

Results Analysis for Project/ WBS : A guideline for Implementation

Aug 2022

Author:

Robindra Kumar Jain

Nagendra Murahari

Niladri Chatterjee

Reviewer:

Bill Schregardus

Gaurav Tyagi

Rob Willis

Contents

Project Background..... 3

Background on Results Analysis (RA): 3

Future Architecture:..... 4

Assumption & Config Prerequisite: 5

 Assumption:..... 5

 Standard Configuration: 5

Problem Statement:..... 6

 Problem Description:..... 6

 Additional Expectation:..... 6

Solution Approach 6

 Custom User Exit & Implicit Enhancement..... 6

 Transactions used: 7

RA Process Implemented:..... 8

 Process Flow: 8

 KKA2/KKAJ Enhancement flow:..... 8

 CJ88/CJ8G Enhancement flow: 9

Limitations:..... 9

Accomplishments:..... 9

Lesson learnt:.....10

Project Background

Client is one of the largest TMT enterprises involved in manufacturing Storage Devices, Servers, and Switches. It also performs repairs, maintenance, and installation of the servers etc. Purpose of the project was standardizing Service Costing and Project Costing by consolidating the systems, automating the processes, and removing redundant processes. Deloitte was selected to partner with client on this engagement to integrate the solution with several different transformation initiatives by adopting S4 HANA, Ariba SCC, Ariba Buying and Invoicing, Concur, EAP and boundary application e.g., Salesforce (SFDC), Legacy system (GCSN-Global Channel Service Network) Client is engaged in repair, installation, break fix and preventive operation of the servers and electronic components which encompass Service Costing.

Background on Results Analysis (RA):

In any customer projects which runs for longer period, RA plays a crucial role to determine the value of the ongoing unfinished activities during the Project Period end. Once we investigate the Profit and Loss (P&L) of those ongoing activities, it shows inconsistent profits or loss throughout the projects span, which does not comply as per USGAAP accounting principles. Results Analysis process eventually helps in timely recognition of the Project Profitability, for each project, every period end to maintain a consistent Profit or Loss.

In SAP, all projects are created with required Work Breakdown structure. Planned Cost and Revenue are maintained at the Project level. Expenses would be posted to WBS, and Revenue info would flow to WBS from SD Billing.

During every period-end Results Analysis is performed at WBS level to calculate and propose accounting adjustment entries as per the RA methods/ matching principle.

SAP has multiple methods to calculate Results Analysis for different businesses and also to comply with multiple geographies.

Method	Results Analysis Method	Sales Order	Project	Internal Order
01	Revenue-Based Method with Profit Realization	Yes	Yes	Yes
02	Revenue-Based Method Without Profit Realization if Actual Revenue < Planned Costs	Yes	Yes	Yes
03	Cost-Based POC Method	Yes	Yes	Yes
04	Quantity-based method	Yes	Yes	Yes
05	Quantity-Based POC Method	Yes	Yes	Yes
06	POC Method on Basis of Revenue Planned by Period	Yes	Yes	Yes
Method	Results Analysis Method	Sales Order	Project	Internal Order

07	POC Method on Basis of Project Progress Value Determination	No	Yes	No
08	Derive Cost of Sales from "Old" Resource-Related Billing of CO Line Items	Yes	Yes	Yes
09	Completed Contract Method	Yes	Yes	Yes
10	Inventory Determination, Without Planned Costs, Without Milestone Billing	Yes	Yes	Yes
11	Inventory Determination, Without Planned Costs, with Milestone Billing	Yes	Yes	Yes
12	Inventory Determination, Reserves for Follow-Up Costs, Without Milestone Billing	Yes	Yes	Yes
13	Inventory Determination "WIP at Actual Costs" for Objects Not Carrying Revenue	No	Yes	Yes
14	Derive Cost of Sales from Resource-Related Billing of Dynamic Items	Yes	Yes	Yes
15	Derive Revenue from Resource-Related Billing and Simulation of Dynamic Items	Yes	Yes	Yes

Our client uses following Results analysis process to calculate different RA keys.

- 01- Revenue-Based Method with Profit Realization
- 06- POC Method on Basis of Revenue Planned by Period.

Future Architecture:

Assumption & Config Prerequisite:

Assumption:

1. From a solution perspective, all configurations are in place that will support the development.
2. The Planning (Costs or Revenues) should be done on a defined WBS level only, currently the solution will need further changes if WBS level is not defined for planning.
3. The actual postings should also be done on a defined WBS level only to avoid increasing complexities.
4. Planning currencies should be defined in advance and should be either the Company Code currency or the Group currency. Standard RA and Settlements does not have provision to consider a 3rd currency as it completely skips calculations on transactions currencies.

