## B2B Integration Factory

# Prepackaged B2B Integration Content – Order to Cash

## SAP IDoc to UN/EDIFACT D.10B

July 2022

SAP BTP

# Table of contents

# Disclaimers

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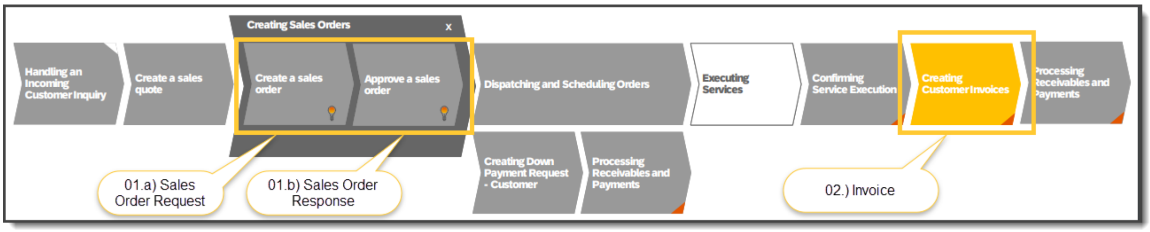
The B2B Integration Factory cannot guarantee this. There is also no guarantee that this content will be continually maintained.

You can find the official release plans for SAP product development on SAP Roadmap Explorer. Here you can also see when the respective features that are considered in the B2B Integration Factory – Integration Packages will be released as a standard feature in the SAP Integration Suite.

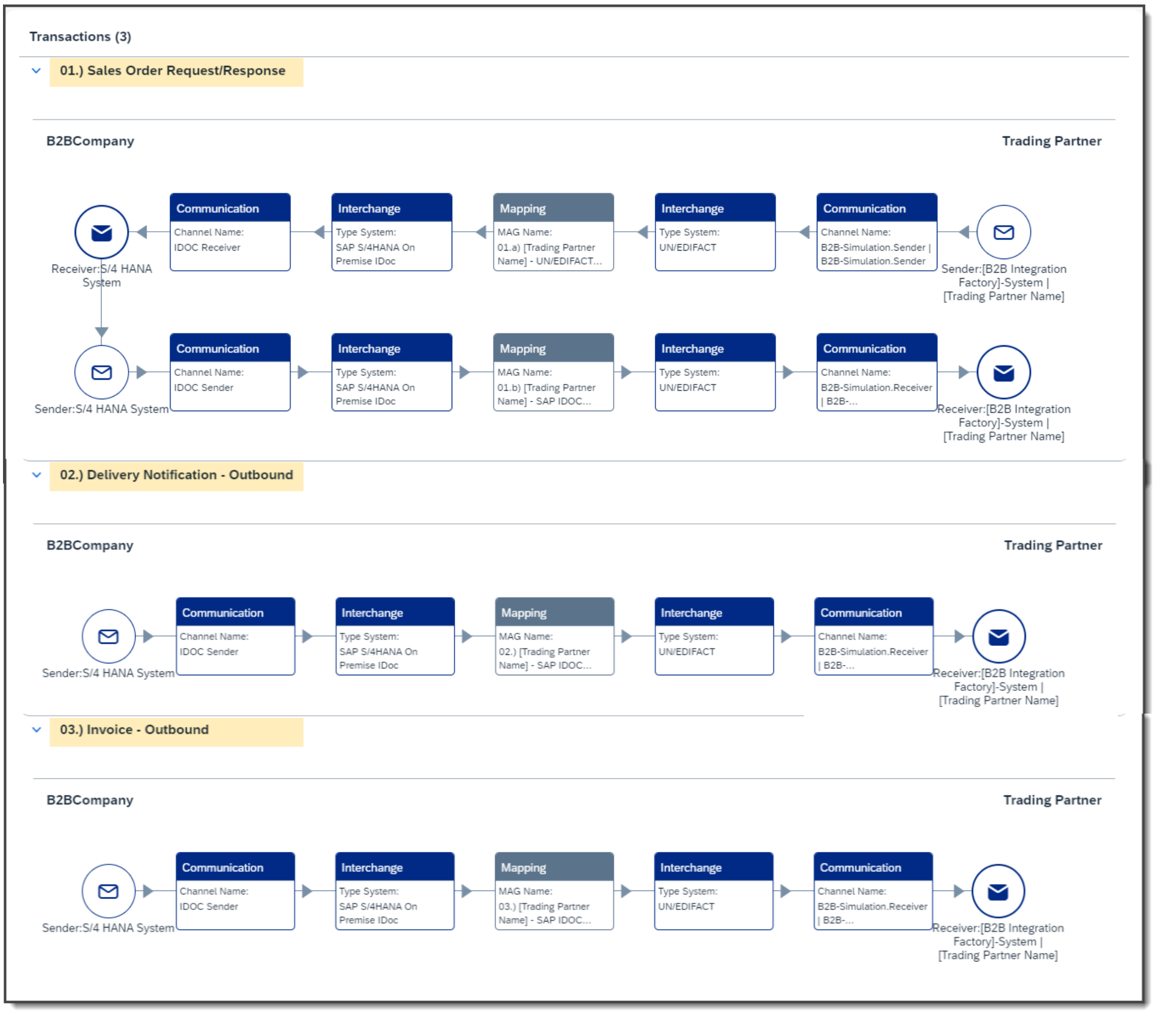
If one of these feature is required in the SAP Integration Suite in a timely manner but not listed in the SAP Roadmap Explore, we therefore ask you to create a “Feature Improvement” on SAP Customer Influence – Campaign: SAP Integration Suite or vote for it, if exactly same “Feature Improvement” is already available. All “Feature Improvements” and especially their votes have a significant influence on the prioritization of the features to be delivered in SAP Integration Suite.

# B2B Scenario

This introduced "Order-to-Cash" B2B scenario refers to the process by which a business receives and fulfills orders from its customers, and then completes the financial transaction.  This first release covers the first main transactions activities of an "Order-to-Cash" process (see following figure) which are: sales order request, sales order response and invoice.




Especially in this B2B scenario, a trading partner utilizes the UN/EDIFACT Version D.10B recommendation for exchanging business documents, while the customer uses SAP IDOC for the same purpose. Like in the following diagram shown process begins with the trading partner sending a 01.a) Sales Order Request in form of an UN/EDIFACT D.10B interchange with an ORDERS message to the customer, which includes details of the products or services being ordered. For this case, this message will be mapped into the corresponding fields of the customer supported  SAP IDOC ORDERS.ORDERS05 message. The customer then responds with a 01.b) Sales Order Response, confirming the acceptance of the order and providing further information such as delivery dates and pricing. For this purpose the created SAP IDOC ORDRSP.ORDERS05 will be mapped into the UN/EDIFACT D.10B ORDRSP message and assembled into the outgoing UN/EDIFACT interchange. Once the order is fulfilled, the customer sends an 02.) Invoice to the trading partner, detailing the payment due for the products or services provided. In this case the from the customer outgoing SAP IDOC INVOIC.INVOIC02 will be mapped into the UN/EDIFACT D.10B INOVIC message which will be also assembled into another outgoing UN/EDIFACT interchange. This seamless exchange of business documents ensures efficient order-to-cash processes between the trading partner and the customer.


Transactions (3)
01.) Sales Order Request/Response
B2BCompany
Trading Partner
Communication
Channel Name:
IDOC Receiver
Interchange
Type System:
SAP S/4HANA On Premise IDoc
Mapping
MAG Name:
01.a) [Trading Partner Name] - UN/EDIFACT...
Interchange
Type System:
UN/EDIFACT
Communication
Channel Name:
B2B-Simulation.Sender | B2B-Simulation.Sender
Receiver:S/4 HANA System
Sender:[B2B Integration Factory]-System | [Trading Partner Name]
Communication
Channel Name:
IDOC Sender
Interchange
Type System:
SAP S/4HANA On Premise IDoc
Mapping
MAG Name:
01.b) [Trading Partner Name] - SAP IDOC...
Interchange
Type System:
UN/EDIFACT
Communication
Channel Name:
B2B-Simulation.Receiver | B2B-...
Sender:S/4 HANA System
Receiver:[B2B Integration Factory]-System | [Trading Partner Name]
02.) Delivery Notification - Outbound
B2BCompany
Trading Partner
Communication
Channel Name:
IDOC Sender
Interchange
Type System:
SAP S/4HANA On Premise IDoc
Mapping
MAG Name:
02.) [Trading Partner Name] - SAP IDOC...
Interchange
Type System:
UN/EDIFACT
Communication
Channel Name:
B2B-Simulation.Receiver | B2B-...
Sender:S/4 HANA System
Receiver:[B2B Integration Factory]-System | [Trading Partner Name]
03.) Invoice - Outbound
B2BCompany
Trading Partner
Communication
Channel Name:
IDOC Sender
Interchange
Type System:
SAP S/4HANA On Premise IDoc
Mapping
MAG Name:
03.) [Trading Partner Name] - SAP IDOC...
Interchange
Type System:
UN/EDIFACT
Communication
Channel Name:
B2B-Simulation.Receiver | B2B-...
Sender:S/4 HANA System
Receiver:[B2B Integration Factory]-System | [Trading Partner Name]

# Prerequisites

You need a SAP Integration Suite license in where the following capabilities are at least enabled:

Cloud Integration

1. Trading Partner Management
2. Integration Advisor
3. API Management

You should undeploy all integration flows as well as the reusable groovy scripts from the integration package “Cloud Integration - Trading Partner Management V2”.

You should also delete this integration package “Cloud Integration - Trading Partner Management V2” including all the content of this integration package.

You should download all the B2B Integration Factory packages that are listed in chapter List of Integration Packages.

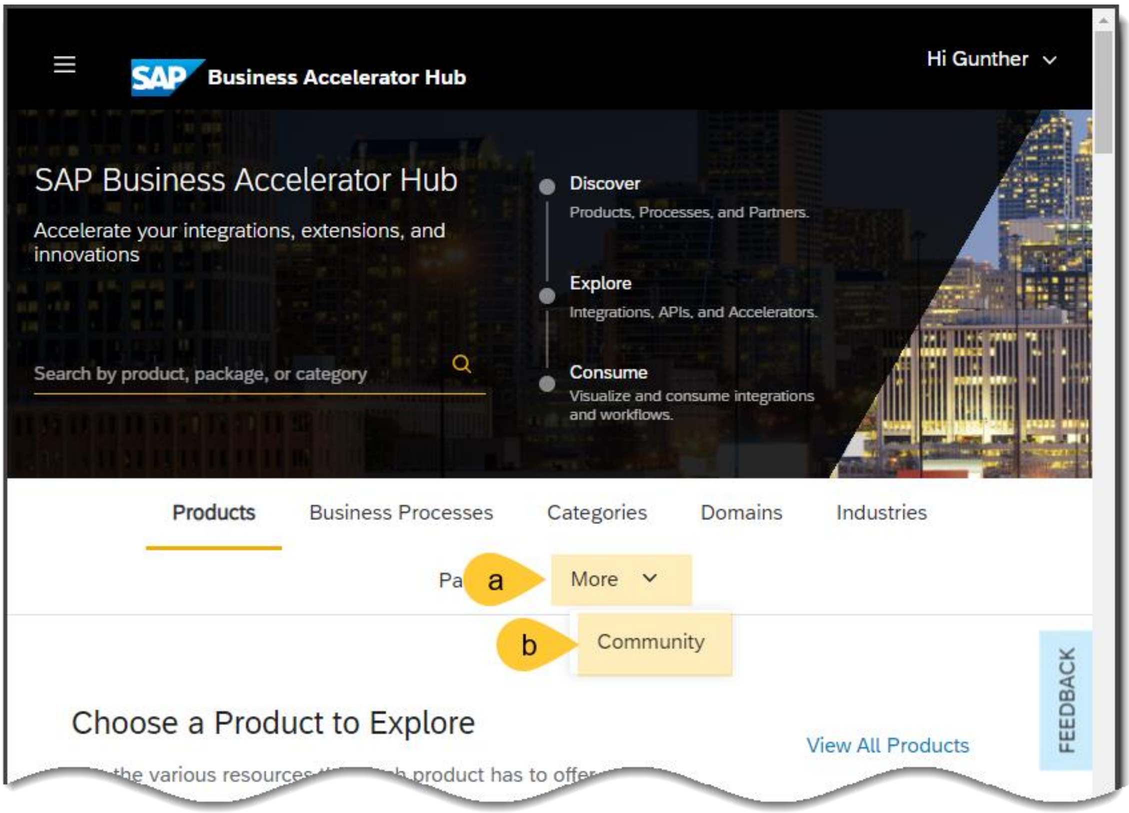
# Get the pre-packaged content from the SAP Business Accelerator Hub

The B2B Integration Factory content can be found in the Business Accelerator Hub at

(a) More → (b) Community

Alternatively, you can also use the direct link to the Community Content.

