thread

This relationship is configured within TRIMIT Business Central using the following navigation: *Communication page → Related → Relate Record*

After the relation of agent communication and a complaint in TRIMIT is complete – the agent communication line in the Returns list on the E-commerce portal is removed and communication thread is available via the return communication.

It is not possible to relate several agent communication threads to the same complaint (return) – you will get a message "*This record is already related to this communication number* <…> ".

Edge Cases, Limitations, and Known Behaviours

While the Returns Communication solution is designed to be robust and flexible, the following edge cases and limitations should be considered during implementation and usage.

Unlinked Agent Communication

Agent Communication threads exist independently until they are manually linked to a return (complaint). If no link is established, the communication remains visible only as a pre-return inquiry and does not appear under a return record.

One-to-one relationship between communication and return

A single return (complaint) can be linked to only one communication thread. Attempting to relate multiple Agent Communication threads to the same complaint results in an error message.

Deletion of communication threads

Although communication threads and messages can technically be deleted in TRIMIT Business Central, deleting a thread that is referenced by the E-commerce portal will result in an error state on the portal side. For this reason, deletion of communication must not be used in production unless explicitly managed.

Message immutability on portals

Messages sent from E-commerce portals cannot be edited or deleted by portal users after submission. This ensures message integrity but may require clarification or follow-up messages if incorrect information is sent.

Notification dependency

Notification delivery depends on correctly configured services (email, Firebase, web notifications). Misconfiguration may result in delayed or missing alerts without affecting the underlying communication records.

Cross-portal visibility

Communication visibility is portal-specific and not synchronized across portal types.
There might be a difference in Returns list records for the same customer on B2B and SA portals. This is because the Agent communication created on B2B will not be reflected for the same customer on SA, even if logged in as the same user.

Cross-portal web notifications

Web notifications (bell icon on Returns dock on the dashboard and red dot on Returns list) are shown only on the portal where the communication was initiated. E.g. if customer 2000 creates a return on B2B and starts communication for that return, then the Sales Agent portal will not reflect communication related web notifications for that customer.
Technical explanation: **CT.Portals.Notification** table can hold only one value for **PortalId**:

Message	PortalId	CustomerNo	DocumentNo	MasterNo
You have 1 unread messages for return CO00006.	b2b	2000	CO00006	
You have 1 unread messages for return CO00007.	b2b	2000	CO00007	
You have 1 unread messages for return CO00011.	b2b	2000	CO00011	
You have 1 unread messages for return CO00016.	sa	2000	CO00016	

File Upload Size and Compression Limitations

*NOTE: File upload size and compression handling for Returns and Returns Communication is supported from **TRIMIT E-commerce version JAN26_004** onward. At the time of writing, version **JAN26_004** is not yet released.*

To optimize storage usage in TRIMIT BC and prevent unnecessary database growth, file uploads related to Returns and Returns Communication are subject to size, dimension, and compression limitations. These limitations are enforced at the E-commerce portal level before files are transmitted to TRIMIT BC.

Portal-Controlled File Processing

File processing behaviour for uploaded files is controlled by theme values configured in the E-commerce portals. These settings apply to files uploaded during:
- Return creation
- Returns Communication threads
- Agent Communication threads

If no custom configuration is applied, the portal uses the default values described below.
The theme values:
<value id="ReturnsCompressFiles">false</value>
<value id="ReturnsFileMaxWidth">800</value>
<value id="ReturnsFileMaxHeight">800</value>
<value id="ReturnsFileQuality">80</value>
<value id="ReturnsFileMaxSize">6000</value

Theme values description

- **ReturnsCompressFiles**

Enables or disables compression of uploaded files.
Default: *FALSE*
When set to *FALSE*, files are uploaded without compression. When enabled, image files may be resized and compressed according to the configured limits.

- **ReturnsFileMaxWidth**
  Maximum allowed width (in pixels) for image files.
  Default: 800
  Images exceeding this width are resized proportionally before upload.

- **ReturnsFileMaxHeight**
  Maximum allowed height (in pixels) for image files.
  Default: 800
  Images exceeding this height are resized proportionally before upload.

- **ReturnsFileQuality**
  Image quality applied during compression or resizing.
  Default: 80
  Higher values preserve more detail at the cost of increased file size.

- **ReturnsFileMaxSize**
  Maximum allowed file size in kilobytes.
  Default: 6000
  Files exceeding this size are processed according to the configured compression and resizing rules or rejected if they cannot be reduced below the limit.

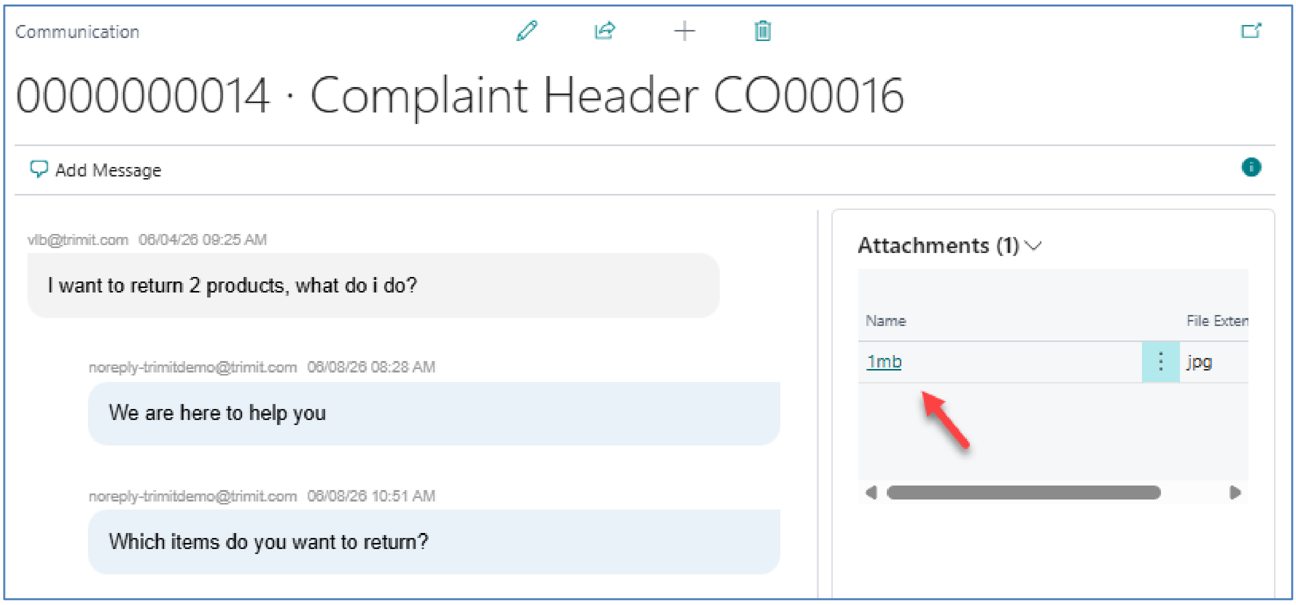
These controls ensure that uploaded files are optimized before being stored in TRIMIT BC, helping to maintain predictable database growth and system performance.

Viewing Uploaded Attachments in TRIMIT

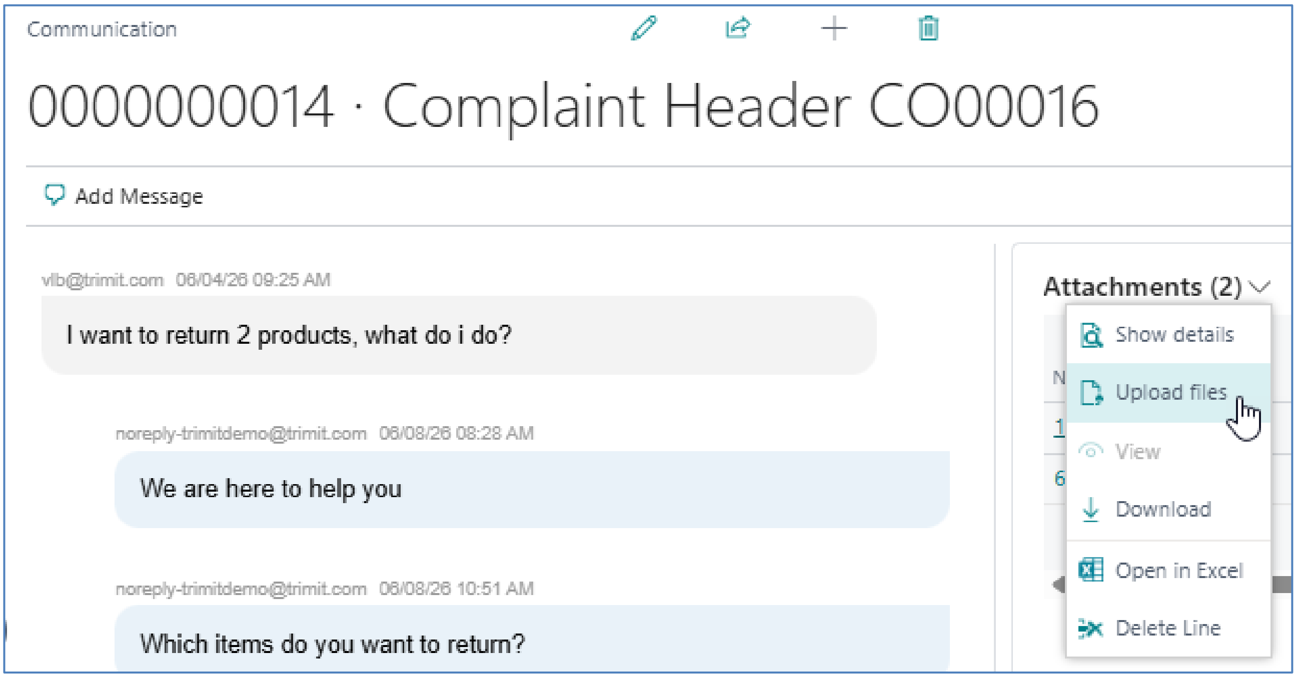
Files uploaded from the E-commerce portals are stored as attachments and can be accessed from different locations in TRIMIT BC depending on the context.

Returns Communication attachments

Attachments uploaded as part of a Returns Communication or Agent Communication can be viewed from the communication thread page when the thread is opened via the **Communications** list in TRIMIT BC.

