

USERS AND THEIR NEEDS

Users and their Needs

Chapter 07





7.1 Introduction

This chapter covers how a national statistical office (NSO) can meet the needs of a range of users that include governments (central and local), research institutions, journalists and the media, businesses, educational institutions, and the general public.

Meeting user needs is an important aspect of quality assurance as covered by the *United Nations National Quality Assurance Framework (UN NQAF)* principle 2 ‘Managing relationships with data users, data providers and other stakeholders’. This principle states that statistical agencies should build and sustain good relationships with all their key stakeholders, including users, data providers, funding agencies, senior government officials, relevant community organizations, academia and the media. It notes that statistical agencies should have access to all data necessary to satisfy the information needs of society, that stakeholders are identified and consulted regarding their interests, needs and obligations, and that statistical agencies have a strategy, and institutional arrangements are in place to engage with their users.

As noted in the *UNECE recommendations for promoting, measuring and communicating the value of official statistics* (🔗), statistics are intended to be used to make an impact on society by contributing to and improving openness and transparency, while at the same time ensuring confidentiality and equal access to information.

Official statistics are a key source of evidence-based decision-making for both governments and private citizens. Official statistics have (in principle) the comparative advantage in that they are produced in professional independence based on scientific methods using rigorous quality criteria based on the United Nations Fundamental Principles of Official Statistics (UNFPOS).

There is an increasing demand for official statistics. In the past an NSO was generally the only producer of statistics: this is no longer the case. Today, there are also various types of users and many different dissemination channels, meaning that statistics are more widely accessed and come from different sources. This makes the task of meaningful user engagement more challenging, and an NSO consequently needs to develop strategies for engaging with the different users and responding to the increased expectations for data access in the age of the so-called “digital natives” – those who have grown up during the age of digital technology. These users are confident in their use of data and have high expectations of user interfaces, and they expect that data resources should be easy to find and simple to use. In addition, awareness creates demand, and the more data an NSO produces, and the better it is communicated and disseminated, the more the demand for data grows. The public has a legitimate demand that their information needs can be met conveniently and easily and asks for more customized products that are easy to use.

A high-profile example of such data needs is the monitoring of the Sustainable Development Goals (SDG) that respond to both international and national policy needs and the interest of the civil society and the general public. Official statistics are key to the monitoring of SDGs as well as national development policies across all sectors, such as health, education, the environment, economic and social. Users need statistics to develop, design, implement, monitor and adjust these policies. The need for statistics to support the 2030 Agenda for Sustainable Development has also contributed to the pressure on the NSOs, which play a key role in the coordination of the compilation of official statistics and SDG indicators.

NSOs are fully accountable to the public for the data they disseminate and need to manage relations and build trust with a number of different user types. Users today expect statistical information to address their specific needs and as the ubiquity

of the Internet brings news and other information to users in real-time, people want immediate answers to their questions along with the data to back it up. Users may consider that all official statistics should be available immediately with no long delays between the collection of data and its publication. An NSO can be open to criticism if they are perceived to take too long to conduct their analyses and share analytical results and insights. This has the effect of increasing the burden on an NSO to meet the demand of users. Thus, an NSO needs to continuously identify and respond to user needs. Failure to do so can attract adverse feedback which can create a negative public image of the NSO. This may even lead users to turn to alternative data sources which may be of inferior quality and leave valuable datasets of official statistics underused.

An NSO requires a strategy on how best to engage with users, identify and respond to their requirements and issues as they arise, and to measure user satisfaction levels.

Such a strategy would ideally be approached in a coordinated way throughout a national statistical system (NSS), led by the NSO. A coordinated user engagement strategy for the NSO and the NSS can help share resources and reduce duplication of effort. As proposed by the Generic Law on Official Statistics (GLOS), the chief statistician may use the **Statistical Council** to set up advisory bodies with members from within and outside of the NSS to support such strategic activities as coordinating user needs.

Each user group has its own specific requirements that need to be addressed in the strategy so that it becomes possible to develop products and services that meet better specific user needs. Providing a good service can help motivate users to understand the value of official statistics and participate more fully in surveys, leading to better quality statistics. This is valid for all user categories.

Statistical messages must use precise concepts whose meaning is widely known to the public, and the statistical concepts should be familiar to users. For this reason, educating users to statistical concepts and language is necessary. NSO statisticians have an important role to play in educating users in their own domains.

7.2 Measuring and analysing user satisfaction and needs

Users can be classified into different groups.



This chapter describes users as belonging to the categories of central government, including the central bank, the general public, businesses, the media, and education, research and international institutions.

There are other ways to categorise users - the European Statistical Advisory Committee (ESAC) has noted in its paper on the role of communication in statistical science and the strategies of communication for statistics users (9) the importance of identifying different types of users of statistics, understanding their needs and creating a strong communication strategy.

An NSO needs to constantly measure and analyse their response to user needs, monitor how statistics are used and by whom, and gather user feedback and commentary from among the various user groups of statistical data. This is not only

to know the users better; it is also to know better how an NSO is performing in the eyes of its users. An NSO also needs to assess how it is reaching potential new users.

User surveys are an important tool to assess user confidence and trust in official statistics, the usefulness of available statistics and accessibility of official statistics and related services. Surveys can be web-based and should phrase questions using language that respondents can be expected to understand. Survey questions should cover the usability, functionality, and availability of any online statistics dissemination platforms. It should seek to get user feedback on the quality of the statistics, based on the quality dimensions of relevance, accuracy, coherence, credibility, timeliness, accessibility, and interpretability.