Standard Configuration:

1. RA configuration path is as below:

Create CO Versions	SPRO → Project System → Revenues and Earnings → Create CO Versions Tcode: OKEQN
Maintain results analysis key	SPRO → Project System → Revenues and Earnings → Automatic and Periodic allocations → Results Analysis → Edit Results analysis keys and versions → Maintain results analysis key Tcode: OKG1
Maintain results analysis versions	SPRO → Project System → Revenues and Earnings → Automatic and Periodic allocations → Results Analysis → Edit Results analysis keys and versions → Maintain results analysis versions Tcode: OKG2
Define Valuation Methods for Results Analysis	SPRO → Project System → Revenues and Earnings → Automatic and Periodic allocations → Results Analysis → Edit Results analysis keys and versions → Define Valuation Methods for Results Analysis Tcode: OKG5
Define line IDs	SPRO → Project System → Revenues and Earnings → Automatic and Periodic allocations → Results Analysis → Edit Results analysis keys and versions → Define line IDs
Define assignments for results analysis	SPRO → Project System → Revenues and Earnings → Automatic and Periodic allocations → Results Analysis → Edit Results analysis keys and versions → Define assignments for results analysis Tcode: OKG5
Define Update for Results Analysis	SPRO → Project System → Revenues and Earnings → Automatic and Periodic allocations → Results Analysis → Edit Results analysis keys and versions → Define Update for Results Analysis Tcode: OKG4

Define Posting Rules for Settlement to Accounting	SPRO → Project System → Revenues and Earnings → Automatic and Periodic allocations → Results Analysis → Edit Results analysis keys and versions → Define Posting Rules for Settlement to Accounting Tcode: OKG8
---	--

Problem Statement:

Problem Description:

The standard RA available in SAP currently has three major drawbacks to our client's process.

1. Currency conversion issues which include following scenarios:
 - a. Rate at which unbilled amounts are de-booked when the actual revenue comes in.
 - b. Rate at which surplus revenues are amortized in subsequent periods
2. Booking of amounts in case of surplus revenues into Short Term (ST) and Long Term (LT) accounts as per US standards as currently it books all surplus amounts into single account only.
3. If there is no Revenue planning data available in WBS Revenue segment, the amortization of the actual costs and revenue does not happen. The entire amount is passed as surplus revenue into a Short-Term account. Ideally the amount should either be deferred to ST and LT accounts or should be amortized equally based on the total remaining periods of the WBS into ST and LT accounts.

For the existing business process of client had issues in below scenarios,

- a. Actual amortization: This scenario requires to amortize the actuals(both costs and revenues) to be amortized to ST and LT depending on the remaining period of the project.; the split happen as equal amount for each period.
- b. Actual postings: This scenario requires the surplus amount to post to LT account if remaining periods are more than 12 or to ST account if the remaining periods are less than 12.

Additional Expectation:

While executing RA transactions for WBS the expectations of the financial posting should follow below rule:

1. Any unbilled amount should be booked at CAR (Current accounting rate).
2. Any unbilled amount de-booking should be done at HAR (Historical accounting rate)
3. Any surplus revenue amount should be booked into ST and LT accounts depending on the surplus amount and the planning data. This should always happen in HAR of recognized revenue using FIFO technique.
4. For special scenarios the postings should happen as mentioned that solves issues 3.a and 3.b above.

Solution Approach

Custom User Exit & Implicit Enhancement

Those major three problems are solved by implementing a user exit and a set of of implicit enhancements.

1. Currency conversion issue was addressed by implementing user exit EXIT_SAPLKKAG_003. Here we controlled the amount that is to be amortized for each period till current period. We also used this exit to control the amount that should be amortized and in turn solve currency conversion in Current Results Analysis.
 - a. The exit helped in booking the unbilled amount at CAR, no deviation from the standard logic.
 - b. When the actual revenue is received for any period, the exit de-books this unbilled amount at the HAR therefore whole unbilled from transaction currency and group currency is reversed. Additionally, since the actual revenue should be booked on CAR, any differences of currency (Surplus or deficit) are adjusted into the company code currency and group currency in the current period.
 - c. Additionally, for the revenue surplus scenario, where planning base currency is used as the transaction currency, we took the rate at which the revenue was realized and the subsequent amortization of amount in transaction currency.
But the amount amortized in company code currency and the group currency is based on the conversion rate of the actual amount received. Therefore, we had to do systematic calculation to replace the amount of current period of CC currency and GC currency.
2. We implemented an implicit enhancement in include LKKAGF01 inside the form KUNDENERWEITERUNG_ to address the short term and long-term booking for surplus amount. Technically, we split the entries of the amount in table XCOEPB for ST account and LT account depending on the planning values of the next 12 periods. All the amount falling in the first 12 periods is kept in ST account while the remaining amount is moved to LT account.
3. In unique cases where WBS does not have any planning data, but still requires calculation for deferred or amortization, a separate logic was implemented to split the actuals into equal amount for every period based on the project start and end date and the amortization start date. The same principle to move the amounts to ST and LT was followed based on point 2.

