

# **UK STATISTICS AUTHORITY**

**Thursday 28 September 2017**  
**Northern Ireland Statistics and Research Agency, Belfast**

## **Present**

### **UK Statistics Authority**

Sir David Norgrove (Chair)  
Professor Sir Adrian Smith (Deputy Chair)  
Mr Jonathan Athrow  
Ms Sian Baldwin  
Mr Iain Bell  
Dame Colette Bowe  
Mr Ed Humpherson  
Ms Nora Nanayakkara  
Dr David Levy  
Mr John Pullinger  
Ms Heather Savory

## **Also in attendance**

Mr Robert Bumpstead  
Ms Siobhan Carey  
Mr Joe Cuddeford  
Ms Emma Rourke

## **Apologies**

Dame Moira Gibb  
Professor David Hand  
Professor Jonathan Haskel

## **1. Apologies**

- 1.1 Apologies were received from Dame Moira Gibb, Professor David Hand and Professor Jonathan Haskel.

## **2. Declarations of interest**

- 2.1 There were no new declarations of interest.

## **3. Minutes and matters arising from previous meetings**

- 3.1 The minutes of the previous meeting held on 20 July 2017 were agreed.
- 3.2 The Chair reported on the topics discussed at the meeting of the non-executive directors that had taken place prior to the start of the Board meeting.

## **4. Report from the Authority Chair**

- 4.1 The Chair reported on his recent activities, noting the following.
- i. The Chair had written to the Foreign Secretary about statements made about the amount that might be available for extra public spending after the UK leaves the European Union.
  - ii. The Chair had written to the Home Secretary about the early disclosure of Home Office migration statistics ahead of their scheduled release.
  - iii. In general the communication of migration statistics numbers could be better. ONS was reviewing this.
  - iv. The Chair had met Chris Wormald, Permanent Secretary at the Department for Health, which was looking to provide a better regular publication of health statistics.
  - v. The Chair had met the BBC statistics team who had spoken positively about ONS, though had noted that engagement across the wider GSS was more variable.
  - vi. The Chair would soon be meeting with the Minister for the Constitution and would raise the succession of non-executive directors to the Authority Board. The Chair would also be meeting the Chair of the Public Administration and Constitutional Affairs Select Committee the same day.

## **5. Report from the Chair of the Regulation Committee**

- 5.1 Sir Adrian reported on the meeting of the Regulation Committee of 7 September. The meeting had considered the Retail Prices Index, the Children, Education and Skills domain, and trade statistics.

## **6. Report from the Chair of Audit and Risk Assurance Committee**

- 6.1 Dame Colette reported on the meeting of the Audit and Risk Assurance Committee of 13 September. The Committee had welcomed the appointment of Nick Bateson to the role of Director of Finance at ONS. The meeting had considered the mid-year financial position and forecast spend for 2017/18.

## **7. Report from the Chief Executive [SA(17)33]**

- 7.1 Mr Pullinger provided an overview of activity and issues for August and September. This had been a busy period with a number of notable releases including on trade asymmetries, migration and flow of funds. Several data collection technology milestones had been met. Alongside the positive developments there had been some operational glitches regarding minor errors and the timeliness of website publishing.
- 7.2 The Board considered the importance of good communication of statistics. It was important that statisticians had the capability, confidence and support from their colleagues to communicate statistics frankly and openly. One potential barrier to statisticians speaking publicly about statistics was a concern that they may be asked about the politics of the issues raised. Some departments had been successful in this regard by putting statisticians alongside communications colleagues.

**8. Better Statistics, Better Decisions: Three years on [SA(17)34]**

8.1 Mr Pullinger introduced a note which covered a draft document, *Better Statistics, Better Decisions: Three years on*.

8.2 Subject to some further drafting amendments in light of comments, the document was approved.

**9. Report from the Director General for Regulation [SA(17)35]**

9.1 Mr Humpherson introduced a paper which provided an update on regulation activity since the last Board meeting.

9.2 The Board noted that the consultation on the revised Code of Practice for Official Statistics would close soon. A report on the main issues arising from the consultation would be provided to the Board in October.

**10. Improving migration statistics [SA(17)36]**

10.1 Mr Bell and Ms Rourke introduced a paper which set out ONS plans to further develop UK migration statistics. The paper set out priorities for the coming year, longer term goals underpinned by access to new data sources, and an approach for engaging stakeholders across the statistical system.

10.2 The following comments were made in the discussion.

- i. Given the need to negotiate access to key datasets, the timetable was ambitious. If successful this could be a flagship example of the way ONS was changing, including technology, culture, analysis and dissemination.
- ii. Where the paper referred to 'clarity of opinion' it was confirmed that this was about forming a professional judgement on what the sum of the statistical evidence was.
- iii. There was an element of prioritisation in terms of which datasets would be brought in first. While the Digital Economy Act would provide important powers it would be necessary to build and maintain relationships with data owners.
- iv. There was political will behind this programme; decision makers across government were keen to have better data on migration. A cross-government migration statistics steering group had been established to ensure a joined up approach.
- v. In terms of the timeline it would be helpful if the milestones were clearer about what each step would bring in terms of new knowledge about migration.
- vi. Good communication of migration statistics would be essential. The risk of misunderstanding or misreporting of statistics could be reduced by better communication of the overall narrative by ONS.

10.3 Subject to these comments, the Board supported the plans set out in the paper.

**11. Statistical Classification Decisions Following EU Exit**

11.1 Mr Athow provided an update on issues surrounding statistical classification after EU exit.

11.2 The meeting heard that the current approach to classifications was based on the UK being a member of the European Statistical System (ESS), where Eurostat set the rules for classification and could also undertake an 'audit' function. Depending on the outcome of the withdrawal negotiations, different scenarios for the UK's membership of the ESS were possible. In each of these scenarios, an approach to classifications decisions would be necessary, with various ways to set the framework of rule setting and auditing.

11.3 It was noted that the question of what statistical classifications framework was right for the UK would depend on the outcome of withdrawal negotiations and the UK's broader relationship with EU institutions. It would be important in any case to ensure that the system was independent and credible, with strong assurance in place.

11.4 The Board welcomed the early consideration of these issues.

## **12. The Priorities and Plans of the Data Science Campus [SA(17)37]**

12.1 Ms Savory introduced a paper which outlined the priorities and programme of activities for the Data Science Campus at ONS for 2017/18 and beyond.

12.2 The meeting considered the prospect of investment from commercial organisations. It was confirmed that such investment would always require full alignment with the public good function of the Authority. It was agreed that the Board wished to set out principles and parameters for commercial sponsorship.

12.3 In considering the relationship between the Campus and the Authority's broader strategic goals, the following comments were made.