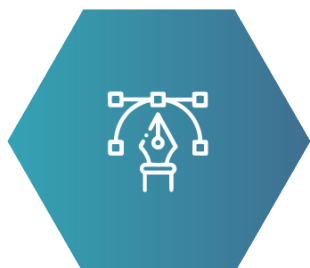
The following areas could be measured by user surveys:



Satisfaction with products and services: This analysis could be further deepened by an analysis of the characteristics of official statistics (e.g., timeliness, accuracy, trustworthiness, (inter)national comparability, etc.). Questions on preferences for the type of access (online, phone, in-person), device type(s) used and preferred media further inform the picture of our customers.



User support quality: Could be measured by asking about the user's perception of user services provided, what works and what should be improved.



Design, communication and metadata: Here, questions could be raised on the design of the official statistics website in general, and the statistical warehouse in particular: how easy/difficult it is to navigate and find the relevant information, how satisfied the user is about the visualizations offered (videos, infographics, maps, graphs, indicator sets), etc.



Relevance, responsiveness and innovation: How effectively does the statistical office inform the public debate on current issues, are they innovative (e.g., using new technologies, methods and data sources), how important are official statistics in helping to understand societal developments.



Awareness of brand and message: Could include analysis of the trust in official statistics, the perceived lack of political interference, and the overall satisfaction with the statistical office and the understanding of its remit.



Specific products and services: This could be measured after a user has received a tailored statistical service, or by asking if the user has heard of a particular statistical product (e.g., provide a list) and then ask how satisfied the user was with the quality of the product or service.

A number of indicators can also be compiled using data that accumulate online. Tools such as Google Analytics and media monitoring can help to measure the use and reach of official statistics. User profiling techniques can be employed to identify the data about different user domains.

It may be useful to collect user feedback and compile indicators to assess adherence to the Fundamental Principles of Official Statistics. These are listed in the annex 3 of the *UNECE Recommendations for promoting, measuring and communicating the value of official statistics*:

- Use of statistics with indicators such as the number of visits to the website and data downloads, by topic. On a sample basis, these data could be complemented by information on the type of users, and whether or not the users could (easily) retrieve the statistics, and whether or not they are satisfied with the service.
- Relevance of statistics such as the number of citations in the main newspapers/news-websites, radio and television channels to assess the impact of statistical “news”, their relevance for public debate, the branding of and the trust in official statistics. The number of citations in research and policy would provide a different viewpoint. An analysis of the alternative data sources used may provide additional information on why users did not use official statistics.
- Transparency of statistical production measured by the publication of an advance release calendar and the adherence to this calendar. In addition, one could collect information on the availability of metadata and other materials and

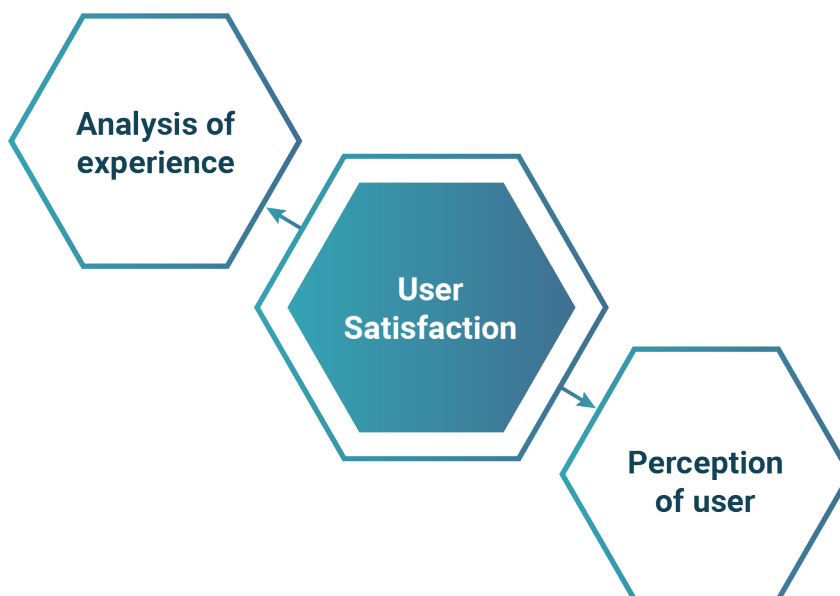
resources about statistics.

- Quality of statistics indicators could be multiple, for instance, one could look at the magnitude and direction of regular revisions, e.g., in economic statistics or a continually updated list of international best practices implemented by the statistical office.

The following activities could form part of the user engagement strategy to measure and analyse user satisfaction and needs:

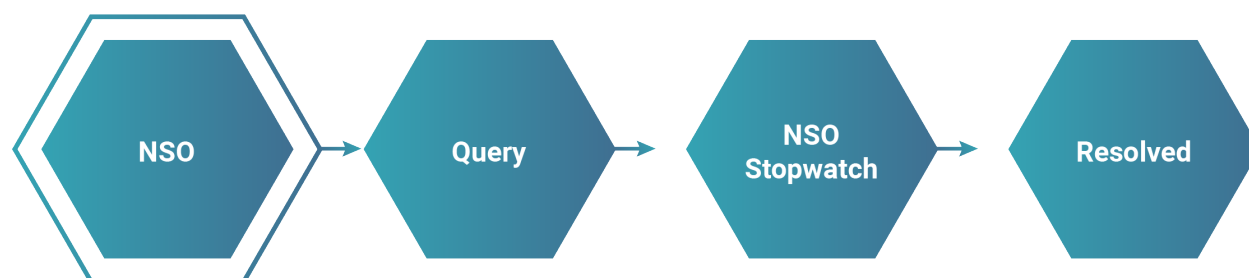


Having a unit responsible for relations with users can help an NSO improve response to the needs of different categories of users. Although many NSOs do not have sufficient capacity for such a unit, they may still initiate or coordinate the implementation of such activities. Such units or activities may be used to coordinate community consultation, public sentiment research and user research, to survey the views of stakeholders and measure their satisfaction levels. User service is part of all statistical work, as statistics are intended for use, and their relevance and ease of use should be a key consideration. Users may also request expert support for the use and interpretation of statistical data. It is key to maintain constant interaction with users.

