

# Transport Scotland communicating analysis user survey: final report

## Introduction and background

Transport Scotland annually publishes four statistics publications (Scottish Transport Statistics, Key Reported Road Casualties Scotland, Transport and Travel in Scotland, and Reported Road Casualties Scotland), as well as a number of social and economic research reports. All reports are made available online as PDF and HTML files; in addition, paper copies of two statistics publications (Scottish Transport Statistics and Reported Road Casualties Scotland) are also produced.

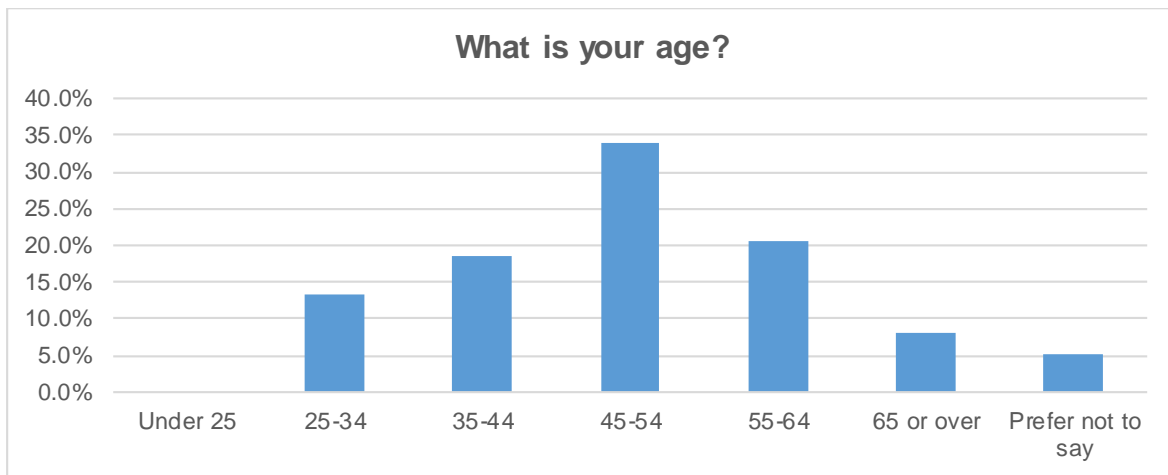
Transport Analytical Services' communicating analysis improvement project aims to enhance the impact of Transport Scotland's statistics and social and economic research outputs, and implement innovative and novel approaches in the communication of our analysis. As part of this project, we conducted a survey of users to gather feedback on our analytical products. The main questions the survey endeavoured to answer were the following.

- In what ways do users think our statistics and social and economic research outputs can be improved?
- Is there a demand among users to continue producing paper copies of Scottish Transport Statistics and Reported Road Casualties publications, or should these be made exclusively available online?
- What are users' impressions of the statistics and research pages of the Transport Scotland website?

The survey was conducted via Questback, an online survey and feedback software, and was open from 5<sup>th</sup> July 2019 to 26<sup>th</sup> July 2019. A link to the survey was sent by email to the ScotStat mailing list and Transport Analytical Services user groups. In addition, the survey was advertised via social media (Facebook, LinkedIn and Twitter), and a link was circulated to internal users through the weekly Transport Scotland staff notice.

## Response

The survey received a total of 97 responses. Respondents were of a variety of ages, with the largest proportion in the 45-54 age band. Figure 1 shows the proportion of respondents in each age band.