- i. The Campus had a number of research themes. Within these themes a remit had been specified that no project should take longer than six months and all results should be published.
- ii. The connection between the activities of the Campus and the Authority's strategic goals could be expressed more explicitly.
- iii. The Campus served to build analytical capability. The apprenticeship scheme in particular was showing early promise in this regard.
- iv. The current capacity of the Campus had delivered tangible research outputs of value. It was confirmed that there was latent demand for data science projects within the core business that the current capacity of the Campus could not meet. Expansion of the Campus would help meet this.
- v. There was also a transformative element to the Campus. In the future, 'normal' outputs would be produced using very different data sources and techniques which the Campus was helping to develop.

12.4 Regarding governance it was confirmed that the Campus was a Directorate of ONS and that the National Statistician was the accounting officer as for other areas of the business. The Board discussed the role of the proposed advisory board in this context and noted that this could be advisory to the National Statistician. The Board accepted that governance needed to be light touch, to encourage innovation, but also that the Campus should be anchored into the broader organisational governance and strategy. Experience from start-ups and incubator spinoffs showed that this could be a difficult balance to strike.

12.5 The Board requested a set of shared measures, linked to the strategy, to track success of the Campus.

## **13. Publishing official statistics on polling days [SA(17)38]**

13.1 Mr Pullinger introduced a paper which set out the current policy for publishing official statistics on polling days.

13.2 The meeting heard that publishing official statistics on polling days presented difficulties in communicating data clearly and fully, not least because of restrictions in place around media reporting. Current statistical policy was therefore to seek to ensure that bulletins of significant public interest were not published on national polling days. During the 2017 General Election, which was called at short notice, some publications were moved either forward or backward to avoid polling day. In each case these decisions were made by statistical Heads of Profession, who are able to seek advice from the National Statistician.

13.3 It was agreed that Mr Pullinger would seek external views on whether the current policy remained the most appropriate approach to take.

**14. Any other business**

- 14.1 There was no other business. The Authority Board would meet next on Tuesday 24 October at 9:15 in London.



# UK STATISTICS AUTHORITY

## *Agenda*

**28 September 2017**

**Northern Ireland Statistics and Research Agency, Belfast**

**09:00 – 15:30**

**Chair: Sir David Norgrove**

**Apologies: Professor David Hand, Professor Jonathan Haskel and Dame Moira Gibb**

**09:00 – 10:00: Tour of NISRA building and meeting with staff**

**10:00 – 10:30: Non-Executive's Session**

1 10:30-10:40 10 mins	Minutes and matters arising from previous meetings <ul style="list-style-type: none"><li>• Declarations of interest</li></ul>	Meeting of 20-07-17
2 10:40-11:00 20 mins	Report from the Authority Chair	Oral report  Sir David Norgrove
3 11:00-11:10 10 mins	Reports from Committee Chairs <ul style="list-style-type: none"><li>• Regulation Committee</li><li>• Audit and Risk Assurance Committee</li></ul>	Oral reports  Professor Sir Adrian Smith Dame Colette Bowe
4 11:10-11:50 40 mins	Report from the Chief Executive	SA(17)33  Mr John Pullinger
5 11:50-12:10 20 mins	Better Statistics, Better Decisions: Three years on	SA(17)34  Mr John Pullinger
6 12:10-12:30 20 mins	Report from the Director General for Regulation	SA(17)35  Mr Ed Humpherson

**12:30 to 13:00 – Lunch**

7 13:00-13:40 40 mins	Improving migration statistics	SA(17)36  Mr Iain Bell and Ms Emma Rourke
8 13:40-14:10 30 mins	Statistical Classification Decisions Following EU Exit	Oral report  Mr Jonathan Athow
9 14:10-14:30 20 mins	The Priorities and Plans of the Data Science Campus	SA(17)37  Ms Heather Savory
10 14:30-14:50 20 mins	Publishing official statistics on polling days	SA(17)38  Mr John Pullinger
11 14:50-15:00 10 mins	Any other business	

**Next meeting: 24 October 2017, London, 09:15 to 14:00**





# UK STATISTICS AUTHORITY

SA(17)33

## *Chief Executive's Report, September 2017*

### **Purpose**

1. This report provides the Board with an overview of activity and issues for August and September.

### **Summary**

2. So much for the idea that things are quiet in the summer. Following the forward look undertaken by the Board in July we have been actively pursuing three strands of activity. First, to get a version of our "elevator pitch" ready for consideration by the Board this month. This document is designed to provide a means to set out mid-term progress with and prospects for our strategy. This will also help us give staff a sense of where they fit in and how collectively we will deliver, so that our efforts are focused and well aligned. Second, to prepare for the next iteration in our planning. We will be developing proposals for the Board to consider over the coming months giving a four year forward look from April 2018 which will take us through the 2021 census period. To do this we will be bringing together our planning of transformation, building on the recent Census Gateway review and Board discussions. And third, the pace of delivery of better statistics is quickening, with some important new outputs being released.
3. Throughout this period there has been considerable interest issues of statistical integrity and how it is safeguarded.

### **Review of recent activities**

4. Many of our figures have received significant attention as decision makers and commentators look for signals about the strength of the economy and, more generally about societal changes, especially in relation to migration and the labour market. There has also been discussion on prices statistics following the re-badging of CPIH as a National Statistic. Notable releases included:
  - i. Trade asymmetries. Katie O'Farrell won silver for her presentation of Asymmetries in UK Trade Flows at the Young Statisticians Meeting at Keele University and presented her work at the RSS conference in Glasgow.
  - ii. A more comprehensive approach to the reporting of migration statistics, including significant new data from Home Office exit checks and on the outcomes for graduating EU students from the new international student survey (a collaboration with the Centre for Population Change at Southampton University and Universities UK). We have also been publishing a series of analyses showing migration between the UK and another country, including Ireland, France and Spain so far. Germany and Bulgaria/Romania to follow.
  - iii. Analysis to support David Lammy's review into the treatment of, and outcomes for, black and ethnic minority individuals in the criminal justice system (MoJ statisticians). Statisticians across the GSS continue to provide support to the Prime Minister's Race Disparities Unit.
  - iv. Further improvements to benefits statistics (covering benefit sanctions) (DWP statisticians).
  - v. Enhanced Financial Accounts (UK Flow of Funds) release on receivables and payables.
  - vi. Experimental estimates of double deflation for industry case studies. This is a significant milestone from the Bean review.