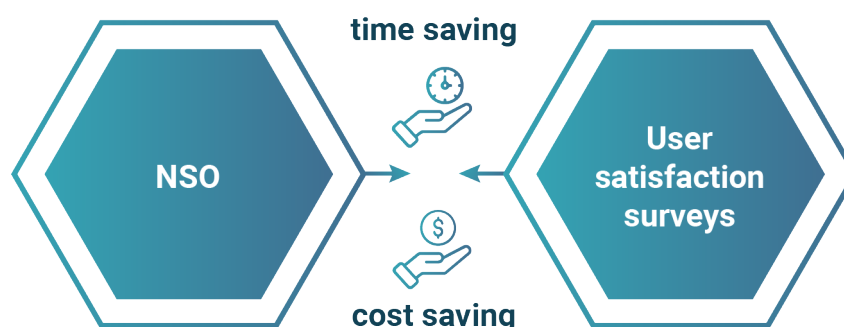


To ensure relevance, the focus should be on analysing the experiences and perceptions of users, to gauge whether the

statistics they are looking for are available at the right level of detail, of sufficient quality and in the right format. An NSO should evaluate the number of users, how they use statistics, how useful the statistics are for them. Efforts should be made to discover why potential users are not using official statistics, whether they are not aware of the statistics, or if they are not in the right format or timely enough. It is important to understand what kind of statistics people are looking for, what it is they actually need and value.



Depending on the capacity of the NSO, there may be a published commitment to respond to a query within a given time period as is the case where the government has an open data policy. In some instances, a query may require the involvement of a subject specialist for a technical request and such special queries would usually require a longer response period.



User satisfaction surveys coordinated across the NSS can avoid duplications, save time and costs.

- User Survey (🔗) of the Turkish Statistical Institute (TurkStat) 2020.
- UNECE (2018) Recommendations for promoting, measuring and communicating the value of official statistics (🔗).
- Statistics Portugal Quality assessment of user satisfaction (🔗).
- National Institute of Statistics of Rwanda User Satisfaction Survey 2018/2019 (🔗).
- INE (Spain) User satisfaction survey (🔗).
- UK Office of National Statistics - exploring the user need for statistical coherence (🔗).

7.3 Organizing and setting up contacts

As noted in *Chapter 4.5.3 — Interaction with user groups outside the statistical advisory council: capturing their information needs*, it can be useful for an NSO to establish and maintain networks and links with user groups, or with important individual users, in order to obtain their substantive inputs and feedback on a regular basis. Establishing close contacts with the experts of the various domains in ministries can help monitor and react to their current and future data needs. An NSO needs core data from ministries, and to ensure this, each ministry needs access to NSO experts. Maintaining close links with policy analysts in ministries can help an NSO to stay abreast of current demands for statistics and any ad hoc requirements for new data. Interagency committees consisting of experts in statistics and various domains may be convened to discuss recurring and emerging statistical issues/concerns.

The following activities could form part of the user engagement strategy to measure and analyse user satisfaction and needs:

- Holding regular stakeholder workshops with key government users allows an NSO to assess the relevance of their current product offerings as well as future needs and any emerging new trends. In this way, users have a platform to give the NSO feedback on any specific data items they need and to ensure its products are responsive to what is needed throughout all levels of government. Different products also have their own key user groups that use and interact with the data regularly, and these users will also have statistical data requests and contributions. These inputs gathered from stakeholder workshops help confirm that products of an NSO remain relevant and can inform a response if they do not.
- User groups can be organized by statistical areas comprising of the most important users in order to collect detailed feedback.
- Using tools such as virtual interaction platforms, contact forms or social media.
- Establishing eternal partnerships and service agreements as frameworks for organizing and establishing contacts.

7.4 Needs of Government and administration

The main purpose of an NSO is to provide data to all their stakeholders, the largest and most important of which is the Government. Availability of trustworthy and timely statistics is crucial, for instance, for a correct assessment of the monetary and economic situation of a country. Census data inform decisions to allocate resources across programmes and plan public services, such as building new hospitals, schools or roads. Statistics influence the direction of fiscal, economic and trade policies, social welfare and environmental policy decisions, and target efforts to improve efficiency and productivity and identify cost savings.

An NSO supports users and provides capacity at all levels of governments – from the highest echelons of the national government to ministries, regional, provincial and municipal levels. This support includes anything from providing statistical profiles to informing strategic plans and helping departments with indicator frameworks and data for reporting.

Governments need an NSO (as well as other compilers of official statistics) to meet their data requirements either in the form of regular, planned statistical collections or via specific, ad hoc data collection exercises. Regular data collection can be high frequency, such as consumer prices, annual data such as annual growth rate international migration, or less frequently collected data, such as a population census. Ad hoc data collections are also needed to provide answers to specific questions that arise and require compilation of new information and perhaps reorganization of existing data.

7.4.1 The needs of ministries, government departments and agencies

Government ministries, departments and agencies are responsible for defining and implementing government policies in their specialised sector. They need official data and statistics to prepare and monitor their national development plans and sectoral plans.

