



TRƯỜNG ĐẠI HỌC FPT

GRADUATION THESIS DOCUMENT

STOCK TRANSFERS WITH VALUATED STOCK IN TRANSIT TRANSACTION MONITOR

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ACKNOWLEDGMENT

The very first words of this final report are dedicated to expressing our deepest gratitude to those who have been involved and supported our team throughout this challenging yet immensely rewarding journey of completing our final capstone project, an extraordinary milestone in our lives.

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The dedication and hard work we have put into this project are the best way to honor your support. Once again, thank you all for your continuous love, guidance, and encouragement throughout this journey.

EXECUTIVE SUMMARY

This Capstone Project presents a comprehensive initiative to research, design, configure, develop, and validate an optimized intra-company stock transfer process within SAP S/4HANA for SAPO Company, with a strategic focus on applying Stock Valuated in Transit functionality and implementing advanced transaction monitoring practices. By aligning internal logistics operations with real-time financial valuation, the project aims to enhance operational governance, strengthen financial transparency, and streamline inventory management processes across SAPO's internal supply chain.

The project begins with an Introduction section, where the team outlines the general context of intra-company stock management challenges, introduces the project team comprising Business Administration (BA) and Information Technology (IT) students, and defines the detailed scope of work and structure of the final report. This foundation situates the project within the broader goals of achieving synchronized material and financial flows using SAP best practices and S/4HANA capabilities, particularly Stock Valuated in Transit and Proof of Delivery (POD) control.

The Product Statements section builds on this foundation by conducting an in-depth product analysis and assessing the limitations of SAPO's existing systems. It establishes the current gaps in stock transfer transparency, identifies the need for valuation of stock during transit to reflect real-time financial movements, and outlines the project management plan for delivering the proposed solution. This section also critically frames the project scope to ensure a focused and achievable implementation trajectory.

In the SAP Configurations section, led primarily by BA students, the enterprise structure is designed to support intra-company stock transfers between Plants under the same Company Code. Detailed configuration work involves mapping MM and SD module integration for automatic delivery creation based on Stock Transport Orders (STOs), setting up OBYC for correct automatic financial postings during Goods Issue and Goods Receipt, and embedding Proof of Delivery (POD) as a mandatory checkpoint. Master data necessary for the execution of the process, including material masters and vendor/customer extensions, are prepared to ensure system readiness for operational execution.

The SAP Coding section, undertaken by IT students, focuses on developing necessary ABAP enhancements to extend system functionality where SAP standard offerings are insufficient. Custom output controls for Proof of Delivery, real-time transaction

monitoring reports, and additional validations during stock movements are proposed and implemented. Technical specifications are carefully aligned with functional requirements to ensure seamless user experience, while strict adherence to SAP development standards is maintained to ensure system sustainability and upgrade compatibility.

The Implementation and Testing section consolidates all the prior configuration and development work. The team executes end-to-end stock transfer scenarios, including the creation of Stock Transport Orders, automatic outbound delivery generation, Goods Issue postings with valuation shifts, real-time tracking of in-transit stock, Proof of Delivery confirmations, Goods Receipt postings, and internal billing processes. A comprehensive Test Plan is developed, detailing human resource allocation, testing environments, test cases simulating standard and exceptional scenarios (such as delayed POD or missing Goods Receipt), and the analysis of test outcomes through structured reporting.

Through the execution of this project, the team successfully demonstrates that the application of Stock Valuated in Transit principles, when combined with strong transaction monitoring and system controls, provides SAPO with substantial improvements in logistical visibility, financial reporting accuracy, and internal control robustness. The project not only validates the theoretical propositions explored during the research phase but also provides a fully practical, scalable, and auditable internal stock transfer model within SAP S/4HANA. Strategic recommendations for SAPO's future process expansion, such as cross-Company Code stock transfers and predictive logistics monitoring, are also proposed based on the project's findings and reflections.

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I. Introduction

I.1 General Information

Project name: Stock Transfers with Valuated Stock in Transit Transaction Monitor

Project code: GSP25SAP01

Vietnamese name: Giám sát giao dịch chuyển kho với hàng tồn kho được định giá trong quá trình vận chuyển

Party involved: SAPO Company

I.2 The Team

I.2.1 Supervisor

Name	Role
Nguyễn Thé Hoàng	Mentor
Nguyễn Ba Lê	Mentor
Bùi Kim Ngân	ABAP Advisor
Vũ Hải Dương	Functional Consultant Advisor

Table 1: List of Supervisors

I.2.2 The Teams

Name	Role
Đinh Minh Huân	Leader - ABAP Developer
Nguyễn Quang Khánh	ABAP Developer
Lương Phạm Việt Anh	ABAP Developer
Nguyễn Lê Phương Uyên	Functional Consultant

Table 2: List of members in the project

I.3 The Scope of Work

The scope of this Capstone Project is centered on the comprehensive research, design, configuration, testing, and critical reflection surrounding the optimization of the Intra-Company Stock Transfer Process utilizing Stock Valuated in Transit functionality within SAP S/4HANA, specifically for Company SAPO. This project aims to demonstrate how an integrated, financially transparent, and operationally controlled internal stock movement process can be designed and partially implemented in a real-world enterprise system environment. In alignment with the expectations for a Capstone Project, the work not only investigates SAP theoretical frameworks but also applies them practically, bridging the gap between academic research and enterprise application.

The research phase of the project focuses on a deep theoretical examination of SAP's internal stock movement functionalities, particularly comparing traditional non-valuated stock transfers against Stock Valuated in Transit scenarios. Special attention is given to understanding the accounting impact valuated stock at Goods Issue rather than Goods Receipt, and how this affects balance sheet accuracy, real-time asset reporting, and financial closing processes. Further research explores transaction monitoring methodologies in SAP, investigating how enterprises utilize system tools to track in-transit goods and prevent operational and financial discrepancies. The research also includes a review of industry best practices, case studies on successful intra-company logistics optimization, and identification of common pitfalls such as Goods Receipt delays, stock reconciliation issues, and unaligned financial postings.

The design and process modeling phase translates these research insights into a structured business process blueprint. The internal stock transfer process is carefully mapped to include the initiation of Stock Transport Orders (STOs), automatic generation of outbound deliveries, financial posting at Goods Issue, systematic monitoring of goods in transit, Proof of Delivery (POD) confirmation prior to final billing, and accurate recording of Goods Receipt at the destination Plant. Design principles emphasize seamless synchronization between material movements and financial postings, real-time visibility of in-transit goods, and the introduction of mandatory control points through POD confirmation to minimize discrepancies. Business scenarios are developed to model both standard and exception handling processes, ensuring the designed solution is resilient to operational variances.

The configuration and system integration phase represents the translation of the designed process into SAP S/4HANA. From the functional perspective, this phase includes the detailed configuration of enterprise structure elements, such as Company Code, Plants, Storage Locations, Sales Organizations, Distribution Channels, and Divisions, ensuring that intra-company logistics flows are structurally supported. Materials Management (MM) and Sales and Distribution (SD) modules are integrated carefully to automate the flow from purchase order to delivery creation and goods movement. Furthermore, Financial Accounting (FI) integration is achieved through meticulous configuration of Automatic Account Determination (OBYC), ensuring that Goods Issue and Goods Receipt postings are correctly reflected in SAPO's financial ledgers without manual intervention.

In parallel with functional configuration activities, the project scope also defines specific responsibilities for the technical team to ensure complete process enablement. The technical team is tasked with enhancing system output functionalities to support Proof of Delivery confirmations, developing customized reports or dashboards for real-time monitoring of in-transit stock where standard reports are insufficient, and supporting exception management by creating alerts or workflows for overdue Goods Receipts. Additionally, the technical team supports the assignment of appropriate user roles and authorizations to segregate responsibilities between purchasing, logistics execution, and financial accounting teams, adhering to SAPO's internal control policies. Transport management activities, including the movement of configuration objects and minor developments from the development system to the quality and testing environments, are also managed by the technical team to ensure system consistency and readiness for simulation activities.

The simulation and validation phase involves executing the complete intra-company stock transfer process within a controlled SAP environment. Simulations include the creation of STOs, processing of outbound deliveries, posting of Goods Issues, real-time tracking of stock in transit, confirmation of Proof of Delivery, posting of Goods Receipts, and generation of internal billing transactions. System behavior is meticulously observed and documented at each stage to validate process correctness, financial posting integrity, and operational control effectiveness. Scenarios are executed for both standard

and exception flows, such as delayed POD confirmations and late Goods Receipts, to ensure the robustness of the designed solution.

Finally, the critical reflection phase assesses the overall project journey, capturing key lessons learned during the research, design, configuration, and simulation activities. This includes an evaluation of the alignment between theoretical SAP functionalities and practical system behavior, an analysis of encountered challenges such as system limitations or configuration complexities, and the identification of improvement areas for future optimization initiatives. Strategic recommendations are provided for SAPO to further enhance its internal logistics processes, including suggestions for broader deployment of monitoring tools, automation of POD reminders, and integration of advanced analytics for proactive logistics management.

In conclusion, the scope of work for this Capstone Project encompasses a holistic journey from theoretical research to practical system simulation, fully integrating both functional and technical dimensions. By embracing a multidisciplinary approach that bridges business process design, SAP configuration, technical system support, and critical analysis, the project provides a model for how enterprises like SAPO can leverage SAP S/4HANA to enhance operational governance, drive financial transparency, and achieve logistical excellence in managing internal stock transfers.

- Posting Goods Issue Accounting Details:

Debit	Credit
Stock decrease (Issuing Plant)	Stock in Transit increase (Issuing Plant)

Table 3: Posting Goods Issue Accounting Details

- Posting Proof of Delivery Accounting Details:

Debit	Credit
Stock in Transit decrease (Issuing Plant)	Stock in Transit increase (Receiving Plant)

Table 4: Posting Proof of Delivery Accounting Details

- Posting Goods Receipt Accounting Details:

Debit	Credit
Stock in Transit decrease (Receiving Plant)	Stock increase (Receiving Plant)

Table 5: Posting Goods Receipt Accounting Details

I.4 Final Report Structure

The final report for this Capstone Project is carefully structured to deliver a comprehensive, coherent, and academically rigorous documentation of the research conducted, the system design proposed, the practical implementation simulated, and the critical reflections drawn throughout the project journey. It seeks to encapsulate both the academic depth expected of a research-based capstone project and the practical applicability necessary for real-world enterprise environments, specifically in the context of Company SAPO's internal logistics and financial governance optimization.

The report commences with a clear statement of purpose, detailing the objectives of the project. It defines the project's ambition to explore how the application of Stock Valuated in Transit functionalities and systematic transaction monitoring can strengthen SAPO's operational governance, enhance logistical transparency, improve financial reporting accuracy, and provide a strategic platform for future internal logistics digitization. This section situates the project within the broader challenges faced by modern enterprises managing complex internal stock movements, offering a rationale for the chosen research focus and outlining the intended contributions to both theoretical knowledge and business practice.

Following the articulation of purpose, the report delves into the research methodology employed throughout the project. The methodology is presented in a multi-layered approach, beginning with an extensive literature review of SAP's official documentation, academic publications, and industry white papers related to stock transfer management, valuation accounting, and transaction control. It further elaborates on the benchmarking activities conducted to compare best practices across different industries, highlighting how leading enterprises manage stock valuation and internal goods tracking. Case studies and real-world operational failure analyses are incorporated to enrich the understanding of potential pitfalls and corrective strategies. The methodology section also explains the analytical framework used to translate theoretical concepts into system configurations and operational workflows suitable for SAPO's specific organizational context.

Subsequently, the report transitions into a detailed exposition of the system configuration and implementation approach adopted. This section provides an exhaustive

account of how the enterprise structure was configured to enable seamless internal stock transfers, detailing the creation and alignment of Company Code, Plants, Storage Locations, Sales Organizations, and Distribution Channels. It outlines the specific integration mechanisms between the Materials Management (MM) and Sales and Distribution (SD) modules, ensuring that Stock Transport Orders (STOs) trigger automatic outbound deliveries and that Goods Issue postings immediately reflect valuation shifts. The configuration of the Financial Accounting (FI) module through the careful mapping of Automatic Account Determination (OBYC) is discussed extensively, demonstrating how financial postings related to Goods Issue and Goods Receipt are automated and aligned with SAPO's accounting standards. Additionally, this section highlights the role of the technical team in enhancing output controls for Proof of Delivery (POD) confirmations, developing custom transaction monitoring tools where SAP standard offerings were insufficient, and securing proper user authorizations to maintain system integrity. By thoroughly detailing both functional and technical workstreams, the report reflects the complexity and interdisciplinary nature of modern SAP system optimization projects.

The subsequent sections of the report are dedicated to the process simulation and testing outcomes. A complete end-to-end simulation is documented, beginning from the creation of the Stock Transport Order, through the automatic delivery creation, execution of Goods Issue, real-time monitoring of stock-in-transit, Proof of Delivery confirmation, posting of Goods Receipt, and finally the generation of internal billing transactions. The behavior of the SAP system is closely observed at each stage, with specific attention paid to the generation of financial entries, stock valuation movements, and the handling of exceptions such as delayed Proof of Delivery confirmations. The testing outcomes are analyzed to verify that the designed process meets both operational and financial accuracy standards and that the integration between modules operates without disruption. Screenshots, document flows, and financial journal entries are presented as evidential support for the successful execution of each process phase.

The key findings and analysis section synthesizes the outcomes of the research and simulation exercises. It articulates how the adoption of Stock Valuated in Transit processes provides SAPO with improved real-time visibility over its internal stock movements and more accurate financial representation of in-transit assets. The analysis demonstrates that the alignment of material and financial flows significantly reduces the risk of reporting mismatches, supports faster and more accurate period-end closings, and

enhances internal audit readiness. Additionally, it is observed that transaction monitoring tools contribute to proactive operational management, allowing SAPO to identify delays or discrepancies early and take corrective actions before they escalate into larger financial or logistical problems. These findings are critically evaluated against the initial research hypotheses, offering validation for the theoretical propositions explored at the project's outset.

The report concludes with a comprehensive conclusions and recommendations section. It summarizes the key lessons learned, including the importance of cross-functional collaboration between logistics and finance teams, the critical role of user training in process adherence, and the necessity of maintaining a dynamic transaction monitoring framework to sustain operational excellence. Strategic recommendations are provided for SAPO to consider broader rollout initiatives, such as extending the Stock Valuated in Transit concept to cross-Company Code transfers, implementing mobile logistics solutions for real-time Proof of Delivery updates, and investing in predictive analytics for internal logistics optimization. The conclusion emphasizes that the project not only delivered immediate operational improvements but also laid the groundwork for SAPO's continued journey towards digital transformation and supply chain resilience.

II. Product Statements

II.1 Product Analysis

II.1.1 Problem Statement

SAPO is a pioneering company specializing in Mechanical and Chemical Innovations, known for delivering high-performance solutions to industries such as manufacturing, energy, and materials science, based in Ho Chi Minh City. The company leverages SAP to manage stock movements across its plants using standard SAP transaction codes (T-codes) like ME21n for creation of Purchase Orders (PO), VL10D for creation of Delivery Outbounds (DO), VL02N for Changing Delivery Outbound and Posting Goods Issue (GI), VLPOD for Posting Proof of Delivery (POD), MIGO for Posting Goods Receipt (GR), and MIRO for Posting Vendor Invoices. However, SAP faces several challenges related to its stock transfer process, particularly when dealing with Valuated Stock in Transit:

- Lack of real-time stock visibility: Although SAPO uses SAP's MM and SD modules, they still lack an integrated system for monitoring stock movements in real-time, especially while goods are in transit between plants. This limits their ability to track stock status accurately and causes delays in decision-making.
- Manual reconciliation processes: Stock movements between plants are tracked, but discrepancies often arise in **stock reconciliation**, leading to time-consuming manual processes to ensure stock levels match across plants.
- Error-prone operations: Manual intervention in creating Stock Transport Orders (STOs) and managing stock issues or receipts can lead to human errors, affecting stock valuations and causing inconsistencies in inventory records.

The primary challenge is to develop a solution that automates stock transfer processes, ensures accurate real-time tracking, and provides a seamless integration between procurement, inventory management, and finance. Therefore,

SAPO requires a solution that integrates real-time stock visibility, and unifies all the stock transfer processes into one dedicated customized Z-program.

II.1.2 Business Requirements

The business requirements outlined below are based on the project's goal of enhancing SAPO's stock transfer system, specifically for managing valued stock in transit and improving the efficiency of intra-company stock transfers between plants. These requirements are aligned with the SAP Materials Management (MM) module's capabilities and the company's operational needs.

1. Real-Time Stock Monitoring and Tracking

Objective: Ensure that real-time updates are available for stock movements, particularly valued stock in transit, to maintain visibility of stock between issuing and receiving plants.

Implementation: The system should allow for automatic updates and tracking of stock from the issuance plant to the receiving plant. This includes updating status for Goods Issue (GI), Goods Receipt (GR), and Proof of Delivery (POD). Real-time tracking will be facilitated through SAP MM, ensuring that stock in transit is visible at all stages.

2. Automated Stock Reconciliation

Objective: Automate the reconciliation of stock quantities during the transfer process, ensuring accuracy across inventory records in the issuing plant and the receiving plant.

Implementation: The system will integrate the Goods Issue and Goods Receipt processes to automatically reconcile stock levels. Once goods are transferred and received, the stock is automatically updated in SAP, eliminating manual checks and reducing discrepancies.

3. Efficient Process Flow for Stock Transfer

Objective: Streamline the intra-company stock transfer process from the creation of Stock Transport Orders (STOs) to Invoice posting.

Implementation: The system will use automated workflows to ensure each step in the process (from PO creation, Goods Issue, Goods Receipt, POD confirmation, to Invoice posting) is carried out seamlessly. The integration of these steps will reduce the risk of errors, speed up the process, and eliminate redundancies.

II.2. Existing Systems

In addressing the challenges identified in optimizing SAPO's internal stock transfer processes, it is essential to analyze existing SAP systems and reference models that offer valuable features or conceptual frameworks applicable to the project's objectives. Among these, SAP's standard Intra-Company Stock Transport Order (STO) process within the SAP S/4HANA platform provides a fundamental basis for designing the solution. The standard STO process supports stock movements between Plants within the same Company Code, allowing the transfer of goods with the necessary financial and logistical documentation. However, the conventional STO process does not automatically value goods during transit unless enhanced with Stock Valuated in Transit functionality. Therefore, learning from existing SAP best practices where valuation is shifted to the time of Goods Issue is critical to ensuring real-time financial reflection of stock movements, an essential goal of this project.

Furthermore, SAP's standard transaction monitoring tools, such as stock-in-transit reports and delivery monitoring transactions, provide useful functionalities that enhance visibility over goods movements. In particular, systems that integrate Proof of Delivery (POD) confirmations as mandatory checkpoints in the logistics flow have been observed to significantly strengthen operational reliability and reduce financial reconciliation issues. Referencing standard SAP POD processes, where delivery completion is validated before financial closure, serves as a guiding principle in embedding similar controls within SAPO's internal logistics workflow.

In addition to SAP standard functionalities, real-world system implementations by leading organizations offer further insights. Enterprises that have successfully implemented advanced Stock Valuated in Transit models often combine automatic outbound delivery creation, real-time stock movement monitoring, and enhanced POD validation to drive efficiency and transparency. For example, companies in the manufacturing and retail sectors have demonstrated how structured transaction monitoring frameworks using standard SAP and minor custom enhancements can significantly reduce stock reconciliation discrepancies and support faster financial period-end closings. These industry references highlight the importance of seamless integration between Materials Management (MM), Sales and Distribution (SD), and Financial Accounting (FI) modules, all of which form critical integration points within the SAPO project's system design.

Finally, lessons from previous SAP system rollouts emphasize the importance of maintaining standardization wherever possible, minimizing custom developments, and ensuring that all enhancements, such as additional monitoring reports or output modifications for Proof of Delivery, are built to complement rather than replace SAP standard processes. This design philosophy is critical to maintaining system upgradeability, sustainability, and compliance with SAPO's long-term digital transformation strategies.

Through the careful study and application of existing SAP systems and proven enterprise solutions, the project team ensures that the design and implementation of SAPO's internal stock transfer process align with best practices, deliver operational and financial improvements, and remain scalable for future business needs.

II.3. Project Scope and Limitations

II.3.1 Project Scope

The scope of this Capstone Project is focused on the design, configuration, technical development, and testing of an optimized intra-company stock transfer process within SAP S/4HANA, specifically tailored for SAPO Company. The primary objective is to enhance the management of internal stock movements between Plants under the same Company Code by implementing the Stock Valuated in Transit functionality and strengthening transaction monitoring practices. Through this solution, the financial valuation of goods is transferred at the time of Goods Issue at the supplying Plant, while

the physical stock remains monitored in transit until it is received at the destination Plant. This approach ensures that SAPO's financial reporting accurately reflects the status of in-transit inventory, enhances operational transparency, and improves internal control over internal logistics flows.

The project encompasses the full cycle of intra-company stock transfer operations, beginning with:

- The creation of Stock Transport Orders (STOs) in the Materials Management (MM) module.
- The automatic generation of outbound deliveries via the Sales and Distribution (SD) module.
- The posting of Goods Issues (GI) where the valuation transfer occurs.
- Systematic tracking of goods in transit through enhanced transaction monitoring tools.
- The Proof of Delivery (POD) process as a mandatory step prior to finalizing Goods Receipts (GR) and internal billing.

Financial postings are integrated through the configuration of Automatic Account Determination (OBYC) in the Financial Accounting (FI) module, ensuring that movements of goods are consistently mirrored by corresponding financial entries. Master data management for materials and plants is also a critical component of the project, ensuring that the stock transfer process is executable within the SAP system environment without data inconsistencies.

On the technical side, where standard SAP functionalities are insufficient to meet operational needs, minor ABAP enhancements are introduced. These include:

- Developing customized reports for monitoring stock movements in transit,
- Supporting POD output management
- Enhancing system validations for better control during Goods Issue and Goods Receipt activities.

The technical deliverables are designed to complement the functional setup without disrupting SAP standard upgrade paths, ensuring system sustainability.

II.3.2 Limitations

However, the project explicitly excludes processes outside the intra-company context:

- Transfers across different Company Codes intra-company billing processes, customer outbound deliveries, vendor procurement transactions, and integrations with external transport or warehouse management systems are outside the defined scope.
- Advanced features such as mobile application integration for Goods Movement or predictive analytics dashboards for shipment monitoring are also excluded.
- No Handling of Material with Batch Management. Materials that require batch management involve a more complex process where individual batches need to be tracked separately, especially during stock transfers. This would require additional configurations and custom enhancements, which would extend the project's scope and timeline.
- Inability to Edit Documents After Creation. Once the key documents in the stock transfer process (e.g., Stock Transport Orders (STOs), Outbound Deliveries, Goods Issue, Goods Receipt) are created, they cannot be edited or modified.
- No Ability to Cancel Vendor Invoice After Creation. After the vendor invoice is created and posted, the system does not allow for cancellation.

These enhancements, while beneficial for broader logistics digitization, would necessitate additional resources, longer timelines, and expanded project budgets, and are therefore deemed out of scope for the current phase.

Clarifying the project scope and its limitations ensures that stakeholders maintain realistic expectations regarding deliverables, and that proposed changes or new requirements can be systematically evaluated against the established framework. Only changes that directly support the intra-company stock transfer optimization, and that align with the original goals of improving financial transparency and operational efficiency within SAPO's existing organizational structure, may be considered for inclusion, subject to appropriate assessments of resource, cost, and schedule impacts.

II.4. Project Management and Plan

Project Name: Stock Transfer with Valuated Stock in Transit Transaction Monitor

Project Manager: Dinh Minh Huan

Customers: Vu Hai Duong & Bui Kim Ngan

Supervisors: Nguyen The Hoang & Nguyen Ba Le

ABAP Developers: Dinh Minh Huan, Nguyen Quang Khanh, Luong Pham Viet Anh

Functional Consultants: Nguyen Le Phuong Uyen

Project Start Date: 16/01/2025

Estimated Completion Date: 26/04/2025

II.4.1 Project Goals and Objectives

- Develop an optimized stock transfer process for SAPO, specifically focusing on valuated stock in transit between plants.
- Enhance transparency and real-time tracking of goods movement to improve financial reporting and inventory management.
- Streamline the Goods Issue (GI), Goods Receipt (GR), Proof of Delivery (POD), and Invoice posting processes within SAPO's SAP environment.
- Implement automated reconciliation for stock quantities and values to ensure accuracy and efficiency in the stock transfer process.
- Provide real-time transaction monitoring and automated reporting on stock movements to enhance decision-making and operational oversight.
- Ensure compliance with internal and external auditing requirements through detailed audit trails and financial integration.
- Regularly report on the progress of the project to stakeholders using project management tools (e.g., Trello, ClickUp).
- Maintain clear communication with SAPO's logistics, finance, and procurement teams throughout the project lifecycle.
- Test the system extensively at multiple levels (unit, integration, functional) to ensure high-quality outcomes and smooth implementation.
- Provide comprehensive user training to SAPO staff for post-implementation support.

II.4.2 Scope of Work

In Scope:

- Research and Analysis: Conduct an in-depth analysis of SAPO's stock transfer needs, specifically for handling valued stock in transit, and research feasible solutions to address current gaps in the process.
- Workshops with SAPO stakeholders: Organize workshops to gather business requirements and user insights for designing the stock transfer solution, ensuring that the solution meets business expectations.
- Blueprint and Specifications: Develop a detailed blueprint and functional specifications for the solution, outlining the technical and functional requirements for stock transfer optimization.
- Configuration and Development: Implement the stock transfer process within SAP S/4HANA, ensuring it aligns with SAPO's existing SAP infrastructure.
- Testing: Perform comprehensive unit testing, integration testing, and functional testing for all custom ABAP developments related to the stock transfer process. This includes testing custom reports, POD confirmation, and system validations.
- User Acceptance Testing (UAT): Collaborate with SAPO stakeholders to conduct UAT, ensuring the system functions as required in real-world scenarios.
- Documentation: Provide thorough documentation of both functional and technical aspects of the project, ensuring clear guidelines for future updates or enhancements.
- User Training: Deliver user training sessions to SAPO's logistics, procurement, and finance teams to ensure they are fully equipped to use the new system. Provide post-implementation support to ensure smooth system adoption.

Out of Scope:

- Advanced SAP FI and MM Configurations: The project will not include any major configurations of the SAP Financial Accounting (FI) or Materials Management (MM) modules beyond what is necessary to enable the stock transfer process.

- Basis Configurations for Authority and Access: The project does not cover any system administration tasks such as configuring user roles, access permissions, or handling system dumps.
- External System Integration: Integrating with external warehouse management systems (WMS), transport management systems (TMS), or third-party logistics (3PL) systems is not part of this project.
- Mobile Application Development: The integration of mobile applications for real-time updates on goods movement or notifications is excluded from the scope due to additional resource requirements.
- Predictive Analytics and Dashboards: Advanced features like predictive analytics for forecasting stock movements or developing real-time shipment monitoring dashboards are excluded due to resource constraints and timeline limitations.

II.4.3 Roles and Responsibilities

Role	Responsibility
Project Manager	Oversee project progress, coordinate tasks, manage risks.
ABAP Developer	Develop, test, and document ABAP enhancements.
Functional Consultant	Gather requirements, functional documents, configurations, create test cases, assist testing, user manual.
Tester	Conduct integration testing and validate requirements.
MoM Reporter	Note key points in meetings and communication.