- vii. Shrinkflation – a release that proved very effective in getting across how we measure prices (and the fact that chocolate bars are getting smaller).
  - viii. Online crime calculator produced in conjunction with the BBC, which had 1.9 million users in the first 4 days after publication.
5. Other important developments in recent weeks include the following.
- i. A range of Census developments including follow up to the latest Gateway review, Treasury Approval Point and several releases on question development (including ethnic groups, armed forces veterans, volunteering and gender identity).
  - ii. Several data collection technology milestones: the first deployment of tablet based data collection for interviewers working on the international passenger survey at Bristol and Cardiff airports; the Business Register Employment Survey is live online; the Monthly Wages and Salaries Survey's first month at 100% online achieved the response rate target one week early; the Quarterly Business Survey is now 100 per cent online; the new Life Events system is live (covering abortions data) - we are on track to turn off the legacy life events system by February 2018 once other elements taken on; the first online test for the Labour Force Survey is complete - the test achieved a 20 per cent take up, the highest take up we are aware of to an online survey of this kind in the UK.
  - iii. First tranche of new Annual Survey of Goods and Services (formerly known as Servcom) issued. This survey will provide more granular information on the products produced by businesses in the services sectors.
  - iv. New internal systems have gone live over the summer including Evoko Concierge (for room bookings etc) and Skype for Business (in familiarization mode in the first instance). The next phase of our buildings programme has also completed adding an additional 436 photovoltaic panels to the Newport office roof (we are now up to around 5% of our daily electricity coming from this source).
  - v. Alongside these positive developments there have been some operational problems. A spike in minor errors in releases is being reviewed and assessed for lessons learned. Some users briefly experienced difficulties accessing information on the ONS website. The issues were quickly resolved. A hardware problem led to a decision to delay the Retail Sales Index release. The reasons have been reviewed but we remain vulnerable to problems with legacy systems.
  - vi. Organised the first virtual cross-site Government Data Science Community of Interest meeting. Attendees were drawn from the 450 strong Government Data Science Partnership co-led by the Government Digital Service, Government Office for Science and ONS. The impact of data science across government is increasing rapidly. There are many strong collaborations taking hold and the data Science Campus is rapidly coming of age as a major contributor to collective capability and substantive research and analysis.
  - vii. Hosted workshop to take forward the idea of a United Nations "City Group" on ageing statistics and age-disaggregated data (the Titchfield Group).
  - viii. Diversity and Inclusion Strategy launched as part of Diversity and Inclusion Week.

#### **Future look**

- 6. As we move into the next phase of planning and delivery we will get useful information on staff engagement from the People Survey and from the GSS conference. This will complement follow up to recent work with the Senior Civil Service group in ONS on organisational culture and forthcoming work amongst GSS Heads of Profession and with the new Analysis Function Board.

**John Pullinger, 20 September 2017**

# UK STATISTICS AUTHORITY

SA(17)34

## ***Better Statistics, Better Decisions: Three years on***

### **Purpose**

1. This note covers a draft document, *Better Statistics, Better Decisions: Three years on*.

### **Recommendation**

2. Members of the Authority Board are invited to consider and provide comments on the draft document at **Annex A**.

### **Background**

3. It has been almost three years since the publication of our five-year strategy, *Better Statistics, Better Decisions*. Our subsequent business plans have set out the detail of how we will deliver the strategy and our annual reports have summarised our progress.
4. At the July 2017 Authority Board meeting, the Board was provided with a range of material on progress with delivering the strategy and high level plans for economic statistics, population and public policy, and data capability.
5. One of the conclusions from the Board discussion was that a document should be published providing a halfway review of progress against the strategy that is readily understandable, to update the public and users on developments and future plans.

**Joe Cuddeford, Central Policy Secretariat, 21 September 2017**

### **List of Annexes**

**Annex A   Better Statistics Better Decisions: Three years on**



## Annex A      Better Statistics, Better Decisions: Three years on

This report has been published at <https://www.statisticsauthority.gov.uk/better-statistics-three-years-on/>.

1. Report from the	2. <b>Better Statistics,</b>	3. Report from the	4. Improving Migration	5. The Priorities and	6. Publishing official
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# UK STATISTICS AUTHORITY

SA(17)35

## *Report from the Director General for Regulation*

### **Purpose**

1. This paper provides an update on regulation activity since the last Board meeting.

### **Recommendation**

2. Members of the Board are invited to note and discuss the activities and proposed actions.

### **Discussion**

3. Key areas of activity have been:
  - i. **EU contributions:** As the Board will know, I advised the Chair on his letter to the Foreign Secretary on the appropriate use of statistics on EU contributions.
  - ii. **New casework:** As a result of the media coverage of this letter, we are seeing an increase in the volume of casework - particularly from members of the public complaining about uses of statistics. While we can manage with this increase at present, if it is sustained I may want to adjust the team structure to create a dedicated casework response group.
  - iii. **Existing casework:** We are responding to a complaint about government statements on police funding from several Police and Crime Commissioners. We are also responding to two concerns about the Department for Education, which may reflect a more systemic concern about the use of statistics to support education policy related to academies and free schools. We are also dealing with a complex case related to statistics on chronic pain in Scotland, which has led to allegations of political interference in the statistics. While we have concluded that there is no strong evidence of undue interference, we are concerned about the relatively narrow nature of engagement with users undertaken by NHS Scotland. These concerns may also emerge in evidence provided by users of statistics to an enquiry by the Scottish Parliament into economic data for Scotland.
  - iv. **Code:** We close the consultation on the Code of Practice on 5 October. We have had a wide range of feedback which I will summarise for the October Board meeting. There are no significant concerns, but lots of suggestions for areas of clarification and improvement. Professor Haskel's diagnostic tool has generated a lot of positive comment too. The only area of substantive concern to raise at this stage concerns pre-release access. The draft Code we propose includes broadly the same practices as the old Code. However, our introduction makes clearer that we oppose the granting of pre-release access on principle. We have received some challenge about the appropriateness of stating our opposition to pre-release access, given that the legislation specifically permits it. Again, I will brief the Board more fully on this issue once the consultation closes.
  - v. **CPIH and Migration:** Our decisions to re-designate CPIH, and to change the categorisation of student migration to experimental, were published after the July Board meeting. They both landed well with stakeholders, given that they relate to two heavily contested policy environments.
4. The two main challenges over the coming months will be maintaining the standard and quality of our casework responses if volumes increase; and finalising the process of updating the Code so that the Authority can launch a new Code at the end of this year or early in 2017.
5. The dashboard summary of regulatory activities is at **Annex A**.

