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Communication and use of migration statistics

Communicating migration statistics in a changing context: challenges and strategies in the UK

Note by Office for National Statistics, United Kingdom*

Summary

The Office for National Statistics (ONS) Centre for International Migration is transforming the way we produce UK migration statistics, making ever greater use of administrative data. Alongside this, there is currently a rapidly changing policy context in the UK and plans for a new immigration system, meaning the demand for evidence is increasing. ONS has therefore used a range of strategies and techniques to improve the way we communicate our migration statistics, ensuring they are relevant and insightful to users and are effective in informing policy and operational decision making.

This paper covers:

- The strategies ONS uses to communicate migration statistics effectively, and the changes we have made to the way we present and visualise statistical findings to support interpretation by users;
- The challenges and successes of communication and dissemination in a transformation context;
- How we have engaged with our stakeholders to identify user needs;
- Our work to collaborate with other organisations and statistical producers across the UK.

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I. Introduction

1. Office for National Statistics (ONS) is transforming the way we produce UK migration statistics, making ever greater use of administrative data to meet user needs. Enabled by data-sharing powers in the Digital Economy Act 2017, our ambition is to put administrative data at the core of our evidence on population and migration. Alongside this, there is currently a rapidly changing policy context in the UK and plans for a new immigration system¹, which means the demand for evidence on migration is increasing. This offers us a well-timed opportunity to reflect on the best way to deliver migration statistics, making fuller use of the data sources available to us to better understand our fast-changing population at both national and local levels, and the wider policy impact and context.
2. To deliver this, we are taking forward a transformation programme based around a framework (figure 1) that puts users at the heart of what we do. Our framework covers the key questions we need to answer in order to meet our users' needs both now and in future, including what concepts and definitions our statistics need to measure, what data and methods we can use to measure these and what outputs we need to disseminate and communicate to our users and the wider public.

Figure 1

Our framework for transforming population and migration statistics



3. This paper focuses on our communication approach - considering this context - and how this has developed since we started our transformation journey. Effective communication is vital to

¹ HM Government, 2018, The UK's Future Skills-Based Immigration System, <https://www.gov.uk/government/publications/the-uks-future-skills-based-immigration-system>

achieving our ambition. Over the last few years, ONS has used a range of strategies to communicate migration statistics and our research, aiming to increase the impact with our users. As we continue to make further developments, in parallel to potential changes to government migration policy, our communication and dissemination strategy will become increasingly important.

4. We discuss how we have engaged with our stakeholders to identify user needs and our work to collaborate with other organisations in the UK; recent developments to the way ONS present the key findings from our migration statistics; and the challenges and successes of communicating with users during a period of transformation.

II. Background: transforming migrations statistics

5. In September 2017, ONS set out our ambition to put administrative data at the core of our migration statistics² and our plan to take forward a transformation programme to deliver this. Since then we have provided regular updates on our programme³, reporting the latest research into how we can use a wider range of data sources to provide an improved evidence base.
6. ONS has long acknowledged that the International Passenger Survey – our current main source of migration flows data - has been stretched beyond its original purpose and that we need to consider all available sources to fully understand international migration. This includes the impact on and contribution to the society, economy and delivery of public services.
7. Since July 2018, we have been embedding administrative data in our regular migration flow statistics – published in the regular ONS Migration Statistics Quarterly Reports (MSQR) - to give our users the best possible assessment of migration trends. In our August 2019 MSQR⁴ we made further progress in our integration of administrative data, using the results of our research into the coherence of migration data sources⁵. Based on the findings, we made preliminary adjustments to our headline measures (see figure 2) using data from the Home Office and Department for Work and Pensions, to provide our best assessment yet of migration trends.
8. As other new data sources become available in future, our plan is to continue to refine our adjustments and reflect this in our migration statistics on an ongoing basis. While we go through this transformation journey, we have reclassified the statistics as ‘Experimental Statistics’, to signal to users that they are undergoing a period of development and innovation. This is in line

² Iain Bell Deputy National Statistician, ONS, 2017, ‘ONS Forum Signals New Era for Migration Statistics’, <https://blog.ons.gov.uk/2017/09/22/ons-forum-new-era-for-migration-statistics/>

