

# RE-FX for CAPEX

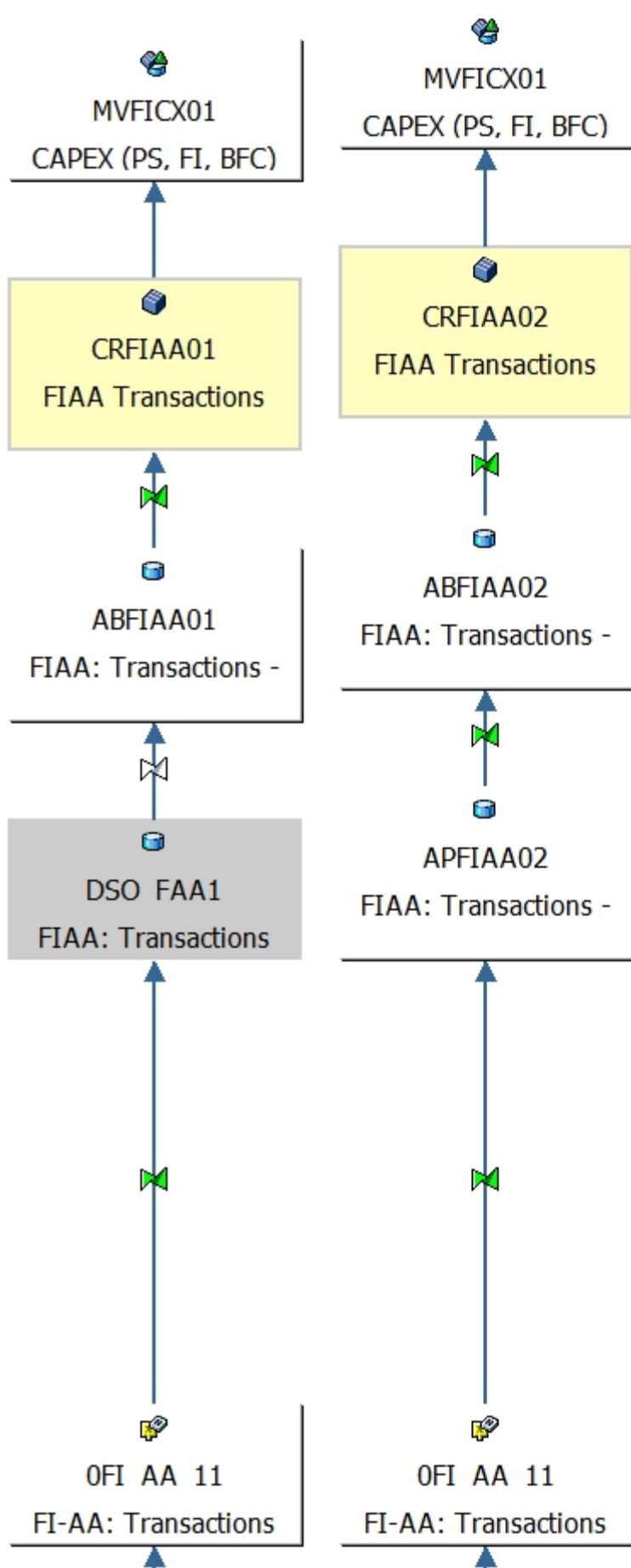
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## Access Management

See [Technical Documentation - CAPEX Analysis report](#)

