

# How to Create a Data Quality Business Case

The Lean Pilot Approach

---



## An Experian guide

<b>Introduction</b> .....	04
<b>Why do we need a data quality business case?</b> .....	04
<b>Are you speaking my language?</b> .....	04
<b>Step 1: Discovering Stakeholder Drivers</b> .....	06
<b>Example: Supply Chain Improvement</b> .....	07
<b>Action Notes: Discovering Stakeholder Drivers</b> .....	08
<b>Step 2: Creating an Economic Performance Model</b> .....	09
<b>Example: Creating an Economic Performance Models for Data Quality Management</b> .....	10
<b>Action Notes: Creating an Economic Performance Model</b> .....	11
<b>Step 3: Discovering the Key Business Functions</b> .....	12
<b>Example: Supply Chain Headaches in Customer Provision</b> .....	12
<b>How can you discover the Business Functions involved?</b> .....	13
‘Walking the Process’ .....	13
<b>Function Workshopping</b> .....	13
<b>Data Discovery Analysis</b> .....	13
<b>Action Notes: Discovering the Key Business Functions</b> .....	14
<b>Step 4: Mapping Business Functions to Information Sources</b> .....	15
<b>Example: Excessive Truck Rolls and the ‘Hidden’ Spreadsheet</b> .....	16
<b>Action Notes: Mapping Business Functions to Information Source</b> .....	17
<b>Step 5: Implementing the Data Quality Impact Assessment</b> .....	18
<b>Addressing the Data Quality ‘Chicken and Egg’ Challenge</b> .....	18
<b>Moving Beyond Guesswork</b> .....	19
<b>How Should You Implement a Data Quality Assessment?</b> .....	19
<b>Data Profiling and Data Quality Rule Discovery</b> .....	19
<b>Creating Complex Data Quality Rules for Assessment</b> .....	19
<b>What Type of Impacts are Discovered During a Data Quality Assessment?</b> .....	20
<b>Example: Discovering Stranded Revenue in a Major Utilities Organisation</b> .....	21
<b>Action Notes: Data Defect Assessment Impacts and Resolutions</b> .....	22

## How to Create a Data Quality Business Case

<b>Step 6: Deliver the (Pilot) Data Quality Improvement</b> .....	23
<b>Applying the Plan-Do-Study-Act methodology</b> .....	23
<b>Action Notes: Data Quality Improvement</b> .....	25
<b>Step 7: Presenting the Business Case</b> .....	26
<b>Make it Simple and Compelling</b> .....	26
<b>Create the Ability to ‘Drill Down’ into the Underlying Data</b> .....	26
<b>Include Lots of Anecdotal Evidence</b> .....	27
<b>Create a Clear Roadmap and Call to Action</b> .....	27
<b>Action Notes: Presenting the Business Case</b> .....	28
<b>In Summary</b> .....	29
<b>Next Steps</b> .....	29

### About the Author

Dylan Jones is the editor and founder of Data Quality Pro, the community portal for the data quality industry, providing practical data quality and data governance guidance to thousands of professionals worldwide.

He has over 25 years industry experience of delivering complex data quality and data management initiatives for some of the UK’s largest organisations including BT, Reuters, Vodafone, Goldman Sachs, Scottish Power and RBS.

# Introduction

As a data quality leader, your first obstacle is likely to be the data quality business case.

You may have the data quality vision, belief and expertise, but if you can't secure funding, your data quality aspirations are a wistful fantasy.

Facing you is the classic 'chicken and egg' challenge that confronts all data quality leaders at some point in their career:

Before you can secure investment in a data quality capability, you need a data quality capability to demonstrate the value of the investment.

The goal of this guide is to help you overcome this common dilemma by showing you how to deliver a virtually zero cost data quality pilot that drives tangible benefits to the business and demonstrates the value of further data quality management investment.

## Why do we need a data quality business case?

Occasionally, you may find a sponsor who can sign off your project without a business case.

For example, particularly with regulatory compliance directives (such as GDPR) and data-driven projects with tight deadlines, the sponsor may say there is no need to justify a return on investment.

Getting the green light for your project without having to go through a potentially time-consuming business case may seem like a dream come true, but it leaves you open to a common problem - sponsorship churn.

I've met many data quality leaders who had their entire capability axed when the primary sponsor moved on and the new replacement saw the data quality function as a cost-centre, ripe for axing.

Your goal should, therefore, be to create a long-term capability for data quality management by continuously demonstrating positive value to the business because you never know when the winds of change will affect your leadership.

Finally, from a career-development perspective, the results you've produced as a data quality leader are crucial for demonstrating your suitability for more senior roles. It pays to become comfortable at delivering a robust data quality business case as it forces you to collect the right metrics to demonstrate the net benefits you've helped to achieve.

