Cyclops Project Awareness™

Cyclops for Projects

Ver 2.05

User Guide

Treebark Software, LLC

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A Brief Summary

Cyclops for Projects ("Cyclops") is a Microsoft Excel™ AddIn that provides real time project financial /resource allocation information within the Excel environment from your company's **SAP™ ECC** or **SAP™ S/4HANA** enterprise server. With Cyclops you can:

- Post project financial planning information directly from Excel to SAP.
- Visualize and manage the capital and resources allocated to a project, and its Work Breakdown Structure (WBS), within the Excel environment.
- Prepare reports on a project's financial progress and update those reports with a simple click of a button.
- Leverage the stunning power of Excel to prepare graphs, charts and analyze your project's financial data as no other client platform can.

Cyclops is the ultimate data visualization tool for any capital project. All the tools needed to plan, execute, analyze, and report on the progress of your project are available to you in real time, directly in the Excel environment.

Cyclops is a **ZERO-install** application and does not require any custom Business Application Programing Interface (BAPI) installs on your SAP system.

Project managers, procurement specialists, contract managers, executives and forensic accounting specialists will all find Cyclops an invaluable tool to get the information they need, quickly.

The Cyclops Flowpath

Planning ▶ Execution ▶ Data Analysis ▶ Reporting

Planning

A successful project begins at the planning stage. Cyclops provides users with four (4) easy to use wizards corresponding to each planning method: (i)Direct, (ii)Activity Price, (iii)Activity Input, and (iv) Statistical Key Figures (SKF) that, in turn, generate Excel formulas that are written back to a user selected cell. The data is validated, or posted, to SAP with a simple click of a button.

Execution

During the execution phase project managers, controllers and other team members have real-time access to financial documents (requisitions, purchase orders, invoices), and their status, as they are posted. This information includes cost, items requested/procured, dates, originator / approver, status and references to preceding documents; such as a requisition number that initiated a purchase order, a purchase order that initiated an invoice and the actual payment to close out the Invoice.

Data Analysis

Data analysis can take the form of capturing financial snapshots of planned vs. actual spends, budget draw-down, utilization statistics as shown by SKF consumption or any of the multitude of queries returned by Cyclops. Project team members, managers and consultants can utilize Cyclops in-depth querying capability to build charts, run statistical analysis, prepare and run simulations. This, combined with Excel's unrivalled data analytical capability, can provide insights that no other tool can match. Update workbooks in real time to see changes to cash position, capacity utilization and negative or positive budget trends almost immediately with Cyclops.

Cyclops has the built-in granularity (no SAP coding required) that simply does not exist in any other product that integrates so completely with Excel.

Reporting

Once a workbook has been prepared and formatted to take advantage of Cyclops many tools and features, send to team members as a snapshot or with formulas embedded. Prepare a template report that automatically revises based on referenced cells rather that hard-coded values*.

** End users must have installed Cyclops to refresh data.*

Features

Planning - plan costs and resources to a WBS:

All the financial information listed below can be posted directly from Excel into SAP using Cyclops.

- Direct Cost / Primary Planning

  Direct cost Items are the **external** costs of goods and services to be consumed by a WBS element during a specific year and period(s). This, along with activity Input / secondary planning, can be used as a basis for finalizing a budget for the project.

- Activity Price Planning ("helper planning function")

  Activity price planning allows the user to post the currency value of an **internal** resource, by year and by period, that can later be used by activity input planning. Activity price planning is a "helper" tool and **does not** post values directly to a WBS element. The user can post prices for any combination of valid activity code and cost center activities within the company by year and period(s).

  ***Note**: The availability in terms of quantity, by year and by period, of an activity / cost center, may be administered by a different entity within the company.*

  Your systems administrator may restrict the activity price planning functionality to certain users / roles or disable this feature based on company policy.

- Activity Input / Secondary planning

  Activity input items are the **internal** resources to be consumed by a WBS element during a specific year and period(s). These resources are identified by a valid activity code and cost center.

Visually, think of activity price planning as "**pushing**" the prices of these activity /cost center combinations to SAP. Then activity input planning as "**pulling**" these values, in the quantity required, back into a WBS code.

If the quantity required for the selected year and period is not available, SAP will return an error message.

- Statistical Key Figure ("SKF") planning

  SKFs play a vital role in benchmarking your project and maximizing resource utilization. Planned SKF resources can take the form of non-monetary data such as machine utilization, capacity, employee structure. As with other planning modules, actual SKF consumption can then be compared with the planned values to provide management insight into how and where it can optimize processes and resources. This can be done in real time as a project progresses through execution to completion and after the fact analysis can be used to optimize future projects based on lessons learned.

Execution:

Query requisitions, purchase orders, invoicing and payment information associated with a WBS during the execution phase of your project. This query can be filtered by either a single or group of WBS codes, a date range and / or selected materials:

- Requisitions

  A purchase requisition serves as a notice of procurement in the form of services or materials for a WBS element. Cyclops returns, in real-time, all requisitions posted against a WBS or a group of WBS codes. The search can be further refined by a date range and materials.

- Purchase Orders

  A purchase order is an agreed upon notice to procure, or buy, goods from an external vendor or internal distribution source. Usually, this notice follows a requisition and is tied to that requisition by a single identifying number. As with requisitions, Cyclops returns purchase order data in real-time with respect to a selected WBS code or group of WBS codes and can be refined similarly. Cyclops retrieves all purchase orders regardless of how they were created and released (using a purchase requisition or not).

- Invoicing

  Once the terms of the purchase order have been satisfied procurement will receive an invoice from the vendor. The Invoice will be identified with the underlying purchase order identifying number. Cyclops returns invoicing data for selected WBS code(s) in the same manner as with requisitions and purchase orders.

- Commitments

  Cyclops can return payment /

commitment information corresponding to a requisition, purchase order or invoice. With a click of a button, you can know exactly where you stand with a vendor and goods and services provided. The search can be further refined by a date range and materials.

Analysis – Data Visibility and Benchmarking:

View project financial information in real-time and compare with planned data. Values can be filtered by selected WBS codes, date range and other parameters as applicable.

- Budget:

  Return current budget figures and compare actual spend to a planned budget at any point along the timeline. Know exactly where you are in real-time. This number always corresponds with the actual hard currency budget associated with a project and not a planned version.

- Statistical Key Figures:

  Get an understanding of how your project is utilizing resources in order to facilitate effective resource management, and optimize time and resources based on this data for future projects (see: Earned Value Management).

- Primary and Secondary Costs - Actuals vs Planned:

  Compare planned data to actual data as the project progresses. First from the finance wizard dropdown menu click on actuals. Then, in the wizard form, go to the bottom left and select from six (6) different options:

  1. *Actual Direct Cost*

     Actual Direct Costs are direct costs that have **posted** to a WBS code, or several selected WBS codes, within a selected time span. The direct costs would correspond to vendors who performed work under a purchase order and where the invoice of that work has been paid and posted against that WBS code. The list, or total value, returned would be those paid invoices that can be filtered by selecting one (1) or several WBS code(s), an optional date span and / or selected material(s).

  2. *Planned Direct Cost*

     Planned Direct Costs are direct costs that have been **planned** against a WBS code, or several selected WBS codes, for a particular year and period in that year in which that value was planned. The list, or total value, returned would be those planned values that can be filtered by selecting the planning version, one (1) or several WBS code(s), an optional date span and / or selected material(s).

  3. *Actual Internal / Secondary Cost*

     Actual Internal costs are secondary, or indirect costs, that have **posted** to a WBS code, or several selected WBS codes, within a selected time span. Secondary costs would correspond to **internal resources** that have been consumed by the WBS code, and posted against that

WBS code, in SAP. The list, or total value, returned would be those paid internal resources that can be filtered by selecting one (1) or several WBS code(s), an optional date span and / or selected material(s).

4. *Planned Internal / Secondary Cost*

   Planned Internal costs are secondary, that have been **planned** against a WBS code, or several selected WBS codes, for a particular year and period in that year in which that value was planned. The list, or total value, returned would be those planned values that can be filtered by selecting the planning version, one (1) or several WBS code(s), an optional date span and / or selected material(s).

5. *Actual Combined Total*

   Actual Combined refers to **both** the direct (1) and secondary (3) costs that have **posted** to a WBS code, or several selected WBS codes, within a selected time span. The list, or total value, returned would be the sum total of the values posted to SAP. The list, or total value, returned would be those combined direct and secondary costs that can be filtered by selecting one (1) or several WBS code(s), an optional date span and /or selected material(s).

6. *Planned Combined Total*

   Actual Combined refers to **both** the direct (2) and secondary (4) costs that have been **planned** against a WBS code, or several selected WBS codes, for a particular year and period in that year in which that value was planned. The list, or total value, returned would be those planned values that can be filtered by selecting the planning version, one (1) or several WBS code(s), an optional date span and /or selected material(s).

List of Values

Preconfigured queries that return useful SAP values that are written back to cells of user choice. These can assist users when posting a plan, building reports and performing data analysis by enabling reusable data by cell reference rather than require unique values for every query.

- Project Tree

  Returns a project tree hierarchy that can be written back to the sheet beginning in the selected cell as shown in the wizard.

- Cost Elements

  Returns a list of cost elements, associated with a company code / controlling area, that can be written back to the sheet beginning in the selected cell as shown in the wizard.

- Activity Codes

  Returns a list of activity codes, associated with a company code / controlling area, that can be written back to the sheet beginning in the selected cell as shown in the wizard.

- Functional Areas

Returns a list of functional areas, associated with a company code / controlling area, that can be written back to the sheet beginning in the selected cell as shown in the wizard.

- SKF List

  Returns a list of SKFs, associated with a company code / controlling area, that can be written back to the sheet beginning in the selected cell as shown in the wizard.

- Currency List

  Returns a list of currencies that can be written back to the sheet beginning in the selected cell as shown in the wizard.

- Unit of Measure

  Returns a list of units of measure, such as H (Hours), that can be written back to the sheet beginning in the selected cell as shown in the wizard.

- Material List

  Returns a list of materials, associated with a company code / controlling area, that can be written back to the sheet beginning in the selected cell as shown in the wizard.

- Activity / Cost Center Unit Prices

  Returns a list of activity / cost center unit prices, associated with the following parameters:

  - Company Code / Controlling Area
  - Fiscal year
  - Controlling version
  - Activity type
  - Cost center

  This list can then be written back to the sheet beginning in the selected cell as shown in the wizard.

Security

Before installing and using Cyclops, Treebark Software, LLC ("Treebark Software") may need to communicate with your Information and Technology (IT) department so that it may enable certain built-in functions ("BAPI's") within the SAP Environment. Cyclops is a "Zero-Install" solution and uses only built-in functions provided by SAP that are already installed in your SAP Enterprise environment.

Logging onto SAP

The Cyclops application logs onto SAP from within the Excel™ environment using **SAP provided connection tools**. The same security you have come to expect from **R/3** or **S/4HANA** when interfacing from NetWeaver or similar SAP products makes up the core of how Cyclops interacts with SAP.

Functionality

Cyclops only uses SAP built functions (BAPI's) to interface with your company's **R/3** or **S/4HANA** server. There are no custom BAPI's to install in order for Cyclops to work. Cyclops does not circumvent user's IT-enabled permissions, all queries are subject to table and row-level permissions as provided by user's IT department in the SAP environment.

SAP Required Modules

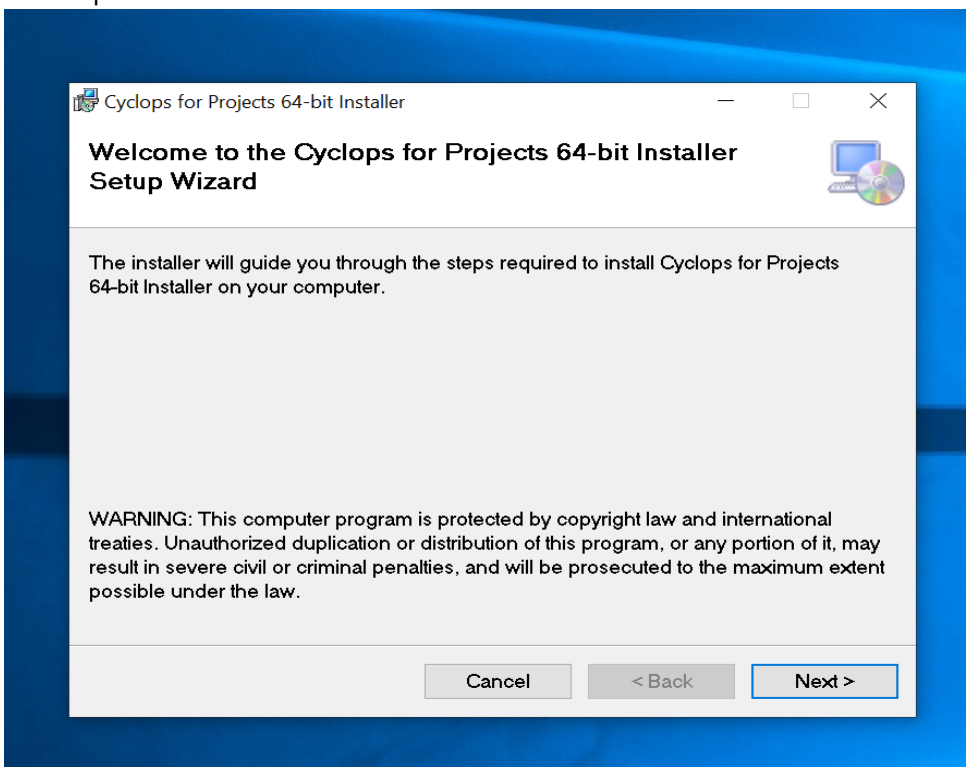
The following SAP Enterprise Resource Planning (ERP) Modules are required to be installed and configured for Cyclops to function:

1. Project Systems (PS)
2. Materials Management (MM)
3. Finance (FI)
4. Control (CO)

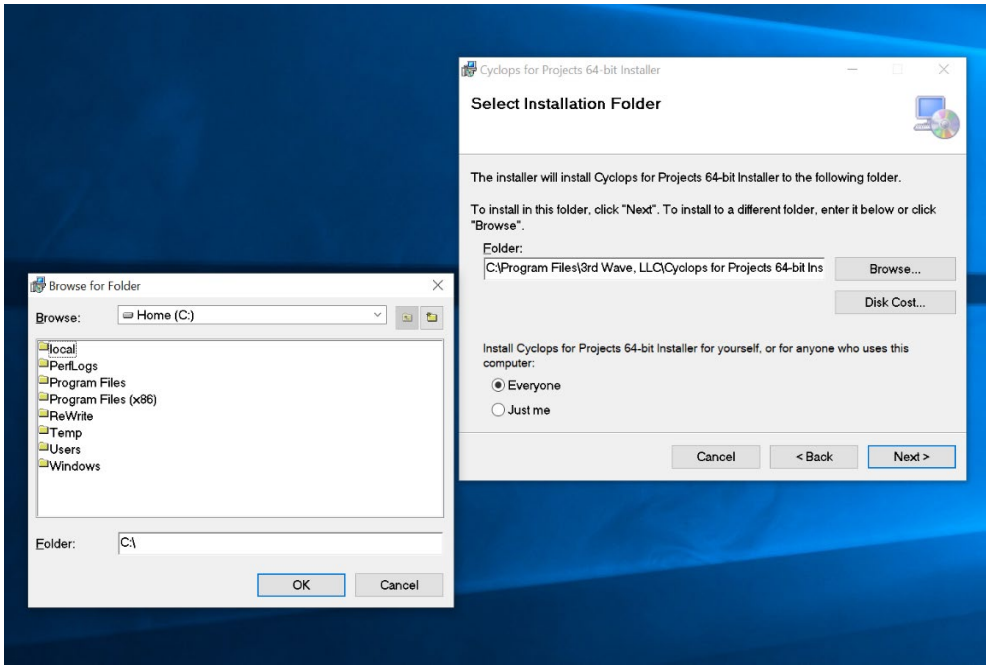
Installing Cyclops for Projects in Excel™

The Cyclops package is distributed with a single executable installer that will guide you through the process of installation on your computer. Below, please see step by step instruction for Cyclops installation:

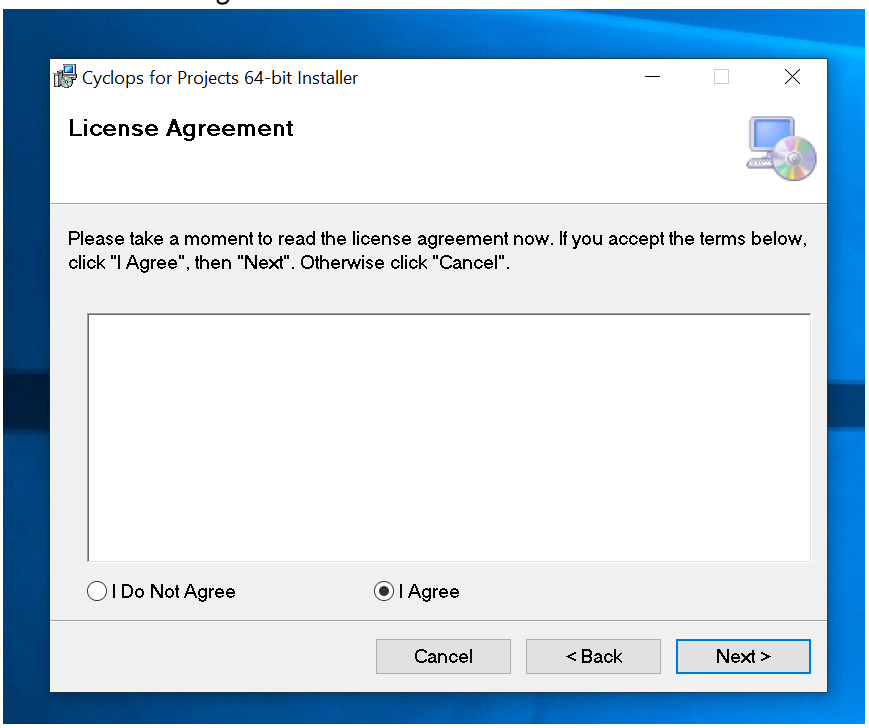
1. Click on Setup.exe:



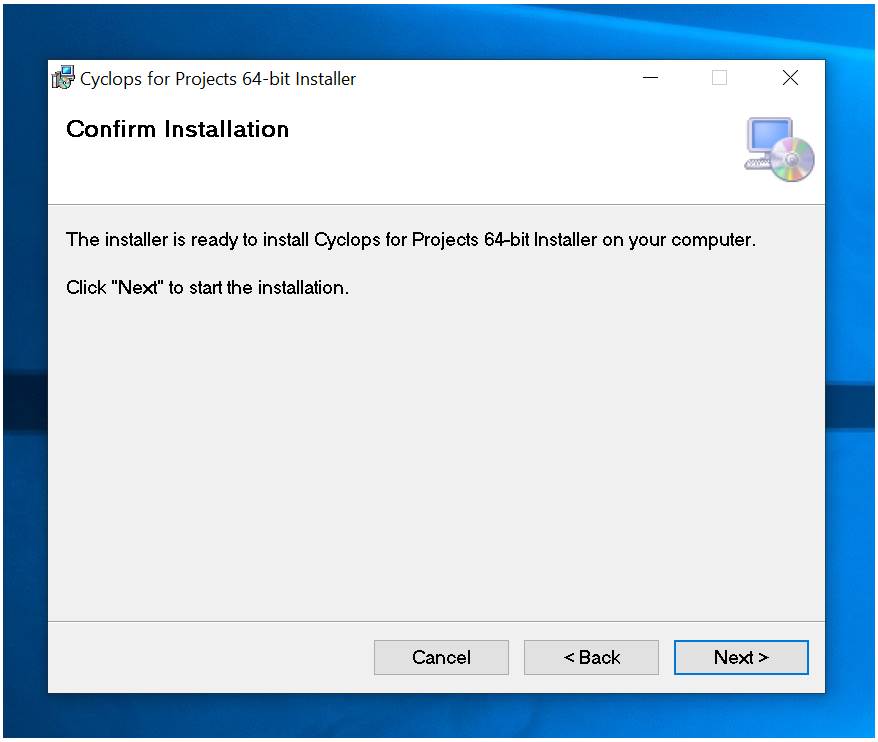
2. Select Install Location:



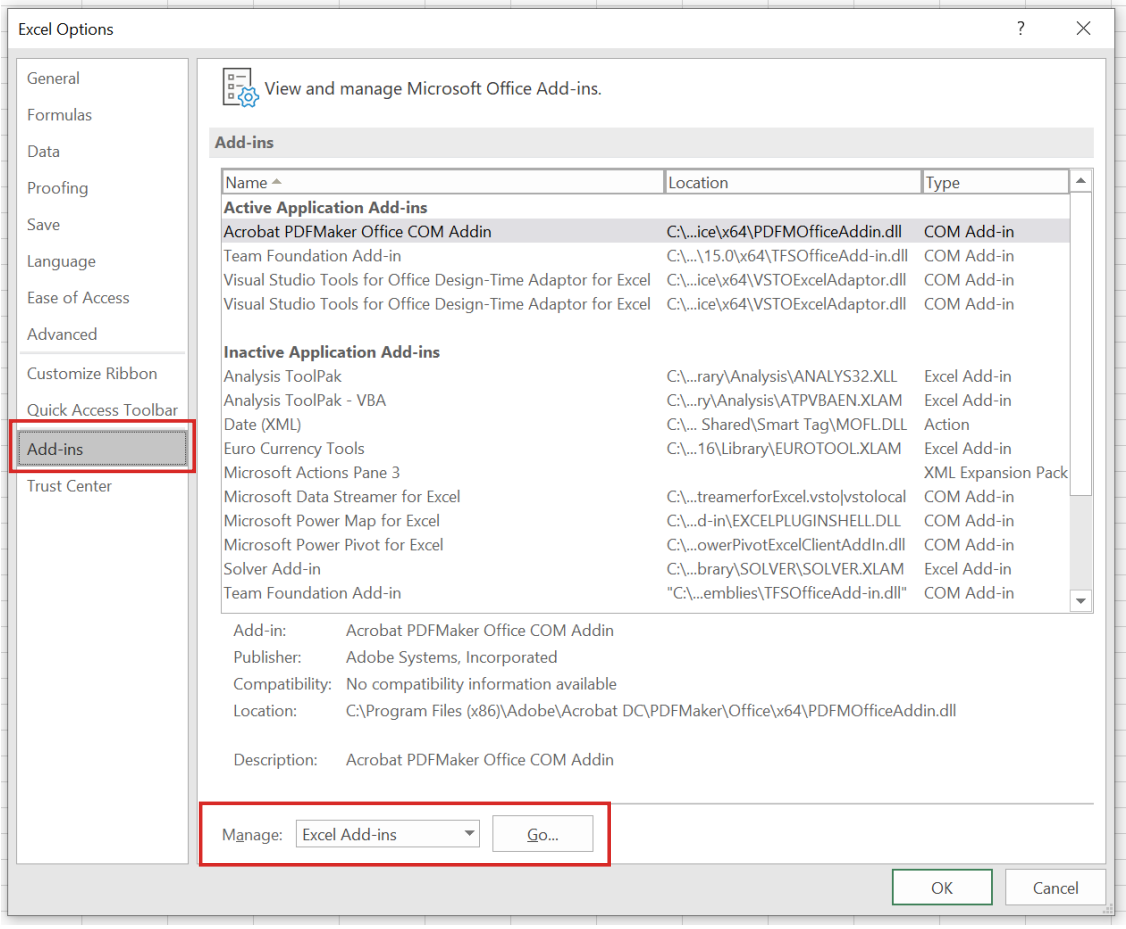
3. Accept End User License Agreement:



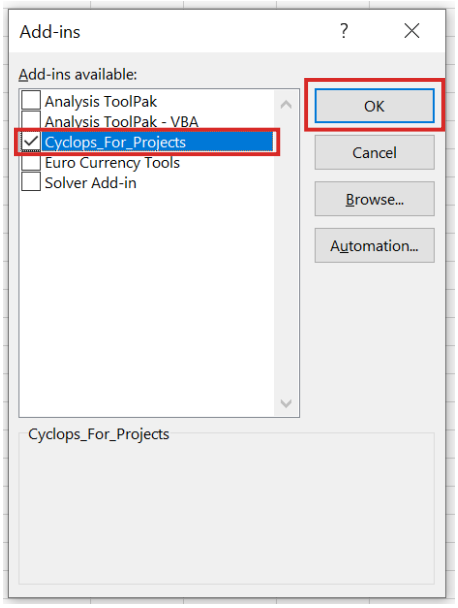
4. Confirm Installation:



5. Open Excel. Go to: "**File**" tab on the menu bar then click on "**Options**" near the bottom left. When the "**Excel Options"** dialog opens, click on "**Add-ins**".



6. At the "**Manage: Excel Add-ins"** drop-down, select "**Go**". The Add-ins dialog box will open:



7. Select the "**Cyclops For Projects**" Add-in checkbox and hit **OK**

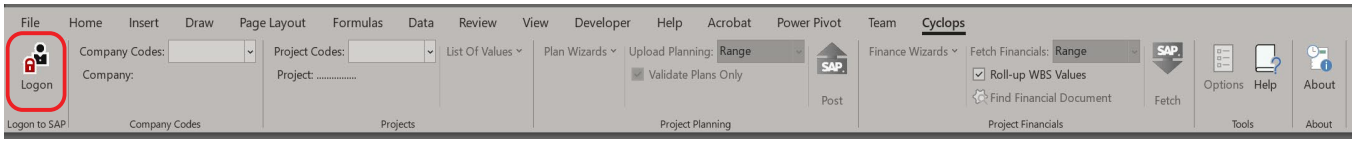
You are all set!

Click "**OK**" on the **Excel Options** dialog and Cyclops for Projects is installed and ready for use.

Cyclops for Projects – Excel Ribbon Menu

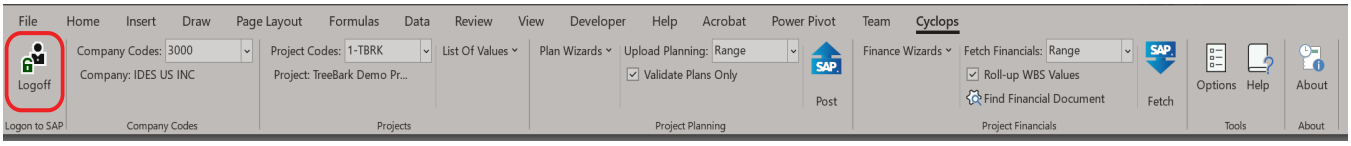
Register and Logon to SAP from the Ribbon Menu

Logon to SAP



First click the **Logon** button shown above. Then, the dialog box below will appear for user to enter username and password. After those field are entered click on logon. When logged onto SAP, the menu bar is activated, and a green unlocked icon appears. (see: Getting Started, Logging onto SAP)

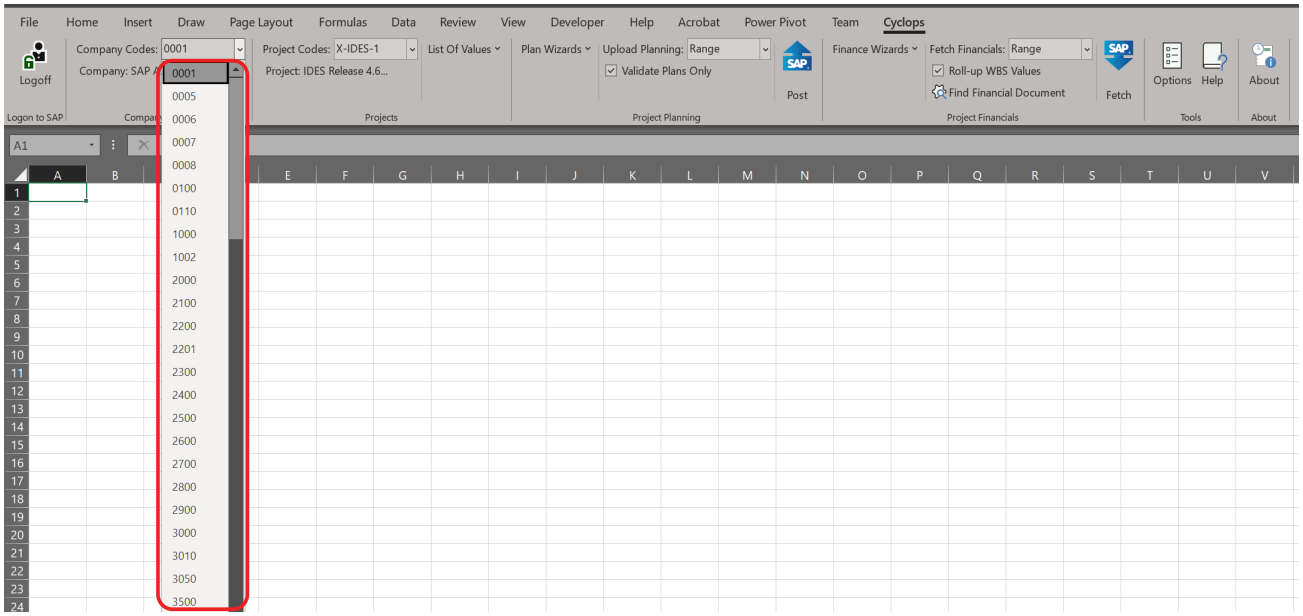
Logoff of SAP



To log off, simply click the **Logoff** to return to the disabled state. When logged off of SAP, functionality is disabled, and a red locked icon appears on Logon button to the left.

Company Codes Group

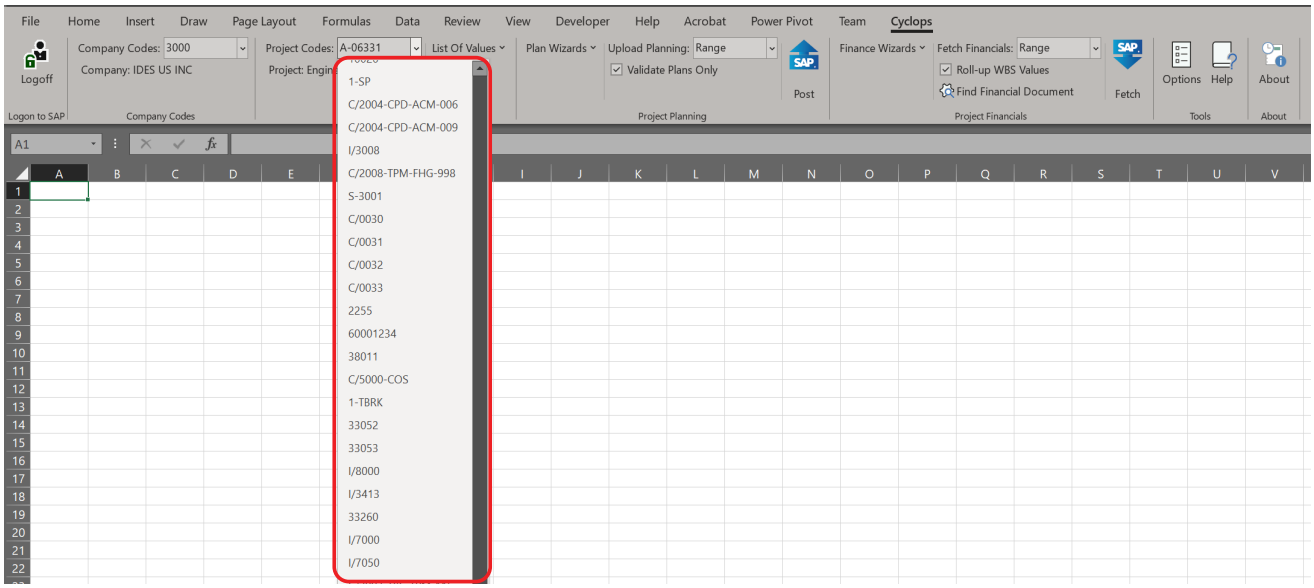
Company Codes Dropdown Menu



Select a company code as your top-level workspace. A company code is usually a distinct legal entity within a larger global enterprise. Most users will work within a single company code that displays the legal entity for which they are employed or engaged in a contractual role. The projects that appear within this dropdown will conform to row-level permissions as set by an organization's IT department. Executive management will generally see a broader list of company codes corresponding to their area of responsibility.

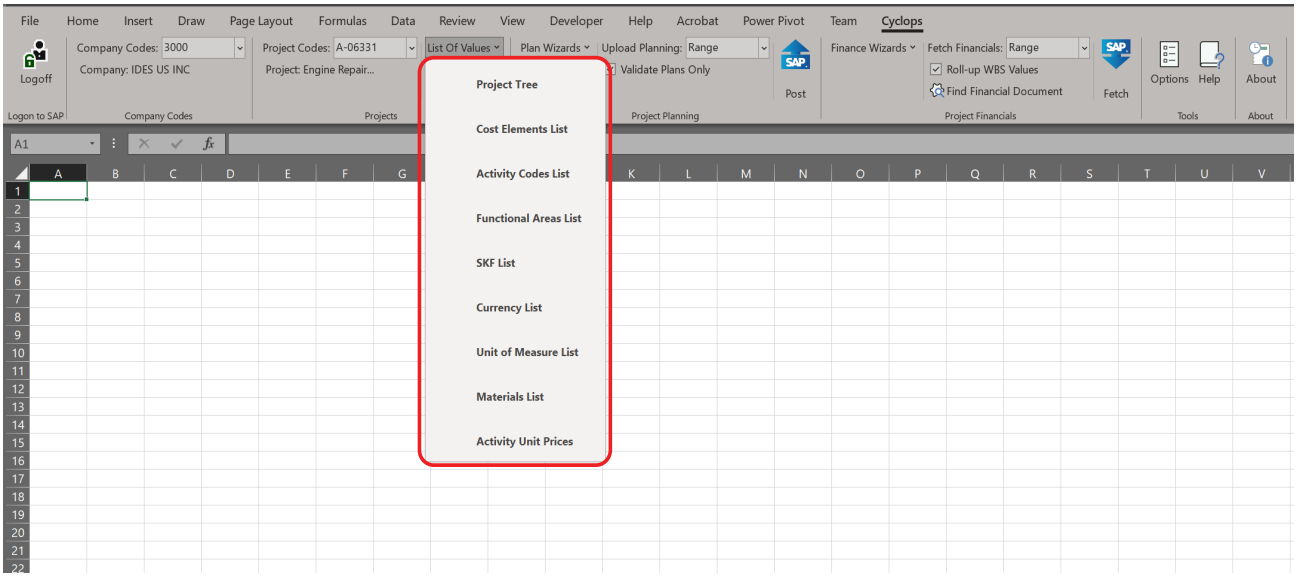
Projects Group

Project Codes Dropdown Menu

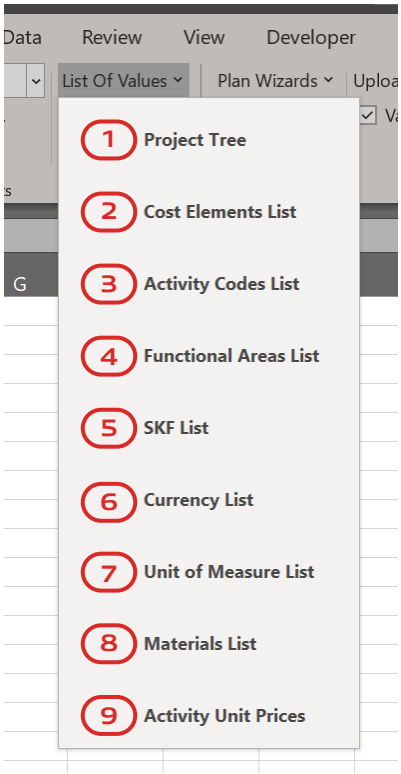


The project code dropdown will display a list of all projects where the user has permission to view financial information or plan into.

List of Values Dropdown Menu



Select pre-formatted list of values to populate in Excel. These lists can be used as references lieu of one-time hard coded values to help build your dynamic workbook.

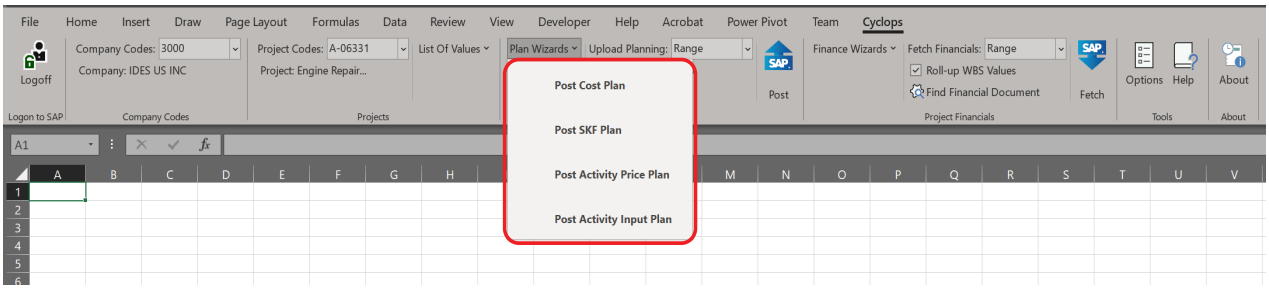


1. ***Project Tree***: Hierarchical display of project and associated WBS codes
2. ***Cost Elements***: List of cost elements associated with the selected company /controlling area. Cost elements are used in primary or direct cost planning.
3. ***Activity Codes***: List of activity types associated with the selected company/controlling area. Activity codes are associated with units and proscribed unit prices and availability. Used in secondary or price planning.
4. ***Functional Areas***: List of functional areas associated with the selected company/controlling area. Functional areas are organizational units that can be a sub-ledger to WBS structures or cost elements. This is an optional element.
5. ***SKF***: List of SKF associated with a company/controlling area. These are user-defined units of measure for planning and cost accounting purposes. ie: kW-Hr (Kilowatt-Hour)
6. ***Currency***: List of currencies associated with a company/ controlling area.

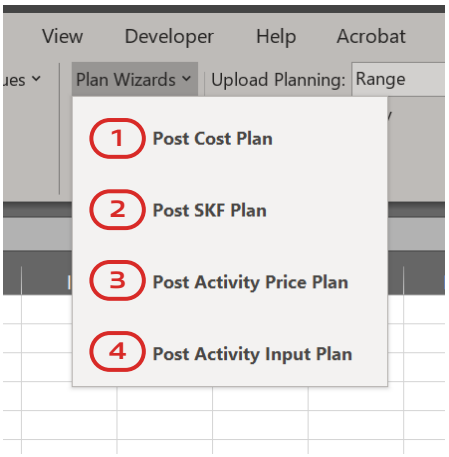
7. ***Unit of Measure***: List of unit types associated with the selected company /controlling area for secondary and SKF planning, i.e., HRS (Hours), KG (Kilograms), EA (Each), etc.
8. ***Materials List***: List of material types associated with the selected company/controlling area. Attributed in financials from purchase requisitions to invoicing.
9. ***Activity Unit Prices***:
   List of unit prices corresponding to a selected company code, year, activity code, cost center and year.

Project Planning

Plan Wizards Dropdown Menu

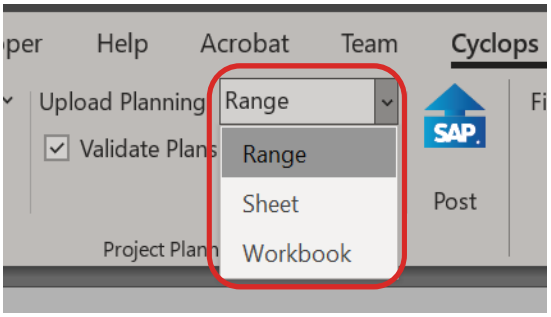


Select from a list of planning wizards from the drop-down menu to guide you through the planning process of your project / WBS.



1. ***Cost Plan***: Primary cost planning (or direct cost planning). These are external costs planned directly to a WBS. Costs can be apportioned directly by period or distributed over period by formula.
2. ***SKF Plan***: Planning for Statistical Key Figures. This is for internal benchmarking purposes only.
3. ***Activity Price Plan***: Planning for activity prices. Prices and availability of any activity must first be assigned to an activity / cost center prior to allocating to a WBS in ***4***. Activity availability can also be restricted by time and quantity.
4. ***Activity Input Plan***: Planning for activity input (or secondary cost planning). Once activities are priced in ***3***, they can then be allocated to a WBS.