## DataFlow

### Overview

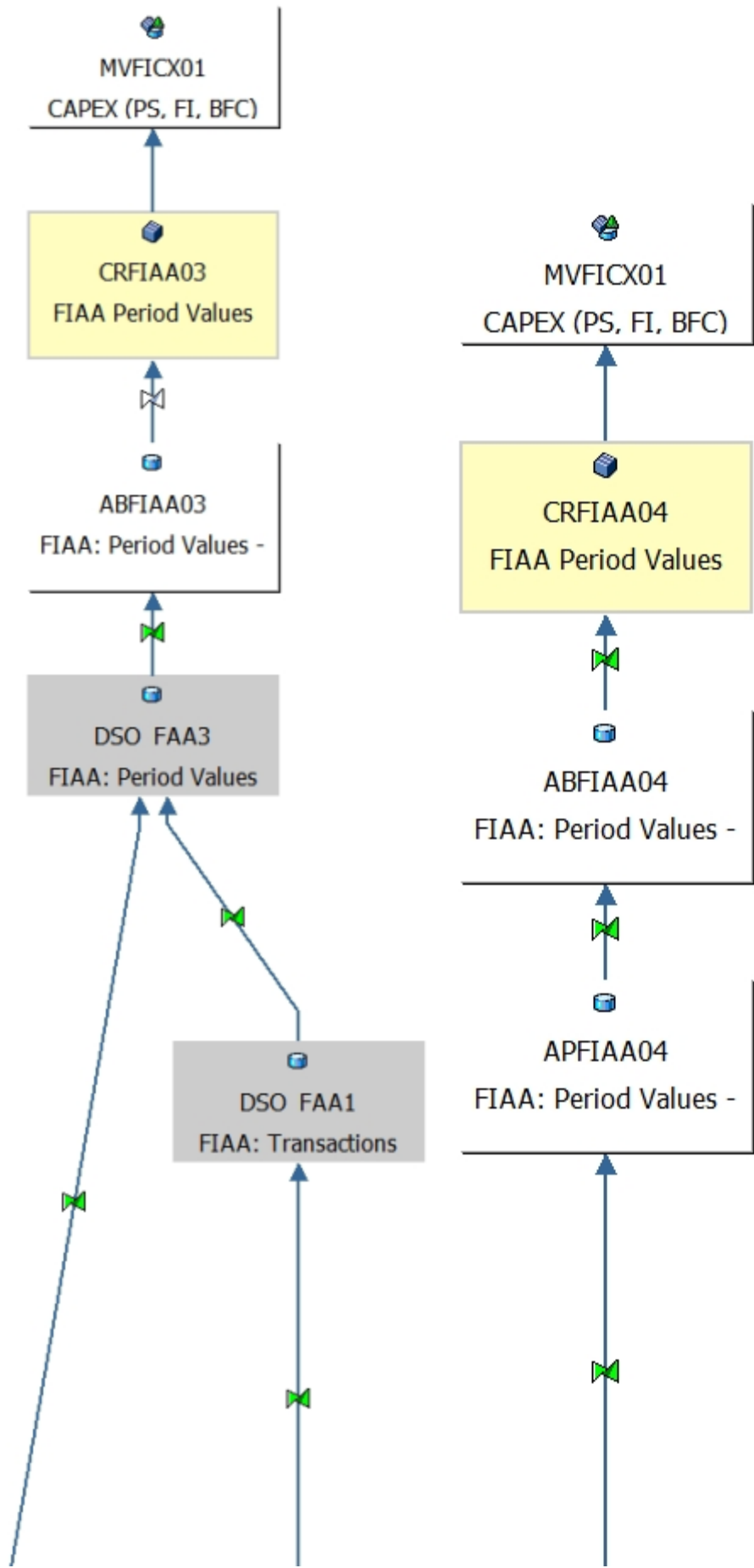


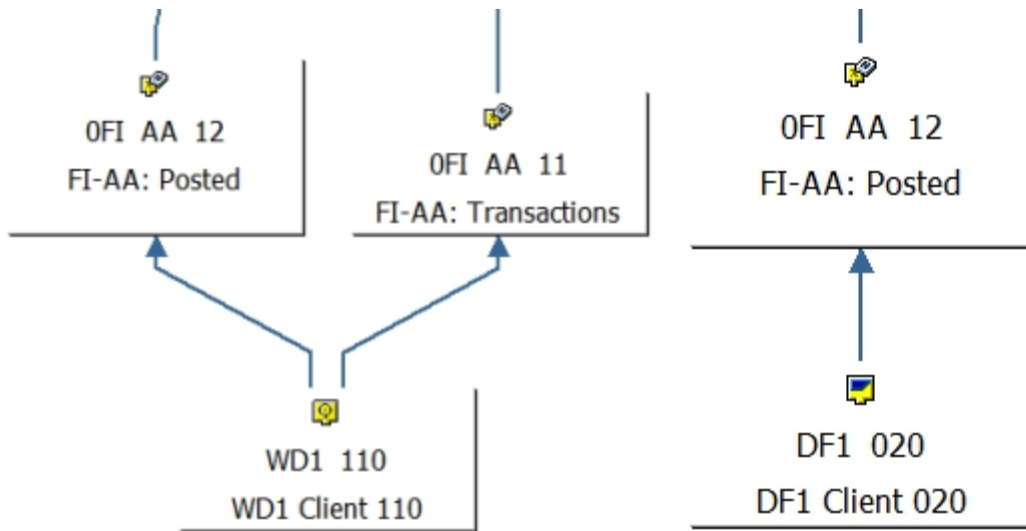


WD1 110  
WD1 Client 110



DF1 020  
DF1 Client 020





### Objective of the application

This page provides all the technical and detailed documentation concerning the "RE-FX" application in BW. IFRS 16 is effective for annual reporting periods beginning on or after 1st January 2019, with earlier application permitted (as long as IFRS15 is also applied). With IFRS 16, it is no longer required to treat financial and operational leases differently from an accounting perspective and therefore this new leasing standard eliminates nearly all "off-balance" sheet accounting for leases. The goal of the new lease accounting rules is to increase transparency and to enable the users of financial statements to assess the impact of their organization's leases on the financial position and cash flow directly from its balance sheet. To meet that objective, a lessee should recognize assets and liabilities arising from a lease.

### Technical Rules on Workbench

#### ECC changes

#### Data Source – Master Data

Enhanced ORECONTRACT\_ATTR data source, added new fields, and written logic in class "Z0RECONTRACT\_ATTR" under "DATA\_TRANSFORM" method.

## BI Service API: Display DataSource ORECONTRACT\_ATTR



General Extraction **fields**

FieldDefinitions

Pos.	Field name	Data element	Property	Tran...	Sele...	Sel. Optio...	Key ...	...	Inve...	Only...
42	RNTYPE	RETMRNTYPE		<input checked="" type="checkbox"/>	<input type="checkbox"/>	0	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>
43	RNAUTTYPE	RETMRNAUTTYPE		<input checked="" type="checkbox"/>	<input type="checkbox"/>	0	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>
44	RNENDNEXT	RETMRNENDNEXT	A	<input type="checkbox"/>	<input type="checkbox"/>	0	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>
45	ZZPOSID	PS POSID	P	<input checked="" type="checkbox"/>	<input type="checkbox"/>	0	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>