## Are you speaking my language?

If you're reading this guide, chances are you're passionate about data quality, or at least personally invested in its development with your employer or client.

There are probably others close to you who share the same world view that data truly is an asset - capable of driving value and benefit across the enterprise.

However, as you've no doubt discovered, there are those within your organisation who possess an opposing viewpoint.

There are those who view data simply as the 'exhaust' of applications, an IT commodity, and a cost centre that every business has to bear.

Unfortunately, these folks often hold the key to unlocking your investment in data quality.

If you stand any chance of gaining adoption for data quality, you need to 'bridge the divide'. You need to demonstrate the value of data quality management across both ends of the spectrum - the believers and the sceptics.

## How to Create a Data Quality Business Case

To achieve this goal, you first need the 'non-believers' to see beyond the alien world of data quality frameworks, skills and methodologies by presenting data quality in a language they understand.

And this is where many data quality practitioners fall at the first hurdle.

In my early career as a data quality consultant, I made the mortal sin of talking in 'data quality speak'.

I remember presenting reams of data profiling statistics to a utility operations manager in a bid to demonstrate how bad their data was (and why they needed my help to improve it!).

"Look at all these empty attributes and defective values - you need to put in place improvements," I stated.

Their response was predictable and humbling:

"Look around you; we're not on our knees, we're turning a profit - these issues are business-as-usual, every operator I've worked with has the same problem".

They firmly believed that "if it ain't broke, don't fix it".

The reality is that most businesses are not 'on their knees' with poor data quality, in most cases the opposite is true. Your business is probably humming along just nicely, thank you very much, so executives are sceptical of quality improvement initiatives (particularly when other attractive data-driven projects are pleading for their share of investment).

To stand a chance of getting investment for your data quality project, you need to shift the conversation from data outcomes to business outcomes. If you want to get anyone (particularly from the business community) to sit up and pay attention, you need to talk about the things that keep them awake at night.

You need to link data quality to things like profit, performance, costs, compliance, risk, lead times, customer churn, shareholder value - only then will you start to grow a data quality capability across the enterprise.

**In my personal journey, I would later get buy-in by demonstrating:**

- How bad data was creating poor lead times (and irate customers) by sending field engineers to the wrong site.
- Where the client was adopting the wasteful practice of procuring new and expensive power equipment because the data incorrectly showed an operational plant as inactive.
- How the client was losing out on new opportunities by not improving the quality of data leading up to their IT consolidation projects.
- When you translate data quality into the language of senior sponsors and stakeholders in this way, the results can be profound.

If there is one thing you must take away from this guide, it is this:

**"If you can't demonstrate the business value of data quality using words and outcomes that are impactful to a senior stakeholder, you don't have a business case."**

**Let's get started.**

**Steps discussed in this guide are:**

- Step 1:** Discovering Stakeholder Drivers
- Step 2:** Creating an Economic Performance Model
- Step 3:** Discovering the Key Business Functions
- Step 4:** Mapping Business Functions to Information Sources
- Step 5:** Implementing the Data Quality Impact Assessment
- Step 6:** Deliver the (Pilot) Data Quality Improvement
- Step 7:** Presenting the Business Case



# How to Create a Data Quality Business Case

## Step 1: Discovering Stakeholder Drivers

To help you connect the dots between data quality and business benefit, you first need to develop a deeper understanding of the business model that underpins your area of the organisation.

**A business model consists of many different elements, such as:**



Your first task is to therefore understand what is of most importance to the business.

Are they having problems with suppliers?

Do they need to increase sales per customer segment?

Are specific revenue streams or cost-centres causing them a headache?

For example, in one organisation I dived in with my 'data quality bag of tricks' and soon discovered they had a significant amount of duplicate customers.

I presented a simple opportunity to senior management:

By cutting the number of duplicate customers, you'll quickly reduce the cost of marketing operations.

Their response stunned me - the executives didn't want their customer count to decrease!

The reason was due to the fact that the size of their customer base directly influenced the perceived value of the company in the eyes of investors.

Reducing customer numbers would deliver reductions in marketing overhead, but it had the potential to lower their share price due to reduced investor confidence.

For the senior stakeholders, maintaining a stable share price was critical so the improvement project never got the green light.

From that point on, I approached data quality business cases differently.

Instead of profiling the data, simply to find 'juicy issues' that would impress the business, I spent more time finding the answers to questions such as:

- Who do I need to get on board as a sponsor?
- What pains are they currently experiencing?
- How does the business model work for their area of responsibility?
- Where are there known problems based on anecdotal evidence?

By speaking with stakeholders first, you're stacking the odds in your favour.

**If you can't demonstrate how poor data quality is contributing to stakeholder pain or gain (and provide some credible approaches for resolving it), you face an uphill struggle to get your business case approved.**

## Ask yourself...

Who do I need to get on board as a sponsor?

