ERP-1044: DDFS - R2R - Record to Report

Document Links

key	summary	type	created	updated	due	assignee	reporter	priority	status	resolution

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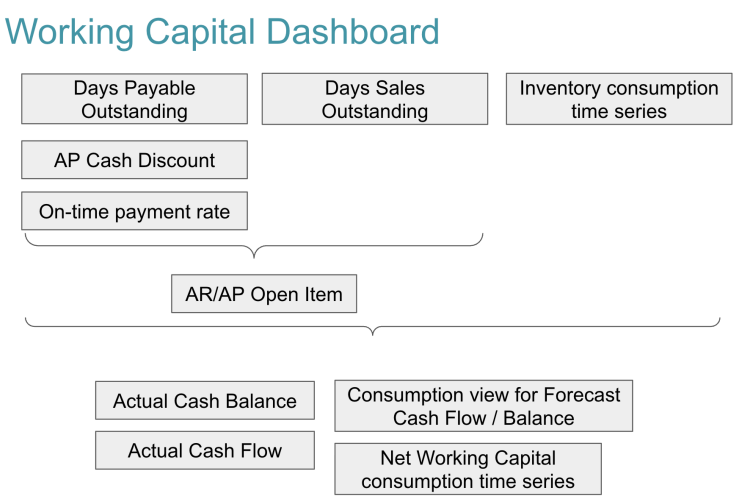
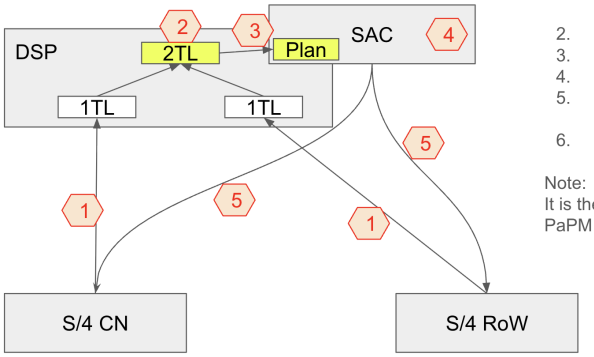
Introduction

This Data Flow Specification (DFS) defines the end-to-end data flow required to meet the following requirements:

Sub area	Driver	Purpose	Notes	Jira

Financial Ledger Reporting	ACDOCA	Replicating business content for GLAccountLineItemRawData to create Semantic tags model that is used for financial reporting. It mirrors the CDS views used in S/4 but creates the semantic tag model in a more logical fashion than in S/4 (removes the hard coding in the CDS views). This model provides all journal entry details. Organisational entities such as Company Code, Profit Centre, Cost Centre, Business Area, Functional Area, Financial dimensions like Ledger, G/L Account, Segment, Financial Document Type, Posting Key, Debit/Credit Code, are available in this data model. The model provides a source ledger as well as all the ledgers that apply to the relevant company codes. This model maps the journal entries to the semantic tags defined based on G/L Accounts. The semantic tags based on functional areas are not considered in this model.	Incld Headcount, Plan	

Net Working Capital	BSEG	The Operation Accounting Document item view provides details of an operational accounting document item (sourced from BSEG) like clearing document details, payment data, and tax data. **The long-term vision is that table BSEG will be used only for open item management.** Used as the foundation of accounts receivable and accounts payable analysis, such as total payables and receivables, overdue receivables and payables, and future receivables. Generates a balance and movements model. 	Leading ledger only	
Fixed Assets	Assets	Ability to show Original cost, depreciation and net book value • Showing all depreciation areas	There is no business content for this	

Statistical Key Figures	SKF	SKF will be calculated in SAC and retracted to both S/4 systems based on company code. SKF can be amended in S/4 and need to be extracted back into DSP. SKF transactions by company code, cost centre, period  Process: 1. Extract from both S/4 systems restricted by company code range 2. Merge the data in DATASPHERE 3. Odata extractor from 2TL to Plan 4. Plan data in SAC planning form 5. Retract data from SAC to S/4 by relevant company codes 6. Data can be amended in S/4 Note: It is the Plan data that will be shared with PaPM	There is no business content for this	
Group Reporting	ACDOCU	There is new improved business content for matrix elimination in group reporting that we will use. Significantly it is now periodic rather than year to date. Cash flow is difficult to replicate into DSP and not included in the business content. As all the data is in a single system, the starting point will be to use SAC LIVE reporting on S/4. There are currently around 30 schedules required. They run quarterly, projecting the 3rd Quarter forwards to predict the year end picture. Reconciliation to Finance GL: • The values in company code currency should reconcile perfectly between ACDOCA/U (where data is in ACDOCA, eg nothing for China) • The global currency value will be translated at a different rate, this will be explained by the currency revaluation • Previously they used YTD but now will have periodic, this should simplify many of the prior reconciliation issues	Planning is not included in this model - need to add if required	

Restructuring Provisions	Plan	The workforce is analysed to consider any possible restructuring and create financial provisions. • Payroll data is required • Four forms in total, similar in nature just different aggregation levels		
HSE Provisions	Plan	Data is required to cater for planning every quarter (2 forms in total, one for qualitative and one for quantitative analysis and inputs).		

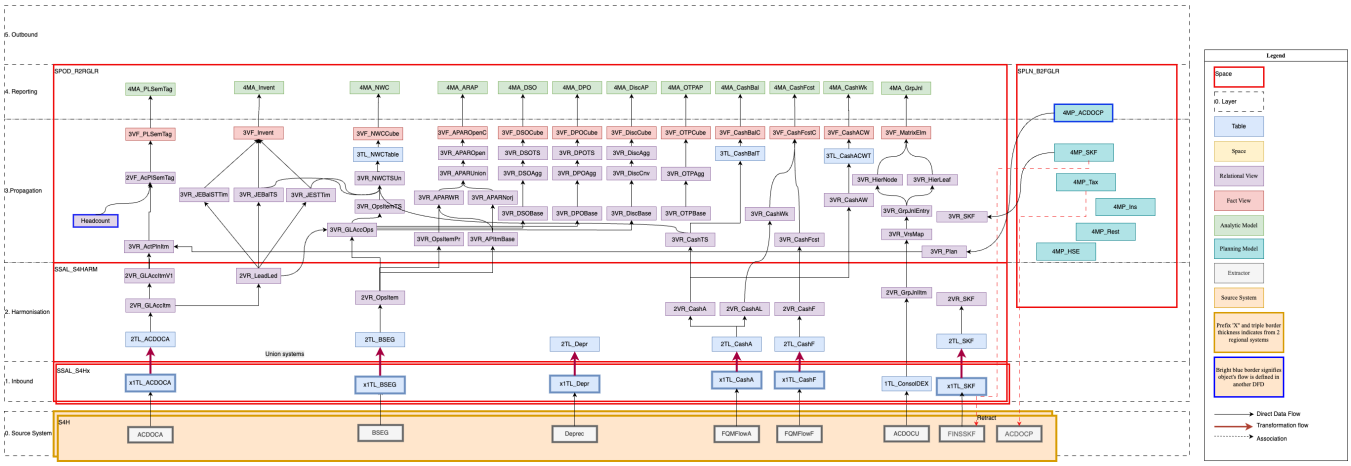
Insurance	Plan	Insurance is provided for the group centrally. Each site needs to provide a valuation for assets (including stock) and potential loss of income.		
Tax	Tax	Ability to plan tax changes and create journals to be posted in S/4 as provisions.		

