How to Use LSMW in SAP to Import Asset Master Data

This guide shows you how to use LSMW (Legacy System Migration Workbench) in SAP to import asset master data in bulk. You will create a new LSMW project, record a batch input session for asset creation, map source fields to target fields, prepare a data file in Excel, and run the import so that new asset master records are created automatically in SAP.

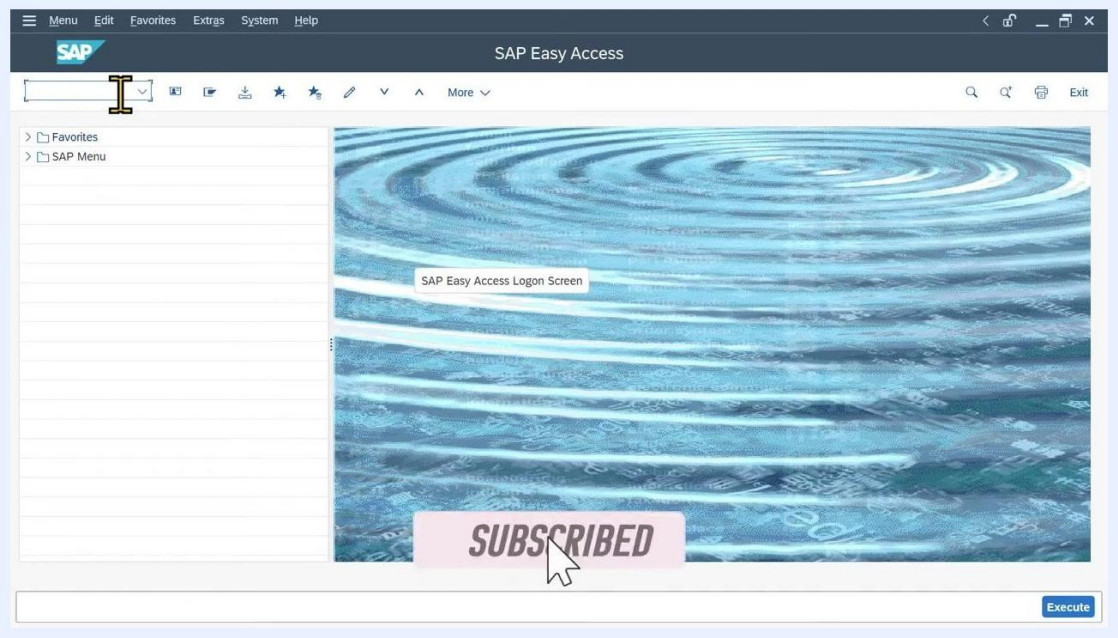
Prerequisites

- Access to SAP with authorization to use transaction **LSMW**.
- Authorization to create asset master records using transaction **AS01**.
- Microsoft Excel for preparing the data file used in the import.
- Knowledge of the asset class, company code, and other organizational values required for your assets (for example, Class, Company Code, Cost Center, Profit Center, and Segment).

Creating a new LSMW project

Step 1: Open SAP Easy Access

Launch SAP and make sure you are on the **SAP Easy Access** screen. This screen shows the SAP logo, the menu bar (**Menu**, **Edit**, **Favourites**, **Extras**, **System**, **Help**), and a search bar at the top. The left panel shows **Favorites** and **SAP Menu**.



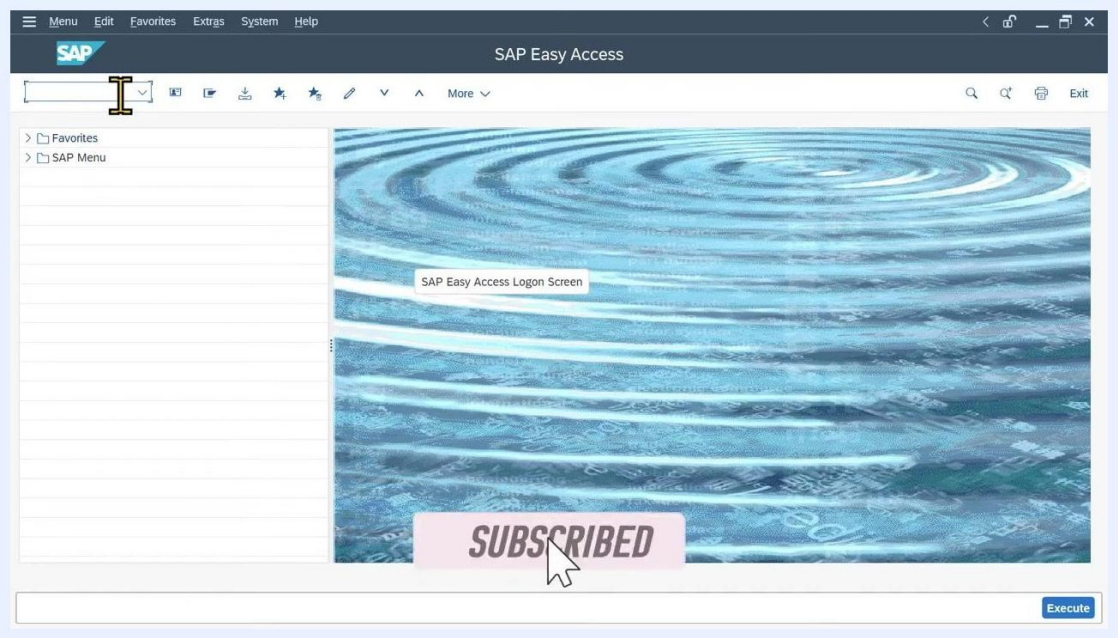
SAP Easy Access screen with menu bar, search bar, and navigation panel visible

Step 2: Navigate to the LSMW transaction

In the command field, enter LSMW and press **Enter** to open the Legacy System Migration Workbench. If a message from SAP appears, click **Continue** to proceed.

Step 3: Create a new project entry

Click the **Create Entry** button (the icon with a plus sign, also labeled "Create Entry (Shift+F1)"). The **Project Selection** section prompts you for Project, Subproject, and Object.

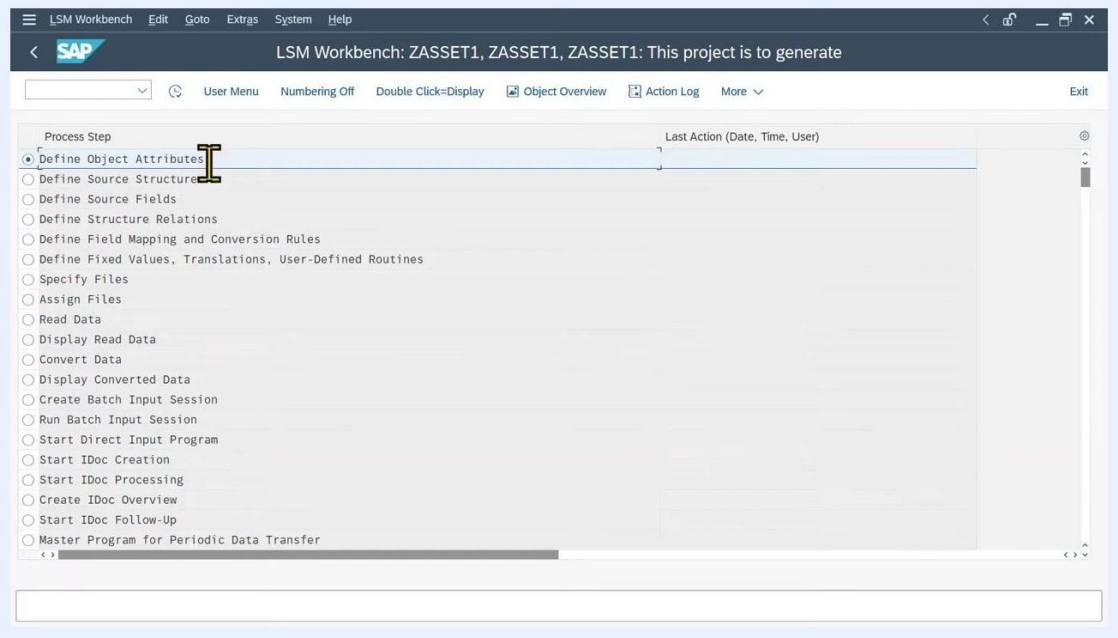


LSMW Project Selection screen with the Create Entry button highlighted and empty fields for Project, Subproject, and Object

In the **Create project** dialog, enter the following:

- **Project:** ZASSET1
- **Description:** This project is to generate asset masters

Click the green checkmark to confirm.



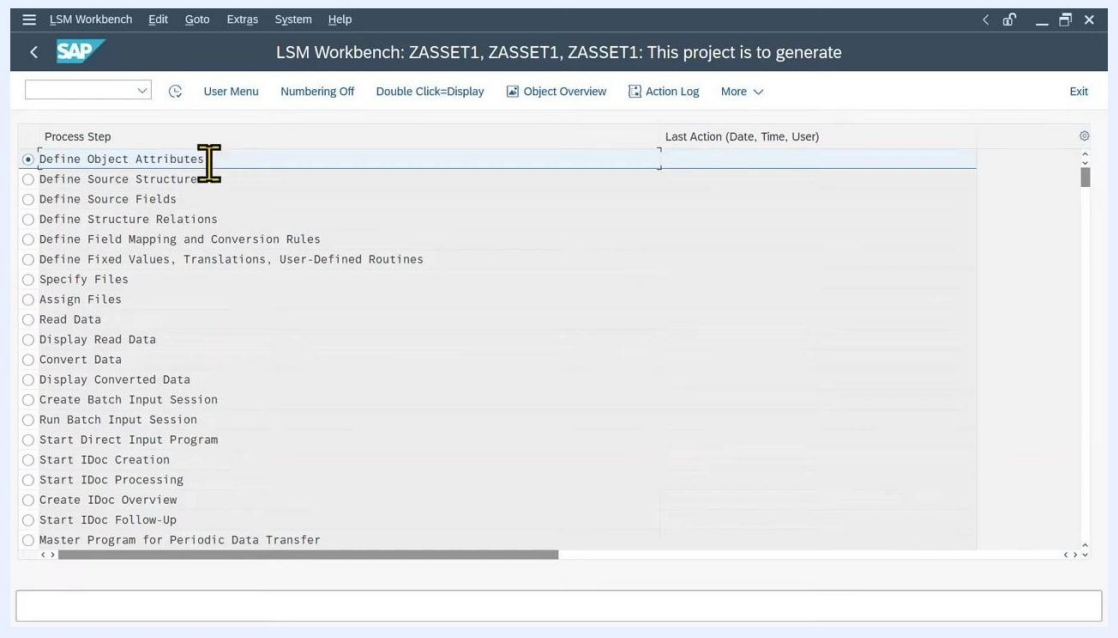
Create project dialog with Project ZASSET1 and Description "This project is to generate asset masters"

Step 4: Enter subproject details

In the **Create Subproject** dialog, enter the following:

- **Subproject:** ZASSET1
- **Description:** This project is to generate asset masters

Click the green checkmark to confirm.



