Cabinet Office

Civil Service
People Survey 2019

Technical Guide

January 2020

Contents

Civil Service People Survey 2019: Technical Summary

Coverage

In 2019, 106 Civil Service organisations took part in the survey. Pages 4 to 7 provide more details on coverage.

A total of 462,963 people were invited to take part in the 2019 survey and 308,556 participated, a response rate of 67% (6,386 people higher than last year, and a increase of 0.2 percentage points in the response rate). Half of participating organisations achieved a response rate of 80% or greater (up 2pp from 78% last year).

The census approach used by the survey (where all staff are invited to participate) allows us to produce around 12,000 reports for managers and teams so that action can be taken at all of the most appropriate levels across the Civil Service.

Note, these figures do not reconcile with Official Statistics about the size of the Civil Service due to different decisions about who is invited to participate in the People Survey and who is counted in Official Statistics.

Coordination & delivery of the survey

The survey is coordinated by the Civil Service People Survey Team in the Cabinet Office. The team commissions a central contract on behalf of the Civil Service and acts as the central liaison between the independent survey supplier and participating organisations. The 2019 survey was delivered by Engine Transformation (formerly known as ORC International).

Questionnaire

Most of the questionnaire used in the Civil Service People Survey is standardised across all participating organisations. Pages 8 to 12 provide more details on the questionnaire.

Data collection methodology

The questionnaire is a self-completion process, with 98% completing online and 2% on paper. Completion of all questions in the survey are voluntary. Fieldwork for the 2019 survey opened on 2nd October 2019 and was closed on 4th November 2019.

Analysis

The framework underpinning the analysis of the Civil Service People Survey is based on understanding the levels of employee engagement within the Civil Service and the experiences of work which influence engagement. Pages 13 to 17 provide more details on the engagement index, while pages 18 to 28 provide more details on other analytical methods used in the People Survey.

Publication

Results from the 2019 People Survey will be published on GOV.UK during 2020:

https://www.gov.uk/government/collections/civil-service-people-survey-hub

Participating organisations

Participating organisations

The Civil Service People Survey can be considered both as a single survey and as a large number of separate surveys.

The People Survey can be considered a single survey because:

- It is commissioned by the Cabinet Office, on behalf of the UK Civil Service, as a single contract with a single supplier.
- The majority of questions respondents are asked are the same, irrespective of the Civil Service organisation they work for.
- The data is collected and collated and analysed as a single activity.
- The survey takes place at the same time across all organisations.

However, the People Survey can also be considered a collection of separate surveys because:

- The core questionnaire includes 'variable terms' meaning that questions use relevant local terminology. Rather than "*Senior managers in my organisation are sufficiently visible*", respondents in the Cabinet Office are asked *"Senior Civil Servants in the Cabinet Office are sufficiently visible"* while respondents in the Crown Commercial Service are asked "*Senior managers in the Crown Commercial Service are sufficiently visible*".
- In addition to local terms, each organisation can also have it's own logo/branding incorporated into their online survey instrument.
- Organisations are able to select up to four sets of additional questions that focus on topics of particular interest/relevance to that organisation.
- Organisations define their own reporting hierarchy and structure.

For the purposes of the People Survey an "Organisation" is typically a government department or executive agency, and it is usually the case that an executive agency participates separately from its parent department.

However, in some cases it may be more practical or effective for a department and its agencies to participate together as a single organisation. Alternatively, it may be that particular sub-entities of a department participate as a standalone organisation, even though they may not be a legally or fully organisationally separate entity from their parent department.

The following pages list all 106 "participating organisations" that took part in the survey, grouped by departmental/organisational family. Where a family has a single entry, that represents when that family has a single survey. Where a family has a number of bodies listed beneath it, then each of those bodies has completed a separate survey.

Organisations participating in the 2019 Civil Service People Survey:

Attorney General's Departments
Attorney General's Office
Crown Prosecution Service
HM Crown Prosecution Service Inspectorate
Serious Fraud Office

Business, Energy & Industrial Strategy
Department for Business, Energy & Industrial
    Strategy
Acas
Companies House
Competition and Markets Authority
HM Land Registry
Intellectual Property Office
Met Office
The Insolvency Service
UK Space Agency

Cabinet Office
Cabinet Office[1]
Crown Commercial Service
Government Equalities Office
Government Property Agency

Charity Commission

Defence
Ministry of Defence
Defence Electronics and Components Agency
Defence Equipment & Support
Defence Science and Technology Laboratory
Submarine Delivery Agency
UK Hydrographic Office

Digital, Culture, Media & Sport
Department for Digital, Culture, Media & Sport
The National Archives

Department for Education[2]

Department for Exiting the European Union

Environment, Food & Rural Affairs
Department for Environment, Food & Rural
    Affairs
Animal and Plant Health Agency
Centre for Environment, Fisheries and Aquaculture
    Science
Rural Payments Agency
Veterinary Medicines Directorate

Estyn

Food Standards Agency

Foreign & Commonwealth Office
Foreign & Commonwealth Office
FCO Services
Wilton Park

Government Actuary's Department

Government Equalities Office

Government Legal Department

Health and Social Care
Department of Health and Social Care
Medicines and Healthcare products Regulatory
    Agency
Public Health England

HM Inspectorate of Constabulary and Fire & Rescue Services

HM Revenue & Customs
HM Revenue & Customs
Valuation Office Agency

HM Treasury and Chancellor's departments
HM Treasury
Government Internal Audit Agency
National Infrastructure Commission
UK Debt Management Office

Home Office[3]
Home Office: Policy and Enablers
Border Force
Immigration Enforcement
UK Visas and Immigration
HM Passport Office

Housing, Communities and Local Government
Ministry of Housing, Communities and Local
    Government
Planning Inspectorate

Department for International Development

Department for International Trade

Justice
Ministry of Justice
Criminal Injuries Compensation Authority
HM Courts and Tribunals Service
HM Prison Service
HM Prison and Probation Service HQ
Legal Aid Agency
MoJ Arms Length and Other Bodies
National Probation Service
Office of the Public Guardian

Organisations participating in the 2019 Civil Service People Survey (continued):

