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CUSTOMER PROFITABILITY ANALYSIS: SPECIFICATION OF INDICATORS AND IMPROVEMENT OF PROCEDURES FOR DATA COLLECTION

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Customer Profitability Analysis

Specification of indicators and improvement of procedures for data collection

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Master Thesis

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Abstract

This thesis aims to improve the Customer Profitability Analysis performed at Amorim Deutschland. Firstly, the indicators used to measure such profitability were specified and given a critical assessment. Afterwards, some problems and opportunities for improvement were identified. Namely, the methodology by which data is collected to serve as input for the Customer Profitability Analysis was identified as being too manual and time consuming. The focus was thus set upon improving the accurateness and accessibility of this data. At a more detailed level, this involved redesigning the financial dimensions of the Chart of Accounts and defining procedures related to the input of data in the ERP system.

The results achieved include a new structure of the dimensions of the Chart of Accounts and a clear definition of procedures for the input of data in the ERP system. These measures were able to improve the level of discipline of data collection to perform the Customer Profitability Analysis and also achieve a more logical organization of data in the ERP system. Finally, some theoretical values were used in calculations for the Customer Profitability Analysis whereas now the real values can be retrieved from the system, thus increasing the accurateness of the affected indicators.

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List of Acronyms

ACC – Amorim Cork Composites

ADE – Amorim Deutschland

AFA – Amorim Flooring Austria

AR – Amorim Revestimentos

ARDEL – Amorim Revestimentos Delmenhorst

AWS – Amorim Wood Supplies

B2B – Business-to-business

CAP – Customer Account Profitability

CPA – Customer Profitability Analysis

DIY – Do-It-Yourself

ERP – Enterprise Resource Planning

IT – Information Technology

LoB – Lines of Business

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1 Introduction

As part of the study plan of the Integrated Master in Industrial Engineering and Management (MIEIG, in Portuguese) at the Faculty of Engineering of the University of Porto, the author developed a curricular project with the duration of 5 months, at the facilities of Amorim Deutschland, in Delmenhorst, Germany. The main goal of the project was to improve the way the company performs the Customer Profitability Analysis, focusing on the optimization of the financial dimensions of the Chart of Accounts, including the update and redesign of the dimensions and the improvement of procedures related to the input of data in the ERP system.

1.1 Presentation of Amorim Deutschland

Amorim Deutschland (ADE) is a distribution unit of Amorim Revestimentos (AR), whose purpose is to serve the markets of Germany and Austria. Its headquarters are located in Delmenhorst, Germany. ADE has no production facilities, focusing only on the warehousing of finished goods that are produced in Portugal. All articles exported to those markets are registered in the books of ADE, but not every article goes through the step of being stored at its warehouses. Some skip warehousing altogether and are shipped from Portugal directly to the customer. This happens mostly with big orders, when local stock is insufficient to meet demand and/or additional production is required.

The parent company Amorim Revestimentos is a manufacturing company that produces floor and wall coverings with the use of cork as the unifying theme. The production is carried out at two plants in the northern region of Portugal: S. Paio de Oleiros and Lourosa. The company has a global reach and sells across many markets, either supported by a local distribution unit or shipping directly from Portugal, with a total sales volume of 122 million euros in 2013. The global structure of AR is presented in Figure 1.



Figure 1 – Global structure of Amorim Revestimentos

1.1.1 Mission, Vision and Values of Amorim Revestimentos

The mission of Amorim Revestimentos is to be a global flooring-player, using CORKTECH as the key differentiation factor.

The vision of Amorim Revestimentos is to be a profitable and innovative flooring company, with a positive and winning attitude.

The core values of Amorim Revestimentos are:

- Integrity/Transparency – The relationship between us are characterized by values of honesty. This honesty is reflected on the assertiveness, frontality and truth that we use to communicate and present out ideas and opinions.
- Diversity – At Amorim Revestimenros coexist different cultures. Maintaining corporative values, we integrate the very best of each of these cultures to augment our potential.
- Loyalty – We do everything that we say we will do, even if we have to renounce to individual interests on the behalf of the global goal.
- Example – Our behavior reveals who we are. Everything that we ask to be done is always something that we do ourselves and that goes in compliance with the company's rules.
- Solidarity – We support each other mutually and together we exceed the adversities. We respect Nature and take an active role on society supporting humanitarian causes.
- Cooperation – Our door is opened to collaborators, the clients and suppliers. We want our partners' help so that we can be better on the solutions that we give them.

1.2 Presentation of the Company

Amorim Deutschland employs around fifty people. The company has three main areas: Sales & Marketing, Logistics and Finance. The most important department for this project was Finance. This department is headed by the Finance Manager, responsible for Finance and Management Control. Bookkeeping and "EDP/BaaN" are also part of the Finance department. EDP stands for Electronic Data Processing and BaaN is the name of the ERP system. This department is responsible for the maintenance of the information system as well as the making of reports and statistics. The organogram of Amorim Deutschland is presented in Figure 2.

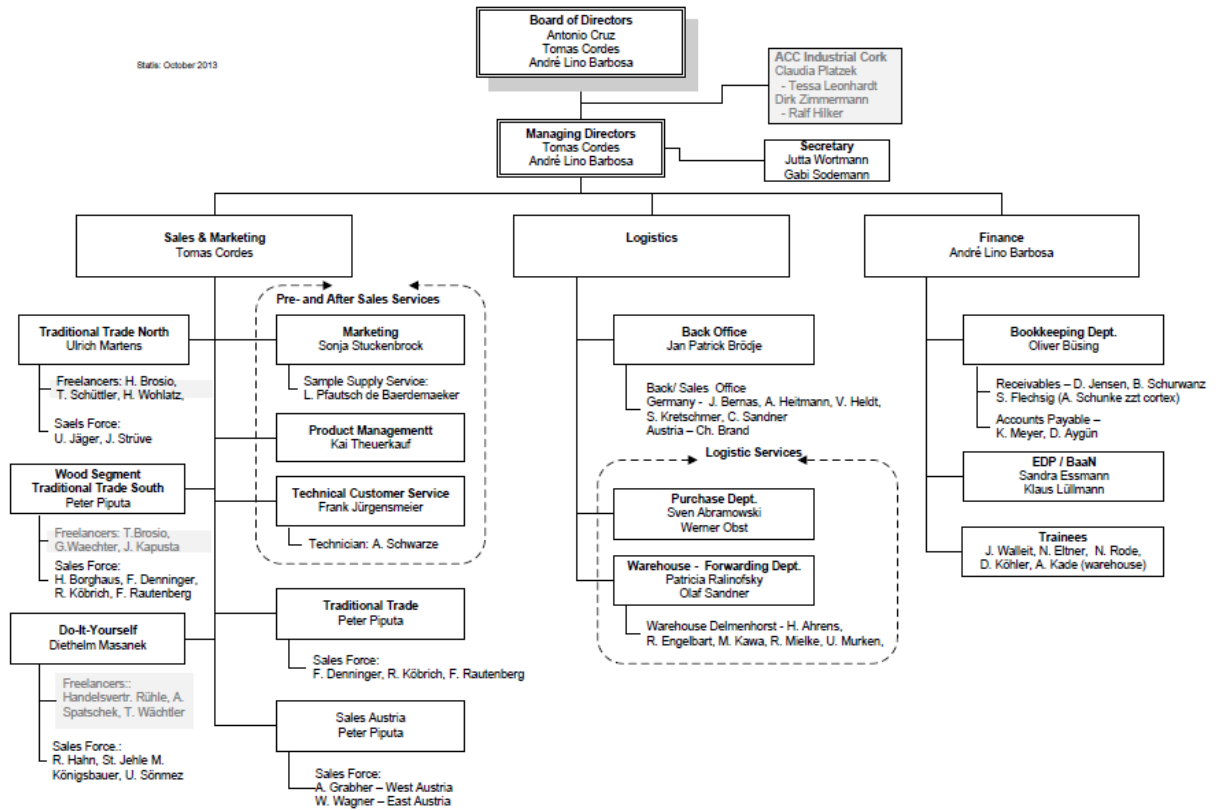


Figure 2 – Organogram of Amorim Deutschland

The production of a Customer Profitability Analysis requires a strong involvement of the “EDP/BaaN” department. They extract most of the needed input from the ERP system and manually compile extra data from other sources.

1.3 Brief Description of the Project

With the increased customer focus required to be competitive in today’s marketplace, the company feels the need to improve the quality of its Customer Profitability Analysis, so that better decisions can be made regarding its customer base. The company realized that the indicators were not as accurate as they could be and the methodology for data collection was too manual and time consuming. An outdated ERP system was part of the problem, but despite this limitation, room for improvement still existed.

As a result, the management of Amorim Deutschland decided that the whole structure that supports the production of the Customer Profitability Analysis needed to be updated and revised. The author, together with the Finance department, conducted an analysis of what could be changed and defined an action plan towards the achievement of this goal. Ultimately, the purpose of this project was to implement a consistent structure that would yield an easy-to-produce and better-quality Customer Profitability Analysis.

1.4 Methodology Used

The project started with an introductory phase that meant spending a designated time with each department in order to acquire a better understanding of how the firm operates internally and conducts business with customers. At this point, the project was not yet fully defined, though guided by a concern to seek improvement potential in the area of Management Control. Once at the Finance department, it was noticed that the Customer Profitability Analysis took a lot of manual effort to be calculated and that a few not necessarily reasonable assumptions were made. Following this observation, a careful look into everything involving the Customer Profitability Analysis took place. The indicators used to understand the profitability of a client were reviewed, the process of calculation of those indicators was analyzed and the factors that justified the current situation were understood. The problem was identified as being partly rooted in the outdated and suboptimal system of classification of transactions through the financial dimensions of the Chart of Accounts and the associated flawed procedures for the input of data in the ERP system. To solve this, it was necessary to look deeper into what and how transactions were classified with each financial dimension. After having a general overview of the conceptual logic underlying the classification system, the model was refined towards greater consistency and structural logic. The inner workings of the ERP system and the procedures that represent the input of data in the system were studied when exploring a potential change, acknowledging the existing links and the fact that a solution has to address the business realities of the firm. Finally, the solution was implemented with the involvement of the affected departments.

1.5 Structure of the Thesis

This thesis is organized in 5 chapters, supported by 6 annexes.

In this chapter are presented the company, the section of the company where the project took place, a brief description of the project and the methodology used in the project.

In chapter 2 is given a theoretical background about Management Control and the Customer Profitability Analysis.

In chapter 3 is presented the current situation regarding the performance of the Customer Profitability Analysis and the main problems. A business overview is given explaining the departments of company, the products that are sold, the customers of the company, the brands used on the products, the suppliers of the company and the ERP system. The indicators used to assess the profitability of the customers are specified, as well as how they are calculated. Finally, the problem of focus is selected.

In chapter 4 are presented some suggestions of improvement and the developed prototypes, regarding the selected problem.

In chapter 5 are presented the global conclusions of the project as well as some proposals of future work.

2 Theoretical background

2.1 Management Control

The concept of Management Control has been defined in many different ways. Mockler (1970) defined Management Control as a systematic effort by business management to compare performance to predetermined standards, plans, or objectives in order to determine whether performance is in line with these standards and presumably in order to take any remedial action required to see that human and other corporate resources are being used in the most effective and efficient way possible in achieving corporate objectives.

In order to make this comparison between desired performance and actual performance, the latter must be somehow measured, even if the quality of that measurement is not the highest possible. According to Spitzer (2007), everything that should be measured can be measured in a way that is superior to not measuring them at all. In fact, if we demand that measures be immediately objective, quantifiable, and statistically reliable, then we are ruling out most emergent and potentially transformational measures.

“What you can’t measure, you can’t manage”. This widely accepted aphorism states the importance of measurement and seems to imply that a good measurement system is necessary for successful management and thus the achievement of high performance.

2.2 Customer Profitability Analysis

During the 1980’s, as companies were trying to look for ways to fight competition and stay ahead of the curve, customer satisfaction assumed greater importance. With the help of computers, the tracking of costs became easier to apply and new possibilities of analysis emerged. Costing methods such as activity based costing were shedding new light upon this subject and helping management take better decisions. As the 1990’s arrived, customer profitability was already considered just as important as product profitability. Management should not decide to discontinue production of a certain product based solely upon its profitability, since it may be the case that it attracts customers that are profitable on other products. This fact calls for the need to analyze profitability of the customer, acknowledging that resources are used by customers as well as products (Howell and Soucy 1990). Examples that support this are:

- Volume discounts
- Commissions
- Sales support
- Inventory and distribution support
- Inventory holding requirements
- Freight policies
- Credit and collection support
- Accounts receivable
- Order entry and customer support
- Field service

These costs vary from customer to customer and may be responsible for significant differences in profitability between them. They generally fall into the category of selling, general and administrative expenses. It is important to assign them correctly to the customers that are responsible for them and avoid incorporating them into the product cost as part of the mark-up

over cost. Resource Costing does exactly that by assigning the revenues, expenses, assets and liabilities of the company to the customers that are ultimately their cause. Costs can be separated according to their relation to the company's value chain: product development, manufacturing, distribution and sales/marketing. Howell and Soucy (1990) suggest six steps to accomplish this:

1. The costs associated with product development and manufacturing are assigned to the products and the customer is then charged according to the purchased product mix.
2. Those costs associated with distribution and sales/marketing that can be directly identified with the customer are also assigned.
3. Resources used by activities that support the customer are identified.
4. Those resources are then assigned to customers, markets or channels of distribution depending on which degree of detail is possible.
5. Activities that drive the costs are used as the basis to assign costs to customers. When it's not possible to directly assign costs to either customers, markets or channels of distribution, they are still assigned using the best possible cost driver.
6. Finally, the costs that are still assigned to markets or channels of distribution are reassigned to customers using suitable cost drivers.

Assigning costs following these steps provides information to the company that can be used to better allocate resources by investing more in profitable customers, giving away structurally unprofitable customers to competitors and cutting costs on customers that can become profitable. The companies that correctly understand the relationship between customers and costs are better positioned to differentiate themselves from competition on the service that they provide to customers.

