KDD049 - End-to-End Integration of GTS with S/4HANA

Status	Approved
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Issue

Syensqo currently uses GTS for a number of compliance related capabilities. Some parts are fit for purpose and used comprehensively while others are not used consistently, have significant gaps or not use at all. This KDD provides the options for

1) Standardize the usage of GTS globally

2) Implement those functional capabilities that are not used today

Recommendation

Based on the detailed evaluation done, following is recommended

Category	Existing Integrations	Improvements	New integrations
Compliance	Sales Order Purchase Order Outbound Delivery Inbound Delivery	Improve SPL checks (Matching with Business Partner)	Freight Order
Customs	Sales Order Proforma Invoice Purchase Order Outbound Delivery Inbound Delivery	Process improvement to settle customs costs to material master via Partner functions on Purchase Order, processing the customs invoice and distributing the costs back to the purchase order/material	Purchasing Invoice Freight Order
Preference	Billing Purchase Order	Country of origin / Preference data to be stored at batch level ATP Checks include any preferential requirements to be met and relay it to Production	Production Order
Intrastat	No		MM Schedule lines, Billing Invoice
Master Data	Materials (Including spare parts and serialised equipment) Business Partners FX Production BOM and Recipe	Data cleansing for product classification	

Following functionality is recommended to be implement after the stabilization of GTS (in Phase 2 and beyond)

- Customs warehouse functionality for bonded warehouse

Background & Context

Syensqo faces challenges in fully leveraging its Global Trade Services (GTS) system for managing compliance-related processes across its global operations. While certain functionalities of GTS are well-utilized and meet organizational needs, other components are either inconsistently applied, have significant gaps, or are not utilized at all. This inconsistency leads to several critical issues:

1. Inconsistent Application of Compliance Processes:
   The lack of standardized usage of GTS across all regions and GBU's results in varying levels of compliance management maturity. Some processes are using the system effectively for activities such as trade compliance screening, license determination, and product classification, while others are not, leading to uneven risk exposure and inefficiencies.
2. Gaps in Functional Capabilities Utilization:
   Several GTS functionalities, including automated Sanctioned Party List (SPL) checks, export control checks, and license management, are either partially used or not utilized at all. This underutilization creates gaps in compliance coverage, increasing the risk of non-compliance with global trade regulations, potential penalties, and reputational damage.
3. Manual Processes and Operational Inefficiencies:
   Due to the incomplete use of GTS capabilities, many compliance tasks are handled manually, such as customs value adjustments and license determination. This not only increases the workload on staff but also introduces the potential for human error, delays in processing, and higher operational costs.
4. Lack of Global Standardization and Training:
   There is no globally standardized approach for using GTS, resulting in inconsistent data quality, varied compliance practices, and suboptimal use of resources. Additionally, the absence of comprehensive training and guidelines on the effective use of GTS across all regions contributes to these discrepancies.

In order to address these challenges, following are the key activities that are proposed:

1. Standardize the Usage of GTS Globally:
   Establish a consistent, organization-wide approach to utilizing GTS for all compliance-related activities. This includes creating standard operating procedures (SOPs), consistent master data standards and implementing governance mechanisms to ensure uniformity and accountability.
2. Implement and Expand Unused GTS Functionalities:
   Identify and integrate those GTS features that are currently not in use but are critical for comprehensive compliance management. This involves assessing current gaps, customizing functionalities as needed, and rolling out these enhancements incrementally to ensure smooth adoption.

This KDD looks at the options for implementing both the activities.

Below table is the current status of the GTS integration in the current system. The **Green** color in the table below indicates that the process is currently active in GTS and the **yellow** color indicates a newer functionality with a potential opportunity to implement as part of ERP rebuild program

There are 2 options considered as part of the KDD

Option 1: Implement the As-Is GTS solution scope

Option 2: Implement the additional GTS solution scope

Process	Type of Data Object	Documents					Current Issues
Sales	Master Data	Customers	X	X	X	X	• Master data required to carry out all the activities is available in GTS
	Transactional	Orders	X	X			▪ Compliance checks need to be optimised for SPL check, License determination
	Transactional	Contracts	X				
	Transactional	Invoice (Proforma)		X			▪ Logistics data is manually entered in the customs declaration form as there is no integration currently
	Transactional	Billing			X	X	• Preference eligibility and Calculation not utelizing the complete GTS preference functionality.
Purchasing	Master Data	Vendors	X	X	X	X	• Master data required to carry out all the activities is available in GTS
	Master Data	Materials	X	X	X	X	• Master data: Product classification is incorrect and needs to be remediated. Master data required to carry out all the activities is available in GTS • Preference data of product at a preferential country of origin
	Transactional	Purchase Orders	X	X	X	X	▪ Compliance checks needs to be optimised for SPL check , License determination ▪ Country of origin information is not accurate for preference as it is maintained at the product level and not batch level ▪ Customs values are manually adjusted for each import declaration as the value from the purchase order might be incorrect - The correct value will be in invoice and it is not integrated to GTS ▪ Preference duties are not allocated back to the materials when the invoice
	Transactional	Invoices		X			• Customs invoice integration is missing for customs imports for accurate customs value and date.

Logistics		Outbound delivery	X	X			• Compliance checks needs to be optimised for SPL check , License determination • Customs values are manually adjusted for each import declaration as the value from the purchase order might be incorrect
		Inbound Delivery	X	X			• Compliance checks needs to be optimised for SPL check , License determination • Customs values are manually adjusted for each import declaration as the value from the purchase order might be incorrect
		Freight Orders	X	X			
		Good Receipt		X	X		
Production	Master Data	Production BOM's / Recipes			X		• Only one level of Finished goods BOM is sent to GTS.. Proposal to send all the components to GTS only if preference products
	Transactional Data	Production Order			X		
Finance	Others	FX	X	X	X	X	
GTS	Others	SPL's and Other integrations	X	X	X	X	

Assumptions

- It is assumed that GTS for HANA suite will be available to deliver the TO-BE E2E solutions for each of the scenario's/ Integration documented in this KDD.
- It is also assumed that the TO-BE GTS instance can be integrated with multiple ERP system.
- NextLabs will be integrated to GTS and therefore the ITAR related access requirements can be fulfilled via NextLabs

Constraints

Not Applicable

Impacts

- Data Cleansing:
  - Product classification
  - Tax registration information
  - Country of Origin
- Change management
- Upstream / Downstream systems
- Integration with 3rd party data providers

Business Rules

Options considered

Following are the options considered for the GTS integration

Option 1: Implement the As-Is GTS solution scope

As a part of this option, the As-Is GTS scope is implemented. There are also some small improvements to the existing processes in scope are included in this option, ex: Optimisation of the SPL check algorithm, improving the master data integrations, including country of origin at batch level etc..

Option 2: Implement the additional GTS solution scope

As a part of this option, the new functionality of GTS is evaluated along with the improvements to the existing process. As part of this option, multiple sub options analysis is done.

Following are the **new** functionality that is to be implemented as part of this option

Process	Type of Data Object	Documents				
Sales	Transactional	Contracts	X			
	Transactional	Billing				X
Purchasing	Transactional	Purchase Orders				X
	Transactional	Invoices		X	X	
Logistics	Transactional	Freight Orders	X	X		
	Transactional	Good Receipt		X	X	
Production	Master	Production BOM's / recipes			X	
Production	Transactional	Production Order			X	

Implement Compliance in GTS S/4 HANA

Following are the key issues identified in compliance process and the proposal to remediate the same.

Issue	Remediation Proposal
SPL checks are not accurate as the business partner matching is not accurate	Business partner match criteria for SPL checks to be optimised via a custom development.

Proposal to implement compliance for new objects in GTS

Object	Risk	Option 1 - Implement in GTS in S/4 HANA	Option 2 - Continue with the As-Is Process	Recommendation
Sales Contracts	Low	Early view of the compliance results to manage the Risk	There is a moderate risk that we contract with a customer / customer party who is blacklisted	Option 2 - This risk is not high and the Sales Order checks if catch any exceptions.
Freight Orders	High	The carriers are screened for compliance automatically. This will increase the automation and decrease the risk of any manual errors	As a part of the As-Is process, the checks are carried out manually and are error prone. There is also of missing the manual checks and therefore end of paying fines	Option 1: It is critical to screen all the carriers before the transportation process is started

Implement Customs in GTS in S/4 HANA

Following are the key issues identified in customs process and the proposal to remediate the same.