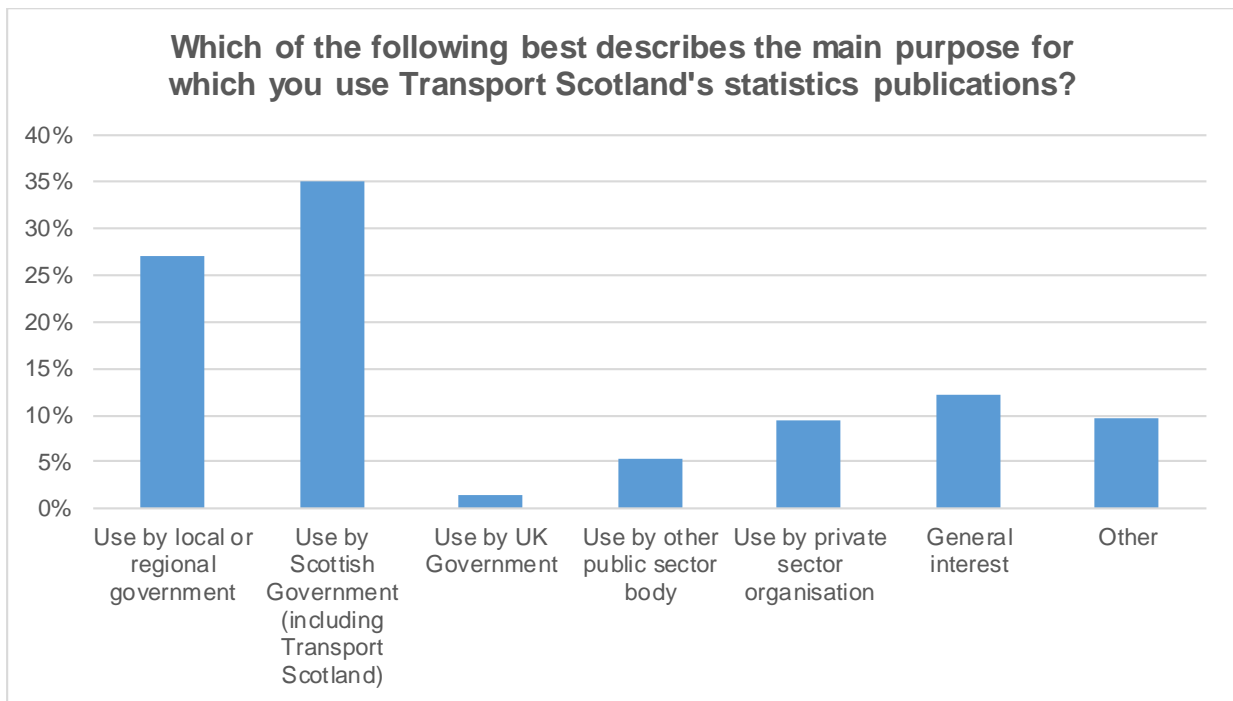


**Figure 1: Respondents by age band**

Respondents who said they had used Transport Scotland's statistics outputs in the last five years were asked the main purpose for which they used these outputs. Responses were:

- use by local or regional government
- use by Scottish Government (including Transport Scotland)
- use by UK Government
- use by other public sector body
- use by private sector organisation
- academic research
- media use
- general interest
- research for trade union
- use by third sector organisation
- to check on DMRB stage 2 reports

The largest proportion of respondents (35.1%) replied 'Use by Scottish Government (including Transport Scotland)', followed by 'Use by local or regional government' (27.0%) and 'General interest' (12.2%). Figure 2 shows responses to the question 'Which of the following best describes the main purpose for which you use Transport Scotland's statistics outputs?'



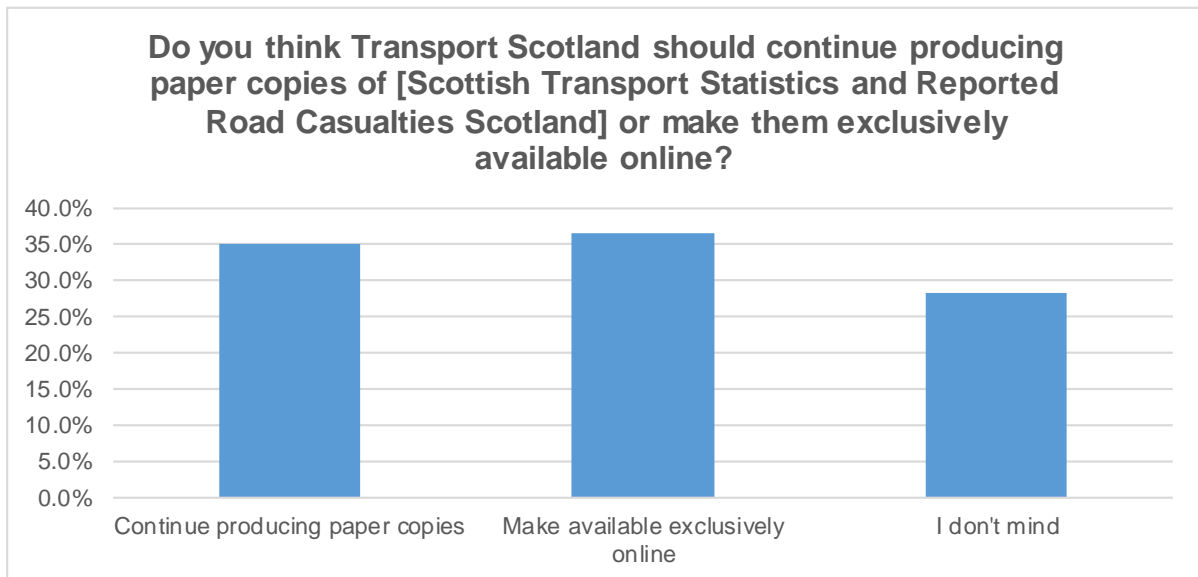
**Figure 2: Respondents' main purposes for using Transport Scotland's statistics publications**

### Key findings

- 35% of respondents said they think Transport Scotland should continue producing paper copies of Scottish Transport Statistics and Reported Road Casualties Scotland publications, while 36% said they thought that these publications should be web-only, and 28% said they didn't mind.
- All four statistics publications received generally positive ratings. Suggestions on how these publications could be improved were consistent between publications, with 'Improved use of infographics' and 'Develop an interactive web app' the most popular suggestions.
- Social and economic research also received generally positive ratings. The most popular suggestions on how to improve these outputs were 'Improved use of infographics' and 'Improved use of colour'.
- Respondents, on average, neither agreed nor disagreed that the statistics pages of the Transport Scotland website are easy to navigate. The main suggested improvements to the statistics and research pages of the website were 'Improved layout' and 'Greater interactivity'.