Basis Administrator	Transport management and system health checks.
----------------------------	--

Table 6: Roles and Responsibilities

II.4.4 Timeline

No.	Task Description	PIC	FU PIC	Planned Duration (Hrs)	Planned Date From	Planned Date To	Note	Planned Time	Actual Duration	Actual Date From	Actual Date To	Actual Time	Status	Deliverable
1 Preparation + Explore														
1.1 Project Kick-Off Meeting		Advisor		1h	18-Jan	20-Jan	3 days			1h	18-Jan	20-Jan	11h30	
1.2 Research SAP Function		Func + Dev		0.5w	22-Jan	26-Jan	5 days							
1.3 Preparing Presentation Slides for Workshop		Func + Dev		0.5w	22-Jan	26-Jan	5 days [off team 7 days from 27/1 (28 âm lịch) - 2/2 (mùng 5 tết)]							
1.4 Business Requirement Workshop		Advisor (Customer)		1w	5-Feb	14-Feb	10 days							
1.4.1 Functional (3 workshop)		Func			5-Feb	10-Feb	6 days							
1.4.2 Technical (1-2 workshop)		Dev			11-Feb	14-Feb	4 days							
1.5 Blueprint Finalization				2w	17-Feb	1-Mar	13 days							
1.4.1 Create Blueprint		Func			17-Feb	21-Feb	5 days							
1.4.2 Review Blueprint (3 times is maximum)		Advisor			24-Feb	28-Feb	5 days							
1.4.3 Sign-off Blueprint		Advisor			24-Feb	28-Feb	5 days							
2 Realization														
2.1 System configuration		Func		0.5w	3-Mar	7-Mar	5 days							
2.2 Configuration Note		Func		0.5w	3-Mar	7-Mar	5 days							
2.3 Specification					10-Mar	23-Apr	5 days							
2.3.1 Functional Specification		Func		1w	10-Mar	14-Mar	5 days							
2.3.2 Technical Specification		Dev		1w	14-Apr	18-Apr	5 days							
2.3.3 Review Functional Specification		Advisor			17-Mar	19-Mar	3 days							
2.3.4 Review Technical Specification		Advisor			21-Apr	23-Apr	3 days							
2.4 Development		Dev		2w	17-Mar	28-Mar	12 days							
2.5 Review Source Code		Advisor			31-Mar	4-Apr	5 days							
2.6 Testing					31-Mar	19-Apr	5 days							
2.5.1 Unit Test		Dev			31-Mar	4-Apr	5 days							
2.5.2 Test Scenario		Func			17-Mar	21-Mar	5 days							
2.5.3 Functional Test		Func			31-Mar	4-Apr	5 days							
2.5.4 Bug Fix & Re-test		Dev			7-Apr	11-Apr	5 days							
2.6 User Manual		Func			15-Apr	19-Apr	5 days							
3 UAT														
3.1 UAT		Lecturer		1w	21-Apr	25-Apr	5 days							
3.2 UAT Sign Off		Lecturer			25-Apr	25-Apr	1 day							

II.4.5 Resource Allocation

Resource	Effort (Hours)
Research	80 hours
ABAP Development	200 hours
Functional Configuration	200 hours
Testing + Debug	60 hours
Documentation	40 hours

Table 7: Resource Allocation

II.4.5.1 Risk Management

Risk	Likelihood	Impact	Mitigation Strategy
Radical User Change Requests	Medium	High	Adopt reasonable requests and persuade the customers that other demands are challenging or impactful.
Source code and configurations are compromised by external factors	High	Medium	Regularly save and document the current work. Editor lock for source code.
System Dump due to external incidents	Medium	High	Back up a video demo scenario that mimics the real demonstration flow.
Users decline the current solutions	Low	High	Reference blueprints and signed contracts and discuss with the customers about the feasible resolutions.

Table 8: Risk Management

II.4.5.2 Testing Procedures

- Unit Testing: Developers test individual ABAP enhancements.
- Integration Testing: Validate workflow functionality with a combination of individual functions.
- User Acceptance Testing: Business users validate functionality in simulated production-like environments.

II.4.5.3 Deployment Strategies

- Transport Request Management: Orchestrate relevant items to project's workbench and custom TRs.
- Post-Deployment Support: Issue resolution.

II.4.5.4 Project Management Software

- Google Drive: Archive Documents and MoM
- Trello: storage of resources and WBS assignment.
- Clickup: progress update and work documentation.

III. SAP Configurations

III.1 Enterprise Structure Definition

III.1.1 Company

A company is the smallest organizational unit for which individual financial statements can be drawn up according to the relevant commercial law. A company can contain one or more company codes. My company is SAPO.

Company	Description
SAPO	FPT Software

Table 9: Company

Change View "Internal trading partners": Overview		
Company	Company name	Name of company 2
1500	Mobile SFTP	
2002	Company New	
2004	Company Test	
ABCD	ABCD Ltd	
BCG	BC JSC	
B325	Blossom Spring VN Trading	
GR06	EY Vietnam	Ernst & Young Vietnam Limited
SABO	Sapoco - HUKA 25	
SAPOCH	Test Company Code MM01	
VNM	Công ty vinamilk	Công ty vinamilk

Figure 1: Display Company

III.1.2 Company Code

SAPO is a processing and exporting agricultural products company in Vietnam. In the SAP system, SAPO has one company code in a 4-digit alphanumeric format, which is FU24, to maintain a legal set of books.

Company code	Description
FU24	FPT Software

Table 10: Company Code

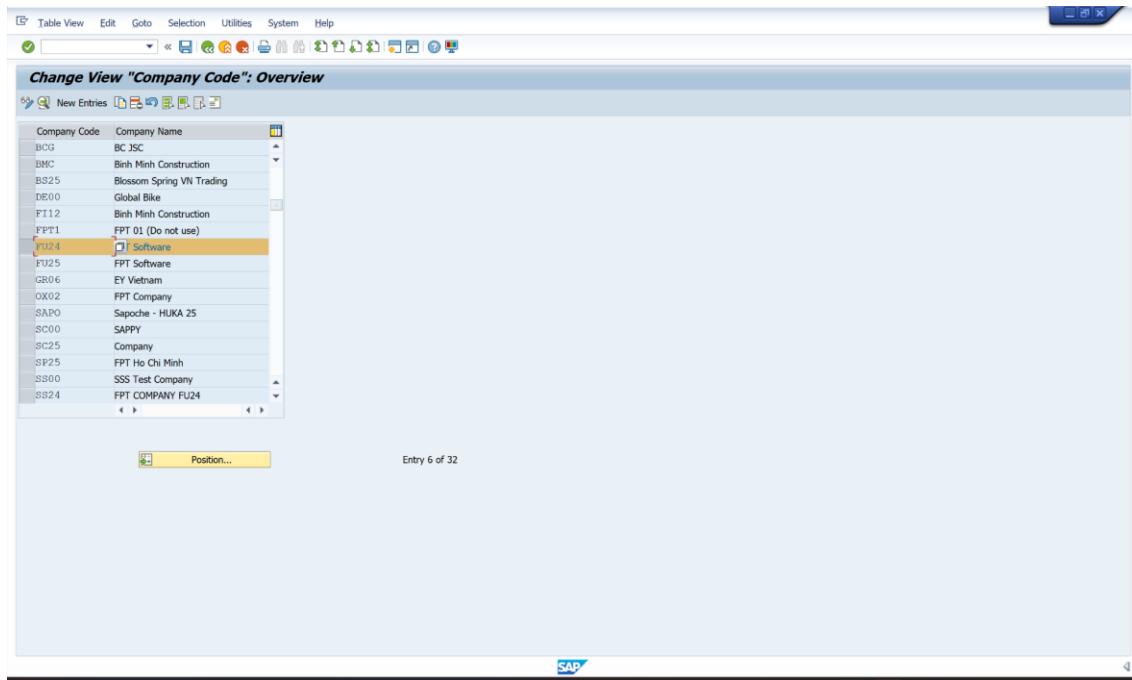


Figure 2: Display Company Code

III.1.3 Purchasing Organization

An organizational unit responsible for procuring materials or services for one or more plants. SAPO has a single purchasing organization in the SAP system, designated as FU01. FU01 is tasked with overseeing the procurement activities, including the sourcing, purchasing, and delivery of materials and services to the relevant plants, ensuring that SAPO's procurement processes are streamlined and efficiently managed across its entire operation.

Purchasing Organization	Description
FU01	Purchasing Org 01

Table 11: Purchasing Organization

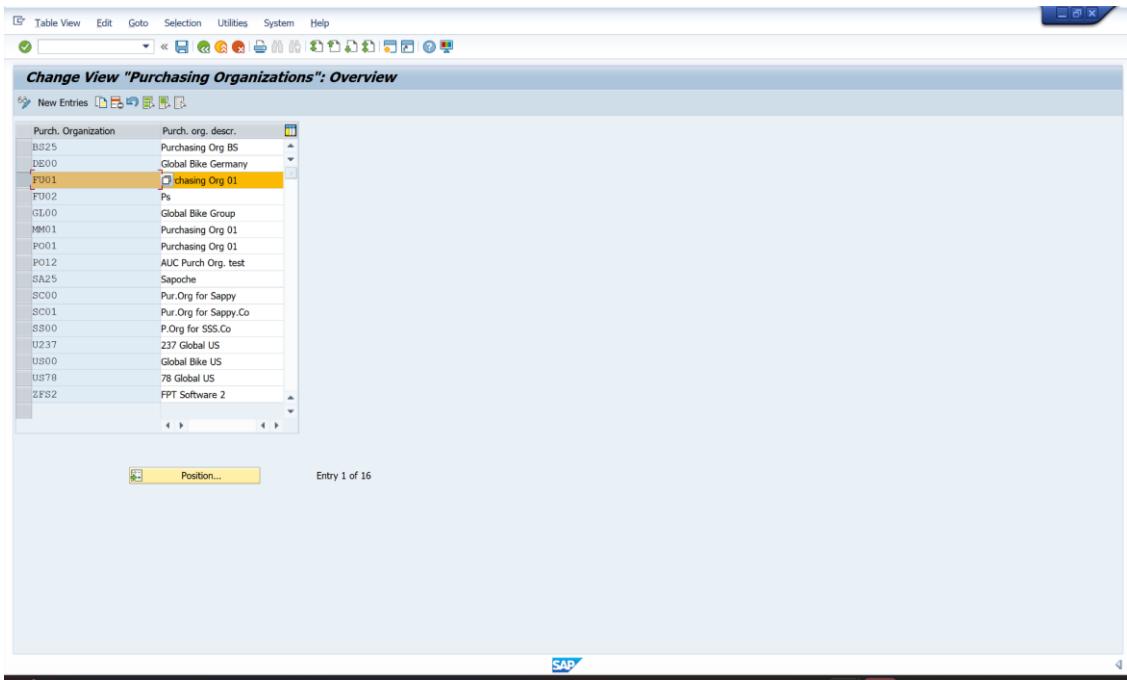


Figure 3: Display Purchasing Organization

III.1.4 Purchasing Group

The purchasing organization is further subdivided into purchasing groups (buyer groups); a purchasing group can also act for several purchasing organizations. SAPO has a single purchasing group in the SAP system, designated as F00.

Purchasing Group	Description
F00	Purchasing Grp 01

Table 12: Purchasing Group

Purchasing Groups				
Pu... Desc. Pur. Grp	Tel.No. Pur. Grp	Fax Number	Telephone	
237 237 North America				
BD1 Pu.Gr for plant BD				
CT1 Pu.Gr for plant CT				
E00 Europe				
P00 Purchasing Grp 01				
G12 AUC Purch Grp test				
N00 North America				
N78 78 North America				
P01 Purchasing G01				
S25 SAPO Pur. Grp				
ZD1 D1 Street				

Figure 4: Display Purchasing Group

III.1.5 Sale Organization

The sales organization is an integral organizational unit within the logistics framework, designed to align and structure the company's operations based on its specific sales needs and objectives. It plays a critical role in organizing the company's resources and processes to meet the demands of its sales activities, ensuring that the company is effectively structured to support and optimize its sales operations. This organizational unit serves as the foundation for implementing sales strategies and managing customer interactions in a way that supports overall business goals.

Sale Organization	Description
SAPO	HUKA sale org

Table 13: Sale Organization

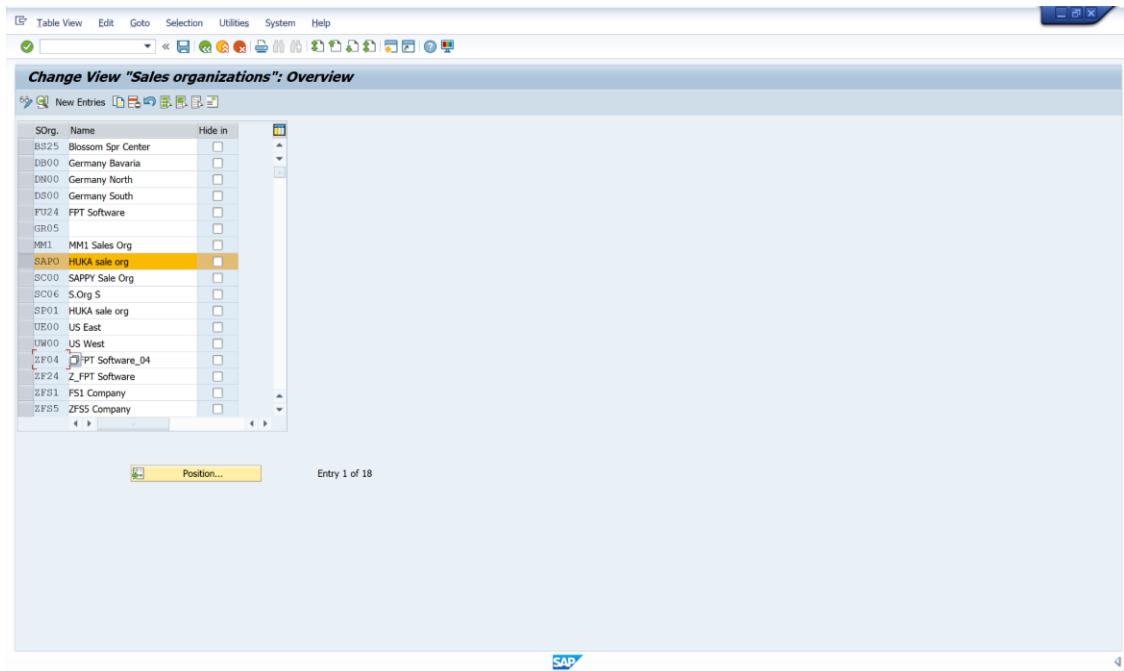


Figure 5: Display Sale Organization

III.1.6 Division

Division represents a product line. In the project, the division will be associated with HCMC as the main product line of the company. In the SAP system, the division of SAPO is:

Division	Description
S1	S1 Division

Table 14: Division

The screenshot shows a SAP application window titled "Change View 'Divisions': Overview". The main area is a grid table with three columns: "Division", "Name", and "Hide in". The "Division" column contains codes like 00, AS, BI, BR, ED, ES, F1, FD, FH, FS, L5, M1, S0, F1, SC, TS, U2, and ZF. The "Name" column provides descriptions for each division. The "Hide in" column contains checkboxes. A row for division F1 is selected, highlighted with a yellow background. The bottom of the screen shows navigation buttons and status information.

Division	Name	Hide in
00	Cross-Division	<input type="checkbox"/>
AS	Accessories	<input type="checkbox"/>
BI	Bicycles	<input type="checkbox"/>
BR	Bike Rental	<input type="checkbox"/>
ED	Electronic Devices	<input type="checkbox"/>
ES	Electronic Service	<input type="checkbox"/>
F1	F1 Division	<input type="checkbox"/>
FD	DNCT	<input type="checkbox"/>
FH	HNC	<input type="checkbox"/>
FS	HCMC	<input type="checkbox"/>
L5	Laptop	<input type="checkbox"/>
M1	MM1 Division	<input type="checkbox"/>
S0	SAPO	<input type="checkbox"/>
F1	□ Division	<input checked="" type="checkbox"/>
SC	SAPPY Division	<input type="checkbox"/>
TS	Trading Service	<input type="checkbox"/>
U2	U2 Division	<input type="checkbox"/>
ZF	FU 7	<input type="checkbox"/>

Figure 6: Display Division

III.1.7 Plants

The plant is the central organizational unit in the context of production planning. A plant can be responsible for manufacturing products, distributing products, or providing a service. In the SAP system, SAPO is assigned to factories KA1 and KA2 under the same Company Code FU24 to perform internal stock transactions.

Plants	Description
KA1	Sapoche HCM
KA2	Sapoche HN

Table 15: Plants

Plant	Name 1	Name 2
FU01	Cu Chi (SD01)	
FU24	FPT University	
FU25	FPT Software	
HD00	Plant Heidelberg	
HH00	DC Hamburg	
HM00		
KA1	Sapoche HCM	
KA2	Sapoche HR	
M237	237 DC Miami	
M100	DC Miami	
MM01	MM01 Plant 1	
MM02	MM01 Plant 2	
MD00	Plant Munich	
NY00	DC New York City	
PF11	AUC Plant Test	
S237	237 DC San Diego	
SA1	Sapoche	

Figure 7: Display Plants

III.1.8 Storage Location

In a plant, the storage location refers to either a physical storage plant or a logical location. In the SAP system, it is defined with a four-character alphanumeric key. Since this is an intra-company transaction between 2 factories, SAPO's storage location will be located at 2 different locations, RM01 for KA1 and RM02 for KA2.

Storage Location	Description
RM01	Raw material
RM02	Raw material

Table 16: Storage Location

The figure consists of two identical screenshots of the SAP Change View "Storage Locations" interface. Both screenshots show a table titled "Storage Locations" with three columns: Location, Descr. of Storage Loc., and Validity. The table contains two entries:

Location	Descr. of Storage Loc.	Validity
FG02	Finished goods	Valid
RM02	W material	Valid

The interface includes a toolbar at the top with various icons, a "Dialog Structure" tree on the left, and a status bar at the bottom indicating "Entry 1 of 2".

Figure 8: Display Storage Location

III.1.9 Shipping point

A shipping point refers to the various exit points of the plant where goods are dispatched to customers or other plants. SAPO is defined to have one shipping point, which is in Ho Chi Minh City. In the SAP system, the shipping point of SAPO is assigned the code FU24.

Shipping Point	Description
FU24	FPT Shipping Pt.

Table 17: Shipping Point

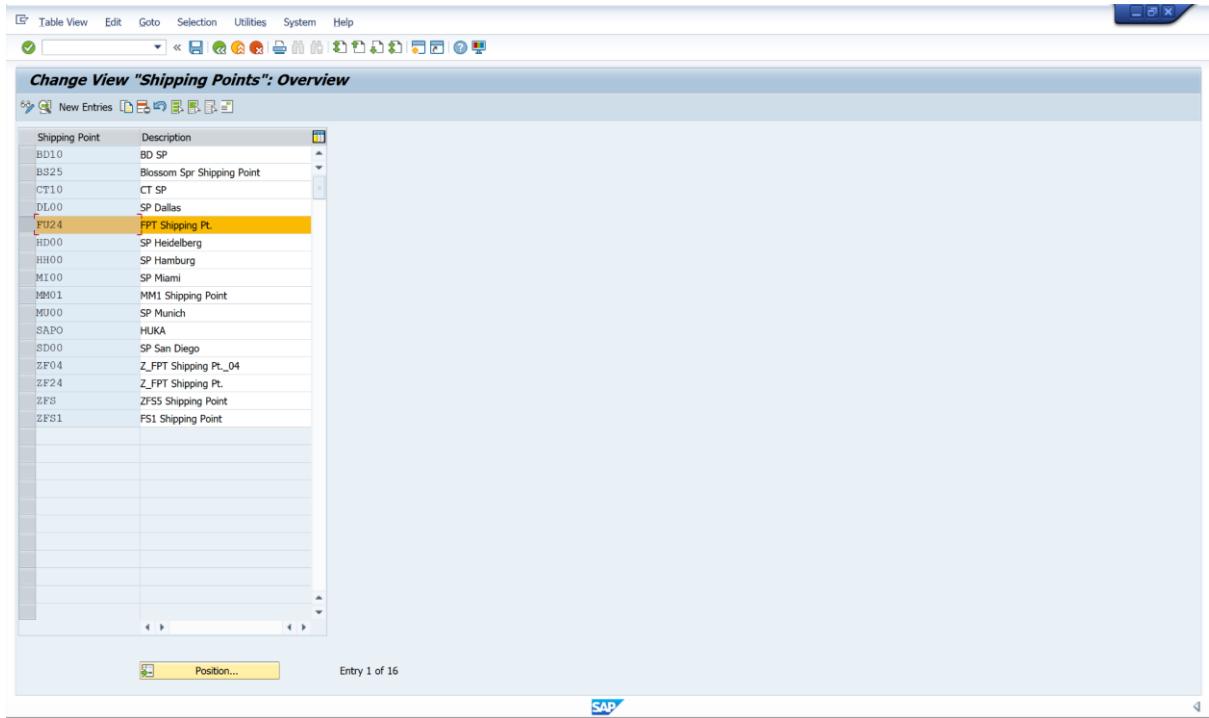


Figure 9: Display Shipping Point

III.1.10 Distribution Channel

In the SAP system, a distribution channel code enables businesses to distinguish between many different sales approaches, such as wholesale, retail, online sales,... In the context of the SAPO project, by assigning a code FU with the segment wholesale, SAP can automatically enforce appropriate conditions for transactions within that channel.

Division	Description
S1	S1 DC

Table 18: Distribution Channel

The screenshot shows a SAP application window titled "Change View 'Distribution channels': Overview". The window contains a table with columns "Distr. Channel" and "Name". The rows list various distribution channels, including BS (Bike Sharing), FU (SD Wholesale), IN (Internet), LS DC (MM1 Dis. Channel), M1 (MM1 Dis. Channel), SO (HUKA SAPO 25), SC (SAPPY Dis. Channel), U2 (U2 Wholesale), and WH (Wholesale). The row for "SC" is also highlighted with a yellow background. The channel "BC" is selected and highlighted with a yellow background. The SAP logo is visible at the bottom right of the window.

Distr. Channel	Name	Hide in
BS	Bike Sharing	<input type="checkbox"/>
FU	SD Wholesale	<input type="checkbox"/>
IN	Internet	<input type="checkbox"/>
LS	LS DC	<input type="checkbox"/>
M1	MM1 Dis. Channel	<input type="checkbox"/>
SO	HUKA SAPO 25	<input type="checkbox"/>
SC	BC	<input checked="" type="checkbox"/>
U2	SAPPY Dis. Channel	<input type="checkbox"/>
WH	U2 Wholesale	<input type="checkbox"/>

Figure 10: Display Distribution Channel

III.2 Business Process Configuration

In the SAP Configuration, each step plays a crucial role in aligning the SAP system to the company's operational requirements, which ensures smooth integration of business processes. Below is a detailed breakdown of the key configurations.

Valuated Stock in Transit

Stock transfer from the valued stock in transit of the issuing plant via the valued stock in transit of the receiving plant to the unrestricted-use stock of the receiving plant

III.2.1 Document Type (NBC3)

Document type NBC3 is used for intra-company stock transfers within SAP, managing the movement of goods between plants of the same company. The process involves transferring valued stock from the issuing plant's "valuated stock in transit" to the receiving plant's "valuated stock in transit." Once confirmed, the stock is moved to the receiving plant's unrestricted-use stock, making it available for use.

NBC3 ensures that stock valuation is accurately maintained throughout the transfer. This process links to delivery documents related to Inter-Stock

Transfer (IST), allowing seamless tracking and stock valuation within the organization. It plays a key role in managing intra-company inventory efficiently.

Type	Doc. Type Descript.	Itemnr.	NoRn
NBC3	Stock Transf. TOTIS	10	12
NBC7	CC SIT Enh. Rets STO	10	45
NB1C	IC ST STO	10	45
NB8	IC SIT Enh. Rets STO	10	45
NBXE	XLO Intra Com PO	10	45
NBA1	XLO Intra Company	10	45
UB	Stock Transp. Order	10	45
UB2	Enh. Rets STO IC	10	45
USB	Stock Transp. Order	10	45
ZNB	Standard PO	10	12
ZNB1	Standard PO_Domestic		45
ZNB2	B2B PO	10	12
ZNB3	PO Return to Plant		46
ZSNR	SAPPY Standard PO	10	10
ZSRV	SAPPY Rets to Vendor	10	20
ZUB1	Stock Transfer Order		47

Figure 11: Display Document Type (NBC3)

III.2.2 Delivery Types (NLI3)

Delivery type NLI3 is used for intra-company stock transfers within SAP, managing the movement of goods between plants of the same company. It handles the delivery of goods from the issuing plant's "valuated stock in transit" to the receiving plant's "valuated stock in transit." Once confirmed, the stock is moved to the receiving plant's unrestricted-use stock, making it available for use.

NLI3 ensures proper documentation and tracking throughout the transfer process, maintaining accurate stock valuation while the goods are in transit. This delivery type plays a crucial role in managing intra-company stock movements, ensuring smooth and efficient inventory control between plants.

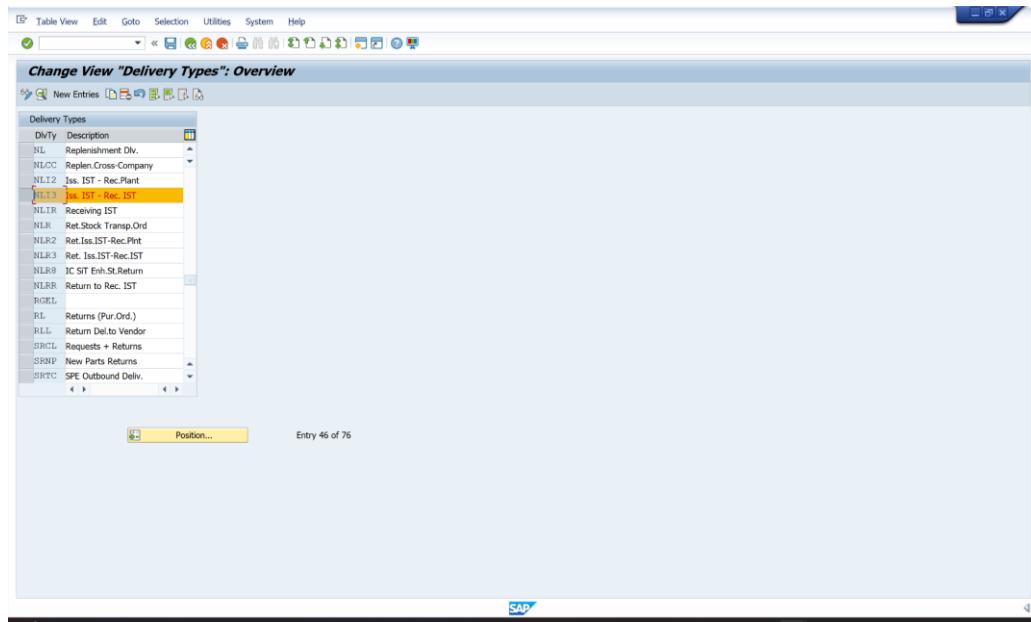


Figure 12: Display Delivery Type (NLI3)

III.2.3 Item Categories

Step 1: Define Item Categories

This creates unique categories to distinguish between items with different behaviors, like standard items, free-of-charge items,...

Step 2: Assign Item Categories

The step assists in linking the item categories to relevant sales document types and item categories, ensuring the proper process.

Conclusion: Item categories will control how the system processes, including pricing, billing, and delivery relevance. The steps for defining and assigning the item categories will help to classify and manage different items in sales documents accurately.

NLI3:

- The item category NLI3 is used for intra-company stock transfers in SAP, specifically to manage the movement of goods between plants within the same company. It is associated with the delivery type NLI3, which handles the transfer of materials from one plant's valued stock in transit to another plant's valued stock in transit.
- This item category ensures that the stock transfer process is properly documented and tracked. It governs the transfer of

materials from the issuing plant to the receiving plant, ensuring that the valuation of stock is maintained accurately throughout the process. Once the goods reach the receiving plant and the transfer is confirmed, the stock is moved to the unrestricted-use stock, making it available for use. The item category NLI3 plays a key role in enabling seamless and accurate intra-company stock transfers, ensuring efficient inventory management within the organization.

III.2.4 POD

Proof of delivery is exclusively an instrument for confirmation of external customers' deliveries.

III.2.4.1 Flag Customer Master, POD Relevance

Select POD-Relevant and assign “A” for the issuing Plant KA1 with vendor number is 1000044 and Receiving Plant KA2 customer number is 1003278 in Tcode BP

The screenshot shows the SAP Business Partner screen for Vendor 1003278. The top navigation bar includes Business Partner, Edit, Goto, Extras, Environment, System, and Help. The title bar says "Display Organization: 1003278, role Vendor". Below the title bar, there are tabs for Person, Organization, Group, General Data, Purchasing, and Relationships. The "Business Partner" field contains "1003278" and "KA2 SAPO / HCM 700000". The "Display in BP Role" dropdown shows "FLVN01 Vendor". The main area has tabs for Address, Address Overview, Identification, Control, Payment Transactions, Status, Legal Data, Vendor: General Data, Vendor: Tax Data, and Vendor: Texts. Under the "Identification" tab, there is a section for "Social insurance" and "Reference Data". In the "Reference Data" section, the "POD-Relevant" field is highlighted with a red border and contains the value "A". A tooltip "Always send proof of delivery" is displayed next to the field. Other options in this section include "Carrier confirmation" (unchecked) and "Carrier confirmation not expected". At the bottom of the screen, there are sections for "Deletion blocks" and "Additional Payment Transaction".

