Evaluation of the Updated ONS Approved Researcher scheme, June 2017

Executive Summary

Background: The Approved Researcher scheme is used by ONS to grant access to data that cannot be published openly, for statistical research purposes, as permitted by the Statistics and Registration Service Act 2007 (SRSA). To access data through the scheme, an individual must hold ONS Researcher Accreditation and have their research proposal approved by the ONS Microdata Release Panel (MRP), on behalf of the National Statistician. MRP ensures that ONS data is used for statistical research purposes that serve the public good and access is granted to researchers in a safe and consistent manner, in line with legislation and ONS policies.

Following a review and public consultation, ONS updated the scheme in July 2016. We have evaluated the impact of the changes and this report summarises the outcomes of these and Approved Research scheme activity for 2016/17. The highlights for this period are:

Improvements to Approved Researcher scheme

• The updated scheme has been well received by users. All the aims have been achieved and 74% of researchers surveyed report they are satisfied with access to ONS research data through the scheme.
• Researchers report that, on the whole, the revisions to the scheme have reduced the administrative burden on them, resulting in a more effective and efficient approvals process.
• Overall satisfaction with the scheme is 68%. This is positive, although we recognise there is room for improvement. An action plan setting out how we will further refine the scheme is attached at Annex A. We are committed to working with you to achieve this.
• Through our collaboration with the UK Data Service (UKDS), there are now over 30 published case studies demonstrating how ONS research data is informing policy and decision making. This is helping to demonstrate the value of the scheme and the important research findings.

We are meeting the increasing demand for research

• There has been an increase in requests for unpublished ONS data and applications to be an Approved Researcher. 1,060 researchers were accredited from July 2016 to March 2017, including an increasing proportion of private sector researchers.
• Almost 340 new Accredited Researcher applications were received between July 2016 and March 2017.
• ONS trained 334 researchers in 2016/17 – almost double the number trained in 2015/16.
• Additional high quality data has been made available in the VML and there are over 200 active projects in the VML. This exceeds the UK Statistics Authority's targets.
• The first ONS Economic Statistics Centre of Excellence (ESCOE) projects underway and will access data in the VML in 2017/18.

Protecting the confidentiality of data subjects

• ONS places the highest priority on protecting the confidentiality of data subjects and it continues to ensure that very robust arrangements are in place.
• Since the establishment of the scheme (in 2008), no personal information has been shared or disclosed unlawfully.
• Investigations into six suspected breaches in 2016/17 concluded that five of these were non-compliance with procedures. There was no breach in the sixth case.
• The discontinuation of downloads of ONS Special Licence data is helping to mitigate the risk of disclosure of personal information.
• MRP is working closely with the National Statistician's Data Ethics Advisory Committee (NSDEC) to ensure the ethical and public benefit consideration of research projects.

Updated Approved Researcher scheme

Following a review and public consultation, we updated the scheme in July 2016. The aims of the changes were to:
- Increase the use of data owned by ONS for statistical research purposes for the public good
- Simplify and improve arrangements for the Approved Researcher scheme to:
    - Increase transparency;
    - Clarify the criteria and conditions for which access to research data will be granted; and
    - Reduce the administrative burden on researchers and ONS; and
- Ensure the safeguards governing data privacy and protecting respondent confidentiality remain appropriate.

The main changes to the scheme included:
- Accredited Researchers and their research projects will be approved separately;
- Researchers must meet explicit qualifications and/or research experience requirements to be granted accredited status. They must also successfully complete the Safe User of Research data Environments (SURE) training, sign an Accredited Researcher declaration and agree to the publication of their name and current research projects on a public record;
- Provisional Accredited Researcher status may be granted to individuals without the required qualifications or research experience, provided they have the appropriate supervision;
- Accredited Researchers will be approved for a period of five years before a renewal application is required;
- To allow "on-going" access to datasets, for an agreed period of time and up to a maximum of five years before another application is required;
- Accredited Researchers from the private sector will be allowed to access the data subject to meeting the required criteria. Their projects would also be referred to the National Statistician's Data Ethics Advisory Committee (NSDEC) for consideration of the ethical use of the data and the public benefit to the UK of the research; and
- The definition of "public good" that must be satisfied for a research project to be approved was clarified and updated.