### Use of hard copies of publications

Respondents who said they had used Transport Scotland's statistics outputs in the last five years were asked whether they think we should continue producing paper copies of Scottish Transport Statistics and Reported Road Casualties Scotland publications. 35.1% of respondents said they think we should continue producing paper copies of these publications, while 36.5% said they think we should make them exclusively available online, and 28.4% said they don't mind.



**Figure 3: Respondents feedback on whether they think Transport Scotland should continue to produce paper copies of Scottish Transport Statistics and Reported Road Casualties Scotland**

### **Feedback on statistics publications**

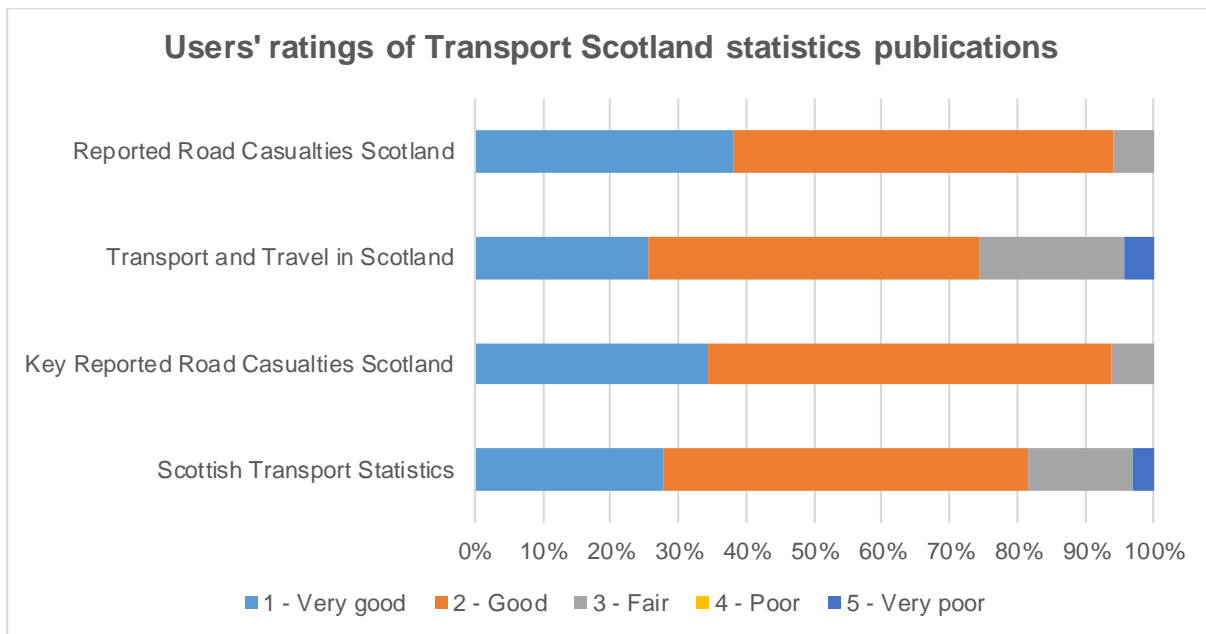
Respondents were asked to provide feedback on each of the statistics publications they said they had used in the last five years. This consisted of rating each such publication on a five-point scale and suggesting ways in which they thought it could be improved.

65 respondents said that in the last five years they had used Scottish Transport Statistics, 32 said they had used Key Reported Road Casualties Scotland, 48 said they had used Transport and Travel in Scotland, and 35 said they had used Reported Road Casualties Scotland.

### Ratings of statistics publications

Respondents were asked to rate each publication they had used in the last five years either '1 – Very good', '2 – Good', '3 – Fair', '4 – Poor' or '5 – Very poor'.

All four publications received generally positive ratings: each publication received a median rating of '2 – Good', and very few responses of '4 – Poor' or '5 – Very poor' were given. Respondents' ratings of each publication are shown in Figure 4.



**Figure 4: Respondents' ratings of Transport Scotland statistics publications**

The mean ratings for each publication are displayed in the table below.

