Bluebook SAP REA & Financial Transparency

Applies to:

SAP Recycling Administration (SAP REA) on EhP6 (many features are also available < EhP6)

Summary

This document explains how to create financial transparency on environmental fees with SAP Recycling Administration. Financial transparency comprises product related fees, contract related payments and legally required accruals.

Author: Bernd Roedel

Company: SAP AG

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Author Bio

Dr. Bernd Roedel joined SAP SI in 2000. Later he moved to SAP AG and became a Development Architect. His responsibilities include the technical governance of SAP Recycling Administration. He has also worked on the SAP Enterprise Portal and in Java and Objective C projects.

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Preliminary Remark

The following document is a cookbook for using REA to achieve financial transparency on environmental fees. The document neither explains any customizing activities that influence the transactional behavior, nor does it discuss the recycling partner/price list set up. In addition to the master data REA uses terms like recycling partner, price list, license fee or splitting that are all part of a contract between the REA user and a compliance scheme. Those contract management tasks are explained in document [15]. Document [23] explains in depth all concrete customizing activities.

After reading this document you should be able understand how to achieve financial transparency with SAP REA. Implementation details are often explained in depth in the documents listed in the appendix.

Changes

This is the initial version.

Introduction to the REA master data model

The REA master data consists of two main objects: REA **article** and REA (**packaging) component**.

A REA (packaging) component is based on REA **internal fractions**. Figure 1 depicts the master data model schematically. The colors in Figure 1 will be used consistently throughout this document.

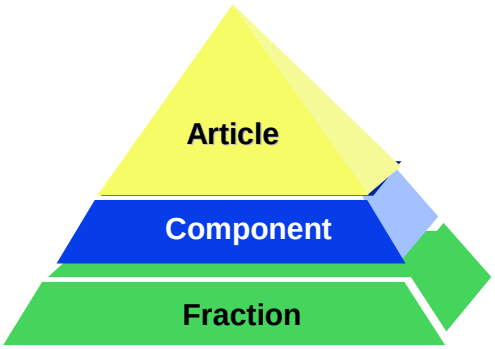

Figure 1: REA Master data scheme

REA article and REA components refer to the material number in the ERP Material master (MARA-MATNR). Hence REA article cannot exist without a corresponding MM entry. REA packaging components may exist without a material master entry, if configured appropriately. In addition it also is possible that a REA article and a REA component refer to the identical MM entry (Figure 2).

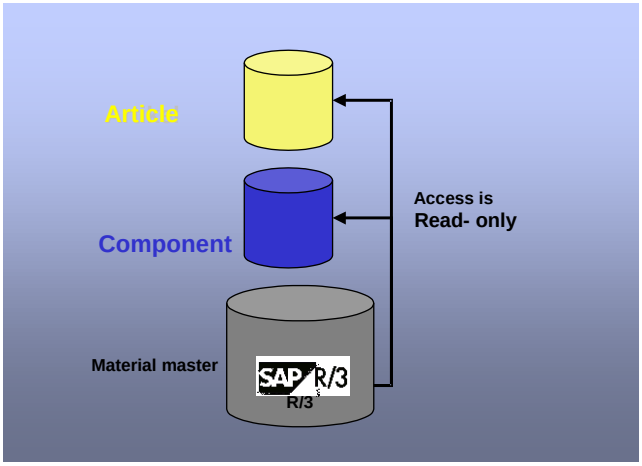

Figure 2: Relationship to ERP Material master

REA internal fractions are maintained in the REA customizing and assigned to one or many recycling partner fractions (Figure 3). It is also possible to assign an internal fraction to a recycling partner fraction without specifying a partner fraction. In this case there is no settlement with this particular recycling partner for that internal fraction. This mechanism is called **cancellation of partner fraction requirement**. This fraction assignment is out of scope for this document.

