
Statistical Communication Training Course for Leaders: Uncertainty, Charts and Plain Reporting

24 – 28 May 2027
Rome





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Programme Summary

Statistical communication, covering uncertainty, chart design and plain-language reporting, is the focus of this five-day training course for senior managers and officials who receive and repeat figures prepared by analysts, ending in a briefing pack for one decision. Statistics often reach decision makers stripped of their caveats, and using them well depends on knowing how firm each figure is. The programme moves from principles, through diagnosis of a figure's quality, to design of charts and wording, then to application on one live briefing. Mars Training Centre UK delivers this programme in statistical communication for non-statisticians.

The Business Case

When figures are passed upward without their limits, boards approve plans on estimates presented as certainties and press statements overstate small changes. Leaders who can ask how a number was produced, state its uncertainty in ordinary words and choose a chart that does not mislead can make firmer decisions and explain them to colleagues and the public.

- Decision Quality: Improves as each figure is tested for data quality and margin of error first.
- Reputational Risk: Falls as published statements describe change and risk in terms that readers cannot misread.
- Briefing Time: Shortens as analysts and leaders agree one plain-language format for results.

Principles and Evidence Base

- Margin of error and confidence interval: They frame how uncertainty is read and worded in Session 1.
- Absolute and relative change: They guide the framing of risk and trend statements tested in Session 2.
- Data quality assessment: It structures the review of sources, definitions and limitations applied in Session 3.
- Chart design principles: They shape the graphics and plain-language summaries built in Session 4.

Intended Participants

- Senior managers who receive statistical results and must decide what they support.
- Officials who brief ministers, boards or committees on indicators and forecasts.
- Communication and policy leads who turn analysts' findings into public statements.
- Heads of function who present performance figures to executives and external audiences.



The programme serves public administration, health, finance and education bodies, and suits mixed groups of analysts and decision makers.

Learning Outcomes

1. Participants will be able to interpret a margin of error and confidence interval in a published statistic.
2. Participants will be able to distinguish absolute from relative change and choose the fairer framing for a risk.
3. Participants will be able to evaluate the data quality and limitations of a figure before repeating it.
4. Participants will be able to construct charts that show a result without exaggerating or hiding it.
5. Participants will be able to draft a plain-language summary that states a finding, its uncertainty and its limits.
6. Participants will be able to justify the wording of a statistical message to a sceptical audience.

Programme Structure

Day 1: Statistical Communication Principles and Uncertainty

What does a statistic claim, and how sure can anyone be of it?

- Estimates, Samples and Populations in Plain Terms
- Margin of Error Reading Guide
- Confidence Interval Interpretation Cards
- Statistical Significance Versus Practical Importance
- Uncertainty Phrase Bank

Day 2: Diagnosing Change, Risk and Misreading

Where do readers most often misunderstand a number?

- Absolute and Relative Change Comparison
- Natural Frequency Framing of Risk
- Percentage and Percentage Point Distinction
- Common Headline Distortions Review
- Misreading Audit of a Published Statistic

Day 3: Assessing Data Quality and Limitations

Is this figure good enough for the decision it supports?

- Source and Definition Checklist
- Sampling and Response Limitations
- Revisions and Provisional Figures
- Quality Statement Template
- Questions to Put to the Analyst



Day 4: Designing Charts and Plain-Language Reports

How is a result shown so that it informs and does not mislead?

- Chart Choice Selection Matrix
- Axis, Scale and Baseline Rules
- Showing Uncertainty on a Chart
- Plain-Language Summary Structure
- One-Page Briefing Layout

Day 5: Applying Statistical Communication to One Briefing

Is the briefing ready to be presented and repeated safely?

- Applying the Session 2 Misreading Audit to the Chosen Statistic
- Testing the Session 3 Quality Statement Against the Source
- Rebuilding the Session 4 Chart and Summary After Peer Feedback
- Rehearsing Questions from a Sceptical Audience
- Completing the Statistical Briefing Pack

Methodology

The programme uses a data workshop built on anonymised published statistics, press releases, survey summaries and charts. Participants work in small teams as decision maker, analyst and spokesperson, and carry one statistic from first reading to a finished briefing, challenging each claim.

- Suggested activity: Rewriting a headline so that its uncertainty and size of change are stated fairly.
- Suggested activity: Redrawing a misleading chart and explaining each change to the original author.
- Suggested activity: Answering sceptical questions on a figure in a short mock briefing.

Capstone Output

Each participant completes a statistical briefing pack for one real or case-based decision. It holds a quality statement for the source figure, a fair statement of uncertainty, a corrected chart and a one-page plain-language summary with prepared answers. The pack is used to brief a board or committee, support a public statement and give analysts a template.

Frequently Asked Questions

Is statistical communication suitable for leaders without a statistics background?

Yes. Statistical communication is taught in plain language for managers and officials who receive numbers, assuming no formal statistics training.



Which principles does statistical communication rest on in this training?

Statistical communication rests on margin of error and confidence interval reading, absolute and relative change, data quality assessment and sound chart design.

How is the briefing pack from statistical communication used at work?

You use the briefing pack to brief a board, support a public statement and give analysts a template for presenting results and their uncertainty.

How does statistical communication differ from a data analysis programme?

Statistical communication centres on explaining and presenting results to decision makers, while a data analysis programme centres on producing the results with software and methods.