Stock valuation	Stock	Stock values including future prices. Join MATDOC to MBEW to ensure that you get a value even if no stock on hand.	There is no business content for this	

Gaps

Item	Detail	Status
Missing requirement	Stock valuation requirements.	Open
Headcount data	Headcount is shown but as a ghost as not in scope at present. Assuming will be covered in B2F where the seed data should be actuals.	Open
Kinaxis integration	Kinaxis Long Term plan has not been designed as expected to be covered in the B2F POD.	Open
Bridges	Opening, closing balance and difference. Assume this logic is possible in models based on 3VR_OpsItemTS. There is a CDS called C_GLAccountBalance_F0707A This is implemented via a class (predecessor was C_CN_GLAccountBalanceSumQuery).	Open
Functional Area Semantic Tag	No requirement as yet for this model. It is not included in SAP business content. The model is very similar to the Profit Centre model.	Open
Cashflow in GR	As this is a difficult area to recreate, it is envisaged that a plausible solution would be to run this using a LIVE model in SAC without DSP.	Open
Group Reporting data incomplete	Planning functionality may be required for parameters and data not available in S/4.	Open
Drill through in GR	Currently we do not believe this is plausible as data is captured from China using the data collector.	Open
Reuse of KPI	In a perfect world, we would create a KPI once and share it, to ensure consistency. If we stack models this will work, but this is probably not feasible in all cases If a KPI is only calculated in the Analytical Model, it will not be shared. Reasons for defining at this level are: • Performance on aggregated data is better • Some KPI's must be calculated pre aggregation eg price x quantity	Open
Commentary	Commentary will be added per model. This is not ideal as there is no leverage.	Open
Leases	Real Estate is being used for Leases but there are no requirements as yet outside of what is included within ACDOCA.	Open
Actual Cash Flow	A very restricted set of dimensions, consider expanding this based on business needs (eg customer and vendor)	Open
Fixed Assets	• Consider the index to revalue too • Understood to be including Leases • Impairments assumed to be performed at an aggregated level rather than per asset.	Open

Data Flow Diagram



Orange font implies a change from SAP standard business content

Source System Extractors

System	Code	Extractor Name	Purpose	Delta	Frequency	Jira Ref	Extended fields
S/4 x	ACDOCA	I_GLACCOUNTLINEITEMRAWDATA	View does not implement the logic for extension ledgers (just basis ledgers). This is implemented in 2VR_GLAccItmV1 Includes Balances Brought Forward (000)	Y	Continuous		Yes
S/4 x	BSEG	I_OPERATIONALACCTGDOCITEM	Open Item management		Continuous		
S/4 x	FQMFLOWA	I_CASHLIQUIDITYACTUALFLOW	Cash liquidity actual flow for working capital inventory.	Y	Continuous		
S/4 x	FQMFLOWF	I_CASHLIQUIDITYFORECASTFLOW	Same source as actual flows	Y	Continuous		
S/4 x	DEPR	I_FXDASTSTATISTICALLINEITEM	Statistical Depreciation areas - This will need to be exposed for extraction. Replicating the logic used in S/4 I_AssetDepreciationBalanceCube Enabling valuation on Leased Assets Restrict to VORGN <> AFAB, MOVCAT <> 05, SLALITTYPE not between 07203 and 07209 (check CDS for exact)			TBC	
S/4 x	FINSSKF	I_FINSTATISTICALKEYFIGITEMBSC	Statistical Key Figures	Y			
S/4	ACDOCU	I_CNSLDTNGROUPJRNLENTRITMDEX	Matrix consolidation	Y	Continuous		Potentially

Inbound Layer

- No inbound field adjustments are applied. Standard technical fields (load date/time, source system) are retained as delivered.
- Persist data as found in the source system CDS view. This should be including any extensions.
- Any data sourced from both S/4 environments, will be created using delta capture and re-persisted in Harmonisation layer. Assumption is that this data can be in cold storage if available.
- In the Business Content, some calculated fields are populated with Null values to make the model compatible with SAP S/4HANA release 2020. These fields will now be added in the 1TL object and mapped, removing the NULL calculation.

Code	Tech Name	Logic	Partitioning
1TL_ACDOCA	1TL_S4Hx_I_GLACCOUNTLINEITEMRAWDATA	Retain all 402 fields even though SAP Business Content has 60 fields less. As the BCT is based on SAP 2023	Fiscal Year
1TL_BSEG	1TL_S4Hx_I_OPERATIONALACCTGDOCITEM	Adds flag for cleared, based on date	
1TL_CashA	1TL_S4Hx_I_CASHLIQUIDITYACTUALFLOW	Cash Actual Flow Lower levels of the CDS have more dimensions (see gaps)	
1TL_CashF	1TL_S4Hx_I_CASHLIQUIDITYFORECASTFLOW	Cash Forecast Flow	
1TL_Depr	1TL_S4Hx_I_FXDASTSTATISTICALLINEITEM	Depreciation Areas	
1TL_SKF	1TL_S4Hx_I_FINSTATISTICALKEYFIGITEMBSC	Statistical Key Figures	
1TL_ConsolDEX	1TL_S4Hx_I_CNSLDTNGROUPJRNLENTRITMDEX	Consolidation	

Harmonisation Layer

- Both transaction data or master data that is not tier 1 will require a union between environments and re-persisted. This is to improve performance.
- As soon as a local table is joined with another dataset, the reference is lost and the "I" from the extractor can be dropped.
- While it is very tempting to remove fields that are not required by Syensqo, we will keep them in the models. As we are converting the SQL views to Graphical views, the optimiser will exclude them. Examples here being industry solution specific such as Public Sector. However, SAP do remove deprecated fields such as Material which is now replaced with Product.

2TL_ACDOCA - 2TL_S4HARM_I_GLAccountLineItemRawData

Purpose:

Persist the 2 datasources into a single table for performance to avoid the runtime union.

Source / Union:

1TL_S4HR_I_GLACCOUNTLINEITEMRAWDATA

1TL_S4HC_I_GLACCOUNTLINEITEMRAWDATA

Key:

Ledger, CompanyCode, SourceLedger

Partitions:

Ledger, FiscalYear

Comments:

Set as Delta Capture

2VR_GLAccItm - 2VR_S4HARM_GLAccountLineItem

Purpose:

Casting dates and add the statistical derivations from the next level

Source:

2TL_S4HARM_I_GLAccountLineItemRawData

Formula:

Casting TO_DATE (PostingDate, DocumentDate, CreationDate, ServicesRenderedDate, PerformancePeriodStartDate, PerformancePeriodEndDate, ExchangeRateDate, ClearingDate, ValueDate, LastChangeDate).

Add the statistical derivations here, rather than repeat in the level above

WBSIsStatisticalWBSElement - WHEN AccountAssignmentType <> 'PR' AND WBSElementInternalID <> '00000000' THEN 'X' ELSE '' END

IsStatisticalSalesDocument - WHEN AccountAssignmentType <> 'VB' AND SalesDocument <> '' THEN 'X' ELSE '' END

IsStatisticalCostCenter - WHEN (AccountAssignmentType <> 'KL' AND AccountAssignmentType <> 'KS') AND CostCenter <> '' THEN 'X' ELSE '' END

IsStatisticalOrder. - WHEN (AccountAssignmentType <> 'OR' and AccountAssignmentType <> 'OP' and AccountAssignmentType <> 'OV') and OrderID <> '' THEN 'X' ELSE '' END

Comments:

Note that the fields set to null in BCT are available to be mapped in this release.