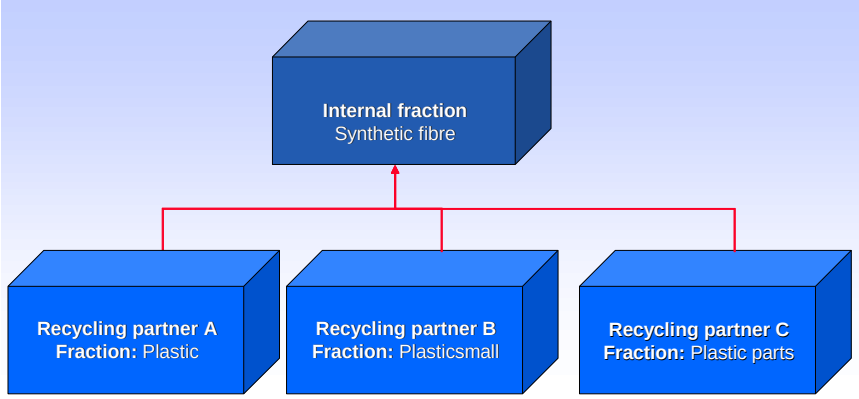

Figure 3: Assignment internal fraction to recycling partner fraction by Customizing

An internal fraction in REA is a packaging material that can be assigned 1 to n times to a REA packaging with a defined weight / weight unit.

A REA component consists of one or many internal fractions and that can be settled with one or many recycling partners. Both assignments are time dependent, so that several packaging versions with a non-overlapping timeframes can be created. A REA component can be of type **consumed packaging**, which can be directly identified in material movements by the declaration system, or of type **sales packaging**, which can be assigned to one or many REA articles as a component.

A REA article represents finished product that must be reported to a recycling partner due to the legal obligations of the REA user. In addition to the material number, a REA article is identified by the key values company code, country and sales unit. REA components and recycling partners are assigned to REA articles in a time dependent manner. A REA article is directly identified in billing documents and/or material movements by the declaration system.

Figure 4 depicts the REA master data structuring. The REA article and the REA components are the two main components that form the REA master data. In addition to the keys and relationships explained so far, REA articles and REA components can hold various attribute values that are generally dependent on the assigned recycling partner.

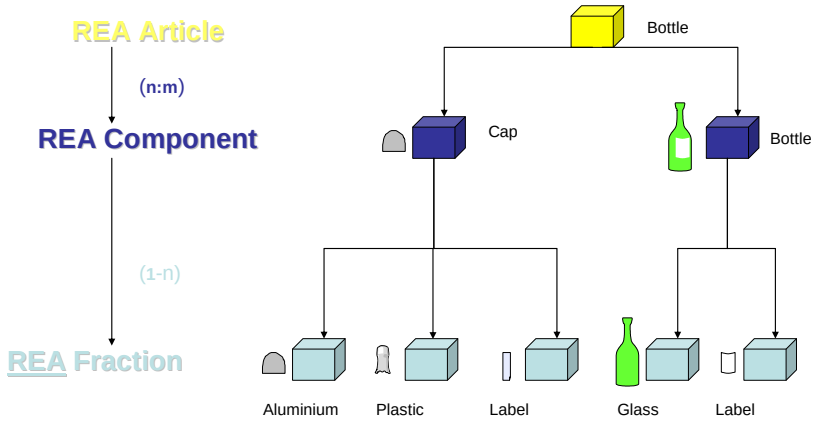

Figure 4: REA Master data

REA components are maintained by the transactions J7L5/J7L6/J7L7. The tab **fraction** is used to maintain the internal fraction assignment. The tab **partner** is used to maintain the recycling partner assignment. A REA component can only be settled with partners that are assigned to the packaging in a particular timeframe.

REA articles are maintained by transactions J7L1/J7L2/J7L3. The tab **packaging** is used to maintain the REA component assignment. The tab partner is used to maintain the recycling partner assignment. A REA article can only be settled with partners that are assigned to the article in a particular timeframe. In case there are multiple recycling partners assigned in the same timeframe, **license fee splitting** rules enable the user to split the license fee of the packaging between the assigned recycling partners dependent on the business process.

REA articles can alternatively be maintained as **reference articles** by transaction J7L0. Reference articles are settled exactly as their referenced article. Reference articles are not discussed in detail in this document.

Figure 5 summarizes the REA master data maintenance process.