Updated Approved Researcher (AR) scheme
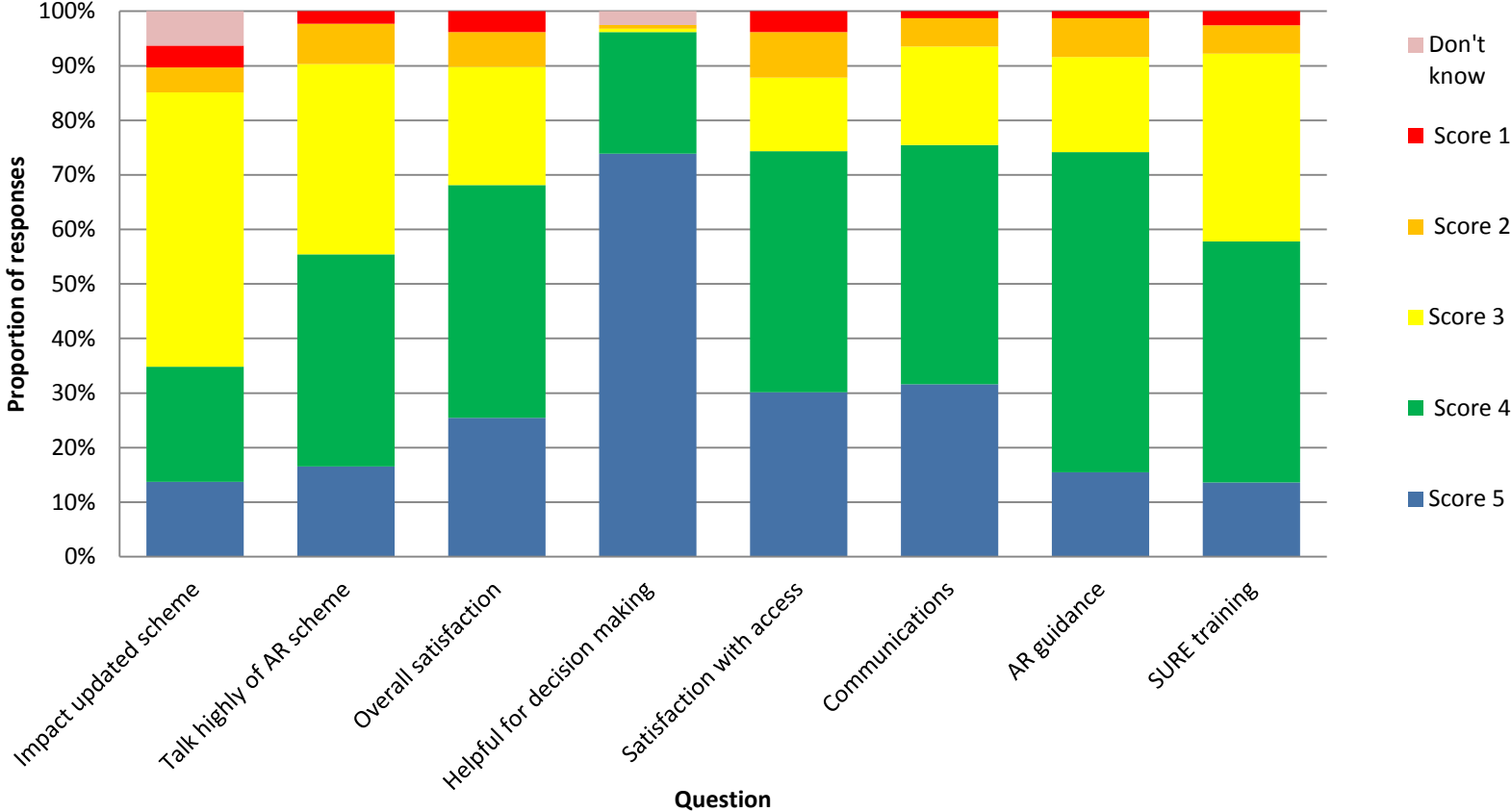
Impact of the changes