National Crime Agency

National Savings and Investments

Office of Rail and Road

Ofgem

Ofqual

Ofsted

Scottish Government
Scottish Government
Accountant in Bankruptcy
Crown Office and Procurator Fiscal Service
Disclosure Scotland
Education Scotland
Food Standards Scotland
Forestry and Land Scotland
National Records of Scotland
Office of the Scottish Charity Regulator
Registers of Scotland
Revenue Scotland
Scottish Courts and Tribunal Service
Scottish Forestry
Scottish Housing Regulator
Scottish Prison Service
Scottish Public Pensions Agency
Social Security Scotland
Student Awards Agency for Scotland
Transport Scotland

Territorial Offices[4]
Scotland Office, Office of the Advocate General, Wales Office and Northern Ireland Office

Transport
Department for Transport
Driver and Vehicle Licensing Agency
Driver and Vehicle Standards Agency
Maritime and Coastguard Agency
Vehicle Certification Agency

UK Export Finance

UK Statistics Authority
UK Statistics Authority
Office for National Statistics

Water Services Regulation Authority (Ofwat)

Welsh Revenue Agency

Work and Pensions
Department for Work and Pensions
Health and Safety Executive

Notes

1. Before 2019, Civil Service HR conducted a separate survey from the Cabinet Office overall

2. The Department for Education and its agencies (the Education and Skills Funding Agency, the Standards and Testing Agency, and the Teaching Regulation Agency) conduct a single survey across all four organisations.

3. The Home Office's operational directorates conduct separate surveys. This is as a result of their legacy as former Executive Agencies of the Home Office. "Home Office: Policy and Enablers" is equivalent to the headquarters/policy centre organisation of government departments with separate executive agencies.

4. The Scotland Office and the Office of the Advocate General, the Wales Office and the Northern Ireland Office conduct a single survey covering all three organisations.

Questionnaire and question development

Questionnaire structure

The Civil Service People Survey is comprised of three sections:

- Core attitudinal questions
- Local optional attitudinal questions
- Demographic questions

The core attitudinal questions

The core attitudinal questions cover perceptions and experiences of working for a civil service organisation; future intentions to stay or leave; awareness of the Civil Service Code, Civil Service Vision and the Civil Service Leadership Statement; experiences of discrimination, bullying and harassment; and ratings of individual subjective wellbeing. The core attitudinal questions also include an opportunity to provide free-text comments.

The core attitudinal questions includes the five questions that are used to calculate the survey's headline measure, the "Employee Engagement Index". A large number of the core attitudinal questions have been grouped into nine themes using factor analysis (a statistical technique to explore the relationship between questions), that are associated with influencing levels of employee engagement – taking action on these themes will lead to increases in employee engagement. You can read more about employee engagement and the Civil Service People Survey on pages 13 to 17.

The majority of the core additional questions are asked on a 5-point scale of strongly agree to strongly disagree.

Local optional attitudinal questions

The core attitudinal questions are a set of common questions that provide an overview of working for an organisation, and are generally applicable to any working environment.

However, there may be topics that particular organisations want to explore in more detail, therefore each participating organisation can select up to four short blocks of additional attitudinal questions that have been standardised.

Demographic questions

The core demographic questions collect information from respondents about their job and personal characteristics such as their working location and age. These questions are used to filter and compare results within organisations by different demographic characteristics so that results can be better understood and action targeted appropriately. The vast majority of demographic questions are standardised across the survey to enable analysis not only at organisation-level but also across the Civil Service.

Questionnaire development and changes over time

Prior to 2009, government departments and agencies conducted their own employee attitudes surveys, using different question sets, taking place at different times of the year, and at different frequencies. In addition to the economies of scale afforded by coordinating employee survey activity, a single survey allows for a coherent methodology to be applied that facilitates effective analysis and comparison.

2007 – 2008: Pathfinder studies and harmonisation

Pathfinder studies were conducted with Civil Service organisations over 2007 and 2008, to inform the development of a core questionnaire for a pilot of the 'single survey' approach. The questionnaire used in the pilot was a pragmatic harmonisation of previous questionnaires used in staff surveys by Civil Service organisations, while ensuring it covered key areas identified by previous studies of employee engagement.

Employee engagement is a workplace approach designed to ensure that employees are committed to their organisation's goals and values, motivated to contribute to organisational success, and are able at the same time to enhance their own sense of well-being. There is no single definition of employee engagement or standard set of questions; for the Civil Service it was decided to use five questions measuring pride, advocacy, attachment, inspiration, and motivation.

The development of the Civil Service People Survey questionnaire was done in consultation with survey managers and analysts across all participating organisations. This development process consisted of a substantial review of the questionnaire (including cognitive testing) to ensure it used plain English and

that the questions were easily understood by respondents. The 'single survey' approach meant that organisations could retain trend data, by using questions they had previously measured, while ensuring that the questionnaire was fit for purpose in measuring employee engagement in the Civil Service and the experiences of work that can affect it.

2009: The first People Survey and factor analysis

Following a successful pilot of the 'single survey' approach in early 2009, the first full Civil Service People Survey was conducted in autumn 2009. The results of the pilot and the first full survey were used in factor analysis to identify and group the core attitudinal questions into 10 themes (the employee engagement index and nine 'drivers of engagement').

Factor analysis identifies the statistical relationships between different questions, and illustrates how these questions are manifestations of different experiences of work. For example, the question "I have the skills I need to do my job effectively" might, at first glance, seem to be a question about learning and development but factor analysis of the CSPS dataset found that this was more closely related to other questions about 'resources and workload'. The themes have shown relatively strong consistency in structure across organisations and across time.

2011: Taking action

In 2011, the first change to the core questionnaire was undertaken to add an further question to measure whether staff thought effective action had taken place since the last survey.

2012: Organisational culture and subjective wellbeing

Five questions on organisational culture were added to the core questionnaire in 2012. They were included to help measure the desired cultural outcomes of the Civil Service Reform Plan.

Four new questions on subjective wellbeing, as used by the Office for National Statistics as part of their Measuring National Wellbeing Programme, were also added to the core questionnaire in 2012:

- Overall, how satisfied are you with your life nowadays?
- Overall, to what extent do you think the things you do in your life are worthwhile?
- Overall, how happy did you feel yesterday?
- Overall, how anxious did you feel yesterday?

These were piloted with five organisations in the 2011 survey prior to their inclusion. The wellbeing questions are measured on an 11-point scale of 0 to 10, where 0 means not at all and 10 means completely.

