

OPTIVIA EBOOK

A practical guide to

IMPROVE ORGANISATIONAL DATA QUALITY AND DATA GOVERNANCE

Gain practical tips and best practice advice to unlock the value in your data, uncover actionable insights, and make more confident data-driven decisions.



In this ebook you'll learn:

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4 benefits of improving the quality of your data

02

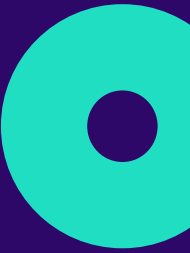
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Introduction

Data is an increasingly valuable commodity in modern organisations, driving business strategy, meaningful decision-making and visibility of your products, processes and services. Conversely, when data quality is in question, it can severely threaten your organisation's financial structure, reporting capabilities, customer experience and growth opportunities.

So, if data quality is so critical to success, why aren't more businesses measuring it?

According to data governance experts, Precisely, around 75% of businesses say that data quality is the leading goal of their data programs – but only 42% actually measure it.

Data is essential to making trusted and informed business decisions. But if your information isn't high quality – if it doesn't serve the specific needs of your context – then it's of little value.

This ebook outlines what your organisation can do to measure and improve data quality, including the data quality metrics to assess the current standard of your business information and tips for ensuring long-term high-quality data.

But first, let's outline how you could benefit from improving the quality of your data. →

4 benefits of improving the quality of your data

Higher quality data helps your organisation to obtain greater value from your business intelligence frameworks, including speedier analysis and more reliable insights. These benefits can be felt by everyone in your organisation, influencing the strategy and direction of your company for the better.



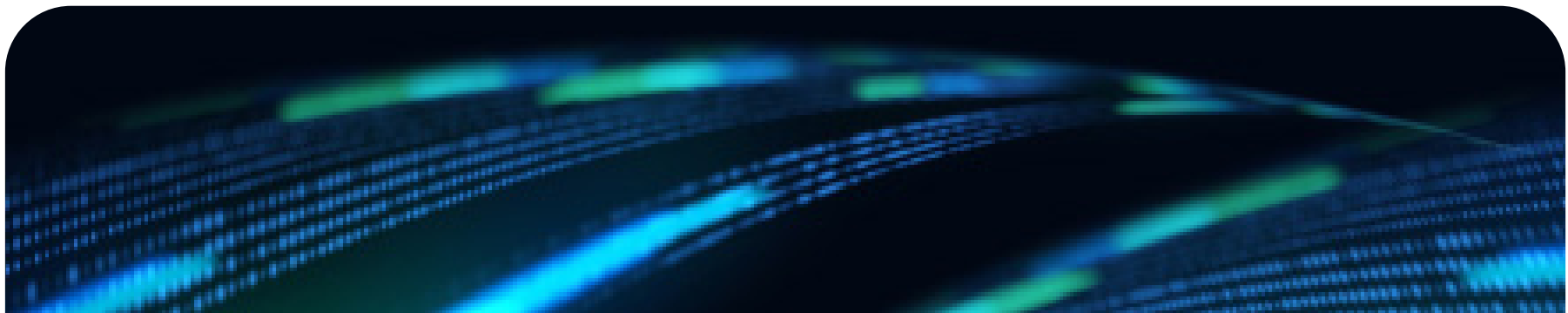
The top four benefits we see clients achieve with improved data quality are:



Benefit #1: Better understanding of customers

Customers expect a high level of service when interacting with your business – from relevant marketing to rapid, personalised support. Good quality data is the best resource you have for strengthening customer relationships and loyalty by knowing, anticipating and meeting your customers' needs.

In fact, a 10% improvement in customer data quality can lead to a 5% improvement in customer responsiveness, thanks to data insights driving faster and better customer service and care.



Benefit #2: Improve productivity

With relevant and easily accessible data available to them, your team can quickly respond to challenges, devise new strategies, share data, collaborate on projects, and set and achieve realistic goals. While previously they may have struggled to access the information they needed – or perhaps it simply didn't exist – with high-quality data at their fingertips, they can focus on the high-value tasks that contribute to the growth and profitability of their company.



Benefit #3: Risk reduction

Low data quality might be the chink in your risk management armour. For example, incomplete or inaccurate business information can contribute to regulatory compliance issues, a greater volume of customer complaints, potential brand damage, crippling financial implications and – worst-case scenario – the collapse of your business.

