#### Corteva CFIN

#### Functional Design Specifications

**[GLD\_FDS\_E\_008\_Special Purpose Ledger Tri-currency into CFIN from DCP]**

04.10.2019

Version 1.0

Document Version History

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| Version No | Version date | Author | Summary of Changes |
| 1.0 | 04/10/2019 | Stephen Biernesser | Initial Draft |
| 1.0 | 04/22/2019 | Andrew Paradise | Updated YGLOBET mappings and minor updates to rest of document. |
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| Object Overview | | | | | |
| Object ID | GLD\_FDS\_E\_008\_Special Purpose Ledger Tri-currency into CFIN from DCP | Business Process | | Replicate accounting documents in CFIN (Central Finance) | |
| Object Type | Interface | Object Description | | Bring data from Y4 ledger in DCP into CFIN | |
| Heritage Systems | DCP – SAP | | | | |
| Cycle of Testing | C1 / C2 / C3 / C4 | | Required Development Completion Date | | DDMMYY |
| Complexity of Object | High | | Program run | | Interface with batch jobs and manual intervention |
| Type of Conversion | Automated and Manual | | Priority | | Medium |

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| FS Control | | | |
| Functional Consultant – Author | Stephen Biernesser | Customer Process Owner | ? |
| Planned Date of FS Completion | 4/12/2019 | Actual Date of FS Completion | TBD |
| FS Approved By | Last Name, First Name | FS Approval date | TBD |
| FS Approved By | Last Name, First Name | FS Approval date | TBD |

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| Source & Target Matrix | | |
| Application Name | Source | Destination |
| DCP - SAP | X |  |
| CFIN |  | X |

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| Functional Description |
| DCP has two company codes, 1153 and 9524, which were created with their local currency as CHF, Swiss Francs. However the company code operates functionally as a EUR company, which per US GAAP is how the company should be reported externally. To work around this DCP created a special ledger, Y4. This special ledger was created with its local currency as EUR, and was set up so that all postings to the leading ledger would flow into Y4 and convert from CHF to EUR. Additionally detail is in the pdf below.    So to provide Corteva with the same ability to report company code 1153 and 9524 in the EUR currency those postings need to get from DCP’s Y4 into Central Finance(CFIN) in some way. However therein lies another problem; the standard tool Central Finance uses to bring in postings from a heritage system is SLT and SLT does not naturally connect to the tables that special ledger postings are stored in, YGLOBEA and YGLOBET. In addition, the way the postings will be made in CFIN (described in greater detail below) is non-standard, and would not fit into the standard CFIN tables that AIF references. So we cannot use SLT or AIF to make these postings.  Therefore we will need to have daily extracts from DCP, all of the data elements will need to be converted CFIN values, and post via a Fiori tile to CFIN.   1. Daily Load – DCP Extract Creation   A batch job will need to be created that extracts data from the YGLOBEA table. It should be run daily, just after the end of current system day, and pick up all documents with a creation date of the prior day (Ex. If the system time/date is EST, the job should run at 12:01am EST. If the job was run at 12:01 am EST on Jan 2nd, it should give me all documents with a creation date of Jan 1).  We only want documents posted to the Y4 ledger.  We only want documents posted to GL accounts in the range 00000000 to 99999999,  The extract would then be converted to CFIN values   1. Daily Load – Conversion to CFIN values   Once the Extract program has created a file, the file will need to be converted to a CFIN format and values. The excel document below lists all of the fields in YGLOBEA, what action should be performed in each field, and what CFIN field it would populate.    In addition, because special ledger documents do not need to be balanced entries (debits and credits do not have to equal zero) there will need to be a work around to get entries into CFIN (as CFIN will require balanced entries). The proposed workaround is after the YGLOBEA table is extracted from DCP, and converted into a CFIN format and values, the conversion program will need to pass every line item in the YGLOBEA table as a separate CFIN document. It will then have to calculate the second line item in the new CFIN document and pass the whole balanced journal into CFIN. This calculated offset entry should be the same as the original line item with two exceptions 1) that the gl account is defaulted to account XYZPDQ and 2) the value should be inverted (so if the original line it was a 100 dollar debit, the created line item should be a 100 dollar credit, and vice versa). Example below  1 document with 2 line items is exracted from the YGLOBEA table   |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | | Legacy Doc Number |  | Company Code | Legacy GL Account | Legacy Profit Center | Debit/Credit | Loc Cur Amount | | 10000001 |  | 1153 | 12345 | ABCD | Debit | 100 | | 10000001 |  | 1153 | 45678 | ABCD | Credit | 101 |   That document is mapped/split and calculated offset entry generated, and what passes into Central Finance would look like this   |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | | Reference Doc Number | CFIN Doc Number | Company Code | CFIN GL Account | CFIN Profit Center | Debit/Credit | 4th Cur Amount | | 10000001 | 20000000 | 1153 | 123456 | ABCDE | Debit | 100 | |  | 20000000 | 1153 | 300000 | ABCDE | Credit | 100 | | 10000001 | 20000001 | 1153 | 456789 | ABCDE | Credit | 101 | |  | 20000001 | 1153 | 300000 | ABCDE | Debit | 101 |   At the end of this whole process there should be a pre vs post mapped file generated. This file would have all of the line items that had come from YGLOBEA during a given period, and show what those were converted to in CFIN. For example we currently have 21 fields from the YGLOBEA table identified as needing to be kept or mapped over into CFIN. The excel file would have 21 columns showing the source values of every line item, another 21 columns showing what each of those source columns was translated to in CFIN, and the rows would be the line items themselves.   1. Daily Load – Posting to CFIN   The postings will be unusual in that they will have zero document, local, and group currency (only a custom 4th currency will be filled) and be to a parallel ledger. For that reason we will not be able to pass the documents through AIF, as our postings would not fit the requirements needed for AIF. Instead we will use the program behind Fiori Tile Post Currency Adjustments (app ID F1606).   1. Initial Load   The initial load would happen in the exact same way as Daily loads, with only two differences.  First as it’s an initial load it would only happen once and would be manually generated. So there would need to be functionality for this process to allow a file to be manually generated in DCP and placed into a folder where the same logic as described for the daily load would occur.  Second the table this would be sourced from would be the YGLOBET table, and so would need a separate logic to format and map into CFIN. This is described in the excel file below on the YGLOBET tab. |