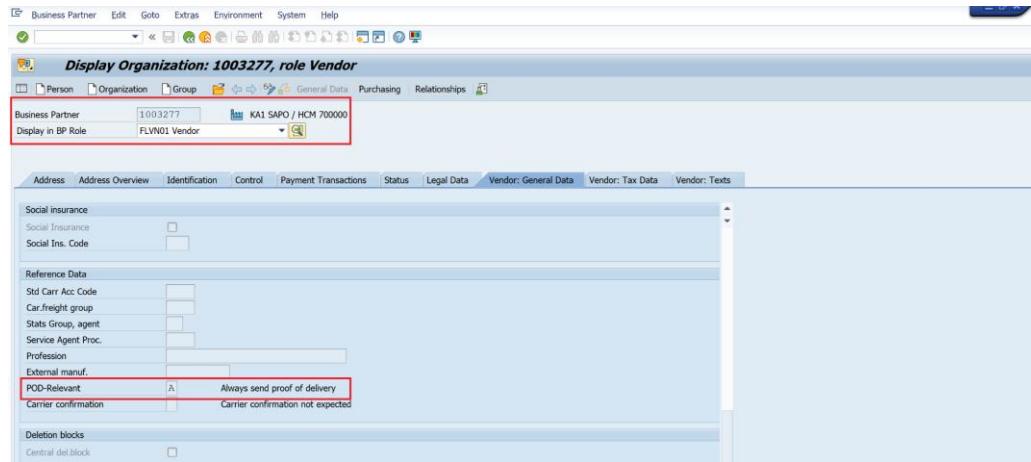


Figure 13: POD-Relevant with BP role

III.2.4.2 Defining Proof of Delivery Relevance Based on Delivery

Item Category

Change View "Maintain POD Relevance": Overview				
Item...	Description	POD-relevant	POD automatic	Description
NLC	InterCo Stock Tr.Itm			Not Relevant
NLCG	IComp-SIT-FullGoods			Not Relevant
NLCL	Ic-STI-Empty(united)			Not Relevant
NLCZ	Ic-STI-Empty (bed)			Not Relevant
NLL2	Ias IST - Rec.Plan	X		Not Relevant
NLL2	Ist - Rec IST	X		Not Relevant
NLLR	Receiving IST			Not Relevant
NLLR	Advanced STO			Not Relevant
NLM	StandStockTransItem			Not Relevant
NLNG	Full Prod. Stock Tr.			Not Relevant
NLNZ	EmpStockTran.(bed)			Not Relevant
NLR2	Ias.IST-Rec.PlnRet.	X		Not Relevant
NLR3	Ios.IST-Rec.IST Ret.	X		Not Relevant
NLR3	Ic ST Enh.St. Ret.	X		Not Relevant
NLRG	FullGood ST Ret.Item			Not Relevant
NLRN	Return StockTransitm			Not Relevant
NLRR	Rec. IST Return			Not Relevant
NLRZ	ST Empes Ret(bed)			Not Relevant
NLSH	STrans.SLS Main Item			Not Relevant
NLSU	STrans.SLS Sub-Item			Not Relevant
OBL3	Order BOS/Flat Rate			Not Relevant
OBGS	Order BOS/Std Item			Not Relevant
P1				Not Relevant

Figure 14: POD-Relevant Based on Delivery Item Category

III.2.5 Account Assignment and Item Categories in MM

Tells the system where money will be charged (cost center, project, order, etc.).

III.2.5.1 Account Assignment Categories

1. Account Assignment Categories in SAP MM determine how a procurement document (Purchase order) is processed in terms of accounting.
2. Types of Account Assignment Categories

K (Cost Center): For procuring goods or services for a specific cost center

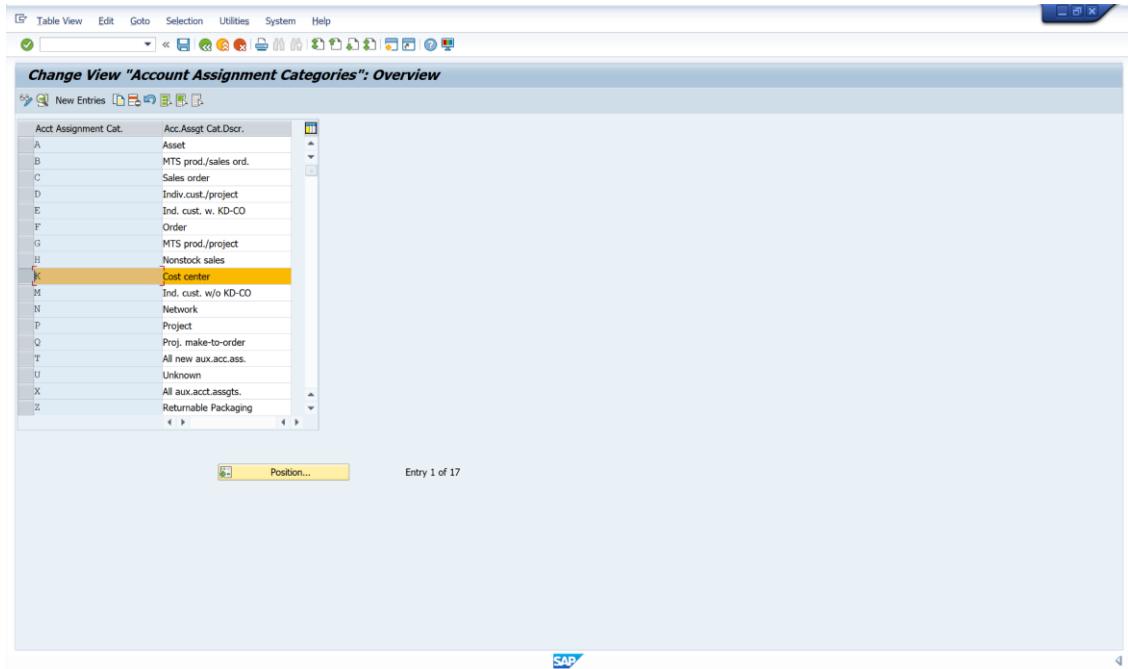


Figure 15: Account Assignment Categories

3. Use Cases:

K- Cost center assignment for general expenses (my case is freight charge)

III.2.5.2 Item Categories

1. Item Categories in SAP MM determine how different types of materials or services are handled in the procurement process.

2. Types of Item Categories:

Standard (Blank): Used for regular materials.

3. Use cases:

Standard: For regular procurement of goods

III.2.6. Item Category Determination in Deliveries

The screenshot shows a SAP Fiori application window titled "Change View 'Delivery item category determination': Overview". The interface includes a top navigation bar with "Table View", "Edit", "Goto", "Selection", "Utilities", "System", and "Help" options, along with various icons. Below the title is a toolbar with "New Entries" and other standard SAP icons. The main area is a table titled "Delivery item category determination" with columns: DvT, ItG, Usge, ItmC, MTC, MTC. The table contains several rows of data, such as NLCC LEER V, NLCC NORM, NLCC NORM CHSP, NLCC NORM V, NLCC VERP, NLCC VOLL V, NL12 NORM V, NL13 NORM V, NL13 ZNOR V, NLIR NORM V, NLR LEER V, NLR NORM V, NLR VOLL V, NLR2 NORM V, NLR3 NORM V, NLR8 V, and NLR8 NORM V. The row "NL13 NORM V" is highlighted with a yellow background. At the bottom of the table, there are buttons for "Position..." and "Entry 181 of 313". The SAP logo is visible at the bottom right.

DvT	ItG	Usge	ItmC	MTC										
NLCC LEER	V	NLCC	NLCZ											
NLCC NORM			ULN											
NLCC NORM CHSP			NLC											
NLCC NORM V			NLC											
NLCC VERP			DLX	DLN										
NLCC VOLL	V	NLCC												
NL12 NORM	V	NL12												
NL13 NORM	V	NL13												
NL13 ZNOR	V	NL13												
NLIR NORM	V	NLIR												
NLR LEER	V	NLRG	NLR2											
NLR NORM	V		NLRN											
NLR VOLL	V		NLRG											
NLR2 NORM	V		NLR2											
NLR3 NORM	V		NLR3											
NLR8	V		NLR8											
NLR8 NORM	V		NLR8											

Figure 16: Delivery Item Category Determination

III.2.7 OBYC

III.2.7.1 Check Valuation Level at Plant/Company Code

- If valuation is at company code price control and valuation price are valid for each company code
- If the valuation is at plant level the price control and valuation price are difference for each plant
- In our system valuation is at plant level

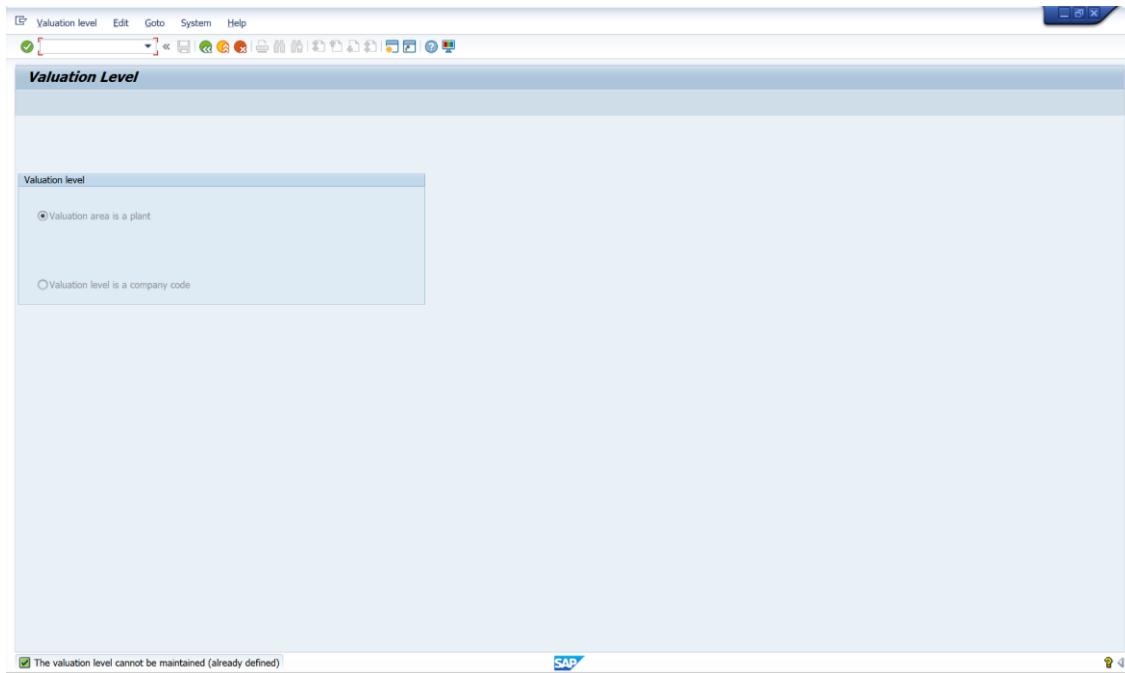


Figure 17: Display Valuation Level

III.2.7.2. Set Company Global are Parameter

- When we registered company with the government of any country, company has to follow the law of the country how the book of account is to be maintained
- The law of account is called as chart of account
- It also has list of general account where difference posting will be made

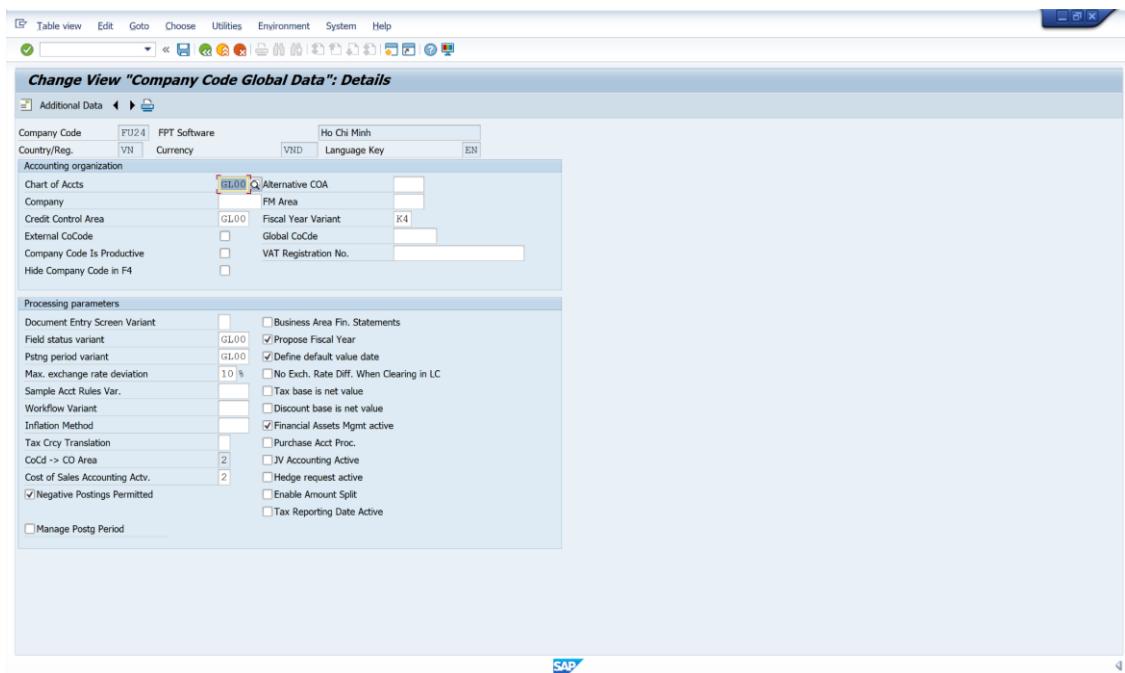


Figure 18: Company Code Global Data

III.2.7.3 Group Together Valuation Area (Valuation Grouping Code)

- Valuation Grouping Code: Valuation grouping code is used to group the valuation area.
- If we want a similar G/L account for all plants in one company we have to give valuation grouping code.

Val. Area	CoCode	Company Name	Chrt/Accnts	Val.Grp Code
DN00	FU24	FPT Software	GL00	0001
F112	F112	Binh Minh Construction	AU12	0001
FU01	FU24	FPT Software	GL00	0001
FU24	FU24	FPT Software	GL00	0001
FU25	FU24	FPT Software	GL00	0001
HD00	DE00	Global Bike	GL00	0001
HH00	DE00	Global Bike	GL00	0001
KA1	FU24	FPT Software	GL00	0001
KA2	□24	FPT Software	GL00	0001
M237	US00	Global Bike Inc.	GL00	0001
M100	US00	Global Bike Inc.	GL00	0001
M000	DE00	Global Bike	GL00	0001
NY00	US00	Global Bike Inc.	GL00	
PF11	DE00	Global Bike	GL00	0001
S237	US00	Global Bike Inc.	GL00	0001
SA1	SAP0	Sapoche - HUKA 25	GL00	0001

Figure 19: Group Together Valuation Area

III.2.7.4 Create New Account Category Reference

Account category reference: It is a 4 digit code which allow us to material type with valuation class

Account Category Reference	
ARef	Description
0001	Reference for raw materials
0002	Ref. for operating supplies
0003	Reference for spare parts
0004	Reference for packaging
0005	Reference for trading goods
0006	Reference for services
0007	Ref. for nonvaluated material
0008	Ref. for semifinished products
0009	Ref. for finished products

Figure 20: Account Category Ref

III.2.7.5 Create Valuation Class and Link with Account Category

Reference

- In automatic account determination SAP system work with valuation class
- Valuation class is to determine which stock account need to be updated during good movement of material
- Valuation class combine with material type for assign GL account so that you do not require a separate stock account
- We use valuation class 3000 and connect with account category ref 0001

The screenshot shows the SAP Fiori interface for managing valuation classes. The title bar reads "Change View 'Valuation Classes': Overview". Below the title bar is a toolbar with various icons. The main area is a table titled "Valuation Classes" with columns: ValID, ARref, and Description. The table lists numerous entries, with the first entry, "3000 0001 Raw materials 1", highlighted by a yellow background. At the bottom of the table, there are navigation buttons for "Position..." and "Entry 1 of 26". The SAP logo is visible at the bottom center.

ValID	ARref	Description
0710	0001	Equipment 1
0720	0001	Equipment 2
1210	0002	Spec.complex fixed assets
3000	0001	Raw materials 1
3001	0001	Raw materials 2
3002	0001	Raw materials 3
3003	0001	Raw materials 4
3004	0001	Raw Materials for ZFS1
3005	0005	Trading Goods for ZFS1
3006	0009	Finished Goods for ZFS1
3030	0002	Operating supplies
3031	0002	Operating supplies 2
3040	0003	Spare parts
3050	0004	Packaging and empties
3100	0005	Trading goods
3105	0005	Third Party Drop Ship
3110	0005	Trading goods Project
3200	0006	Services
3300	0007	Nonvaluated material
6101	0001	Raw material FS
6201	0008	Semifinished products FS
6301	0009	Finished products FS
7900	0008	Semifinished products
7920	0009	Finished products
L5	0009	finished p test

Figure 21: Valuation Class connect with Account Category Ref

III.2.7.6 Link Material Type with Account Category Ref

MTyp	Material Type Desc.	ARef	Description
KWAT	Configurable materials	0009	Ref. for finished products
LEER	Empty	0004	Reference for packaging
LETH	Returnable packaging	0004	Reference for packaging
LGUT	Empties (retail)	0004	Reference for packaging
MODE	Apparel (seasonal)	0005	Reference for trading goods
MPO	Material Planning Object	0007	Ref. for nonvaluated material
NLAG	Non-stock materials	0005	Reference for trading goods
NOFL	Nonfoods	0005	Reference for raw materials
PIPE	Pipeline materials	0001	Reference for raw materials
PLAN	Trading goods (planned)	0005	Reference for trading goods
PROC	Process materials	0009	Ref. for finished products
PROD	Product groups	0008	Ref. for semifinished products
ROH	Raw materials	0001	Reference for raw materials
SICM	Finished Product	0009	Ref. for finished products
SERV	Service Product	0006	Reference for services
SIFG	SAPPY Finished Product	0009	Ref. for finished products
SFRM	SAPPY Raw materials	0001	Reference for raw materials
SFTG	SAPPY Trading Goods	0001	Reference for raw materials
SROH	Raw materials MM01	0001	Reference for raw materials
SUBC	Subscription Sharing Prd.	0006	Reference for services
SUBP	Subscription Partner Prd.	0006	Reference for services
SUBS	Subscription Product	0006	Reference for services
UNBW	Nonvaluated materials	0007	Ref. for nonvaluated material
VBRA	ETM consumption material	0002	Ref. for operating supplies
VEHI	Vehicle config.	0005	Reference for trading goods

Figure 22: Link Material Type with Account Category Ref

III.2.7.7 Automatic Account Posting

- The primary goal of this configuration is to automatically determine G/L accounts.
- Posting transactions are set up in advance for inventory management and invoice verification transactions that are linked to accounting. Posting records, which are grouped in the value string, are allocated to each corresponding movement type in inventory management and each transaction in invoice verification.
- To automatically determine G/L accounts, SAP has predefined settings, such as transaction keys.
- To eliminate manual errors, it is essential to configure automatic postings.
- Automatic account determination will assist in clearly defining how your G/L accounts are utilized.

III.3 Master Data

III.3.1 Customer Master Data

All business transactions are posted to and managed in accounts. You have to create a master record for each account that you need. The master record contains data that controls how business transactions are recorded and processed by the system. They also include all the information about a customer that you need to be able to conduct

business with him or her. For this topic, Plant KA2 will be set as the customer for the 1 side internal transfer from KA1 to KA2.

Business Partner (BP)	Number BP	Role
KA2 SAPO	Internal Number	Customer

Table 19: List of Business Partners

The screenshot shows the SAP Business Partner interface. The title bar reads "Display Organization: 1003278, role Customer". The navigation bar includes links for Person, Organization, Group, General Data, Sales and Distribution, ETM Data, and Relationships. The main area displays customer details:

- Customer Number:** 1003278
- F1 Customer Assignment:** Account group 0001 (Dom. Customer) - Maintained Acc Grp
- General Data:**
 - Supplier: [empty]
 - Authorization: [empty]
 - Group: [empty]
- Additional General Data:**
 - Express station: [empty]
 - Train station: [empty]
 - Location code: [empty]
 - Annual sales: 0.00
 - Currency: [empty]
 - Sales year: 0
 - Employee: 0
 - Year: 0
 - Plant: KA2
 - Delivery Date Rule: On Requested Date or Later

Figure 23.1: Business Partner - Receiving Plant (1003278)

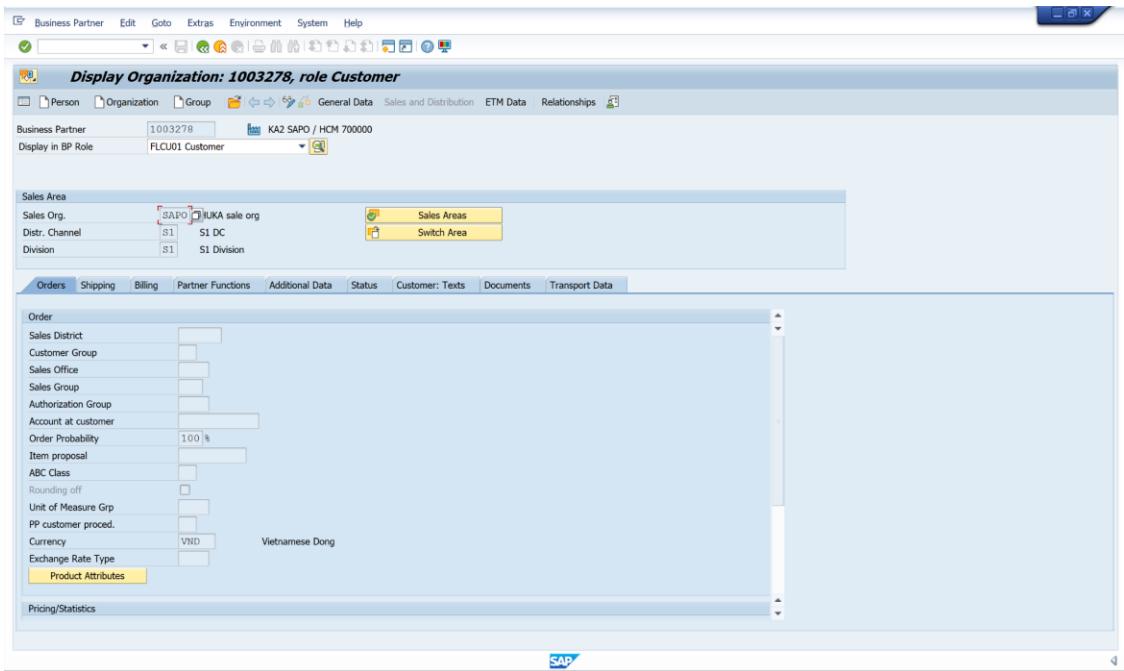


Figure 23.2: Business Partner - Receiving Plant (1003278)

III.3.2 Vendor Master Data

The vendor master database contains information about the vendors that supply an enterprise. This information is stored in individual vendor master records. In this topic, plant KA1 will be set as the vendor role and will only move one way from KA1 to KA2. Simultaneously, because this is an internal transfer, a third party named KA3, which will be set as the FI vendor role, so that the transportation costs can be calculated. It should be noted that the process of transportation will not incur more fees from material, instead, the transportation fees are only calculated freight charges.

Business Partner (BP)	Number BP	Role
KA1 SAPO	Internal Number	Vendor
KA3 SAPO	Internal Number	Vendor
KA3 SAPO	Internal Number	FI Vendor

Table 20: List of Business Partners

Display Organization: 1003278, role Customer

Customer Number	1003278	KA2 SAPO / HCM 700000
Display in BP Role	FLCU01 Customer	
Address Address Overview Identification Control Payment Transactions Status Legal Data Customer: General Data Customer: Tax Data Customer: Additional Data Customer: Unloading Points Customer: ...		
Customer Number Customer Number: 1003278 FI Customer Assignment Account group: 0001		
General Data Supplier: Authorization: Group:		
Additional General Data Express station: Train station: Location code: Annual sales: 0.00 Currency: Sales year: 0 Employee: 0 Year: 0 Plant: Delivery Date Rule: <input type="checkbox"/> On Requested Date or Later		

Display Organization: 1003277, role Vendor

Purch. Organization	FU01	Purchasing Org 01	
Purchasing Data Partner Functions Vendor Subranges Interchangeability Vendor: Texts Supply Region			
Conditions Order currency: VND Vietnamese Dong Payment Terms: Incoterms Version: Incoterms: Incoterm Loc. 1 ID: Incoterm Loc. 1: Incoterm Loc. 2 ID: Incoterm Loc. 2: Minimum order value: 0.000			
Sales Data Salesperson: Telephone: Account with supplier:			
Control Data ABC indicator: <input type="checkbox"/>			

Figure 24: Business Partner - Issuing Plants (1003277)

Display Organization: 1003279, role Vendor

General Data

- Business Partner: 1003279
- Display in BP Role: FLVNO1 Vendor
- Account group: KRED (Vendor (int.number assignmnt))
- Maintain Acc Grp: [button]

Additional General Data

- Block function: [checkbox]
- VSR relevant: [checkbox]
- Plant relevant: [checkbox]
- Plant: [dropdown]
- Factory Calend.: [checkbox]
- Repetition: [checkbox]
- DteLimit ext.ID: [text input]
- Train station: [checkbox]
- Origin Acceptance: [checkbox]

Purchasing Organization

- Purch. Organization: FU01
- Purchasing Org 01
- Purchasing Organizations: [button]
- Switch Organization: [button]

Purchasing Data

- Conditions
- Order currency: VND (Vietnamese Dong)
- Payment Terms: [dropdown]
- Incoterms Version: [dropdown]
- Incoterms: [dropdown]
- Incoterm Loc. 1 ID: [dropdown]
- Incoterm Loc. 1 Location: [dropdown]
- Incoterm Loc. 2 ID: [dropdown]
- Incoterm Loc. 2 Location: [dropdown]
- Minimum order value: 0.000
- Sales Data
- Salesperson: [dropdown]
- Telephone: [text input]
- Account with supplier: [dropdown]
- Control Data
- ABC Indicator: [checkbox]

Figure 25.1: Business Partner - Vendor for Freight Charge role Vendor (1003279)

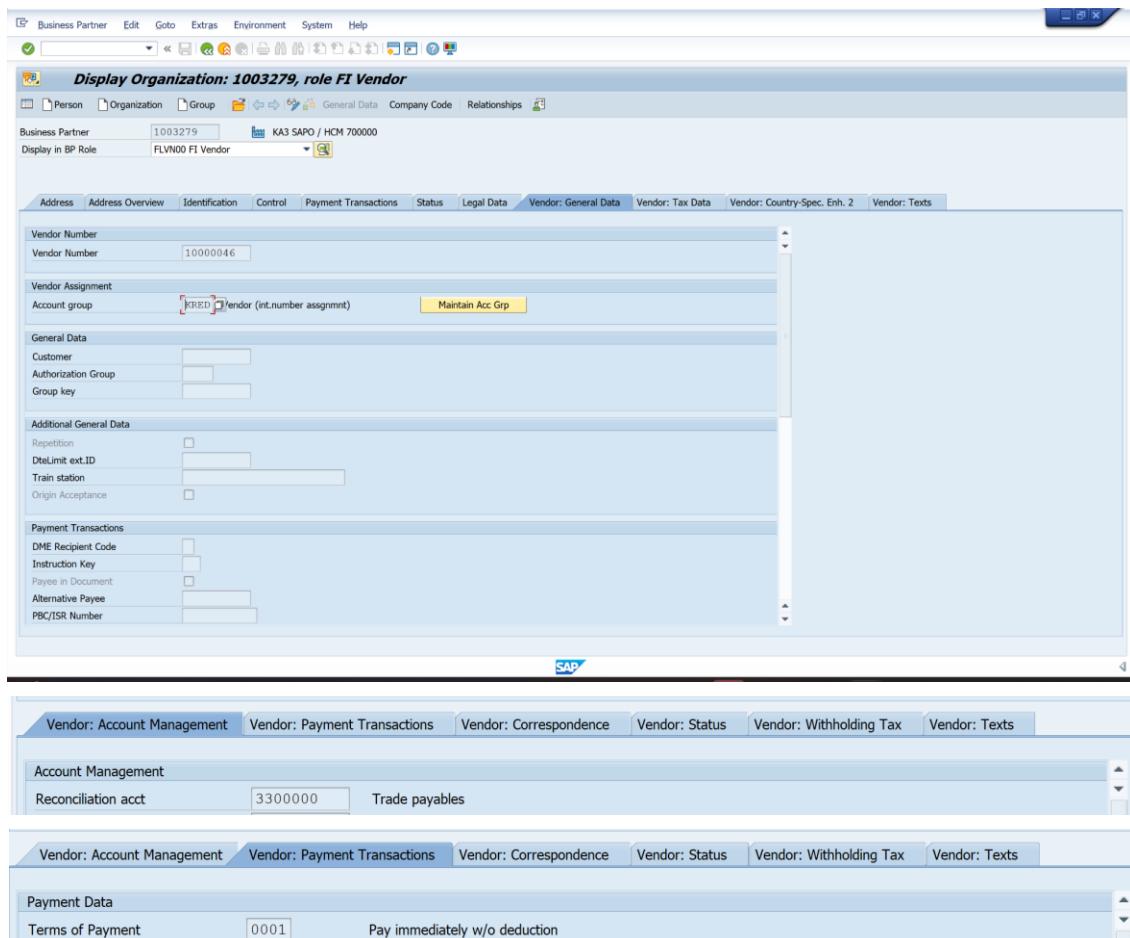


Figure 25.2: Business Partner - Vendor for Freight Charge role FI Vendor (1003279)

III.3.3 Material Master Data

The material master database contains descriptions of all materials that an enterprise procures, produces, and keeps in stock. It is the central repository of information on materials (such as inventory levels) for the enterprise. In the case of this scenario, because the transfer is internal between 2 different plants, SAPO allows for the transfer of many Material Codes. In this case, Material will be transferred with the ROH type for many different raw codes, a few codes, such as 66 67 68, will be shown in the table below, the number ranges no2.. The base measurement unit of Material is each. These are assigned to Division S1.