Following the revisions in July 2016, there has been an increasing demand for information on the scheme and an increase in the number of applications to be an accredited researcher. In response, we have increased the number of training courses we run and trained almost twice as many researchers in 2016/17 (compared with 2015/16) to meet the demand. Pages 8 – 10 provides a summary of this activity. Feedback from researchers (pages 4 – 7) on the scheme has generally been positive. A survey of Approved Researchers carried out in Feb/March 2017, received 176 responses and highlighted that:

- 96 per cent of respondents considered that ONS research data are 'very helpful' or 'helpful' for decision making (74% of all respondents stated they were 'very helpful');
- 74 per cent of researchers were 'very satisfied' or 'satisfied' with their access to research data through the scheme;
- 12 per cent of respondents were 'very dissatisfied' or 'dissatisfied' with their access to research data. Some cited the decision to stop the downloading of ONS Special Licence data and the geographical challenges associated with accessing the data in the VML as an issue for them;
- 68 per cent of researchers were 'very satisfied' or 'satisfied' overall with the scheme;
- 76 per cent of researchers were 'very satisfied' or 'satisfied' with ONS and/or UK Data Service communication with them;
- Over half (56 per cent) of the respondents would talk positively about the scheme if asked for their opinion. Only 9 per cent would be critical; and
- Over one-third (35 per cent) of respondents considered that the updated scheme had improved their access to ONS research data. Nine per cent of respondents stated that their access had deteriorated. The majority of these were unhappy about the decision to stop the downloading of ONS Special Licence data.

Although the feedback is positive, there are identified areas for improvement (pages 5-6). An Action Plan setting out how we will refine the scheme further and respond to researcher feedback is set out at Annex A.

Summary of findings from the Approved Researcher survey

Responses to Approved Researcher survey March 2017

Notes: Score 5 = 'Very helpful'/'Very satisfied'/'Talk highly'. Score 1 = 'Very unhelpful', 'Very dissatisfied', 'Talk critically'
Response answers to questions on Impact of the updated scheme and Helpfulness of data include 'Don't knows'

Summary of survey feedback

Reduced administrative burden on ONS and researchers:
- Researchers welcomed the decisions to separate the researcher and project application and to extend researcher accreditation and access to the requested data for a period of up to five years.
- ON the whole, researchers felt that the updated scheme had resulted in a more efficient approvals process
- A minority of respondents felt that the approval processes could be streamlined further to help reduce administration times. Some commented that it took longer than expected to approve their project and/or researcher applications.

Transparency and clarity on the criteria and conditions for which access to ONS research data is granted
- The majority of respondents welcomed the revisions and considered that they would enhance transparency (e.g. the publication of a public record of Accredited Researchers and the findings from their research).
- Some researchers sought greater clarity and transparency on the application processes (e.g. regular status updates, estimated approval times). We will address this and revise our guidance documents to ensure they provide greater clarity on these points.

Access to research data through the Approved Researcher scheme:
- 74 per cent of respondents were 'very satisfied' or 'satisfied' with access to ONS research data through the scheme.
- 12 per cent of respondents were 'very dissatisfied' or 'dissatisfied' with their access.
- 9 per cent of respondents reported that the updated scheme had reduced their data access. A number of researchers attributed this to the discontinuation of downloads of ONS Special Licence data. ONS will respond separately on the outcomes of the review of its Special Licence data.
- Some users also identified difficulties with physically accessing the data or attending training due to geographical reasons (e.g. access to the VML is only available at limited locations, i.e. ONS offices , Northern Ireland Statistics and Research Agency (NISRA) office in Belfast, National Records for Scotland office at Glasgow.