**Ed Humpherson, Director General for Regulation, 21 September 2017**

1. Report from the

2. Better Statistics,

3. Report from the

4. Improving Migration

5. The Priorities and

6. Publishing official

## **List of Annexes**

**Annex A      Regulatory Activities**



## Regulatory Activities September 2017

Economy	Health and social care	Business, industry, energy and trade	Crime and justice
<ul style="list-style-type: none"> <li>Prepared written evidence to the Scottish Parliament's Economy, Jobs and Fair Work Committee inquiry into Economic Data.</li> <li>Commenced Phase 2 of the assessment of ONS's Regional Gross Value Added statistics – new Balanced Estimates.</li> <li>Assessment of UK House Price Index ongoing, findings to be considered at November's Regulation Committee meeting.</li> </ul>	<ul style="list-style-type: none"> <li><b>Systemic Review:</b> The stocktake of UK health and care statistics is underway, we are planning the health and care conference for 28 November; the next stage of our work will be looking at cross-UK comparisons.</li> <li><b>Regulatory Services:</b> We intend reviewing health and care statistics labelled as 'management information'. We performed compliance checks on statistics published by ONS and PHE, by ISD and NISRA. We confirmed statistics about Children's Social Care in England as National Statistics.</li> <li><b>Casework:</b> We will publish a letter to ISD Scotland about their Chronic Pain statistics. We are following the progress of a concern about the Summary Hospital Mortality indices published by NHS Digital and working to untangle the complexities of getting access to data from NHS Digital.</li> </ul>	<ul style="list-style-type: none"> <li><b>UK Trade:</b> Following progress review at September's regulatory committee, further analysis on the contributions to trade asymmetries is awaited from the ONS to inform re-designation decision.</li> <li><b>Construction Output and Prices statistics:</b> Assessment is due to begin in the next few weeks, with a series of meetings with the ONS covering the process of the assessment and an examination of the proposed interim construction prices method. We will also get feedback from key users (Bank, Treasury, OBR, industry representatives).</li> </ul>	<ul style="list-style-type: none"> <li><b>Crime and Criminal Justice:</b> Following our producer roundtable in July on data sharing and linking, ONS, MoJ and Home Office meet on 28 September to progress this work.</li> <li><b>Justice:</b> Started a systemic review of criminal and civil justice statistics across the UK. From this, we will publish a statement on the public value of justice statistics in March and use the results to inform future work.</li> <li><b>Police:</b> Finalising response to Dame Vera Baird's letter on the accuracy of ministerial statements about police funding.</li> </ul>
Labour market	Housing, planning and local services	Children, education and skills	Agriculture and environment
<ul style="list-style-type: none"> <li><b>Income/Earnings:</b> Sent private letter to Simon Briscoe who is concerned about misuse of earnings data. Met with several members of the earnings team at ONS to get updates on progress.</li> <li><b>NINos and Access to Work:</b> Draft letters have been produced by DWP and OSR which will close down the NINos assessment. They have been shared and will be published soon once finalised.</li> </ul>	<ul style="list-style-type: none"> <li><b>Housing Review:</b> We have developed our findings and identified several areas for improvements to these statistics. We are awaiting comments from statistics producers before sharing the report and communications plan with the Regulation Committee via correspondence. We will publish these findings in mid-October.</li> </ul>	<ul style="list-style-type: none"> <li><b>Casework:</b> Finalising 2 DfE enquiries – availability of academy rebrokerage costs and the use of statistics within DfE press releases.</li> <li><b>Systemic Review:</b> Review on innovation in CES stats – questionnaire for producers to share improvement activities sent w/c 18 Sept.</li> </ul>	<ul style="list-style-type: none"> <li>No significant activity.</li> </ul>
Population	Culture and identity	Security, defence and intl relations	Travel, transport and tourism
<ul style="list-style-type: none"> <li><b>Migration:</b> Our first migration roundtable will be held on employment and business in October, with a further roundtable scheduled in November on service delivery.</li> </ul>	<ul style="list-style-type: none"> <li>No significant activity</li> </ul>	<ul style="list-style-type: none"> <li>Completed Compliance checks on MoD personnel and resource statistics – follow-up to occur with MoD HoP</li> </ul>	<ul style="list-style-type: none"> <li>No significant activity</li> </ul>



*Improving migration statistics*

**Purpose**

1. This paper sets out ONS plans to further develop UK migration statistics.

**Timing**

2. The work programme as planned extends to 2022 but this paper focuses on providing confidence in the delivery of commitments made up to 2019.

**Recommendations**

3. Members of the Authority Board are invited to:
  - i. note the work priorities for the next year; the longer term goals and the data sharing that underpins it; and
  - ii. agree our approach to engaging key stakeholders across the system.

**Background**

4. Migration remains a UK policy priority and an area where ONS statistics have the potential to make significant impact by providing evidence to inform decision making and aid debate. To date, the Office has made limited progress in the production of statistical products that are wholly relevant and helpful in the context of Brexit and associated migration interests. We have lacked the required data accompanied by a well understood plan that brings together stakeholders across the system to achieve our common goal.
5. The Digital Economy Act provides the Office with unprecedented access to administrative data, which will contain unique insight into the numbers and activities of migrants in the UK. We, with the broader GSS, fully explore and utilise the data to meet the demands for information about the characteristics of migrants in the population, the impact of international migration on the economy, and migrants' consumption of services and contribution to society.
6. In February 2017, we published a paper (summary at **Annex B**) setting out conceptually where we are now in meeting these demands and where we want to be in the longer-term, by making the best use of data (administrative, survey and census) held across government. This was well received by but was not widely promoted, leading to limited understanding of our activity beyond a small, expert community.
7. In July 2017 Iain Bell presented an overview of the Population and Public Policy Directorate to the UKSA board (SA(17)33b). The key relevant commitments made in this presentation can be found at **Annex A**.
8. Political interest remains high; the statistics are vulnerable to any steps by the government to disaggregate the UK net migration target. The Home Office have commissioned the Migration Advisory Committee (MAC) to report on several strands of migration activity by 2019. ONS has been very active in the evidence gathering stage and continue to have a strong relationship with the MAC.

**Discussion – Update on status and next steps**

9. In August 2017, we published our first administrative data experimental analysis using Home Office Exit Checks data which investigated what international students do after completing their studies. The outputs were broadly welcomed as authoritative and generated significant media attention which often veered to misinterpretation of our confidence in the net migration figure.
10. We concluded from this analysis that a more robust approach to measuring net migration, by reason is required. Our ambition is to create a suite of relevant, helpful

statistics which are core to migration, drawn from administrative data, by 2019. This allows us to consult with users in Autumn 2018 on how the new data system can provide a better suite of statistics.