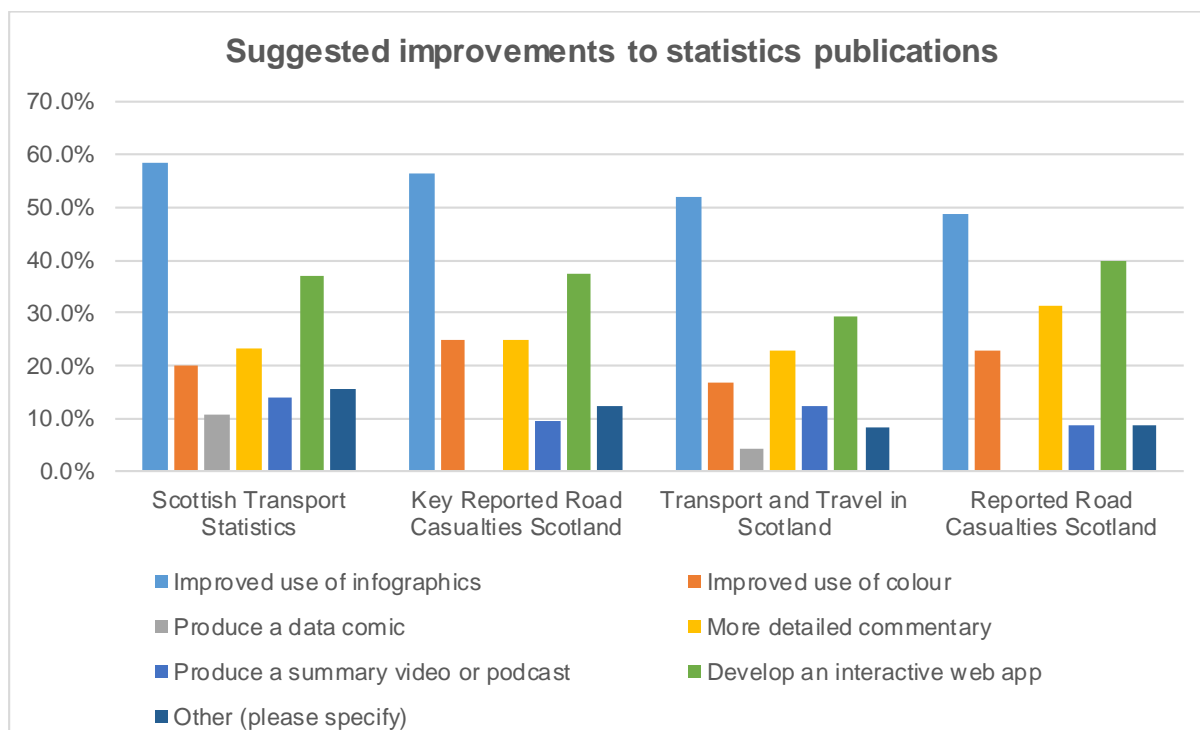
Scottish Transport Statistics	1.97
Key Reported Road Casualties Scotland	1.72
Transport and Travel in Scotland	2.04
Reported Road Casualties Scotland	1.68

It can be seen that, on average, the two road casualties publications received slightly more positive ratings than Scottish Transport Statistics and Transport and Travel in Scotland. One potential explanation for this is that users who primarily accessed our statistics publications for 'General interest' on average gave less positive ratings than other user groups. The proportion of responses by this group was higher for Scottish Transport Statistics and Transport and Travel in Scotland than the road casualties publications (10.8% and 14.6% respectively, compared to 6.3% and 5.7%), therefore if this hypothesis is true then it may have contributed to the difference in ratings between these publications. Excepting ratings by the 'General interest' group, Scottish Transport Statistics and Transport and Travel in Scotland both received an average rating of 1.90.

A statistical analysis of the ratings by different user groups is presented in Appendix A. It is shown that for Transport and Travel in Scotland, there is statistically significant evidence to suggest that respondents in the 'General interest' group gave higher (less positive) ratings than those who said their main purpose for using our statistics publications was 'Use by local or regional government' or 'Use by Scottish Government (including Transport Scotland)'. There was also an observed difference in the averages between these groups for Scottish Transport Statistics; however, the evidence that the 'General interest' group gave higher ratings for this publication is not statistically significant.

## Suggested improvements to statistics publications

For each publication, users were asked to select from a list of options ways in which they thought that publication could be improved. Responses are shown in the Figure 5. Percentages displayed are the proportions of users who were asked that selected that option. (N.B. The 'Produce a data comic' option was not given for the Key Reported Road Casualties Scotland and Reported Road Casualties Scotland publications.)



**Figure 5: Suggested improvements to statistics publications**

'Improved use of infographics' was the most popular suggestion for all four publications, with 58.5%, 56.3%, 52.1% and 48.6% of respondents, respectively, choosing that option. The next most popular choice was 'Develop an interactive web app', which was selected by 36.9%, 37.5%, 29.2% and 40.0% of respondents, respectively.