Maintaining good relations with government units is obviously an important part of the work of the chief statistician and the NSO. The structure and organization of the various ministries, government departments and agencies can vary greatly according to the situation of each country. Most countries, however, will have ministries of the interior, foreign affairs, defence, justice, finance, education, economy, labour, administration, education, agriculture, environment and health, each of which an NSO will need to interact with.

The ministries responsible for health and education tend to be the largest of the service ministries, with portfolios that cover both public and private sectors. The information requirements of these ministries have become increasingly dominated by the notion of effectiveness, which requires measuring the outcomes of their policies and actions administrative records are insufficient to measure outcomes. As a result, questions about effectiveness lead to demands for supplementing administrative records with independently generated statistical information within an analytical framework.

The needs of ministries responsible for finance are long-standing, even though the form in which data must be presented changes along with advances in economics and accounting. Their needs range from measuring the wealth of the country to balancing the State ledgers and setting aside resources for future generations. A ministry responsible for finance must know how changes in quantities and prices interact to change value. By and large, a ministry responsible for finance is more interested in statistics that relate to rapidly changing variables, such as the demand, rather than the supply, side of the overall balance. For this reason, its questions tend to be clustered around the behaviour of the major demand aggregates: consumers, the confidence with which they behave in the marketplace, and the portion of their incomes they are prone to save; investors and the structures and equipment they wish to acquire; businesses abroad and the willingness they display to purchase nationally produced goods and services. Other ministries are more interested in looking into the supply side of the balance.

The data management needs of the various ministries are linked to the organization of the NSS and the role of the NSO. Of particular importance is whether the national system is centralised or decentralised (see [Chapter 4.5.3 — Interaction with user groups outside the statistical advisory council: capturing their information needs](#)).

In a centralised NSS, the NSO has specialised subject area units that manage a number of statistical activities of interest to line ministries.

Depending on the degree of centralisation, a unit may play an advisory role or be responsible for liaison or dialogue with a particular ministry if the ministry is a source of data. The unit would have the subject-matter expertise needed to predict statistical requirements.

In a decentralised NSS, the data management expertise in ministries that produce official statistics would reside in a statistical unit within the ministry itself. Depending on the degree of decentralisation, these units could have their own data collection capability or alternatively, the ministry could request the NSO to carry out data collection on its behalf. In cases that the NSO does not carry out the surveys or censuses, it may review and evaluate them to ensure that they conform with standard definitions, concepts and classifications and that the statistics generated from these surveys are reliable, accurate, and comparable. (As an example, the Philippine Statistics Authority adopts a mechanism called the Statistical Survey Review and Clearance System where surveys and censuses sponsored or conducted by agencies are evaluated). An NSO could also commission a third party, such as an international organization or private sector, to take charge of any data collection operations.

The following activities could form part of the user engagement strategy for ministries:

- Prioritising activities and communicating the information to its users.
- Establishing formal agreements between the NSO and ministries for the compilation of tailored statistical services or the provision of source data from the ministry to the NSO.
- Promoting regular formal consultations for ministries.

7.4.2 Regional and local government

The interactions an NSO has with regional and local government lead to similar issues to those it has with ministries, the key difference being that ministries are related to subject matter whereas regional government cuts across geography. Local governments face an intensified need for local policymaking and need reliable regional statistical information to support their evidence-based policymaking.

The issues arising for an NSO in its work with local government can vary enormously from country to country depending on its political organization, size, infrastructure, capacity and other variables.


Problems can be caused by the difficulties of communication and gaining access to officials in remote areas, or to satisfy the information needs of various layers of government.

It is important that the NSO has good communications with regions and that the relationship with the local government does not become imbalanced and lead to the evolution of alternative data collection agencies. This may result in the overall coordination becoming much more difficult to manage. Where a network of provincial and district statistical offices is in place, there is the capacity within these offices to support provincial and local government stakeholders and serve to link

these to the national office. It is also important that the NSO has the same approach for regional and local governments, even though their needs might be different in scope and type of requested information. Staff can be seconded to various regional agencies to help connect them with official statistics, data and insights. A statistics committee may be convened at the sub-national level to provide guidance and direction to statistical development activities in regions and provinces. This committee, with members composed of line agencies, academic, private sector and local government, can serve as a venue to improve statistical planning, programming, and coordination at the sub-national level.

An NSO does not usually have a requirement to address all regional needs for statistics unless resources are specifically provided for that purpose. Many NSOs provide regionally detailed statistics and also perform additional tailored statistical services for regional bodies that are chargeable.

The following activities could form part of the user engagement strategy for regional and local government:

- Providing nationally compiled statistics to regions accompanied by regional and local breakdowns.
- Defining the conditions of access to regional and local databases.
- Providing support for regional and local agencies that wish to supplement their own databases with resources available at the national level.
- Providing guidance on ways to ensure the reliability of regional statistics on issues such as the use of geographic classifications.
- Promoting regular formal consultations for regions.
- Statistics Poland STRATEG system () for programming and monitoring of development policy – an example of meeting stakeholders' needs.

7.5 Needs of the Central Bank

Central banks are government institutions but are independent of the ministry or department of finance with the role of ensuring the stability of a country's monetary or financial system. Central banks can be part of the NSS and are both a producer and a user of statistics. Producing statistics is a core activity of central banks both for policymaking and for communicating and explaining their decisions.

The statistical activities of central banks are often a by-product of its supervisory functions and are generally confined to the monetary and fiscal spheres of the economy, particularly monetary statistics, the balance of payments and economic forecasts.

