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Investment Management: A Comprehensive Approach to Manage Large Expenditure in SAP Paper 2: From Planning to Action: Configuring Investment Measures and Settlement Processes - *Ensuring Control and Accountability in Capital Projects*

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Abstract: ***Effective management of large-scale capital expenditures (CAPEX) requires precise budgeting, continuous monitoring, and structured settlement processes. This paper, the second in a three-part series on leveraging standard ERP functionalities, focuses on the configuration of Investment Measures and settlement processes in SAP S/4HANA Investment Management (IM). Building on the foundational investment program setup from Paper 1 [1], we detail the configuration of Work Breakdown Structure (WBS) elements, budgeting and planning profiles, coding masks, and settlement rules to ensure transparent cost allocation to assets, cost centers, or general ledger accounts. A real-world case study from a global healthcare organization illustrates how integrating SAP IM with project governance workflows can improve budgetary control, prevent overruns, and enhance financial oversight. The proposed configuration framework enables organizations to align capital project execution with long-term strategic objectives while achieving measurable cost savings and operational efficiency. This work contributes to a reusable reference model for practitioners and researchers seeking to implement ERP-based investment governance processes.***

Keywords: SAP S/4HANA Investment Management (IM), ERP-based Capital Expenditure Control, Capital Project Governance, Work Breakdown Structure (WBS) Configuration, SAP Configuration, Budget Planning, CAPEX Lifecycle Management, Project Approval Workflow, Capital Spend Planning, Investment Control, Financial Oversight

1. Introduction

Large investment projects are typically complex and require significant organizational resources. These initiatives often have a substantial impact on a company's growth, financial stability, and operational efficiency. As such, they demand careful planning, budgeting, monitoring, and control. Enterprise systems like SAP, Oracle, Microsoft Dynamics provide a comprehensive solution for managing such investments through their Investment Management module. In this paper, we will take SAP as ERP to explain the ERP systems capabilities to handle investment management. SAP investment module integrates seamlessly with other key SAP components, such as Project System and Asset Accounting, to ensure a structured and efficient approach to managing capital expenditures [2].

This document is the second in a three-part series focused on leveraging SAP's standard Investment Management functionality alongside the Project System to handle the large investments. The first paper covered the configuration of the Investment Program and Requesting Measures (also known as Appropriation Requests). This second paper explores the configuration of Investment Measures and the settlement process. The final paper in the series will detail the step-by-step execution process for managing large-scale capital investments.

2. Investment Management in SAP: A Key Tool for Managing Large Expenditures

Investment Management (IM) is a key module in SAP used to plan, monitor, and manage significant organizational spending. These expenditures may be capital-related such as investments in infrastructure or equipment or non-capital, like R&D,

acquisitions, or major maintenance efforts. IM enables companies to design their own investment program structure based on specific needs, consolidating all approved planned costs into a hierarchical framework. It uses "requesting measures" like appropriation requests to plan spending, often spanning multiple years to match project lifecycles. The module integrates SAP's workflow-based approval process, ensuring tight control over the spending process. Although IM handles planning and budgeting, full investment lifecycle management requires linking it with Investment Measures.

Investment Measures in SAP are objects that receive budgets, track planned and actual costs, and allocate expenses to fixed assets, cost centers, or G/L accounts depending on the nature of the investment. These measures typically take the form of WBS elements or internal orders. In essence, SAP Investment Management comprises four key components, which are detailed in the following section.

3. Steps in Managing Large Expenditures in SAP Investment Management [3]

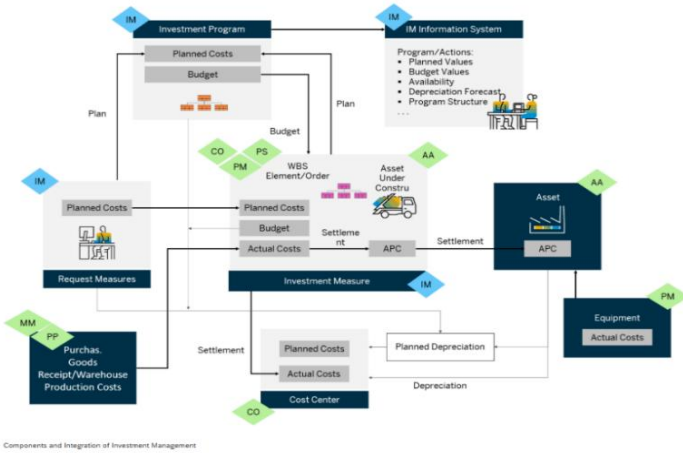

Figure 1: SAP Investment Management Overview
Source: *SAP Help Portal on Investment Management (Overview)*

1) **Requesting Measures (Appropriation Request):** Appropriation requests serve as formal proposals for high-value expenditures, much like purchase requisitions. They include project details such as estimated costs and follow SAP's standard workflow for review and approval before any budget is committed.
2) **Investment Program:** The investment program provides a hierarchical framework to plan, approve, and allocate funds for capital projects. Organizations can tailor the structure to their needs. Approved costs from appropriation requests roll up through this hierarchy, with budgets distributed top-down. Investment measures are assigned only to the lowest-level nodes, typically internal orders, WBS elements, or maintenance orders.
3) **Investment Measure:** These objects (WBS elements or internal orders) receive budgets from the investment program and track actual spend. They enable tight cost control by monitoring budget, actuals, commitments, and available balances. Investment measures are integrated with Asset Accounting to ensure proper settlement of costs to Assets Under Construction (AUC) [4].
4) **Settlement planning and settlement:** Once an investment is complete or partially complete, it must be settled to appropriate receivers such as fixed assets, cost centers, other measures, or G/L accounts. Settlement rules define how costs are distributed (e.g., by percentage or amount), ensuring accurate financial reporting and project closure.