As a greater focus on the customer gained wider acceptance, the concept of Customer Account Profitability (CAP) started to emerge. Recognizing that each unit of revenue does not contribute equally to net income, CAP provides a way of analyzing customer sales to determine if doing business with a particular customer represents a profitable endeavor. Foster, Gupta et al. (1996) point out three features as key to this approach:

1. Costs are assigned to individual customers (not products, services or departments);
2. The level of analysis can be set on a particular customer or a large group of customers;
3. The lens is shifted from a single product sold to multiple customers to multiple products sold to a single customer.

This approach provides management with a better understanding of costs that are specific to customers, therefore setting the foundation for decisions regarding which customers to target. These customer specific costs are mostly downstream costs related to customer service, marketing and distribution. However, differences of profitability between different customers can also be due to differences in revenue, through differences in the price that is effectively charged. This happens when discounts are awarded to certain customers, often without a good economic reason, disregarding profitability in favor of short-term revenue goals. A rationale that makes more economic sense is to offer lower prices to customers that require less usage of downstream functions (Foster, Gupta et al. 1996).

The degree of focus that is used with CAP is a function of the characteristics of the firm's customer base. Ideally, the company would be able to capture data and look directly at the profitability of individual customers, but this is only feasible in practice if the total sales volume

is concentrated around a few big clients. If that is not the case, then the cost of capturing data for individual customers would outweigh the advantages provided by the extra detail. The solution in this case is to group clients that share certain characteristics deemed relevant to define different policies based on the result of the analysis (Foster, Gupta et al. 1996).

Foster, Gupta et al. (1996) suggest that other issues have to be addressed and that those are key to a successful analysis of customer profitability. These may represent obstacles or possible causes of inferior results that can lead to wrong conclusions and mistaken decision making. Firstly, the company must have a system of measurement that gathers the needed data for the analysis. If the input is inadequate, one cannot expect to achieve a satisfactory output. An information system that comprises the correct tools to accumulate the data that is necessary to create reliable customer revenue and cost figures is absolutely fundamental. Secondly, possible future downstream costs of customers must not be overlooked, namely the potential for environmental and litigation costs that could severely affect profitability. An effort should be made towards a reasonable estimation of these costs, avoiding the simplistic approach of assuming that they will not exist. Thirdly, the analysis on customer profitability is not complete without an assessment of how the figures will evolve over time. A static interpretation would be deficient, since a currently unprofitable customer may be worth pursuing if management can anticipate that he will be profitable in the long run. Finally, enough thought and research must be devoted towards selecting the most plausible drivers of customer costs.

Porter (1996) explains that a company can outperform rivals only if it can establish a difference that it can preserve. It must deliver greater value to customers or create comparable value at a lower cost, or do both.

This justifies an increased corporate focus on customers and their profitability with respect to:

- Understanding and analyzing customer profitability;
- Maintaining and increasing customer profitability;
- Turning unprofitable customers into profitable ones.

Expanding global competition is one reason behind the increased concern for customer profitability. Companies worldwide are being pressured to become more customer focused and to increase shareholder value. Customer profitability analysis is a useful tool in both areas (Epstein 2002).

3 Current situation and main problems

In this third chapter, the Customer Profitability Analysis (CPA) is presented and its main problems are identified. To properly address the issues surrounding the CPA, it is important to have a general understanding of the business. For that purpose, this chapter starts with an introduction to the company's departments, products, brands, customers and suppliers, as well as the ERP system.

3.1 Business overview

In this section, an overview of the business is presented. A brief summary is given about the different departments of the firm, the products that the company sells, the customers to which they are sold, the brands used to target different customers and the suppliers of products and services. The ERP system used at the company is also presented.

3.1.1 Departments

For a visual representation of the structure of Amorim Deutschland, the organogram of the company presented in Figure 2 must be recalled. At the top, the company is directed by the Board of Directors. The Board of Directors has three members, but only two work at ADE on a daily basis. Those two are called Managing Directors. As stated before, the company has three main areas: Sales & Marketing, Logistics and Finance. Sales & Marketing holds Marketing, Product Management and Technical Customer Service, as well as the Sales Force, organized around different geographical areas and types of customers. Logistics holds the Back Office, the Purchase department and the Warehouse and Forwarding department. Finance holds Bookkeeping and the IT/Statistics department.

3.1.2 Products

Amorim Deutschland is a distribution unit of Amorim Revestimentos. As such, the company does not produce any of the products that it sells. Most of the production comes from the parent company, with only a few exceptions. The main groups of products are cork floor coverings, cork wall coverings and wood flooring. The cork floor coverings can be further divided into cork visuals, real wood visuals, vinyl visuals and digital printing visuals. Regarding the wood flooring, it is worth mentioning that this is a trade product i.e. the finished goods are bought from an external supplier and resold without any modification. The reason for its inclusion in the product mix has to do with the need to serve the market with a wider product offering. The products will be further described in the section about brands, since it is easier to present them after the customers have been introduced.

3.1.3 Customers

In general, Amorim Deutschland does not sell to the end user. ADE sells to companies that, in turn, sell to the end user.

The customers are grouped into so-called lines of business that represent different distribution channels. The main lines of business are retail, wholesale, wood distribution, do-it-yourself (DIY), business-to-business (B2B) and contracting.

The retail and wholesale clients are mostly dedicated to decoration, although some deal exclusively with flooring. The retailers sell to the end user and the wholesalers sell to other

businesses, but the distinction is not always a clear one. They generally strive for a premium shopping experience, with good customer support and complementary services.

The wood distribution describes a group of clients whose focus is on wood products. There are many stores with this concept and they tend to sell not only flooring but also doors, windows, fences, benches and the like.

DIY stands for do-it-yourself and the name gives a good idea of the underlying concept of this group of clients. This line of business is characterized by stores that look like warehouses. The end user is expected to shop for himself with minimal help. The priority is placed upon low cost and product availability. The store aims to have every product on stock so that the customer can immediately take everything he needs without having to place orders for additional material.

B2B stands for business-to-business and the clients that belong to this distribution channel tend to be manufacturing companies that are interested in a component of a product or in a product that is not complete i.e. they buy mostly unfinished goods from ADE. Examples include a company that only wants a component from ADE to build into their own product or a company that wants an unfinished product of ADE to which he adds his own customization. It is also possible that a company wants to buy finished goods from ADE to have a wider product offering.

The contracting clients are considered those that buy products from ADE for a particular project, namely in the context of the construction of a new building or the opening of a new store. In this case, the client can either be the actual end user (hotel chains, supermarkets, etc.) or the firm that installs the products for the end user.

3.1.4 Brands

Some of the main brands used to sell products to the German and Austrian markets are Wicanders, CorkLife (and DecoLife), Ipocork and Go4Cork. There are also some business agreements that allow the customer to use his own brand on the product. Such is the case with some big customers like Holzland. Their private label is HQ.

Wicanders is the premium brand and is directed towards the retail market. There is a brochure for the “Comfort Flooring Collection” and a separate one for “Parquet”. The former has all the products that use cork and the latter has only wood flooring (that includes no cork at all). The technical details of the products is out of the scope of the present work, but it is nevertheless adequate to have a general idea of the product offering and the main distinctions between types of products.

The “Comfort Flooring Collection” comprises the following types of products.

- Artcomfort: the floor can imitate the look of wood, stone or theoretically any other pattern, since the visible layer is a printed cork sheet.
- Corkcomfort: the visible layer is a thin sheet of high quality cork that can be treated to assume different colours. There are two versions of the floor. The floating version means that the floor can be easily installed on top of the existing surface, whereas the glue-down version requires the floor to be glued to the existing surface, which usually implies professional assistance to make sure conditions are appropriate.
- Woodcomfort: the top layer is a thin sheet of wood.

- Vinylcomfort: layers of vinyl ensure greater durability while imitating the looks of other materials, such as wood or stone.
- Dekwall: comprises the products meant to be applied on the wall.
- Accessories: includes products such as glue, varnish and tool kits.

The “Parquet” brochure shows all the different kinds of wood floors that are available. In addition, some accessory products are also displayed.

The other brands have a smaller offering that consists of a selection of the products sold with premium brand Wicanders, though the brand Go4Cork also features a few exclusive products.

A small explanation follows as to the reason of existence of the several brands. A deep brand strategy discussion is beyond the scope of this work, so only an overview is presented.

Wicanders sells the most comprehensive catalog of products and is directed towards the retail and wholesale markets. It is the only brand that also sells wood parquet.

Ipocork comprises a smaller product offering and is only available at wood distribution stores. The main reason for the existence of this brand is to allow for competition between neighboring stores of retail/wholesale and wood distribution, instead of having them advertise the same brand.

CorkLife and DecoLife are solely destined for the do-it-yourself business (DIY). CorkLife has the cork products and DecoLife has the vinyl products.

Go4Cork started as a brand aimed at selling products with low turnover at discounted rates. There is no permanent catalog for this brand and the number of products on offer is very low (around 10 products at any given time). Later, the concept of the brand was somewhat redefined to stand out as a low-cost collection within Wicanders, presented as “Go4Cork by Wicanders”.

3.1.5 Suppliers

The main supplier of Amorim Deutschland is Amorim Revestimentos. The parent company produces almost all of the products under offering. One exception is wood floorings. As mentioned before, this range of products is imported from external suppliers to the company’s warehouse. As for marketing products such as samples or catalogs, some come from AR whereas others are sourced locally. Accessory products and secondary materials are bought from a variety of suppliers.

ADE outsources the transportation of goods. This service is provided almost exclusively by one company. Other companies are used only for exceptional cases.

3.1.6 ERP system

BaaN is the name of the ERP (Enterprise Resource Planning) software used at ADE. The product bears the name of the company responsible for its development, which in turn bears the name of its founder. The BaaN Corporation was founded in the Netherlands in 1978 by Jan Baan. It was sold in 2003 amid financial difficulties. The version used at ADE dates back to the 80’s and has suffered a great deal of customization. Technical support for this system is granted by OSI, a company owned by the Amorim Group.

The fact that the system is outdated proves to be a source of inefficiencies. Modern ERPs have the ability to perform certain analyses in a user-friendly way. BaaN forces the execution of many potentially unnecessary steps in order to achieve the same results. The production of

statistics reports requires the extraction of data from BaaN and the processing of that data using programs such as Microsoft Access and Microsoft Excel.

3.2 Customer Profitability Analysis

The Customer Profitability Analysis (CPA) is an important tool for the company as it provides useful information to evaluate the profitability of customers and make business decisions based on that information.

3.2.1 Definition of customer

To be able to conduct a CPA, it is necessary to define what is considered to be the “customer” i.e. the level of aggregation of the analysis. Sometimes it makes sense to group several “customers” because they belong to the same owner or they have the same business agreement. The customers of ADE make up a reality that is not entirely easy to understand. Some customers belong to a “purchase organization” that negotiates business conditions with ADE on their behalf. Some customers belong to a “marketing association” that defines their product mix. In addition, ownership relationships must be considered on top of these other agreements. These factors make the decision of what to consider a “customer” not always an easy one. The most important criteria is the business agreement. If the commercial terms of the business agreement of a group of customers are negotiated together as a group, it usually makes sense to consider them as a group and perform the analysis at that level of aggregation. However, if one of those customers represents a significant sales volume, then it may be relevant to separate the customer from the group and perform the analysis on that customer separately.

3.2.2 Business agreement

Business agreements are negotiated with ADE by large customers. Some smaller customers leverage their collective negotiating power by joining a “purchase organization” that negotiates a business agreement on their behalf. The business agreement specifies payment conditions, bonuses and other commercial terms. The payment conditions refer to cash discounts that are provided if the payment is received within a given time frame. The bonuses refer to amounts that are paid on a yearly basis as a function of the sales volume reached during that year. Other commercial terms may include a payment for each new store opened by the customer and a threshold on sales volume above which marketing materials such as samples or displays are free.

3.2.3 Indicators

A number of indicators are used to assess the profitability of a customer. The most obvious one is the profit margin, in absolute and relative terms. To calculate the profit margin of a customer, it is necessary to know several other indicators. The formula is presented in the next point.

The profitability of a customer cannot be fully understood by looking solely at the profit margin. Other indicators are used to paint a better picture of the current situation of the customer as well as its future potential. Among these indicators are the number of stores, number of orders and average order size, in addition to the indicators that are used to compute the profit margin.

A customer satisfaction survey is periodically sent to customers. Despite being a source of useful information with important links to present and future profitability, it is not given a lot of attention. This is something that ought to be changed.

3.2.3.1 Gross and net profit margin

The first indicator that is calculated is the gross profit margin of the customer. This is simply the difference between the sales volume and the cost of sales for a given customer. In other words, it's the sum of the differences between the selling prices and the purchase prices of all the different products that are sold to a given customer. Since most products are bought from the parent company, the purchase price is usually the transfer price. The gross profit margin can be presented in absolute or relative value. The formulas are shown below.

$$\text{Gross profit margin} = \text{Sales volume} - \text{Cost of sales}$$

$$\text{Gross profit margin (\%)} = \frac{\text{Gross profit margin}}{\text{Sales volume}} \times 100$$

The second indicator that is calculated is the net profit margin of the customer. This indicator is calculated every 3 months. The net profit margin is computed by subtracting a number of indicators from the gross profit margin. The theoretical goal is to come as close as possible to the ideal situation where all the costs of the company are properly assigned to customers. In practice, it is not possible to meaningfully assign some costs to customers e.g. wages of general staff. Management believes that more important than assigning every possible cost to customers is to have a consistent indicator that is comparable between customers and across different periods of time. This means that the net profit margin of the customer must be computed in the same way for every customer and changes to the formula should be avoided. As a side note, the exercise of calculating the most accurate value of net profit margin of a customer was done previously with help from one of the big four accounting firms. Management found that the approximate calculation of this indicator is strongly correlated to the "real" value i.e. if a customer is very profitable according to one method, he is also very profitable according to the other method. One thing that is kept in mind is the fact that the computed value is always an overestimation, given that not all costs are assigned. The net profit margin can be presented in absolute or relative value. The formulas are shown below.

$$\begin{aligned} \text{Net profit margin} \\ = & \text{Gross profit margin} - \text{Discounts} - \text{Bonuses} - \text{Provisions} \\ & - \text{Transport costs} - \text{Advertising costs} - \text{Handling costs} \\ & - \text{Credit insurance} - \text{Cost of capital} \end{aligned}$$

$$\text{Net profit margin (\%)} = \frac{\text{Net profit margin}}{\text{Sales volume}} \times 100$$

In the next few points, the indicators used in the computation of the net profit margin of the customer are given individual attention: sales volume, discounts, bonuses, transport costs, advertising costs, handling costs, credit insurance and cost of capital.