As well as being responsible for these financial statistics, in some cases, a central bank may also be responsible for the compilation of national accounts, the production of foreign trade in services statistics and the organization of business surveys and some household surveys. In many recent examples, financial accounts are being transferred from central banks to the NSO in order to improve the quality of national accounts (Note: In conformity with UN Statistical Commission decision 51/108 c, it should be noted that in order to comply with the Fundamental Principles of Official Statistics, the compilers of the National Accounts should be independent of the users of these statistics such as the monetary authorities).

A central bank will usually have a statistical unit. It is in the interests of both the central bank and the NSO to maintain a high level of cooperation as this provides key mutual benefits given that each organization is the user of the other's data. This unit frequently has a research function and is recognised as a scientific unit.

In many cases, the NSO provides data collection for the central bank - particularly in cases when surveys are required, such as household finance and consumption survey. The role of the NSO in providing guidance in data exchange standards to facilitate interoperability and joined up systems applies to the Central Bank as much as to the line ministries making up the NSS.

The following activities could form part of the user engagement strategy for the central bank:

- As the lead organization of the NSS, an NSO can provide coordination. Coordinating between the two NSO and central bank on statistical activities and defining a clear division of tasks with respect to the responsibilities for data

collection, data processing, data exchange, compilation of primary and derived statistics, reporting to international institutions and the publication of statistical results. Sharing of information between NSO and the central bank due to different confidentiality requirements.

- Providing guidance to the central bank on the adoption and use of the latest statistical standards at the international level, and on methodologies and best practices on data production processes.
- Provide training events to facilitate the proper understanding of changes in statistical output and the underlying reasons.

7.6 Needs of the public

Society's seemingly insatiable demand for fact-based information continues to increase. The general public - ordinary people in society who do not belong to any of the more formal groups of statistics users covered in this chapter - require statistics to respond to a wide range of questions affecting their daily lives, to better understand events both local and global and to meet other, individual needs. Modern official statistics help the public to hold policymakers and the government to account, and equal access to official statistics is intended to offer the same benefits to everyone similarly to basic human rights.

Official statistics give the general public a basis for thinking about the future, grounded in good information about the present and the past.

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For most of the general public with access to the internet, the first instinct when seeking the data, they need, is to use a search engine which may direct them to the NSO website. From here, users can access the NSO database, view recent statistical releases, access headline indicators and also find the contact details of the NSO experts.

The following activities could form part of the user engagement strategy for the general public:

- The general public needs user-friendly products (focused products, data stories, short and simple texts, etc.).
- Making NSO data sufficiently easy to find, access and understand for all users. Making the data searchable with comprehensive metadata and a robust search engine can go a long way to achieving this. Separate interfaces can be developed for expert-level and more basic users with different levels of functionality and analytical tools (see *Chapter 11.7 - Dissemination methods*).
- Maintaining a dedicated unit to respond to enquiries from the general public and stakeholders, which can come via email, social media, telephone or walk-in visits. Users can subscribe to receive news about latest releases via a notification service or be advised when updates are available for the various topics, they are interested in.
- Providing the general public with access to the data they need with infographics to make the data more understandable and increasing awareness of its availability and high quality is an important way to build confidence and trust in official statistics.
- Redesign the website to improve visibility based on analysis of web search results analysis.
- Use social media to increase engagement (see *Chapter 11.7.2 - The use of social media in dissemination*).
- Leverage other groups to increase outreach (for example, ONS in the UK have a syndication arrangement with BBC). This can be an effective way to ensure the general public gets access to the data rather than assuming they will get it through the NSO website.

7.7 Needs of businesses

Businesses are both providers of data and users of official statistics. Businesses look to an NSO to obtain the information they need to help them run efficiently and effectively. In particular, they need data to ascertain their business position compared to their competitors in the marketplace and to identify any trends that will have an impact on their operations.

An NSO commonly provides data derived from business surveys censuses and trade data that cover economic and demographic characteristics for businesses that can help an analyst to better understand a particular industry, prospective customers, competitors, internal problems, and markets.

NSO user support to businesses is generally organized to consider the differences between large and small businesses respondent burden (see [Chapter 9.2.2 — Survey types](#)).

7.7.1 Large businesses

In many countries, big businesses represent a disproportionately large share of GDP and therefore neither its requirements for information nor the accuracy and promptness of its responses can be ignored.

For this reason, a number of statistical agencies have instituted a special unit with the exclusive function of managing relations with large businesses. Not surprisingly, the first agencies to institute such units were in those countries with the highest concentration of large businesses. However, the payoff has been so significant that others have followed suit. Today, there are examples of big business units in large and small statistical offices and in industrially advanced as well as emerging industrialised countries.

7.7.2 Small and medium sized businesses

Small businesses or small and medium-sized enterprises make up the bulk of businesses in most countries. Satisfying the information needs of these businesses can be a challenge for an NSO for a number of reasons. The chief reason is the sheer number of small businesses, meaning that the effort required to respond to their queries will be that much higher than for the relatively much smaller number of large businesses. If a request for data concerns comparable small businesses, for which the specifications could be very detailed, the data can be time-consuming to locate and compile for the NSO support unit that manages business surveys.

The following activities could form part of the user engagement strategy for the businesses:









- Interacting with (sectoral) business associations to, among others, communicate messages that are of the interest of the industry. Businesses supply raw data. At the same time, they are users of statistical products and are not always aware of the services provided by an NSO. An NSO can identify and communicate what statistics are used by businesses. With an awareness of the special service provided to business users, survey response rates can improve as a consequence.
- Providing guidance to large businesses as to how best to use statistical information. NSOs need to find out whether large businesses are using statistical information, and if not, to find out the reasons why not. NSOs also need to promote the use of statistics for business decision-making.
- Arrange training courses, seminars and other events for small businesses in order to help business users, get the best advantage out of business statistics and to better locate, extract and make use of this data.