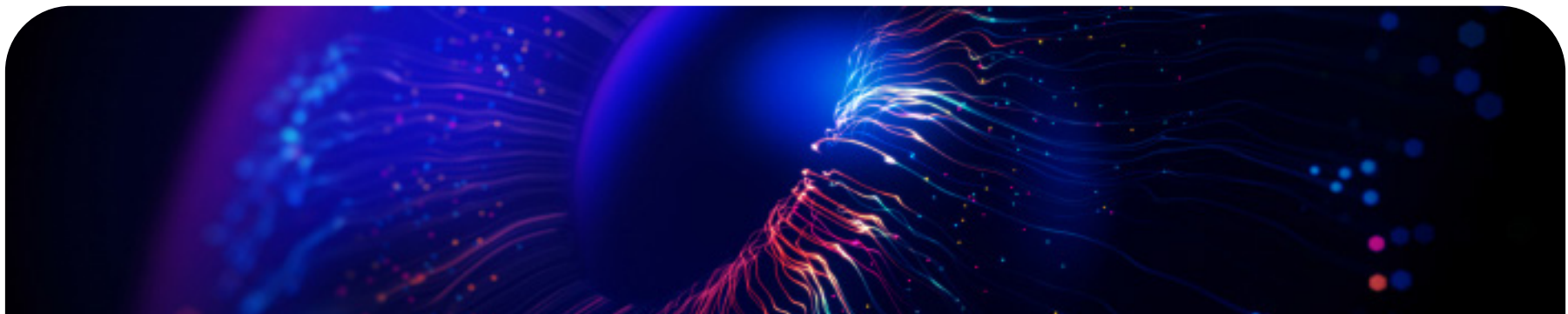
Improving your data quality is critical to minimising risk in your business through more accurate, transparent and auditable data. Not only that, but with the right data analytics tools, you can reduce your risk further through continuous risk monitoring, controls monitoring and other insights.



Benefit #4: Better decision-making

All of the above benefits of improved data quality have one big thing in common – they empower reliable, informed decision-making. This, in turn, ensures the success of other data projects like insight development and discovery and delivery.

Now let's take a closer look at how to measure the quality of your data. →

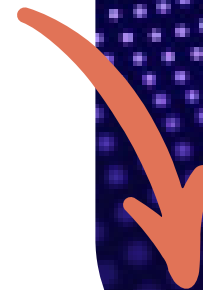


How data quality is measured and improved

Having access to high-quality data is critical for organisations striving to be more data-driven. In fact, poor data quality can cost up to \$13 million for an organisation. So, how do you actually improve data quality? To begin with, you have to understand how to measure it.

At first, this question might seem a bit like asking, 'How long is a piece of string?' However, there are tangible, calculable ways to measure the quality of your data and how your organisation can make improvements.

Here are the six most common data quality metrics to help you determine the integrity and fitness of your data.



Data quality metrics



1: Completeness

Does it fulfil your business requirements and expectations?

When data is comprehensive and fulfils its requirements, it is considered to be complete. Determining if all requisite information is recorded and available is the first step to improving this metric. For example, a customer's first and last names might be mandatory fields that have been entered, while the middle name is optional and vacant. Because the required fields have been entered, this data is considered complete.

Sometimes completeness may vary depending on who is using the data and what they need it for. It's important to consider the needs of all your business departments when assessing the completeness of your data, as well as the other data quality metrics listed here.



2: Accuracy

Does the information reflect the truth?

This data quality metric requires you to know the degree to which information accurately reflects an event or objective of a specific requirement. This could mean that the sales data for a particular business unit is the real, true value. To improve the accuracy of your data, you need to delete duplicate entries, resolve discrepancies between datasets and identify any other errors that need fixing.

If your business is relying on manual data entry, then accuracy is likely to be an ongoing challenge unless you implement long-term strategies to reduce the risk of inaccuracies. For example, automating manual processes and consolidating datasets sitting across multiple sources into one single source of truth.



3: Consistency

Is the information consistent across your data systems?

If your organisation has information stored in more than one place, it's critical that the information matches. To eliminate inconsistencies, you must assess your data sets and identify any discrepancies or conflicts. This is done through planned testing across multiple sets and sometimes verification with an alternate source, depending on the complexity of your data systems.

There is often overlap between the data consistency and data accuracy metrics, and improving both can significantly impact the quality of your data.



4: Validity

Is the data in the correct, usable format and does it follow business rules?