What pains are they currently experiencing?

How does the business model work for their area of responsibility?

Where are there known problems based on anecdotal evidence?

## How to Create a Data Quality Business Case

### Example: Supply Chain Improvement

**The processes within a typical supply chain are common to most firms that deliver products and services.**

Within each supply chain is an interlocking set of business functions that link the order received, to a (hopefully) satisfied customer.

Directors and executives who lead these operations may refer to the overall business function using terms such as order-to-cash (OTC/O2C) or quote-to-cash (QTC/Q2C).

At any point in time, there will typically be a clear need (pain or gain) that is driving senior management activity.

**It could be a desire to:**

- Improve the DSO (Days Sales Outstanding) or DTP (Days to Pay) metrics
- Increase cross-sell and up-sell results per customer
- Improve AR (Accounts Receivables) performance
- Reduce order change cycle times

You may see these high-level goals often get passed down the organisation into localised, departmental-level initiatives.

Traditionally, these supply chain operations have suffered from fragmentation across the myriad of systems and functional silos that need to link up to process each order received into working capital (via the accounts receivable process).

Due to fragmentation, there is often a great deal of scope (and low-hanging fruit) for data quality improvement as the data becomes out-of-sync or defective as it flows through the hand-off points between operational workers and systems.

An inexperienced data quality practitioner may simply pick a system at random and dive in with their data quality profiler, hoping to find some issues to impress senior stakeholders.

A smarter approach, however, is to speak with senior management first and understand what metrics they need to improve e.g. DSO, DTP etc.

By doing this, you'll quickly start to find the areas of greatest pain.

For example, stakeholders may be frustrated with the average order change cycle time because it creates a reduction in working capital, which is, in turn, bringing down the wrath of their CFO.

**Following stakeholder discussions, you would be able to understand:**

- The potential areas to start your search for improvements
- The business metrics of most importance to each stakeholder
- The stakeholders that are most likely to fund any investment



**Action Notes:** Discovering Stakeholder Drivers

Which stakeholders are likely to sponsor an investment in your area of the business?

.....

.....

.....

.....

.....

What motivates these potential sponsors personally?

.....

.....

.....

.....

.....

What specific business metrics are important to these sponsors?

.....

.....

.....

.....

.....

What processes / information sources directly influence these metrics?

.....

.....

.....

.....

.....



## How to Create a Data Quality Business Case

### Step 2: Creating an Economic Performance Model

Now you have a rough idea where data quality improvements would be well received (e.g. stakeholders of the order change process, using our earlier example) your next task is to get a good handle on business performance across this process.

#### **By building a performance model from the current operational data you can start to understand:**

- What are the past and future trends, e.g. is the order change cycle time getting worse?
- Which teams are involved in this part of the business? What is their function?
- What systems and data are involved?
- Which product lines or services are experiencing the most problems?
- How does the order change cycle time impact customer satisfaction and complaints?

By presenting these models to the business they'll start to recount their own experiences of any known data issues on 'their patch' - giving you vital clues of where to explore further.

These knowledge-worker anecdotes are a powerful asset in your business case because they help executives experience, at first-hand, the real story behind the facts and figures you're presenting.

The desire to understand business performance in detail as part of a data quality business case process is a common theme I've discovered from researching the tactics of many successful data quality leaders. As a result, it is a highly recommended addition to your business case approach.



## How to Create a Data Quality Business Case

### Example: Creating Economic Performance Models for Data Quality Management in the Energy Industry

Mark Humphries is an accomplished data quality professional and speaker.

In a recent presentation, Mark presented on the topic of Aligning Data Quality with the Business in the Energy Retail sector. During his presentation, Mark demonstrated extensive use of incorporating economic models into his data quality process.

One of the first tasks Mark undertook was to understand how revenues and costs are generated within his organisation (as highlighted in the following model:

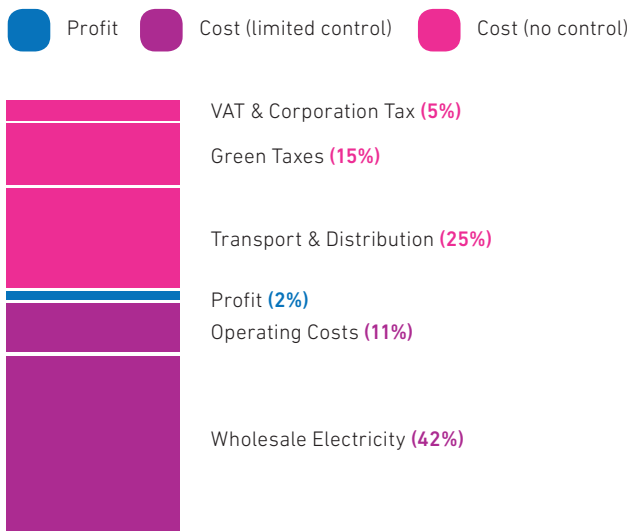


Diagram 1: Revenue and cost split within energy organisation

The next model demonstrates how the energy organisation makes a loss in the first year due to the cost of customer acquisition:

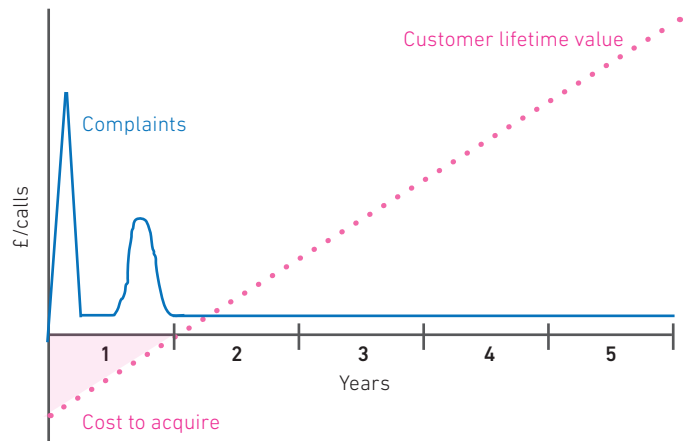


Diagram 2: How an energy organisation makes a loss in Year 1

As you can see, the first year is where most complaints and customer churn takes place. Armed with this information, Mark was able to focus his energies on tackling data quality issues relating to customer house moves.

Using the above models (and several others), he developed a deeper understanding of where to prioritise data quality investment for maximum return, something your stakeholders will no doubt be keen to see in any business case.



## How to Create a Data Quality Business Case

### Action Notes: Creating an Economic Performance Model

What existing reports do stakeholders and senior management currently receive about the performance of your business area?

.....

.....

.....

.....

Based on the needs of stakeholders, what information sources may help you dig deeper into trends of past, current and future business performance? Examples of trends: costs, cycle times, wasted effort, delays, revenues, net profit, days worked, risk levels etc.

.....

.....

.....

.....

After discussing these reports with stakeholders and users, what recurring problems, improvement initiatives or future objectives are known?

.....

.....

.....

.....

Given what you now know - what area(s) of the business are likely candidates for assessing the viability of a future data quality business case?

.....

.....

.....

.....

## How to Create a Data Quality Business Case

### Step 3: Discovering the Key Business Functions

By this point, you should know where to focus your efforts to get some initial traction at an executive level. Your next task is to understand the business functions and processes involved.

For example, using our previous example, we could start by following the flow of services along the troublesome 'change order process'.

To do this, you need to speak with the business 'super-users' who understand the process so you can get a deeper understanding of the information and steps the teams are using at each stage.

**Once again, it's these discussions with real-life users of the data that can often tell you exactly where to focus your initial data quality improvements.**

### Example: Supply Chain Headaches in Customer Provision

In one supply-chain organisation, we discovered that the handheld data collection devices that field installation teams used during customer installations could not record all of the information required of the commissioned solution.

Due to additional challenges (such as overtime restrictions) they often failed to update the records back at base, resulting in an incomplete BoM (Bill of Materials) and inconsistent customer installation records.

Through a brief discussion with the users, we uncovered this problem and found a significant source of hidden customer revenue.

We also uncovered a great source of frustration (and cost) for the field support team who had to provide ongoing maintenance and installation to sites with inaccurate data.



# How to Create a Data Quality Business Case

## How can you discover the Business Functions involved?

There are a number of methods that can be employed to map out the business functions that are critically dependent on data quality.

### 'Walking the Process'

This method requires you to follow the chain of events that take place to complete a well-defined process, such as a customer order.

In this case, you would trace each event in the process sequence, from start to finish.

Along the way, you would identify all of the key business functions involved e.g. order entry, order processing, order fulfillment, order billing, order shipping, complaint management etc.



Diagram 3: Example 'Order-to-Cash' Process

### Function Workshopping

Using this method, you would invite the business into a workshop setting and ask them to describe the key activities that they carry out that influence the stakeholder drivers and any economic models you've identified as important in the earlier steps.

Workshops are a great way to find potentially 'hidden' or undocumented data stores that the users rely on to get the job done.

### Data Discovery Analysis

To help speed up the process, you can also deploy data quality profiling and discovery software to automatically 'walk the process' by discovering the data linkages between different entities and systems within the area of assessment.

When combined with the previous techniques, this can dramatically improve the speed and effectiveness of your function discovery capability.



## Action Notes: Discovering the Key Business Functions

Which business functions are critical to the business drivers your stakeholders are focused on?