Changing name to replicate the corresponding CDS in S/4.

2VR_LeadLed - 2VR_S4HARM_GLAccountLineItemLeadingLedger

Purpose:

Restrict to Leading Ledger.

This should be the object that is shared with other PODs for reporting.

Source:

2VR_S4HARM_GLAccountLineItem

I_FI_Ledger

Filter:

FI_Ledger - IsLeadingLedger = 'X'

Projection:

FI_Ledger - Ledger

Join:

[Many.....1] 2VR_S4HARM_GLAccountLineItem V1 INNER JOIN I_FI_Ledger on SourceLedger = Ledger

Formula:

Derivations applied at lower level, so not required here

2VR_S4HARM_CoCodeLedgerSourceLedger

Purpose:

To provide currency roles and Company Code Assignment of Ledgers.

Source:

I_LedgerCompanyCodeCrcyRoles

I_LedgerSourceLedger

Join:

[Many.....Many]2VR_S4HARM_CoCodeLedgerSourceLedger as 2VR_S4HARM_LedgerCompanyCodeCrcyRoles LEFT JOIN 2VR_S4HARM__LedgerSourceLedger on Ledger = Ledger

Projection:

Remove repeated Ledger

Comments:

Not shown in diagram (hence no alias) as this is master data

2VR_GLAccItmV1 - 2VR_S4HARM_GLAccountLineItem V1

Purpose:

To provide all the ledgers available to a company code.

This has the effect of exploding the rows to ensure that all ledgers are created for every source ledger.

Source:

2VR_S4HARM_GLAccountLineItem

2VR_S4HARM_CoCodeLedgerSourceLedger

Join:

[Many.....Many] 2VR_S4HARM_GLAccountLineItem INNER JOIN I_LedgerCompanyCodeCrcyRoles on SourceLedger = SourceLedger, CompanyCode = CompanyCode

Comments:

SAP incorrectly defined as semantic type FACT

2TL_BSEG - 2TL_S4HARM_I_OperationalAcctgDocItem

Purpose:

Persist the 2 datasources into a single table for performance to avoid the runtime union.

Source / Union:

1TL_S4HR_I_OperationalAcctgDocItem

1TL_S4HC_I_OperationalAcctgDocItem

Key:

CompanyCode, AccountingDocument, FiscalYear, AccountingDocumentItem

Partitions:

FiscalYear

Comments:

Set as Delta Capture

2VR_OpsItm - 2VR_S4HARM_I_OperationalAcctgDocItem

Purpose:

Casting dates and adding cleared flag

Source:

2TL_S4HARM_I_OperationalAcctgDocItem

Projection:

Removing 26 fields - project, fixedasset, material, valuationarea, jointventure, committmentitem, funds, profitabilitysegment etc

These are related to deprecation of fields and the relevance to the solution.

Formula:

Casting TO_DATE (ClearingDate, ClearingCreationDate, ValueDate, DueCalculationBaseDate, LastDunningDate, TaxDeterminationDate, PostingDate, DocumentDate, NetDueDate, CashDiscount1DueDate, CashDiscount2DueDate)

Adding IsCleared - case when ClearingDate = '00000000' then '' else 'X' end

Comments:

Note that the fields set to null in BCT are available to be mapped in this release.

2TL_CashA - 2TL_S4HARM_I_CashLiquidityActualFlow

Purpose:

Persist the 2 datasources into a single table for performance to avoid the runtime union.

Source / Union:

1TL_S4HR_I_CashLiquidityActualFlow

1TL_S4HC_I_CashLiquidityActualFlow

Comments:

Delta capture not required.

2VR_CashA - 2VR_S4HARM_I_CashFlowActualItem

Purpose:

Cast dates and add fields.

Source:

2TL_S4HARM_I_CashLiquidityActualFlow

Formula:

Cast TO_DATE for (TransactionDate and PostingDate)

Adding ControllingArea, ProfitCentre,Segment, Customer, Supplier as NULL (these are now standard fields in the CDS).

Comments:

Convert to Graphical

Combine SAP_FI_HL_CashFlowActualItem (adding NULL fields) and SAP_FI_IL_CashLiquidityActualFlow (casting)

2VR_CashAL - 2VR_S4HARM_I_CashLiquidityActualFlow

Purpose:

Cast dates and restrict to bank related.

Source:

2TL_S4HARM_I_CashLiquidityActualFlow

Filter:

BankAccountInternalID <> '' AND BankAccountInternalID <> '0000000000'

Formula:

Cast TO_DATE for (TransactionDate and PostingDate)

Comments:

Convert to Graphical

2TL_CashF - 2TL_S4HARM_I_CashLiquidityForecastFlow

Purpose:

Persist the 2 datasources into a single table for performance to avoid the runtime union.

Source / Union:

1TL_S4HR_I_CASHLIQUIDITYFORECASTFLOW

1TL_S4HC_I_CASHLIQUIDITYFORECASTFLOW

Comments:

Delta capture not required.

2VR_CashF - 2VR_S4HARM_I_CashLiquidityForecastFlow

Purpose:

Casting dates and filtering for bank related.

Filter:

BankAccountInternalID <> '' AND BankAccountInternalID <> '0000000000'

Formula:

Cast TO_DATE for (TransactionDate and PostingDate)

Comments:

Convert to Graphical combining the 2 views

2TL_SKF - 2TL_S4HARM_I_FinStatisticalKeyFigItemBsc

Purpose:

Persist the 2 datasources into a single table for performance to avoid the runtime union.

Source:

1TL_S4HR_I_FinStatisticalKeyFigItemBsc

1TL_S4HC_I_FinStatisticalKeyFigItemBsc

2VR_SKF - 2VR_S4HARM_I_FinStatisticalKeyFigItemBsc

Purpose:

Cast dates and remove deprecated fields.

Source:

2TL_S4HARM_I_FinStatisticalKeyFigItemBsc

Projection:

Remove deprecated fields (WBS and Project)

Formula:

TO_DATE (ValidityStartDate)

2TL_Depr - 2TL_S4HARM_I_FxdAstStatisticalLineItem

Purpose:

Persist the 2 datasources into a single table for performance to avoid the runtime union.

Source:

1TL_S4HR_I_FxdAstStatisticalLineItem

1TL_S4HC_I_FxdAstStatisticalLineItem

2VR_Depr - 2VR_S4HARM_I_FxdAstStatisticalLineItem

Purpose:

Cast dates and remove deprecated fields.

Source:

2TL_S4HARM_I_FxdAstStatisticalLineItem

Projection:

Remove fields not required (eg additional currencies that Syensqo do not intend to use).