Material	Description
66	Polyether Ether Ketone (PEEK)
67	Polycarbonate (PC)
68	Natural Rubber (NR)

Table 21: Material

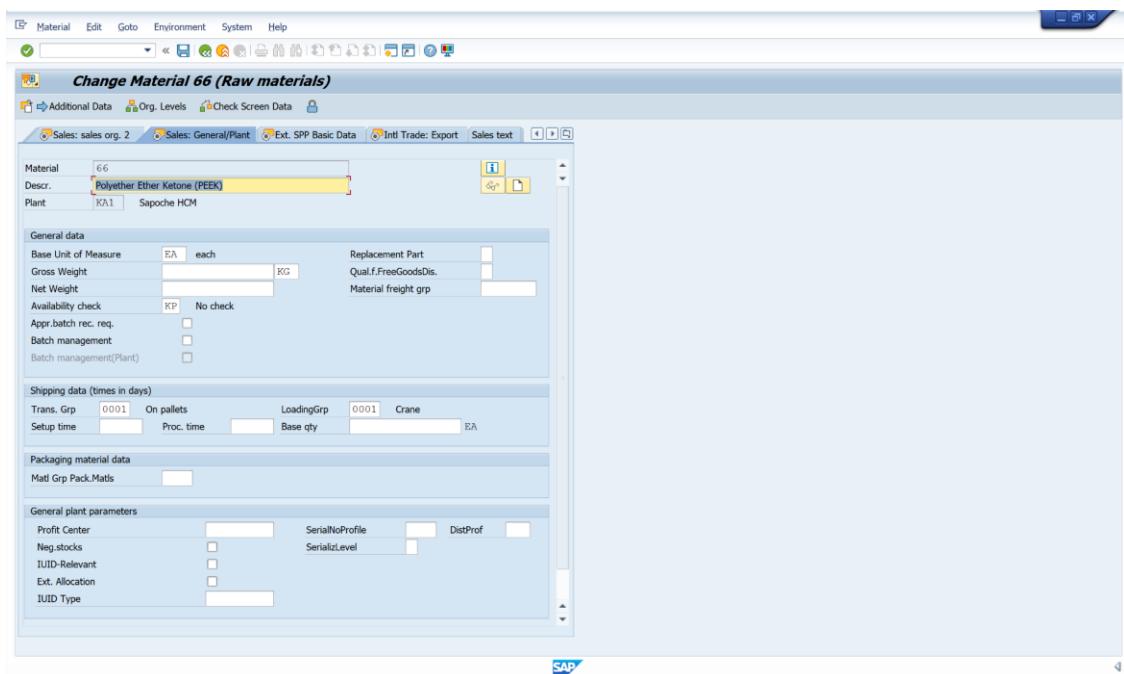


Figure 26.1: Material 66

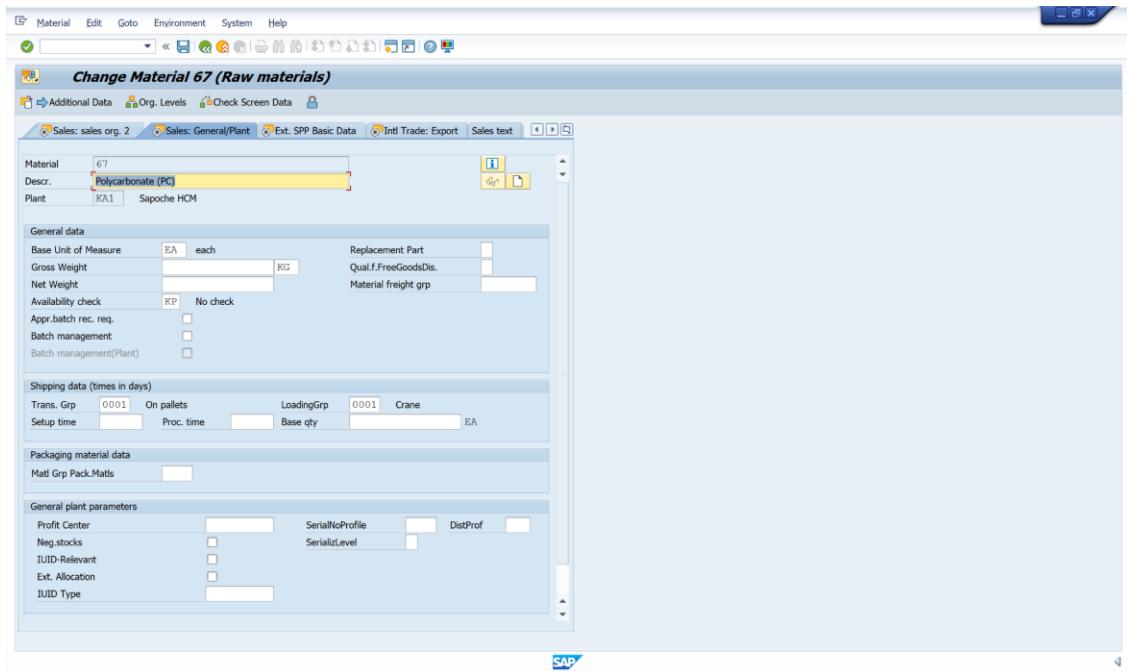


Figure 26.2: Material 67

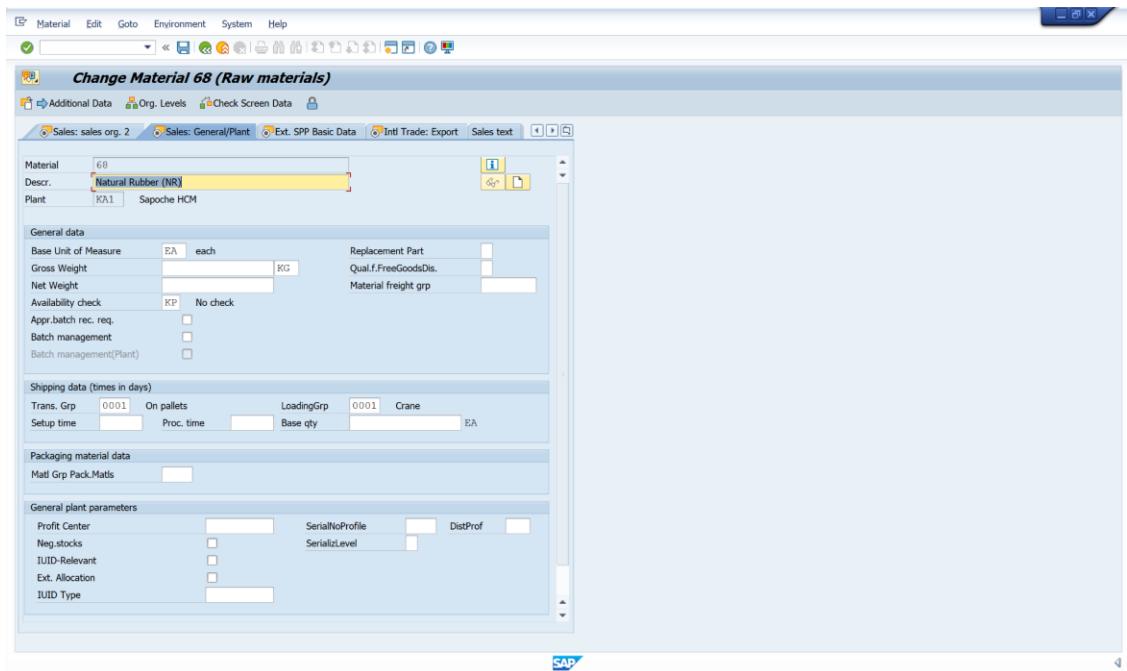


Figure 26.3: Material 68

IV. SAP Coding

IV.1 Proposed ABAP Enhancement

- New Z-Program: ZVSIT_PRJ_MAIN – Stock Transfers with Valuated Stock in Transit Transaction Monitor.

- Excel Upload: Implement upload functionality using CL_GUI_FRONTEND_SERVICES=>GUI_UPLOAD for Excel files (.xlsx, .xls).
- ALV Grids: Develop three separate ALV Grids (PO Management, Delivery Management, Goods Receipt/Invoice Management) using CL_SALV_TABLE or CL_GUI_ALV_GRID.
- Button Enhancement: Embed custom toolbar buttons for Create, Cancel, Confirm, Post actions in each ALV.
- BAPI/FMs Usage:
 - + BAPI_PO_CREATE1 (Create STO PO)
 - + WS_DELIVERY_UPDATE (Create DO, GI posting, POD confirmation)
 - + BAPI_GOODSMVT_CREATE (Goods Receipt, Reversal)
 - + BAPI_INCOMINGINVOICE_CREATE1 (Invoice posting)
- BDC Call: For POD Confirmation via transaction VLPOD if needed.
- Error Handling: Using RETURN parameters from BAPI calls, committing transactions only when no error (BAPI_TRANSACTION_COMMIT / ROLLBACK).

IV.2 Technical Specifications

To understand more about the detailed process, please refer to the document: [SP25SAP01_Techical_Specification](#).

Link:

IV.3 ABAP Implementation[SP25SAP01_Techical_Specification.xlsx](#)

Selection Screen:

File Upload field for Excel file

- Radio buttons or push buttons for selecting operation: Create / Cancel / Confirm / Post.

Excel Upload Handling:

- Parse Excel into an internal table using ALSM_EXCEL_TO_INTERNAL_TABLE or newer class-based approach.

PO Creation Logic:

- Loop input data, call BAPI_PO_CREATE1, collect success/error messages.
- Update ALV Grid 1 (PO Monitor).
- Delivery Creation & GI Processing:
 - Create delivery based on PO.
 - Post GI for deliveries.
- Display results in ALV Grid 2 (Delivery Monitor).

POD Confirmation:

- Confirm POD via WS_DELIVERY_UPDATE or BDC.
- Goods Receipt & Invoice Posting:
 - Post GR via BAPI_GOODSMVT_CREATE.
 - Post Invoice via BAPI_INCOMINGINVOICE_CREATE1.
- Display in ALV Grid 3 (Receiving Monitor).

Error Handling and Logging:

- Capture RETURN tables.
- Display success/error messages in ALV Message columns.

Button Event Handling:

- Implement HANDLE_TOOLBAR and HANDLE_USER_COMMAND methods for button clicks in ALV.

IV.4 SAP Requirements Appendix

IV.4.1 Business Rules

STO PO must be created with the correct Document Type (e.g., NBC3).

- PO Quantity must match total Delivery Quantities.
- GI posting must only happen after Delivery creation.
- POD confirmation must only happen after GI posting.
- GR posting must only happen after POD confirmation.
- Invoice posting must only happen after GR.
- Each BAPI call must check RETURN and commit only if there is no error.
- Cancellation must update ALV Grids immediately to reflect reversal actions.

IV.4.2 Common Requirements

Master Data:

- Vendor, Material, Plant, Storage Location must exist before processing.

Movement Types:

- GI Movement: 68A
- POD Movement: 68E
- GR Movement: 109

Performance:

- Mass processing should be optimized to handle hundreds of POs/deliveries.

User Interface:

- Use ALV Grids for clear status tracking.
- Use intuitive button icons and tooltips.

Transactions:

- Always end BAPI calls with COMMIT/ROLLBACK.

Consistency:

- Update ALV Grids immediately after each operation to reflect the latest status.

IV.4.3 Application Messages List

Message ID	Language	Message
000	English	Error: No file selected for upload!
001	English	Error: The file is not an Excel file – incorrect format!
002	English	Error: Uploaded file has incorrect format or wrong column order!
003	English	Error: File contains only headers but no data!
004	English	Total of &1 Purchase Order Items is found.
005	English	Total of &1 Delivery Outbound is found.
006	English	No Delivery Outbound is found.
007	English	Total of &1 Delivery Outbound Items is found.
008	English	No Delivery Outbound Item is found.
009	English	No Delivery Outbound is found.
010	English	POD Confirmed Successfully for Delivery: &1
011	English	POD Update Failed, No Database Update Performed for Delivery: &1

012	English	Error: &1 &2 &3 &4
013	English	Error: No item found in Delivery &1
014	English	Error! GR not created: &1
015	English	Goods Receipt posted successfully! Document Number: &1
016	English	No Purchase Order found with corresponding selection criteria.
017	English	No Purchase Order Item is selected
018	English	Please fill in the Delivery Quantity value!
019	English	Invalid Delivery Quantity: Delivery Quantity is greater than Open Quant.
020	English	Cannot found Shipping Point for Plant &1
021	English	Delivery Outbound Number(s): &1 created.
022	English	Error: The file contains no data!
023	English	Error: Cannot read column headers from file!
024	English	Error: Incorrect number of columns!
025	English	Error: Column &1 is in the wrong position (expected at column &2)!
026	English	Error uploading file: file is open/locked/does not exist
027	English	Download cancelled by the user!
028	English	Template downloaded successfully!
029	English	Error: Unable to convert Document Date
030	English	Error: Unable to convert Delivery Date
031	English	No Purchase Order found with corresponding selection criteria.
032	English	No Delivery Outbound is selected
033	English	POD Unconfirmed Successfully for Delivery: &1
034	English	Cancel for POD failed!
035	English	Download cancelled by user
036	English	Error while downloading file
037	English	Download successful: &1
038	English	Error while downloading file
039	English	PO Created: &1 successfully!
040	English	PO still contains errors. Please fix all to continue.

041	English	PO has been saved successfully. Return to continue.
042	English	PO item &1 of PO &2 cannot cancel. Error: &3
043	English	PO item &1 of PO &2 canceled successfully.
044	English	Action has been canceled by the user.
045	English	Open Quantity is not available for this Stock Transport Order.
046	English	Post Goods Issue failed for Delivery Outbound &1
047	English	Post Goods Issue successfully for Delivery Outbound &1.
048	English	Cancel Goods Issue successfully
049	English	Cancel Goods Issue failed
050	English	Cancel Delivery Outbound failed
051	English	Cancel Delivery Outbound &1 successfully.
052	English	Post Invoice for Delivery Outbound &1 successfully, Mat. Doc. Number &2
053	English	Post Invoice for Delivery Outbound &1 failed.
054	English	Please fill in the Freight Cost value before posting Invoice.
055	English	Delivery Outbound &1 has already posted Invoice.
056	English	Cancel Goods Receipt successfully. Material Document number &1
057	English	Cancel Goods Receipt failed: &1
058	English	Delivery Outbound &1 has not posted a Goods Issue yet.
059	English	Delivery Outbound &1 has already confirmed Proof of Delivery.
060	English	Delivery Outbound &1 has not confirmed POD yet.
061	English	Delivery Outbound &1 has already posted a Goods Receipt.
062	English	Delivery Outbound &1 has not posted a Goods Receipt yet.
063	English	Error while downloading file.
064	English	PO Created: &1 successfully!
065	English	PO still contains errors. Please fix all to continue.
066	English	PO has been saved successfully. Return to continue.
067	English	Please select at least one PO to cancel.
068	English	PO item &1 of PO &2 has been canceled before.
069	English	PO item &1 of PO &2 cannot cancel. Error: &3

070

English

PO item &1 of PO &2 canceled successfully.

Table 22: Application Messages List

V. Implementation & Testing

V.1. Implementation

V.1.1 Installation Guides

Step 1: Access the link:

<https://developers.sap.com/trials-downloads..html?search=ABAP+Platform+1909>

Step 2: Download SAP GUI for Windows

Name	Release Date	Version	File Size	Checksum	Comments
 SAP GUI for Windows	14-Jun-2024	ABAP Platform 1909	174.2 MB	SHA-256	n/a
 SAP GUI for Java	14-Jun-2024	ABAP Platform 1909	1.9 GB	SHA-256	n/a
 Readme	14-Jun-2024	ABAP Platform 1909	162.9 KB	SHA-256	n/a

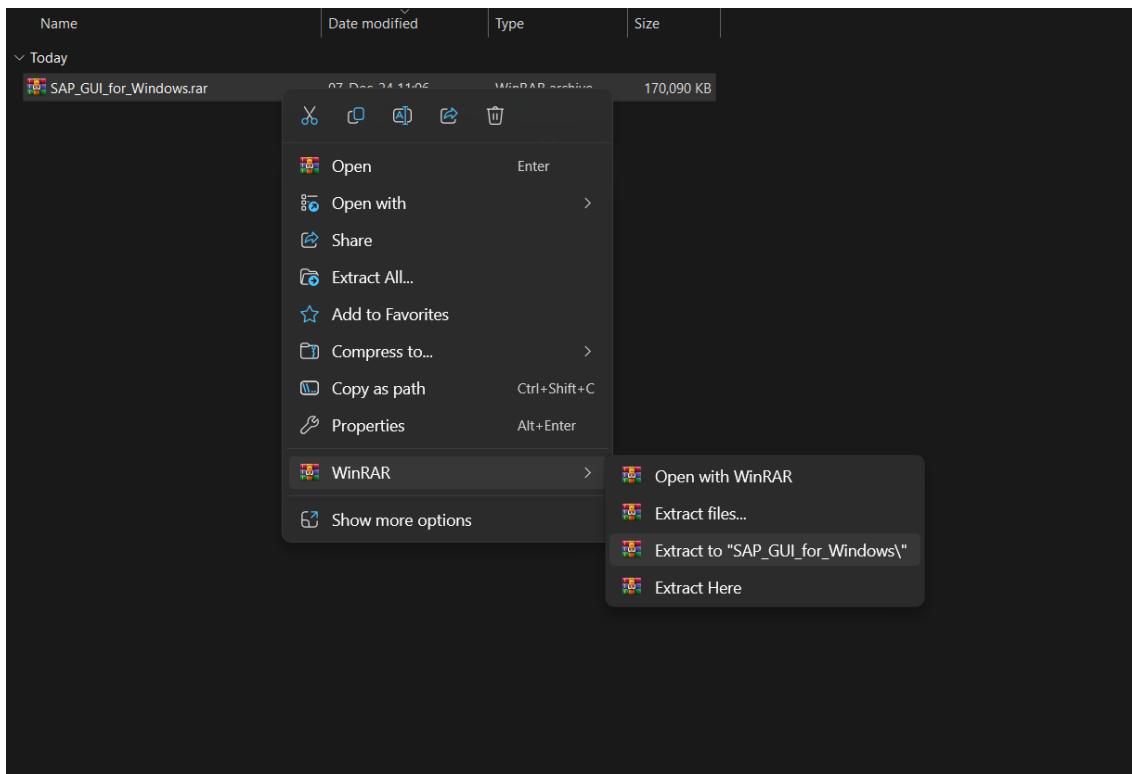
Step 3: Enter your email address and Agree Terms & Conditions

The screenshot shows the SAP Learning website's "Trials and Downloads" section. A modal window titled "Thank you for your interest in SAP" is open. It contains the text "Get Started with Free Trials and Downloads!" and a "Terms & Conditions" section. Below it is a checkbox labeled "I have read and I accept the [SAP Developer Center Master License Agreement](#)." A "Submit" button is at the bottom. The background shows search results for "ABAP Platform 1909?loginFlow=http://".

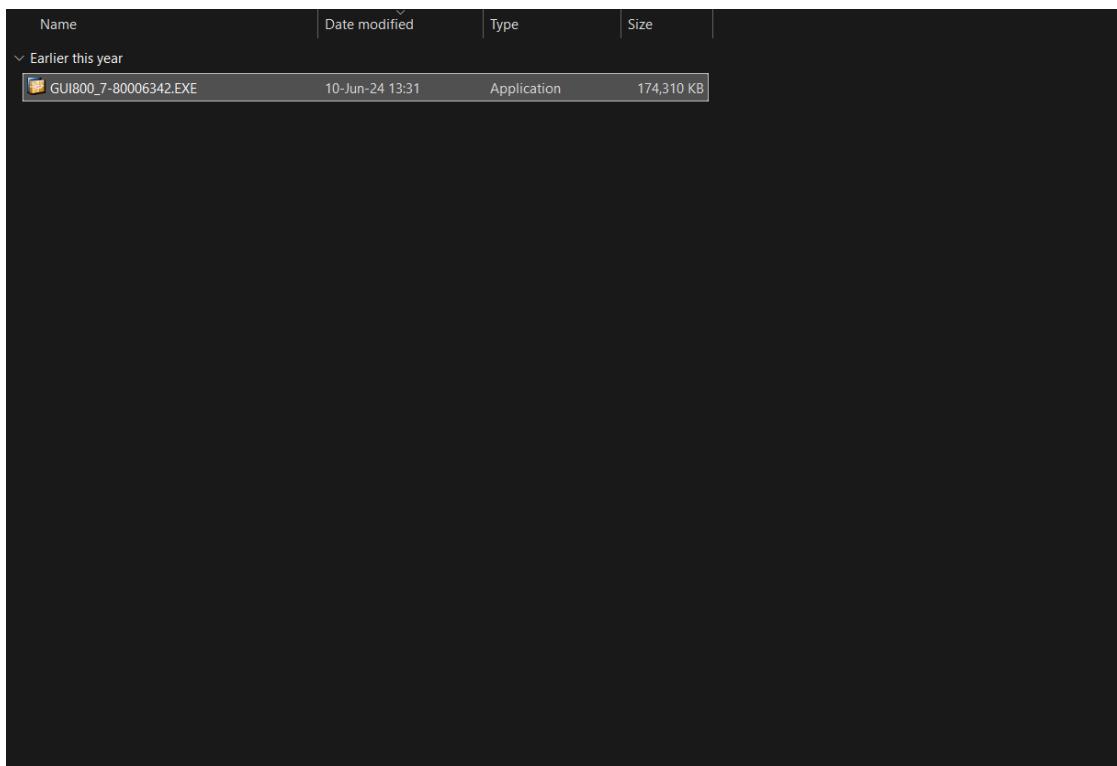
Step 4: Start your download

The screenshot shows the SAP Learning website's "Trials and Downloads" section. A modal window titled "Thank you for your interest in SAP" is open. It contains the text "Welcome to your free software download" and a message to "Dear Huy Nguyen Ba.". It provides instructions for logging in to SAP.com using the user ID noted below. It also mentions SAPcom Dashboard, Community Download Catalog, SAP.com Community, and SAP Product, Process & Industry Roadmaps. A "Click here to start your download!" button is at the bottom. The background shows search results for "ABAP Platform 1909?loginFlow=http://".

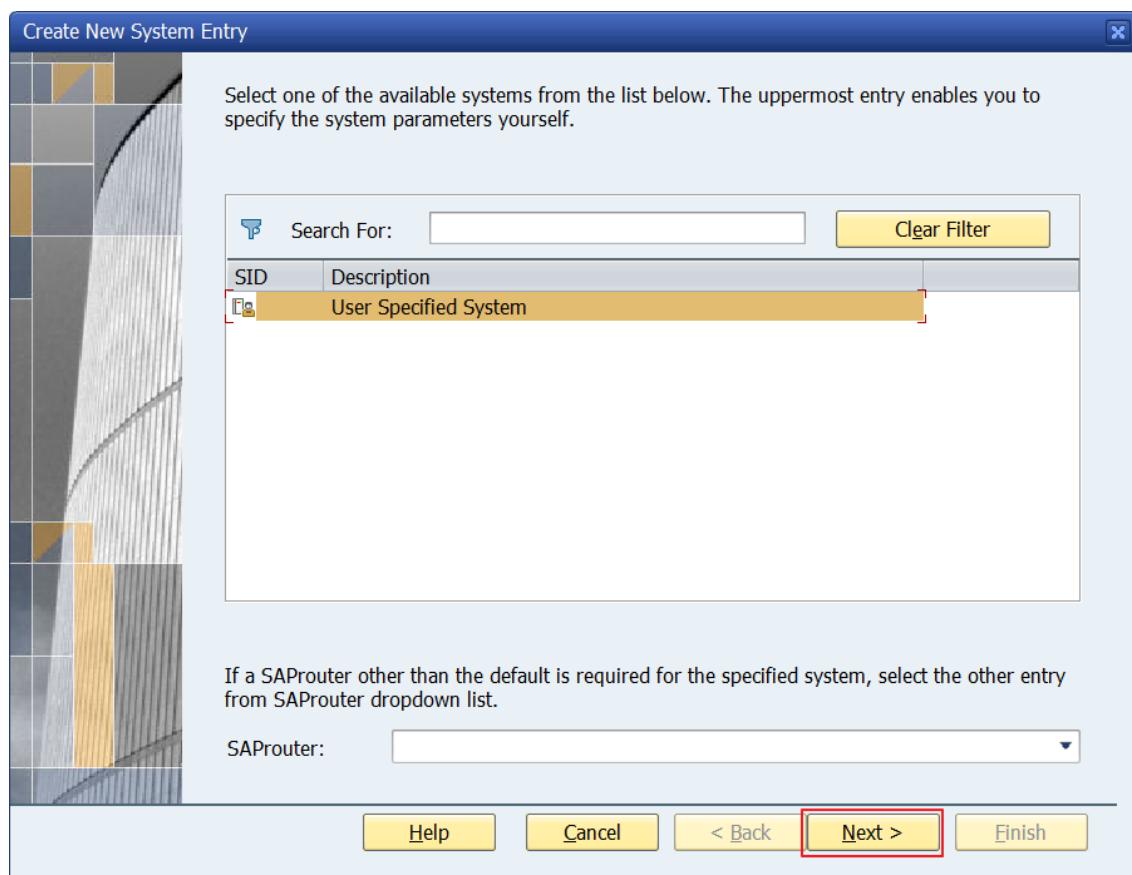
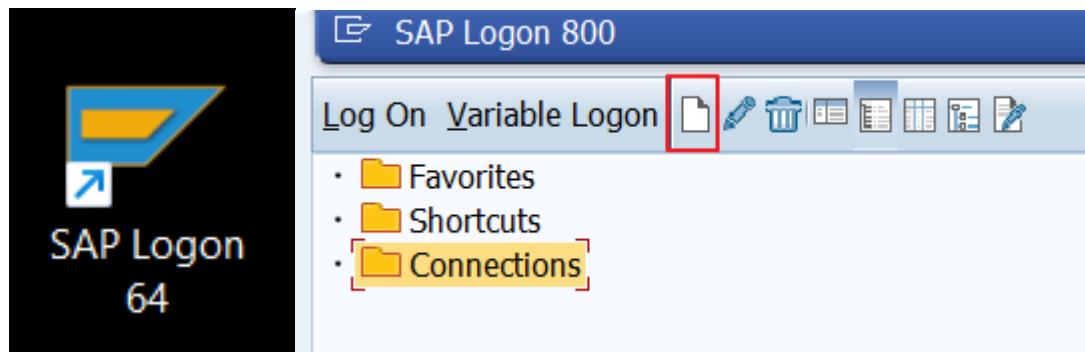
Step 5: Extract folder

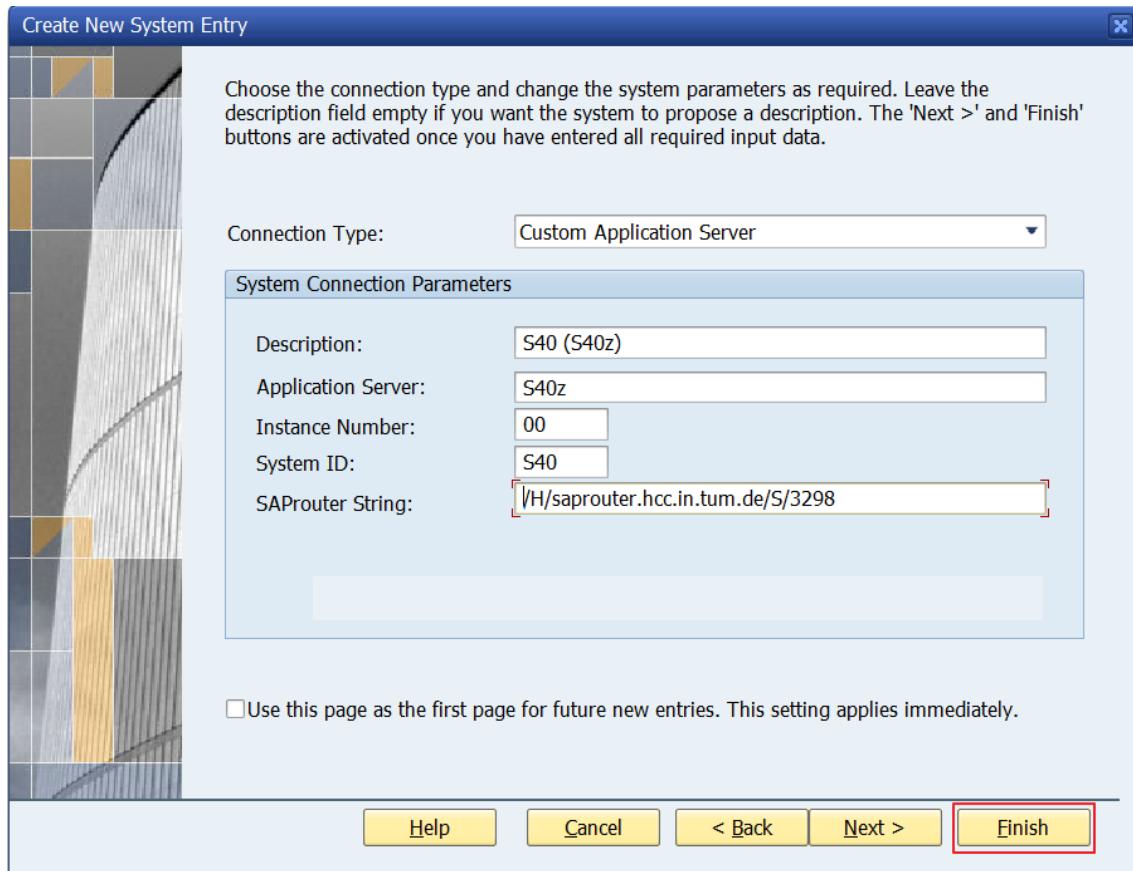


Step 6: Run the .exe file to start installation



Step 7: Create Connection to the System





SAP Logon 800						
Log On Variable Logon		Connections				
	Name	System Description	SID	Group/Server	Instance No.	Message Server
• Favorites	• 80, FU HCM (572)	572	572Z		00	/H/saprouter.hcc.in.tum.de/S/3298
• Shortcuts	• A+H	A+H	127.0.0.1		00	
• Connections	• S40 [S40z]	S40	S40z		00	/H/saprouter.hcc.in.tum.de/S/3298

V.1.2. User Manual

V.1.1.1 Overview

The Stock Transfer with Valuated Stock in Transit Transaction Monitor optimizes internal stock transfer processes and inventory management, supporting strategic decision-making. By consolidating key functions like PO creation, DO

generation, GI, POD, GR, Invoicing, and then back through the cancellation process into one program, it enhances efficiency, improves resource management, and ensures accurate, real-time tracking of stock movement, fostering transparency and accountability within supply chain operations.