7.8 Needs of education

An NSO can play an important role in helping children get the best out of statistics from an early age and to stress how these data could help them make decisions throughout their lives.

Many schools and high schools have introduced statistics into the curriculum. School visits to the NSO are quite common in many countries, although the degree to which an NSO participates in the design of these courses or invests in statistical outreach to schools varies considerably from country to country.

The following activities could form part of the user engagement strategy for schools:

- Defining courses on statistics that use examples of familiar situations that take place in daily life and then apply statistical analysis to them or use existing collections of data such as sports league tables to help build statistical literacy using real-world data. Statistics can be incorporated into the school mathematics courses (as they are already in many countries). Courses may also include training on infographics.
- Creating online sites specifically aimed at children. Initiatives can include story-telling techniques with graphics to explain statistical phenomena, online statistical quizzes and essay competitions to underline the value of using statistics.
- Conducting career orientation seminars and statistical advocacies that are comprehensive and engaging in students.
- ISI/IASE: International Statistical Literacy Project (ISLP).
- Eurostat – The European Statistics Competition (.
- Malawi's establishment of a statistical training school to serve statistical staff across the NSS (.
- Nigeria youth exchanges with schools (, the training school () for entire NSS in-service training, the annual retreat with media () and dissemination using social media (.
- Rwanda. National Institute of Statistics of Rwanda annual competition () intended for University students in the framework of the celebration of the African Statistics Day to raising public awareness about the importance of statistics in the economic and social development of the continent.
- Cayman Islands Economics and Statistics Office web page for students (.

7.9 Needs of researchers and academia

The research community is an essential adjunct to economic innovation and improved social and environmental outcomes. Much of the sector's work is possible, however, because of its access to wide-ranging official statistical datasets. A testament to this fact is underlined by the pressure from research institutes in many countries for the availability of further statistical information.

Some NSOs are able to serve researchers by providing them with complex and easily linkable datasets in technically advanced environments. Integrated large unit-level datasets enable universities, policy analysis institutes, research institutions, ministries, municipal agencies and individual researchers to do empirical analysis to inform future decisions. The datasets assist in studying complex problems that have multiple causes and cut across many areas of government, such as productivity, innovation, gender pay gap, income deprivation, climate change, joblessness, homelessness etc.

Where it has sufficient capacity, an NSO can provide researchers with data that have been collected, classified, combined, edited and corrected as part of the compilation of official statistics.

Data come from multiple sources, such as censuses, surveys and population and business registers, tax registers, school systems, social protection and health systems, and as such enable a multitude of longitudinal and cross-sectional analysis. Accessible metadata together with a suite of research tools, applications and software, can be offered for processing and analysing data. These services enable researchers to focus on the key issues with which they are concerned, rather than on the preparation of the data itself.



Working with researchers and academia can be both beneficial and demanding for an NSO.

As a benefit, academia can promote the use of official statistics by making it more widely known in the research domain and among the general public, which in turn can boost the credibility of the NSO as the source of data. Researchers can provide useful input to an NSO by giving important feedback on the quality of its data and methodologies due to the fact that they have more in-depth access to the data production processes than other types of users. In addition, collaboration with researchers on specific topics can have the knock-on effect of leading to new areas of research for an NSO.

The academic world can put demands on an NSO given the often very complex demands for data required for research projects. In many cases, the aggregate statistics made available by the NSO through its web site or other publications are not sufficient for researchers who instead prefer to use the underlying microdata to feed into their own preferred analytical tools and algorithms. This can require quite a significant effort given the confidentiality concerns and the practical issues involved in gaining physical access to this kind of data via secure micro-data labs or their equivalent. The needs of academic users often require significant time and repeated involvement of NSO experts.

Statistical offices, universities and research institutes have a long record of working closely together to develop statistical methods on one hand and empirical research on the other.

The following activities could form part of the user engagement strategy for researchers:

- Offer traineeships to students and carry out training on survey techniques and statistical methodologies, adding to the overall endowment of research capability.
- Develop common principles and tools for access to microdata for research purposes and are sharing best practices across countries. Such initiatives increase the scope for productive research on international phenomena and allow for comparative analysis across a range of subjects.
- Establish a specific unit dedicated to supporting the work of researchers and requirements are covered on a case-by-case basis following individual requests according to general rules and regulations; however, there is often a committee that deals with requests to access confidential statistical information.
- Establish formal cooperation programmes with academic institutes. Cooperation programmes can take the form of secondments, placements, fellowships or memoranda of understandings. In cases where such cooperation programmes are possible, seconded academics provide a useful complement to an NSO, bringing up to date and in-depth knowledge and analytical skills.
- Example: A strategic partnership has been launched between Cardiff University and the Office for National Statistics (ONS), which has students taking part in developing new data science techniques that aim to inform top government decisions. The new partnership places a strong emphasis on developing skills, career pathways and creating graduate opportunities.
- Senegal NSO centre to access statistical data () at the Cheikh-Anta-Diop University of Dakar.
- Canada has established 32 research data centres () in universities across the country and three federal research Data centres in the National Capital Region where researchers become deemed employees and can access a vast selection of Statistics Canada microdata fields for research purposes.
- Eurostat provides researchers with several public-use files containing data from EU countries, and other international organizations have similar projects aimed at promoting this type of exchange. The survey on income and living conditions (EU-SILC) is a good example where the microdata is an end-product of its own and can be accessed by researchers globally.

7.10 Needs of the media




An NSO should pay special attention to the needs of the media given the importance of their role in transmitting statistics to a mass audience and the important roles they can play in image-building activities of an NSO.