The whole design of implementing investment management in SAP is divided into 3 papers as below:

Paper 1: Laying the Foundation: Structuring Investment Programs and Approval Request— *A Guide to Initiating and Organizing Capital Investments*
This paper covers the initial steps in managing large projects through SAP Investment Management, including the setting up of investment programs and the process for requesting measures *[1]*.

Paper 2: From Planning to Action: Configuring Investment Measures and Settlement Processes — *Ensuring Control and Accountability in Capital Projects*
This paper focuses on configuring investment measures and defining settlement rules, providing the foundation for effective planning, tracking, and accountability in capital project execution.

Paper 3: Executing Large Investments: A Step-by-Step Guide to Project Delivery and Oversight— *Managing the Full Lifecycle of Strategic Expenditures*
The final paper outlines the end-to-end execution process for managing large-scale investments using SAP, including project tracking, monitoring, and lifecycle management.

This paper is the second paper of the series covering configuration steps for Investment Measures and Settlement processes. The first paper can be accessible at DOI: https://dx.doi.org/10.21275/SR25724075404 [1].

4. Investment Measures

Investment Measures are essential tools for tracking and managing the financial aspects of capital projects or other major planned expenses. They serve as the operational link between budget planning and execution, allowing organizations to control spending in real time.

In SAP, Investment Measures can be implemented using Work Breakdown Structure (WBS) elements from the Project System or Internal Orders. These measures receive budget allocations from the Investment Program and record actual expenditures as they occur. They also support monitoring of commitments, planned costs, and available funds, offering a full view of financial performance throughout the project lifecycle.

A critical feature of Investment Measures is their integration with Asset Accounting. When projects are in progress, costs are typically posted to Assets Under Construction (AUC) at the

end of the period. Upon completion or at key milestones, these costs are settled to final receivers such as fixed assets, cost centers, or general ledger accounts, depending on the project's outcome.

The paper will cover the configuration steps of Work Breakdown Structure (WBS) elements from the Project System as Investment Measure. It includes master data settings, budgeting profiles, planning profiles, and settlement rules. These configurations establish a solid foundation for controlling and reporting on capital projects and ensure compliance with internal financial policies and accounting standards.

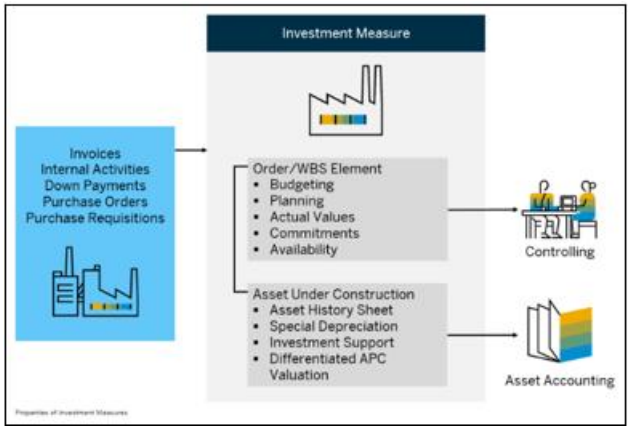

Figure 2: Investment Measure Overview
***Source**: SAP Help Portal on Requesting Measure*

This can be further explained with the diagram above from SAP. It shows how the Investment Measure tracks actual spending from various sources. It carefully controls all financial data, including planned costs, budget, actual expenses, commitments, and available funds. Once the capital project is completed, the Investment Measure also settles the costs to Assets Under Construction (AUC) in the Asset Accounting module.

Below are the configuration steps of Work Breakdown Structure (WBS) elements from the Project System as an Investment Measure.

1) **Code Masking for Project:** In this step, the allowed special character and code masking for Project System is defined.
   a) **Define Special Characters for Projects:** This specifies the edit screen determination rule (the first character of the hierarchy), the length rule (exact or shorter), special characters/symbols allowed in code masking, and indicator that allows to create project if it follows the code mask.
   b) **Define Project Coding Mask:** Define the code masking structure allowed for project. X allows the alphanumeric values and 0 allows only numeric values

IMG Path: SPRO → Project System → Structures → Operative Structures → Work Breakdown Structure (WBS) → Project Coding Mask → Define Special Characters for Projects

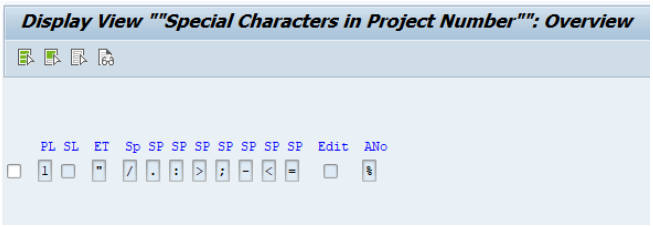

Figure 3: Define Special Characters for Projects

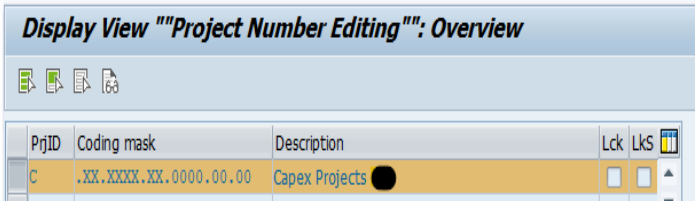

Figure 4: Define Project Coding Mask

2) ***Allowed Values for Certain Master Data Fields:*** Similar to an investment program, allowed values can be customized for WBS element master data. These values can be used as a selection criterion in reporting.
   a) **Define Reasons for Investment:** Define values allowed to classify the investment according to its purpose.
   b) **Define Environmental Protection Indicator:** Define values allowed to classify environment protection project.
   c) **Define Scale:** Define the allowed values according to the size or value of the investment.