11. This plan (Annex B) requires ONS to engage well externally, acquire the right data and means to exploit it and build our own internal capability to develop more timely, relevant analysis. Importantly, 2019 is also when the MAC will report its findings to the government,
12. The greatest value of administrative data is that it records what people actually do. Unfortunately, this can create limitations in its application. For example, a 12 month lag is required to understand whether someone has become a long-term emigrant. Therefore, the International Passenger Survey will continue to provide timely intentions based data on international migration, as a leading indicator of net migration.
13. Key to our further work and collaboration across government is a coherent communication strategy. **Annex D** gives an executive summary of the migration statistics communication strategy, which sets out planned engagement with other government departments and stakeholders. This work is necessary to ensure that our proposed release plan (**Annex C**) remains relevant to user needs and achievable in a rapidly changing environment.
14. We have held an internal roundtable to ensure internal enablers have aligned resources. In addition cross-GSS support for data sharing and novel analysis is being cultivated through a regular steering group with a broad membership, chaired by Iain Bell. This community will be critical in assuring our delivery to the proposed timescale and aligns well with our Admin Census work, a key part of our organisational transformation.
15. In September 2017, we held a Public Policy Forum which brought together a variety of stakeholders and experts to discuss our plans and refreshed approach, focusing specifically on migration. Jonathan Portes, a respected economist who often comments publicly on our statistics, addressed the event.
16. Jonathan gave a compelling speech outlining the challenges that face ONS, noting that as the volume of data has increased, our insight that we publish alongside the statistics has not. Jonathan asserted that 'as better decision making needs better debate' ONS must step up to the challenge of both presenting what the public needs and wants to know, and ensuring that we accompany this with clarity of opinion and join up the interpretation of various statistics from numerous sources. Simply, it is not enough for us to plan to create even more statistics with the new data; we must create a clear and compelling story with what we create.
17. This set the tone well for our subsequent presentations and Q&A. There was an ONS presentation outlining our conceptual framework for migration and the timeline for further experimentation and development (see slides). Following this, we opened for questions and discussion. There was particular interest in how we might identify illegal migrants and develop stronger insight into the economic impacts of migration, in trade, for example. It was clear to see the desire for ONS to understand and communicate the complexity of migration. There were also broader questions linked to the Digital Economy Act, our appetite for using commercial data, our approach to reflecting and learning and the impact of the incoming GDPR. Key messages we took from the event with were for us to keep going with this tone and level of ambition, and to continue to listen.
18. In the next 6 months we will commence analysis of health and benefits data held by ONS, to begin assessing how these data can be used to answer migration policy questions. In partnership with Data as a Service we will secure access to critical data sets, including nationality and country of birth information available from the DfE English School Census and health microdata from NHS Digital.

19. By mid 2018 we will be able to secure HMRC data on taxes paid combined with benefits data to identify the impact of international migration on the economy in more detail than has been previously possible, as well as analysing the industry sector specific contributions migrants make.
20. In the longer term we will be able to conduct further analysis on the different types of migrant journeys. We will be using the Integrated Data Enabling Analysis and Statistics (IDEAS) system to follow migrant journeys through administrative data and more clearly understand how long migrants stay and what they do. Currently IDEAS has been developed for England and Wales; however we plan to extend coverage to the whole UK as data become available.
21. We will keep abreast with developments in the new Home Office led Digital Services at the Border, which is expected to replace Semaphore over the next two to three years. This is expected to improve the quality of the data for statistical use. This requires further discussion with the Home Office and the UK Border Agency.
22. Our approach will be experimental; we intend to share outputs that reveal our statistical research and encourage an active, constructive conversation with stakeholders. In addition to administrative data, we will experiment with commercial data, such as banking and mobile phone records to provide complimentary insight into population flows.
23. In July 2017 the Office of Statistics Regulation conducted a review of the quality of long term student migration statistics. Among more specific recommendations focused on the labelling of published statistics, this review recommended continuing work on administrative data. To deal with confusion around student migration numbers “ONS should set out a clear plan for how it intends to use the exit check data and work as quickly as possible to implement this plan.”
24. The OSR also note “ONS should be realistic about the timescale for using the exit check data to gain insights into the Long-term student migration statistics departures of former non-EEA students. Once the findings become clearer, ONS should comment on what they mean for its ability to reliably capture former-student emigration using the IPS and the quality of the IPS more generally.” Our work plan includes further work on understanding the value and limitations of exit checks and expanding analysis to cover other types of visas.
25. ONS has fully complied with the recommendations and used the opportunity to set out the broader approach to developing migration statistics as a whole, which added to the initial impact and value of the OSR report. OSR has ongoing plans to look at the system of migration statistics, including using their powers to convene and support the ongoing dialogue between producers and users.

## Conclusion

26. This paper has set out the activity which is underway to secure delivery in our high level plans of work. Achieving these plans will need both ONS business areas and the GSS to come together to deliver what is an ambitious programme. Authority Board members are asked to note and support the work.

**Emma Rourke, Director of Public Policy Analysis, Office for National Statistics**  
**22 September 2017**

## **List of Annexes**

- |                |   |
|----------------|---|
| <b>Annex A</b> | <b>Key relevant commitments made in July 2017 presentation to UKSA board by Iain Bell</b>                 |
| <b>Annex B</b> | <b>Summary of February 2017 paper “International migration data and analysis: Improving the evidence”</b> |
| <b>Annex C</b> | <b>Indicative timeline for publishing</b>   |
| <b>Annex D</b> | <b>Executive summary of Migration Statistics stakeholder Strategy</b>                                     |

**Annex A      Key relevant commitments made in July 2017 presentation to UKSA by  
Iain Bell**

This presentation made commitments to the Statistics Authority board including:

- i. Publishing an article<sup>1</sup> explaining what international students do after completing their studies. This article included analysis of Home Office Exit Checks data and results from a new survey of graduating Higher Education students – Published August 2017
- ii. Setting out ONS plans to further improve migration statistics and how ONS will make the best use of data sources held across government. Timescale: September 2017
- iii. To make further improvements to migration statistics, and further our understanding of the characteristics of migrants living in the UK, and their impact on the economy and public services by using linked administrative and survey data. Timescale: Over the next 2 years

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<sup>1</sup> <https://www.ons.gov.uk/peoplepopulationandcommunity/populationandmigration/internationalmigration/articles/whats happening with international student migration/2017-08-24>

1. Report from the	2. Better Statistics,	3. Report from the	4. Improving	5. The Priorities and	6. Publishing official
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## Annex B Summary of February 2017 paper “International migration data and analysis: Improving the evidence”

1. In February 2017 ONS published an article setting out its short term and longer term goals on “International migration data and analysis: Improving the evidence” This article identified 4 short term areas for focus and a longer term ambition to use linked administrative data to better answer questions on the characteristics of migrants in both flows and stocks.
2. In this article ONS stated that “At the end of 2018, we would hope that many areas where there are gaps will be filled and many of the boxes currently red or amber will be turned to green as shown in Figures 3 and 4.” Figure 4 focuses on migrant stocks and is reproduced below to show the range of areas for linking proposed and the data sources considered.