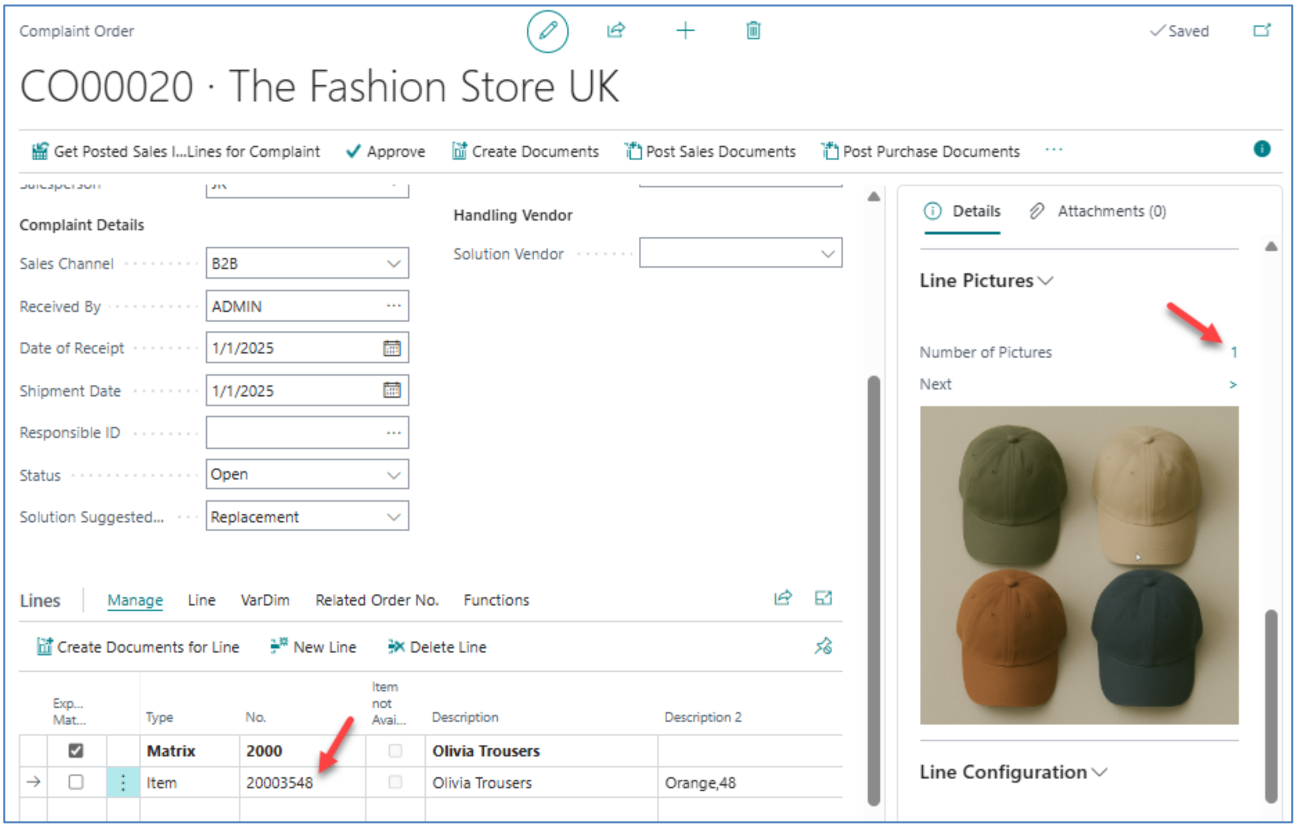


It is also possible to attach a file from the Communication thread in TRIMIT BC. For this, expand *Attachments* and select *Upload files*:



Complaint document attachments

Files attached to a Complaint (return) document can be viewed at the line level. After selecting a complaint line, attached images are displayed in the *Line Pictures* FactBox on the right-hand side. The ***Number of Pictures*** field reflects the total number of attachments associated with the selected line. This number in clickable and opens Order Picture List with image preview. To preview .webp files click **Zoom**..



Video File Upload Support

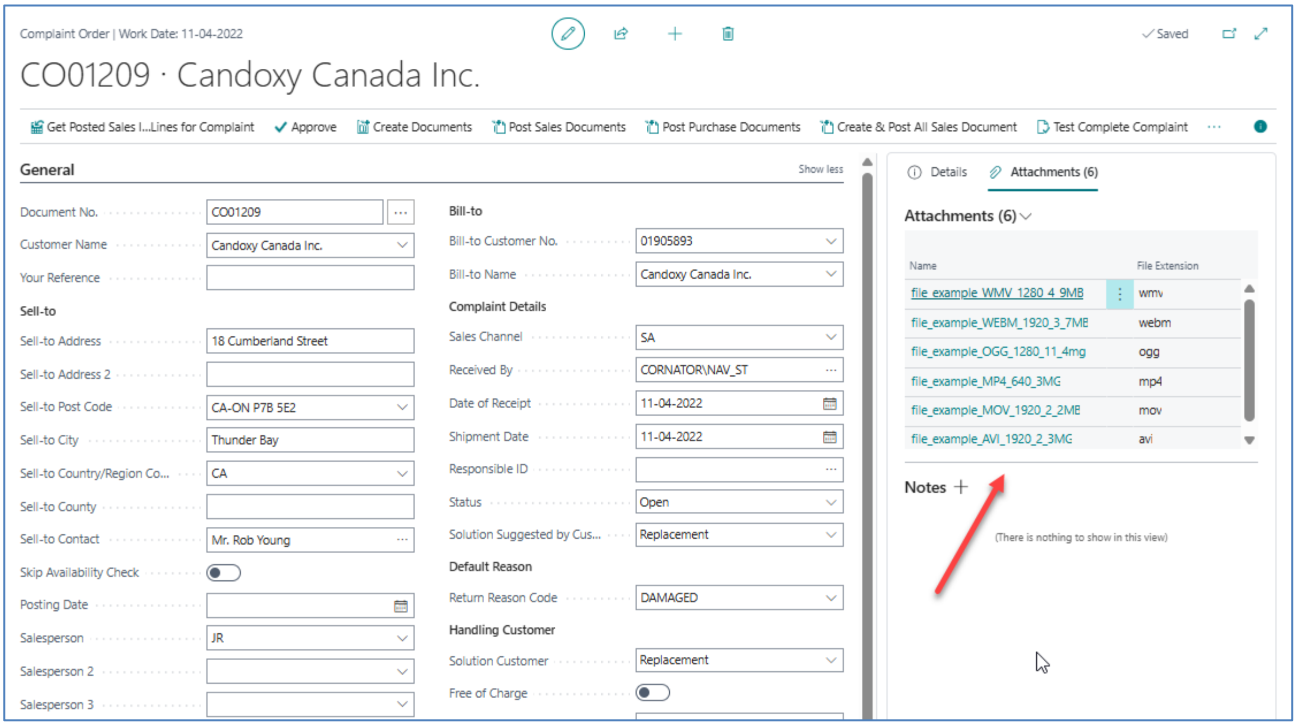
In addition to image files, the E-commerce portals support uploading video files during:

- Return creation
- Returns Communication threads
- Agent Communication threads

The portals support uploading most common video file formats. Video files are handled differently from image files once stored in TRIMIT Business Central.

Storage and visibility behaviour

- Video files uploaded from B2B or Sales Agent portals are attached at the **Complaint (return) header level** in TRIMIT BC.
- These video attachments can be accessed from the **Attachments FactBox** on the Complaint card header.
- Video files are **not attached to complaint lines**.



This behaviour differs from image files uploaded during returns processing. Image files are associated with individual complaint lines and are displayed in the **Line Pictures FactBox** when a complaint line is selected.

Operational Considerations

- File size limits and image processing rules are enforced exclusively by the E-commerce portals and cannot be overridden from TRIMIT BC.
- Changing portal theme values affect all future uploads and does not retroactively modify existing attachments.
- Proper configuration of these limits is essential to balance image quality requirements with storage and performance considerations in TRIMIT BC.

Architecture and Data Model

The solution is built on the TRIMIT Communication module, which provides a flexible and scalable architecture for handling threaded communication.

At its core, the system distinguishes between three main data elements. The **Communication Header** represents the thread itself and contains metadata such as the identifier, subject, type, and relations. The **Communication Lines** represent individual messages within the thread and include information about direction, sender, and references. The **Communication Relations** define how the thread is linked to Business Central records. Below is the description of the main element of the solution.

Communications page

This page represents Communication Header. Below is the description of the columns in the visible area.

Description of the fields

No.
Communication thread number. Inserted automatically as soon as Returns or Agent communication is initiated from the E-commerce. This number is clickable and opens a communication thread window, where it is possible to view all the messages in a thread, view attachments and create a new message

Subject
Filled in automatically for an existing return (complaint), e.g. "Complaint Header CO00001". This field is not filled in automatically for an Agent communication, even after the Agent communication had been related to a complaint.

Type
Determines notification routing, auto populated. Available options: *Default* and *Complaint*.

Related Record
Auto-populated for existing returns' communication. Not populated for Agent communications unless it is manually related to a complaint.

From
Auto-populated with the user's credentials, i.e. email. Reflects the sender of the latest message in the communication thread.

Message Preview
The preview of the last message in the thread

Customer
Auto-populated with a customer number from E-commerce portals

No. of Relations
Count of Communication Relation records. E.g. in case of an existing return related communication thread, there will be two relations – one to a complaint and one to a customer. This number is clickable and opens Communication Relations card.

Notify Recipient
Triggers the TRIMIT logic to update My Notifications when set

Notify Recipient Group
Extends the notification to the configured user group

Description of the controls (Communications page)

Manage
Has the following sub controls:

Edit – opens communication thread card
View – opens communication thread card
Delete – deletes the communication thread record. This can lead to an error state on E-commerce (record cannot be found)

View
Opens communication thread card

Open Related Record
Opens complaint order card if it exists

Edit Communication
Opens Communication Lines card. This is a communication thread representation, where each line is a message. Here is it possible to delete or edit the messages in the thread

Action
Has the following sub controls:

Enable / Disable Notifications – triggers to update Communication Notifications when set

Related
Has the following sub controls:

Relations – opens a Communication Relations lookup
Attachments – opens Attached Documents page, where it is possible to view or attach files
Relate Record – opens Complaints Order List for unrelated Agent Communication

Communication Notification Entries
In this page - one entry per notification instance created when a message is posted (both existing threads and new threads, also Agent communication). Entries are surfaced in My Notifications (in the Role Center, tile Communications) and drives both push and e-mail delivery.

Description of the fields

Recipient User ID
TRIMIT BC user who should receive the notification. Existing return communication gets a recipient credentials (value is coming from **User Name** field on ***User Card*** page). Agent communication gets a '-' value. In both cases the values are clickable and open a communication thread window. This field can be blank in two cases:

- Notification sent to a user group
- Direct call with empty user ID (user ID and group code are empty)

To set a group code to a user, open ***My User Settings*** page and select group code(s) in **field Workflow User Groups** (you can select multiple using "|"). When notification is created for a group rather than a specific user, a user will see that notification only if their **Workflow User Groups** setting matches the **Recipient User Group** on the notification entry. It is the mechanism that ties a user to group-targeted notifications.