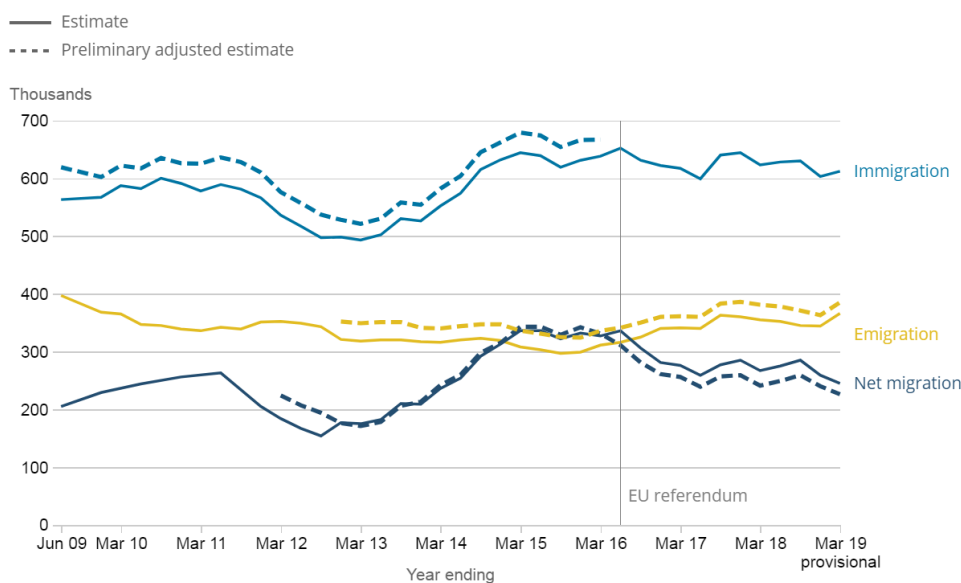
³ ONS, 2019, Transformation of the Population and Migration Statistics System: Overview, <https://www.ons.gov.uk/peoplepopulationandcommunity/populationandmigration/internationalmigration/articles/transformationofthepopulationandmigrationstatisticsssystemoverview/2019-06-21>

⁴ ONS, 2019, Migration Statistics Quarterly Report: August 2019 <https://www.ons.gov.uk/peoplepopulationandcommunity/populationandmigration/internationalmigration/bulletins/migrationstatisticsquarterlyreport/august2019>

⁵ ONS, 2019, Understanding Different Migration Data Sources: August Progress Report, <https://www.ons.gov.uk/peoplepopulationandcommunity/populationandmigration/internationalmigration/articles/understandingdifferentmigrationdatasources/augustprogressreport>

with guidance issued by the Office for Statistics Regulation⁶ and the UK Code of Practice for Statistics⁷, which encourages innovation to improve estimates and better meet the public good.

Figure 2
Long-term international migration, UK, year ending June 2009 to year ending March 2019⁸



Source: Office for National Statistics – Long-Term International Migration (LTIM), LTIM with preliminary adjustments based on DWP and Home Office data

Notes:

1. Preliminary adjusted estimates are shown as dashed lines on the chart.

9. This work sits within the context of our ambition to deliver a transformed population and migration statistics system by 2023, making iterative improvements along the way using the latest available administrative data. This will also support a recommendation to the UK government in 2023 about the future of population and housing censuses in England and Wales.

⁶ Office for Statistics Regulation, 2019, Regulatory Guidance: Experimental Statistics – Statistics in Development, <https://www.statisticsauthority.gov.uk/wp-content/uploads/2019/08/Regulatory-Guidance-Experimental-Statistics-2019.pdf>

⁷ United Kingdom Statistics Authority, 2018, Code of Practice for Statistics, <https://www.statisticsauthority.gov.uk/code-of-practice/>

⁸ Note: Preliminary adjusted estimates for EU8 citizens have been produced for year ending June 2009 to year ending March 2016 and preliminary adjusted estimates for non-EU students have been produced for year ending December 2012 to year ending March 2019. Preliminary adjusted estimates for net migration have been produced for year ending March 2012 to year ending March 2019. This is based on the data available with which to apply adjustments. We will continue to develop this as more data becomes available.