3.2.3.2 Sales volume

The sales volume of a customer is a very important indicator. This indicator is used as criteria to define different policies related to customer service, as well as other customer related decisions. Management acknowledges that more important than looking at the current sales volume is focusing on the future sales volume. This makes more sense, implying that the

priority is given to future profitability, which is of greater relevance than current profitability. The classification of customers based on this indicator is divided in 5 levels according to specific thresholds of sales potential:

- Classification A: sales potential > 80 k€
- Classification B: 40 k€ < sales potential < 80 k€
- Classification C: 12.5 k€ < sales potential < 40 k€
- Classification D: 5 k€ < sales potential < 12.5 k€
- Classification E: sales potential < 5 k€

One of the uses of this indicator is to define the frequency with which the sales force visits different customers. The estimate of the potential sales volume is given by the sales representative in charge of the respective customer, based on his personal assessment.

3.2.3.3 Cost of sales

One limitation of the CPA is the reliance on transfer prices for the cost of sales. Although this results in a correct assessment of profitability at the level of ADE, it fails to provide the overall profitability at the level of the parent company AR. This is the case because transfer prices hide the margin that the parent company AR has when it sells the products to ADE.

3.2.3.4 Discounts

Discounts include commercial and cash discounts. Customers that buy large volumes are awarded a commercial discount based on quantity. In addition, a cash discount is awarded when customers meet the defined terms of payment. These terms of payment can be different between customers depending on the negotiated business agreement. The value of cash discounts that is used for the computation of the net profit margin of the customer is a theoretical value, based on the discounts contracted by the customer with ADE. It is assumed that the customer always takes advantage of the cash discount that he is entitled to by paying within the given time frame. Obviously, this is a flawed assumption. Despite the incentive to pay within the given time frame, the customer may choose to pay later e.g. due to cash flow constraints.

3.2.3.5 Bonuses

Some large customers have negotiated a yearly bonus that depends on the sales volume reached during a given year. There are usually different levels of sales volume that the customer can reach that award different amounts at the end of the year. There are also other kinds of bonuses. One example is a bonus given to customers to make sure that they advertise ADE's products in their catalogs. Another example is a bonus for new store openings i.e. ADE pays a fixed amount whenever the customer opens a new store. Since the value of the yearly bonuses is only known at the end of the year, an estimation is used based on the sales volume up to the date of the analysis.

3.2.3.6 Transport costs

The amount of transport costs is a relevant indicator to consider when analyzing the profitability of a customer, since it varies significantly between customers. The value used in the computation of the net profit margin of the customer is the "real" value. However, this value is

not extracted from the ERP system. In fact, the value is obtained through a process that totally bypasses the ERP system. Upon request, the transport company sends an Excel sheet with data on transport costs. This data is then edited and organized to obtain the necessary information.

3.2.3.7 Advertising costs

Advertising costs is an indicator that includes marketing costs such as the cost of advertisement in specialized magazines, product samples, marketing events, trade fairs and other marketing activities. When there are advertising costs that are specific to a customer, they are assigned to the respective customer. However, most advertising costs are distributed among customers using the sales volume as a cost driver.

3.2.3.8 Handling costs

The handling costs are related to the picking activities at the warehouse. This value is estimated using the sales volume as the cost driver. This is quite a rough estimate, since a few examples can easily tell that the sales volume is not a very accurate cost driver for handling costs. For example, some big orders are fulfilled with the shipment of containers that come directly from the factory in Portugal. Those do not have any handling costs since they are shipped directly to the customer without going through ADE's warehouse.

3.2.3.9 Credit insurance

Credit insurance represents a cost that is specific to each customer. The insurance is bought from a major provider of trade credit insurance. This protects ADE from losses in case a customer fails to pay a debt as a result of becoming insolvent. The provider defines the premium as a small percentage of sales. The premium depends on the creditworthiness of the customer, as judged by the insurance provider. Not all customers are insured though and those are usually required to pay upfront.

3.2.3.10 Cost of capital

When the customer is not required to pay upfront, the cost of capital of trade credit must be considered. For example, if a customer is allowed to pay one month after the sale, this indicator would be calculated by multiplying the monthly sales volume with the cost of capital expressed as a percentage value, given by the parent company AR.

3.2.3.11 Number of stores

The number of stores of a customer is an indicator that is considered relevant to help evaluate the size of the customer, as well as the potential for sales growth and the reach to end users. The profitability of a customer depends on a number of factors. Negotiation power is affected greatly by the size of the customer due to the current or potential sales volume that they represent. Also, since a big customer reaches a high number of end users, a marketing perspective must be considered. Having the product on display at the stores of a well-known customer and on their catalogs is an important advertisement channel that brings awareness to the brand. For these reasons, the number of stores is an indicator that is taken into consideration for a better understanding of future profitability and for guidelines on the negotiation of business agreements.

3.2.3.12 Number of orders and average order size

The number of orders is a useful indicator because it gives an idea of the frequency with which a customer places orders. Moreover, this indicator can be used together with the sales volume to compute the average order size, according to this formula:

$$\text{Average order size} = \frac{\text{Sales volume}}{\text{Number of orders}}$$

The average order size is an interesting indicator because it gives information that is related to transportation costs and, ultimately, the profitability of the customer. Decisions can be made to encourage bigger orders with lesser frequency, providing a more efficient use of transportation resources.

3.2.3.13 Customer Satisfaction

The existing links to customer profitability enhance the importance of monitoring indicators related to customer satisfaction. ADE sends a customer satisfaction survey to its customers on an annual basis. The survey asks the customer to classify the quality of service and products of ADE. The classification is done using a 4-point Likert scale:

1. Not sufficient
2. Sufficient
3. Good
4. Very good

However, this Likert scale is not balanced (or symmetric), because there is not an equal number of positive and negative positions. There are 3 positive answers (“sufficient”, “good” and “very good”) and only 1 negative answer (“not sufficient”). As mentioned in the literature, this may skew results towards a more favorable outcome. To overcome this problem, the author suggests changing to a balanced 5-point Likert scale:

1. Very insufficient
2. Insufficient
3. Sufficient
4. Good
5. Very good

Another option is to keep a 4-point Likert scale but with different position names:

1. Very insufficient
2. Insufficient
3. Good
4. Very good

Although both alternatives solve the problem of balance, there are differences between them. Most notably, the first option may suffer from central tendency bias i.e. the customer may be led to choose the middle position too often. On the contrary, the second option forces the surveyed customer to be positive or negative about the statement. Hence, the second option is arguably deemed superior.

The survey asks to classify features related to customer support, sales force, logistics, technical assistance, marketing, products, packaging, product development, product samples, prices and others. There is also some space for additional suggestions and comments. The template of the customer satisfaction survey can be found in annex A.

The customer satisfaction survey originates a number of different indicators. It is possible to produce indicators on individual questions, groups of questions or an indicator for the overall customer satisfaction level. The latter can be called customer satisfaction index. The calculation of the customer satisfaction index is done by computing the average classification of the customer satisfaction survey, taking the numerical values of the Likert scale. Any one of these indicators can be used to compare between different customers or to study the evolution of a particular customer over time. Based on this information, decisions can be made to improve customer satisfaction and drive increased profitability.

3.3 Conclusion of the chapter

After exploring how the Customer Profitability Analysis (CPA) is performed at ADE, potential improvement opportunities were discussed. Among other things, it was observed that the indicators used to compute the net profit margin of the customer had a few issues.

Firstly, the value of indicators such as commercial and cash discounts was a theoretical value, based on the conditions contracted by the customer with ADE. It was recognized that using the real value would be more accurate. The reason why the real value was not being used was because the data was not adequately organized in the information system.

Secondly, the value of the transport costs of the customer was not extracted from the ERP system. This indicator was obtained almost manually through a method that totally bypassed the ERP system. Again, the information system was not delivering the needed data the way it should.

At this point, the question was what could be done to be able to extract the data needed from the ERP system. Discussion with management led to the conclusion that in order to achieve this goal, the way transactions were classified in the system had to be reviewed as well as the associated procedures for data collection. Indeed, the methodology by which data was collected to serve as input for the Customer Profitability Analysis was identified as being too manual and time consuming. The focus was thus set upon improving the accurateness and accessibility of this data. At a more detailed level, this involved redesigning the financial dimensions of the Chart of Accounts and defining procedures related to the input of data in the ERP system, as explained in the next chapter.

The problem explained above was deemed the most relevant to address. Nonetheless, there are other issues, some of which have been previously mentioned and given a critical assessment throughout this section. However, a deep discussion of those other problems is beyond the scope of this work.

4 Suggestions of improvement and developed prototypes

In this chapter, the suggestions for improvement are presented as well as the prototypes developed. As stated before, solving the selected problem meant designing the financial dimensions of the Chart of Accounts used to classify transactions in the ERP system and defining procedures related to the input of data in the ERP system. As a side effect, this course of action brought improvements beyond the scope of the initial problem. The organization of transactional data in the ERP system benefits not only the extraction of data for the performance of the Customer Profitability Analysis, but also generally benefits the accessibility and accurateness of data demanded by other Management Control activities. This chapter starts by introducing some of the concepts used to better understand the problems under scrutiny.

4.1 Chart of Accounts

The Chart of Accounts used at ADE is defined by the parent company AR and is the same for all distribution units. The income statement portion of the Chart of Accounts deserves special attention, because it holds data on revenues and expenses that is then used for the Customer Profitability Analysis.

4.2 Levels of the Chart of Accounts

The levels of the Chart of Accounts are extra fields of the Chart of Accounts that are used to store additional information in the ERP system related to a given transaction. In other words, when a transaction is registered in the Finance module of the ERP system, the appropriate account is selected and additional information is provided about the transaction regarding the functional area, country, item group, line of business and other miscellaneous information. The 5 levels of the Chart of Account are presented below.

Table 1 – The 5 levels of the Chart of Accounts

Level number	Level name
1	Functional Area
2	Country
3	Item group
4	Line of business
5	Miscellaneous

Without going into too much detail, a hypothetical example is given ahead. A transaction regarding transport costs would be registered in the transport account of the Chart of Accounts. Additional information would be provided using the 5 levels of the Chart of Accounts to indicate that the functional area is Logistics, the country is Germany, the item group is Corkstyle, the line of business is Bauhaus and, if there is any other miscellaneous information of relevance, it would be stored in level 5.

4.3 List of Dimensions

The information that can be inserted under each level is limited to a set of predefined options. From here on, this set of predefined options shall be referred to as the List of Dimensions. Each dimension has a code. It is this code that is typed on the computer to store additional information in the levels of the Chart of Accounts when a transaction is registered in the ERP system. The

List of Dimensions is organized in a hierarchic fashion. Each dimension belongs to a certain “sublevel”. The sublevel states its place in the hierarchy. This is best understood with an example:

Table 2 – Sample of the List of Dimensions

Dimension	Dimension Description	Sublevel	Account Type	Parent Dimension
B	Sales Back Office	8		
B0	Sales Back Office	6		B
B00	Sales Back Office	4		B0
B000	SBO - Manager Order Desk	0	Normal	B00
B001	SBO - Order Desk North	0	Normal	B00
B002	SBO - Order Desk South	0	Normal	B00
B003	SBO - Order Desk DIY	0	Normal	B00
B004	SBO - Order Desk Contract	0	Normal	B00

Above is a small sample of the List of Dimensions to better explain the matter. Using the example, the codes that belong to dimensions of sublevel zero are the codes that can be typed on the computer to store additional information in the levels of the Chart of Accounts when a transaction is registered in the ERP system. In this example, these codes are: B000, B001, B002, B003 and B004. The sublevels above zero (4, 6 and 8) are used to identify a group of dimensions with the same common ground. In this example, the common ground is “Sales Back Office” i.e. the shown dimensions all belong to the Sales Back Office, representing different desks of the Sales Back Office. The column “Account Type” helps to quickly identify the dimensions of sublevel zero i.e. the dimensions of sublevel zero are classified as “Normal” in the column “Account Type”. From here on, the dimensions of sublevel zero may be referred to as “normal dimensions” and the dimensions of sublevels above zero shall be generally referred to as “parent dimensions”.

4.3.1 Dimensions with status “blocked for all purposes”

Some dimensions have become obsolete over time, though their existence in the system persists. This happens because deleting a dimension in the IT system means deleting all past data associated with that dimension, which is not desirable. Although the dimensions must not be deleted, those same dimensions can be redefined to be used for a different purpose, as long as they haven’t been in use for some time, as to avoid mixing data of the new dimension with data of the old dimension. To prevent the use of these obsolete dimensions, they are given the status “blocked for all purposes” which makes it impossible to assign them to new transactions. This status is not necessarily permanent as it can be changed at any time.

4.3.2 Dimensions with no recent transactions

There are many dimensions that are not associated with any recent transactions. This may imply that they have become obsolete. If that is the case, the best policy is to change their description to “do not use” and change their status to “blocked for all purposes”, so that confusion is avoided and their use is prevented. However, in some cases the dimension can serve a useful purpose if used correctly. In those cases, changes are suggested to the procedures for inserting data in the system.

4.3.3 Dimensions named “N/A”

The List of Dimensions has one dimension named “N/A” (stands for “not available”) for each level of the Chart of Accounts. The code for this dimension is simply “----”. This dimension is used when a transaction cannot be classified with any of the other dimensions.

4.4 Problems of the List of Dimensions

In this section, the identified problems of the List of Dimensions are given a critical assessment and the solutions found to solve these problems are presented. This section is organized according to the levels of the Chart of Accounts i.e. the problems of the List of Dimensions are addressed as the List of Dimensions is explored for each level of the Chart of Accounts.