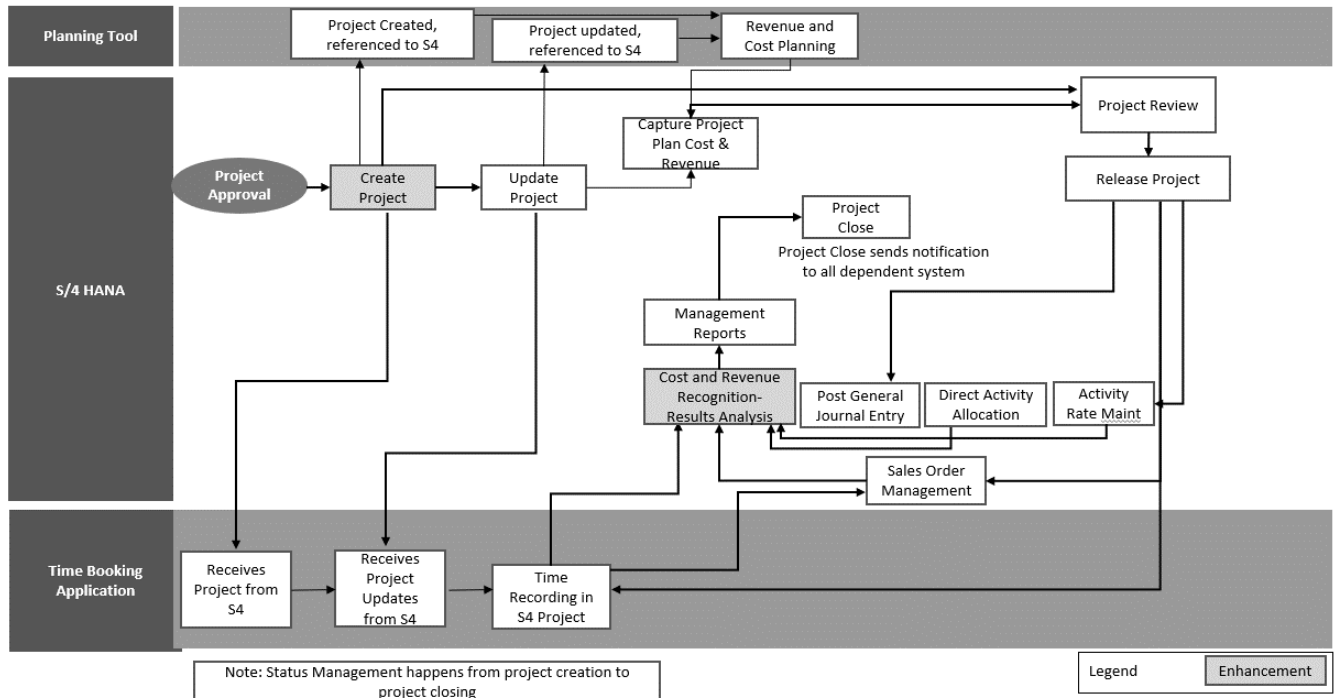
Transactions used:

The process of execution of RA and Settlement in Client environment still follows the same standard transaction below, but the additional implicit enhancement and user exit play's role in achieving the specific needs.

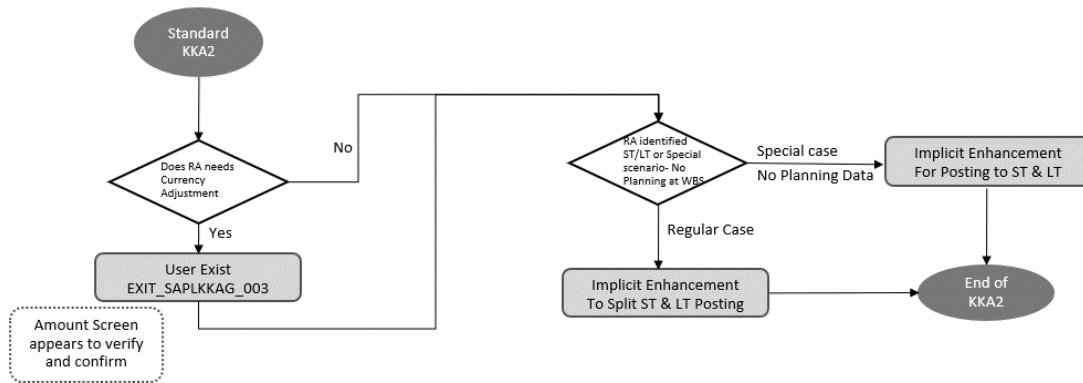
- KKA2 / KKAJ: Project Actual Results Analysis (Individual and Mass).
- CJ88 / CJ8G: Project Actual Settlement (Individual and Mass)

