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SUCCESSFULLY SELLING THE CASE FOR DATA QUALITY

INTRODUCTION

Successfully acquiring investment for data quality at a time when businesses are cutting their spending can feel like an impossible task. This paper has been developed to help those who are trying to acquire investment to improve data quality within their organisations by giving guidance on developing and selling a successful business case.

This paper is primarily aimed at people new to data quality or early starters in data quality roles, but will be of use to anyone who wants to build a business case for data quality improvement.

THE AUTHORS

This paper is the second output of the DAMA Working Group on “Approaches to Data Quality Management”. Its joint authors are:

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The authors have extensive experience of building successful business cases in variety of sectors and organisations including finance, telecommunications, sales and manufacturing.



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WHAT IS A BUSINESS CASE?

A business case is an argument, usually documented, that is intended to convince a decision maker to approve some kind of action. As a rule, a business case seeks to introduce a desirable change in an organisation and although is often about acquiring financial investment, could also be about resource allocation, process change, or sponsorship.

Business cases in Data Quality tend to fall into three distinct categories:

- **Improving Capability:** perhaps reducing returned mailings via purchase of an address checking tool.
- **Solving a current problem:** such as accelerating a reporting cycle to enable faster decision making or reducing inefficiencies in a supply re-order process in a supermarket.
- **Laying the platform for future opportunity:** reorganisation of current data or purchase of external data to support future business requirements.

At its simplest, a business case could just be a spoken suggestion. However, because the business case for many projects is not immediately clear, documentation is usually essential to support its approval. A well-crafted business case explores feasible approaches to a given problem, enabling business owners to select the option that best serves the organisation, with the conclusion always being a compelling argument for implementation.

Whatever the method of delivery or the organisation, the business case should always examine the benefits, risks and costs involved with taking the action and should also include the implications of not taking any action at all.

WHY MAKE A BUSINESS CASE TO IMPROVE DATA QUALITY?

Poor data quality remains a major business problem. It impacts both public and private sector organisations and all aspects of their operations.

In a 2012 worldwide survey by OVUM (an IT technology research organisation) estimated that data that is not fit for business purposes costs an average company a staggering 30% of their total revenue or budget. A 2012 Experian survey in the UK found that dealing with poor data quality costs a typical UK organisation one sixth of their total departmental budgets. That's nearly 17% of expenditure. Other surveys have estimated the cost of poor data quality as around 20% of turnover.

Although these estimates vary the conclusion is clear: poor data quality has a major and destructive impact on businesses, organisations and individuals.

In general poor data quality adversely impacts organisations in four main ways:

- **Economic** – poor data impacts the efficiency of business processes and damages the customer experience. It increases bottom line costs (both operational and capital expenditure) and reduces revenue & sales. It impacts employee productivity and morale, creating the need for corrective action and rework.
- **Law & Regulation** – bad data can cause organisations to contravene both national and international law and regulation. There are many examples: the European Union Data Protection Act, Global Financial regulations and even Health and Safety Legislation.
- **Brand & Reputation** – poor data can damage an organisation’s reputation and cause negative publicity and ultimately loss of customer confidence.
- **Individuals** – can be affected in many ways by poor data held by companies. These include receiving inappropriate emails, calls, written communications, being financially impacted by invoicing or billing mistakes, or by being wrongly identified for credit assessment or other purposes.

Although data defects can and do cause severe problems for businesses the good news is that, like any business problem, data quality can be addressed and improved.

The first thing that has to be realised is that data quality problems are not always IT issues. They generally emanate from a combination of what people do with data, poor process design and / or execution, and inadequate IT. On that basis improving the status quo often requires holistic business change which embraces people, process AND technology. This change has to be paid for and so building a business case for action that is supported across and within departments is essential.

PREPARING THE BUSINESS CASE – INITIAL GUIDANCE

The exact format and content of the business case will of course vary from organisation to organisation. It can be called many things; such as an “Expenditure Authorisation” or a “Project Charter”.

Whatever the format, name or process, the approach is generally the same, with some guiding principles that should be worked through:

- Make sure you understand how your organisation manages its business case processes from start to finish. This will ensure you use the expected language and terminology,

engage with the right people at the right time, and enable you to seek help and advice when needed.