2015: Civil Service Leadership statement and organisational culture

In 2015, eight questions related to the Civil Service Leadership Statement were added to measure perceptions of the behavioural expectations and values to be demonstrated by all Civil Service leaders. This section was reduced to two questions in 2016 as analysis of the 2015 results showed us that six questions were highly correlated with the 'leadership and managing change' theme questions, meaning questions could be removed without losing insight.

Depending on how respondents answered the Leadership statement questions they were given a follow-up question asking them to list up to three things that senior managers and their manager do or could do to demonstrate the behaviours set out in the Civil Service Leadership Statement.

2016: Organisational culture

One of the questions added in 2012 on organisational culture ("My performance is evaluated based on whether I get things done, rather than on solely following process") was removed in 2016 as stakeholder feedback suggested that it offered little insight and removing it would reduce questionnaire length while having minimal impact on the time series.

2017: Questionnaire review and theme changes

In 2017 the Leadership statement follow up questions were amended to "Please tell us what [senior managers] in [your organisation] do to demonstrate the behaviours set out in the Leadership Statement" and "Please tell us what managers in [your organisation] do to demonstrate the behaviours set out in the Leadership Statement" and asked to all respondents. Each was followed by one text box. The follow up questions were not asked in paper surveys.

Six questions were removed as they were found to be duplicative or difficult to take action on (B06, B30, B40, B56, B60 and B61 in 2016). This change caused a break in the time series for three of the nine headline theme scores (Organisational objectives and purpose; Resources and workload; Leadership and managing change). Our independent survey supplier recreated trends for these theme scores for 2009 - 2016, so that organisations would still be able to see their 2017 results compared to equivalent 2016 theme scores, and theme scores in previous years.

Five new questions were then introduced in 2017 to improve insight into key business priorities. This included two questions on the Civil Service Vision, and three relating to organisational culture.

A response option was added to question J01, asking about gender, to allow individuals to say "I identify in another way".

2018: Discrimination, gender identity, function and free-text comments

Following stakeholder consultation in 2018, two additional response options - 'Marital status' and 'Pregnancy, maternity and paternity' - were added to question E02, "On which of the following grounds have you personally experienced discrimination at work in the past 12 months?"

The wording of two response options, to question J01 "What is your gender identity", were changed from 'Male' and 'Female' to 'Man' and 'Woman' respectively, to differentiate identity from sex at birth (which is asked in question J01A).

The wording of question H8B was changed from "Does the team you work for deliver one of the following Functions?" to "Which Function(s) are you a member of?" This was because our analysis found that respondents could be working in teams that delivered multiple Functions, some of which were not directly related to the work they did themselves.

A new preamble was added before question G01 "What would you like [your organisation] to change to make it a great place to work?" in light of the new General Data Protection Regulation (GDPR) to explain how we would use the free text comments provided by respondents.

2019: Diversity, discrimination, bullying/harassment, wellbeing and locations

To get better insights on experiences of discrimination, bullying and harassment in the Civil Service, and drawing on findings from Dame Sue Owen's review to tackle bullying, harassment and misconduct in the Civil Service, a number of changes were made to this set of questions. For question E02 (the grounds of discrimination) new categories have been added and the language of some existing categories has been refined. New questions on the nature of bullying/harassment experienced and what the current state of the situation is have been added as follow-up questions for those who said they were bullied or harassed. The response options for E04 (the source of bullying/harassment) and E05 (whether they reported their experience) were also amended to improve insight gained from these questions.

Two additional demographic questions were added to improve our understanding of the health and wellbeing of civil servants. One new question asks about respondents' self-assessed mental health ("In general, how would you rate your overall mental health now?"). The other new question asks respondents about workplace adjustments ("Do you have the Workplace Adjustments you need to do your job?").
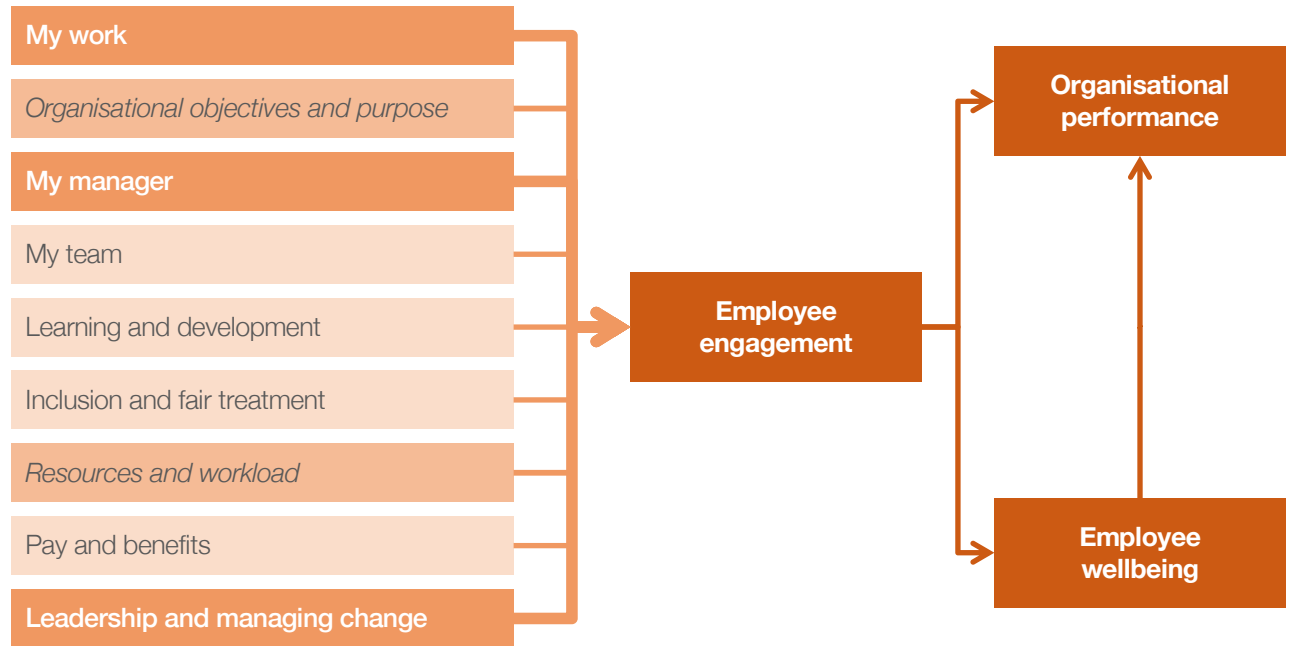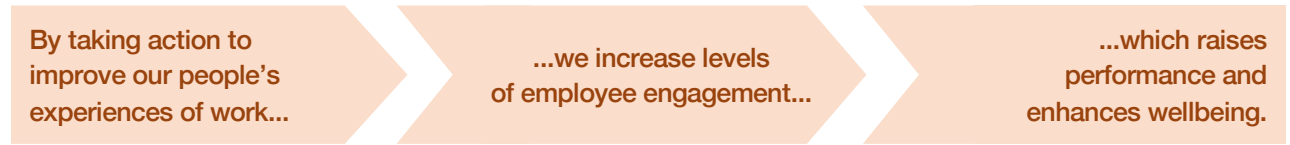
The existing response options for the questions asking about which region of England, Scotland or Wales work in have been expanded to include a broader range of areas (e.g. including three other major cities in Scotland [alongside Glasgow and Edinburgh]; these are Inverness, Dundee, and Aberdeen). For those working in Northern Ireland a question asking if they work in Belfast or elsewhere has been added. As workforce and organisational change programmes relating to location and place continue to develop, the location question will be kept under review in the coming years.