Create Subproject dialog with Subproject ZASSET1 and Description "This project is to generate asset masters"

Step 5: Enter object details

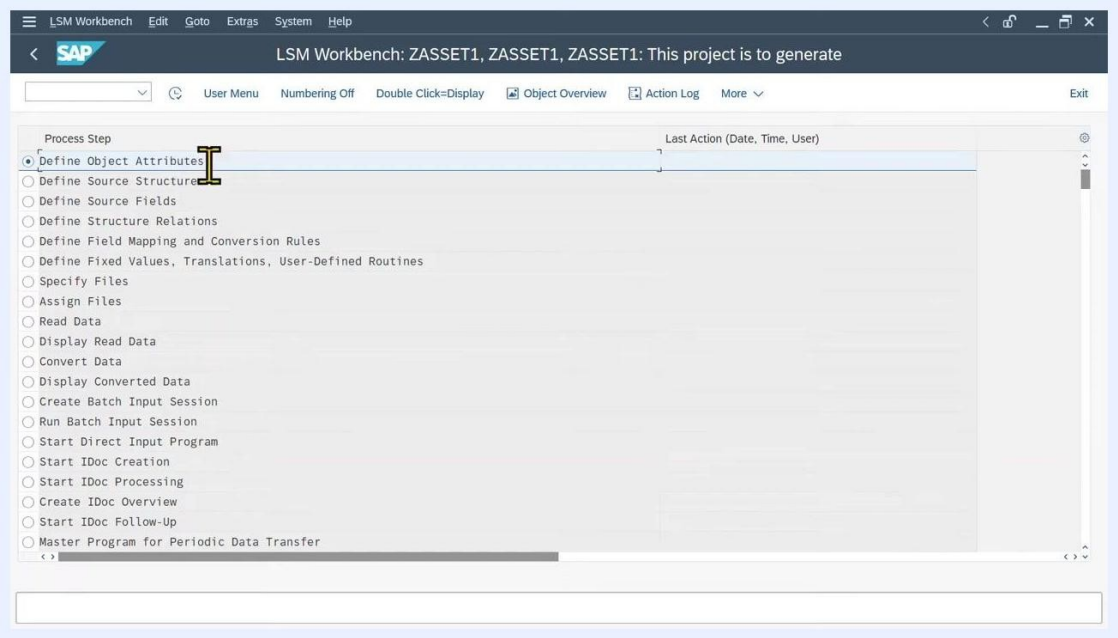
In the **Create Object** dialog, enter the following:

- **Object:** ZASSET1
- **Description:** This project is to generate asset masters

Click the green checkmark to confirm.

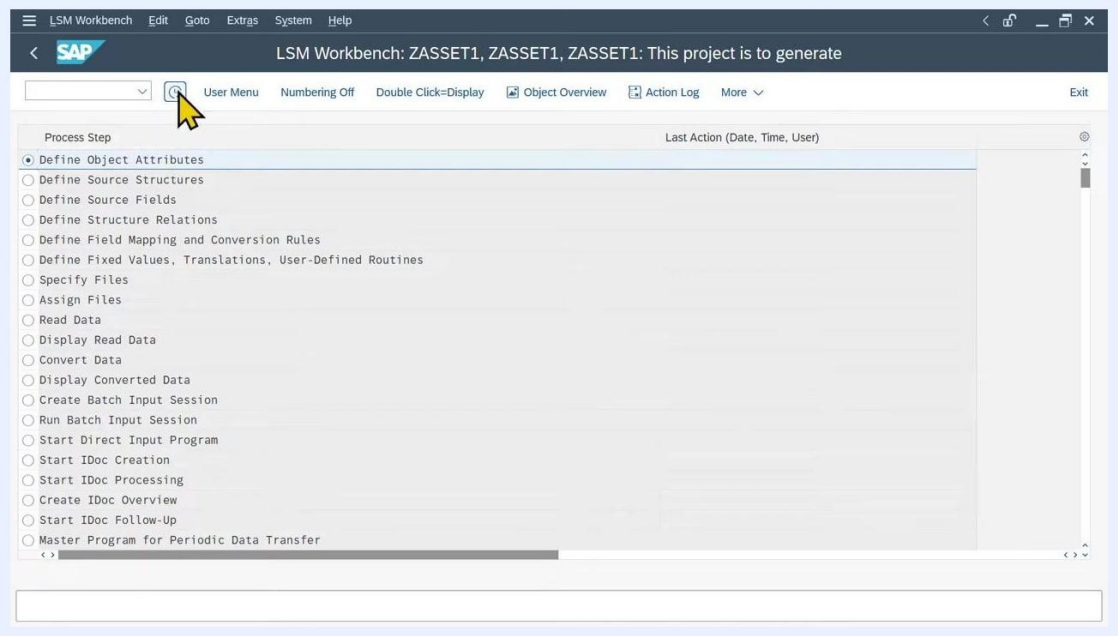
Step 6: Define object attributes

The LSM Workbench displays a list of process steps required for the migration project. The first step, **Define Object Attributes**, is selected by default.



LSM Workbench process steps list with Define Object Attributes selected

Click the **Change** button (the pencil icon, also labeled "Display ↔ Change") to enable editing of the object attributes.



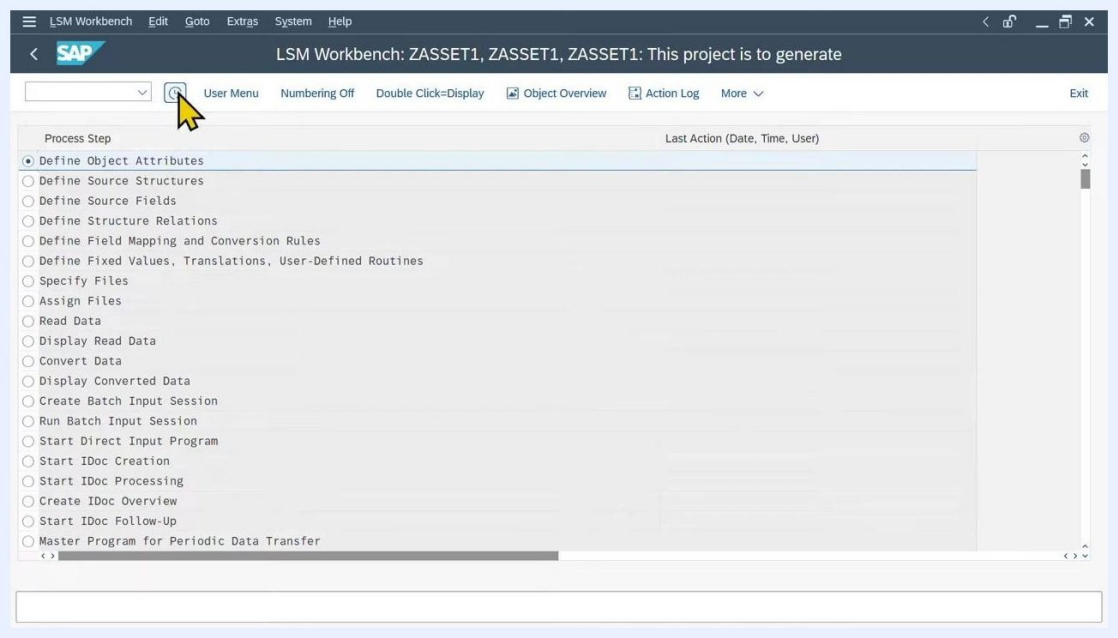
LSM Workbench Change Object Attributes screen with the Change button highlighted

Step 7: Select batch input recording

In the **Object Type and Import Method** section, select the **Batch Input Recording** radio button. This method creates a batch input session for mass data processing.

Step 8: Create a new recording

Click the **Recordings: Overview** button (the folder icon next to the Recording field) to manage recordings.

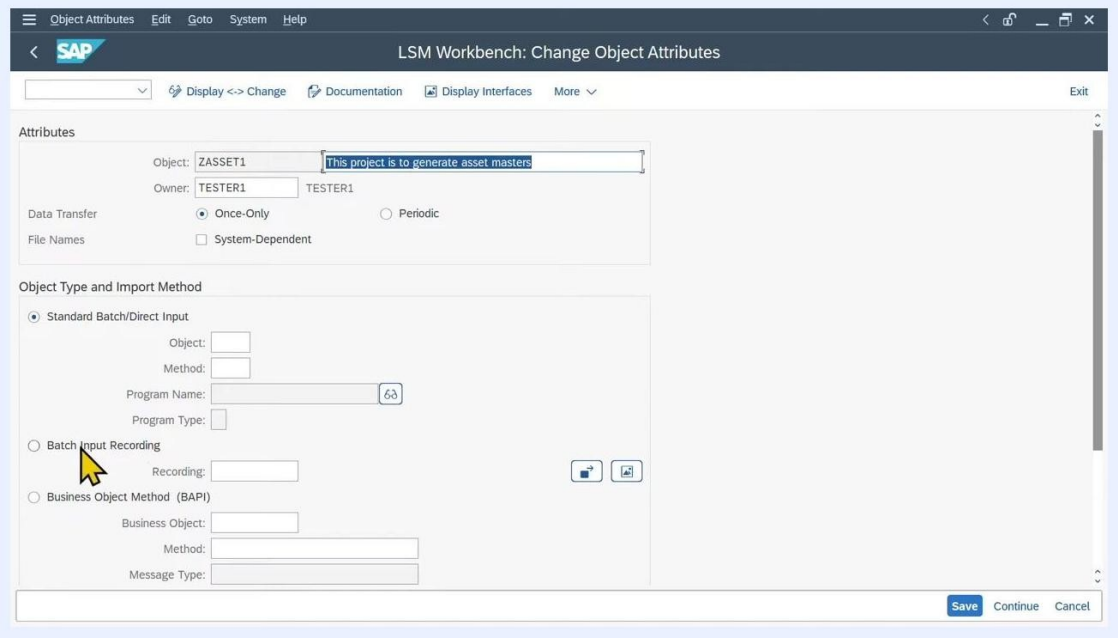


Change Object Attributes screen with Batch Input Recording selected and the Recordings: Overview button highlighted

In the **Create Recording** dialog, enter the following:

- **Recording:** ZASSET
- **Description:** Create Asset Master
- **Owner:** pre-filled automatically (for example, TESTER1)

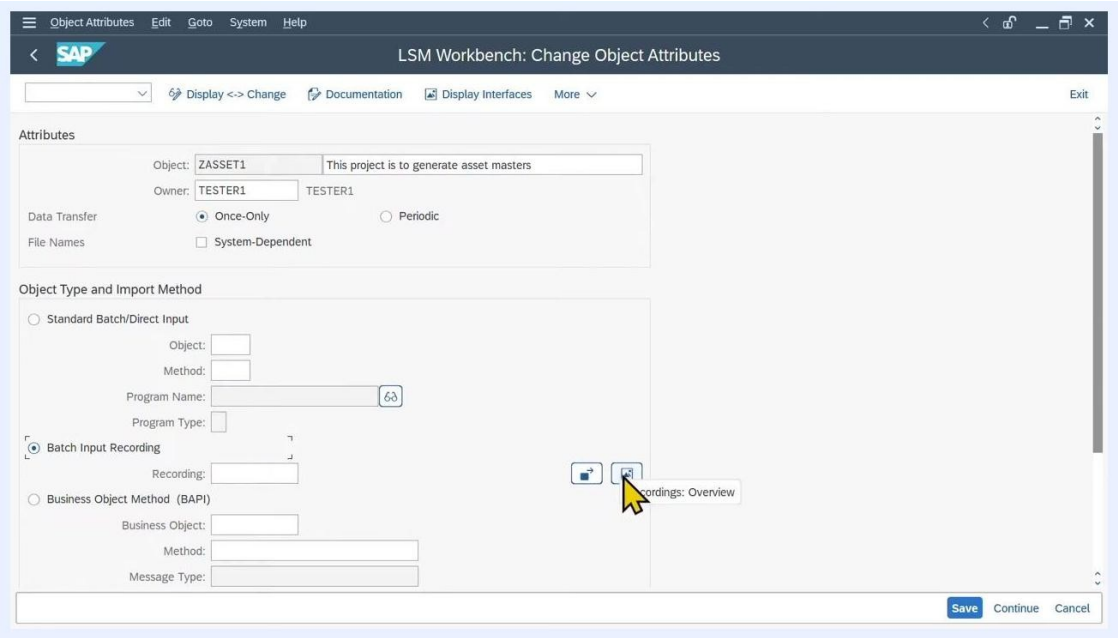
Click the green checkmark to confirm.



Create Recording dialog with Recording ZASSET, Description "Create Asset Master", and Owner TESTER1

Step 9: Enter the transaction code

In the **Transaction Code** dialog, enter AS01 as the transaction code used for creating asset master data in SAP. Click the green checkmark to proceed.