It is important that the media are informed of all statistical releases in advance, and that they receive or can get access to the relevant data in a format that they can easily use. The data should be clearly described to prevent any misinterpretation so that any report based on it will be as balanced and accurate as possible. By using official statistics in a news story, the media can help build public confidence and trust in the NSO and increase awareness of its statistics and methods.

An NSO needs to be particularly responsive to questions from journalists and to provide any explanations, given the global aspect of modern news media. To achieve this, most NSOs have a communication or press office dedicated to the needs of the media with trained staff who are able to handle media queries and to manage product launches and releases. This office is responsible for sending out the press releases that accompany all major releases and reports to alert the media. Requests for statistical information from journalists and the media are handled by this unit and would normally coordinate any media requests for television or radio interviews with NSO members. It would also support the response to the requests of the media and journalists concerning the comments made or the clarifications requested in relation to results of surveys or figures published in press conferences, including tailoring information to the specific needs of media.

Press conferences can be held when statistical releases contain news, such as a large change in the economy, for the most important releases such as census results or GDP figures. In some NSOs the unit is responsible for promoting official statistics to the media, including suggesting potential stories and facilitating interviews with NSO staff. In an ideal world, everybody should get access to data at the same time as stated in the UNFPOS principle of ‘universality and equal access’. In some cases, this is possible, and a limited early release for certain users under embargo can be considered. This case is an exception and should be strictly regulated and transparent. In these cases, transparency must be ensured with the NSO publishing a list of all entities having access to data before the embargo.

The following activities could form part of the user engagement strategy for the media:

- Improve communication of statistical releases in a way that appeals to the media. This often requires training of NSO staff to help the media use statistics for checking facts and for writing interesting articles about their data. This practically may mean multiple publications for each output (e.g., a media release, a main publication etc.).
- Organize training seminars covering analytical techniques and how best to interpret data in support of investigative stories and visualisations in order to help journalists better understand and use statistics.
- Assess the use of statistics by media in order to identify domains or topics where data are misused and therefore develop capacity building and training programmes for journalists.
- Develop online training modules. This can lead to a reduction of the costs linked to training seminars and extensive coverage of journalists.
- Develop training courses in data journalism. Data journalism goes hand in hand with Big Data, which aims to exploit data and other information generated by businesses and other sources. Data Journalism has emerged as a new branch of journalism that can show journalists how to use data to elucidate and give deeper insights into the important issues of the day as well as to provide context to a news story. The Data Journalism Handbook shows how data can serve as the tool used to tell a story, the source upon which a story is based, or both.
- Development of a virtual press centre/room where journalists can interact with NSO. Such an activity reduces costs for workshops and seminars and covers a wide range of journalist, particularly those who do not reside where the NSO is located.
- Establishing an awards system to recognize any significant contributions of media in the statistical community.
- UNECE Making data meaningful guides ()
- Australian Bureau of Statistics, Understanding Statistics ()
- Al Jazeera Media Institute of Data Journalism ()

- Zambia user engagement with media and schools (🔗).
- Ghana media interactions via user workshops (🔗).

7.11 Needs of international institutions

An NSO works extensively with international institutions. These are made up of the UN organizations (UN Secretariat, specialised agencies, funds and programmes, regional commissions), intergovernmental development banks, intergovernmental central banks and regional intergovernmental organizations (see *Chapter 17 - The International Statistical System (ISS)*).

The relationship between an NSO and international institutions works in two directions. The NSO provides statistics to the international institutions and contributes to discussions in international fora while international institutions provide technical capacity building and guidance on the use of standards and methodologies.

International institutions support collective action in a number of ways, particularly through the development of common rules, standards, and international instruments.

For an NSO, the focus of their work with international institutions is the provision of statistics that are comparable across countries, whose compilation requires collaboration between the NSO and other agencies in the NSS. Depending on the mandate of each international institution, the provision of this data can be either a legal obligation resulting in a penalty if not fulfilled, or it can take the less binding form of a cooperation agreement or memorandum of understanding. The workload of an NSO can increase when multiple requests are made for the same, or similar, data through lack of coordination between different international institutions. This has been addressed by both sides and efforts have since been made by NSOs to publish data online using agreed international standard formats in order that international institutions can ‘pull’ the data themselves from a single source rather than have the NSO ‘push’ a separate data extract for request.

7.12 Needs associated with the Sustainable Development Goals

Comparable and harmonized official statistics are a powerful tool for implementing international policy frameworks which are increasingly evidence-based and come with a measurement framework. This is true for the **2030 Agenda for Sustainable Development**. An NSO is often responsible for the compilation and reporting of SDG data, although this is not always the case as country practices on SDG data collection and coordination mechanisms vary. An NSO needs to put in place specific data management systems to collect data from all of its stakeholders in a standard format that are then reported – often via a specialised SDG data portal. The NSO must ensure interoperability of SDG data with all its international partners for the monitoring of progress on its SDG targets. An NSO may have the overall responsibility, but much of data may come from other NSS data producers.

The necessary monitoring of the many SDG indicators has brought to light many data gaps that conventional data collection methods cannot bridge. As a result, NSOs are increasingly engaging with other data producers within the official statistical system, and in the civil society, academia and the private sector, and are called to provide advice on methods to ensure high quality of statistics. This is also engaging NSOs in new tasks, and wider coordination of data flows on SDG indicators to provide easier access to data, but also to review the quality. Official statistics provide an independent and impartial means for assessing progress (or the lack of it!). An NSO needs to implement the necessary software systems and to work extensively with stakeholders in order to close any data gaps. For an NSO, such multi-stakeholder processes can be challenging and resource-heavy in their nature.

