

## **How Data Quality and Data Integration can improve your customer relationships and reduce marketing costs.**

Customer relationship solutions are only as good as your data. Marketing decisions are based on the information available to you from customer data. These can be either one large data warehouse or separate database systems run for each department or business unit. Knowledge is in turn gathered from that information.

### **What are the benefits of good data quality?**

#### **1. Cost Reduction**

Ensuring that your customer addressing details are accurate affords you the opportunity of achieving significant savings. There are many means of improving your data quality within the organization as well as from reliable secondary data sources, external to your organization. Examples of reliable secondary data are the PAMSS system, which grades and corrects addressing details in accordance with post office specifications. Internally, you can cross reference data from different data sets within your organization, to create a consolidated customer record from the most recent information available to the you.

#### **2. Improve customer relationships.**

Good data quality allows you to make better-informed decisions, enhancing the customer experience. You will no longer be annoying your customers by sending them duplicate correspondence. You will have the correct, most up to date information available on your customers, allowing your customer contact centres to perform more efficiently. The results you mine from your database will be more meaningful, allowing you to improve your product offering/s, improve

customer communications, and creating an overall improvement in your CRM initiatives.

### 3. Improve Internal Processes

Through a program of ensuring data quality your sales team and marketing department are able to perform more effectively. You will know that all statistical and sales figures are accurate. You will be more accurate in your assessment of the environment and your position in it. Your data mining activities will produce meaningful results. Knowledge is output from your information systems, which in turn are influenced by your data. Naturally, good data quality influences the results your business intelligence systems produce.

## **How data quality affects your organization:**

1. The data quality process starts with having accurate customer names and addresses.

The results of poor addressing details are that the shipment never arrives at the correct destination, is rejected by you customer or is never delivered. These factors result in extra work, lost time, additional expenses and lower productivity within your organisation. These are all expensive symptoms of poor data quality. Other added annoyances to your customers are incorrect titles and addressing them in the wrong language.

2. Data quality and integration can be important in multi-divisional organizations.

Without monitoring customer contact across all divisions, the organization could be in the embarrassing situation of sales divisions

contacting and even bidding for the same customers. Good data quality and integration ensures that the organization understands how it is interacting with its customers and what the status of each customer is within the organization.

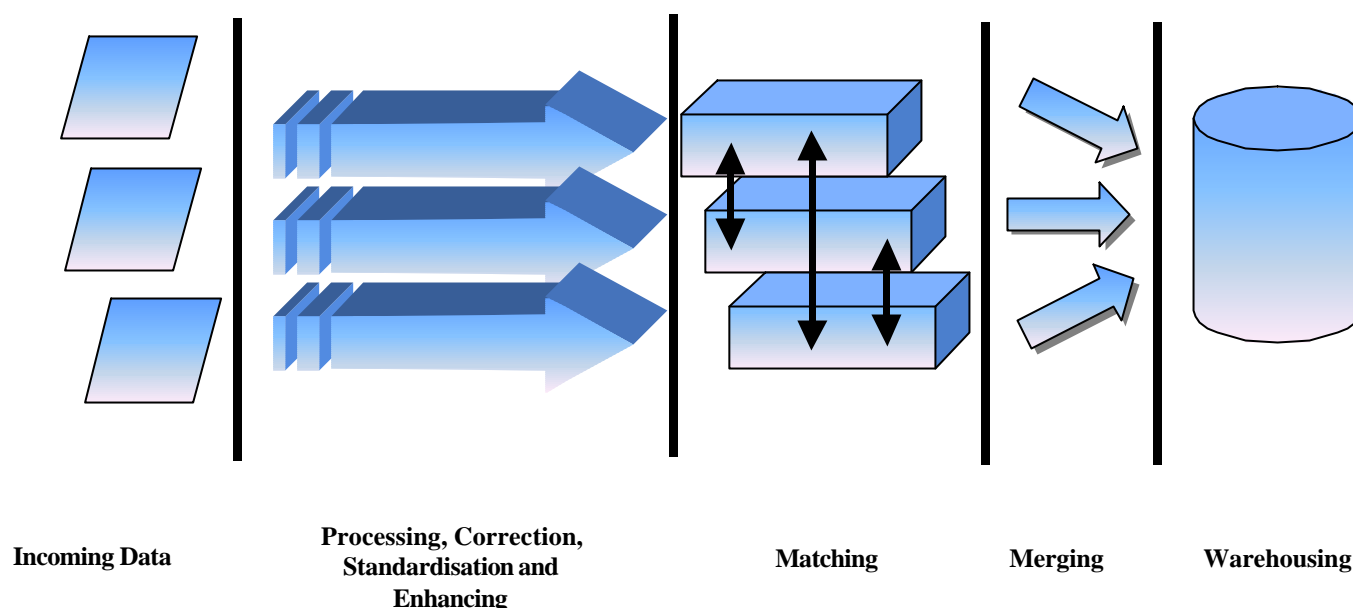
3. Data quality improves the knowledge your business intelligence systems deliver.