4.4.1 Level 1: Functional Area

The level 1 of the Chart of Accounts is named “Functional Area”. In this level is registered information related to the functional area of the firm i.e. the department or person of the firm responsible for the transaction. The List of Dimensions of level 1 is quite extensive. It is organized in groups identified with the following parent dimensions:

Table 3 – Parent dimensions of level 1

Parent dimension code	Parent dimension name	Sublevel
-	N/A	8
B	Sales Back Office	8
C	Marketing & Sales	8
D	Distribution	8
F	Floor Layer	8
G	General Administrative Support	8
I	Information Flow	8
L	Logistics and Stock Management	8
S	Sales Force	8
T	Technical Assistance	8
Y	Industrial BU	8
W	AWS	8

Some parent dimensions are not used i.e. the normal dimensions under those parent dimensions are either non-existent or do not have any recent transactions associated with them. The following parent dimensions are in this situation: D, F, Y and W, respectively named Distribution, Floor Layer, Industrial BU (Industrial Business Unit) and AWS (Amorim Wood Flooring). Since the parent dimensions are defined centrally by the parent company AR and are the same across all distribution units, the ERP system of ADE still includes these parent dimensions, despite them not being used. These parent dimensions that are currently not used at ADE may however be in use at other distribution units.

A table with all the changes to the List of Dimensions of level 1 is presented in annex B.

4.4.1.1 Dimensions N/A

Some transactions are registered in the ERP system without being given any additional information about the Functional Area to which they are associated. The code of the dimension named “N/A” (stands for “not available”) is given. The code of this dimension is simply “----”. It was found that most transactions associated with this dimension were of small value and due to mistakes that have no reason to be repeated.

4.4.1.2 Dimensions B: Sales Back Office

The dimensions under the parent dimension named Sales Back Office are presented below.

Table 4 – Dimensions of level 1 under parent dimension B

Dimension	Dimension Description	Sublevel	Account Type	Parent Dimension
B	Sales Back Office	8		
B0	Sales Back Office	6		B
B00	Sales Back Office	4		B0
B000	SBO - Manager Order Desk	0	Normal	B00
B001	SBO - Order Desk North	0	Normal	B00
B002	SBO - Order Desk South	0	Normal	B00
B003	SBO - Order Desk DIY	0	Normal	B00
B004	SBO - Order Desk Contract	0	Normal	B00

There are 5 normal dimensions below this parent dimension. Dimensions B001-B004 represent each desk of the sales back office. On each desk there are normally 2 people working.

Dimension B000 (SBO - Manager Order Desk) belongs to the Sales Back Office Manager, but has no registered expenses. The explanation for this is that those costs are being distributed among the 4 desks. However, it is more appropriate to register some of the exclusive costs of this person under this dimension, namely salary and travelling expenses.

4.4.1.3 Dimensions C: Marketing & Sales

The dimensions under the parent dimension named Marketing & Sales are presented below, excluding the dimensions with no recent transactions.

Table 5 – Dimensions of level 1 under parent dimension C

Dimension	Dimension Description	Sublevel	Account Type	Parent Dimension
C	Marketing & Sales	8		
C0	Communication & Advertising	6		C
C00	Communication & Advertising	4		C0
C000	C&A - Manager Marketing	0	Normal	C00
C002	C&A - Product Management	0	Normal	C00
C003	C&A - Sample Department	0	Normal	C00

There are 3 normal dimensions and each one of them matches a person working at the department. A very large percentage of the total amount goes under dimension C000. All general costs incurred by the Marketing Department fall under dimension C000 (C&A - Manager Marketing) with the reasoning that this is the person that makes the decisions. These costs could instead fall under a new dimension C004 (C&A – General). However, this change has no clear benefit, since the interest of management is mostly focused on knowing the cost of the full marketing department and associate those costs with products, customers and/or events.

The only change done to this portion of the List of Dimensions was to block the dimensions with no recent transactions that were not already blocked.

4.4.1.4 Dimensions G: General Administrative Support

Most of the dimensions under the parent dimension named General Administrative Support should not exist. The Bookkeeping department assigned dimensions of level 1 to represent customers or suppliers in transactions such as commissions, penalties, cash discounts, bonuses and other expenses. This is conceptually wrong since dimensions of level 1 are meant to represent the functional area responsible for the transaction. To represent the customer or supplier, dimensions of level 4 should be used. This was changed so that these transactions are registered with dimensions of level 4. The list of dimensions of level 4 was updated and expanded to properly replace the former dimensions of level 1 under the parent dimension named General Administrative Support.

Below is the list of dimensions of level 1 under the parent dimension named General Administrative Support that is meant to be used. Only the dimensions that relate to functional areas of the company were kept.

Table 6 – Dimensions of level 1 under parent dimension G

Dimension	Dimension Description	Sublevel	Account Type	Parent Dimension
G	General Administrative Support	8		
G0	General Administrative Support	6		G
G00	General Administrative Support	4		G0
G000	GAS - General Company	0	Normal	G00
G002	GAS-Apprentices	0	Normal	G00
G003	GAS-Workers Council	0	Normal	G00
G200	CORTEX	0	Normal	G00

4.4.1.5 Dimensions I: Information Flow

Information Flow is the designation given to the Finance department. The dimensions under the parent dimension named Information Flow are presented below, excluding the dimensions with no recent transactions.

Table 7 – Dimensions of level 1 under parent dimension I

Dimension	Dimension Description	Sublevel	Account Type	Parent Dimension
I	Information Flow	8		
I0	Information Flow	6		I
I00	Information Flow	4		I0
I000	IF- MFA - Barbosa	0	Normal	I00
I010	IF- Accounting - Büsing	0	Normal	I00
I011	IF-Accounting Department	0	Normal	I00
I020	IF- Essmann	0	Normal	I00
I030	IF-Lüllemann	0	Normal	I00

In order to achieve coherence in the structure of the dimensions, a few changes were suggested. First of all, the names of people were replaced by names that indicate the function of those people within the organization. A dimension of general character was created for transactions that do not fit in other dimensions. This dimension was named “IF- General” and was associated with code I000. As a consequence, the dimension previously associated with the code I000 was then associated with the code I001. Dimensions I020 (IF- Essmann) and I030 (IF- Lüllemann) were merged into a new dimension I004 (IF- Information Flow), since they represent 2 people from the same department and the transactions associated with those dimensions are limited to the respective salaries. The changes are shown below.

Table 8 – Dimensions of level 1 under parent dimension I: old and new version

Old version		New version	
Dimension	Dimension Description	Dimension	Dimension Description
		I000	IF- General
I000	IF- MFA - Barbosa	I001	IF- Manager
I010	IF- Accounting - Büsing	I002	IF- Accounting Responsible
I011	IF- Accounting Department	I003	IF- Accounting Department
I020	IF- Essmann	I004	IF- Information Flow
I030	IF- Lüllemann		

4.4.1.6 Dimensions L: Logistics and Stock Management

Logistics and Stock Management represents the costs incurred by the Purchase Department, the Forwarding Department, the warehouse and transportation. The dimensions under the parent dimension named Logistics and Stock Management are presented below, excluding the dimensions with no recent transactions.

Table 9 – Dimensions of level 1 under parent dimension L

Dimension	Dimension Description	Sublevel	Account Type	Parent Dimension
L	Logistics and Stock Management	8		
L0	Logistics and Stock Management	6		L
L00	Logistics and Stock Management	4		L0
L000	LSM-SCM - Pereira	0	Normal	L00
L010	LSM-Transport	0	Normal	L00
L011	LSM-Warehouse	0	Normal	L00
L020	LSM-Purchase / Disposition	0	Normal	L00
L030	LSM-Julio Pereira	0	Normal	L00

In order to achieve coherence in the structure of the dimensions, a few changes were suggested, using the same logic of the changes done to the dimensions under the parent dimension named Information Flow, as explained in the previous point. In addition, it was suggested to stop using the dimension L030 (LSM- Julio Pereira), named after a former employee. The changes are shown below.

Table 10 – Dimensions of level 1 under parent dimension L: old and new version

Old version		New version	
Dimension	Dimension Description	Dimension	Dimension Description
		L000	LSM- General
L000	LSM-SCM - Pereira	L001	LSM- Responsible
L010	LSM-Transport	L002	LSM- Transport
L011	LSM-Warehouse	L003	LSM- Warehouse
L020	LSM-Purchase / Disposition	L004	LSM-Purchase / Disposition
L030	LSM-Julio Pereira		(stop using, block)

4.4.1.7 Dimensions S: Sales Force

There are many dimensions under the parent dimension named Sales Force. These dimensions are organized in groups using parent dimensions of sublevel 4. The parent dimensions of sublevel 4 under the parent dimension named Sales Force are presented below.

Table 11 – Dimensions of level 1 under parent dimension S

Parent dimension code	Parent dimension name	Sublevel
S10	SF - General Company	4
S20	SF - Cork Residential/DIY	4
S30	SF-Contract	4
S40	SF-Industrial BU	4
S50	SF- AWS	4
S60	SF- AUSTRIA	4

A brief explanation of the groups of dimensions is given below:

- Parent dimension S10 (SF - General Company) is a general category.
- Parent dimension S20 (SF - Cork Residential/DIY) includes the whole sales force of ADE.
- Parent dimension S30 (SF-Contract) holds dimensions of the extinct sales team dedicated to the “Contract” business. This team operated under a separate leadership which justified the separate category.
- Parent dimension S40 (SF-Industrial BU) represents the sales team of Amorim Cork Composites (ACC).
- Parent dimension S50 (SF- AWS) bares the name of Amorim Wood Supplies (AWS). This company is no longer in existence. It has been replaced by Amorim Revestimentos Delmenhorst (ARDEL). ARDEL is owned by AR and is independent from ADE despite using its facilities.
- Parent dimension S60 (SF- AUSTRIA) belongs to the sales team of Amorim Flooring Austria (AFA).

All in all, the structure of these dimensions was deemed to be adequate. The only change done to this portion of the List of Dimensions was to block the dimensions with no recent transactions that were not already blocked.

4.4.1.8 Dimensions T: Technical Assistance

Technical Assistance represents the Technical Customer Service department. The dimensions under the parent dimension named Technical Assistance are presented below, excluding the dimensions with no recent transactions.

Table 12 – Dimensions of level 1 under parent dimension T

Dimension	Dimension Description	Sublevel	Account Type	Parent Dimension
T	Technical Assistance	8		
T0	Technical Assistance	6		T
T00	Technical Assistance	4		T0
T000	T- Jürgensmeier	0	Normal	T00
T001	T-Techniciens Schwarze	0	Normal	T00

In order to achieve coherence in the structure of the dimensions, a few changes were suggested, using the same logic of the changes done to the dimensions under the parent dimension named Information Flow and the dimensions under the parent dimension named Logistics and Stock Management, as explained in the previous respective points. The changes are shown below.

Table 13 – Dimensions of level 1 under parent dimension T: old and new version

Old version		New version	
Dimension	Dimension Description	Dimension	Dimension Description
		T000	T- General
T000	T- Jürgensmeier	T001	T- Manager
T001	T-Techniciens Schwarze	T002	T- Assistant

4.4.2 Level 2: Country

The level 2 of the Chart of Accounts is named “Country”. In this level is stored information related to the country associated with the registered transactions. This portion of the List of Dimensions is simply a list of all the countries in the world. The table below shows the countries that are associated with most of the transactions.

Table 14 – Percentage of the volume of transactions per country

Country	Volume of transactions
Germany	73%
Portugal	14%
Austria	3%
Others	1%
N/A	9%

The dimension named “N/A” holds transactions that were not associated with a specific country when they were registered in the ERP system. This dimension has a significant volume, which threatens the purpose of classifying the transactions by country. The nature of those transactions that haven’t been properly classified was analyzed. The origin is diverse and there is no overriding reason for this misclassification. However, the information that can be extracted from this data is of dubious usefulness. What is really important to know is sales by country and purchases by country. Since this data can be pulled out of the Logistics module of the ERP system, there is no added value in duplicating this information for transactions in the Finance module of the ERP system. In conclusion, this level serves no useful purpose. No changes were suggested.

4.4.3 Level 3: Item Group

The level 3 of the Chart of Accounts is named “Item Group”. In this level is stored information related to the product associated with the registered transactions. It is organized by groups of products that can be joined together due to common characteristics. This portion of the List of Dimensions is simply a list of the different products that ADE sells to its customers. Discussion with management led to the conclusion that this level did not warrant special attention. No changes were suggested.

4.4.4 Level 4: Line of Business

The level 4 of the Chart of Accounts is named “Line of Business”. This is the key element and the link between Accounting or Bookkeeping and the Customer Profitability Analysis. In this level is stored information related to the customer or supplier associated with the registered transactions. The Customer Profitability Analysis performed at ADE relies on the level 4 of the Chart of Accounts to extract data from the ERP system organized by customer or distribution channel. The dimensions are organized in groups identified with the following parent dimensions:

Table 15 – Parent dimensions of level 4

Parent dimension code	Parent dimension name	Sublevel
-	N/A	8
A	Architect/DesignerOffice	8
B	BuildingConstr.MaterialComp	8
C	Contractors	8
D	Doityourself	8
F	Floorlayer/Installer	8
G	Group	8
H	IndustrialCustomersFlooring	8
I	Importer/Distributor	8
L	Other:Closures	8
M	Wood	8
N	Industrial	8
R	Retailer	8
S	BusinessUnit	8
V	Directsales	8
W	Wholesaler	8
Z	Suppliers	8

Some parent dimensions are not used i.e. the normal dimensions under those parent dimensions do not have any recent transactions associated with them. The following parent dimensions are in this situation: B, F, I, and L, respectively named “BuildingConstr.MaterialComp”, “Floorlayer/Installer”, “Importer/Distributor” and “Other:Closures”. Since the parent dimensions are defined centrally by the parent company AR and are the same across all distribution units, the ERP system of ADE still includes these parent dimensions, despite the fact that they are not used. Those parent dimensions that are currently not used at ADE may however be in use at other distribution units.

A brief explanation of the groups of dimensions is given below, excluding those with no recent transactions:

- Parent dimension A (Architect/DesignerOffice) holds dimensions of the contracting distribution channel. The name of this parent dimension ought to be changed to “Contracting”.
- Parent dimension C (Contractors) was deemed obsolete, since parent dimension A was assigned to contracting clients.
- Parent dimension D (Doityourself) belongs to the “do-it-yourself” customers (DIY).
- Parent dimension G (Group) comprises several dimensions that indicate different companies of the Amorim Group, with whom ADE does business.
- Parent dimension H (IndustrialCustomersFlooring) holds dimensions of the B2B distribution channel. The name of this parent dimension ought to be changed to “B2B”.
- Parent dimension M (Wood) belongs to the wood distribution clients.