46	ZZC_VENDID	LIFNR	P	<input checked="" type="checkbox"/>	<input type="checkbox"/>	0	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>
47	ZZC_AT_MAN2	ZC AT MAN2	P	<input checked="" type="checkbox"/>	<input type="checkbox"/>	0	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>
48	ZZC_ASSET2	ZC ASSET2	P	<input checked="" type="checkbox"/>	<input type="checkbox"/>	0	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>
49	ZZC_ZZCONV	ZZ1F CONV	P	<input checked="" type="checkbox"/>	<input type="checkbox"/>	0	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>
50	ZZC_ZZVENDID	ZZ1F VENDID	P	<input checked="" type="checkbox"/>	<input type="checkbox"/>	0	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>
51	ZZPROBABLEEND	RECEPROBABLEEND	P	<input checked="" type="checkbox"/>	<input type="checkbox"/>	0	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>
52	ZZNOTE	RECENOTE	P	<input checked="" type="checkbox"/>	<input type="checkbox"/>	0	<input type="checkbox"/>		<input type="checkbox"/>	<input checked="" type="checkbox"/>
53	ZZFREQUENCY	RECFREQUENCY	P	<input checked="" type="checkbox"/>	<input type="checkbox"/>	0	<input type="checkbox"/>		<input type="checkbox"/>	<input checked="" type="checkbox"/>
54	ZZFREQUENCYUNIT	RECFREQUENCYUN...	P	<input checked="" type="checkbox"/>	<input type="checkbox"/>	0	<input type="checkbox"/>		<input type="checkbox"/>	<input checked="" type="checkbox"/>
55	ZZFREQUENCYUNITT		P	<input checked="" type="checkbox"/>	<input type="checkbox"/>	0	<input type="checkbox"/>		<input type="checkbox"/>	<input checked="" type="checkbox"/>
56	ZZCONDVALUEREFER	RECDCONDVALUERE...	P	<input checked="" type="checkbox"/>	<input type="checkbox"/>	0	<input type="checkbox"/>		<input type="checkbox"/>	<input checked="" type="checkbox"/>
57	ZZCONDVALUEREFERFERT		P	<input checked="" type="checkbox"/>	<input type="checkbox"/>	0	<input type="checkbox"/>		<input type="checkbox"/>	<input checked="" type="checkbox"/>