Formula:

TO_DATE (ValidityStartDate)

2VR_GrpJnlItm - 2VR_S4HARM_GroupJournalEntryItem

Purpose:

Casting fields

Source:

1TL_S4HR_I_CNSLDTNGROUPJRNLENTRITMDEX

Formula:

TO_DECIMAL(AmountInTransactionCurrency,23,2)

TO_DECIMAL(AmountInLocalCurrency,23,2)

TO_DECIMAL(AmountInGroupCurrency,23,2)

TO_DATE(CreationDate)

Comments:

Relational semantic type.

Propagation Layer

SKF

Purpose:

Enrich with accounting principle

Source:

I_AccountingPrincipleAssgmt

3VR_AcPlSemTag - ActlPlnJournalEntryItemSemTag

Purpose:

Source:

Join:

Join ActPlan N:N SemTagGLAccount (filter for validity dates and excld FunctArea)

Filter:

Formula:

Comments:

Remove redundant measures

Can we reduce initial projection?

Need to add headcount somewhere, maybe here?

CDS View I_SemTagGLACcount from SAP S/4HANA provides the mapping between the G/L accounts and semantic tags. It is the key component of this model.

This CDS view does not have any key fields. The replication of data without key fields from CDS Views is not supported by the Replication Flow at moment. Instead the local table SAP_FI_IL_I_SemTagGLAccount is used in this model to support both SAP S/4HANA Cloud and SAP S /4HANA source systems. The inbound layer view SAP_FI_IL_SemTagGLAccount is based on this table.

Customer should perform the following activities after importing the content package:

- Create a remote table from CDS View I_SemTagGLAccount of the connected SAP S/4HANA system and replicate the data.
- Create a dataflow to populate the local table SAP_FI_IL_I_SemTagGLAccount from the remote table. (For SAP S/4HANA Cloud sources a conversion from Date to String Datatype is needed in the dataflow.)

or

- Replace the local table SAP_FI_IL_I_SemTagGLAccount with the remote table in the inbound layer view SAP_FI_IL_ SemTagGLAccount.

The Inbound layer view G/L Account with Semantic Target (IL) (SAP_FI_IL_ SemTagGLAccount) is based on the local table SAP_FI_IL_I_SemTa gGLAccount and has some simple data type conversions like date conversion.

3VR_VersMap - 3VR_SPOD_R2RGLR_VersionMapping

Purpose:

Union with itself
The first select is where group currency = group currency and the second select is where it is not equal

Relating to statistical postings and adjustments in Local Currency, not envisaged as being used in our scenario

Source:

2VR_S4HARM_GroupJournalEntryItem

Union / Join:

2VR_S4HARM_GroupJournalEntryItem

INNER JOIN ConsVersRelation on ConsolidationVersionElement = ConsolidationVersionElement

INNER JOIN ConsVers on ConsolidationVersion = ConsolidationVersion and GroupCurrency **=** GroupCurrency

UNION ALL

2VR_S4HARM_GroupJournalEntryItem

INNER JOIN ConsVersRelation on ConsolidationVersionElement = ConsolidationVersionElement

INNER JOIN ConsVers on ConsolidationVersion = ConsolidationVersion and GroupCurrency **<>** GroupCurrency

adding fields ConsolidationVersion and FiscalYearVariant

Projection:

Removing creationdate, creationtime, creationdatetime (the count difference is -1 as we add 2 and remove these 3)

Formula:

The second select does not update the group currency and amount in group currency

Comments:

Need to see if any entries where group currency <> group currency. Potentially GRDC data

Else items in local currency that dont have a translation

Switch to graphical view

3VR_GrpJnlEntry - 3VR_SPOD_R2RGLR_GroupJournalEntryItem1

Purpose:

Union with same source

Source:

2VR_S4HARM_VersionMapping

Union / Join:

2VR_S4HARM_VersionMapping

INNER JOIN ConsGrpStr on ConsolidationVersion = ConsolidationVersion, ConsolidationUnit = ConsolidationUnit and FiscalYearPeriod between FromFiscalYearPeriod and ToFiscalYearPeriod

INNER JOIN ConsGrpStr on ConsolidationVersion = ConsolidationVersion, **Partner**ConsolidationUnit = ConsolidationUnit and FiscalYearPeriod between FromFiscalYearPeriod and ToFiscalYearPeriod andConsolidationGroup = ConsolidationGroup

where PostingLevel = 20 (two-sided elimination entries)

Replacing the ConsolidationGroup from the joined table

UNION ALL

2VR_S4HARM_VersionMapping

INNER JOIN ConsGrpStr on ConsolidationVersion = ConsolidationVersion, ConsolidationUnit = ConsolidationUnit and FiscalYearPeriod between FromFiscalYearPeriod and ToFiscalYearPeriod andConsolidationGroup = ConsolidationGroup

where PostingLevel = 02 or 12 AND RecordType = 0, A, D or E

UNION ALL

2VR_S4HARM_VersionMapping

INNER JOIN ConsGrpStr on ConsolidationVersion = ConsolidationVersion, ConsolidationUnit = ConsolidationUnit and FiscalYearPeriod between FromFiscalYearPeriod and ToFiscalYearPeriod

INNER JOIN ConsGrpStr on ConsolidationVersion = ConsolidationVersion, **Partner**ConsolidationUnit = ConsolidationUnit and FiscalYearPeriod between FromFiscalYearPeriod and ToFiscalYearPeriod andConsolidationGroup = ConsolidationGroup

where PostingLevel = 22 (two-sided elimination entries) AND RecordType = 0, A, D or E

UNION ALL

2VR_S4HARM_VersionMapping

where RecordType = U OR (RecordType = 0 AND PostingLevel in ('', '00', '01', '08', '0C', '0T', '10', '20', '30')

Projection:

Formula:

Comments:

Probably move to Propagation layer

Create as Graphical

- For Group Journal Entry Items with two-sided elimination entries, the consolidation unit and partner consolidation unit need to be assessed along a given consolidation hierarchy on which node in the hierarchy they meet. Above this hierarchy node, the posting needs to be eliminated. Therefore, the posting gets assigned to an elimination member on this hierarchy node.
- For all other Group Journal Entry Items, the elimination member information should be still available to allow showing all postings along one common hierarchy in a report. In this case the elimination member is just to be filled with the consolidation unit if the consolidation unit exists for the chosen consolidation unit hierarchy.

Only at this layer will we add additional datasets like plan and headcoun

Ensure we perform group by when aggregating.....