- Before drafting the case obtain copies of successful, previously presented business cases in your organisation, and others if available. Learn from their style, format, content etc. and apply this to your own case.
- Make sure you get the help of the right people. If you are not proficient in finance, and in the particular financial practices & processes of your organisation, get help from someone in a finance speciality role who is.
- As you start drafting the case, don't assume others will understand the terminology you use. Always use business language and avoid any technical jargon. Where acronyms and jargon must be used explain them fully in the body of the case or in an appendix.
- Always provide more than one investment option to show that alternative courses of action have been considered in your case. Specify a recommended option so that it is clear what investment you are seeking and why. Ensure that at least one other option is given and that it is one you would be willing to see as a second best outcome should the approval board decide against your primary recommendation.
- Make sure that a further potential outcome included is a 'Do Nothing' option, highlighting the implications of taking no action. Look ahead and predict what the impact on your organisation will look like in 2 or 5 years if it is not addressed.
- Ensure your case includes a wider industry perspective. What have competitors or other similar organisations done to address their data quality issues? This will highlight the need for action and provide an external driver for your case.
- Check alignment to business objectives. A strong initiative is one that aligns with your organisation's corporate strategy. It does not need to support all of the strategy, but there may be elements that you can synchronise to.
- Try to identify what personal objectives potential sponsors may have. People generally respond favourably if there is a perceived personal benefit.
- In some instances your business case will be directly linked to another project, e.g. a technology refresh, an acquisition, or a business transformation initiative. Merging your initiative with a larger one can help with its acceptance. Equally two smaller initiatives can give each other momentum.

- Always talk in terms of benefits, not features. Features are just technical facts. For example “this software will allow us to process more records per second” is a feature. A benefit would be that “this software would enable us to service more customers more quickly without any increase in our headcount”
- Itemise benefits, wherever possible, in financial terms. For example, a benefit stated as “Improve the accuracy of our marketing mail shots” will make significantly less impact than “Reduce the current costs of £130,000 per annum wasted on returned mail shots to £30,000 by 2014”.
- When estimating costs and benefits try to assign a cost to a data quality failure. For example it is difficult to estimate how much an accurate customer record is worth. Instead it is easier to quantify the number of returned mail-shots. The case is then founded on reducing failure costs which are much easier to demonstrate empirically.
- When itemising the costs of your case, i.e. the investment you are seeking, remember to include both one-off costs (e.g. software licences, training etc.) and continuing costs (people, consumables etc.) over the lifetime of the initiative.
- Pay careful consideration to the payback period of your case. In some organisations this is stipulated, for example 2 or 5 years, so ensure you are aware of this. Where there are no hard and fast rules ensure that the payback period you choose shows a positive return on investment over the period, particularly if it requires significant one-off, up front funding.
- In some data quality cases other drivers are more important than economic factors, e.g. adherence to law or regulation, or protecting / restoring brand & reputation. However, even in these instances, still aim to quantify benefits wherever possible, e.g. “improving the accuracy of our customer data will enhance our brand reputation and so increase customer loyalty by 10% per annum over 5 years, resulting in £5.5 million additional revenues from those customers”.
- Where your case seeks significant financial investment look to phase it. This will increase greatly your chances of success and reduces the risk in the eyes of the decision makers. Ask for Phase 1 investment immediately and indicate what investment you will seek in Phases 2 & 3. Make these later investments conditional on achieving the predicted benefits of Phase 1 and state you will re-present the case once the benefits of Phase 1 are demonstrable.
- Always try to under-promise and over-deliver. Evidence shows that well researched and factually supported data quality business cases consistently deliver a positive return on

investment. However, under promising and over delivering demonstrates delivery competence and make it more likely that future cases and / or phases will be supported, whereas over promising and under-delivering will damage future phases or cases. It is worth being cautious.