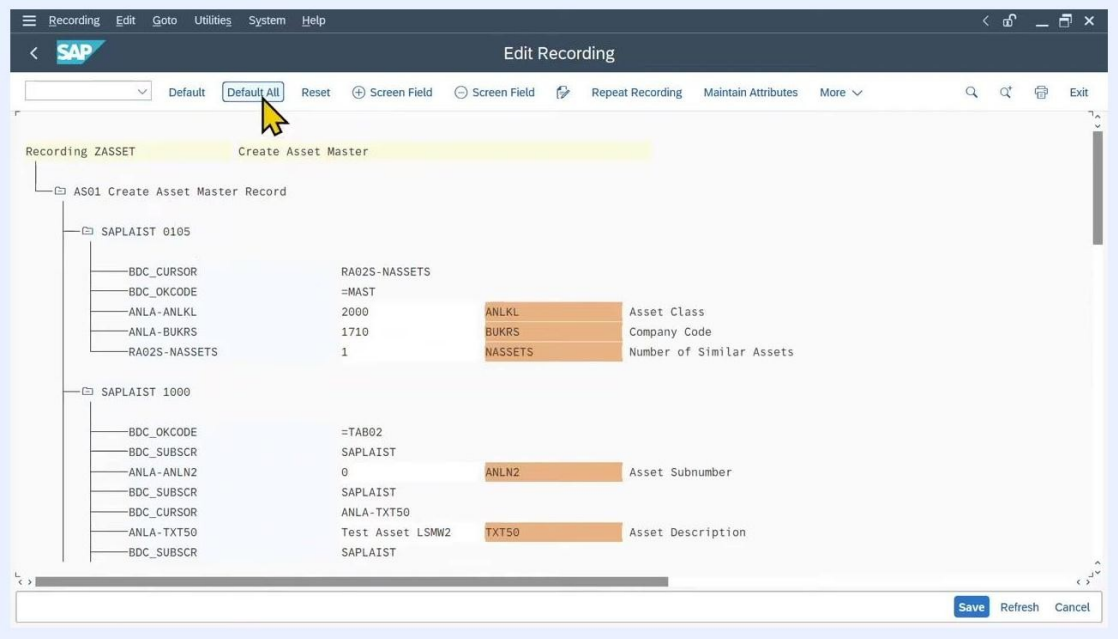
Transaction Code dialog with Transaction Code AS01

Step 10: Record the asset creation steps

On the **Create Asset: Master data** screen, enter the following details:

- **Description:** Test Asset LSMW2
- **Class:** 2000 (Machinery Equipment)
- **Company Code:** 1710

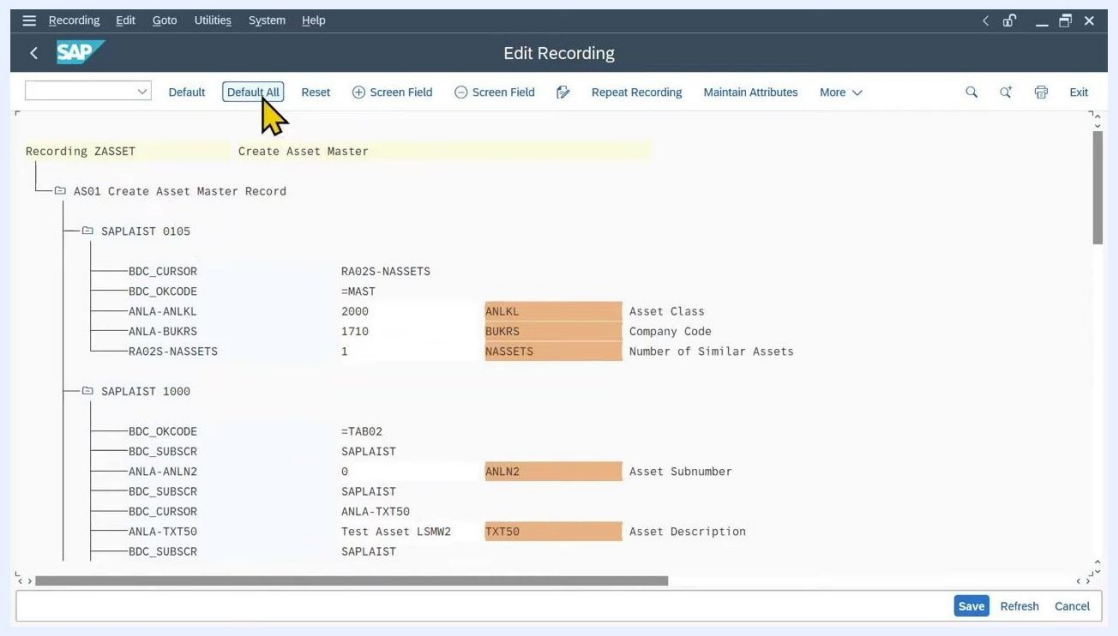
The **Account Determination** field should display 160020 Machinery and Equipment. Leave the "Asset Main No. Text," "Serial number," "Inventory Number," and "Quantity" fields blank unless required.



Create Asset: Master data screen with Description "Test Asset LSMW2" and the other fields set as described

Click the **Time-Dependent** tab. No changes are required in the "Origin" or "Deprec. Areas" tabs at this stage. Include a **Cost Center** in the relevant field if prompted, then click **Save** to create the asset.

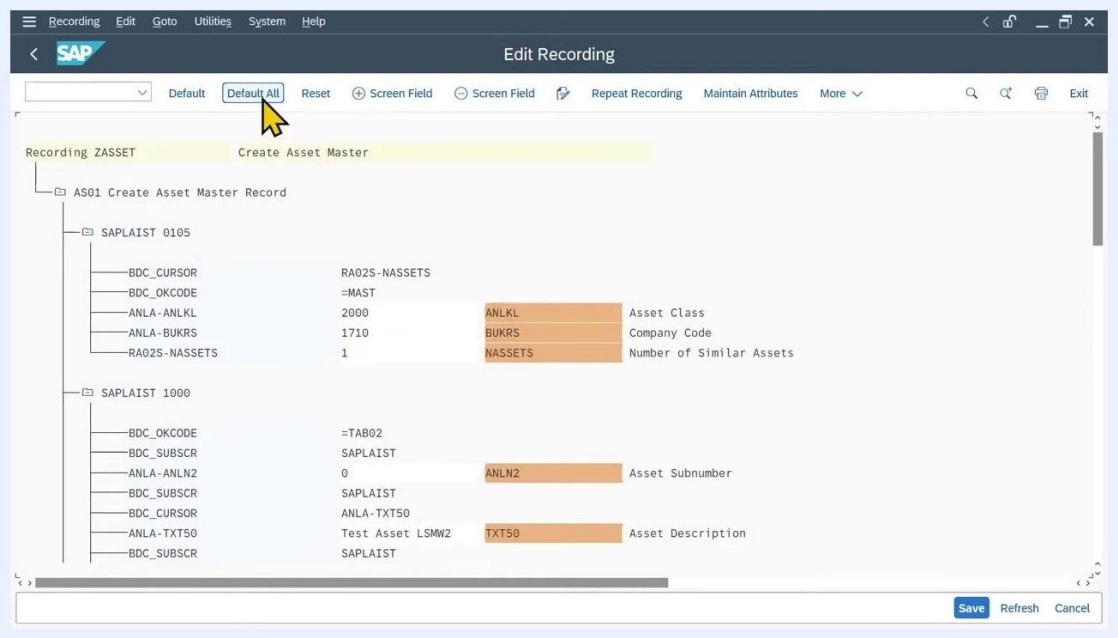
A confirmation message appears indicating the asset was created (for example, INTERN-00001 0 Test Asset LSMW2).



Asset: Display messages dialog showing the asset creation confirmation

Step 11: Review and save the recording

After saving, the system displays the steps it recorded during the asset creation. On the **Edit Recording** screen, click **Default All** to apply default values to all fields, then click **Save** to store the recording.



Edit Recording screen with the Default All button highlighted and the asset creation steps listed

Click the **Back** button multiple times to return to the main LSMW Workbench screen.

Defining source structures and source fields

Step 12: Define source structures

In the LSM Workbench, select the **Define Source Structures** step and switch to **Change Mode** if necessary. Click **Create Structure** and enter the following:

- **Structure:** ZTEST_ASSET
- **Description:** Structure to create a test asset

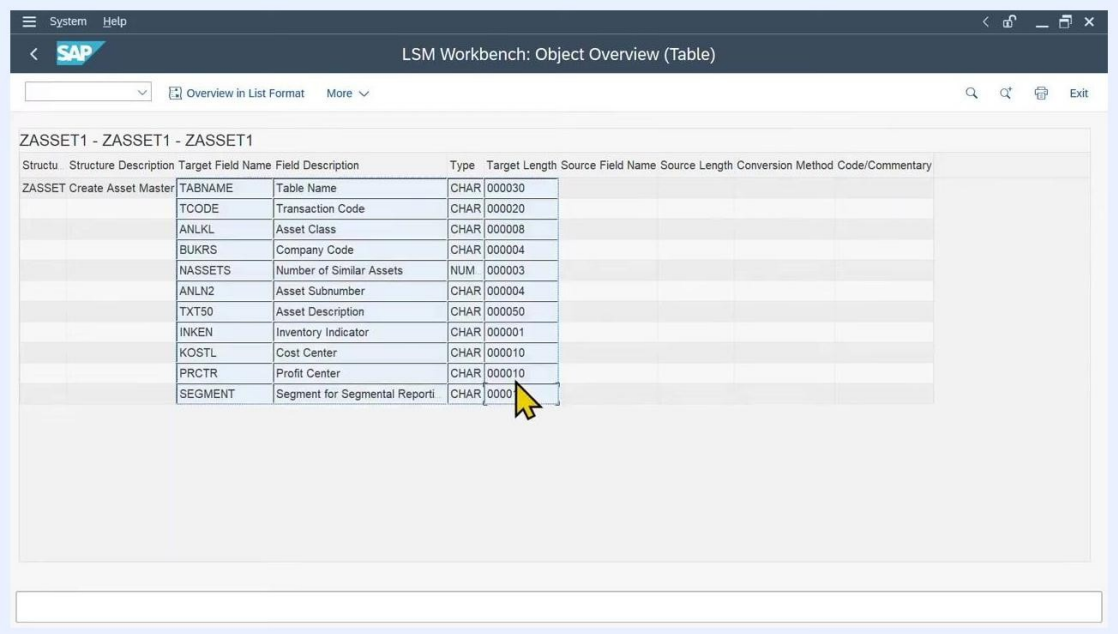
Click **Save**, then go back to the main process steps list.

Step 13: Review and copy technical fields

With **Define Source Structures** selected, click **Object Overview**. On the **Object Overview (Table)** screen, review the list of technical fields recorded by LSMW. These typically include:

- TABNAME (Table Name)
- TCODE (Transaction Code)
- ANLKL (Asset Class)
- BUKRS (Company Code)
- NASSETS (Number of Similar Assets)
- ANLN2 (Asset Subnumber)
- TXT50 (Asset Description)
- INKEN (Inventory Indicator)
- KOSTL (Cost Center)
- PRCTR (Profit Center)
- SEGMENT (Segment for Segmental Reporting)

Confirm these are the fields you want to fill during the import. Select all the field entries and copy them into a blank Excel sheet for reference.

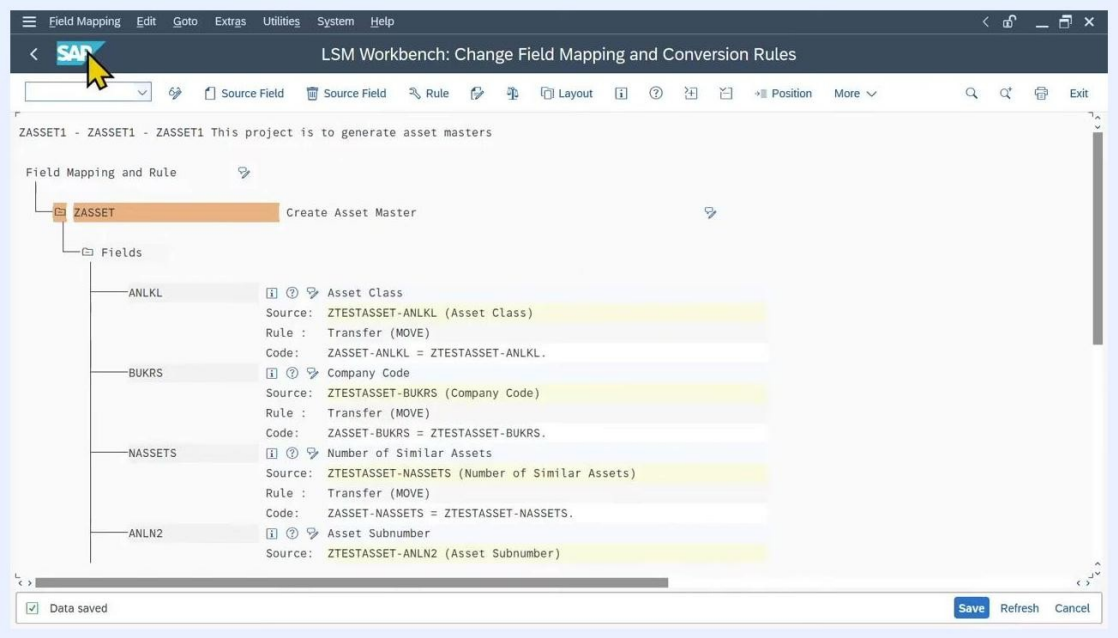


LSM Workbench Object Overview (Table) screen showing technical fields for asset master creation

Open your Excel workbook and paste the list of technical fields (field names, labels, types, and lengths) from the LSMW Object Overview or Source Fields screen into consecutive columns:

- **Column A:** Field Name (for example, ANLKL, BUKRS, NASSETS)
- **Column B:** Field Label (for example, Asset Class, Company Code)
- **Column C:** Type (for example, CHAR, NUMC)
- **Column D:** Length (for example, 4, 3, 50)

Make sure the data types are correct — use CHAR for character fields and NUMC for numeric fields. Save your Excel file.



