

## **Trends in User Needs**

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### **The changing nature of users and uses**

From the time of the Domesday Book (compiled in England in 1086 to ensure the payment of taxes) through to the late 19<sup>th</sup> Century, the *users* of statistics tended to be people in positions of authority or influence. They often took it on themselves to collect as much statistical information as they thought they needed. Their needs were clear to them – whether it was to collect revenue or to bring about social change. In 2004, Len Cook, the then UK National Statistician, gave a lecture about the “extraordinary contribution to public life” of the Victorian statistical movement<sup>1</sup> and the important role played in this by the Royal Statistical Society.

Moving on to more recent times, the late twentieth century saw a massive expansion in the state’s capacity to generate statistical data and a consequent, and progressive, focus among the producers of statistics on filling ‘gaps’ in the statistical tapestry.

Whilst this was indeed progress it can be argued that it led also to a loss of focus on what users of statistics really needed. If a subject could be identified on which statistics *might* be needed, the priority was to fill that gap regardless of whether doing so was driven by a balanced assessment of user requirements. The UK’s decentralised statistical structure, with many separate funding streams and separate lines of accountability, undoubtedly contributed to this focus on production rather than service.

The growth in the supply of statistics also meant that the user was increasingly bombarded with statistical material from a multitude of sources. Where once there had been only one set of statistics on consumer prices, say, now there were more and more versions and variations. The statistical users of the 1980s and 1990s can have had little idea where some of the statistics came from; and the many producers of those statistics can have had little idea who was using their products or for what. Whilst this observation is made in relation to the United Kingdom, which may have been at one extreme in terms of lack of central control, we suspect some elements of this picture may have been true in many countries.

As with any service industry, a loss of focus on the user prompts criticism and the more recent history, at least in the UK, has been about trying to re-connect the producer and the user of official statistics and help the producers respond more systematically and effectively to changing user priorities.

Even where official statistics had been well-focused on the needs of major users, these needs were starting to evolve more rapidly and are now changing much faster than twenty years ago. The UK’s membership of the European Union progressively re-defined the requirement for broad areas of our official statistical production. Domestically, there was also a major shift towards using official statistics to measure progress against performance indicators for all public services. And statistics were increasingly relied on, whether performance indicators had been defined or not, to identify the need for, and justify, government intervention (in terms of policy or

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<sup>1</sup> [http://www.statistics.gov.uk/events/annual\\_vc.asp](http://www.statistics.gov.uk/events/annual_vc.asp)

resources) targeted at particular social or geographical groups - for example, the need for central government to make repeated interventions in the management of the National Health Service.

At the same time as the importance of statistics to this sort of national decision-making was recognised, an increasingly wide range of other user requirements were also seen to be valid and important. From the early 1990s, the UK government formally recognised that official statistics are used, not just by government to make policy and run local services, but also by the general public in holding government to account; by the private sector in building an efficient economy and by the voluntary sector in providing much needed services. *All* of these uses constituted a public good.

Various reports pointed to the use of official figures by business, pressure groups, the voluntary sector, and the individual person, for decision-making purposes that included planning, marketing, resource allocation, monitoring, policy making, benchmarking, targeting, and many other processes that benefited the citizen directly or indirectly<sup>2</sup>. Among the wider uses of statistics there was growing recognition of their importance in evaluating and assessing the processes involved in implementing policy, providing a metric for the performance of government and public bodies, and for scientific, research and analytical work in many fields.

This very broad concept of the value of official statistics has now been formalised in the new UK Statistics and Registration Service Act, which talks about the obligation to produce official statistics that serve the 'public good'. This phrase embraces all the uses mentioned above.

There is a natural corollary to this focus on the public good. Official statisticians must now legitimise their role by demonstrating that they fulfil their part in the informal contract that governs their work – taxpayers support statisticians' activity and provide survey and administrative data; in return statisticians provide a service that is responsive to the needs of all parts of the society where there is benefit to the public.

### **The changing nature of society**

The 19<sup>th</sup> Century saw fundamental change in almost every aspect of society which official statistics might be expected to measure. By way of examples, there were great changes in population and migration, international trade, national wealth, defence spending, construction, welfare investment, agricultural production, manufacturing, household income, crime, life expectancy and expectation of good health, education, borrowing, public investment, research and development, and the built environment.

