

## DATA QUALITY MANAGEMENT

### Introduction

The supporter database sits at the heart of the DM/CRM support infrastructure and plays a critical role in supporting and delivering a range of planning, marketing and operational activities including:

- **Strategic and tactical planning** - data-generated insight
- **Marketing execution** - targeting, segmentation, personalisation
- **Marketing reporting** - campaign performance, marketing ROI tracking
- **Analytics** - LTV, attrition tracking, profiling, data mining & modelling
- **Finance** - income reconciliation and allocation, gift-aid claims
- **Supporter Services** - look-ups, query handling, supporter care

The quality of the data within the database is critical in ensuring that all the required business activities can be supported and delivered successfully.

Effective data quality management therefore needs to be recognised as a key strategic element for achieving both business effectiveness and the creation and maintenance of competitive advantage.

The key criteria in assessing data quality and determining on-going data quality management requirements are:

- **Relevance** - based on the intended uses for the data
- **Integrity** - how good the data is for its intended uses (its accuracy recency and completeness)
- **Usability** - how easily and readily the data can be accessed and utilised

The intended uses for the data, the sources of the data and the data/system stakeholders and users all play a critical role in determining both the quality requirements and the delivery of the required quality levels.

As a result, quality evaluations and data quality management programmes should not therefore focus purely on the data set itself but require a wider business assessment to be made, taking into account all business activities and stakeholders that generate in-flows to the database and all business activities and stakeholders that need to be supported by the database.

All relevant legal, regulatory and best practice requirements in relation to data collection, storage and management also need to be addressed as part of any quality evaluation exercises and during the development of data quality management programmes.

## **Scope**

Effective data quality management requires an approach which includes:

- Definition of the data quality requirements and objectives
- An initial data quality evaluation
- The development of a data quality management programme
- Programme implementation and roll-out
- On-going monitoring and evaluation

Definition of the data quality requirements and objectives needs to be based on a full understanding of:

- The intended data uses
- The data sources
- All data flows and processes
- Any related marketing, operational and administrative processes
- Relevant legal, regulatory and best practice requirements

An initial data quality evaluation may include the following elements:

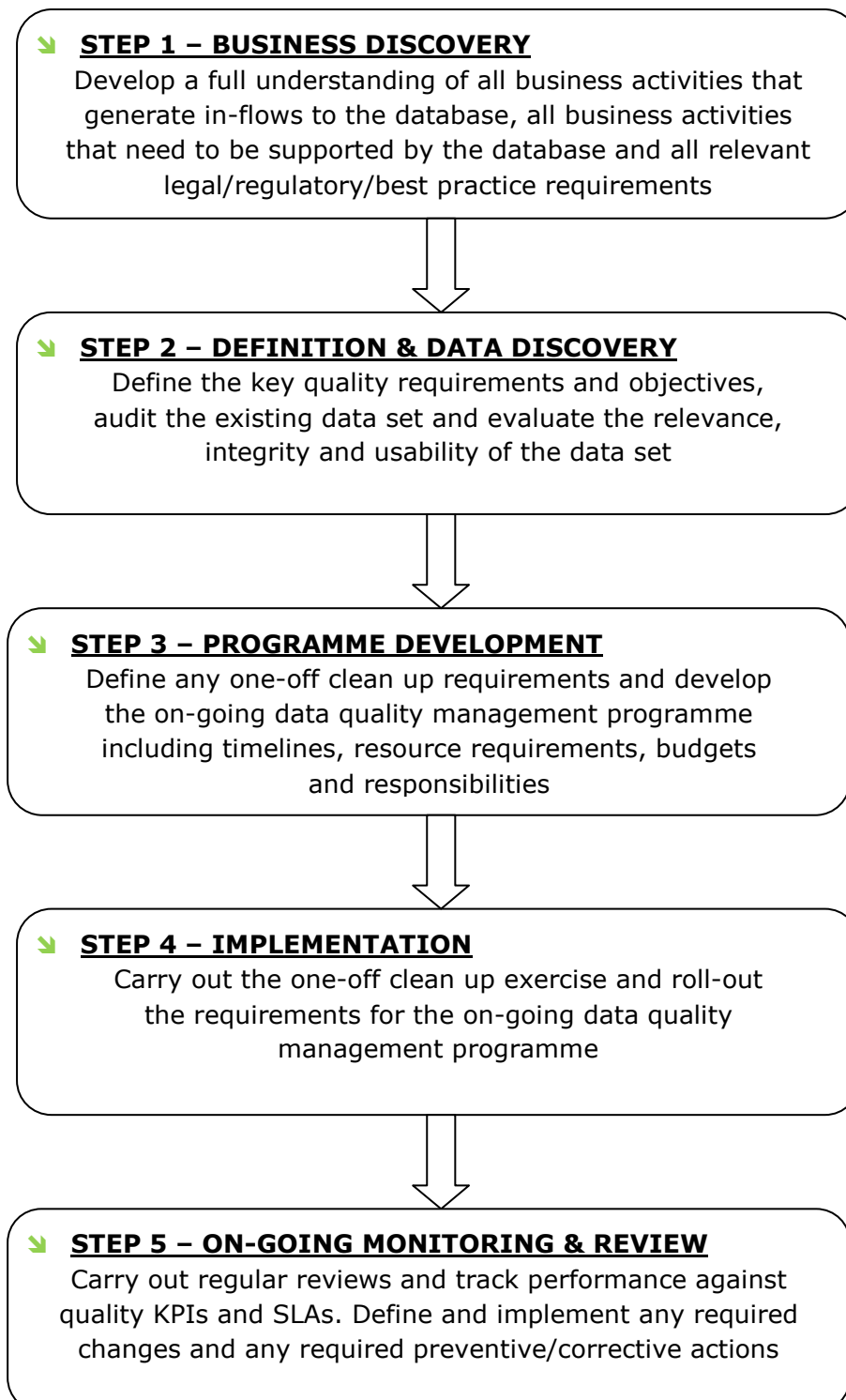
- Accuracy/validity audits
- Recency audits
- Gap analyses
- Data profiling/matching
- Stakeholder and user feedback