V.1.1.2 Workflows

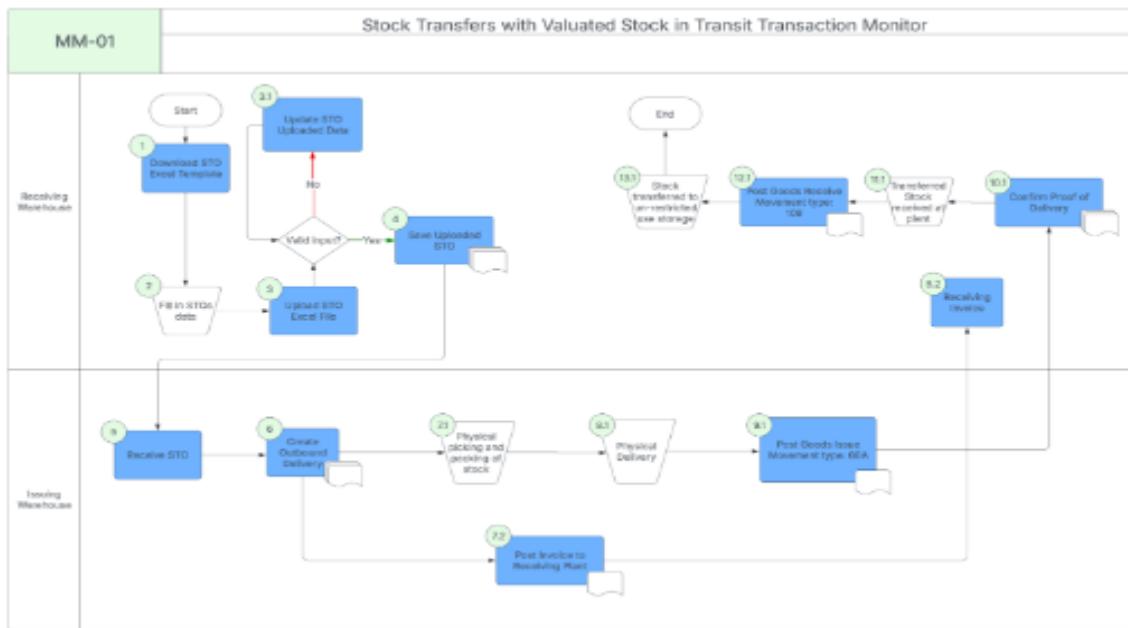


Figure 27: Intra- company delivery process with invoice

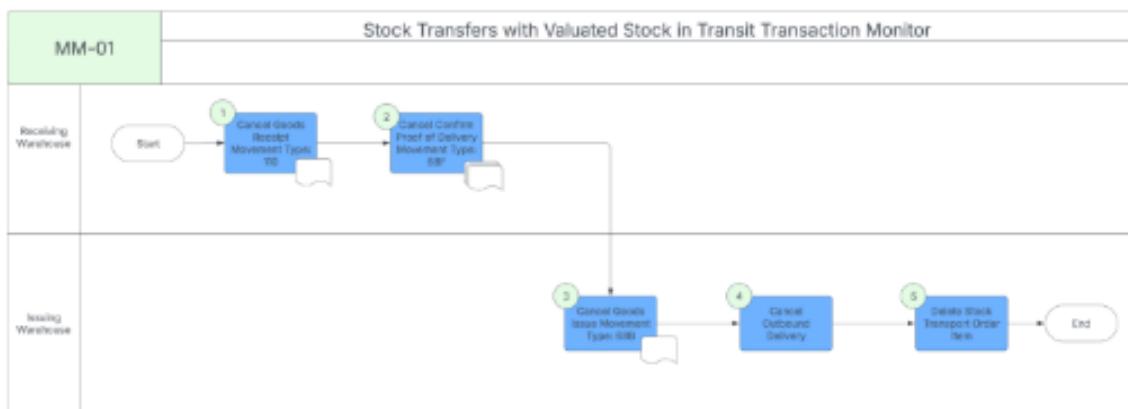


Figure 28: Cancellation process for Intra-company delivery

Context:

The **Stock Transfer Order (STO)** process plays a vital role in managing the movement of stock between plants within an organization. Traditionally, this process

relies on multiple SAP standard transactions, involving significant manual effort and coordination across logistics, warehouse, and procurement teams.

To streamline operations and reduce the risk of errors, a custom SAP program (ZVSIT_PRJ_MAIN) was developed. This program consolidates the entire STO lifecycle into a single, integrated workflow - providing end-to-end visibility and control, from order creation to delivery, goods movement, and invoice posting.

Designed primarily for logistics, warehouse, and purchasing teams, this tool simplifies the management of inter-plant transfers by:

- Centralizing key process steps.
- Supporting both manual selection and Excel-based batch processing.
- Providing real-time process status tracking.
- Enabling direct action execution (e.g., GI, GR, invoice) through an intuitive ALV interface.

This User Manual serves as a comprehensive guide for all users involved in plant-to-plant stock transfers, helping ensure accuracy, efficiency, and consistency across all STO-related activities.

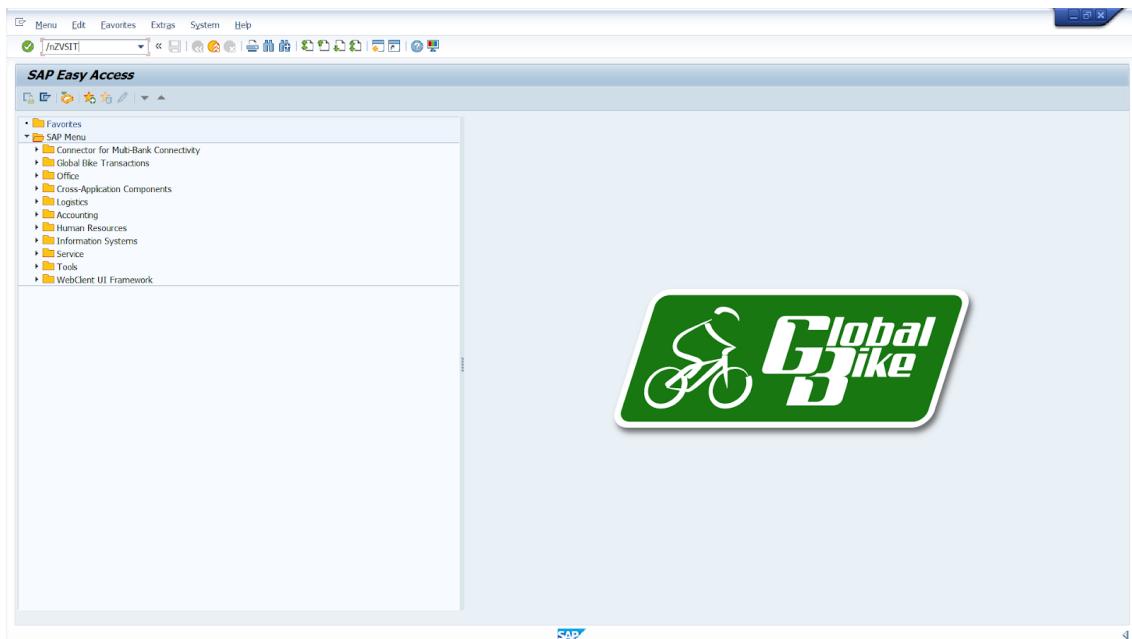
User Manual: Stock Transfers with Valuated Stock in Transit Transaction

Monitor

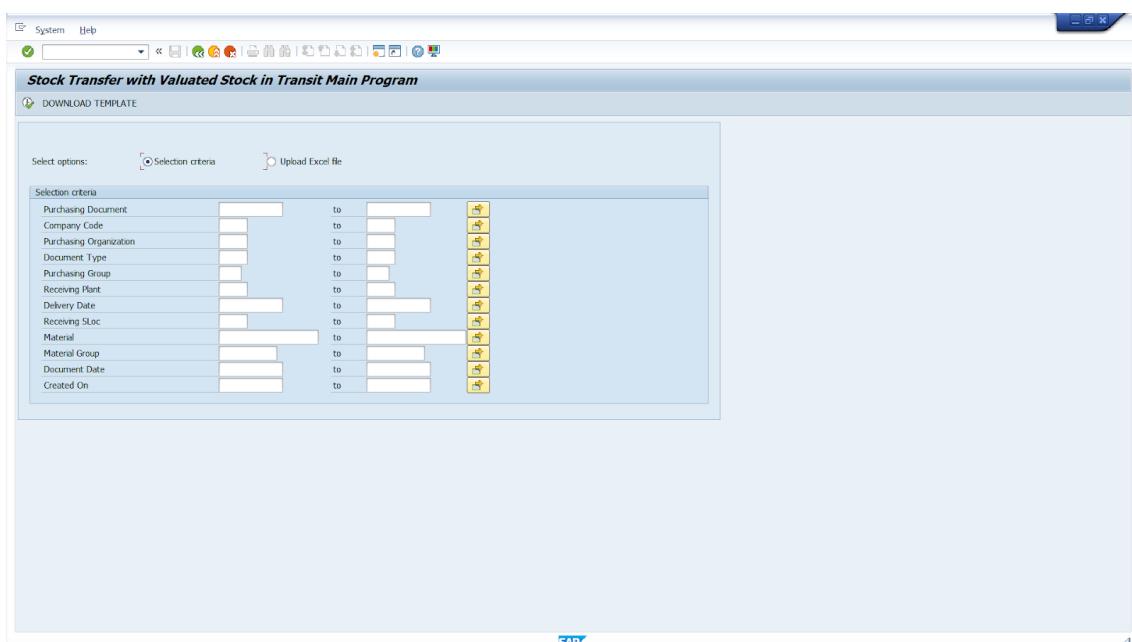
Step 1: PO – Upload Stock Transfer Order

Open SAP GUI.

In the command field, enter the transaction code:  /nZVSIT then press Enter.

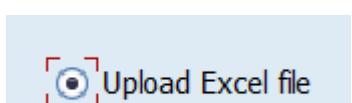


Screen display:

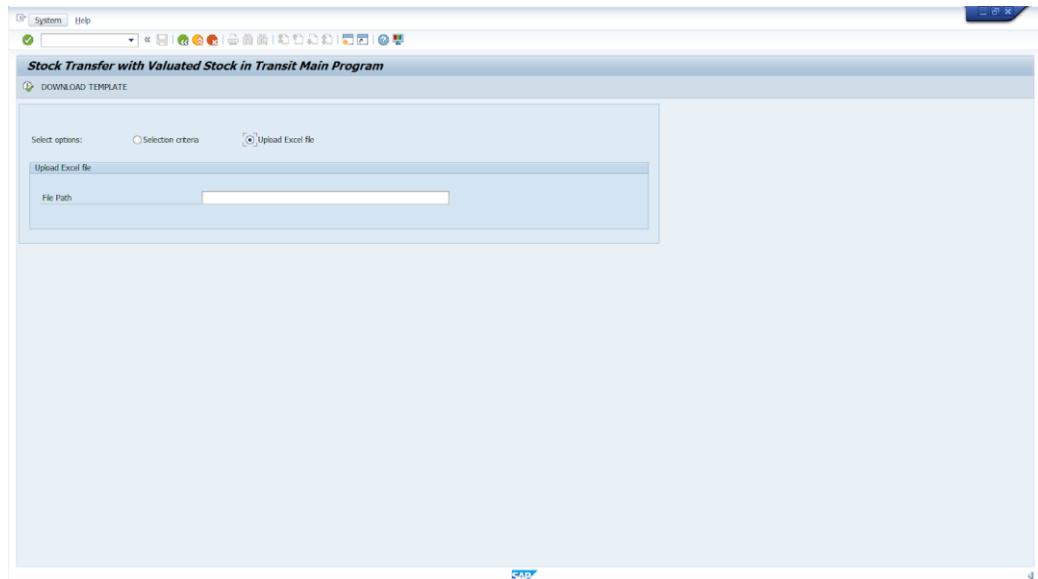


Choose input method:

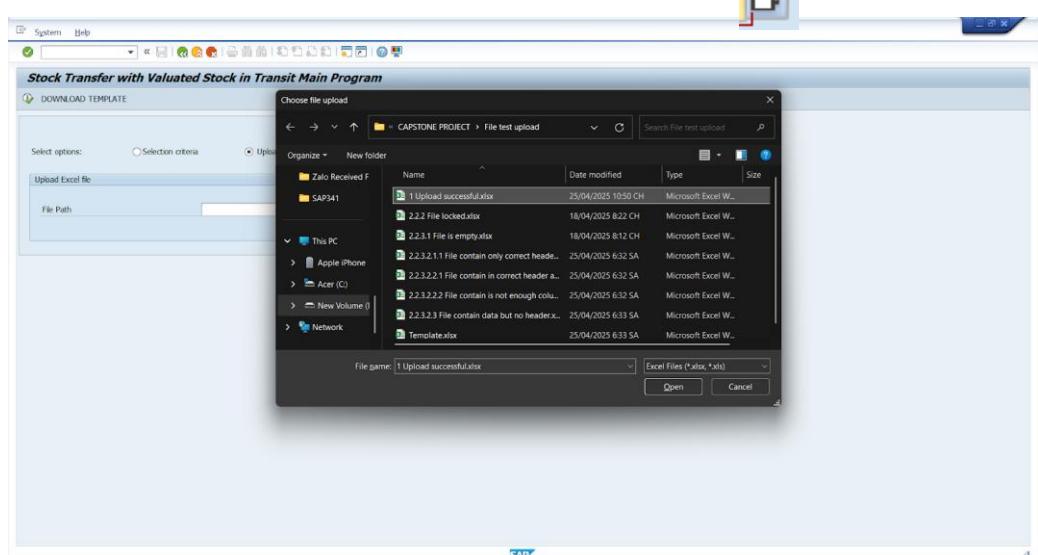
Selection by criteria (for manual filtering)



Upload Excel file (recommended for bulk)



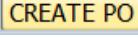
Using upload by Excel: Choose file upload by open file catalog or manual input file path



Click to execute button or F8 to upload file.

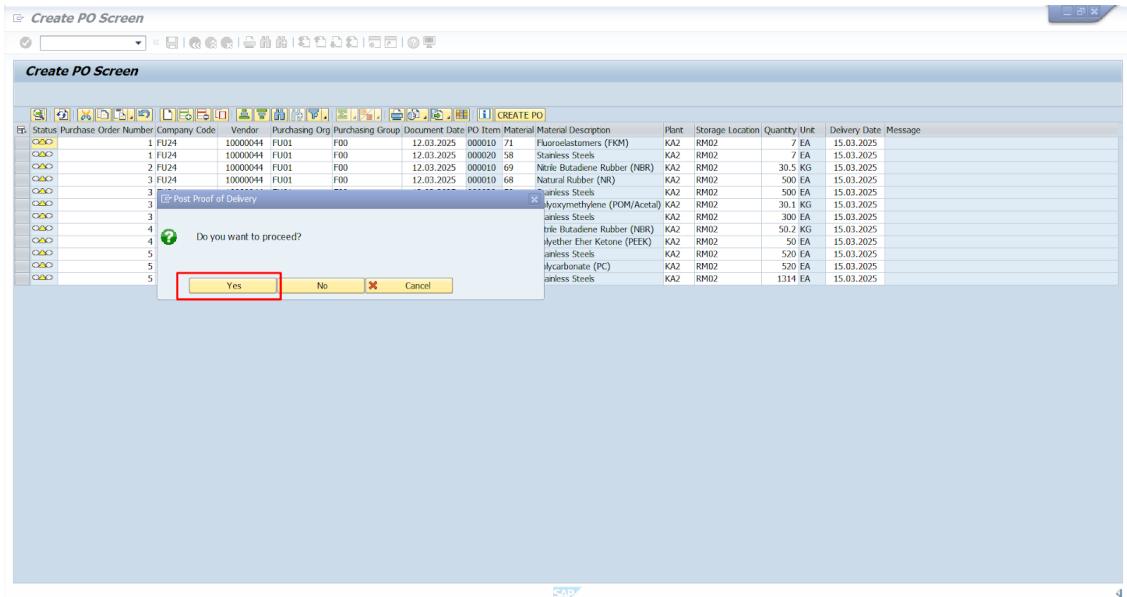
Create PO Screen															
	Start Date	Purchase Order Number	Supplier Company Code	Vendor	Purchasing Org	Purchasing Group	Document Type	Document Status	General Description	Part No.	Storage Location	Quantity	Unit	Delivery Date	Message
1	FU24	1000044	FU01	F00	12.03.2025	000010	71	Fluoropolymer (FKM)	KAZ	RM02	7 EA		15.03.2025		
1	FU24	1000044	FU01	F00	12.03.2025	000020	58	Stainless Steels	KAZ	RM02	7 EA		15.03.2025		
2	FU24	1000044	FU01	F00	12.03.2025	000010	69	Nitrile Butadiene Rubber (NBR)	KAZ	RM02	30.5 KG		15.03.2025		
3	FU24	1000044	FU01	F00	12.03.2025	000010	68	Natural Rubber (NR)	KAZ	RM02	500 EA		15.03.2025		
3	FU24	1000044	FU01	F00	12.03.2025	000020	58	Stainless Steels	KAZ	RM02	500 EA		15.03.2025		
3	FU24	1000044	FU01	F00	12.03.2025	000030	74	Polyoxymethylene (POM/Acetal)	KAZ	RM02	30.1 KG		15.03.2025		
3	FU24	1000044	FU01	F00	12.03.2025	000040	58	Stainless Steels	KAZ	RM02	300 EA		15.03.2025		
4	FU24	1000044	FU01	F00	12.03.2025	000010	69	Nitrile Butadiene Rubber (NBR)	KAZ	RM02	50.2 KG		15.03.2025		
4	FU24	1000044	FU01	F00	12.03.2025	000020	66	Polyether Ester Ketone (PEEK)	KAZ	RM02	50 EA		15.03.2025		
5	FU24	1000044	FU01	F00	12.03.2025	000010	58	Stainless Steels	KAZ	RM02	520 EA		15.03.2025		
5	FU24	1000044	FU01	F00	12.03.2025	000020	67	Polycarbonate (PC)	KAZ	RM02	520 EA		15.03.2025		
5	FU24	1000044	FU01	F00	12.03.2025	000030	58	Stainless Steels	KAZ	RM02	1314 EA		15.03.2025		

Create PO (if no validation errors exist on the screen, the PO can be created):

Click on the CREATE PO button 

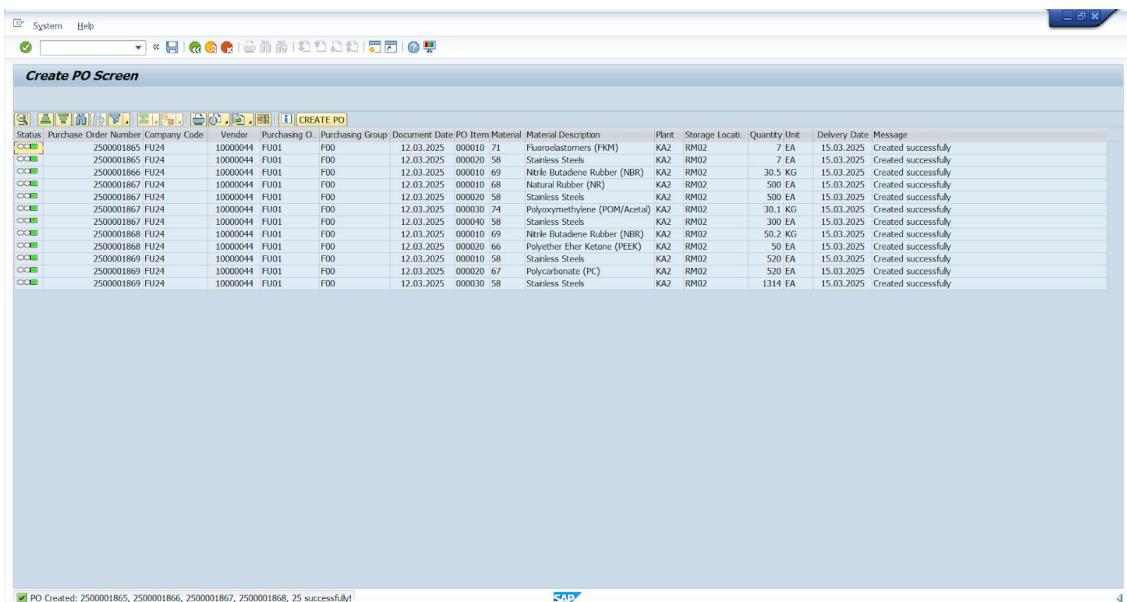
 Yes

Confirm the execution of the PO creation action by clicking on the YES button



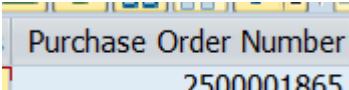
The screenshot shows the SAP Create PO Screen. A confirmation dialog box is displayed in the center, asking "Do you want to proceed?". Below the dialog are four buttons: "Yes" (highlighted with a red box), "No", "Cancel", and "X". The main grid table displays purchase order items with columns: Status, Purchase Order Number, Company Code, Vendor, Purchasing Org, Purchasing Group, Document Date, PO Item, Material, Material Description, Plant, Storage Location, Quantity, Unit, Delivery Date, and Message. The data in the grid includes various materials like Fluorocarbons (FKM), Nitrile Butadiene Rubber (NBR), Natural Rubber (NR), Acrylates, Polyoxymethylene (POM/Acetal), and Polycarbonate (PC) across different plants (KAZ, KAZ2) and storage locations (RM02).

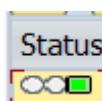
Create PO successfully:



The screenshot shows the SAP Create PO Screen after successful creation. A message at the bottom left states: "PO Created: 2500001865, 2500001866, 2500001867, 2500001868, 25 successfully!". The main grid table shows the same purchase order items as the previous screen, but now with a status indicator of "Created successfully" for each row.

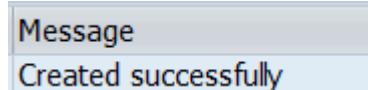
The PO number is updated in the **PO Number** field


Purchase Order Number
2500001865



Status field displays a green icon

Message field shows the text: "Create successfully"



The notification message displays the list of created PO numbers.

PO Created: 2500001865, 2500001866, 2500001867, 2500001868, 25 successfully!

Step 2: Create Outbound Delivery

Task: DO – Post Outbound Delivery

Position: Issuing Warehouse

In the ALV grid, select PO-STO lines.

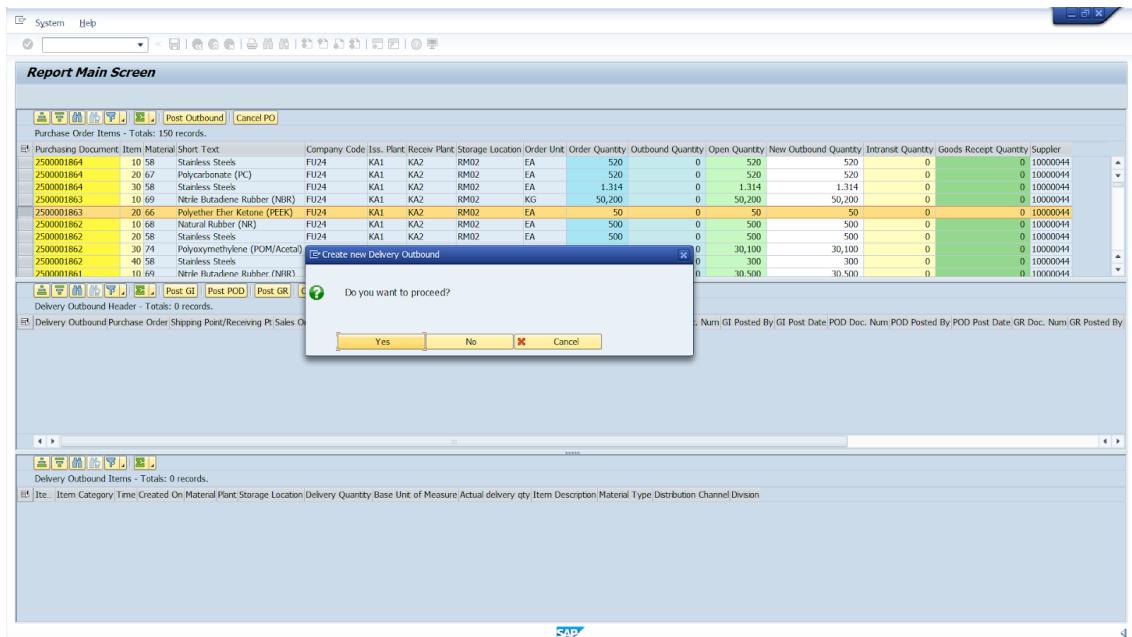
Report Main Screen																
Purchase Order Items - Totals: 150 records.																
Purchasing Document	Item	Material	Short Text	Company Code	Iss. Plant	Receiv. Plant	Storage Location	Order Unit	Order Quantity	Outbound Quantity	Open Quantity	New Outbound Quantity	Intransit Quantity	Goods Receipt Quantity	Supplier	
2500001864	10 58	Stainless Steels	FU24	KA1	KA2	RM02	EA	520	0	520	0	0	0	0	10000044	
2500001864	20 67	Polycarbonate (PC)	FU24	KA1	KA2	RM02	EA	520	0	520	0	0	0	0	10000044	
2500001864	40 54	Silicone Rubber	FU24	KA1	KA2	RM02	EA	1,313	0	1,313	0	1,313	0	0	10000044	
2500001863	10 69	Nitrile Butadiene Rubber (NBR)	FU24	KA1	KA2	RM02	KG	50,200	0	50,200	0	50,200	0	0	10000044	
2500001863	20 66	Polyether Ether Ketone (PEEK)	FU24	KA1	KA2	RM02	EA	50	0	50	0	0	0	0	10000044	
2500001862	10 68	Natural Rubber (NR)	FU24	KA1	KA2	RM02	EA	500	0	500	0	0	0	0	10000044	
2500001862	20 58	Stainless Steels	FU24	KA1	KA2	RM02	EA	500	0	500	0	0	0	0	10000044	
2500001862	30 74	Polypoxymethylene (POM/Acetal)	FU24	KA1	KA2	RM02	KG	30,100	0	30,100	0	30,100	0	0	10000044	
2500001862	40 58	Stainless Steels	FU24	KA1	KA2	RM02	EA	300	0	300	0	300	0	0	10000044	
2500001861	10 69	Nitrile Butadiene Rubber (NBR)	FU24	KA1	KA2	RM02	KG	30,500	0	30,500	0	30,500	0	0	10000044	

Delivery Outbound Header - Totals: 0 records.																
Delivery Outbound Purchase Order Shipping Point/Receiving Pt Sales Organization Delivery Type Loading Date Delivery Date Customer DO Created By DO Post Date GI Doc. Num GI Posted By GI Post Date POD Doc. Num POD Posted By POD Post Date GR Doc. Num GR Posted By																

Delivery Outbound Items - Totals: 0 records.																
Item Item Category Time Created On Material Plant Storage Location Delivery Quantity Base Unit of Measure Actual delivery qty Item Description Material Type Distribution Channel Division																

Input New Outbound Quantity:

New Outbound Quantity	
520	
520	
1.314	
50,200	
50	
500	
500	
30,100	
300	
30.500	



Click "Yes"

The system will create the Delivery Order.

Delivery Outbound Number(s): 0080001220 created.

Delivery number will be shown in the ALV if successful. Stock Transfers To Outbound Quantity Column.

Report Main Screen

Purchase Order Items - Totals: 451 records.