You can now search for "[B2B Integration Factory] - Order to Cash B2B Scenario - SAP IDOC/UN-EDIFACT D.10B" in the Community Content.




The B2B Integration Factory community page is divided into three tabs:

1. Overview, Integration Flow and Documents.
2. Overview tab: This section provides a general summary and context of the B2B Integration Factory content available in the Business Accelerator Hub. It highlights the purpose, objectives, and key features of the content while outlining how users can benefit from utilizing the resources provided.
3. Integration Flow tab: There are no Integration Flows in the package.
4. Documents tab: This section contains all the relevant documents, files, and resources that support the community content. It serves as a repository of information. The Documents tab includes the

configuration guide and Zip files with the "[B2B Integration Factory] - Order to Cash B2B Scenario - SAP IDOC/UN-EDIFACT D.10B" content.

In order to import the pre-packaged content, it must first be downloaded from the Business Accelerator Hub.

# How to import

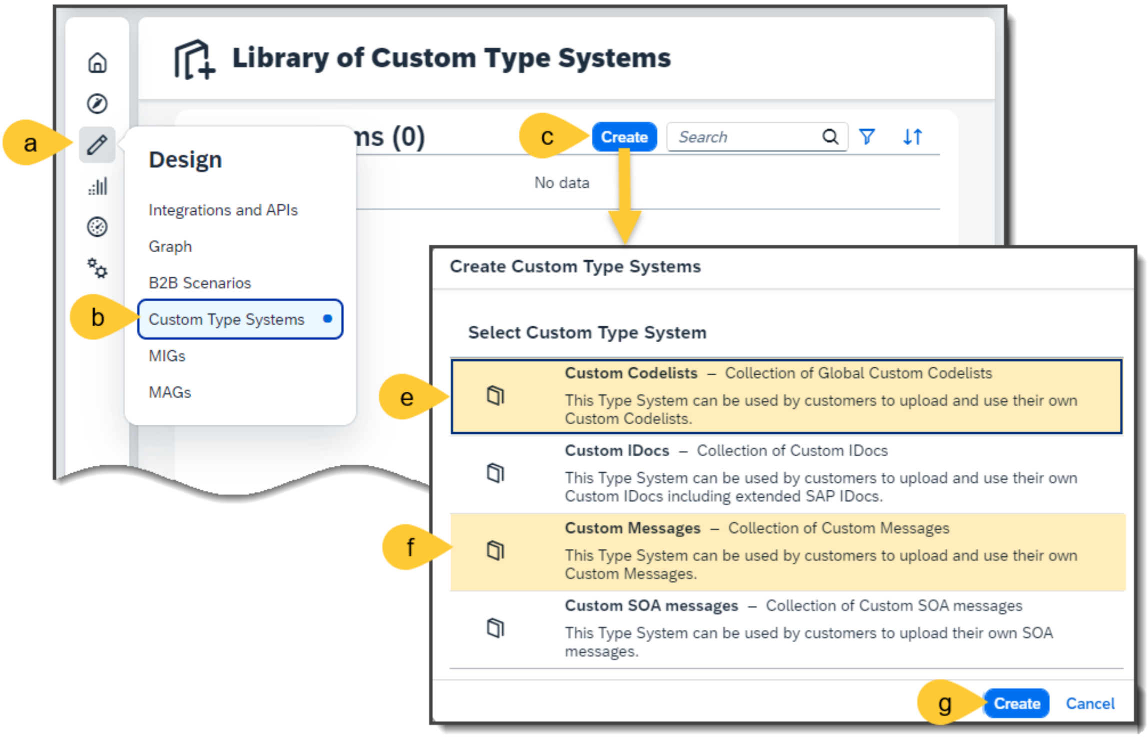
Quite important: You should import the MAGs first and then the TPA (Trading Partner Agreement)

## How to import the MAGs (Mapping Guidelines)?

To successfully import the configurations in the system, please follow the steps below.

First of all, you should activate the Custom Codelists and Custom Messages in Custom Type Systems, if you didn't made it before. Therefore, go like in the figure below shown in the Integration Suite to (a) Design ➝ (b) Custom Type Systems. Then repeat the following steps for Custom Codelists and Custom Messages:

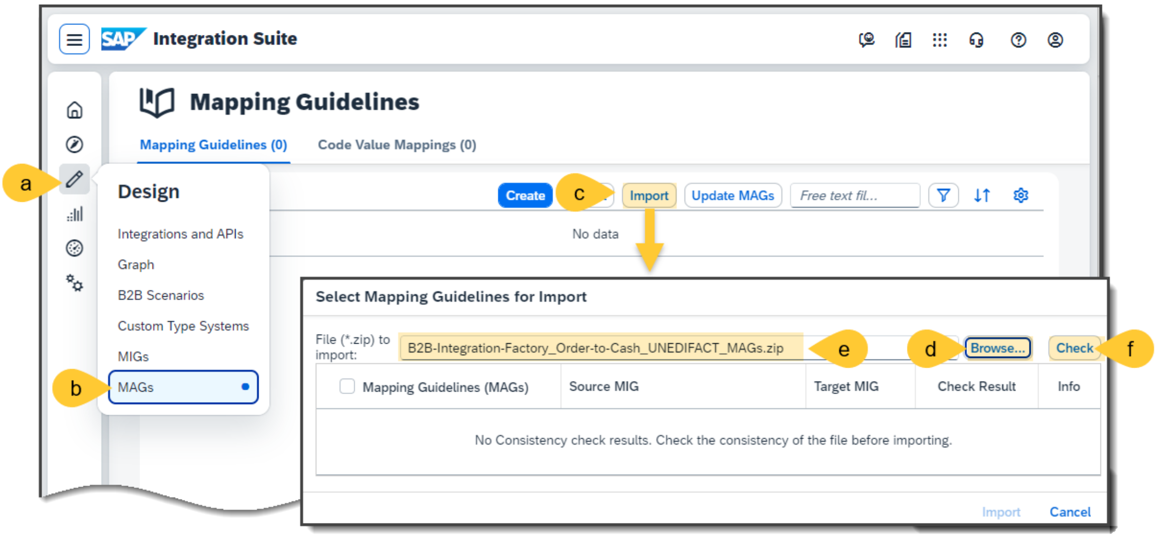
- Click on (c) Create button.
- Select in the sub-window Create Custom Type Systems the following entries (e) Custom Codelists and then (f) Custom Messages
- Click on (g) Create button in this window.



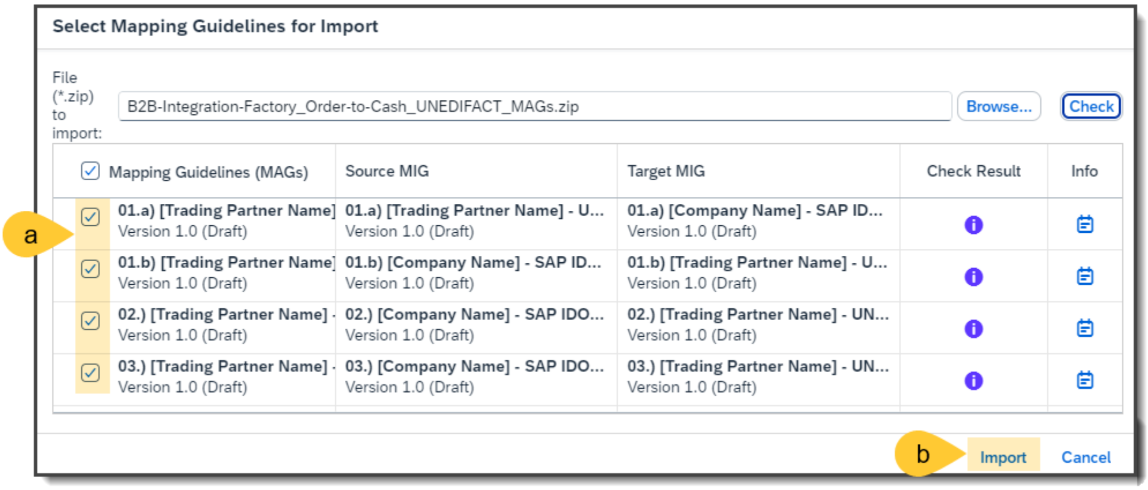

You should see than two entries "Custom Codelists" and "Custom Messages" in your Library of Custom Type Systems


So now you ready to import the provided MAGs (Mapping Guidelines) between the mentioned SAP IDOC and UN/EDIFACT message types as zip file. For this purpose and like in the following figure shown keep in the (a) Design section and click on (b) MAGs. These MAGs are crucial for defining the source/target structure and validation rules considered as well as the mapping rules of messages exchanged between the company (SAP IDOC) and trading partners who are using UN/EDIFACT D.10B. Especially the structure and the validation rules will be considered by the already involved source and target MIGs (Message Implementation Guidelines). Importing these MAGs before the import of the TPA ensures that these guidelines will be automatically assigned once the TPA is successfully imported.

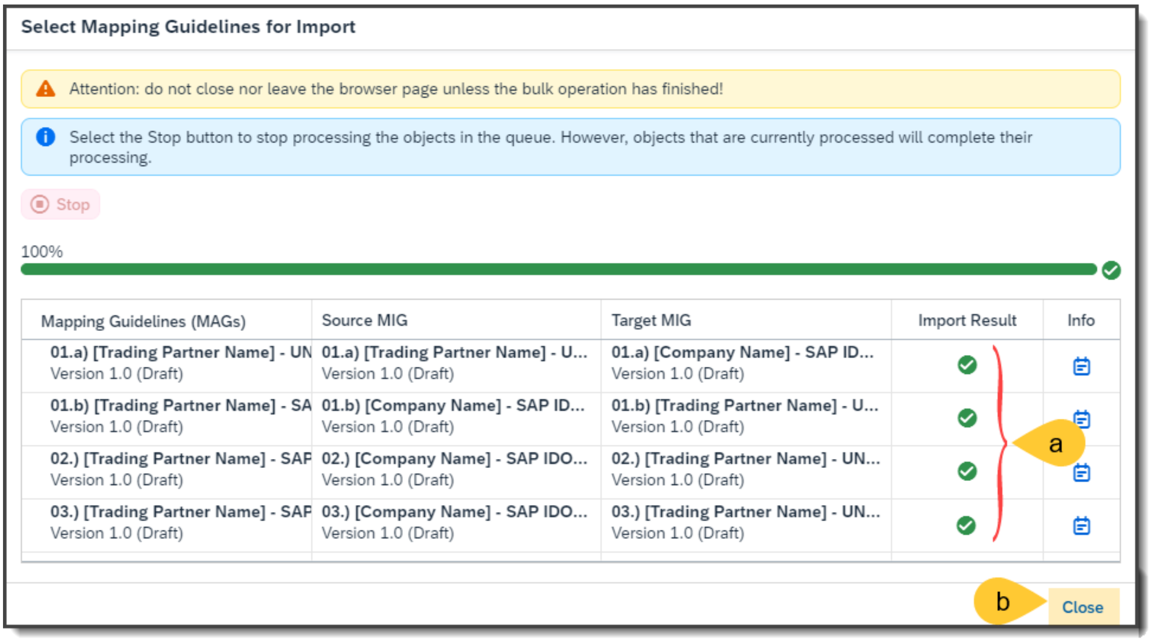
To commence the import procedure, click on the (c) **Import** button, which located in the upper right-hand corner. You will get a new window "Select Mapping Guidelines to Import". Here you should (d) browse for the already exported zip file: B2B-Integration-Factory_Order-to-Cash_IDOC_to_UNEDIFACT-D10B_MAGs.zip so that you will see ii in the field (e) File (*.zip) to import. Click than on button (f) Check.