- When drawing up a case be very clear about the measures of success you are going to apply. Ensure Key Success Factors (KSFs), Key Performance Indicators (KPIs) etc. are clearly shown in the case and demonstrate how you are going to demonstrate progress towards them.
- Always include an Executive Summary, a short outline that explicitly states the problem, the proposed course of action, the investment sought and foreseen benefits. It may seem surprising but in practice many decision makers are heavily influenced by this. Busy people may not read beyond it. Others may read the whole case only if the summary has caught their interest.
- When finalising your case there are some important things to leave out. Keep it as short and readable as possible and omit unnecessary detail. If you do need to include supporting information place this in appendices. Do not make unsupported statements or claims without evidence as these will undermine your whole case if challenged. Do not assign blame for the problems you are trying to address as this may alienate people or departments that you need to help you implement it. Good business cases succeed by winning friends, not making enemies.
- Finally, there will be times when even the best researched and presented business cases fail to gain the required support. External factors can intervene and occasionally mean that the case is the wrong topic presented at the wrong time. For example, in an organisation where short term cost cutting is high on the agenda your case may be competing with other cases that directly address those imperatives. If this happens, learn from the experience and re-present your case when circumstances are more favourable.

HOW TO MAKE THE CASE

Once you understand why you need to make a business case for data quality investment and the elements it should contain, there are seven basic stages to building the case that you should follow.

Stage 1 - Identify the Issue

First identify any potential data quality problem(s) and/or opportunities. There are many methods that can be employed to do this; some are open, some more discreet.

A lot can be learnt about the current state of data quality in an organisation by just actively observing business practice and listening to people's complaints. Even flippant remarks can give you clues to where problems lie.

Stage 2 - Gather Evidence

Formal approaches are then essential to refine your original analysis and plan the next steps. Choose a structure or methodology that gets the most from these opportunities but allows creativity, honesty and openness. There are a number of approaches, but remember to use these in a structured and controlled way as they give visibility to your project. Lack of apparent control could have a detrimental impact.

The most common ways to gather & collate information are:

- **Workshops**

There are many ways of running a successful workshop. Rapid Application Development (RAD) or Systems Thinking methodologies are two examples (see Appendix for references). These work well when controlled, the purpose is clearly set, and you have a group of open individuals who are prepared to collaborate.

- **Interviews**

These can be useful if you need to gather information from people who do not like to speak in a crowd to share problems more openly, or if a getting time slot with people is an issue. Make sure though that you have a pre-prepared list of questions to ensure comparative analysis of the results.

- **Best practice benchmarking**

Sometimes useful if it is clear that your organisation or process lags a recognised standard. This can include competitor and / or market analysis.

- **Issues / opportunity logs**

These logs often already exist in organisations, though may have to be re-designed to capture the information you are looking for. Ensure that you structure the fields in these logs; otherwise it is very difficult to analyse and extract facts.



- **Reporting needs not met**

Information on this can be obtained from people who create or consume the reports. The data may need to be organised into a suitable format prior to analysis. These teams will normally have new and pending report requests that have not been fulfilled, possibly historical analysis. In some case you will need to approach the report end users to gather this data.

Stage 3 - Quantify the costs of failure, risks & potential benefits

Having established a need or requirement, you must now quantify it.

All successful business cases should be backed up with relevant, accurate facts related to the project or initiative. Be holistic and consider the impact throughout your organisation, as data quality problems usually have a wider impact than you realise.

Useful tools and techniques you might use are:

Fishbone Model	A diagrammatic tool that can be used to model the causes and effects of a problem.
Data Profiling	Data profiling is the statistical analysis and assessment of the quality of data values within a data set. Used to find errors in data. It can be done manually but this is time consuming and labour intensive so consider an automated tool.
Root Cause Analysis	A problem solving approach aimed at identifying the root causes of problem. Methods include “5-whys”, “FMEA failure modes and effects analysis”, “Current reality tree” & “Pareto analysis”.
Systems Analysis / Systems Thinking	The study of sets of systems (people, process, technology) and their interaction. This includes the “spiral and waterfall models” and” Morphological analysis”.
Force Field Analysis	A quantitative approach to help weigh the pros and cons of a decision. Identifies the enablers of successful change.
SWOT	Strategic planning method used to evaluate Strengths, Weaknesses/Limitations, Opportunities, and threats involved in a project or business venture
Time and Motion	A method of establishing productivity standards where a complex task is broken down into small, simple steps

Quantify the project or initiative in terms of costs of failure, risks & potential benefits.