Seven new questions were added to help baseline the socio-economic diversity of the Civil Service workforce by 2020. This was a public commitment made in the 2017 Diversity and Inclusion Strategy. The measures were developed over a two year period in consultation with academics and other organisations. These questions did not appear in paper surveys.

Finally, to manage questionnaire length, the sections on the Civil Service Vision and Civil Service Leadership Statement were reduced to one question each.

Employee engagement

Our analytical framework focuses on how employee engagement levels can be improved

| By taking action to improve our people's experiences of work... | ...we increase levels of employee engagement... | ...which raises performance and enhances wellbeing. |

My work

Organisational objectives and purpose

My manager

My team

Learning and development

Inclusion and fair treatment

Resources and workload

Pay and benefits

Leadership and managing change

→ **Employee engagement**

Organisational performance

Employee wellbeing

The results of the People Survey have shown consistently that **leadership and managing change** is the strongest driver of employee engagement in the Civil Service, followed by the **my work** and **my manager** themes. The **organisational objectives and purpose** and **resources and workload** themes are also strongly associated with changes in levels of employee engagement.

Measuring employee engagement in the Civil Service

Employee engagement is a workplace approach designed to ensure that employees are committed to their organisation's goals and values, motivated to contribute to organisational success, and are able at the same time to enhance their own sense of well-being.

There is no single definition of employee engagement or standard set of questions. In the Civil Service People Survey we use five questions measuring pride, advocacy, attachment, inspiration and motivation as described in the table below.

| Aspect	Question	Rationale
Pride	B47. I am proud when I tell others I am part of [my organisation]	An engaged employee feels proud to be associated with their organisation, by feeling part of it rather than just "working for" it.
Advocacy	B48. I would recommend [my organisation] as a great place to work	An engaged employee will be an advocate of their organisation and the way it works.
Attachment	B49. I feel a strong personal attachment to [my organisation]	An engaged employee has a strong, and emotional, sense of belonging to their organisation.
Inspiration	B50. [My organisation] inspires me to do the best in my job	An engaged employee will contribute their best, and it is important that their organisation plays a role in inspiring this.
Motivation	B51. [My organisation] motivates me to help it achieve its objectives	An engaged employee is committed to ensuring their organisation is successful in what it sets out to do.

Calculating the engagement index

Like all of the other core attitudinal questions in the CSPS, each of the engagement questions is asked using a five-point agreement scale.

For each respondent an engagement score is calculated as the average score across the five questions where strongly disagree is equivalent to 0, disagree is equivalent to 25, neither agree nor disagree is equivalent to 50, agree is equivalent to 75 and strongly agree is equivalent to 100. Like all questions in the survey this cannot be linked back to named individuals.

The engagement index is then calculated as the average engagement score in the organisation, or selected sub-group. This approach means that a score of 100 is equivalent to all respondents in an organisation or group saying strongly agree to all five engagement questions, while a score of 0 is equivalent to all respondents in an organisation or group saying strongly disagree to all five engagement questions.

	Strongly agree	Agree	Neither agree nor disagree	Disagree	Strongly disagree	Score
Weight:	100%	75%	50%	25%	0%	
I am proud when I tell others I am part of [my organisation]	✓					100%
I would recommend [my organisation] as a great place to work		✓				75%
I feel a strong personal attachment to [my organisation]		✓				75%
[My organisation] inspires me to do the best in my job			✓			50%
[My organisation] motivates me to help it achieve its objectives				✓		25%
Total:						325%
Respondent's individual engagement score (total / 5):						65%

65% 70% 50% 90% 20%
25% 35% 100% 40% 35%
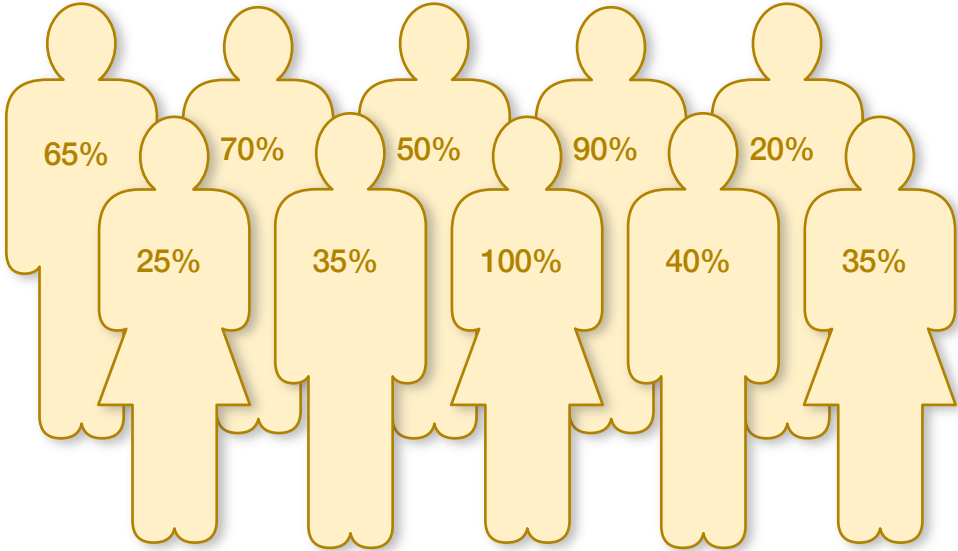
Sum of engagement scores (65+25+70+35+50+100+90+40+20+35):   530%

Engagement index for the group (530 / 10):   53%

Comparing the "index" scores to "percent positive" scores

Because the engagement index is calculated using the whole response scale, two groups with the same percent positive scores may have different engagement index scores. For example comparing one year's results to another, or as illustrated in the example below comparing two organisations (or units).