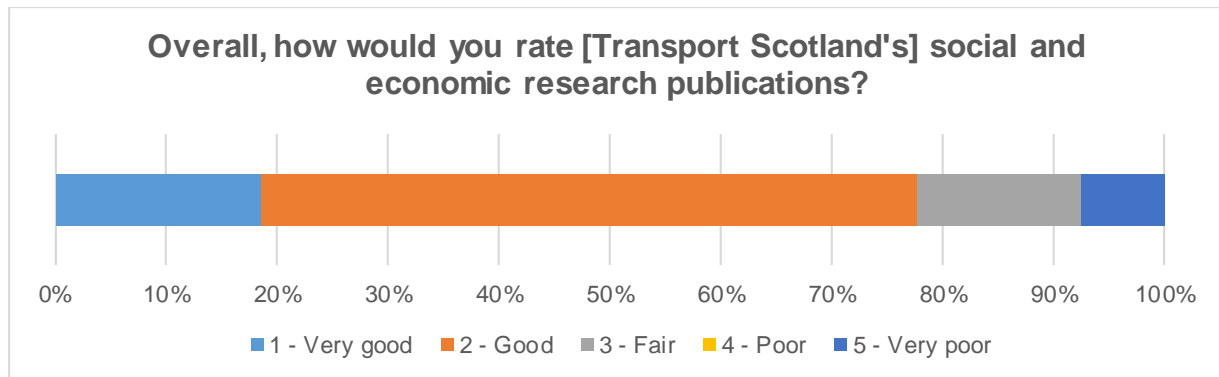
The 'Other (please specify)' option allowed users to suggest ways in which they thought each publication could be improved that were not listed. These responses are summarised in the table below.

<p>Scottish Transport Statistics</p>	<ul style="list-style-type: none"> <li>• Include statistics on profit margins and fares for major operating companies.</li> <li>• Include coverage of individual routes.</li> <li>• Infographics are starting to look dated.</li> <li>• Produce a standalone summary document.</li> <li>• Improved user-friendliness; make the publication more easy to navigate and statistics easier to look up for those who don't have prior knowledge of where they are located.</li> <li>• Greater disaggregation of data by gender and greater focus on non-employment journeys.</li> <li>• The publication is often too academic and hard to understand.</li> <li>• Include more comparisons with the rest of the UK.</li> </ul>
<p>Key Reported Road Casualties Scotland</p>	<ul style="list-style-type: none"> <li>• Include more commentary in the 'Key points' section at the beginning of the publication.</li> <li>• Include provision for statistics on drug use in future publications.</li> <li>• The publication is often too academic and hard to understand.</li> <li>• Include more comparisons with the rest of the UK.</li> </ul>
<p>Transport and Travel in Scotland</p>	<ul style="list-style-type: none"> <li>• Greater disaggregation of data and recognition of intersectionalities.</li> <li>• The publication is often too academic and hard to understand.</li> <li>• Include more comparisons with the rest of the UK.</li> </ul>
<p>Reported Road Casualties Scotland</p>	<ul style="list-style-type: none"> <li>• Produce a standalone summary as the document itself is so big.</li> <li>• The publication is often too academic and hard to understand.</li> <li>• Include more comparisons with the rest of the UK.</li> </ul>

## Feedback on social and economic research publications

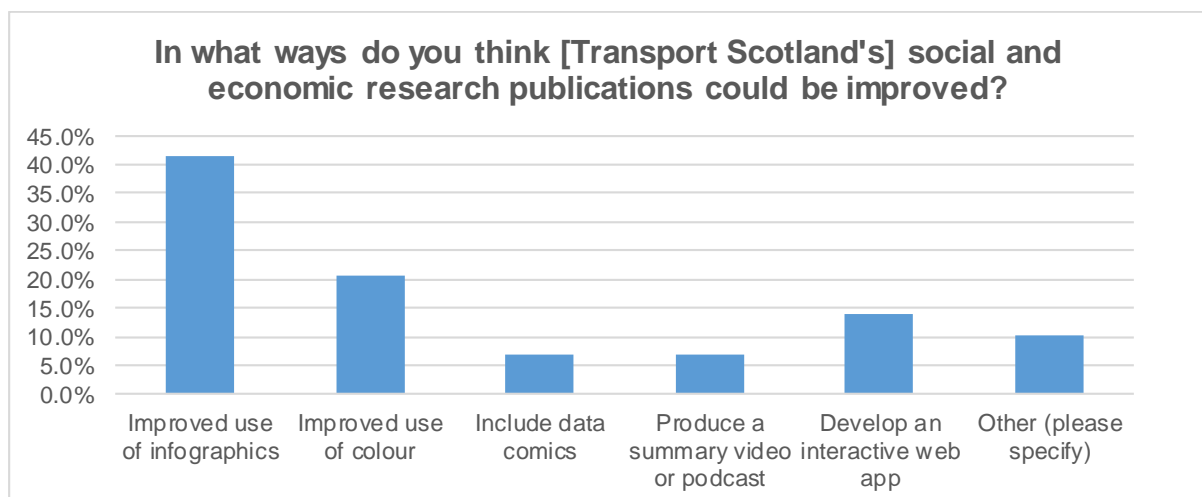
29 respondents said that they had accessed Transport Scotland’s social and economic research in the last five years. These users were asked to provide an overall rating of our social and economic research outputs, and suggest ways in which they think these outputs can be improved.