IMG Path: SPRO → Investment Management → Projects as Investment Measures → Master Data → WBS Elements → Allowed Values for Certain Master Data Fields

Figure 5: Define Reasons for Investment

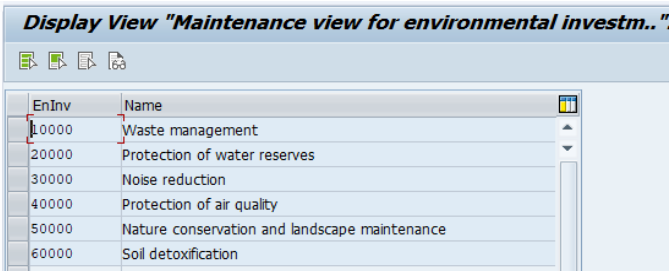

Figure 6: Define Environmental Protection Indicator

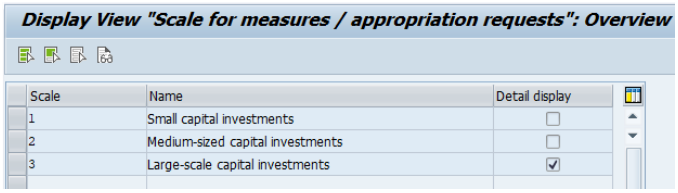

Figure 7: Define Scale

3) ***Define Field Selection:*** Define the screen layout of the master record screens for Project system and/or WBS element. You can change the field from option to mandatory or suppress.

IMG Path: SPRO → Project System → Structures → Operative Structures → Work Breakdown Structure (WBS) → User Interface Settings → Define Field Selection for Work Breakdown Structures

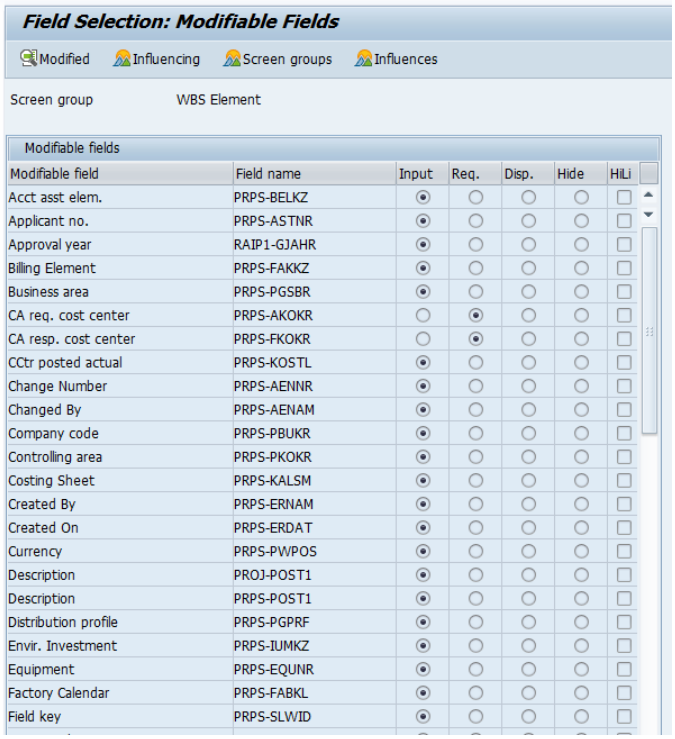

Figure 8: Define Field Selection

4) ***Create Project Profile:*** The project profile is a core component of the Project System. It contains default settings and control parameters, such as the planning profile, settlement profile, investment profile, and Budget profile. These settings are automatically copied into the project definition and WBS elements when a new project is created, although they can be manually changed later if needed.

The values defined in the project profile influence key functionalities within the Project System. Because of this, any changes to the project profile should be made carefully, as they can impact on how projects are planned and managed.

IMG Path: SPRO → Project System → Structures → Operative Structures → Work Breakdown Structure (WBS) → Create Project Profile