Issue	Remediation Proposal
Customs values are manually adjusted for each import declaration as the value from the purchase order might be incorrect - The correct value will be in invoice and it is not integrated to GTS	Proposed to integrate the Invoices so that the correct value is available for GTS to calculate the right customs value
Customs duties / customs brokers charges are not settled to the Purchase Order (And in turn to the material master and unit price)	Purchase orders will have a condition to maintain the customs duties / charges or customs broker and will accommodate customs broker as a business partner. Invoices received from the customs broker periodically can be settled against the Purchase Order and therefore the costs and the variances are distributed to the material master
Incorrect customs calculation due to incorrect classification code on material master	Data cleansing to clean-up and match the right material classification

Proposal to implement GTS customs integration to new object

Object	Risk	Option 1 - Implement in GTS	Option 2 - Continue with the As-Is Process	Recommendation

Purchasing Invoices	High	As a part of this option, Supplier/Inter-company Invoices (Incoming) will be transferred to GTS to create Customs invoice. These invoices will be referred to create the import declarations using the invoice value. This will reduce overhead to business and delays to shipment	As a part of the As-Is process, purchasing invoices are not integrated and therefore the customs value is not accurate in GTS. This results in a lot of manual co-ordination and activity to update the customs value The incorrect value on the import declarations, there might be delays the shipment as part of customs inspection	Option 1 - implement the GTS Integration
Freight Order	High	As part of enabling this integration, freight order will provide all the necessary information for customs clearances such as container, seal number, correct weights and volume, carrier information etc. The customs declaration process therefore can be automated using the data in GTS	Currently all of the shipment information including container, seal number, correct weights and volume, carrier information etc. is added manually in GTS / sending to the brokers to support the customs declaration process This results in a lot of manual co-ordination, additional overhead to business and potentially delays in processing the customs	Option 1 - implement the GTS Integration
Goods Receipts **(Detailed Analysis Below)**	Medium	Implement Customs Warehouse Solution (CWH) in GTS to manage and monitor the stocks in bonded warehouse including all the movements real time It will be possible to generate customs documents when required. Also for preference batch numbers will be allocated for the quantity received, hence through IBPP solution in GTS 4 HANA, more specific information can be stored at each batch level and transferred back to S4.	Currently the data of the Bonded Warehouse is sent to a third-party ex: Maersk for customs clearance and filing Any data required wrt to stock and movements will have to be requested by the 3rd party. No Real Time visibility. As for preference, currently supplier declarations are requested against purchase order items. Hence there is dispartiy in critical preference related data, such as country of origin.	Continue with Option 2 - As-Is and implement this functionality after stabilisation of GTS (Phase 2)

Detailed analysis for Goods Receipt integration with GTS

Feature and Capability	CWH Solution Using GTS 4 HANA (OPTION A)	Use AS-IS Solution (OPTION B)
Goods Movement to /from CWH	⊕ Standard integration to GTS from S4 HANA via PO/Material Document, Sales order.	⊖ Not Managed withing GTS eco system, much rather managed via data transfer to external agent such as Maersk.
Stock Keeping and Reconciliation	⊕ Maintained inhouse automatically from each import declaration via closing portions.	⊖ This will not happen automatically based on customs entry, whereas this will happen based on confirmation from external clearing agency such as Maersk.
Audit trail	⊕ Will have complete document flow within Sap Ecosystem (S4 and GTS) System of record is Syensqo	⊕ Will have complete document flow within Sap Ecosystem (S4 and GTS) (Only customs confirmation is done based on confirmation from broker)
Operational Expense	⊕ There will no additional operational expenses.	⊖ Interface to the customs broker (such as MAERSK) will take place via middleware such as a control tower. These interfaces will require additional monitoring hence this will lead to additional operational expenses.

Implement Preference in GTS in S/4 HANA

Following are the key issues identified in customs process and the proposal to remediate the same.

Issue	Remediation Proposal
Country of origin is at product level which drives incorrect preference calculation	Capture the country of origin and preference status at batch level. This will allow accurate country of origin information if the product is multi sourced
Preference calculation is done only at Sales Order Billing, however it is a lost opportunity as the production team will not have a view on the preference stock requirements	ATP logic will be implemented in the Sales Order to make sure that the preferential data is cascaded to production

Proposal to implement GTS customs integration to new object

Object	Risk	Option 1 - Implement integration to GTS	Option 2 - Continue with the As-Is Process	Recommendation
Production BOM and Recipe	High	Explode the BOM until the raw material level and replicate all the materials to GTS	Only one level of Finished goods BOM is sent to GTS.	Option 2: This is not required as the finished goods batch will have the right information and that can be used for preference calculation
Production Orders	High	Introduce a preference check at the production order level	No checks on production orders	Option 2: This integration is not required as the ATP checks are going to take care of the preferential treatment of the product during production

Implement Intrastat in GTS in S/4 HANA

Intrastat functionality though required is not being used currently.

Object	Option 1 - Implement in GTS	Option 2 - Continue with the As-Is Process	Recommendation
Billing and Invoices	As a part of this option, the Intrastat can be generated from GTS without any manual interventions. The required master and transactional data is already available in GTS	As part of the As-Is process Intrastat is generated Manually which is cumbersome and an operational overhead	Use Intrastat functionality in GTS

Evaluation

Following is the evaluation of both the options

Functionality	Object	Importance (Directly proportional to the Risk)	Option 1 - Implement in GTS with process improvements	Option 2 - Continue with the As-Is Process
Compliance	SPL Checks accuracy	High	High - Implement to improve the Business partner matching to SPL list	Medium- Business partner cleansing will improve the matching, however will not fix the issue totally
	Sales Contracts Integration to GTS	Low	Low - Extra integration will bring complexity and not a lot of value as by the time contract is created in S/4, it is already signed	High - No integration
	Freight Orders Integration to GTS	High	High - Integration will bring enhanced checks for carriers	Low - Manual checks as there is not integration. Will be cumbersome and resource intensive
Customs	Master Data - Material cleansing	High	High - Cleanse the master data to capture the correct product classification which will increase the accuracy and reduce the manual effort	Low - Without cleansing there will not be an improvement in the customs calculations
	Settlement of customs costs to material master	High	High - Customs costs are attributed to the material costs using the PO and Invoices	Low - The customs costs are expensed to a cost center
	Invoice Integration to GTS	High	High - Required to get the correct values for determining the customs values	Low - Without invoice integration, the customs values are calculated in the Purchase Order and might be wrong
	Goods Receipts for Bonded Warehouse	Medium	Medium - Implement this functionality with the customs warehouse functionality will allow Syensqo to have better and real-time control on the bonded warehouse	Low - The updated have to be obtained from the 3rd party vendor managing the customs warehouse
Preference	Country of origin / other preference data capture in Batch characteristics	High	High - Allows accurate preference calculation	Low - Manual intervention required
	Preference requirements during production process	High	High - ATP design in the To-Be will have the functionality of communicating the preferential requirements to the production process	Low - Manual intervention required
	Master Data - Lower Level BOM	Medium	Low - Additional data is not required as the batches suffice the requirements	High - No additional data integration as the requirements are already sufficed with the batch characteristics
	Production order integration to GTS	Low	Low - Additional data is not required as the batches suffice the requirements	High - No integration as the requirement is already sufficed with ATP checks
Intrastat	Billing and Invoice	High	High: Automation of Intrastat generation	Low - Manual Intrastat

See also

File	Modified
PDF File Workspace Mail - Fwd_ KDD approval.pdf	Sept 30, 2024 by FALL-ext, Cheikh

Change log

Version	Published	Changed By	Comment
CURRENT (v. 77)	**Nov 04, 2024 12:32**	**WENNINGER-ext, Sascha**	
v. 76	Sept 19, 2024 12:51	**NARAHARI-ext, Bhargavi**	
v. 75	Sept 19, 2024 12:47	**BOSE-ext, Subhrajit**	
v. 74	Sept 19, 2024 12:46	**BOSE-ext, Subhrajit**	
v. 73	Sept 19, 2024 12:44	**BOSE-ext, Subhrajit**	
v. 72	Sept 19, 2024 12:44	**BOSE-ext, Subhrajit**	
v. 71	Sept 11, 2024 04:59	**NARAHARI-ext, Bhargavi**	
v. 70	Sept 09, 2024 12:51	**BOSE-ext, Subhrajit**	
v. 69	Sept 09, 2024 08:31	**WENNINGER-ext, Sascha**	
v. 68	Sept 06, 2024 09:10	**NARAHARI-ext, Bhargavi**	

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Workflow history

Title	Last Updated By	Updated	Status
There are no pages at the moment.			