Respondents gave a mean rating of 2.19 and a median rating of ‘2 – Good’. The ratings are shown in Figure 6 below.



**Figure 6: Respondents’ ratings of Transport Scotland’s social and economic research publications.**

Respondents’ suggested improvements were largely similar to those for the statistics publications, although there were some key differences. The most popular suggestion was ‘Improved use of infographics’, which was chosen by 41.4% of users asked, followed by ‘Improved use of colour’ (20.7%). The ‘Develop an interactive web app’ option was less popular than for the statistics publications; this was selected by 13.8% of users.



**Figure 7: Suggested improvements to social and economic research publications**

The comments left by respondents who selected the ‘Other (please specify)’ option were as follows.

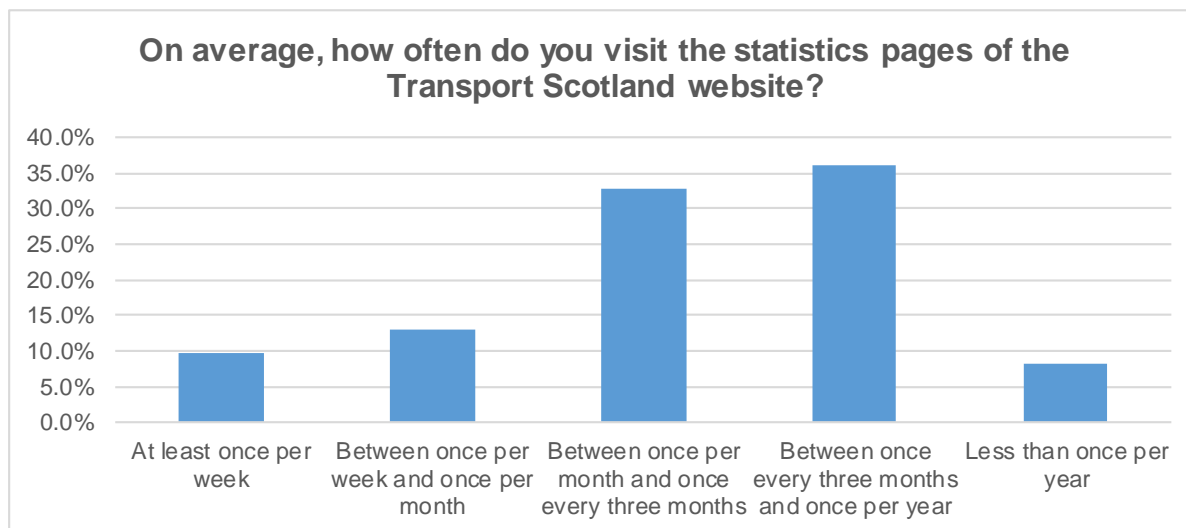
- Include greater socio-economic and equalities analysis.
- Include more information on methodology and the data samples used.



## Feedback on the Transport Scotland website

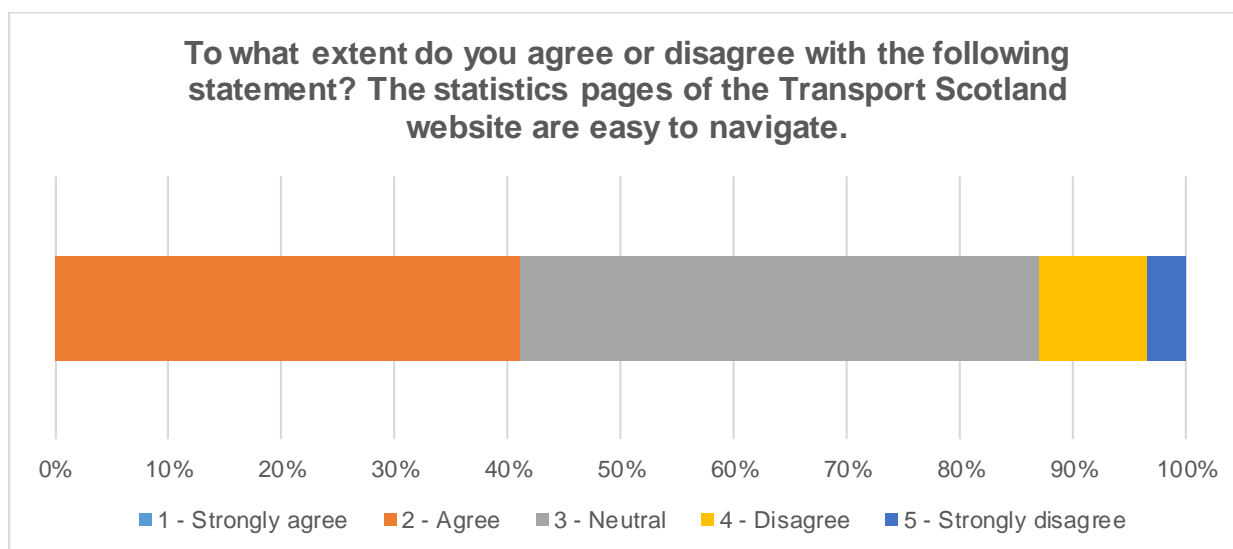
Users were also asked several questions regarding the statistics and research pages of the Transport Scotland website.