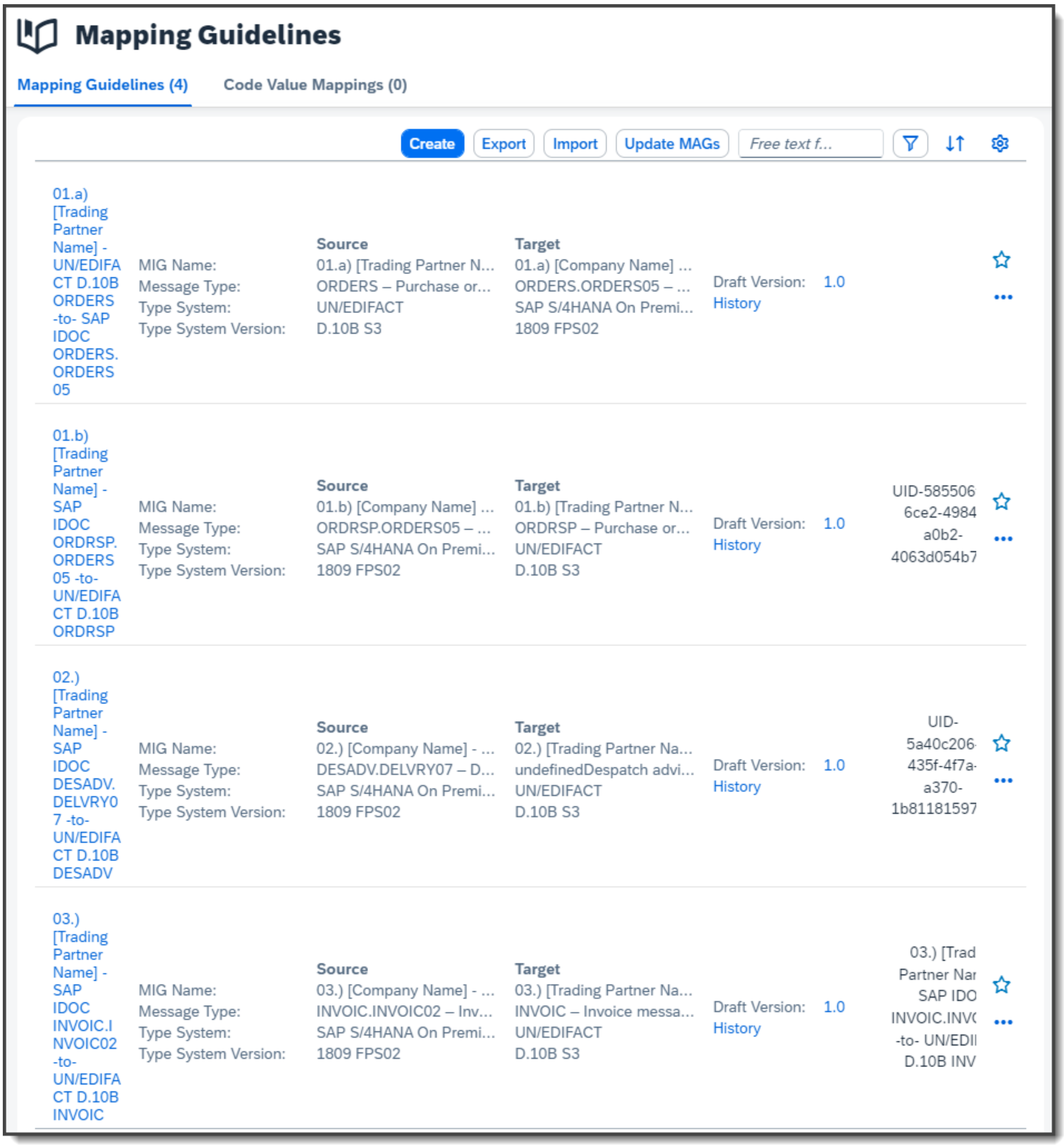

Once the file selection and validation steps are satisfactorily completed which is shown by the enabled checked check boxes (a), click like in the following figure shown the (b) Import button to initiate the actual importation of the selected MAGs. Once you clicked on the Import button do not close nor leave the browser page unless the bulk operation has finished!




If the import is completed successfully, you should find the following representation of import result in where each entry is marked with ✔ icon. Here you should click on (b) Close button.



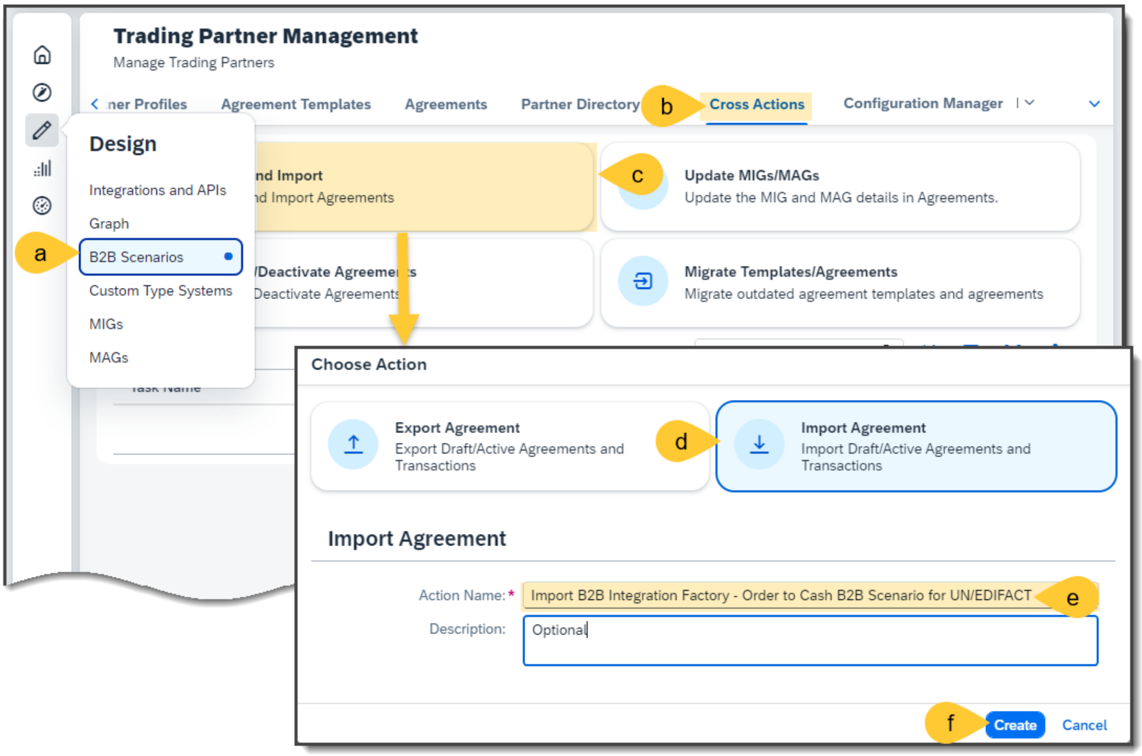

Like in the following figure shown, all the successfully imported Mapping Guidelines should be listed in the overview list.

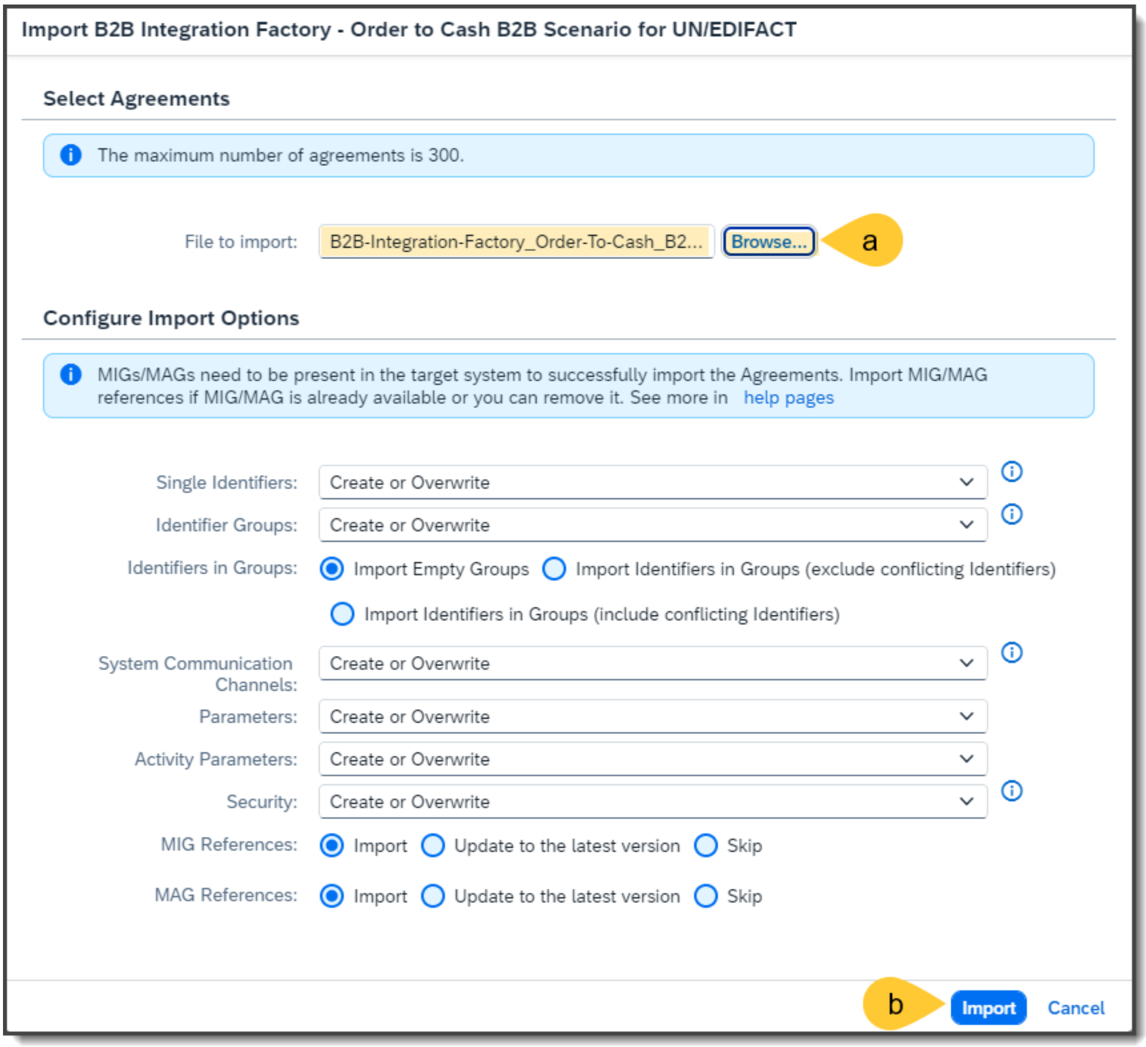


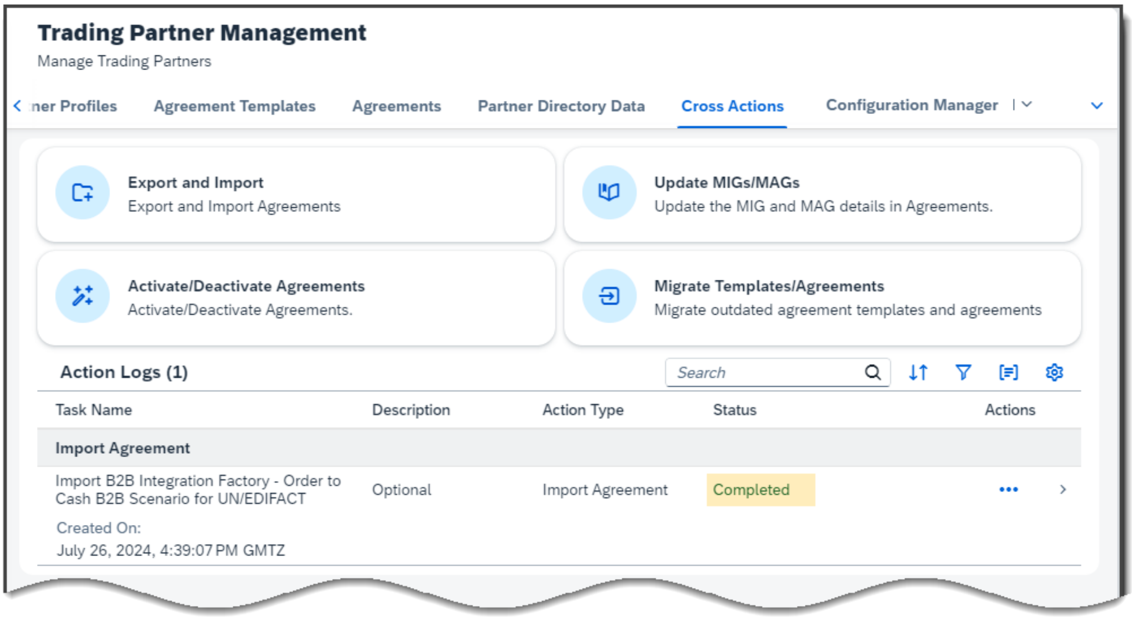

## How to import the TPA (Trading Partner Agreement)?

After you import MAGs successfully, you can import the TPA into your system as well. After successfully importing the MAGs, you can proceed to import Trading Partner Agreements (TPAs). TPAs define the terms and conditions of data exchange between you and your trading partners, ensuring mutual understanding and compliance with agreed-upon standards.

d.)Navigate back to the Design section, then go to B2B Scenarios. This section is specifically designed for managing and configuring various business-to-business scenarios, including TPAs. e.)Click on the Cross Action button, which provides the option to import agreements. f.) The Export and Import helps you to import your Agreement into the system.