Integration Elements in Details - Including TO-BE Process Flow

Overview

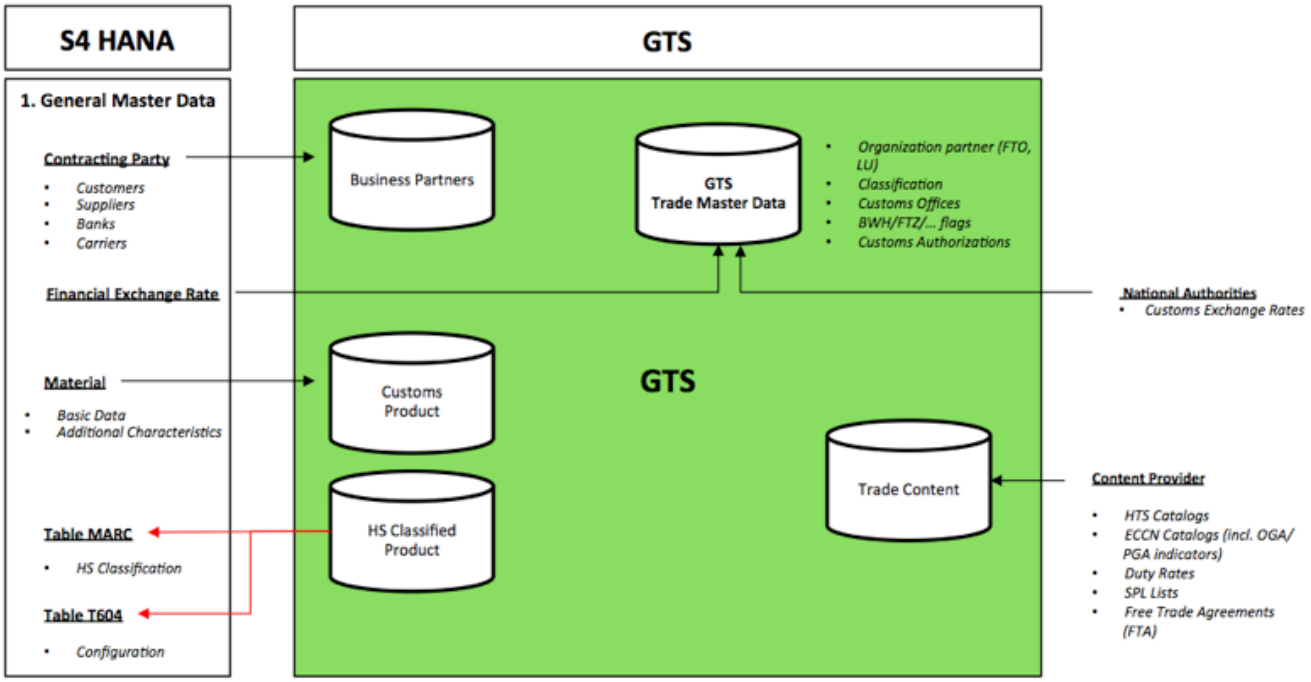
Integration between Feeder System and GTS happens due to compliance, customs, preferential and statistical reporting activities.

The following functions in GTS are supported and performed due to these integrations.

Note : All these activities in GTS are statutory and obligatory (except intrastat reporting which can be done via HANA international trade module).

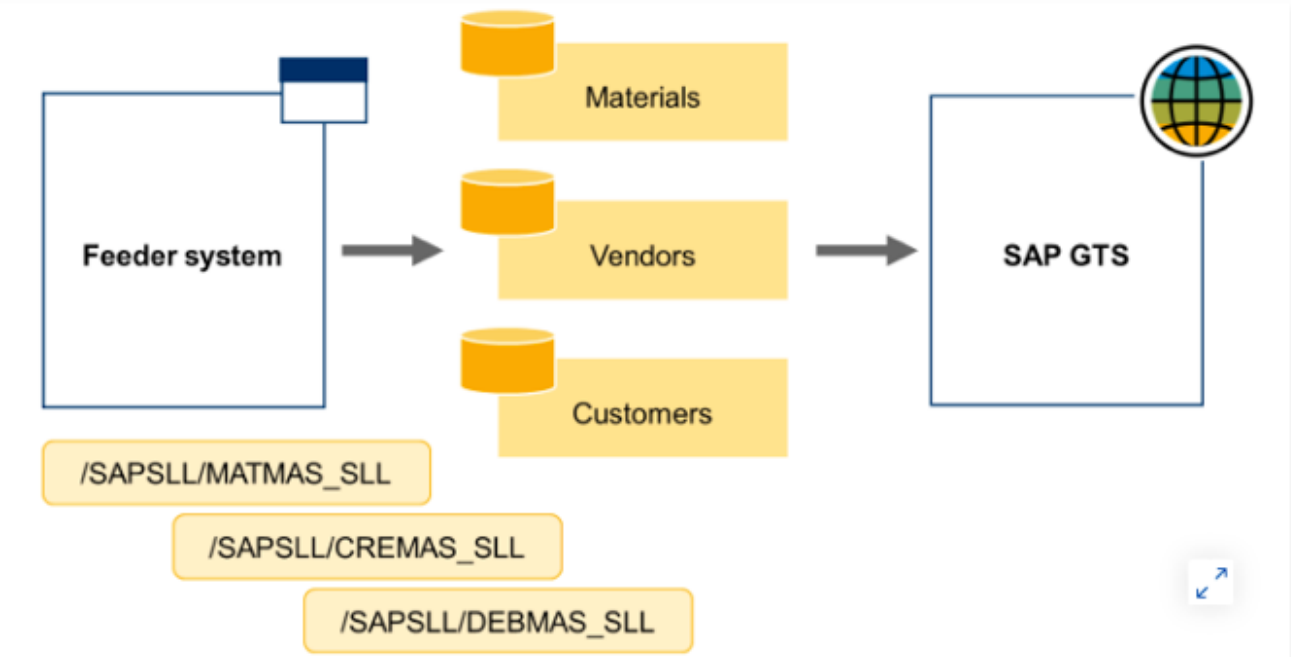
- Master Data’s
- Sanction Party list Screening (Compliance Management)
- Legal control Activities including ITAR compliance (Compliance Management)
- Embargo Screening (Compliance Management)
- Export and Import Declaration Activities both E-Filing and Broker enablement (Customs Management).
- Preference Calculation (Risk Management)
- Intrastat Reporting (Enterprise Compliance Reporting)

MASTER DATA (Continuation of AS-IS)



Master Data Transfer Process between S4 HANA and GTS

- All customer, vendor, and material master data, and if applicable, bills of material (BOMs) relevant for preference determination and re-export control, from the feeder system to the SAP GTS system using Remote Function Calls (RFC).
- A distinction must be made between the initial data transfer when the SAP GTS system is set up and regular transfers of new or changed data during operation. There are standard change pointers available in S4 HANA dedicated for this purpose.
- The change pointer creates a connection between change documents and the corresponding message type. When creating or changing a master record, the application program checks whether the change pointer function is activated. If the function is activated, the system saves a change pointer to the database.
- For SAP GTS purposes, so-called reduced message types are used. Message types denote the data that can be exchanged between systems in ALE or EDI scenarios, for example, MATMAS for material masters, CREMAS for vendor masters, and DEBMAS for customer masters.



Masters data's received from external parties

- **SPL List:** Currently these SPL lists are uploaded manually in GTS (periodically) via a frontend transaction. These are usually an XML file provided by an external data provider (such as Descartes for Syensqo) and dumped in a Syensqo provided Network directory. In TO-BE solution , this interface might get automated and post TO-BE this might get added to the RICEF list.
- **Duty Rates:** Duty rates are also supplied by external agencies and they are uploaded in GTS via frontend transaction within the master data cockpit.
- **HTS / Tariff codes/ECCN (Export control classification number) :** These are uploaded in the system during cutover (One time) manually via a frontend periodic updates to these. This numbers are used to classify the products in GTS for compliance and customs purposes.

Data Transfer from GTS to Feeder System

- Once the products are classified with a HTS (Harmonized Tariff) this numbers are sent back to the product master in S4. This happens via a change pointer based transfer API maintained in GTS and S4 system. Usually this gets updates via periodic batch jobs. Currently at Syensqo this job is running once daily.

Note : It is also estaiblished during our L3 process mapping sessions that the duty rates will also be transferred back to the feeder for product costing purpose. These rates will be included as an costing element (condition type) in the purchase order line item. A new RICEF entry will be create post TO-BE workshop for this requirement.

Additional Master Data Integration Requirement

CUSTOMS EXCHANGE RATES

In selected country's the exchange rates are required to be updated in the system from their designated financial authorities. These exchanges are required to be periodically updated in the S4 HANA system and a standard SAP supported batch job will update them in GTS.

Failing to update have them correctly updated will create disparity between origin curreny (Invoice currency) and Customs Currency during customs filing (For imports). This might lead to Show Cause or Penalty from customs authorities.