61 respondents said they had accessed the statistics pages of the Transport Scotland website in the last five years. Figure 8 shows the frequencies in which they said they visit these pages.



**Figure 8: Frequencies in which respondents said they visit the statistics pages of the Transport Scotland website**

Users were asked the extent to which they agree with the statement 'The statistics pages of the Transport Scotland website are easy to navigate'. The majority of respondents answered '3 – Neutral', with no users responding '1 – Strongly agree'. Responses are summarised in Figure 9 below.

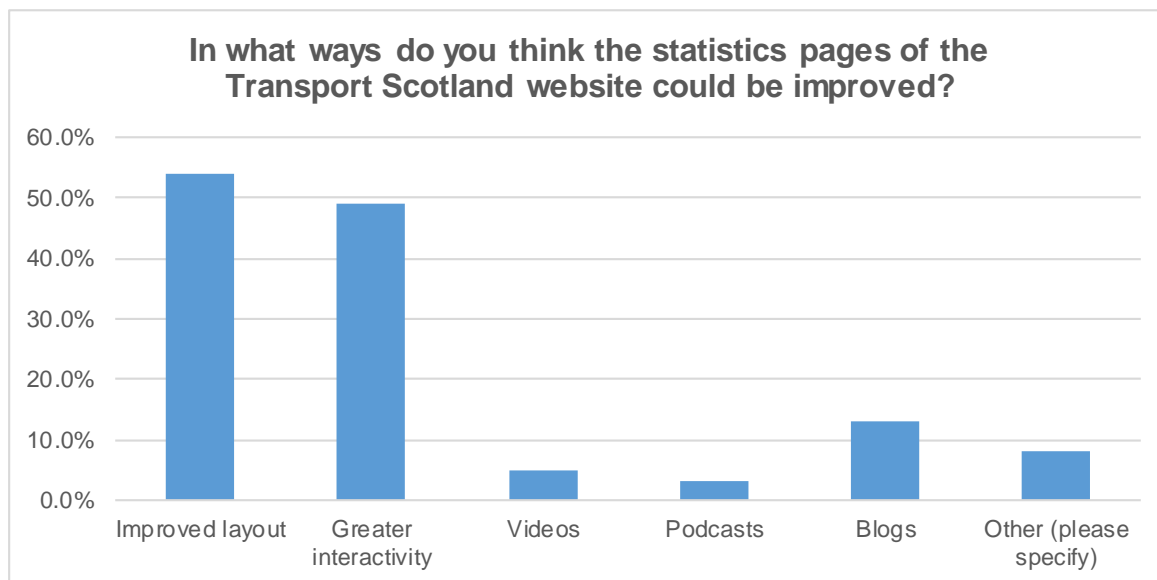


**Figure 9: Extent to which users agreed or disagreed with the statement 'The statistics pages of the Transport Scotland website are easy to navigate'**

The median response to this question was '3 – Neutral', and the mean response was 2.75, considerably higher than any other ratings question in the survey. This, together with the increase in the number of negative responses and absence of

respondents strongly agreeing, suggests that users did not generally agree that the statistics pages are easy to navigate.

This sentiment is also reflected in users' suggested improvements. The majority (54.1%) of respondents selected the 'Improved layout' option, and two users left free-text answers stating that they thought the pages were difficult to navigate. The next most popular suggestion was 'Greater interactivity' (49.2%), with all other options selected by significantly smaller proportions of users.



**Figure 10: Suggested improvements to the statistics pages of the Transport Scotland website**

Comments provided by users who selected the 'Other (please specify)' option were as follows.

- Make the pages easier to find from the front page.
- Include social media buttons.
- Include more detailed descriptions of reports to allow information to be found more easily.