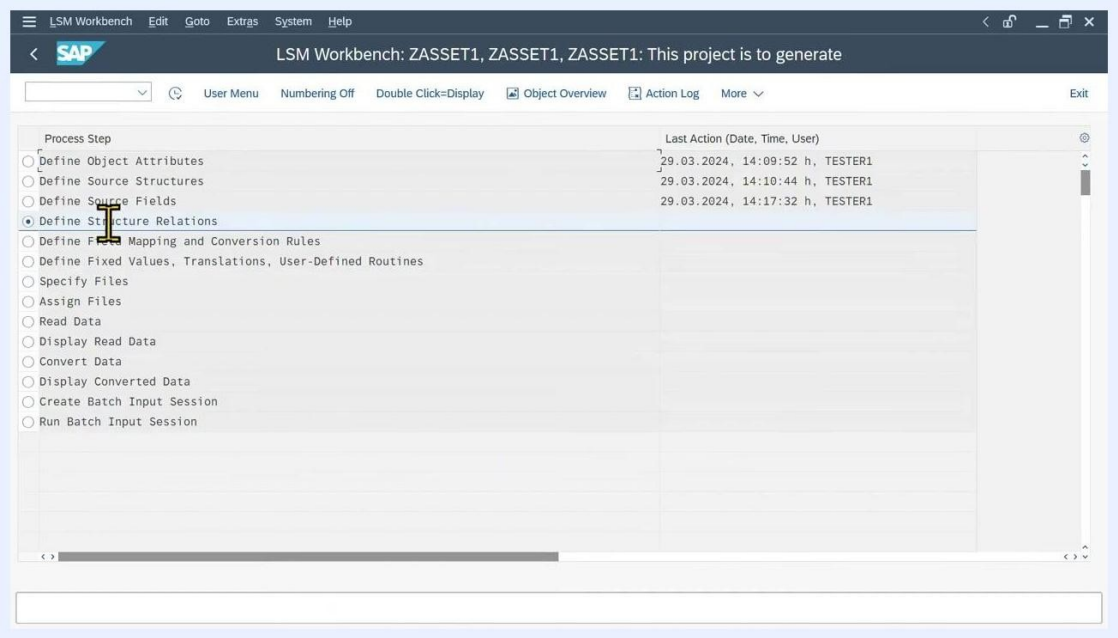
Excel sheet with technical fields pasted: Field Name, Field Label, Type, and Length for asset master data

Step 14: Define source fields

Go back to the main process steps list and click **Define Source Fields**. Select the source field and switch to **Change Mode**, then click **Table Maintenance** to proceed. This prepares you to specify which technical fields should be filled during the data import.

Step 15: Save source fields in LSMW

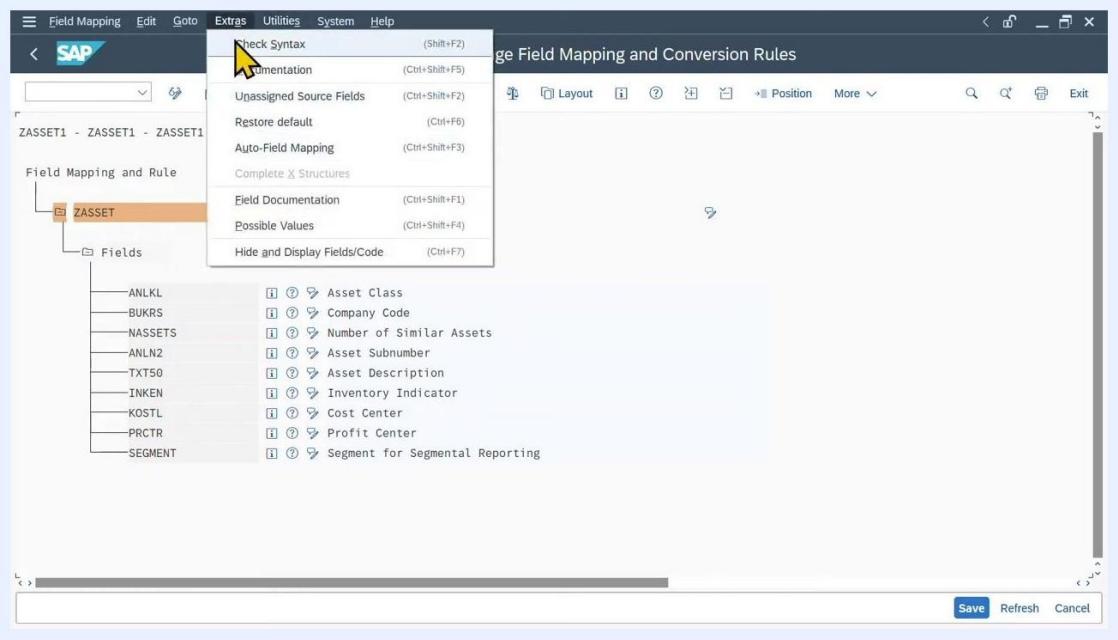
On the **Source Fields for Source Structure** screen, verify that all required fields are entered with the correct type and length. Click **Save**, then click **Back** to return to the main LSMW process steps list.



Source Fields for Source Structure ZTESTASSET screen with fields, types, and lengths being edited

Step 16: Define structure relations

In the LSMW Workbench, select **Define Structure Relations** and switch to **Change Mode** if necessary. Click **Create Relationship** and confirm that the relationship between your source structure (for example, ZTEST_ASSET) and the target structure (Create Asset Master) is assigned. Click **Save**, then click **Back** to return to the main process steps list.



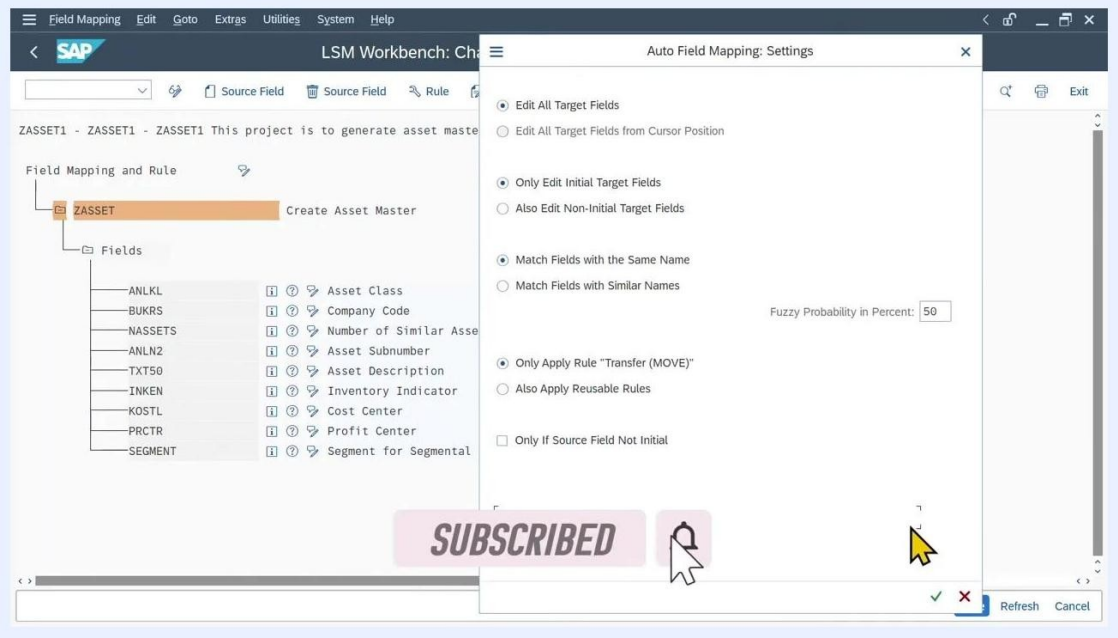
LSM Workbench with the Define Structure Relations step selected, ready to create a relationship

Step 17: Perform field mapping and conversion rules

Select **Define Field Mapping and Conversion Rules** in the process steps and switch to **Change Mode** if required. Go to the **Extras** menu and select **Auto Field Mapping**. In the Auto Field Mapping settings dialog, make sure the following options are selected:

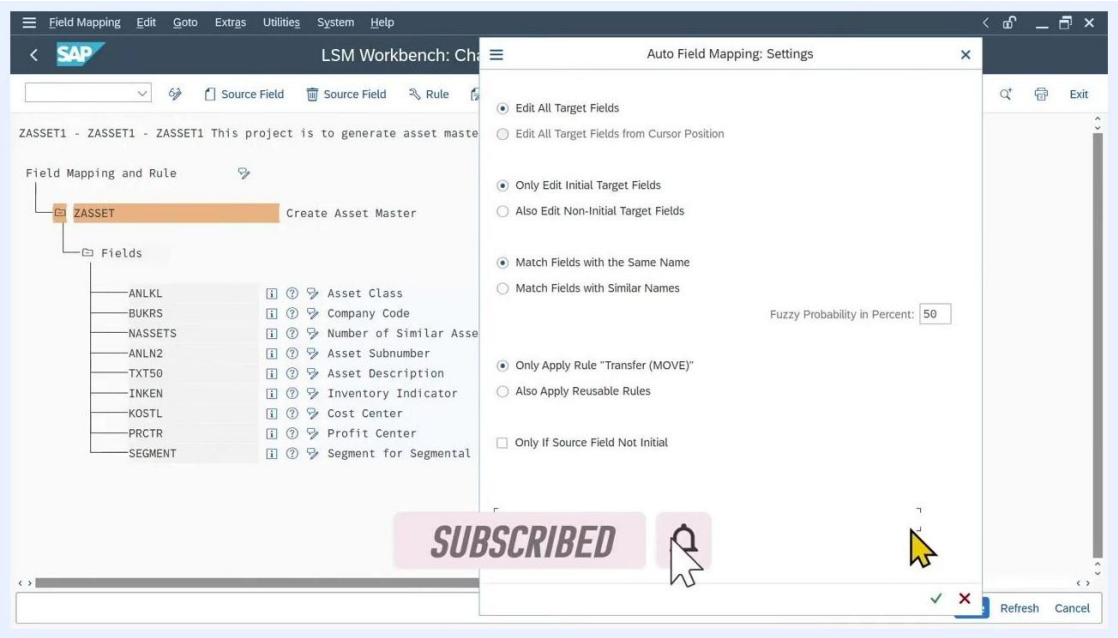
- **Edit All Target Fields**
- **Only Edit Initial Target Fields**
- **Match Fields with the Same Name**
- **Only Apply Rule "Transfer (MOVE)"**

Click the green checkmark to continue.