**Figure 4 - ONS view on how well future use of data sources could meet the needs for data and analysis on different aspects of international migration stocks**

Immigrants living in the UK (stocks)			
Section	RAG rating	Topic Area	RAG rating
Working (2,3,4,11)	Green	Industry sectors (3,11)	Green
		PAYE (7,11)	Green
		Benefits received (8,11)	Green
Studying (2,5,9)	Green	Higher Education (5)	Green
		Further Education (11)	Green
		Skills (3)	Amber
Other reasons (2,3,9,11)	Amber		
Where immigrants are living (6)	Green	Using services - schools, health, housing, etc (11)	Amber
Age structure of migrants (6)	Green	Split by nationality	Amber
Visa status (2)	Green	Valid visas (non EEA) (2,10)	Green
		Without valid visas (11)	Amber

### Current Data Sources (shown in brackets)

(2) Home Office: Visa statistics; (3) ONS: Labour Force Survey; (4) DWP: NINo statistics; (5) Higher Education Statistics Agency; (6) ONS: Population Estimates; (7) HMRC: PAYE system; (8) DWP: Benefits and Income Data; (9) ONS: Census; (10) No data available; (11) Securely linked data

We plan to publish an updated version of this paper and diagram in March 2018, which will offer more detail on sources used and potential timeframes for each of these areas.



## Annex C Proposed timeline for research on answering policy questions.

This timetable represents our aspiration but requires close collaboration between PSD and DaaS, and commitment to dedicate the resources needed. It is iterative in some of the areas, and becomes less concrete the further into the future you look. We may not have the 'perfect' output initially but we are keen to provide some answers to our stakeholders. As we become more familiar with these sources and link them further, more analysis and outputs are likely to be possible. The timeline also remains adaptable, depending on shifts in priorities among our stakeholders and political priorities.

Date	Topic	Additional Admin data sources
Late 2017	Work & Family visa analysis providing better evidence on travel and migration patterns of non-EU nationals	Exit Check data
2018	EU Nationals travel and migration patterns – How do EU citizens interact with administrative systems in the UK and what can we learn about their movements, to supplement existing analysis?	HMRC Real Time Information, DWP benefits data, Home Office Borders data
Mid 2018	How different groups of international migrants impact the economy, building on available evidence.	Migrant Workers Scan, Benefits and Income Data
Autumn 2018	Experimental migration statistics using admin data as the core	All available sources, particularly Patient Registers and Customer Information System
Autumn 2018	Consultation with migration statistics users on the shape that a new administrative based system would take	
Late 2018	International migrant use of Health Services, and labour supply in the Health Sector – building on information already available across the public sector	NHS data on GP registrations, and hospital interactions, in addition to the HMRC sources above, augmented with data for devolved administrations where available.
Late 2018 / early 2019	International migrant use of Education Sector, and labour supply in the Education Sector – building on information already available across the public sector	DfE School Census, Longitudinal education outcomes, in addition to the HMRC sources above, augmented with data for devolved administrations where available.
2019	Administrative Sources as core to Migration Statistics	Linked data system based on all available sources.



## Annex D Executive summary of Migration Statistics stakeholder Strategy

Migration Statistics and analysis is a key priority for ONS. Our strategy sets out how we will engage with our stakeholders in a focused way to deliver statistics and analysis that:

- increases in timeliness and relevance using improved technology and methodology
- addresses key policy questions
- use the best data available

### Objectives

There are 5 areas of change addressed by the plan:

1. **Improve the communication of statistics/expand the audience we reach** by change the perception of our communication from expert-to-expert to expert-to-all, adapting our reporting style and focus on audience need
2. **Shift to wider stakeholder base**, including think-tanks and non-government bodies, while recognising the importance of existing stakeholders. Engage more widely and more frequently with government policy colleagues and beyond to review priority policy questions.
3. **Access to the right data sources** within ONS by clearly identifying the sources we need and engaging with DaaS to ensure agreement of priorities.
4. **To more fully utilise administrative data sources** by linking them in an integrated fashion.
5. **Change corporate and individual mindset** to change our 'gold standard' research culture to one more adaptable to deliver more flexibly, especially where timeliness is more important than other quality dimensions. Raise the profile and priority of migration within ONS.

We will run events such as the Public Policy Forum and Migration Statistics User Forum to invite policy makers, policy influencers and scrutinisers to ensure that our plans for improve maintain relevance. We will use these events to gain 'buy in' from key stakeholders and test our plans with expert users and policy makers to ensure that the statistics we produce are relevant, timely and accurate.

These objectives aim to contribute to Public Policy and Analysis objective to increase the impact of our statistics and use modern techniques for communication.



*The Priorities and Plans of the Data Science Campus*

**Purpose**

1. This paper outlines the priorities and programme of activities for the Data Science Campus at ONS for 2017/18 and beyond.

**Recommendations**

2. Members of the Authority Board are invited to:
  - i. note the Data Science Campus Programme of Activities for 2017/18 at **Annex A**;
  - ii. discuss the proposed expansion of activities in 2018/19 at **Annex B**

**Background**

3. Drawing on the recommendations of the Bean Review, ONS has established a new Data Science Campus (DSC) in 2016/17, with two interconnected and parallel strands, Research and Capability, to enable a shift in the ability of the ONS to handle the challenges of measuring the modern economy and society.
4. Research and capability activities commenced in September 2016, and the Managing Director, Tom Smith, started on 26 January 2017. The DSC held its formal launch on 27 March 2017, in a new purpose-built area with accommodation for up to 60 staff. The event was attended by three government ministers and over 130 external guests.
5. Tom Smith presented to the Board in April 2017 where it was agreed that he would return with a paper on governance arrangements and commercial partnerships.