- Parent dimension N (Industrial) was deemed obsolete, since parent dimension H already holds the dimensions that belong to the industrial customers of the B2B distribution channel.
- Parent dimension R (Retailer) holds dimensions of both retailers and wholesalers. As stated before, the distinction between them is not always a clear one. This justifies grouping them together as traditional distribution. The name of this parent dimension ought to be changed to “Traditional”.
- Parent dimension S (BusinessUnit) comprises several dimensions that indicate different business units of the Amorim Group, with whom ADE does business.
- Parent dimension V (Directsales) is meant for sales done directly by the parent company AR.
- Parent dimension W (Wholesaler) was deemed obsolete, since parent dimension R already holds dimensions of both retail and wholesale clients.
- Parent dimension Z (Suppliers) is used for all external suppliers.

This portion of the List of Dimensions is a list of the customers and suppliers of ADE. The customers of ADE were studied regarding several criteria to evaluate the desired level of aggregation of the Customer Profitability Analysis i.e. if they should be represented individually or grouped by “purchase organization” or “marketing association”. The criteria were the kind of business agreement that was celebrated with the customer and their importance with respect to sales volume, as well as ownership relationships between customers. In addition, the dimensions of level 4 were reviewed together with the dimensions of level 1 under parent dimension G, given that it was decided that the latter should cease to be used and that the Bookkeeping department should always register transactions using the dimensions of level 4 to store information related to customers or suppliers.

Since the structure of dimensions under each parent dimension is similar, it is not necessary to present the list of dimensions under each parent dimension individually. As an example, the normal dimensions under the parent dimension named Wood are presented below, excluding the dimensions with no recent transactions.

Table 16 – Dimensions of level 4 under parent dimension M

Dimension	Dimension Description	Sublevel	Account Type	Parent Dimension
M	Wood	8		
M0	Wood	6		M
M00	Wood	4		M0
M0000	Wood-General	0	Normal	M00
M0001	Wood-Holzland	0	Normal	M00
M0002	Wood-Hagebau	0	Normal	M00
M0003	Wood-Holzring	0	Normal	M00
M0004	Wood-EurobaustoffHolz	0	Normal	M00

As shown above, there is one general dimension that groups together all the smaller customers and 4 dimensions that correspond to important clients of wood distribution that deserve to be individually considered for the Customer Profitability Analysis.

A table with all the changes to the List of Dimensions of level 4 is presented in annex C.

After changing the dimensions of level 4 to the desired level of aggregation, it was necessary to integrate the Finance module of the ERP system with the Logistics module. When a product is sold to a customer, the Logistics module of the ERP system registers the transaction and automatically associates a customer code to the sales revenue and a supplier code to the cost of sales. The list of customer and supplier codes of the Logistics module of the ERP system shall be referred to as the List of LoB (stands for “List of Lines of Business”). The List of LoB, in the Logistics module of the ERP system, is linked to the List of Dimensions of level 4, in the Finance module of the ERP system. The List of LoB was updated and expanded to match the List of Dimensions of level 4.

A table with all the changes to the List of LoB is presented in annex D.

The share of the volume of transactions associated with each parent dimension is shown in the graph below, excluding the parent dimensions that are not used.

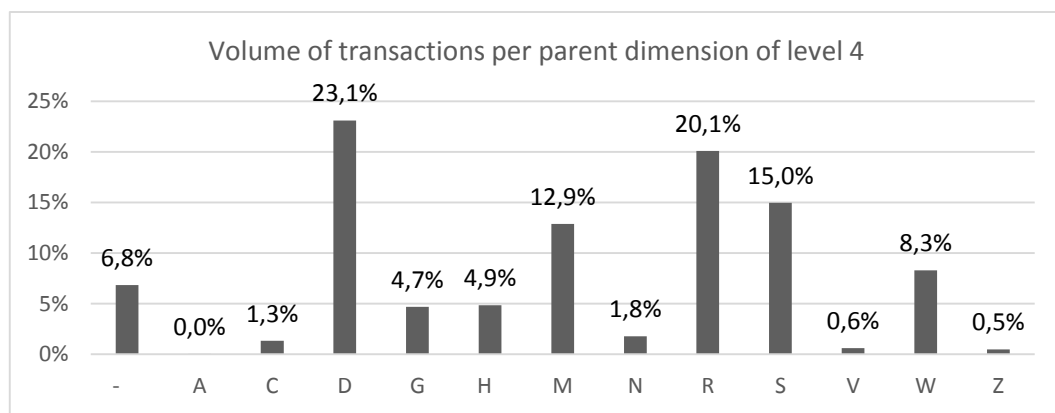


Figure 3 – Volume of transaction per parent dimension of level 4

As seen in the graph above, the parent dimension named “N/A” (code “-”) holds almost 7% of the total volume of transactions. The income statement accounts that had transactions associated with the dimension named “N/A” of level 4 were explored to understand if some of those transactions could have been classified with other dimensions. The accounts in that situation were related to:

- Commissions, cash discounts and bonuses
- Transportation costs
- Marketing
- Travelling expenses

No valid reason was found not to properly classify commissions, cash discounts and bonuses. There were talks with the Bookkeeping department to make sure that greater care would be taken to properly classify these transactions.

Transportation costs amount to 14% of the total volume under the dimension named “N/A”. ADE has one provider of transportation services for its products that handles all distribution, with negligible exceptions. The way that information was exchanged between ADE and the transportation company was the responsible for the lack of a detailed classification by customer. It was not a satisfactory situation because the process by which the transport costs by customer were obtained was rather manual and bypassed the ERP system. It was not possible to access this information through the ERP system. A new procedure to collect the data on transport costs

was suggested. The procedure to classify transport costs in the ERP system is presented in annex E.

As for the transactions related to Marketing, it was recognized that it is not possible to associate all expenses with a customer, since these expenses may affect many customers. However, the Marketing department must make sure that the transactions that can be associated with dimensions of level 4 are indeed properly classified. A user-friendly list with the dimensions that are useful to the Marketing department was created. The list of the dimensions of level 4 adjusted for the Marketing department is presented in annex F.

The travelling expenses are incurred by the sales force when they meet customers. Most are difficult to assign to a specific customer. For example, the bill for fuel costs is received once a month from the energy company (e.g. Shell) for all travels done during that months, certainly including visits to many customers. On the other hand, some costs could be assigned directly to a customer. An example could be the accommodation expenses in hotels for the annual meeting with each customer. However, the value of these expenses is so small in comparison to the whole that the impact on the costs by customer is negligible. No changes were suggested.

4.4.5 Level 5: Miscellaneous

The level 5 of the Chart of Accounts is named “Miscellaneous”. In this level is stored information of diverse nature i.e. this level is meant for additional information that does not fit in the previous dimensions. These dimensions are organized in groups identified with the following parent dimensions:

Table 17 – Parent dimensions of level 5

Parent dimension code	Parent dimension name	Sublevel
-	N/A	8
A	Activity	8
C	Cars	8
D	Departments	8
I	Labour/Investment	8
M	Brand	8
P	Personnel	8
Q	Quality	8
S	Showroom	8
X	Enterdescription	8
Z	Exchangegains/losses	8

Most dimensions are currently not being used. Indeed, the dimension named “N/A” concentrates over 99.5% of transactions. The dimensions under parent dimensions A, C, I and P, respectively named Activity, Cars, Labour/Investment and Personnel have no recent transactions. There is a lack of standards concerning the use of dimensions of this level. It is necessary to define the purpose of this level and establish guidelines on how it should be used.

There have been some useful applications of this level. For example, the dimension named “Domotex” (A0001) was once used to gather all data related to the event of the same name: Domotex.

Another example is the dimensions named “Advertising-New Collection” (code M0601) and “Advertising-Others” (code M0602). These dimensions were used when a new collection of flooring products was launched. These products had the distinctive feature of being colorful. In order to control the advertising expenses on this new line of products, the Marketing department was instructed to classify all advertisement costs either as “Advertising-New Collection” or “Advertising-Others”.

Here are some possibilities for usage of this dimension:

- Marketing events such as presentation fairs e.g. “Domotex”
- Internal company projects e.g. Kaizen implementation, new product collection launch

In conclusion, this level remains as an extra field for specific events or initiatives. Since none of the dimensions of this level is currently being used, it was decided to change their status to “blocked for all purposes” and their names to “do not use”. When something comes up that justifies the use of this level, then one or more dimensions shall be assigned for that purpose.

4.5 Conclusion of the chapter

This chapter presents the changes that were found necessary to adequately redesign the List of Dimensions, considering the existing implications for the procedures of data collection to perform the Customer Profitability Analysis and the access of data for other purposes related to Management Control. Greater attention was directed towards level 1 and 4 of the Chart of Accounts, respectively named “Functional Area” and “Line of Business”. The suggested changes concerned the structure of the List of Dimensions and the conceptual logic behind the adopted prototypes. The solutions presented throughout the chapter are the product of a careful analysis of the factors that influence the choice of different alternatives, keeping in mind the business reality of ADE and how that affects the classification of transactions in the Finance module of the ERP system.

5 Conclusions and future work

The focus on customer profitability and the need to remain competitive in the current business environment has led the company Amorim Deutschland to seek improvement in the way it performs the Customer Profitability Analysis. With that mindset, the indicators used to measure customer profitability were critically assessed and the procedures for data collection were studied. The methodology by which data was collected to serve as input for the Customer Profitability Analysis was reckoned as too manual and time consuming. It was decided that improving the accurateness and accessibility of this data would be the focus of the present work. This meant optimizing the List of Dimensions and reviewing the procedures related to the input of data in the ERP system.

This endeavor resulted in the general redesign of the List of Dimensions, giving greater consistency and integration to the classification of transactions. On the other hand, the misclassification of transactions was fought by discussing the matter with the relevant departments and emphasizing the need to associate the registered transactions with the appropriate dimensions, thereby providing the correct input to perform the Customer Profitability Analysis and generally improving the availability of data to serve Management Control.

Some improvements deserve to be highlighted. The classification of the Transport costs in the Finance module allows management to retrieve data on transportation costs directly from the ERP system, instead of relying on the previous method that bypassed the ERP system. Discussing the misclassification of commissions, bonuses and cash discounts with the Bookkeeping department increased awareness on the importance of associating the registered transactions with the appropriate dimensions. This way the real value of these indicators can be obtained instead of relying on the theoretical value. The Bookkeeping department was responsible for a conceptual mistake that consisted on the usage of dimensions of level 1 (named Functional Area) to store information related to the customer or supplier associated with the registered transactions. This was solved by redesigning and expanding the dimensions of level 4 (named Line of Business) to accommodate the dimensions required by the Bookkeeping department. Once again, keeping in mind the importance of associating the registered transactions with the appropriate dimensions, a list of dimensions of level 4 was created for the Marketing department with only the dimensions needed by the Marketing department to help the process of associating marketing costs to customers or suppliers.

In the end, the implemented changes made it easier to obtain the desired indicators to evaluate customer profitability and improved the quality of the Customer Profitability Analysis, as well as increased the accurateness and organization of the data held in the Finance module of the ERP system, contributing to better serve Management Control.

Looking ahead, perspectives of future work may include studying the influence of relying on transfer prices to calculate the cost of sales upon the results of the Customer Profitability Analysis, given that the margin of the parent company AR is not included in the calculations. Another perspective of future work would be a thorough cost-benefit analysis of acquiring a new ERP system to substitute the current outdated software.

References

Epstein, M. (2002). Customer Profitability Analysis, ICAEW.

Foster, G., et al. (1996). "Customer profitability analysis: challenges and new directions." Journal of Cost Management **10**: 5-17.

Howell, R. A. and S. R. Soucy (1990). "Customer profitability: As critical as product profitability." Management Accounting(October): 43-47.

Mockler, R. J. (1970). Readings in Management Control, Appleton-Century-Crofts.

Porter, M. E. (1996). "What is strategy?" Harvard Business Review.

Spitzer, D. (2007). Transforming performance measurement, Amacom.

Annex A: Customer Satisfaction Survey



Amorim Revestimentos, S.A.

REGISTO	SGQ
CUSTOMER SATISFACTION SURVEY	

Your opinion is important! With the objective of continuously improving our service, we would like to ask for 5 minutes of your time for filling in this survey.

1 – Company Identification

Company name:	
Address:	

2 – Evaluation

A – Interface

		Not Sufficient ☹	Sufficient ☺	Good ☺	Very Good ☺
		1	2	3	4
Phone	Efficiency				
	Politeness				
	Easy to contact				
Suggestions:					

B – Services

		Not Sufficient ☹	Sufficient ☺	Good ☺	Very Good ☺
		1	2	3	4
Support Services	Politeness of the administrative and financial staff				
Sales Force	Appearance and politeness				
	Visit frequency and availability				
	Technical capacity/competence of sales force				
Logistics	Order processing / reception				
	Speed of delivery				
	Fulfilment of delivery dates (punctuality)				
	Response to information requests				
	Terms of Delivery				
Technical Assistance	Speed of response to claims				
	Quality of the responses to claims				
	Claims handling efficiency				
	Quality of technical support (Recommendations, solutions, follow up)				
	Communication with the market/availability				



AMORIM

Amorim Revestimentos, S.A.