Depending on the industry sector or organisation you are in, certain drivers will make some areas of risk more pertinent than others, such as in banking, utilities or telcos where there are strong legal and regulatory risks to manage.

Stage 4 – Identify Stakeholders

The most successful business cases and projects have a senior champion or sponsor who will help drive the implementation, which in a climate of cut backs can be essential to ensure your case gets the attention and credibility it needs. The sponsor can also often offer guidance on the best way of to deliver your case.

In addition to the sponsor your project will have a variety of stakeholders, ideally representing every area that is affected by the problems you have uncovered. Obtaining agreement to your case from these stakeholders is essential as it will give your case credibility and will ensure easier implementation.

The sponsor and stakeholders should become your allies and help to start the cultural change required for a successful project. They will ask questions and can help you prepare the final case.

A useful tool in this area is Stakeholder Mapping which can be designed as a simple list of names through to more complete hierarchical and detailed structures. Alternatively, tap into structures in the organisation such as data stewards, Centres of Excellence or Commerce or Workers Council members.

Stage 5 - Draft the Case

Now begin to draft the case, using the pointers outlined throughout this paper.

Stage 6 – Socialise the Case

Because data quality improvement is a collaborative process, socialisation of data quality business cases is critical. This is because data quality improvement initiatives generally require a business transformation; a combination of cross-functional support, process re-design and IT, coupled with the support of the people who will have to develop, maintain and use the data.

The best cases for Data Quality improvement are often better driven “bottom up”, securing the hearts and minds of those who will implement BEFORE approaching senior managers and seeking their support.

Start by talking to people you know; those who work with or for you. Use these to identify people in other departments who might help or resist you.

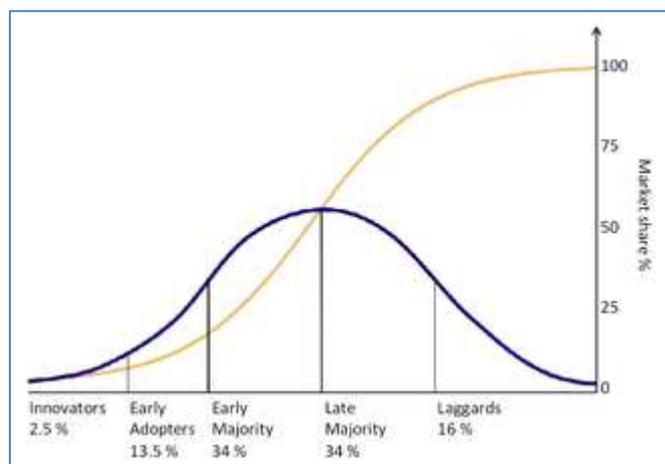
Once you have found out who the key decision makers and influencers might be, seize opportunities to preview and review progress with them, including formally via oral or written progress updates or informally.

Securing necessary support can appear to be quite challenging. People may not necessarily be interested in, be prepared to listen to or even understand your detailed analysis. Many of the key process and data people you need to get on board do not always embrace change willingly and in many situations would rather stick within their comfort zone than adopt something new.

However, changing people's attitudes and behaviours is an established area of study. A good example of understanding how people react to change is given in the book by Everett Rogers (*Diffusion of Innovations, 1962*), who categorised behaviours in terms of an **Innovation Adoption Curve**, based on the idea that certain individuals are more open to change than others.

Rogers's categories are:

- Innovators (2.5 %)
- Early Adopters (13.5 %)
- Early Majority (34 %)
- Late Majority (34 %)
- Laggards (16 %)



There are different views on how this behavioural distribution should be applied, but certain principles remain true.

- First in any group of people the majority are influenced not by you, but by the “innovators” and “early adaptors”, OR by the “laggards”. On that basis you don't have to talk to or convince everybody. Instead focus on these particular groups.
- Second the CEO, the review body, stakeholders and sponsors will also map somewhere to this diagram. Understanding where they fit and who influences them can be useful in selecting your sponsors.

Spend time identifying those who will support you and those who offer the most resistance. The more effort you put into convincing innovators and early adopters, and using them to help you convince the Laggards, the more “ground-level” support you will have for your case.