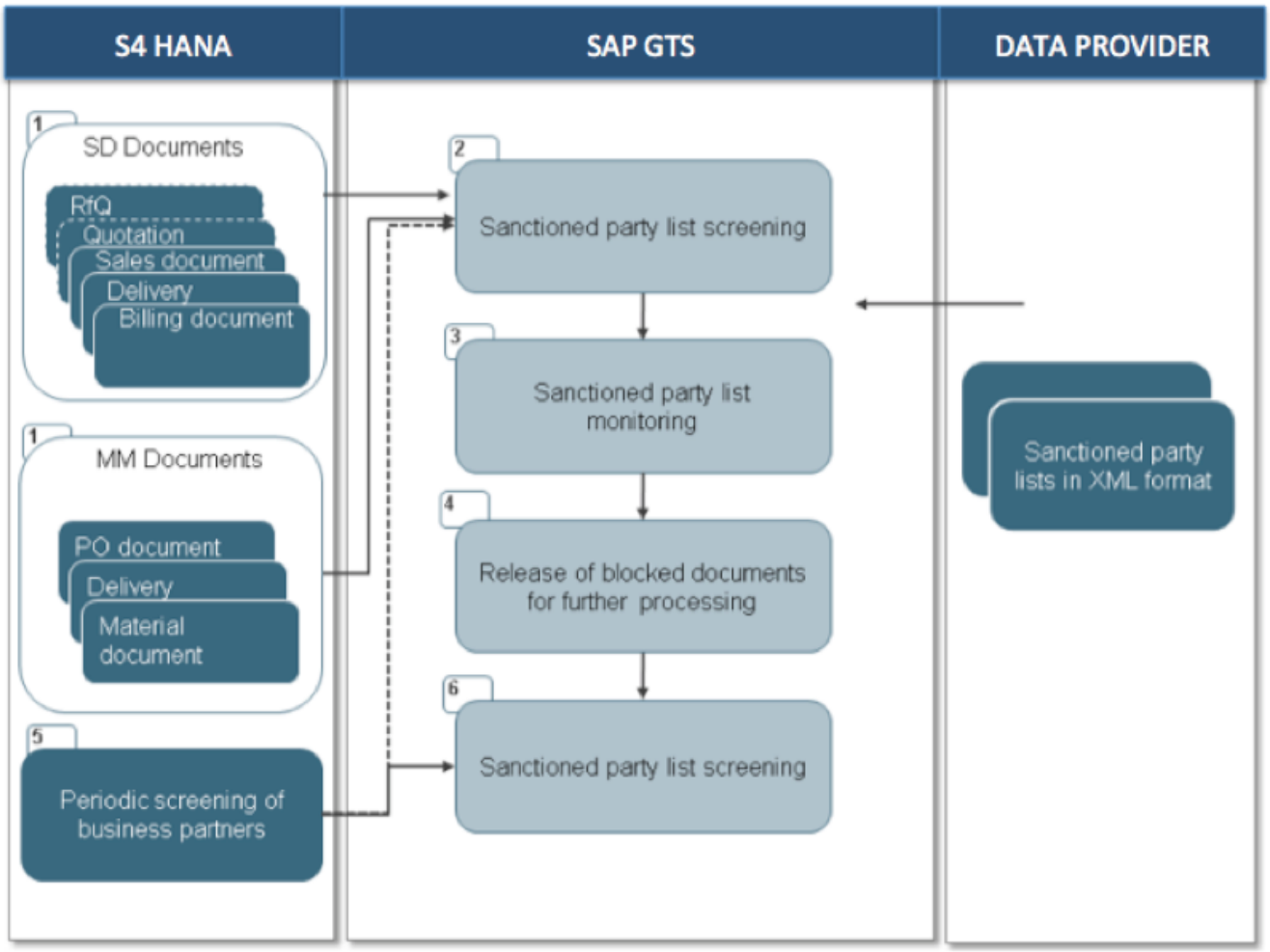
Some Reference Links are shared below

Germany (offers multiple formats for download): http://www.zoll.de/SiteGlobals/Forms/KursSuche/KurseSuche_Formular_NotierteWaehrung.html;jsessionid=AD1637C99B2440FF0596E59C35C0FF7F

Netherlands :https://www.belastingdienst.nl/wps/wcm/connect/bldcontenten/belastingdienst/customs/reference_books_and_other_information/currency_exchange_rate/currency_exchange_rate

Note :Entry Added to Custom Development Register.

SANCTION PARTY LIST SCREENING (COMPLIANCE MANAGEMENT)

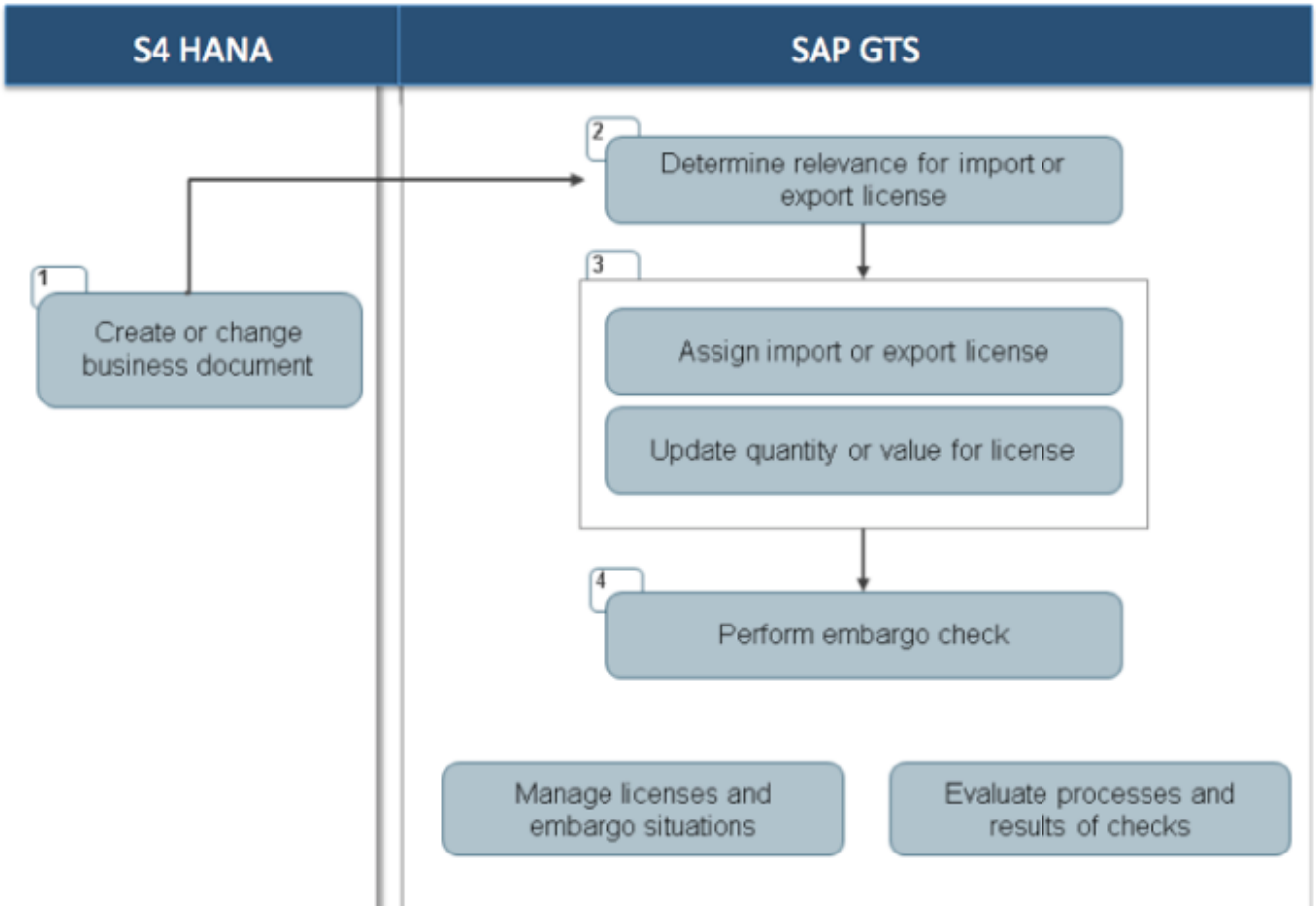


Document Types In Scope	Integration Type	Technical
Sales Orders/Outbound Delivery/Outbound Invoice/Outgoing Payments	Real Time /Syncronous	T-RFC Enabled (Standard SAP Supported)
Purchase Orders /Inbound Deliveries	Real Time /Syncronous	T-RFC Enabled (Standard SAP Supported)

1. You create a sales document or document for materials management in the feeder system.
2. *SAP GTS, edition for SAP HANA* (SAP GTS) starts sanctioned party list screening automatically. Based on the rules that you configured during implementation, the address data in the business documents is checked against the available sanctioned party lists in the GTS system. You can obtain these lists in XML format from external data providers and upload them to your GTS system. You can also create your own lists.
3. The monitoring features in the GTS system let you easily keep track of all checked addresses.
4. An employee with the appropriate authorizations can use the monitoring capabilities to release blocked documents for further processing.
5. Periodic checks can be set up to check the current available master data. You can configure the sequence that is used for checking the master data. It makes sense to set up the system so that all the master data is checked automatically after every update of the sanctioned party lists.
6. All activities are logged in the area of sanctioned party list screening and can be archived for legal purposes with the SPL audit trail function.

Note: If a document is blocked then some activities pertaining to goods movement such as picking/packing and Goods issues is also blocked in the feeder system. This is controlled via incompletion checks in S4 system based on status checks in GTS.

Legal Control and Embargo Checks



1. You create or change business document in the HANA system.
2. The GTS system starts the export/import control automatically. It checks whether an import or export license is required to import or export the product, based on the settings configured in Customizing for the GTS system.
3. If a license is required, the system assigns the appropriate license automatically to the business transaction.