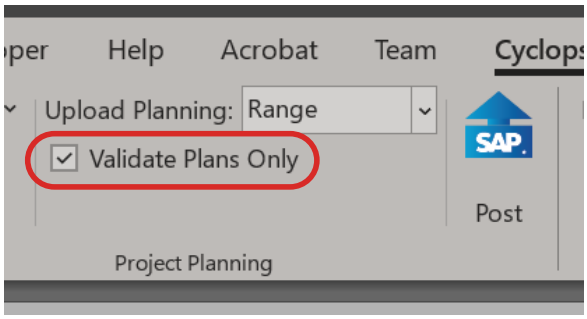
Upload Planning Dropdown Menu



Select from one of 3 posting options with respect to the Excel workbook you are working in.

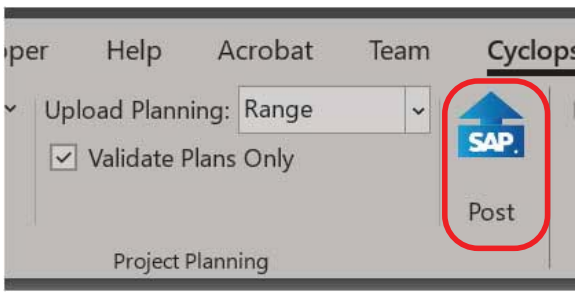
1. **Range:** Select a range of cells containing the planning formulas you wish to post or validate to SAP
2. **Sheet:** This selection posts or validates all planning formulas within the current worksheet
3. **Workbook:** This selection posts or validates all planning formulas within the entire workbook.

Validate Plans Only Checkbox



This checkbox allows a user to either ***Validate*** plan formulas in SAP without ***posting*** the data to SAP. Or, when left unchecked, the planning formula's data posts to SAP.

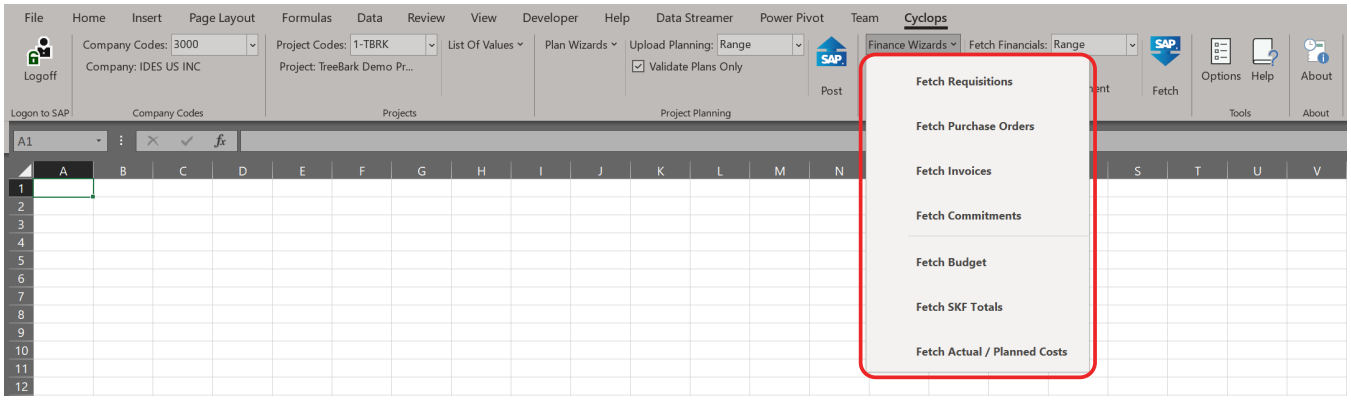
Post Plans Button

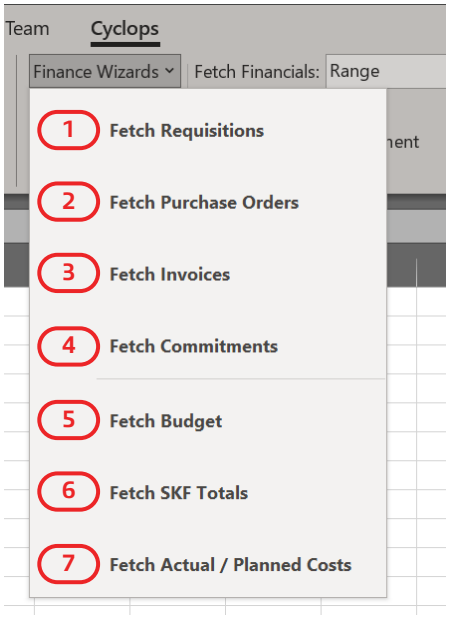


Click on the “Post Plans” button to initiate upload of planning data formulas to SAP.

Project Financials

Finance Wizards Dropdown Menu





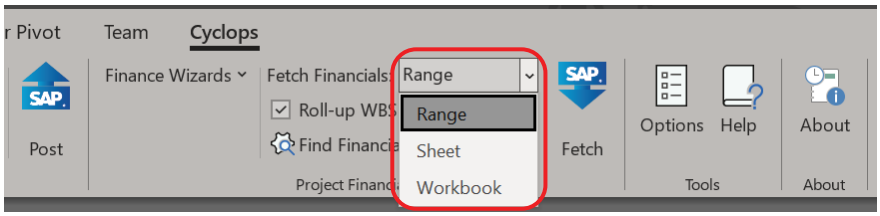
1. ***Requisitions***: Opens a wizard that allows a user to filter requisitions by a WBS, or group of WBS, elements. Requisitions can be further filtered by date range and materials. The wizard can return a list of values that can be written to the spreadsheet, or it can post a total value function, based on the selections, to the sheet which can then be fetched from SAP.
2. ***Purchase Orders***: Same as for requisitions applying to purchase orders.
3. ***Invoices***: Same as for requisitions applying to invoices.
4. ***Commitments:*** Same as for requisitions applying to commitments.
5. ***Budget***: Opens a wizard that allows a user to filter budgets by a WBS, or group of WBS, elements and a date at point in time. Once filter parameters are selected the user can display a list of budgets corresponding to the selected WBS codes and filters or returns a “Post Total” that is written to the selected Excel cell as a function and is a dynamically updatable value that refreshes upon user selected “Fetch Data” button.
6. ***SKF Totals***: Opens a wizard that allows a user to filter SKF values by a WBS, or group of WBS, elements and a date at point in time. Once filter parameters are selected the user can display a list of budgets corresponding to the selected WBS codes and filters or returns a “Post Total” that is

written to the selected Excel cell as a function and is a dynamically updatable value that refreshes upon user selected "Fetch Data" button.

7. ***Planned / Actuals***: Opens a wizard that allows a user to filter planned and actual values by a WBS, or group of WBS, elements and a date at point in time. Once filter parameters are selected the user can display a list of budgets corresponding to the selected WBS codes and filters or returns a "Post Total" that is written to the selected Excel cell as a function and is a dynamically updatable value that refreshes upon user selected "Fetch Data" button.

Select from a list of finance wizards from the drop-down menu to guide you through fetching budget and purchasing information for your project and/or WBS.

Fetch Financials Dropdown Menu



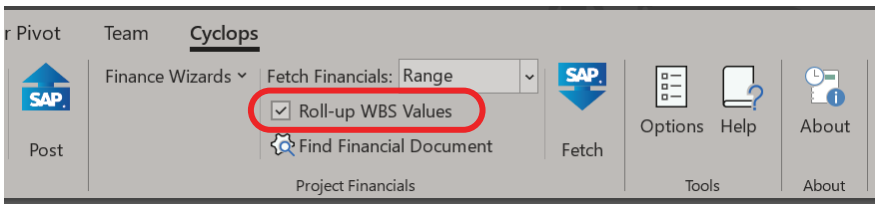
Select from one of 3 Finance refresh options with respect to the Excel workbook you are working in:

1. **Range:** Select a range of cells containing the finance / budgeting or read plan formulas you wish to retrieve / refresh from SAP.

2. **Sheet:** This selection retrieves / refreshes all finance / budgeting or read plan formulas within the current worksheet.

3. Workbook: This selection retrieves / refreshes all finance / budgeting or read plan formulas within the entire workbook.

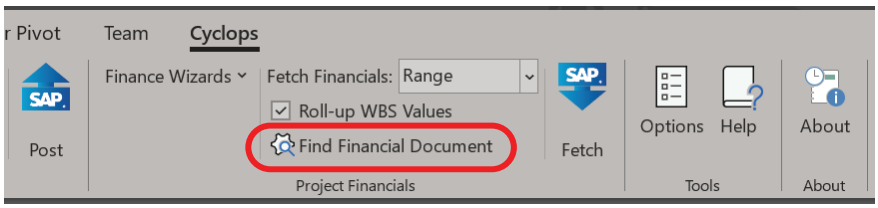
Roll-up WBS Values Checkbox



When selected, the roll-up WBS values checkbox indicates that all sub-level WBS codes are included within the parent WBS and Cyclops will not "double count" by adding sub-WBS financial values to their parent WBS code. Check this box to indicate that your project hierarchy has been configured accordingly.

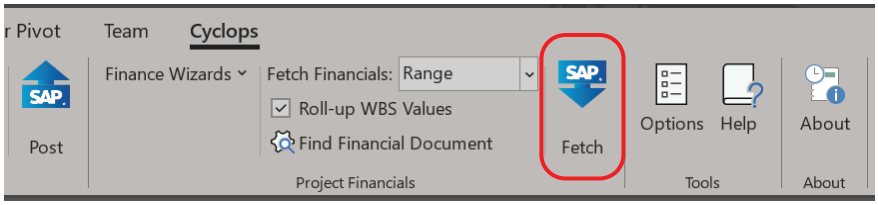
If your project has **not** been configured to allow for WBS roll-up, please uncheck this box. When unchecked, every WBS will be considered isolated from parents or children and the hierarchy will be summed together. If unsure, please contact your SAP administrator to confirm.

Find Financial Document Button



Click on "Find Financial Document" to open the Ad Hoc Financial Document Wizard.

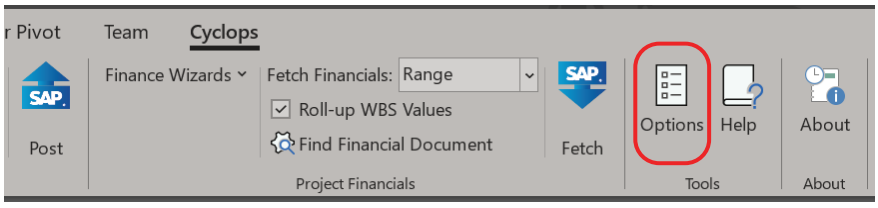
Fetch Financials Button



Click on the "Fetch Plans" button to initiate refresh of finance / budgeting or read plan formulas to SAP

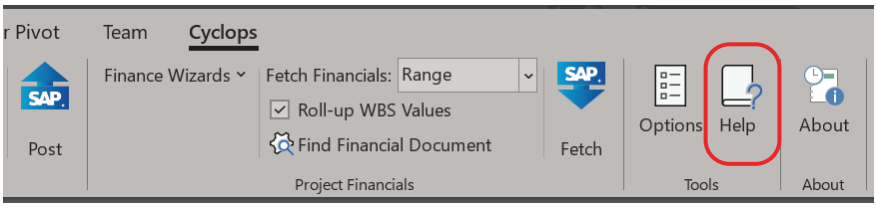
Tools

Options Button



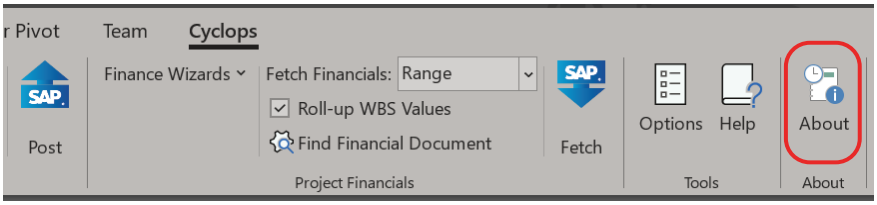
Click on the options button to select, SAP batch size, SAP query limit and refresh cache interval.

Help Button



Click on the help button to display this user guide.

About Button

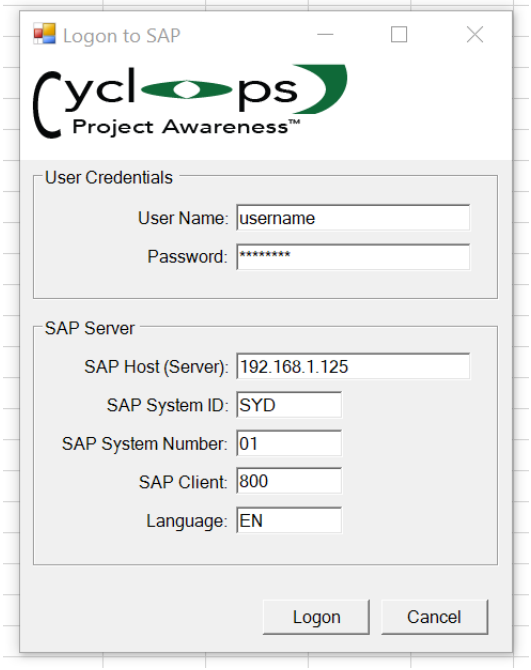


Click on the about button to review licensing status, version information, and other relevant details.

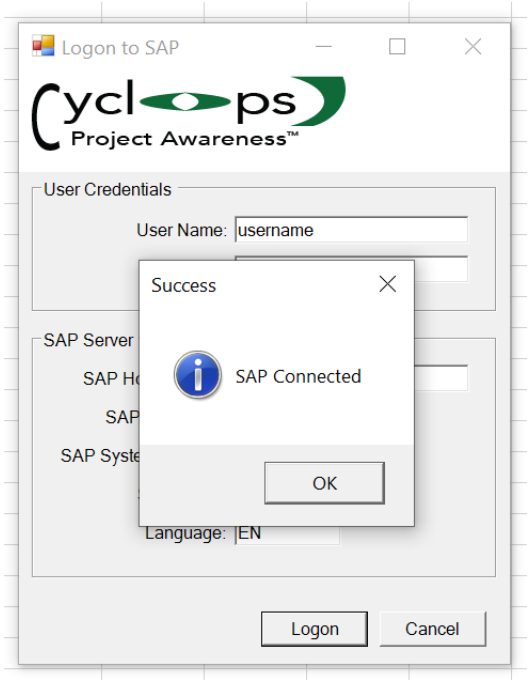
Getting Started

Logging Onto SAP

Click the Logon button on the Cyclops menu bar and fill in the appropriate information in the dialog box:

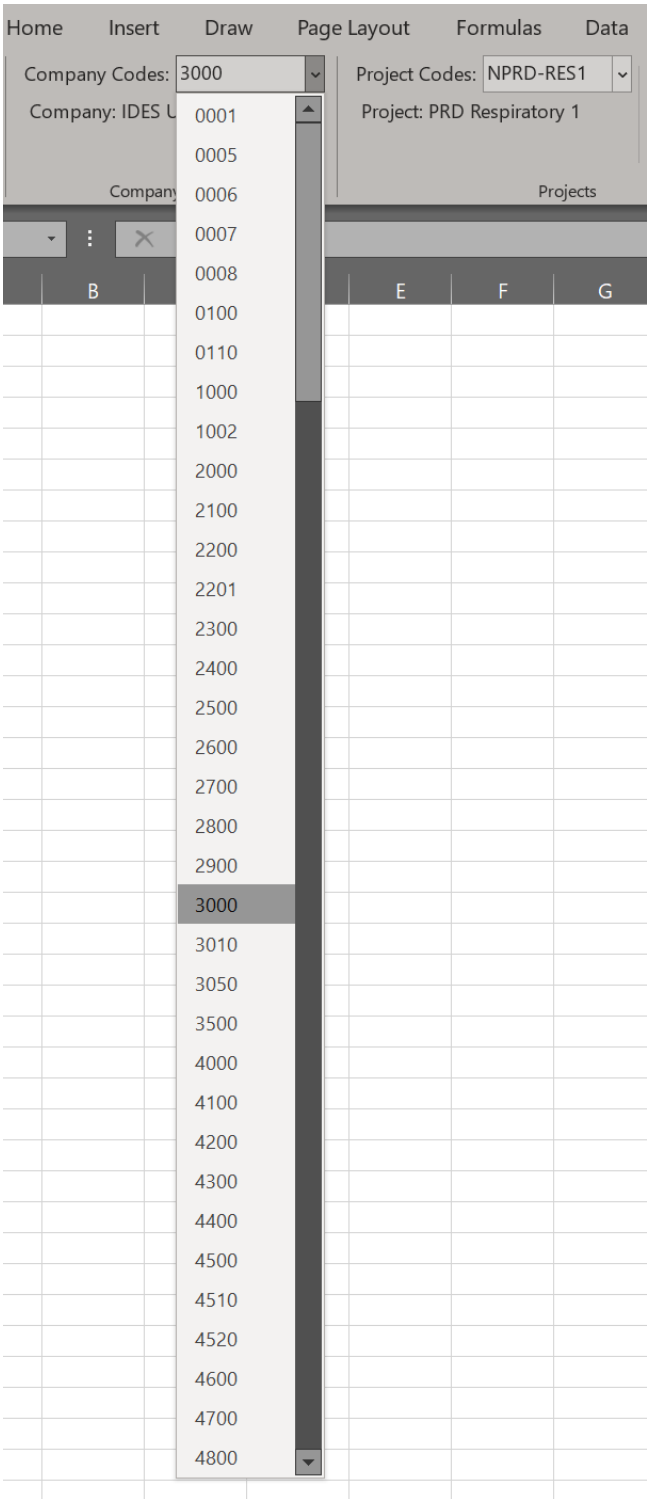


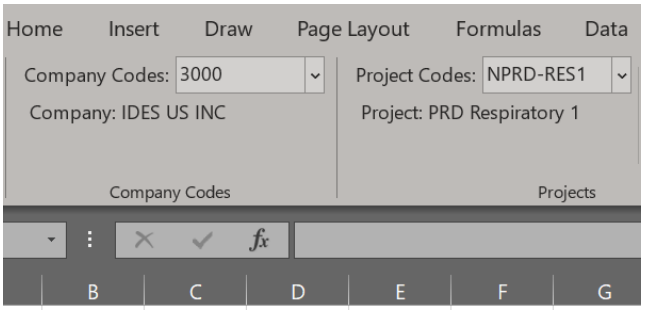
The information required to sign on to SAP is the same information you would use to establish a connection through R/3*. Upon successful login the following dialog box will be displayed:



*Logon credentials for S/4 HANA shall be provided by your system administrator

Select Company Code Workspace

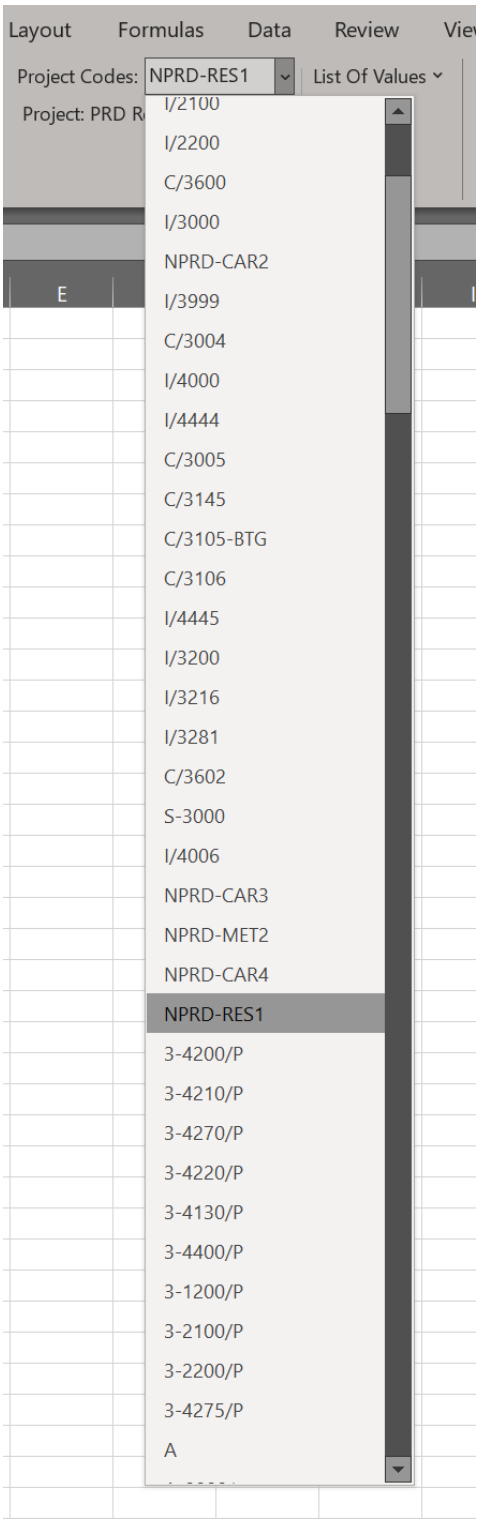


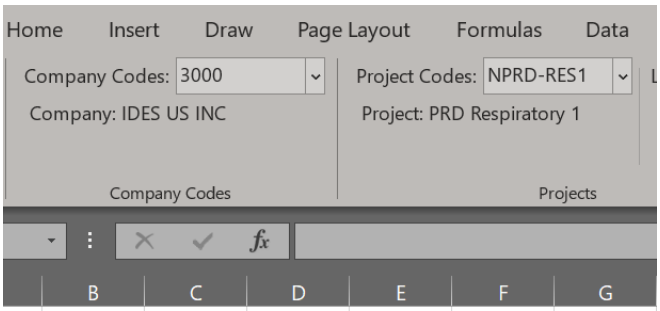


When a user logs onto SAP a company code dropdown list is populated with a list of active company codes available to the user. The user can then select from this pre-populated list of company codes to define the top-level workspace. This list is dependent upon user access permissions set by management / IT. Users will only see company codes which they have permissions to view.

When a company code is selected; the project list is updated automatically to reflect projects within the selected company code domain. Again, only those projects for which the user has permission to view will populate the project codes list. By default, the first project in the list is selected.

Select Project Workspace





Once the company code and associated project are selected the user can then operate within this domain to start planning or retrieving financial data in this space. The user can then change this domain very easily by selecting another project within the company or selecting another company in the list and different project. The next tier in the hierarchy are WBS codes associated with a project.

Visually:

Company Code -> Project Code -> WBS Codes

How To

List of Values

Summary of List of Values

List Name	Comments
Project Tree	Writes back the complete WBS structure associated with the project to Excel as either a complete hierarchical tree, an "orphan" tree that only groups the deepest child in a branch or a simple list. User may select fields to be written back to the Excel spreadsheet.
Cost Element List	Returns all cost elements associated with a company code. User may select which code(s) they wish to write back to the Excel spreadsheet.
Activity Code List	Returns all activity types associated with a company code. User may select which code(s) they wish to write back to the Excel spreadsheet.
Functional Area List	Returns all functional areas associated with a company code. User may select which code(s) they wish to write back to the Excel spreadsheet.
SKF List	Returns a list of Statistical Key Figures (SKFs) associated with a company code. User may select which code(s) they wish to write back to the Excel spreadsheet.
Currency List	Returns a list of global currency codes that the user may then write back to the Excel worksheet.
Unit of Measure List	Returns a list of units of measure (each, kilogram, meter, liters, etc.) that the user may then write back to the Excel worksheet
Materials List	Returns a complete list of materials available to a company code. User may select which material(s) they wish to write back to the Excel worksheet.
Activity Unit Prices	Returns a list of activity unit prices that have been planned against an activity code and cost center. Other required parameters to return planned values include company code, year, and version. All returned values based on the provided parameters can be written back to the worksheet.

The primary purpose of the provided **List of Values** is so that a user may write back these data sets to one or several sheets within a workbook, and then reference that data in other sheets within the workbook.

Fetch + Write back a Project Tree or List to Sheet

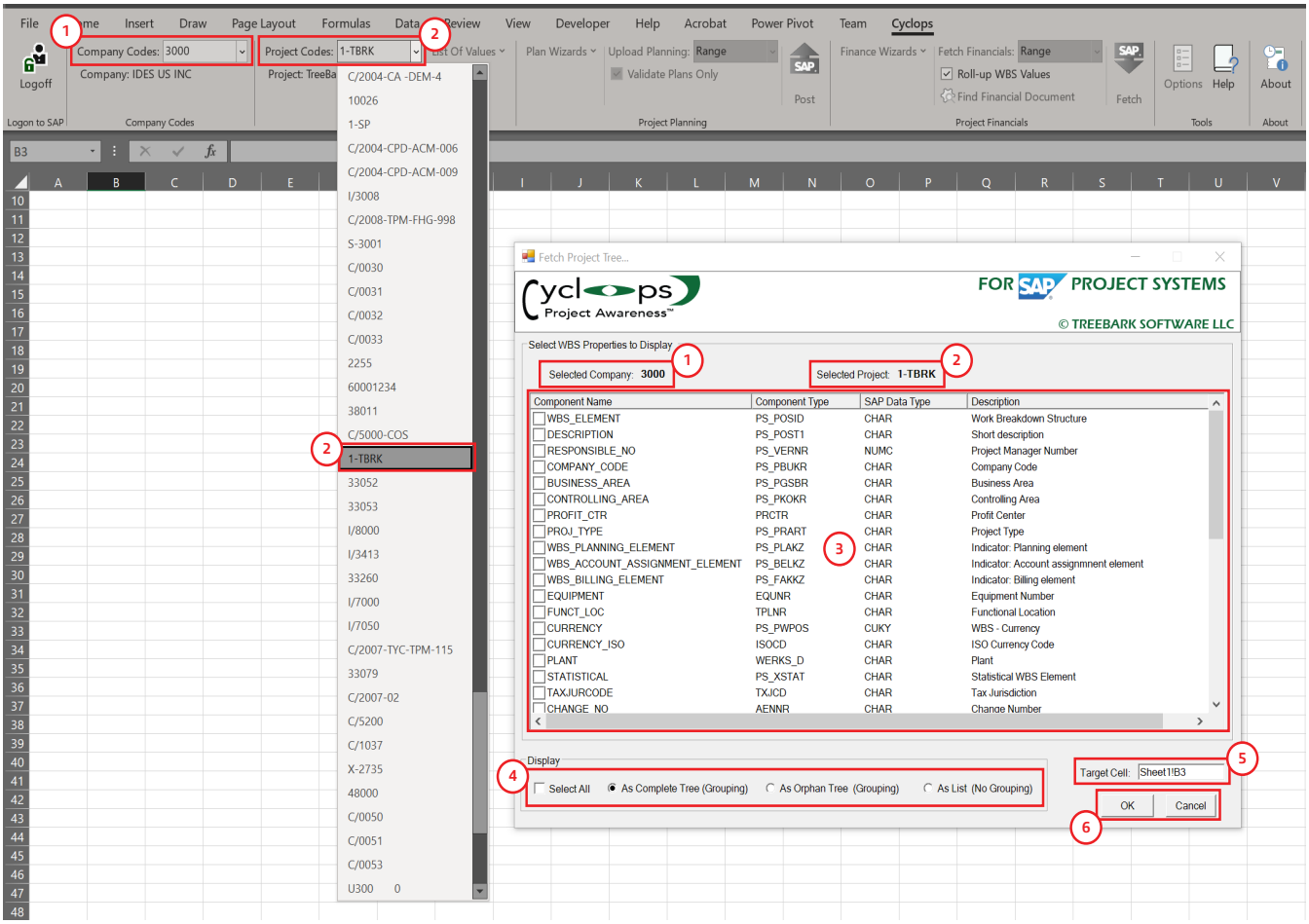


Figure 1 – Fetch Project Tree

The **Fetch Project Tree** wizard displays a listing of WBS elements within a selected company and project. The WBS elements can be displayed as a fully grouped tree, an orphan tree or a simple listing as described below.

Options:

1. <u>Selected Company</u>: The **company code** selected in the Cyclops ribbon bar will be the **selected company** as listed in the wizard. This value can be automatically updated based on user selection in the Menu bar. If a user were to select a new **company code** value, from the dropdown, while the wizard is open, that value would automatically refresh the **company code** value in the wizard and automatically reset the **selected project** to the first listed project in the **project code dropdown**.

2. <u>Selected Project</u>: The **project code** selected in the Cyclops ribbon bar will be the selected project as listed in the wizard. If a user were to select a new **project code** from the dropdown, while

the wizard is open, that value would automatically refresh the **selected project** to the first listed project in the **project code dropdown**.

3. SAP WBS Fields: Select the **SAP fields** from the **selected project**'s **WBS codes** (ALL of the WBS codes associated with the selected project will be written back) you wish to write back to the Excel spreadsheet.

4. Display: The display list of controls determines which data from the selected project, and associated WBS, is written back to the worksheet and how that data is formatted. Within the display group box the user has several options as listed below (also; please see Figure 2):

    a. ***Select All checkbox***: User can quickly select all the WBS codes from the list (3) by checking the select all checkbox. Unselected the checkbox will remove all selected fields.

    b. ***As Complete Tree (Complete Grouping)***: There are several different ways Cyclops can write back the selected **WBS fields** to the spreadsheet. The first method is as a completely grouped tree. The entire hierarchy of the WBS Codes (and all associated sub codes) will be preserved and written back to Excel using grouping.

    c. ***As an Orphan Tree (Single Grouping)***: An orphan tree will group only the furthest WBS codes within a hierarchy (Please see: Exhibit WBS Grouping). The rest of the WBS codes to the left of the final group are in-lined with the top-level WBS. How a user choses to display a WBS hierarchy is entirely a matter of personal preference. An orphan tree can provide a cleaner look at the expense of a complete hierarchy view. The user will have to decide which one works best.

    d. As a List (No Grouping): If user selected a list, data will be written back to Excel in sorted format but without grouping.

5. Target Cell: Click inside the target cell text box to activate the Excel linkage then select any cell within an Excel worksheet as the target write back location. The selected cell will be displayed in the text box, Click "OK". Cyclops will proceed to write back the project tree structure based on the selected option in 1 – 4 beginning at the selected cell and proceeding right and to the bottom.

6. OK and Cancel Buttons:

    - *OK* - Click the "OK" button to write back the list of values to the active sheet beginning with the target cell. (See: **Figure 3**)
    - *Cancel* – Closes the Wizard

Complete Grouping	Orphan Tree	List
Project A $WBS_{1\text{-}A}$ $WBS_{1\text{-}1\text{-}A}$ $WBS_{1\text{-}1\text{-}1\text{-}A}$ $WBS_{2\text{-}1\text{-}1\text{-}A}$ $WBS_{3\text{-}1\text{-}1\text{-}A}$ $WBS_{2\text{-}A}$ $WBS_{1\text{-}2\text{-}A}$ $WBS_{1\text{-}1\text{-}2\text{-}A}$ $WBS_{2\text{-}1\text{-}2\text{-}A}$ $WBS_{1\text{-}2\text{-}1\text{-}2\text{-}A}$ $WBS_{2\text{-}2\text{-}1\text{-}2\text{-}A}$ $WBS_{3\text{-}2\text{-}1\text{-}2\text{-}A}$ $WBS_{3\text{-}1\text{-}2\text{-}A}$ $WBS_{1\text{-}3\text{-}1\text{-}2\text{-}A}$ $WBS_{2\text{-}3\text{-}1\text{-}2\text{-}A}$ $WBS_{3\text{-}3\text{-}1\text{-}2\text{-}A}$	Project A $WBS_{1\text{-}A}$ $WBS_{1\text{-}1\text{-}A}$ $WBS_{1\text{-}1\text{-}1\text{-}A}$ $WBS_{2\text{-}1\text{-}1\text{-}A}$ $WBS_{3\text{-}1\text{-}1\text{-}A}$ $WBS_{2\text{-}A}$ $WBS_{1\text{-}2\text{-}A}$ $WBS_{1\text{-}1\text{-}2\text{-}A}$ $WBS_{2\text{-}1\text{-}2\text{-}A}$ $WBS_{1\text{-}2\text{-}1\text{-}2\text{-}A}$ $WBS_{2\text{-}2\text{-}1\text{-}2\text{-}A}$ $WBS_{3\text{-}2\text{-}1\text{-}2\text{-}A}$ $WBS_{3\text{-}1\text{-}2\text{-}A}$ $WBS_{1\text{-}3\text{-}1\text{-}2\text{-}A}$ $WBS_{2\text{-}3\text{-}1\text{-}2\text{-}A}$ $WBS_{3\text{-}3\text{-}1\text{-}2\text{-}A}$	Project A $WBS_{1\text{-}A}$ $WBS_{1\text{-}1\text{-}A}$ $WBS_{1\text{-}1\text{-}1\text{-}A}$ $WBS_{2\text{-}1\text{-}1\text{-}A}$ $WBS_{3\text{-}1\text{-}1\text{-}A}$ $WBS_{2\text{-}A}$ $WBS_{1\text{-}2\text{-}A}$ $WBS_{1\text{-}1\text{-}2\text{-}A}$ $WBS_{2\text{-}1\text{-}2\text{-}A}$ $WBS_{1\text{-}2\text{-}1\text{-}2\text{-}A}$ $WBS_{2\text{-}2\text{-}1\text{-}2\text{-}A}$ $WBS_{3\text{-}2\text{-}1\text{-}2\text{-}A}$ $WBS_{3\text{-}1\text{-}2\text{-}A}$ $WBS_{1\text{-}3\text{-}1\text{-}2\text{-}A}$ $WBS_{2\text{-}3\text{-}1\text{-}2\text{-}A}$ $WBS_{3\text{-}3\text{-}1\text{-}2\text{-}A}$

Figure 2 - WBS Grouping

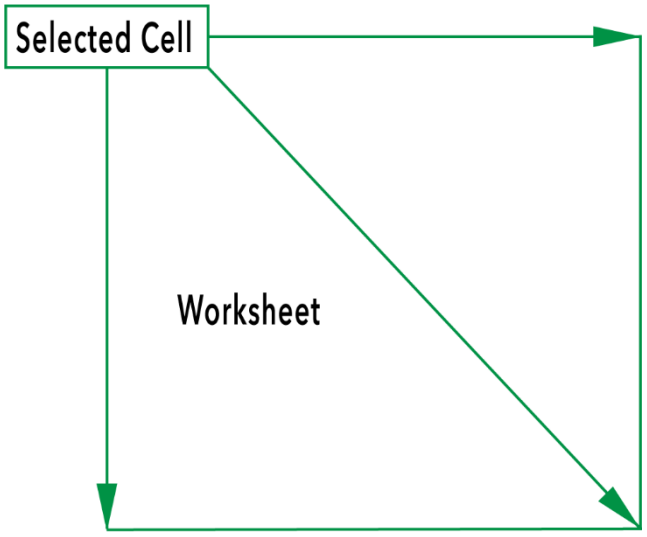


Figure 3 - Write back to Worksheet

Fetch + Write back Cost Elements to Sheet

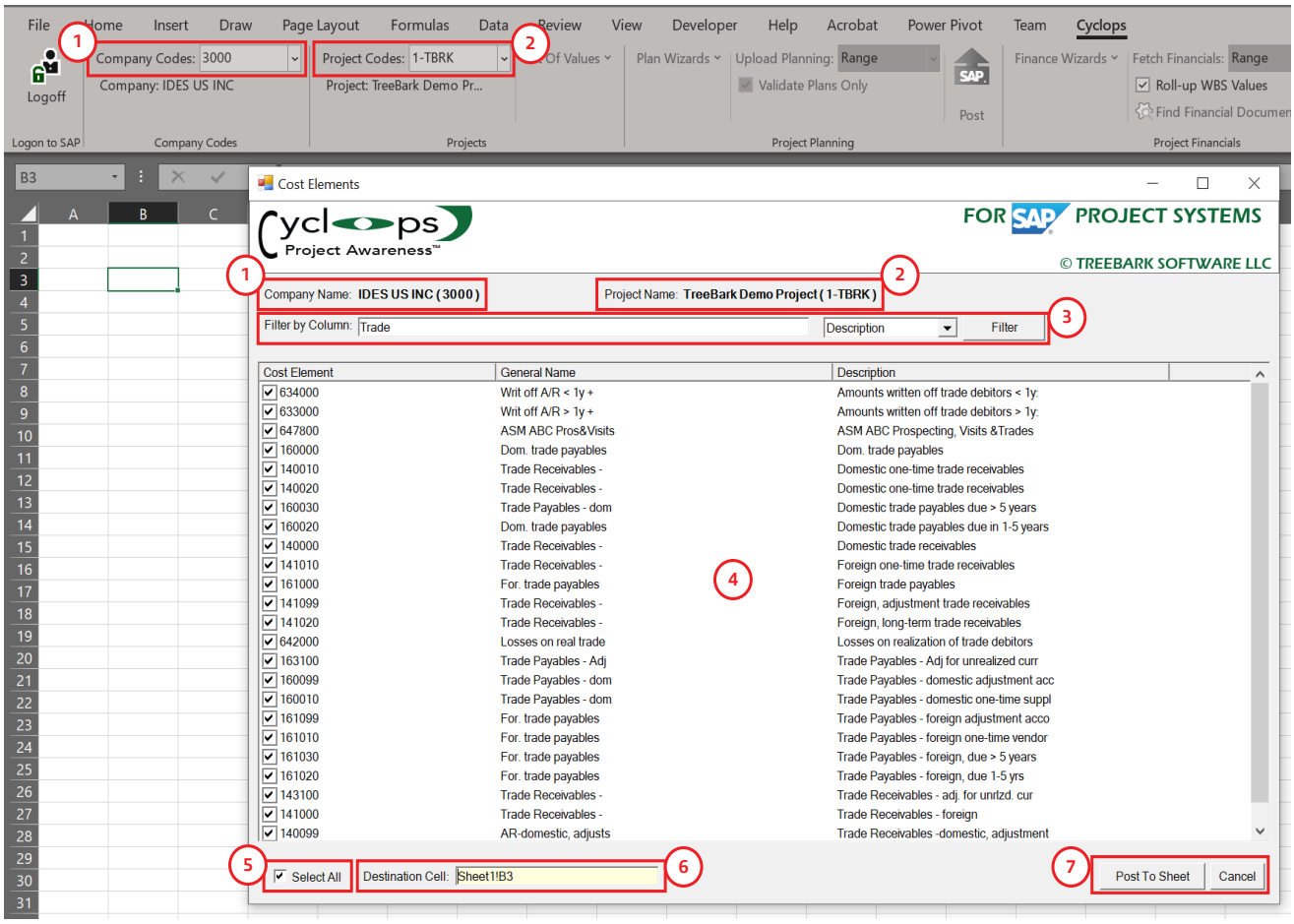


Figure 4 - Cost Elements List of Values

Options:

1. **Selected Company**: The company code selected in the Cyclops ribbon bar will be the selected company as listed in the wizard. This value can be automatically updated based on user selection in the menu bar. If a user were to select a new **company code** value, from the dropdown, while the wizard is open, that value would automatically refresh the **company code** value in the wizard and automatically reset the **selected project** to the first listed project in the **project code dropdown**.

2. **Selected Project**: The project code selected in the Cyclops ribbon bar will be the selected project as listed in the wizard. If a user were to select a new **project code** from the dropdown, while the wizard is open, that value would automatically refresh the **selected project** to the first listed project in the **project code dropdown**.

3. **Filtering**: The user may filter cost elements based on any word, or part of any word, by:

    a. Entering text in the filter by column text box

b. Selecting the column in which to filter by (a)
c. Then, click the "Filter" button

The list of values will automatically update based on the text and column name.

4. **List of Values**: The displayed list of values based on user restrictions / filtering.

5. **Select All Checkbox**: Similar to the fetch project tree (see: Figure 1) the user can quickly select all of the **cost elements** displayed in list of values before or after filtering.

6. **Destination / Target Cell**: Click inside the target cell text box to activate the Excel linkage then select any cell within an Excel worksheet as the target write back location. The selected cell will be displayed in the text box, Click "OK". Cyclops will proceed to write back the project tree structure based on the selected option in 1 – 4 beginning at the selected cell and proceeding right and to the bottom. Please note: ALL data within the sheet **will be deleted**. Pick a dedicated sheet without any data for which for want to write back a project tree hierarchy.

7. **Post to Sheet / Cancel**:

   - **Post To Sheet:** Writes back the list of values as a non-hierarchical list to the active sheet beginning with the target cell.
   - **Cancel:** Closes the wizard.

