

**Best Practice Guidelines for the Development
and Implementation of formal Data/Statistics
Strategies in Government Departments**

National Statistics Board

March 2004

1 Background

On foot of the memorandum accompanying the Steering Group on Social and Equality Statistics (SGSES) report¹, the Government requested each department to prepare a data/statistics strategy². Each department was asked to establish an appropriate committee bringing together data users (including appropriate outside experts and data users) and data producers to design and deliver its statistics strategy:

- ◆ Determine how, and to what extent, the department's data needs can be met within the department;
- ◆ Establish what information not internally available is required;
- ◆ Identify the data needs in respect of complex and cross-cutting issues with which the department is concerned; and
- ◆ Identify how the skills of its staff in using data as a tool for policy evaluation and development can be enhanced.

The Government asked the NSB to develop best practice guidelines to assist departments in the preparation and implementation of their data strategy. This report addresses that request.

2 Identification of data policy needs

The starting point for preparing a data strategy is for each department to set out and prioritise its statistical data needs. This effectively requires departments to identify what data they need to assist them in the formulation of policy and also what data they need for assessing the effectiveness of policy implementation. A department may need in-depth tabular analyses to support the initial development of policy, e.g. tables broken down by the main demographic, socio-economic and geographical categories, whereas key indicators may be sufficient for the ongoing monitoring of policy.

An initial attempt at identifying data needs was undertaken as part of the SGSES exercise. The Steering Group issued a questionnaire to several government departments³. Department staff were asked to list the indicators they currently used and the indicators that they would like to see developed, and to assign a high, medium or low priority to each of these indicators.

The results of the survey suggested that policy makers regarded the indicators currently in use as inadequate for supporting the development and evaluation of social policy. The results also showed that many of the respondents thought about data needs in a narrow perspective focussed primarily around meeting the needs of specific programmes or international questionnaires. The SGSES report concluded that the level and variety of data needs identified showed that there was considerable

¹ NSB (2003): "Developing Irish Social and Equality Statistics to meet Policy Needs"

² The development of a formal Data/Statistics Strategy within each Department as an integral part of its information strategy. This should be included in its *Statement of Strategy* and be reported on in the annual report.

³ Departments of: Agriculture & Food; Community, Rural & Gaeltacht Affairs; Education & Science; Enterprise, Trade & Employment; Environment and Local Government; Finance; Health & Children; Justice, Equality & Law Reform; Social & Family Affairs; Taoiseach; and the Office of the revenue Commissioners.

variation across departments in their engagement with and understanding of the potential for using data for policy development and analysis.

A more thorough examination of department data needs is required for the development of data strategies. A data strategy exercise involves a fuller analysis of data needs than a selection of individual social policy indicators. Departments should begin by identifying the key policy areas where there is a need for a broad range of statistical information. These key policy areas will serve as a broad framework⁴ for identifying the more detailed statistical data needs of the department in a comprehensive manner. For example, the SGSES report used 12 domains⁵ to classify user data needs. These domains were further broken down into 75 more detailed policy areas⁶ during the process of classifying the 1,025 indicators identified during the study.

Each department then needs to identify which information it requires in each of these key policy areas. Senior management within each department should be involved in this task to ensure that the process is both comprehensive and strategic and not just formulated on the basis of current priorities, data availability, or data demands. The process should also include consultation with the key users of the department's statistical information and possibly a survey of the statistical data needs of the principal external users⁷. The required information will probably be a mixture of a broad range of detailed tabular information on areas such as poverty and education, and key social, economic and environmental indicators classified by variables such as gender and geographic region.

3 Analysis of internal data availability

Having identified their data needs, each department should identify what data sources are available within the department and its agencies that can meet these policy needs for statistical data. Work undertaken by the NSB and CSO should be of assistance to departments in this task. The SGSES report contained a preliminary listing of the data holdings of relevance to social statistics in each department. The report also outlined the extent to which these data sources could be disaggregated by criteria such as age, gender and socio-economic status⁸. In addition, in a follow-on report⁹ (known as the SPAR report), the CSO examined the potential statistical value of the major social data holdings in six government departments¹⁰.