Recipient User Group
User group code if the notification targets a group

Type
Communication type. Available options: *Default / Complaint*

Related Record
Auto-populated for existing complaints, e.g. "Complaint <number>". Not auto-populated for Agent communication notifications

Created Date-Time
Creation date

Created By
Service account used by E-commerce connection string

Description of the controls (Communication Notification Entries page)

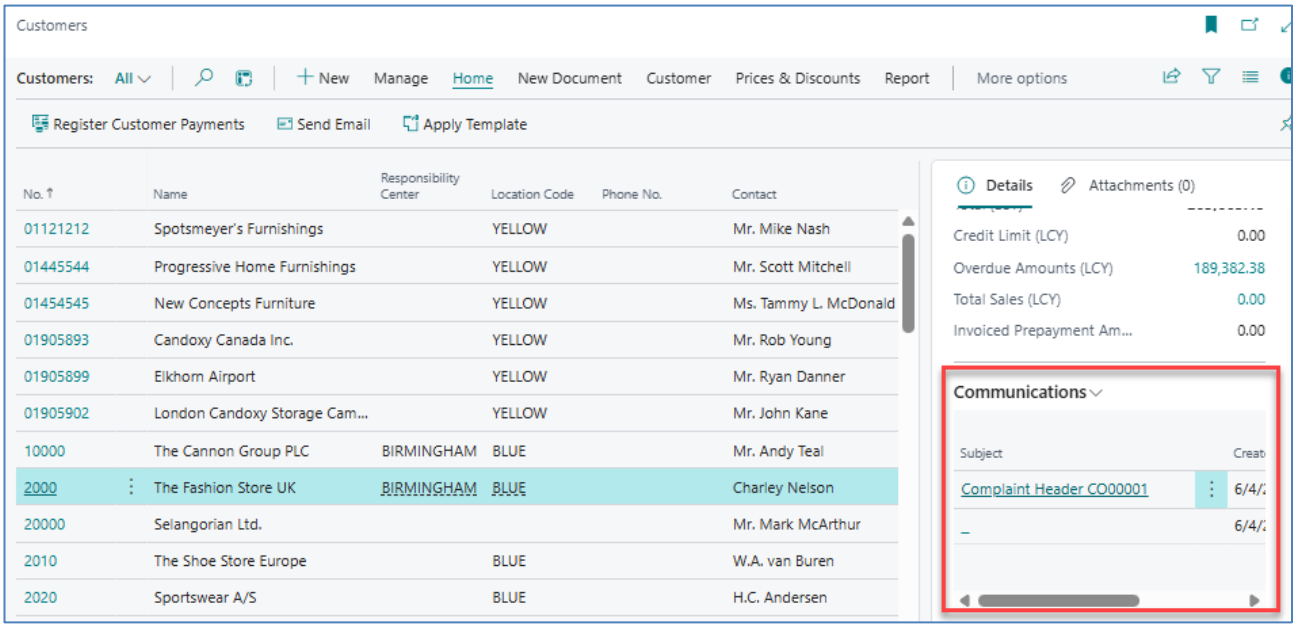
Mark as Read
Removes record from the list

Open Record
Opens a related complaint

Open Communication
Opens a related communication thread

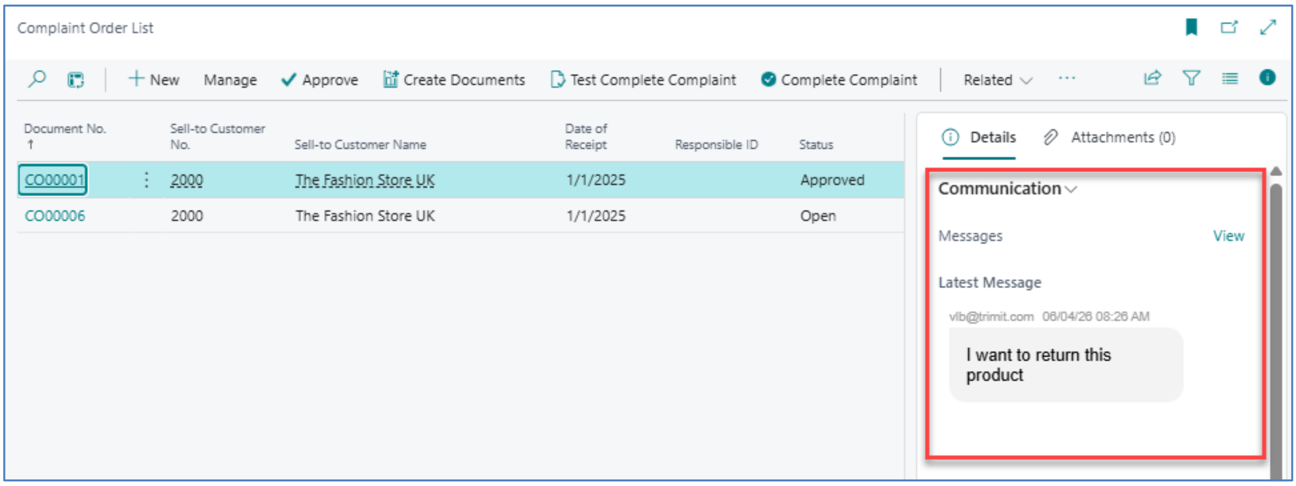
Customer page (communication FastTab)

This page has a FastTab which is dedicated to Communication. Clicking on the header of the FastTab it is possible to create a new message or edit the communication.



Complaint Order list page (communication FastTab)

This page has a FastTab which is dedicated to Communication. Clicking on the header of the FastTab it is possible to view, create a new message or edit the communication.



Security, Access Control, and Visibility

Returns Communication is designed with clear separation between internal and external communication to ensure data security and controlled visibility.

Internal vs external messages

Communication lines are explicitly marked as internal or external. Internal messages are visible only to authorized TRIMIT Business Central users and are never exposed to E-commerce portal users.

Portal user access

Portal users can view and respond only to communication threads that are linked to their customer account. They have no access to internal messages or unrelated communication threads.

Back-office access

TRIMIT Business Central users can access communication threads through related records (customers, complaints) or via the Communications page, depending on their permissions.

Auditability

All communication messages are stored centrally within TRIMIT Business Central and remain available for auditing and historical review, supporting compliance and traceability requirements.

Authentication and integration security

Communication between TRIMIT Business Central and Modelyn services uses a dedicated technical user and token-based authentication to ensure secure, login-free background processing.

Prerequisites and Requirements

Before using the feature, ensure that the correct TRIMIT version is installed and integrated with Business Central. Notification services must be configured and required authentication and infrastructure components must be operational. Proper configuration ensures stable communication flow and notification delivery.

You must have at least TRIMIT version 25.2.17.569 installed. E-commerce version at least JAN26_003. Ensure Business Central integration, Modelyn setup, and notification services are configured.

Configuration and Setup

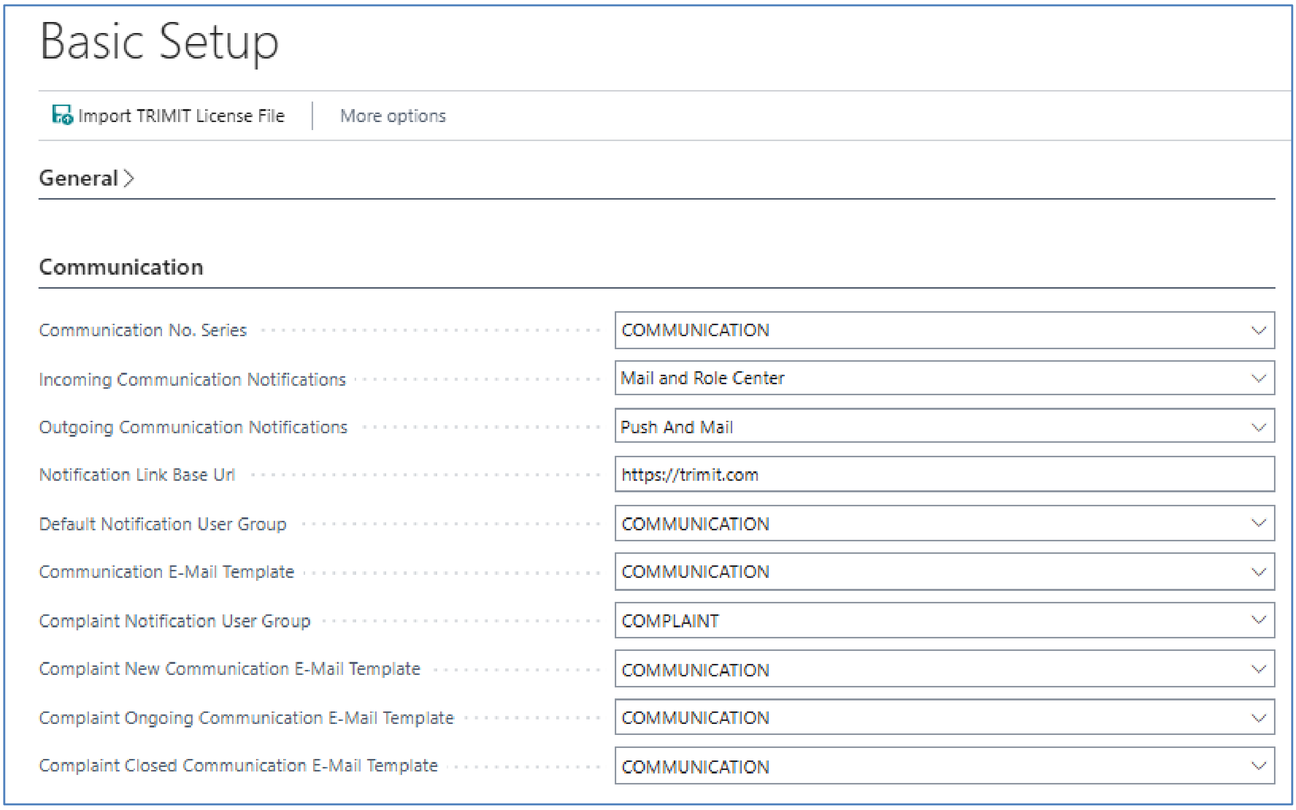
The Returns Communication functionality relies on proper configuration within TRIMIT. This includes setting up Basic and E-commerce setups, email templates for notifications, defining base URLs, configuring portal profiles, and enabling notification services such as Firebase. Background job queues must also be activated to handle message processing and notification delivery.

Step-by-step setup:

1. Configure Basic Setup
2. Configure Portal Profiles
3. Configure E-commerce Setup
4. Configure email templates
5. Setup Notification Service (Firebase)
6. Enable Firebase and Email notification theme values

Basic Setup Configuration in TRIMIT

All communication configuration is centralized on the ***Basic Setup*** card. Open it from the role center or search for TRIMIT Basic Setup, then navigate to the Communication FastTab.