In the example below two organisations (A and B) have 50% of respondents saying strongly agree or agree. However the index score for the two organisations is 49% in A and 63% in B.

The index score gives a stronger weight to strongly agree responses than agree responses, and also gives stronger weight to neutral responses than to disagree or strongly disagree responses.

Figure 1 shows the distribution of the responses in each organisation. Table 1 shows how the calculations on the previous page translate these response profiles into index scores. Finally Figure 2 contrasts the percent positive scores between the two organisations with their index scores.
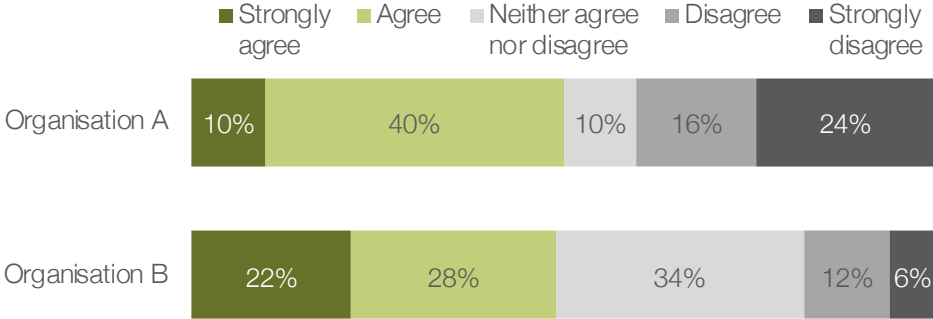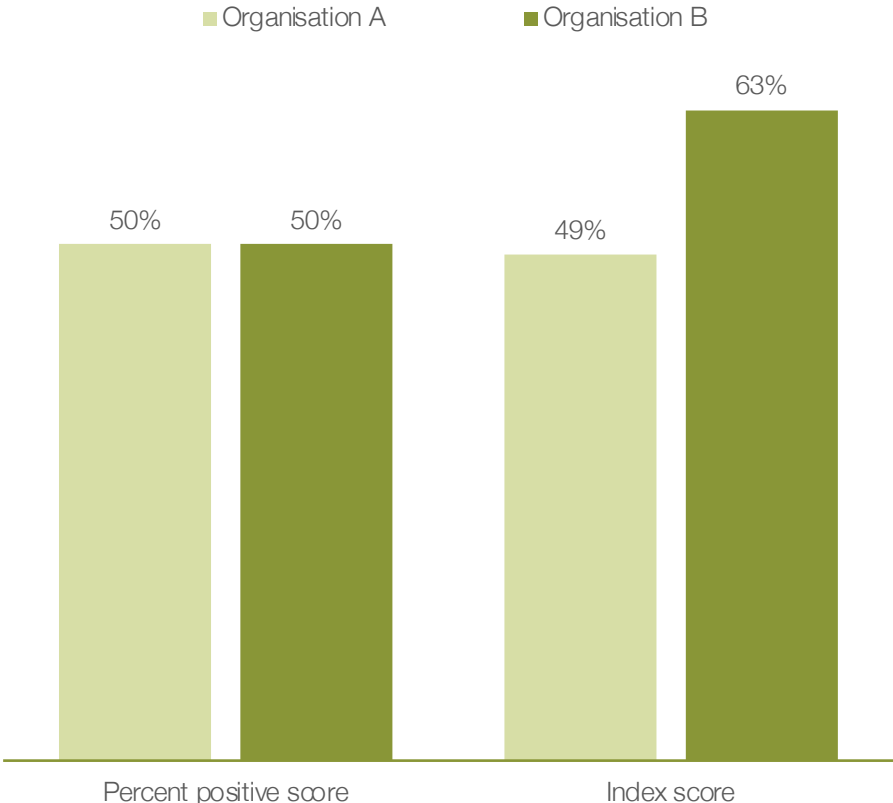
Figure 1: Organisational results

Figure 2: Comparison of percent positive and index approaches

Table 1: Calculating the index score

	Weight	Organisation A		Organisation B	
		%	Score	%	Score
Strongly agree	100%	10%	10%	22%	22%
Agree	75%	40%	30%	28%	21%
Neither agree nor disagree	50%	10%	5%	34%	17%
Disagree	25%	16%	4%	12%	3%
Strongly disagree	0%	24%	0%	6%	0%
Total		100%	49%	100%	63%

Wellbeing indices

The Proxy Stress Index and the PERMA Index

Using existing People Survey questions to provide additional wellbeing measures

High employee engagement is often conceptualised in terms of the benefits it can bring to organisations. Through the inclusion of four subjective wellbeing questions in the People Survey since 2011, as used by ONS, we are trying to understand the benefits that high engagement can bring to our employees as individuals.

Results products include two indices based on existing questions in the People Survey, which have been shown as important elements of wellbeing.

The Proxy Stress Index

This index aligns to the Health and Safety Executive stress management tool. It uses the 8 questions from the People Survey shown below. It is calculated in the same way as the Employee Engagement Index. We then 'invert' the final index so that it is a measure of conditions that can add to stress rather than alleviate stress, i.e. a higher index score represents a more stressful environment.

- **Demands:** B33. I have an acceptable workload

- **Control:** B05. I have a choice in deciding how I do my work

- **Support 1:** B08. My manager motivates me to be more effective in my job

- **Support 2:** B26. I am treated with respect by the people I work with

- **Role:** B30. I have clear work objectives

- **Relationships 1:** B18. The people in my team can be relied upon to help when things get difficult in my job

- **Relationships 2:** E03. Have been bullied or harassed at work, in the past 12 months?