III. Communicating our transformation journey to users of our statistics

10. We recognise that, in order to successfully deliver our transformation programme and to meet users' needs – which are at the heart of our framework (see figure 1) - we need to communicate effectively. We want our transformation to be led by a two-way conversation between us and our users, ensuring that we are delivering in a way that is responsive to their changing needs and the changing policy context in which our statistics are being used. We need to have a good understanding of what our statistics are being used for and by whom, what decisions they inform, and how they could change to better support this. Our strategy is therefore to:
 - (a) Regularly publish research and methods as we develop them;
 - (b) Engage with our users and stakeholders, seeking regular feedback;
 - (c) Use our research findings, the best available data and methods, and the feedback from users to make decisions about which improvements to make each year;
 - (d) Implement changes to our statistics when and where appropriate, clearly communicating these changes to users in advance of making them.

A. Engaging users and gathering feedback

11. A recent example of this approach is our January 2019 'research engagement' report⁹. This set out the latest progress on our transformation journey and focused on asking users a series of questions so we could gather their feedback. This included collecting evidence on what they currently use migration statistics for, what analysis they would like to see in future and the types of outputs they would value (including the timeliness, frequency, accuracy).
12. Alongside the publication of the report, our stakeholder engagement team carried out a process of 'stakeholder mapping' to identify our main user groups and to develop a plan for disseminating the research to each of them and gathering their feedback. In addition to receiving written responses to our engagement report, we also reached out to users via a range of methods, including presenting and discussing our plans with users at dedicated meetings, hosting webinars, roadshows and round table events – and joining up with related population or migration policy events where appropriate. We also regularly publicised our research and requested feedback using newsletters and social media, for example Twitter.
13. We also published an accompanying blog¹⁰ alongside our more detailed research engagement report, which summarised the main messages and findings for users and the wider public. This is an approach we have been taking across our migration publications, as it helps make our research and statistics more accessible by using a compelling narrative and simpler writing style.

⁹ ONS, 2019, Update on Our Population and Migration Statistics Transformation Journey, <https://www.ons.gov.uk/peoplepopulationandcommunity/populationandmigration/internationalmigration/articles/updateonourpopulationandmigrationstatisticstransformationjourneyaresearchengagementreport/2019-01-30>

¹⁰ Jay Lindop, ONS, 2019, Transforming Population and Migration Statistics, <https://blog.ons.gov.uk/2019/01/30/transforming-population-and-migration-statistics/>

14. Our experience shows the real benefits of using diverse engagement methods and establishing a regular feedback loop, as this enabled us to gather a wide range of views, including from representatives of central and local government departments, international organisations, universities and research institutions, think tanks and other independent bodies with an interest in migration statistics.
15. In June we published a follow-up report¹¹ summarising this feedback and setting out the way we would be feeding this into our ongoing programme. The feedback has been crucial for informing our next steps and showed that there was clear support for our ambition to transform migration statistics. Users welcomed the move to put administrative data at the core of our evidence but acknowledged that there are many factors we need to consider. Users highlighted the important role this has in informing a wide range of decisions such as demand for services (including education, healthcare, housing) and suggested that it would be useful to consider different approaches for communicating statistics including dashboards, to encourage a more nuanced understanding of patterns rather than a high-level focus on specific statistics such as net migration.
16. Users also felt that it was important, particularly when considering new statistical outputs covering topics such as the impact and contribution of migration, that we needed to carefully consider the way these are communicated to ensure appropriate interpretation by policy decision makers, the public and the media.

B. Collaborating with the Government Statistical Service

17. Another important aspect of our work has been strengthening our partnerships with other government departments – both as suppliers of administrative data but also as users of migration statistics for informing policy development. This is key to realising our ambition, and so our transformation programme is cross-Government Statistical Service and involves analytical representatives from a range of departments¹² and the devolved administrations in Northern Ireland, Scotland and Wales.
18. We have developed a governance structure to support this, encompassing a GSS Working Group which reports progress to a GSS Steering Group made up of senior analysts. The Groups meet on a regular basis to shape research, gather feedback, share best practice and steer the overall direction of the programme. This has helped to foster cooperation across the departments and to build capabilities in how we can use integrated administrative data to improve migration statistics. This collaboration has been successful in allowing ONS analysts to work increasingly closely with analysts in other departments – including setting up secondments to embed analysts in relevant teams in the Home Office.
19. Alongside GSS partnerships, we also make regular use of, and have established, other expert forums to enable us to share knowledge and shape our research. For example, setting up an Expert Group on Migration Statistics which includes relevant GSS members alongside experts from academia and research organisations, to gather input and peer review on our methodology and support us in meeting user needs.