.....

.....

.....

.....

.....

Which stakeholders and 'super users' are responsible for each business function?

.....

.....

.....

.....

.....

What are some of the known issues with these business functions?

.....

.....

.....

.....

.....

Which business functions are good candidates for data quality assessment?

.....

.....

.....

.....

.....

# How to Create a Data Quality Business Case

## Step 4: Mapping Business Functions to Information Sources

Continuing our Supply Chain example, by understanding the critical business functions along the process, you will naturally start to discover the information each team needs to complete their individual tasks.

In essence, you are creating an accurate picture of the Information Chain that underpins the overall sequence of business events.

**Tip:** If you apply data discovery analysis (using specialist software) you'll be able to rapidly discover these information chains, and assess their quality instantly.

The biggest benefit of finding the information required of a business function is to gain a clear understanding of where to focus your data quality impact assessment.

**Only when you've assessed the data, found defects, and quantified their impact, can you demonstrate a justification for your data quality business case.**



Diagram 4: Example 'Order-to-Cash' Process



### **Example:** Excessive Truck Rolls and the 'Hidden' Spreadsheet

In one utility organisation, using the function workshop and data discovery exercise, we discovered a local spreadsheet had been used to record unplanned 'truck rolls' during the supply chain delivery process.

(An unplanned truck roll is where an engineering team has to go back to a client site for an unplanned piece of installation or maintenance, often due to poor quality data and processes).

These truck rolls were expensive, adding delays and unplanned staff allocation to the supply chain.

If we had relied on the approved inventory of IT systems, we would never have found this data, so it pays to spend time talking to users as they provide so much contextual information when building your business case.





## How to Create a Data Quality Business Case

### Action Notes: Mapping Business Functions to Information Source

What data sources map to each business function (hint: you may have multiple data sources per function)?

Business Function	Sub-Function	Data Sources (System/Entity)

Which stakeholders and super users are responsible or knowledgeable for each data source?

Data Source	Super Users	Stakeholders

## How to Create a Data Quality Business Case

### Step 5: Implementing the Data Quality Impact Assessment

#### Addressing the Data Quality 'Chicken and Egg' Challenge

If you read back over the steps covered so far, you'll realise we've not required any major investment, other than taking the time to talk with management and workforce representatives.

However, once you've understood a high-value area of interest, the business functions involved, and the information they depend on, you hit a problem.

To go any further typically requires specialist data quality technology to carry out a deeper data quality assessment.

#### Implemented correctly, a data quality impact assessment will help you:

- Find a variety of different data quality issues across your area of interest (in our earlier example, a subset of the order change information chain)
- Identify the link between the defective data and the business function impacted
- Quantify the cost of the issues found
- Prototype short-term fixes and longer-term preventions

My advice is to pitch this assessment as a data quality pilot.

#### With a data quality pilot completed, you can go back to the business and say:

1. We found an issue in a part of the process that was caused by poor quality data
2. We implemented a pilot solution to identify the causes
3. We trialled a prototype remedy and observed the following benefits
4. We now need more investment to roll this out across further product lines and pain points in the process

At this point, you may be thinking: "How do we afford the technology for this pilot because surely that's the objective of a data quality business case in the first place!"

I hit this data quality 'chicken and egg' problem many times in my earlier career and would often have to settle for delivering home-grown assessments using a combination of tools such as Excel and hand-cranked code to crunch the data and find the issues.

#### Perhaps you've had the same challenge?

If so, you'll know that using manual tools is a slow, outdated method of analysis, that invariably limits your scope and the benefits you can release to the business.

Fortunately, in the latter part of my career, I started to work with data quality technology vendors who would loan their software for a small fee (or at no cost) over a limited period so I could carry out a faster and broader data quality impact assessment and improvement.

Using this approach, I was able to not only discover the issues I expected to find, but uncover hundreds of previously unknown problems that I was able to schedule for later initiatives.

With data quality tools that supported the full data quality life-cycle (from discovery to resolution), I was able to deliver small pilots, at practically zero cost, demonstrating a clear benefit to the business.

This 'Lean Pilot' approach is recommended for organisations looking to build a business case for data quality.



## How to Create a Data Quality Business Case

### Moving Beyond Guesswork

Importantly, adopting a low-cost Data Quality Pilot doesn't rely on guesswork or industry statistics to demonstrate the benefits of data quality. Many stakeholders are sceptical about returns on investment that are based on industry research and trends, you'll have far more impact with credible findings from your own organisation.

With a data quality pilot, you're showing executives the 'situation on the ground' through the outcome of your data quality impact assessment activity. Through tangible improvements, you can then provide solid evidence of how data quality management aligns to the business drivers you've discovered in earlier discussions.