- **Change:** B45. I have the opportunity to contribute my views before decisions are made that affect me

The PERMA Index

This index measures the extent to which employees are 'flourishing' in the workplace; it is based around the 5 dimensions: Positive emotion, Engagement, Relationships, Meaning and Accomplishment. The index is computed using the 5 questions from the People Survey shown below and combining them in the same way as the Employee Engagement Index.

A high score for an organisation represents a greater proportion of employees agreeing with the statements below and rating two well-being questions as high.

- **Positive Emotion:** W01. Overall, how satisfied are you with your life nowadays?

- **Engagement:** B01. I am interested in my work

- **Relationships:** B18. The people in my team can be relied upon to help when things get difficult in my job

- **Meaning:** W02. Overall, to what extent do you feel the things you do in your life are worthwhile?

- **Accomplishment:** B03. My work gives me a sense of personal accomplishment

Calculating the Proxy Stress Index

Step One: Ensure an individual has responded to all eight questions the index is based on.

Step Two: Recalculate the scores as percentages:

- For "B" questions: 100% if Strongly Disagree, 75% if Disagree, 50% if Neither agree or disagree, 25% if Agree, 0% if Strongly agree
- For bullying and harassment: 100% if Yes, 50% if Prefer not to Say, 0% if No

Step Three: Add together the scores for all 8 questions answered by the respondent, and divide them by 8. This gives you the respondent's mean score.

Step Four: For a team or organisation level Proxy Stress Index score, the Proxy Stress scores of all the individuals in the group should be added up, and that score divided by the number of individuals in the group.

Lower Proxy Stress Index for a team indicates a greater capacity to prevent and manage stress in that team.

Rounding should take place at the final stage, if needed.

Survey response:	Strongly agree	Agree	Neither agree nor disagree	Disagree	Strongly disagree	Score
Weight:	0%	25%	50%	75%	100%	
Demands: B33. I have an acceptable workload					✓	100%
Control: B05. I have a choice in deciding how I do my work			✓			50%
Support 1: B08. My manager motivates me to be more effective in my job			✓			50%
Support 2: B26. I am treated with respect by the people I work with			✓			50%
Role: B30. I have clear work objectives		✓				25%
Relationships 1: B18. The people in my team can be relied upon to help when things get difficult in my job				✓		75%
Change: B45. I have the opportunity to contribute my views before decisions are made that affect me			✓			50%

Survey response	No	Prefer not to say	Yes	Score
Weight:	0%	50%	100%	
Relationships 2: E03. During the past 12 months have you personally experienced bullying or harassment at work?	✓			0%
Total score (sum of 8 question scores):				400%
Respondent's individual Proxy Stress score (total score / 8):				**50%**

65%	70%	50%	90%	20%		
25%	35%	100%	40%	35%		
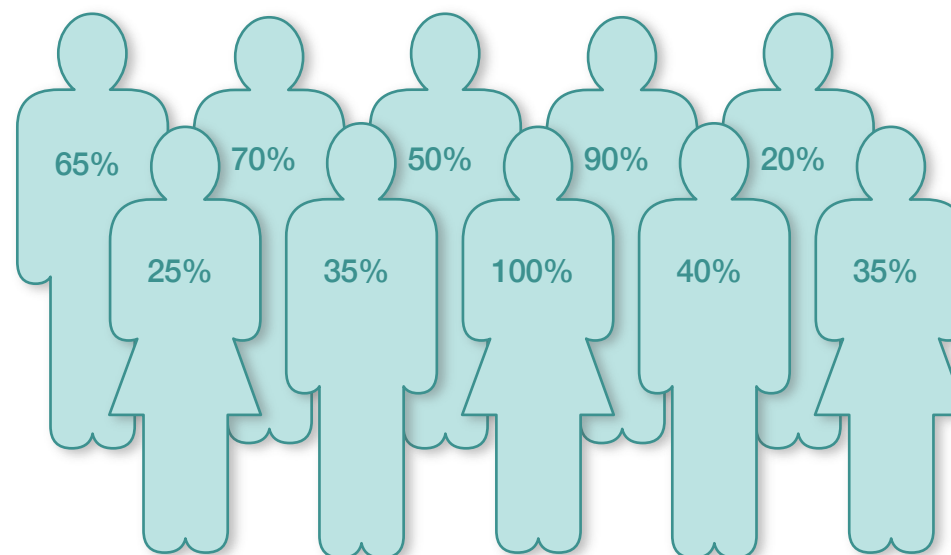
Sum of individual proxy stress scores (65+25+70+35+50+100+90+40+20+35):	530%
Proxy Stress index for the group (530 / 10):	**53%**

Calculating the PERMA Index

Step One: Ensure an individual has responded to all five questions the index is based on.

Step Two: Recalculate the scores as percentages:

- For "B" questions: 0% if Strongly Disagree, 25% if Disagree, 50% if Neither agree or disagree, 75% if Agree, 100% if Strongly agree
- For "W" questions of 0 to 10: assign a score of 0% if 0, 25% if 1 to 4, 50% if 5 or 6, 75% if 7 to 9, and 100% if 10.

Step Three: Take a mean of the percentage scores for each question, by totalling them and dividing by five

Step Four: For a group PERMA score, the PERMA scores of all the individuals in the group are averaged

Higher PERMA Index scores represent higher levels of flourishing and engagement at an individual or team level.

Rounding should take place at the final stage, if needed.