Purchasing Document	Item	Material Short Text	Company Code	Iss. Plant	Receiv. Plant	Storage Location	Order Unit	Order Quantity	Outbound Quantity	Open Quantity	New Outbound Quantity	Intransit Quantity	Goods Receipt Quantity	Supplier
2500001864	10 58	Stainless Steels	FU24	KA1	KA2	RM02	EA	520	0	520	520	0	0	10000044
2500001864	20 67	Polycarbonate (PC)	FU24	KA1	KA2	RM02	EA	520	0	520	520	0	0	10000044
2500001864	30 58	Stainless Steels	FU24	KA1	KA2	RM02	EA	1,314	0	1,314	1,314	0	0	10000044
2500001863	10 69	Nitrile Butadiene Rubber (NBR)	FU24	KA1	KA2	RM02	KG	50,200	0	50,200	50,200	0	0	10000044
2500001863	20 69	Polyether Ester Ketone (PEEK)	FU24	KA1	KA2	RM02	EA	50	50	0	0	0	0	10000044
2500001862	10 69	Natural Rubber (NR)	FU24	KA1	KA2	RM02	EA	500	0	500	500	0	0	10000044
2500001862	20 58	Stainless Steels	FU24	KA1	KA2	RM02	EA	500	0	500	500	0	0	10000044
2500001862	30 74	Polyoxymethylene (POM/Acetal)	FU24	KA1	KA2	RM02	KG	30,100	0	30,100	30,100	0	0	10000044
2500001862	40 58	Stainless Steels	FU24	KA1	KA2	RM02	EA	300	0	300	300	0	0	10000044
2500001861	10 69	Nitrile Butadiene Rubber (NBR)	FU24	KA1	KA2	RM02	KG	30,500	0	30,500	30,500	0	0	10000044

Delivery Outbound Header - Totals: 0 records.

Delivery Outbound Purchase Order Shipping Point/Receiving Pt. Sales Organization Delivery Type Loading Date Delivery Date Customer DO Created By DO Post Date GI Doc. Num GI Posted By GI Post Date POD Doc. Num POD Posted By POD Post Date GR Doc. Num GR Posted By

Delivery Outbound Items - Totals: 0 records.

Item Category Time Created On Material Plant Storage Location Delivery Quantity Base Unit of Measure Actual delivery qty Item Description Material Type Distribution Channel Division

Delivery Outbound Number(s): 00800001220 created.

Step 3: GI – Post Goods Issue

Task: Post Goods Issue to reduce stock from the issuing plant.

Position: Issuing Warehouse

In the Report Main Screen double click on lines where delivery has been created.

Total of 1 Delivery Outbound is found.

Report Main Screen

Purchase Order Items - Totals: 451 records.

Purchasing Document	Item	Material Short Text	Company Code	Iss. Plant	Receiv. Plant	Storage Location	Order Unit	Order Quantity	Outbound Quantity	Open Quantity	New Outbound Quantity	Intransit Quantity	Goods Receipt Quantity	Supplier
2500001864	10 58	Stainless Steels	FU24	KA1	KA2	RM02	EA	520	0	520	520	0	0	10000044
2500001864	20 67	Polycarbonate (PC)	FU24	KA1	KA2	RM02	EA	520	0	520	520	0	0	10000044
2500001864	30 58	Stainless Steels	FU24	KA1	KA2	RM02	EA	1,314	0	1,314	1,314	0	0	10000044
2500001863	10 69	Nitrile Butadiene Rubber (NBR)	FU24	KA1	KA2	RM02	KG	50,200	0	50,200	50,200	0	0	10000044
2500001863	20 66	Polyether Ester Ketone (PEEK)	FU24	KA1	KA2	RM02	EA	50	0	0	0	0	0	10000044
2500001862	10 68	Natural Rubber (NR)	FU24	KA1	KA2	RM02	EA	500	0	500	500	0	0	10000044
2500001862	20 58	Stainless Steels	FU24	KA1	KA2	RM02	EA	500	0	500	500	0	0	10000044
2500001862	30 74	Polyoxymethylene (POM/Acetal)	FU24	KA1	KA2	RM02	KG	30,100	0	30,100	30,100	0	0	10000044
2500001862	40 58	Stainless Steels	FU24	KA1	KA2	RM02	EA	300	0	300	300	0	0	10000044
2500001861	10 69	Nitrile Butadiene Rubber (NBR)	FU24	KA1	KA2	RM02	KG	30,500	0	30,500	30,500	0	0	10000044

Delivery Outbound Header - Totals: 1 records.

Delivery Outbound Purchase Order Shipping Point/Receiving Pt. Sales Organization Delivery Type Loading Date Delivery Date Customer DO Created By DO Post Date GI Doc. Num GI Posted By GI Post Date POD Doc. Num POD Posted By POD Post Date GR Doc. Num GR Posted By

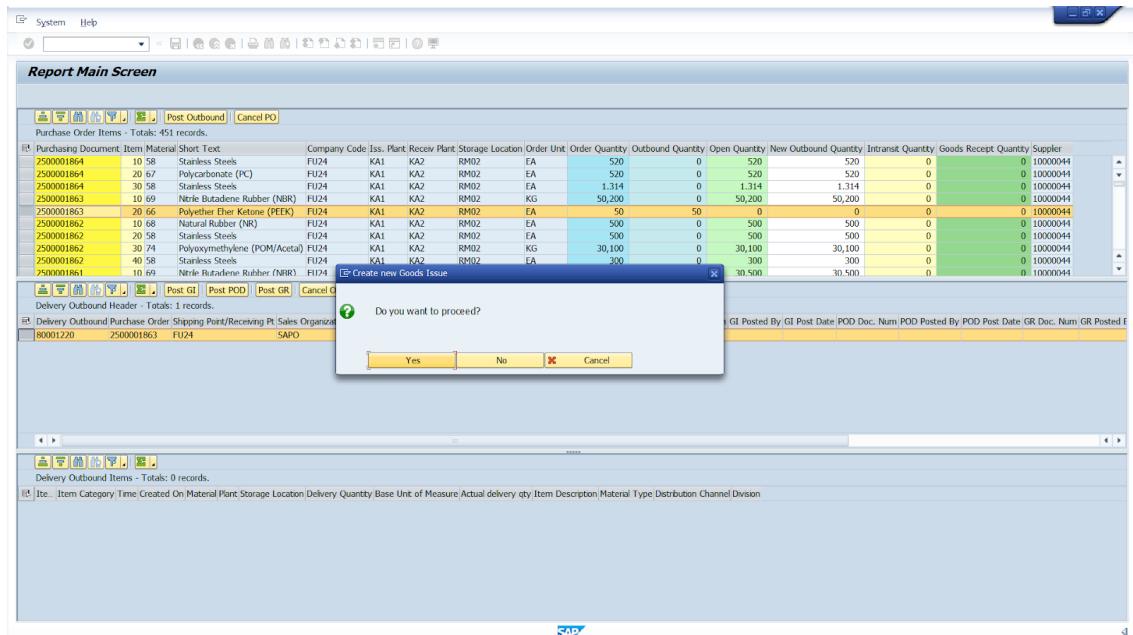
800001220 2500001863 FU24 SAPO NL13 15.03.2025 15.03.2025 1003278 DEV-100 25.04.2025

Delivery Outbound Items - Totals: 0 records.

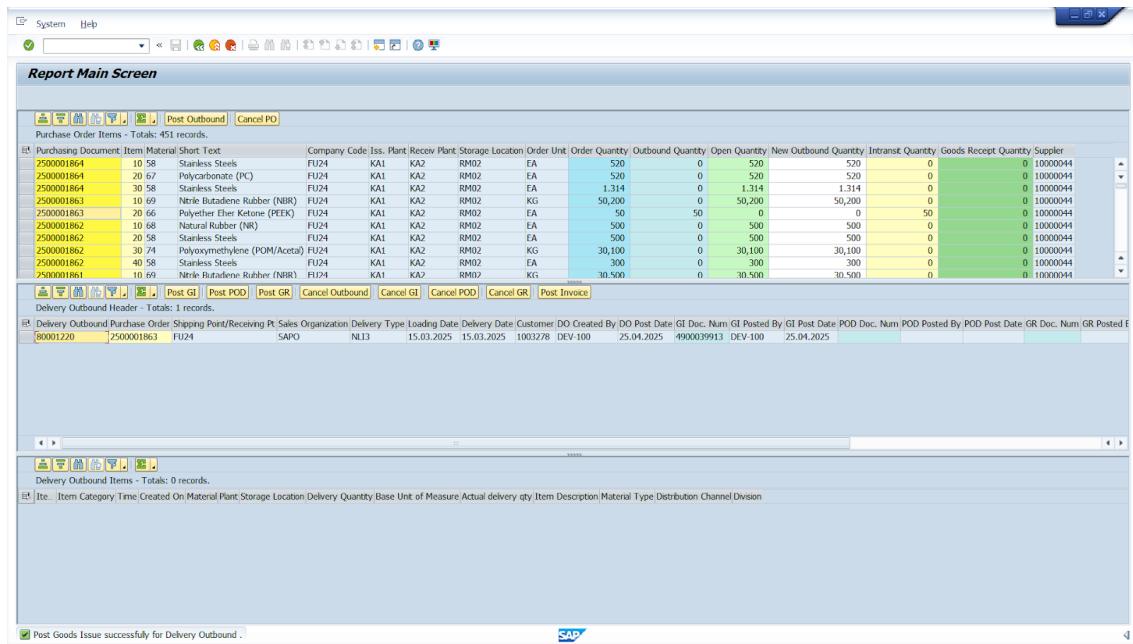
Item Category Time Created On Material Plant Storage Location Delivery Quantity Base Unit of Measure Actual delivery qty Item Description Material Type Distribution Channel Division

Total of 1 Delivery Outbound is found.

Click **Post GI** then **Yes** to Post Goods Issue.



The system will post movement type **68A**. GI document number will be recorded in the grid. Stock Transfers To Intransit Quantity Column.



Step 4: POD – Confirm Proof of Delivery

Task: Confirm goods have physically arrived at the receiving plant.

Position: Receiving Warehouse

Select Delivery Outbound GI-posted lines.

The screenshot shows the SAP Report Main Screen. At the top, there are tabs for 'Post Outbound' and 'Cancel PO'. Below the tabs, a message says 'Purchase Order Items - Totals: 451 records.' and 'Delivery Outbound Header - Totals: 1 records.' A table displays purchase order items with columns: Purchasing Document, Item Material Short Text, Company Code, Iss. Plant, Receiv. Plant, Storage Location, Order Unit, Order Quantity, Outbound Quantity, Open Quantity, New Outbound Quantity, Intransit Quantity, Goods Receipt Quantity, Supplier. The first row shows: 2500001864, 10 58 Stainless Steels, FU24, KA1, KA2, RM02, EA, 520, 0, 520, 0, 0, 10000044. Below this is another table for 'Delivery Outbound Items - Totals: 1 records.', showing one record with columns: Item Item Category, Time, Created On, Material Plant, Storage Location, Delivery Quantity, Base Unit of Measure, Actual delivery qty, Item Description, Material Type, Distribution Channel, Division. The record is: 10 NL13, 18:32:11 25.04.2025 66, KA1, RM01, 50, EA, 50, Polyether Eher Ketone (PEEK) ROH, S1, S1. A note at the bottom left says 'Total of 1 Delivery Outbound Items is found.'

Click **Post POD** then click **Yes**

The screenshot shows the SAP Report Main Screen again. The 'Post Outbound' tab is selected. A confirmation dialog box titled 'Create Purchase Order' asks 'Do you want to proceed?' with 'Yes' and 'No' buttons. Below the dialog, the same tables for Purchase Order Items and Delivery Outbound Items are visible. A note at the bottom left says 'Total of 1 Delivery Outbound Items is found.'

POD is confirmation. System updates POD status (movement type 68F or equivalent).

POD Confirmed Successfully for Delivery: 80001220

Report Main Screen

Purchase Order Items - Totals: 451 records.														
Purchasing Document	Item	Material Short Text	Company Code	Iss. Plant	Receiv Plant	Storage Location	Order Unit	Order Quantity	Outbound Quantity	Open Quantity	New Outbound Quantity	Intransit Quantity	Goods Receipt Quantity	Supplier
2500001864	10 58	Stainless Steels	FU24	KA1	KA2	RM02	EA	520	0	520	520	0	0	10000044
2500001864	20 67	Polycarbonate (PC)	FU24	KA1	KA2	RM02	EA	520	0	520	520	0	0	10000044
2500001864	30 58	Stainless Steels	FU24	KA1	KA2	RM02	EA	1,314	0	1,314	1,314	0	0	10000044
2500001863	10 69	Nitrile Butadiene Rubber (NBR)	FU24	KA1	KA2	RM02	KG	50,200	0	50,200	50,200	0	0	10000044
2500001863	20 66	Polyether Eher Ketone (PEEK)	FU24	KA1	KA2	RM02	EA	50	0	50	0	0	0	10000044
2500001862	10 68	Nitrile Butadiene Rubber (NBR)	FU24	KA1	KA2	RM02	EA	500	0	500	500	0	0	10000044
2500001862	20 58	Stainless Steels	FU24	KA1	KA2	RM02	EA	500	0	500	500	0	0	10000044
2500001862	30 74	Polyoxymethylene (POM/Acetyl)	FU24	KA1	KA2	RM02	KG	30,100	0	30,100	30,100	0	0	10000044
2500001862	40 58	Stainless Steels	FU24	KA1	KA2	RM02	EA	300	0	300	300	0	0	10000044
2500001861	10 69	Nitrile Butadiene Rubber (NBR)	FU24	KA1	KA2	RM02	KG	30,500	0	30,500	30,500	0	0	10000044

Delivery Outbound Header - Totals: 1 records.

Delivery Outbound Purchase Order Shipping Point/Receiving Pt. Sales Organization Delivery Type Loading Date Delivery Date Customer DO Created By DO Post Date GI Doc. Num GI Posted By GI Post Date POD Doc. Num POD Posted By POD Post Date GR Doc. Num GR Posted E															
80001220	2500001863	FU24	SAPO	NL13	15.03.2025	15.03.2025	1003278	DEV-100	25.04.2025	4900039913	DEV-100	25.04.2025	4900039914	DEV-100	26.04.2025

Delivery Outbound Items - Totals: 1 records.

Item Item Category Time Created On Material Plant Storage Location Delivery Quantity Base Unit of Measure Actual delivery qty Item Description Material Type Distribution Channel Division												
10 NL13	18:32:11	25.04.2025	66	KA1	RM01	50	EA	50	Polyether Eher Ketone (PEEK)	ROH	S1	S1

POD Confirmed Successfully for Delivery: 80001220

Step 5: GR – Post Goods Receipt

Task: Receive goods into stock at the receiving plant.

Position: Receiving Warehouse

Select DO lines where POD has been confirmed.

Report Main Screen

Purchase Order Items - Totals: 451 records.														
Purchasing Document	Item	Material Short Text	Company Code	Iss. Plant	Receiv Plant	Storage Location	Order Unit	Order Quantity	Outbound Quantity	Open Quantity	New Outbound Quantity	Intransit Quantity	Goods Receipt Quantity	Supplier
2500001864	10 58	Stainless Steels	FU24	KA1	KA2	RM02	EA	520	0	520	520	0	0	10000044
2500001864	20 67	Polycarbonate (PC)	FU24	KA1	KA2	RM02	EA	520	0	520	520	0	0	10000044
2500001864	30 58	Stainless Steels	FU24	KA1	KA2	RM02	EA	1,314	0	1,314	1,314	0	0	10000044
2500001863	10 69	Nitrile Butadiene Rubber (NBR)	FU24	KA1	KA2	RM02	KG	50,200	0	50,200	50,200	0	0	10000044
2500001863	20 66	Polyether Eher Ketone (PEEK)	FU24	KA1	KA2	RM02	EA	50	0	50	0	0	0	10000044
2500001862	10 68	Nitrile Butadiene Rubber (NBR)	FU24	KA1	KA2	RM02	EA	500	0	500	500	0	0	10000044
2500001862	20 58	Stainless Steels	FU24	KA1	KA2	RM02	EA	500	0	500	500	0	0	10000044
2500001862	30 74	Polyoxymethylene (POM/Acetyl)	FU24	KA1	KA2	RM02	KG	30,100	0	30,100	30,100	0	0	10000044
2500001862	40 58	Stainless Steels	FU24	KA1	KA2	RM02	EA	300	0	300	300	0	0	10000044
2500001861	10 69	Nitrile Butadiene Rubber (NBR)	FU24	KA1	KA2	RM02	KG	30,500	0	30,500	30,500	0	0	10000044

Delivery Outbound Header - Totals: 1 records.

Delivery Outbound Purchase Order Shipping Point/Receiving Pt. Sales Organization Delivery Type Loading Date Delivery Date Customer DO Created By DO Post Date GI Doc. Num GI Posted By GI Post Date POD Doc. Num POD Posted By POD Post Date GR Doc. Num GR Posted E															
80001220	2500001863	FU24	SAPO	NL13	15.03.2025	15.03.2025	1003278	DEV-100	25.04.2025	4900039913	DEV-100	25.04.2025	4900039914	DEV-100	26.04.2025

Delivery Outbound Items - Totals: 1 records.

Item Item Category Time Created On Material Plant Storage Location Delivery Quantity Base Unit of Measure Actual delivery qty Item Description Material Type Distribution Channel Division												
10 NL13	18:32:11	25.04.2025	66	KA1	RM01	50	EA	50	Polyether Eher Ketone (PEEK)	ROH	S1	S1

Total of 1 Delivery Outbound Items is found.

Click **Post GI** then **Yes** to Post Goods Receipt.

Report Main Screen

Purchase Order Items - Totals: 451 records.

Purchasing Document Item Material Short Text	Company Code	Iss. Plant	Receiv. Plant	Storage Location	Order Unit	Order Quantity	Outbound Quantity	Open Quantity	New Outbound Quantity	Intransit Quantity	Goods Receipt Quantity	Supplier
2500001864	10 58	Stainless Steels	FU24	KA1	KA2	RM02	EA	520	0	520	0	0 10000044
2500001864	20 67	Polycarbonate (PC)	FU24	KA1	KA2	RM02	EA	520	0	520	0	0 10000044
2500001864	30 58	Stainless Steels	FU24	KA1	KA2	RM02	EA	1,314	0	1,314	0	0 10000044
2500001863	10 69	Nitrile Butadiene Rubber (NBR)	FU24	KA1	KA2	RM02	KG	50,200	0	50,200	0	0 10000044
2500001863	20 66	Polyether Ester Ketone (PEEK)	FU24	KA1	KA2	RM02	EA	50	0	50	0	0 10000044
2500001862	10 68	Natural Rubber (NR)	FU24	KA1	KA2	RM02	EA	500	0	500	0	0 10000044
2500001862	20 58	Stainless Steels	FU24	KA1	KA2	RM02	EA	500	0	500	0	0 10000044
2500001862	30 74	Polyoxymethylene (POM/Acota)	FU24	KA1	KA2	RM02	KG	30,100	0	30,100	0	0 10000044
2500001862	40 58	Stainless Steels	FU24	KA1	KA2	RM02	EA	300	0	300	0	0 10000044
2500001861	10 69	Nitrile Butadiene Rubber (NBR)	FU24	KA1	KA2	RM02	KG	30,500	0	30,500	0	0 10000044

Delivery Outbound Header - Totals: 1 records.

Delivery Outbound Purchase Order Shipping Point/Receiving Pt. Sales Organization Delivery Type Loading Date Delivery Date Customer DO Created By DO Post Date GI Doc. Num GI Posted By GI Post Date POD Doc. Num POD Posted By POD Post Date GR Doc. Num GR Posted By
80001220 2500001863 FU24 SAPO NL13 15.03.2025 15.03.2025 1003278 DEV-100 25.04.2025 4900039913 DEV-100 25.04.2025 4900039914 DEV-100 26.04.2025

Create Goods Receipt

Do you want to proceed?

Yes No Cancel

Report Main Screen

Purchase Order Items - Totals: 1 records.

Item Item Category Time Created On Material Plant Storage Location Delivery Quantity Base Unit of Measure Actual delivery qty Item Description Material Type Distribution Channel Division
10 NL13 18:32:11 25.04.2025 66 KA1 RM01 50 EA 50 Polyester Eher Ketone (PEEK) ROH S1 S1

The system will post movement type 109.

Stock is now available for use.

Report Main Screen

Purchase Order Items - Totals: 489 records.

Purchasing Document Item Material Short Text	Company Code	Iss. Plant	Receiv. Plant	Storage Location	Order Unit	Order Quantity	Outbound Quantity	Open Quantity	New Outbound Quantity	Intransit Quantity	Goods Receipt Quantity	Supplier
2500001867	40 69	Stainless Steel	FU24	KA1	KA2	RM02	EA	300	0	300	0	0 10000044
2500001866	10 69	Nitrile Butadiene Rubber (NBR)	FU24	KA1	KA2	RM02	KG	30,500	0	30,500	0	0 10000044
2500001865	10 71	Fluorocarbons (FKM)	FU24	KA1	KA2	RM02	EA	7	7	0	0	0 10000044
2500001865	20 58	Stainless Steels	FU24	KA1	KA2	RM02	EA	7	0	7	0	0 10000044
2500001864	10 58	Stainless Steels	FU24	KA1	KA2	RM02	EA	520	0	520	0	0 10000044
2500001864	20 67	Polycarbonate (PC)	FU24	KA1	KA2	RM02	EA	520	0	520	0	0 10000044
2500001864	30 58	Stainless Steels	FU24	KA1	KA2	RM02	EA	1,314	0	1,314	0	0 10000044
2500001863	10 69	Nitrile Butadiene Rubber (NBR)	FU24	KA1	KA2	RM02	KG	50,200	0	50,200	0	0 10000044
2500001863	20 66	Polyether Eher Ketone (PEEK)	FU24	KA1	KA2	RM02	EA	50	0	50	0	0 10000044
2500001862	10 68	Natural Rubber (NR)	FU24	KA1	KA2	RM02	EA	500	0	500	0	0 10000044

Delivery Outbound Header - Totals: 1 records.

Delivery Outbound Purchase Order Shipping Point/Receiving Pt. Sales Organization Delivery Type Loading Date Delivery Date Customer DO Created By DO Post Date GI Doc. Num GI Posted By GI Post Date POD Doc. Num POD Posted By POD Post Date GR Doc. Num GR Posted By
80001220 2500001863 FU24 SAPO NL13 15.03.2025 15.03.2025 1003278 DEV-100 25.04.2025 4900039913 DEV-100 25.04.2025 4900039914 DEV-100 26.04.2025 5000000688 DEV-100

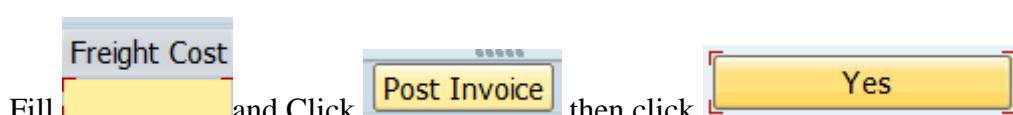
Goods Receipt posted successfully! Document Number: 5000000688

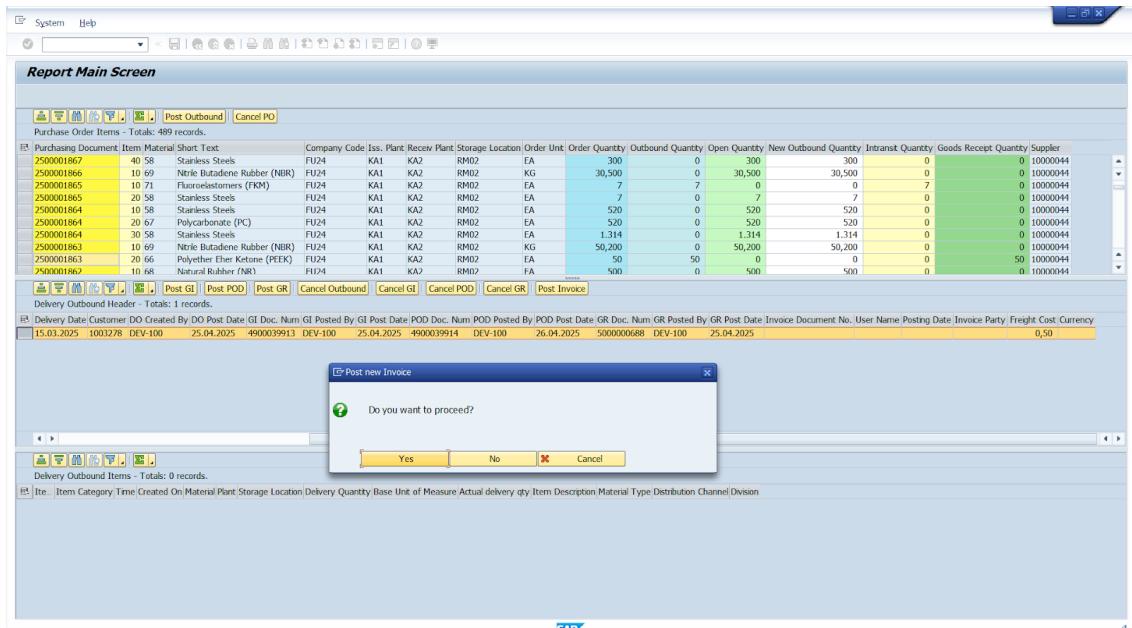
Step 6: Invoice – Post Invoice (if applicable)

Task: Post financial invoice related to the STO.

Position: Finance Department

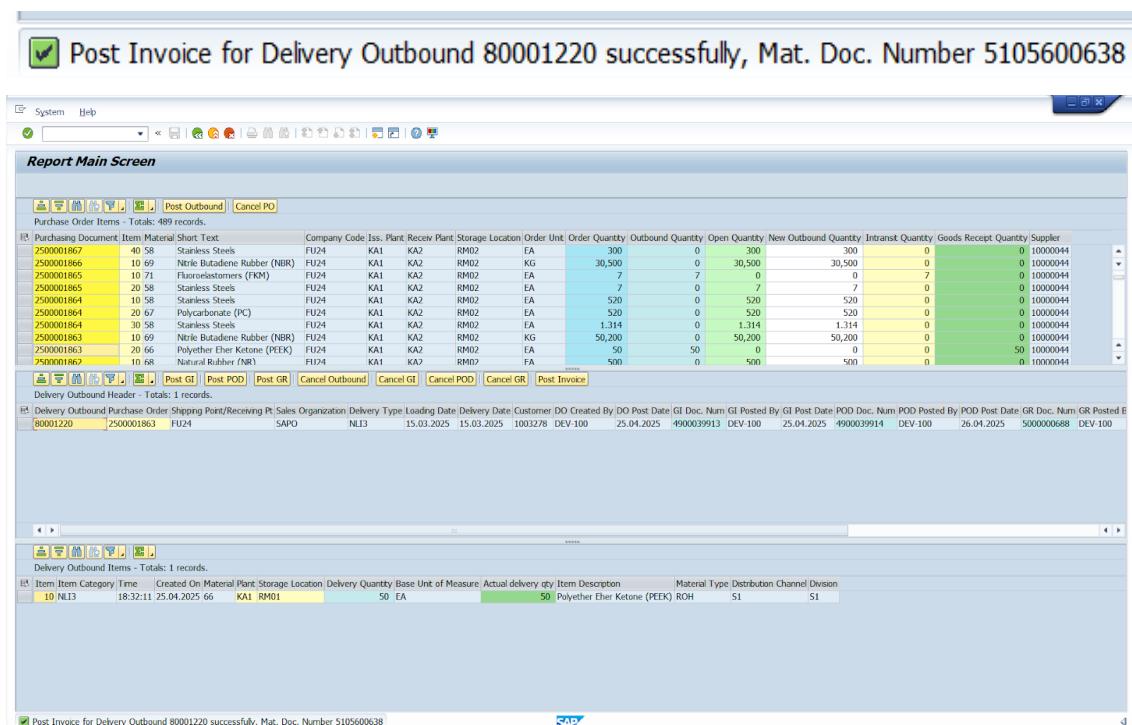
Select lines DO





System will create an invoice document.

The invoice number will appear in the ALV grid.



Cancellation Process – Stock Transfers with Valuated Stock in Transit

Step 1: Cancel Goods Receipt (Movement Type 110)

Task: Cancel Goods Receipt

Position: Receiving Warehouse

In the ALV, select the line where GR has been posted.

Click **Cancel GR** then click **Yes** to cancel.

System posts reversal using movement type 110.

Status will update and GR document will be cleared.