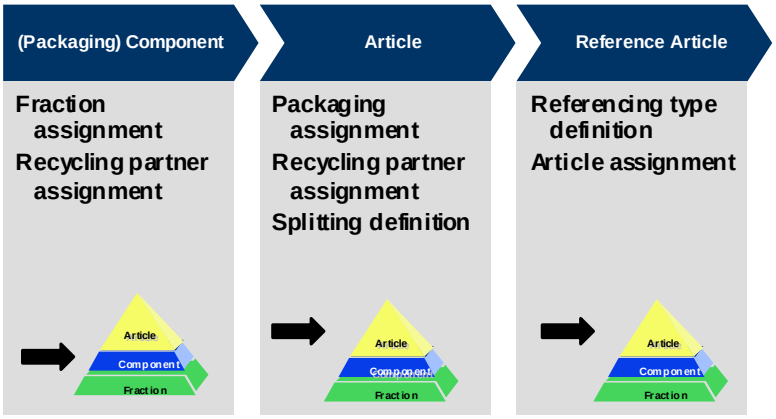

Figure 5: Process view

Simplified data model with article, main packaging and additional components

Many REA customers do not need all functionalities of the REA data model outlined above. Figure 6 depicts a simplified data model, which is comprised of an article with one main packaging component both referring to the same material master record. In addition, other components, such as transport packaging, batteries or WEEE components may be assigned to the article.

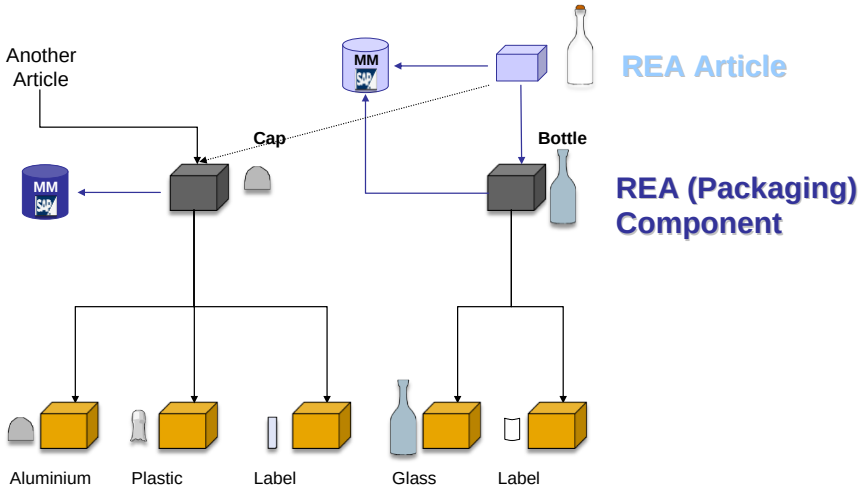

Figure 6: Simplified date model

A simplified data model also allows for simplified data maintenance in ONE transaction as shown in Figure 7.