Validity refers to the data being available to the right people in a format that aligns with their specific business requirements. For example, phone numbers may only be valid if they contain the correct prefixes or area codes for their respective region. Without this critical information, the data may be unusable to your customer support team.

Validity is best maintained at the source where the data is entered into the system, such as by making an area code a required field when entering a phone number. Interlacing your data requirements with your business rules is also a logical way to assess and maintain the validity of your data.



5: Timeliness

Is the data available at the time you need it?

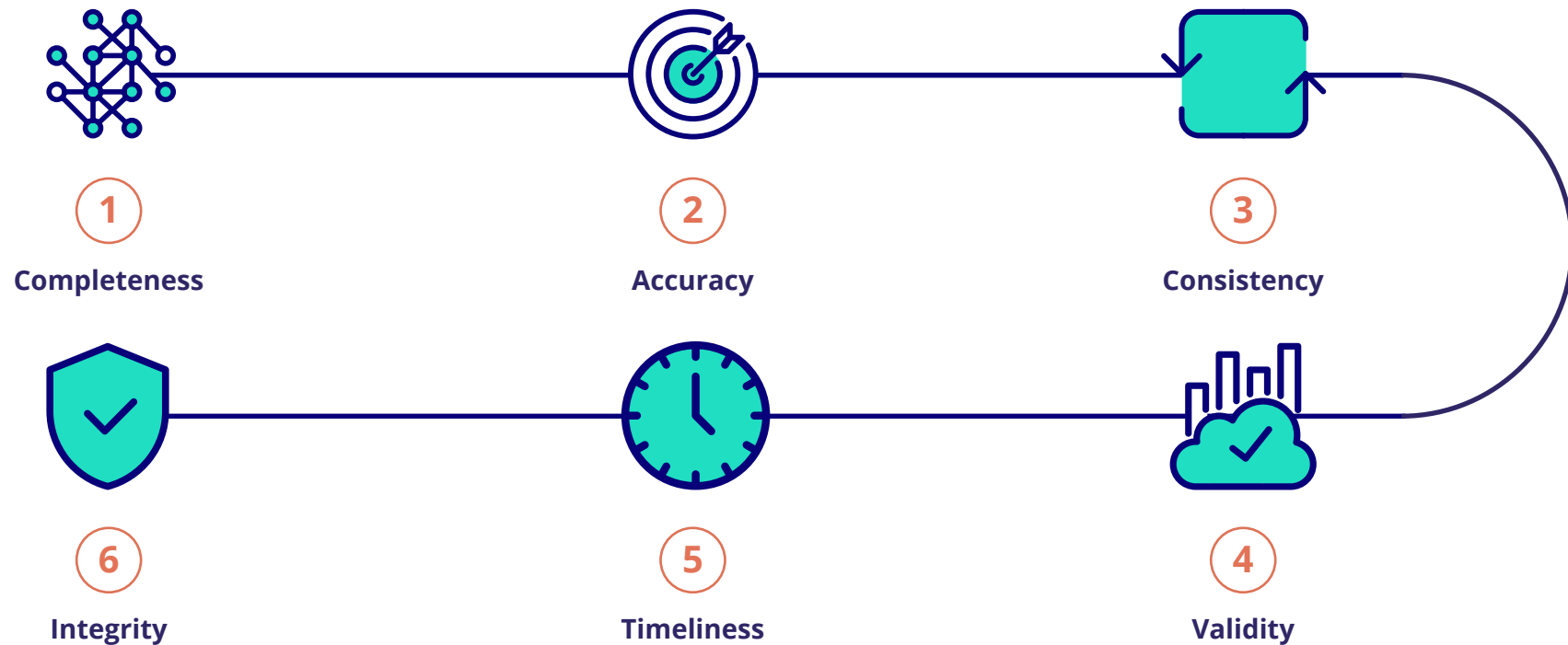
Time is money, so if you need financial information on a quarterly basis, then your data needs to be ready and accessible ahead of deadlines. Timeliness can simply be measured as the time between when the data is expected and when it is actually available for use. Having a framework that allows real-time updates to information and current reports can improve your data's timeliness. For example, if you're required to bill customers at a certain time of the month, then the corresponding invoice data should be updated and synced to your business system as soon as it's ready.



6: Integrity

Is the data traceable and can it be connected across your organisation?

Integrity indicates that data sets are correctly maintained and their source is identifiable, regardless of where the information is within your business systems. In other words, it ensures that all business data can be traced and connected. Tied closely to validity, this metric verifies that your data is 'clean' and that data permissions and changes have been audited and applied to ensure its overall integrity and quality.