Stage 7 – Finalise and Present the case

Now you must think about how you are going to present your case. A carefully crafted document may not be enough. On that basis it is always a good idea to prepare a supporting PowerPoint presentation that summarises the case, focuses on the benefits and addresses any foreseen questions and objections.

Be absolutely clear what you want to achieve from the meeting or review when you are giving the presentation. Presenting the case is a **selling** exercise so you need to be clear on what you want the outcome to be. This would normally be to gain support to start the work, but should the case be not accepted you should at least request to follow up with additional analysis.

The presentation should be short and simple. A CEO was once quoted as saying “*If you cannot **SELL** your business case in seven PowerPoint slides (20 minutes), you don’t have a case*”. The **craft** is making sure that your business case covers any detail or justification that you may be asked, the **art** is in the delivery and presentation.

Presentations MUST be;

- In company format.
- Short and capable of being condensed should you find yourself with a shorter time period than you planned for.
- “Visual”, using diagrams, examples and images to bring it to life.
- Deliverable across all functions that need to be involved and understandable at all levels in the organisation.
- Transferable and capable of being delivered confidently by others when the case is approved.

Presentations should contain:

- **A single page Executive Summary**, focusing on what the issue is, how you are going to solve it and the benefits it will bring. This should form the basis of any elevator pitch on the initiative. It is often a good idea to include it twice in the presentation, both at the beginning and the end.
- **A short number of content slides**, expanding on the executive summary, but not going into extreme detail. The slides should at least include a:
 - Review of the problems

- Impact of the problems
- Review of the options available and actions required
- Statement of the benefits
- Potential costs
- **An Appendix** containing the detail that has been crafted into your organisation's official document.
- A high level **milestone and resource plan** to demonstrate feasibility if the case succeeds.

In delivering your presentation;

- Be enthusiastic. Talk to your slides, do not read from them. Practise before presenting.
- Once you have made the sale do not continue into more detail. Be prepared to have your allotted time span shortened, should there be an unexpected time constraint.

CONCLUSION

We hope that this paper will help you build successful business cases for data quality improvement. At the end of the day business cases to improve data quality are no different from any other business cases but are often harder to sell because knowledge of the impacts of poor data quality is still limited in many organisations. But in the era of Big Data and Cloud Computing the importance of data as a key differentiator is becoming increasingly recognised and so the perceived value of high quality data will increase.

We hope the advice here will help you succeed in gaining the investment you need to tackle your data quality challenges. Good luck in your endeavours.

CONTACT POINTS

If you would like to follow up any aspect of this paper please contact DAMA UK in the first instance at:

http://www.damauk.org/rw_shop/contact.php?&dx=1&ob=3&rpn=index&sid=865dc8c4282e35f320f273dd92ef453d

APPENDIX – GUIDE TO ADDITIONAL TOOLS & TECHNIQUES

TECHNIQUE	RESOURCES
Data Profiling	http://en.wikipedia.org/wiki/Data_profiling
Decision / Payback Matrices	http://asq.org/learn-about-quality/decision-making-tools/overview/decision-matrix.html
Fishbone Diagrams	http://asq.org/learn-about-quality/cause-analysis-tools/overview/fishbone.html
Force Field Analysis	http://www.institute.nhs.uk/quality_and_service_improvement_tools/quality_and_service_improvement_tools/force field analysis.html
Lean	http://en.wikipedia.org/wiki/Lean_manufacturing
MoSCoW	http://en.wikipedia.org/wiki/MoSCoW_Method
Net Present Value	http://en.wikipedia.org/wiki/Net_present_value
Root Cause Analysis	http://www.institute.nhs.uk/creativity_tools/creativity_tools/identifying problems - root cause analysis using5 whys.html
RAD	http://en.wikipedia.org/wiki/Rapid_application_development
Six Sigma	http://en.wikipedia.org/wiki/Six_Sigma
Stakeholder Mapping	http://en.wikipedia.org/wiki/Stakeholder_analysis#Methods_of Stakeholder Mapping
SWOT Analysis	http://www.businessballs.com/swotanalysisfreetemplate.htm
Systems Thinking	http://www.reallylearning.com/Free_Resources/Systems_Thinking/systems thinking.html
Time & Motion	http://en.wikipedia.org/wiki/Time_and_motion_study