REGISTO	SGQ
CUSTOMER SATISFACTION SURVEY	

B – Services				
	Not Sufficient ☹ 1	Sufficient ☺ 2	Good ☺ 3	Very Good ☺ 4
Professional Training	Contents of the Training Programs			
	Training frequency			
	Type of training tools suitable(CD, paper, video, ...)			
	Quality of the tools according to the expectations			
	Competence of the Trainers			
Marketing & Communication Tools	Communication tools are suitable to the specific needs of your business in terms of: <ul style="list-style-type: none"> • Design and Image • Content • Functionality 			
	How to evaluate, specifically, the following communication tools according to your business needs:			
	1) Brand Website			
	2) Samples book			
	3) Sample binder			
	4) Point of Sales display cases			
	5) Kits of product demonstration			
	6) Other materials of the point of sale (posters, banners, stickers, etc.)			
	7) Advertising in Magazines and Newspapers			
8) Other ways of advertising (Sponsors, Outdoors, Internet, etc.)				
Suggestions:				

Annex B: Changes to List of Dimensions of Level 1

Code	Description	Blocked	Not used	Block	Create	Change name
----	N/A					
B000	SBO - Manager Order Desk		x			
B0000	SBO - Vetriebsinnendienst, all	x	x			Do Not Use
B001	SBO - Order Desk North					
B002	SBO - Order Desk South					
B003	SBO - Order Desk DIY					
B004	SBO - Order Desk Contract					
C000	C&A - Manager Marketing					
C0000	C&A - Werbung, allgemein	x	x			Do Not Use
C0001	C&A - Werbung, Leitung	x	x			Do Not Use
C0002	C&A - Werbung, KNAUSS	x	x			Do Not Use
C001	C&A - Manager service		x	x		Do Not Use
C002	C&A - Product Management					
C003	C&A - Sample Department					
C005	C&A - Österreich		x	x		Do Not Use
C010	C&A - ADV-Manager-Thomas		x	x		Do Not Use
C012	C&A-ADV-Cork.Res.Nort-Martens		x	x		Do Not Use
C013	C&A-ADV-Cork.Res.South-Bergner		x	x		Do Not Use
C014	C&A-Wood North-Borghaus		x	x		Do Not Use
C015	C&A-Wood South-Piputa		x	x		Do Not Use
C016	C&A-DIY-Masanek		x	x		Do Not Use
C017	C&A-ADV-Contract-Wahsner		x	x		Do Not Use
G000	GAS - General Company					
G0000	GAS - Verwaltung, allgemein	x				Do Not Use
G001	GAS-General Manager Assistant	x	x			Do Not Use
G0012	GAS-Max Bahr NEU			x		Do Not Use
G002	GAS-Emprentices					GAS-Apprentices
G003	GAS-Workers Council					
G004	GAS-Provision / Accruals		x	x		Do Not Use
G005	GAS-Amorim Flooring Austria			x		Do Not Use
G0064	GAS-Praktiker NEU			x		Do Not Use
G010	GAS-AFS			x		Do Not Use
G011	GAS-Aro Großvertrieb			x		Do Not Use
G012	GAS-Max Bahr			x		Do Not Use
G013	GAS-Bauhaus			x		Do Not Use
G014	GAS-Bauspezi NBB			x		Do Not Use
G015	GAS-Beumers + Orth		x	x		Do Not Use
G016	GAS-Bonflair Gruppe			x		Do Not Use
G017	GAS-Brandt Braunschweig		x	x		Do Not Use
G018	GAS-Buchwald		x	x		Do Not Use
G019	GAS-Burghardt		x	x		Do Not Use
G020	GAS-Castorama		x	x		Do Not Use
G021	GAS-COPA			x		Do Not Use

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G022	GAS-Dekor Union		x	Do Not Use
G0221	GAS-Decor Objekt		x	Do Not Use
G023	GAS-Discher Holz/Thalhofer	x	x	Do Not Use
G024	GAS-Emil Lux	x	x	Do Not Use
G025	GAS-EMK Kassel	x	x	Do Not Use
G026	GAS-EMV		x	Do Not Use
G027	GAS-Engelhard	x	x	Do Not Use
G028	GAS-Euro Leder	x	x	Do Not Use
G029	GAS-Edeka	x	x	Do Not Use
G0291	GAS-Globus		x	Do Not Use
G0292	GAS-AVA	x	x	Do Not Use
G0293	GAS-MARKTKAUF	x	x	Do Not Use
G030	GAS-Geiger Aschaffenburg	x	x	Do Not Use
G032	GAS-Goldkuhle Tapetenmagazin		x	Do Not Use
G033	GAS-Haag Stuttgart	x	x	Do Not Use
G034	GAS-Hacotex/Botex/Mega		x	Do Not Use
G035	GAS-DIY Hagebau	x	x	Do Not Use
G036	GAS-DIY Österreich Hagebau		x	Do Not Use
G037	GAS-Handel Hagebau		x	Do Not Use
G038	GAS-EDE Hagebau	x	x	Do Not Use
G039	GAS-DIY		x	Do Not Use
G040	GAS-EDE	x	x	Do Not Use
G041	GAS-Hammer Schlau		x	Do Not Use
G042	GAS-Hans Spies	x	x	Do Not Use
G043	GAS-Haase-Christiansen-Knutzen		x	Do Not Use
G044	GAS-Heimdecor		x	Do Not Use
G045	GAS-Markant	x	x	Do Not Use
G0451	GAS-Hela		x	Do Not Use
G0452	GAS-Profi Märkte	x	x	Do Not Use
G046	GAS-Hellweg		x	Do Not Use
G047	GAS-Herzog	x	x	Do Not Use
G048	GAS-Holzland		x	Do Not Use
G049	GAS-Holzring		x	Do Not Use
G050	GAS-Hometrend		x	Do Not Use
G051	GAS-Hornbach		x	Do Not Use
G052	GAS-Huber Tann	x	x	Do Not Use
G053	GAS-Interbaustoff	x	x	Do Not Use
G054	GAS-Eurobaustoff-DIY		x	Do Not Use
G0541	GAS-Eurobaustoff-HANDEL		x	Do Not Use
G055	GAS-Jedele/Aalen	x	x	Do Not Use
G056	GAS-Kaltenbach + Maier		x	Do Not Use
G057	GAS-Klemm Pfullingen	x	x	Do Not Use
G058	GAS-Klöpferholz	x	x	Do Not Use
G059	GAS-König & Kritzmann	x	x	Do Not Use
G060	GAS-E & E Krauss	x	x	Do Not Use
G061	GAS-Leyendecker	x	x	Do Not Use

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G062	GAS-Lotter + Liebherr		x	Do Not Use
G063	GAS-Mayerhofer	x	x	Do Not Use
G064	GAS-Praktiker = Metro		x	Do Not Use
G0641	GAS-Extra	x	x	Do Not Use
G065	GAS-Müller & Dintelmann	x	x	Do Not Use
G066	GAS-Natur Boden	x	x	Do Not Use
G067	GAS-NRC	x	x	Do Not Use
G068	GAS-Obi	x	x	Do Not Use
G069	GAS-Objekt Partner	x	x	Do Not Use
G070	GAS-PMZ	x	x	Do Not Use
G071	GAS-Rettberg	x	x	Do Not Use
G072	GAS-REWE		x	Do Not Use
G073	GAS-Riegelsche Baustoffe	x	x	Do Not Use
G074	GAS-Rigromont		x	Do Not Use
G075	GAS-Ruhe & Co.	x	x	Do Not Use
G076	GAS-Römhild Koblenz	x	x	Do Not Use
G077	GAS-SKV	x	x	Do Not Use
G078	GAS-Speckmann	x	x	Do Not Use
G079	GAS-Sonnhaus	x	x	Do Not Use
G080	GAS-Südbund		x	Do Not Use
G081	GAS-Timpe & Mock	x	x	Do Not Use
G082	GAS-Thomas & Co.		x	Do Not Use
G083	GAS-Vito	x	x	Do Not Use
G084	GAS-VFG	x	x	Do Not Use
G085	GAS-VKG	x	x	Do Not Use
G086	GAS-Wässa & Schuster	x	x	Do Not Use
G087	GAS-Perfect Weiken	x	x	Do Not Use
G088	GAS-Weigl	x	x	Do Not Use
G089	GAS-Wilts		x	Do Not Use
G091	GAS-Winkler	x	x	Do Not Use
G092	GAS-MDH	x	x	Do Not Use
G093	GAS-Meisterleisten	x	x	Do Not Use
G094	GAS-Jordan	x	x	Do Not Use
G095	GAS-Nordhessische-Baustoffm.	x	x	Do Not Use
G096	GAS-Thede und Witte	x	x	Do Not Use
G097	GAS-WeGo	x	x	Do Not Use
G098	GAS-W+H Diemel-Baumarkt	x	x	Do Not Use
G099	GAS-Ratio	x	x	Do Not Use
G100	GAS-NBB	x	x	Do Not Use
G101	GAS-COOP		x	Do Not Use
G102	GAS-Steffel		x	Do Not Use
G103	GAS-Objekteure im Forum		x	Do Not Use
G104	GAS- euro delkredere		x	Do Not Use
G105	GAS- TTL		x	Do Not Use
G200	CORTEX			
G999	GAS-Others		x	Do Not Use

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I000	IF- MFA - Barbosa				IF- General
I0000	IF - allgemein	x	x		Do Not Use
I0001	IF - kfm. Leitung	x	x		Do Not Use
I0002	IF - Rewe., Finanzen, allgem.	x	x		Do Not Use
I001	IF- Manager				x
I002	IF- Accounting Responsible				x
I003	IF- Accounting Department				x
I004	IF- Information Flow				x
I010	IF- Accounting - Büsing			x	Do Not Use
I011	IF-Accounting Department			x	Do Not Use
I020	IF- Essmann			x	Do Not Use
I030	IF-Lüllemann			x	Do Not Use
L000	LSM-SCM - Pereira				LSM- General
L0000	LSM - Logistik, allgemein	x	x		Do Not Use
L0001	LSM - Logistik, Leitung	x	x		Do Not Use
L001	LSM- Responsible				x
L002	LSM- Transport				x
L003	LSM- Warehouse				x
L004	LSM-Purchase / Disposition				x
L010	LSM-Transport			x	Do Not Use
L011	LSM-Warehouse			x	Do Not Use
L020	LSM-Purchase / Disposition			x	Do Not Use
L030	LSM-Julio Pereira			x	Do Not Use
L040	LSM-Archive		x	x	Do Not Use
S0000	SF - Vertrieb, allgemein	x	x		Do Not Use
S0001	SF - Geschäftsführung	x	x		Do Not Use
S0002	SF - Vertriebsleitung	x	x		Do Not Use
S0003	SF - kfm. Leitung	x	x		Do Not Use
S0010	SF - Verkaufsgebiet Nord, all	x	x		Do Not Use
S0011	Breuer	x	x		Do Not Use
S0012	Martens	x	x		Do Not Use
S0013	Strüve Handel	x	x		Do Not Use
S0014	Strelewitz	x	x		Do Not Use
S0015	Wolf	x	x		Do Not Use
S0016	Wurth	x	x		Do Not Use
S0017	Schüttler	x	x		Do Not Use
S0018	Hahn Handel	x	x		Do Not Use
S0019	Borghaus	x	x		Do Not Use
S0020	SF - Verkaufsgebiet Süd, allg	x	x		Do Not Use
S0021	Barthel	x	x		Do Not Use
S0022	Bergner	x	x		Do Not Use
S0023	Kapusta	x	x		Do Not Use
S0024	Keilhauer	x	x		Do Not Use
S0025	Schäfer	x	x		Do Not Use
S0026	Piputa	x	x		Do Not Use
S0027	Böhm	x	x		Do Not Use

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S0028	Wohlatz	x	x		Do Not Use
S0029	Borghaus Rheinland-Pfalz	x	x		Do Not Use
S0030	SF - DIY, allgemein	x	x		Do Not Use
S0031	Freiwald	x	x		Do Not Use
S0032	Marve	x	x		Do Not Use
S0033	Mohr	x	x		Do Not Use
S0034	Müller	x	x		Do Not Use
S0035	Peulen	x	x		Do Not Use
S0036	Rühle	x	x		Do Not Use
S0037	Spatscheck	x	x		Do Not Use
S0038	Wächtler	x	x		Do Not Use
S0039	Borghaus NRW	x	x		Do Not Use
S0040	SF - Object, allgemein	x	x		Do Not Use
S0041	Güßregen	x	x		Do Not Use
S0042	Reick	x	x		Do Not Use
S0043	Borghaus OST	x	x		Do Not Use
S0044	Mohr	x	x		Do Not Use
S0045	Wahsner Andreas	x	x		Do Not Use
S0046	Skimina Mark	x	x		Do Not Use
S0047	Wichert C. Dominik	x	x		Do Not Use
S0048	Böing Georg	x	x		Do Not Use
S0050	SF - G+S, allgemein	x	x		Do Not Use
S0051	Industrial BU	x	x		Do Not Use
S0052	Platzek	x	x		Do Not Use
S0053	Borghaus Hessen	x	x		Do Not Use
S0054	Baden Württemberg Nord	x	x		Do Not Use
S0055	Baden Württemberg Süd	x	x		Do Not Use
S0056	Bayern Nord	x	x		Do Not Use
S0057	Bayern Nord	x	x		Do Not Use
S0058	Reindel	x	x		Do Not Use
S0059	Zimmermann	x	x		Do Not Use
S0060	VKL DIY	x	x		Do Not Use
S0061	Strüwe DIY	x	x		Do Not Use
S0062	Hahn DIY	x	x		Do Not Use
S0063	Böhm Holzhandel	x	x		Do Not Use
S0064	Waechter	x	x		Do Not Use
S0065	Schüttler Holzhandel	x	x		Do Not Use
S0066	Strüve HOLZ	x	x		Do Not Use
S0067	Keilhauer	x	x		Do Not Use
S0068	SF - Wohlatz - Holz	x	x		Do Not Use
S100	SF - Sekretär				
S101	SF - Printing Services	x	x		Do Not Use
S200	SF-S.Man Res/Wood/DIY-T.Cordes				
S201	SF-General Sales Cost				
S202	SF-Ralph Santjer		x	x	Do Not Use
S210	SF-S. Man Wood North-Borghaus				