Survey response:	Strongly agree	Agree	Neither agree nor disagree	Disagree	Strongly disagree	Score
Weight:	100%	75%	50%	25%	0%	
Engagement: B01. I am interested in my work		✓				75%
Relationships: B18. The people in my team can be relied upon to help when things get difficult in my job	✓					100%
Accomplishment: B03. My work gives me a sense of personal accomplishment			✓			50%

Survey response	10	7/8/9	5/6	1/2/3/4	0	Score
Weight:	100%	75%	50%	25%	0%	
Positive Emotion: W01. Overall, how satisfied are you with your life nowadays?		✓				75%
Meaning: W02. Overall, to what extent do you feel the things you do in your life are worthwhile?				✓		25%
Total score (sum of 5 question scores):						325%
Respondent's individual PERMA score (total score / 5):						**65%**

65%   70%   50%   90%   20%

25%   35%   100%   40%   35%
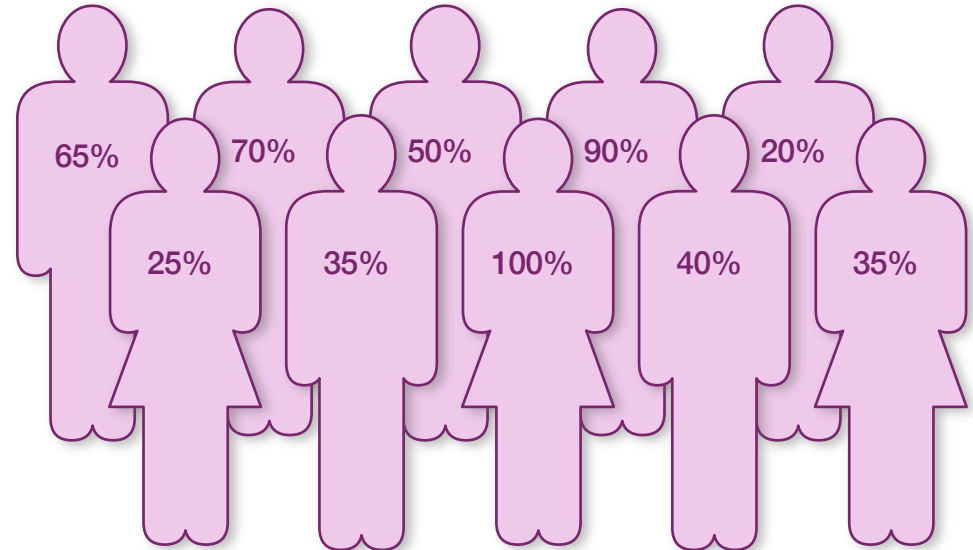
Sum of individual PERMA scores (65+25+70+35+50+100+90+40+20+35):   530%

PERMA index for the group (530 / 10):   53%

Comparisons and significance testing

Benchmarks and comparisons

To help leaders, managers and staff understand and interpret the People Survey results for their organisation or team a number of benchmarks and comparisons are produced and included in reports and/or published on GOV.UK.

Civil Service Benchmark (median)

The Civil Service Benchmark scores are the high-level overall results from the Civil Service People Survey. For each measure it comprises the median of all participating organisation's scores for a given year. In 2019 there were 106 participating organisations, so the benchmark score represents the figure for which 53 organisations will score at or above, and 53 organisations will score at or below.

Civil Service High Performers

The Civil Service High Performers scores are included in organisation-level reports, for each measure it is the upper quartile of all organisation's scores, that is 26 organisations will score above or below this score. Note that this is calculated for each measure, so the organisations above/below this score will vary for each question in the survey.

High Performing Units

For the remaining 12,000+ team- and unit-level reports, rather than the organisation-level *Civil Service High Performers* comparison, they have a comparison called *High Performing Units*. This is the upper quartile score across all 12,000+ teams and units in the Civil Service People Survey's reporting hierarchy. As with the Civil Service High Performers this is calculated for each measure separately.

Civil Service mean scores / All Civil Servants

The Civil Service mean scores are the simple aggregate scores of all respondents to the Civil Service People Survey. This might also be referred to the score for "all civil servants". These scores are not used as the high-level figure for the Civil Service overall as they are strongly influenced by the largest civil service organisations. The Civil Service Benchmark (median) score is a more accurate measure of organisational performance. However, the mean scores may be more appropriate when looking at the largest organisations, and/or when looking at cross-Civil Service demographic analysis (e.g. how do women's scores vary from all civil servants). This is not included in any standard reports, but is included in data published on GOV.UK.

Comparison to parent and comparison to organisation

In team- and unit-level reports a comparison is provided to that unit's parent in the reporting hierarchy, and to the organisation overall (if that is not the unit's parent).

Comparison to previous survey

In organisation- and team/unit-level reports a comparison to the previous survey results is included where there is a valid trend match. As a result of organisational and machinery of government changes not all units/organisations can be directly compared to previous years.

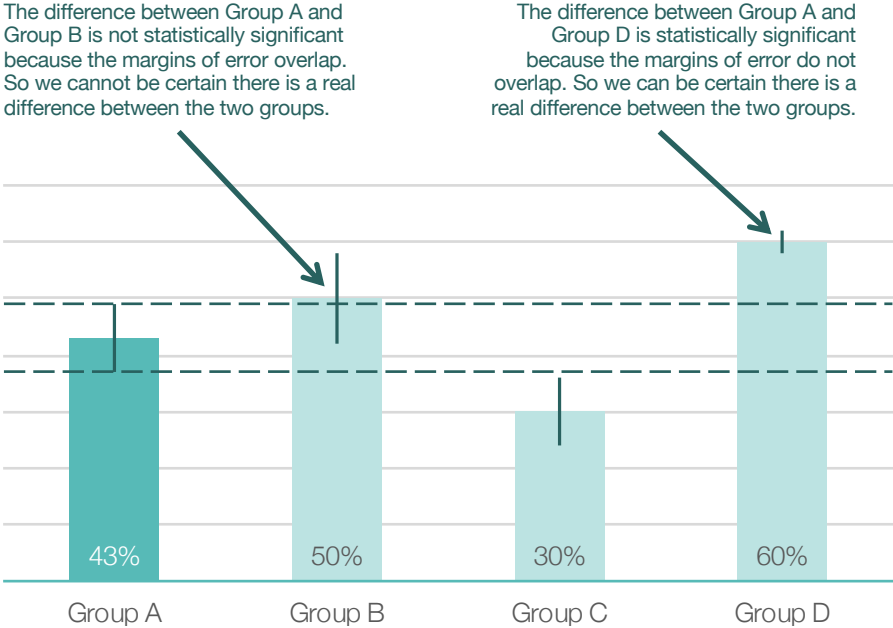# Using statistical testing to compare sets of results

Unless an organisation or team has a 100% response rate, we have to take account of the fact we do not know the views of those who did not take part. In statistical terms this is called the "margin of error".

When making comparisons between groups over time it is important not just to look at the absolute difference between the reported figures but also to consider the margin of error.

If the margins of error overlap then we cannot be confident that the difference between the two figures is a 'real' difference of opinion.