Trading Partner Management
Manage Trading Partners
ner Profiles
Agreement Templates
Agreements
Partner Directory
b
Cross Actions
Configuration Manager
Design
Integrations and APIs
Graph
a
B2B Scenarios
Custom Type Systems
MIGs
MAGs
nd Import
nd Import Agreements
c
Update MIGs/MAGs
Update the MIG and MAG details in Agreements.
/Deactivate Agreements
Deactivate Agreements
Migrate Templates/Agreements
Migrate outdated agreement templates and agreements
Choose Action
Export Agreement
Export Draft/Active Agreements and Transactions
d
Import Agreement
Import Draft/Active Agreements and Transactions
Import Agreement
Action Name: *
Import B2B Integration Factory - Order to Cash B2B Scenario for UN/EDIFACT
e
Description:
Optional
f
Create
Cancel


Import B2B Integration Factory - Order to Cash B2B Scenario for UN/EDIFACT
Select Agreements
The maximum number of agreements is 300.
File to import:
B2B-Integration-Factory_Order-To-Cash_B2...
Browse...
a
Configure Import Options
MIGs/MAGs need to be present in the target system to successfully import the Agreements. Import MIG/MAG references if MIG/MAG is already available or you can remove it. See more in help pages
Single Identifiers:
Create or Overwrite
Identifier Groups:
Create or Overwrite
Identifiers in Groups:
Import Empty Groups
Import Identifiers in Groups (exclude conflicting Identifiers)
Import Identifiers in Groups (include conflicting Identifiers)
System Communication Channels:
Create or Overwrite
Parameters:
Create or Overwrite
Activity Parameters:
Create or Overwrite
Security:
Create or Overwrite
MIG References:
Import
Update to the latest version
Skip
MAG References:
Import
Update to the latest version
Skip
b
Import
Cancel

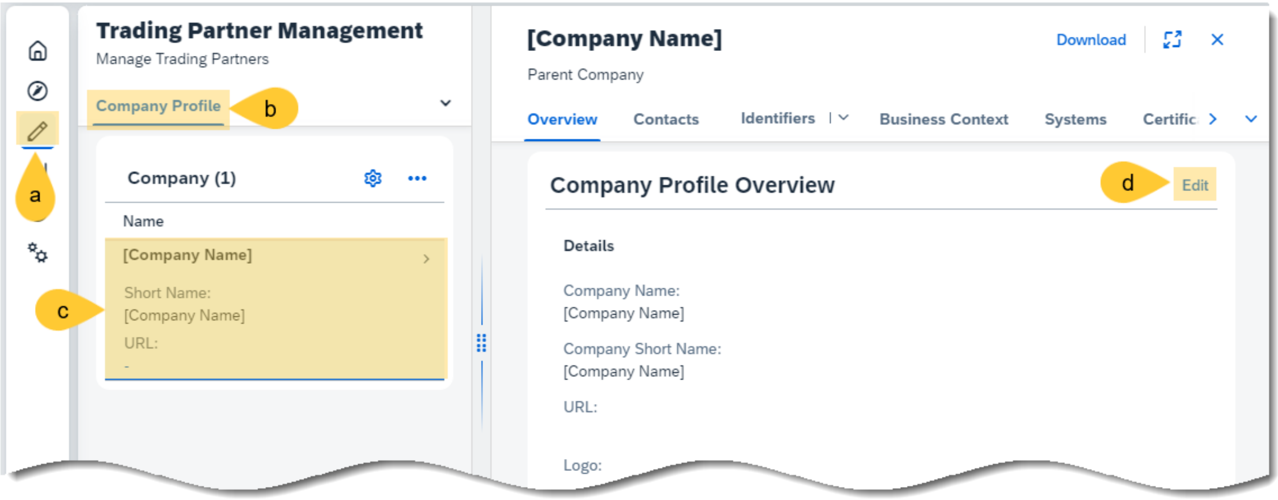

Trading Partner Management
Manage Trading Partners
ner Profiles
Agreement Templates
Agreements
Partner Directory Data
Cross Actions
Configuration Manager
Export and Import
Export and Import Agreements
Update MIGs/MAGs
Update the MIG and MAG details in Agreements.
Activate/Deactivate Agreements
Activate/Deactivate Agreements.
Migrate Templates/Agreements
Migrate outdated agreement templates and agreements
Action Logs (1)
Search
Task Name
Description
Action Type
Status
Actions
Import Agreement
Import B2B Integration Factory - Order to Cash B2B Scenario for UN/EDIFACT
Optional
Import Agreement
Completed
Created On:
July 26, 2024, 4:39:07 PM GMTZ

# How to finally configure

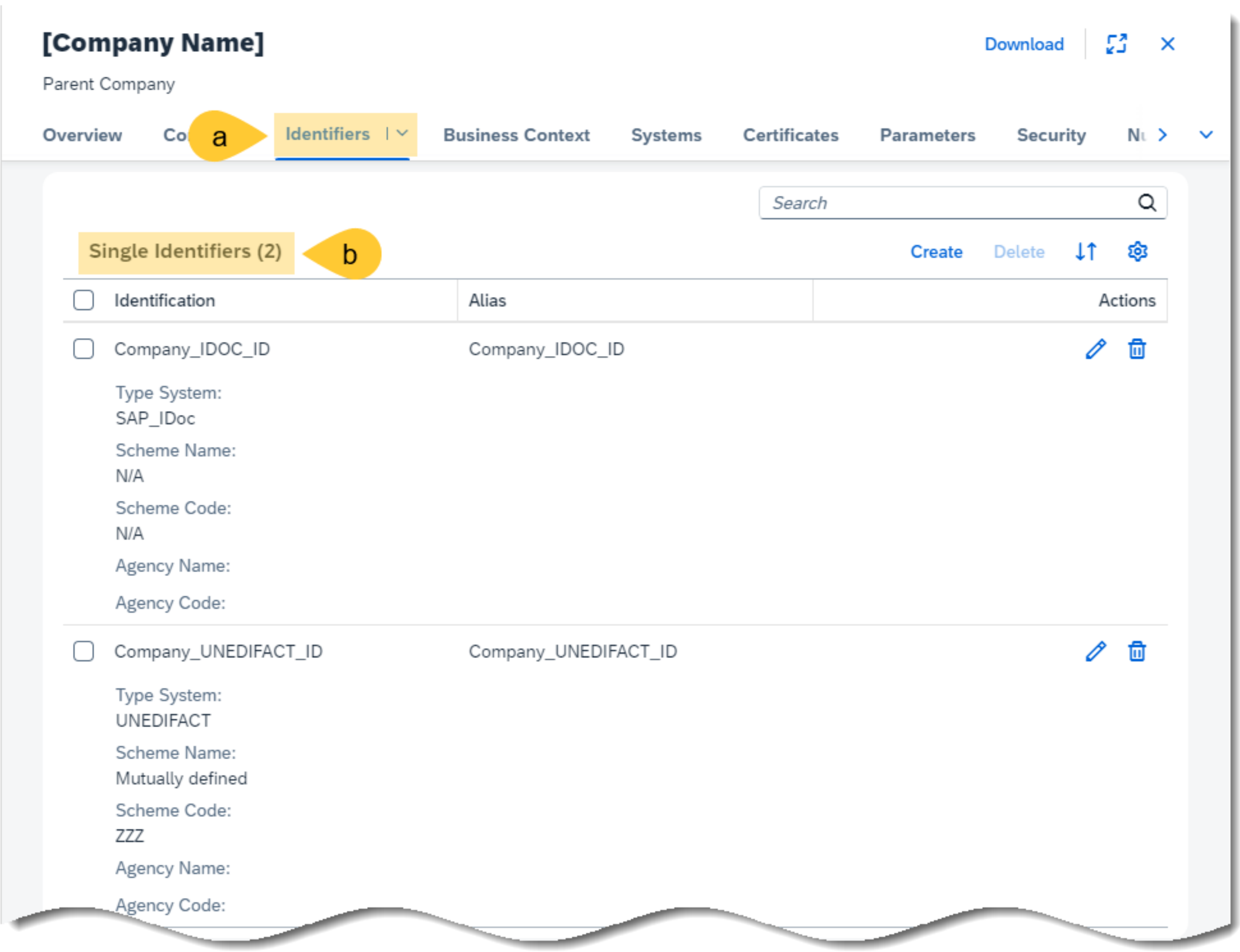
## Company Profile

Once the pre-packaged content has been successfully imported, it must be configured. In the first step of the configuration, the placeholder [Company Name] in the Company Profile must be replaced by the real name.

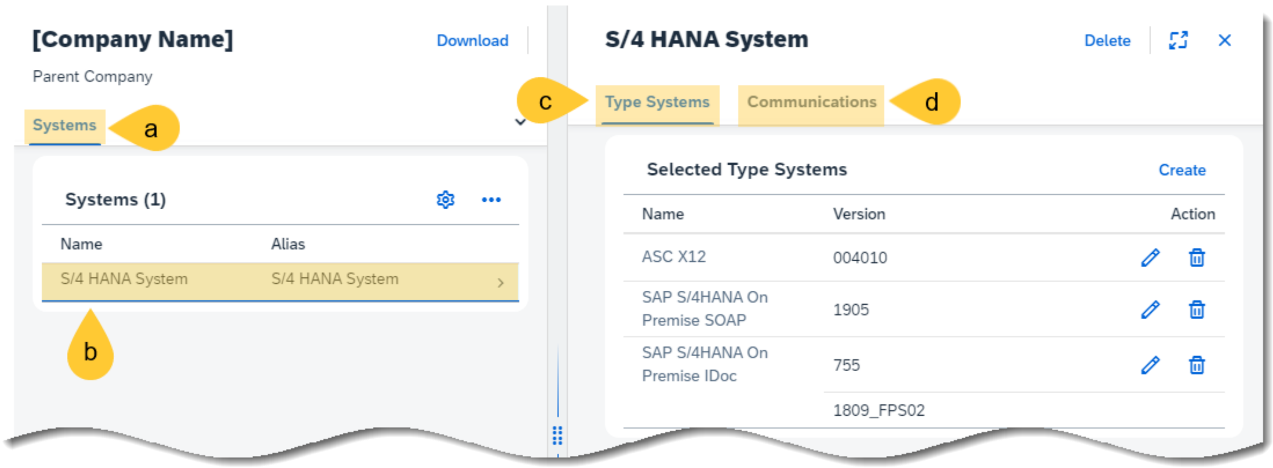
The Company Profile covers the necessary company related information and parameters which are relevant and can be reused across all the Trading Partner Agreements. This Company Profile should be initially used in Trading Partner Agreement templates, and should have at least below properties.