RA Process Implemented:

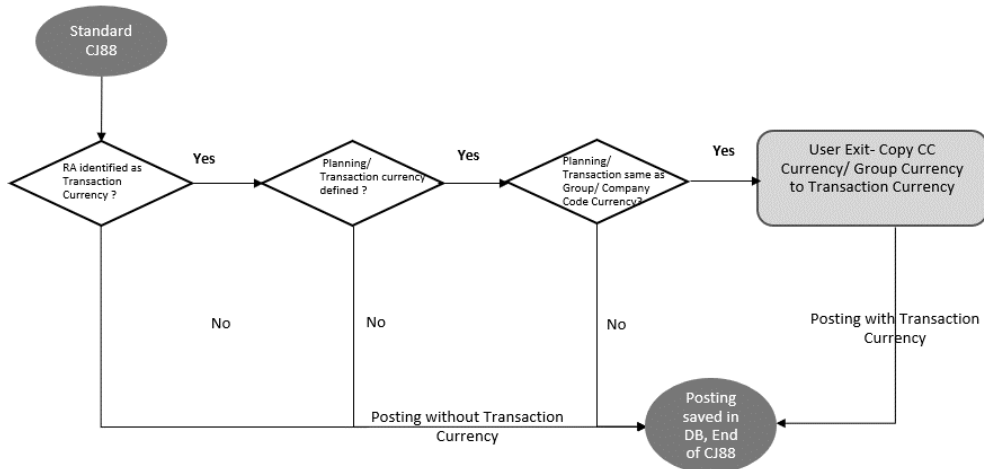
Process Flow:



KKKA2/KKAJ Enhancement flow:



CJ88/CJ8G Enhancement flow:



Limitations:

1. There will always be small decimal limitation issues for the conversion rate of the system due to which the calculated amount for different magnitude of amount comes out differently with each other. This impacts the overall calculations of the amounts that needs to be amortized and hence there will be few cents of postings which will be off from the expected postings. The calculation eventually will adjust it later, hence the cent postings into LT and ST account adjusting these cent value for overall solution will come in from time to time and cannot be avoided.
2. The planning must be done in a particular level of WBS only, multiple level of planning will add more complexities to the solution.
3. Revenue, if reversed, must be reversed first from the existing values bases based on the FIFO technique and only then it should be used for periodic amortization calculations otherwise it will cause inconsistencies in the calculation of the data as the reversal rate can be different then the realized rates.
4. When WBS is migrated from legacy system, rates are not determined from S4 rather we calculate Grp vs transaction vs company code at Legacy system and same rate will be used in S4 during migration, rather than standard S4 exchange rate.

Accomplishments:

1. The unique requirement of Currency conversion of planned Revenue in HAR Vs Actual Revenue in CAR is achieved.
2. Standard S4 limitation of no segregation of short term and long term amount in case of surplus revenues is addressed.
3. We were able to solve the “No planning” at WBS scenarios.
4. RA Closing process time is drastically reduced as manual monitoring of the WBS status is no longer needed. Based on the User Status, all RA postings, balance adjustments to P&L account are completed, and projects are systematically closed.
5. Scalability of the RA functionality for new country/ geography is easy.
6. Reduction in IT Cost as it helped retiring their current Legacy RA application.
7. Enhanced the User Experience by automating the Reclass and Rebalancing and Project closure into single solution.

8. Reducing the manual effort significantly. The Business RA process team is in the process of reducing the FTE count from existing 6 to 2.

Lesson learnt:

1. The Results analysis is a business specific, process oriented and Data sensitive process, therefore understanding Business need is necessary before building any solution.
2. User training is a must as user needs to follow the steps as defined in the process.
3. The Gap in the understanding of the definition or term used for various postings and processes by business and by IT can impact the overall design considerations. This should be aligned well before the design is finalized.
4. Client has multiple RA types, and each has its own defined processes, therefore documentation for each RA processes must be done, and process properly followed.
5. RA in existing environment begins with correct WBS creation in S4 with correct RA types, Planning data, planning currency but highly integrated with other application such as Revenue and Cost Planning tool, Time booking application, etc. Therefore, all the information from other application should come flawlessly for a correct RA process.
6. Results Analysis has a limitation at posting in Transaction Currency. Therefore, deciding which currency to be used (Company Code currency/ Group Currency) needs to happen before the RA process.
7. Source for planning/actual revenue is single i.e., billing invoice, but cost is being captured from multiple sources (billing/time confirmation/manual entries)so, identifying and accumulating those from different S4 table is key for correct match of Cost and Revenue that holds the success for results analysis posting.