Fetch + Write back Activity Unit Prices to Sheet

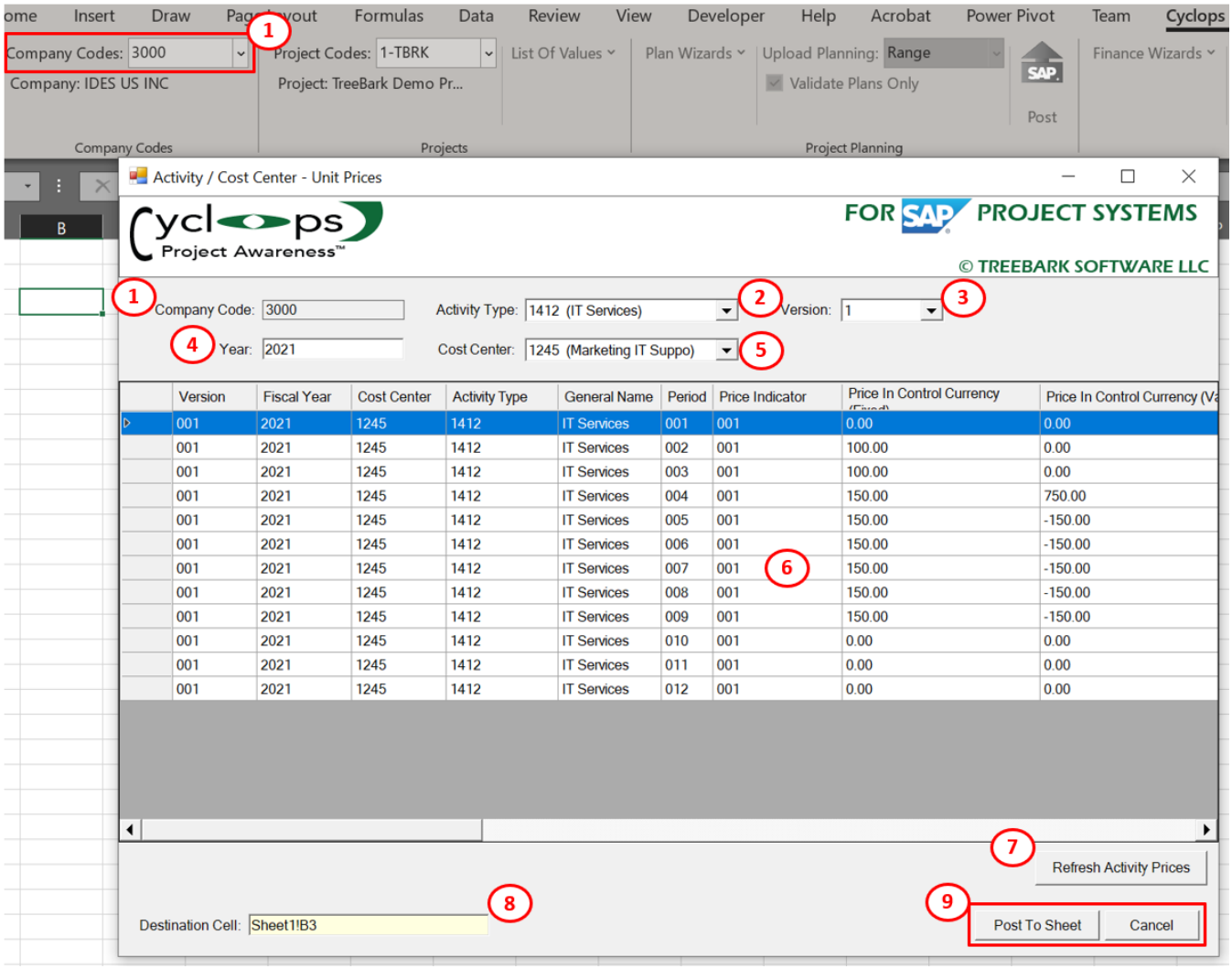


Figure 5 – Activity Unit Prices List of Values

Options:

1. Selected Company: The company code selected in the Cyclops ribbon bar will be the selected company as listed in the wizard. This value can be automatically updated based on user selection in the menu bar. If a user were to select a new **company code** value, from the dropdown, while the wizard is open, that value would automatically refresh the **company code** value in the wizard and automatically reset the **selected project** to the first listed project in the **project code dropdown**.

2. Activity Type: This dropdown menu contains a list of activity types, or activity codes associated with a company code / controlling area. An activity type is planned against a cost center to create a unit price for the activity within the company / controlling area ("activity unit price"). The drop-down menu contains all the selectable activity types associated with a company and its controlling area.

3. Version: The version dropdown menu contains the planning versions available to the selected company code. The selected version value correlates to the activity unit prices planned. Every planned activity unit price is assigned to a specific version.

4. Year: The year value is the fiscal year for which the activity unit price is planned.

5. Cost Center: This dropdown menu contains a list of cost centers associated with a controlling area, that is planned in conjunction with an activity type (see: item 2 above) to create an activity unit price.

6. Activity Price List: The result table containing the activity unit prices, and associated information, as a result of the selected parameters 1 through 5.

7. Refresh Activity Prices: Pressing this button will refresh the activity price list table (see: item 6 above) with the selected parameters 1 through 5.

8. Destination Cell: The top-left most cell in the spreadsheet that the data from the activity price list will write to. The data from the price list will then write beginning at this cell and write down and to the right corresponding to row / column.

9. Function Buttons:
    - *Post to Sheet Button*
        Posts the data from the activity price List to the spread sheet as described in (8).
    - *Cancel Button*
        Closes the wizard / form.

Cost Plan Wizard by Fiscal Year – Header Information Tab

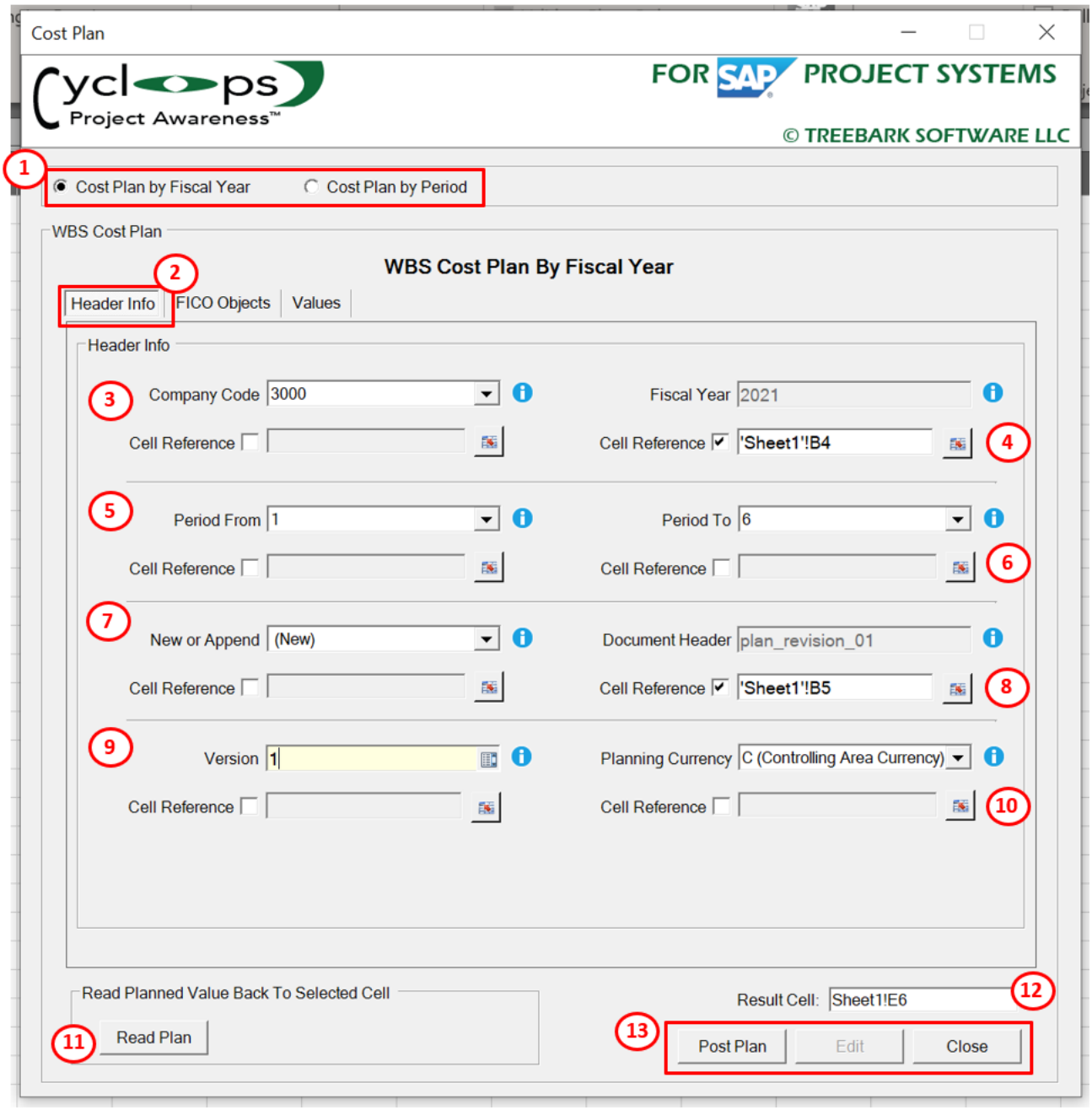


Figure 6 - WBS Cost Plan by Fiscal Year – General Parameters

Cost Plan, Header Information Tab, Figure 6 - Options:

1. <u>Fiscal Year / Period - Radio Group Button</u>:
   Cost plan by fiscal year is selected to plan by fiscal year.

2. Header Information Tab:
   Header information tab can also be thought of as values that, in combination, uniquely identify a group of planning values in SAP. From the user's perspective, this process is opaque.

3. Company Code:
   Select company code by dropdown list for planning purposes. Unlike the "list of value" wizards, the planning wizards are not dynamically linked to the main ribbon dropdown. This makes editing and inputting planning values consistent as it may not always be desirable for planned values to be updated based on ribbon selections.

4. Fiscal Year:
   The year that the cost plan will be posted against.

5. Period From:
   The initial month or period of the posting.

6. Period To:
   The final month or period of the posting.

7. New or Append:
   Specifies whether value posted will replace existing value or be additive to existing value.

8. Document Header:
   A document header that identifies the posting group. One or more postings can share a common document header.

9. Version:
   Planning version associated with the posting group.

10. Planning Currency:
    The planning currency could be one of 3 options listed below:
    - C or "Controlling Area Currency". As the name implies, all values posted to the plan will be in the currency defined by the controlling area.
    - O or "Object Currency". Currency as defined by the WBS object being planned.
    - T or "Transaction Currency". Costs and revenue that may arise from transactions that may be of different currency than controlling or object (WBS) currency can be recorded using a transaction currency.

11. Read Plan:

Read plan writes an Excel function into the spreadsheet that returns the current planned value posted with the selected constraints. After writing the function to the spreadsheet, it must be initiated (sent to SAP server) by clicking on the **Fetch** button on the ribbon bar.

If successful, the planned value will be returned to the cell. Otherwise, the function will return an error message from SAP.

12. **Result Cell**:
    Read plan writes an Excel function into the spreadsheet that returns the current planned value posted with the selected constraints.

13. **Post Plan, Edit, Close**:

    - Post Plan: Writes an Excel function into the spreadsheet that posts planned values as entered into the wizard into the result cell. After writing the function to the spreadsheet, it must be initiated (sent to SAP server) by click on the **Post** button on the ribbon bar.

      If successful, the planned value will be returned to the cell. Otherwise, the function will return an error message from SAP.

    - Edit: Opens the Excel function editor from which to edit input values.

    - Close: Closes the wizard without writing to the Excel spreadsheet. This will discard any values entered into the wizard.

Cost Plan Wizard by Fiscal Year – FICO Objects Tab

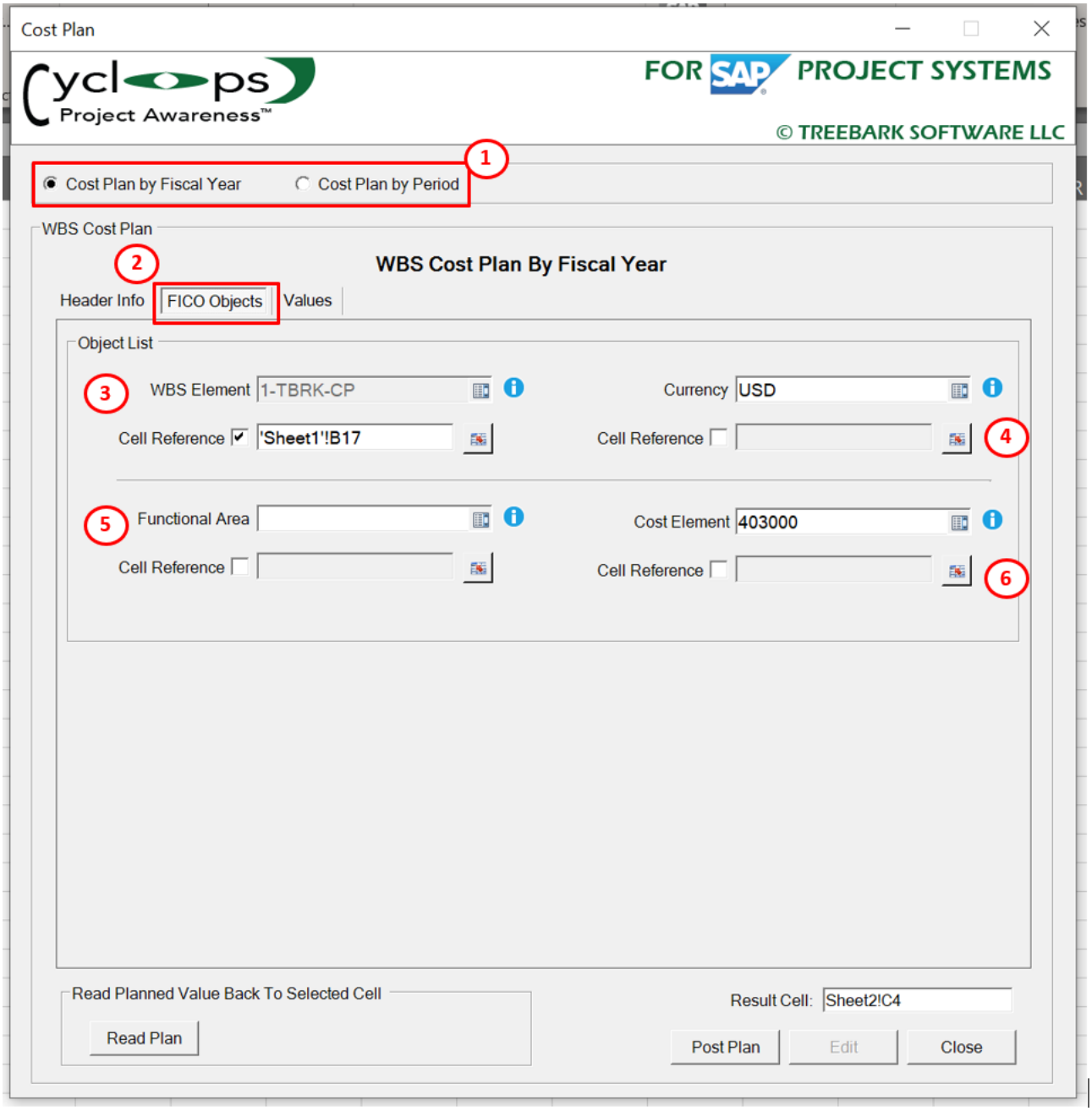


Figure 7 - WBS Cost Plan by Fiscal Year – FICO Objects

Cost Plan, FICO Objects Tab, Figure 7 - Options:

1. <u>Fiscal Year / Period - Radio Group Button</u>:
   Cost plan by fiscal year is selected to plan by fiscal year.

2. <u>FICO Objects Tab</u>:

FICO objects ("Finance and Control") represent objects and their attributes, for which values are planned against. In this case, direct cost planning, the primary FICO object will always be a WBS object.

3. **WBS Element**:
   This is the primary, top-level, FICO object to be planned. For planning purposes, the WBS element cannot be a top-level project.

4. **Currency**:
   The selected currency to plan in. This corresponds to national currency designations such as USD, EUR, GBP, RUB, CNY, etc.

5. **Functional Area (optional)**:
   A sub-ledger to a cost element or WBS that allows for planning against activities within the primary ledger.

6. **Cost Element (optional)**:
   Identifies the work element to be planned within a WBS.

Cost Plan Wizard by Fiscal Year – Values Tab

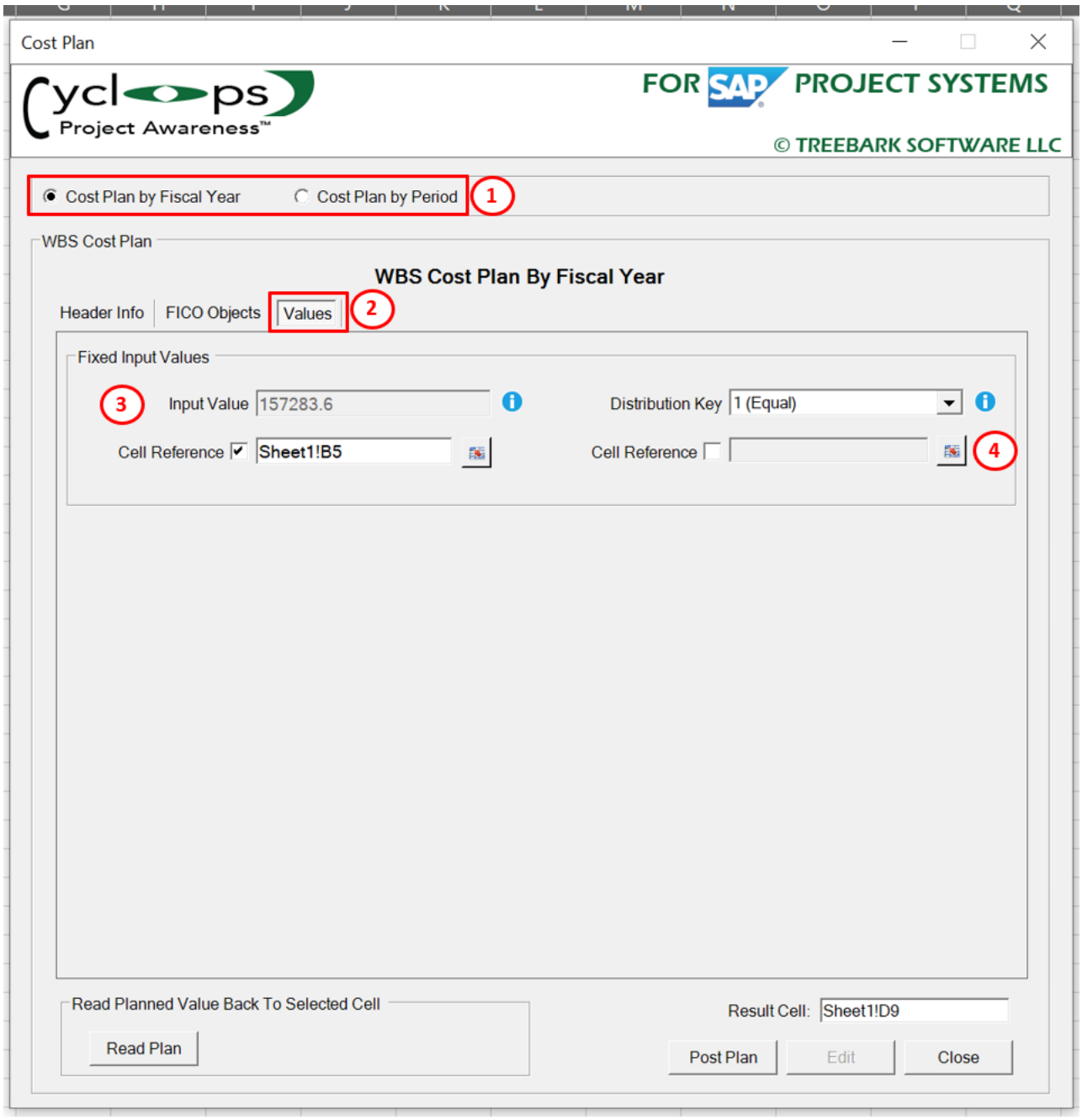


Figure 8 - WBS Cost Plan by Fiscal Year – Values

Cost Plan, WBS Values Tab, Figure 8 - Options:

1. <u>Fiscal Year / Period - Radio Group Button</u>:
   Cost plan by fiscal year is selected to plan by fiscal year.

2. Values Tab:
   This tab displays the input fields necessary to allocate a numeric currency amount to the WBS code identified in FICO objects, and the way that amount is distributed.

3. Input Value:
   The input value is the numeric currency amount to be allocated.

4. Distribution Key (for Fixed Values), Figure 9:
   This dropdown list shows several options that SAP provides for distributing a single value over multiple periods:

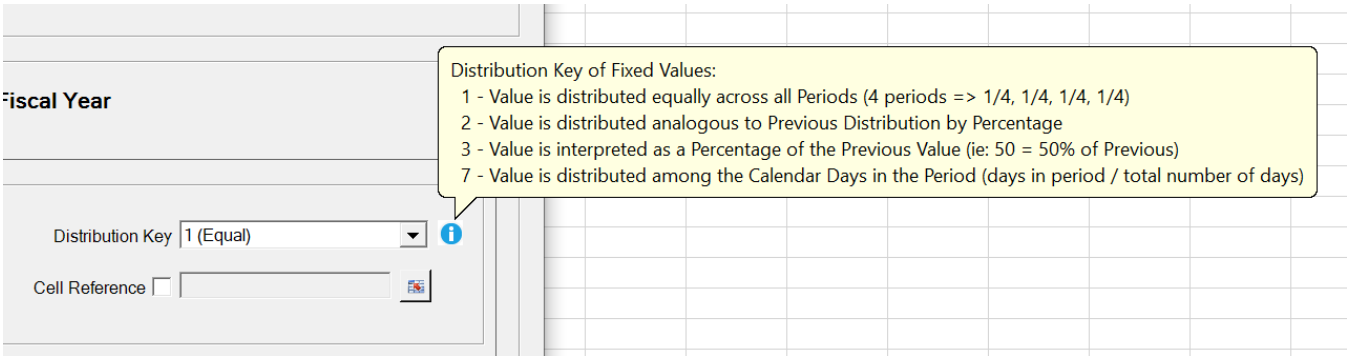


Figure 9 - WBS Cost Plan by Fiscal Year – Distribution Key

Cost Plan Wizard by Fiscal Year – Reference WBS List of Values

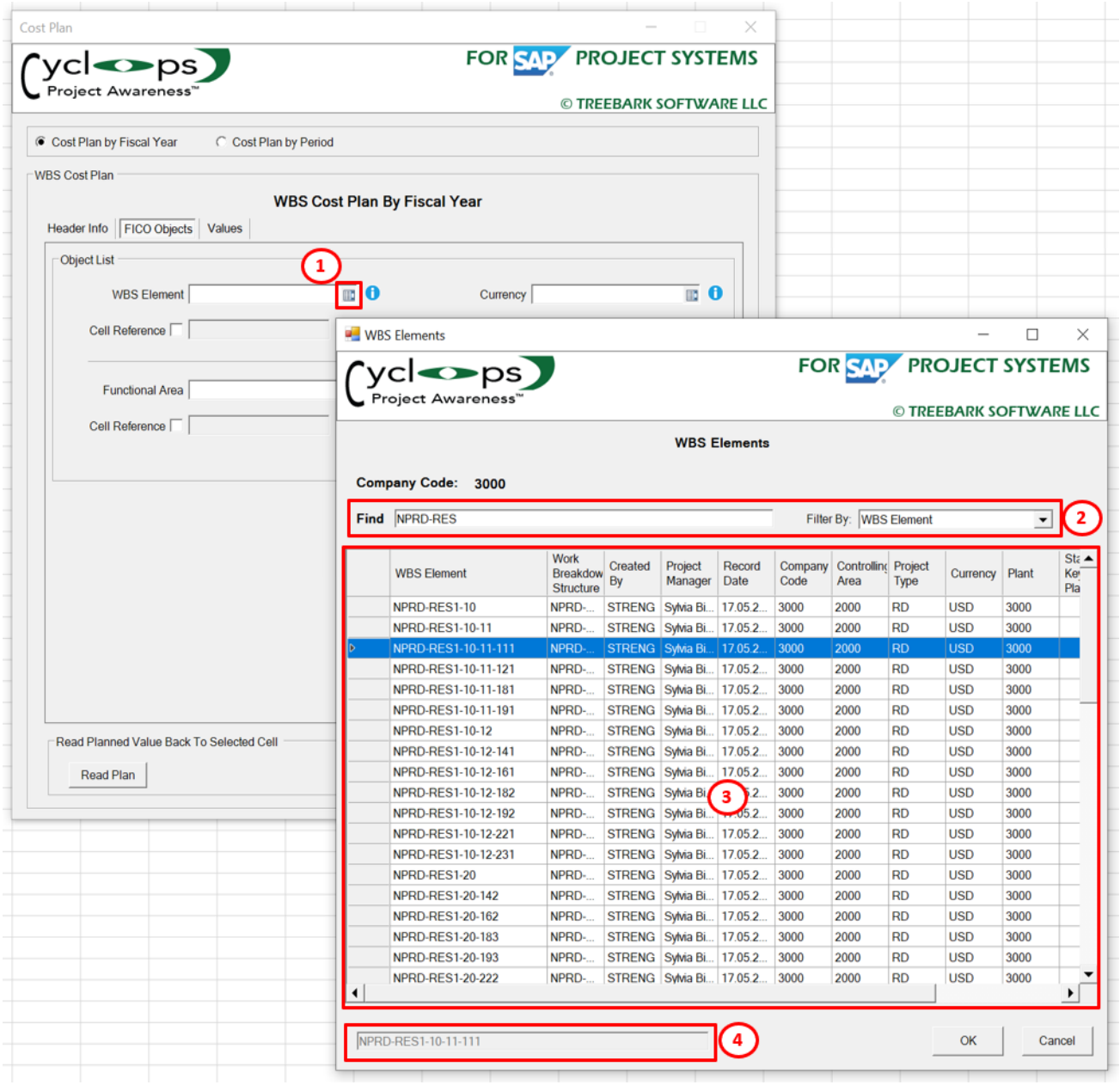


Figure 10 - Reference List of Values

Cost Plan, Reference List of Values, Figure 10 - Options:

1. <u>List of Values Button</u>:
   Clicking this button will open the reference list of values corresponding to possible values for the planning item. In the instance above, the List of Values refers to the selectable WBS list. The selected WBS value is shown in option 4.

2. <u>Finding and Filtering</u>:

If you know some part of the name or identification, simply type that value into the **Find** text box and the list will automatically filter the list. Select the **Filter by** dropdown of fields to correlate with text typed into the **Find** text box.

3. List of Values (WBS Elements):
   This is the possible list of values as returned by SAP based in the planning parameters entered into the planning wizard. This list may be contingent of year, periods, company or project to be planned depending on the FICO object. In the instance above, the list of values refers to the selectable WBS list.

4. Selected Value:
   User may select a single value from the reference list of values to be entered into the FICO field.

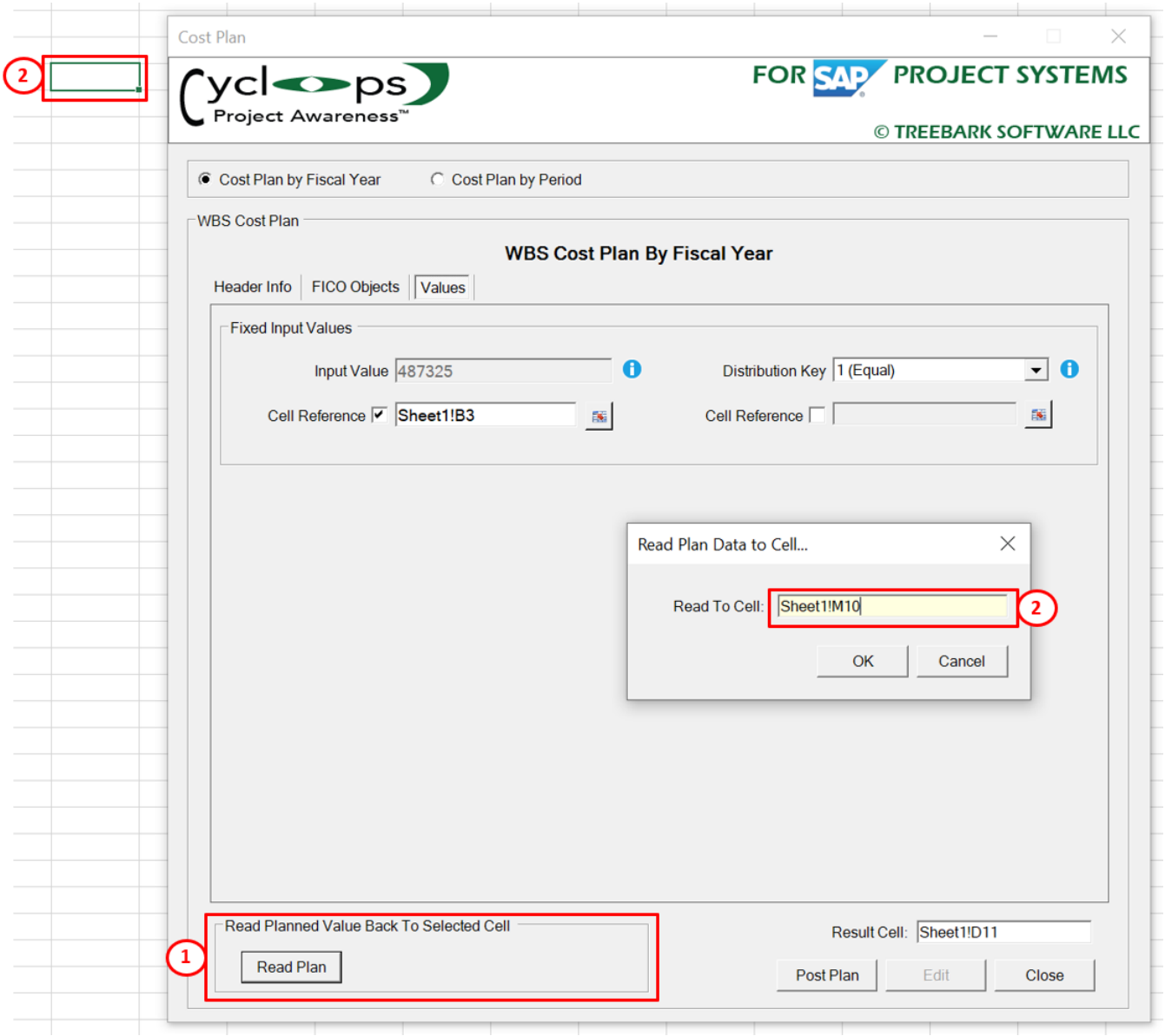


Figure 11 - Read Cost Plan Data to Cell

Cost Plan, Read to Plan, Figure 11 - Options:

1. **Read Plan Button**:
   Opens the read plan data to cell dialog box.

2. **Read to Cell**:
   The cell that the formula is to be written back to.

Cost Plan Wizard by Period – Values Tab

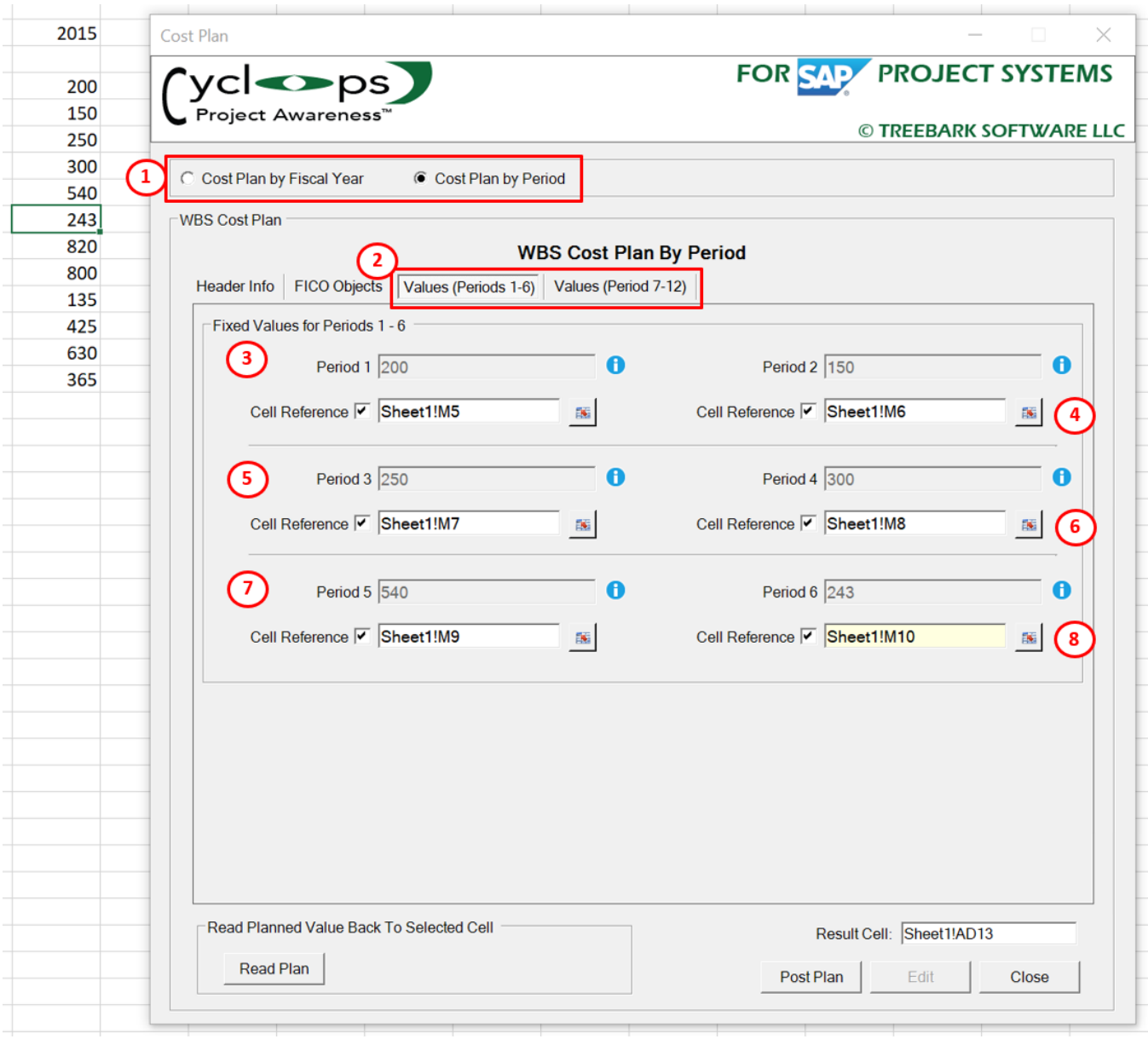


Figure 12 - WBS Cost Plan by Period – Values (Period 1-6)

Cost Plan, Values Tab, Figure 12 - Options:

1. **Cost Plan by Period**: Selected radio button post by period.

2. **Values (Periods 1-6 & 7-12)**: Selected tab page and values to post for periods 1 to 6 and 7 to 12.

3. Period 1 Value - to - Period 12 Value: The planning value in the planning currency to be posted to periods 1 through 12. This value can be a literal as entered into the value box on top or as a reference to a cell containing the value when the cell reference checkbox is checked. When the cell reference checkbox is checked, and the adjacent text box is activated (simply click mouse into text field) the value will update to whatever value is in the selected cell. A cell reference will only refer to the **top-left most selected cell** if a multi-cell range is chosen. The other values in a multi-cell range will be ignored.

Excel Functions (General)

IMPORTANT: All functions can use cell references as values. However, it is highly recommended, although not required, to use a fully qualified cell address ***prepended by the sheet name, in single quotation,*** such as:

- *'Sheet1'*!W15

Failure to prepend the sheet name as above **may** result in unpredictable behavior. All the Cyclops function wizards prepend the sheet names automatically when writing a function to the Excel spreadsheet.

Unless otherwise noted, all functions also support **absolute cell references**:

- *'Sheet1'*!$W15 (Column lock)
- *'Sheet1'*!W$15 (Row lock)
- *'Sheet1'*!W15 (Column and Row lock)

While in an active cell reference textbox, pressing the "***F4***" function key will iterate through the different absolute cell reference options shown above. This is similar to the default Excel cell reference functionality.

Cyclops **does not** support references to **external workbooks** within cell references.

Excel Primary Cost Planning Functions – Manual Entry

For manually programming Cyclops cost functions into Excel without using the above wizards, the following functions are defined and included with Cyclops:

Post or Validate a Primary Cost Plan by Fiscal Year to SAP (Excel Function)

```
cyclops_cost_plan_by_fiscal_year(CompanyCode          As Variant, _
                                 Year                 As Variant, _
                                 PeriodFrom           As Variant, _
                                 PeriodTo             As Variant, _
                                 Version              As Variant, _
                                 DocumentHeaderText   As Variant, _
                                 CurrencyType         As Variant, _
                                 Delta                As Variant, _
```

```
                    WBSElement           As Variant, _
          Optional  CostElement          As Variant, _
          Optional  FunctionalArea       As Variant, _
          Optional  TransactionCurrency  As Variant, _
          Optional  InputValue           As Variant, _
          Optional  DistributionKey      As Variant) As Variant
```

Note: **All variant** values may be string-enclosed "*2000*" regardless of underlying data type. However, that is not required. Please be sure to use a local culture date format, such as *15-AUG-2018*, when ***not*** enclosed in string-quotes.

Post or Validate a Primary Cost Plan by Period to SAP (Excel Function)

```
cyclops_cost_plan_by_period(CompanyCode                As Variant, _
                            Year                       As Variant, _
                            PeriodFrom                 As Variant, _
                            PeriodTo                   As Variant, _
                            Version                    As Variant, _
                            DocumentHeaderText         As Variant, _
                            CurrencyType               As Variant, _
                            Delta                      As Variant, _
                            WBSElement                 As Variant, _
                  Optional  CostElement                As Variant, _
                  Optional  FunctionalArea             As Variant, _
                  Optional  TransactionCurrency        As Variant, _
                  Optional  FixValuePeriod01           As Variant, _
                  Optional  FixValuePeriod02           As Variant, _
                  Optional  FixValuePeriod03           As Variant, _
                  Optional  FixValuePeriod04           As Variant, _
                  Optional  FixValuePeriod05           As Variant, _
                  Optional  FixValuePeriod06           As Variant, _
                  Optional  FixValuePeriod07           As Variant, _
                  Optional  FixValuePeriod08           As Variant, _
                  Optional  FixValuePeriod09           As Variant, _
                  Optional  FixValuePeriod10           As Variant, _
                  Optional  FixValuePeriod11           As Variant,
                  Optional  FixValuePeriod12           As Variant) As Variant
```

Read back Cost from a Primary Cost Plan to SAP (Excel Function)

```
cyclops_read_cost_plan_by_fiscal_year(CompanyCode          As Variant, _
                                      Year                 As Variant, _
                                      PeriodFrom           As Variant, _
                                      PeriodTo             As Variant, _
                                      Version              As Variant, _
                                      DocumentHeaderText   As Variant, _
                                      CurrencyType         As Variant, _
                                      WBSElement           As Variant, _
                            Optional  CostElement          As Variant, _
                            Optional  FunctionalArea       As Variant, _
                            Optional  TransactionCurrency  As Variant) As Variant
```

SKF Plan Wizard by Fiscal Year – Header Information Tab

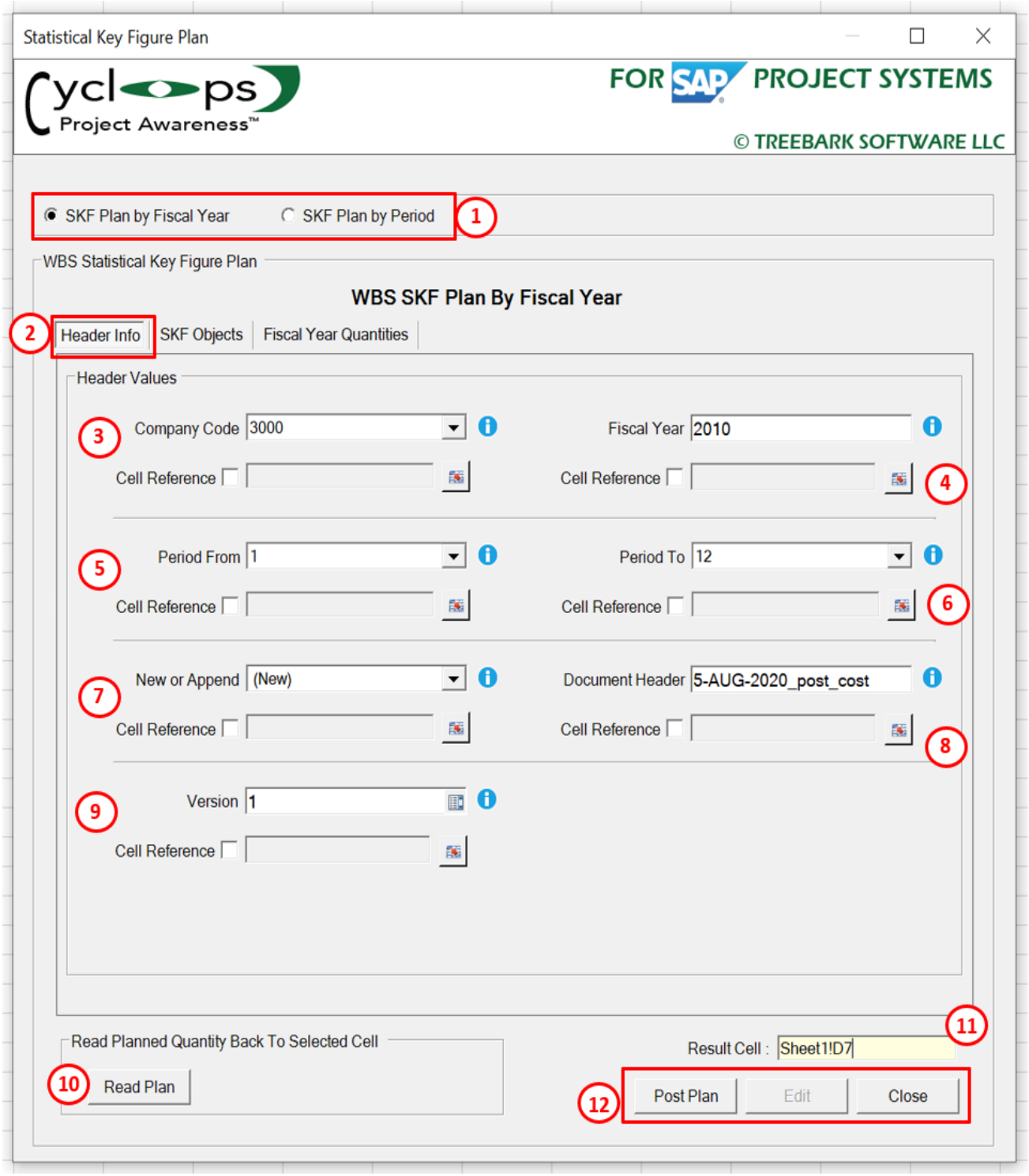


Figure 13 – WBS SKF Plan by Fiscal Year Header Info

Plan Wizard by Year, Header Information Tab, Figure 13 - Options:

1. **Fiscal Year / Period – Radio Group Button**:
   Selected radio button and post by fiscal year.