Perhaps prompted by all this social upheaval, the foundations of the modern official statistics system were also laid in the 19<sup>th</sup> century. The statistical tools established at that time were designed to measure the substantial social and economic changes and many of these tools are still in use today. The UK's population estimates are still based on the system of registration of births and deaths established in 1836, and on census data obtained using the same basic methods as established in our first modern census of 1851.

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<sup>2</sup> For examples, see Statistics Commission Report No. 33, The Use Made of Official Statistics - [http://www.statscom.org.uk/C\\_1145.aspx](http://www.statscom.org.uk/C_1145.aspx)

The 21<sup>st</sup> century, so far, seems to have had a different dynamic to the 19<sup>th</sup> century. There is perhaps more social stability but some very important changes are happening nonetheless. Western nations have broadly stable population numbers, but with significant periods of economic migration and asylum seeking. Public sector expenditure hovers around 40 - 60% across Europe but there are significant relative changes in tax and spend through economic cycles. The UK economy is relatively stable (or at least has been), but with important relative changes in the role of the financial markets and other tertiary industries. Life expectancy growth has slowed, but there remain substantial differences in expectations of healthy life according to social class and place. Overall standards in education are reasonably stable, but substantial differences in schools' standards exist within small areas. National crime rates are stable, but policing and crime prevention are focussed on specific areas and narrow sub-sections of the population where worrying extremes are found. New concerns – about climate change, the cost and availability of transport, the credit crunch, and the risk of pandemic disease, among many others, have perhaps not yet usurped more established social and economic anxieties (crime, incomes or housing costs) but are steadily rising in the public consciousness.

It can be argued that economic statistics have adapted reasonably well to the different dynamics of the current century although some might note that the service sector, particularly the global financial sector, is not yet well enough measured; or that the measurement of public sector productivity is not yet sufficiently developed. But taking a broad sweep, economic statistics are founded on indicators of trends, rather than absolute measures. The error in the measure of, say, foreign direct investment, is recognised by users as less important than the direction of travel of the indicator. And different countries have achieved a good measure of common practice with most having National Accounts founded on the SNA, and also having associated economic indicators of relative change in key features of the economy.

In retrospect, social statistics may be seen not to have adapted or developed as well. It may now be time to think in terms of developing a framework for Social Accounts with key social indicators, as a tool-set more adapted to measuring relative, not net, social changes. However, the test will be one of utility. We must not produce a social accounting framework because we can, or because we would find it interesting. It must be because steps in that direction are seen to serve the user; and through helping the user to serve the public good.

### **Quality of the statistics**

As statistics have become more used and more influential, so the demands to improve their quality have increased. Improvements have been achieved in terms of relevance, coherence, timeliness, and accessibility.

#### *Relevance*

As noted above, the trend during the 20<sup>th</sup> Century has been a shift from producing whatever statistics could be collected (on a broad subject), to products tailored to specific user interests. At the same time, in both the national and European contexts, there is an inevitable tension between making statistics relevant to government users and making them relevant to other users – this is all the more acute in an era of limited resources available (from government) for the production of statistics.

Of course, many developments do meet the needs of a broad range of users. A recent example of this is the Neighbourhood Statistics System, designed to bring together a range of social and socio-economic data on different policy domains –

education, health, welfare, crime etc - from a variety of sources. The intention was to provide an evidence base to inform decisions about policy interventions and resource allocation (under the generic heading of Neighbourhood Renewal), and also to provide the public with information to inform their own local (housing, schooling, voting) decisions.

And the UK's National Statistical Institute – the Office for National Statistics (ONS) - has established the UK Centre for the Measurement of Government Activity<sup>3</sup>, to strengthen the capability of ONS to publish authoritative and coherent measures of change over time in the inputs, output and productivity of government funded services. Again, this serves the needs of both government and citizens.

### *Coherence*

In recent years, users have demanded greater coherence in all aspects of official statistics – their planning, their collection and analysis, and their reporting. The official statistical community has initiated a number of innovations designed to improve coherence:

- collection: harmonisation of survey definitions and classifications; the new integrated household survey
- analysis and reporting: where a phenomenon is described by multiple sources, there are considerable opportunities to present rounded pictures of broad social and economic domains – ONS produces integrated labour market statistics publications, and integrated releases of migration and related statistics, for example

However it has made less progress on the development of coherent statistical planning, largely because of the decentralised and devolved organisation of statistics in the UK. Nevertheless this is a priority area for the new UK Statistics Authority. It is picked up below.