### How Should You Implement a Data Quality Assessment?

To recap, you should now have:

- A list of stakeholders that are motivated to improve the status quo
- A list of business drivers, metrics and outcomes stakeholders care about
- A list of business functions, and the data sources they map to
- A list of stakeholders and super users who are responsible or knowledgeable about each data source
- An economic model (your business model) for the area under consideration

### Data Profiling and Data Quality Rule Discovery

Your next task is to profile the data and discover some of the data quality rules that influence the economic model of the business and are obviously critical to the pilot.

In my experience, this is where it pays to leverage data quality tools, initially on a short-term 'try before you buy' basis, ideally you can work with a vendor to build the business case.

Trying to analyse data manually to uncover rules is extremely time-consuming and runs counter to the 'Lean Pilot' manifesto of finding quick wins to justify an investment in your data quality business case. Manual analysis also limits your scope of assessment, meaning it's often harder to find enough issues to justify a business case.

A modern data quality platform (such as Experian Pandora) will help you analyse thousands of entity and attribute data quality metrics, literally in minutes.

When you combine this data profiling output with your discussions in the business and stakeholder community, this will help you quickly understand:

- Where are the hotspots of poor data quality?
- Which data is most critical to the business function?
- What are the most important data quality rules to assess?

### Creating Complex Data Quality Rules for Assessment

One of the common mistakes people make is to assume that once their data profiling exercise is complete, they have finished the data quality assessment.

What data profiling allows you to do is assemble the data quality rules (or specifications) for data quality assessment at a magnitude of at least 10x faster than conventional, manual data analysis.

Data profiling and data discovery gives you an exhaustive amount of analytics that tell you:

- What data quality dimensions need to be considered for a particular data quality rule?
- How are the data elements linked into a complex information chain across multiple systems?
- What data domains e.g. master data, reference data, transactional data are found in each data source?
- Which are the critical data quality rules to include in your pilot improvement?
- Where are data models and standards being abused or broken?

**For example, a data profiling assessment may tell you that a data element has 5% missing values across 25,000,000 customer records but which of those 5% of records is valid or invalid? You may have customer records or equipment records that have perfectly valid missing values.**

## How to Create a Data Quality Business Case

For example a newborn baby will not have a national insurance identifier so they will have an empty value in this field but this is perfectly valid. However, an adult with a lengthy work history, but a missing national insurance identifier, is likely to be an invalid or defective record, that may in turn cause further problems in downstream processes.

Data profiling allows you to analyse this information and construct more complex data quality rules (often spanning multiple attributes, entities and systems) that can be used to assess where the data truly has become incorrect. This type of information then allows you to create an accurate business case for improvement based on known facts.

### What Type of Impacts are Discovered During a Data Quality Assessment?

By following the steps in this guide, you should typically narrow in on a major area of known concern prior to the assessment. However, a data quality assessment nearly always highlights additional, unknown problems, too.

Here are just some of the common impacts you're likely to discover as a result of your data quality assessment:

- Delays in deploying new systems and modernisation initiatives
- Loss of credibility in new systems

- Lost revenue or increased costs
- Compliance and regulatory exposure e.g. GDPR, Basel III, Solvency II etc.
- Reduced productivity and throughput along the supply chain
- Delays in reconciling financial data for reporting and risk
- Customer churn through poor service

Once you have identified all of the impacts, you must create a spreadsheet that outlines each category, sub-category, and description of impact, plus the financial outcome and cost of resolution.

**This information gives you the basis of a Return on Investment (ROI) model for identifying which improvement (Step 6) will deliver the greatest return.**



### Example: Discovering Stranded Revenue in a Major Utilities Organisation.

A large UK-based utilities organisation possessed two (ageing) billing and maintenance systems. An overnight batch process was designed to synchronise the two systems and ensure that maintenance work was accurately billed.

**By following the steps listed in this guide, we were able to initially ascertain the following:**

- Operational stakeholders were tasked with reducing costs (and subsequently profits) across their division
- The CFO team was tasked with improving a range of reporting and risk initiatives, particularly around accuracy of accounts receivable payments and general ledger reporting
- Stakeholders of the two systems complained about numerous architectural challenges of the systems (one of the systems ran on an unsupported operating system for example)
- Field workers complained that their maintenance records were often incorrect onsite

Armed with this information, we undertook a data quality 'gap analysis' using the techniques in this guide, principally a detailed data profiling and data discovery exercise, to find:

- The critical data from systems A and B that mapped to an order fulfillment process
- The linkage points and information chains between systems A and B
- The data quality rule specifications for assessing data quality violations

The data quality rules were then mapped into a data quality tool, where we were able to monitor historic data quality levels to gather past/predicted trends of financial loss.

Following a two week assessment, we were able to identify a £30,000-40,000 shortfall in unmapped billing each month between the two systems.