2. **Header Info Tab:**
   Header information can also be thought of as values that, in combination, uniquely identify a group of planning values in SAP. From the user's perspective, this process is opaque.

3. **Company Code**:
   Select company code by dropdown list for planning purposes. Unlike the "list of value" wizards, the planning wizards are not dynamically linked to the main ribbon dropdown. This makes editing and inputting planning values consistent as it may not always be desirable for planned values to be updated based on ribbon selections.

4. **Fiscal Year**:
   The year that the cost plan will be posted against.

5. **Period From**:
   The initial month or period of the posting.

6. **Period To**:
   The final month or period of the posting.

7. **New or Append**:
   Specifies whether value posted will replace existing value or be additive to existing value.

8. **Document Header**:
   A document header that identifies the posting group. One or more postings can share a common document header.

9. **Version**:
   Planning version associated with the posting group.

10. **Read Plan**:
    Read plan writes function that returns the current planned value posted with the selected constraints.

11. **Result Cell**:
    Read plan writes an Excel function into the spreadsheet that returns the current planned value posted with the selected constraints. After writing the function to the spreadsheet, it must be initiated (sent to SAP server) by clicking on the **Fetch** button on the ribbon bar.

If successful, the planned value will be returned to the cell. Otherwise, the function will return an error message from SAP.

12. **Post Plan, Edit, Close:**

- Post Plan: Writes an Excel function into the spreadsheet that posts planned values as entered into the wizard into the result cell. After writing the function to the spreadsheet, it must be initiated (sent to SAP server) by click on the **Post** button on the ribbon bar.

If successful, the planned value will be returned to the cell. Otherwise, the function will return an error message from SAP.

- Edit: Opens the Excel function editor from which to edit input values.

- Close: Closes the wizard without writing to the Excel spreadsheet. This will discard any values entered into the wizard.

SKF Plan Wizard by Fiscal Year – SKF Objects Tab

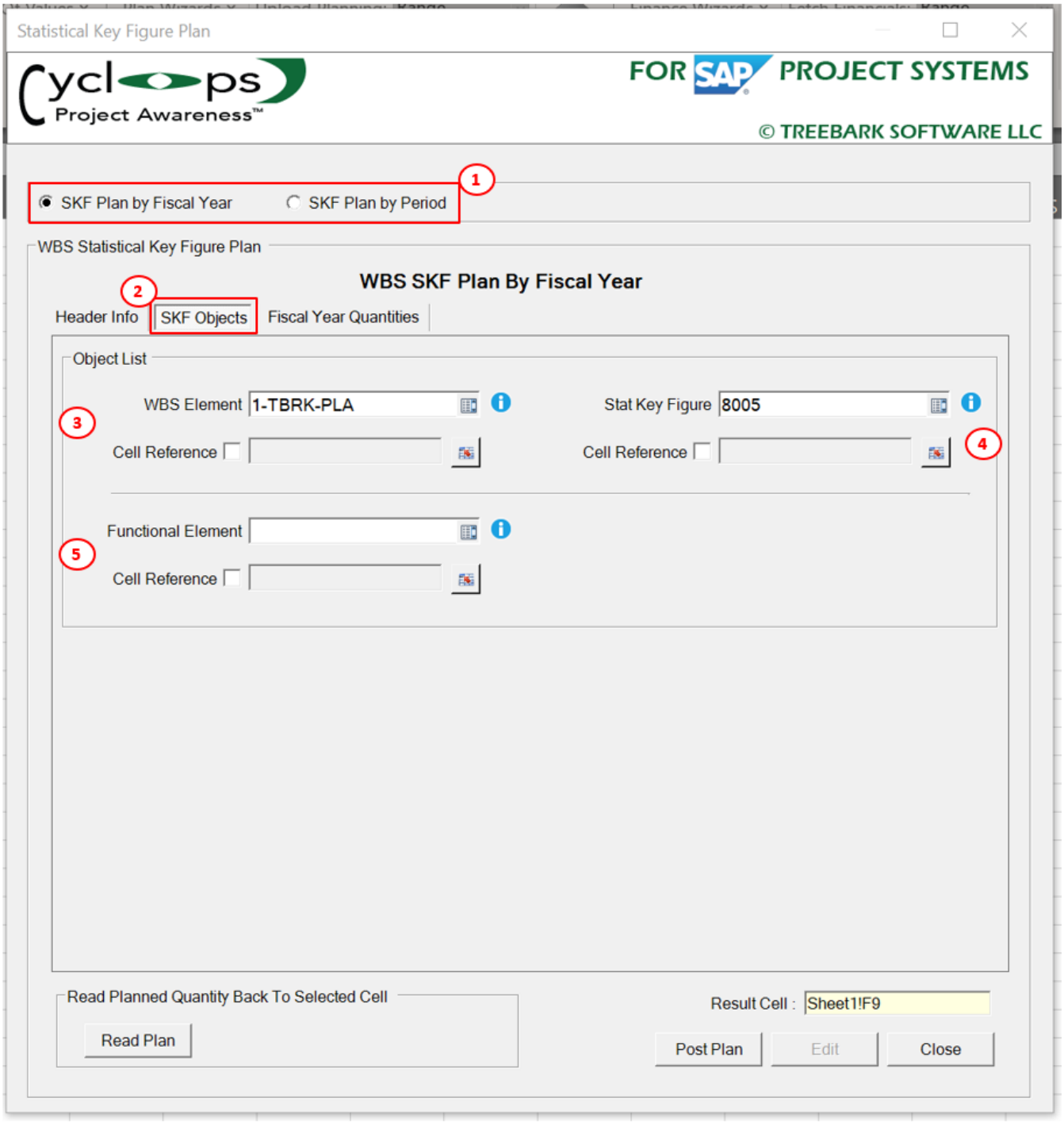


Figure 14 – WBS SKF Plan by Fiscal Year Object List

Plan Wizard by Fiscal Year, SKF Objects Tab, Figure 14 - Options:

1. <u>Fiscal Year / Period - Radio Group Button</u>:
   SKF Plan by fiscal year is selected to plan by fiscal year.

2. SKF Objects Tab:
   Statistical Key Figures (SKF) objects represent objects, and their attributes, for which values are planned against. In this case, SKF planning, the primary FICO object to be planned will always be a WBS object.

3. WBS Element:
   This is the primary, top-level, FICO object to be planned. For planning purposes, the WBS element cannot be a top-level project.

4. Statistical Key Figure:
   Statistical key figure represents the definition of non-monetary data related to the FICO object. In this case the selected WBS code. This figure is primarily used as a way of benchmarking performance and identifying causal relationships between various resources used in the completion of a WBS.

5. Functional Element:
   Functional areas are user-definable and should be created at the lowest level necessary for tracking specific functions, programs, and/or activities. Individual functional areas can then be grouped in various ways for accounting and reporting purposes.

SKF Plan Wizard by Fiscal Year – Fiscal Year Quantities Tab

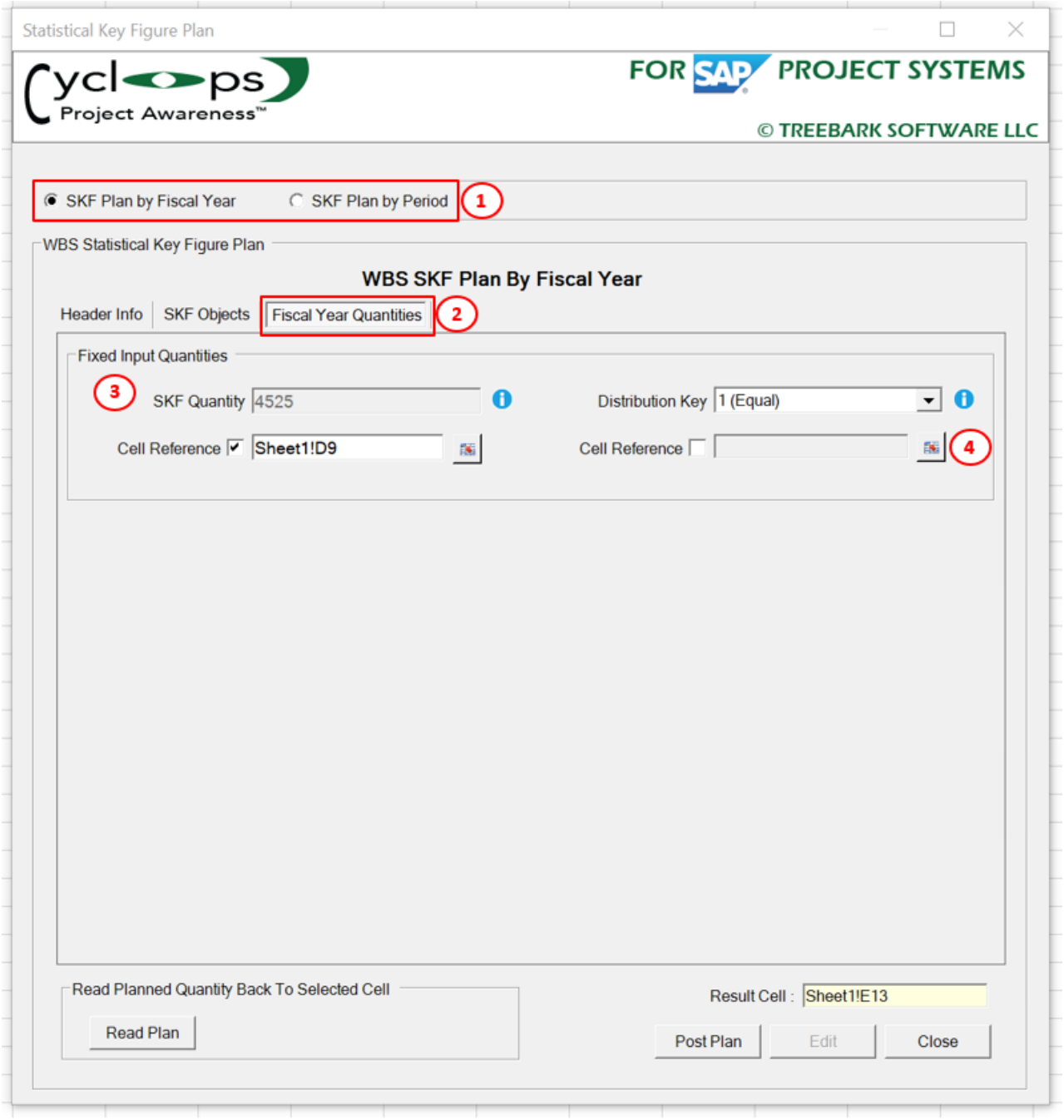


Figure 15 – WBS SKF Plan by Fiscal Year Quantities

SKF Plan by Fiscal Year, WBS Values Tab, Figure 15 – Options:

1. Fiscal Year / Period – Radio Group Button:
   Cost plan by fiscal year is selected to plan by fiscal year.

2. Fiscal Year Quantities:

This tab displays the input fields necessary to allocate a numeric amount / quantity of the selected SKF, from to the SKF code identified in FICO objects, and the way that amount is distributed.

3. Input Value:
   The input value is the numeric amount /quantity to be allocated.

4. Distribution Key (for fixed values):
   This dropdown list shows several options that SAP provides for distributing a single value over multiple periods.

   1. Value is distributed equally across all periods (4 periods => ¼, ¼, ¼, ¼)
   2. Value is distributed analogous to previous distribution by percentage
   3. Value is interpreted as a percentage of the previous value (i.e.: 50 = 50% of previous)
   7. Value is distributed among the calendar days in the period (days in period / total number of days)

SKF Plan Wizard by Period –Quantities Tab

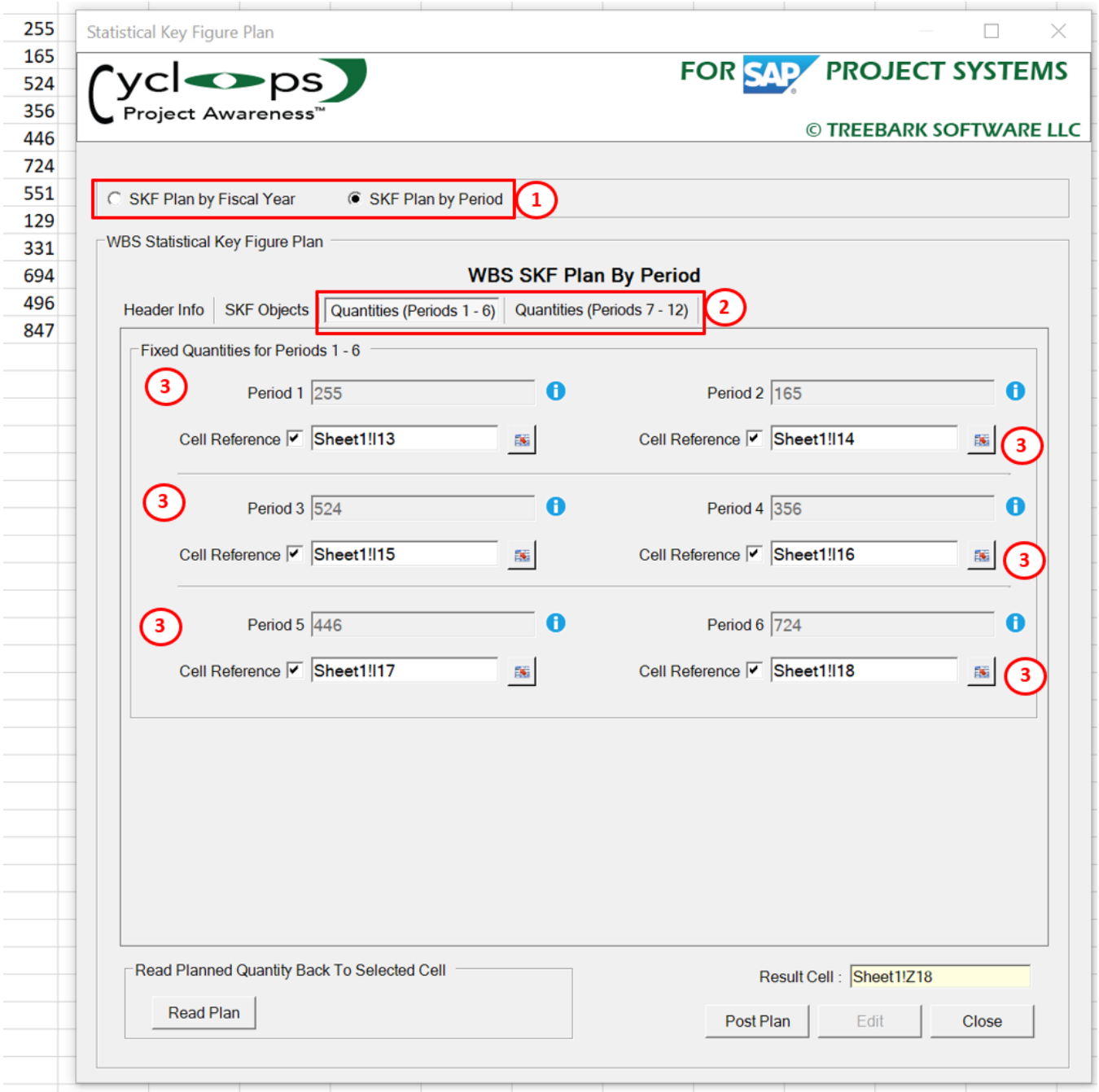


Figure 16 – WBS SKF Plan by Period Quantities

SKF Plan Wizard by Period, Quantities Tab, Figure 16 - Options:

1. **SKF Plan by Period**: Selected radio button to post by period.

2. **Quantities (Periods 1-6 & 7-12)**: Selected tab page and quantities to post for periods 1 to 6 and 7 to 12.

3. Period 1 Quantity to Period 12 Quantity: The planning quantity of the selected SKF to be posted to periods 1 through 12. This value can be a literal as entered into the value box on top or, as a reference to a cell containing the value when the cell reference checkbox is checked. When the cell reference checkbox is checked, and the adjacent text box is activated (simply click mouse into text field) the value will update to whatever value is in the selected cell. A cell reference will only refer to the **top-left most selected cell** if a multi-cell range is chosen. The other values in a multi-cell range will be ignored.

Excel SKF Planning Functions – Manual Entry

For manually programming Cyclops SKF functions into Excel without using the above wizards, the following functions are defined and included with Cyclops:

Post / Validate or Read a Statistical Key Figure Plan by Fiscal Year to SAP (Excel Function)

```
cyclops_skf_plan_by_fiscal_year(CompanyCode              As Variant, _
                                Year                     As Variant, _
                                PeriodFrom               As Variant, _
                                PeriodTo                 As Variant, _
                                Version                  As Variant, _
                                DocumentHeaderText       As Variant, _
                                Delta                    As Variant, _
                                WBSElement               As Variant, _
                                StatisticalKeyFigure     As Variant, _
                     Optional   FunctionalArea           As Variant, _
                     Optional   StatisticalQuantity      As Variant, _
                     Optional   DistributionKeyQuantity  As Variant) As Variant
```

Post or Validate a Statistical Key Figure Plan by Period to SAP (Excel Function)

```
cyclops_skf_plan_by_period(CompanyCode                   As Variant, _
                           Year                          As Variant, _
                           PeriodFrom                    As Variant, _
                           PeriodTo                      As Variant, _
                           Version                       As Variant, _
                           DocumentHeaderText            As Variant, _
                           Delta                         As Variant, _
                           WBSElement                    As Variant, _
                           StatisticalKeyFigure          As Variant, _
                  Optional   FunctionalArea              As Variant, _
                  Optional   FixQuantityPeriod01         As Variant, _
                  Optional   FixQuantityPeriod02         As Variant, _
                  Optional   FixQuantityPeriod03         As Variant, _
                  Optional   FixQuantityPeriod04         As Variant, _
                  Optional   FixQuantityPeriod05         As Variant, _
                  Optional   FixQuantityPeriod06         As Variant, _
                  Optional   FixQuantityPeriod07         As Variant, _
                  Optional   FixQuantityPeriod08         As Variant, _
                  Optional   FixQuantityPeriod09         As Variant, _
                  Optional   FixQuantityPeriod10         As Variant, _
                  Optional   FixQuantityPeriod11         As Variant, _
                  Optional   FixQuantityPeriod12         As Variant) As Variant
```

Read back Quantities from a Statistical Key Figure Plan to SAP (Excel Function)

```
cyclops_read_skf_plan_by_fiscal_year(CompanyCode          As Variant, _
                                     Year                 As Variant, _
                                     PeriodFrom           As Variant, _
                                     PeriodTo             As Variant, _
                                     Version              As Variant, _
                                     DocumentHeaderText   As Variant, _
                                     WBSElement           As Variant, _
                                     StatisticalKeyFigure As Variant, _
                            Optional FunctionalArea       As Variant) As Variant
```

Activity Price Planning

The activity price plan wizard enables the user to post unit prices for an activity / cost center. Once prices have been assigned the user may then allocate these units to a WBS code. This is typically referred to as secondary planning where costs are allocated internally to the WBS/ project. Corresponding transaction codes (T-Codes) in SAP would be KP26/KP27.

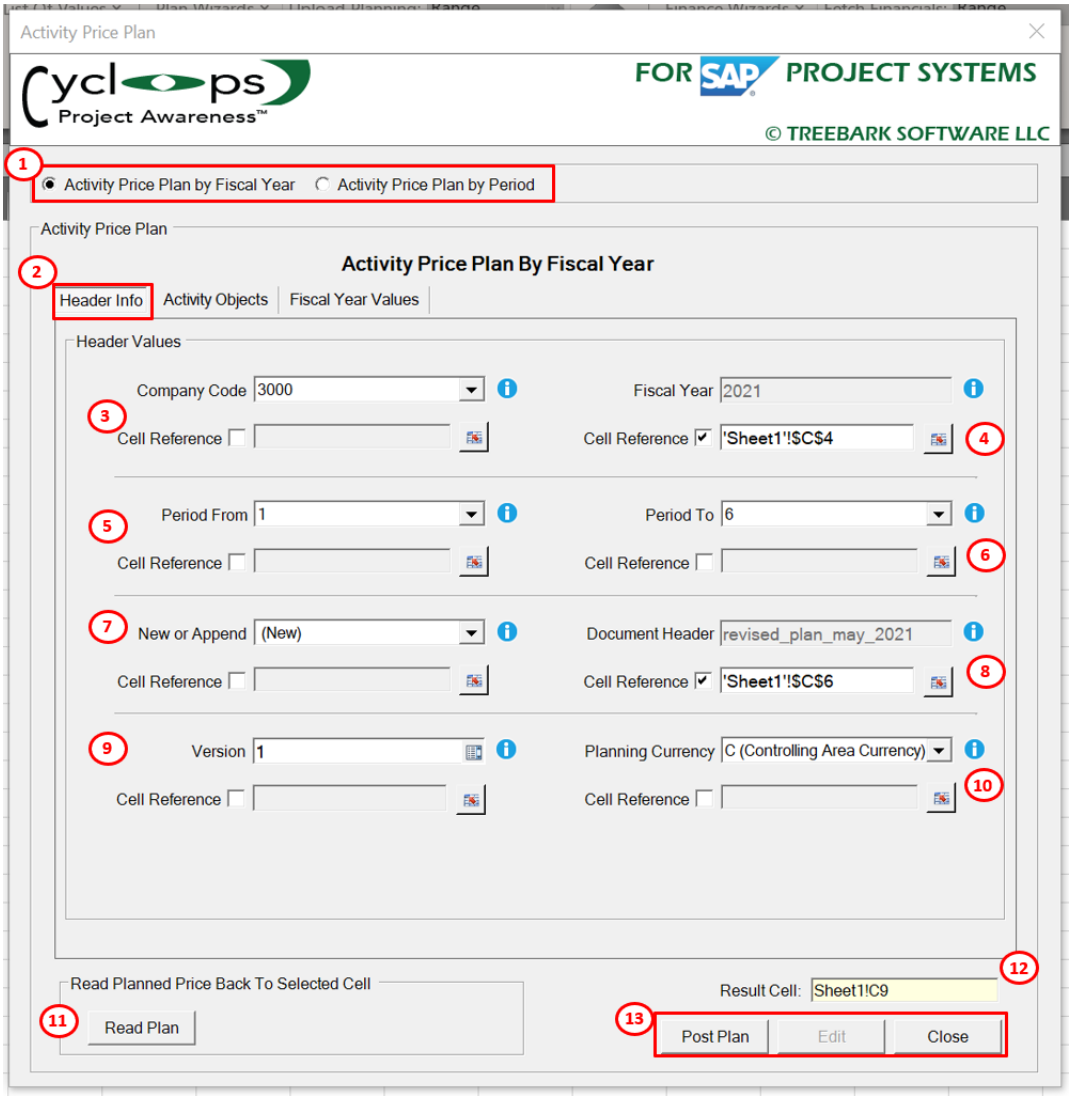


Figure 17 - WBS Activity Price Plan by Fiscal Year – Header Info

Activity Price Plan, Header Information Tab, Figure 17 - Options:

1. <u>Fiscal Year / Period - Radio Group Button</u>:
   Cost plan by fiscal year is selected to plan by fiscal year.

2. <u>Header Information Tab</u>:
   Header information can also be thought of as values that, in combination, uniquely identify a group of planning values in SAP. From the user perspective, this process is opaque.

3. <u>Company Code</u>:

Select company code by dropdown list for planning purposes. Unlike the "list of value" wizards, the planning wizards are not dynamically linked to the main ribbon dropdown. This makes editing and inputting planning values consistent as it may not always be desirable for planned values to be updated based on ribbon selections.

4. **Fiscal Year**:
   The year that the cost plan will be posted against.

5. **Period From**:
   The initial month or period of the posting.

6. **Period To**:
   The final month or period of the posting.

7. **New or Append**:
   Specifies whether value posted will replace existing value or be additive to existing value.

8. **Document Header**:
   A document header that identifies the posting group. One or more postings can share a common document header.

9. **Version**:
   Planning version associated with the posting group.

10. **Planning Currency**:
    The planning currency could be one of the following options:
    - **C** or "Controlling Area Currency". As the name implies, all values posted to the plan will be in the currency defined by the controlling area.
    - **O** or "Object Currency". Currency as defined by the WBS object being planned.
    - **T** or "Transaction Currency". Costs and revenue that may arise from transactions that may be of different currency than controlling or object (WBS) currency can be recorded using a transaction currency.

11. **Read Plan**:
    Read plan writes an Excel function into the spreadsheet that returns the current planned value posted with the selected constraints. After writing the function to the spreadsheet, it must be initiated (sent to SAP server) by clicking on the **Fetch** button on the ribbon bar.

If successful, the planned value will be returned to the cell. Otherwise, the function will return an error message from SAP.

12. **Result Cell**:
    Result cell is the spreadsheet cell address / location where the cost plan wizard posts the resultant function.

13. **Post Plan, Edit, Close**:

    - Post Plan: Writes an Excel function into the spreadsheet that posts planned values as entered into the wizard into the result cell. After writing the function to the spreadsheet, it must be initiated (sent to SAP server) by click on the **Post** button on the ribbon bar.

      If successful, the planned value will be returned to the cell. Otherwise, the function will return an error message from SAP.

    - Edit: Opens the Excel function editor from which to edit input values.

    - Close: Closes the wizard without writing to the Excel spreadsheet. This will discard any values entered into the wizard.

Activity Price Plan Wizard by Fiscal Year – Activity Objects Tab

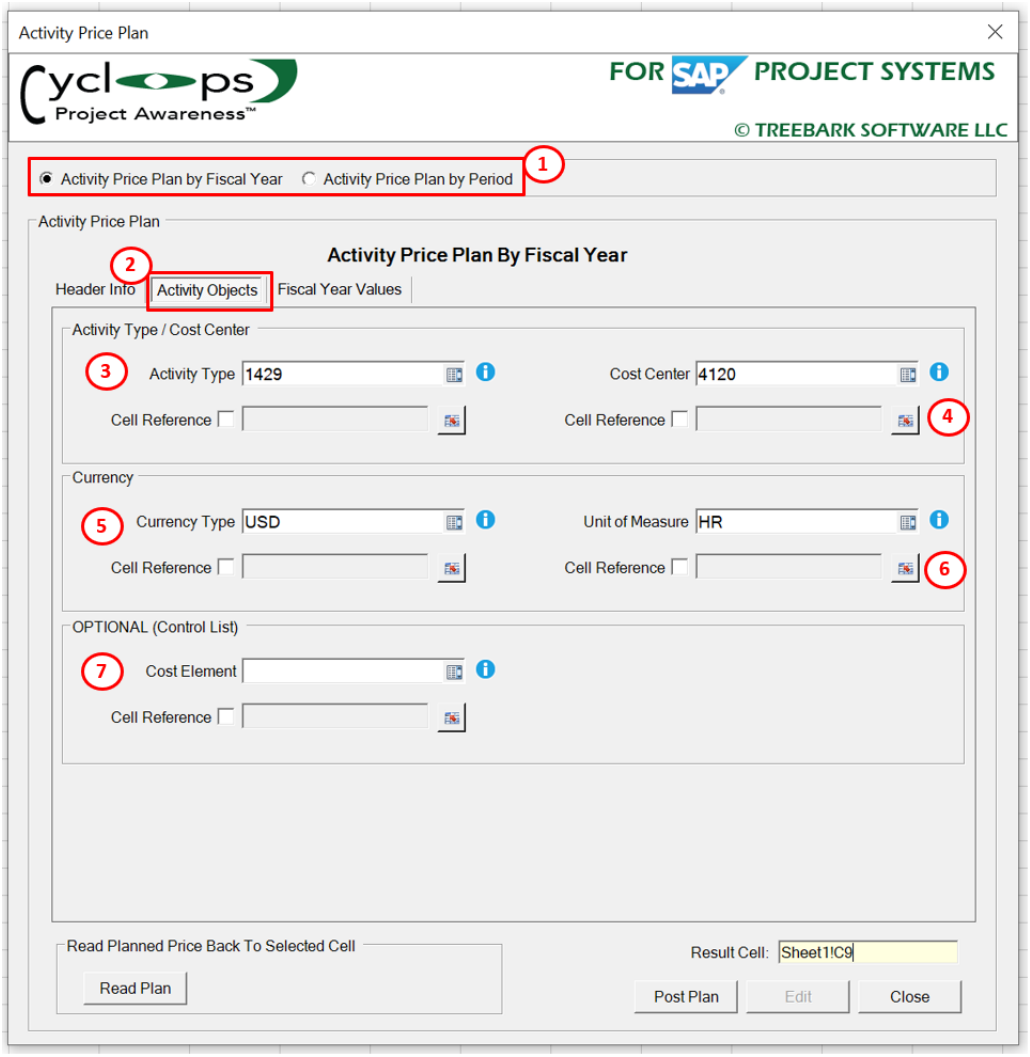


Figure 18 - WBS Activity Price Plan by Fiscal Year – Activity Objects

Activity Price Plan by Fiscal Year, Activity Objects Tab, Figure 18 - Options:

1. <u>Fiscal Year / Period - Radio Group Button</u>:
   Activity price plan by fiscal year is selected to plan by fiscal year.

2. <u>Activity Objects Tab</u>:
   Activity objects are a unique combination of activity type and cost center, and their attributes, that values are planned against. In this case, the activity type /cost center selection will be attributed a currency type and a unit of measure. A cost element attribute is optional.

3. <u>Activity Type (Code)</u>:

Activity types, or codes, are used to allocate internal activities and their cost, which are incurred by specific cost center. Specifically, it identifies the activities or work that has to be done by an organization for one or several cost centers.

4. Cost Center:
   A Cost center can be defined as a component in an organization that adds to the cost and indirectly adds to the profit of the organization.

5. Currency Type:
   The currency type associated with an activity type / cost center allocation.

6. Unit of Measure:
   The unit of measure is an allocable unit that corresponds to an activity type / cost center plan. This could be a unit of time, such as hour or weight, such as kilogram, etc.

7. Cost Element:
   Cost elements classify an organization's valued consumption of production factors within a controlling area. This is an optional attribute for activity price planning.

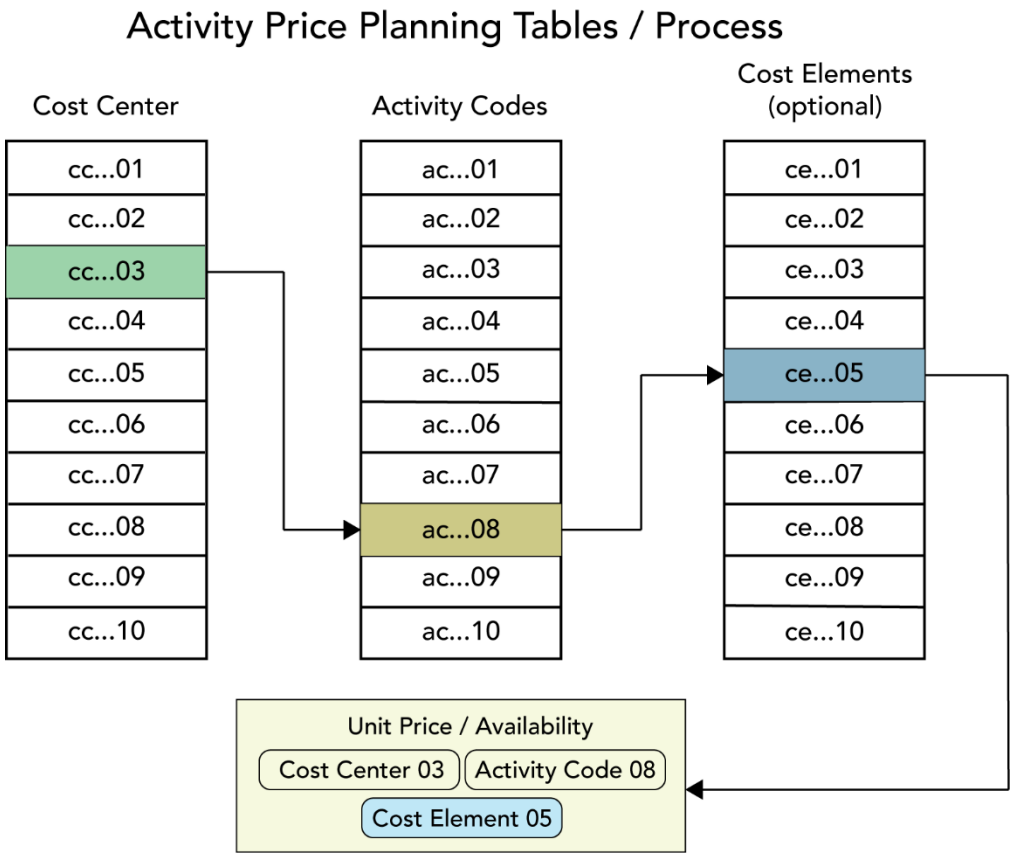


Figure 19 - Activity Price Planning - Tables and Process

Activity price planning is the process of assigning a unit value / price to internal resources so that those resources may then be allocated to a WBS structure. Those resources are represented as a combination of a cost center, activity code and, optionally, a cost element.

Once price and availability of a resource has been assigned then those values will be available through **Activity Input Planning** (or **Secondary Cost Planning**) for allocation. Once allocated, SAP will then automatically update the overall planning cost model to reflect the cost of the assigned resources.

Activity Price Plan Wizard by Fiscal Year – Fiscal Year Values Tab

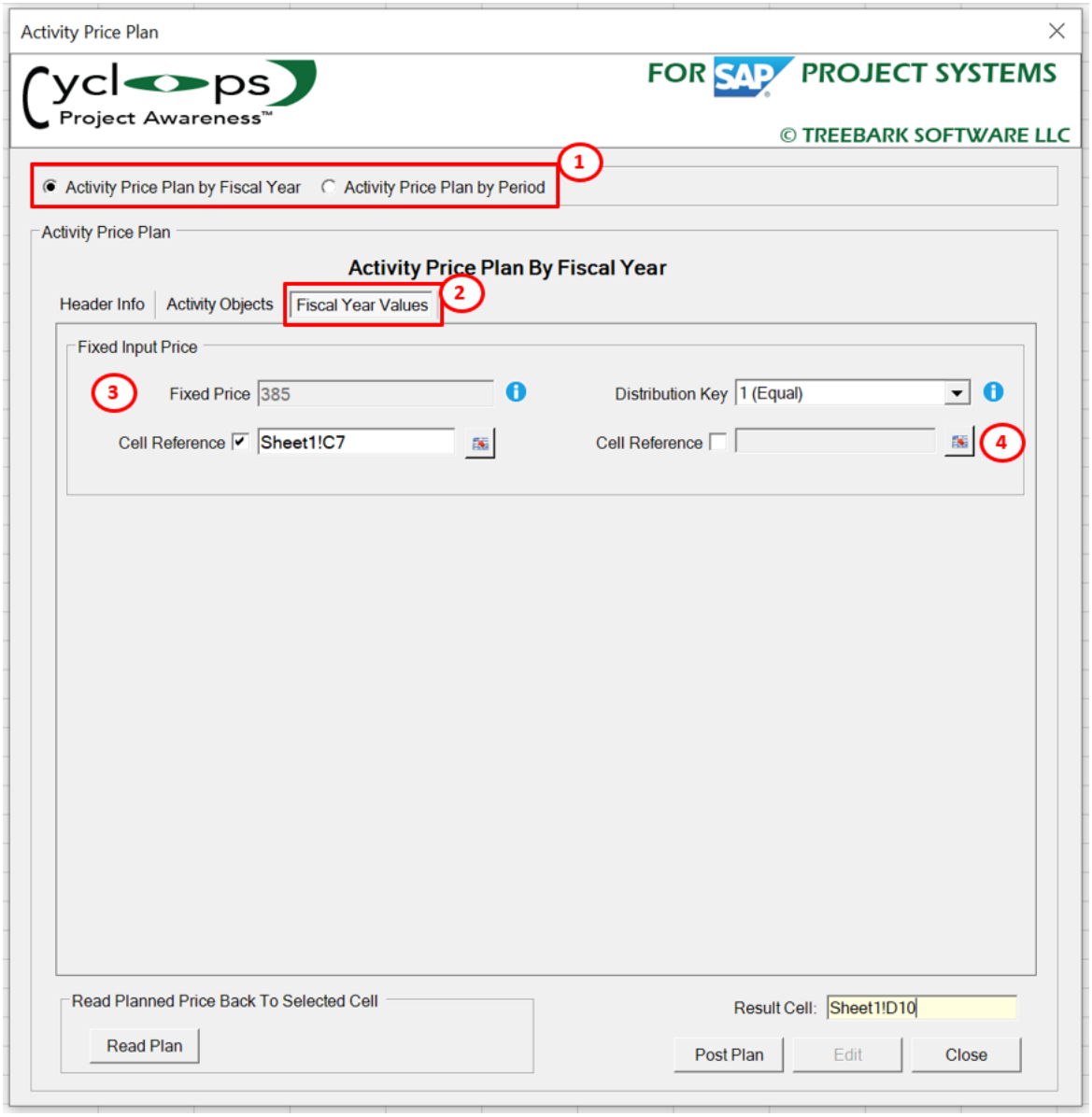


Figure 20 – WBS Activity Price Plan by Fiscal Year – Fiscal Year Values

Activity Price Plan, Fiscal Year Values Tab, Figure 20 – Options:

1. <u>Fiscal Year / Period – Radio Group Button</u>:
   Cost plan by fiscal year is selected to plan by fiscal ear.

2. <u>Values Tab</u>:

This tab displays the input fields necessary to allocate a unit price of the selected FICO objects (cost center, activity code, cost element), and the manner in which that amount is distributed over selected periods.

3. Fixed Price:
   The fixed unit price to be allocated.

4. Distribution Key (for Fixed Values):
   This dropdown list shows several options that SAP provides for distributing a single value over multiple periods.