### *Timeliness*

Economic competition has led to a demand for ever-quicker flows of information to support rapid decision-making. This has applied to economic statistics. To meet EU strategies there has been sustained effort to produce estimates of Principal European Economic Indicators<sup>4</sup> (PEEIs) more quickly, benchmarked against competitors such as the USA. More generally, new IT and survey processing systems have led to the quicker production of estimates as the demand for 'timeliness' has become ingrained. For example, estimates from the UK's Labour Force Survey were produced 15 weeks after the survey reference period in 1993; today they are produced after only 6 weeks.

### *Accessibility*

Major improvements in the accessibility of statistics have resulted from developments in ICT. The growth of the internet in particular has enabled users of statistics to access statistics more efficiently and effectively than ever before.

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<sup>3</sup> <http://www.ons.gov.uk/about-statistics/ukcemga/index.html>

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[http://epp.eurostat.ec.europa.eu/portal/page?\\_pageid=1194,47773485,1194\\_47782287:1194\\_66724556&\\_dad=portal&\\_schema=PORTAL](http://epp.eurostat.ec.europa.eu/portal/page?_pageid=1194,47773485,1194_47782287:1194_66724556&_dad=portal&_schema=PORTAL)

## **The suitability of the statistical service**

In UK public services the trend is increasingly one of tailoring public services (the provision of social benefits, health services and so on) to be convenient to the customer/user rather than simply providing the service in a way that is convenient for the provider – sometimes called citizen-centric service provision. As identified in section 1, in the world of official statistics a similar though perhaps less developed trend can also be seen. This has the potential to support us in legitimating our statistical activities by being seen to provide a statistical service that demonstrably serves the public good rather than (solely) the imperatives of the government of the day.

This has manifested itself in a number of ways; a few examples illustrate the point.

*Trust and confidence* – the debate in the 1980s about the appropriateness of measures of the out-of-work claiming unemployment benefit (the ‘claimant count’) – as a measure of unemployment did lasting damage to the confidence of the public in the integrity of UK official statistics. The introduction of National Statistics in 2000, and a new Code of Practice in 2002 were important developments, though the most high profile stage in addressing questions of trust was the Statistics and Registration Service Act (2007), which introduced an independent organisation – the UK Statistics Authority - to replace the role of Ministers in the running of ONS and the strategic oversight of the statistical production and dissemination across government.

*Information* - In the UK, users are not so much demanding new data now as better access and advice. In a busy world in which people are bombarded with information of varying degrees of quality, users want objective and clear communication of the key messages in official statistics, and better access to statistical products including by exploiting new technologies.

*New products and new methods* - Where users *do* want new data, it is often a matter of wanting the same *type* of information as before but smaller geographies, or longer time series, or more reliable estimates. And the growing diversity of user needs, especially from the research sector, has led to a demand for bespoke products which ONS has not been able to meet directly. Instead ONS has facilitated others’ analysis of its microdata, by increasing access to microdata. This has had spin-off benefits for producers too – for example, by producing bespoke research datasets to enable methodologists to improve their understanding of the characteristics of survey non-respondents, in order to improve survey taking and processing techniques.

## **Implications of these trends**

### *Identifying and engaging with users*

The statistical system needs to take more active steps to understand who its users (and potential users) are, if it is to understand the uses to which they want to put official statistics and more generally give users the opportunity to influence the way the system develops. Relationships need to be close enough for users to accept that there are limitations on what producers can achieve in a given time, and that prioritisation inevitably means that some needs are not met – but that prioritisation nonetheless takes account of the full range of user needs.

This is not easy. ONS has a good understanding of its users in central and local government, and strong links with the academic and research communities, and the

business sector. And the links between ONS and the Statistics User Forum<sup>5</sup> – an umbrella organisation bringing together the existing sectoral user groups – provide an opportunity for users to influence the direction of official statistics.