Description of the fields on Basic setup

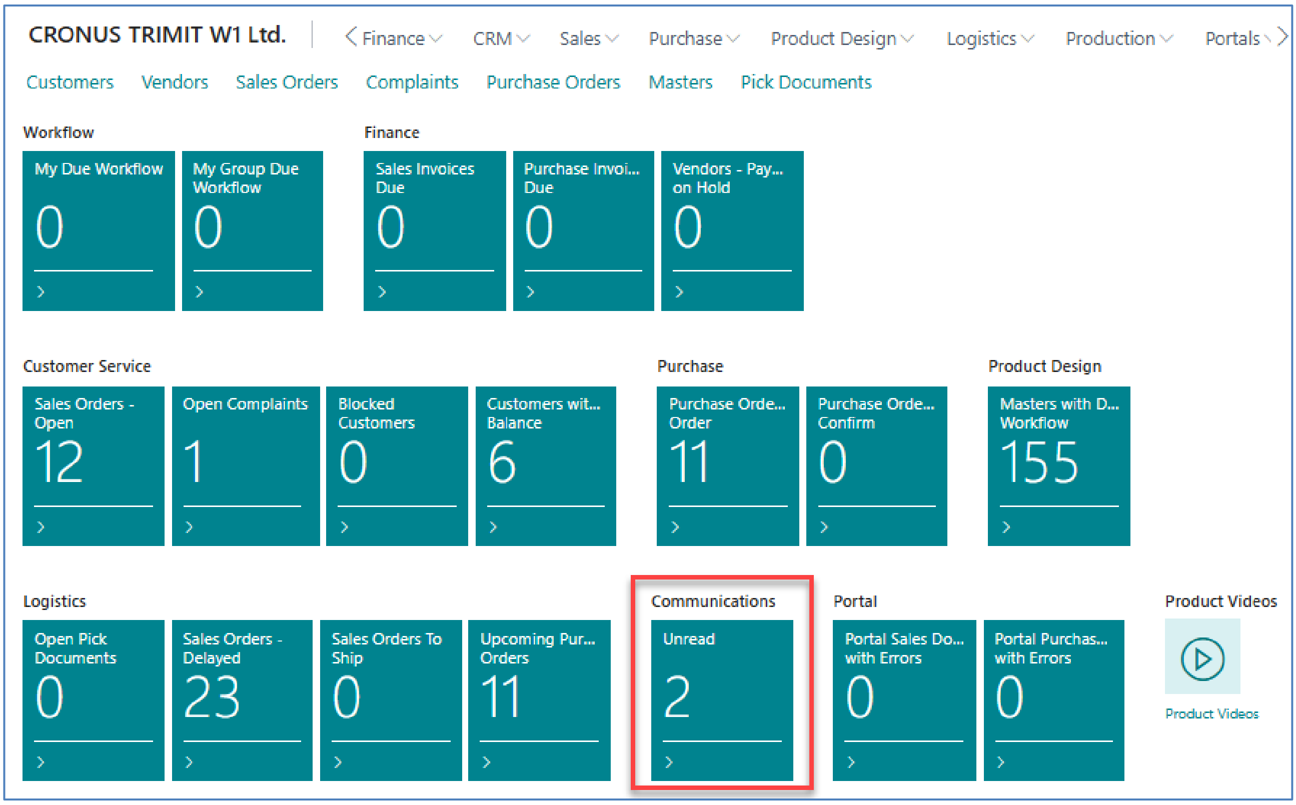
Communication No. Series

The no-series used to assign a **Communication No.** to new threads. Must be filled in before any communications can be created**.**

*This number series is used for communication records in page **Communications**. An agent communication, i.e. pre-return communication, when a return is not created yet, Also takes a number for the complaint number series. Even though the Return number on E-commerce Returns list (in B2B or Sales Agent) displays the number series numbers from the complaints number series, the communication records (threads) have their own number series. This is because the communication module can be used as a standalone and linked to other modules, e.g. returns, sales documents or customers within TRIMIT.*
That is why communication records can have secondary relationships with other modules. And in this case, it makes more sense to display returns numbers in the communication list on E-commerce returns list.

Incoming Communication Notifications

Notification method for incoming messages. Available options:
Role Center – display notifications only in a TRIMIT Role Center



Mail and Role Center - display notifications in a TRIMIT Role Center and sent by email. The notification for incoming messages in BC will be sent to all BC users which have an email address specified in their ***User card*** in TRIMIT..

NOTE: there is no functionality to clean the Unread Communications in the role center, after they have been viewed. But clicking **Mart As Read** (in Communication Notification Entries) removes the line.

Ongoing Communication Notifications

Notification method for outgoing messages. Available options:
None – no action
Mail - send only email
Push - send only push notification in browser (this requires a setup of a third party Firebase notification, the setup process can be found in Modelyn admin documentation under System/Portals/Docs/Returns communication)
Push And Mail - send both email and push notification

Notification Link Base Url

This field is used to override the base URL in deep links sent in email notifications to **internal system users** to notify about the incoming communication messages. When a mail notification is sent, the system builds a standard TRIMIT BC web client URL pointing to the relevant page and record, e.g.:

https://<bc-server>/<tenant>/?company=...&page=...&bookmark=...&mode=View

If **Notification Link Base URL** is filled in, the BC server/tenant part of that URL is replaced with the value from this field. Only the query string part (?company=...&page=...) is kept and appended to the base URL.

This is needed because in some environments the internal BC URL is not accessible from outside (e.g. email recipients outside the network, or when using a custom domain/proxy). Setting this field lets you

substitute the correct externally-accessible base URL so the deep link in the email works correctly for the recipient.
Example of the field value:

https://server.trimit.com:443/trimit_bc/

NOTE: For external users (e.g. B2B portal customers), the code takes a different path — the system builds a link to the E-commerce portal, not to TRIMIT BC.

Default Notification User Group
User group that receives notifications for **Default**-type communications. Leave blank to notify only individually named recipients.

Communication E-Mail Template
Email template for communication notification

Complaint Notification User Group
User group that receives notifications for **Complaint**-type communications. Can differ from the Default group.

Complaint New Communication E-Mail Template
Email template for a start of a new returns' communication notification

Complaint Ongoing Communication E-Mail Template
Email template for an ongoing returns' communication notification

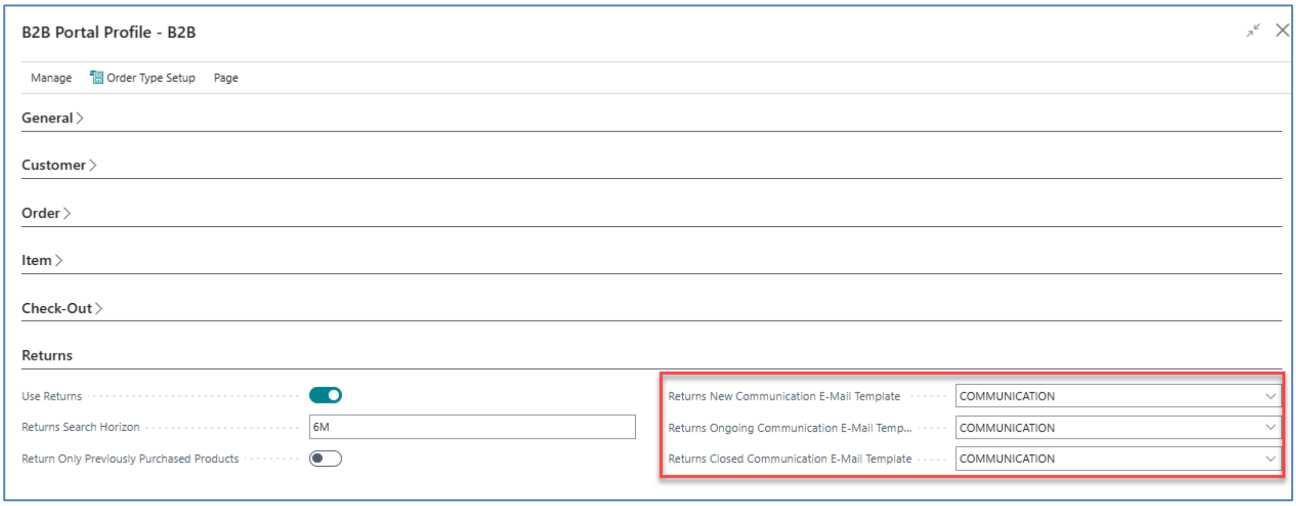
Complaint Closed Communication E-Mail Template
Email template for a closing return communication notification

NOTE: User groups simplify routing. If you set a user group, every member of that group receives notifications automatically, you do not need to set individual notification recipients on each thread.

NOTE: Setting both ***Outgoing Communication Notify*** and ***Incoming Communication Notify*** to blank disables all communication notifications. At least one must be configured for any alerts to be sent.

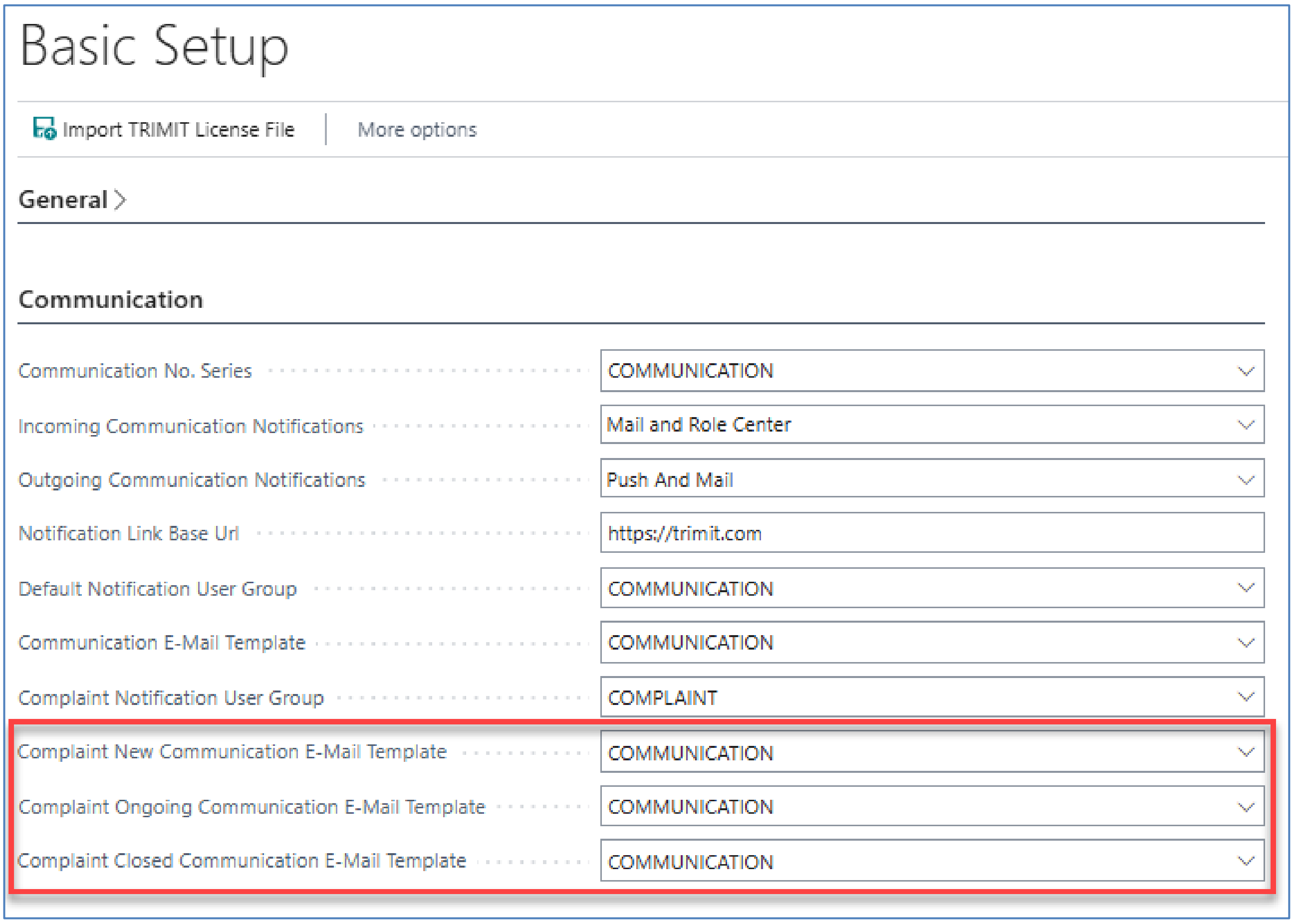
Portal Profile Configuration in TRIMIT
B2B and Sales Agent portal profiles in TRIMIT have the following fields which are related to Returns Communication. These fields can be found under section *Returns*.