   1. Value is distributed equally across all periods (4 periods => ¼, ¼, ¼, ¼)
   2. Value is distributed analogous to previous distribution by percentage
   3. Value is interpreted as a percentage of the previous value (ie: 50 = 50% of previous)
   8. Value is distributed among the calendar days in the period (days in period / total number of days)

Activity Price Plan Wizard by Period – Periods (1 – 12) Values Tab

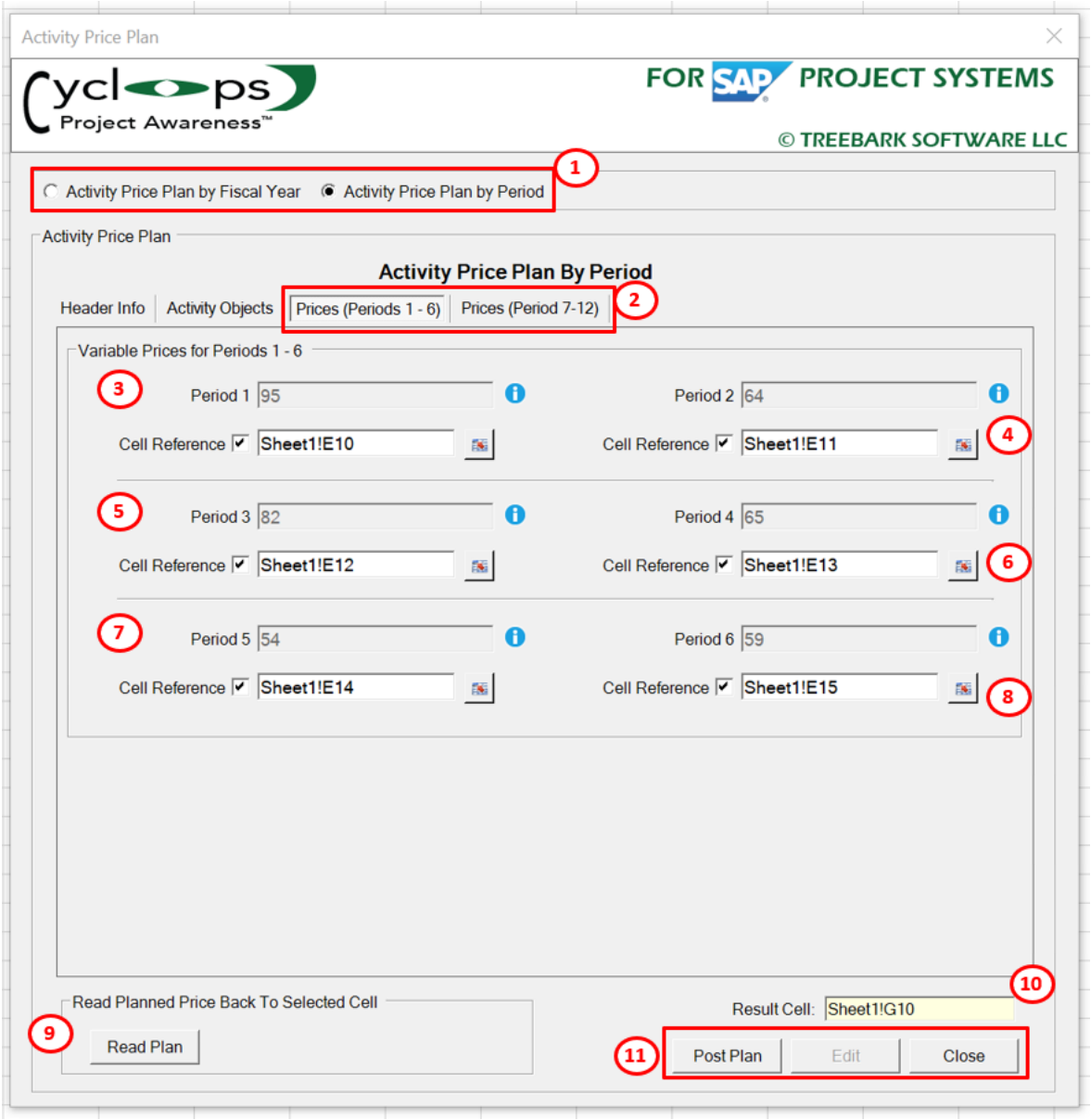


Figure 21 – WBS Activity Price Plan by Period – Period Values

Activity Price Plan, Period Values Tab, Figure 21 – Options:

1. **Cost Plan by Period**:
   Selected radio button – post by period.

2. **Values (Periods 1-6 & 7-12) Tabs**:
   Selected tab page and values to post for periods 1 to 6 and 7 to 12.

3. **Period 1 Value**:

The activity price plan value unit price per unit of measure, in the planning currency, to be allocated to period 1 within the selected year. This value can be a literal or a reference as shown.

4. Period 2 Value:
   The activity price plan value unit price per unit of measure, in the planning currency, to be allocated to period 2 within the selected year. This value can be a literal or a reference as shown.

5. Period 3 Value:
   The activity price plan value unit price per unit of measure, in the planning currency, to be allocated to Period 3 within the selected year. This value can be a literal or a reference as shown.

6. Period 4 Value:
   The activity price plan value unit price per unit of measure, in the planning currency, to be allocated to period 4 within the selected year. This value can be a literal or a reference as shown.

7. Period 5 Value:
   The activity price plan value unit price per unit of measure, in the planning currency, to be allocated to period 5 within the selected year. This value can be a literal or a reference as shown.

8. Period 6 Value:
   The activity price plan value unit price per unit of measure, in the planning currency, to be allocated to period 6 within the selected year. This value can be a literal or a reference as shown.

9. Read Plan Button:
   Read plan writes an Excel function into the spreadsheet that returns the current planned value posted with the selected constraints. After writing the function to the spreadsheet, it must be initiated (sent to SAP server) by clicking on the **Fetch** button on the ribbon bar.

10. Result Cell:
    Result cell is the spreadsheet cell address / location where the cost plan wizard posts the resultant function.

11. Post Plan, Edit, Close:

    - Post Plan: Writes an Excel function into the spreadsheet that posts planned values as entered into the wizard into the result cell. After writing the function to the spreadsheet, it must be initiated (sent to SAP server) by click on the **Post** button on the ribbon bar.

If successful, the planned value will be returned to the cell. Otherwise, the function will return an error message from SAP.

- Edit: Opens the Excel function editor from which to edit input values.
- Close: Closes the wizard without writing to the Excel spreadsheet. This will discard any values entered into the wizard.

Excel Activity Price Planning Functions – Manual Entry

For manually programming Cyclops Activity Price Functions into Excel without using the above wizards, the following functions are defined and included with Cyclops:

Post or Validate an Activity Price Plan by Fiscal Year to SAP (Excel Function)

```
cyclops_activity_price_plan_by_fiscal_year( _
                                CompanyCode          As Variant, _
                                Year                 As Variant, _
                                PeriodFrom           As Variant, _
                                PeriodTo             As Variant, _
                                Version              As Variant, _
                                DocumentHeaderText   As Variant, _
                                CurrencyType         As Variant, _
                                Delta                As Variant, _
                                ActivityType         As Variant, _
                                CostCenter           As Variant, _
                                CostElement          As Variant, _
                                TransactionCurrency  As Variant, _
                                UnitOfMeasure        As Variant, _
                                FixedPrice           As Variant, _
                                DistributionKey      As Variant) As Variant
```

Note: Cost element is an optional parameter for SAP. Please simply leave a blank or empty value if not planning with a cost element.

Post or Validate an Activity Price Plan by Period to SAP (Excel Function)

```
cyclops_activity_price_plan_by_period( _
                                CompanyCode          As Variant, _
                                Year                 As Variant, _
                                PeriodFrom           As Variant, _
                                PeriodTo             As Variant, _
                                Version              As Variant, _
                                DocumentHeaderText   As Variant, _
                                CurrencyType         As Variant, _
                                Delta                As Variant, _
```

```
                              ActivityType         As Variant, _
                              CostCenter           As Variant, _
                              CostElement          As Variant, _
                              TransactionCurrency  As Variant, _
                              UnitOfMeasure        As Variant, _
                    Optional  FixPricePeriod01     As Variant,
                    Optional  FixPricePeriod02     As Variant, _
                    Optional  FixPricePeriod03     As Variant,
                    Optional  FixPricePeriod04     As Variant, _
                    Optional  FixPricePeriod05     As Variant,
                    Optional  FixPricePeriod06     As Variant, _
                    Optional  FixPricePeriod07     As Variant,
                    Optional  FixPricePeriod08     As Variant, _
                    Optional  FixPricePeriod09     As Variant,
                    Optional  FixPricePeriod10     As Variant, _
                    Optional  FixPricePeriod11     As Variant,
                    Optional  FixPricePeriod12     As Variant) As Variant
```

Read an Activity Price Plan by Fiscal Year to SAP (Excel Function)

```
cyclops_read_activity_price_plan_by_fiscal_year( _
                              CompanyCode          As Variant, _
                              Year                 As Variant, _
                              PeriodFrom           As Variant, _
                              PeriodTo             As Variant, _
                              Version              As Variant, _
                              DocumentHeaderText   As Variant, _
                              CurrencyType         As Variant, _
                              ActivityType         As Variant, _
                              CostCenter           As Variant, _
                              CostElement          As Variant) As Variant
```

Activity Input Plan Wizard by Fiscal Year – Header Information Tab

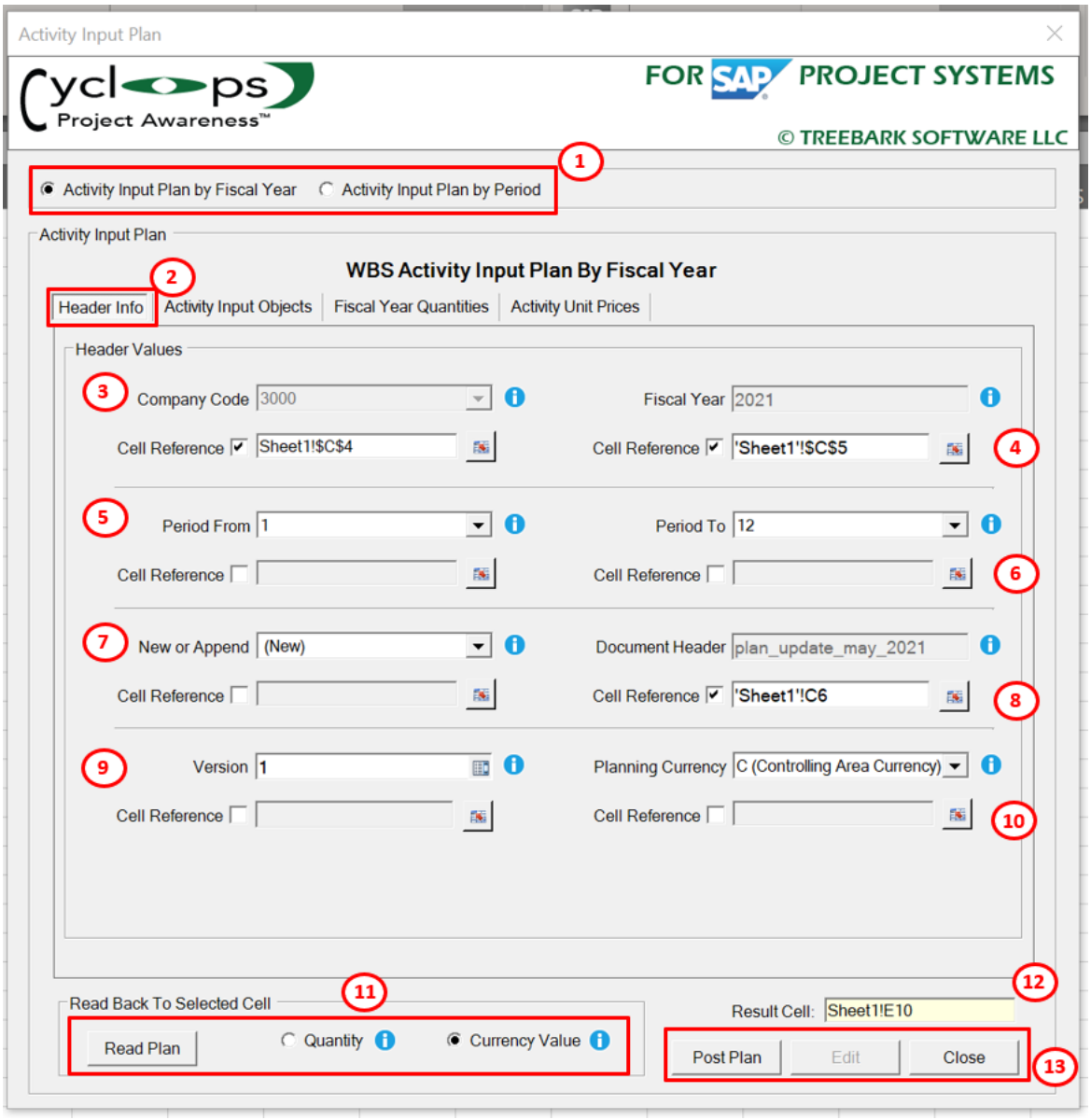


Figure 22 –Activity Input Plan by Fiscal Year – Header Information Tab

Activity Input Plan, Header Information Tab, Figure 22 - Options:

1. <u>Fiscal Year / Period - Radio Group Button</u>:
   Activity input plan by fiscal year is selected.

2. <u>Header Information Tab</u>:
   Header information can also be thought of as values that, in combination, uniquely identify a group of planning values in SAP. From the user's perspective, this process is opaque.

3. Company Code:
   Select company code by dropdown list for planning purposes. Unlike the "list of value" wizards, the planning wizards are not dynamically linked to the main ribbon dropdown. This makes editing and inputting planning values consistent as it may not always be desirable for planned values to be updated based on ribbon selections.

4. Fiscal Year:
   The year that the cost plan will be posted against.

5. Period From:
   The initial month or period of the posting.

6. Period To:
   The final month or period of the posting.

7. New or Append:
   Specifies whether value posted will replace existing value or be additive to existing value.

8. Document Header:
   A document header that identifies the posting group. One or more postings can share a common document header.

9. Version:
   Planning version associated with the posting group.

10. Planning Currency:
    The planning currency could be one of the following 3 options:

    - C or "Controlling Area Currency". As the name implies, all values posted to the plan will be in the currency defined by the controlling area
    - O or "Object Currency". Currency as defined by the WBS object being planned
    - T or "Transaction Currency". Costs and revenue that may arise from transactions that may be of different currency than controlling or object (WBS) currency can be recorded using a transaction currency.

11. Read Plan:
    Read plan writes an Excel function into the spreadsheet that returns the current planned value posted with the selected constraints. After writing the function to the spreadsheet, it must be initiated (sent to SAP server) by clicking on the **Fetch** button on the ribbon bar.

If successful, the planned value will be returned to the cell. Otherwise, the function will return an error message from SAP.

12. **Result Cell**:
    Result cell is the spreadsheet cell address/location where the cost plan wizard posts the resultant function.

13. **Post Plan, Edit, Close**:

    - Post Plan: Writes an Excel function into the spreadsheet that posts planned values as entered into the wizard into the result cell. After writing the function to the spreadsheet, it must be initiated (sent to SAP server) by click on the **Post** button on the ribbon bar.

      If successful, the planned value will be returned to the cell. Otherwise, the function will return an error message from SAP.

    - Edit: Opens the Excel function editor from which to edit input values.

    - Close: Closes the wizard without writing to the Excel spreadsheet. This will discard any values entered into the wizard.

Activity Input Plan Wizard by Fiscal Year – Activity Input Objects Tab

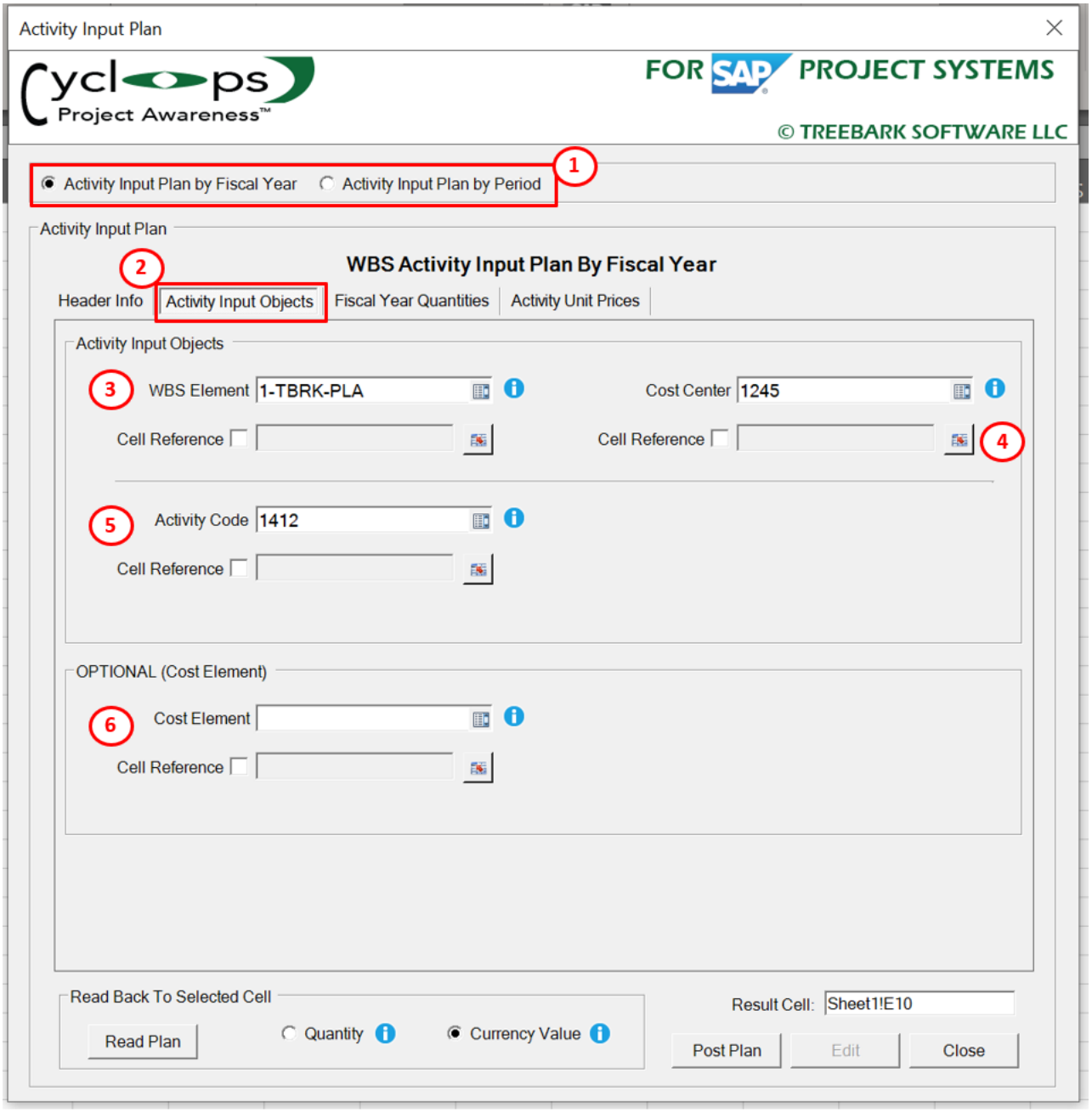


Figure 23 – WBS Activity Input Plan by Fiscal Year – Activity Input Objects

Activity Input Plan, Activity Input Tab, Figure 23 - Options:

1. **Fiscal Year / Period - Radio Group Button**:
   Activity input plan by fiscal year is selected.

2. **Activity Input Objects Tab**:
   Activity input objects are a unique combination of WBS elements, cost center, activity code and cost element which have a corresponding planned unit value (see: Activity Price Planning). Activity price

planning can also be done through NetWeaver or other third-party interfaces. This planned value will need to be available as a resource prior to allocating as an activity input.

3. WBS Element
   This is the primary top-level FICO object to be planned. Activity input price units are assigned to the WBS element as a secondary cost and part of the overall budget planning process.

4. Cost Center
   A cost center can be defined as a component in an organizational structure that adds to the cost and indirectly adds to the profit of the organization.

   Within the context of activity input planning, the cost center is one of two (2) primary identifying structures for purposes of allocating secondary costs / activity input, with the other being activity code. The combination of these two (2) elements with an optional cost element, defines the cost and availability of an internal resource to be allocated to the WBS structure.

5. Activity Code (Type):
   Activity types or codes are used to allocate internal activities and their cost, which are incurred by a specific cost center. Specifically, it identifies the activities or work to be done by an organization for one or several cost centers.

   Activity codes pair with cost centers to define an internal resource that can then be allocated.

6. Cost Element
   Cost elements classify an organization's valued consumption of production factors within a controlling area. This is an optional attribute for activity input planning.

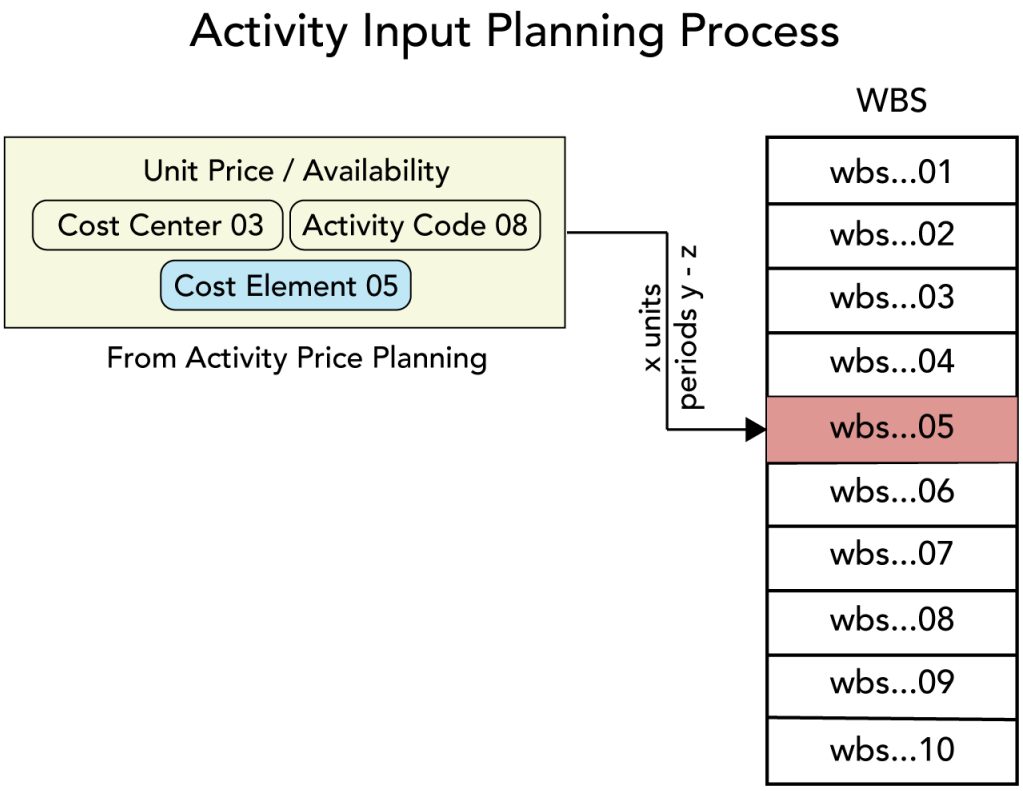


Figure 24 - Activity Input Planning Process

The activity input planning process allocates the previously planned activity price units to a selected WBS code.

This process is called "**Secondary Cost Planning**". SAP automatically updates the planned version budget based on the unit price/quantity planned to the WBS.

Per SAP documentation:
https://help.sap.com/erp_sfi_addon10/helpdata/en/08/5148e543b511d182b30000e829fbfe/content.htm

*"…In addition to primary costs, secondary costs are often incurred during the production of cost center activity. This is because a cost center must often take activity from other cost centers to produce its own activity. Secondary costs on the cost center result from internal allocations, such as activity allocations or assessments…"**

**Within the Cyclops Environment - these allocations are assigned to selected WBS Codes.*

Activity Input Plan Wizard by Fiscal Year – Fiscal Year Quantities Tab

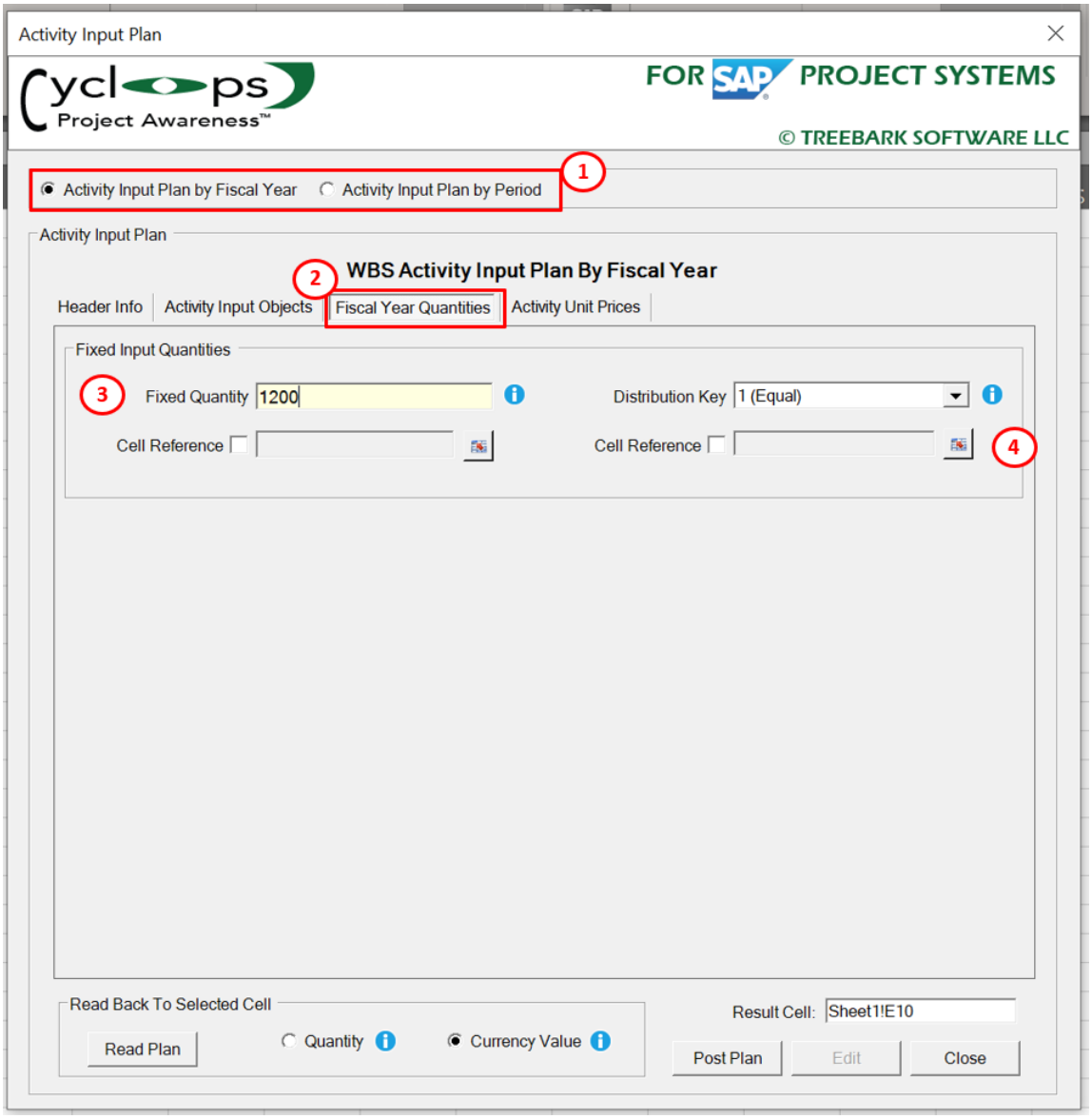


Figure 25 – WBS Activity Input Plan by Fiscal Year – FY Quantities

Activity Input Plan, Fiscal Year Quantities Tab (Figure 25) – Options:

1. **Fiscal Year / Period – Radio Group Button**:
   Activity Input Plan by Fiscal Year is selected.

2. **Quantities Tab**:
   This tab displays the input fields necessary to allocate a quantity, the selected FICO objects (Cost Center, activity code, cost element), and the manner in which that quantity is distributed.

3. **Fixed Quantity**:
   The input value is the numeric amount / quantity to be allocated.

4. **Distribution Key (for Fixed Quantities)**:
   This dropdown list shows several options that SAP provides for distributing a single value over multiple periods.

   1. Value is distributed equally across all Periods (4 periods => ¼, ¼, ¼, ¼)
   2. Value is distributed analogous to Previous Distribution by Percentage
   3. Value is interpreted as a Percentage of the Previous Value (ie: 50 = 50% of Previous)
   9. Value is distributed among the Calendar Days in the Period (days in period / total number of days)

Activity Input Plan Wizard by Fiscal Year – Activity Unit Prices Tab

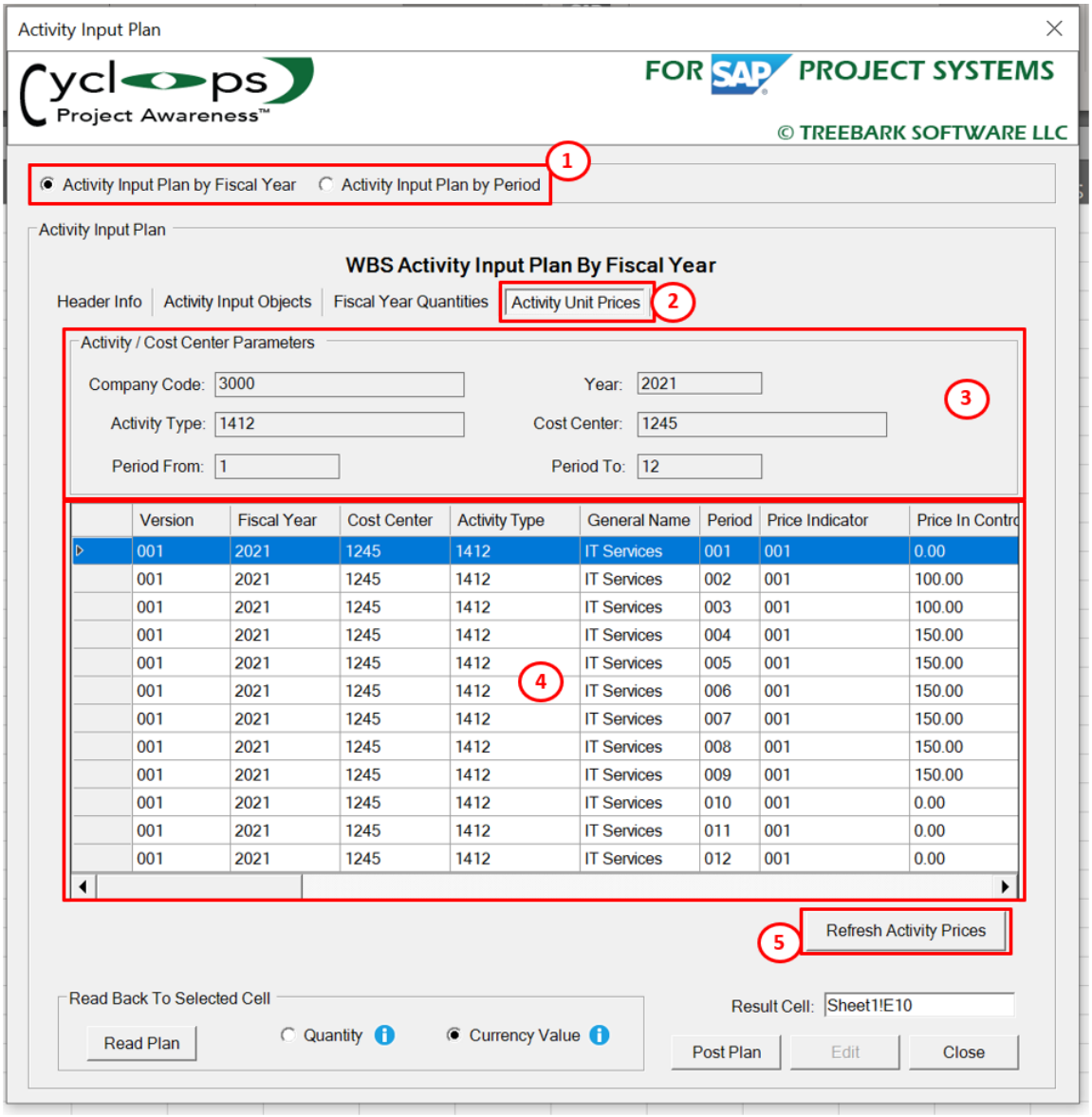


Figure 26 – WBS Activity Unit Prices Tab

Activity Input Plan, Activity Unit Prices Tab, Figure 26 – Options:

1. <u>Fiscal Year / Period – Radio Group Button</u>:
   Activity input plan by fiscal year is selected.

2. <u>Activity Unit Prices Tab</u>:
   This tab displays the selected input planning parameters from the previous tabs and the price list for same.

3. <u>Activity / Cost Center Parameters</u>:

Group box that shows the pre-selected values from the Header Info and activity Input tabs. These parameters are then used to query SAP for unit values corresponding to same.

4. Activity Unit Price List:
   The data table that corresponds to the parameters as listed above. This table provides input planners a list of current costs prior to allocating /planning those resources.

5. Refresh Activity Prices Button:
   Refreshes the list of values.

Activity Input Plan Wizard by Period – Quantities (Periods 1-6, 7-12)

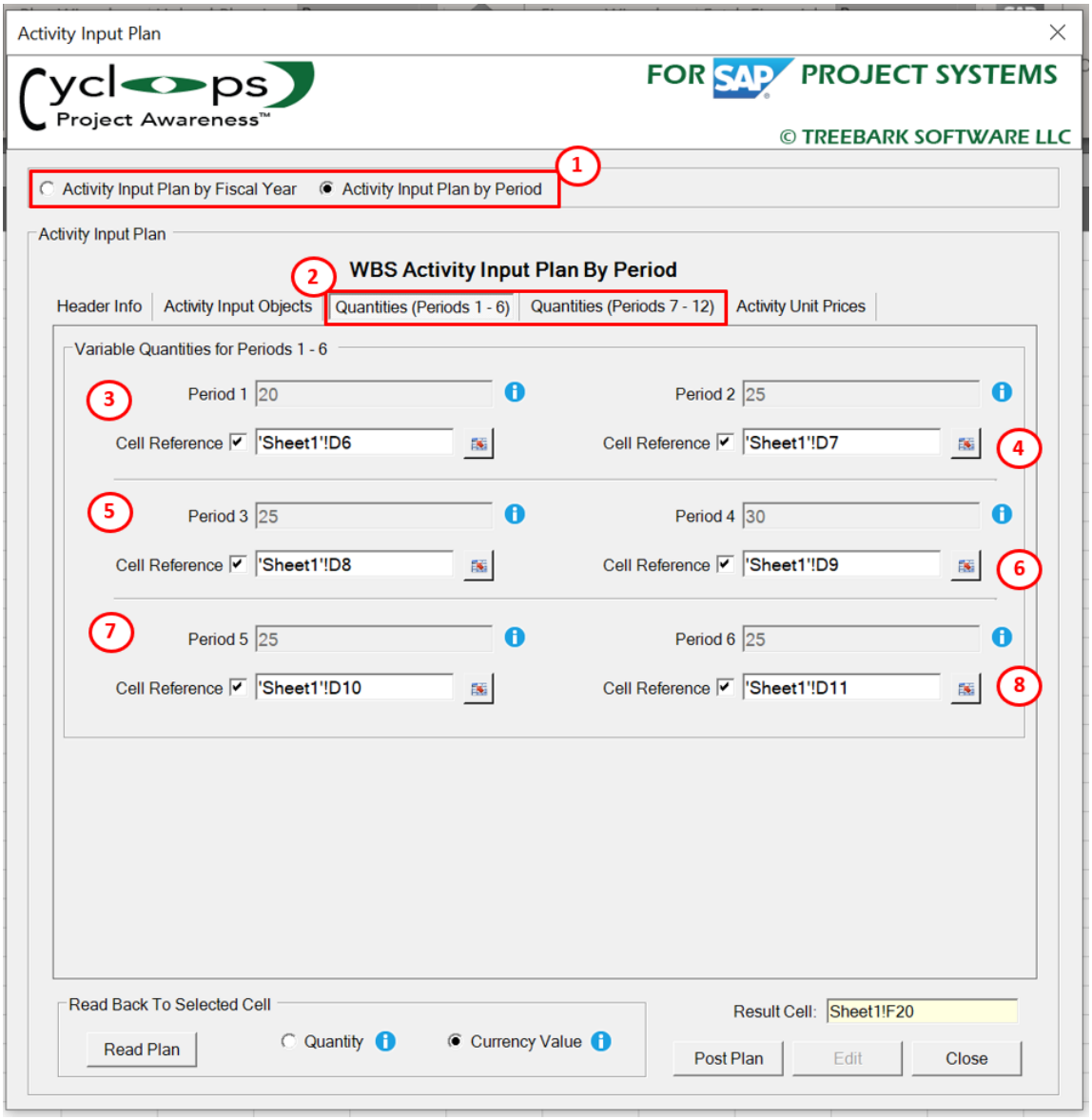


Figure 27 – WBS Activity Input Plan by Period

Activity Input Plan, Period Values Tab, Figure 27 – Options:

1. **Cost Plan by Period**:
   Selected radio button and post by period.

2. **Values (Periods 1-6 & 7-12) Tabs**:
   Selected tab page and values to post for periods 1 to 6 and 7 to 12.

3. **Period 1 Value**:
   The activity price plan value unit price per unit of measure, in the planning currency, to be allocated to period 1 within the selected year. This value can be either a literal or a cell reference as shown.

4. **Period 2 Value**:
   The activity price plan value unit price per unit of measure, in the planning currency, to be allocated to period **2** within the selected year. This value can be either a literal or a cell reference as shown.

5. **Period 3 Value**:
   The activity price plan value unit price per unit of measure, in the planning currency, to be allocated to period **3** within the selected year. This value can be either a literal or a cell reference as shown.

6. **Period 4 Value**:
   The activity price plan value unit price per unit of measure, in the planning currency, to be allocated to period **4** within the selected year. This value can be either a literal or a cell reference as shown.

7. **Period 5 Value**:
   The activity price plan value unit price per unit of measure, in the planning currency, to be allocated to period **5** within the selected year. This value can be either a literal or a cell reference as shown.

8. **Period 6 Value**:
   The activity price plan value unit price per unit of measure, in the planning currency, to be allocated to period **6** within the selected year. This value can be either a literal or a cell reference as shown.