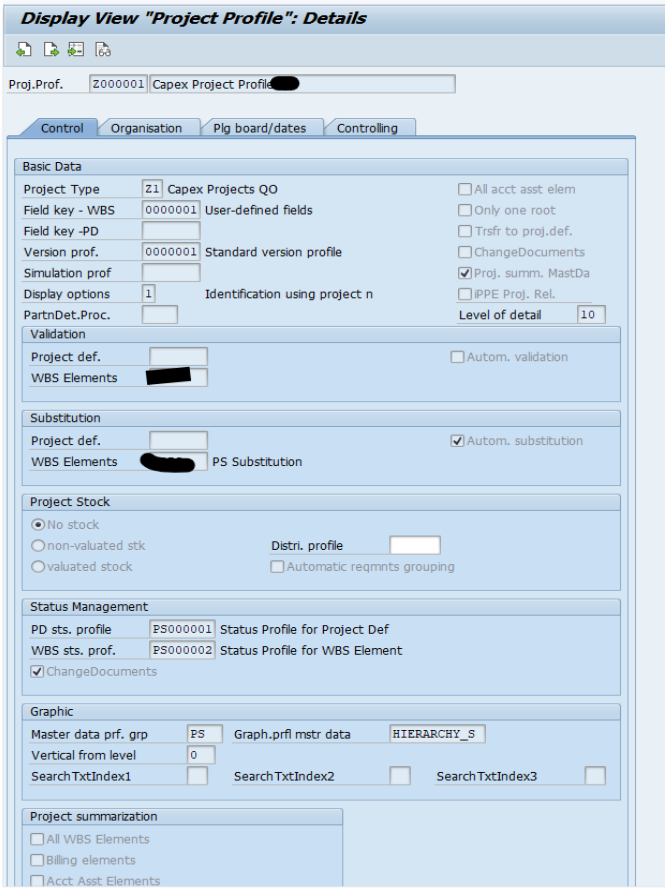

Figure 9: Create Project Profile Page 1

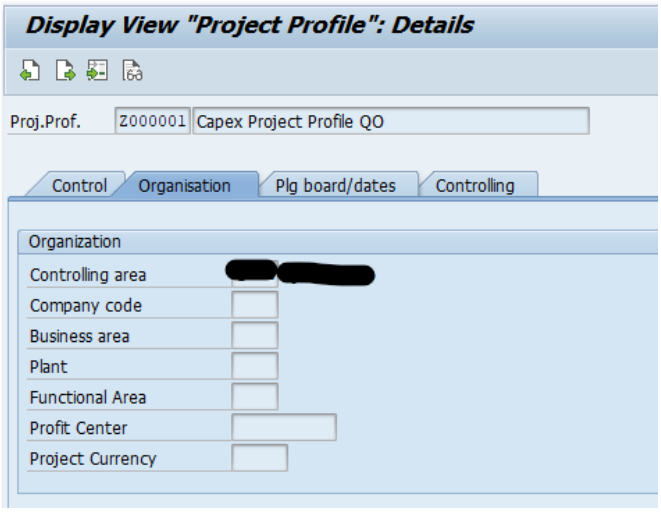

Figure 10: Create Project Profile Page 2

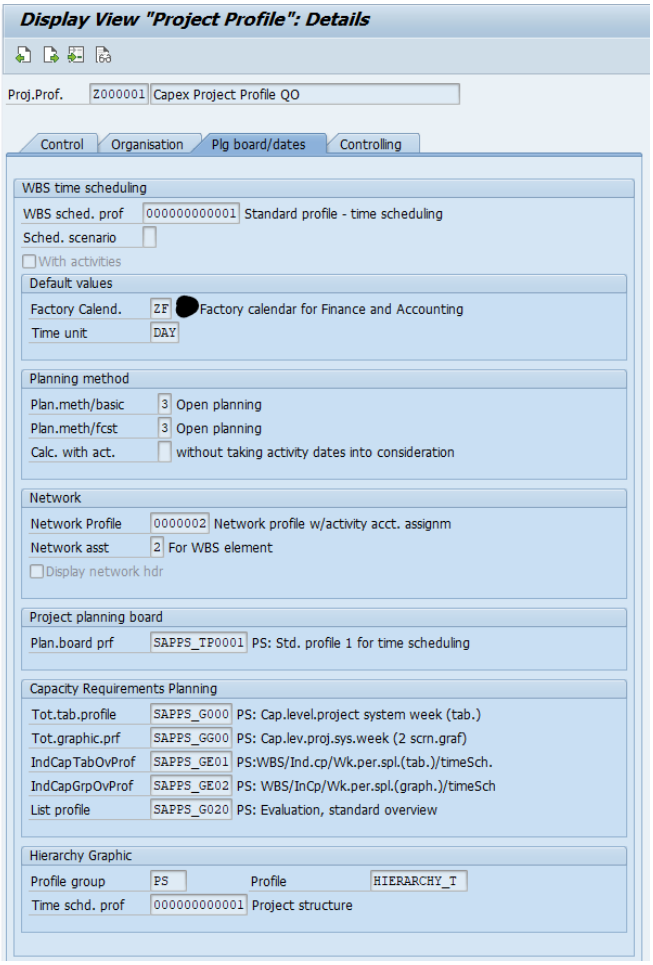

Figure 11: Create Project Profile Page 3

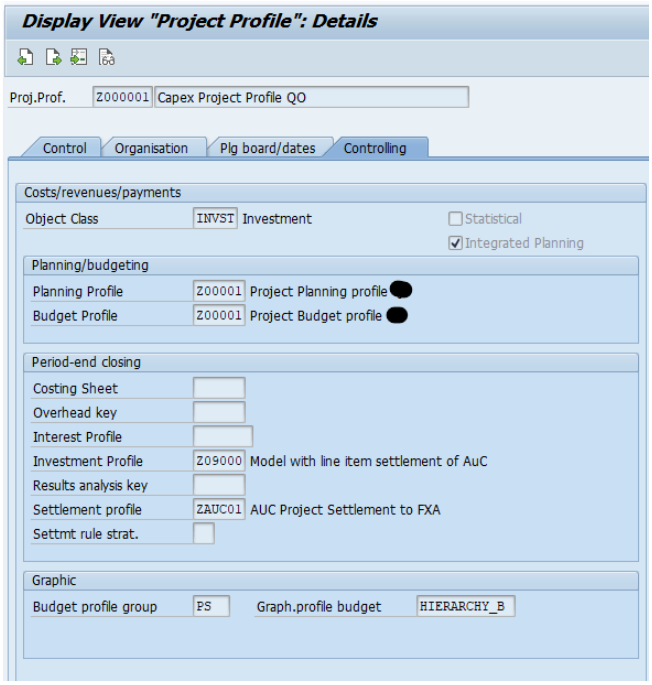

Figure 12: Create Project Profile Page 3

5) ***Project Type:*** Project types are used to categorize and group projects based on their purpose or nature. This helps in reporting and controlling projects of similar nature. Examples: Capital Projects, Development Project etc.
   a) **Create Project Types for WBS Elements:** The first step is to create a 2-digit code for Project Type.
   b) **Assign Project Types to Project Profile:** The next step is assigning the Project Type to all similar project profiles.

IMG: SPRO → Project System → Structures → Operative Structures → Work Breakdown Structure (WBS) → Create Project Types for WBS Elements

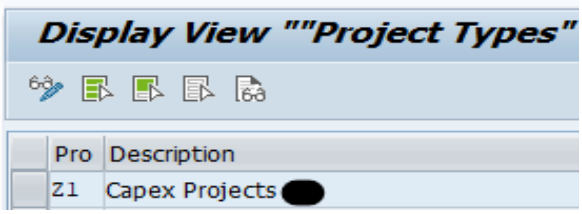

Figure 13: Create Project Types for WBS Elements

IMG Path: SPRO > Project System > Structures > Operative Structures > Work Breakdown Structure (WBS) > Assign Project Types to Project Profile

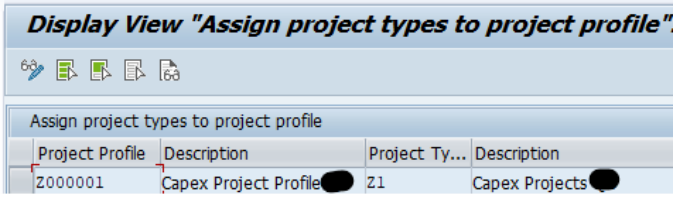

Figure 14: Assign Project Types to Project Profile