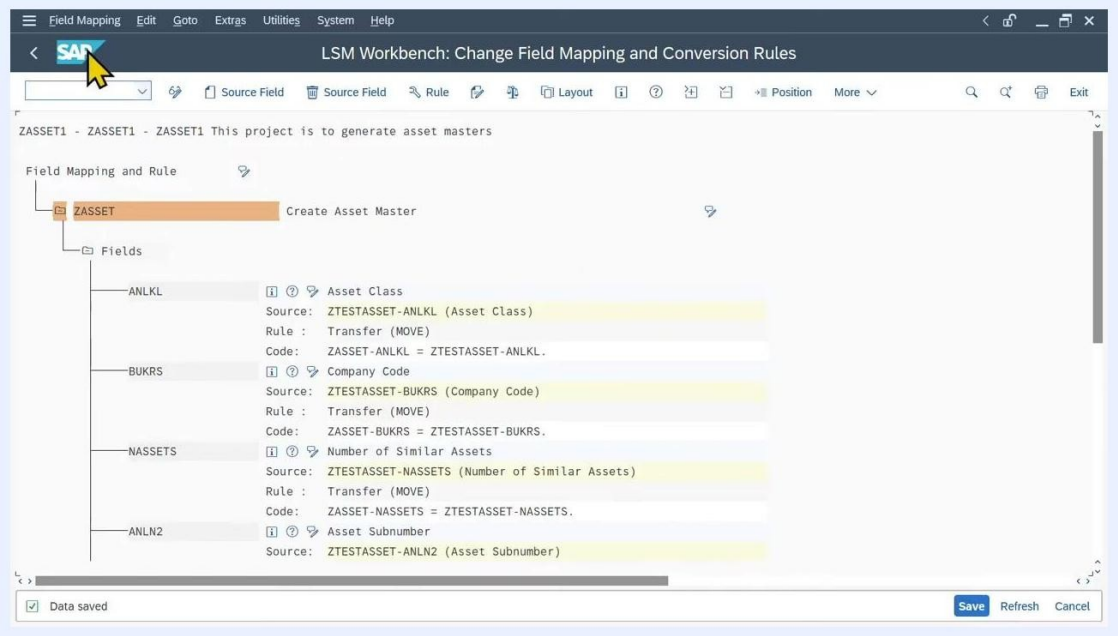
Auto Field Mapping Settings dialog with mapping options for field matching

Review the mapping proposals to confirm that each source field is mapped to the correct target field — a 100% match is best practice. Click **Accept Proposal** for each mapping, then click **Save** to store the mapping.



Auto Field Mapping Proposals dialog showing a 100% match and the Accept Proposal button

The mapping results are displayed, showing the source, rule, and code for each field. Confirm all fields are mapped as intended, then click **Save**.



LSM Workbench Change Field Mapping and Conversion Rules screen showing mapped fields and rules

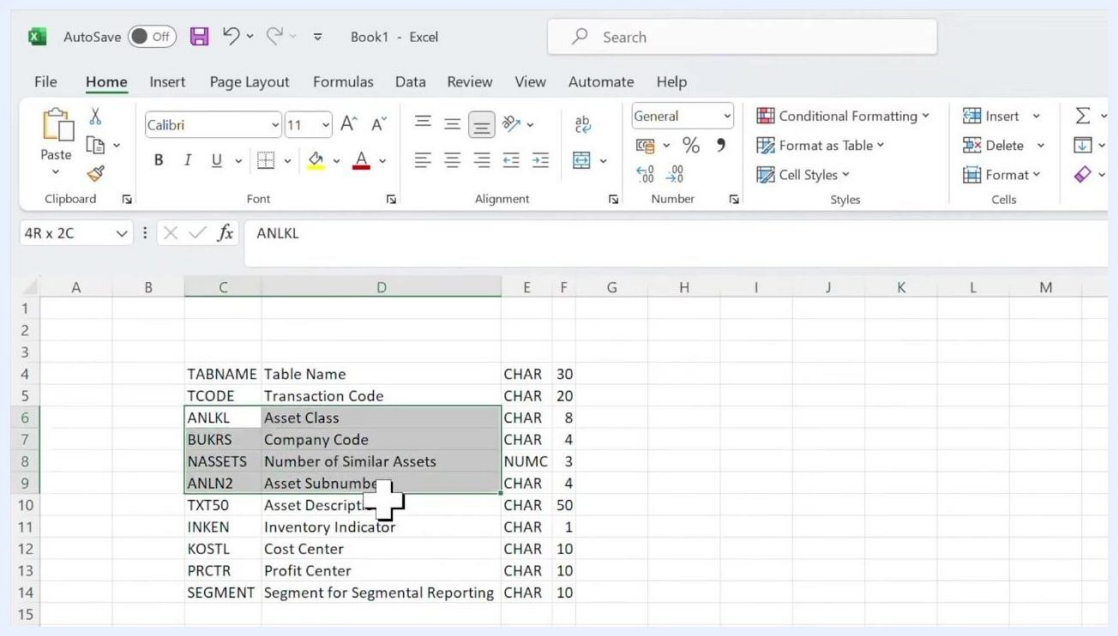
Preparing the data file for import

Step 18: Select and copy relevant fields for data import

In your Excel workbook, locate the list of technical fields you previously pasted. Identify the rows below the "Transaction Code" (TCode) entry — these are the fields relevant for your data import. Select all rows starting immediately below "Transaction Code" down to the last required field. In this example, the following fields are selected:

- ANLKL (Asset Class)
- BUKRS (Company Code)
- NASSETS (Number of Similar Assets)
- ANLN2 (Asset Subnumber)
- TXT50 (Asset Description)
- INKEN (Inventory Indicator)
- KOSTL (Cost Center)
- PRCTR (Profit Center)
- SEGMENT (Segment for Segmental Reporting)

Include all columns for each field: Field Name, Field Label, Type, and Length. Right-click the selected area to prepare for copying.



Excel workbook showing the technical fields below Transaction Code being selected for copying, including ANLKL, BUKRS, NASSETS, ANLN2, TXT50, INKEN, KOSTL, PRCTR, and SEGMENT with their labels, types, and lengths, with the cursor in selection mode

Step 19: Transpose the fields into column headers

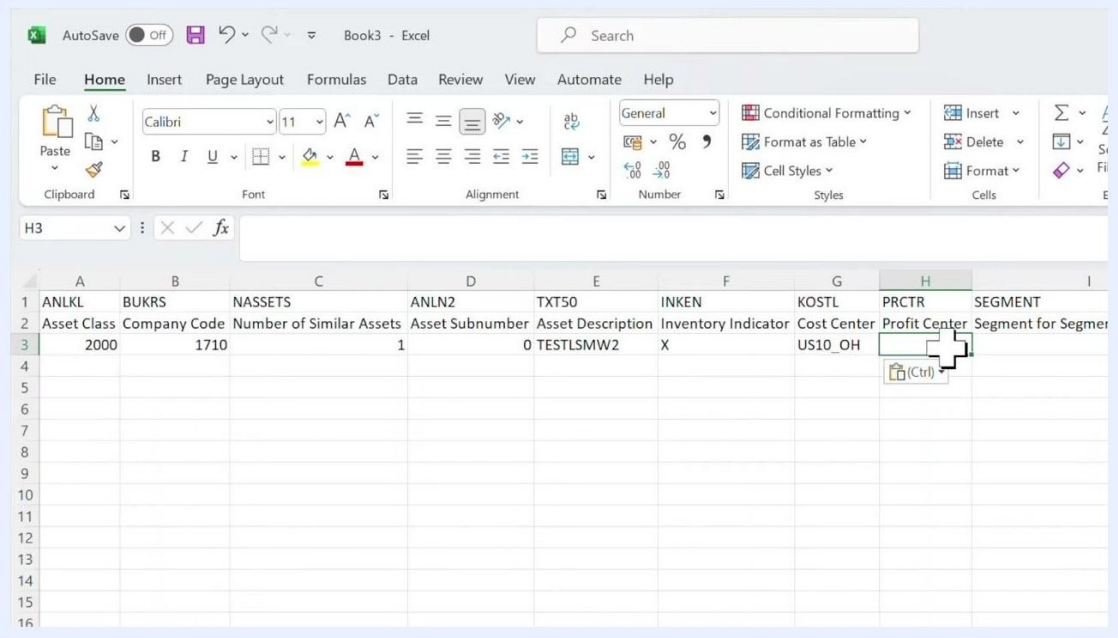
Open your Excel file again and copy only the relevant fields for import — typically everything below the transaction code. In a new Excel sheet, select cell **A1**, right-click, and choose **Transpose** to arrange the fields as columns. Your Excel sheet should now have the field names as column headers, ready for data entry and import.

Step 20: Enter the asset data into the Excel template

Fill in the data row with the following values:

- **Cell A3:** Asset Class = 2000
- **Cell B3:** Company Code = 1710
- **Cell C3:** Number of Similar Assets = 1
- **Cell D3:** Asset Subnumber = 0
- **Cell E3:** Asset Description = TESTLSMW2
- **Cell F3:** Inventory Indicator = X
- **Cell G3:** Cost Center = US10_OH
- **Cell H3:** Profit Center = US10_PC11

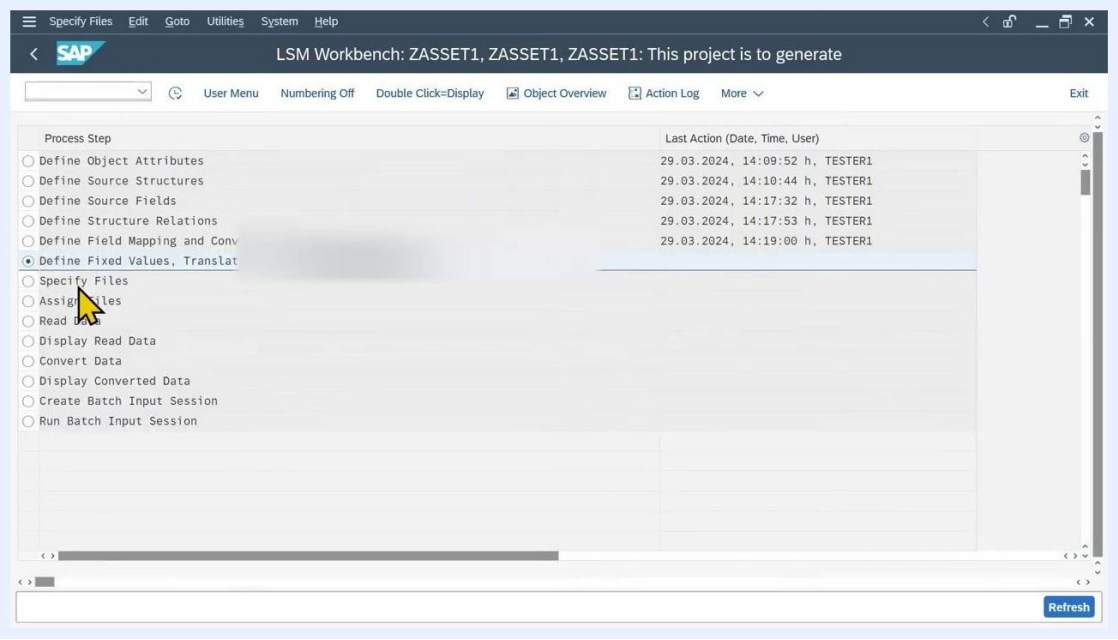
- **Cell I3:** Segment = Z_SEG



Excel sheet with asset data being filled in: Asset Class 2000, Company Code 1710, Number of Similar Assets 1, Asset Subnumber 0, Asset Description TESTLSMW2, Inventory Indicator X, Cost Center US10_OH, Profit Center US10_PC11, Segment Z_SEG

Step 21: Clean up the data file

Remove any unnecessary lines or formatting from the Excel file so that only the data values remain, with no extra headers or blank rows.