The development and roll-out of a data quality management programme may include the following elements:

- A one-off clean up exercise
- Regularly scheduled hygiene routines
- New/re-engineered marketing, operational and administrative processes
- Systems development and enhancement
- Staff awareness and training
- Defining quality KPIs and monitoring mechanisms
- Re-design of marketing materials, telephony scripts and online forms

The key stages in the development of an effective data quality management programme are illustrated overleaf as a step-by-step approach.

## **STEP-BY-STEP APPROACH**



## **Examples Of Common Data Quality Issues, Causes & Impact**

### **Contact Data**

For charities using direct contact techniques such as direct mail, outbound telemarketing and electronic communications, the accuracy and recency of the contact data (names, addresses, telephone numbers, etc) is critical.

The presence of, and creation of, duplicate names and addresses is a common issue faced by many charities. Sources of duplicate name and address data within a supporter database are usually:

- Existing supporters "re-recruited" through cold channels (Inserts, door drops, F2F, OTP, website)
- Cross-over supporters added by separately managed business areas (DM, Events, Community, Merchandising, etc)
- Human error/oversight
- Poor quality data capture/manual entry
- Variable address data formats and presentation
- Insufficiently sophisticated dedupe software
- Where multiple disparate data sets have been merged

Minimising the number of duplicate names and addresses and improving the overall quality of contact data is critical and provides many key benefits, including:

- Truer 360 degree view of supporters
- More effective use of marketing budgets
- Improved postal discounts
- Higher ROI on marketing expenditure
- Maximisation of gift-aid revenue
- Improved supporter relationship management
- Improved public perception

## Transaction Data

Transaction data (payments, communications history, attributes, etc) is critical for all business uses of the database. It provides the underlying information to facilitate a range of activities including:

- Analytics to support marketing performance evaluation and planning
- Targeting, segmentation, extracts and personalisation
- Financial reconciliation and income allocation
- Supporter services and supporter care

Issues with transaction data can include incomplete information, inaccurate information, invalid information and out of date information. An example may be missing or invalid codes such as campaign, appeal, fund, gift type, etc.

Causes of quality issues in transaction data are usually:

- Insufficient validation/lock-down on key data items during import
- Poor quality data capture/manual entry
- System error
- Human error/oversight
- Incomplete/inaccurate cross-reference data
- Where multiple disparate data sets have been merged

Improving the overall quality of transaction data is critical and provides many key benefits including:

- Improved accuracy and sophistication of reporting and analytics
- Improved accuracy and sophistication of targeting and segmentation
- Increased opportunities for tailoring supporter communications
- Improved accuracy, speed and ease of income allocation
- Maximisation of gift-aid revenue
- Improved supporter relationship management

## **Examples Of Data Quality Management Techniques**

To follow are some examples of techniques that can be deployed for one-off clean up exercises and in formulating data quality management programmes.

The examples are designed to be illustrative, rather than prescriptive, and are not exhaustive. The techniques that would be appropriate for an individual charity would need to be identified and defined as part of the business and data discovery process. Overall business requirements, timelines and any business/ resource/budgetary constraints would also need to be taken into account.

### **One-Off Clean-Up Exercises**

Examples of techniques that can be deployed as part of a one-off clean up exercise include:

#### **👉 PAF validation and enhancement of address data**

To validate all existing address data, reformat to the standard PAF presentation and add any missing address elements. PAF validation and enhancement will improve the effectiveness of any subsequent deduplication work carried out, but consideration also needs to be given to the handling of any known vanity addresses.

#### **👉 Deduplication**

A deduplication exercise could be carried out on the existing data set. It is important that the correct level and weight of deduplication are applied, and that there is an appropriate combination of automated and manual checks before any merging of transactional data takes place.

#### **👉 Screening**

A screening exercise could be carried out on the existing data set utilising industry screening files for national goneaways, deceased and changes of address in order to carry out flagging and data updates. This would be important if there are concerns over the age of the data, and would be recommended prior to any contact activity to historical/lapsed supporters.