Type	Code	Tech Name	Root	Logic	Potential Changes
		Headcount			
	2VR_ActPlnItm		ACDOCA/PLAN	2VF_S4HARM_GLAccountLineItem V1 union with the plan data	
VF	3VF_PFSemTag	ProfitLossSemanticTag	ACDOCA/PLAN	Create parameters for FinStatemtVersion and Category Reduce dimensions (need to align to our needs) Add associations	
		SemTagLeadingLedger	ACDOCA/PLAN	see BCT help doc	Dead end
VR	3VR_JEBalTS	JournalEntryBalanceTimeSeries	ACDOCA	Every month includes all postings belonging to this month and all postings from the past, and aggregates the data as cumulative balances Therefore, it excludes all postings with Fiscal Period '000', which can be viewed as balance carry-forward items, which otherwise would lead to double counted values.	Convert SQL to graphical?
VR	3VR_JESTTim3VR_JEBalSTTim	JournalEntryBalanceSemTagTimeSeries	ACDOCA	Every month includes all postings belonging to this month and all postings from the past, and aggregates the data as cumulative balances Therefore, it excludes all postings with Fiscal Period '000', which can be viewed as balance carry-forward items, which otherwise would lead to double counted values.	Convert SQL to graphical?
VR	3VR_JESTTim	JournalEntrySemTagTimeSeries	ACDOCA	Each month shows the changes or postings that occurred in this month. The values of the Financial Data Model Configuration (FinancialDataModelConfiguration) table are not fixed and can be changed by the user. If you define a G/L Account Hierarchy before joining with G/L Account with Semantic Tag (IL), you restrict the data from Journal Entry item Operational View to a single G/L Account Hierarchy by default. This is a requirement for Net Working Capital Time Series Consumption (NetWorkingCapitalTimeSeries).	Convert SQL to graphical?
VF	3VF_Invent	InventoryTimeSeries	ACDOCA	Combines data from "Journal Entry Balance Time Series", "Journal Entry Balance Semantic Tag Time Series" and "Journal Entry Semantic Tag Time Series". Some semantic tag KPIs must include data from the past months, whereas others need to consider only the movements of the relevant months. Every branch introduces a calculated field UnionBranch which is included in some KPIs to check which type of data should be considered. • 'BALANCE' selects data from Journal Entry Balance Time Series, • 'SEMTAGBAL' from Journal Entry Balance Semantic Tag Time Series and • 'SEMTAG' from Journal Entry Semantic Tag Time Series.	
VR	3VR_CashTS	CashBalanceTimeSeries	CashA	Read from CashFlowActualItem, returns cash balance with bank account on End of MonthDate • restrict to bank relevant transactions • add logic for **currency role** • add logic for time series dimensions	SQL to Graphic View?
TL	3TL_CashBalT	TotalCashBalanceTimeSeriesTable	CashA	Dataflow aggregates an interim result from CashBalanceTimeSeries and persists the results for performance. This table is updated on an hourly basis.	
VF	3VF_CashBalC	TotalCashBalanceTimeSeriesCube	CashA	Projection of TotalCashBalanceTimeSeriesTable adding associations	
VF	3VF_CashWk	CashActualFlowByCalendarWeek	CashA	Read from CashLiquidityActualFlow • add logic for **currency role** • Adding country as an attribute of company ? cannot see the logic of creating as a dimension	SQL to Graphic View? Combine with lower layer?

VF	3VF_CashFcst	CashForecastFlow	CashF	Read from CashLiquidityForecastFlow • add logic for **currency role** • Adding country as an attribute of company ? cannot see the logic of creating as a dimension	SQL to Graphic View?

VF	3VF_CashFcstC	CashForecastBalanceFlow	CashF / CashA	Union Actual and Forecast adding associations
				
				• Union Forecast
				  ◦ CashForecastFlow (starting balance)
				  ▪ Filter: read < prior 2 years (all data before previous 2 years)
				  ▪ Formula: amend transdate to day-725 , set RecType = 1 and remove the balance (sum amounts)
				  ◦ CashForecastFlow (2 yrs back and 1 mnth forward)
				  ▪ Filter: read prior 2 years upto month +1 (25 months)
				  ▪ Formula: set RecType = 0 and remove the balance
				• Union Actual
				  ◦ CashActualFlowByCalendarWeek (alias starting balance incorrectly?)
				  ▪ Filter: read < prior 2 years (all data before previous 2 years)
				  ▪ Formula: set RecType = 1 (date is still per week?)
				  ◦ CashActualFlowByCalendarWeek (2 yrs back and 1 mnth forward)
				  ▪ Filter: read prior 2 years upto month +1 (25 months)
				  ▪ Formula: set RecType = 0
					will we have migrated history?

VR	3VR_CashAW	CashActualFlowByCalendarWeek		Read from CashLiquidityActualFlow • add logic for **currency role** • Adding country as an attribute of company ? cannot see the logic of creating as a dimension	SQL to Graphic View?
VT	3VT_CashACWT	CashActualFlowByCalendarWeekTable		Read from CashActualFlowByCalendarWeek and persist for performance? • DF using aggregation (Sum)	DF to Transformation Flow
VF	3VF_CashACW	CashActualFlowByWeek		Reads from CashActualFlowByWeek adding Associations	
VR	3VR_GLAccOps	JournalEntryItemOperationalView	ACDOCA/ BSEG	ACDOCA (GLAccountLineItemLeadingLedger) + BSEG (OperationalAcctgDocItem). 1:N This will add the 3 XREF fields	
VR	3VR_OpsItemTS	JournalEntryOperationalViewTimeSeries	ACDOCA/ BSEG	Reads using SQL, JournalEntryItemOperationalView with inner join on TimeSeriesMonthlyValues to restrict to monthly balances Restricted to Debtors and Creditors and excludes Statistical Items Flag for items that are sales-related or not (IsSalesRelated indicator). Performs the currency role selection	SQL to Graphic View?
	3VR_NWCTSUn	NetWorkingCapitalBalanceTimeSeriesUnion	ACDOCA/ BSEG	Union of: • CashBalanceTimeSeries - just for total cash amount • JournalEntryBalanceTimeSeries - Debtors, Creditors and Stock • JournalEntrySemTagTimeSeries - Net Sales and Cost of Sales • JournalEntryOperationalViewTimeSeries - Revenue and Purchases	SQL to Graphic View?
	3TL_NWCTable	NetWorkingCapitalBalanceTimeSeriesTable	ACDOCA/ BSEG	A dataflow retrieves the data from “Net Working Capital Balance Time Series Union” and aggregates an interim result that is stored in the Net Working Capital Balance Time Series table. When you combine data from multiple areas, this may result in complex KPIs on top and may lead to serious performance issues, as live data from the inbound layer is processed to calculate the KPIs. • To prevent this, an interim result is stored and updated hourly via the Net Working Capital Persist Task Chain task chain (SAP_FI_TC_NetWorkingCapitalPersist). • Also updated by DF NetWorkingCapitalRolling reading from NWCRolling12MonTimeSeries (Append using Aggregation with MAX (YTD?))	Replace DF with Transformation Flow
VF	3VF_NWCCube	NetWorkingCapitalBalanceTimeSeriesCube	ACDOCA/ BSEG	Just a projection (removing Amount in Group Currency?) on NetWorkingCapitalBalanceTimeSeriesTable	Add Grp Curr?