Returns New Communication E-Mail Template
Returns Ongoing Communication E-Mail Template
Returns Closed Communication E-Mail Template



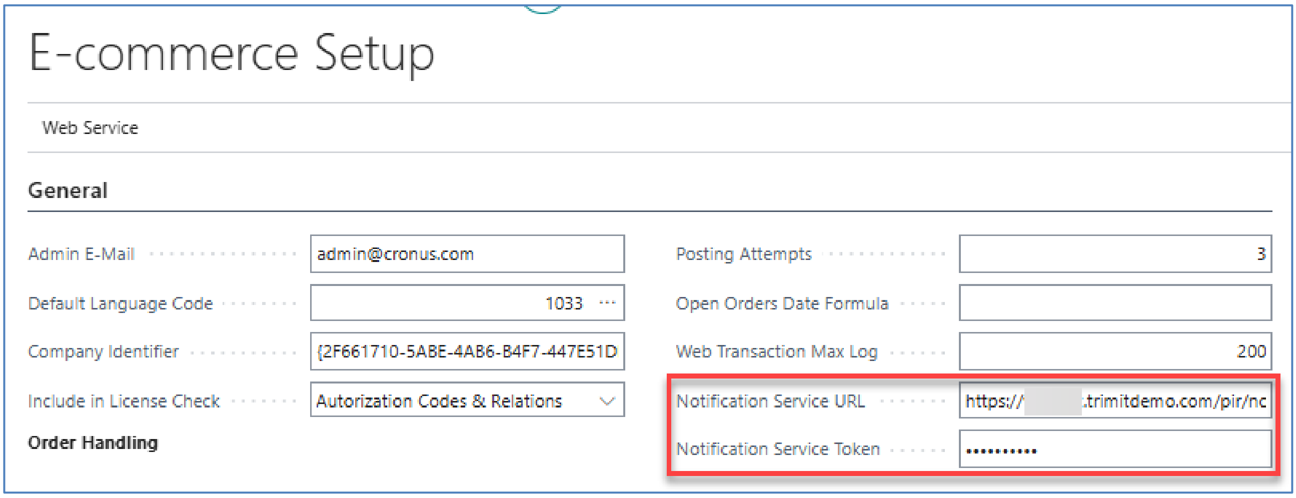
These fields can be left blank if the corresponding fields on the ***Basic Setup*** are filled in. I. e. the fields on the ***Basic Setup*** page:

Complaint New Communication E-Mail Template
Complaint Ongoing Communication E-Mail Template
Complaint Closed Communication E-Mail Template



E-Commerce Setup in TRIMIT

E-commerce Setup page has two fields associated with communication notifications. Below is the description of the fields.

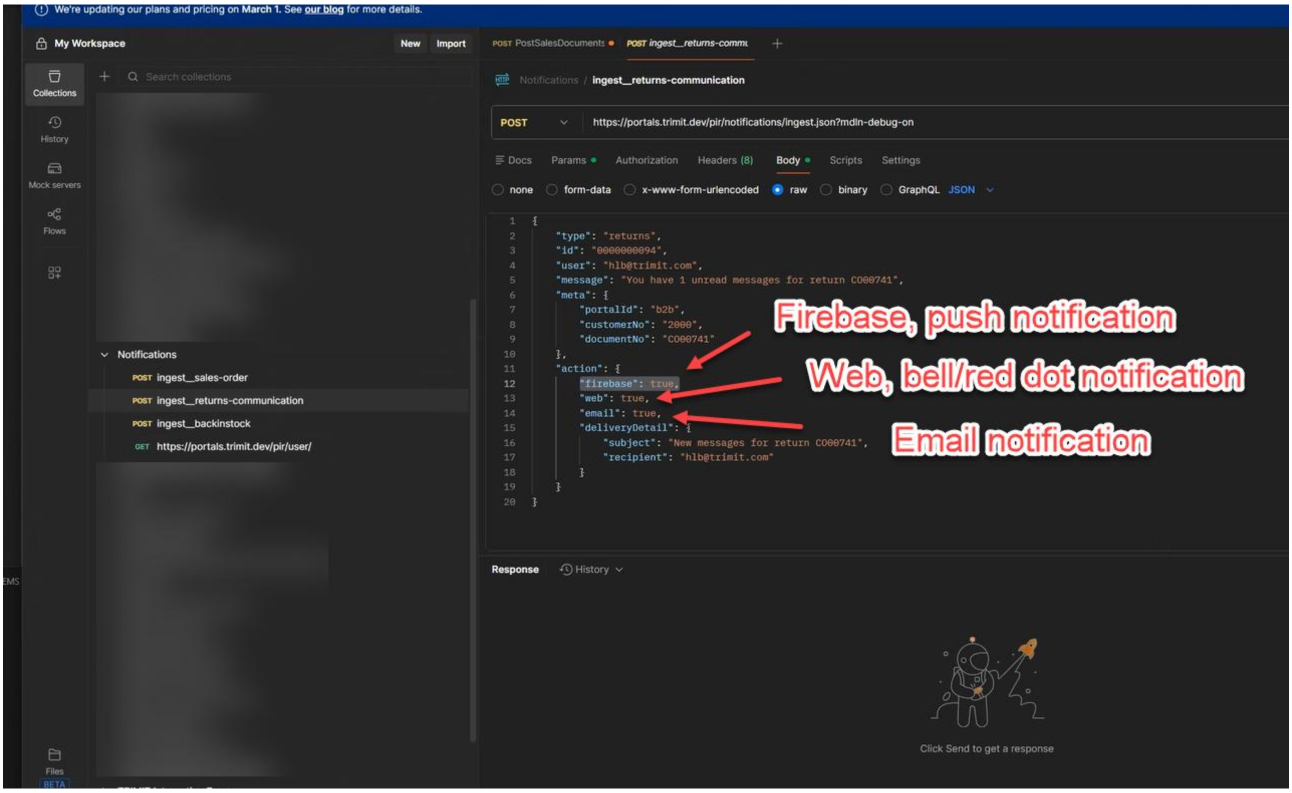


Notification Service URL

Notification webhook endpoint. Use your domain name and use the rest of the URL as follows:

https://<your domain name>/pir/notifications/ingest.json

The ingest.json endpoint receives notification payloads from TRIMIT BC and writes a record to ***Notifications*** (Portals.Notifications) custom table inside Modelyn.
TRIMIT BC sends the following 3 notifications: Firebase (push notifications), Web (bell/red dot notifications) and Email.



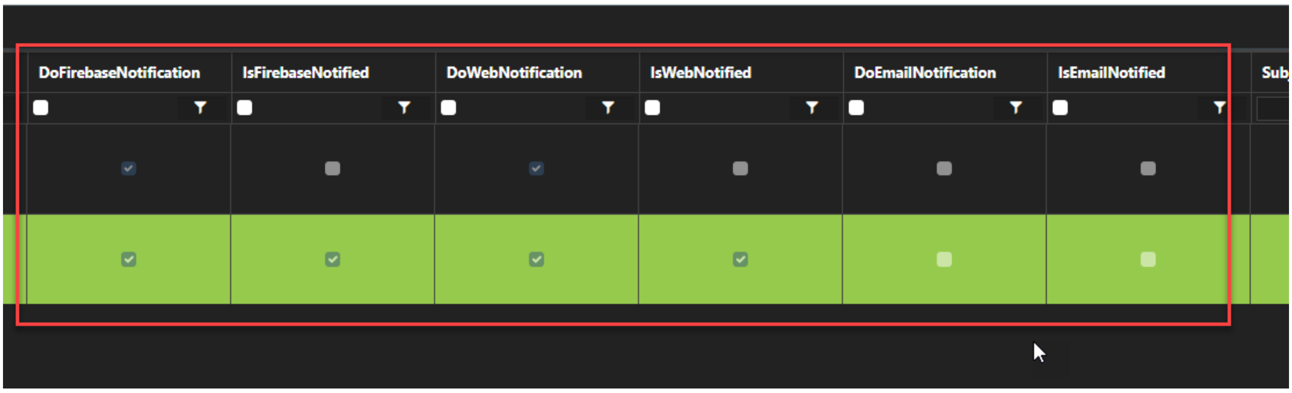
Notifications custom table in Modelyn the following columns, which are related to the notifications:

DoFirebaseNotification
IsFirebaseNotified
DoWebNotification
IsWebNotified
DoEmailNotification
IsEmailNotified
These Boolean fields are being automatically set to TRUE/FALSE after the actions taken.

Flow (technical description)

- TRIMIT BC sends a json POST to Portals endpoint at e.g. `https://pir.mydomain/notifications/ingest.json`
- `ingest.json` handles the request and stores data in custom table `CT.Portals.Notifications`
- `ctNotifications` on either B2B, or Sales Agent Customer, dashboard looks for web notifications `DoWebNotification = 1` records that match the current user id and have not yet been viewed `IsWebNotified`
- If Firebase notification theme value, `$theme_IsFirebaseNotificationsSetup`, is set to TRUE, the `notify-firebase.html` schedule will run every 5 minutes (this value can be adjusted by `$theme_FirebaseNotificationsScheduleSimple`)
- If Email notification theme value, `$theme_DoEmailNotifications`, is set to TRUE, the scheduler will run every 5 minutes (this value can be adjusted by `$theme_FirebaseNotificationsScheduleSimple`)
- If a notification record has both Firebase and Web notification, then once the communication thread has been viewed, both Firebase and Web are marked as viewed. We have not implemented this for Email due to a) we might not be using this (but it is there for future), and b) user might wish to come back to something from an email.