However, it takes time and sustained effort to build an effective relationship with a broad community of users, and in an era of scarce resources it can be hard to convince budget holders that the investment is worthwhile given the intangible benefits that accrue. Nevertheless these arguments must be made because if producers lose contact with users they lose their support and without that support budget holders will be even less sympathetic to statistical investment.

The relationship between the business sector, and official statistics, is a case in point. Some business representatives consider surveys to be an administrative burden, and press for their reduction. Others, in contrast, regard the government's economic statistics as either directly important in running their own businesses, or indirectly recognise that their best interests are served by enabling the government to manage the economy informed by the statistics that result from the data they provide – and hence see survey completion as a price worth paying. Given the dependence on business surveys for the production of economic statistics it is vital that ONS engages with the business sector effectively<sup>6</sup>.

The governance of an effective relationship with users is also difficult – issues include perceptions of the importance of different user communities, and the extent to which they are able to organise themselves effectively. It is all-too-easy for central government users to dominate the relationship with the NSI in a way that appears exclusive to other users.

The UK statistical community has addressed this primarily by working with representatives of the Statistics User Forum (SUF) to establish a Producers and Users Group (PUG). This provides an opportunity for users to discuss strategic developments in official statistics, and progress against users' priorities<sup>7</sup>, with senior officials in ONS and from across the wider Government Statistical Service. PUG meets about three times a year and is still evolving, but it provides an infrastructure to ensure that (organised) users' views are heard.

Emphasising the importance of user focus, the chair of the UK Statistics Authority – Sir Michael Scholar – has talked about it being the Authority's role to encourage statistical planning with user engagement at its core, and about the need to engage with users in the Authority's scrutiny work, by establishing a systematic dialogue with the many user communities.

#### *Disseminating statistics to meet the needs of users*

It is well understood that users of official statistics place great emphasis on:

- ready access to statistics – requiring a well designed web presence
- descriptions of new statistical results that are clear, unambiguous, and objective – requiring standards for presentation, and a monitoring role
- rounded quality information – identifying the strengths and limitations of statistical series, written in ways that a wide range of users can understand,

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<sup>5</sup> <http://www.rss.org.uk/main.asp?page=1391>

<sup>6</sup> Similar issues apply to the general public, who respond to Censuses and household surveys – the need to ensure that the benefits (ie the uses) of the information are explained to the providers

<sup>7</sup> SUF priorities - <http://www.rss.org.uk/main.asp?page=2699>

and including clear descriptions of the uses to which the statistics should (and should not) be put.

- understanding the environment in which the statistics are produced – requiring relevant Codes of Practice to be written in ways that users can readily understand, and ideally written with input from the user community.

The UK official statistics community has made a number of notable advances in its dissemination of statistics, including:

- a suite of re-designed websites which describe the UK Statistics Authority<sup>8</sup> and the ONS<sup>9</sup>, and the new Publication Hub<sup>10</sup> (which acts as a single port-of-call for users wanting to access any statistical releases produced by any government department or agency; the commentary in these Releases will follow standards determined by the National Statistician)
- standards for the presentation of information about revisions in National Accounts First Releases – setting out when revisions are expected (and the rationale)<sup>11</sup>
- enhanced personalisation of statistics – the Personal Inflation Calculator<sup>12</sup>, launched in 2007, enables individuals to approximate their own inflation rate based on their own spending patterns
- greatly enhanced visualisation of statistics – ONS has identified the need to bring statistical data to life by, for example, exploiting geographical information systems and producing dynamic population projections<sup>13</sup>.

Another major improvement occurred at the time of the introduction of the National Statistics Code of Practice (in 2002). A policy of free access to headline statistics via the internet was adopted (with charging restricted to situations in which additional processing was required, or to cover the printing costs of reference volumes).

But whilst ONS has a good story to tell, it cannot afford to rest on its laurels. Users' needs will develop both spontaneously and in response to technological developments – such as the development of 'web 2.0' which is likely to lead to even greater use of (official) statistics as part of everyday discussion and decision-making.

### *Planning and prioritising*

The absence of a coherent planning system across UK official statistics was mentioned earlier. In recent years ONS has published National Statistics Work Programmes<sup>14</sup>, which have set out the scale of activity in both cross-cutting terms, and for individual themes, and this activity has typically been cross-government (that is to say, inter-agency). However, these plans have been in large part the aggregation of Departments' existing plans, brigaded together for the convenience of users.