6) ***Planning Profile:*** This configuration allows to define and assign a planning profile to Project Profile.
   a) **Create/Change Planning Profile:** Define key parameters for planning profile like annual vs overall planning allowed, planning timeframe, decimal allowability, scale factor for large planning, exchange rate, and planning currency set up.
   b) **Assign Planning Profile to Project Profile:** Assign Planning Profile to Project Profile.

SPRO → Project System → Costs → Planned Costs → Manual Cost Planning in WBS → Hierarchical Cost Planning

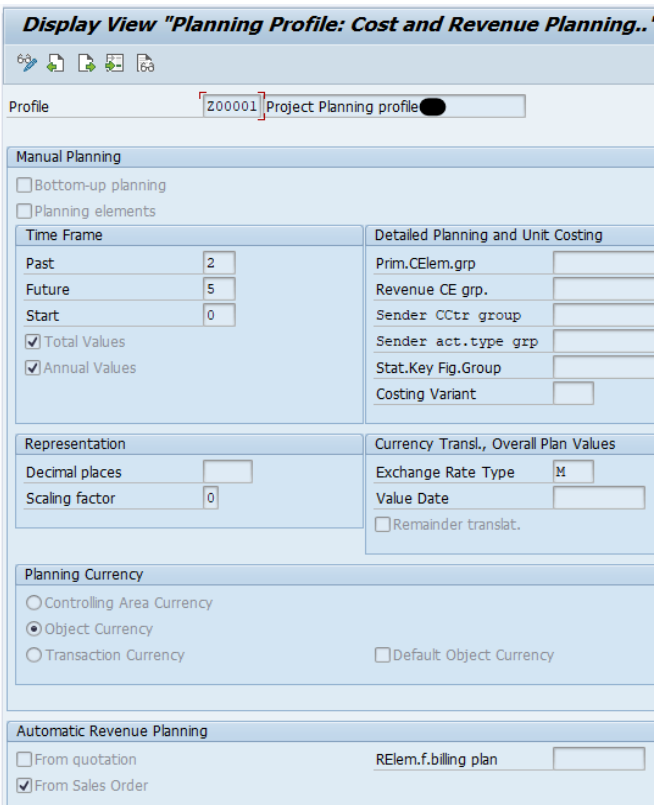

Figure 15: Create/Change Planning Profile

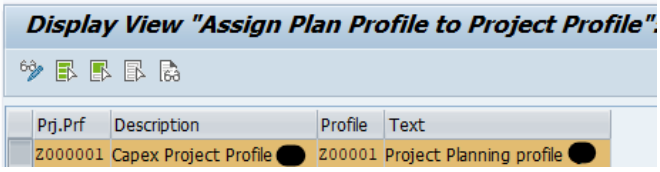

Figure 16: Assign Planning Profile to Project Profile

7) **Budget profile:** This configuration allows to define and assign budget profile to project profile.
   a) **Maintain Budget Profiles:** Maintain Budget Profile refers to the configuration where budgeting parameters and controls are set up. It includes settings for Budget time frame, availability control, Budget currency and other related settings to manage and monitor budgets effectively.
   b) **Assign Budget Profile to Project Profile:** This is done to ensure that the Budget Profiles are correctly assigned to the project profile.