Fields in `CT.Portals.Notifications`:



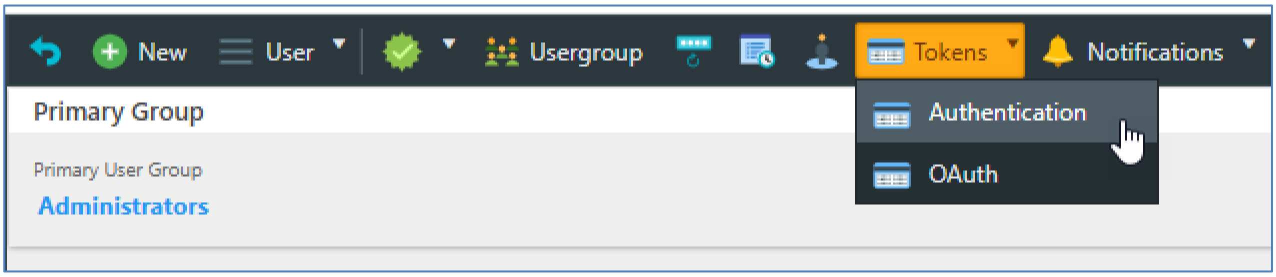
Boolean fields (IsFirebaseNotified and IsWebNotified) are getting set to FALSE again if a new message is saved in TRIMIT Communications and TRIMIT sends .json payload to Modelyn. Then, IsFirebaseNotified is set to TRUE after Firebase schedule has run. IsWebNotified is set to TRUE when new message, marked with red dot of bell, is opened on E-commerce portal.

NOTE: even if Firebase and Email notification schedules are enabled, only Firebase schedule works and sends push notifications. Email notification schedule is for future usage, thus fields in `CT.Portals.Notifications` are not filled in. But it is important to note that email notifications are sent from TRIMIT BC so Email notification schedule in Modelyn does not affect that.

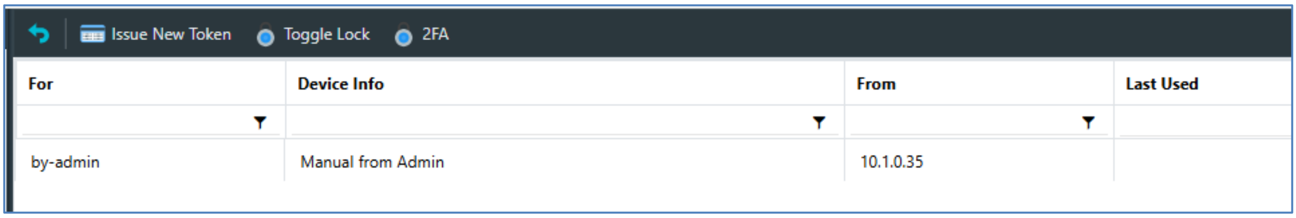
Notification Service Token

Token needed to connect to Modelyn webhook endpoint without authentication, so that the communication can run in a background. This requires creation of a dedicated user in Modelyn.

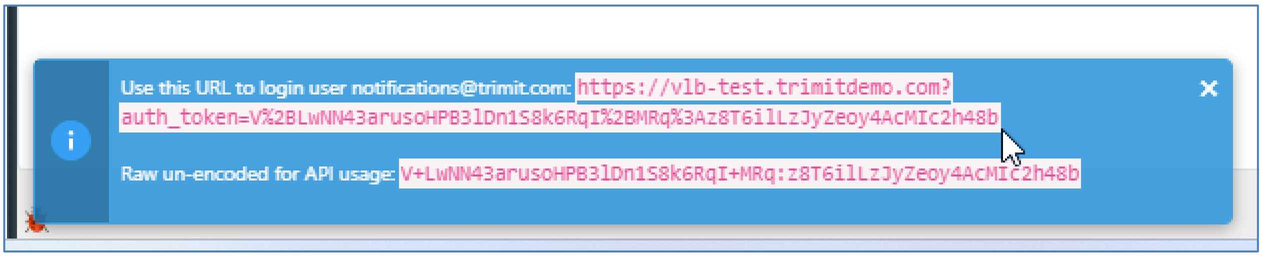
This dedicated user can be called notifications@<your domain name> (e.g. notifications@trimit.com). When synchronized with TRIMIT BC, this user does not need to be related to any of the portals in User Relationships Management..
This user then needs to be added to the API user group and Administrators user group in Modelyn admin.
Right after, open this user from the list of users in Modelyn (Users/Users, search for your dedicated user in the list, right click and select Open). Then, in the top bar select Tockens/Authentication.



Then click **Issue New Tocken** in the top bar and confirm – a new line will be created:



At the same time, there appears a notification pop up in the lower part of the browser as follows:



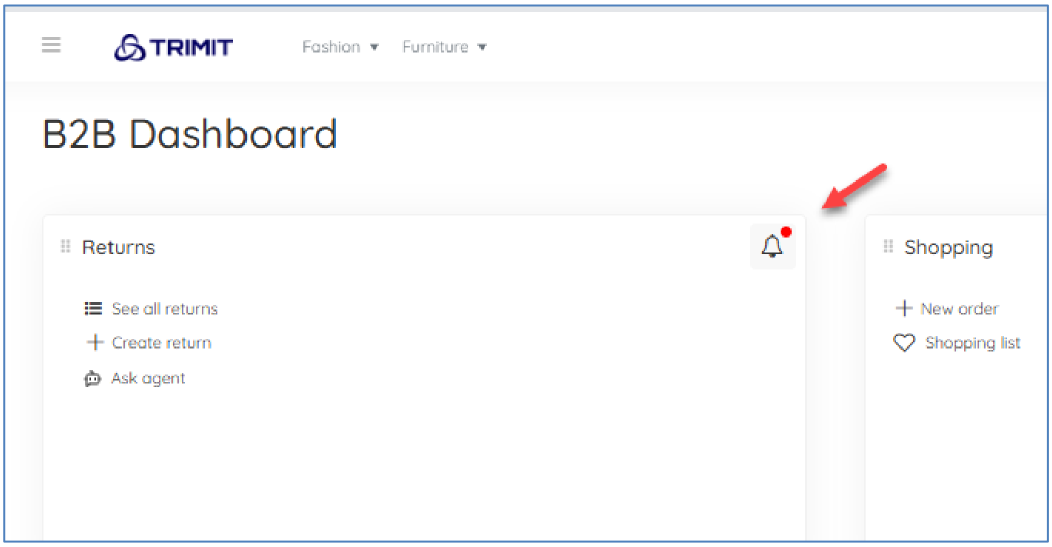
Copy the value of "*Run un-encoded for API usage*" and paste into **Notification Service Token** field on the ***E-commerce Setup*** page in TRIMIT.

NOTE: the token can only be collected on create – they are not stored in the database. In case the token is not saved, there has to be a new token created.

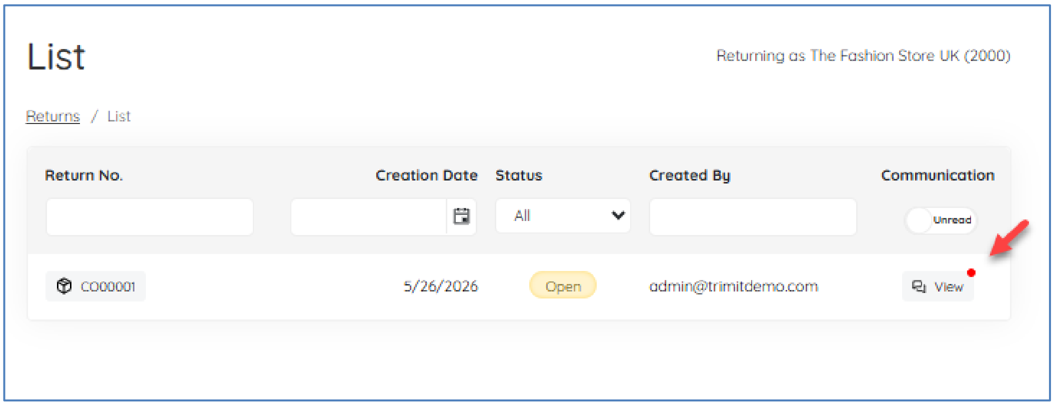
These fields are used for seamless, login-free communication between TRIMIT and Modelyn in regard to communication notifications in TRIMIT E-commerce.

E-commerce Web notifications example (there is a new message):

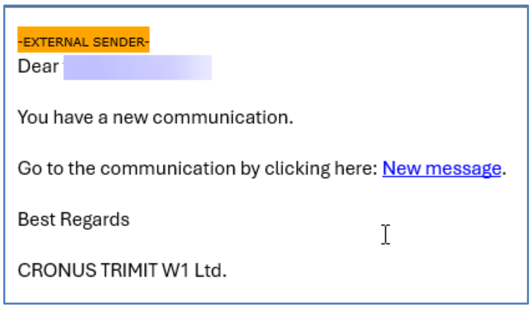
A bell icon on the Returns list on the dashboard.



Red dot in the Returns list.



Communication notification email content example:s


-EXTERNAL SENDER-
Dear

You have a new communication.

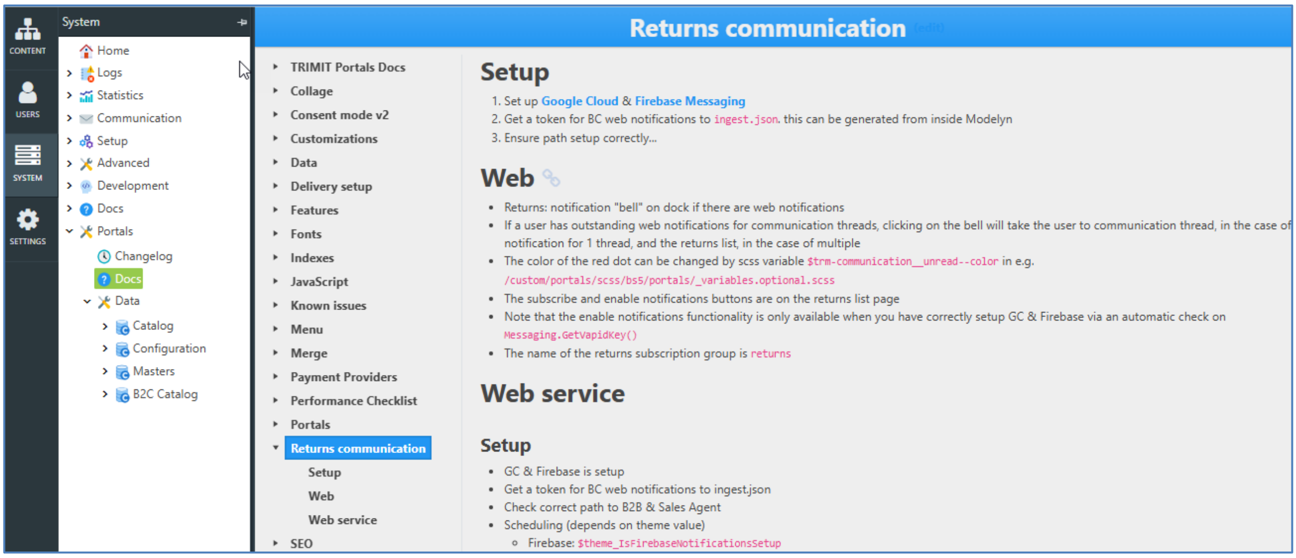
Go to the communication by clicking here: New message.