NOTE : The integration design remains same for any type legal control (EAR and/or ITAR) only the degree ot checks and type of licenses differ.

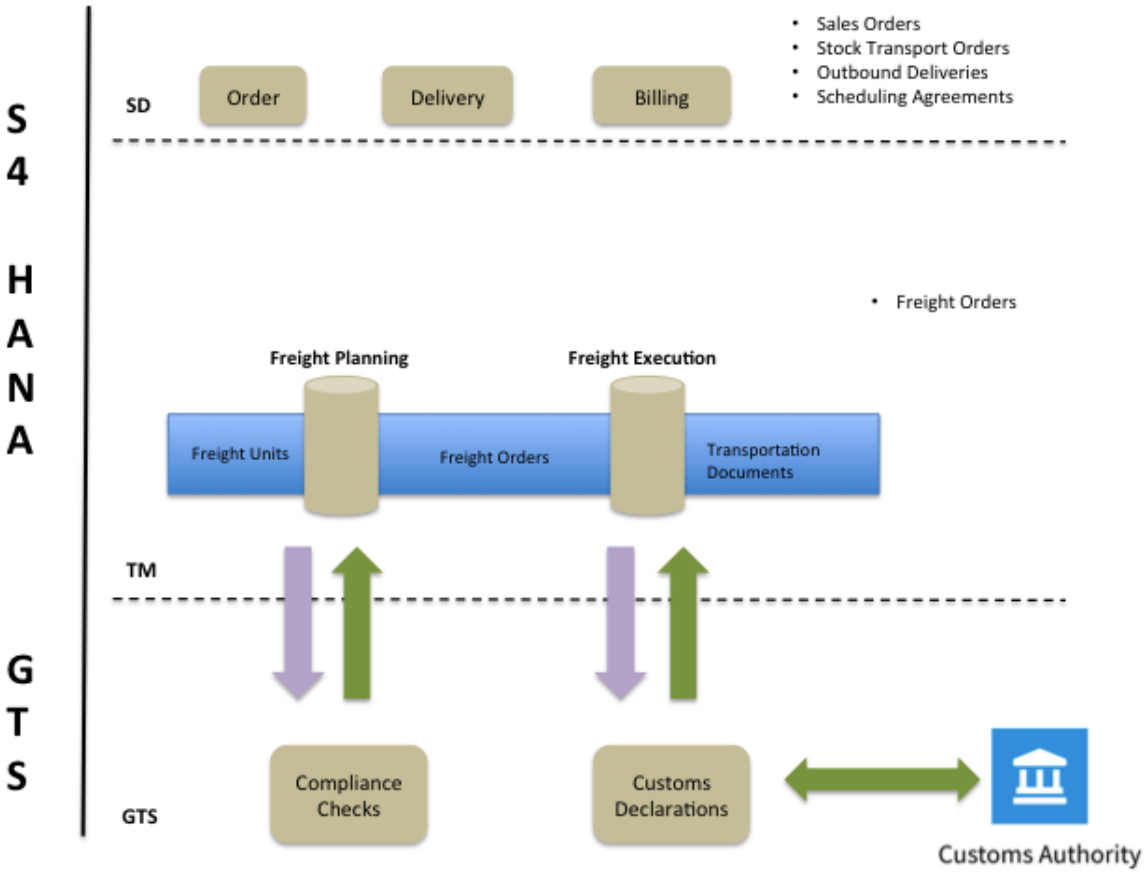
E2E Integration for Customs (Export/Imports)

Overview

For Customs Management, you can transfer four categories of feeder system documents to SAP GTS: The replicas of purchasing documents and material documents are referred to as customs declarations in SAP GTS. Inbound deliveries and billing documents can be transferred as both customs declarations and customs shipments.

- Purchasing documents
- Sales Documents
- Logistics and Transportation Documents
- Material documents
- Billing documents

TO-BE EXPORT PROCESS AT A GLANCE



The following documents will be integrated with GTS to support Export Declaration Process.

- Sales document will create a corresponding customs document in GTS and perform neccessary compliance check (as shown in the previous section).
- The outbound delivery will also be screened for compliance check as a well as basic logistics information will be stored in GTS for customs purpose.
- The Freight order from SAP TM will also be transferred to GTS customs shipment document. This will carry the final weights and volumes as well as freight and transportation informations such as container/Seal informations, vessel / Truck informations etc.
- A billing document (proforma or standard invoice) will create the customs declaration document in GTS.
- an Authorized customs representative from Syensqo or a customs broker will file these informations to Customs authorities.
- Customs Authorities will send approval along with customs authorization details (Such as Movement Reference document).
- This document will be transferred back to warehouse and/or carrier in order to perform transportation execution.

Note : These documents recieved from Customs Authorities are also stored in Archive repository for many years (depending on each country's legal requirement , but usually its from 5-15 years).

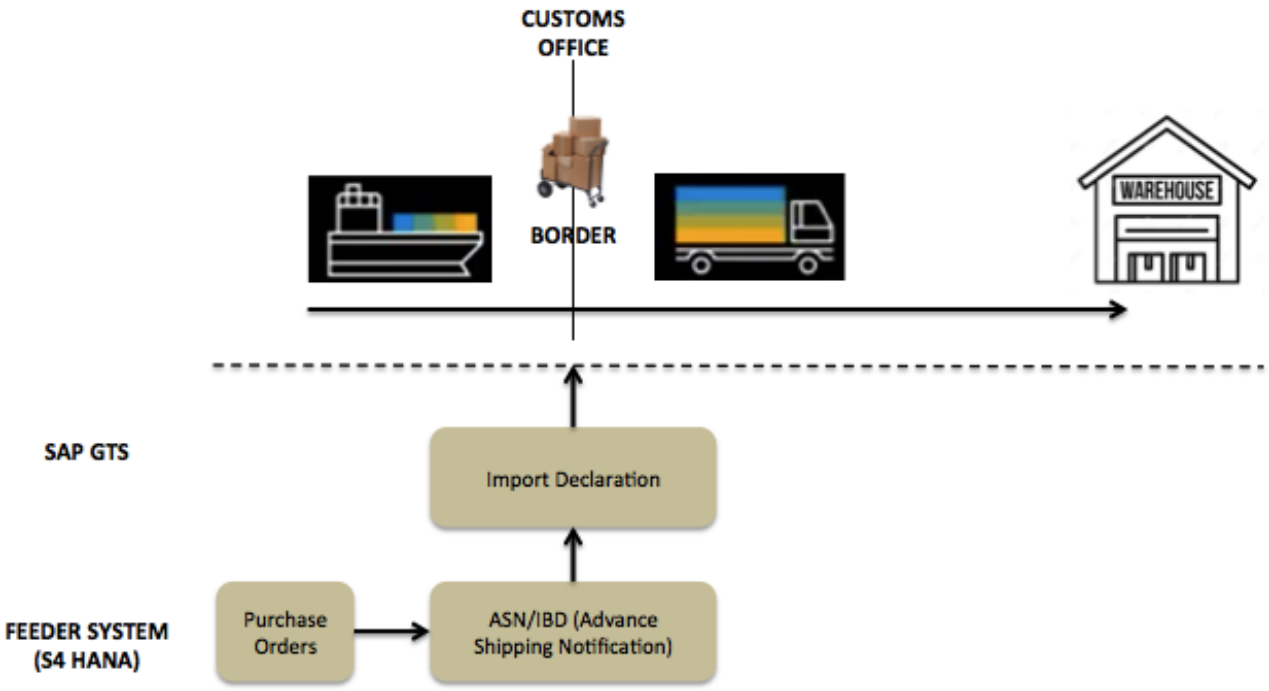
IMPORT PROCESS

Overview

Unlike Export the import processing has more variations depending on type of import (Duty Paid/Duty Unpaid/ Process Reliefs/Foreign Trade Zone etc) and Customs Territories (US, EU, Non-EU, China, India etc). Each of these flows will also impact the document integration and data exchange between SAP GTS and S4 HANA.

Import Declaration Prior To Goods Receipt (Duty Paid)

Customs declarations prior to goods receipt let you to declare imports to the customs authorities before you take physical possession of the goods. This lets you start the customs declaration process for the transfer of third-country goods to free circulation directly at the border, for example, and complete it with verification of the declared data after goods receipt. This procedure is needed, for example, to obtain a release from the customs authorities for goods that have arrived at a port or airport and have to be placed into a customs status before transportation further inland is possible.