IMG Path: SPRO → Project System → Costs → Budget

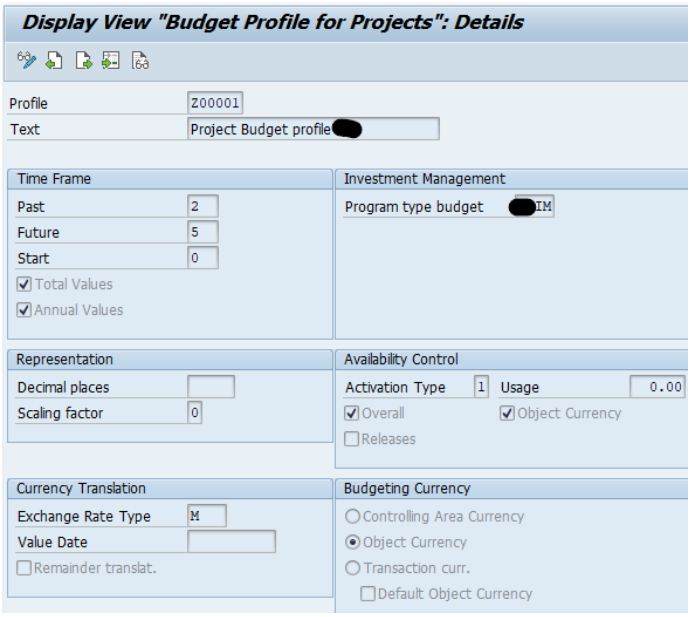

Figure 17: Maintain Budget Profiles

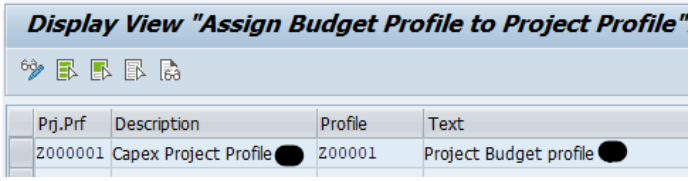

Figure 18: Assign Budget Profile to Project Profile

8) ***Create Number Ranges:*** SAP creates a document every time, a budget is allocated to the WBS element. This allows SAP to record if any change is made to the budgeting. Standard SAP provides number range 01 for planning and 02 for budgeting with numbers assignment as default. It is recommended not to change the setting. If necessary, only reset the number intervals.

IMG Path: SPRO → Project System → Costs → Budget → Create Number Ranges for Budgeting

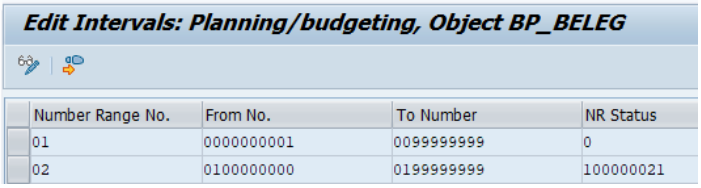

Figure 19: Create Number Ranges

9) ***Define Tolerance Limits:*** Tolerance limits are used to set thresholds for budget monitoring in projects. Availability control helps identify budget overruns early and can trigger warnings or error messages when spending approaches or exceeds the set limits. By defining these thresholds, organizations can manage budgets more

effectively avoiding overcommitment while ensuring resources are fully utilized. This helps maintain financial discipline throughout the project lifecycle.

IMG Path: SPRO → Project System → Costs → Budget → Define Tolerance Limits

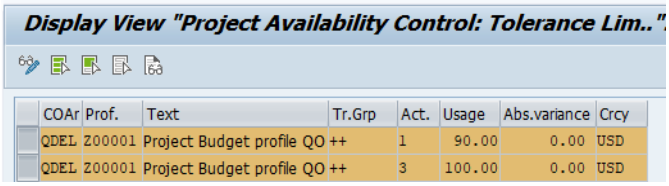

Figure 20: Define Tolerance Limits

10) ***Maintain Validations:*** In this step, validations are created and maintained to check the accuracy of data entered in the Project System/WBS Element. Validations help ensure that the values or combinations of values entered by users meet specific rules.

IMG Path: SPRO → Project System → Structures → Operative Structures → Work Breakdown Structure (WBS) → Maintain Validations

11) ***Maintain Substitutions:*** In this step, substitutions are created and maintained to automatically replace values or value combinations in the Project System/WBS Element based on predefined rules. Substitutions help enforce data consistency, reduce manual input errors, and support standardized processes. Multiple interdependent substitution statements can also be defined for complex requirements or future use.

IMG Path: SPRO → Project System → Structures → Operative Structures → Work Breakdown Structure (WBS) → Maintain Substitutions

5. Settlement planning and settlement:

Large-scale investments usually span over a period of time, requiring periodic settlement of costs to Assets Under Construction (AUC) until the project is fully or partially completed or reaches a significant milestone. Once the project is finished, the costs must be settled to the final receivers, which could include fixed assets, cost centers, other investment measures, or general ledger accounts. The settlement process needs careful planning to decide how the funds will be allocated (e.g., by percentage, amount, or proportion). SAP provides control over this process through configuration, as outlined below.