The UK Statistics Authority is currently considering an approach to statistical planning characterised by elements of top-down planning (at a strategic level by the

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<sup>8</sup> <http://www.statisticsauthority.gov.uk/about-the-authority/index.html>

<sup>9</sup> <http://www.statistics.gov.uk/default.asp>

<sup>10</sup> <http://www.statistics.gov.uk/>

<sup>11</sup> [http://www.statistics.gov.uk/about/methodology\\_by\\_theme/revisions\\_policies/default.asp](http://www.statistics.gov.uk/about/methodology_by_theme/revisions_policies/default.asp)

<sup>12</sup> <http://www.statistics.gov.uk/pic/>

<sup>13</sup> [http://www.statistics.gov.uk/populationestimates/svg\\_pyramid/default.htm](http://www.statistics.gov.uk/populationestimates/svg_pyramid/default.htm)

<sup>14</sup> <http://www.statistics.gov.uk/StatBase/Product.asp?vlnk=9212>

Authority) and bottom-up planning (by producers, in consultation with users), with the whole process 'moderated' by a committee of senior managers across the Government Statistical Service.

Of course there is some good practice already. For example, there is a "4 Nations Working Group" which ensures that statisticians who support the UK government (represented by ONS), and the Devolved Administrations in each of Scotland, Wales and Northern Ireland, are aware of each others' plans and developments, so that harmonisation and comparability can be 'designed in' to statistical activities as far as possible<sup>15</sup>.

And ONS has invested significant effort over the last year in developing its own Work Programme for 2008-12, which required considerable prioritisation. The objectives were to develop a prioritised list of outputs that would be relevant to stakeholders and provide value for money. The first step towards prioritisation was to identify the costs of outputs. This required a new costing method, mapping the costs of all the various dependencies across the organisation to the range of outputs, rather than the previous approach of allocating costs by organisational unit. Criteria were then developed to enable the scoring of outputs, with some weighting applied to certain criteria such as cost, benefits and known user needs. There then followed a multi-phased consultation exercise with all those with an interest in what ONS does and how it does it. ONS invited views on which of its products and services were most important, how they could be improved, which areas should (in their opinion) be given the highest priority for new investment, and on whether there were some areas where ONS could do less than it does now. ONS also welcomed views on innovative ways of funding its work. The results were then processed and a matrix of contributors, outputs and comments was compiled. This enabled decisions to be taken on producing a Work Programme reflecting an informed balance of priorities against available funding.

Finally, it is worth noting that ONS has actively chosen to extend its partnership working, not least as a response to its own resource limitations in terms of cash and expertise. So for example ONS works closely with academic experts<sup>16</sup> to help develop Samples of Anonymised Records (SARs) from the population censuses – using others' skills to help develop products that will benefit the research community, whilst ensuring that confidentiality is maintained.

#### *Horizon scanning*

To continue to provide relevant statistics, we need to know what users are likely to be interested in, preferably well before the demands emerge. Of course this is easier said than done, and it is hard to justify allocating scarce resources to topics which do not have a current user/sponsor. But it is important to look ahead, to ask what will be important in 10 years time, and how to consider the likely evidence base that will be needed. With this objective in mind the Statistics Authority has decided<sup>17</sup> as a priority to undertake research into both the arrangements for longer-term planning, and the issues currently on the horizon.

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<sup>15</sup> Analogous issues arise at the European level – see the discussion in the Opinion on the Statistical Programme of the European Commission for 2008, published by CEIES in October 2007.

<sup>16</sup> <http://www.ccsr.ac.uk/sars/>

<sup>17</sup> <http://www.statisticsauthority.gov.uk/news/announcements/assessment-programme-and-authority-monitoring-reports.doc>



ONS takes this type of activity seriously, recognising the need to be ahead of the game. The National Statistician has the rank of 'Permanent Secretary' (the highest level) in the UK Civil Service, and attends weekly meetings with her peers who lead policy ministries. This gives her a unique opportunity to hear about the issues that Government regards as future challenges for the country.