S215	SF-Holz-Süd / Ost Brosio			
S216	SF-Thomas Schüttler Holz			
S217	SF - Sehrt Ralf	x	x	Do Not Use
S218	SF - Wohlatz Holz	x	x	Do Not Use
S220	SF-Sales Man Wood South-Piputa			
S221	SF-Timmo Mann	x	x	Do Not Use
S222	SF-Tomas Denninger			
S225	SF-Gerhard Wächter			
S230	SF-S.ManCorkRes North-Martens			
S231	SF-Jorg Struve			
S240	SF-Wohlatz			
S241	SF-Brosio			
S242	SF-Strehlewitz	x	x	Do Not Use
S243	SF-Dennis Volkmar			
S244	SF-Wurth	x	x	Do Not Use
S245	SF-Schüttler			
S250	SF-SManagCorkRes South-Bergner			
S251	SF-Denninger Bereich Handel			
S260	SF-P.Schäfer	x	x	Do Not Use
S261	SF-J. Kapusta			
S262	SF-G.Barthel	x	x	Do Not Use
S270	SF-Sales Man Cork DIY-Masanek			
S271	SF-Königsbauer			
S272	SF-Peulen			
S273	SF-Hahn			
S274	SF-Stefan Jehle			
S275	SF-Frank Rautenberg - Handel			
S276	SF-Frank Rautenberg - Holz			
S277	SF-Ralf Köbrich			
S280	SF-Andreas Spatschek			
S281	SF-Joachim Wachtler	x	x	Do Not Use
S282	SF - Tim Wächtler			
S283	SF-Ruhle			
S284	SF-Komarek	x	x	Do Not Use
S285	SF-VKL DIY AT			
S286	SF-Jäger			
S290	SF-Industrial Flooring	x	x	Do Not Use
S300	SF-Castrup			
S301	SF-Duisberg	x	x	Do Not Use
S302	SF-Skimina	x	x	Do Not Use
S303	SF-Wichert	x	x	Do Not Use
S400	SF- Platzek			
S401	SF-Zimmermann			
S410	SF-Assistant			
S500	SF- Sandra Drescher			
S600	NOT USE			

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S601	SF- AUSTRIA WAGNER			
S602	SF- AUSTRIA GRAHBER			
S610	SF- AUSTRIA			
T000	T- Jürgensmeier			T- General
T0000	Technik, allgemein	x	x	Do Not Use
T0001	TA - Technik, Leitung	x	x	Do Not Use
T0002	Schellerhoff	x	x	Do Not Use
T0003	Schwarze	x	x	Do Not Use
T0004	Ralinowksy	x	x	Do Not Use
T001	T-Techniciens Schwarze			T- Manager
T002	T- Assistant			x
Y0001	SF - Platzek	x	x	Do Not Use
Y0002	SF - Zimmermann	x	x	Do Not Use
Y0003	SF - Assistant Ind. BU	x	x	Do Not Use

Annex C: Changes to List of Dimensions of Level 4

Code	Description	Not used	Stop using	Create	Change name
----	N/A				
A0000	Contracting - General				
A0001	Contracting - OiF	x			
A0002	Contracting - Domäne			x	
A0003	Contracting - Bonita			x	
B0000	Building Const.M.Comp-General	x			
C0000	Contractors-General		x		
D0000	DIY - General				
D0001	DIY - Hornbach				
D0002	DIY - OBI	x			
D0003	DIY - Hagebau				
D0004	DIY - Bauhaus				
D0005	DIY - Praktiker				
D0006	DIY - Max Bahr				
D0007	DIY - Eurobaustoff				
D0008	DIY - Rewe / Toom				
D0009	DIY - Hela				
D0010	DIY - Hellweg				
D0011	DIY - EMV				
D0012	DIY - Kaes	x			
D0013	DIY - Globus				
D0014	DIY - ZEB			x	
D0015	DIY - Baywa			x	
D0016	DIY - Distributa Warenhandel			x	
D0017	DIY - Nordhessischer			x	
D0018	DIY - Bauklotz			x	
D0050	DIY - Heim & Haus			x	
D0099	DIY - All others		x		
F0000	Floor layer / Installer-Genera	x			
G00000	Group-General				
G00010	Group - Amorim Cork Composites				
G00020	Group-Amorim & Irmaos	x			
G00027	Group-OSI				
G00030	Group-Amorim Revestimentos	x			
G00040	Group-Champcork	x			
G00050	Group-Amorim Isolamentos				
G00330	Group- Amorim France	x			
G00420	Group-Raro	x			
G00530	Group-Industrial Solutions I	x			
G00620	Group-Amorim Plus	x			
G00930	Group-Amorim A/S Baltija	x			
G05130	Group-DOM Korkowy				
G05310	Group-Real Cork	x			

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H0000	Industrial Customers Flooring		B2B - General
H0001	B2B - Parador	x	
H0002	B2B - Hamberger	x	
I0000	Importer / Distributor-General	x	
L0000	Other: Closures	x	
M0000	Wood - General		
M0001	Wood - Holzland		
M0002	Wood - Hagebau		
M0003	Wood - Holzring		
M0004	Wood - Eurobaustoff Holz		
M0005	Wood - Klöpferholz	x	
M0006	Wood - All Others	x	
N0000	Industrial		
R0000	Traditional - General		
R0001	Traditional - Hammer Schlau		
R0002	Traditional - COPA		
R0003	Traditional - Rigromont	x	
R0004	Traditional - Decor Vertrieb		
R0005	Traditional - Knutzen		Traditional - Christiansen / Knutzen
R0006	Traditional - Mega		Traditional - Hacotex / Mega
R0007	Traditional - Heimdecor		
R0008	Traditional - Wilts		
R0009	Traditional - CMS		
R000A	Cork shops	x	
R000B	Independent Cork Retailers	x	
R000C	Eco Shops	x	
R000D	Ceramic Shops	x	
R0010	Traditional - Teppisch Essers		
R0011	Traditional - Südbund		
R0012	Traditional - VFG	x	
R0013	Traditional - Goldkuhle		
R0014	Traditional - TTL		
R0015	Traditional - Bonflair	x	
R0016	Traditional - Decor Objekt		x
R0017	Traditional - Hometrend		x
R0018	Traditional - Jordan		x
R0019	Traditional - Weigel		x
R0020	Retail Corporations	x	
R0021	Traditional - Teppisch Kibek		x
R0030	Cooperative of Painters		
R0040	Ret. turnover >1M EURO	x	
R0050	Ret. turnover <1M EURO	x	Traditional - Lutz
R0051	Ret.turnover<1M EURO-fl.instal	x	Traditional - Service & More
R0052	Ret.turn<1M EURO-fl.inst.sho	x	Traditional - Besko
R0053	Traditional - Frischeis		x
R0054	Traditional - Kika / Leiner		x

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R0055	Traditional - Landegger		x
R0060	Furniture or Department Stores	x	
R0080	Spec Wood Center Org in Groups	x	
R0090	Spec Wood Center not in Groups	x	
R0091	Spec Wood Center-Parquet Store	x	
R0099	Traditional - All Others	x	
S00000	Sales-General	x	
S00080	Sales-Amorim Revestimentos		
S00190	Sales-Amorim UK	x	
S00200	Sales-Amorim DK Flooring	x	
S00210	Sales-Wicanders Suica		
S00310	Sales-Proli	x	
S00390	Sales-Amorim Sverige	x	
S00430	Sales-Infocork Portugal	x	
S00440	Sales-Amorim Flooring Austria		
S00480	Sales-Amorim Cork		
S00500	Sales - Amorim Deutschland		
S00550	Sales-Amorim Benelux		
S00570	Sales-A.C.D.N.	x	
S00580	Sales-Cortex		
S00596	Sales-Timberman DK		
S00660	Sales-Amorim Ibérica Decoração	x	
S00690	Sales-Amorim Revestimientos, S	x	
S00920	Sales-Amorim F. North America	x	
S00950	Sales-Amorim Wood Supplies	x	
SUC000	Sales-Amorim Branch General		
SUC002	Sales-Amorim Rev. Delmenhorst		
V0000	Direct Sales-General		
W0000	Wholesaler		
Z0000	Suppliers		

Annex D: Changes to the List of LoB

Code	Description	Not used	Stop using	Create	Change name
B10000	Building Companies	x			
B11000	Do Not Use	x			
B20000	Carpenters	x			
C10000	Building Contractors		x		Do Not Use
C10999	Building Contractors Einzelkunde			x	
C20000	Contract End-Users		x		Do Not Use
C20217	Contract Domäne			x	
C2A999	Contract Bonita			x	
CF1000	Flooring Contractors		x		Do Not Use
CF1320	Contract OIF			x	
CF1999	Contract Einzelkunde			x	
D10000	DIY Center		x		Do Not Use
D10001	DIY Bahr			x	
D10002	DIY Bauhaus			x	
D10003	DIY Baywa			x	
D10004	DIY Hornbach			x	
D10007	DIY Hellweg			x	
D10008	DIY Rewe			x	
D10010	DIY Hagebau			x	
D10011	DIY EMV			x	
D10012	DIY Distributa Warenhandel			x	
D10013	DIY Kaes			x	
D10015	DIY ZEB			x	
D10022	DIY Praktiker			x	
D10028	DIY Eurobaustoff			x	
D10053	DIY OBI			x	
D10056	DIY Globus			x	
D10170	DIY Nordhessischer			x	
D10751	DIY Bauklotz			x	
D10989	DIY AT Heim&Haus			x	
D10999	DIY Einzelkunde			x	
D12100	Hagebau		x		Do Not Use
D12200	Bahr		x		Do Not Use
D12300	Domäne		x		Do Not Use
D12400	Stinnes/Toom		x		Do Not Use
D12500	Hela		x		Do Not Use
D12600	MGE		x		Do Not Use
D12700	Interpares		x		Do Not Use
D12800	GHD		x		Do Not Use
D12900	Globus		x		Do Not Use
D13000	Do Not Use	x			
D13100	OBI		x		Do Not Use
D13200	Hornbach		x		Do Not Use

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D13300	Bauhaus		x	Do Not Use
D13400	Praktiker		x	Do Not Use
D14000	Do Not Use		x	
D20000	Do Not Use		x	
DW1000	DIY - Wholesalers		x	
F10000	Do Not Use		x	
F20000	Do Not Use		x	
F21000	Do Not Use		x	
F22000	Do Not Use		x	
F23000	Do Not Use		x	
F24000	Do Not Use		x	
F30000	Do Not Use		x	
F40000	Do Not Use		x	
G00001	Group-Amorim Cork Composites			
G00002	Group-Amorim & Irmaos			
G00004	Group-Champcork		x	
G00005	Group-Amorim Isolamentos			
G00006	Group-Cort. Amorim Algarve		x	
G00007	Group-Itexcork		x	
G00010	Group-Espe		x	
G00011	Group-Amorim Cork Internac		x	
G00013	Group-Portocork Internac.		x	
G00014	Group-Amorim Ind. Solutions II		x	
G00024	Group-Pelau Wien		x	
G00025	Group-Pelau Dusseldorf		x	
G00027	Group-O.S.I.		x	
G00029	Group-Comatral		x	
G00030	Group-Corticeira Amorim SGPS		x	
G00033	Amorim France			
G00041	Group-Vasconcelos Lincke		x	
G00042	Group-Raro		x	
G00045	Group-Korken Schiesser		x	
G00049	Group-CDM Composit Damp.		x	
G00053	Group-Amorim Ind. Solutions I		x	
G00062	Group-Amorim Plus		x	
G00065	Group-Ofequipa		x	
G00068	Group-Intercork		x	
G00069	Group-Corcheras Catalan		x	
G00071	Group-Corkbor		x	
G00072	Group-GTS Global Techon.		x	
G00073	Group-Labcork		x	
G00074	Group-Sopac		x	
G00079	Group-Amorim & Irmãos II		x	
G00080	Group-OSI		x	
G00083	Group-Amorim ITI		x	
G00092	Group-Infocork USA		x	

G00093	Group-Amorim A/S Baltija		
G00097	Group-Douriva	x	
G00355	Group-Amorim Embalagens,P C Em	x	
G00500	Group-Interchampanhe	x	
G00508	Group-Amorim Florestal	x	
G00513	Group-DOM Korkowy		
G00519	Group-Soc.Agroflor.Varzea Cruz	x	
G00531	Group-Real Cork	x	
G00536	Soc. Dés Liéges - HPK		
H10000	Industrial Customers	x	Do Not Use
H10800	Industrial Hamberger		x
H10801	Industrial Parador		x
H10999	Industrial Einzelkunde		x
H20000	Do Not Use	x	
H30000	Do Not Use	x	
I10000	Do Not Use	x	
I20000	Do Not Use	x	
L00000	Closures BU	x	
MR1000	Wood Retail	x	Do Not Use
MR1010	Wood Retail Hagebau		x
MR1028	Wood Retail Eurobaustoff		x
MR1212	Wood Retail VFG		x
MR1213	Wood Retail Holzring		x
MR1227	Wood Retail Heimdecor		x
MR1233	Wood Retail Holzland		x
MR1751	Wood Retail Bauklotz		x
MR1999	Wood Retail Einzelkunde		x
MW1000	Wood - Wholesalers	x	Do Not Use
MW1010	Wood Wholesalers Hagebau		x
MW1028	Wood Wholesalers Eurobaustoff		x
MW1213	Wood Wholesalers Holzring		x
MW1233	Wood Wholesalers Holzland		x
MW1710	Wood Wholesalers Klöpferholz		x
MW1999	Wood Wholesalers Einzelkunde		x
N00000	Industrial BU		
R10000	Retail Flooring Stores	x	Do Not Use
R10010	Retail Hagebau		x
R10028	Retail Eurobaustoff		x
R10030	Retail Schlauf		x
R10031	Retail TTL		x
R10120	Retail Kibek		x
R10200	Retail CMS		x
R10212	Retail VFG		x
R10215	Retail Decor Vertrieb		x
R10216	Retail Decor Objekt		x
R10217	Retail Domäne		x

R10218	Retail Südbund		x	
R10219	Retail Wotex		x	
R10227	Retail Heimdecor		x	
R10240	Retail Essers		x	
R10301	Retail Knutzen		x	
R10309	Retail Goldkuhle		x	
R10712	Retail Ruma		x	
R10724	Retail Tep&Tap		x	
R10731	Retail MZE		x	
R10990	Retail AT Service & More		x	
R10991	Retail AT Besko		x	
R10992	Retail AT Frischeis		x	
R10993	Retail AT KIKA		x	
R10994	Retail AT Leiner		x	
R10995	Retail AT LUTZ		x	
R10999	Retail Einzelkunde		x	
R20000	Retail Fl. Stores-Recommended		x	Do Not Use
R30000	Retail Cork Shops		x	Do Not Use
R30110	Retail Cork Shop Natur Boden			x
R30726	Retail Cork Shop Naturo			x
R30999	Retail Cork Shops Einzelkunde			x
R40000	Do Not Use	x		
R50000	Do Not Use	x		
R51000	Do Not Use	x		
R52000	Do Not Use	x		
R60000	Do Not Use	x		
R80000	Do Not Use	x		
R90000	Do Not Use	x		
R91000	Do Not Use	x		
RA0000	Do Not Use	x		
RB0000	Do Not Use	x		
RC0000	Do Not Use	x		
RD0000	Do Not Use	x		
S00008	Sale-Amorim Revestimentos			
S00019	Sale-Amorim UK			
S00020	Sale-Amorim Flooring Denmark			
S00021	Sale-Amorim Fl. Switzerland			
S00031	Sale-Proli			
S00039	Sale-Amorim Sverige	x		
S00043	Sale-Infocork Portugal	x		
S00044	Sale-Amorim Flooring Austria			
S00048	Sale-Amorim Cork, GMBH			
S00050	Sale-Amorim Deutschland			
S00055	Sale-Amorim Benelux			
S00057	Sale-A.C.D.N.	x		
S00066	Sale- Amorim Ibérica Decoração			