1) ***Investment profile:*** This configuration allows you to define and assign investment profile to project profile.
   a) **Define Investment Profile:** The investment profile is mainly used to plan and monitor capital expenditure that cannot be directly capitalized to fixed assets, typically in the case of complex or long-term projects. It is assigned to the project profile, which is then linked to the WBS element. When an investment project is released, the system automatically creates an Asset Under Construction (AUC) based on the investment profile settings.
   b) **Define Investment Profile / Project Profile Assignment:** Assign Investment profile to Project profile.

IMG Path: SPRO → Investment Management → Projects as Investment Measures → Master Data → Define Investment Profile → Define Investment Profile

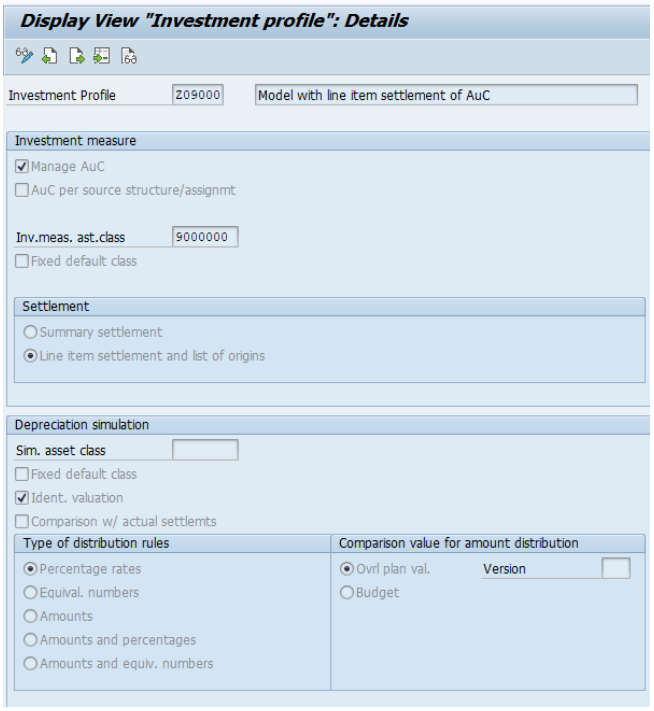

Figure 21: Define Investment Profile

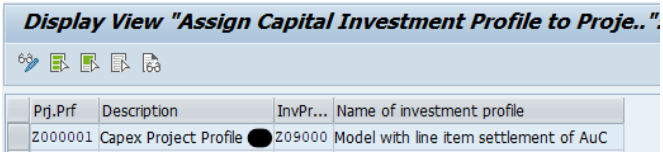

Figure 22: Define Investment Profile / Project Profile Assignment

2) ***Settlement:*** In this setting, the control parameters for settlement is defined.
   a) **Create Allocation Structure:** The first step is to define the allocation structure, which specifies the source structure for settlement. Costs are recorded under specific primary or secondary cost elements, and during settlement, those costs must be transferred from the same cost elements to the receiver(s). The allocation structure also determines the receiver of the costs, ensuring that the correct accounts or assets are updated during the settlement process.
   b) **Create Settlement Profile:** This setting controls the key parameters for settlement in the Project System. It defines the valid receivers of costs, links the appropriate allocation structure, and specifies important account posting parameters such as

document types, default settlement objects, and settlement controls. These controls include checks for percentage accuracy and the types of settlement rules allowed such as percentage-based, amount-based, or proportional distribution. Together, these settings ensure that the settlement process is accurate, consistent, and aligned with the organization's financial requirements.

c) **Specify Default Settlement Profile for Project Definition:** Assign settlement profile to the Project profile.

IMG Path: SPRO → Project System → Costs → Automatic and Periodic Allocations → Settlement → Settlement Profile