Where do you measure data quality?

As well as these six metrics that determine how you measure your data quality, businesses also need to consider where they will measure it as it flows throughout the organisation. There are generally two options: at the source or in a consolidated staging platform such as a data warehouse.

At the source

Measuring data at the source involves checking the information when it's created using a measuring tool that can "intercept" the data as it is flowing to warehouses. There are often technical limitations to this approach depending on the tools that create the data – sometimes information can be scattered across thousands of ETL pipelines, making it difficult for some metrics to be applied at the source and challenging to access the data itself. Organisations using this approach are also often divorced from thinking about how business users will use and apply the data. Despite the complexities of this approach, the payoff can be significant and so is usually pursued by organisations with an already mature data quality capability.

In data warehouses

In data warehouses, data quality is measured once it moves downstream and is consolidated for various business users into data sets. Measuring the quality of these data sets is a quicker approach as it considers the data's purpose and its requirements to fulfil that purpose. It's also easier because you're working in one system rather than disparate siloed source systems, giving you more confidence in the end quality of the data. Organisations with pressing data quality issues are best to start with this approach.



4 tips for improving data quality

Now that you understand how and where to measure data quality, here are four principles that can help you ensure the long-term quality of data in your organisation.

1. Reconciliation

You don't want your data sets to get out of whack when new entries are added, especially if you've spent months improving the accuracy and completeness of your information. That's where reconciliation comes in.

Reconciliation ensures that data meets your quality controls and matches any existing information you have before its put to use. This is particularly important if your organisation has purchased third-party sources and you need to migrate that data into your business systems.



4 tips for improving data quality

2. Mobilisation

When data is moving between systems and teams, it's important that its accuracy remains intact, business rules are consistently applied and upheld, and the data is performing its intended function. By monitoring for accuracy and completeness at each step, you can prevent data from getting lost or corrupted as it circulates your organisation.

3. Relevance

As data is never stagnant, relying on out-of-date data can be detrimental to your business. That's why it's imperative to have systems in place to capture reliable, updated data in a timely fashion. Automated data systems can be of immense benefit here as they can conduct data quality checks and ensure controls and requirements are being met for your business.

4 tips for improving data quality

4. Call in the experts

Improving organisation-wide data quality is a Herculean task involving lots of planning despite many businesses needing a quick fix. Improving overall data quality and maturity can take a few years without outside help. But experienced data experts can provide a much-needed boost to data quality through rapid, tactical solutions that feed into a larger long-term strategy.



Optivia in action: helping a company improve the accuracy and consistency of their data

The client: One of Australia's largest energy retailers

The project: Accuracy and consistency of the [price-setting program](#)

The challenge: This large energy retailer needed to improve the accuracy and consistency of their data. Their immediate challenge was to collect and transform large volumes of customer consumption data collected from smart meters and turn this into interpretable, usable information.

The solution: Optivia was able to pull data sets from multiple different platforms, identify gaps and data quality issues and then put all the information into an integrated, trustworthy and usable data source that could feed into the energy retailer's pricing platform. Where there was incomplete or missing data, the Optivia team empowered this organisation to have greater analytical capabilities and create models to predict customer consumption.

While improving your company's data quality with these metrics can provide immediate benefit, it's worth noting that it's not a set-and-forget panacea. Data is never static so conditioning and improving it is an ongoing process. In the next chapter, we explore how and why. →