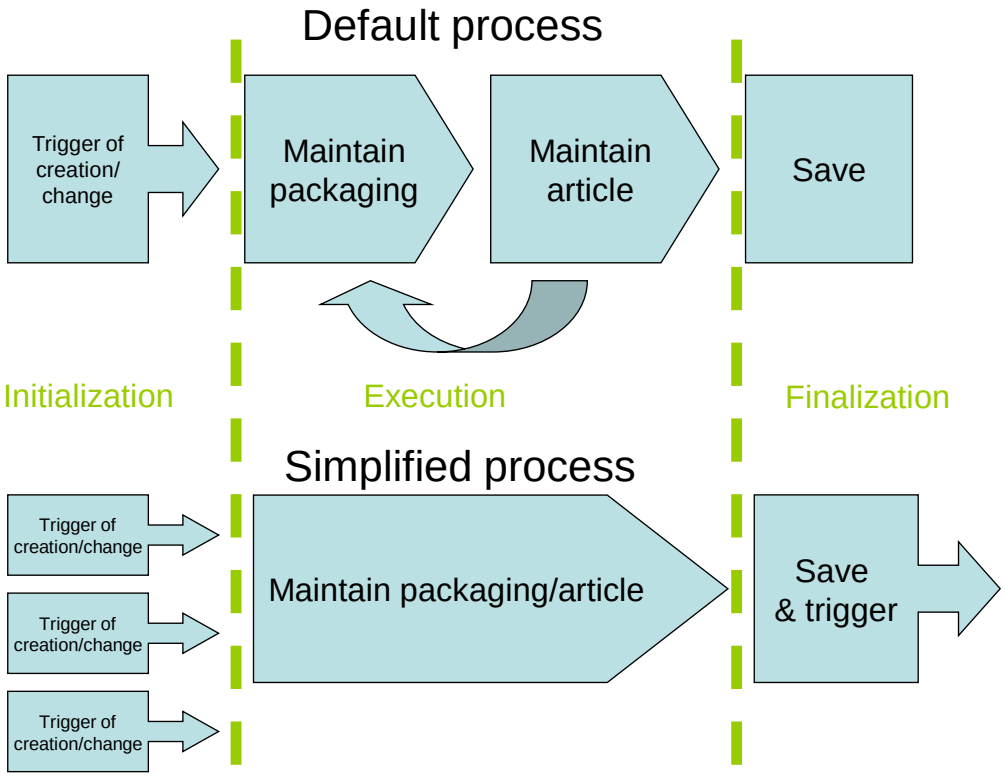

Figure 7: Process variations for REA master data maintenance

Challenges for financial transparency

Signing a contract with a recycling partner usually also entails the obligation of regular environmental fee payments. You may want to have as much transparency on those payments as possible:

- Including the environmental fee in the pricing schema during sales or purchasing of a dedicated article (product)
- Accumulating accruals for all environmental fees within one reporting period and balancing the accruals with the payment at the end of the reporting period
- Tracking the costs per article / component

Closed financial loop

Motivation

Figure 8 shows the closed loop to achieve financial transparency. The sales document carries the pricing information per article provided by REA as condition records and eventually uses them to create accruals (upper part of the loop). The sales document (billing document) is read by the REA declaration system, and the quantity is multiplied by the price per article calculated in REA. The result is collected into a REA declaration document. The financial amount linked with this declaration document is converted into a credit memo, transferred into FI and used to balance the accruals.

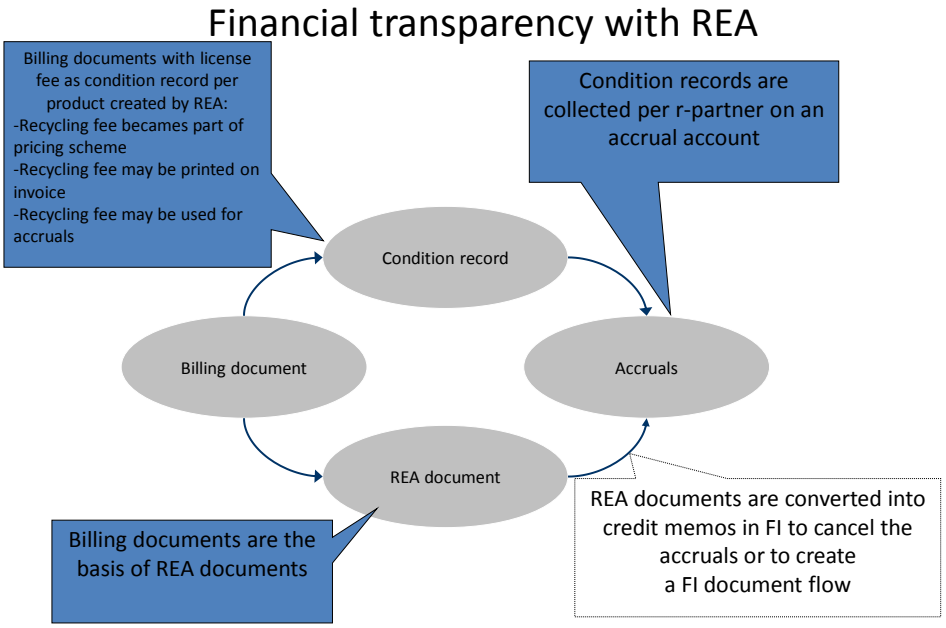

Figure 8: Closed financial loop of a sales process

The process shown in Figure 8 is identical for purchasing process. It is important to understand that, on the one hand, the price per article of multiple articles is carried within the sales documents. On the other hand, the quantity of those articles in all of the sales documents is collected and processed during REA declaration document creation. The setup must ensure that

- the condition records carrying the price information must match the price information used in the REA declaration, thus both have to be assigned to the same recycling partner
- the timeframe of the accruals must match the timeframe of the declaration document
- the articles/billing documents used for accruing must match the articles/billing documents used for the REA declaration document

Figure 9 illustrates the REA business processes in detail. On the left hand side colored in orange you see the creation of REA master data, which is based on the material master (optional PP BOMs). When the REA article master data is created, the environmental fee is passed as condition records to the sales process. On the right hand side colored in blue you see the REA declaration creation, which entails reading and filtering transactional data, linking the filter result to the REA master data and collecting the final result in a REA declaration document. The declaration document's financial amount is eventually transferred to FI and balances the accruals.