¹¹ ONS, 2019, Feedback on the Population and Migration Statistics Transformation Programme, <https://www.ons.gov.uk/peoplepopulationandcommunity/populationandmigration/internationalmigration/articles/feedbackonthepopulationandmigrationstatisticstransformationprogramme/2019-06-21>

¹² Including the Home Office (as the lead policy department for migration), the Department for Work and Pensions (DWP), HM Revenue and Customs (HMRC), the Department of Health and Social Care (DHSC) and the Department for Education (DfE).

20. Sharing expertise in this way has been hugely beneficial and is an approach we will continue throughout the delivery of our transformation programme.

IV. Presentation methods and data visualisation

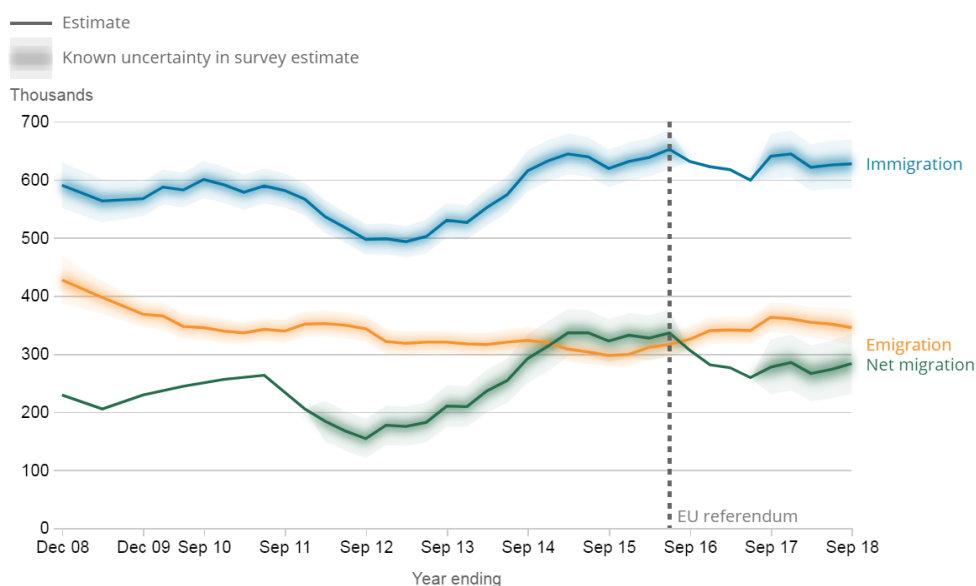
21. Alongside our approach to stakeholder engagement and identifying user needs, an important aspect of communicating our ongoing transformation work is how we present and visualise the statistics themselves. As set out in the ‘Better Statistics, Better Decisions’ strategy¹³, we have been looking for ways to make data, statistics and analysis more engaging and easier to understand, to support accurate and meaningful interpretation. This is increasingly important in a transformation context, where we are looking to change and improve our methods and communicate this clearly to users.

A. Migration Statistics Quarterly Reports

22. We have made several improvements to the way we communicate migration statistics and the design of our reports over recent years, based on the findings from user research. This includes reviewing the length and structure of our reports and ensuring that we focus on main messages upfront and in the prominent ‘Statistician’s comment’ that accompanies each release. This aims to ensure that the main messages are easily accessible and increases the chance that the media uses these in their reporting and coverage of the statistics, thereby aiding correct interpretation by their wider audience.
23. One of the more recent developments to how we present our official estimates aimed to give a clearer illustration of the uncertainty associated with our IPS-based estimates (see figure 3) by displaying confidence intervals as a blurred area around the central estimate.

¹³ UK Statistics Authority and the Government Statistical Service, 2015, Better Statistics, Better Decisions: Strategy for UK Statistics 2015 to 2020, <https://gss.civilservice.gov.uk/wp-content/uploads/2012/12/Better-Statistics-Better-Decisions.pdf>

Figure 3
Long-term international migration, UK, year ending December 2008 to year ending December 2018



Source: Office for National Statistics - Long-Term International Migration

24. This was developed working with the University of Cambridge to explore how we could communicate the statistical uncertainty around our headline estimates in a straightforward, visual way. Feedback from users suggests that many found this approach helpful in communicating that the statistics are estimates, and in helping people to reach a more informed conclusion.