The Company Profile can be found in the Trading Partner Management under (a) Design > B2B Scenarios. The (b) Company Profile has its own tab there. The (c) entry with the placeholder [Company Name] can be found in the list of created companies. Click on it to go to the Company Profile Overview. The Company details can now be configured using the (d) Edit button in the top right-hand corner.




In addition to the Company details, the (a) Company Identifiers must also be adjusted. Two (b) Single Identifiers have already been created for IDoc and UN/EDIFACT, which should conveniently be renamed according to the company.



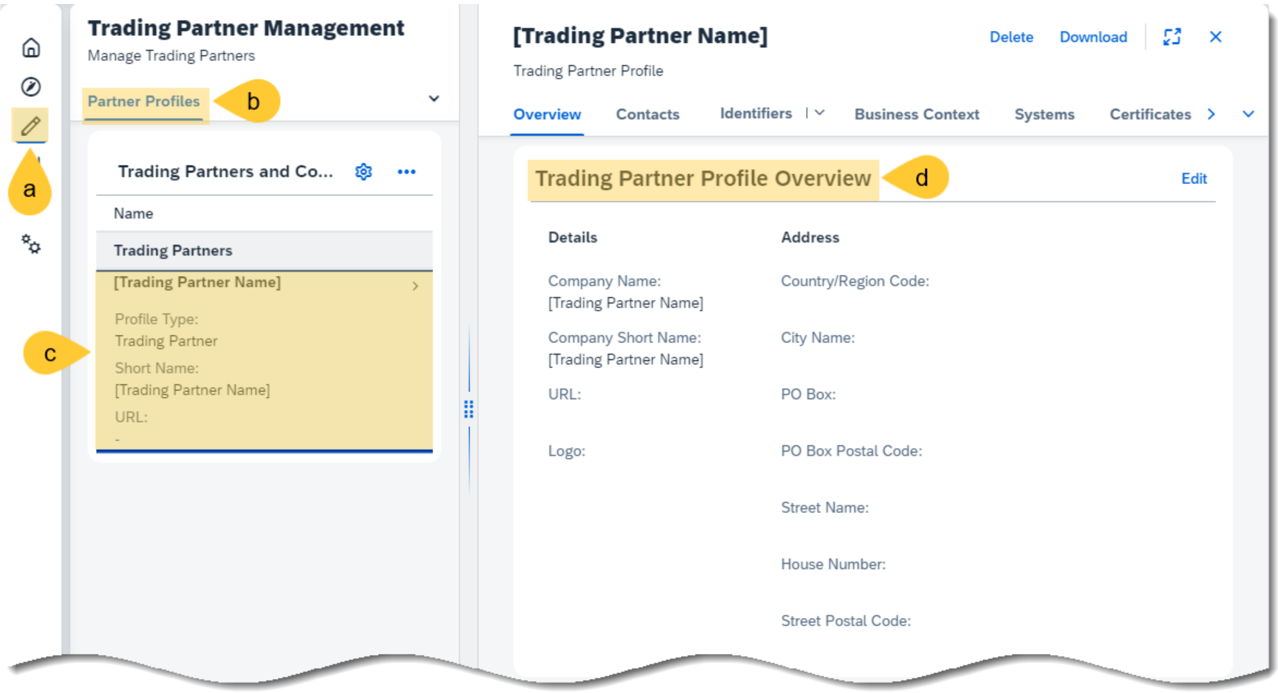

Under (a) Systems, a business system must be created with the internally used (c) type system in its agreed version and the (d) communication channels. Dummy parameters are provided in the pre-packaged content for orientation.

The two communication channels created can be used for simulation purposes by the Insomnia Collection.

There are further details that can be configured in the Company Profile. These can be found in the other tabs. For example, parameters can be defined or the business context customized.

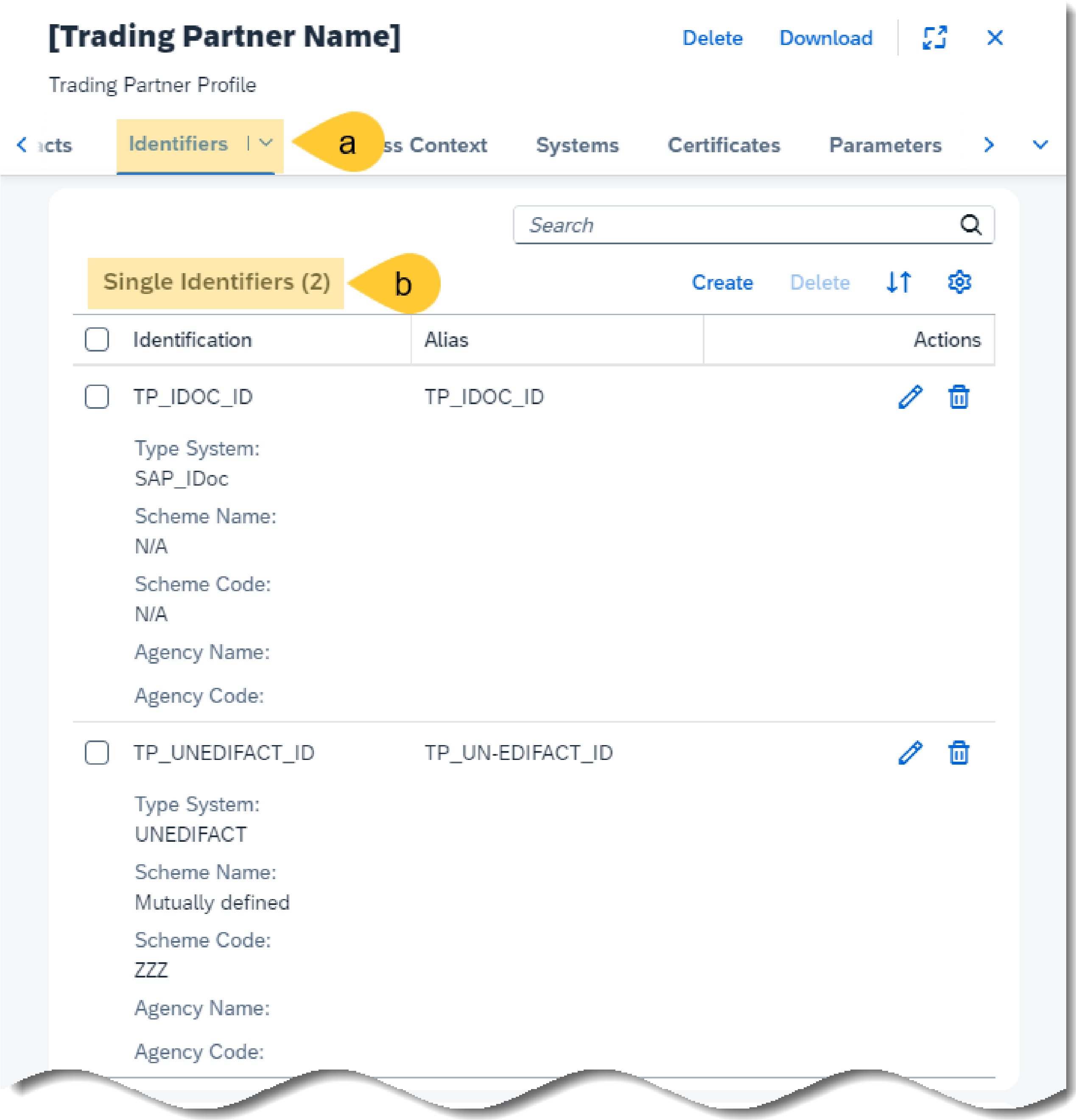
## Trading Partner Profile

The pre-packaged content includes a sample Trading Partner Profile with the name [Trading Partner Name]. This can be used as a template for your own trading partners. This template is briefly explained below.




The Trading Partner Profile can also be found in the Trading Partner Management under (a) Design > B2B Scenarios. The (b) Partner Profile has its own tab there. The (c) entry with the placeholder [Trading Partner Name] can be found in the list of created companies. Click on it to go to the Trading Partner Profile Overview. The (e) Trading Partner details can now be seen in this window.

Next, the identifiers should be created. The identifiers are used in interchange payloads to identify the enterprise, either as a sender or a receiver, depending on the direction. Identifiers in B2B exchanges are like values that help systems identify the sender/receiver trading parties involved in that B2B exchange.



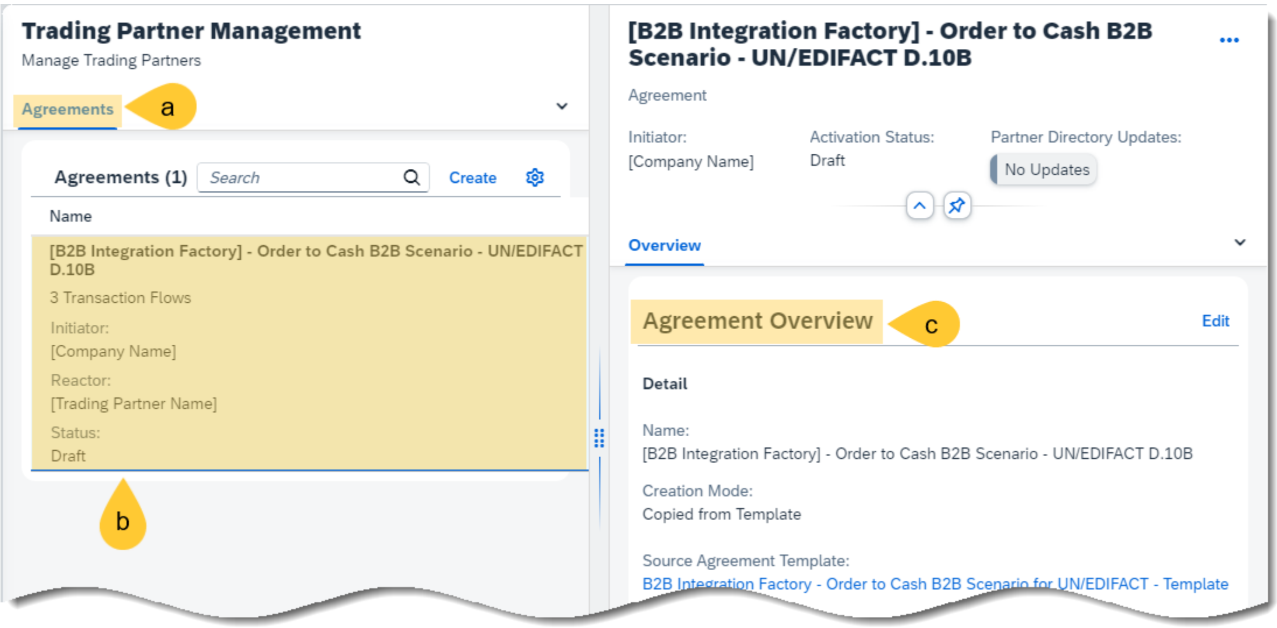

The (a) Identifiers tab takes you to the list of the (b) Single Identifiers. Each trading partner must have its own identifier for each type system. Two identifiers are provided in the pre-packaged content as a template that can be used for orientation.


A system with communication channels must also be configured under each trading partner. This works in the same way as for the company. To do this, go to (a) Systems and create or (b) select a system. You can then set the type system and the (c) communications. Here again, there are ready-made templates that can be used as a guide.

## Trading Partner Agreements

The Trading Partner Agreement (TPA) is a formal contract between two business entities that defines the agreed terms and conditions for electronic data exchange and specifies the technical and operational arrangements necessary for successful integration.