#### **👉 Identification of backlogs**

As part of a one-off clean-up exercise, any backlogs of data or updates that may be outstanding would need to be actioned – these may be response data awaiting update, goneaways and CON/COA not yet actioned, etc.

#### **👉 Identification of redundant data**

Where a database has been created over a long time period, or has been created from disparate data sources it is possible for there to be redundant data present within the data set – this may be orphaned data, data items no longer relevant

for the current business requirements, data no longer meeting legal/regulatory requirements, etc. These can be identified and quantified through data audits and appropriate courses of corrective action can then be defined.

‣ **Correction of key data items**

Data fields that are identified as being key in supporting business activities and requirements can be audited for content to check accuracy, completeness and validity. Examples may be campaign and appeal codes, method of payment, date of birth, opt-outs/opt-ins, etc. Anomalies and gaps can be identified and quantified and appropriate courses of action defined – corrections, additions, default value creation, etc.

## **Data Quality Management Programmes**

Examples of techniques that can be deployed as part of developing and activating a data quality management programme include:

‣ **Identification and review of data sources**

To identify all business activities which create data sources, both in-house and outsourced, and to develop an understanding of the data flows and processes in use. Sources may include:

- Data from outsource suppliers (donation handling/fulfilment houses, telemarketing bureaux, F2F agencies, PSPs, etc)
- Data created in-house (from direct supporter contact)
- Data forwarded from regional and community activities
- Data transferred from other systems and applications (finance, website, etc)

Once identified, all data sources can then be evaluated in line with business and quality requirements. In order to better support the required business uses and the quality requirements and objectives, changes may need to be defined and implemented to format/content/ frequency/etc.

‣ **Hygiene programme**

A series of regular hygiene activities could be introduced if required – these may be regular PAF exercises, regular deduplication exercises, regular screening exercises, regular audits on key data items, etc

‣ **Process and systems development**

In order to ensure that on-going data quality requirements and objectives are met, changes or upgrades may be required to business processes and data management systems:

- Existing operational, administrative and marketing processes may need to be re-engineered

- New processes may need to be introduced, eg for quality monitoring and reporting, for corrective and preventive actions, for risk assessment and management, for handling exceptions, for monitoring legal/regulatory developments, etc
- Data collection devices (hard copy materials, online forms, etc) may need to be re-designed
- New import/export/data exchange routines may need to be developed
- New validation criteria may need to be defined for key fields
- Data structures may need to be revised
- New cross-references may need to be created
- Data entry screens/user interfaces may need to be re-designed
- New data access/query facilities may need to be introduced

#### ➤ **Staff awareness and training**

Staff awareness and training is an important element of an on-going data quality management programme. All staff members with responsibility for introducing data onto the database and using data within the database, either directly and indirectly, need to be aware of the data quality requirements and be trained on all of the relevant processes and routines, including mechanisms for preventive and corrective actions. The teams responsible for interpreting analysis results to generate insight for the planning processes would also need to be made aware of any on-going data quality limitations or outstanding corrective actions.

#### ➤ **Quality KPIs**

A series of quality KPIs and internal SLAs could be defined as part of the data quality management programme. These would need to be relevant to the defined quality requirements and easily measurable – examples may be setting a target for the maximum acceptable percentage of data entry errors, setting a maximum turnaround time for actioning goneaways and opt-outs, etc. Where outsource solutions are used which also generate data for update to the database, the quality KPIs and SLAs should also be cascaded into suppliers' contractual requirements.

#### ➤ **Business Planning**

In the event of any planned major business changes, consideration would need to be given to any likely impact on data quality. Major business changes which can impact on data quality management and processes include:

- The introduction of new marketing techniques and channels
- Major systems development/data migration projects
- The transfer of critical business activities from in-house operation to an outsource solution or vice versa
- Business restructures

If major business changes such as these are being planned, data quality implications should be included for consideration in any impact and risk assessments being carried out as part of the business planning processes.

## **SUMMARY**

The quality of the data within a central supporter database is critical for smooth business operations, maximising marketing ROI and effective supporter relationship management. The development of a comprehensive data quality management programme is therefore a key strategic requirement.

A planned approach can be used to determine the data quality requirements and objectives and to define the on-going quality management programme. The development of the quality requirements and objectives and the choice of quality management techniques to be deployed as part of the on-going programme need to be determined in line with business requirements, stakeholder interests and relevant legal and regulatory requirements.

Effective data quality management is a continuous process and therefore requires an on-going commitment.

Information compiled by: Sue Maccabe, Consultant Business Analyst  
November 2009

For more information visit [www.docdataresponse.co.uk](http://www.docdataresponse.co.uk) t.01993 770600 e. [info@docdataresponse.co.uk](mailto:info@docdataresponse.co.uk)  
OR Sue Maccabe e. [sue.maccabe@dotjoining.co.uk](mailto:sue.maccabe@dotjoining.co.uk)