Best Regards

CRONUS TRIMIT W1 Ltd.

Notification Services Setup (Firebase)

The Firebase notification setup is described in the Modelyn documentation under System/Portals/Docs/Returns communications.



Modelyn Schedules

Schedules for Firebase and Email depend on the theme values and are not active by default. The theme values are as follows:
- Firebase: `$theme_IsFirebaseNotificationsSetup`

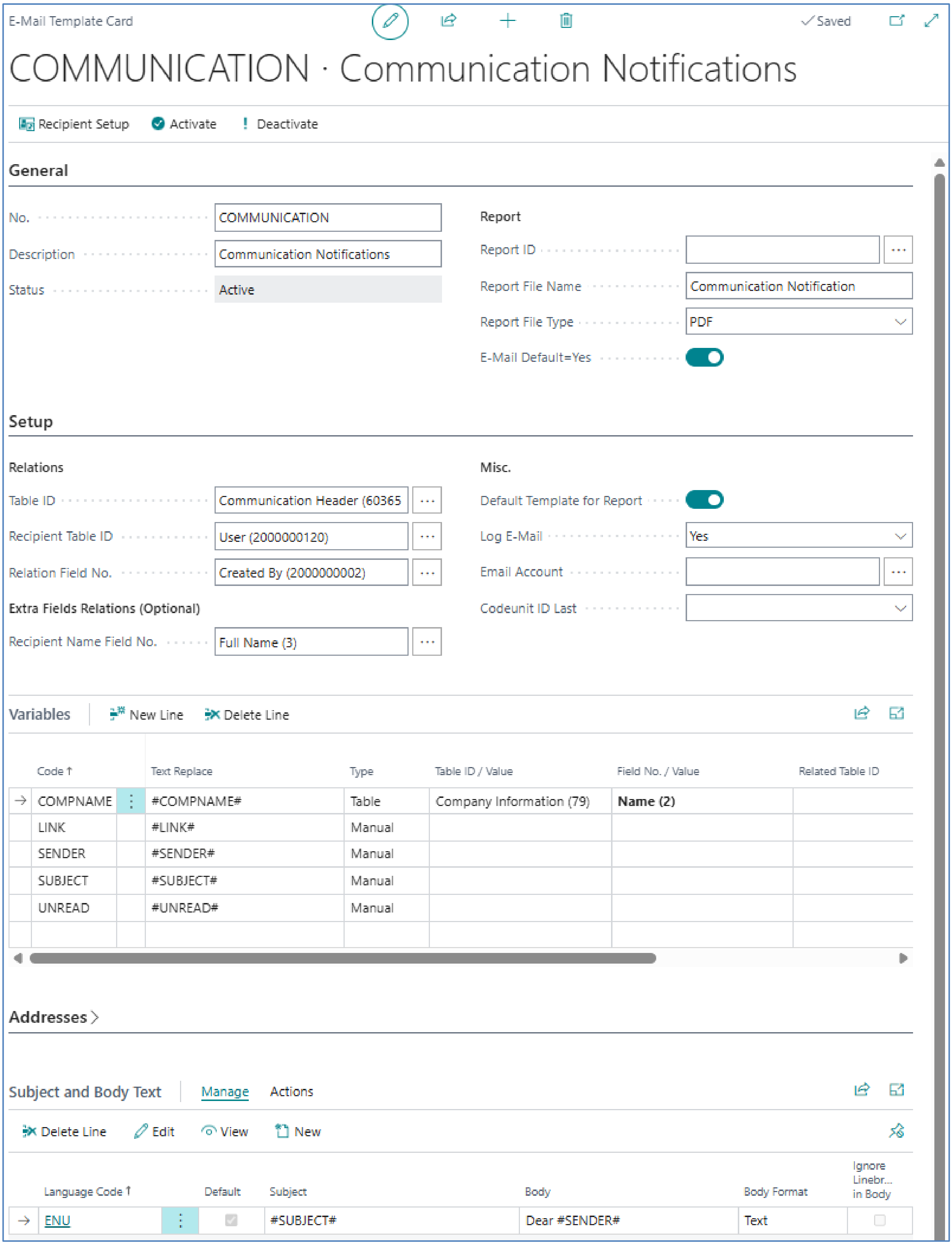
- Emails: `$theme_DoEmailNotifications`

```
    <value id="PopupBasketAnimationTypeB2b">slideIn</value>
    <value id="OverviewColumnCountSa">4,_5,6</value>
    <value id="BISEnabled">true</value>
    <value id="IsFirebaseNotificationsSetup">false</value>
    <value id="DoEmailNotifications">false</value>
</themevalues>
```

If set to TRUE and after the IIS reboot – the corresponding schedules will appear in the list of the schedules in Modelyn and run with a default settings, every 5 minutes (this value can be adjusted accordingly by `$theme_FirebaseNotificationsScheduleSimple` and `$theme_FirebaseNotificationsScheduleSimple`)

Email Templates Configuration in TRIMIT

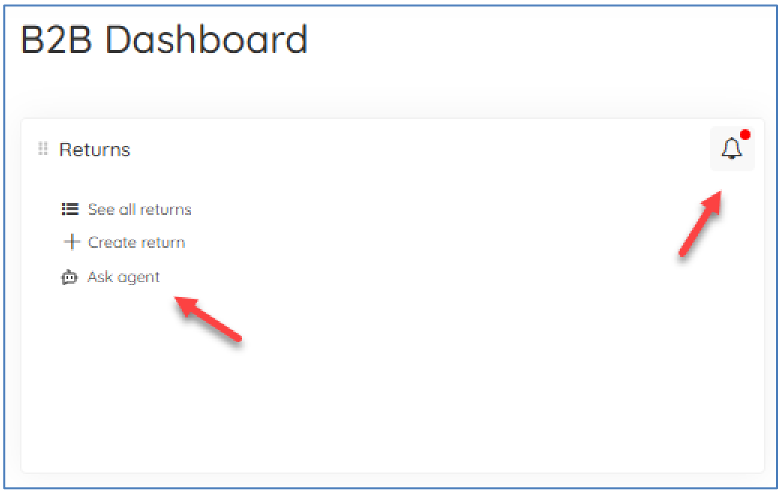
TRIMIT Returns (Complaints) Communication uses email templates to send notifications to the respective users. Email templates can be set under ***E-Mail Template List***. Here it is possible to create email templates for new, ongoing and closed communications. Alternatively, one email template can serve all the communication notification purposes.
Example of the E-mail template setup:


E-Mail Template Card
Saved
COMMUNICATION · Communication Notifications
Recipient Setup
Activate
Deactivate
General
No.
COMMUNICATION
Description
Communication Notifications
Status
Active
Report
Report ID
Report File Name
Communication Notification
Report File Type
PDF
E-Mail Default=Yes
Setup
Relations
Table ID
Communication Header (60365
Recipient Table ID
User (2000000120)
Relation Field No.
Created By (2000000002)
Extra Fields Relations (Optional)
Recipient Name Field No.
Full Name (3)
Misc.
Default Template for Report
Log E-Mail
Yes
Email Account
Codeunit ID Last
Variables
New Line
Delete Line
Code
Text Replace
Type
Table ID / Value
Field No. / Value
Related Table ID
COMPNAME
#COMPNAME#
Table
Company Information (79)
Name (2)
LINK
#LINK#
Manual
SENDER
#SENDER#
Manual
SUBJECT
#SUBJECT#
Manual
UNREAD
#UNREAD#
Manual
Addresses
Subject and Body Text
Manage
Actions
Delete Line
Edit
View
New
Language Code
Default
Subject
Body
Body Format
Ignore Linebr... in Body
ENU
#SUBJECT#
Dear #SENDER#
Text

Returns communication on E-commerce

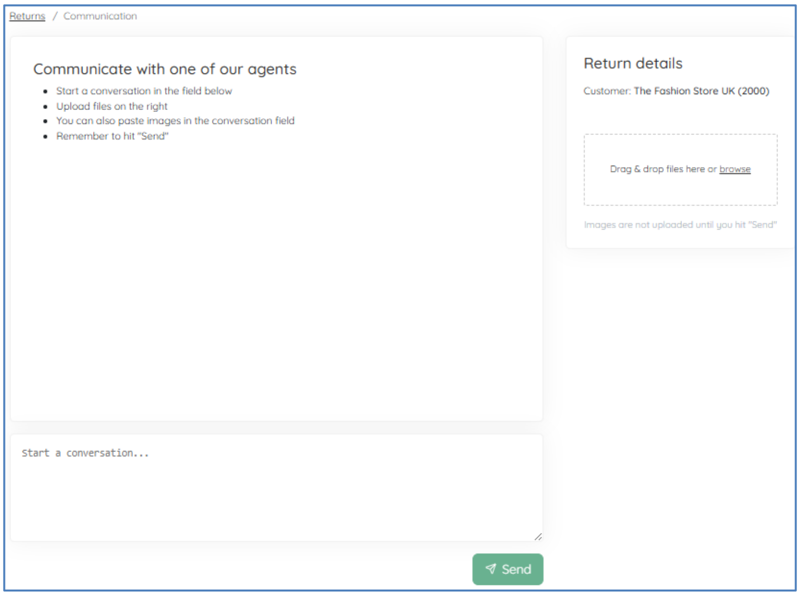
Returns dock

Returns communication is available on TRIMIT E-commerce B2B and Sales Agent portals, where customer dashboard has a dock ***Returns***. This dock has a link to Agent communication – *Ask agent*:



Also, there can be displayed a bell icon with a red dot, as on image above. This means that user has outstanding web notifications for communication threads, clicking on the bell will take the user to communication thread, in the case of notification for one thread, and the returns list, in the case of multiple.
Additionally, the colour of the red dot can be changed by SCSS variable `**$trm-communication__unread--color**` in e.g. `/custom/portals/scss/bs5/portals/_variables.optional.scss`.

Clicking *Ask agent* link opens a new Communication Thread page which looks as follows:



The page is divided into two primary sections:

Main Communication Panel (Left Section)
The main panel serves as the core interaction area where users engage in conversation. It includes:

- **Instructional Header:**
  A title, *"Communicate with one of our agents,"* provides context for the page's purpose. Supporting bullet points outline key usage instructions:
    - Start a conversation in the text input field
    - Upload files using the file upload section on the right
    - Paste images directly into the conversation field
    - Confirm actions by clicking the "Send" button

  This area also serves as a **Conversation Display Area -** currently empty message thread area is reserved for displaying ongoing communication between the user and the support agent. This area will dynamically populate as messages are exchanged.
- **Message Input Field:**
  Located at the bottom of the panel, a text input box labeled *"Start a conversation…"* allows users to compose messages. This field supports free-text entry.
- **Action Button:**
  A prominently displayed **"Send"** button enables users to submit their message and any associated attachments.