We then explored how a data quality platform could not only improve the synchronisation of the two systems but eradicate a range of problems found within the fieldforce team. The platform also helped the CFO team to improve the quality of reported data coming from the billing system to their financial reporting platform.

**With this irrefutable data, a clear business case for long-term data quality improvement was put forward and agreed.**



**Action Notes:** Data Defect Assessment Impacts and Resolutions

Impact Category	Impact Description	Impact Outcome e.g. Financial	Resolution Options	Resolution Costs

## How to Create a Data Quality Business Case

### Step 6: Deliver the (Pilot) Data Quality Improvement

By this stage, you should have an understanding of:

- The key stakeholders and the business drivers they care deeply about
- The business and economic models for the area under consideration
- The list of business functions (processes) and their information sources
- The data quality rules and their data quality levels
- The anecdotal accounts of the challenges of poor quality data
- The impact of any data defects found and their likely root-cause
- The cost and steps involved of any improvements

With this information, you can start to present your business case and create a justification for running a pilot to make some immediate improvements to an area of the business that stakeholders are motivated by.

As discussed, it is advisable to implement a 'Lean Pilot' approach to your data quality initiative to demonstrate the financial benefits of making some immediate improvements.

By adopting the previous steps, you should have identified an area of the business that can benefit from some level of data quality improvement.

For example, perhaps your data quality assessment has noticed that orders received via the call-centre are 5x more error prone than orders received via the website.

By applying the 'Lean Pilot' technique, you could lease a data quality tool for a short period to clean up any historic defects and eliminate future defects at source.

By tracking the 'before and after' status of orders received using the new data quality interventions, you can get a clear picture of how the situation has improved, including any financial benefits.

#### Applying the Plan-Do-Study-Act methodology

Data Quality Management is derived from the same performance improvement and quality principles that transformed the post-war manufacturing sector.

Performance Improvement Projects (PIP's), often leverage clearly defined methodologies and data quality improvement should be no different - so what method should you use?

**There are countless data quality text books to advise you further, but one simple model to employ is the PDSA framework as seen below:**



#### PDSA Pilot Improvement Cycle:

1. Plan

2. Do

3. Study

4. Act

## PDSA Pilot Improvement Cycle:

### 1. Plan

- What change are you testing with the PDSA cycle(s)?  
This should have been identified earlier in the process
- What do you predict will happen and why?
- Who will be involved in this PDSA?
- How long will the change take to implement?
- What resources do you need?
- What data needs to be collected?

### 3. Study

- Analyse the results
- Did the change result in the expected outcome?
- What implementation lessons did you learn?
- What financial or performance related changes were observed?
- Summarise what was learned, especially and unexpected consequences, including surprises, successes or failures

### 2. Do

- Carry out the change or improvement (i.e. across some of the key business functions or data sources you've identified earlier)
- Document your observations, including any problems and unexpected findings (gather anecdotal evidence from key workers)
- Collect the performance improvement data you specified during the "plan" stage

### 4. Act

At this point, you should now have several options:

- Adapt: modify the changes and repeat PDSA cycle
- Adopt: consider expanding the changes in your organisation
- Abandon: change your approach and repeat the PDSA cycle



## Action Notes: Data Quality Improvement

What changes and data quality improvements did you introduce in the pilot?

.....

.....

.....

.....

.....

What was the financial or performance impact of these changes?

.....

.....

.....

.....

.....

In simple terms, describe the business case for data quality improvement?

.....

.....

.....

.....

.....

## How to Create a Data Quality Business Case

### Step 7: Presenting the Business Case

By now you should have some credible evidence for how data quality intervention can benefit the organisation, and in particular the key stakeholders.

Now comes the difficult part - convincing senior management to invest in longer-term data quality funding.

Most departments are able to fund localised data quality improvements using the Lean Pilot method as the funding required is minimal.

But at some stage, you will need a broader commitment to data quality, hence the need for aligning data quality improvements to stakeholder drivers.

To deliver your business case, here are some practical considerations:

#### **Make it Simple and Compelling**

Your data quality business case should be demonstrated clearly, using simple terms the senior management team will understand.

If you are presenting the case to an executive steering committee for example, you must lead with the key drivers that the committee care about.

You need to grab their attention early so you will quickly lose the audience if you just rely on presenting a summary of data defects and profiling stats in your business case.

To make the presentation truly compelling, demonstrate how the business drives value currently, explain all of the elements involved in that process, and how data quality impact impacts the current situation.

If you have made improvements already, you can then demonstrate the before and after impact on the economic model of the business.

#### **Create the Ability to 'Drill Down' into the Underlying Data**

In all of the business case presentations I've delivered, at least one of the executives has questioned the data quality results. They often refuse to believe their data really is that bad, typically because this is the first time someone has highlighted the extent of the problem.