Agenda 2030 also brings opportunities for capacity building and a strategy to assist NSOs in addressing these challenges was developed by the HLG-PCCB and is at the centre of the Cape Town Global Action plan (CTGAP) for sustainable development data.

The Sustainable Development Goals have created a number of specific needs for an NSO associated with the production and use of the SDG indicators. As noted in the CTGAP, all NSS face the urgent need to adapt and develop in order to

meet the widening, increasing and evolving needs of data users, including for the full implementation of the 2030 Agenda for Sustainable Development.

An NSO plays a key role in collecting, coordinating, validating as well as reporting, disseminating and communicating statistics for the SDGs.

This role includes the following tasks:

- Identifying appropriate data sources and methodologies to produce the SDG indicators;
- Compiling national statistics from NSOs and other stakeholders, including ministries and civil society organizations;
- Data disaggregation of SDG indicators;
- Verifying country data and metadata;
- Ensuring international comparability;
- Providing statistics to international agencies to help measure the progress on SDGs;
- Analysing data and identifying data gaps and key trends;
- Reporting data and metadata to the annual Sustainable Development Goals Report;
- Designing and leading effective communication strategies for SDG statistics.

7.13 Needs of other international policy frameworks

Other international policy frameworks include human rights reporting under international human rights treaties, the Paris Climate Change Agreement, the Sendai Framework for Disaster Risk Reduction and many others.

They are all reaching out to NSOs to provide the basis for the reporting and monitoring, impelled by the strong international comparability offered by official statistics.

The international statistical system works in collaboration across countries, thereby bringing the best experts together to develop new statistics and statistical methods. The pressure to increase coordination within the NSS is coming from users, including the government and international organizations, who are looking for compatibility, high quality and easier access to the required information.

7.14 Statistical communication

In today's world, it is no longer enough for an NSO to simply make official statistics available to users, but it is also necessary to communicate in order to reach both existing and potential new users.

The practice of communication is a relatively new field for many NSOs. With limited resources and in an increasingly competitive environment, however, communication can no longer be viewed as 'nice to have' but as a 'must-have'. To stay relevant, NSOs need to communicate the value and importance of official statistics consistently and clearly through a strategic approach to communication to ensure that the NSOs products and services are reaching the right audiences at the right time using the most appropriate channels.

7.14.1 Statistical communication strategy

A communication strategy should create sustainable communication systems, processes and skills that will ensure a consistently high quality of communication between the NSO and its stakeholders.

This includes adapting communication outputs to suit particular communication channels.

An NSO needs to communicate that the data it disseminates meets requirements of timeliness, disaggregation and reliability. NSOs need to build internal expertise in the field of communication. To meet these challenges, an NSO requires appropriate dissemination and communication strategies.

The following text in this section is summarised from the *UNECE in-depth review of emerging issues in statistical communication* (🔗). Communication is essentially about targeting and messaging key audiences. An effective dissemination and communication strategy are essential for maintaining the relevance of official statistics.

A communication strategy is not covered in the Generic Statistical Business Process Model (GSBPM) because this would normally be handled at the corporate level rather than the individual process level. It is covered in the Generic Activity Model for Statistical Organizations (GAMSO) that describes and defines the activities that take place within a typical organization that produces official statistics, under the topics Corporate support Manage consumers.

A dissemination and communication strategy will need to address the following issues:


- tailoring and framing messages to suit particular audience cohorts;
- designing tools and channels that suit a particular audience's needs;
- audience engagement initiatives and outreach programmes;
- customer consultation;
- media relations programmes;
- creating issue management response protocols; and
- measuring the results and impact of communication.

Measuring the effectiveness of communication strategies is essential in order to ascertain whether implemented communication activities have enabled an NSO to meet its goals and enable it to face future challenges. The use of web analytics (such as Google Analytics) to monitor use against defined goals and objectives is fundamental to any communication programme, whether it be a single campaign or an on-going effort where the results are incremental over time.

7.14.2 External communication

Communication to the users of official statistics can be divided into two types: proactive and reactive communication.

Proactive Communication	Reactive Communication
Proactive communication includes holding press conferences, releasing videos to the media and improving statistical release material. Such communication techniques can strengthen the public image of the NSO and improve its perceived credibility.	Reactive communication involves the chief statistician having to publicly explain an issue concerning a release of statistics and asking for correction. Many statistical laws in these cases make such reactions an obligation of the chief statistician. This is necessary in order to preserve the public image of the NSO and to prevent misuse or misinterpretation of official statistics.
Press conferences can be held by the chief statistician or subject matter specialists and are an easy way to give additional explanations to the public without extra cost. Some NSOs produce commentaries on statistical releases and make the video material available to the media. This can improve statistical releases by making them more informative and more understandable to the general public.	To help meet the needs of dealing with the media, an NSO could ideally maintain a pool of statisticians and other analysts who are trained to answer media queries and give broadcast interviews.
Statistical releases may also be redesigned with the aim of capturing attention, encouraging users to continue reading and making it more likely that a release will get media attention. As a precondition to such communication, the training of staff involved in writing releases is needed.	

- *UNECE Recommendations for Promoting, Measuring and Communicating the Value of Official Statistics* (.

7.14.3 Internal communication

Official statistics are usually organized into subject areas, and even though statisticians in an NSO may use similar methods, quite often they are unaware of activities such as modernisation or new developments in other subject areas. In order to encourage knowledge sharing and cooperation, an NSO can promote methods of internal communication such as regular meetings with the chief statistician and management to discuss current issues. Many statistical offices use their intranet pages to inform employees of their activities. Internal communication is also an important tool for change management within an NSO (See [Chapter 6.6 — Change management](#)).