VR	3VR_OpsItemPr	OperationalAcctDocItemProj	BSEG	Convert SQl to Graphical view (just restricting the fields read from OperationalAcctgDocItem)	SQL to Graphic View?
VR	3VR_APItmBase	APARLineItemBase	ACDOCA/ BSEG	Read JournalEntryItemOperationalView Returns cleared vendor and customer items that are sales-related, for example, invoice and credit memo, and excludes the statistical items and items from recurring documents. • Restrict to **Leading Ledger** • Restrict to **DocType** (Debtor / Creditor) • Currency sign correction • Create parameter (key date). Includes those items that have been posted counting from the value of the input parameter and still not cleared at the point of Key Date.	SQL to Graphic View?
VR	3VR_APARWR	APAROpenItemWRJ	ACDOCA/ BSEG	Reading from APARLineItemBase and restricting by joining on OperationalAcctDocItemProj to s**ales related, doc type <> V/P , Inv ref not Null** Selects open items with an invoice reference (payments) When calculating arrears days for partial payment cases for base invoice items, the net due date of the reference item would be used instead of the net due date of the base item.	SQL to Graphic View?
VR	3VR_APARNorj	APAROpenItemNORJ	ACDOCA/ BSEG	Reading from APARLineItemBase and restricting to **doc type V/P, Inv ref is Null** Selects open items with no invoice reference (partial payments). The net due date of the base item is retrieved for further calculation.	SQL to Graphic View?
VR	3VR_APARUnion	APARLineItemUnion	ACDOCA/ BSEG	Links AP/AR Open Item with the Reference Join (APAROpenItemWRJ) view and the AP/AR Open Item no Reference Join (APAROpenItemNORJ) view, which retrieves dimensions and amounts fields for both direct payment and partial payment cases of open items for further calculation.	SQL to Graphic View?
VR	3VR_APAROpen	APAROpenItem		Reading from APARLineItemUnion • derive currency role • calculates the days between the key date and net due date of open items and • expose the minus as “NetDueArrearsDays” • “ItemCategory” field is added according to “FinancialAccountType” to distinguish AP and AR items for the Working Capital Dashboard.	SQL to Graphic View? Please dont use OIDs Anymore. Product and CostCenter are exceptions right now.
VF	3VF_APAROpenC	APAROpenItemC	ACDOCA/ BSEG	Adding Associations	
VF	3VF_DSOBase	DaysSalesOutStdgDrctBase	ACDOCA/ BSEG	Reading from JournalEntryItemOperationalView • Restrict to **Leading ledger, Sales related, Account Type = Debtor, DocCat <> null, exclude reversals** • Create **parameter** for key date (posting and clearing dates) • **Calculations** for Clearing days, Net due days, clearing date minus 1 year as preceding year	SQL to Graphic View? prior year?
VR	3VF_DSOAgg	DaysSalesOutStdgDrctLineItem	ACDOCA/ BSEG	Nested select from DaysSalesOutStdgDrctBase (for calculations before group by?) • derive clearing year month and subsequent Year Month (2025-01 as 202501) - why not in previous layer? • add logic for **currency roles** Why is it called line item when aggregated?	SQL to Graphic View?
VR	3VF_DSOTS	DaysSalesOutStdgDrctLineItemTmeSers	ACDOCA/ BSEG	Nested select from CalendarMonth with left outer join on DaysSalesOutStdgDrctLineItem To perform if before aggregation?	SQL to Graphic View? perform string on lower level?
VF	3VF_DSOCube	DSODrctLineItem	ACDOCA/ BSEG	Add associations	

VF	3VF_DPOBase	DaysPyblOutStdgDrctBase	ACDOCA/BSEG	Reading from JournalEntryItemOperationalView • Restrict to **Leading ledger, Sales related, Account Type = Creditor, DocCat <> null, exclude reversals** • Create **parameter** for key date (posting and clearing dates) • **Calculations** for Clearing days, Net due days, clearing date minus 1 year as preceding year	SQL to Graphic View? prior year?
VR	3VF_DPOAgg	DaysPyblOutStdgDirect	ACDOCA/BSEG	Nested select from DaysPyblOutStdgDrctBase (for calculations before group by?) • derive clearing year month and subsequent Year Month (2025-01 as 202501) - why not in previous layer? • add logic for **currency roles** Why is it called line item when aggregated?	SQL to Graphic View?
VR	3VF_DPOTS	DaysPyblOutStdgDrctLineItemTmeSers	ACDOCA/BSEG	Nested select from CalendarMonth with left outer join on DaysPyblOutStdgDrctLineItem To perform if before aggregation?	SQL to Graphic View? perform string on lower level?
VF	3VF_DPOCube	DPODrctLineItem	ACDOCA/BSEG	Add associations	
VR	3VR_OTPBase	OnTimePaymentRateBase	ACDOCA/BSEG	Reading from JournalEntryItemOperationalView, returns cleared vendor items • Restrict to **Leading ledger, Sales related, Account Type = Creditor, DocCat <> null, exclude reversals** • Create **parameter** for key date (posting and clearing dates) includes those items that have been cleared in the last 24 months counting from the value of the input parameter • **Calculations** for changing signs and counting - counts the number of invoice line items as InvoiceNumber and marks the invoice items by the date comparison of ClearingDate and NetDueDate. Invoice items whose ClearingDate before NetDueDate would be counted as OntimeInvoiceNumber while for items whose ClearingDate after NetDueDate would be counted as OverDueInvoiceNumber.	SQL to Graphic View? Time range as 2 years
VR	3VR_OTPAgg	OnTimePaymentRateSum	ACDOCA/BSEG	Nested select from OnTimePaymentRateBase (for calculations before group by?) • add logic for **currency roles**	SQL to Graphic View?
VF	3VF_OTPCube	OnTimePaymentRate	ACDOCA/BSEG	Add associations	
VR	3VR_DiscBase	APCshDiscRealizedBase	ACDOCA/BSEG	Reading from OperationalAcctgDocItem • concat YearMonth (2025-01 as 202501) • correct signage (*-1) • Add parameter for key date (clearing) • Restrict to leading ledger, Creditors and cleared doc's (plus others)	SQL to Graphic View?
VR	3VR_DiscCnv	APCshDiscRealizedConvert	ACDOCA/BSEG	Reading from APCshDiscRealizedBase, returns cleared vendor items • As there is **no direct global currency amount for discount-related amount,** transaction currency and transaction currency amount retrieved used here, and global currency is retrieved from the join with CompanyCodeCurrencyRole by company code and currency role for further currency transform. Other measures like "TakenCshDiscInTransacCrcy" and AmountInTransactionCurrency" can be directly retrieved from the invoice items • conversion type M and PostingDate as reference date	SQL to Graphic View?
VR	3VR_DiscAgg	APCshDiscRealized	ACDOCA/BSEG	Nested select from APCshDiscRealizedConvert (for calculations before group by?) • add logic for **currency role** • Add month	SQL to Graphic View?
VF	3VF_DiscCube	APCshDiscRealizedC	ACDOCA/BSEG	Add associations	

		Assets		Read from Acdoca/Bseg • restrict to asset account (SubLedAccLineItemType = 07940 or between 07000 and 07209 or between 07900 and 0796 • union the depreciation areas (I_FxdAstStatisticalLineItem) • consider including AssetBalanceWithTmpPlanVal (no data at present)	