The table below illustrates common errors at the point of entry:

ABC (Pty) Ltd		
CUSTOMER_ID	COMPANY_NAME	CONTACT
ABC_0343	Tech. Inc.	John Brown
ABC_0223	Technology inc.	Jhon Brown
ABC_1245	Technology Incorporated	J. Brown
ABC_2322	T.I.	Melissa hart

These types of errors can have a major affect on the kind of information you can gather through your business intelligence systems. In the example above, how many clients do you really have in the technology industry? How much did Technology Incorporated spend with your company last year? What is the average value per customer? How many customers do I really have? Which customers have the highest spend with my company? This simple example illustrates how data quality can affect the decision-making abilities within your organization. If your reports miss one of the Technology Incorporated sales it could be missing as much as 25% of its contribution to revenue. Loss of confidence in your systems leads to manual checks of the database, cross-referencing to accounting records and a loss in productivity.

## How does data quality process work within your organization?



1. **Incoming data** – is gathered from disparate sources across your organization. These can include sales data, demographic data, accounting data or sales leads or any combination thereof.
2. **Processing, correction, standardization and enhancement** – *Processing* identifies individual elements within your data. *Correction* identifies spelling errors, incorrect abbreviations, and incorrect titles. Referencing a reliable secondary data source to update details on your customers will achieve the best results (such as the postal address file supplied by the post office - PAMSS). There are other methods of updating your customer data, such as enhancement. *Standardisation*, the next process arranges customer data in a consistent and preferred format. Some of the challenges for standardization include:

Inconsistent abbreviations (i.e. Int. Interntnl. International)

Incorrect titles (i.e. does the first name correspond to the title?)

Misspellings and variant spellings (i.e. John or jhon, quick or Kwik)

Language (What language do you communicate to your customers in?)

*Enhancement*, the last process in data cleansing, allows you to append information to your customer data. You can append details such as ID No's, telephone no's, income, enumerator area's or census information or any combination thereof.

3. **Matching** – identifies similar data within and across your data sources. Using cleaned information you can eliminate duplicate records and consolidate information in your warehouse to each individual, household or business. This will help you to:

- Make better and more immediate marketing decisions
- Increase revenue
- Increase profitability
- Detect fraud more accurately
- Improve customer service
- Ensure clean feeds to on-line analytical processing (OLAP) and data-mining tools
- Implement your solution faster than building your own
- Understand your customers

4. **Merging** – allows you to create one clean “super” customer record from the disparate data sources and duplicate entries found. This information can later be mined from the data warehouse.

## What matching systems are used?

There are several varieties of matching systems available, each offering a different way to arrive at a match:

1. **Key-code** matching performs identical comparisons using the first few characters in one or more fields. This primitive method is rarely practiced because it uses only a small sub-set of the data, which can result in many false matches.
2. **Soundexing** detects phonetic similarities, such as 'f' and 'ph' or Quick and Kwik. These errors often result from data received over the telephone, particularly with data that can't be standardized. However, soundexing is inadequate as a sole solution because it can only detect phonetic errors.
3. **Similarity matching** also referred to as 'fuzzy matching' – can identify matches by computing a degree of likeness between two discrete components. Because identical matches are not required, it can adjust for spelling, phonetic, typographical, and transpositional errors. Similarity matching is widely considered the best matching method. It is especially valuable for data that cannot be standardized, such as last names, business names, and house numbers.
4. **Weighted matching** can be used in conjunction with soundexing or similarity matching. It allows you to indicate the relative importance of fields that determine a match.

The best course of action is to choose tools and services that best meet your requirements. Ensuring data quality across your organization will translate into savings and more efficient business intelligence systems, improving your customers' experience and increasing workforce productivity.