

1.3 Red, Amber, Green (RAG)

Red, Amber, Green is probably the most common form of data quackery, spreading like weeds through many organisations. Assigning RAG status produces great looking reports...

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Sales	Green	Amber	Amber	Green	Green	Green	Green	Green	Green	Amber	Green	Green
Profit	Green	Green	Amber	Amber	Green	Green	Green	Green	Green	Green	Green	Green
Productivity	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green
Working Capital	Amber	Green	Green	Green	Green	Amber	Amber	Green	Amber	Amber	Green	Green
Service Level	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green
Quality	Red	Red	Red	Amber	Amber	Red	Red	Red	Amber	Red	Red	Red
Absence	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green
New Customers	Red	Red	Red	Red	Red	Red	Red	Red	Red	Red	Red	Red
Complaints	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green

But there are many problems with this. Firstly, you are (once again) comparing single numbers rather than a progression of data. Secondly, you are comparing the metrics against a specification, the RAG categories. And who devised the boundaries between the different colours? Are they based on sound analysis or arbitrary targets that bear no relation to the actual process? How can it be possible to have every metric showing as Green in the RAG status, but everyone knows that the current performance is terrible? Finally, RAG dumbs down the analysis, as it is just another example of “is one number bigger than another number?”. And the specifications can be changed by whim; e.g. in response to unfavourable customer comments, making metrics that were green change to red.

These reports drive the wrong behaviour; everyone ignores everything in Green, but focusses on everything in Red. But a Red metric may be perfectly stable and a Green metric may show a trend that requires immediate intervention. Think of “Red Rag to a Bull” every time you see a RAG status report - they should make you very angry.

1.4 Ratios

All organisations are awash with data ratios. Many of these are produced by the finance department, some for external stakeholders and some for internal performance tracking. The money markets are interested in growth ratios, price ratios, profitability ratios and several others, whereas internal ratios include revenue per employee, return on investment (ROI), inventory turnover ratio etc. But all ratios can be data quackery because they hide information. The act of dividing one number by another number decreases what you know about each number separately. Here is an example to explain the problem.

A bank investigated the number of errors made in opening new accounts as a ratio of the number of batches coming from various regions. This produced the following graph...