B. Impact and contribution of migration on education and healthcare

25. Alongside the improvements we are making to the regular official estimates of international migration flows to and from the UK, we are also utilising the data sources available to us to provide a better understanding of the impact and contribution of international migration. To deliver evidence that has an impact with users, we have explored how we can make best use of data visualisation in our published articles – taking on board feedback about what approaches they find most useful.
26. In May 2019, we published an article¹⁴ which explored what current data sources tell us about international migration and the number of children requiring school places, the attainment of pupils and the number of teaching and support staff in schools. In August 2019, we followed this with an article about international migration and the healthcare workforce¹⁵, which drew on available administrative data to set out how many migrants work in health care in the UK and

¹⁴ ONS, 2019, International Migration and the Education Sector: What Does the Current Evidence Show,

<https://www.ons.gov.uk/peoplepopulationandcommunity/populationandmigration/internationalmigration/articles/internationalmigrationandtheeducationsectorwhatdoesthecurrentevidenceshow/2019-05-03>

¹⁵ ONS, 2019, International Migration and the Healthcare Workforce,

<https://www.ons.gov.uk/peoplepopulationandcommunity/populationandmigration/internationalmigration/articles/internationalmigrationandthehealthcareworkforce/2019-08-15>

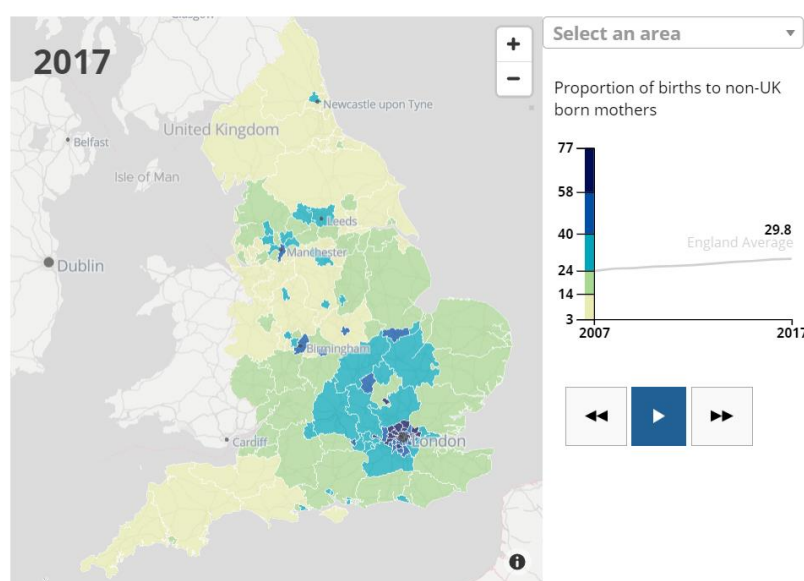
explore their age, location and changes over time. These articles offered us a good opportunity to make use of different data visualisation approaches, including interactive tools, to support out users in engaging with these statistics.

27. For example, figure 4 shows one of the interactive maps used to show the proportion of births to non-UK born mothers by area in the UK, to set the context around the available statistics on school place demand.

Figure 4

Interactive map: Proportions of births to non-UK born mothers, England, 2007 to 2017

Proportion of births to non-UK born mothers, England, 2007 to 2017



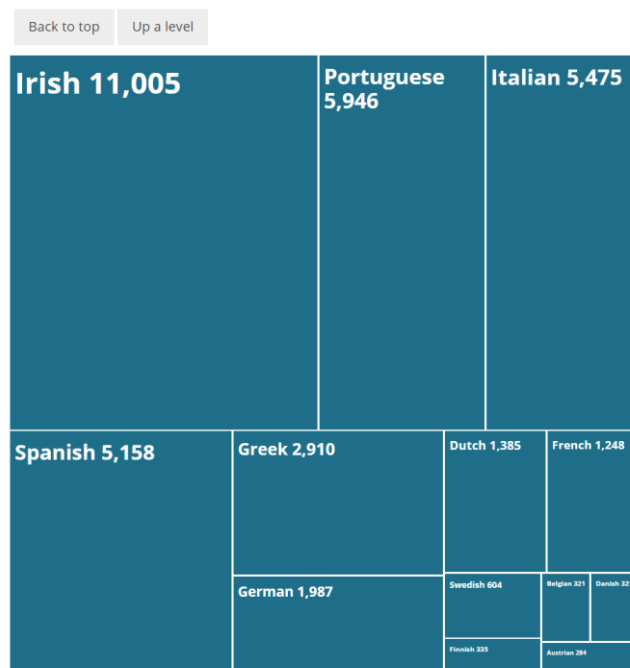
Source: Office for National Statistics - Birth registrations

28. Figure 5 shows where we have made use of Treemap charts to display data on nationality of staff within the National Health Service. This demonstrates the proportions of each nationality, using the area allocated to each category, and allows the user to drill up and down levels so that they can find splits for overall EU or non-EU and then drill down to the individual nationalities within these groups.