Excel sheet with only the data row visible, headers removed: 2000, 1710, 1, 0, TESTLSMW2, X, US10_OH, US10_PC11, Z_SEG

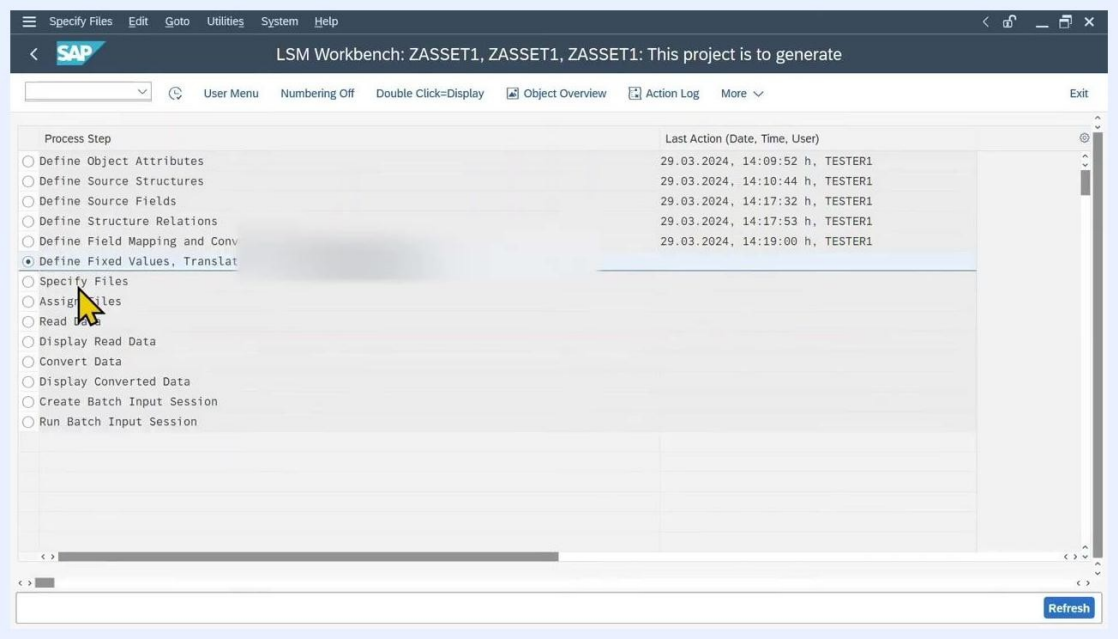
Step 22: Save the Excel file

Save the file using a descriptive name, such as "lsmw test one."

Specifying files and reading data

Step 23: Specify files

Open the SAP LSM Workbench and navigate to the **Specify Files** step. Click **Change Mode** if it is not already enabled. Under **Legacy Data**, click **Add Entry**.



SAP LSM Workbench screen with the Specify Files step selected and the cursor on Add Entry

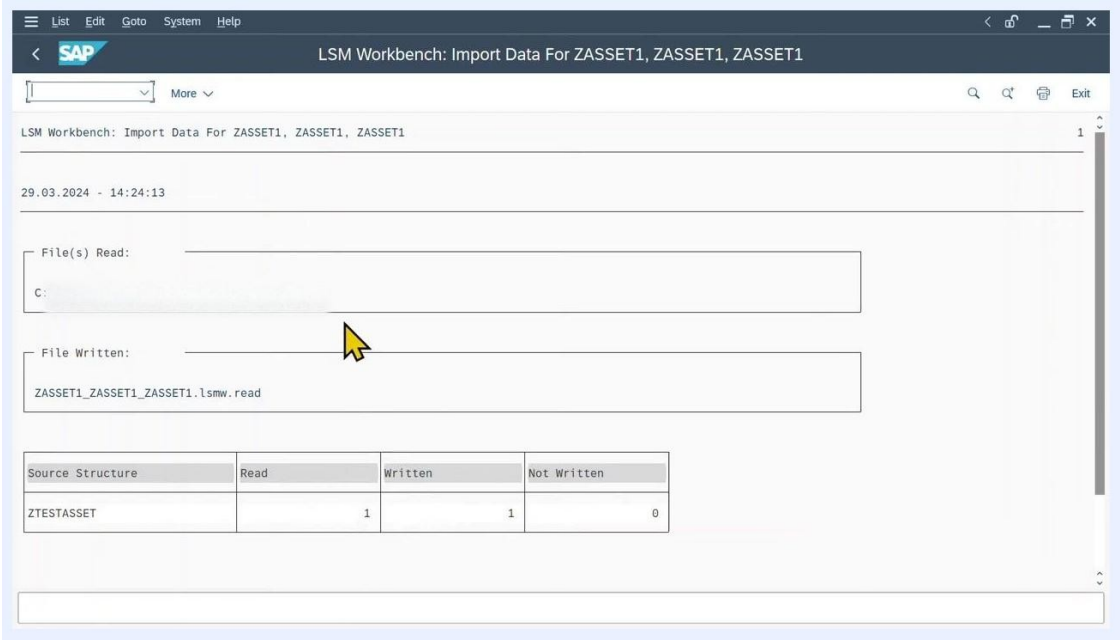
In the **File on Front End: Maintain Properties** dialog, complete the following:

- Enter the file name (for example, ZTESTA1).
- Select **Data for One Source Structure (Table)** under File Contents.
- Choose **Tabulator** as the delimiter option.
- Make sure **Field Order Matches Source Structure Definition** is checked.
- Select **Record End Marker (Text File)** as the file type.

Click **Save** and then **Go Back**.

Step 24: Assign files

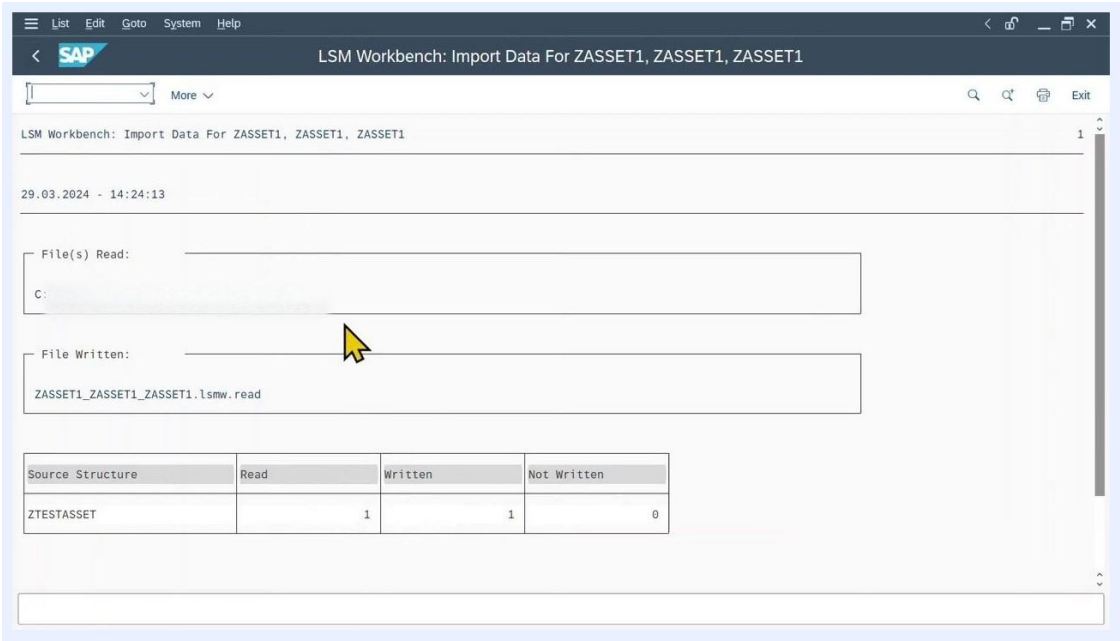
Click **Assign Files** in the process step list to proceed.



SAP LSM Workbench with the Assign Files step selected

Step 25: Read data

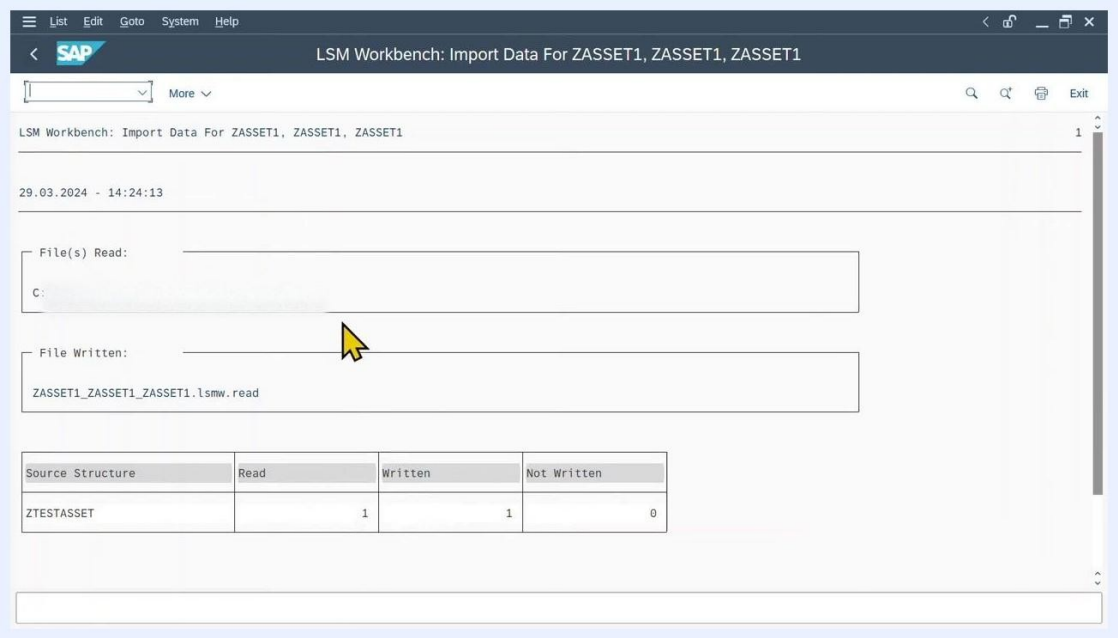
Click **Read Data** in the process step list to import the data from your file.



SAP LSM Workbench with the Read Data step selected

Step 26: Review the import summary

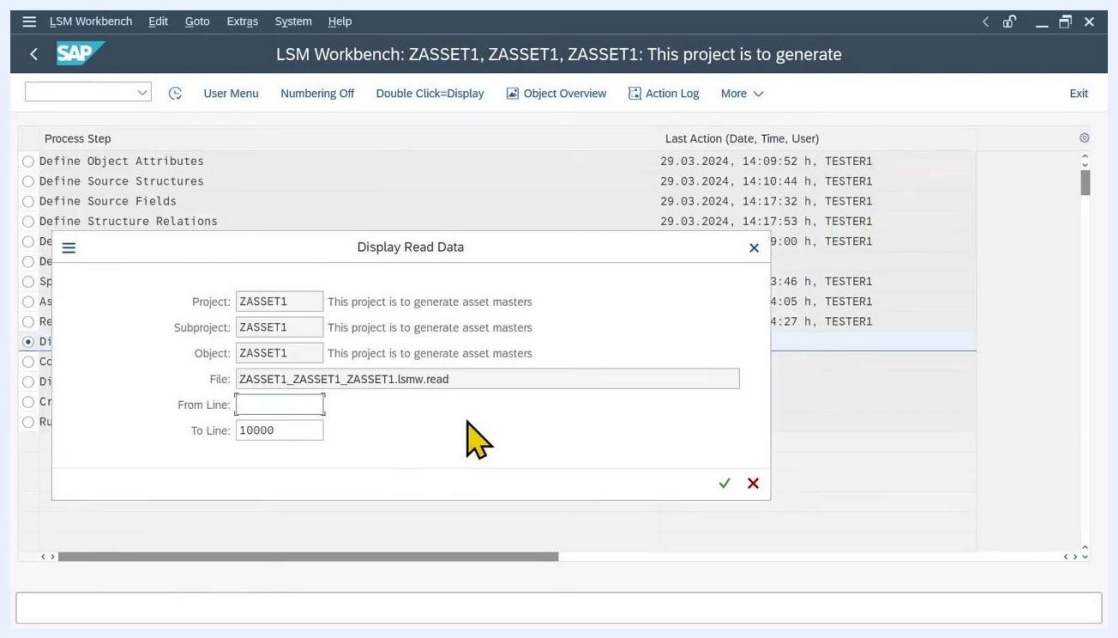
Confirm that the file was read successfully and check that the correct number of records were read and written (for example, Source Structure ZTESTASSET, Read: 1, Written: 1, Not Written: 0).



SAP LSM Workbench import summary showing the file read and written status for ZTESTASSET

Step 27: Display the read data

In the **Display Read Data** dialog, verify the project, subproject, object, and file name. Optionally, specify the line range to display (the default is 1 to 10,000). Click the checkmark to proceed.