Excel Activity Input Planning Functions – Manual Entry

For manually programming Cyclops activity input functions into Excel without using the above wizards, the following functions are defined and included with Cyclops:

Post or Validate an Activity Input Quantities by Fiscal Year to SAP (Excel Function)

```
cyclops_activity_input_plan_by_fiscal_year( _
                                  CompanyCode          As Variant, _
                                  Year                 As Variant, _
                                  PeriodFrom           As Variant, _
                                  PeriodTo             As Variant, _
                                  Version              As Variant, _
                                  DocumentHeaderText   As Variant, _
                                  CurrencyType         As Variant, _
                                  Delta                As Variant, _
                                  WBSElement           As Variant, _
                                  SendingCostCenter    As Variant, _
                                  SendingActivityCode  As Variant, _
                        Optional  CostElement          As Variant, _
                        Optional  FixedQuantity        As Variant, _
                        Optional  DistributionKey      As Variant) As Variant
```

Post or Validate an Activity Input Quantities by Fiscal Period to SAP (Excel Function)

```
cyclops_activity_input_plan_by_period( _
                                  CompanyCode          As Variant, _
                                  Year                 As Variant, _
                                  PeriodFrom           As Variant, _
                                  PeriodTo             As Variant, _
                                  Version              As Variant, _
                                  DocumentHeaderText   As Variant, _
                                  CurrencyType         As Variant, _
                                  Delta                As Variant, _
                                  WBSElement           As Variant, _
                                  SendingCostCenter    As Variant, _
                                  SendingActivityCode  As Variant, _
                        Optional  CostElement          As Variant, _
                        Optional  FixQuantityPeriod01  As Variant, _
                        Optional  FixQuantityPeriod02  As Variant, _
                        Optional  FixQuantityPeriod03  As Variant, _
                        Optional  FixQuantityPeriod04  As Variant, _
                        Optional  FixQuantityPeriod05  As Variant, _
                        Optional  FixQuantityPeriod06  As Variant, _
                        Optional  FixQuantityPeriod07  As Variant, _
                        Optional  FixQuantityPeriod08  As Variant, _
                        Optional  FixQuantityPeriod09  As Variant, _
                        Optional  FixQuantityPeriod10  As Variant, _
                        Optional  FixQuantityPeriod11  As Variant, _
                        Optional  FixQuantityPeriod12  As Variant) As Variant
```

Read back Costs from an Activity Input Plan to SAP (Excel Function)

```
cyclops_read_activity_input_plan_by_fiscal_year( _
                                  CompanyCode          As Variant, _
                                  Year                 As Variant, _
                                  PeriodFrom           As Variant, _
                                  PeriodTo             As Variant, _
                                  Version              As Variant, _
                                  DocumentHeaderText   As Variant, _
                                  CurrencyType         As Variant, _
                                  WBSElement           As Variant, _
```

```
            SendingCostCenter   As Variant, _
            SendingActivityCode As Variant, _
Optional    CostElement         As Variant) As Variant
```

Fetching Information from SAP

Fetch Requisitions / Purchase Orders / Invoice / Commitment, Totals

Fetch Requisitions / Purchase Orders / Invoice / Commitment, Totals – WBS From List

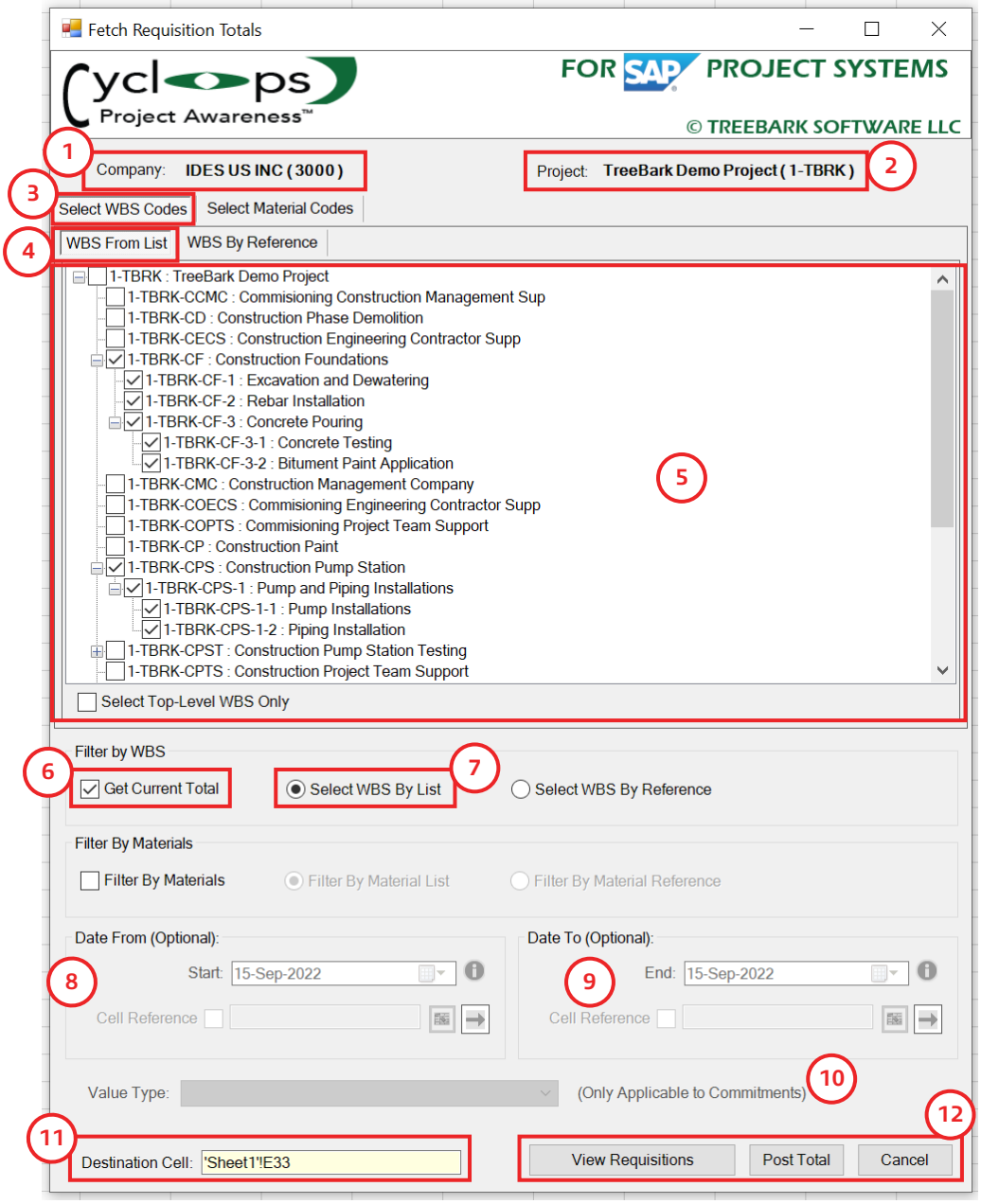


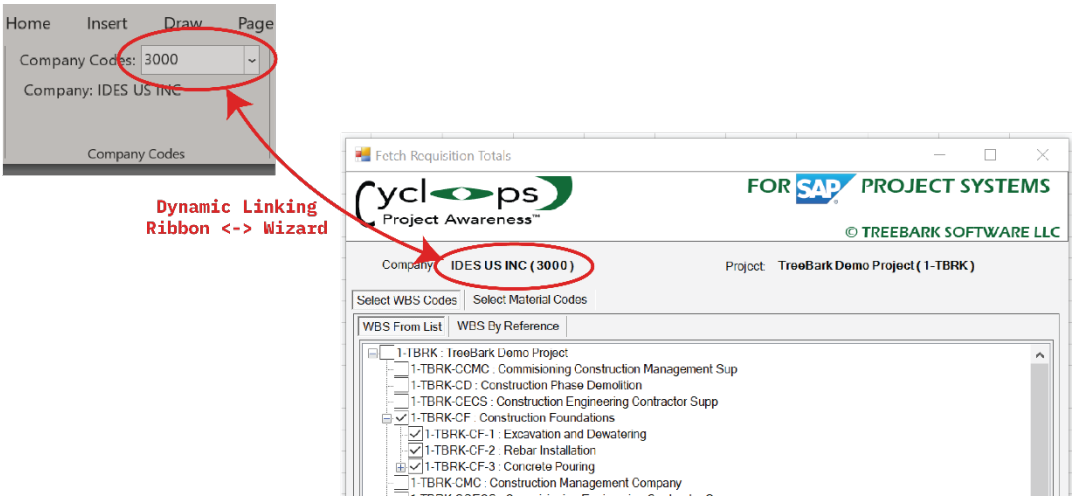
Figure 28 – Fetch Requisitions Total – WBS From List

(Note: Wizard interface is functionally equivalent for Requisitions, Purchase Orders and Invoices)

Fetch Financials Total, Figure 28 – Options:

1. <u>Selected Company (by ribbon bar selection)</u>:
   There are two (2) separate ways in which a user may enter the company parameter data in the wizard form. The first method, as illustrated in the WBS from list tab, represents a checkbox list / tree approach whereby the company data is synchronized with the Cyclops ribbon.

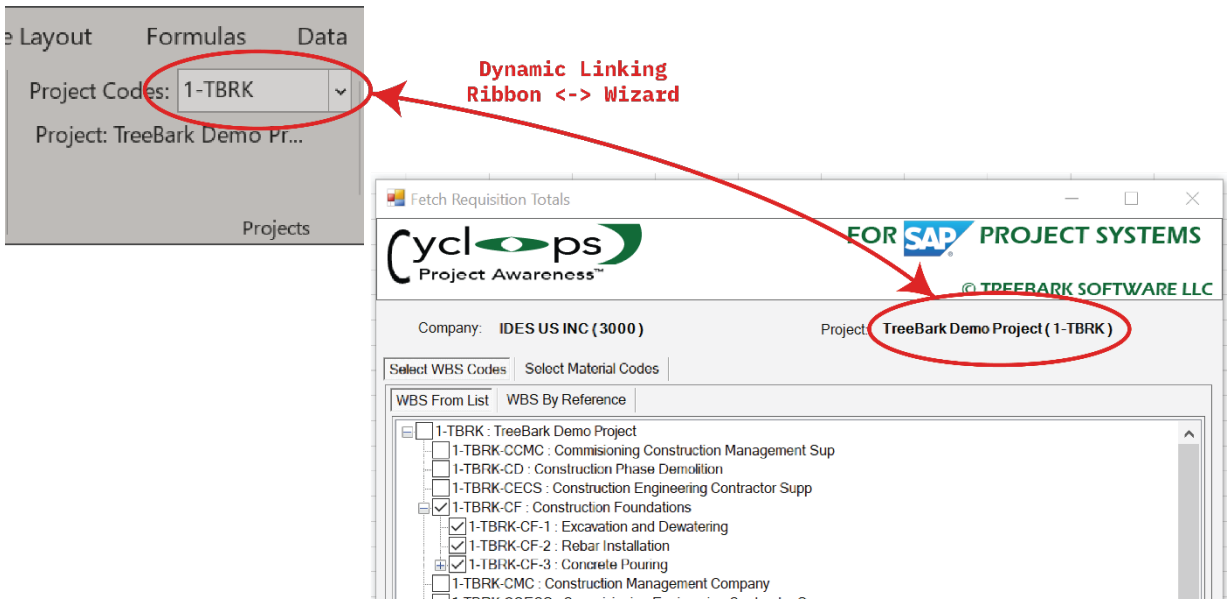
   The company name, identified in bold near the top-left of the wizard as shown in the figure below, is the selected company for totals and list values. When the WBS from list tab is selected (see item 3 below), the company is automatically selected based on the Cyclops ribbon company drop-down menu. This value dynamically updates as the user selects a company to work with in the background.



   In addition, when the company name changes, the selected project name is updated as well to reflect the selected project in this ribbon bar. Every time a user selects a new company, the selected project refers to the first project in alphabetical order from the list of associated projects with respect to the selected company.

   Also, the above process refreshes the list of WBS elements in the tree view automatically to reflect the newly selected company and project.

2. <u>Selected Project</u>:
   As with the selected company parameter, there are two (2) similar ways to in which to update / import project data in the wizard form. The first method, as illustrated in the WBS from list tab below, represents a checkbox list / tree approach whereby the company data is synchronized with the Cyclops ribbon.



   Every time a user selects a new project from the Ribbon drop-down, the selected project process refreshes the list of WBS elements in the tree view to automatically update and reflect the newly selected company and project.

3. <u>WBS From List Tab</u>:
   Tab page containing the WBS list / tree view.

4. <u>WBS Tree View</u>:
   Dynamically updatable list /tree view of hierarchical WBS Codes. When a user selects a new project from the list, or selects a new company code altogether, the WBS list / tree is automatically populated with new values based on the revised selection (as described in items 1 and 2 above).

   The WBS value(s) selected, or checked, will be combined with other constraint parameters to define the return of a list, or total value of a function, based on wizard action buttons.

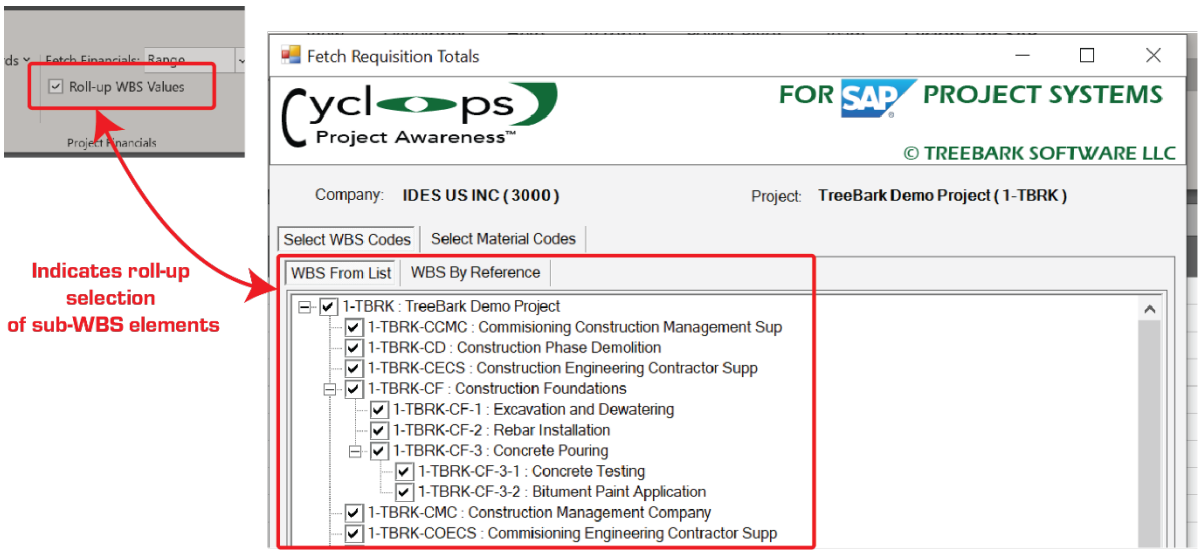


Figure 29 - WBS Rollup Values – Sync with List / Tree

Depending on the WBS rollup value selection as shown in the Cyclops ribbon (**checked** or **unchecked**), the total or list value returned will be as follows:

- Roll-up WBS values **checked**
  All sub codes within the hierarchy of a selected WBS code will be **automatically** included in any list or totals calculation.

- Roll-up WBS values **un-checked**
  Sub codes withing the hierarchy of a selected WBS code, that have **not** been explicitly selected, will be excluded from any list or totals calculation.

Note: The Cyclops ribbon roll-up WBS selection would extend to **all** Cyclops functions that can accept a range or semi-colon delaminated list of WBS values. This value is determined at **time of query**, from the ribbon checkbox value, and is **not** a value that is included in the function itself.

5. **WBS Tree List View**:
   Displays the selectable hierarchy of WBS codes. Select the WBS codes relevant to your query directly from the list.

6. **Get Current Total Checkbox**:
   Determines the date range for the returned financial values:

   - Checked
     When **checked**, the list or total value returned will reflect the summed value, including all other constraints, to the current time when query is executed. This value will change over

time as financial documents associated with the query are added or changed up until the point the query is run again.

- Unchecked
  When **unchecked**, the list or total value returned will reflect the summed value, including all other constraints, within the time frame selected. This value will **only** change over time if financial documents are added in a post-dated manner and fall within the selected query timeframe.

7. **Selected WBS by List Radio Button**:
   This radio button selection identifies the tree / list as the source of any returned list of values or function written to Excel.

8. **Date From - Date Selector / Reference**:
   Start date of selection. This value is only valid if **Get Current Total checkbox** is **not** selected. End date of selection. Like the **Date From** parameter, this value only applies when the **Get Current Total checkbox** is **not** selected.

9. **Date To – Date Selector / Reference**:
   End date of selection. This value is only valid if **Get Current Total checkbox** is **not** selected. End date of selection. Like the **Date To** parameter, this value only applies when the **Get Current Total checkbox** is **not** selected.

10. Value Type (*applicable to commitments only*):

    Represents the value type of the commitment item(s) to be returned. This filter is applicable to ***commitment lists and totals***. Leave value blank / unselected to return all value types for the commitments.

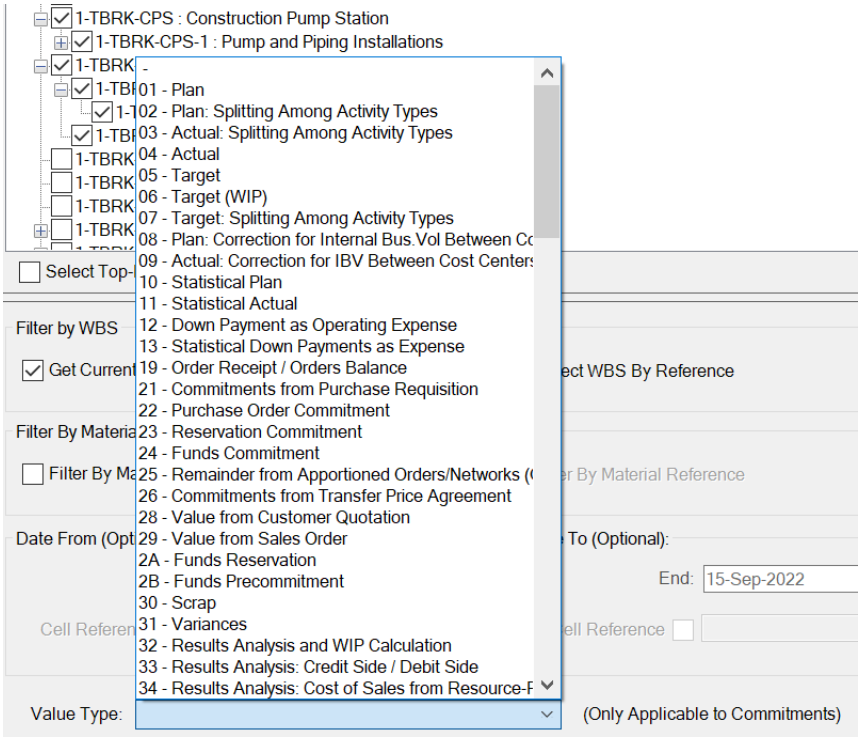


Figure 29a – Value Type Dropdown – For Commitments Only

11. Destination Cell:

    Destination cell is the spreadsheet cell address / location where the cost plan wizard posts the resultant function.

12. Wizard Action Buttons (View List, Post Total, Cancel):

- View List: Displays the list of financial documents per above (see: Figure 31 - View List of Financial Documents)

- Post Total: Write the function with selected parameters from the wizard form into the destination cell.

- Cancel: Closes the form without performing any other action.

WBS Date Parameter – Date From / Date To

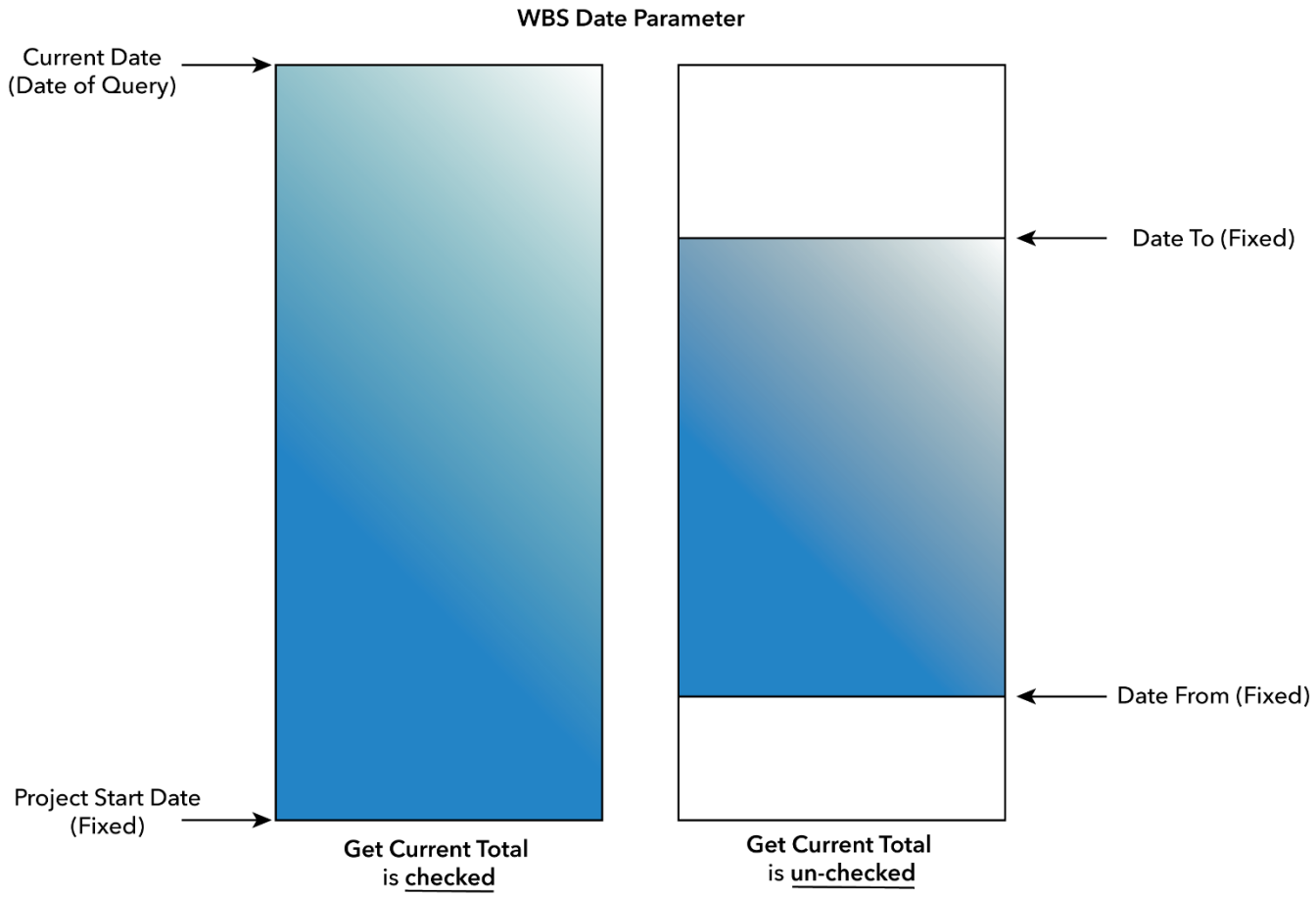


Figure 30 - WBS Date Parameter - Date From / Date To

The WBS date selection relationship can be illustrated by the figure above. When the **Get Current Total** checkbox is selected, the date is, essentially unconstrained and reflects the values at whatever point in time the query is run (from the project start date). When unchecked, the **Date From** and **Date To** parameters represent fixed points in time that will reflect financial postings within that time frame.

13. **Destination Cell**:
    Destination cell is the spreadsheet cell address / location where the cost plan wizard posts the resultant function.

14. **Wizard Action Buttons (View List, Post Total, Cancel)**:

- View requisitions (purchase orders, invoices, actuals):

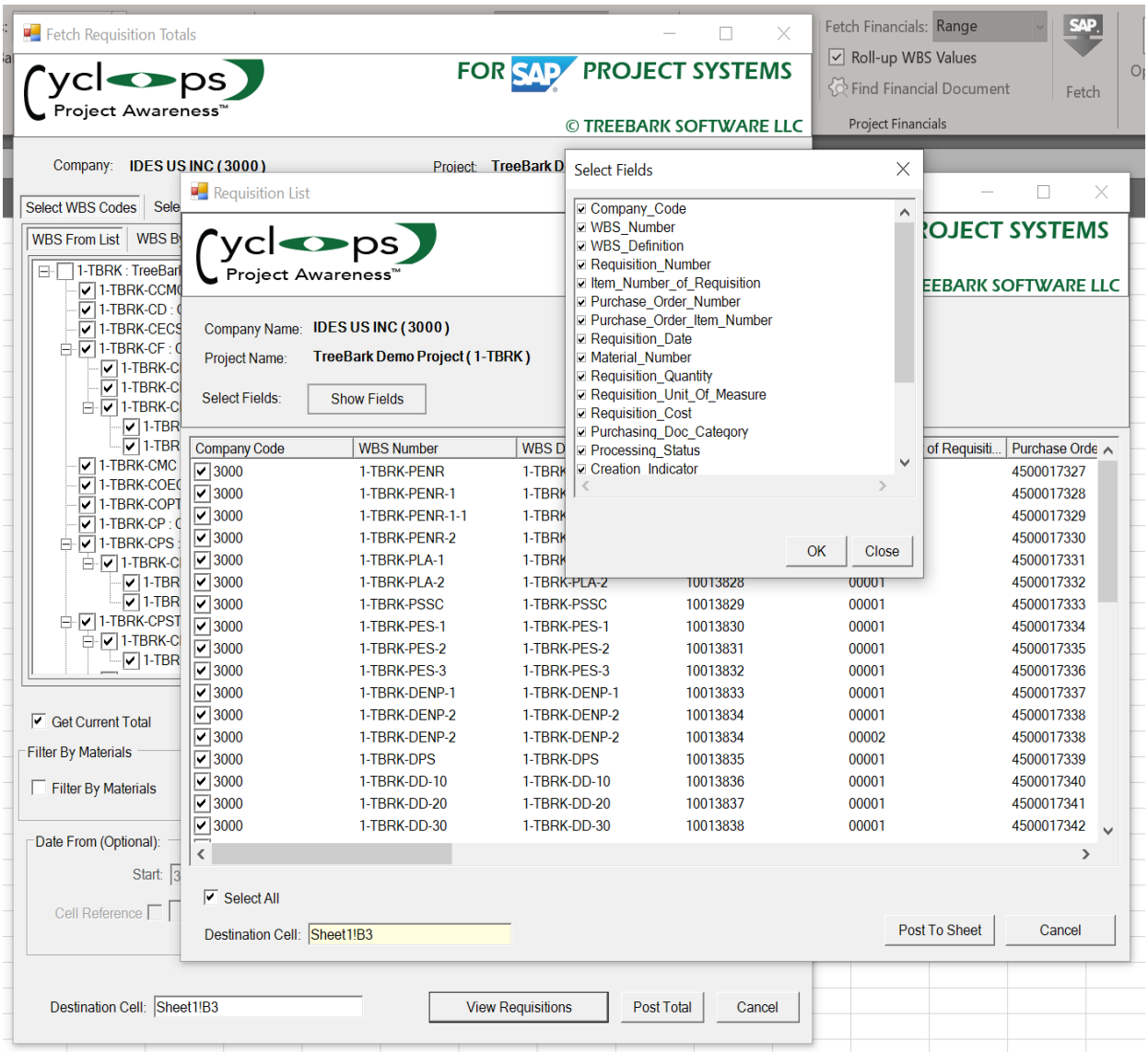


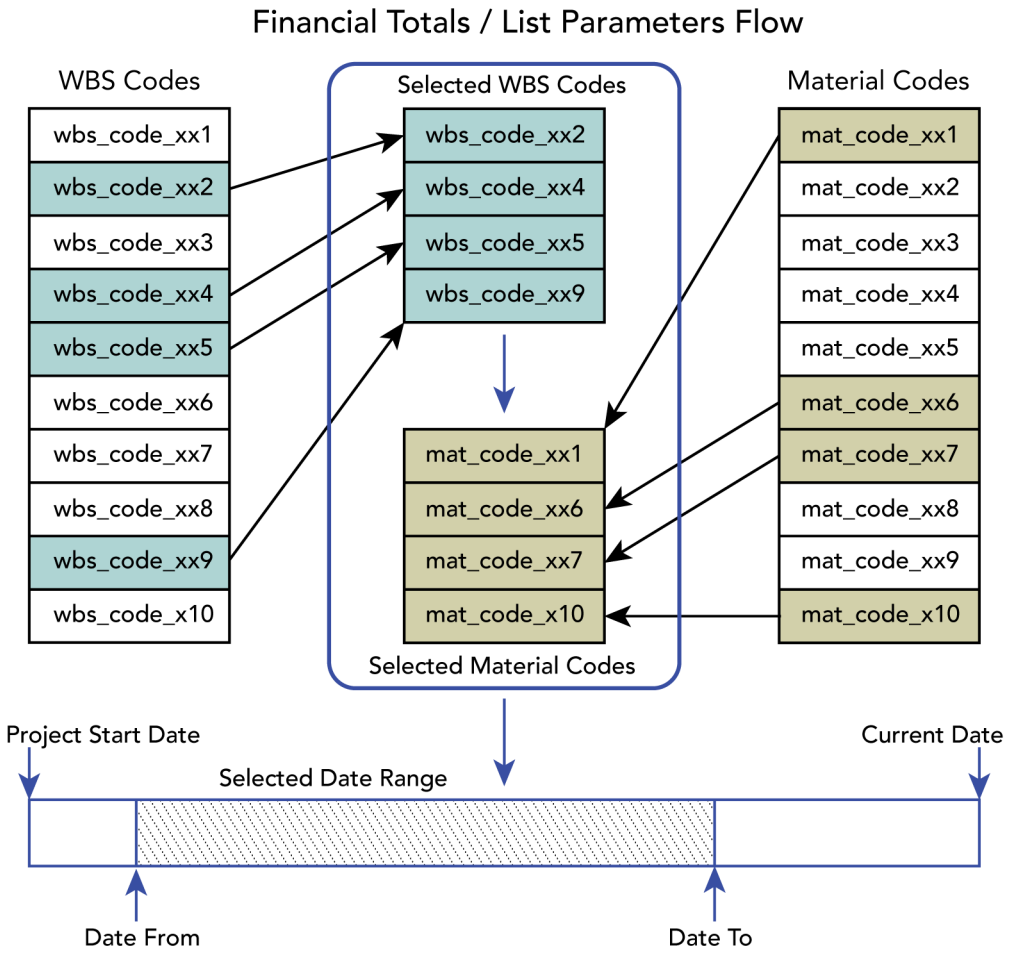
Figure 31 - View List of Financial Documents

When the user selects "View Requisitions" button the list of financial documents corresponding to the selected contraints is shown. Additionally the user can select which fields are displayed in the list. The user may then select from the displayed list to write back values to the spreadsheet beginning at the destination cell.

- Post Total: Write the function with selected parameters from the wizard form into the destination cell.

- Cancel: Closes the form without performing any other action.

Financial Totals / List Parameters Flow



Generally...

"...cyclops_function(selected_wbs_codes, selected_material_codes, date_range...)"

Figure 32 - Financial Totals / List Parameters Flow

Fetch Requisitions / Purchase Orders / Commitment Totals – WBS From Reference

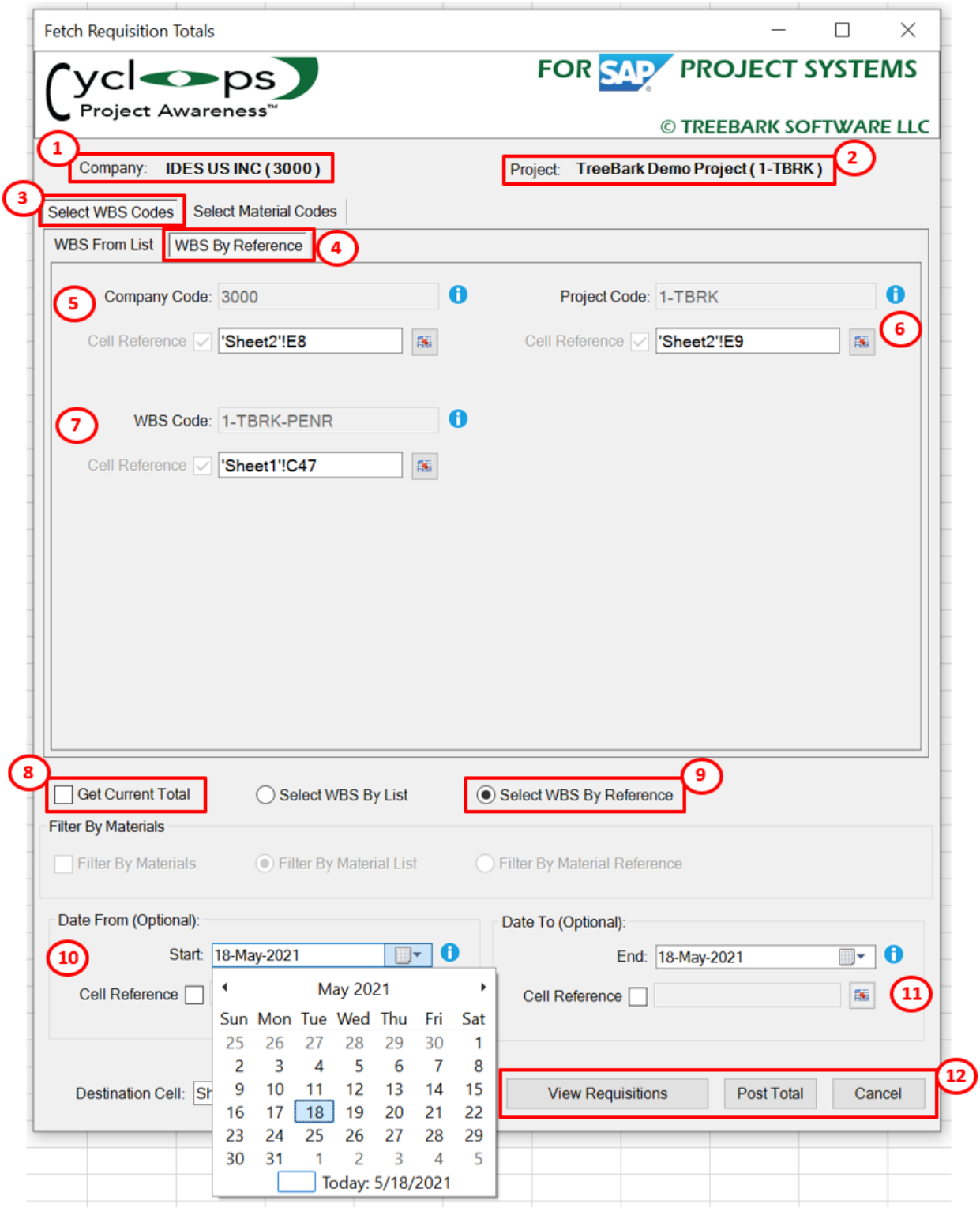


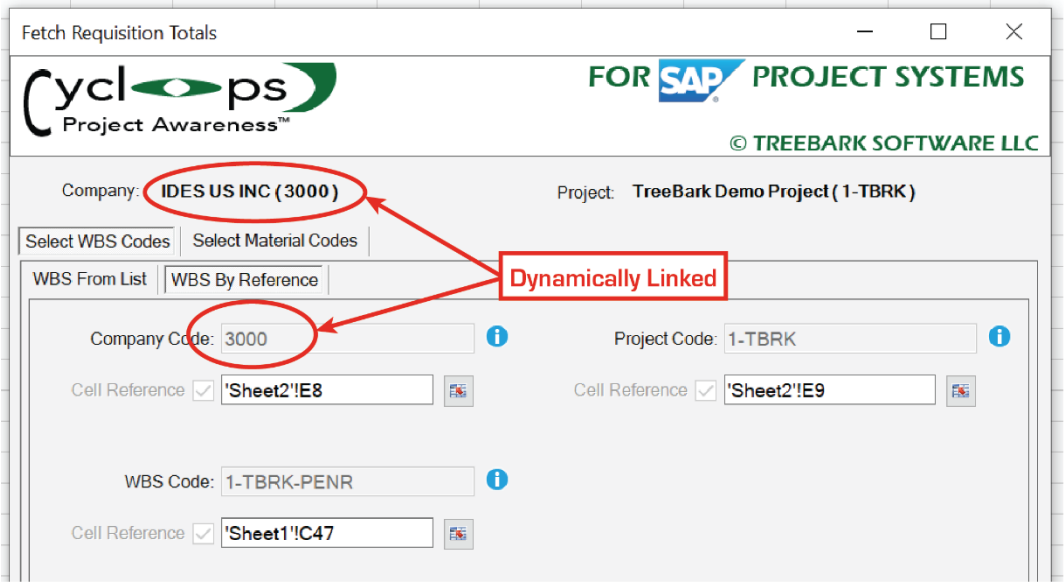
Figure 33 – Fetch Requisitions Total – WBS From Reference

(Note: Wizard interface is functionally equivalent for Requisitions, Purchase Orders and Invoices)

Fetch Financials Total, Figure 27 – Options:

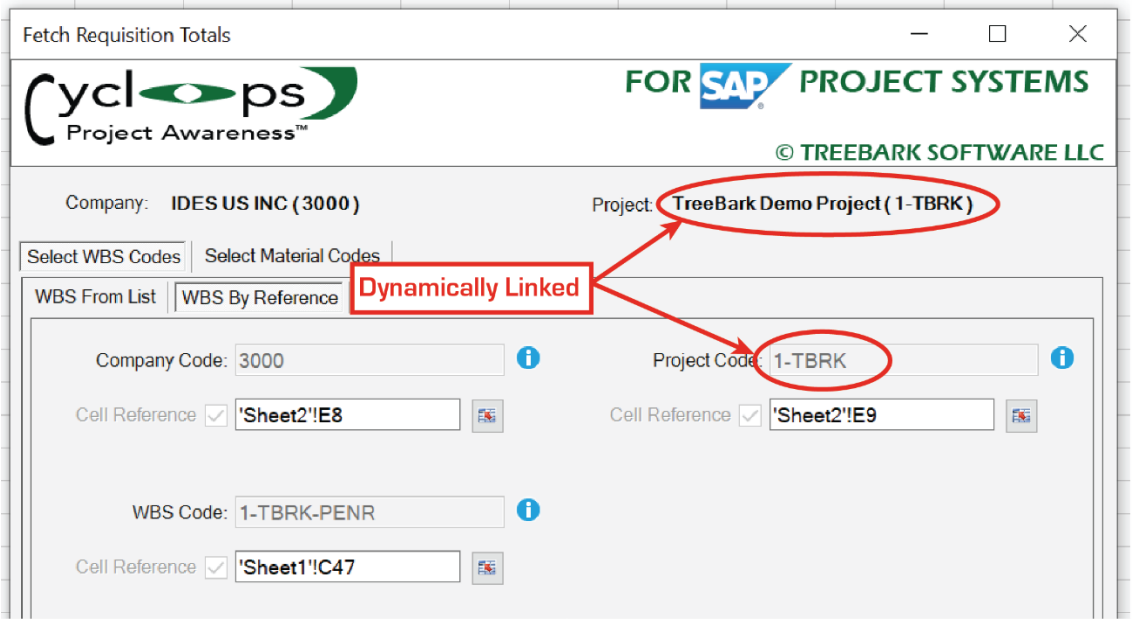
1. **Selected Company (by reference)**:
   The company name, identified in bold near the top-left of the wizard, is the selected company constraint for queries.

   When the **WBS By Reference** tab is selected, the company name is correlated to the company code referenced in a selected cell. This value dynamically updates as the user enters the cell reference containing the company code.



   As shown in image above, when the user references a cell value that corresponds to a valid company code, the company name and code automatically update as well.

2. **Selected Project**:
   Similar to the selected company, the selected project is located at the top of the wizard and is the selected project constraint for queries.



When the WBS By Reference tab is selected, the project name at the top of the wizard is correlated to the project code referenced in a selected cell. This value dynamically updates as the user enters the cell reference containing the project code.

3. Select WBS Codes Tab:
   Top tab page identifying the filtering parameter (WBS or Materials) codes.

4. WBS By Reference Tab:
   Tab page containing the reference values for company, project and WBS codes.

5. Company Code:
   A cell reference to the user selected company code. When the selected company code corresponds to a valid company code in SAP, this field will dynamically update the selected company value.

6. Project Code:
   Cell reference to the user selected project code.

7. WBS Code(s):
   Cell range reference to one or more WBS codes.

8. Get Current Total Checkbox:
   Determines the date range for the returned financial values:

   - Checked
     When **checked**, the list or total value returned will reflect the summed value, including all other constraints, from the project start date to the current time when query is executed.

This value will change over time as financial documents associated with the query are added or changed up until the point the query is run again.

- Unchecked
  When **unchecked**, the list or total value returned will reflect the summed value, including all other constraints, within the time frame selected. This value will **only** change over time if financial documents are added in a post-dated manner and fall within the selected query timeframe.

9. **Select WBS Values by Reference Radio Button**:
   This radio button selection identifies the WBS By Reference tab page as the source of company and project constraints for queries.

10. **Date From**:
    Start date of selection. This value is only valid if **Get Current Total checkbox** is **not** selected. End date of selection. Like the **Date From** parameter, this value only applies when the **Get Current Total checkbox** is **not** selected.

11. **Date To**:
    End date of selection. This value is only valid if **Get Current Total checkbox** is **not** selected. End date of selection. Like the **Date To** parameter, this value only applies when the **Get Current Total checkbox** is **not** selected.

12. **Wizard Action Buttons (View List, Post Total, Cancel)**:
    Button Options:

    - View List: Displays the list of financial documents per above (see: Figure 31 - View List of Financial Documents)

    - Post Total: Write the function with selected parameters from the wizard form into the destination cell.

    - Cancel: Closes the form without performing any other action.