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| Dependencies / Constraints |
| 1. This process will be depending on a daily batch job that feeds documents from DCP’s YGLOBEA table to a location that CFIN can pick up the file and apply the logic above 2. This process will need to leverage the existing mapping files that are used for the main DCP interface <FDS\_I\_003\_Outbound DCP Accounting Documents>. |

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| Assumptions |
| 1. Only transactions from the Y4 ledger are required (no other ledgers are needed). 2. Any master data used in the Y4 ledger will have already been created in CFIN as part of the main DCP master data load 3. Balances/transactions from the Y4 will be remeasured in source DCP system |

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| Security Requirements |
| 1. DCP will need a security role to do the initial set up of the batch job, as well as support ongoing maintenance and the one time initial load process 2. Whatever program that converts and applies the load logic will need a role to support this process 3. CFIN will need a role that allows the user to review documents posted, as well as run basic GL balance reports for analysis.    1. CFIN error handling |

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| Transaction Volume |
| 1 million transactions a year |

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| Processing Type |
| Batch job with manual error handling process |

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| Functional Requirement |
| This document fulfills the functional requirement of allowing company codes 1153 and 9524 to report externally with EUR values, per the US GAAP requirements. |

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| Source Data Layout |
| [See](#_Functional_Description) Section 12 |

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| Mapping SAP Fields to Source / Target |
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| Data Cleansing Logic/Approach |
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| No data cleansing required. |

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| Error Handling |
| BODS Error Handling  BODS error handling will be fully detailed in GLD\_TDS\_I\_006\_Non-SAP (Profit Soft) however a summary of the types of BODS errors and how they would be handled are below.   * Stopped at BODS Initialization   + Type – Formatting/flawed source report error   + Notification – Email to source system user   + Resolution – Resolved by generating new report * Stopped at BODS Validations   + Type – Functional source report errors; i.e. imbalances   + Notification – Email to source system user   + Resolution –     - Automatic – Resolved by generating new report     - Manual – Resolve errors and move corrected file back to input folder   CFIN Error Handling |

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| Reconciliation Procedures & Audit Requirements |
| 1. Simple Line Item count: The first test should be a simple count of how many line items went in and how many came out. If the process worked successfully there should always be exactly double the line items in CFIN as there were in YGLOBEA for that day (since CFIN will have the added offset entries 2. Account zero balance reconciliation: The account used for the offset posting would ideally always net out to zero (this would imply that all of the documents that had been passed that day/week/month had already netted to zero). If it does not the business needs to review and determine why it is non-zero and if it is an acceptable “out of balance”. 3. Simple Functional reconciliation: A simple functional reconciliation should be done to see if the mappings applied to the source YGLOBEA line items were directionally correct.   Preferably once a week (although this should ultimately done at the businesses discretion) the business would check at a high level if GL balances were correct (assets in legacy = assets in CFIN, liabilities = liabilities, equity = equity, revenue = revenue, expenses = expenses) and at a high level that the balances by profit center are correct (balances under the crop protection profit centers are overall correct and balances under the indirect profit centers are correct).  They could perform their GL check utilizing report S\_ALR\_87012284 and compare it against their standard source GL report. Profit centers could leverage report the same report via dynamic selection to filter for profit centers in CFIN for their reconciliations. |

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| Open Issues in Functional Design |
| |  |  |  |  |  | | --- | --- | --- | --- | --- | | # | **Open Item** | **Owner** | **Status** | **Action** | | 1 | How do parked documents affect the Y4 ledger | GL | Open |  | | 2 | How is error handling handled in CFIN | Data team/GL | Open |  | | 3 | Mappings for YGLOBEA and YGLOBET need to be finalized | Data team/GL | Open |  | | 4 | Determine Offset Account for CFIN Postings | GL | Open |  | |

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| Business Test Conditions |
| |  |  |  | | --- | --- | --- | | Scenario # | Input Selection Criteria | Expected Result | | 1 | Positive Test: Load one asset, one revenue, one expense line item | 3 successful documents with their offsetting entries calculated should post to CFIN | | 2 | Negative test: Load a line item that has no mapping | Should error out during conversion process and error handling process should be followed | | 3 | Negative test 2: load a line item with a mapping to a non existent CFIN object | Should error out during posting and that error handling process should be followed | | 4 | Full test: End to End process should be tested, batch job run, line items converted, offset line items created, postings to CFIN made | 1 days worth of transactions should post to CFIN and a reconciliation should be successful | | 5 | Initial Load Full Test: End to End process for initial Load | Initial load should post to CFIN and a reconciliation should be successful. | |