When this situation arises, you need to be prepared. You can't recommend a recess to the executive team so you can go off and find the relevant data.

In this situation, I like to integrate my presentation with the data quality assessment results found using my data quality tool. If a manager wants to explore a particular issue we've raised, I can then quickly bring up the underlying data and the data quality metrics we've discovered.

#### **This real-time approach to demonstrating the business case has multiple benefits:**

- Demonstrates instant credibility (i.e. you've done your job effectively)
- Brings the topic of data quality management to life (the fact that you can quickly pinpoint issues demonstrates the value of deploying data quality tools and techniques)
- Removes doubts and objections from the executive team

## How to Create a Data Quality Business Case

### **Include Lots of Anecdotal Evidence**

User and customer stories are incredibly compelling to stakeholders.

Identify the 'before' state of your business processes by gathering anecdotes from different workers, or even customers.

If you have the capacity to make some improvements, go back and gather anecdotes from the same end-user community.

How did things improve for them?

What did they observe?

Were they more productive or profitable as a result of your changes?

Anecdotal evidence is powerful for any business case because it is irrefutable.

### **Create a Clear Roadmap and Call to Action**

After you present your findings and the justification for wider improvements, you need to be clear on exactly what you need from the sponsors and stakeholders.

Lay out a simple roadmap, in terms the executives will understand, so that they can see the next steps involved.

If you just provide lots of evidence for data quality investment, without a clear implementation plan, you may struggle to get buy-in.

Your call to action for executives may require them to lend support and influence to help drive changes in the organisation. If so, make that clear and outline what their responsibilities should be.



## How to Create a Data Quality Business Case

### Action Notes: Presenting the Business Case

How do you intend presenting the business case?

.....

.....

.....

.....

By reviewing the business drivers you discovered earlier in the process, which are most affected by data quality improvements?

.....

.....

.....

.....

What underlying data will you need to include in the presentation?

.....

.....

.....

.....

Which stakeholders will need to be present?

.....

.....

.....

What questions are you likely to get asked so you can prepare in advance?

.....

.....

.....

.....

## In Summary

Creating a defensible data quality business case is one of the most challenging undertakings you will face as a data quality professional.

It is also one of the most rewarding because, delivered successfully, it will help you realise your vision for long-term data quality maturity, which should in turn further your own career ambitions.

The key to success in any data quality business case is demonstrating value.

By adopting the 'Lean Pilot' approach, i.e. you actively improve something your stakeholders are keen to change, you stand a far greater chance of receiving further funding for broader changes.

Hopefully the previous steps have whetted your appetite for getting started with your own data quality business case.

## Next Steps

**Want to develop a data quality business case in your organisation?**

Experian Data Quality provides a complete service to help you:

- Gather evidence of data quality impacts
- Devise strategies for remedial solutions
- Implement pilot improvements
- Demonstrate a justification for wider investment

We can provide the technology to support your business case in the form of Experian Pandora, our leading Data Quality Platform that is adopted across some of the largest organisations in the UK and overseas.

In addition, we can also supply data quality specialists to help you assemble the critical pieces of your data quality business case.

**Please contact us to learn more about how we can help accelerate your data quality journey.**

## How to Create a Data Quality Business Case

### About Experian

Experian unlocks the power of data to create opportunities for consumers, businesses and society.

At life's big moments – from buying a home or car, to sending a child to college, to growing your business exponentially by connecting it with new customers – we empower consumers and our clients to manage their data with confidence so they can maximize every opportunity.

We gather, analyse and process data in ways others can't. We help individuals take financial control and access financial services, businesses make smarter decision and thrive, lenders lend more responsibly, and organisations prevent identity fraud and crime.

For more than 125 years, we've helped consumers and clients prosper, and economies and communities flourish – and we're not done. Our 17,000 people in 37 countries believe the possibilities for you, and our world, are growing. We're investing in new technologies, talented people and innovation so we can help create a better tomorrow.

**Learn more about data quality from Experian at [www.edq.com/uk](http://www.edq.com/uk)**



---

Experian

T 0800 197 7920

E [dataquality@experian.com](mailto:dataquality@experian.com)

W [www.edq.com/uk](http://www.edq.com/uk)

© Experian, 2017. All rights reserved

The word "EXPERIAN" and the graphical device are trade marks of Experian and/or its associated companies and may be registered in the EU, USA and other countries. The graphical device is a registered Community design in the EU.

Experian Ltd is authorised and regulated by the Financial Conduct Authority.

Experian Ltd is registered in England and Wales under company registration number 653331.

Registered office address: The Sir John Peace Building, Experian Way, NG2 Business Park, Nottingham, NG80 1ZZ.