The importance of communicating data quality

It is vital that organisations use data effectively. To do this, people using the data must understand how it can and cannot be used. Communicating the quality of data to your users is an essential step in helping them to decide whether it is fit for their intended purpose. This will allow them to come to more accurate conclusions and therefore make better business decisions. Communicating data quality should be an ongoing commitment – not just something that is done at the end of your data's journey.

In this article we share why communicating data quality is important and what you need to communicate to your users.

Why you need to communicate data quality to your users

Data may be used by several different users, and each for different purposes. It is therefore necessary to take a 'case by case' approach to assess when it is appropriate to use it and for what purpose. Communicating your data quality allows you to demonstrate the strengths and limitations of your data so that each user can decide if it meets their needs.

Communicating the quality of data to users gives them a fuller picture of your data and its journey. It also mitigates against people using the data for the wrong purposes. This will minimise the risk of any associated costs this may have, such as financial or reputational damage. Providing information on data quality up front will give users confidence in the data and their use of it. Regularly communicating your data quality will also promote and maintain the confidence in, and integrity of, your organisation.

Do not shy away from poor quality data

Before you can communicate the quality of your data, you must first understand it yourself. Unknown data quality can pose a bigger risk to data users than known, poor quality data. Therefore, even if your data quality is poor, it's important to let your users know as this will prevent the data from being misused. You may find that the data is still suitable for their needs, but without communicating the quality to them, they won't be able to reach that decision.

What your users need to know

What you communicate to your users will depend on their individual needs. It will also depend on whether you have any agreements in place with your users. Conveying the original purpose of your data and how it was collected will help your users to make an informed decision as to whether the data is suitable for their work or not. Generally, users will also need to see your

assessment of quality against data quality dimensions, as well as changes to the data and caveats.

Data quality dimensions

The data quality dimensions can help you communicate the quality of your data. It's important to do this in a way that's meaningful to your users as this will allow them to compare the data against their requirements. Knowing your users and their needs allows you to communicate any data quality concerns that may be critical to them. This includes communicating the characteristics of the data to help them to determine any trade-offs. For example, if timeliness is your users' most critical dimension, then the data may have been collected quickly to meet this. However, this could be at the expense of the completeness of the data. By communicating these characteristics of the data to your user, they can make an informed decision about the trade-off and determine whether the data is suitable for their purposes.

Remember to also tell your users about any uncertainty you have over the assessment of quality against the dimensions. This will help to reduce the risk of the data being misused and prevent poor decisions being made.

Changes to your data

Users need to know about any changes that have been made to your data. You should always provide the context behind these changes. For example, if figures in your data are altered as a result of a change to processing, then it's crucial that users know this. This will prevent them from making assumptions and misusing the data. Any change made to data processes that could impact on quality should be communicated before the change happens. Changes shouldn't come as a surprise to your users, so frequent communication is important.

Even if the figures in your data seem unaffected by a change in processing, it's still important to communicate the change to your users. For example, your data may have previously been collected by an interviewer but is now collected by an online survey. Users should be told about this change so that they are able to make their own decisions as to whether it still meets their needs.

Caveats

You will need to communicate any caveats in your data. For example, letting users know that your data only includes those employed full-time in England, Scotland and Wales, rather than the whole of the UK. Without this caveat they may make incorrect assumptions about the data and come to inaccurate conclusions.

When and how to communicate data quality

Quality assessment and assurance should happen throughout the data lifecycle. You should document and communicate the data quality at each of these stages.

Each stage introduces different potential data quality problems that need to be communicated to your users.

Communicating your data quality regularly keeps your users up to date with any potential changes. Whenever there is a change to your data, this should be communicated to your users. This allows them to reassess whether the data is still suitable. Remember to communicate your data quality alongside any data products that are delivered to your customer, such as data sets or reports.

It's also important to think about how you communicate with your users. For example, non-technical users might prefer dataset guides or dashboards, whereas technical users may want to understand the metrics behind the quality. Knowing your users will help you to decide what channels of communication will be most effective.

Want to know more?

Communicating data quality is an important part of assessing and improving the quality of data. Our upcoming course 'Data Quality Action Plans' looks at communication as part of effective data quality assessments. This course will help you to demonstrate whether your data is fit for purpose, understand where to put resource to improve its quality and set out goals to consistently improve your data. The Government Data Quality Framework provides more detail about data quality.

The Government Data Quality Hub (DQHub) is developing tools, guidance, and training to help you with your data quality initiatives. You can find the Government Data Quality Framework, tools and case studies on the DQHub site.

We also offer tailored advice and support across government. Please contact us by emailing DQHub@ons.gov.uk.