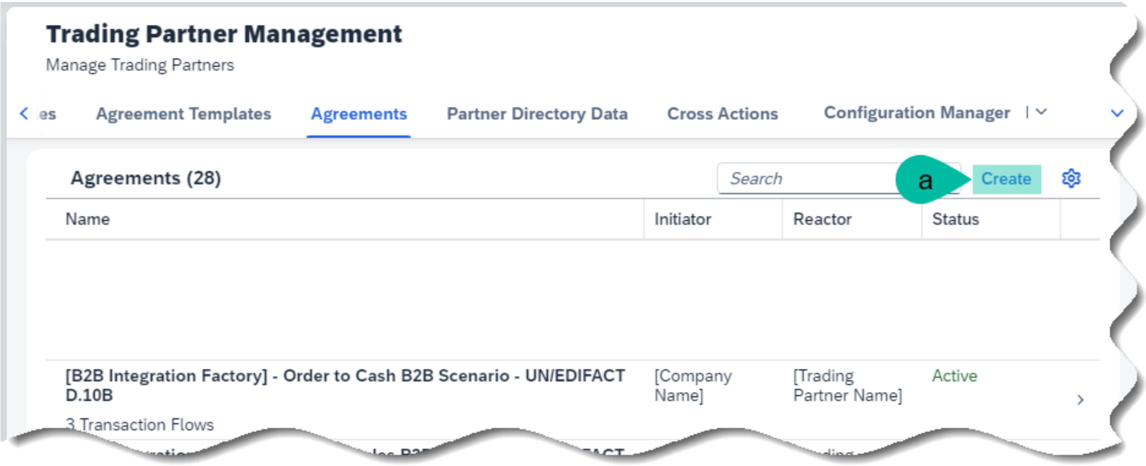
This is an example Trading Partner Agreement that can be used for testing. The B2B simulation can be used to understand how it works. It can also serve as a comparison or template for creating new TPAs.



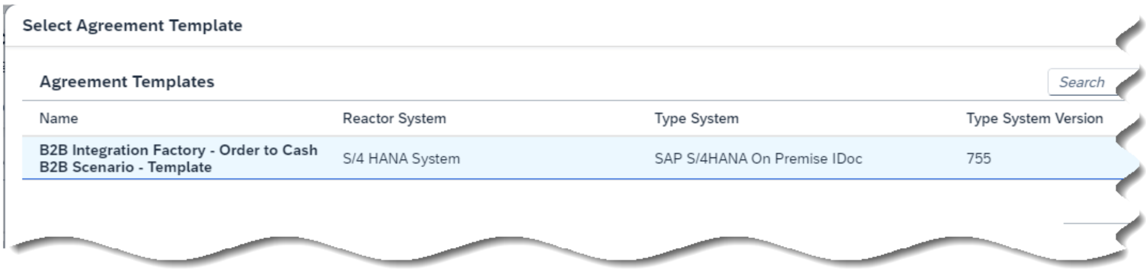

The Trading Partner Agreements can be found in Trading Partner Management under (a) Agreements. An agreement has already been provided for orientation purposes, which can serve as a template. Behind each

(b) agreement there is the (c) Agreement Overview with all the information on the company and the trading partner, among other things.

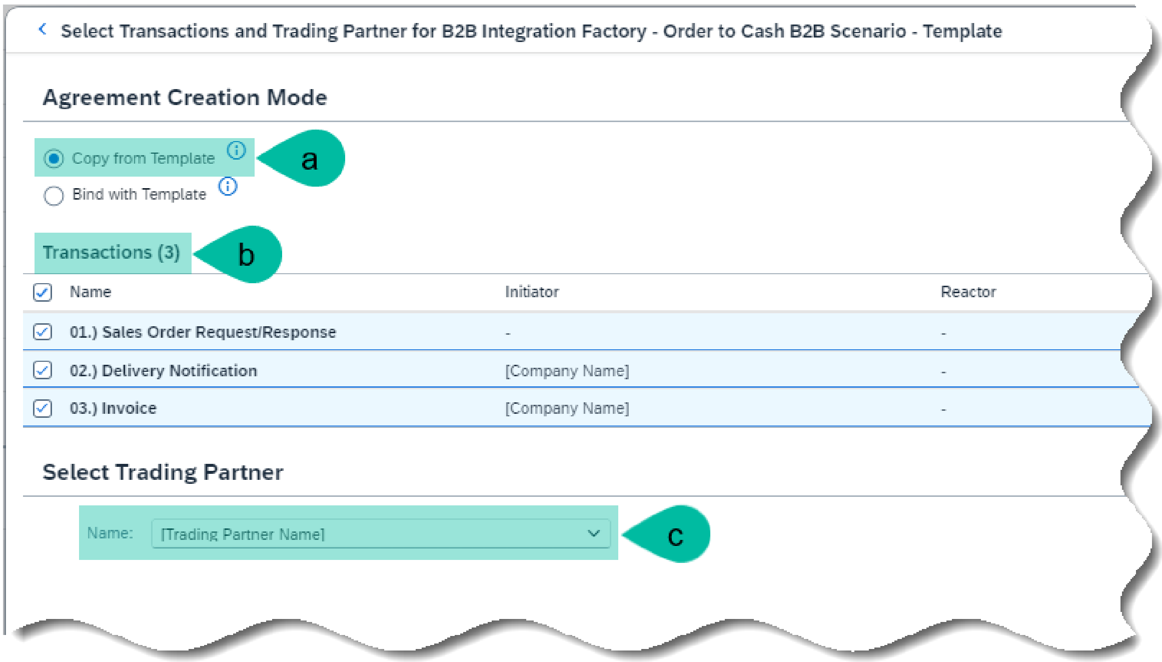
In the Trading Partner Agreement, at least the Company sender/receiver communication and the identifier in the template overview must be adjusted.



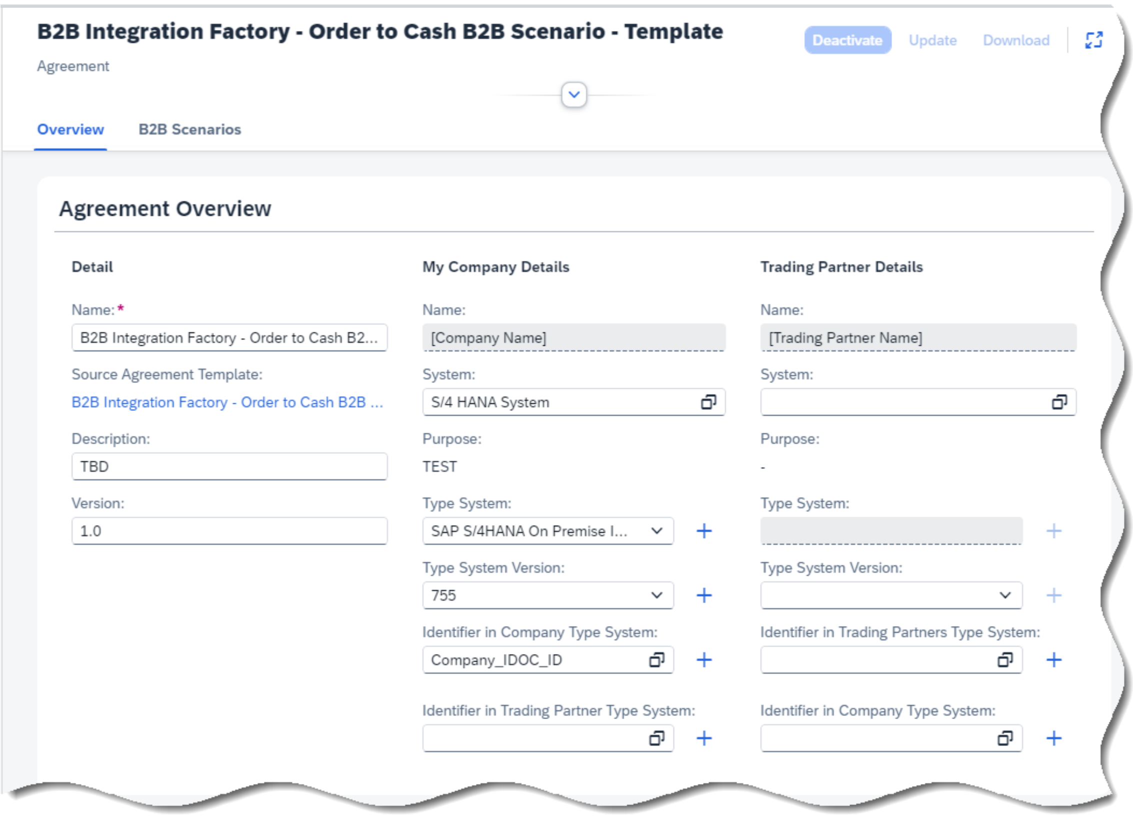

To create a new Trading Partner Agreement based on the existing template, you must create a new one using the (a) Create button.




The 'Order to Cash' template can then be selected.




In Agreement Creation Mode, (a) 'Copy from Template' must then be selected. The desired (b) transactions can also be selected. At the bottom you can then select the (c) trading partner on the basis of which the agreement will be created. The Open Draft button then takes you to the settings already described.




Parameters such as the type system, the version and the identifier must be set here.

# Activation, Testing and set final TPAs

User can do following

--> Activate and do an internal test using Insomnia Collection + Thecommunication channels B2B-Simulation.Sender and B2B-Simulation.Receiver

--> After successful test, the user can do a deactivation and change the company + trading partner communication channel to the required ones such as IDOC.sender or AS2.sender and do an activation again

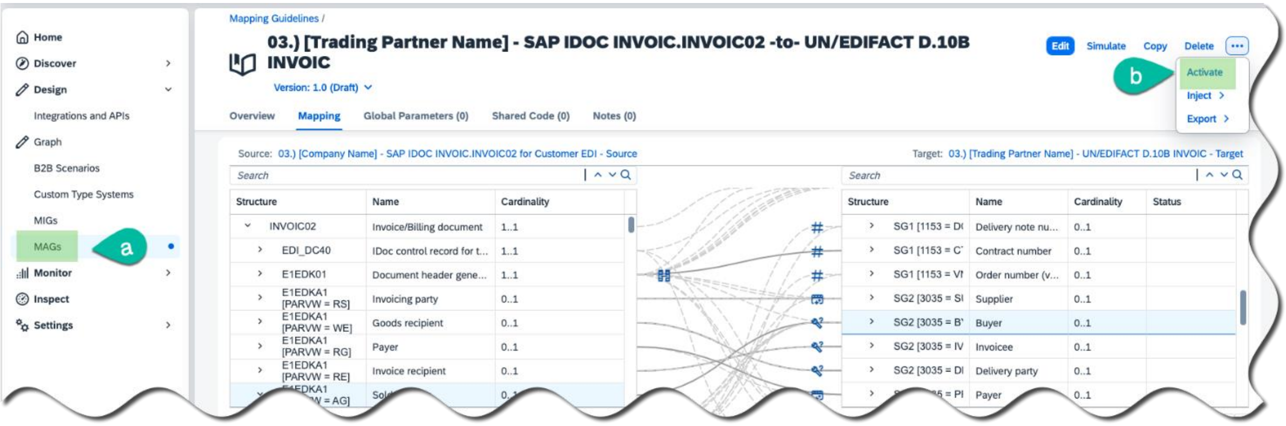
If this TPA is than running and you need it for further tradings partners, you can than change in the template the communication channels do the final ones (for e.g. IDOC.sender/-receiver) and than you can do a ceate (+ copy) in where you have to set the final communications in the BTAs (business transaction activities) accordingly,

The following chapters deal with activating and testing the pre-packaged contents. To carry out an initial internal test, the content can be activated and tested using the Insomnia collection. The pre-configured communication channels B2B-Simulation.Sender and B2B-Simulation.Receiver are used for this. After a successful test, the content can be deactivated again. The company and trading partner communication channels can then be configured as required (e.g. IDOC.Sender or AS2.Sender) and then reactivated.
If the communication of this trading partner works, it can be used for other trading partners. After creating or copying, only the final communications need to be set accordingly in the Business Transaction Activities (BTAs).