How to maintain data quality in your organisation

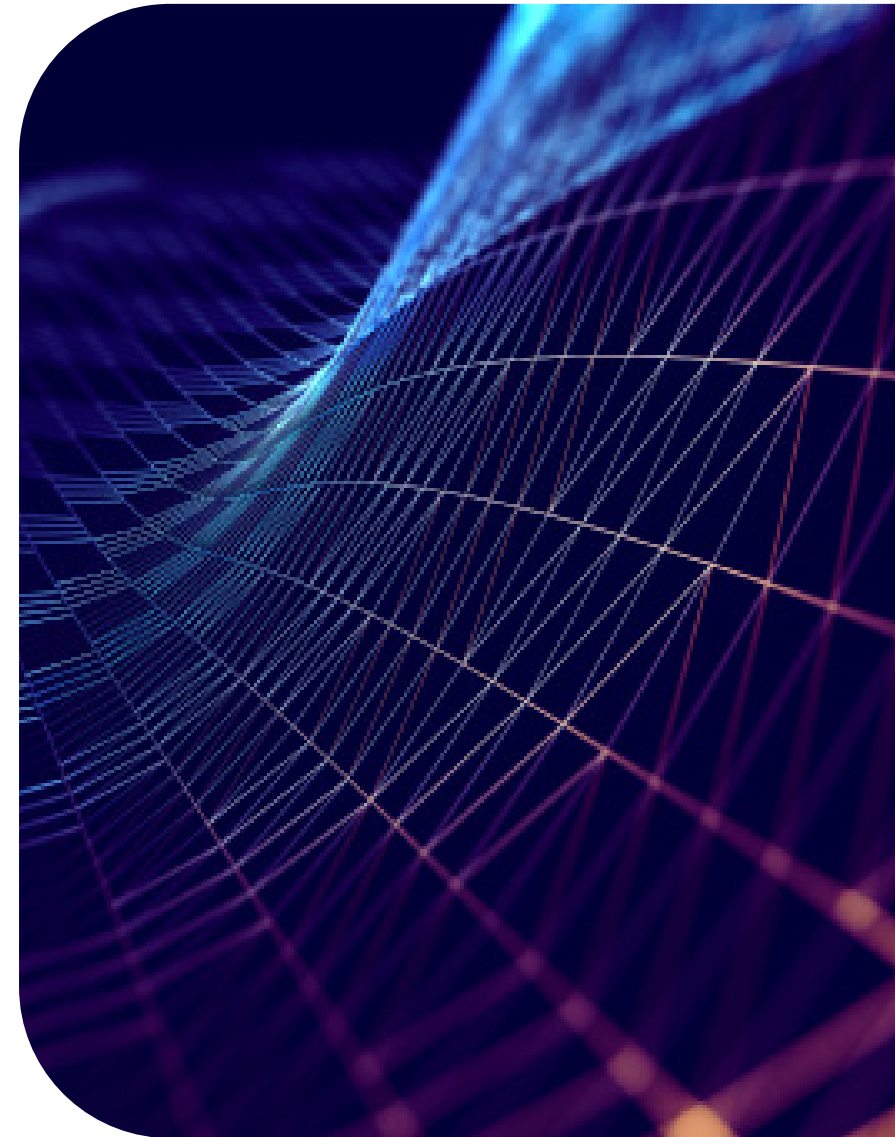
Critical to improving your data quality is building a whole-organisation approach to maintaining data quality. To become a more data mature company, you need to build a data culture rather than just respond to the deterioration of business intelligence as it happens. This [helps solve data issues proactively](#) rather than reacting to an incorrect business decision, non-compliance fine or a barrage of customer complaints.



Balance strategic with tactical priorities

It's important to balance the need to resolve urgent issues in your data with your goals of embedding data quality practices into the DNA of your organisation.

Start with simple data quality metrics to measure your current state and from there, you can progressively build your capability to remediate data more quickly. Laying out a roadmap to actively support data quality across every department, team, and process in your business can have a tremendous impact.

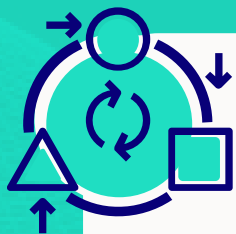


5 smart tips to maintain data quality



Tip #1: Set goals and define specific business requirements

As with most initiatives, setting goals is the precursor to everything else you do within a business. You might want more trusted sales records, timely financial or accounting reporting, or a deeper understanding of your customers. By knowing what you want to achieve, you can prioritise which data quality issues are the most pressing for your organisation to address. These business requirements will provide a continual reference point for your company and help inform any refinements to the data quality improvement process in the future.



Tip #2: Understand where your data is coming from and how it is moving about

Your business needs correct data as much as it needs relevant data. This requires a level of understanding of where information is coming from, what it is telling you and how it can be applied to generate valuable insights. It's all about connecting the dots throughout the data lifecycle to improve its overall quality.



Tip #3: Promote a data culture through education

It's important for organisations to promote the values, behaviours and norms that empower all users to be more data-driven. It's equally important that everyone knows their part in improving organisational data quality by investing in education and training to make all business users more data literate. This can further steer a data culture and ensure buy-in and organisation-wide commitment towards data quality improvement.