### Class

Class Builder: Display Class Z0RECONTRACT\_ATTR

Class/Interface: Z0RECONTRACT\_ATTR Implemented / Active

Properties Interfaces Friends Attributes **Methods** Events Types Aliases

Method	Level	Visibility	Me...	Description
DATA_TRANSFORM	Instance Method	Public		DATA_TRANSFORM

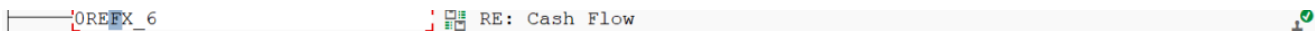
### Data Source – Transaction Data

Data Source - 0REFX\_6

Activated 0REFX\_6 from standard SAP business content in both PF1 and WP1 sources.

Datasource : 0REFX_6	
Description	RE: Cash Flow
Datasource Type	Transaction Data Extractor
Application	-
Delta Process	Full Load (Delta possible by using a DSO)
Extraction Method	Based on Function Module (Complete Reference)
Extractor	REIS_CASHFLOW_TRAN_GET
Extractor Structure	REIS_CASHFLOW_TRAN
Source Tables (Function Module)	REIS_CASHFLOW_TRAN_GET (Function Module)

ODP enabled data source only in WP1 not in PF1. Prerequisite and reason being for having ODP enablement is, source system must be on EHP8.



## BW Changes

### Info Area in BW

Flexible Real Estate Management (IA\_REFX) is the newly created info area in BW system. All the newly created objects for RE-FX, like Info objects, DSOs, Cubes and corresponding data flows are created under this info area.

- ▼ ◆ Real Estate Management
  - ▼ ◆ Flexible Real Estate Management
    - ◆ Flexible Real Estate Management - Master Data
    - ▼ ◆ Flexible Real Estate Management - Transactional Data
      - ◆ Flexible Real Estate Management Propagation Layer
      - ◆ Flexible Real Estate Management Business Transfer Layer
      - ◆ Flexible Real Estate Management Reporting Layer

- IA\_RE
- IA\_REFX
- IA\_REFX\_MD
- IA\_REFX\_TD
- IA\_REFX\_PROPAGATION
- IA\_REFX\_BUSINESS\_TRANSFORMATIO
- IA\_REFX\_REPORTING\_LAYER

### ODP Source System

There is a new ODP system created in BW named WP1\_ODP. Using this ODP source system data is being extracted using SAP's new ODP mechanism, which give more flexibility in terms of connectivity and data extraction.

**Note:** Only WP1 data is extracted using ODP connection. Where, PF1 is still using the RFC connection and not ODP connection.

Source Systems	Tech. Name	Execute Function	O...	Object Ir
➤ BW	BW	Create...		
➤ SAP	SAP	Create...		
➤ ODP - BW	ODP_BW	Create...		
▼ ODP - SAP (Extractors)	ODP_SAP	Create...		
▪ ARINSO Development system	DP9_100	Display DataSour...		SAPI
▪ WD1	<b>WD1_ODP</b>	Display DataSour...		SAPI

### Info Objects

Info object Contract (C\_RECONTR) is enhanced with new attributes in BW for this RE-FX data flow under info area IA\_REFX\_MD.