**Discussion**

6. In 2017/18 the DSC will continue to expand its research and capability work while enhancing its reputation as a world-class data science institute. It has set five key strategic objectives:
  - i. to be recognised as the Government hub for data science, helping to enhance the UK's reputation as a world leader;
  - ii. to support the data science community across ONS and government;
  - iii. to contribute to ONS strategic and corporate objectives through data science projects;
  - iv. to strengthen cross-government and UK-wide data science capability; and
  - v. to be an inspiring, innovative and inclusive place to work.
7. In pursuit of these objectives, a programme of activities for 2017/18 has been developed, that builds upon the successes of the initial launch phase, and is outlined in **Annex A**.
8. In developing the next phase of activities from 2018/19, the DSC is seeking to expand radically the scale and scope of its research and capability building programmes, increasing headcount to 100 by March 2021. To realise this vision, a revised business plan with an option for an expanded Campus (including a request for funding for a new physical hub for data science on the Newport site) was submitted to HM Treasury (HMT) in July 2017. This case included a review of proposed DSC activities as part of a wider update related to the Bean Review: an outline is included in **Annex B**. A response from HMT is awaited. Any additional core funding would be matched by external funding. The DSC is in discussions with several commercial organisations to secure the investment that would be required to deliver against these objectives.
9. An advisory group of experts drawn from government, academia and industry will be established by the end of 2017 to advise the Director General for Data Capability and the

DSC MD on research priorities, partnerships, ethical issues and legal considerations. Where appropriate, advice on data ethics will be sought from the National Statistician's Data Ethics Advisory Committee (NSDEC).

### **Conclusion**

10. The Data Science Campus has the potential to scale to 100 high value positions by March 2021, transforming the understanding and interrogation of data within ONS and government as a whole while having a significant and positive economic impact on the South Wales region through the creation of an internationally renowned centre for Data Science and Data Engineering.

**Dr Tom Smith, Peter Fullerton, David Johnson, Data Science Campus,  
20 September 2017**

### **List of Annexes**

- Annex A Data Science Campus Programme of Activities, 2017/18**
- Annex B Growing the Campus Beyond 2018**



# Annex A: Data Science Campus Programme of Activities, 2017/18

Objectives	Activities	How will progress be achieved and measured?	Targets (Campus-wide)
<b>1. To be recognised as the Government hub for data science helping to enhance the UK's reputation as a world leader</b>	i. Present with impact at conferences or other public events in the UK and abroad	Number of presentations delivered by March 2018. Feedback received	6 presentations by March 2018 receiving positive feedback. Own conference held by March 2018
	ii. To plan for Phase 2 of the Campus, building on initial success and establishing a national research institute with a growing reputation	Readiness of plans for Phase 2. A new funding model proposed for the Campus. Sponsorship agreements in place	New long-term funding model agreed by March 2018, including some sponsorship. Plans for Phase 2 well-advanced by March 2018
	iii. Organise and contribute to workshops and presentations across government	Number of workshops and presentations contributed to. Feedback received	At least 10 workshops / presentations
	iv. Publishing results and blogs on Campus website	Numbers of research outputs and blogs published, number of views.	At least 30 publications, increasing total views each quarter
	v. Engage with media	Positive articles on DSC projects and activities	8 articles published with at least 3 in mainstream media.
	vi. Deliver engaging content via Twitter	Twitter followers of @DataSciCampus	An additional 1000 followers by March 2018
<b>2. To support the data science community across ONS and government</b>	i. Provide support to the wider data science and user community across ONS	Numbers of show & tells, brown bag lunches, articles etc.	At least 10 articles and 6 events
	ii. Set up a data science seminar series with internal & external speakers	Number of events with speakers, feedback from participants	6 events, at least 75% positive feedback.
	iii. To be an effective data science "help desk" for Government	Number of examples of providing support across government	Increasing numbers of requests for help throughout 2017/18
	iv. Work with DST and MDR (DaaS) to develop and pilot approaches to acquire / analyse data for exploratory data science work	Piloting of DaaS process to quickly acquire data for exploratory work. Implementation of Campus data science projects on new ONS data IT infrastructure.	
	v. Work with MDR and the Learning Academy to publish an ONS data science and big data strategy [Corporate objective CPD-101]	Publication of strategy	Published by December 2017
<b>3. To contribute to ONS strategic and corporate objectives through data science projects</b>	i. Set up project criteria and workflow processes, publish and use to make assessments of and manage projects.	Number of projects assessed and managed	Publish criteria and process by August 2017. 8 projects assessed per quarter, some rejected at early stages. Workflow process implemented for remainder
	ii. Deliver data science project outputs across a range of themes, stakeholders and data science challenges [Corporate business objective CPD-099]	Number of projects delivered and written-up. Proportion adopted by clients into business as usual or progressed further	First projects delivered by August 2017, 10 projects delivered over the year, some adopted into business as usual. Positive responses overall from stakeholders
	iii. Run brain-storming workshops with key stakeholders	Number of workshops. Feedback from stakeholders	5 per quarter, positive feedback
	iv. Meet the expectations of the Bean Review	Revised business case agreed by Treasury, business plan published	Summary plan presented to HMT by July 2017, Business Case agreed by December 2017
	v. Maintain an agile approach to data science research projects	Number of projects being presented at gateways – not all succeeding	To maintain 8 live projects throughout 2017/18 and a pipeline of feasible proposals

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6. Publishing official statistics on polling days



# Annex A: Data Science Campus Programme of Activities, 2017/18

Objectives	Activities	How will progress be achieved and measured?	Targets (Campus-wide)
4. To strengthen cross-government and UK-wide data science capability	i. To provide visible data science leadership across government	Examples of Campus influence at senior levels within government	Campus widely recognised for cross-government leadership, with MD playing a prominent role at the helm of the profession
	ii. Provide support to the Secretariat of the Government's Data Board's exemplar programme	Positive feedback from Cabinet Office	London-based 0.5 FTE in place by October 2017
	iii. Develop a cross-Government marketplace for data science support from the commercial sector, Eg building on the GCloud model	Cross government agreement on a new commercial approach	Framework in place during 2017/18
	iv. Engage with partner organisations in government and elsewhere on projects, mentoring, training and secondments	Numbers of partners, projects, mentees and secondments leading to collaborative projects or increased capability	An increasing list of partnership agreements signed across all sectors throughout 2017/18
	v. Launch the new MSc in Data Analytics in partnership with the Learning Academy [Corporate objective CPD-101]	New courses in place and students enrolled	First students enrolled at 3 providing universities by September 2017
	vi. Provide financial, resource or leadership support for data science research in partner universities	Number of collaborative projects, PhD projects funded. MSc topics offered	To support at least 4 PhD projects and 4 MSc projects at partner universities in 2017/18
	vii. To run and expand the data analytics Apprenticeship programme in the Campus [Corporate objective CPD-101]	Number of apprentices successfully participating in the data science campus programme	At least 12 Apprentices engaged on cohorts 1 and 2 by October 2017
	viii. Promote and run a Newport hub for the Government's data science Accelerator programme	Number of participants successfully completing the course	At least 8 successful over 2017/18
	ix. Publish blogs on cross-government data science work	Number of blogs published	8 blogs over the year
5. To be an inspiring, innovative and inclusive place to work	i. Ensure strong communications and a range of engagement activities throughout the Campus	People survey scores. Number of whole Campus activities organised, number of weekly updates	Engagement scores above UKSA averages.
	ii. Ensure transparency in all the work and provide open access to outputs, wherever possible.	Regular publication of information on the Campus and its research activities,	Summary Campus business plan published by June 2017. Open access to on-going project plans provided
	iii. Provide learning and development opportunities for all Campus staff	L&D activity across the Campus. Participation in development programmes and academic courses	All staff engaged in at least 5 days L&D activity each year. Several Campus staff on development programmes
	iv. Increase the range of working patterns offered in the Campus	Work with Learning Academy to design new part-time pathway for Apprentices	Part-time Apprentice pathway established by March 2018 for 2018/19 recruits.
	v. Encourage job applications from diverse backgrounds	Numbers of female and part-time applicants successful at interview. Recruitment materials at modes aimed at having a wide appeal.	Increased numbers compared to 2016/17 recruitment rounds