Reporting Layer

Type	Code	Tech Name	Logic	Functional Spec
MA	4MA_PL_SemTag	4MA_R2RGLR_SemanticTags	ProfitLossSemanticTagKPIs Currency handling: select single based on role Quantity Conversion: Measures: 19 restricted by Semantic tags and simple calculations Variables: FinStatemtVersion, Category, Date	1564 682
MA	4MA_Invent	InventoryTimeSeries	Provides a balance and movements for the entire TB (not sure why called inventory) - includes semantic tags Dimensions: a limited set - will have to review if adequate Currency handling: select single based on role Quantity Conversion: Measures: 19 restricted by Semantic tags and simple calculations Variables: FinStatemtVersion, Category, Date	
MA	4MA_NWC	NetWorkingCapitalTimeSeries	Read from NetWorkingCapitalBalanceTimeSeriesCube. The goal is to be able to calculate moving averages for specific KPI's It combines data from different areas such as Cash, Accounts Receivables, Accounts Payables, and Inventory. When you combine data from multiple areas, this may result in complex KPIs on top and may lead to serious performance issues, as live data from the inbound layer is processed to calculate the KPIs. To prevent this, an interim result is stored and updated hourly via the Net Working Capital Persist Task Chain task chain	
MA	4MA_ARAP	ARAPOpenItem	It provides overdue payables/receivables, future payables/receivables, and total payables/receivables in the point of Key Date. This analytical model distinguishes open items to overdue and future items by the comparison of posting date and net due date of open invoice items.	
MA	4MA_DSO	DSODrctLineItem	It provides per calendar month the measures DSO, Best Possible DSO and the DSO 12 months before. Days Sales Outstanding (DSO) is to measure the time elapsed between the completion of a sale and the collection of the revenue, that is, the time taken to process accounts receivable items. This analytical model calculates DSO according to the direct calculation method. The direct calculation method is based on original documents. The period of time between posting an invoice (posting date) and receiving the payment for the invoice (clearing date) is calculated for the relevant document line item to provide accurate results.	
MA	4MA_DPO	DPODrctLineItem	This model provides measures DPO and corresponding DPO 12 months before according to the direct calculation method. Direct Days Payables Outstanding (DPO) is calculated based on the period of time between posting an invoice (posting date) and actual paying for the invoice (clearing date) along with the invoice amount.	
MA	4MA_CashBal	CashBalanceTimeSeries	Provides cash balance with bank account on End of MonthDate. The cash balance amount is represented by two currencies, that is, Company Code Currency and Global Currency. Cash Balance also contains the transaction currency amount and bank information, as it can be drilled down by Transaction Currency and bank dimension. Reconcile to I_CashFlowCube	more dmensions?
MA	4MA_CashFrcst	CashForecastBalncFlw	Consumption View for Forecast Cash Balance & Flow	
MA	4MA_CashWeek	CashActualFlowByWeek	Reads from view of the same name CashActualFlowByWeek	
MA	4MA_DiscAP	APCashDiscount	This model provides measures realized discount, lost discount, discounted spend, and discount realization rate, which is calculated based on the discount-related fields on invoice line items along with the invoice amount.	

MA	4MA_OnTime	OnTime Payment Rate	This model provides measures on-time payment rate from year to Key Date and its comparison rate of the whole last calendar year based on the date comparison between actual paying for the invoice (clearing date) and proposed payment date for the invoice (net due date) along with the invoice number count.	
MA		Assets	This will either be Acdoca or Acdoca/Bseg base with depreciation areas and fixed asset master data Logic to emulate I_AssetDepreciationBalanceCube with less parameters	293

MA	4MA_Ins	Insurance	Corporate Insurance Management is a process managed by a central global insurance team which relies on data provided by each site with ongoing business operations for obtaining quotations of annual insurance premiums from third-party insurance providers for the subsequent premium cycle. Various forward-looking financial data need to be provided to the corporate insurance team by each site in annual intervals.
			
			• Fixed Assets
			  ◦ Equipments
			  ▪ Owned
			  ▪ Leased (excl. the ones that retire before the enxt premium cycle starts)
			  ◦ Buildings
			  ▪ Owned
			  ▪ Leased (excl. the ones that retire before the enxt premium cycle starts)
			• Peak Stock
			  ◦ Expected peak stock over the next premium cycle period.
			• Contribution Margin
			  ◦ Expected contribution over the next premium cycle period.
			• Project Costs
			  ◦ Expected CAPEX that become Fixed Assets within the next premium cycle period.
				1321

MA	4MA_Rest	Restructuring	SAC Planning model integrated with ProfitLossSemanticTag • Integration with Successfactors to pull employee-relevant data (e.g. Standard Costs, grading, actual leaving date, etc.) • Facilitate upload of external data (e.g. standard costs for non-SAP entities) via Excel upload interface or similar • Integration with S/4 HANA to pull prior-period actuals and to push final values back to S/4 HANA. • Data feeds from Group Reporting to facilitate reconciliation of financial plan figures • To include Site	1320
MA	4MA_HSE	HSE	SAC Planning model integrated with ProfitLossSemanticTag • Facilitate upload of external data (e.g. standard costs for non-SAP entities) via Excel upload interface or similar • Integration with S/4 HANA to pull prior-period actuals and to push final values back to S/4 HANA. • Data feeds from Group Reporting to facilitate reconciliation of financial plan figures • Net present value calculations for long-term HSE provisions based on interest rates maintained in the system • To include Site	1320
MA	4MP_SKF	SKF	SKF will be calculated in SAC and retracted to both S/4 systems based on company code.	1843
MA	4MP_Tax	Tax	Ability to plan for tax and post results into S/4 as journal entries	

4MA_R2RGLR_SemanticTags

Supports:

- ERP-682 Tax
- ERP-1321 Corporate insurance

Includes technical details for:

- Post-aggregation calculations
- Restricted measures
- Time-based analysis and drill-through

Calculated Measures (Post Aggregation Calculations / exception aggregation etc)

Report Field Description	SAP Table-Field Name / process	Comments / Calculation / Formula / Restriction dimensions and values	Aggregation of data	Example SAP field data
Inverted amount	Amount In Global Currency * -1		Calculated	
Amortization of Intangible Asset	Inverted amount when Semantic Tag = 'AMORINASST'		Restricted	
COGS	Inverted amount when Semantic Tag = 'RECO_COS'		Restricted	

Depreciation of Tangible Assets	Inverted amount when Semantic Tag = 'DPRTASSET'		Restricted	
Gross Revenue	Inverted amount when Semantic Tag = 'GROSS_REV'		Restricted	
Income Tax	Inverted amount when Semantic Tag = 'INCOMETAX'		Restricted	
Net Income	Inverted amount when Semantic Tag = 'PL_RESULT'		Restricted	
Net Revenue	Inverted amount when Semantic Tag = 'RECO_REV'		Restricted	
Employee Expense	Amount in Global Currency when Semantic Tag = 'EMPLEXP'		Restricted	
Operating Expense	Inverted amount when Semantic Tag = 'OPEREXP'		Restricted	
Recognized Revenue	Inverted amount when Semantic Tag = 'RECO_REV'		Restricted	
Gross Profit	Recognized Revenue + COGS		Calculated	
Gross Margin	(Gross Profit / Recognized Revenue) * 100		Calculated	
Total Operating Expense	COGS + Operating Expense		Calculated	
Operating Profit	Recognized Revenue + Total Operating Expense		Calculated	

Restricted Measures

tbd

Currency Conversions

tbd

Variables

Field	Required/Optional	Scope	Default	Comment
Periods (Weeks / Months / Quarters)	Optional	Interval (Date or Fiscal Period)	Default = last xxxxx	Applied using CreationDate or CreationDateTime

Data access controls

4MA_R2RGLR_Account Balance & Movements

Supports:

- ERP-1564 Balances
- cash flow

Calculated Measures (Post Aggregation Calculations / exception aggregation etc)

Report Field Description	SAP Table-Field Name / process	Comments / Calculation / Formula / Restriction dimensions and values	Aggregation of data	Example SAP field data