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S00069	Sale-Amorim Revestimientos			
S00092	Sale-Amorim F. North America			
S00095	Sale-Amorim Wood Supplies			
S00580	Sale-Cortex			
S00596	Sale-Timberman DK			
SUC002	AR-DEL			
V10000	End Users			
V20000	Do Not Use	x		
V30000	Employees			
V40000	Do Not Use	x		
V50000	Do Not Use	x		
W10000	Wholesalers		x	Do Not Use
W10028	Wholesalers Eurobaustoff			x
W10070	Wholesalers Mega			x
W10100	Wholesalers Genocolor			x
W10200	Wholesalers CMS			x
W10210	Wholesalers Copa			x
W10212	Wholesalers VFG			x
W10213	Wholesalers Holzring Jordan			x
W10219	Wholesalers Wotex			x
W10227	Wholesalers Heimdecor			x
W10231	Wholesalers Rigromont			x
W10708	Wholesalers Bito			x
W10716	Wholesalers Wilts			x
W10999	Wholesalers Einzelkunde			x
W1A200	Wholesalers CMS Kaltenbach			x
W1A210	Wholesalers Copa Hometrend/Steffel			x
W1A231	Wholesalers Rigromont Lotter			x
W1B231	Wholesalers Rigromont Ruhe			x
W1B200	Wholesalers CMS Wässa			x
W1B210	Wholesalers Copa Novoline			x
W1C200	Wholesalers CMS MPLUS			x
W1C210	Wholesalers Copa Bonflair			x
W1D200	Wholesalers CMS Weicken			x
W20000	Wholesalers - Recommended		x	Do Not Use
W30000	Do Not Use	x		
W40000	Do Not Use	x		
W50000	Do Not Use	x		
WI1000	Wholesalers - Importers		x	Do Not Use
X10000	Parents	x		
Z10000	Suppliers			

Annex E: Procedure to classify transport costs in the ERP system

Additional information:

- Hellmann is the name of the transport company that handles almost all deliveries for ADE.
- All accounts of month M must be closed until the third business day of month M+1 which means that the Excel file with detailed information on transport costs must be received from Hellmann within that timeframe.

Steps:

1. Receive an Excel file from Hellmann with the list of transport costs incurred during the month organized by order number
2. Edit the Excel file
 - a. Match each order number with the associated customer
 - b. Calculate the amount of transport costs organized by customer
3. Prepare necessary information
 - a. Match customer code (“Area”) with the associated level-4 dimension
4. Create a new Excel file with the transport costs organized by level-4 dimension
 - a. Rules and structure:
 - i. The Excel file must have no header
 - ii. One line per level-4 dimension

Account	Dim1	Dim2	Dim3	Dim4	Dim5	Blank	Blank	Amount	D/C	Info
---------	------	------	------	------	------	-------	-------	--------	-----	------

b. Explanation:

<i>Field</i>	<i>Description</i>
Account	appropriate account
Dim1	appropriate level-1 dimension
Dim2	appropriate level-2 dimension
Dim3	appropriate level-3 dimension
Dim4	appropriate level-4 dimension
Dim5	appropriate level-5 dimension
Blank	blank
Blank	blank
Amount	amount
D/C	debit or credit
Info	additional information

c. Example:

625305101	L010	----	----	D0004	----			20355,37	D	Test May 2014
625305101	L010	----	----	D0001	----			1960,21	D	Test May 2014

625305101	L010	----	----	D0010	----			1224,76	D	Test May 2014
625305101	L010	----	----	D0008	----			4446,26	D	Test May 2014
625305101	L010	----	----	D0003	----			1503,94	D	Test May 2014
625305101	L010	----	----	----	----			29490,54	C	Test May 2014

d. Comment:

The classification of transport costs with level-4 dimensions must not change the balance of the account. This is done by booking each transport cost as debit and then booking the total sum as credit, as shown in the example above.

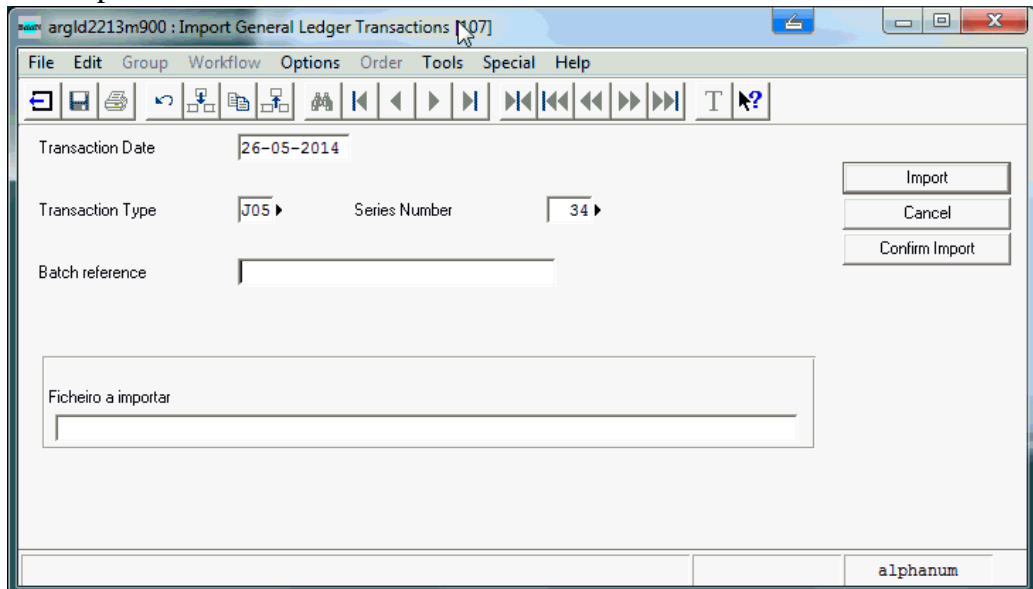
5. Convert the Excel file into a CSV file

- a. Fields must be separated with a semi-colon (“;”) and not with a comma (“,”)
- b. Decimals must be separated with a comma (“,”) and not with a point (“.”)
- c. Example:

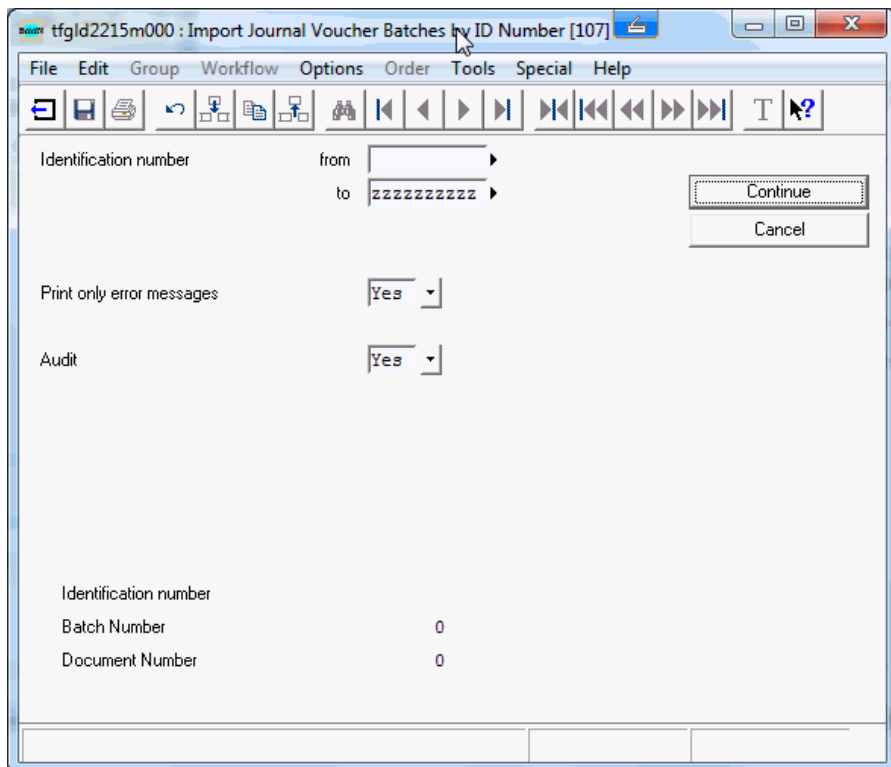
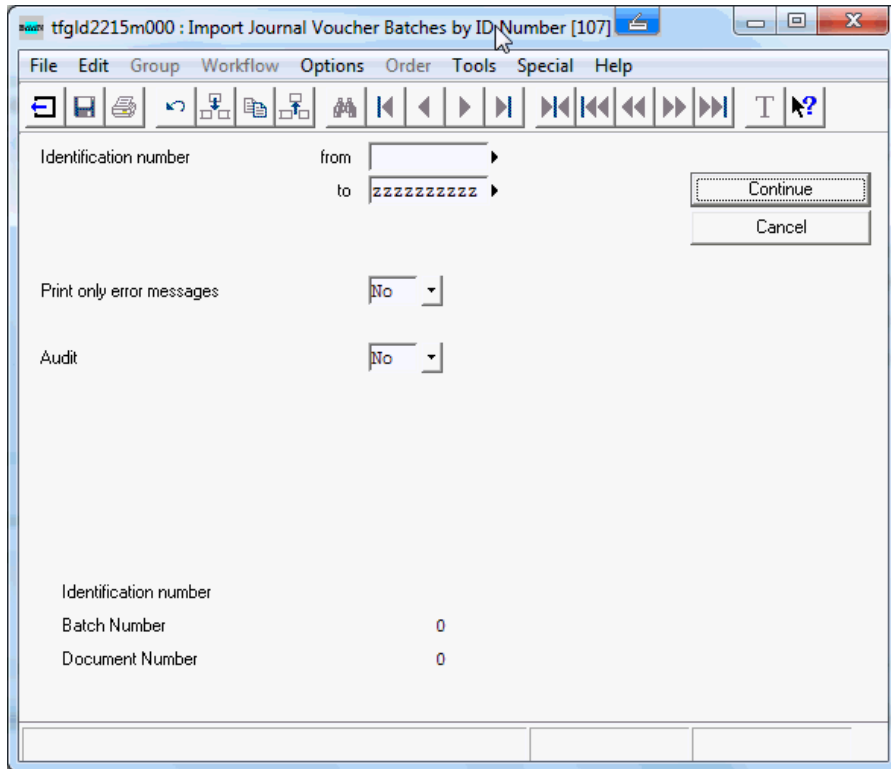
```
625305101;L010;----;----;D0004;----;;20355,37;D;Test May 2014
625305101;L010;----;----;D0001;----;;1960,21;D;Test May 2014
625305101;L010;----;----;D0010;----;;1224,76;D;Test May 2014
625305101;L010;----;----;D0008;----;;4446,26;D;Test May 2014
625305101;L010;----;----;D0003;----;;1503,94;D;Test May 2014
625305101;L010;----;----;----;----;;29490,54;C;Test May 2014
```

6. Import the CSV file into BaaN

a. Import file



b. Check if the import was successful



Annex F: List of dimensions of level 4 adjusted for the Marketing department**Dim 4 - Advertising Costs**

Contracting	Dimension
Contracting - General	A0000
Contracting - OiF	A0001
Contracting - Domäne	A0002
Contracting - Bonita	A0003
DIY	
DIY - General	D0000
DIY - Hornbach	D0001
DIY - OBI	D0002
DIY - Hagebau	D0003
DIY - Bauhaus	D0004
DIY - Praktiker	D0005
DIY - Max Bahr	D0006
DIY - Eurobaustoff	D0007
DIY - Rewe / Toom	D0008
DIY - Hela	D0009
DIY - Hellweg	D0010
DIY - EMV	D0011
DIY - Kaes	D0012
DIY - Globus	D0013
DIY - ZEB	D0014
DIY - Baywa	D0015
DIY - Distributa Warenhandel	D0016
DIY - Nordhessischer	D0017
DIY - Bauklotz	D0018
Industrial	
B2B - General	H0000
B2B - Parador	H0001
B2B - Hamberger	H0002
Traditional Distribution	
Traditional - General	R0000
Traditional - Hammer Schlau	R0001
Traditional - COPA	R0002
Traditional - Rigromont	R0003
Traditional - Decor Vertrieb	R0004
Traditional - Christiansen / Knutzen	R0005
Traditional - Hacotex / Mega	R0006
Traditional - Heimdecor	R0007

Traditional - Wilts	R0008
Traditional - CMS	R0009
Traditional - Teppisch Essers	R0010
Traditional - Südbund	R0011
Traditional - VFG	R0012
Traditional - Goldkuhle	R0013
Traditional - TTL	R0014
Traditional - Decor Objekt	R0016
Traditional - Hometrend	R0017
Traditional - Jordan	R0018
Traditional - Weigel	R0019
Traditional - Teppisch Kibek	R0020
Wood Distribution	
Wood - General	M0000
Wood - Holzland	M0001
Wood - Hagebau	M0002
Wood - Holzring	M0003
Wood - Eurobaustoff Holz	M0004
Wood - Klöpferholz	M0005
Austria	
Traditional - Lutz	R0050
Traditional - Service & More	R0051
Traditional - Besko	R0052
Traditional - Frischeis	R0053
Traditional - Kika / Leiner	R0054
Traditional - Landegger	R0055
DIY - Heim & Haus	D0050
General	
Global Costs	V0000