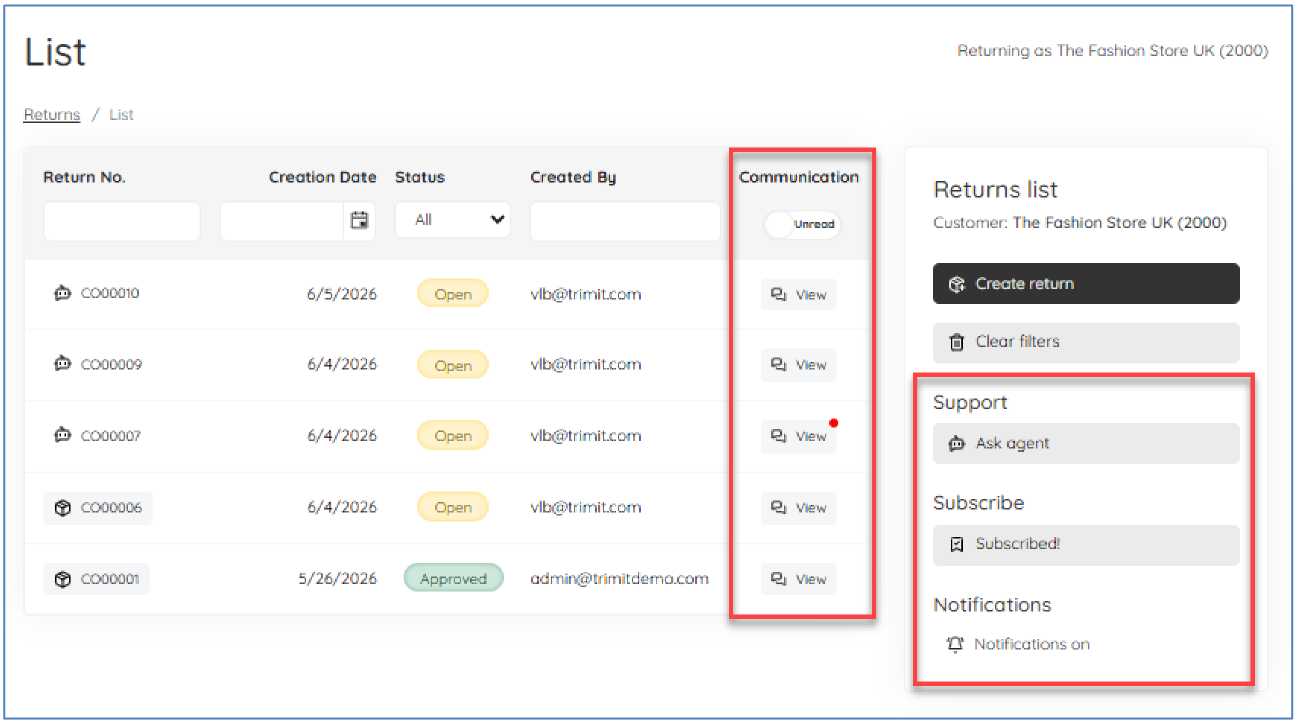
Context and File Upload Panel (Right Section)
This section provides contextual information about the communication and supports file attachment functionality:

- **Return Details:**
  A summary block labeled *"Return details"* displays key contextual information, including Customer name
- **File Upload Component:**
  A drag-and-drop interface allows users to upload files relevant to the communication thread. Key features include:

Returns List Page – Communication Features

Purpose

The Returns List page provides users with an overview of all return-related records while integrating communication capabilities directly into each entry. This design enables users to efficiently monitor, initiate, and respond to conversations associated with both pre-return inquiries and active return cases.



Communication Column

A dedicated **"Communication"** column is positioned within the returns table, enabling direct access to message threads linked to each return entry.

Key Elements:

- **View Button:**
  Each row includes a **View** button that serves as the entry point to the communication thread associated with that specific return or inquiry. Selecting this button redirects the user to the detailed communication interface.
- **Unread Message Indicator:**
  A **red dot indicator** displayed adjacent to the **View** button signifies the presence of **unread messages**.
  - This indicator functions as a visual alert, notifying users of new communication received from TRIMIT Business Central (BC) or support agents.
  - The absence of the indicator implies that all messages within the thread have been reviewed.
- **Unread Filter (Column Header):**
  The column header includes an **"Unread" filter option**, allowing users to quickly identify and prioritize return entries with pending or unseen communication.

Communication Types

The list differentiates between two distinct communication scenarios, based on the lifecycle stage of the return:

1. Agent Communication (Pre-Return Phase)

The first three entries in the list:

- **CO00010**
- **CO00009**
- **CO00007**

These entries represent pre-return communication (see Core Concepts and Terminology). These threads are used for initial interaction with agents before a return is created. Typical use cases include:

- Clarifying return eligibility
- Requesting support or guidance
- Exchanging preliminary information

These threads serve as the initial point of contact and may later result in the creation of a formal return record.

2. Existing Returns Communication (Post-Creation Phase)

The subsequent entries:

- **CO00006**
- **CO00001**

These represent communication tied to existing return orders (another icon type prefixing the number). In this context, communication focuses on managing and progressing active returns, including:

- Status updates (e.g., Open, Approved)
- Additional documentation requests
- Issue resolution and follow-up communication

Support and Notification Panel (Right Section)

A supplementary side panel enhances communication accessibility and user engagement:

Support Section

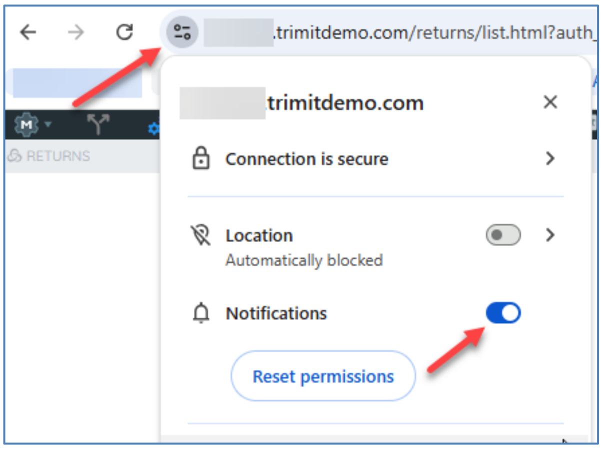
- **“Ask agent” Button:**
  Provides users with a direct option to initiate a new communication thread with a support agent, independent of existing return entries.

Subscription Status

- **“Subscribed!” clickable Indicator:**
  Confirms that the user is actively subscribed to updates (answers the question: “*do I want to follow the communication related notifications?*”), ensuring visibility into communication activity. Clicking that indication enables/disables subscription to communication thread updates via push notifications in browser or mobile app.

Notifications

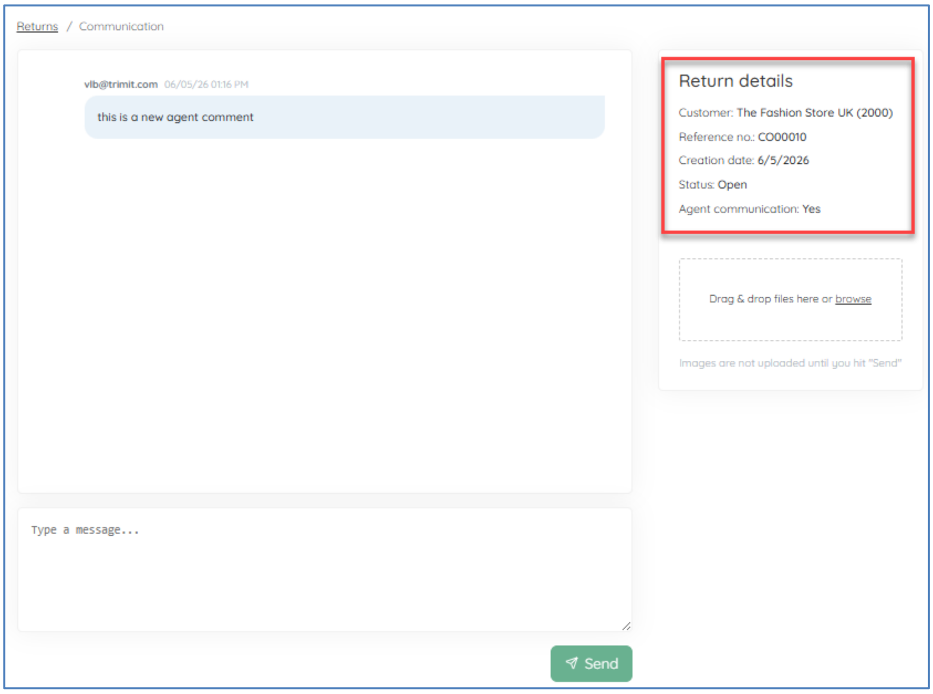
- **“Notifications on” Status:**
  Indicates that real-time notifications are enabled (answers the question: “*if I follow it, how do I want to be notified?*”), allowing users to stay informed about new messages and updates without manually refreshing the interface. Enabling notifications in your browser:



NOTE: the enable notifications functionality is only available when you have correctly setup Google Cloud & Firebase via an automatic check on `Messaging.GetVapidKey()`

Subscription and **Notifications** (Returns list on E-commerce) do not affect web notifications (bell / red dot icons) and email notifications, which both come from TRIMIT BC.

Below is an example of an Agent communication thread:



Displayed Fields:

- **Customer**
  Identifies the customer associated with the communication thread.
- **Reference No.**
  This value represents an official return number reserved in advance from the return number series in TRIMIT BC. Although a formal return document has not yet been created, the number is preallocated to ensure consistency and traceability throughout the process lifecycle. The thread number is not shown on this page.
- **Creation Date**
  Indicates the date on which the communication thread was initiated.
- **Status**
  Reflects the current state of the interaction.
  Example: Open, indicating that the communication is still active.
- **Agent Communication**
  A boolean indicator specifying whether the thread is categorized as **agent-driven (pre-return) communication**.
  - *Yes* indicates that the thread exists independently of a confirmed return process.
  - This distinguishes it from communication linked to fully created and processed return orders.

Performance, Scalability, and Operational Considerations

The Returns Communication solution is designed to support high volumes of communication without compromising system performance.

Thread-based data model

Communication is organized into threads with separate header and line records, allowing efficient retrieval and rendering of conversation history even for long-running returns.

Asynchronous notifications

Notification delivery (email, web, Firebase) is handled asynchronously through background processes and scheduled jobs, minimizing impact on transactional performance in TRIMIT Business Central.

Scalability across portals

The Modelyn notification architecture supports multiple portals (B2B and Sales Agent) and large user bases by filtering notifications based on user identity and subscription settings.

Operational monitoring

In high-volume environments, it is recommended to monitor notification schedules, job queues, and integration logs to ensure timely processing of communication updates.