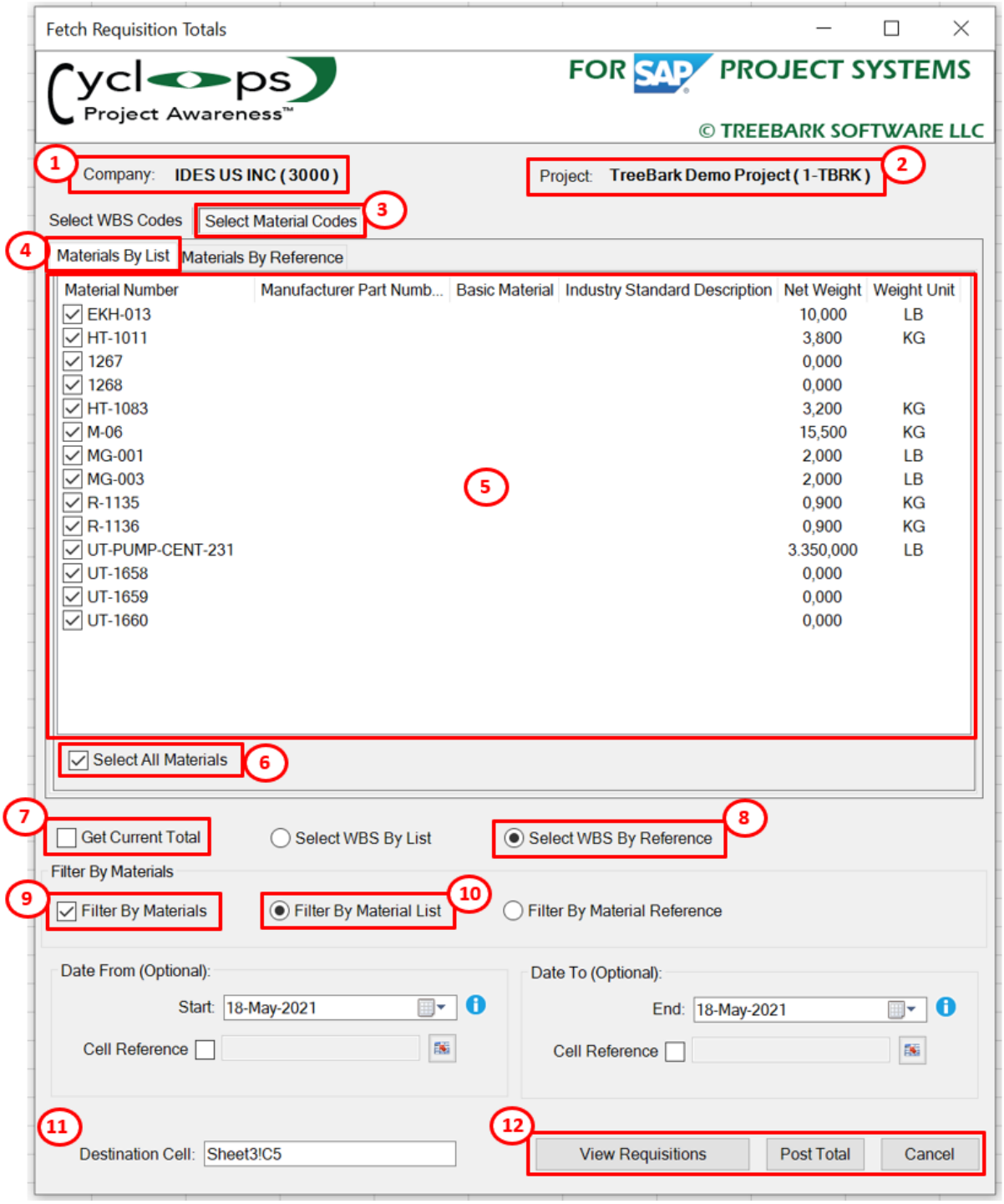


Figure 34 – Fetch Requisitions Total – Material From List

(Note: Wizard interface is functionally equivalent for Requisitions, Purchase Orders and Invoices)

Fetch Financials Total, Material From List, Figure 34 – Options:

1. <u>Selected Company</u>:

The company name, identified in bold near the top-left of the wizard, is the selected company constraint for queries.

As shown in the above screenshot, when the **Select WBS by Reference** radio button is selected, the value for the company name / company code correlates to the selected company code value from the **WBS by Reference** tab page.

2. Selected Project:
   Similar to the selected company, the elected project is located at the top of the wizard and is the selected project constraint for queries. Also, as with the selected company parameter in this example, the selected project parameter correlates to the selected project code value from the **WBS by Reference** tab above.

   Again, this is because the **Selected WBS By Reference** radio button (item 7) is selected. However, had the **Select WBS by List** radio button been selected, the selected project code value from the **WBS by List** tab would be selected.

   The user is advised that **the last WBS tab page clicked (List or Reference)** is the one that governs and will be reflected in the associated radio button selected.

3. Select Material Codes Tab:
   Top tab page identifying material codes selection space.

4. Materials by List Tab:
   Secondary tab page containing the material list view.

5. Materials List:
   Dynamically updatable list view of all material codes associated with the selected company and project. This list is comprised of all material codes values that have been assigned to any purchase requisition, purchase order or invoice within the selected project.

6. Select All Materials Checkbox:
   When selected / checked, this value will automatically select all material codes in the list. When this checkbox is unselected, it will de-select any selected material codes values.

7. Get Current Total Checkbox:
   Determines the date range for the returned financial values:

   - Checked
     When **checked**, the list or total value returned will reflect the summed value, including all other constraints, from the start of the project to the current time when query is executed.

This value will change over time as financial documents associated with the query are added or changed up until the point the query is run again.

- Unchecked
  When **unchecked**, the list or total value returned will reflect the summed value, including all other constraints, within the time frame selected. This value will **only** change over time if financial documents are added in a post-dated manner and fall within the selected query timeframe.

8. **Select WBS By Reference Radio Button**:
   This radio button selection identifies the WBS By Reference tab page as the source of company and project constraints for queries.

9. **Filter by Materials Checkbox**:
   When checked, the query will include material code selections.

10. **Filter by Materials List Radio Button**:
    Correlated with the selected page tab, this radio button indicates that the material codes in the query will be from the materials selected on this page (**Materials by List).**

11. **Destination Cell**:
    Destination cell is the spreadsheet cell address / location where the cost plan wizard posts the resultant function.

12. **Wizard Action Buttons (View List, Post Total, Cancel)**:

    - View List: Displays the list of financial documents per above (see: Figure 31 - View List of Financial Documents)

    - Post Total: Write the function with selected parameters from the wizard form into the destination cell.

    - Cancel: Closes the form without performing any other action.

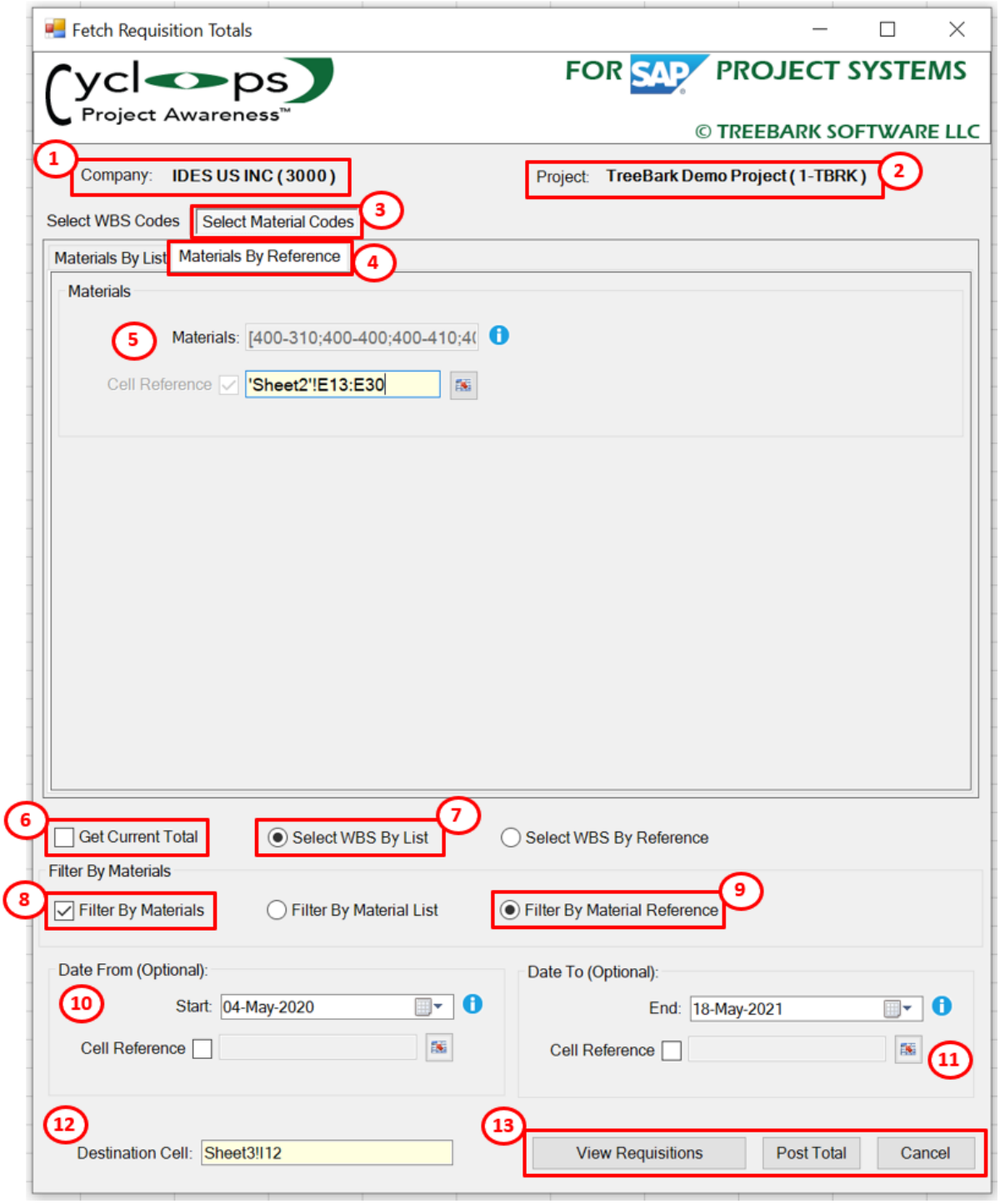


Figure 35 – Fetch Requisitions Total – Material By Reference

(Note: Wizard interface is functionally equivalent for Requisitions, Purchase Orders and Invoices)

Fetch Financials Total, Figure 35 – Options:

1. **Selected Company**:
   The company name, identified in bold near the top-left of the wizard, is the selected company for queries. When the **WBS From List** tab is selected, the company code value is automatically updated based on the revised data in the Cyclops ribbon company drop-down. This value dynamically updates as the user selects a company to work with in the background.

   In addition, when the company name changes so o does the selected project name. Every time a user selects a new company, the selected project refers to the first project in alphabetical order from the list of associated projects with respect to the selected company.

2. **Selected Project**:
   The project name, identified in bold near the top-right of the wizard, is the selected project for queries. When the **WBS From List** tab is selected, the project code value is automatically updated based on the revised data in the Cyclops ribbon company drop-down. This value dynamically updates as the user selects a company to work with in the background.

   In addition, when the company name changes so does the selected project name. Every time a user selects a new company, the selected project refers to the first project in alphabetical order from the list of associated projects with respect to the selected company.

3. **Select Material Codes Tab**:
   Tab page containing the material reference input.

4. **Materials by Reference Sub Tab**:
   Contains input region for a ell range reference to one or more material codes.

5. **Material Range Value**:
   Input box restricted to cell reference values from a worksheet within the workbook. These values are represented as a **Range** object in Excel.

6. **Get Current Total Checkbox**:
   Determines the date range for the returned financial values:

   - Checked
     When **checked**, the list or total value returned will reflect the summed value, including all other constraints, from the project start date to the current time when query is executed. This value will change over time as financial documents associated with the query are added or changed up until the point the query is run again.

   - Unchecked

When **unchecked**, the list or total value returned will reflect the summed value, including all other constraints, within the time frame selected. This value will **only** change over time if financial documents are added in a post-dated manner and fall within the selected query timeframe.

7. **Select WBS By List Radio Button**:
   This radio button selection identifies the tree / list as the source of any returned list of values or function written to Excel.

8. **Filter By Materials Checkbox**:
   When checked, the query will include the selected materials as a constraint. When unchecked, the parameter will be left blank, and materials will not be a constraint.

9. **Filter My Materials Reference Radio Button**:
   When selected, the query will include the material.

10. **Date From – Date Selector / Reference:**
    Start date of selection. This value is only valid if **Get Current Total checkbox** is **not** selected. End date of selection. Like the **Date From** parameter, this value only applies when the **Get Current Total checkbox** is **not** selected.

11. **Date To – Date Selector / Reference**:
    End date of selection. This value is only valid if **Get Current Total checkbox** is **not** selected. End date of selection. Like the **Date To** parameter, this value only applies when the **Get Current Total checkbox** is **not** selected.

12. **Destination Cell**:
    Destination cell is the spreadsheet cell address / location where the cost plan wizard posts the resultant function.

13. **Wizard Action Buttons (View List, Post Total, Cancel)**:

    - View List: Displays the list of financial documents per above (see: Figure 31 - View List of Financial Documents)

    - Post Total: Write the function with selected parameters from the wizard form into the destination cell.

    - Cancel: Closes the Form without performing any other action.

Excel Fetch Financial Totals Functions – Manual Entry

For manually programming Cyclops fetch financial totals functions into Excel without using the above wizards, the following functions are defined and included with Cyclops:

Fetch Requisition Total for WBS from SAP (Excel Function)

```
cyclops_get_requisition_total_for_wbs( _
                                CompanyCode         As Variant, _
                                ProjectNumber       As Variant, _
                        Optional WBSElements        As Variant, _
                        Optional WBSRange           As Range,   _
                        Optional MaterialCodes      As Variant, _
                        Optional MaterialRange      As Range,   _
                        Optional DateFrom           As Variant, _
                        Optional DateTo             As Variant) As Variant
```

Fetch Purchase Order Total for WBS from SAP (Excel Function)

```
cyclops_get_purchase_order_total_for_wbs( _
                                CompanyCode         As Variant, _
                                ProjectNumber       As Variant, _
                        Optional WBSElements        As Variant, _
                        Optional WBSRange           As Range,   _
                        Optional MaterialCodes      As Variant, _
                        Optional MaterialRange      As Range,   _
                        Optional DateFrom           As Variant, _
                        Optional DateTo             As Variant) As Variant
```

Fetch Invoice Total for WBS from SAP (Excel Function)

```
cyclops_get_invoice_total_for_wbs( CompanyCode      As Variant, _
                                ProjectNumber       As Variant, _
                        Optional WBSElements        As Variant, _
                        Optional WBSRange           As Range,   _
                        Optional MaterialCodes      As Variant, _
                        Optional MaterialRange      As Range,   _
                        Optional DateFrom           As Variant, _
                        Optional DateTo             As Variant) As Variant
```

Fetch Commitment Total for WBS from SAP (Excel Function)

```
cyclops_get_actual_total_for_wbs(  CompanyCode      As Variant, _
                                ProjectNumber       As Variant, _
                        Optional WBSElements        As Variant, _
                        Optional WBSRange           As Range,   _
                        Optional MaterialCodes      As Variant, _
                        Optional MaterialRange      As Range,   _
                        Optional DateFrom           As Variant, _
                        Optional DateTo             As Variant, _
                        Optional ValueType          As Variant) As Variant
```

Fetch Budget Totals

The Fetch Budget Totals feature in Cyclops returns, to the user, the funds available to a WBS element, or collection of WBS elements, at any user-selected point in time.

Actual Postings
Actual postings are determined starting with initial allocation of funds, applies any budgetary adjustments then applies the **actual** postings (debit or credit) from project initialization to the user-selected time.

Planned Postings
Planned postings are determined starting with initial allocation of funds, applies any budgetary adjustments then applies the **planned** amounts (Direct Cost, Secondary Cost) from project initialization to the user-selected time.

By their nature, actual postings will be date specific, to the actual day selected. Whereas planned values are period based. This will lead to some discrepancies depending on impact of any one actual posting when compared to period based planned costs.

This feature is provided so that the user may both see the budget at a point in time and compare / benchmark any planned budget version against actual.

Fetch Budget Totals – WBS From List

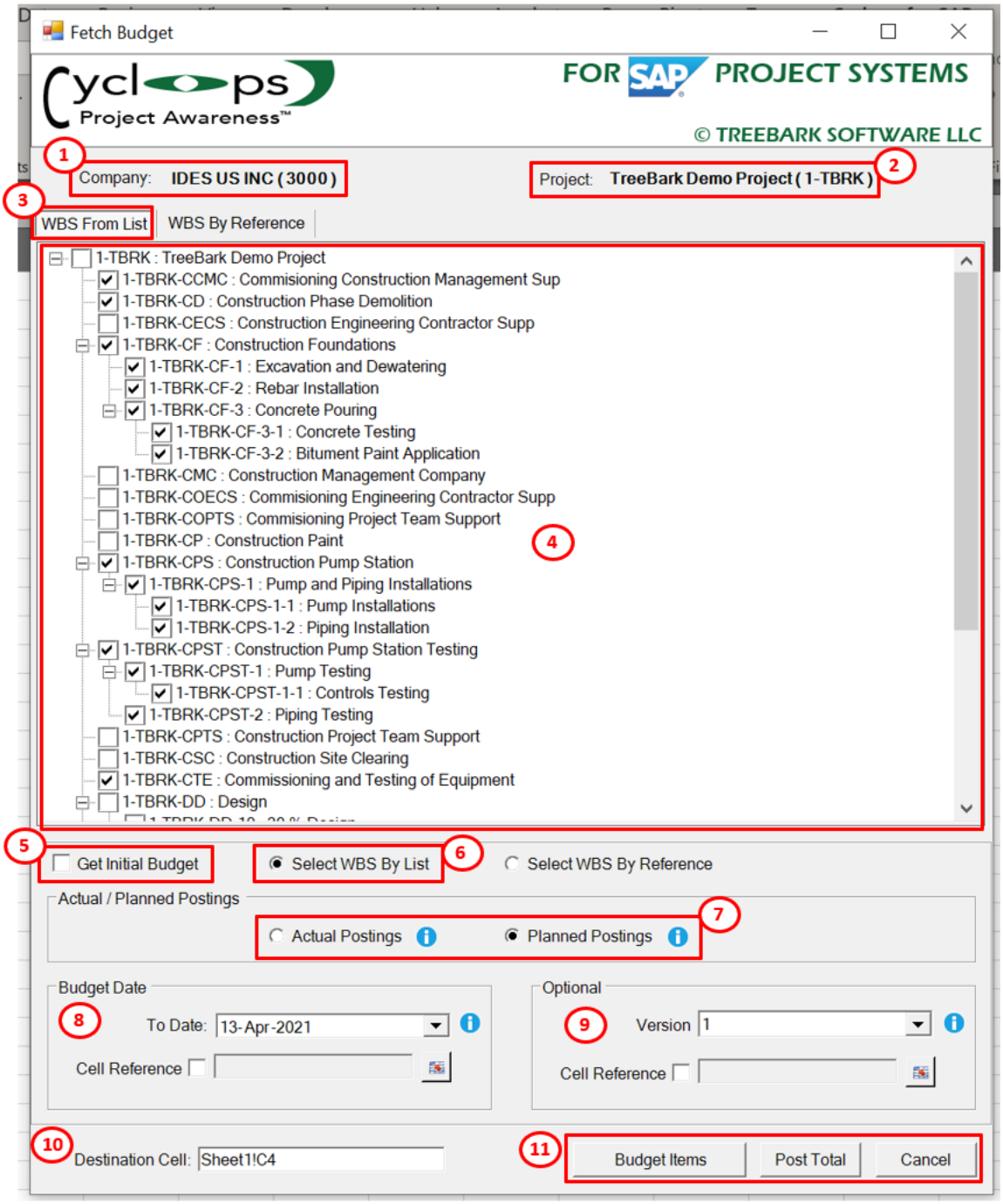
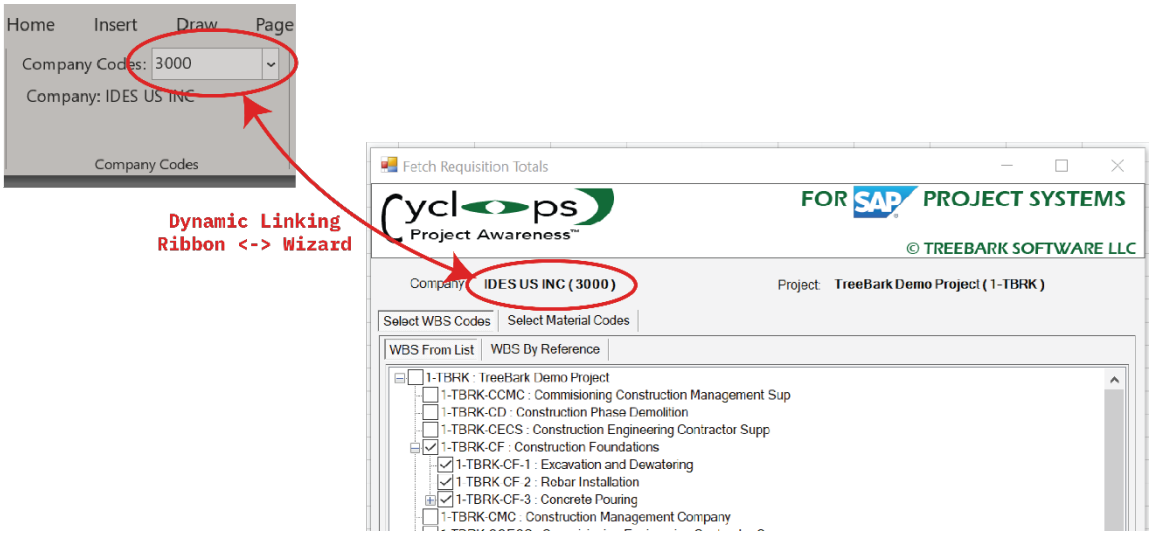


Figure 36 – Fetch Budget Total – WBS From List

Fetch Budget Total, WBS From List, Figure 36 – Options:

1. **Selected Company**:
   There are two (2) separate ways in which a user may enter the company parameter data in the wizard form. The first method, as illustrated in the WBS from List tab, represents a checkbox list / tree approach whereby the company data is synchronized with the Cyclops ribbon.

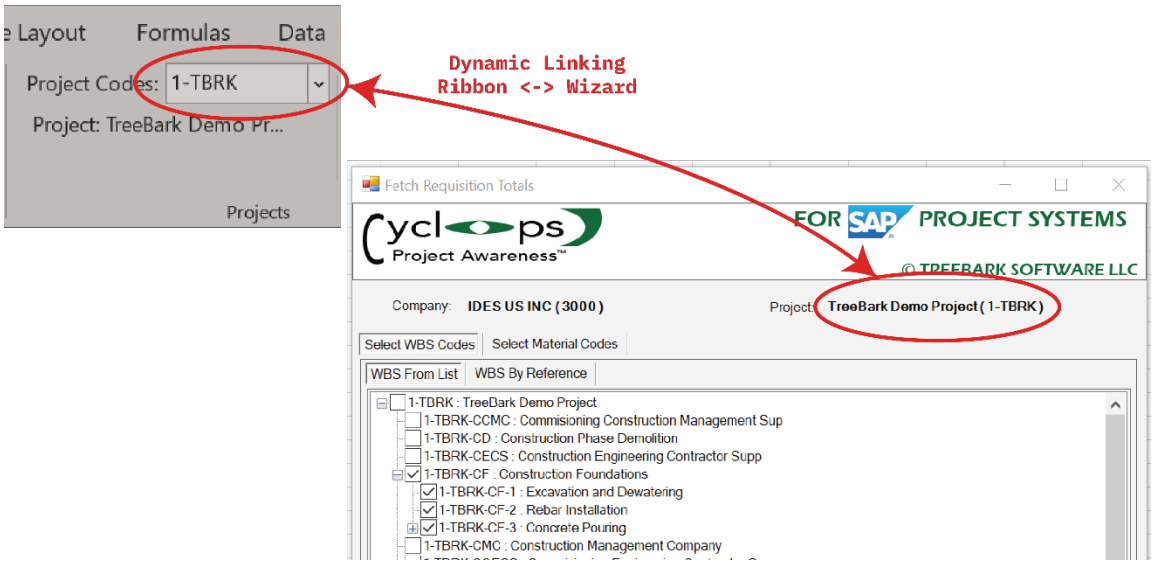
   The company name, identified in bold near the top-left of the wizard, is the selected company for totals and list values. When the WBS From List tab is selected (see: item 3 below) the company is automatically selected based on the Cyclops ribbon company drop-down. This value dynamically updates as the user selects a company to work with in the background.



   In addition, when the company name changes so too does the selected project name. Every time a user selects a new company, the selected project refers to the first project in alphabetical order from the list of associated projects with respect to the selected company.

   Also, the above process refreshes the list of WBS elements in the tree view automatically to reflect the newly selected company and project.

2. **Selected Project**:
   As with the selected company parameter, there are two (2) similar ways to in which to update / import project data in the wizard form. The first method, as illustrated in the WBS From List tab, represents a checkbox list / tree approach whereby the company data is synchronized with the Cyclops ribbon.



Each time a user selects a new project from the Ribbon drop-down, the selected project process refreshes the list of WBS elements in the tree view to automatically update and reflect the newly selected company and project.

3. **WBS From List Tab**:
   Tab page containing the WBS list / tree view.

4. **WBS Tree View**:
   Dynamically updatable list / tree view of hierarchical WBS codes. When a user selects a new project from the list, or selects a new company code altogether, the WBS list / tree is automatically populated with new values based on the revised selection (as described in items 1 and 2 above).

   The WBS value(s) selected, or checked, will be combined with other constraint parameters to define the return of a list, or total value of a function, based on wizard action buttons.

5. **Get Initial Budget Checkbox**:
   When **selected**, the query will always return the initial budget and ignore a date range. When **unselected**, the query will return the values as described in Fetch Budget Totals.

6. **Select WBS By List Radio Button**:
   This radio button selection identifies the tree / list as the source of any returned list of values or function written to Excel.

7. **Actual / Planned Postings Radio Buttons**:
   - Returns the actual budget of the selected WBS code(s) at the selected budget date.
   - Returns the planned budget of the selected WBS code(s) at the selected budget date.

8. **Budget Date – Date Selector / Reference**:
   The date at which the budget is determined by the query.

9. **Version Drop Down / Reference**:
   Selected version of the planned postings. This radio button is disabled for actual postings.

10. **Destination Cell**:
    Destination cell is the spreadsheet cell address / location where the cost plan wizard posts the resultant function.

11. **Wizard Action Buttons (View List, Post Total, Cancel)**:

    - View List: Displays the list of financial documents per above (see: Figure 31 - View List of Financial Documents)

    - Post Total: Write the function with selected parameters from the wizard form into the destination cell.

    - Cancel: Closes the form without performing any other action.

Fetch Budget Totals – WBS By Reference

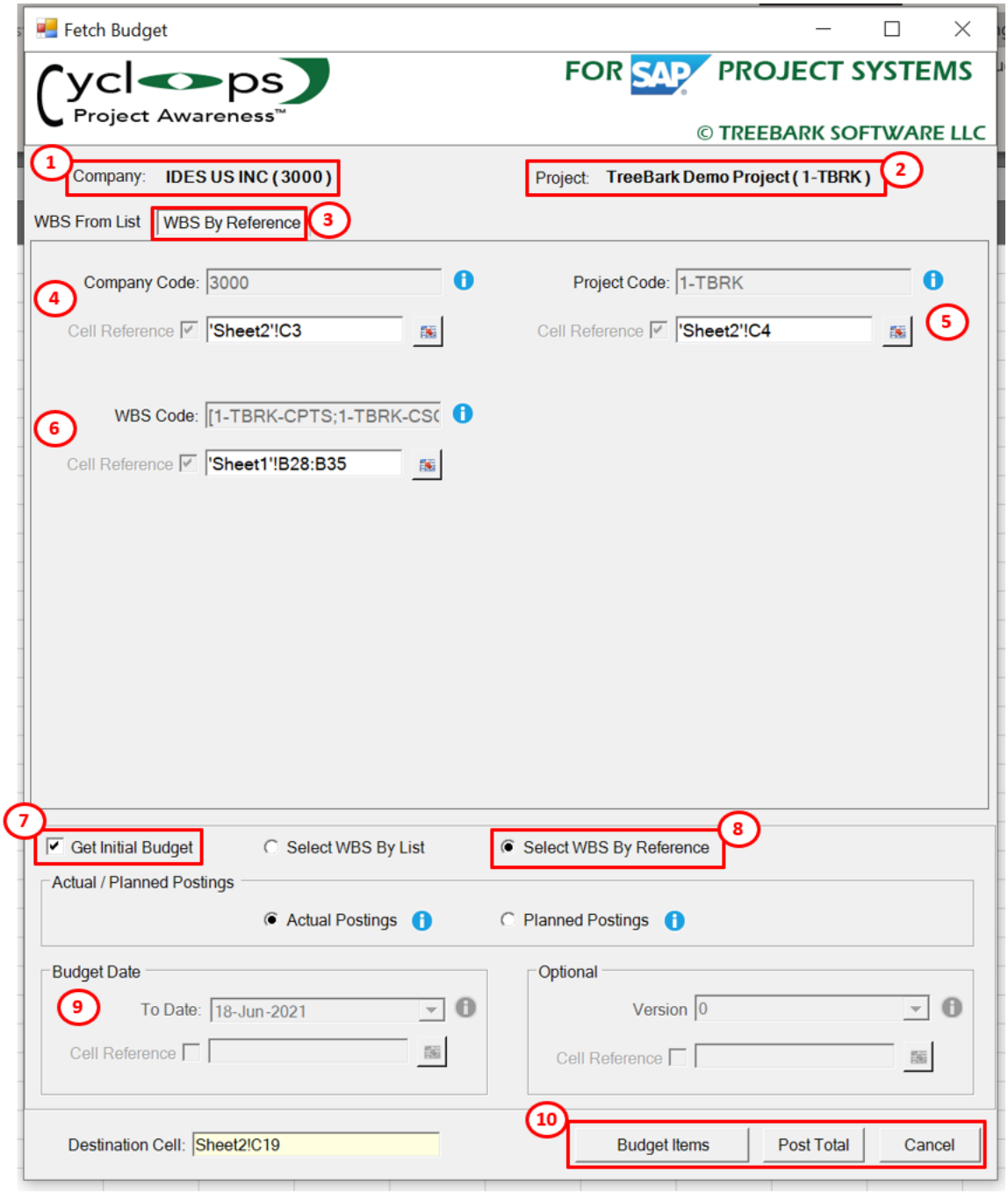


Figure 37 – Fetch Budget Total – WBS by Reference

Fetch Budget Totals, WBS by Reference, Figure 37 – Options:

1. **Selected Company**:
   The company name, identified in bold near the top-left of the wizard, is the selected company for queries. When the WBS From List Tab is selected, the company code value is automatically updated based on the revised data in the Cyclops ribbon company drop-down. This value dynamically updates as the user selects a company to work with in the background.

   In addition, when the company name changes so too does the selected project name. Every time a user selects a new company, the selected project refers to the first project in alphabetical order from the list of associated projects with respect to the selected company.

2. **Selected Project**:
   The project name, identified in bold near the top-right of the wizard, is the selected project for queries. When the WBS From List tab is selected, the project code value is automatically updated based on the revised data in the Cyclops ribbon company drop-down. This value dynamically updates as the user selects a company to work with in the background.

   In addition, when the company name changes so too does the selected project name. Every time a user selects a new company, the selected project refers to the first project in alphabetical order from the list of associated projects with respect to the selected company.

3. **WBS By Reference Tab**:
   Tab page containing the Reference values for company, project and WBS codes.

4. **Company Code**:
   A cell reference to the user selected company code. When the selected company code corresponds to a valid company code in SAP, this field will dynamically update the selected company value.

5. **Project Code**:
   Cell reference to the user selected project code.

6. **WBS Code**:
   Cell range reference to one or more WBS codes.

7. **Get Initial Budget Checkbox**:
   When **selected**, the query will always return the initial budget and ignore a date range. When **unselected**, the query will return the initial budget less all actual, or planned, postings.

8. **Select WBS by Reference Radio Button**:
   This radio button selection identifies the tree / list as the source of any returned list of values or function written to Excel.

9. **Budget Date – Date Selector / Reference**:
   The date at which the budget is determined by the query.

10. **Wizard Action Buttons (View List, Post Total, Cancel)**:

    - View List: Displays the list of financial documents per above (see: Figure 31 - View List of Financial Documents)

    - Post Total: Write the function with selected parameters from the wizard form into the destination cell.

    - Cancel: Closes the Form without performing any other action.

Excel Fetch Budget Functions – Manual Entry

For manually programming Cyclops fetch budget functions into Excel without using the above wizards, the following functions are defined and included with Cyclops:

Fetch Starting Budget for WBS from SAP (Excel Function)

```
cyclops_get_starting_budget_for_wbs( _
                                    CompanyCode        As Variant, _
                                    ProjectNumber      As Variant, _
                        Optional    WBSElements        As Variant, _
                        Optional    ByVal WBSRange     As Range) As Variant
```

Fetch Budget Balance at Date for WBS from SAP (Excel Function)

```
cyclops_get_budget_balance_at_date_for_wbs( _
                                    CompanyCode        As Variant, _
                                    ProjectNumber      As Variant, _
                        Optional    WBSElements        As Variant, _
                        Optional    ByVal WBSRange     As Range,   _
                        Optional    AtDate             As Variant, _
                        Optional    Version            As Variant, _
                        Optional    IsActual           As Variant) As Variant
```

Fetch SKF Totals

Fetch SKF Totals – WBS From List

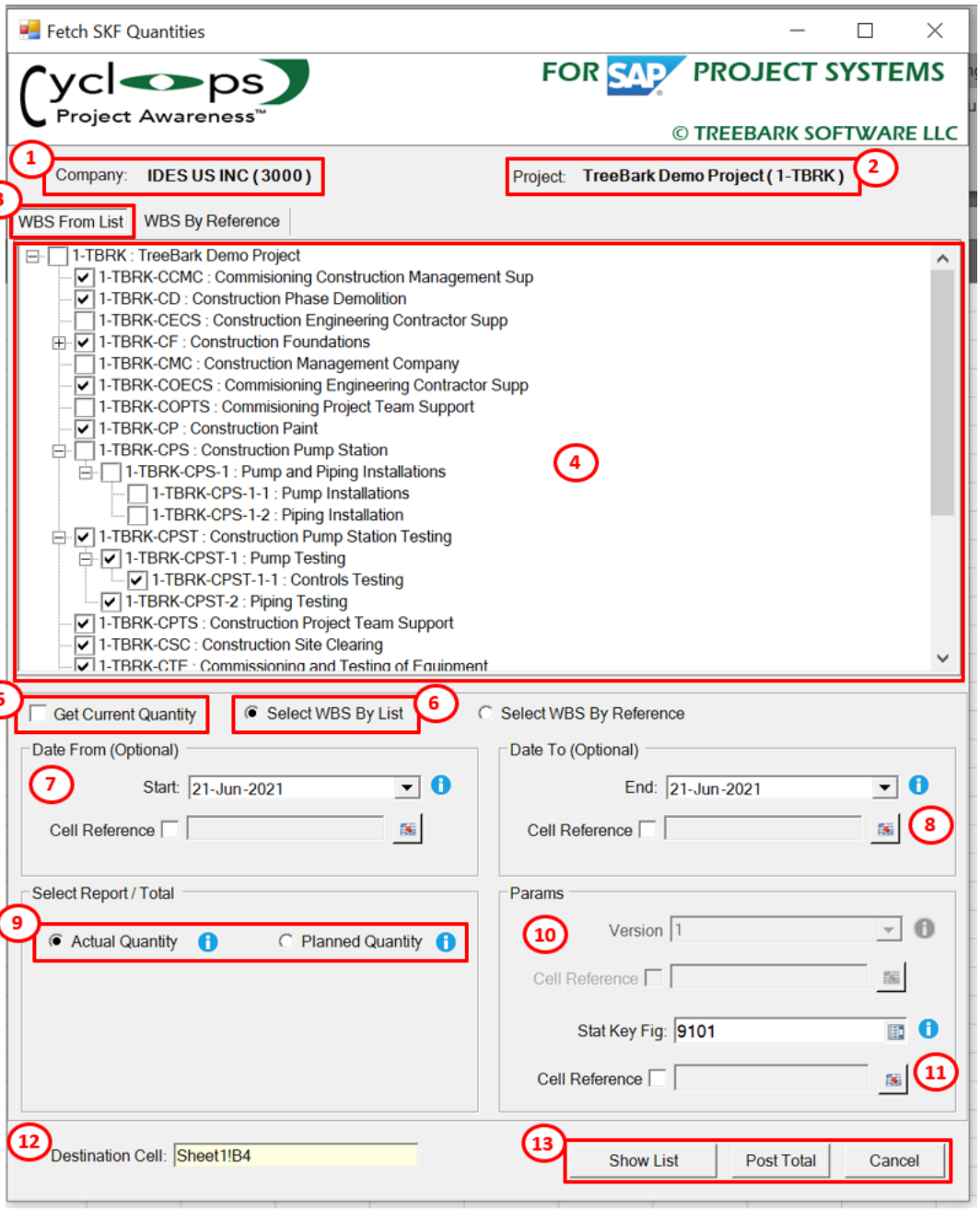
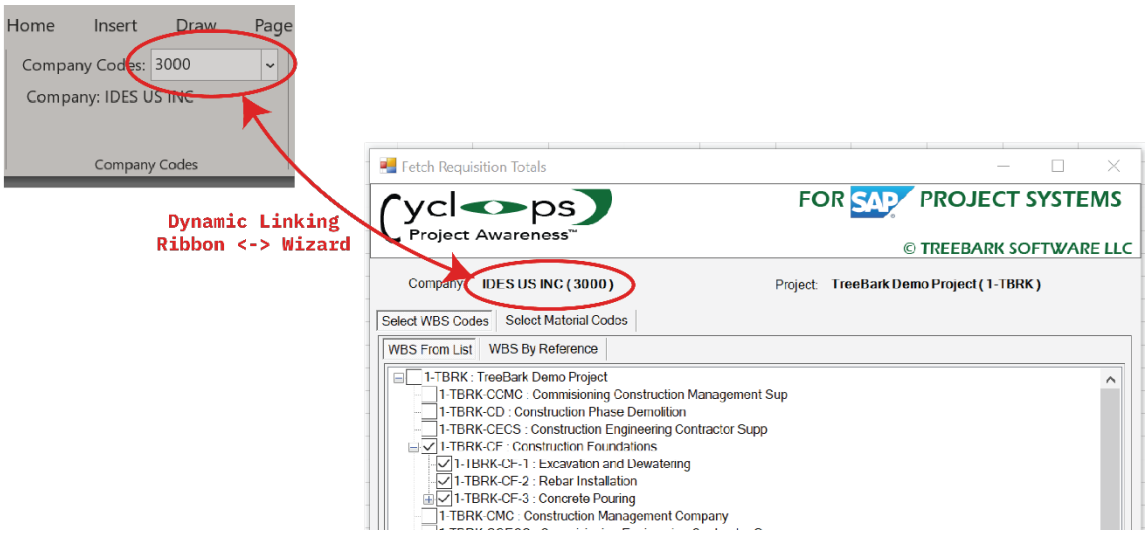


Figure 38 – Fetch SKF Total – WBS From List

Fetch SKF Totals, WBS From List, Figure 38 – Options:

1. **Selected Company**:
   There are two (2) separate ways in which a user may enter the company parameter data in the wizard form. The first method, as illustrated in the WBS From List tab, represents a checkbox list / tree approach whereby the company data is synchronized with the Cyclops ribbon.

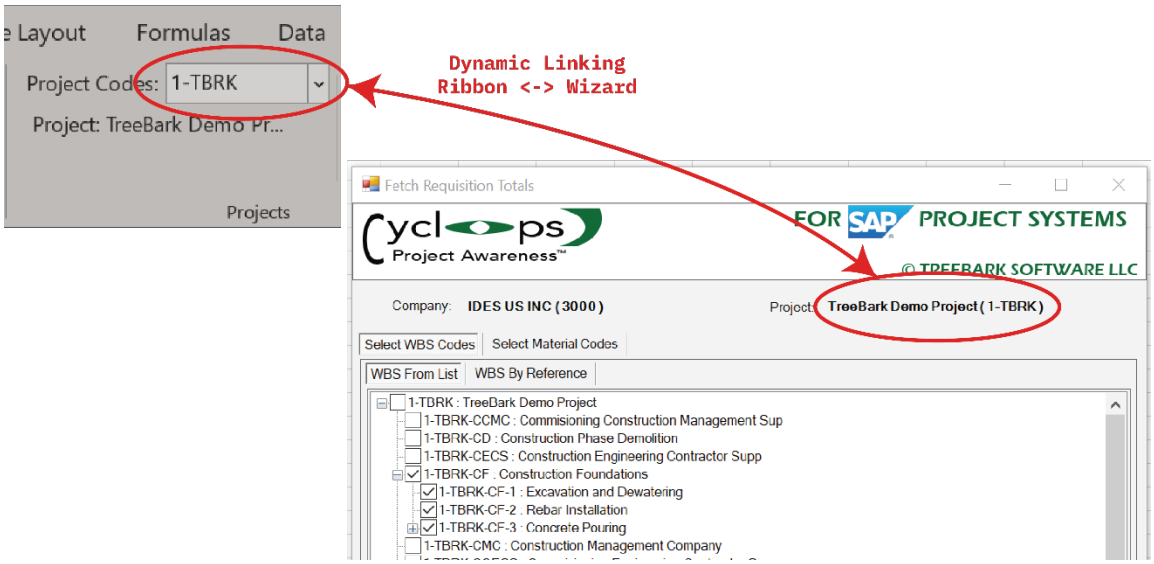
   The company name, identified in bold near the top-left of the wizard, is the selected company for totals and list values. When the WBS From List tab is selected (see: item 3 below) the company is automatically selected based on the Cyclops ribbon company drop-down. This value dynamically updates as the user selects a company to work with in the background.