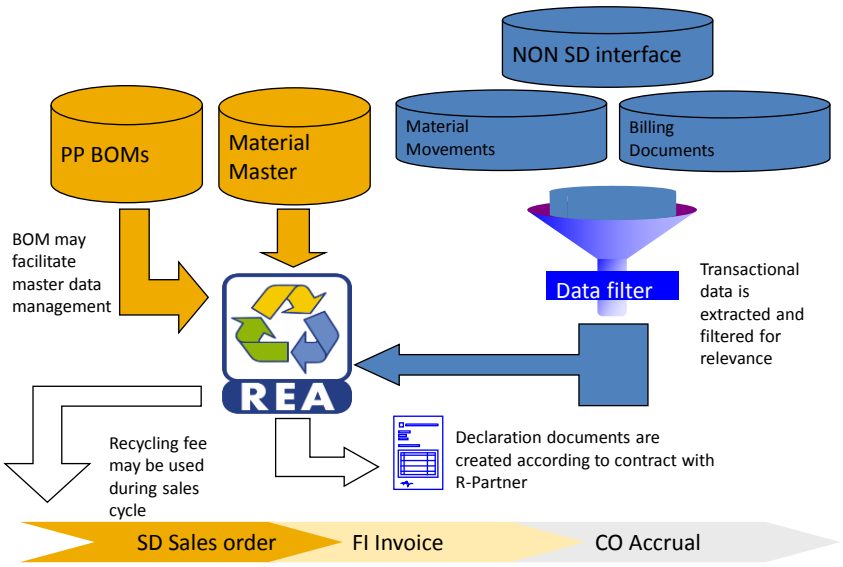

Figure 9: REA business processes

Of course you may opt to use only parts of the closed loop in Figure 8, such as:

- condition record in sales documents, but without any accruals
- transferring the financial amount of the REA declaration document to FI without balancing accruals

If you want to use only parts of the closed loop you either have to substitute the left out parts manually or relinquish some transparency.

Using environmental fees per product in your sales/purchasing process

REA uses ERP condition records to provide other ERP applications with product related environmental fee information. You have to create the condition type and assign it one or many recycling partner. Each time the recycling partner is assigned to a REA article in a certain timeframe, a condition record with the predefined condition type is created/updated/deleted (in case the recycling partner is inactivated). [20] covers the whole process (setup, usage) in depth.

Transferring environmental fees payment created in REA to FI

REA uses the ERP financial accounting to transfer the financial amount associated with a REA declaration document to the ERP FI application. You have to activate the function in REA Customizing → Control → General Control (assign the Reference Transaction J7LR). After that you may configure for each of your document types whether, and how, the financial amount shall be enabled for FI transfer.

Keeping accruals up to date during retroactive price changes

Accruals created by means of using condition records, as explained in section “Using environmental fees per product in your sales/purchasing process”, are only accurate if the condition record representing the environmental fee is correct. For instance, if a change in article composition entails a change of the environmental fee, but is applied in REA AFTER the changed article has already been sold, the created accrual is not correct. The deviation equals the quantity of sold articles multiplied by the deviation per article. In that case you may use the automatic accruals correction of REA to adjust the accrued amount. Figure 10 shows the entire process. A REA article (1) is sold using the environmental fee as SD condition record ZREA (2) provided by REA in the normal sales process (3). The pricing contains the condition record ZREA. The ERP document flow (4) leads eventually to the accruals by ZREA in FI/CO (5). If the REA article is retroactively changed, REA calculates the deviation of the accrued amount by the formula above and creates correction posting (6) to the accrual ZREA. The whole process can be customized (retroactive search horizon, manual/full automatic posting, FI document types).