Display Read Data dialog in SAP LSM Workbench with project, subproject, object, and file fields filled in

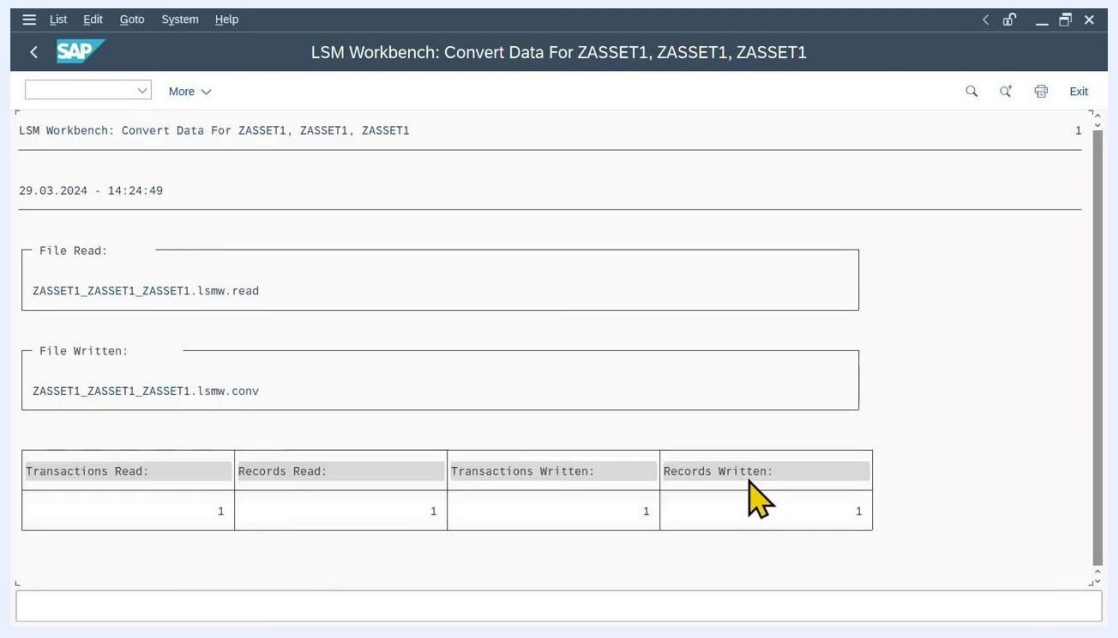
Converting data and running the batch input session

Step 28: Convert the imported data into SAP format

In the SAP LSM Workbench, review the **Convert Data** summary screen and confirm that the file was read and written successfully:

- File Read: ZASSET1_ZASSET1_ZASSET1.lsmw.read
- File Written: ZASSET1_ZASSET1_ZASSET1.lsmw.conv
- Transactions Read: 1
- Records Read: 1
- Transactions Written: 1
- Records Written: 1

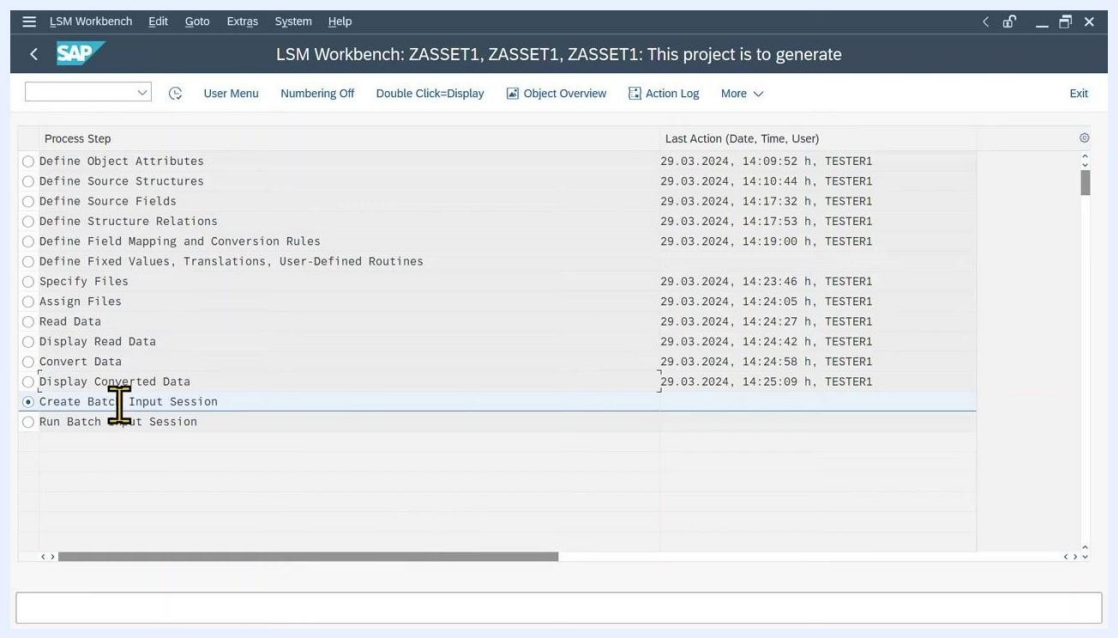
Make sure there are no errors in the conversion summary.



SAP LSM Workbench Convert Data summary showing the file read/written status and records processed

Step 29: Create the batch input session

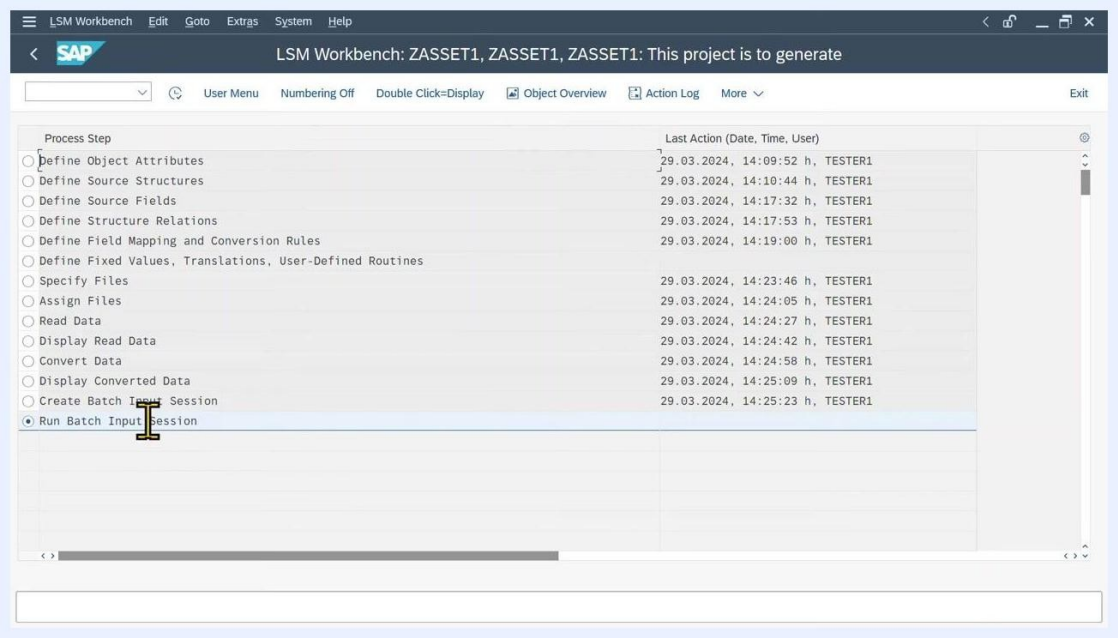
In the LSM Workbench process step list, select **Create Batch Input Session**. Confirm the last action timestamp and user for traceability, then proceed to the next step.



LSM Workbench process step list with Create Batch Input Session selected

Step 30: Run the batch input session

In the process step list, select **Run Batch Input Session**. This opens the **Batch Input: Session Overview** screen.



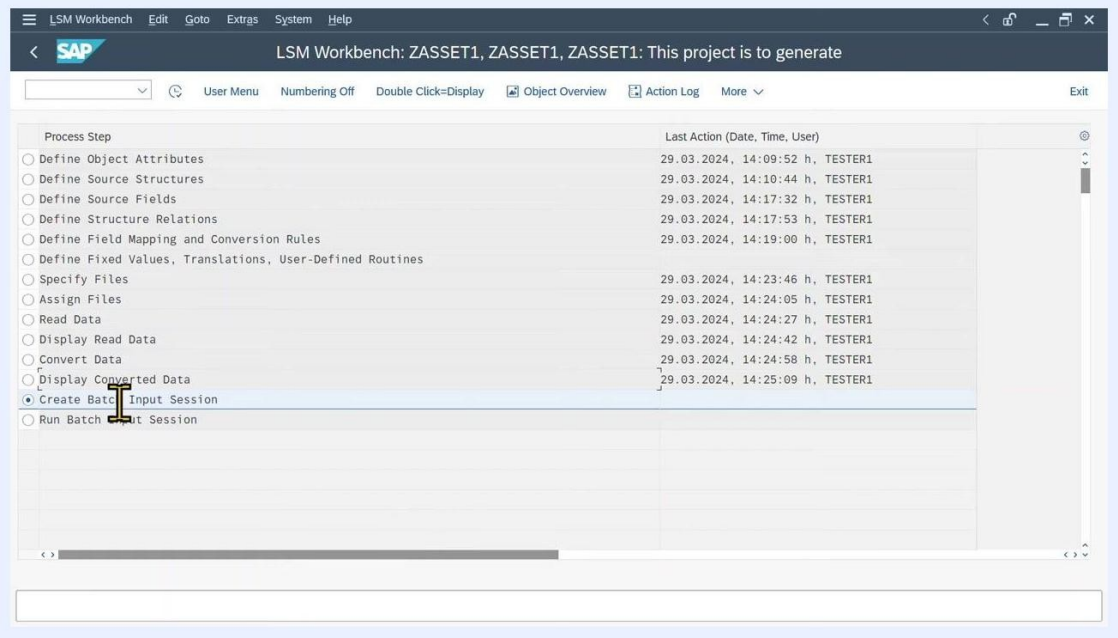
LSM Workbench process step list with Run Batch Input Session selected

Step 31: Process the batch input session

In the **Batch Input: Session Overview** screen, locate your session (for example, ZASSET1) and select it by checking the box next to its name. Click **Process** to open the processing options. In the **Process Session** dialog:

- Choose **Process/foreground** as the Processing Mode.
- Optionally, select **Default Dynpro Size** under Additional Functions.

Click **Process** to start the session.



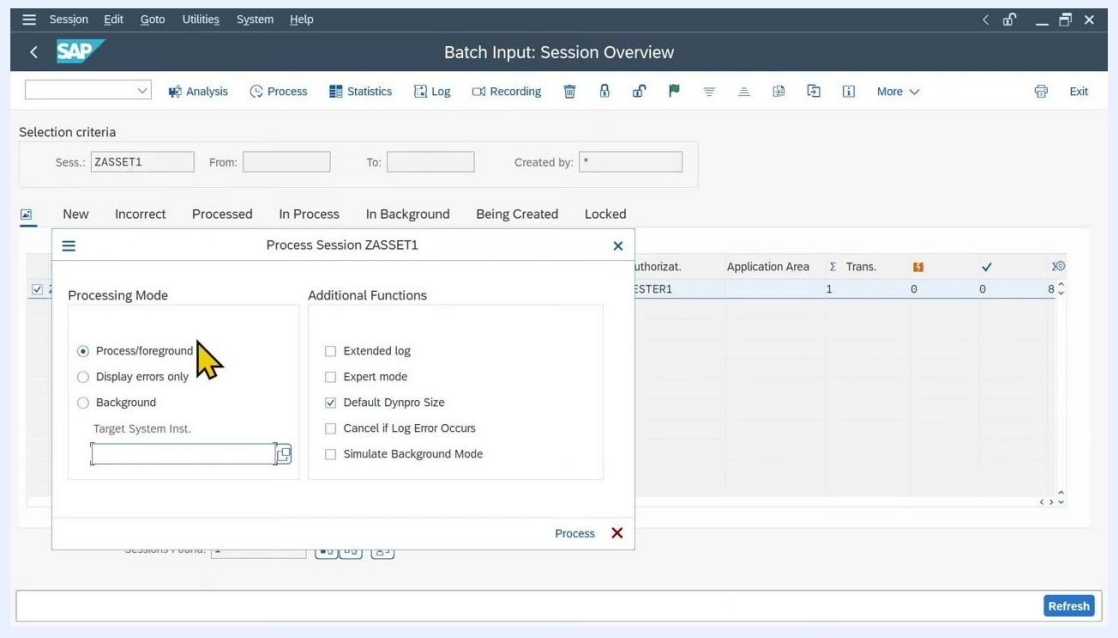
Batch Input: Session Overview with the Process Session dialog, Process/foreground selected

Step 32: Review the asset creation in SAP

The system steps through the asset creation screens using the imported data. On the **Create Asset: Master data** screen, verify the following fields:

- Asset: INTERN-00001 / Subnumber: 0
- Class: 2000 (Machinery Equipment)
- Company Code: 1710
- Description: TESTLSMW2
- Account Determination: 160020 (Machinery and Equipment)
- "Include asset in inventory list" is checked.