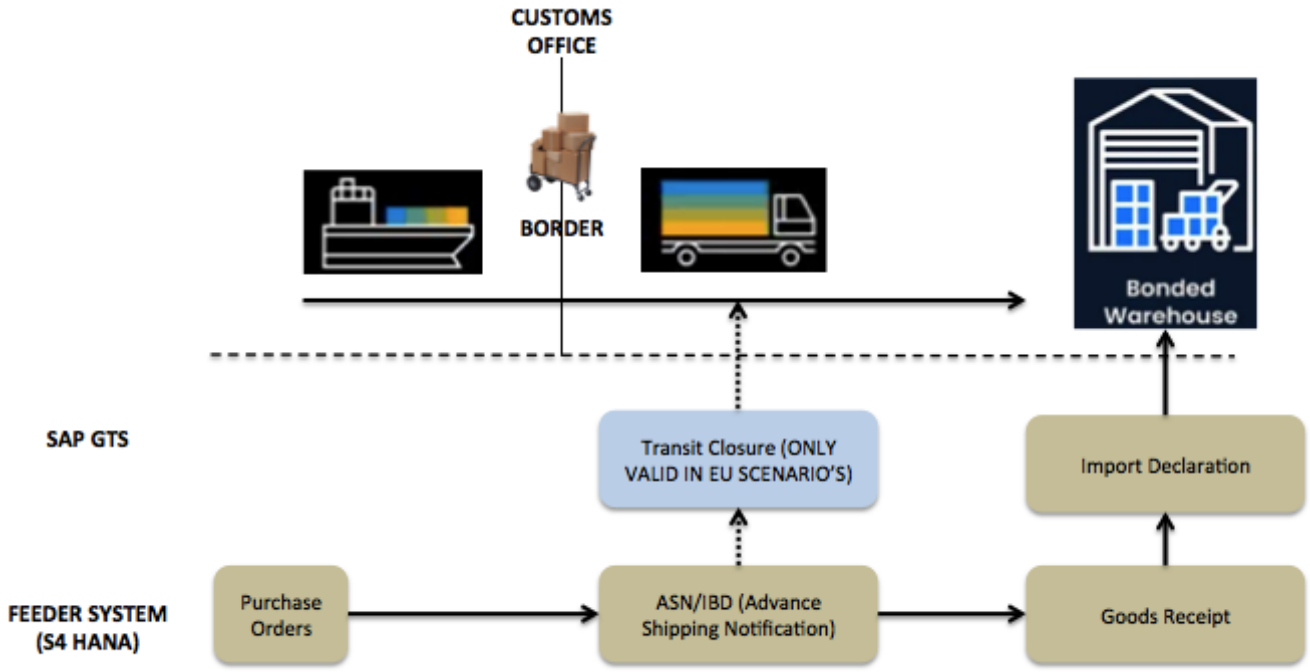
In this scenario the GTS system creates a replica of the purchasing document and collects the data in an overview. The inbound delivery data can also be used to update the quantities and values in a customs declaration prior to goods receipt, the system collects the purchasing document data in an overview to update the data. The data is updated as soon as you save the inbound delivery in the feeder system. This lets you use the quantity that the supplier has actually shipped in your transaction.

From within the overview, you can create a customs declaration and start the communication process with the authorities. The customs duties will be calculated in both the replicated purchasing document and in the customs declaration prior to goods receipt. It does not matter whether your customs declaration contains items from one or more suppliers (consolidation of multiple purchase orders to one import declaration is supported by standard GTS).

Import Declaration After Goods Receipt (Duty Un-Paid/Bonded Warehouse)

Overview

Special customs procedures, such as customs warehousing and outward processing are some of the scenario's where a material document from feeder system is used to create the import declaration with the customs authorities. In such cases,you have to post the goods receipt directly from the inbound delivery and the inbound delivery must have a purchase order reference.



At Syensqo the following variants will be performed depending on business process and geography.

- Release products to free circulation or place them in a special customs procedure
- Release partial quantities to free circulation
- Delete a material document item that has no influence on stock postings of a special customs procedure
- Delete partial quantities of material document items.

POSSIBLE ADDITIONS TO SYENSQO TO-BE IMPORTS PROCESS DESIGN (RECOMMENDED)

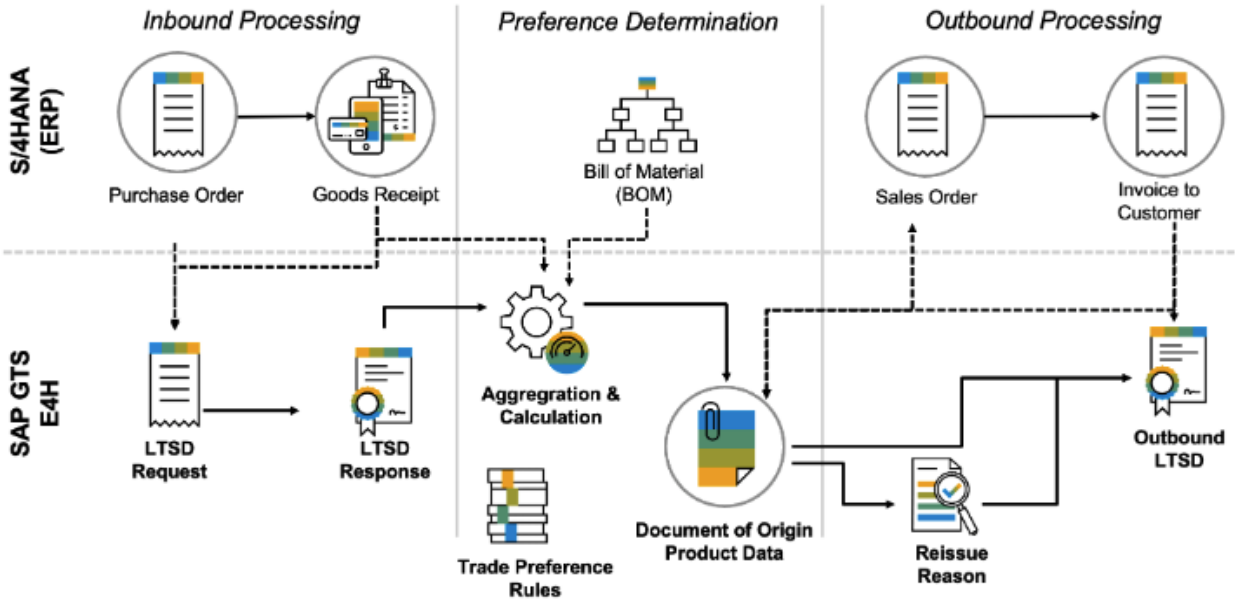
Customs Invoice : Integration of inbound invoice (Inter-Company or Supplier Invoice) to create customs Invoice in GTS. Subject to our TO-BE discussion, this might be an additional element which will created in GTS . The following elements will be accurately updated in import declaration before submitting to the authorities.

- External Invoice Number
- Value
- Invoice Date
- Invoice Currency
- Incoterm
- Invoicing Party

PREFERENCE PROCESSING

Overview

Preference Processing supports an exporter to meet the legal requirements for preferential customs treatment and document your products as eligible for preferential treatment.Based on this documented eligibility for preferential treatment, the exporter's customers can import these products duty-free or at a reduced rate of import duty, giving the exporter a decisive competitive advantage.



Master Data Integration Requirements (Pre-Requisites)

The following master data elements are transferred from the feeder system to GTS.

Data Element	Data Source (S4 HANA)	Type Of Integration
Product Price	Accounting View (Product Master)	Batch Job based on Change pointers _ SAP Standard
Procurement Type	MRP View (Product Master)	Batch Job based on Change pointers _ SAP Standard
Bills Of Materials	BOM Master	Batch Job based on Change pointers _ SAP Standard
Supplier Master Data	Vendor Master Record	Batch Job based on Change pointers _ SAP Standard