<ul style="list-style-type: none"> <li>▼ Flexible Real Estate Management <ul style="list-style-type: none"> <li>▼ Flexible Real Estate Management - Master Data <ul style="list-style-type: none"> <li>➤ Business Partner</li> <li>➤ Cash Flow Status</li> <li>➤ Contract</li> <li>➤ Contract - Affiliate</li> <li>➤ Contract Number</li> <li>➤ Contract Type</li> <li>➤ Contract: 1st Business Partner</li> <li>➤ Contract: 1st Partner Role</li> <li>➤ Contract: 2nd Business Partner</li> <li>➤ Contract: 2nd Partner Role</li> <li>➤ Real Estate: BP Role</li> </ul> </li> </ul> </li> </ul>	<p><b>IA_REFX</b></p> <p>IA_REFX_MD</p> <p>C_BPARTNR</p> <p>OCFSTATUS</p> <p>C_RECONTR</p> <p>C_RECTRAF</p> <p>C_VERTNR</p> <p>C_CONTRTY</p> <p>C_CONTBP1</p> <p>C_CTRROL1</p> <p>C_CONTBP2</p> <p>C_CTRROL2</p> <p>C_REBPROL</p>
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### Display Characteristic C\_RECONTR: Details

Version Comparison | BI Content | C\_RECONTR

Characteristic: C\_RECONTR

Long Description: Contract

Short Description: Contract

Version: Active | Saved | Object Status: Active, executable

General | Business Explorer | Master Data/Texts | Hierarchy | **Attributes** | Compounding

Delete Master Data with Orecordmode | Navigation Attribute InfoProvider

Attribute	Ve...	Long Description	Ty.	Tl...	In...	Or...	Na...	Au...	Te...	Navigation Att. Description	Nav. Attribute ...	Navigation Attrib. Name
C_AT_MAN2	▲	Main Asset Number	NAV			0			✓	Main Asset Number	Main Asset Num.	C_RECONTR_C_AT_MAN2
C_ASSET2	▲	Asset Sub-number	NAV			0			✓	Asset Sub-number	Asset Sub numb.	C_RECONTR_C_ASSET2
C_ZZCONV	▲	Convergence ID	NAV			0			✓	Convergence ID	Convergence ID	C_RECONTR_C_ZZCONV
C_ZZVENDI	▲	Vendor Contract ID	NAV			0			✓	Vendor Contract ID	Vendor Contract	C_RECONTR_C_ZZVENDI
C_COSTCTR	▲	Cost Center	NAV			0			✓	Cost Center	Cost Center	C_RECONTR_C_COSTCTR
C_FUNCT_1	▲	1 Organisation	NAV			0			✓	1 Organisation	1 Organisation	C_RECONTR_C_FUNCT_1
C_FUNCT_2	▲	2 Function	NAV			0			✓	2 Function	2 Function	C_RECONTR_C_FUNCT_2
C_FUNCT_3	▲	3 Sub-function Grouping	NAV			0			✓	3 Sub-function Grouping	3 Sub-funct Gro.	C_RECONTR_C_FUNCT_3
C_FUNCT_4	▲	4 Sub-function	NAV			0			✓	4 Sub-function	4 Sub-function	C_RECONTR_C_FUNCT_4
C_PROJ_2	▲	Project Definition	NAV			0			✓	Project Definition	Project Definition	C_RECONTR_C_PROJ_2
C_ASSCLAS	▲	Asset Class	NAV			0			✓	Asset Class	Asset Class	C_RECONTR_C_ASSCLAS

The enhanced info object Contract (C\_RECONTR) is added with attributes and used in data flows of RE-FX and FI-GL.

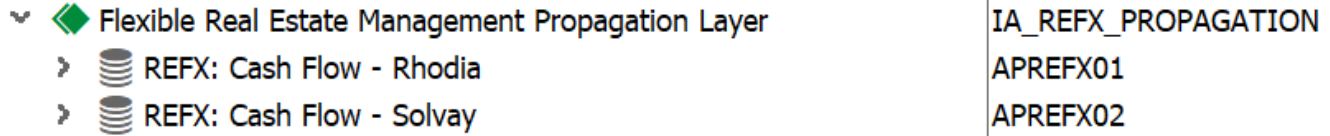
Below are the info objects created and added as attributes of C\_RECONTR.

Created new IOBJs Asset Sub-number (C\_ASSET2), Convergence ID (C\_ZZCONV), Vendor Contract ID (C\_ZZVENDI), Valuation memo (C\_VALMEMO), Frequency (C\_FREQUEN), Frequency unit (C\_FREQUUN), Frequency (C\_VALREF). Also added Vendor number (C\_VENDID), Main Asset number (C\_AT\_MAN2) as attributes of Contract (C\_RECONTR).