In addition, ONS conducts occasional horizon scanning exercises, as part of the UK public sector's wider activity<sup>18</sup>. And staff of the UK Statistics Authority are encouraged to engage in public debate about the future of statistics<sup>19</sup>.

Finally, the European Statistical System (ESS) has established a high level Task Force (TF) charged with considering statistical challenges facing the ESS as a whole. This TF is considering, in discussion with a range of stakeholders, the future needs for statistics in major domains such as migration, labour market, and the economy, for example in recognition of the actual and potential implications of globalisation. The TF is also looking at methodological developments needed to meet these needs most effectively, whilst corresponding groups are considering resource and organisational issues. Staff of the Statistics Authority are closely involved with this activity, partly as a contribution to the ESS but also with a weather eye on demands for statistics at the national level.

ONS is aware that there are gaps in the evidence base needed to inform the debate around pensions and pension reform. Filling these gaps will require research into some complex areas, such as the estimation of pension wealth, which will need to make use of expertise across the academic and government areas. ONS is exploring the idea for a virtual Wealth and Pensions Centre as a mechanism for taking forward a programme of work needed to provide the required evidence base. This approach would complement the establishment in 2007 of a Centre for Demography, the aims of which included improving estimates of migration, in response to strong user demands.

More generally, it is recognised that one of the most effective ways of preparing to meet future statistical needs is to ensure that producers have access to administrative data held across the public sector, and that they have suitable and flexible statistical infrastructures. The new Statistics Act should enable ONS to acquire administrative data held elsewhere, provided they can make convincing cases to Parliament about their needs. This is vitally important, although the climate of opinion in the UK about privacy may make it hard to convince Parliamentarians about the desirability of data sharing for statistical purposes.

In terms of a future statistical infrastructure, ONS is considering the linkage of 2011 Census data with administrative data in order to form the basis of a social statistics spine. This will need an organising framework, real access to data (political commitment), and investment in training and technology

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<sup>18</sup> <http://www.foresight.gov.uk/Horizon%20Scanning%20Centre/index.asp>

<sup>19</sup> For example, "No islands: charting a course for UK official statistics" (*Richard Alldritt and Richard Laux*), *Significance*, March 2008.

## Conclusions

Until the advent of advanced technology, users of statistics mostly just wanted statistics; and they would go out and collect the data themselves if they needed to. Now the world has changed: there has been an explosion in administrative data sources, and users often have access to more statistics than they can comprehend - and so they need help in navigating the sea of statistics of varying provenances that is available via the internet.

The role and culture of official statisticians has to change to match this changing requirement. Conducting sample surveys is no longer the primary activity, although we must not lose those skills. The first responsibility of an official statistician now must be to develop a deep understanding of all the statistical material relevant to a particular subject whether from official sources or not; be able to synthesise the data into the most useful estimates of particular quantities; and provide a trusted service – in the form of statistical products and advice - to a wide range of users.

Where there remains a mismatch between user needs (or anticipated needs) and the available statistical data, the statistician must look at a wide range of options for meeting the requirement. Traditional surveys remain an option but it may be more effective, and potentially less expensive, to adapt or develop the administrative sources managed by public services. But that often requires the close involvement of authorities that are not statistical authorities; and these people will have priorities other than the production of statistical information. So the planning of statistical services is becoming increasingly a matter for the whole of government rather than just the NSI.

Official statisticians are civil servants, and are used to discussing their statistics primarily with other civil servants who are familiar with operating in an environment in which different sources of information have different strengths and limitations. But this may well be less so for the wider user community – which puts the onus on official statisticians to understand that some users need practical, hands-on support in making informed use of statistics. In turn it will be important for the statistical community to skill itself and organise itself to meet this imperative.

It will also be increasingly important for the user community to organise itself in order both to lobby official statisticians, and to provide direct support itself to users. But the user community is becoming increasingly diverse and fragmented, with web2.0 concepts (such as wikis) proving irresistible. Some users want to be engaged with directly by the producers, and mechanisms to enable this are vital. But other users want to operate more passively, so producers have to be more imaginative in catering for their needs.

It is traditional to define a national statistical system in terms of the organisations responsible for production and for oversight/regulation. In the 21<sup>st</sup> Century we need to put the user at the heart of the statistical system – and then work through the implications for planning, production, dissemination, and adding value.