Feedback from the survey (continued)

Training
- Researchers reported that the Accredited Researcher training was beneficial and had improved their awareness of data security.
- A number of respondents articulated that refinements could be made, e.g. increase the number of, and publicity for, courses beyond London, Titchfield and Colchester locations. Some also felt that the length of the course could be shortened.
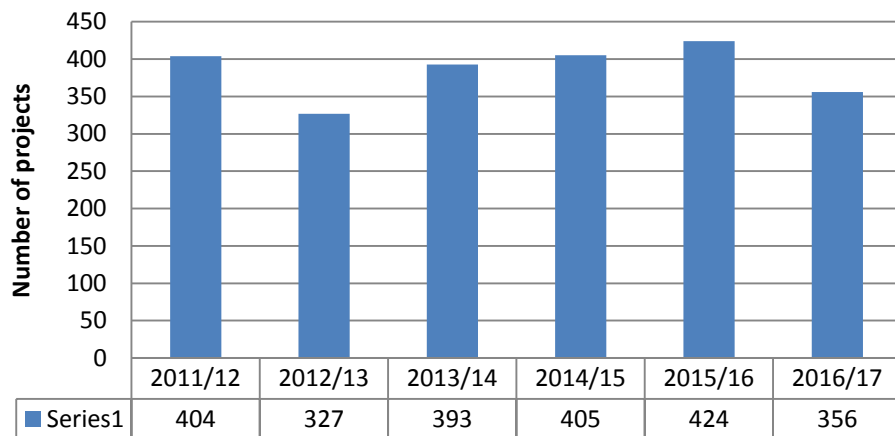
Communication:
- 76 per cent of respondents were 'very satisfied' or 'satisfied' with ONS communication and a number of researchers provided very complimentary (and unsolicited) responses about the high quality of support provided by ONS and UK Data Service staff.
- A handful of users highlighted that communication on the progress of their project application could be improved. We will take forward actions to address this.
- Some researchers highlighted that an online community for researchers would be beneficial for ONS to provide regular updates and for researchers to ask questions. We have now created an Approved Researcher community on Stat User Net.
- ONS and the UK Data Service will continue to develop our engagement with researchers so that a greater proportion feel they are receiving a high quality service and are valued.

Impact:
- Researchers commented on the significant benefit of access to high quality and detailed data for statistical research. Over 96% of the survey respondents reported that ONS research data was helpful or very helpful for decision making.
- 80 respondents indicated that they would be willing to work with us to produce case studies to demonstrate the impact and public benefit of their research. We will contact these researchers shortly to follow up on this. Our objective is to publish at least 10 new case studies in 2017/18.
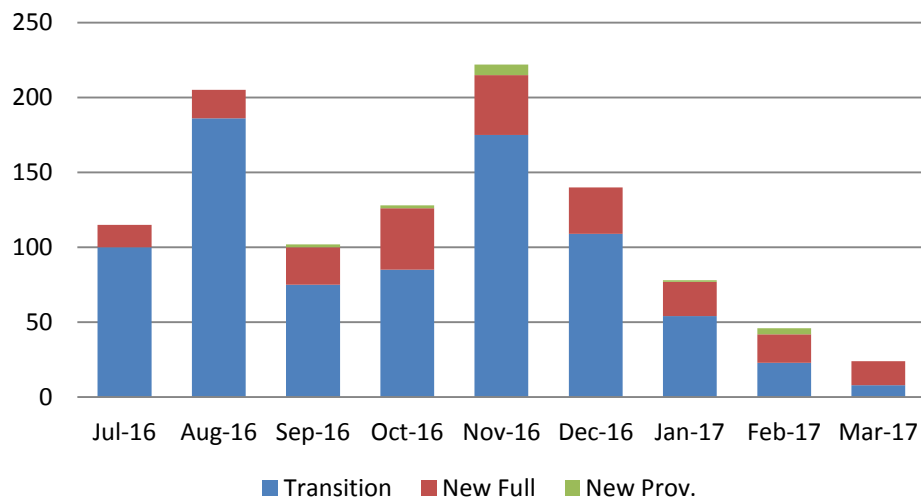
Approval of projects and researchers