   In addition, when the company name changes so does the selected project name. Every time a user selects a new company, the selected project refers to the first project in alphabetical order from the list of associated projects with respect to the selected company.

   Also, the above process refreshes the list of WBS elements in the tree view automatically to reflect the newly selected company and project.

2. **Selected Project**:
   As with the selected company parameter, there are 2 similar ways to in which to update / import project data in the wizard form. The first method, as illustrated in the WBS From List tab, represents a checkbox list / tree approach whereby the company data is synchronized with the Cyclops ribbon.



Every time a user selects a new project from the ribbon drop-down, the selected project process refreshes the list of WBS elements in the tree view to automatically update and reflect the newly selected company and project.

3. **WBS From List Tab**:
   Tab page containing the WBS list / tree view.

4. **WBS Tree View**:
   Dynamically updatable list / tree view of hierarchical WBS codes. When a user selects a new project from the list or a new company code altogether, the WBS list / tree is automatically populated with new values based on the revised selection (as described in items 1 and 2 above).

   The WBS value(s) selected, or checked, will be combined with other constraint parameters to define the return of a list, or total value of a function, based on wizard action buttons.

5. **Get Current Quantity**:
   Returns current quantity of SKF values when the query was executed.

6. **Select WBS By List Radio Button**:
   This radio button selection identifies the tree / list as the source of any returned list of values or function written to Excel.

7. **Date From – Date Selected / Reference**:
   Start date of selection. This value is only valid if Get Current Quantity checkbox is not selected.

8. **Date To – Date Selected / Reference**:

End date of selection. Like the Date From parameter, this value only applies when the Get Current Total checkbox is not selected.

9. **Actual Quantity / Planned Quantity Radio Button**:

    - When the Actual Quantity radio button is selected, the query will return SKF values correlating to **actual** project consumption of those resources.

    - Then the Planned Quantity radio button is selected, the query will return SKF values correlating to **planned** project consumption of those resources.

10. **Versions Drop Down**:
    Selected version of the planned postings. This radio button is disabled for actual postings.

11. **SKF Ref Edit**:
    Selected SKF value used in the query.

12. **Destination Cell**:
    Destination cell is the spreadsheet cell address / location where the cost plan wizard posts the resultant function.

13. **Wizard Action Button (View List, Post Total, Cancel)**:

    - View List: Displays the list of financial documents per above (see: Figure 31 - View List of Financial Documents)

    - Post Total: Write the function with selected parameters from the wizard form into the destination cell.

    - Cancel: Closes the form without performing any other action.

Fetch SKF Totals – WBS From Reference

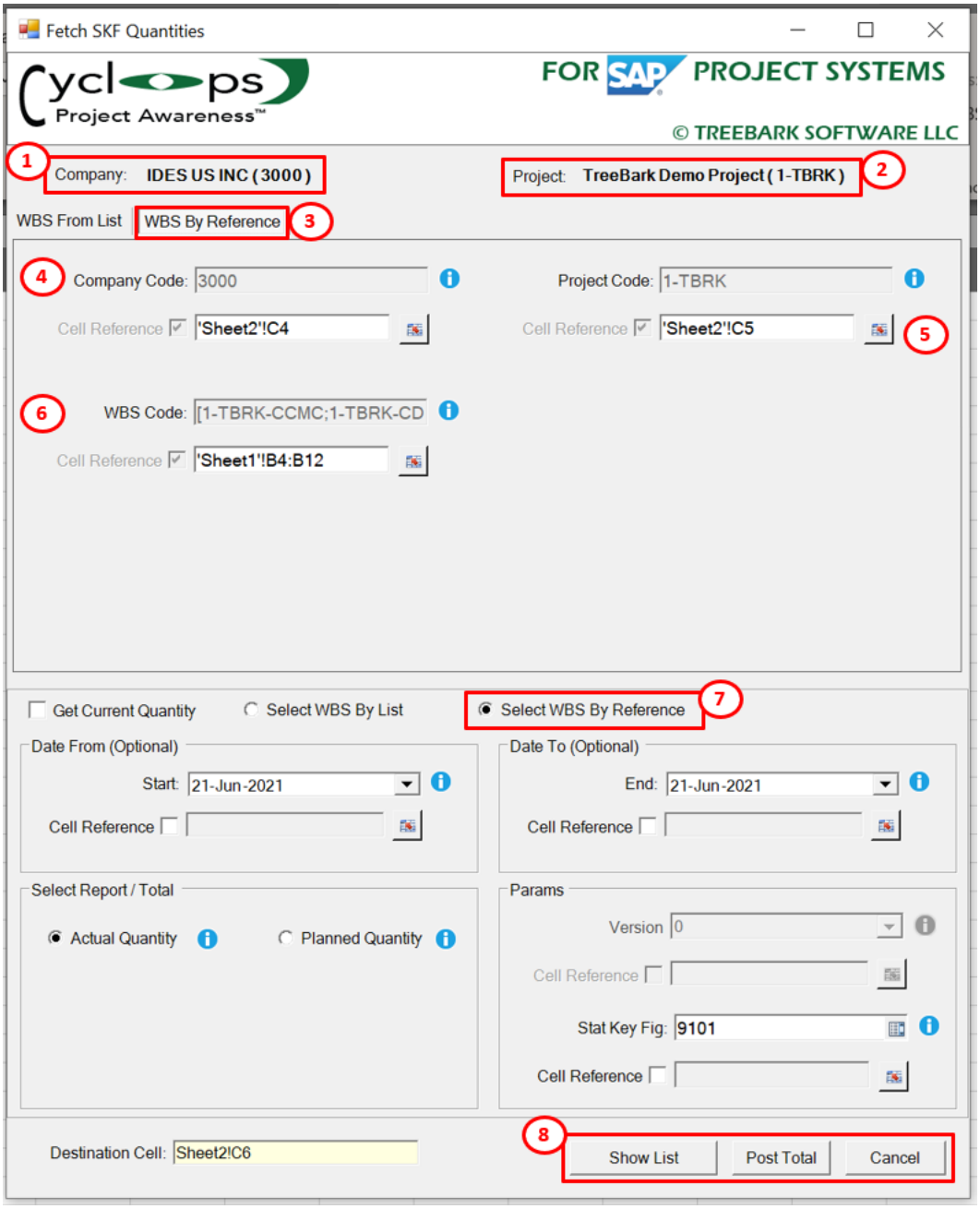


Figure 39 – Fetch SKF Total – WBS From List

Fetch SKF Total by Reference, WBS From List (Figure 39) – Options:

1. <u>Selected Company</u>:
   The company name, identified in bold near the top-left of the wizard, is the selected company for queries. When the WBS From List tab is selected, the company code value is automatically updated based on the revised data in the Cyclops ribbon company drop-down. This value dynamically updates as the user selects a company to work with in the background.

In addition, when the company name changes so too does the selected project name. Every time a user selects a new company, the selected project refers to the first project in alphabetical order from the list of associated projects with respect to the selected company.

2. Selected Project:
   The project name, identified in bold near the top-right of the wizard, is the selected project for queries. When the WBS From List tab is selected, the project code value is automatically updated based on the revised data in the Cyclops ribbon company drop-down. This value dynamically updates as the user selects a company to work with in the background.

   In addition, when the company name changes so does the selected project name. Every time a user selects a new company, the selected project refers to the first project in alphabetical order from the list of associated projects with respect to the selected company.

3. WBS By Reference Tab:
   Tab page containing the reference values for company, project and WBS codes.

4. Company Code:
   A cell reference to the user selected company code. When the selected company code corresponds to a valid company code in SAP, this field will dynamically update the selected company value.

5. Project Code:
   Cell reference to the user selected project code.

6. WBS Code(s):
   Cell range reference to one or more WBS codes.

7. Select WBS By Reference Radio Button:
   This radio button selection identifies the WBS By Reference tab page as the source of company and project constraints for queries.

8. Wizard Action Button (View List, Post Total, Cancel):

   - Show List: Displays the list of financial documents per above (see: Figure 31 - View List of Financial Documents)

   - Post Total: Write the function with selected parameters from the wizard form into the destination cell.

   - Cancel: Closes the form without performing any other action.

Excel Fetch SKF Functions – Manual Entry

For manually programming Cyclops fetch SKF functions into Excel without using the above wizards, the following functions are defined and included with Cyclops:

Fetch SKF Total Quantities for WBS from SAP (Excel Function)

```
cyclops_get_skf_quantities_for_wbs( _
                                   CompanyCode        As Variant, _
                                   ProjectNumber      As Variant, _
                                   StatKeyFig         As Variant, _
                          Optional WBSElements        As Variant, _
                          Optional ByVal WBSRange     As Range, _
                          Optional DateFrom           As Variant, _
                          Optional DateTo             As Variant, _
                          Optional Version            As Variant, _
                          Optional IsActual           As Variant) As Variant
```

Fetch Actual and Planned Totals – WBS From List

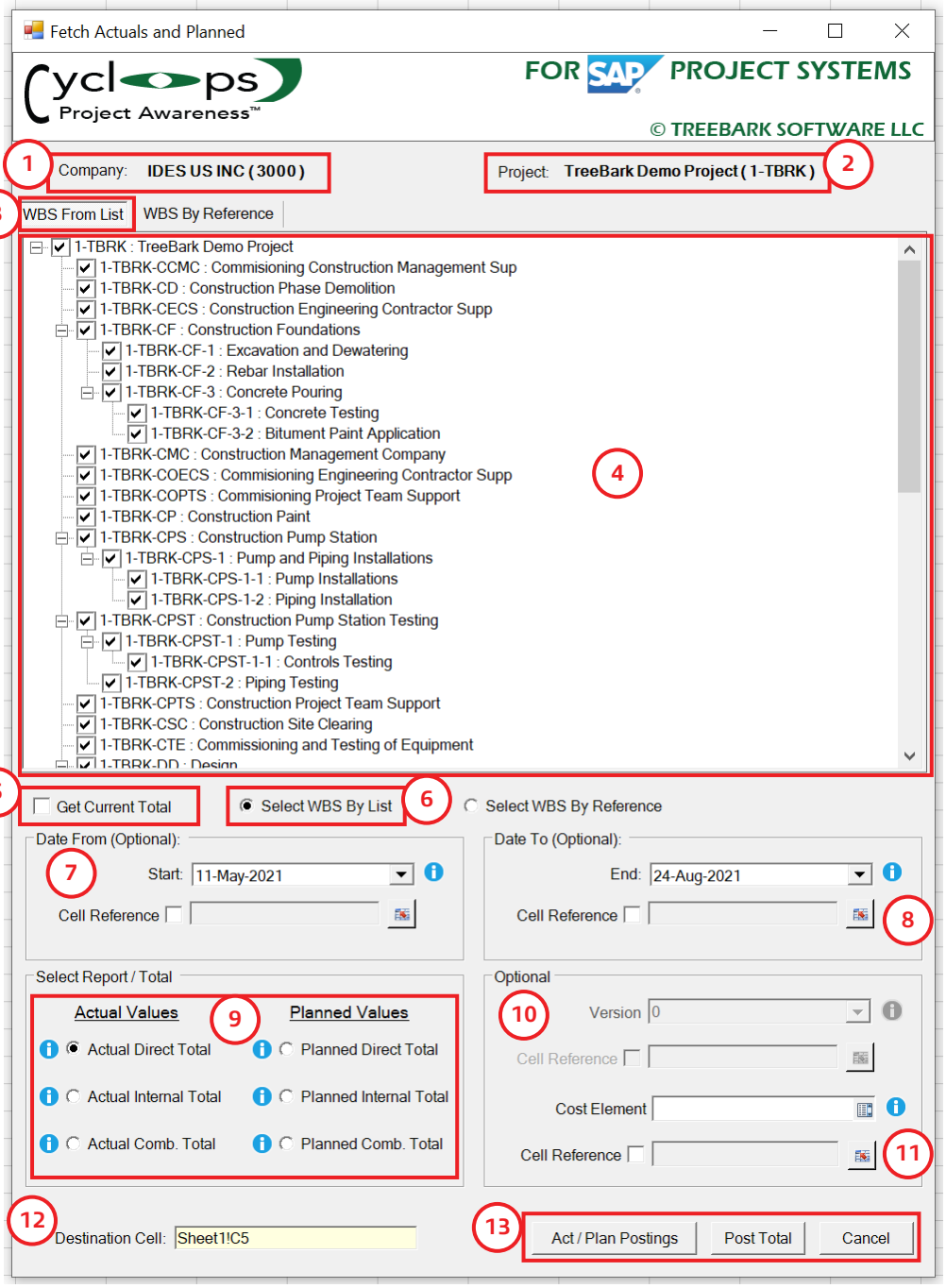
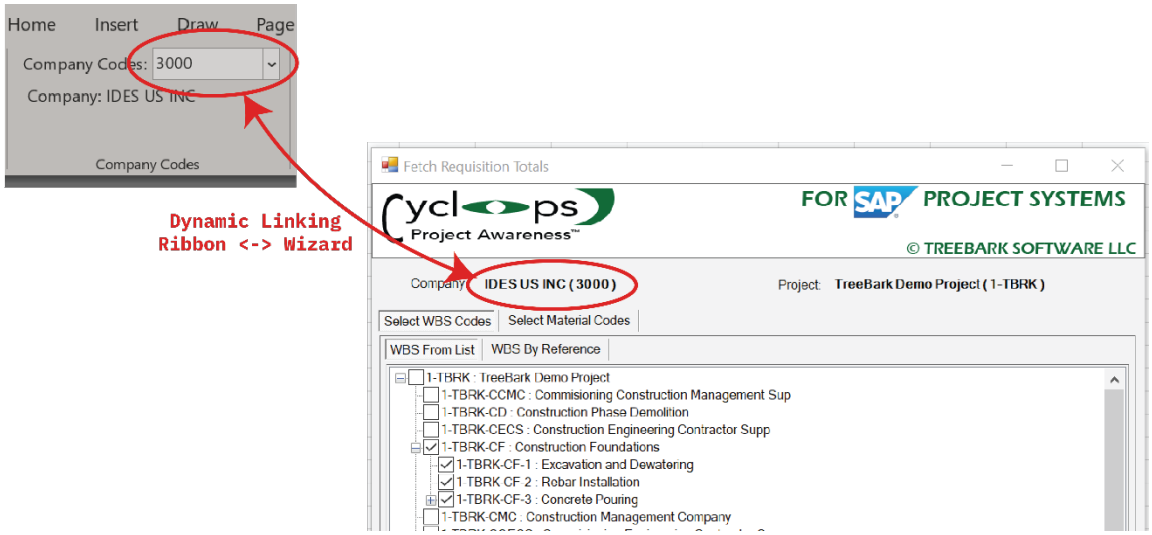


Figure 40 – Fetch Actual and Planned Total – WBS From List

Fetch Actual and Planned Total, WBS From List, Figure 40 – Options

1. **Selected Company**:
   There are two (2) separate ways in which a user may enter the company parameter data in the wizard form. The first method, as illustrated in the WBS From List tab, represents a checkbox list / tree approach whereby the company data is synchronized with the Cyclops ribbon.

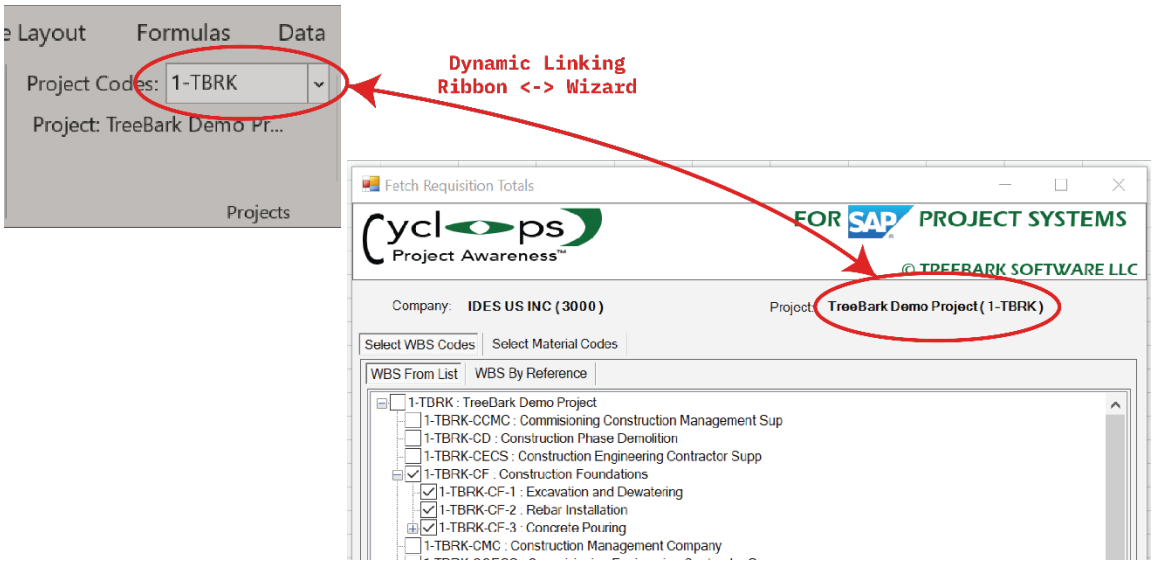
   The company name, identified in bold near the top-left of the wizard, is the selected company for totals and list values. When the WBS From List tab is selected (see item 3 below) the company is automatically selected based on the Cyclops ribbon company drop-down. This value dynamically updates as the user selects a company to work with in the background.



   In addition, when the company name changes so does the selected project name. Every time a user selects a new company, the selected project refers to the first project in alphabetical order from the list of associated projects with respect to the selected company.

   Also, the above process refreshes the list of WBS elements in the tree view automatically to reflect the newly selected company and project.

2. **Selected Project**:
   As with the selected company parameter, there are two (2) similar ways to in which to update / import project data in the wizard form. The first method, as illustrated in the WBS From List tab, represents a checkbox list / tree approach whereby the company data is synchronized with the Cyclops ribbon.



Every time a user selects a new project from the ribbon drop-down, the list of WBS elements in the tree view is automatically updated to correspond with the selected company and project.

3. <u>WBS From List Tab</u>:
   Tab page containing the WBS list / tree view.

4. <u>WBS Tree View</u>:
   Dynamically updatable list / tree view of hierarchical WBS codes. When a user selects a new project from the list, or selects a new company code altogether, the WBS list / tree is automatically populated with new values based on the revised selection (as described in items 1 and 2 above).

   The WBS value(s) selected, or checked, will be combined with other constraint parameters to define the return of a list, or total value of a function, based on wizard action buttons.

5. <u>Get Current Total Checkbox</u>:
   Determines the date range for the returned financial values:

   - <u>Checked</u>
     When **checked**, the list or total value returned will reflect the summed value, including all other constraints, from the start date of the project to the current time when query is executed. This value will change over time as financial documents associated with the query are added or changed up until the point the query is run again.

   - <u>Unchecked</u>
     When **unchecked**, the list or total value returned will reflect the summed value, including all other constraints, within the time frame selected. This value will **only** change over time if

financial documents are added in a post-dated manner and fall within the selected query timeframe.

6. **Selected WBS By List Radio Button**:
   This radio button selection identifies the tree / list as the source of any returned list of values or function written to Excel.

7. **Date From – Date Selected / Reference**:
   Start date of selection. This value is only valid if Get Current Total checkbox is not selected.

8. **Date To – Date Selected / Reference**:
   End date of selection. Like the Date From parameter, this value only applies when the Get Current Total checkbox is not selected.

9. **Select Report Total Group**:

   - Actual Cost Total
     The query returns only the **actual primary costs** posted against the constraints.

   - Planned Cost Total
     The query returns only the **planned primary costs** posted against the constraints.

   - Actual Price Total
     The query returns only the **actual secondary price** (or cost) posted against the constraints.

   - Planned Price Total
     The query returns only the **planned secondary price** (or cost) posted against the constraints.

   - Actual Combined Total
     The query returns both the **actual combined primary and secondary costs** against the constraints.

   - Planned Combined Total
     The query returns both the **actual combined primary and secondary costs** against the constraints.

10. **Version Drop Down / Reference**:
    Selected version of the planned postings. This radio button is disabled for actual postings.

11. **Cost Element Select / Reference (Optional)**:

The cost element is an optional constraint used in the query. This reference control brings up a user selectable list from which to choose.

12. **Destination Cell**:
    Destination cell is the spreadsheet cell address / location where the cost plan wizard posts the resultant function.

13. **Wizard Action Button (View Actual / Plan Postings, Post Total, Cancel)**:

    - View List: Displays the list of financial documents per above (see: Figure 31 - View List of Financial Documents)

    - Post Total: Write the function with selected parameters from the wizard form into the destination cell.

    - Cancel: Closes the form without performing any other action.

Fetch Actual and Planned Totals – WBS From Reference

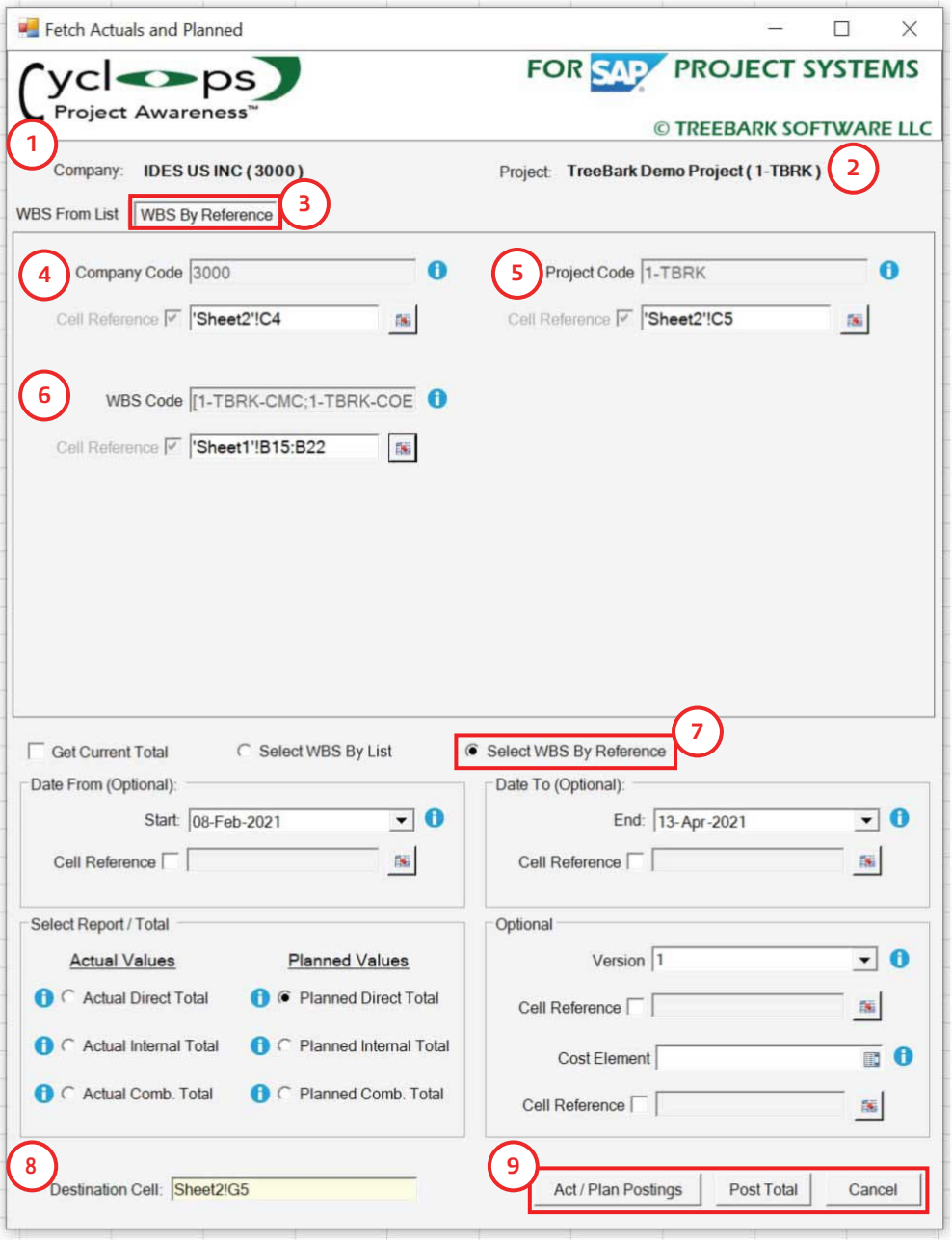


Figure 41 – Fetch Actual and Planned Total – WBS From List

Fetch Actual and Planned Total by Reference, Figure 41 – Options

1. <u>Selected Company</u>:
   The company name, identified in bold near the top-left of the wizard, is the selected company for queries. When the WBS From List tab is selected, the company code value is automatically updated based on the revised data in the Cyclops ribbon company drop-down. This value dynamically updates as the user selects a company to work with in the background.

In addition, when the company name changes so does the selected project name. Every time a user selects a new company, the selected project refers to the first Project in alphabetical order from the list of associated projects with respect to the selected company.

2. Selected Project:
   The project name, identified in bold near the top-right of the wizard, is the selected project for queries. When the WBS From List tab is selected, the project code value is automatically updated based on the revised data in the Cyclops ribbon company drop-down. This value dynamically updates as the user selects a company to work with in the background.

   In addition, when the company name changes so does the selected project name. Every time a user selects a new company, the selected project refers to the first project in alphabetical order from the list of associated projects with respect to the selected company.

3. WBS By Reference Tab:
   Tab page containing the reference values for company, project and WBS codes.

4. Company Code:
   A cell reference to the user selected company code. When the selected company code corresponds to a valid company code in SAP, this field will dynamically update the selected company value.

5. Project Code:
   Cell reference to the user selected project code.

6. WBS Code(s) By Reference:
   Cell range reference to one or more WBS codes.

7. Select WBS By Reference Radio Button:
   This radio button selection identifies the WBS By Reference tab page as the source of company and project constraints for queries.

8. Destination Cell:
   Destination cell is the spreadsheet cell address / location where the cost plan wizard posts the resultant function.

9. Wizard Action Button (View Actual / Plan Postings, Post Total, Cancel):

   - View List: Displays the list of financial documents per above (see: Figure 31 - View List of Financial Documents)

- Post Total: Write the function with selected parameters from the wizard form into the destination cell.

- Cancel: Closes the form without performing any other action.

Excel Fetch Actual / Planned Total Functions – Manual Entry

For manually programming Cyclops fetch actual / planned total functions into Excel without using the above wizards, the following functions are defined and included with Cyclops:

Fetch Actual / Cost at Date for WBS from SAP (Excel Function)

```
cyclops_get_cost_total_for_wbs(    CompanyCode        As Variant, _
                                   ProjectNumber      As Variant, _
                          Optional WBSElements        As Variant, _
                          Optional WBSRange           As Range,   _
                          Optional DateFrom           As Variant, _
                          Optional DateTo             As Variant, _
                          Optional Version            As Variant, _
                          Optional CostElement        As Variant, _
                          Optional IsActual           As Variant) As Variant
```

Fetch Actual / Price at Date for WBS from SAP (Excel Function)

```
cyclops_get_price_total_for_wbs(   CompanyCode        As Variant, _
                                   ProjectNumber      As Variant, _
                          Optional WBSElements        As Variant, _
                          Optional WBSRange           As Range,   _
                          Optional DateFrom           As Variant, _
                          Optional DateTo             As Variant, _
                          Optional Version            As Variant, _
                          Optional CostElement        As Variant, _
                          Optional IsActual           As Variant) As Variant
```

Fetch Combined Actual / Planned Total at Date for WBS from SAP (Excel Function)

```
cyclops_get_combined_total_for_wbs(CompanyCode        As Variant, _
                                   ProjectNumber      As Variant, _
                          Optional WBSElements        As Variant, _
                          Optional WBSRange           As Range,   _
                          Optional DateFrom           As Variant, _
                          Optional DateTo             As Variant, _
                          Optional Version            As Variant, _
                          Optional CostElement        As Variant, _
                          Optional IsActual           As Variant) As Variant
```

Find Financial Document – Ad Hoc Query

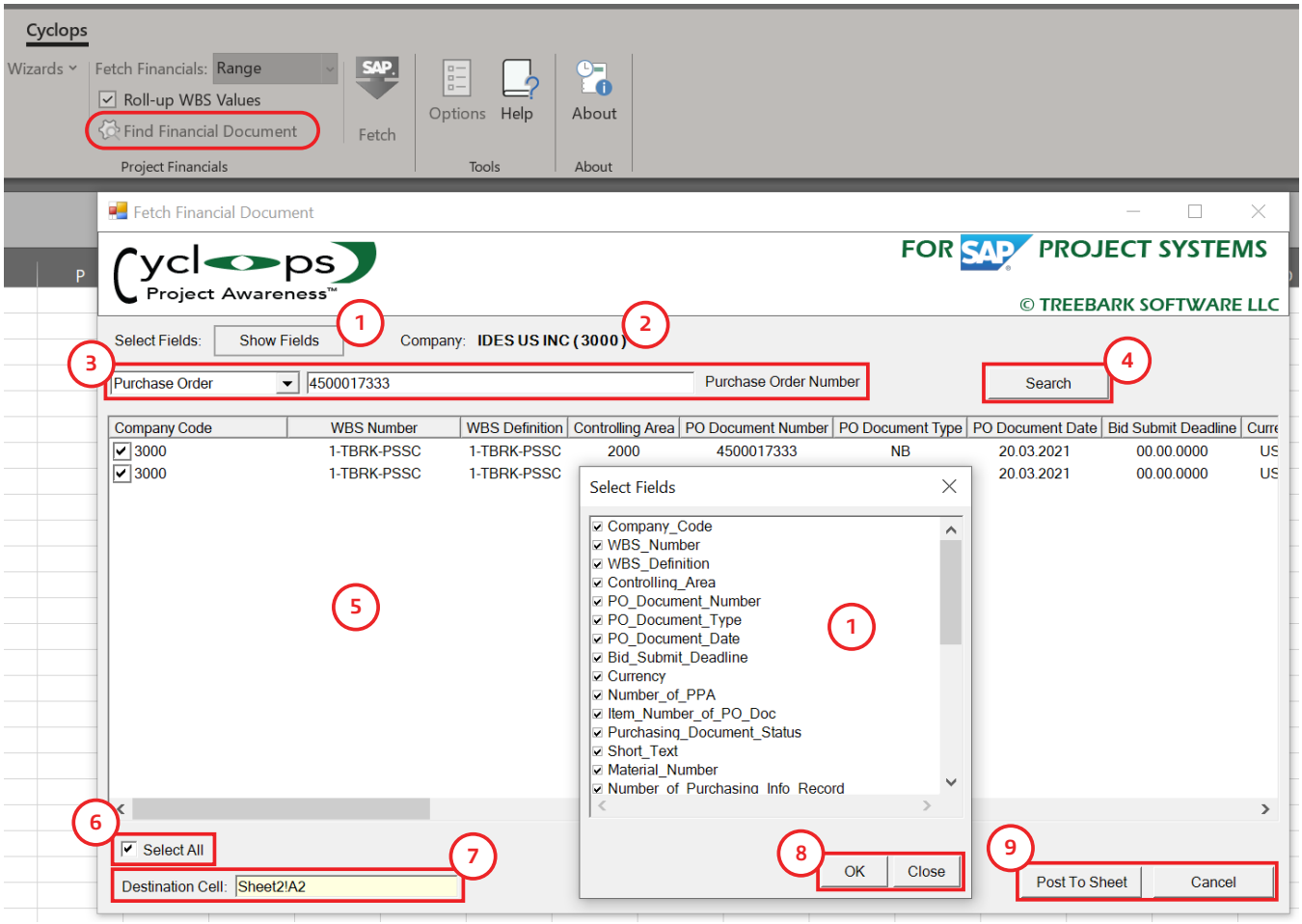


Figure 42 – Fetch Financial Document – Ad Hoc Query

The **Fetch Financial Document** allows the user to query any financial document (requisition, purchase order, invoice, actual) related to the selected company code in the Cyclops ribbon bar drop-down menu.

Options:

1. **Show Fields**:
   The Show Fields button opens a list of column headers corresponding to the columns of values of the returned financial document table. By default, all column headers are selected. Unselect columns headers that are unnecessary in your report / data analysis.

2. **Selected Company**:
   The company code selected in the Cyclops ribbon bar will be the **selected company** as listed in the wizard. This value can be automatically updated based on user selection in the menu bar.

3. **Selected Financial Document Type**:

The user may search for any number of financial documents based on associated number. For instance, a purchase order can be retrieved if the user has a relevant purchase order number. Similarly, an invoice or actual posting can be retrieved using an invoice number.

4. Search Button:
   Clicking the search button attempts to find a corresponding financial document with the matching document number.

4. Search Results List:
   List of financial documents and returned values corresponding to the search parameters.

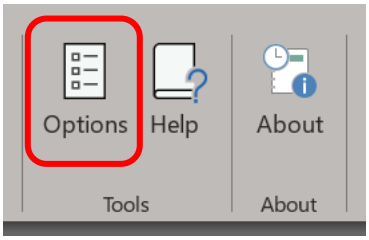
5. Select All Checkbox:
   a. Clicked from Unclicked – When the user clicks the box, all rows are selected.
   b. Unclick from Clicked – When user unclicks the box, all rows are deselected.

6. Destination Cell:
   Destination cell is the spreadsheet cell address / location where the cost plan wizard posts the resultant function.

7. Select Fields - Action Buttons:
   When a query is first run, all columns / fields from the financial document are returned by default and listed for view. The Select Fields button opens a user wizard that display a list of all the data column header names with a checkbox beside each name. This wizard allows the table to filter / show only those columns the user wishes to see. When the user unselects a field, the corresponding data point is removed from the visible data table and the list refreshes to show only those user selected data points. The user can open the wizard again and re-select the hidden data point as well. When the user hits the "OK" button the data table is re-written back to the list with only those selected data columns selected. When the user selects "Cancel", no changes to the data list are made and any change in selected fields will be ignored.

8. Financial Document – Action Buttons:
   a. Post to Sheet: Writes back data from list at selected cell then down and to right.
   b. Cancel: Closes the wizard.

User Options



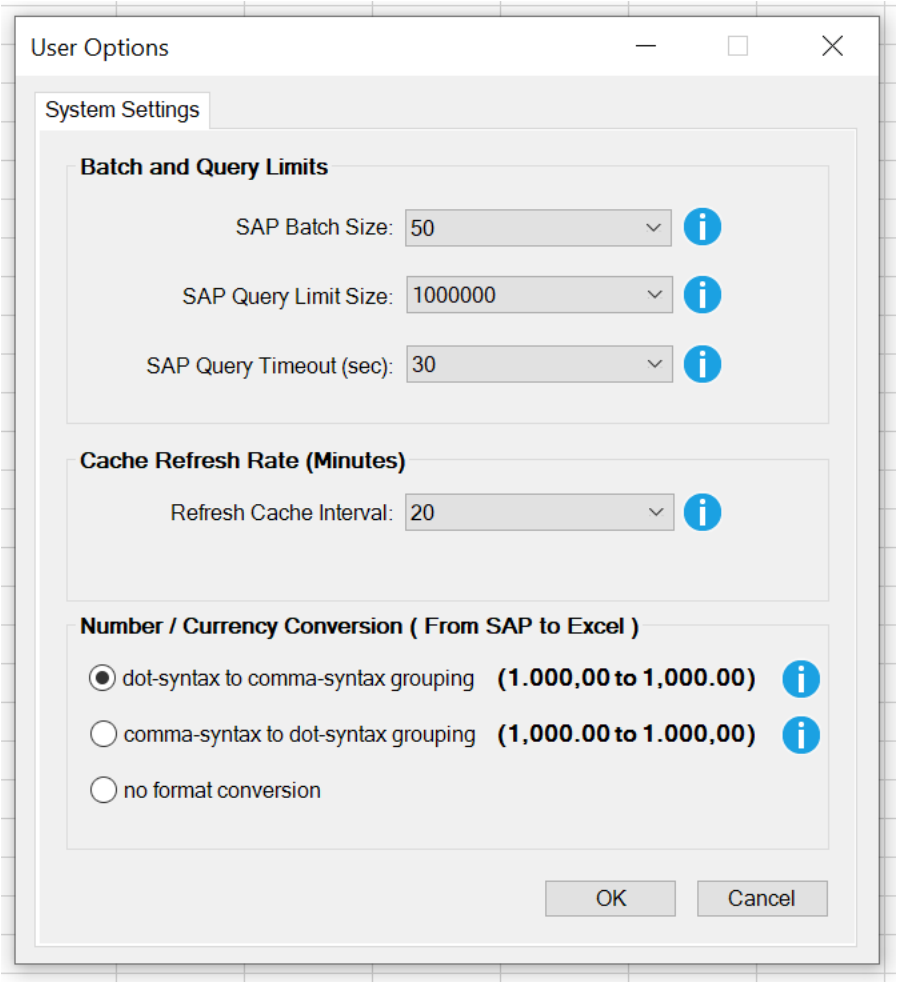


Figure 43 - Cyclops for SAP – User Options

1. Batch and Query Limits

   a. SAP Batch Size

   Sets the maximum batch size for queries sent to SAP. Rather than sending queries one at a time, queries are gathered into batches based in grouping similarities and sent to SAP sequentially based in their order in the queue.

b. SAP Query Limit Size

Sets the maximum number of query rows returned from SAP for a list of values. This applies to financial data lists such as purchase requisitions, purchase orders, and invoices. If too many rows are returned, try narrowing criteria such as date range or number of selected WBS codes.

c. SAP Query Timeout

Sets the time limit, in seconds, on any query to SAP. This is to ensure that the application does not render Excel non-functional due to a failed SAP query.

2. Cache Refresh Rate (Minutes)

a. Refresh Cache Interval

Sets the amount of time, in minutes, between refresh intervals when a user retrieves values from an SAP query. During this interval, data is cached on the user's machine's memory. Caching allows less frequent direct queries to SAP.

If the user does not wish to cache data, for any period of time, this value can be set to '0'. The benefit of not caching any data locally is that every single query is the most up to the minute data sent directly from SAP. The drawback of not using client-side cache is potentially higher bandwidth usage and increase load on the server.

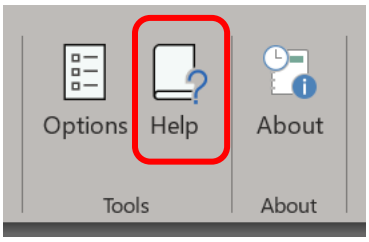
3. Number / Currency Conversion

a. Numeric Format Conversion

Allows the user to convert data returned from SAP "dot-syntax" grouping to "comma-syntax" grouping and vice versa depending on SAP native formatting.

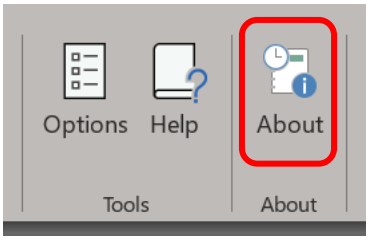
Note: data submitted to SAP from the user is automatically converted to SAP native formatting.

Help



The “Help” Ribbon button opens this document in searchable PDF format.

About



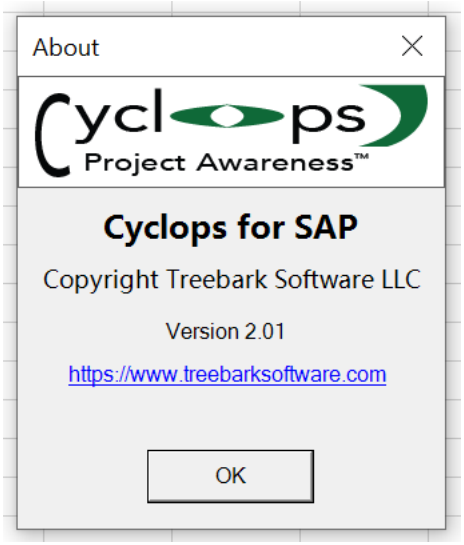


Figure 44 - The “About” Dialog Box