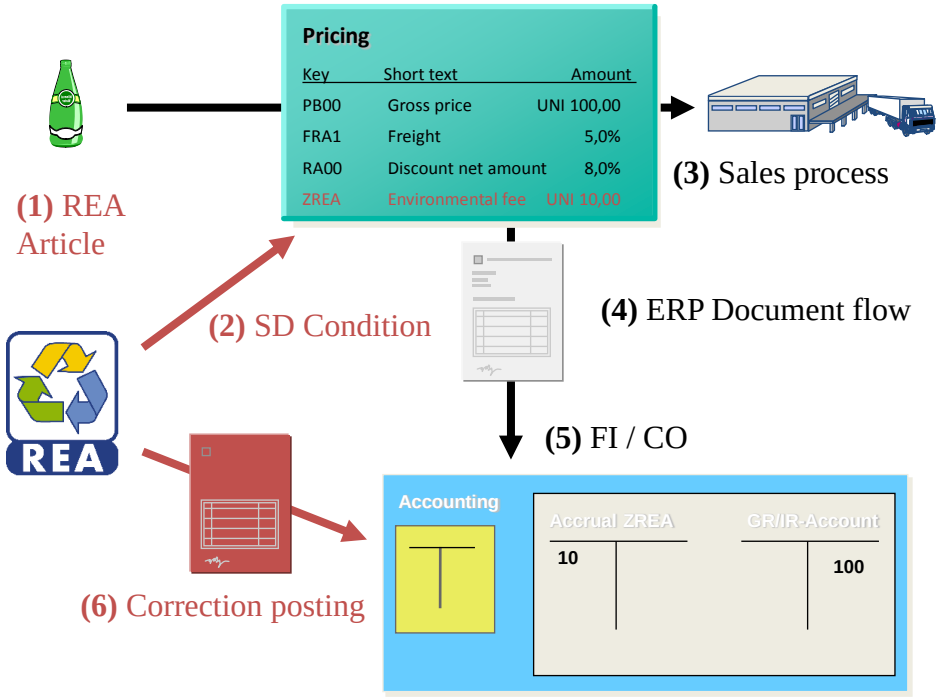

Figure 10: Keeping accruals up to date

Keeping track of product related fees

Introduction

REA offers the opportunity to analyze the cost structure with several build-in reports, or by uploading the REA raw data into BI. The following two sections cover both options.

REA build-in analytical tools

Costs per product or component

The REA article cost analysis, the customer analysis and the packaging cost analysis links REA master data (article, packaging) to transactional data and displays it per REA article. More details can be found in [17].

License fees per product or component

The REA article price analysis, REA condition analysis and REA packaging price analysis calculate the price (environmental fee) per REA master data. More details can be found in [17].

REA BI uplink

REA provides you with BI extractors that may be used to uplink REA master data/declaration results/cost analysis results to a BI. See for details “Related-Content”

Glossary

Term	Abbreviation	Explanation
Bill of material	BOM	Tree-like structure to represent a product composition
Carton	CAR	Dimensionless sales unit
Enhancement Pack 6	EhP6	Software shipment that includes some REA functionality
Environment Health & Safety	EH&S	SAP ERP application to cover processes related to product compliance and safety
Lean data entry	LDE	ABAP Webdynpro based simplification of REA master data maintenance
Material Master Transaction	MM	SAP ERP application to cover master data maintenance
Pallet	PAL	Dimensionless sales unit
Piece	PC	Dimensionless sales unit
Recycling Administration	REA	SAP ERP application to cover environmental fee reporting globally
Sales and Distribution	SD	SAP ERP application to cover outbound sales and logistics processes
Sales Unit	SU	Unit in which a material is sold (such as PC, CAR, PAL)
Waste of electric and electronic equipment	WEEE	European Community directive describing the legal framework for the producer's responsibilities of electric / electronic goods

Related Content

[1] FPM Cookbook

[2] Quickstart LDE

[3] Cookbook_REA_Workflow

[4] Cookbook_REA_UC

[5] Cookbook_REA_MM_Integration for Retail

[6] Cookbook_REA_MM_Integration for Industries

[7] J_7LNONSD_510_SP02_E

[8] J_7LINTERFACE_510_SP02_E

[9] HOWTO_LIS_V1_2

[10] Quickstart_MasterDataDialogs

[11] Interfaces in REA (Note 1134609)

[12] Bluebook REA@Retail

[13] Cookbook_LDE

[14] Quickstart_REA_Customizing

[15] Quickstart REA RPartner&PricelistDialog

[16] Cookbook_REA_Variants

[17] Quickstart_Infosystems&Declaration

[18] Mass Maintenance (Note 1671009)

[19] User exits (Note 891715)

[20] SD/MM conditions (Note)

[21] Cookbook_REA_Extractor

[22] Bluebook REA@Manufacturing

[23] Cookbook_Recycling_Fees_In_Business_Processes

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