Process Steps

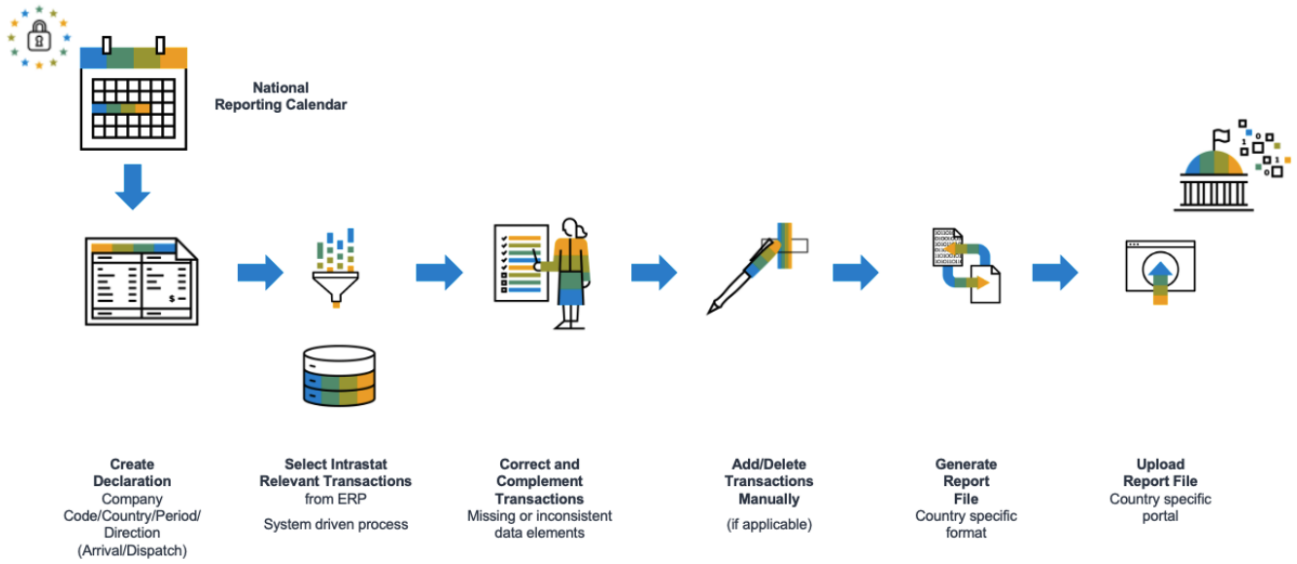
1. The feeder system transfers information on supplier-product relationships to the GTS system for Preference Management. The GTS system can create proposals for further processing from this data.
2. Based on the business documents (Purchase Orders) , the system can create proposals for requesting long-term supplier's declarations for which you do not have an LTSD. During creation, current supplier data, for example, the communication method and the request relevance, is taken into account. You can now send the request for long-term supplier's declarations to your supplier.
3. When you receive a long-term supplier declaration from your suppliers, you have to enter and release them in the GTS system.
4. The system aggregates products based on existing goods receipts and released long-term supplier's declarations.
5. The system uses the threshold value from preference determination. In this process, it combines the statements for each material, based on the rules and procedures of the preference agreement, regardless of whether valid or invalid supplier's declarations are available. The system archives the results of preference determination to enable further monitoring and audits.
6. When you create or change an order or billing document in the feeder system, the system compares the threshold value with the ex works price from the order or billing document.
7. If the product is eligible for preferential treatment, the system sets the preference indicator.
8. You can issue long-term supplier's declarations to your customers. The system can create proposals based on business documents.

INTRASTAT _ SAP S/4 HANA for International Trade and SAP GTS (Integrated Solution)

Introduction

Intrastat is a statistical reporting system used in the European Union (EU) to collect information on the movement of goods between EU member states. It is a means of monitoring and analyzing trade flows within the EU's single market. Intrastat is implemented in each EU member state and requires businesses to provide detailed data on their intra-EU trade activities.
The Intrastat system applies to businesses that exceed certain thresholds for the value of goods dispatched (sales to other EU member states) and the value of goods acquired (purchases from other EU member states). The thresholds vary by country.
Under Intrastat, businesses must report specific details about their cross-border transactions, including the commodity code, value, quantity, and partner country of the goods traded. These details enable national statistical agencies to gather data on intra-EU trade and compile statistics on imports and exports within the EU.

PROCESS FLOW



Integration steps

- The source documents are Purchase Orders and MM Scheduling Lines. Some parts of the data required for the Intrastat report can be taken directly from the purchase order.
- The delivered quantities (goods receipts) and the values provided by the vendor in the invoice (invoice receipts) will be determined from the PO history (document flow).
- There is no direct link between the individual goods receipts and the invoice receipts; the assignment happens chronologically.
- The declaration currency is predefined by country. As documents can also be created in different currencies, a conversion into the declaration currency is often necessary.

INTRASTAT ARRIVALS

Source Documents from Feeder System (ERP_S4 HANA)

- **Purchase Orders**
- **MM Schedule Lines**

Integration steps

- The source documents are Purchase Orders and MM Scheduling Lines. Some parts of the data required for the Intrastat report can be taken directly from the purchase order.
- The delivered quantities (goods receipts) and the values provided by the vendor in the invoice (invoice receipts) will be determined from the PO history (document flow).
- There is no direct link between the individual goods receipts and the invoice receipts; the assignment happens chronologically.
- The declaration currency is predefined by country. As documents can also be created in different currencies, a conversion into the declaration currency is often necessary.

INTRASTAT DISPATCHES

Source Documents from Feeder System (ERP_S4 HANA)

- **Billing Documents**

Integration Steps

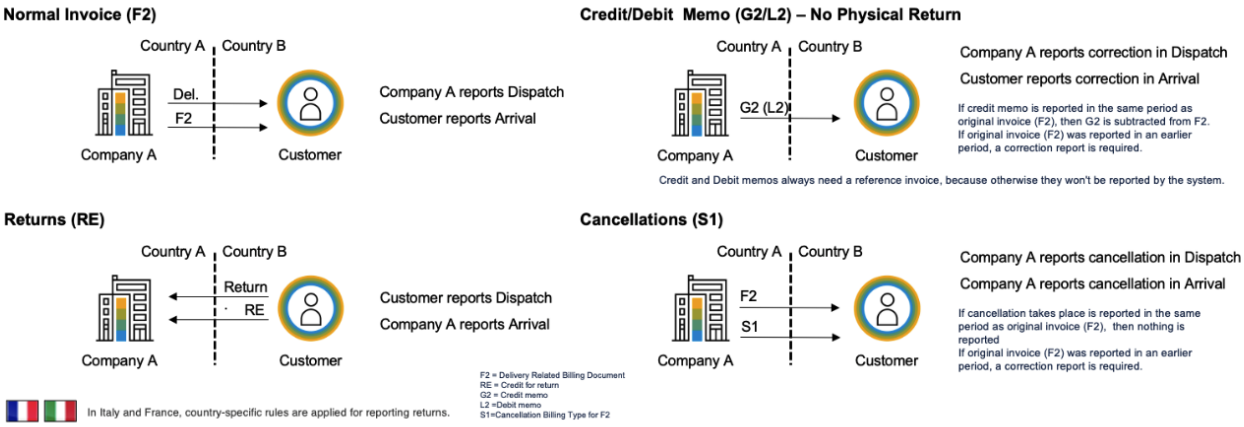
- Billing documents are created for goods already delivered to customers. These billing documents contain all the values required for Intrastat, including the invoice and statistical values.
- The declaration currency is predefined by country. As documents can also be created in different currencies, a conversion into the declaration currency is often necessary.

The following SD sales document categories are processed by the Intrastat programs:

- Invoice
- Invoice Cancellation

- Credit and Debit Memo
- Inter-Company Invoice
- Inter-Company Credit Memo

The four illustrations below illustrate the system's behavior and the partner's responsibility given different scenarios for Dispatch reporting.



ADDITIONAL FUNCTIONALITIES RECOMMENDED (SUBJECT TO TO_BE WORKSHOP)

There are 2 additional functional elements recommended to Syensqo based on GAP's identified during AS_IS workshops. Both of these 2 functionalities are supported by standard SAP and is available in GTS 4 HANA Business Suite. These 2 functionalities attract additional integration elements with S4 HANA hence it is included in this document.