## ADSOs

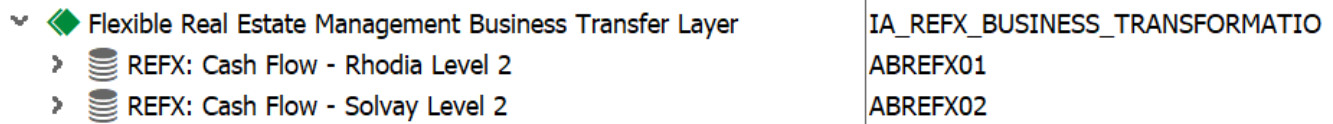
There are four ADSOs created for RE-FX.

### Propagation layer



### Business Transformation Layer

Two ADSOs (ABREFX01/02) as Business transformation layer



K\_REPAYMT and K\_ACCLINT new KF have been created and managed in BTL DSOs and Reporting Layers Cubes

And there is a logic written in transformation for K\_REPAYMT and K\_ACCLINT as per the business requirement.

Only Payment entries with RE Flow Type C\_VBEWA = I400 or I401 or I402 have to be enhanced with new KF K\_REPAYMT and K\_ACCLINT  
For each payment entry (P), the idea is to identify previous Payment (PrP) assigned to the same Contract\* (meaning entries such as Due date 0NETDUE DATE < P Due date), and to sum up Interests collected in the meantime

\*Same Contract 0RECONTRACT means also same Source System 0LOGSYS + same Company Code 0COMP CODE

Case 1: If no found entry (payment P is the 1st one or the only one in the Contract)

Selection of all Interest entries with RE Flow Type = I300/I301/I302 assigned to the same Contract with I Due date =< P Due date

If no found entry, update of P Payment entry with:

K\_ACCLINT = 0

K\_REPAYMT = 0CFAMNTNET - K\_ACCLINT

If found entries with I Due date starting with 01

Sum up of 0CFAMNTNET of all Interest entries with I Due date < P Due date, and update of P Payment entry with:

K\_ACCLINT = sum up result (incl. I300 + I301 - I302)

K\_REPAYMT = 0CFAMNTNET - K\_ACCLINT

If found entries with I Due date starting with <> 01 (and not empty)

Sum up of 0CFAMNTNET of all Interest entries with I Due date =< P Due date, and update of P Payment entry with:

K\_ACCLINT = sum up result (incl. I300 + I301 - I302)

K\_REPAYMT = 0CFAMNTNET - K\_ACCLINT

Case 2: If N found entries, (payment P is not the 1st one in the Contract)

Selection of the latest previous one (PrP)

If PrP Period 0FISCPER = (P Period or P Period-1), meaning if previous payment is in same period or period-1 (ex. 11.2018 or 12.2018 for 12.2019)

Selection of all Interest entries with RE Flow Type = I300/I301/I302 assigned to the same Contract with PrP Due date =< I Due date =< P Duedate

If no found entry, update of P Payment entry with:

K\_ACCLINT = 0

K\_REPAYMT = 0CFAMNTNET - K\_ACCLINT

If found entries with I Due date starting with 01

Sum up of 0CFAMNTNET of all Interest entries with I Due date < P Due date, and update of P Payment entry with:

K\_ACCLINT = sum up result (incl. I300 + I301 - I302)

K\_REPAYMT = 0CFAMNTNET - K\_ACCLINT

If found entries with I Due date starting with <> 01 (and not empty)

Sum up of 0CFAMNTNET of all Interest entries with I Due date = P Due date, and update of P Payment entry with:

K\_ACCLINT = sum up result (incl. I300 + I301 - I302)

K\_REPAYMT = 0CFAMNTNET - K\_ACCLINT

Else, meaning if previous payment is not in same period or period-1

Selection of all Interest entries with RE Flow Type = I300/I301/I302 assigned to the same Contract with PrP Due date =< I Due date =< P Duedate

If no found entry, update of P Payment entry with:

K\_ACCLINT = 0

K\_REPAYMT = 0CFAMNTNET - K\_ACCLINT

If found entries with I Due date starting with 01

Sum up of 0CFAMNTNET of all Interest entries with PrP Due =< I Due date < P Due date, and update of P Payment entry with:

K\_ACCLINT = sum up result (incl. I300 + I301 - I302)

K\_REPAYMT = 0CFAMNTNET - K\_ACCLINT

If found entries with I Due date starting with <> 01 (and not empty)

Sum up of 0CFAMNTNET of all Interest entries with PrP Due < I Due date =< P Due date, and update of P Payment entry with:

K\_ACCLINT = sum up result (incl. I300 + I301 - I302)

K\_REPAYMT = 0CFAMNTNET - K\_ACCLINT

## Reporting Layer

There are two cubes created for RE-FX. One for CRREFX01 - CAPEX REF data – Rhodia and other for CRREFX02 - CAPEX REF data – Solvay

<ul style="list-style-type: none"> <li> <ul style="list-style-type: none"> <li> <ul style="list-style-type: none"> <li>CAPEX REF data - Rhodia</li> <li>CAPEX REF data - Solvay</li> </ul> </li> </ul> </li> </ul>	IA_REFX_REPORTING_LAYER CRREFX01 CRREFX02
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## Multi provider

Cubes CRREFX01 and CRREFX02 are included in Multi provider (MVFICX01) and required fields have been mapped as per business requirement.

<ul style="list-style-type: none"> <li> <ul style="list-style-type: none"> <li> <ul style="list-style-type: none"> <li>CAPEX Virtual Layer</li> <li> <ul style="list-style-type: none"> <li>CAPEX FI-GL data for G/L Acct (S)</li> <li>CAPEX (PS, FI, BFC)</li> </ul> </li> </ul> </li> </ul> </li> </ul>	IA_FMCO_FICX IA_FMCO_FICX_VIRTUAL CPFICX02 MVFICX01
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Please find the [MP mappings](#)

## Reporting

## Dependencies with other applications

We should have the information where the application is sending or receiving information (e.g. APD open hub)

## Data Loading

### Info Providers and objects loaded

Dependency – While loading C\_RECONTR there are few dependent info objects need to be loaded first (C\_COSTCTR and C\_ASSET2) as these are being used in the transformation routine for LOOKUP.

Process Chain	Code	Type	Frequency	Comments	Duration
REFX: TD - D - CAPEX - Rhodia	PC_REFX_01	SLAVE	<ul style="list-style-type: none"> <li>launched by PC_REFX_01</li> <li>Daily 1 time (including closing period)</li> <li>Monday morning to Friday morning at 8:00am</li> </ul>	<ul style="list-style-type: none"> <li>Rhodia system</li> <li>From DSO Propagation REFX to BTL DSO</li> <li>From BTL DSO to Reporting Cube</li> </ul>	Around 10 mins
REFX: TD - D - CAPEX - Solvay	PC_REFX_02	SLAVE	<ul style="list-style-type: none"> <li>launched by PC_REFX_02</li> <li>Daily 1 time (including closing period)</li> <li>Monday morning to Friday morning at 8:00am</li> </ul>	<ul style="list-style-type: none"> <li>Solvay system</li> <li>From DSO Propagation REFX to BTL DSO</li> <li>From BTL DSO to Reporting Cube</li> </ul>	Around 30 mins

## Data Quality Control

Data come from SAP system. To compare data between BW and sources systems, check propagation layers.

## Operational Documentation

### Procedures

<Describe the recurring procedures needed to operate the application (eg. start/pause/terminate/restart the app processes, data preparation, data ingestion, ETL, data visualization, data export, other manual activities)>

### Scheduling

<Describe the scheduling in place for the application (eg. existing jobs, trigger time/event based, dependencies)>

### Monitoring

<Describe the monitoring checks to confirm the application is performing well (eg. check the overall status, check performance metrics like runtime/data volume/memory/disk/CPU, maintain and react to alerts/notifications)>

### Error Handling

<Describe how to handle errors (eg. error codes, description and respective resolution, alert users)>

### Known Bugs

<List the existing bugs, its criticality, workarounds and resolution plan.>

### Roadmap