Tip #4: Leverage automation

The right tech can also help improve data quality and eliminate potential human error. There are many automation software providers offering teams their time back by taking the manual and error-prone tasks out of the equation. Automation can define data quality metrics, test your data quality and remedy data quality issues. This is useful when a customer changes address or has updated their personal details. Automation can detect data discrepancies to reinforce data validity through intuitive data matching software – all the while accelerating your path to reliable insights.



Tip #5: Implement a data governance program to prevent errors from reoccurring

Your data quality issues can be teachable lessons and it's important to know their root causes. It helps to have a holistic data governance program to uplift the quality of your data across your organisation. This will inform the standardisation and comprehensive management of data assets to boost the maturity of your information network and prevent new data quality issues from emerging down the track. In the next chapter, we explore the core elements of such a program that supports data quality. →

How data governance supports data quality in your organisation

What is data governance?

Data governance is a framework to manage the processes, policies and standards that ensure your business information is used accurately and effectively throughout your organisation. This includes solid, well-communicated procedures to improve and maintain data quality, which benefits all of your data initiatives. In fact, a study by Precisely and LeBow Center of Business Analytics found that 83% of organisations with mature data governance programs gain value from improved data quality. However, even early data governance programs can be of immense benefit to your data quality.



Why does it matter?

Data governance solves a range of common business challenges and delivers an equally extensive range of **beneficial outcomes to help improve data quality** and add value to your organisations. It can help:

- Avoid data inconsistencies across different systems and business units
- Remediate discrepancies among data definitions
- Increase the accuracy and reliability of analytics by identifying and fixing errors across data sets
- Prevent data errors in the future and ensure the appropriate use of data
- Improve compliance with data privacy regulations



Getting started with data governance to improve data quality

Although data governance typically evolves into an enterprise-wide function, organisations can start small to drive data quality improvements. It helps to focus on a critical business area where good data quality is essential, for example, a common starting point is financial reporting. Here are some simple steps for piloting data governance to support improved data quality:

1 Establish roles and responsibilities

The first crucial step of a data governance program is to establish the roles and responsibilities of the users that will be interacting with your data. That is, who creates it, approves it, uses it and for what purpose, and who processes it? By having these roles clearly defined, you create a framework for your team to easily collaborate and engage with more accurate, secure data.

2 Define data domain owners

A lack of data ownership is one of the biggest inhibitors of data governance initiatives and can create a disjointed, unstable data environment. Assigning domain owners to your data allows you to create a hierarchy of data stewards within your organisation. This process also helps you determine all stakeholders and users who will need to engage with the data and be a part of your data governance model. From there, you will have a better grasp of your data and how it's managed which can steer the way you prioritise your data requirements for a particular use case.



3 Identify required controls

Establishing controls and processes to fine-tune the quality of your data is the crux of a well-executed data governance program. This is done by identifying important controls and metrics to regulate the processes around your data and defining a way to resolve data-related issues as they arise (and to prevent them from reoccurring).

With the momentum created by these steps to implement a data governance program, you can extend your policies and standards more widely in your organisation for even greater effect. It starts with clearly defined roles and responsibilities integrated into policies and processes that fit your specific business needs.

Of course, there's no cookie-cutter approach to an effective data governance program. That's why it pays dividends to have the right people on the ground to ensure the continual success of a data governance program to improve your data posture and amplify the impact of your business decisions.

The Optivia difference

Your data is unique to your organisation as are your data quality challenges, depending on the type of services and products you offer and the wider industry you represent.

Optivia's approach to helping you **improve your data quality** is just as unique. With a tailored, industry-specific and business-focused methodology, we gain a detailed understanding of what your organisation needs through collaboration with your team. Our data experts know the important questions to ask about your business context and how it encompasses data quality so that we can help you achieve your goals and help you build an organisation-wide data strategy. We offer an unbiased, third-party perspective that will help you choose the right technology, processes and framework to spot and fix issues before they become catastrophes and prevent them from happening again in the future.



High-quality data means high-value decision making

Adopting a data culture and improving decision-making cannot happen without high-quality data. By applying data quality metrics to assess current standards, actioning ways to improve data quality with an effective data governance program, and focusing on subjects with the biggest impact, you can gain powerful insights from your business intelligence. This will bolster your broader strategy to continually improve data quality and help forge a path toward higher-value business decisions.

Improving data quality may seem like an exhaustive and daunting process. But it doesn't have to be. Optivia's sophisticated approach to measuring data quality can accelerate the improvement process, giving you quick wins to improve your performance. [Contact us today](#) to learn more about how to improve data quality and level up your decision-making capabilities.