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## Annex B: Growing the Campus Beyond 2018

1. In developing the next phase of the Data Science Campus, from 2018/19 DSC has the potential to scale to 100 high value positions by March 2021, transforming the understanding and interrogation of data within ONS and government as a whole while having a significant and positive economic impact on the South Wales region through the creation of an internationally renowned centre for Data Science and Data Engineering. Resources for growth at this scale and suitable facilities to house a global centre of excellence are not anticipated to be made available through existing funding mechanisms alone.
2. The majority of positions within the DSC are, and will continue to be, engaged in research activities. The aim of the research programme is to explore how new and innovative data sources such as administrative data, real-world economic and social data, image and earth observation data and social media, and techniques ranging from machine learning and deep learning neural networks to natural language parsing, can improve the understanding of the UK's economy, communities and people. Research priorities are identified under five themes:
  - i. the Evolving Economy: The health of the economy, particularly fast & local measures. Other areas of interest include industry & occupation classifications, regional trade, supply chains, the digital economy and measuring innovation;
  - ii. UK in a Global Context: International trade and international migration;
  - iii. Society: Understanding and measuring 21st century society, including health, income, deprivation, changing nature of employment, and natural capital;
  - iv. Urban and Rural: Local and timely measures of communities and connections; and
  - v. Sustainability: Innovative measurement of progress towards meeting the UK's commitment to the UN Sustainable Development Goals.
3. The scope of research within the launch phase of the DSC has been limited by the number of data scientists available to work on each project. As the DSC scales through to 2022, multi-disciplinary research teams will be assigned to each project, greatly increasing the outputs while maintaining the agile framework that characterises DSC projects.
4. Within government, ONS has a mandate to lead on data science capability. The Campus drives this activity in partnership with the ONS Learning Academy within the Government Statistical Service (GSS) and with the Government Digital Service (GDS) outside the GSS. The launch of a dedicated Data Science Training Unit within the Campus in September 2017 will enable the delivery of a wide range of training programmes to both practitioners and policy makers across ONS and wider government through both in-house trainers and partner universities. The key limitation in the scale of delivery is the availability of suitable facilities rather than trainers.
5. A significant commercial opportunity may exist to generate a funding channel for the Campus by building on expertise developed through the delivery or accreditation of training programmes to ONS and wider government, with the provision of such services either directly to market, as part of a wider partnership agreement with specific industry collaborators or as a component of a broader sponsorship arrangement. Further opportunities for commercially-focused research collaborations exist, however such activities must be undertaken in such a way as to maintain a culture of risk, innovation and work for the public good. The availability of leading-edge facilities to attract such commercial activity will be a key driver of success.
6. By working with strategic commercial partners, a further opportunity to shape the future growth of data science within industry arises through the creation of a partner-funded incubator programme, providing short-term on-site accommodation and mentorship for data science start-ups and SMEs. By co-locating an incubator space with Campus

research and learning facilities, with access to the Campus' academic partnerships, a world-class centre of excellence is created that enables public sector, academic and industry researchers to innovate and develop new data science capabilities in a collaborative environment.

7. The development of an expanded learning and co-located incubator facility will enable the Campus to significantly expand its role within the academic community. A truly world-class facility will enable the Campus to attract and host academic partners in increased numbers and a range of programmes including summer schools, symposia and conferences would build upon existing workshops and seminar series. The Campus will leverage this expanded academic network to launch a co-ordinated government placement programme for data science MSc students in England and Wales, and partner with the Cabinet Office Open Innovation Team to connect government departments with expert research data scientists in academia to collaborate on solutions to key problems.
8. A revised budget that enables these activities, with an option for an expanded Campus facility, was submitted to HM Treasury on 27 July 2017 as part of a wider update on ONS activities related to the Bean Review. A summary of this budget is include below:

£m (nominal)	2016/17	2017/18	2018/19	2019/20	2020/21	2021/22	Total
Programme of Activities	1.736	4.222	5.710	6.980	7.190	7.405	33.243
Expansion of Campus							
Capital			4.000	3.00			
Resource				0.879	1.876	1.883	7.879

9. Additional core capital funding in 2018/19 and 2019/20 would be matched by external funding to enable an expanded facility to be built to accommodate the envisaged expansion of the Campus role. Given the projected positive impact on the South Wales region, there may be an opportunity to partner with Welsh Government for inward investment and Cardiff Capital Region and City Deal funding.
10. The estimated staffing implications of scaling up the Data Science Campus through to 2022 are detailed below:

Staff by main function (FTE)	Base position			Proposed Expansion		
	March 2017	March 2018	March 2019	March 2020	March 2021	March 2022
<b>Leadership</b>	3.0	4.0	4.0	4.0	4.0	4.0
<b>Data scientists</b>	8.0	19.0	22.0	30.0	38.0	38.0
<b>Apprentice data scientists</b>	8.0	16.0	16.0	18.0	20.0	20.0
<b>Other analytical and technical</b>	2.0	7.0	9.0	10.0	11.0	11.0
<b>Academic &amp; capability</b>	2.0	5.0	7.0	8.0	10.0	10.0
<b>Communications and digital</b>	0.0	3.0	3.0	4.0	5.0	5.0
<b>Commercial</b>	0.0	0.3	3.0	4.0	4.0	4.0
<b>Business and project support</b>	2.0	5.0	6.0	7.0	8.0	8.0
<b>Perm Staff FTE</b>	25.0	60.3	70.0	85.0	100.0	100.0

*Publishing official statistics on polling days*

This report has been published at  
<https://www.statisticsauthority.gov.uk/publication/consultation-on-the-publication-of-official-statistics-on-national-polling-days/>.

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