For example, take the situation outlined in the table and figure below. Here we see that the margin of error for Group A and Group B overlap and therefore we cannot be confident that there is a real difference of opinion between the two groups. However, for Group A and Group D the margins of error do not overlap and therefore we can be confident that there is a real difference between the two groups.

Unit	Headcount	Responses	% positive score	Margin of error
Group A	200	120 (60%)	43%	± 6%
Group B	150	80 (53%)	50%	± 8%
Group C	50	40 (80%)	30%	± 6%
Group D	500	375 (75%)	60%	± 2%

The difference between Group A and Group B is not statistically significant because the margins of error overlap. So we cannot be certain there is a real difference between the two groups.

The difference between Group A and Group D is statistically significant because the margins of error do not overlap. So we can be certain there is a real difference between the two groups.

Showing statistically significant differences in CSPS reporting products

Significance testing is used in the CSPS reporting to show whether the differences between a unit and comparisons are statistically significant. The reporting will show all differences, but for differences that are statistically significant the result will be flagged with a diamond symbol, ✧.

Survey proportions (the percent positive and theme scores) are tested using z-tests, while the engagement index is tested using the t-test. All tests are conducted at the 95% confidence level. Significance testing is only applied when the appropriate sample sizes have been achieved (10 for a t-test, 20 for a theme score z-test, and 30 for a question z-test).

Significance testing is used when comparing the following sets of results:

- A unit or organisation's 2019 scores against that unit or organisation's scores from previous years.
- A unit against it's parent, organisation or another unit's results.
- A unit or organisation's scores against a benchmark score (the Civil Service Benchmark or a high performance benchmark).

No diamond symbol:
this difference is not statistically significant

My work — 86% — +7 ✧ Difference from previous survey

		Strongly agree	Agree	Neither	Disagree	Strongly disagree	% Positive	Difference from previous survey	Difference from Parentº	Difference from CO	Difference from high performing units
B01	I am interested in my work	60	31				91%	+6	+3	+2	-3
B02	I am sufficiently challenged by my work	52	32	9			85%	+2	+6 ✧	+7	-3
B03	My work gives me a sense of personal accomplishment	50	37	5	6		87%	+11 ✧	+7 ✧	+10 ✧	+2
B04	I feel involved in the decisions that affect my work	28	50	12	8		77%	+10 ✧	+5 ✧	+15 ✧	+8
B05	I have a choice in deciding how I do my work	51	41				92%	+8 ✧	+6 ✧	+14 ✧	+7 ✧

A diamond symbol:
this difference is statistically significant

Margin of error reference table

The CSPS reporting uses the t-test for the engagement index and z-tests for all other survey measures to test for statistical significance.

Comparisons between groups or over time use two-sample tests, while comparisons to benchmark scores use one-sample tests.

These are complex calculations that are based on the exact number of people responding and their results. The table below provides a reference for simple at-a-glance understanding of the margins of error. Like the significance tests in the reports the reference table uses the 95% confidence level.

For a given number of respondents results of 50% have the largest margin of error, the closer the figure is to 0% or 100% the smaller the margin of error. The margin of error also reduces as the number of respondents increases.

For example, for a group of 100 respondents a result of 50% has a margin of error of ±10 percentage points, but for a result of 5% or 95% it is ±4 percentage points. However, for a group of 1,000 respondents a result of 50% has an error of just ±3 percentage points, and at 5% or 95% the margin of error is ±1 percentage point.

Survey result proportion:

Number of respondents	50%	40% 60%	30% 70%	25% 75%	20% 80%	15% 85%	10% 90%	5% 95%
50	±14	±14	±13	±12	±11	±10	±8	±6
100	±10	±10	±9	±8	±8	±7	±6	±4
150	±8	±8	±7	±7	±6	±6	±5	±3
200	±7	±7	±6	±6	±6	±5	±4	±3
250	±6	±6	±6	±5	±5	±4	±4	±3
500	±4	±4	±4	±4	±4	±3	±3	±2
750	±4	±4	±3	±3	±3	±3	±2	±2
1,000	±3	±3	±3	±3	±2	±2	±2	±1
1,500	±3	±2	±2	±2	±2	±2	±2	±1
2,000	±2	±2	±2	±2	±2	±2	±1	±1
5,000	±1	±1	±1	±1	±1	±1	±1	±1
10,000	±1	±1	±1	±1	±1	±1	±1	<±1

Rounding

All results in CSPS reporting products are rounded to the nearest percentage point

Figures (notably percentages) in the CSPS reports are displayed as whole numbers for the ease of reading. To ensure the figures are as accurate as possible the reports and tools apply rounding to the figures at the last stage of calculation and are rounded to the nearest percentage point. Sometimes this will mean that the figures shown may not be identical if calculations are performed using the figures displayed in the report, however any difference would not be larger than ±1 percentage point.

For example results of 23.00% to 23.49% are displayed as 23%, while results of 23.50% to 23.99% are displayed as 24%. Therefore if you sum the percentages for all the response options to a question the figure may not sum to 100%, but may sum to 99% or 101%.

In Table A, if we sum the displayed percentages for strongly agree and agree to calculate the percentage positive response as 47% (18% + 29%), but using the raw figures we calculate the result as 48%.

Similarly when comparing figures between different groups or benchmarks, the difference displayed in reporting may not be identical to that if the difference is calculated using the reported figures.

In Table B, Group E has an engagement index score of 52.952% which rounds to 53% in their report, while Benchmark has a score of 58.495% which rounds to 58%. The difference between these two figures is 5.543, which is rounded to a 6 percentage points difference. However, if the calculation was carried out manually readers would calculate the difference as 5 percentage points (58 minus 53).

Table A: Demonstration of rounding when presenting question results

	Strongly agree	Agree	Neither agree nor disagree	Disagree	Strongly disagree	Total	Positive responses
Number of responses	103	166	176	96	24	565	269
Percent of responses	18.23%	29.38%	31.15%	16.99%	4.25%	100.00%	47.61%
Figure displayed in reporting	18%	29%	31%	17%	4%	99%	48%

Table B: Demonstration of rounding when calculating differences

	Group E	Benchmark	Difference (Group E - Benchmark)
Engagement Index	52.952%	58.495%	- 5.543
Figure displayed in reporting	53%	58%	- 6

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