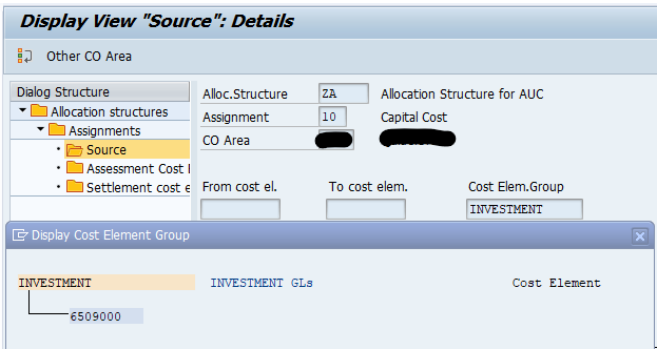

Figure 22: Create Allocation Structure

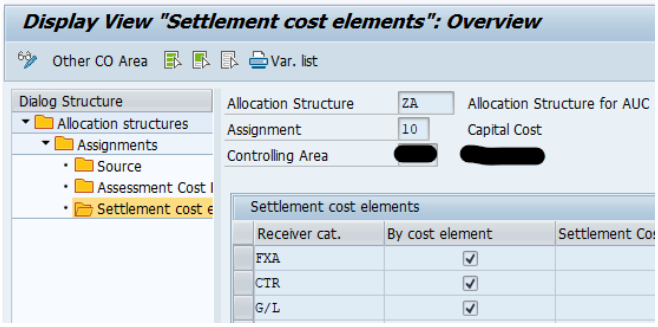

Figure 23: Create Settlement Profile

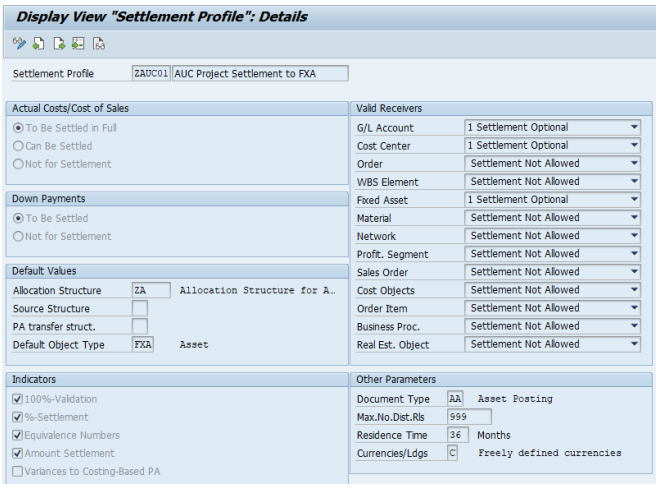

Figure 24: Specify Default Settlement Profile for Project Definition

Please note that not all available setup options are shown with screenshots, as only the configurations used in the current setup are covered. However, the key customizations listed below can be adjusted according to specific business needs:

1) **WBS User Status** – This step allows the definition of custom project status steps based on organizational requirements, along with authorization keys for each status. In this paper, the default status profiles **PS000001** and **PS000002** were used.
2) **Specify Persons Responsible for WBS Elements** – This setting is used to define individuals responsible for specific WBS elements, helping with accountability and tracking.
3) **Define Priorities for WBS Elements** – In this step, project priorities can be categorized. SAP provides four default priority levels: **Very Urgent**, **Urgent**, **Normal**, and **Low**.

6. Use Case: Implementation of SAP Investment Management for Capital Spend Governance in GLOBAL Healthcare Organization

A global healthcare organization, with operations across multiple countries and an annual capital expenditure (CAPEX) of USD 300–400 million, faced critical challenges managing its investment projects. Hundreds of capital projects ran concurrently, but the organization had no integrated system to monitor and control this massive expenditure. Project budgets and expenditure were tracked manually in Excel files, leading to inefficient oversight, budget overruns, and lack of real-time visibility.

1) The Challenge:

a) Capital spend data was decentralized and manually managed.
b) Monthly reports were the only way to monitor spending, making real-time decision-making difficult.
c) Budget overruns were frequent due to lack of automated checks and controls.
d) No mechanism to enforce pre-approval for excess spending.

2) The Solution:

The organization implemented SAP Investment Management (IM) with integrated budget control mechanisms. Each investment project was managed within SAP, with budgets assigned through the investment program structure. Automated alerts and hard stops were introduced:

a) Alerts at 90% budget utilization.
b) Blocking commitments over 100% without prior approval.

Real-time reporting was enabled, covering budgeted, committed, and actual spending, giving project managers and finance teams complete visibility into each project.

3) Key Achievements

a) **Strategic Capital Planning:** The implementation enabled structured capital planning using SAP's hierarchical investment program. The organization could now forecast capital needs, prioritize projects, and allocate budgets based on strategic goals—ensuring funds that were aligned with

long-term objectives.

b) **Automation:** Manual tracking using Excel was completely replaced. SAP automated the entire lifecycle from appropriation requests to settlement, reducing manual errors, streamlining approvals, and improving compliance with internal controls.

c) **Budget Control Brings Saving:** Implementing SAP Investment Management brought significant control over budget overspending. It enabled the organization to proactively manage and monitor capital project budgets, reducing unnecessary expenditures and enforcing budget discipline. Based on current estimates, the solution has the potential to save approximately USD 10 million annually by preventing budget overruns. When projected over a long-term horizon, assuming an average organizational lifespan of 100 years, this could translate to USD 1 billion in cumulative savings, in today's terms. These savings are not only financial but also represent increased efficiency, improved decision-making, and stronger governance in capital investment planning and execution.

d) **Time Savings:** Routine financial reporting that once took days was now available in real-time. Project teams could focus more on execution rather than data gathering and formatting. Month-end closing processes also became significantly faster and more accurate.

e) **Operational Efficiency:** Project managers gained full ownership of budget management. SAP IM enforced budget discipline, reduced overspending, and ensured funds were utilized as approved. The automated controls created a reliable, auditable trail improving governance and accountability.

4) Strategic Impact:

a) The SAP IM implementation transformed the organization's approach to capital expenditure. It not only enhanced financial control but also positioned the organization to make better investment decisions, reduce risks, and improve regulatory compliance.

b) With enhanced visibility, automation, and control, the finance and operations teams now operate in sync, enabling smarter and faster execution of long-term strategic investments.

7. Conclusion

Managing large-scale investments requires more than just budget planning, it demands accurate tracking, tight cost control, and structured financial settlement. In this second paper, we expanded on the groundwork laid in Paper 1 by configuring Investment Measures and their related components. We explored how to use SAP's Project System and Internal Orders to assign budgets, monitor actual spending, and set up rules for periodic and final settlements. These configurations ensure transparency, accountability, and compliance across long-term projects.

Together with the Investment Program setup from Paper 1, the configurations discussed here form the core of an integrated investment management process. In the final paper of this series, we will demonstrate the end-to-end execution of large capital projects, together planning, execution, and settlement steps into a complete lifecycle for investment management. This will help organizations move from setup to action with confidence and clarity.

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