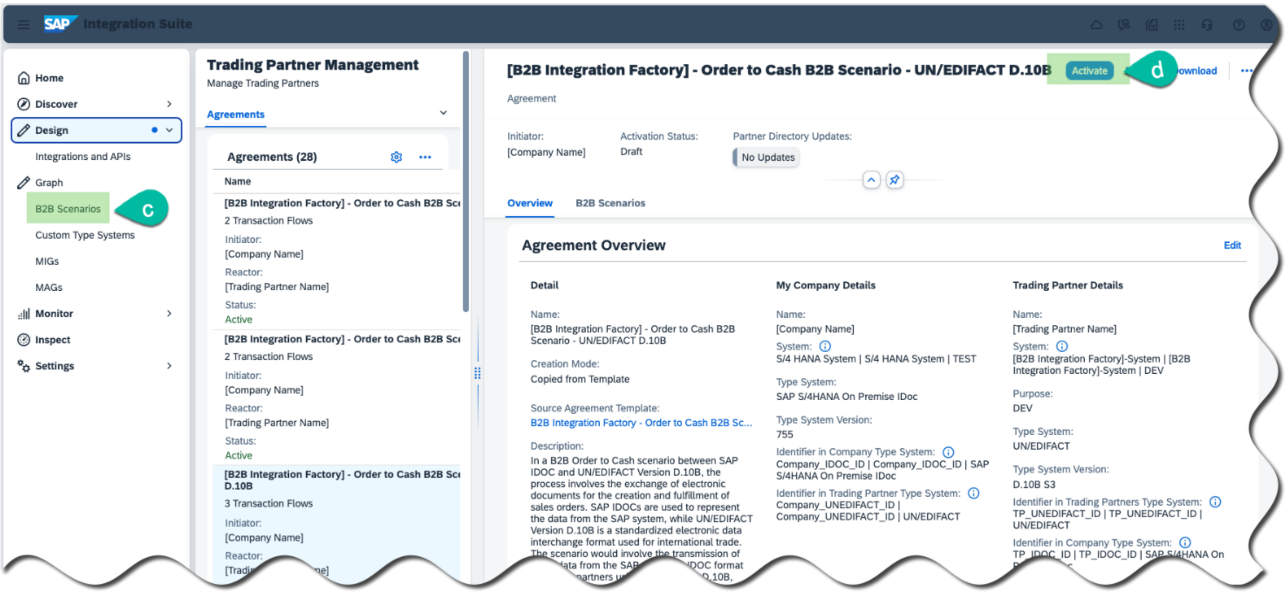
## How to activate

To ensure the configuration which you have imported can be pushed to the partner directory, the following activation process must be done before you processing

a.) Navigate to Design > MAGs and click on the three button on the top right corner. You can b.) active the Mapping Guideline which you imported before. The version of the MAG would be updated from draft to active.



Now, you can active the Agreement which you´ve imported it. c.)Navigate to the B2B Scenarios again and find the Agreement, d.) Click on Active and push the TPA into the partner directory. If you finish the activation process, it is ready for you to proceed the test now.

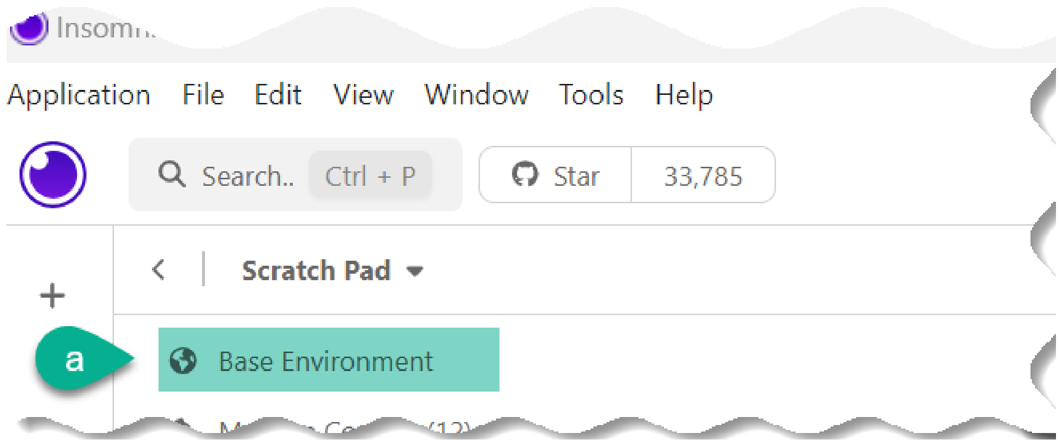



## How to test using the Insomnia collection/postman collection

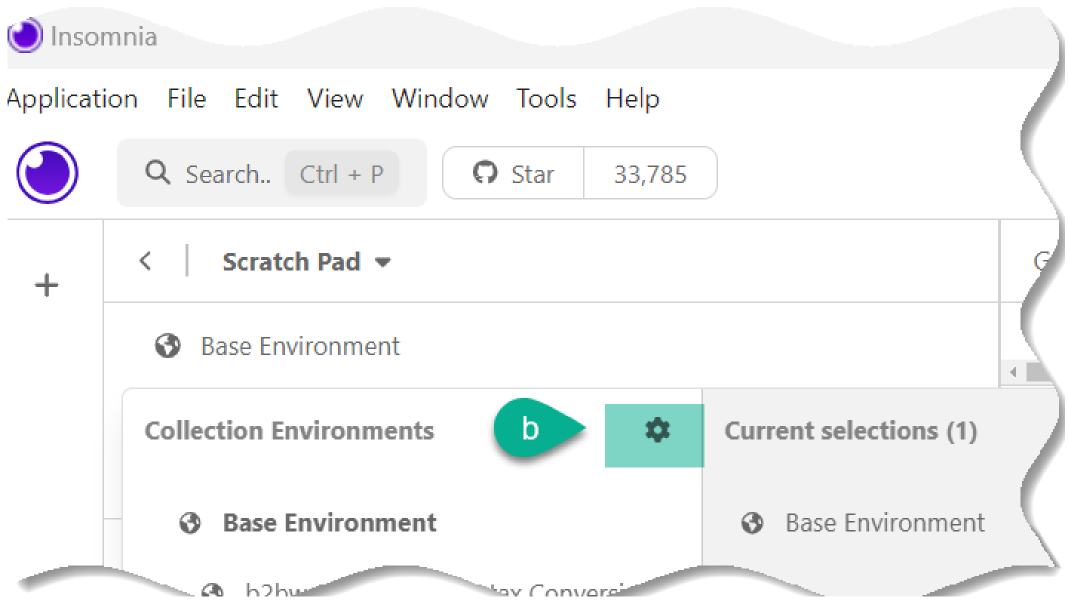
In order to test transactions using Insomnia REST Client, follow the steps below:

1. Install Insomnia: If you haven't already installed Insomnia, download it from the official website and install it on your machine.
2. Download Insomnia collection: Download the insomnia collection from the document tab of the SAP Business Accelerator Hub and import it in your insomnia.
3. Create base environment: To create a base environment in Insomnia collection, follow the steps below:

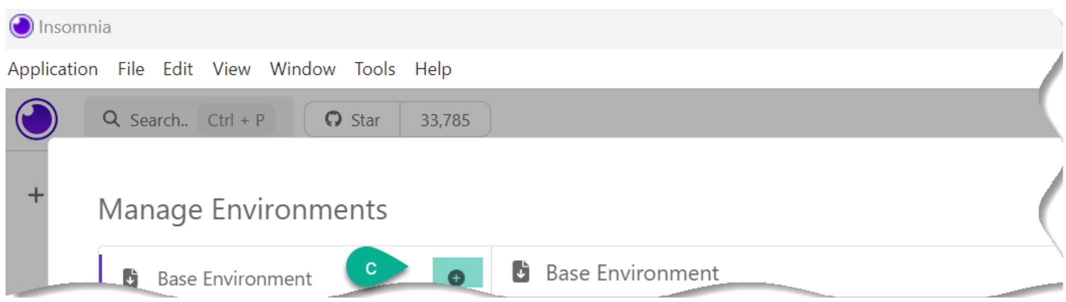
a.) Click on the icon for Base Environment.




b.) Click on the settings icon(as seen in below screenshot) and a new window Manage Environment opens.




c.) Click on the plus sign to create new environment. In Manage Environments window.



d.) Give a meaningful name to the new environment. You will then be taken to the JSON environment editor. By default, the base environment will be empty, simply {}


e.) The base environment, you can add variables in a key : value format.You could set up a variables for your base URL and clientid and clientsecret like this:

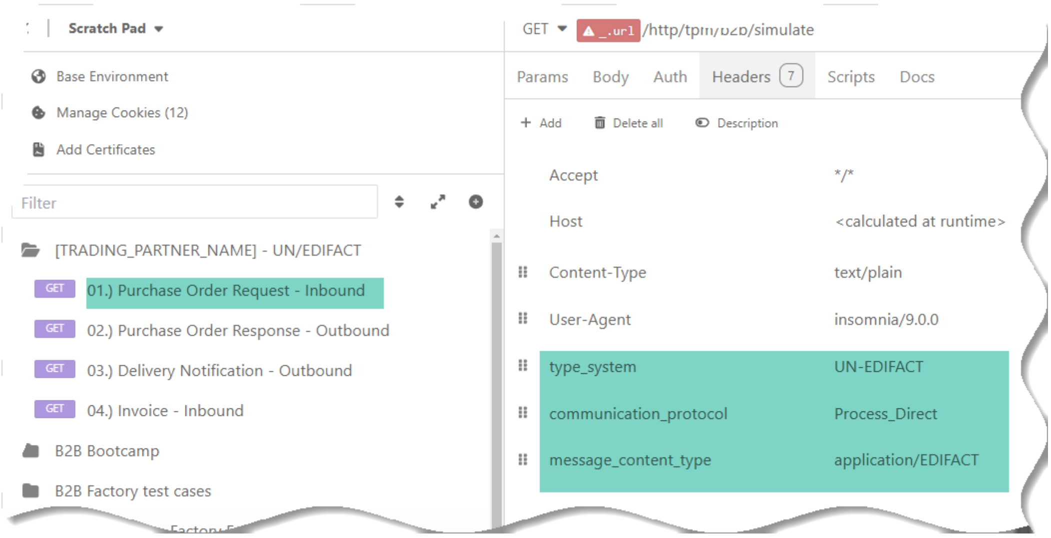
{
"clientid": "sb-e94893a5-f5d9-481e-b0da-36a6f206c547!b394389|it-rt-b2b-mapping-factory-dev-d6xaa3qy!b1806",
"clientsecret": "8b3aa9fb-ba1c-43d5-a16a-787d2814663d$TnIoIQFSVgxwL3IKTTaPHkwp1Jh4iDl-N0eOW4m3_po=",
"url": " https://b2b-mapping-factory-dev-d6xaa3qy.it-accd003-rt.cfapps.eu12.hana.ondemand.com"
}

4. Save: Once you have added the necessary variables, click 'Done' to close the Manage Environments window.
   Your base environment has now been activated and any requests you make will use the variables defined in this environment.
   Please remember, the Base Environment is active across all of your environments. So if you activate another environment, the Base will still be active. In case you want to override a variable from the base environment, you can do so by declaring it in the sub environment.