Figure 5
 Interactive: National Health Service and Community Health Services staff working in Trusts and Clinical Commissioning Groups in England, March 2019

NHS HC/S healthcare staff working in Trusts and CCGs by nationality, England, March 2019

Total: 913,789



Source: NHS Digital - NHS Workforce Statistics

V. Future plans and challenges

29. As we continue to develop our methods and put further administrative data at the core of our migration statistics, one of the main challenges we are addressing is how to communicate our research and statistics in a clear and engaging way, whilst also ensuring that users understand the changes we are making and why.
30. Our recent move to reclassify UK migration statistics as ‘Experimental Statistics’ has put more focus on our transformation programme in the media and public domain. Users have asked a range of questions about what this means for the quality of our underlying data and the impact this has on the story the statistics are telling.
31. This feedback highlights the importance of our future communication strategy and how we explain our transformation journey to users. We therefore plan to continue to regularly update users on our progress and iteratively publish the results of our research. We are also continuing to adapt our approach to address the areas that are most important, based on feedback:
 - (a) *Communicating “one version of the truth”* - We are reviewing the way we display our preliminary adjustments in our charts (see figure 2) to make it simpler to interpret our assessment of migration trends. Particularly given that we will continue to make

refinements to our methods over time and need to find the best approach of communicating this to our users;

- (b) *Displaying uncertainty in a multi-source world* - We are *also* reviewing the way we display uncertainty in our statistics and accompanying charts (see figure 3), given that we are now making use of further administrative sources and need to develop new approaches to take this into account;
- (c) *Communicating how we are putting administrative data at the core of our statistics* - many of our users are less familiar with the data sources we use to measure migration, which risks misinterpretation around why we are moving from a largely survey-based system to a more administrative data-based system. We are therefore looking to develop a strategy for communicating this journey to our non-expert users and inquiring citizens¹⁶, including options for developing new infographics or explainers to support our ongoing transformation journey.

VI. Conclusion

- 32. ONS is transforming the way we produce UK migration statistics, making ever greater use of administrative data to meet user needs. Alongside this, there is currently a rapidly changing policy context in the UK and plans for a new immigration system, which means the demand for evidence on migration is increasing. This offers us a well-timed opportunity to reflect on the best way to deliver migration statistics, making fuller use of the data sources available to us.
- 33. In order to successfully deliver this transformation and meet users' needs – which are at the heart of our transformation framework – we need to communicate effectively. Our strategy is to regularly publish our research and methods as we develop them, engage with our users and stakeholders on an iterative basis and clearly communicate any changes to users in advance of making them.
- 34. We have been engaging our users using a variety of methods, a recent example being our January 2019 'research engagement' report and our subsequent approach to gathering feedback, which encompassed a range of forums, presentations and interactive events. We have also established close partnerships with departments across the Government Statistical Service (GSS) to facilitate the sharing of data, expertise and to shape our ongoing research programme.
- 35. Alongside user engagement, another important aspect of our ongoing research is considering how we present and visualise our statistics and communicate the transformation journey we are undertaking. This is increasingly important in the context of change, not just to our statistical methods but also in the wider context of potential policy changes. We have been developing our statistics and research publications to make them more engaging and easier to understand, including reviewing the structure, visuals and use of interactives – and ensuring that the main messages aid interpretation by all users.

¹⁶ ONS, 2018, User Personas, <https://style.ons.gov.uk/writing-for-the-web/personas/inquiring-citizens/>

36. There is more we want to do to continue refining the way we communicate migration statistics, including how we present our administrative data-based preliminary adjustments and how we communicate statistical uncertainty in a multi-source world. These are areas we will continue to focus on over the next year following our reclassification of migration statistics to 'Experimental Statistics' to signal that they are undergoing a period of development and innovation. We plan to continue engaging with our users on an iterative basis throughout and welcome feedback on our plans.
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