MRP approved projects each year

	2011/12	2012/13	2013/14	2014/15	2015/16	2016/17
Series1	404	327	393	405	424	356

- The number of approved projects is reasonably consistent over the last 6 years
- There have been over 10 private sector projects (often on behalf of a public sector organisation) since the scheme was updated. All of these have been considered by NSDEC regarding the ethical and public benefit use of the data.
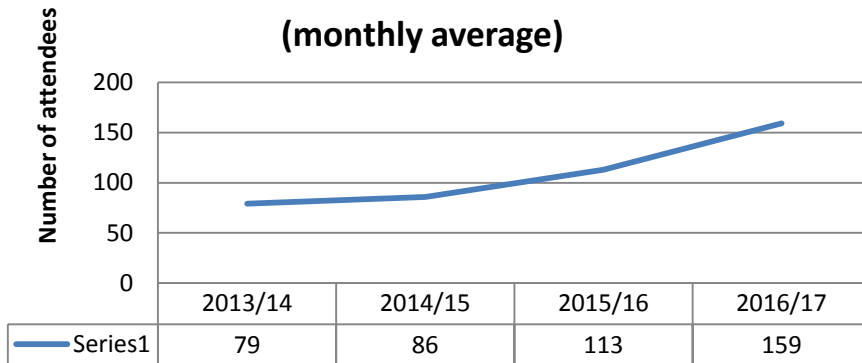
Accredited Researchers approved by month

Legend: ■ Transition ■ New Full ■ New Prov.

- Since introduction of updated scheme, a total of 1,060 researchers have been accredited
- Of these, 815 researchers have transitioned from the old scheme and there has been 245 newly approved researchers
- The number of new applications (full & provisional) shows a general increase since July 2016 (there has been a fall in approvals in Feb and March 2017 due to fewer training courses
- Peaks in monthly numbers correspond with reminder emails to researchers yet to transition. We expect a spike in July 2017 when the transition period expires.
- The number of monthly AR applications pre- and post-July 2016 are not comparable due to changes in the application process
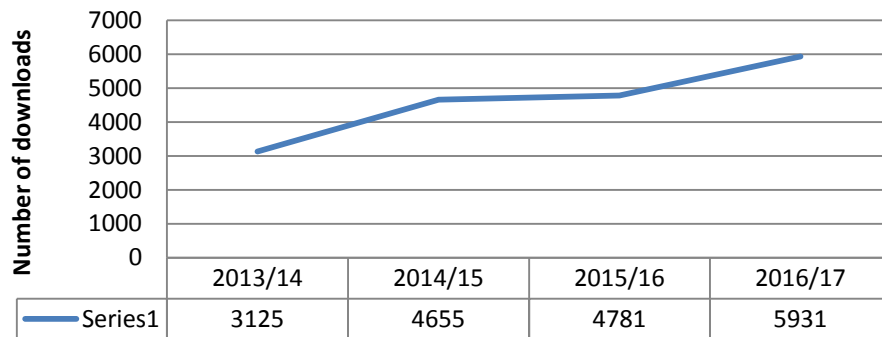
Increasing the use of ONS data

Researchers booked into VML
(monthly average)

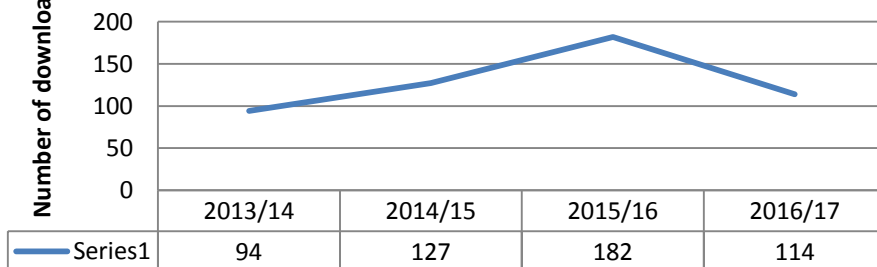|	2013/14	2014/15	2015/16	2016/17
Series1	79	86	113	159

Y-axis: Number of attendees (0–200)