5. Headers:For inbound transaction such as Purchase Order Request following headers are maintained:

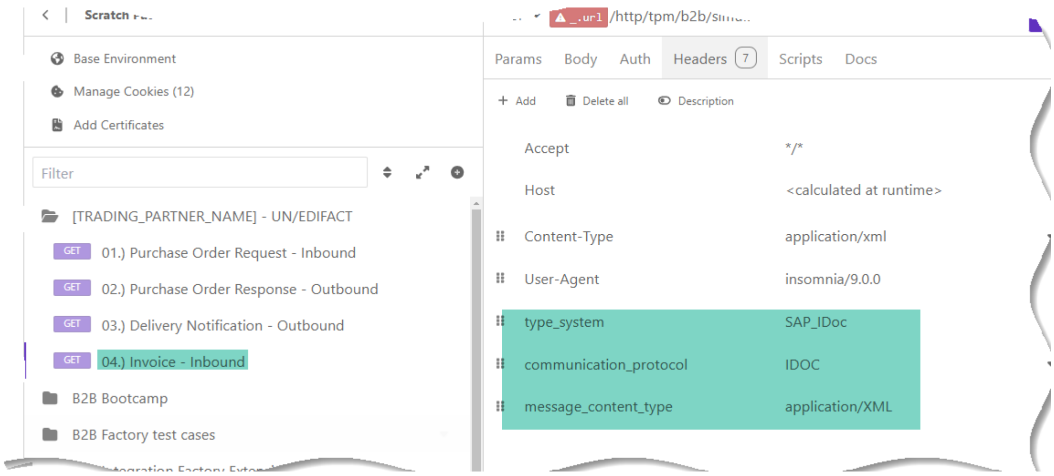
type-system: UN-EDIFACT
communication_protocol: Process_Direct

message_content_type:application/EDIFACT

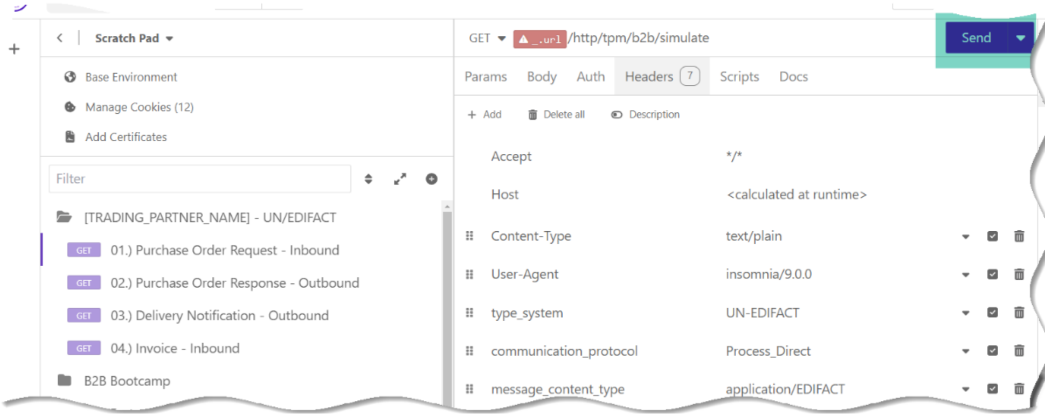



For Outbound transactions such as Invoice ,DeliveryNotification, Purchase Order Response following headers are maintained:

type-system: SAP_IDoc
communication_protocol: IDOC
message_content_type:application/XML

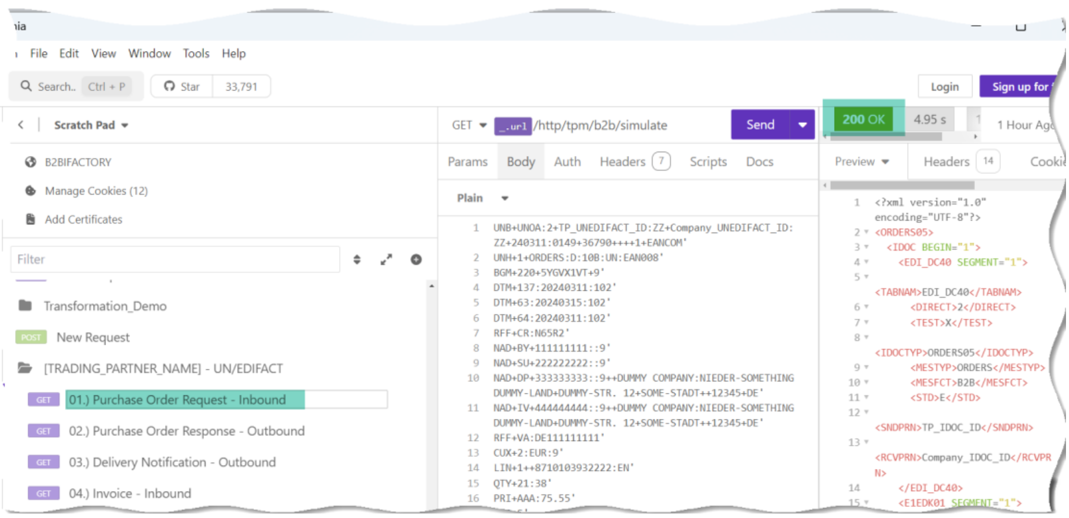


6. Send a request: By clicking 'Send' you will submit the request to the server.

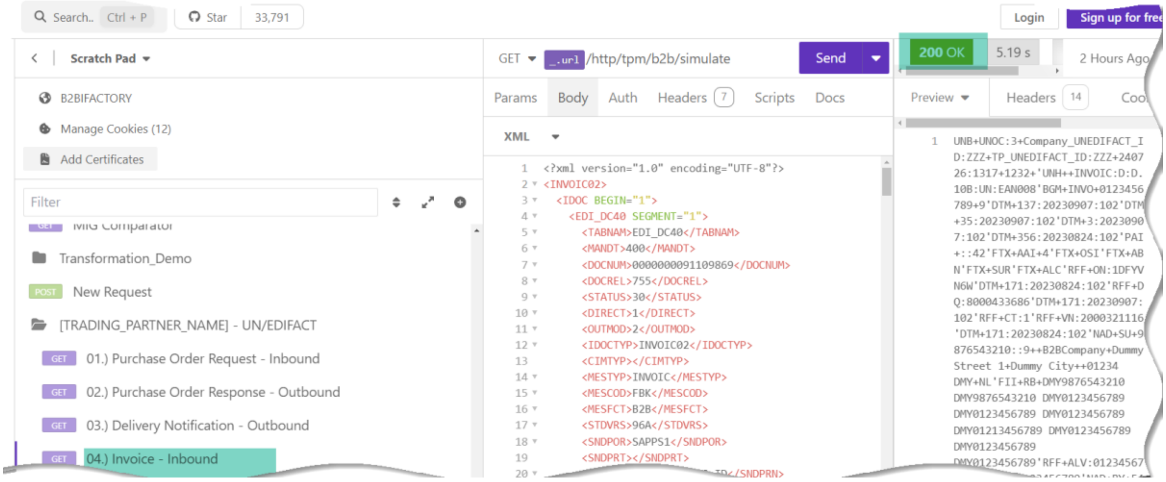



7. Check the response: After making the request, Insomnia will display the server's response below. Check the returned status code, headers, and the body of the response for validation.
   If the returned status code is 200 OK, it's a success.

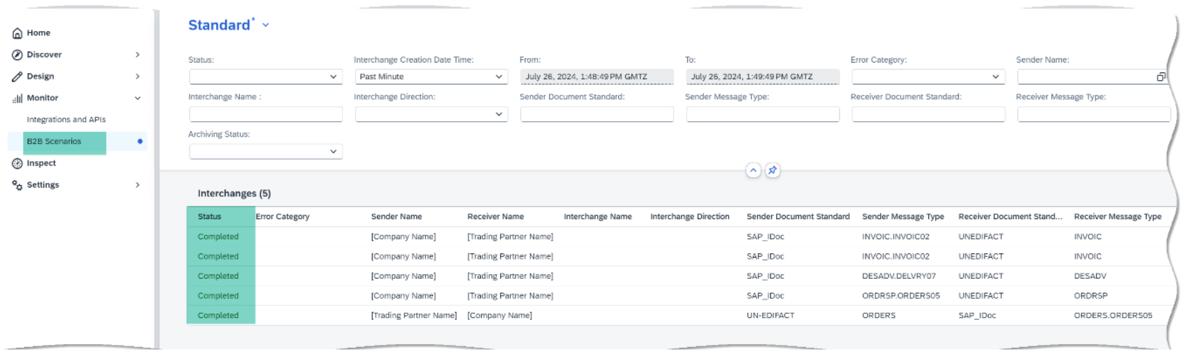
Successful Result for  Purchase Order Request - Inbound




Successful Result for Invoice -Outbound



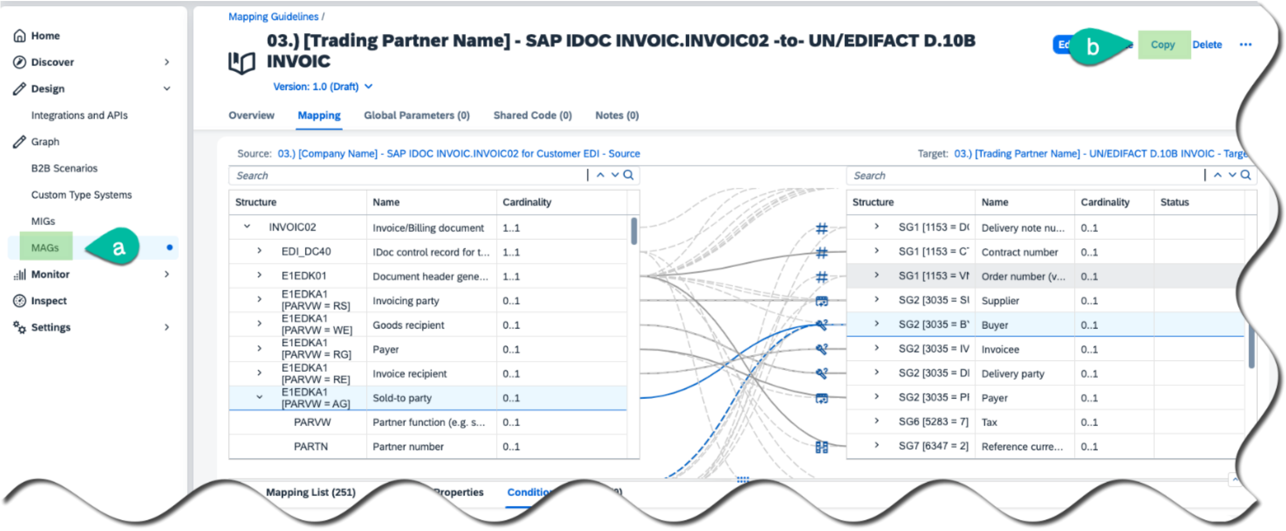

8. B2B Monitoring: After the successful response in insomnia , you can navigate to Monitor > B2B Scenarios and you will find the entry of the Completed transactions.



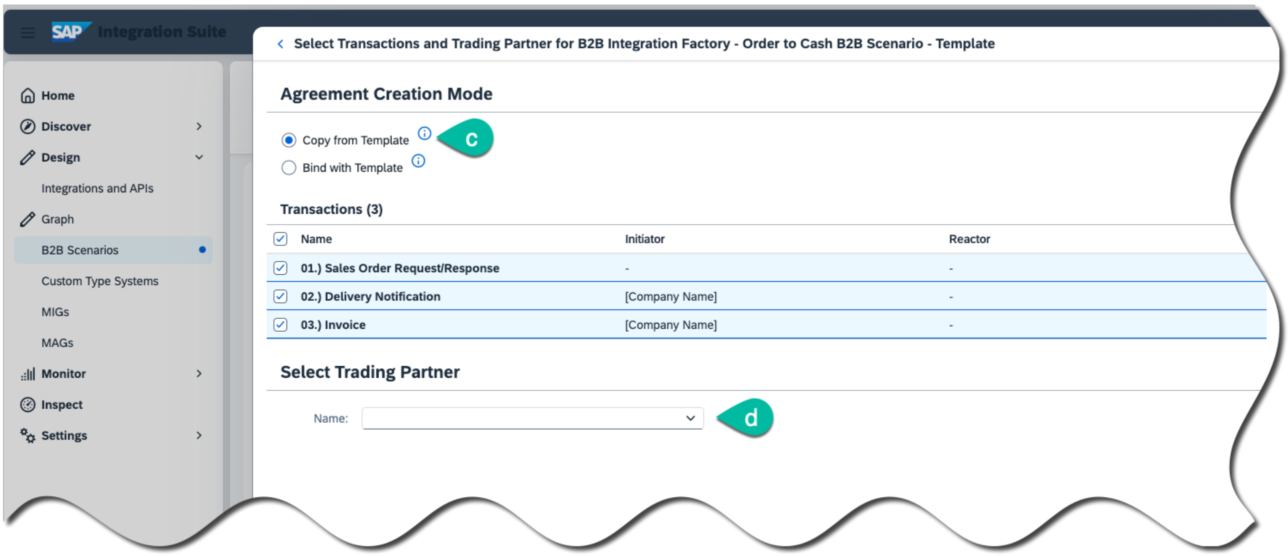

## How to copy?

After your successful test, you are also able to take advantage of these contents for your other trading partners and its related mapping. Copying the existing MAG allows you to quickly set up new guidelines for other trading partners without starting from scratch. a.)Go to the Design Section and the MAGs, the option b.)Click on

This action will generate a duplicate of the selected MAG with a suffix indicating it is a copy (e.g., MAGName_Copy).




Follow the procedure of creating the new trading partner profile in How to finally configure and then you can create the Trading Partner Agreement with the Template. Go to Agreement Creation Mode a.) Copy from Template and choose the Transactions you need for further Trading Partner Agreement and d.) select the Trading Partner you´ve just added. Base on the template, you can easily create the further Trading Partner Agreements for other Trading Partners.

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