The SPAR exercise involved a detailed examination of the main data holdings in the departments. One of the report's findings was that there was a lack of central documentation of the data holdings held in departments and their agencies. This lack

⁴ To facilitate overall inter-departmental co-ordination, it would be helpful if all departments used a consistent framework for identifying the key policy areas where they need statistical information. However the Board's opinion is that it may be more meaningful to construct such a broad consistent framework at a later stage after each department has identified its own needs.

⁵ Health and Access To Health Care; Labour Market and Working Conditions; Income, Wealth and Poverty; Education and Training; Households and Families; Housing; Safety and Security; Social Relationships and Integration; Environment; Transportation; Lifestyles and Consumer Expenditure; and Population.

⁶ See Table 2.2 of the SGSES report.

⁷ For example, the NSB undertakes a five-yearly survey of CSO users to inform the Board's Strategy for Statistics preparations.

⁸ See Appendix F of the SGSES report.

⁹ Statistical Potential of Administrative Records: An Examination of Data Holdings in Six Government Departments.

¹⁰ Education and Science; Environment, Heritage and Local Government; Health and Children; Justice, Equality and Law Reform; Social and Family Affairs; and the Office of the Revenue Commissioners.

of central co-ordination contributed to an inadequate awareness among staff of the content and full range of data holdings being managed by their department. Other deficiencies such as the absence of common standards in the design, content, and processing of administrative questionnaires prevented departments from compiling an overall integrated profile of their clients and from obtaining optimum statistical value from their data holdings. The CSO will complete the SPAR exercise for the other two departments with significant social statistics data holdings that were included in the SGSES exercise¹¹ by Autumn 2004. The NSB and CSO are also committed to completing an SGSES equivalent study in the economic and environmental fields by Autumn 2004.

Building upon these studies, departments should match their data needs to their internal data holdings. Where the information to meet a policy data need is not immediately available, the department should examine whether an existing internal data source could be further developed to meet that need by adding additional questions or classification variables. Data holdings in agencies and other associated department bodies should be included in this matching exercise.

4 Data held by other departments

A department may not have all the information it needs for policy development and monitoring available to it from within its own data holdings. In some cases, the missing information may be available either from other government departments or from the CSO. For example, many departments rely critically on statistics from the Revenue Commissioners and the Department of Social and Family Affairs for monitoring progress on income and poverty indicators. Given this shared usage of statistics from administrative data holdings, departments should be aware of the uses to which its data is being put and they should ensure that all the information collected under an administrative scheme is computerised.

For more complex data needs, it may be necessary to combine the information contained in data holdings held in different departments. The CSO has the legal authority under the Statistics Act, 1993 to link such files at the individual record level, through the use of a unique reference number common to both files, in order to derive the aggregate information required for a cross-cutting policy need. Many of the key recommendations in the SGSES and SPAR reports and in the 2003-2008 NSB strategy are focussed on the many statistical benefits that would result from such integration.

5 Data gaps

In *Strategy for Statistics 2003-2008*, the NSB recognised the need for adopting a broader approach to the strategic development of the national statistical system to ensure that data gaps are prioritised and addressed in a cross-departmental manner. Implicit in this approach is that departments will have identified their key policy information gaps as part of their data strategy. This information will be used to identify if there are data holdings in other departments that could be developed to address these gaps.

¹¹ Community, Rural and Gaeltacht Affairs and Agriculture and Food. Enterprise, Trade and Employment will be examined in a joint CSO enterprise and social statistics study.

The NSB proposed the establishment of a cross-departmental statistics network to ensure that statistics are collected in a cost-effective manner and that the statistical potential of each administrative data source is fully realised. The Board proposes to establish such a group during 2004. This group should examine the individual department unmet needs against an integrated inventory of department data holdings.

6 Maximising the value of data

Increasing the extent of standardisation, co-ordination and common classification of data collection and maintenance of data banks across the public service would ensure that maximum value is obtained from the existing data holdings in government departments¹². The increased use of such standardisation should be led by the CSO and supported by the inter-departmental statistics network. Departments and their agencies should consult with the CSO when they are undertaking new data collection or updating existing information technology systems.