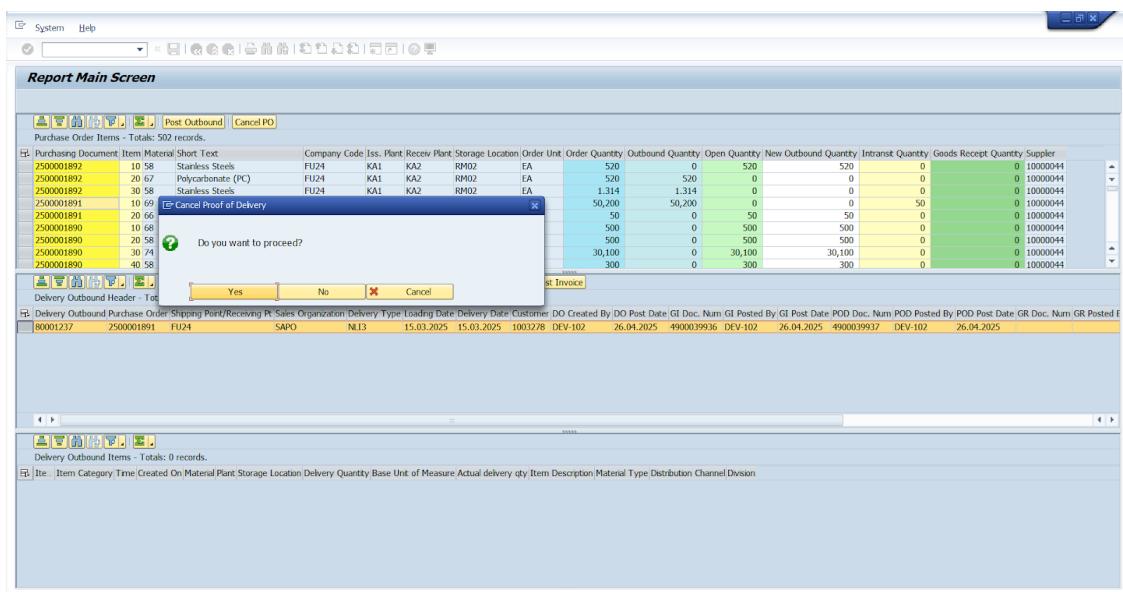
Step 2: Cancel Proof of Delivery (Movement Type 68F)

Task: Cancel Proof of Delivery

Position: Receiving Warehouse

In the ALV, select the line where POD has been posted or canceled GR.

Click **Cancel POD** then click **Yes** to cancel.



The notification message was canceled successfully.

Purchase Order Items - Totals: 502 records.

Purchasing Document	Item	Material	Short Text	Company Code	Isc.	Plant	Receive Plant	Storage Location	Order Unit	Order Quantity	Outbound Quantity	Open Quantity	New Outbound Quantity	Intransit Quantity	Goods Receipt Quantity	Supplier
2500001892	10 58	Stainless Steels	FU24	KA1	KA2	RM02	EA			520	0	520	0	0	0	10000044
2500001892	20 67	Polycarbonate (PC)	FU24	KA1	KA2	RM02	EA			520	0	0	0	0	0	10000044
2500001892	30 58	Stainless Steels	FU24	KA1	KA2	RM02	EA			1,314	0	0	0	0	0	10000044
2500001891	10 69	Nitrile Butadiene Rubber (NBR)	FU24	KA1	KA2	RM02	KG			50,200	50,200	0	0	50	0	10000044
2500001891	20 66	Polymethyl Ether Ketone (PEEK)	FU24	KA1	KA2	RM02	EA			50	0	50	0	0	0	10000044
2500001890	10 68	Nitrile Butadiene Rubber (NBR)	FU24	KA1	KA2	RM02	EA			500	0	500	0	0	0	10000044
2500001890	20 58	Stainless Steels	FU24	KA1	KA2	RM02	EA			500	0	500	0	0	0	10000044
2500001890	30 74	Polyacrylonitrile (POM/Acetal)	FU24	KA1	KA2	RM02	KG			30,100	0	30,100	0	0	0	10000044
2500001890	40 58	Stainless Steels	FU24	KA1	KA2	RM02	EA			300	0	300	0	0	0	10000044

Delivery Outbound Header - Totals: 1 records.

Delivery Outbound Purchase Order Shipping Point/Receiving Pt Sales Organization Delivery Type Loading Date Delivery Date Customer DO Created By DO Post Date GI Doc. Num GI Posted By GI Post Date POD Doc. Num POD Posted By POD Post Date GR Doc. Num GR Posted By

Step 3: Cancel Goods Issue (Movement Type 68B)

Task: Cancel Goods Issue

Position: Issuing Warehouse

In the ALV, select the line where GI has been posted or canceled POD.

Click **Cancel GI** then click **Yes** to cancel.

Purchase Order Items - Totals: 502 records.

Purchasing Document	Item	Material	Short Text	Company Code	Isc.	Plant	Receive Plant	Storage Location	Order Unit	Order Quantity	Outbound Quantity	Open Quantity	New Outbound Quantity	Intransit Quantity	Goods Receipt Quantity	Supplier
2500001892	10 58	Stainless Steels	FU24	KA1	KA2	RM02	EA			520	0	520	0	0	0	10000044
2500001892	20 67	Polycarbonate (PC)	FU24	KA1	KA2	RM02	EA			520	0	0	0	0	0	10000044
2500001892	30 58	Stainless Steels	FU24	KA1	KA2	RM02	EA			1,314	0	0	0	0	0	10000044
2500001891	10 69	Nitrile Butadiene Rubber (NBR)	FU24	KA1	KA2	RM02	EA			50,200	50,200	0	0	50	0	10000044
2500001891	20 66	Polymethyl Ether Ketone (PEEK)	FU24	KA1	KA2	RM02	EA			50	0	50	0	0	0	10000044
2500001890	10 68	Nitrile Butadiene Rubber (NBR)	FU24	KA1	KA2	RM02	EA			500	0	500	0	0	0	10000044
2500001890	20 58	Stainless Steels	FU24	KA1	KA2	RM02	EA			500	0	500	0	0	0	10000044
2500001890	30 74	Polyacrylonitrile (POM/Acetal)	FU24	KA1	KA2	RM02	KG			30,100	0	30,100	0	0	0	10000044
2500001890	40 58	Stainless Steels	FU24	KA1	KA2	RM02	EA			300	0	300	0	0	0	10000044

Delivery Outbound Header - Totals: 0 records.

Delivery Outbound Purchase Order Shipping Point/Receiving Pt Sales Organization Delivery Type Loading Date Delivery Date Customer DO Created By DO Post Date GI Doc. Num GI Posted By GI Post Date POD Doc. Num POD Posted By POD Post Date GR Doc. Num GR Posted By

The notification message was canceled successfully.

Report Main Screen

Purchasing Document	Item Material Short Text	Company Code	Iss.	Plant	Receiv.	Plant	Storage Location	Order Unit	Order Quantity	Outbound Quantity	Open Quantity	New Outbound Quantity	Intransit Quantity	Goods Receipt Quantity	Supplier
2500001892	10 58 Stainless Steels	FU24	KA1	KA2	RM02	EA	520	0	520	0	0	0	0	0	10000044
2500001892	20 67 Polycarbonate (PC)	FU24	KA1	KA2	RM02	EA	520	0	520	0	0	0	0	0	10000044
2500001892	30 58 Stainless Steels	FU24	KA1	KA2	RM02	EA	1,314	0	1,314	0	0	0	0	0	10000044
2500001891	10 69 Nitrile Butadiene Rubber (NBR)	FU24	KA1	KA2	RM02	KG	50,200	0	50,200	0	0	0	0	0	10000044
2500001890	20 66 Polyether Ether Ketone (PEEK)	FU24	KA1	KA2	RM02	EA	50	0	50	0	0	0	0	0	10000044
2500001890	10 68 Natural Rubber (NR)	FU24	KA1	KA2	RM02	EA	500	0	500	500	0	0	0	0	10000044
2500001890	20 58 Stainless Steels	FU24	KA1	KA2	RM02	EA	500	0	500	500	0	0	0	0	10000044
2500001890	30 74 Polyoxymethylene (POM/Aceta)	FU24	KA1	KA2	RM02	KG	30,100	0	30,100	30,100	0	0	0	0	10000044
2500001890	40 58 Stainless Steels	FU24	KA1	KA2	RM02	EA	300	0	300	300	0	0	0	0	10000044

Report Main Screen

Purchasing Document	Item Material Short Text	Company Code	Iss.	Plant	Receiv.	Plant	Storage Location	Order Unit	Order Quantity	Outbound Quantity	Open Quantity	New Outbound Quantity	Intransit Quantity	Goods Receipt Quantity	Supplier
2500001891	10 69 Nitrile Butadiene Rubber (NBR)	FU24	SAPO	NL13	15.03.2025	15.03.2025	1003278	DEV-102	26.04.2025						

Delivery Outbound Items - Totals: 0 records.

Delivery Outbound Header - Totals: 1 records.

Cancel Goods Issue successfully.

Step 4: Cancel Outbound Delivery

Task: Cancel Outbound Delivery

Position: Issuing Warehouse

Select lines DO

Report Main Screen

Purchasing Document	Item Material Short Text	Company Code	Iss.	Plant	Receiv.	Plant	Storage Location	Order Unit	Order Quantity	Outbound Quantity	Open Quantity	New Outbound Quantity	Intransit Quantity	Goods Receipt Quantity	Supplier
2500001892	10 58 Stainless Steels	FU24	KA1	KA2	RM02	EA	520	0	520	0	0	0	0	0	10000044
2500001892	20 67 Polycarbonate (PC)	FU24	KA1	KA2	RM02	EA	520	0	520	0	0	0	0	0	10000044
2500001892	30 58 Stainless Steels	FU24	KA1	KA2	RM02	EA	1,314	0	1,314	0	0	0	0	0	10000044
2500001891	10 69 Nitrile Butadiene Rubber (NBR)	FU24	KA1	KA2	RM02	KG	50,200	0	50,200	0	0	0	0	0	10000044
2500001890	20 66 Polyether Ether Ketone (PEEK)	FU24	KA1	KA2	RM02	EA	50	0	50	0	0	0	0	0	10000044
2500001890	10 68 Natural Rubber (NR)	FU24	KA1	KA2	RM02	EA	500	0	500	500	0	0	0	0	10000044
2500001890	20 58 Stainless Steels	FU24	KA1	KA2	RM02	EA	500	0	500	500	0	0	0	0	10000044
2500001890	30 74 Polyoxymethylene (POM/Aceta)	FU24	KA1	KA2	RM02	KG	30,100	0	30,100	30,100	0	0	0	0	10000044
2500001890	40 58 Stainless Steels	FU24	KA1	KA2	RM02	EA	300	0	300	300	0	0	0	0	10000044

Report Main Screen

Purchasing Document	Item Material Short Text	Company Code	Iss.	Plant	Receiv.	Plant	Storage Location	Order Unit	Order Quantity	Outbound Quantity	Open Quantity	New Outbound Quantity	Intransit Quantity	Goods Receipt Quantity	Supplier
2500001891	10 69 Nitrile Butadiene Rubber (NBR)	FU24	SAPO	NL13	15.03.2025	15.03.2025	1003278	DEV-102	26.04.2025						

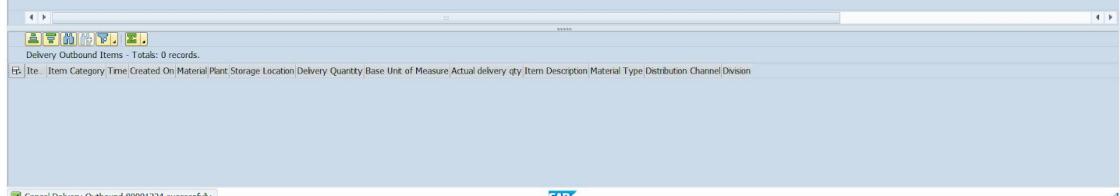
Delivery Outbound Items - Totals: 0 records.

Delivery Outbound Header - Totals: 1 records.

Total of 1 Delivery Outbound is found.

Click **Cancel Outbound** then click **Yes** to cancel.

Report Main Screen														
Purchase Order Items - Totals: 502 records.														
<input checked="" type="checkbox"/> Purchasing Document Item Material Short Text Company Code Iss. Plant Receiv. Plant Storage Location Order Unit Order Quantity Outbound Quantity Open Quantity New Outbound Quantity Intransit Quantity Goods Receipt Quantity Supplier														
2500001892	10 58	Nitrile Butadiene Rubber (NBR)	FU24	KA1	KA2	RM02	EA	520	0	520	0	0	0 10000044	
2500001892	20 67	Polycarbonate (PC)	FU24	KA1	KA2	RM02	EA	520	0	520	0	0	0 10000044	
2500001892	30 58	Stainless Steels	FU24	KA1	KA2	RM02	EA	1,314	0	1,314	0	0	0 10000044	
2500001891	10 69	Nitrile Butadiene Rubber (NBR)	FU24	KA1	KA2	RM02	KG	50,200	0	50,200	0	0	0 10000044	
2500001891	20 69	Polyether Ether Ketone (PEEK)	FU24	KA1	KA2	RM02	EA	50	0	50	0	0	0 10000044	
2500001890	10 68	Natural Rubber (NR)	FU24	KA1	KA2	RM02	EA	500	0	500	0	0	0 10000044	
2500001890	20 58	Stainless Steels	FU24	KA1	KA2	RM02	EA	500	0	500	0	0	0 10000044	
2500001890	30 74	Polyoxymethylene (POM/Acetal)	FU24	KA1	KA2	RM02	KG	30,100	0	30,100	0	0	0 10000044	
2500001890	40 58	Stainless Steels	FU24	KA1	KA2	RM02	EA	300	0	300	0	0	0 10000044	
<input checked="" type="checkbox"/> Post Outbound Post GI Post POD Post GR Cancel Outbound Cancel GI Cancel POD Cancel GR Post Invoice														
Delivery Outbound Header - Totals: 1 records.														
<input checked="" type="checkbox"/> Delivery Outbound Purchase Order Shipping Point/Receiving Pt Sales Organization Delivery Type Loading Date Delivery Date Customer DO Created By DO Post Date GI Doc. Num GI Posted By POD Doc. Num POD Posted By POD Post Date GR Doc. Num GR Posted By														
80001234	2500001892	FU24	SAPO	NLU3	15.03.2025	15.03.2025	1003278	DEV-102	26.04.2025					



The notification message was canceled successfully.

Step 5: Delete Stock Transport Order (STO)

Task: Delete the item from the Stock Transport Order (STO)

Position: Receiving Warehouse

Select lines PO item

Report Main Screen													
Purchase Order Items - Totals: 150 records.													
<input checked="" type="checkbox"/> Purchasing Document Item Material Short Text Company Code Iss. Plant Receiv. Plant Storage Location Order Unit Order Quantity Outbound Quantity Open Quantity New Outbound Quantity Intransit Quantity Goods Receipt Quantity Supplier													
2500001885	10 69	Nitrile Butadiene Rubber (NBR)	FU24	KA1	KA2	RM02	KG	50	50	0	0	0	0 10000044
2500001882	10 58	Stainless Steels	FU24	KA1	KA2	RM02	EA	520	520	0	0	0	0 10000044
2500001882	20 67	Polycarbonate (PC)	FU24	KA1	KA2	RM02	EA	520	520	0	0	0	0 10000044
2500001882	30 58	Stainless Steels	FU24	KA1	KA2	RM02	EA	1,314	0	1,314	0	0	0 10000044
2500001881	10 69	Nitrile Butadiene Rubber (NBR)	FU24	KA1	KA2	RM02	KG	50,200	50,200	0	0	0	0 10000044
2500001881	20 66	Polyether Ether Ketone (PEEK)	FU24	KA1	KA2	RM02	EA	50	50	0	0	0	0 10000044
2500001880	10 68	Natural Rubber (NR)	FU24	KA1	KA2	RM02	EA	500	0	500	0	0	0 10000044
2500001880	20 58	Stainless Steels	FU24	KA1	KA2	RM02	EA	500	0	500	0	0	0 10000044
2500001880	30 74	Polyoxymethylene (POM/Acetal)	FU24	KA1	KA2	RM02	KG	30,100	0	30,100	0	0	0 10000044
<input checked="" type="checkbox"/> Post Outbound Post GI Post POD Post GR Cancel Outbound Cancel GI Cancel POD Cancel GR Post Invoice													
Delivery Outbound Items - Totals: 0 records.													
<input checked="" type="checkbox"/> Delivery Outbound Purchase Order Shipping Point/Receiving Pt Sales Organization Delivery Type Loading Date Delivery Date Customer DO Created By DO Post Date GI Doc. Num GI Posted By POD Doc. Num POD Posted By POD Post Date GR Doc. Num GR Posted By													
Total of 150 Purchase Order Items s found.													

Click **Cancel PO** then click **Yes** to cancel.

The notification message was canceled successfully.

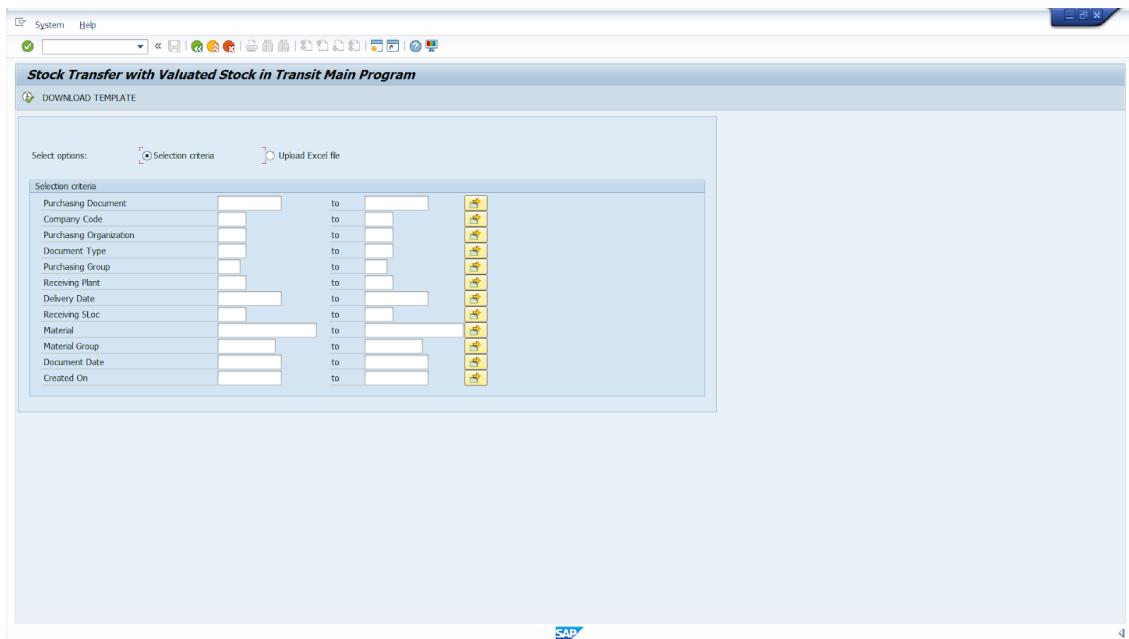
Extra features

1. Download file excel create po template

Open SAP GUI.

In the command field, enter the transaction code: then press Enter.

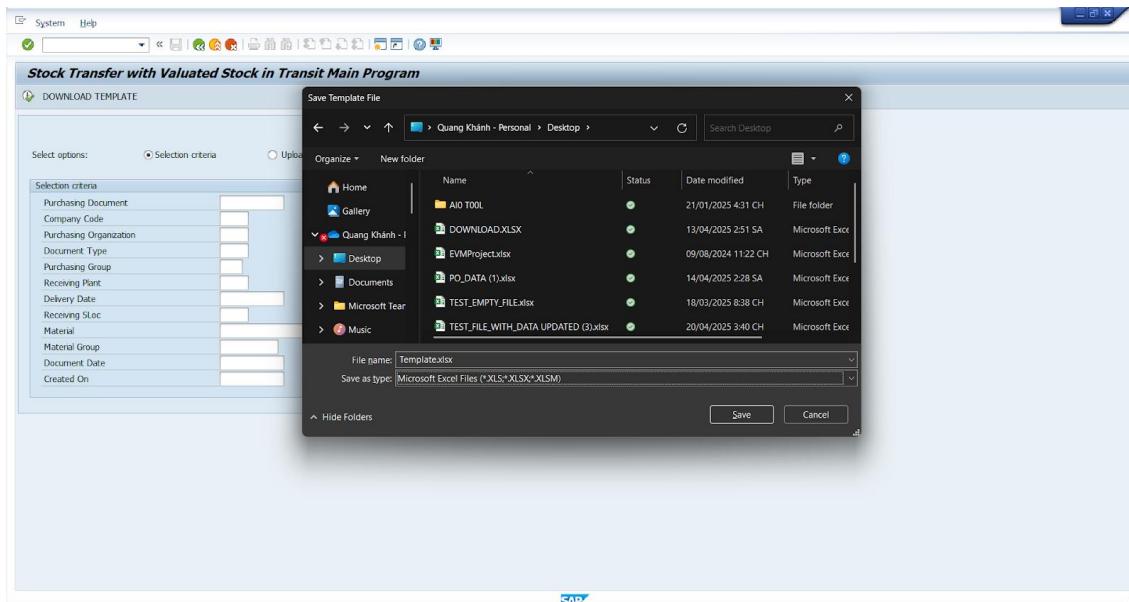
Screen display:



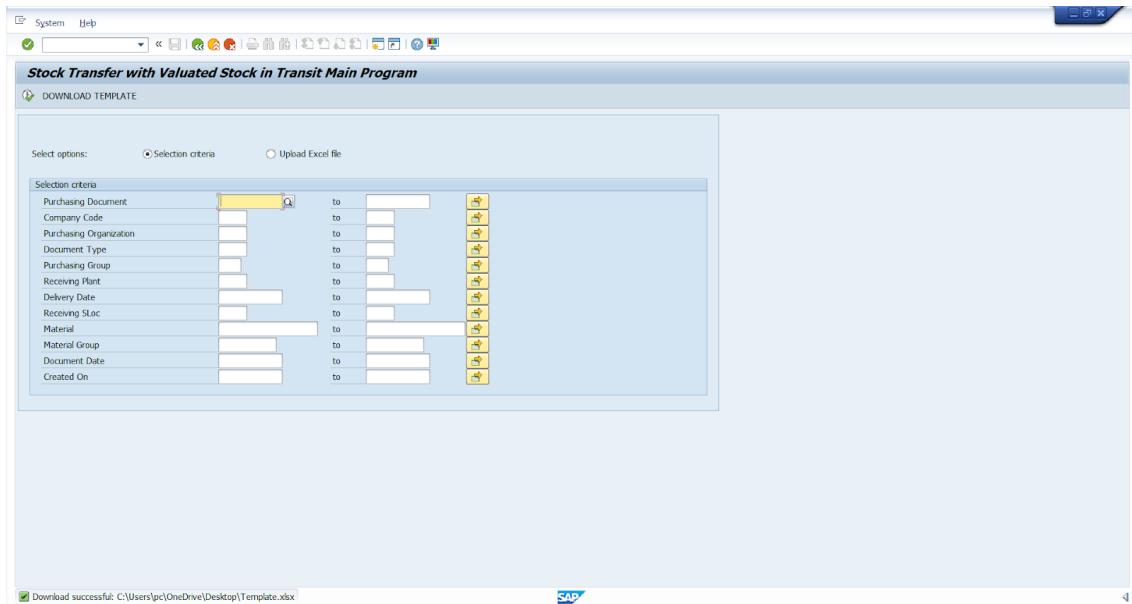
Choose DOWNLOAD TEMPLATE method by clicking on button

DOWNLOAD TEMPLATE

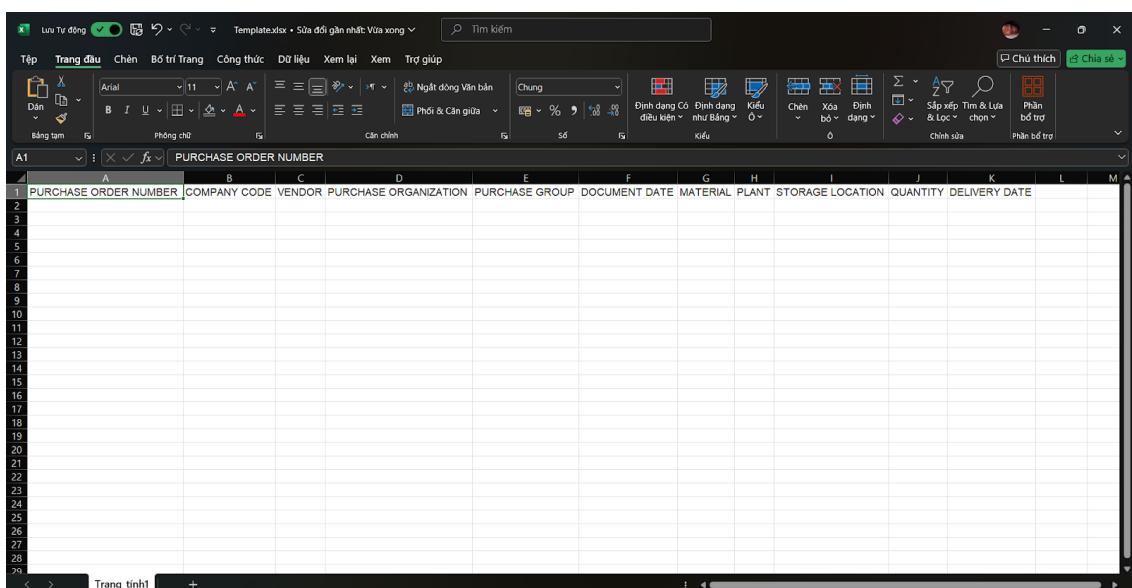
The Save File Dialog opens, the user selects the destination folder, then clicks the **Save** button.



After the file is successfully saved, a message appears: **Download successful:** with the file path where the file was saved.

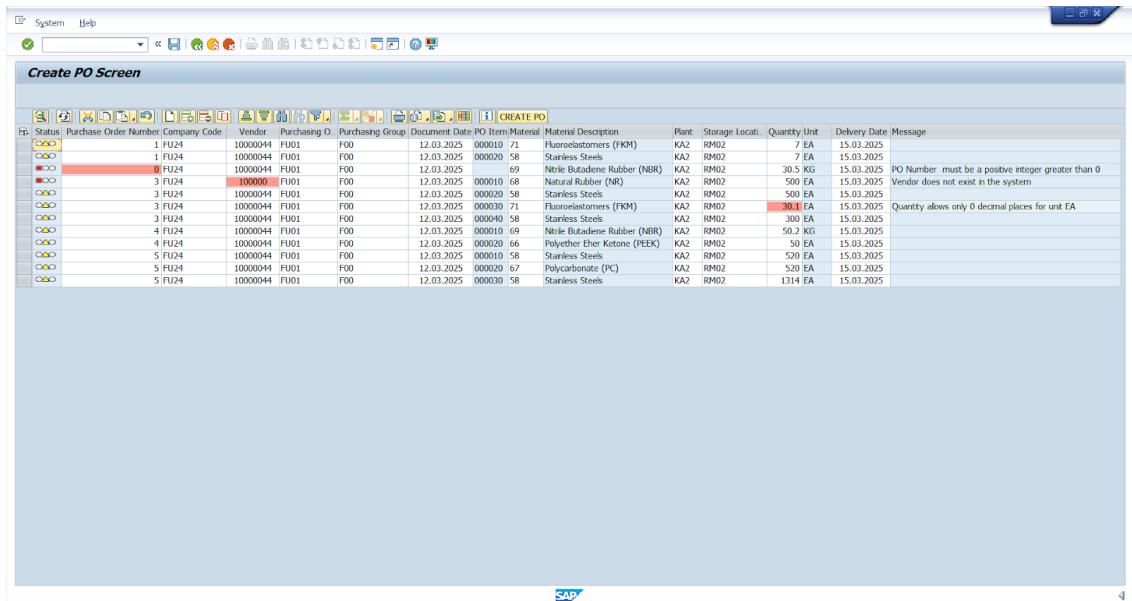


The successfully saved template file will open automatically.



2. Data validation before created PO

After upload successfully, the program goes to the Create PO Screen.



On the PO creation screen, the red-colored field indicates a validation error

100000, the message field will display the error corresponding to the red-colored field **Vendor does not exist in the system**.

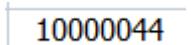
The user must resolve all validation errors before creating the PO by either:

- Using the search help to select a valid value for the error field: User click on the icon on the error field and selects a new value

The screenshot shows the SAP Supplier Selection screen. It displays a list of suppliers with columns for C/R, City, SearchTerm, Name 1, Supplier, and CoCd. The first row is highlighted in yellow, showing 'DE SANDKRUG 000 SHELL GEAR 121000 DE00'.

C/R	City	SearchTerm	Name 1	Supplier	CoCd
DE	SANDKRUG	000	SHELL GEAR	121000	DE00
DE	SANDKRUG	001	SHELL GEAR	121001	DE00
DE	SANDKRUG	002	SHELL GEAR	121002	DE00
DE	SANDKRUG	003	SHELL GEAR	121003	DE00
DE	SANDKRUG	004	SHELL GEAR	121004	DE00
DE	SANDKRUG	005	SHELL GEAR	121005	DE00
DE	SANDKRUG	006	SHELL GEAR	121006	DE00
DE	SANDKRUG	007	SHELL GEAR	121007	DE00
DE	SANDKRUG	008	SHELL GEAR	121008	DE00
DE	SANDKRUG	009	SHELL GEAR	121009	DE00
DE	SANDKRUG	010	SHELL GEAR	121010	DE00
DE	SANDKRUG	011	SHELL GEAR	121011	DE00
DF	SANDKRUG	012	SHFI GFAR	121012	DF00

- Manually re-entering the correct data into the error field: The user clicks on the field with the error and enters a valid value.

After solving the validation error, the cell color is white  **10000044**, status is icon yellow .