Feedback was similar for the research pages of the website. Of users who were asked the question 'In what ways do you think the research pages of the Transport Scotland website can be improved?' 51.7% responded 'Improved layout' and 31.0% responded 'Greater interactivity', with all other options selected by fewer than 10% of respondents.

## Conclusion

The survey was designed to obtain user feedback on how we communicate analysis and inform ways in which we can improve our analytical outputs. It was predominantly completed by individuals who mainly use Transport Scotland's analytical outputs in work for local or regional government, or the Scottish Government or Transport Scotland; however, there were also a number of respondents who access our statistics for general interest. Given that the survey was

primarily circulated to stakeholders who use our outputs for professional purposes, it is possible that individuals who access them for general interest may have been underrepresented, and the proportion of users who access our statistics and research for this reason may indeed be higher than the 12% indicated by the survey.

A number of suggestions were made by users as to how we can improve our statistics and social and economic research outputs, and this feedback was largely consistent. The most popular suggestions on how we can improve our outputs were to improve our use of infographics and colour in publications, and to develop an interactive web app to supplement statistics publications.

The majority of respondents said either that they think that Scottish Transport Statistics and Reported Road Casualties Scotland should be made web-only publications, or that they wouldn't mind if paper copies of these publications were discontinued. Slightly over one third of respondents said they think we should continue producing paper copies.

The survey also obtained feedback on the statistics and research pages of the Transport Scotland website. Users stated that an improved layout and more interactivity are the main changes they think would improve these pages.

Based on the findings of the survey, we make the following recommendations.

- Develop an updated infographics library, to which all Transport Analytical Services members should be able to access.
- Design a standardised colour palette to be followed in all analytical outputs.
- Interactive web apps are to be developed to supplement this year's Transport and Travel in Scotland and Carbon Account for Transport publications. If these are well-received then it is recommended that web apps are produced for all statistics publications.
- Publish this year's Reported Road Casualties Scotland publication as a web-only document. If this is successful then all future editions of Scottish Transport Statistics and Reported Road Casualties Scotland should be published exclusively online.
- Include greater disaggregation of data by demographic.
- Liase with the Transport Scotland Corporate Communications team regarding website feedback.
- Increase focus on how we communicate our analysis to users who access our statistics and research predominantly for interest.

## Appendix A – Statistical analysis of ratings by user group

In this appendix we outline statistical analysis conducted on how ratings of statistics publications varied between three user groups; namely those who said their main reason for accessing Transport Scotland’s statistics publications were ‘Use by Scottish Government (including Transport Scotland)’, ‘Use by local or regional government’, and ‘General interest’. The sample sizes of the other user groups who responded were too small to conduct any statistically significant analysis. Moreover, there were too few responses from the ‘General interest’ group for the road casualties publications, therefore our analysis is focused on the ratings for Scottish Transport Statistics and Transport and Travel in Scotland. For these publications, the ratings left by respondents in each user group were as follows.

<i>Scottish Transport Statistics</i>	1	2	3	4	5	Total
‘General interest’	2	0	3	0	1	6
‘Use by local or regional government’	4	12	1	0	0	17
‘Use by Scottish Government (including Transport Scotland)’	5	16	5	0	0	26

<i>Transport and Travel in Scotland</i>	1	2	3	4	5	Total
‘General interest’	0	0	5	0	1	6
‘Use by local or regional government’	3	9	1	0	1	14
‘Use by Scottish Government (including Transport Scotland)’	4	10	3	0	0	17

A Mann-Whitney U-test can be used to reject the hypotheses that the distribution of scores left by the ‘General interest’ group was the same as each of the other groups for Transport and Travel in Scotland. A test statistic of 8 is obtained when the scores from left by the ‘Use by local or regional government’ group are compared to those left by the ‘General interest’ group. With sample sizes of 6 and 14, the critical value for the test statistic at the 5% level is 17, therefore we reject the hypothesis that the distribution of scores between these two groups are the same. Similarly, when comparing the scores of the ‘General interest’ and ‘Use by Scottish Government (including Transport Scotland) groups, a test statistic of 7.5 is calculated, which is below the critical value of 22 for samples of size 6 and 17. We therefore conclude that the distribution of scores left by the ‘General interest’ group is different from both the other two groups; in particular, that the ‘General interest’ group’s scores were *higher*.

For Scottish Transport Statistics ratings, the ‘General interest’ group left the highest median and mean scores; namely 3 and 2.67, compared with 2 and 1.82 for the ‘Use by local or regional government’ group, and 2 and 2.00 for the ‘Use by Scottish Government (including Transport Scotland)’ group. However, there is not evidence at the 5%, or even 10% level to conclude that the ratings by the ‘General interest’ group were higher than either of the other two groups. Mann Whitney U-test statistics were calculated as 31.5 and 54.5, respectively, above the critical values of 22 and 43 required to reject the hypothesis that both samples have the same distribution, at the 10% level.