Increased use of a common identifier, such as the PPS Number, in all government data holdings would greatly increase their statistical value. For example such a development would allow the CSO to link related discrete data sets, such as in the areas of health and education, and would facilitate the creation of longitudinal data sets from existing administrative data.

The targeted implementation of some policy issues requires data at sub-national level, for example, the identification of particular environmental threats or areas of social deprivation. Geographical information in data holdings is generally captured through coding postal text addresses. There would be considerable information benefits if the individual records in data holdings were coded at geo co-ordinate level and postal addresses had an implicit coding system such as a postcode.

The SPAR report included a number of recommendations targeted at optimising the intra-departmental and cross-departmental value of statistical data holdings. Many of these recommendations are quite far reaching and will take some time to implement but ultimately they should result in economies in data collection and information benefits across the whole public sector.

7 Using statistics effectively

The SGSES report concluded that the evidence-based element of social policy-making was under-developed. This view was supported by the NSB who recommended that each department and agency should have the analytical competence to meet its primary data needs. Such competence should be developed both among staff working on formulating and monitoring policy and among staff primarily focussed on the management of administrative data holdings and statistical surveys. Both the SGSES and SPAR studies identified a significant number of instances where departments contracted both data collection and data analysis to outside bodies because of a lack of internal resources and expertise. Given the increasing demands for statistics, it is the Board's view that such expertise should be readily available within departments.

¹² The absence of any standardisation of categories such as age, occupation and geographic location dramatically reduces their potential contribution to statistics.

8 Data Use Protocols

On foot of the SGSES report, the Government also asked the NSB and CSO to set out how the CSO and government departments would use administrative data without giving rise to data protection problems. These protocols are currently being finalised. They will be published on the NSB and CSO web sites after they have been referred to the Data Protection Commissioner.

Guidelines

Guideline 1 Each department should establish a Data Strategy Committee comprising data users (including appropriate outside experts and data users) and data producers to design and deliver its data strategy.

Guideline 2 Each department should include its data/statistics strategy in its periodic Statement of Strategy and comment on progress in its annual report.

Guideline 3 Departments Data Strategy Committees should identify the key policy areas where their department requires statistical information for making and monitoring policy. The Management Advisory Committee within each department should be represented in this process to ensure that the identification of data needs is both comprehensive and strategic.

Guideline 4 Departments should identify their important data needs within each key policy area. These needs should include the key statistical indicators by which a Department will evaluate the effectiveness of its policies. The needs of key users of the department's statistical information should be identified.

Guideline 5 Departments should identify the data holdings available internally (including agencies and other bodies acting on behalf of the Department) that could contribute to meeting the department's policy data needs.

Guideline 6 Departments should identify the external data holdings that could contribute to meeting the Department's unmet policy data needs.

Guideline 7 Departments should prioritise their policy data needs that have not been met through either existing internal or external data holdings. The statistics network proposed by the NSB should examine how official data holdings could be developed to meet these needs.

Guideline 8 Departments should ensure that related data sources are capable of being integrated at the individual record level. The increased use of the Personal Public Service Number within data holdings in government departments is of central importance in this context.

Guideline 9 The CSO should assist individual departments to further develop the statistical competence of their staff.

Guideline 10 The CSO should work with departments to develop a core set of demographic and socio-economic variables¹³. These could either be independently collected in administrative schemes and surveys or preferably, subject to meeting data protection restrictions, collected via a central repository such as the Department of Social and Family Affairs Central Records System database.

Guideline 11 The CSO and departments should ensure that the wording of the questions used to collect the core information is expressed in a consistent manner across all schemes and surveys.

Guideline 12 Departments should consult with the CSO to ensure that common classifications and coding systems are used as much as possible throughout their data holdings. The increased use of consistent small area geo-coding and grid co-ordinates point coding is required to facilitate comprehensive spatial analyses.

¹³ The CSO study of social data holdings in six government departments examined the usage of: age, gender, marital status, socio-economic status, income, geography, family status, disability, nationality, race/ethnicity, membership of the Traveller community, sexual orientation, religious affiliation, and farming activity.