- Researcher use of the VML has increased year on year and has been more pronounced over the last two years.
- In 2016/17, there were 1,907 bookings by researchers in the VML.
- A total of 394 unique researchers have accessed the VML in 2016/17
- Currently there are 225 active projects within the VML. This exceeds the UK Statistics Authority's target

Downloads of End User Licence data (monthly average)

	2013/14	2014/15	2015/16	2016/17
Series1	3125	4655	4781	5931

Y-axis: Number of downloads (0–7000)

- The number of average monthly EUL downloads has increased year on year since 2013/14
- The Labour Force Survey, Annual Population Survey and General Household Survey were the most downloaded EUL datasets over the last four years.
- EUL data is not considered personal information and users do not need to be accredited to access it.
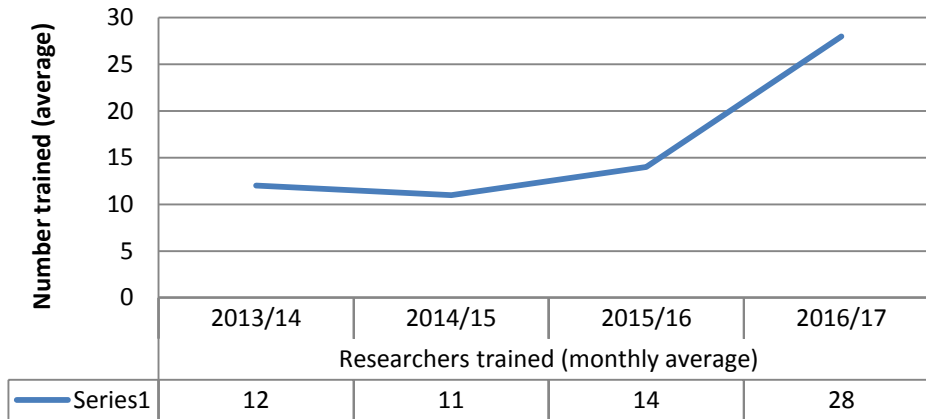
Average monthly Special Licence downloads

	2013/14	2014/15	2015/16	2016/17
Series1	94	127	182	114

Y-axis: Number of downloads (0–200)

- There was an anticipated fall in 2016/17 ONS Special Licence downloads following discontinuation of new applications for download access from 5 Nov 2016
- Labour Force Survey and Annual Population Survey were the most downloaded datasets
- The number of ONS Special Licence downloads average fewer than 10/month since Jan 2017. These are for legacy projects
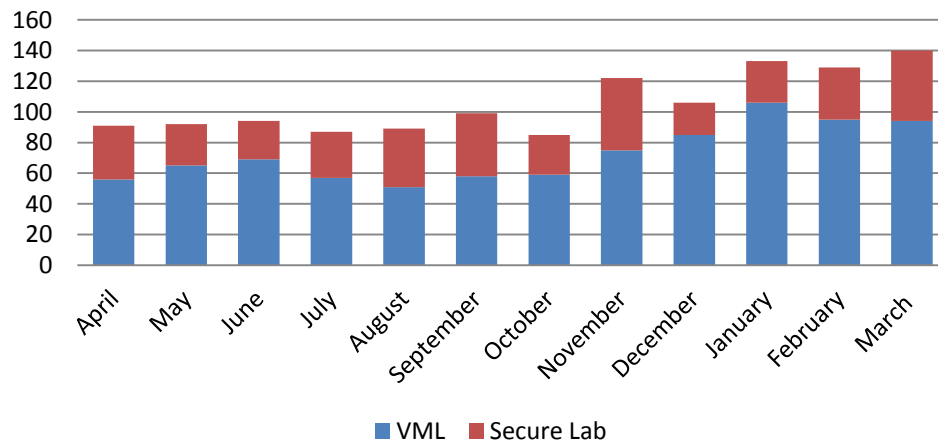
We are responding to this increasing demand

Researchers trained by ONS

Researchers trained (monthly average)	2013/14	2014/15	2015/16	2016/17
Series1	12	11	14	28

- There has been a large increase in the number of researchers trained by ONS in 2016/17 due to increases in the numbers of AR applications and ONS and OGD researchers using the VML.
- A total of 334 researchers were trained by ONS in 2016/17. This compares with 171 in 2015/16.
- 286 researchers were trained between August 2016 (following updated AR scheme) and March 2017.
- The UK Data Service also trained over 100 researchers accessing ONS data

Number of output clearances in VML and Secure Lab

- Since the introduction of updated scheme, there has been an increase in the number of outputs requested for clearance.
- The graph shows the number of outputs cleared by ONS (in the VML) and the UK Data Service (in the Secure Lab) by month

Conclusions from Evaluation of Updated Approval Scheme

- The aims of the updated Approved Researcher scheme have been met.