Amount in Currency Role Currency (AmountInCurrencyRoleCurrency)	Source measure for every measure described here. This measure distinguishes between Amount in Global Currency and Amount in Company Code Currency.			
Capital Employed (CapitalEmployed)	TotalAssets-CurrentLiabilities			
Cash Asset Ratio (CashAssetRatio)	Liquidity/CurrentLiabilities based on semantic tag 'CSH_CSHEQV' and 'CURLIABEQU'.			
Cash Asset Ratio Last (CashAssetRatioLast)	CashAssetRatio with exception aggregation LAST			
Cost Of Sales (CostOfSalesAmount)	Shows SemanticTag = 'RECO_COS' assigned movements within a month. UnionBranch = 'SEMTAG'.			
Current Liabilities – LAST (CurrentLiabilities)	Displays SemanticTag = 'CURLIABEQU' assigned balances cumulated on month level with exception aggregation LAST. UnionBranch = 'SEMTAGBAL'.			
EBIT (EBIT)	NetIncomeAmount-(IncomeTax+Interest)			
Income Tax (IncomeTax)	Displays SemanticTag = 'INCOMETAX' assigned movements within a month. UnionBranch = 'SEMTAG'.			
Interest (Interest)	Displays SemanticTag = 'INTEREST' assigned movements within a month. UnionBranch = 'SEMTAG'.			
Liquidity – LAST (Liquidity)	Displays SemanticTag = 'CSH_CSHEQV' assigned balances cumulated on month level with exception aggregation LAST. UnionBranch = 'SEMTAGBAL'.			
Marketable Securities – LAST (MarketableSecuritiesAmount)	Displays SemanticTag = 'MARK_SEC' assigned balances cumulated on month level with exception aggregation LAST. UnionBranch = 'SEMTAGBAL'.			
Net Income (NetIncomeAmount)	Displays SemanticTag = 'PL_RESULT' assigned movements within a month. UnionBranch = 'SEMTAG'.			
Number Of Days In Month (NumberOfDaysInMonth)	Displays the number of days of every month based on Time Series Date that provides the end date of a month.			
Numbers Of Days In Month Max (NumbersOfDaysInMonthMax)	MAximum Number of Days In Month to provide the number of days of the selected time range.			
Quick Ratio (QuickRatio)	TotalLiquidityLast/CurrentLiabilities			
ROCE (ROCE)	Refers to a financial ratio that assesses the profitability and capital efficiency of a company by dividing EBIT by Capital Employed. Capital Employed = Total Assets - Current Liabilities, which are based on Semantic Tag 'ASSET' and 'CURLIABEQU'. Formula: EBIT/CapitalEmployed			
ROCE Last (ROCELast)	LAST of ROCE			
Total Assets – LAST (TotalAssets)	Shows SemanticTag = 'ASSET' assigned balances cumulated on a monthly basis with exception aggregation LAST. UnionBranch = 'SEMTAGBAL'.			
Total Inventory (TotalInventory)	Displays data assigned with TransactionTypeDetermination = 'BSX' cumulated on a monthly basis. UnionBranch = 'BALANCE'.			
Total Inventory Average (TotalInventoryAverage)	Average of Total Inventory based on Time Series Date that provides the end date of a month.			
Total Liquidity (TotalLiquidity)	Displays your Total Liquidity based on 'Cash and Cash Equivalence' (Semantic Tag 'CSH_CSHEQV'), 'Marketable Securities' (Semantic Tag 'MARK_SEC'), and 'Accounts Receivables'. Accounts Receivables includes all open invoices up to the current month (Financial Account Type = 'D' and isOpen = 'X'). Formula: SemanticTag = 'CSH_CSHEQV' or (SemanticTag = 'ACCREC2') or SemanticTag = 'MARK_SEC'.			
Total Liquidity Last (TotalLiquidityLast)	Displays Total Liquidity balances cumulated on a monthly basis with exception aggregation LAST.			

4MA_R2RGLR_APAROpenItems

Supports:

- ERP-

Includes technical details for:

- Time-based analysis of Open Items

Calculated Measures (Post Aggregation Calculations / exception aggregation etc)

Report Field Description	SAP Table-Field Name / process	Comments / Calculation / Formula / Restriction dimensions and values	Aggregation of data	Example SAP field data
Amount		Currency derived using currency roles	SUM	1

4MA_R2RGLR_APCashDiscount

Supports:

- ERP-

Includes technical details for:

- realized discount, lost discount, discounted spend, and discount realization rate, which is calculated based on the discount-related fields on invoice line items along with the invoice amount.

Calculated Measures (Post Aggregation Calculations / exception aggregation etc)

Report Field Description	SAP Table-Field Name / process	Comments / Calculation / Formula / Restriction dimensions and values	Aggregation of data
Discount realisation rate		$$U = \frac{\sum_{i=1}^{n} T_i}{\sum_{i=1}^{n} O_i} * 100\%$$ Where $U =$ Cash discount utilization ratio from a start date specified in the P_StartDate input parameter till today $T_i =$ Cash discounts taken from an invoice in this period $O_i =$ Cash discounts offered for an invoice in this period	SUM
On time payment rate		OntimeInvoiceNumber / InvoiceNumber	
Overdue payment rate		OverDueInvoiceNumber / InvoiceNumber	

4MA_R2RGLR_Depreciation

Supports:

- ERP-293 - Depreciation Areas

Includes technical details for:

- Post-aggregation calculations in SAC
- Restricted measures by
- Time-based analysis

Calculated Measures (Post Aggregation Calculations / exception aggregation etc)

Report Field Description	SAP Table-Field Name / process	Comments / Calculation / Formula / Restriction dimensions and values	Aggregation of data	Example SAP field data
			SUM	1

4MA_R2RGR_GrpJrnlMtrxElm

Supports:

- ERP-

Includes technical details for:

- Post-aggregation calculations in SAC (e.g., hours conversions, ratios, availability formulas)
- Restricted measures by breakdown / downtime flags and status
- Time-based analysis (malfunction start/end, creation dates) and drill-through to Maintenance Notification

Dimensions & Measures are defined in the Functional Specification under “Dimensions & Measures: Requirements View”; the analytical model exposes those fields at notification grain without pre-aggregation.

Dimensions (significant only)

Assume that Semantic Tags cannot be used

Attribute for discontinued ops?

Dimension	Design	Variable	Parameter
Consol COA		Mandtory	
Consol Group		Mandtory	
Version		Mandtory	
FYPeriod		Mandtory	
PrfctHier			Mandtory
SegmentHier			Mandtory
UnitHier			Mandtory
Key date			Mandtory
Ref Date			Mandtory
Seg for Elim	0		
Segment	1		
Proft Centre elim	2		
Profit Centre	3		
Consol Unit	4		
FinStatItem	5		
Doc Type	6		
SubItem	7		
Elim Member	8		
Supplier	9		
Cost Centre	10		

Cont Area	11		

Missing: Asset

Calculated Measures (Post Aggregation Calculations / exception aggregation etc)

Consider using a structure for Current and Prior, movement(variance)

Report Field Description	SAP Table-Field Name / process	Comments / Calculation / Formula / Restriction dimensions and values	Aggregation of data	Example SAP field data
Transaction Amount			SUM	
Company Amount			SUM	
Group Amount			SUM	
Quantity			SUM	

Outbound Layer