3. Status update

On the PO creation screen, the Status icon indicates the current state of the data or process:

-  – Validation completed and validation errors were found; PO creation failed
-  – Validation completed and no errors were found
-  – PO created successfully

The status icon updates automatically based on the validation results and PO creation outcome.

V.2 Test Plan

V.2.1 Human Resources

Role	Name	Responsibilities
Technical Tester	KhanhNQ	Design test cases for upload, download, validation, PO creation & cancellation; execute and log results.
Technical Tester	HuanDM	Test delivery order (DO), goods issue (GI), cancellation, POD, GR, invoice posting flows.
Technical Tester	AnhLPV	Test POD, cancel POD, GR, cancel GR, invoice posting; review and consolidate reports.

Functional Tester	UyenNLP	Review and execute end-to-end business process scenarios
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Table 23: HR

V.2.2 Test Environment

- SAP system: Quality Assurance (QAS)
- Client: 324
- Server: s40z
- Router: /H/saprouter.ucc.cit.tum.de/S/3299
- System ID: S40
- Transport request: S40K904955
- Test Data:
Excel templates with valid/invalid rows.
Master data: Company code, Vendor, Purchase Organization, Purchase Group, Material, Material Description, Unit, Plant, Storage Location.
- Test tool: SAP GUI

V.2.3 Test Cases

V.2.3.1 Unit Test

Function ID	Function Name
MM01-001	Upload file Excel

Table 24: Unit Test Upload file Excel

NO	Test Contents			
	.	Test Cases	Test Data	Predicted Test Results
1	Upload successful (file extension is .xls/.xlsx; file can be opened; correct header; at least 1 line data)		File excel is valid. Purchase Order Number: 1 Company Code: FU24 Vendor: 10000044 Purchase Organization: FU01 Purchase Group: F00 Document Date: 20250312 Material: 71 Plant: KA2 Storage Location: RM02 Quantity: 7 Delivery Date: 20250315	Call screen 300, display data in file uploaded on ALV
2	Upload failed			
2.1	User has not selected file/entered file path to upload		None	Message S000 - "Error: No file selected for upload!"

2.2	User has selected file/entered file path to upload		
2.2.1	File extension is difference .xls/.xlsx	File path: "D:\CAPSTONE PROJECT\Fil e test upload\2.2.1 File extension difference.doc x"	Message S001 - "Error: The file is not an Excel file – incorrect format!"
2.2.2	File Excel is opening/ lock/ does not exist	File is locked; File path: "D:\CAPSTONE PROJECT\Fil e test upload\2.2.2 File locked.xlsx"	Message S026 - "Error uploading file: file is open/locked/does not exist"
2.2.3	File contains more than 200 lines	File: C:\Upload\Tes tData_201row s.xlsx (201 lines, 1 header + 200 lines data)	Message - "Error: File exceeds 200 lines! Please upload another file!"
2.2.4	File Excel is closing/ is not lock/ exist		
2.2.4.1	File is empty	File: C:\Upload\Tes	Message S022 - "Error: The file contains no data!"

		tData_Empty. xlsx (File excel no header, no data)	
2.2. 4.2	File is not empty		
2.2. 4.2. 1	File contain correct header		
2.2. 4.2. 1.1	File contain only correct header	<p>File: C:\Upload\Tes tData_Header Only.xlsx</p> <p>Header: PURCHASE ORDER NUMBER, COMPANY CODE</p> <p>VEND OR, PURCHASE ORGANIZAT ION</p> <p>PURC HASE GROUP, DOCUMENT DATE, MATERIAL, PLANT, STORAGE</p>	<p>Message S003 - "Error: File contains only headers but no data!"</p>

		LOCATION, QUANTITY, DELIVERY DATE	
2.2. 4.2. 2	File contain incorrect header		
2.2. 4.2. 2.1	File contain incorrect header at 1 or many fields	File: C:\Upload\Tes tData_Wrong Header.xlsx Header at Plant field is “PLANT”	Message S002 - "Error: Uploaded file has incorrect format or wrong column order!"
2.2. 4.2. 2.2	File contain is not enough column	File: C:\Upload\Tes tData_Missing Column.xlsx Missing field “PLANT”	Message S024 - "Error: Incorrect number of columns!"
2.2. 4.2. 3	File contain data but no header	File: C:\Upload\Tes tData_NoHea der.xls Data at first line: 1,FU24, 10000044, FU01, F00, 20250312, 71, KA2, RM02, 7, 20250315	Message S023 - "Error: Cannot read column headers from file!"

Function ID	Function Name
MM01-002	Download file excel template

NO	Test Contents		
	Test Cases	Test Data	Predicted Test Results
1	Download successful	None	After the download is successful, the system will automatically open the downloaded file.
2	User cancels save file dialog	None	Message - "Download cancelled by user"
3	Download failed	None	Message - "Error while downloading file"

Table 25: Download file excel template

Function ID	Function Name
MM01-003	Validate data before create Purchase Order

NO	Test Contents		
	Test Cases	Test Data	Predicted Test Results
1	Check not blank		
1.1	Field blank	Vendor is blank value.	Message: "<FIELD_NAME> cannot be blank"; Cell color: Red
1.2	Field non-blank	Purchase Order Number: 1 Company Code: FU24	Field message is empty; Cell color: White

		<p>Vendor: 10000044</p> <p>Purchase Organization: FU01</p> <p>Purchase Group: F00</p> <p>Document Date: 20250312</p> <p>Material: 71</p> <p>Plant: KA2</p> <p>Storage Location: RM02</p> <p>Quantity: 7</p> <p>Delivery Date: 20250315</p>	
2	Check existence value		
2.1	No value exists in the system	Storage Location: RM00	Message: "<FIELD_NAME> is not exist in the system"
2.2	Value exists in the system	Storage Location: RM02	Field message is empty; Cellcolor: White
3	Positive integer (PO number)		
3.1	Valid number	Purchase Order Number: 1	Field message is empty; Cellcolor: White

3.2	Zero	Purchase Order Number: 0	Message: "<FIELD_NAME> must be a positive integer greater than 0"; Cellcolor: Red
3.3	Decimal number	Purchase Order Number: 1.5	Message: "<FIELD_NAME> invalid, only integer letters are allowed, not containing "," or ". . ."; Cellcolor: Red
3.4	Negative number	Purchase Order Number: -2	Message: "<FIELD_NAME> must be a positive integer greater than 0"; Cellcolor: Red
3.5	Non-numerical	Purchase Order Number: a	Message: "<FIELD_NAME> must be a positive integer greater than 0"; Cellcolor: Red
4	Validate quantity based on unit of material		
4.1	Unit accepted decimal number		
4.1.1	Valid quantity		
4.1.1.1	Positive integer	Quantity: 7	Field message is empty; Cellcolor: White
4.1.1.2	Positive decimal	Quantity: 2.3	Field message is empty; Cellcolor: White
4.1.2	Negative number	Quantity: -7	Message: "<FIELD_NAME> must be a positive number"; Cellcolor: Red
4.1.3	Exceeds the limit of collecting decimal numbers	Unit KG accept 3 decimal places Quantity: 2.3489	Message: "<FIELD_NAME> allows only <N> decimal places for unit <UNIT>"; Cellcolor: Red

4.1. 4	Non-numerical	Quantity: a	Message: "<FIELD_NAME> is not a valid number"; Cellcolor: Red
4.2	Quantity not accept decimal number		
4.2. 1	Valid quantity (Positive integer)	Quantity: 8	Field message is empty; Cellcolor: White
4.2. 2	Negative number	Quantity: -3	Message: "<FIELD_NAME> must be a positive number"; Cellcolor: Red
4.2. 3	Decimal number	Quantity: 2.3	Message: "<FIELD_NAME> allows only 0 decimal places for unit <UNIT>"; Cellcolor: Red
4.2. 4	Non-numerical	Quantity: 7	Message: "<FIELD_NAME> is not a valid number"; Cellcolor: Red
5	Date (file upload)		
5.1	Valid date (yyyymmdd)	Document Date: 20250312	Field message is empty; Cellcolor: White
5.2	Invalid date		
5.2. 1	Wrong format	Document Date: 2025.03.12	Message: "<FIELD_NAME> must be in the format YYYYMMDD in file upload or DD.MM.YYYY in this screen"; Cellcolor: Red
5.2. 2	Non-existent day	Document Date: 20250229	Message: "<FIELD_NAME> has invalid date"; Cellcolor: Red
5.2. 3	Non-existent month	Document Date: 20251312	Message: "<FIELD_NAME> has invalid month"; Cellcolor: Red
6	Change status		
6.1	Error	Data in cell is invalid	Cellcolor: Red
6.2	Not error	Data in cell is valid	Cellcolor: White

7	Change cell color		
7.1	Error	Line of PO item still have error	Status icon: Red light
7.2	Not error	No error in line of PO item	Status icon: Yellow light

Table 26: Validate data before create Purchase Order

Function ID	Function Name
MM01-004	Create Purchase Order

NO	Test Contents		
	Test Cases	Test Data	Predicted Test Results
1	Create PO successful	Purchase Order Number: 1 Company Code: FU24 Vendor: 10000044 Purchase Organization: FU01 Group: F00 Document Date: 20250312 Material: 71 Plant: KA2	Update new PO number; Status: Green light; Field message: "Create successfully"; Message: list of PO are created.

NO	Test Contents		
	Test Cases	Test Data	Predicted Test Results
		Storage Location: RM02 Quantity: 7 Delivery Date: 20250315	
2	Create PO failed		
2.1	Data still has validation error on PO creation screen	Field Storage Location is blank	Message: "PO still contains error. Please fix all to continue."

Table 27: Create Purchase Order

Function ID	Function Name
MM01-005	Cancel Purchase Order

NO	Test Contents		
	Test Cases	Test Data	Predicted Test Results
1	Cancel PO successful	PO Number: 2500001827 Po item: 10	Message: "PO item <PO_ITEM> of PO <PO_NUM> canceled successfully".
2	Cancel PO failed		
2.1	PO not selected to cancel	No selection	Message: "Please select at least one PO to cancel"
2.2	PO has been canceled before	PO Number: 2500001827 Po item: 10 (status:	Message: "PO item <PO_ITEM> of PO <PO_NUM> has been canceled before."

		Deleted)	
2.3	Cancel failed by BAPI	PO Number: 2500001827 Po item: 10 Posted DO	Message: "PO item <PO_ITEM> of PO <PO_NUM> cannot cancel. Error: BAPI returned message separate by ";"

Table 28: Cancel Purchase Order

Function ID	Function Name
MM01-006	Create Outbound Delivery

NO	Test Contents		
	Test Cases	Test Data	Predicted Test Results
1	Create DO successful	PO Number: 2500001827 Po item: 10	Delivery Outbound Number(s): <DO_NUM> created.
2	Create DO failed		
2.1	No DO selected	No selection	No Purchase Order Item is selected
2.2	Missing shipping point	PO Number: 2500001827 Po item: 10 Shipping point is blank	Cannot found Shipping Point for Plant <Plant>
2.3	No open quantity available	PO Number: 2500001827 Po item: 10 Open quantity: 0	Open Quantity is not available for this Stock Transport Order.
2.4	BAPI returns error	PO Number: 2500001827 Po item: 10 Delivery	Error: <Details from BAPI message>

		quantity greater than open quantity	
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Table 29: Create Outbound Delivery

Function ID	Function Name
MM01-007	Cancel Outbound Delivery

NO	Test Contents		
	• Test Cases	Test Data	Predicted Test Results
1	Successful DO Cancel	DO: 80001192	Cancel Delivery Outbound <DO_NUM> successfully.
2	Cancel DO failed		
2.1	No DO selected	No selection	No Delivery Outbound is selected
2.2	DO already posted GI	DO: 80001192 posted GI	Cannot cancel Delivery Outbound <DO_NUM>. GI has been posted.
2.3	DO already confirmed POD	DO: 80001192 confirmed POD	Cannot cancel Delivery Outbound <DO_NUM>. POD has been confirmed.

Table 30: Cancel Outbound Delivery

Function ID	Function Name
MM01-008	Post Goods Issue

NO	Test Contents		
	• Test Cases	Test Data	Predicted Test Results
1	Successful GI	DO:	Post Goods Issue successfully for Delivery

		80001192	Outbound <DO_NUM>.
2	GI failed		
2.1	No DO selected	No selection	No Delivery Outbound is selected
2.2	DO already GI	DO: 80001192 already post GI	Post Goods Issue failed for Delivery Outbound <DO_NUM>

Table 31: Post Goods Issue

Function ID	Function Name
MM01-009	Cancel Goods Issue (GI)

NO	Test Contents		
	Test Cases	Test Data	Predicted Test Results
1	Successful GI Cancel	DO: 80001192	Cancel Goods Issue successfully for Delivery Outbound <DO_NUM>.
2	GI Cancel failed		
2.1	No DO selected	No selection	No Delivery Outbound is selected
2.2	DO has not GI yet	DO: 80001192 not posted GI yet	Delivery Outbound <DO_NUM> has not posted Goods Issue yet.

Table 32: Cancel Goods Issue (GI)

Function ID	Function Name
MM01-010	Proof of Delivery

NO	Test Contents		
	Test Cases	Test Data	Predicted Test Results
1	Successful POD	DO: 80001192	POD Confirmed Successfully for Delivery:

	Confirm		<DO_NUM>
2	POD Confirm Failed		
2.1	DO not selected	No selection	No Delivery Outbound is selected
2.2	DO not GI'd yet	DO: 80001192 not posted GI yet	Delivery Outbound <DO_NUM> has not posted Goods Issue yet.
2.3	Already POD confirmed	DO: 80001192 already confirmed POD	Delivery Outbound <DO_NUM> has already confirmed Proof of Delivery.

Table 33: Proof of Delivery

Function ID	Function Name
MM01-011	Cancel POD

NO	Test Contents		
	• Test Cases	Test Data	Predicted Test Results
1	Successful POD Cancel	DO: 80001192	Cancel POD successfully for Delivery Outbound <DO_NUM>.
2	POD Cancel failed		
2.1	DO not selected	No selection	No Delivery Outbound is selected
2.2	DO not POD confirmed	DO: 80001192 not confirmed POD yet	Delivery Outbound <DO_NUM> has not confirmed POD yet.
2.3	Already posted GR	DO: 80001192 already posted GR	Delivery Outbound <DO_NUM> has already posted a Goods Receipt.

Table 34: Cancel POD

Function ID	Function Name
MM01-012	Cancel GR

NO	Test Contents		
	Test Cases	Test Data	Predicted Test Results
1	Successful GR	DO: 80001192	Goods Receipt posted successfully! Document Number: <MatDoc>
2	GR failed		
2.1	DO not selected	No selection	No Delivery Outbound is selected
2.2	DO not confirmed POD	DO: 80001192 not confirm POD yet	Delivery Outbound <DO_NUM> has not confirmed POD yet.
2.3	Already GR posted	DO: 80001192 already posted GR	Delivery Outbound <DO_NUM> has already posted a Goods Receipt.

Table 35: Goods Receipt (GR)

Function ID	Function Name
MM01-013	Cancel Goods Receipt (GR)

NO	Test Contents		
	Test Cases	Test Data	Predicted Test Results
1	Successful GR Cancel	DO: 80001192	Goods Receipt cancellation successful! Document Number: <MatDoc>
2	GR Cancel failed		

2.1	DO not selected	No selection	No Delivery Outbound is selected
2.2	No GR posted	DO: 80001192 has not posted GR yet	Delivery Outbound <DO_NUM> has not posted Goods Receipt yet.
2.3	Already cancelled	DO: 80001192 already cancelled	Delivery Outbound <DO_NUM> has not posted Goods Receipt yet.

Table 36: Cancel Goods Receipt (GR)

Function ID		Function Name	
MM01-014		Invoice Posting	

NO	Test Contents		
	• Test Cases	Test Data	Predicted Test Results
1	Successful Invoice	DO: 80001192	Goods Receipt cancellation successful! Document Number: <MatDoc>
2	Invoice failed		
2.1	No freight cost entered	Freight cost is blank	Please fill in the Freight Cost value before posting Invoice.
2.2	Already posted Invoice	DO posted invoice	Delivery Outbound <DO_NUM> has already posted Invoice.
2.3	DO not selected	No selection	No Delivery Outbound is selected

Table 37: Invoice Posting

V.2.3.2 Functional Test

NO.	Test Contents	
	Test Cases	Predicted Test Results
1	Delivery Process	

1.1	Create Purchase Order	<ul style="list-style-type: none"> - The system reads the file and creates stock transport orders. - The new STO number(s) appear in the PO Number field - A green status icon is shown. - The message field shows "Create successfully" - The program message shows "PO Created: XXXXX successfully! "
1.2	Create Delivery Outbound	<ul style="list-style-type: none"> - The system generates an Outbound Delivery. - The program message shows "Delivery Outbound Number(s): XXXXXX created." - The Delivery Outbound Header ALV is reloaded and showing newly created Delivery Outbound header information. - The Purchase Order Items ALV is reloading and updating Open Quantity, Delivery Quantity for the corresponding Purchase Order items.
1.3	Post Goods Issue	<ul style="list-style-type: none"> - The system posts material documents with movement type 68A. - The program message shows ""Post Goods Issue successfully for Delivery Outbound XXXXXX."" - The Delivery Outbound Header ALV is reloading and showing newly created Material Document information for the corresponding Delivery Outbound Header. - The Purchase Order Items ALV is reloading and updating In transit Quantity for the corresponding Purchase Order items.
1.4	Post Proof of Delivery	<ul style="list-style-type: none"> - The system posts material documents with movement type 68E. - The program message shows "POD Confirmed Successfully for Delivery: XXXXX" - The Delivery Outbound Header ALV is reloaded and showing newly created Material Document information for the corresponding Delivery Outbound Header.
1.5	Post Goods Receipt	<ul style="list-style-type: none"> - The system posts material documents with movement type 109. - The program message shows "Goods Receipt posted successfully! Document Number: YYYYY" - The Delivery Outbound Header ALV is reloaded and showing newly created Material Document information for the corresponding Delivery Outbound Header. - The Purchase Order Items ALV is reloading and updating In transit Quantity, Goods Receipt Quantity for the corresponding Purchase Order items.

1.6	Post Invoice	<ul style="list-style-type: none"> - The system posts material documents with movement type 109. - The program message shows "Goods Receipt posted successfully! Document Number: YYYYYY" - The Delivery Outbound Header ALV is reloading and showing newly created Material Document information for the corresponding Delivery Outbound Header. - The Purchase Order Items ALV is reloading and updating In transit Quantity, Goods Receipt Quantity for the corresponding Purchase Order items.
2	Cancellation Process	
2.1	Cancel Goods Receipt	<ul style="list-style-type: none"> - The system posts material documents with movement type 110. - The program message shows "Cancel Goods Receipt successfully. Material Document number YYYYYY" " - The Delivery Outbound Header ALV is reloading and removing previous Goods Receipt Material Document information for the corresponding Delivery Outbound Header. - The Purchase Order Items ALV is reloading and updating Goods Receipt Quantity, Intransit Quantity for the corresponding Purchase Order items.
2.2	Cancel Proof of Delivery	<ul style="list-style-type: none"> - The system posts material documents with movement type 68F. - The program message shows "POD Unconfirmed Successfully for Delivery: YYYYYY" - The Delivery Outbound Header ALV is reloading and removing previous Proof of Delivery Material Document information for the corresponding Delivery Outbound Header.
2.3	Cancel Goods Issue	<ul style="list-style-type: none"> - The system posts material documents with movement type 68B. - The program message shows "Cancel Goods Issue successfully for Delivery Outbound XXXXX" - The Delivery Outbound Header ALV is reloading and removing previous Goods Issue Material Document information for the corresponding Delivery Outbound Header. - The Purchase Order Items ALV is reloading and updating Intransit Quantity for the corresponding Purchase Order items.

2.4	Cancel Delivery Outbound	<ul style="list-style-type: none"> - The system deletes the selected Delivery Outbound. - The program message shows "Cancel Delivery Outbound XXXXXX successfully." - The Delivery Outbound Header ALV and Delivery Outbound Items ALV are reloaded and clearing corresponding rows belong to that Delivery Outbound. - The Purchase Order Items ALV is reloading and updating Open Quantity, Delivery Quantity for the corresponding Purchase Order items.
2.5	Cancel Purchase Order Items	<ul style="list-style-type: none"> - The system deletes the selected Purchase Order items. - The program message shows "PO items AA, BB of PO CCCCCC canceled successfully.". <p>The Purchase Order items ALV is reloaded and clearing corresponding rows belong to that Purchase Order items.</p>

Table 38: Functional Test

V.2.3.3. Scenario Test

N	Test Contents		
O	Test Cases	Test Data	Predicted Test Results
1	Download Excel Template File	None	An Excel Template file named 'Template.xlsx' is downloaded to the user locale.

2	Upload Excel File with Purchase Order Items data	Item 10: COMPANY CODE: FU24 VENDOR: 10000044 PURCHASE ORGANIZATION: FU01 PURCHASE GROUP: F00 DOCUMENT DATE: 20250312 MATERIAL: 71 PLANT: KA2 STORAGE LOCATION: RM02 QUANTITY: 7 DELIVERY DATE: 20250315 Item 20: COMPANY CODE: FU24 VENDOR: 10000044 PURCHASE ORGANIZATION: FU01 PURCHASE GROUP: F00 DOCUMENT DATE: 20250312 MATERIAL: 71 PLANT: KA2 STORAGE LOCATION: RM02 QUANTITY: 15 DELIVERY DATE: 20250315	<ul style="list-style-type: none"> - The system reads the file and creates stock transport orders. - The new STO number(s) appear in the PO Number field - A green status icon is shown. - The message field shows "Create successfully" - The program message shows "PO Created: 2500001938 successfully! "
3	Post Outbound delivery		

	3.	Post Outbound delivery for single Purchase Order	Purchase Order: 2500001938 Item: 10 New Delivery Outbound Quantity: 7 Purchase Order: 2500001938 Item: 20 New Delivery Outbound Quantity: 15	- The system generates an Outbound Delivery. - The program message shows "Delivery Outbound Number(s): 80001247 created." - The Delivery Outbound Header ALV is reloaded and showing newly created Delivery Outbound header information. - The Purchase Order Items ALV is reloading and updating Open Quantity, Delivery Quantity for the corresponding Purchase Order items.
	3.	Post Outbound delivery for multiple Purchase Order	Purchase Order: 2500001938 Item: 10 New Delivery Outbound Quantity: 7 Purchase Order: 2500001938 Item: 20 New Delivery Outbound Quantity: 15 Purchase Order: 2500001939 Item: 10 New Delivery Outbound Quantity: 30,5	- The system generates an Outbound Delivery. - The program message shows "Delivery Outbound Number(s): 80001247, 80001248 created." - The Purchase Order Items ALV is reloading and updating Open Quantity, Delivery Quantity for the corresponding Purchase Order items.
	3.	Post partial Outbound delivery for Purchase Order	Purchase Order: 2500001938 Item: 10 New Delivery Outbound Quantity: 4	- The system generates an Outbound Delivery. - The program message shows "Delivery Outbound Number(s): 80001247 created." - The Delivery Outbound Header ALV is reloaded and showing newly created Delivery Outbound header information.

		<p>Purchase Order: 2500001938</p> <p>Item: 20</p> <p>New Delivery</p> <p>Outbound Quantity: 7</p>	<ul style="list-style-type: none"> - The Purchase Order Items ALV is reloading and updating Open Quantity, Delivery Quantity for the corresponding Purchase Order items.
4	Post Goods Issue	<p>Delivery Outbound: 80001247</p>	<ul style="list-style-type: none"> - The system posts material documents with movement type 68A. - The program message shows "Post Goods Issue successfully for Delivery Outbound 80001247." - The Delivery Outbound Header ALV is reloading and showing newly created Material Document information for the corresponding Delivery Outbound Header. - The Purchase Order Items ALV is reloading and updating In transit Quantity for the corresponding Purchase Order items.
5	Post Proof of Delivery	<p>Delivery Outbound: 80001247</p>	<ul style="list-style-type: none"> - The system posts material documents with movement type 68E. - The program message shows "POD Confirmed Successfully for Delivery: 80001247" - The Delivery Outbound Header ALV is reloading and showing newly created Material Document information for the corresponding Delivery Outbound Header.
6	Post Goods Receipt	<p>Delivery Outbound: 80001247</p>	<ul style="list-style-type: none"> - The system posts material documents with movement type 109. - The program message shows "Goods Receipt posted successfully! Document Number: 5000000702" - The Delivery Outbound Header ALV is reloading and showing newly created Material Document information for the corresponding Delivery Outbound Header. - The Purchase Order Items ALV is reloading and updating In transit Quantity, Goods Receipt Quantity for the corresponding Purchase Order items.

7	Post Invoice	Delivery Outbound: 80001247 Freight Cost: 1.000.000,000 Currency: VND Invoice Party: 10000046	- The system creates a new Invoice document for the Stock Transport Order. - The program message shows "Post Invoice for Delivery Outbound 80001247 successfully, Mat. Doc. Number 5105600642" - The Delivery Outbound Header ALV is reloading and showing newly created Invoice Document information for the corresponding Delivery Outbound Header. - The Freight Cost column will be disabled. - The Purchase Order Items ALV is reloading and updating In transit Quantity, Goods Receipt Quantity for the corresponding Purchase Order items.
8	Cancel Goods Receipt	Delivery Outbound: 80001247	- The system posts material documents with movement type 110. - The program message shows "Cancel Goods Receipt successfully. Material Document number 5000000703 "- The Delivery Outbound Header ALV is reloading and removing previous Goods Receipt Material Document information for the corresponding Delivery Outbound Header. - The Purchase Order Items ALV is reloading and updating Goods Receipt Quantity, Intransit Quantity for the corresponding Purchase Order items.
9	Cancel Proof of Delivery	Delivery Outbound: 80001247	- The system posts material documents with movement type 68F. - The program message shows "POD Unconfirmed Successfully for Delivery: 80001247" - The Delivery Outbound Header ALV is reloading and removing previous Proof of Delivery Material Document information for the corresponding Delivery Outbound Header.

10	Cancel Goods Issue	Delivery Outbound: 80001247	<ul style="list-style-type: none"> - The system posts material documents with movement type 68B. - The program message shows "Cancel Goods Issue successfully for Delivery Outbound 80001247" - The Delivery Outbound Header ALV is reloading and removing previous Goods Issue Material Document information for the corresponding Delivery Outbound Header. - The Purchase Order Items ALV is reloading and updating Intransit Quantity for the corresponding Purchase Order items.
11	Cancel Delivery Outbound	Delivery Outbound: 80001247	<ul style="list-style-type: none"> - The system deletes the selected Delivery Outbound. - The program message shows "Cancel Delivery Outbound 80001247 successfully." - The Delivery Outbound Header ALV and Delivery Outbound Items ALV are reloaded and clearing corresponding rows belong to that Delivery Outbound. - The Purchase Order Items ALV is reloading and updating Open Quantity, Delivery Quantity for the corresponding Purchase Order items.
12	Cancel Purchase Order Items	Purchase Order: 2500001938 Item: 10 Purchase Order: 2500001938 Item: 20	<ul style="list-style-type: none"> - The system deletes the selected Purchase Order items. - The program message shows "PO items 10, 20 of PO 2500001938 canceled successfully.". <p>The Purchase Order items ALV is reloaded and clearing corresponding rows belong to that Purchase Order items.</p>

Table 39: Scenario Test

V.2.3.4. User Acceptance Test

Scenario 1: Upload and Execute Full STO Process – All Quantity in One Delivery Order	COMPANY CODE: FU24 VENDOR: 10000044 PURCHASE ORGANIZATION: FU01 PURCHASE GROUP: F00 DOCUMENT DATE: 20250312 MATERIAL: 58 PLANT: KA2 STORAGE LOCATION: RM02 QUANTITY: 593 DELIVERY DATE: 20250315	PO Created: 2500001877 successfully! Delivery Outbound Number(s): 0080001222 created. GI Number: 4900039925 POD NUmber: 4900039926 Goods Receipt posted successfully! Document Number: 5000000690
Scenario 2: Upload and Execute Full STO Process – Split into 2 Delivery Orders	COMPANY CODE: FU24 VENDOR: 10000044 PURCHASE ORGANIZATION: FU01 PURCHASE GROUP: F00 DOCUMENT DATE: 20250312 MATERIAL: 58 PLANT: KA2 STORAGE LOCATION: RM02 QUANTITY: 50	PO Created: 2500001881 successfully! Delivery Outbound Number(s): 0080001222 created. Delivery Outbound Number(s): 0080001231 created. GI Number: 4900039925 GI Number: 4900039925 POD NUmber: 4900039928 POD NUmber: 4900039929 Goods Receipt posted successfully! Document Number: 5000000691

	DELIVERY DATE: 20250315	Goods Receipt posted successfully! Document Number: 5000000692
Scenario 3: Cancel Full STO Process	Cancel GR: 5000000698 Cancel POD: 4900039953 Cancel GI: 4900039952 Cancel DO: 80001237 Cancel PO: 2500001891	Cancel GR: 5000000698 successfully! Cancel POD: 4900039953 successfully! Cancel GI: 4900039952 successfully! Cancel DO: 80001237 successfully! Cancel PO: 2500001891 successfully!

Table 39: User Acceptance Test