- We are making further refinements to the scheme in response to user feedback.

- The changes have resulted in:

  - **An increase in the use of data held by ONS for statistical research purposes for the public good** . There has been increased usage of the VML and Secure Lab as well as the download of ONS End User Licence (EUL) datasets (Note: to access EUL data, researchers do not have to be Accredited). There has also been an increase in the number of applications to be an Accredited Researcher. We will take forward work to develop the capacity and connectivity (e.g. remote access) of the VML.

  - **A reduction in the administrative burden on ONS and researchers**. A number of researchers commented on, and welcomed, the new streamlined arrangements to gain access to ONS research data.

  - **Increased transparency**: We have published a record of all accredited researchers and their research projects since October last year. However, there is more to do to ensure the approval processes are clearer and we will publish additional guidance and updates on this. We will also do more to keep researchers informed of progress with their project applications.

  - **A greater focus on the public benefit to the UK achieved by the research**. Almost all respondents to the Approved Researcher survey consider that the research data is helpful to decision making. In collaboration with the UK Data Service, we are working with researchers to produce case studies that demonstrate the benefit of their analyses. Consideration of private sector research proposals by the National Statistician's Data Ethics Advisory Committee is also helping to provide further clarity and focus on public good.

  - **A continued commitment to ensuring that safeguards governing data privacy and protecting respondent confidentiality remain appropriate.** Following concerns about the risk of disclosure of data subjects resulting from researcher access to ONS Special License data, we have stopped downloads of these data. We will be reporting separately on the findings and outcomes of our review of ONS Special Licence data.

Virtual Microdata Laboratory developments

- **VML – Increased demand :**
  - Each month, the VML has consistently exceeded the UK Statistics Authority's business plan target to *'deliver at least 200 projects within the VML'.*
    - Currently there are 225 active projects within the VML and over 800 active researchers.
  - In addition to the increased external demand seen over the year, the VML has facilitated several high profile internal and external research and policy projects, including:
    - Prime Minster's Race Disparity Audit.
    - Pay Progression analysis to support the Department for Work and Pensions (DWP).
    - Evaluating the impact of Migrant Workers on the London Economy by Price Waterhouse Coopers (PwC)

- **VML - More data available :**
  - The VML continuously monitors usage and listens to the needs of the research community to exploit more and more data, helping to deliver public benefit.
    - Over the last year, the VML has made more data available for research by proactively working with business areas across ONS and the Government Statistical Service (GSS) to make their data available. A particular focus has been to provide business data that can help policy teams better understand economic trends.

- **VML - Better data available :**
  - Data in itself has little value unless its benefit can be easily realised and understood.
    - The VML has developed a research data framework to improve metadata, documentation and variable catalogues. This work is ongoing with the next phase focusing on supporting data owners to deliver VML research data that has better usability and utility, therefore ultimately helping to maximise benefit from their research.

- **VML – Delivering public benefit and stimulating 'Safe Use' within the VML :**
  - To help build awareness and understanding of the value of the VML and the wealth of data that can be made available, a number of activities have been carried out. These include:
    - Over the last year, the VML has developed workshops to supplement the SURE researcher training . These workshops specifically highlight the potential of the VML and the rich data resources to help stimulate policy research.
    - The aim of the workshops is to demonstrate real live issues with social and business data to help demonstrate how the VML and the data within can be used to answer policy needs.
    - Currently, these workshops have been run at the Department for Business, Energy and Industrial Strategy (BEIS) , Scottish Government and in ONS, with plans to hold similar events at the Bank of England and with other government departments.

