

Statement on statistical quality strategy principles and processes

Office of Rail Regulation

Definition:

Statistical quality in ORR is defined as meeting users' needs with particular reference to the relevance, accuracy, timeliness, accessibility, comparability and coherence of the statistics collected, analysed and reported. These measure of quality are consistent with the "Guidelines for measuring statistical quality" published by the Office for National Statistics (<http://www.ons.gov.uk/ons/guide-method/method-quality/quality/guidelines-for-measuring-statistical-quality/index.html>)

Rationale:

The majority of the underlying data used to create National Rail Trend statistics is sourced from external suppliers, including companies such as Network Rail. Whilst these companies can and do publish data themselves ORR, as the independent economic and safety regulator for rail, must use these data to produce high quality, robust, and trusted statistics using transparent scientific methodologies. The publication of official statistics that adhere to quality guidelines and best practice on pre-release help hold regulated companies to account and increase public confidence in the statistics.

Key components of statistical quality in ORR:

Relevance

Relevance is defined as the degree to which the statistical product meets user needs for both coverage and content. Assessments of relevance needs to consider who are the users of the statistics, what are their needs, and how well does the output meet these needs.

Users of ORR statistics should expect that they will be appropriately consulted about quality principles and approaches to quality management

Accuracy

For survey data the definition of accuracy is the closeness between an estimated result and the unknown true value. Accuracy can be split into sampling error, which are based on the size of the sample and the sampling methodology, and non-sampling error (which includes errors due to coverage, non-response, measurement inaccuracies, processing errors)

Most published ORR statistics are based on administrative data supplied by Network Rail or the train operating companies. For this type of data the definition of accuracy relates to how well the information is recorded and transmitted and includes:

- Completeness of the data;
- Timeliness of recording and transmission;
- Accuracy of recording of data items;
- Correct use of coding; and
- Correct interpretation of the data items.

In addition consideration should be given to whether or not the data contains material that is appropriate for the statistical inquiry being undertaken.

- All ORR Statistical publications will contain a description of data quality issues relating to the release; and any impact that has on analysis of changes over time; or comparisons between different groups will be transparent to a lay and expert audience
- All Statistical publications will be fully compliant with the ORR Statement on Revisions
- Survey data will be presented with full information on sampling, variability; confidence intervals; response rates and other relevant criteria to allow users to make informed judgements on quality
- Administrative data will be published with details of how it is collected to allow users to understand its strengths and limitations

Timeliness and Punctuality

Timeliness refers to the lapse of time between publication and the period to which the data refer. Punctuality refers to the time lag between the actual and planned dates of publication. An assessment of timeliness and punctuality should consider the following:

- production time for the statistical release;
- frequency of release; and
- punctuality of release

All our statistical publications will comply with the Code of Practice on pre-announcement dates of publications. We will publish Statistical releases as soon as possible after the relevant time-period. Statistical publications will be produced in line with our Statement on User Engagement

Accessibility

This is the ease with which users are able to access the data. It also relates to the format in which the data are available and the availability of supporting information. Clarity refers to the quality and sufficiency of the metadata,

illustrations and accompanying advice. Specific areas where accessibility and clarity may be addressed include:

- needs of expert and non expert users;
- consistency of standard in relation to revisions, rounding, data suppression (often required to maintain confidentiality) and spreadsheet type;
- help to locate information;
- clarity; and
- dissemination

All publications will use plain English wherever possible and minimise the use of industry-specific jargon.

Comparability

Comparability is the degree to which data can be compared over time and sphere. Comparability should be addressed in terms of comparability over:

- time;
- spatial areas e.g. sub-national, national, international; and
- sub-populations of the data e.g. gender, mode of transport

We will use harmonised concepts and definitions in statistical publications wherever they are available and appropriate. Any statistical publication which does not use harmonised definitions will clearly explain why the harmonised definition has not been used and any plans to move it onto a harmonised basis where possible.

Coherence

Coherence is defined as the degree to which data derived from different sources or methods but which refer to the same phenomenon are similar. Coherence should be addressed in terms of:

- data produced at different frequencies;
- other statistics in the same area;
- sources and outputs;
- coverage of different surveys and databases; and
- definitions and coding used for different databases

Where related measures are published across several publications we will make it clear to users where the related information can be found.

Confidentiality

As standard practice we will ensure that all information is kept secure and ensure that information released does not reveal the identity of an individual

or organisation or any private information relating to them taking into account information that might be available from other sources.

Continuous improvement

We recognise that quality involves a continuing process of improvement in all of these dimensions of quality. We assess our official statistics against these, and other, dimensions in order to maximise quality for our stakeholders. As part of this continual improvement we examined quality considerations around NRT statistics using the “Quality, Methods and Harmonisation Tool” developed for the GSS to identify any areas for improvement. Any flagged issues were fed into our Quality Improvement Plans for the forthcoming year.

If you have any queries on statistical quality issues in ORR, please contact:

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