Click **Enter** to proceed.



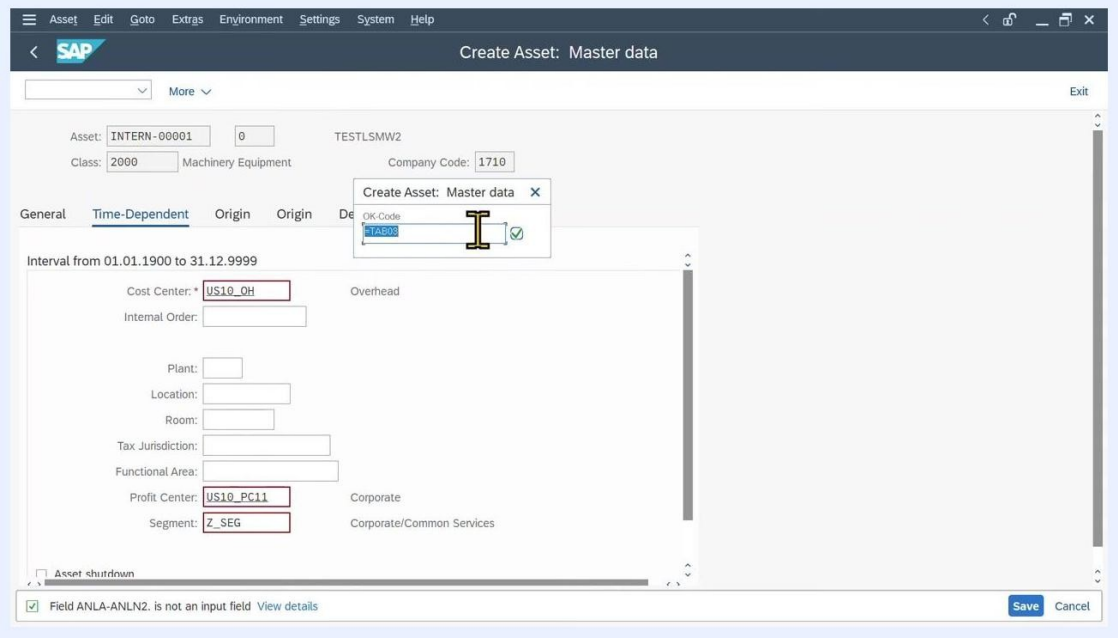
Create Asset: Master data screen with asset details and the inventory list checkbox selected

Step 33: Confirm time-dependent and organizational data

On the **Time-Dependent** tab, verify the following:

- Cost Center: US10_OH
- Profit Center: US10_PC11
- Segment: Z_SEG

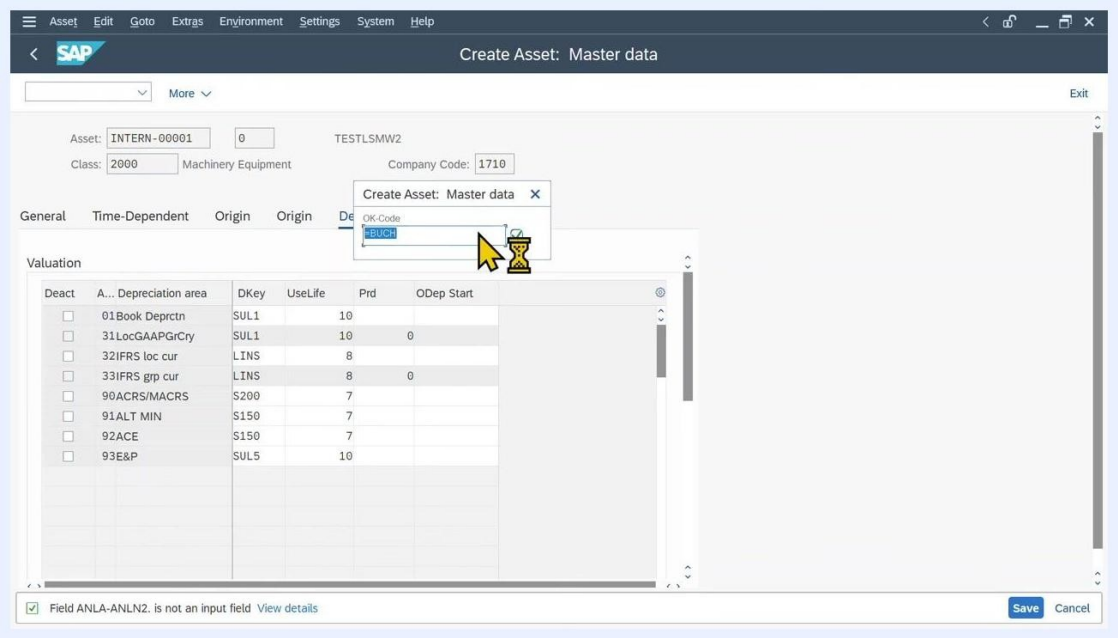
Click **Enter** to continue.



Create Asset: Master data screen, Time-Dependent tab with Cost Center US10_OH, Profit Center US10_PC11, Segment Z_SEG

Step 34: Review depreciation areas

On the **Depreciation** tab, confirm that the correct depreciation areas and keys are populated (for example, Book Deprctn, IFRS loc cur). Click **Enter** to proceed.



Create Asset: Master data screen, Depreciation tab with various depreciation areas and keys

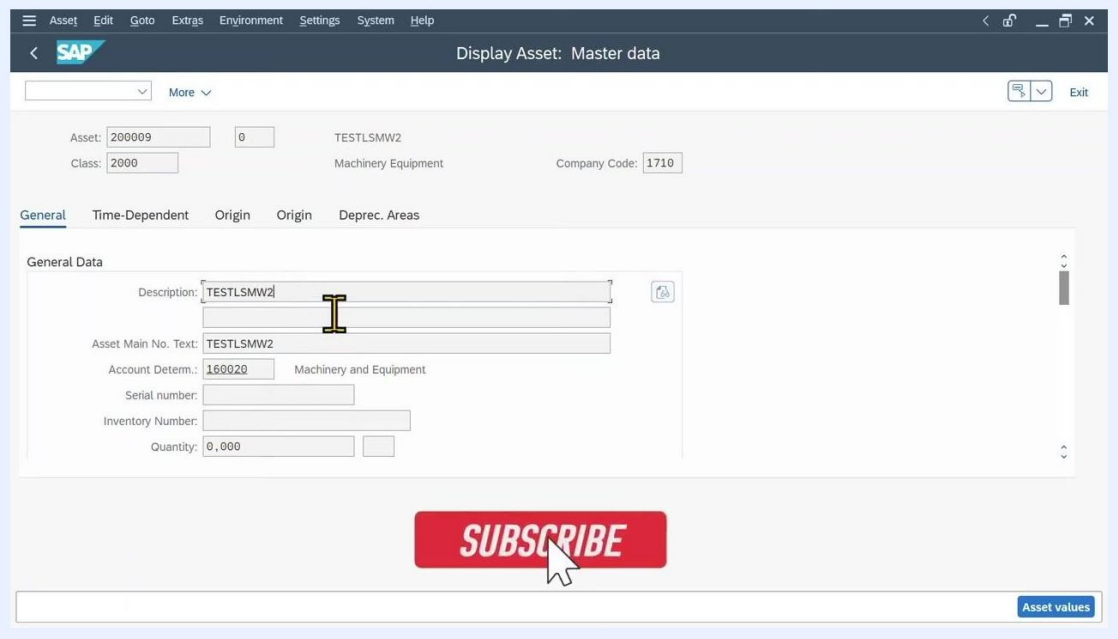
Displaying the newly created asset

Step 35: Display the asset using transaction code /nSA03

In SAP, enter /nSA03 in the command field to open the **Display Asset: Master data** screen. Confirm that the correct asset number is already selected (for example, Asset: 200009, Subnumber: 0). Verify the asset details:

- Description: TESTLSMW2
- Class: 2000 (Machinery Equipment)
- Company Code: 1710
- Account Determination: 160020 (Machinery and Equipment)
- Asset Main No. Text: TESTLSMW2
- Quantity: 0,000

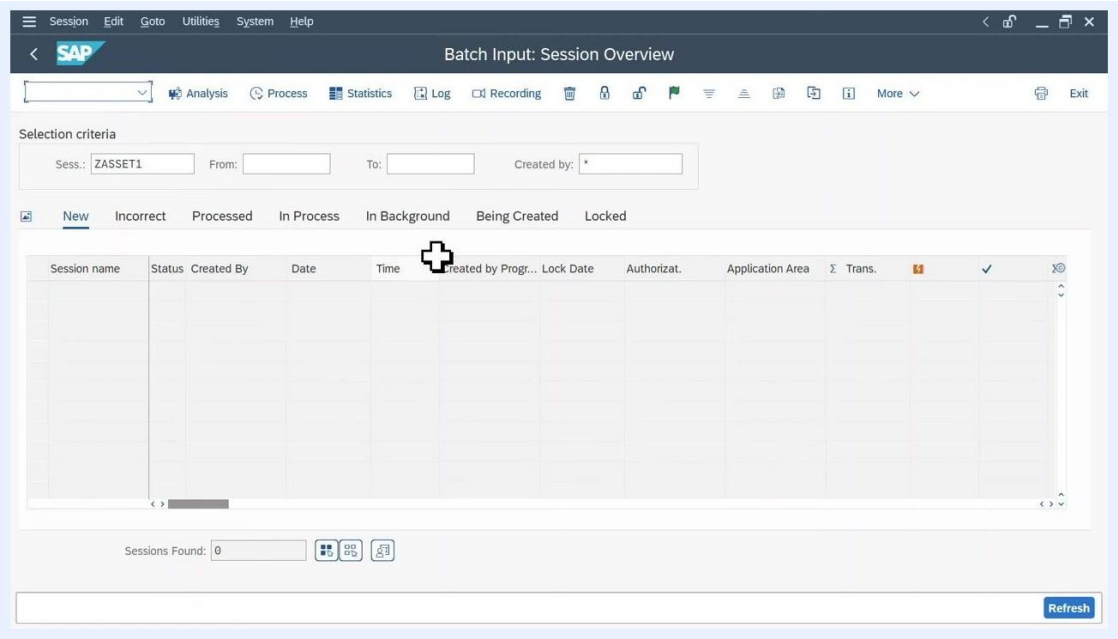
Review all relevant tabs (General, Time-Dependent, Origin, Deprec. Areas) to ensure all imported data is present and correct. Use the **Asset values** button if you need to review asset value details.



Display Asset: Master data screen showing asset 200009, TESTLSMW2, class 2000, company code 1710, and account determination 160020

Step 36: Confirm completion of the process

Make sure the asset master data matches the imported values. If all data is correct, the asset creation and import process is complete. You can now exit the asset display screen or proceed to process additional assets as needed.



Display Asset: Master data screen with asset details and a navigation pointer, indicating process completion

Summary

You have now learned how to use LSMW in SAP to create a project, record a batch input session for asset creation, map source fields to target fields, prepare a data file in Excel, and run the batch input session to import asset master data. By following these steps, you successfully displayed and verified the newly created asset in SAP using transaction /nSA03, and all imported values are now visible in the asset master data.

What's next

If you need to process more assets, repeat the data preparation, import, and verification steps shown in this guide using new asset data in your Excel file.