Protecting the confidentiality of data subjects

- Protecting the confidentiality of data subjects is of the upmost priority for ONS. Since the establishment of the scheme (in 2008), no personal information has been shared or disclosed unlawfully.

- There were six suspected breaches by Approved Researchers in relation to access to ONS research data during the year. All of these were investigated by ONS and/or the UK Data Service.

- The investigations concluded that in five of the six instances, procedural non-compliance with the terms and conditions to which access to identifiable data was granted (e.g. remote access to a secure environment from a home-based rather than office-based account, seeking clearance of outputs outside of the secure environment) occurred. The investigation into the other case concluded that no breach occurred.

- The action taken against the researchers included: disablement of their account during the investigation; temporary suspension of their AR accreditation and data access; and a requirement to re-train. ONS also asked the relevant organisations to update their procedures to ensure they protect data subject confidentiality and avoid unlawful data access breaches, as appropriate.

- Two of the suspected breaches were for access to ONS Special Licence data. This highlights the risks associated with researchers downloading data considered personal information under the Statistics and Registration Service Act 2007. This risk should no longer exist following our decision to stop the downloading of ONS Special Licence data by Approved Researchers.

Acknowledgements

The Microdata Release Panel would like to express its thanks to the following:

• The UK Data Service for their help in producing this report and for their excellent support in managing the Approved Researcher scheme and the governance of ONS data.

• ONS survey teams for their help in making data available for research and their advice to researchers on the feasibility of their analyses

• All the researchers that took the time to respond to our Updated Approved Researcher scheme survey in February/March. The feedback is really beneficial in helping us to further refine the scheme.

• All those researchers that have agreed to work with us to produce a case study demonstrating the impact of their analysis. We will contacting these researchers shortly.

Annex A: Approved Researcher scheme Action Plan 2017/18

Action	Planned outcomes	Deadline
Create an online community for Accredited Researchers	-Increase sharing of information between, and support for, researchers.	Community created on www.statsusernet.org.uk
Revise Accredited Researcher guidance documents	- Produce more helpful guidance that takes account of feedback from researchers and NSDEC. - Provide examples of good applications	July 2017
Provide greater clarity on anticipated timescales for Accredited Researcher and project applications, including MRP & NSDEC meeting dates	- Increased transparency. - Reduction in application times. - Help researchers manage their projects more effectively.	July 2017
Ensure researchers are kept informed of the status of their applications.	- Increased transparency. - More timely updates on applications. - Build stronger relationships with researchers. - Help researchers manage their projects more effectively.	Ongoing
Develop a system whereby researchers can submit online applications and log in to check the status of their applications		January 2018
Review the research project application form, e.g. to include requested location of data access	- Help researchers manage their projects more effectively. - Reduction in application times.	July 2017
Revise the syllabus for Accredited Researcher training to place a greater emphasis on desired behaviours	Greater protection of confidentiality of data subjects.	June 2017

Approved Researcher scheme Action Plan 2017/18 (continued)

Action	Planned outcomes	Deadline
Revise AR web pages to include additional information on the VML.	- More efficient application process - Reduced burden on researchers	July 2017
Work with researchers and the UK Data Service to develop additional case studies and organise events to demonstrate the impact and public benefit of analysis using ONS research data.	- Improved understanding of researcher needs. - Demonstrate the public benefit and value of analysis using ONS research data	Case studies: ongoing Impact event: December 2017
Continue to develop the VML capacity and connectivity to enhance access to the data. Make more high quality data available in the VML to support researchers.	- Increased access to ONS secure environment settings	Ongoing
Remove the transitional arrangements for Accredited Researchers	- Conclusion of the transition phase on 12 July 2017	July 2017
Report on progress to deliver the Action Plan.	- Further refine the AR scheme and notify researchers of progress made	December 2017
Carry out a further customer survey to gauge researcher feedback on the Approved Researcher scheme developments.	- Evaluate whether the AR scheme is meeting the needs and expectations of users.	March 2018