1. **IBPP (Identity Based Preference Processing)**

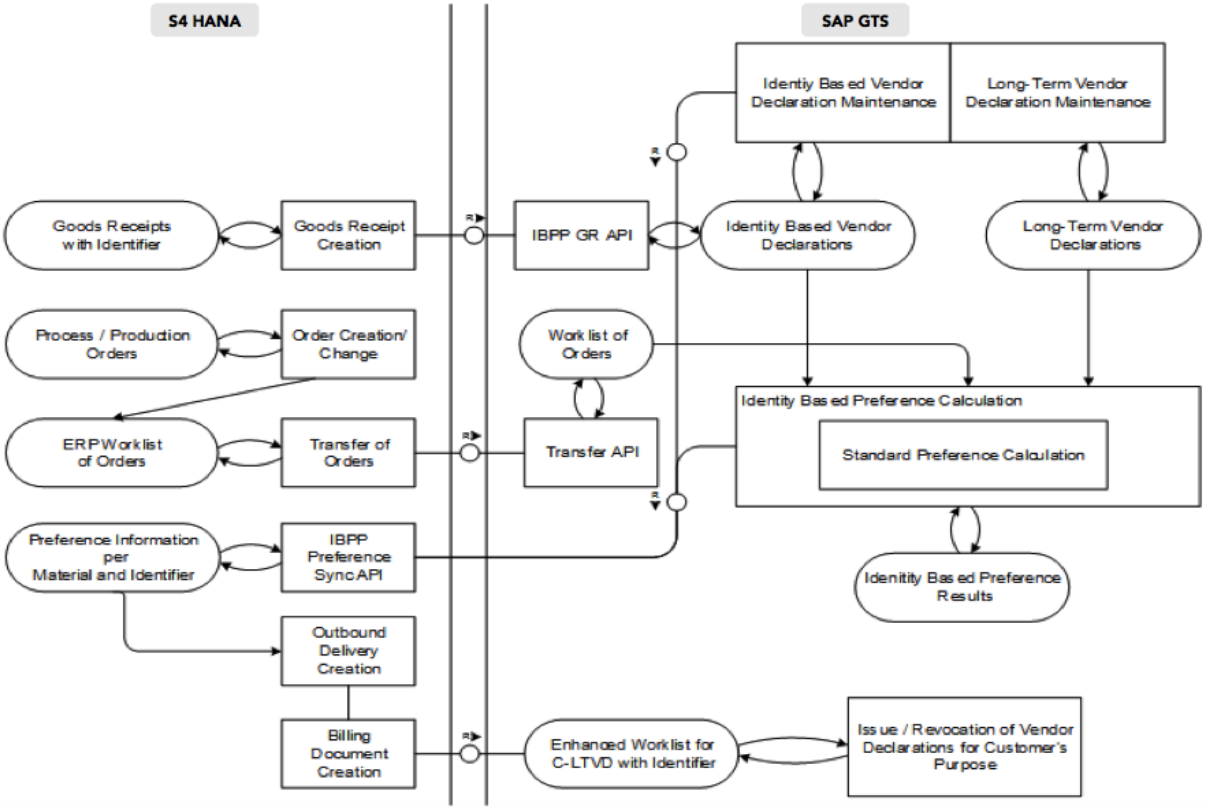
Problem Statement

As of now, Syensqo experiences major issues with critical data elements such as ' Country of Origin' . Currently this information is mantained at the product level but there are challenges to store accurate COO information based on stock sourcing. There could be multiple origin for the same product or there could additional component utelized in producing the item, and both of these are reason that leads towards incorrect preference calculation. As a result there are significant amount of loss in trade savings.

Overview

identity-based preference processing supports exporters in fulfilling all legal requirements for customs preferences and identifying their goods as eligible for preferential treatment. Users can determine the preference status of production and process orders at an identifier (Batch) level. The application supports preference determination on production and process orders with static bill-of-materials (BoM) based on actual goods consumption.

The difference between IBBP and standard preference functionality is that instead of calculating configurable materials in sales documents, the system calculates process orders or production orders with the actually consumed components and quantities.



NOTE: IDENTIFIER IN IBPP = BATCH MASTER

Integration Elements

- ***Production /Service Orders (S4 HANA)***
- ***Purchase Orders***
- ***Goods Receipt***

SAP TM Integration with GTS

To clear the shipment from Customs, SAP TM also sends the Freight Orders to SAP GTS that undergo the Screening and create Customs Declarations. They are in turn used to do filing with Customs Authorities. Items of Integration in SAP S/4HANA with SAP TM to SAP GTS:

• Master Data Transfer from SAP S/4HANA or SAP ECC to SAP GTS

• Integration of Forwarding Order in SAP TM to SAP GTS Compliance Document

• Integration of Freight Order from SAP TM to SAP GTS Customs Declaration

In terms of SAP TM Documents that integrate with SAP GTS standard out-of-the-box are following:

• Compliance Check for Sanctioned Party Screening on SAP TM Forwarding Order

• Compliance Check for Embargo Screening on SAP TM Forwarding Order • Export Declaration Creation in SAP GTS from SAP TM Freight Order

Document Flow	Business Functions	Existing Functionality	Integration Type	Requirement Type	Alternative	Impact of integration Missing	Recommended By Architect?

Sales Document integrated to GTS (Quotatio / Sales Order)	Compliance Checks	YES	SAP Standard	Statutory	Manually perform compliance checks against each legal regulation.	Huge Business Risk, Massive operational overhead and expense, increase in order management time.	YES
Logistics (Outbound /Inbound Delivery) document integrated to GTS	Compliance / Customs	YES	SAP Standard	Statutory	Manually perform compliance checks against each legal regulation. And Manually creating customs declaration document either in GTS or submit to brokers with only business documents.	Huge Business Risk Massive operational overhead Additional Operational expense, increase in order management time, Delay in Customs Filing and risk of goods clearance on time.Additional charges for broker management.	YES
Purchase documents Integration with GTS	Compliance /Customs /Preference	YES	SAP Standard	Statutory	Manually perform compliance checks against each legal regulation. And Manually creating customs declaration document either in GTS or submit to brokers with only business documents.As for preference very little alternative is available to be performed within the business hence outsourcing this business function.	Huge Business Risk Massive operational overhead Additional Operational expense, increase in order management time, Delay in Customs Filing and risk of goods clearance on time.Additional charges for broker management.	YES
Invoice (Proforma) Integration with GTS	Customs and Preference	NO	SAP GTS	Statutory	Manually perform compliance checks against each legal regulation. And Manually creating customs declaration document either in GTS or submit to brokers with only business documents.As for preference very little alternative is available to be performed within the business hence outsourcing this business function.	Apart from everything above there is serious financial loss as there is risk of loosing preferential duty treatment and values. Incorrect declaration of preferential statement in commercial invoice.	YES
Freight order (TM) with GTS	Customs	NO	SAP GTS	Statutory	Business will manually enter these freight related data's in customs declaration before submitting to the authorities.	Incomplete customs declaration, Customs penalty.	YES
Identity Based Preference Processing	Preference Management	NO	SAP GTS	Statutory	Business will have to mantain preference information based on worst case scenario. (See Comparison Matrix in the recommendation section, highlighting detailed pro's and con's)	Apart from Business Risk the following Elements will be missing , if this integration is included in the TO-BE Solution. • Maximize preference determination by leveraging more granular data. • Calculate only the components or raw materials that are used during the production process • Enable picking directly from eligible batches for customer shipments • Store preference status at the batch level • More Accurate Country of Origin Information (even if the product is multi sourced)	YES
Intrastat Reporting using GTS 4 Hana and S4 International Trade	Enterprise Compliance Reporting	NO	SAP GTS	Statutory	• Manually compile system data's from SD/MM and compile reporting Manually. • Employee dependent and not process dependent.	The following additional Features will be missing (for more details see Intrastat 101 section below) • Enables data to be collected from the SD and MM processes, which can be processed accordingly for interaction with personalized authorities. • Status updates on international goods movements can be produced quicker and more precisely.	YES
Use GTS 4 HANA for the customs warehouse flow	Customs	NO	SAP GTS	Statutory	Use Existing solution (integration to external agencies such as MAERSK via control tower).	The following Advantages will be missing if the integration is not available. • Integrated solution with import and export E2E process. • Stock overview and Stock reporting in supported within standard. • All subseqeunt process such as release to free circulation is also integrated within the same process flow. • Audit trail available within the same SAP Eco system.	YES

1. IBPP (Identity Based Preference Processing Vs Convetional GTS Preference)

Feature and Capabilities	**Preference Management GTS (Option A)**	**Identity based preference processing - GTS 4 HANA (Option B)**
Utilize content-based rules of origin to find out which products are eligible for reduced import duty rates.	⊕Pro Present	⊕Pro Present
Collect relevant purchase orders and material documents	⊕Pro	⊕Pro

	Present	Present
Calculate product origin for products using official trade agreement rules	Pro Present	Pro Present
Determine preference eligibility using different methods such as sales documents, invoices, and bill of materials	Pro Present	Pro Present
Automatically generate and manage declarations for customers receiving your products	Pro Present	Pro Present
Issue and reissue declarations in the event of a change in preferential eligibility	Pro Present	Pro Present
Integrate with sales and distribution processing in the SAP ERP application and customs management in SAP GTS	Pro Present	Pro Present
Maximize your preference determination by leveraging more granular data	Con Absent	Pro Present
Calculate only the components or raw materials that are used during the production process	Con Absent	Pro Present
Achieve a more precise result	Con Absent	Pro Present
Conduct preference processing via specific batches	Con Absent	Pro Present
Store preference status at the batch level	Con Absent	Pro Present
Enable picking directly from eligible batches for customer shipments	Con Absent	Pro Present

RECOMMENDATION : (OPTION B) IBPP

2. Use GTS CWH Functionality

Recommendation: Based on the evaluation table above using CWH solution with GTS 4 HANA.

lead to add

Workflow history

This view shows the 5 most recent entries. The complete workflow log is available from the 'Document Activity' menu item.

Nov 04, 2024	Actor	Type	Activity	Version

Approved	WENNINGER-ext, Sascha	Edit	updated the page at 12:32 pm	
		State	changed state to Approved at 11:32 am	v77
Edited following Approval	WENNINGER-ext, Sascha	State	gave *Minor update* approval at 11:32 am	
		State	changed state to Edited following Approval at 11:32 am	v77
Sept 26, 2024				
Approved	FALL-ext, Cheikh	State	changed state to Approved at 1:10 pm	v76
Pending SteerCo Review	FALL-ext, Cheikh	State	gave *Final Approval* approval at 1:10 pm	
		State	changed expiry date to '10 Oct, 2024 01:10 pm' at 1:10 pm	
		State	changed state to Pending SteerCo Review at 1:10 pm	v76
Pending Stakeholder Review	FALL-ext, Cheikh	State	gave *Stakeholder Review* approval at 1:10 pm	
		State	changed expiry date to '03 Oct, 2024 01:10 pm' at 1:10 pm	
		State	changed state to Pending Stakeholder Review at 1:10 pm	v76