Republic of Rwanda

NISR
NATIONAL INSTITUTE OF STATISTICS OF RWANDA

National Quality Assurance Framework

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Foreword

Quality is interpreted in a broad sense, encompassing all aspects of how well statistical processes and statistical outputs fulfill key stakeholders' expectations. High quality is, therefore, associated not only with meeting both internal and external user expectations regarding the availability and information content of the disseminated data, but also addressing respondent and data compiler concerns in the production of statistics, and promoting the skills and ethical standards of statisticians.

In order to satisfy all stakeholders' needs, strong emphasis needs to be given to key aspects of statistical quality, in particular, impartiality and objectivity, sound methodology, appropriate and cost-effective statistical procedures, statistical confidentiality, the avoidance of excessive burden on respondents, relevance, completeness, accuracy, reliability, consistency, timeliness and accessibility, among others. All of these quality aspects are considered complementary and, in general, of equal importance.

Therefore, the National Institute of Statistics of Rwanda (NISR) is pleased to publish herein the National Quality Assurance Framework (NQAF) to be guidance for quality assurance of the National Statistical System (NSS) of Rwanda, particularly data producers, with NISR playing the prime role of data production in the country

As Rwanda is a country of multiple producers of statistical information, effective coordination and communication among all members of the NSS is necessary in order to align on this NQAF and on the commitment towards the harmonization of information, standards and other aspects of statistical information production.

I would also like to thank the NISR team from Statistical Methods, Research and Publication Unit and Technical Advisor who have worked relentlessly towards the realization of this document. Finally, I highly encourage all data producers' members of the NSS in Rwanda to make full use of the framework.

Yusuf Murangwa,
Director General, NISR

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Chapter 1: Background

1.1 Introduction

The quality management in National Statistical Offices typically takes the form of a quality assurance framework. Several issues have historically underscored the need for national statistical offices to systematically adopt quality management measures sooner rather than later and translate them into a formalized quality assurance framework. In this direction, the purpose of this document is to formulate a framework for quality assurance of the National Statistical System (NSS) of Rwanda with special reference to National Institute of Statistics of Rwanda (NISR). In some cases, published errors that may cause embarrassment and potential damage to the credibility of the statistical office and its outputs, may be the catalyst, whereas in other cases, large increases or decreases in resources was the impetus for the shift by the statistical office towards managing quality in a more formalized and systematic way. Similarly, government-wide reform initiatives, changes in management, the restructuring of the national statistical office, or the need to comply with legislation or regulations are examples of other driving forces leading to a national statistical office's decision to embark upon the formulation of a quality assurance framework.

The present document draws heavily upon "The *Guidelines for the Template for a Generic National Quality Assurance Framework "published* by the UN Statistical Division, February 2012.

1.2 Benefits.

It has been advocated that all national statistical organizations should have a national quality assurance framework in place – or consider developing one if they have not yet done so. The objective would be to have in place an overarching framework that would provide

context for quality concerns, activities and initiatives, and explain the relationships between the various quality procedures and tools. Such an organizing framework has proved to be very useful in providing a single place to record and reference the activities. The main benefits of having a quality assurance framework in place are:

a- It provides a systematic mechanism for facilitating the on-going identification of quality problems and possible actions for their resolution. At the same time, it serves to stimulate and maximize the interaction among staff throughout the organization;

b- It gives greater transparency to the processes by which quality is assured and reinforces the image of the office as a credible provider of good quality statistics;

c- It provides a basis for creating and maintaining a quality culture within the organization and contains reference material that can be helpful for training;

d- It supports quality improvements and their maintenance over time;

e- It is a mechanism for the exchange of ideas on quality management with other producers of statistics within the national statistical system and with other national and international statistical organizations.

1.3 Challenges

Along with the formulation and implementation of a quality assurance framework significant Challenges, mentioned underneath, are generally encountered:

a- One of the first challenges often faced is - arriving at a common understanding in the NSS of what quality actually is – highlights the shift from the typical "old" notion of quality as being synonymous with accuracy to the more current notion, one in which quality, when referring in particular to statistical

outputs, encompasses many other dimensions such as relevance, timeliness, punctuality, accessibility, clarity, coherence, comparability, etc.

b- In countries such as Rwanda there are multiple producers of statistical information, effective coordination and communication among all members of the national statistical system is necessary in order to agree on a common framework and on the commitment towards the harmonization of information, standards, and other aspects of statistical information production.

c- Long term sustained support by senior management is crucial to the successful implementation of a quality assurance framework

Chapter 2: Quality assurance guidelines

This section contains the individual guidelines for managing the statistical system; managing the institutional environment; managing statistical processes; and managing statistical outputs.

2.1 Managing the statistical system

2.1.1 Coordinating the National Statistical System

Achieving Coordination of the work of different parties of the national statistical system is essential for improving and maintaining the quality of official statistics produced by the various sectors and line ministries. To this end NISR, being the coordinator of the NSS, must designate a coordinating body within its structure so as to assume the following functions:

1- Developing guidelines, methodological manuals and handbooks on recommended statistical practices for the NSS.
2- Regularly held meetings for members of the NSS to develop statistical standards and guidelines, exchange technical knowledge, identify good statistical practices, etc. (e.g. committees, working groups, etc.)
3- Lunching training courses for members of the system to update knowledge on the contents and application of recommended standards, methodologies, etc.
4- Putting in place processes for identifying and resolving cases of duplication of efforts in the production of statistics.
5- Making arrangements for facilitating regular and timely user-producer consultations and dialogues.
6- Putting in place processes for the standardized evaluation of the quality of statistical outputs.

7- Developing guidelines on quality management of statistics produced by outsourced agencies.

2.1.2 Managing relationships with data users and data providers

The NISR needs to promote and strengthen the relationships with all of the key stakeholders, including users, data providers, funding agencies, senior government officials, relevant community organizations, and the media.

The user, or recipient of statistical information, transforms it into knowledge needed for decision making or research. As the ultimate client of the NISR and other data producers, the user makes the judgment as to whether the data or pertinent services are "fit for purpose". Delivering quality outputs to the client and obtaining quality feedback are processes that need specific relationship management objectives and supporting processes.

Government departments or other organizations, as providers of administrative data, are essential partners in the provision of statistics that meet the test of fitness for purpose. Administrative data can be very useful to create registers and frames, edit or impute survey data, or validate survey data or outputs.
Where the administrative data are of sufficient quality and the data available adequately match the concepts being measured, they can be used instead of a direct survey collection. This in turn creates efficiencies by reducing the size of the survey sample required and also reduces respondent burden. The most important strategy for managing a range of risks with the use of administrative data is the maintenance of ongoing relationships with the data custodians of the source data. These relationships should be established to varying degrees at all levels from the Chief Executive down to operational staff.

Funding agencies need to have a good understanding of the resource pressures facing NISR and other data producers and the

trade-offs that need to be made in matching the high priority demands for statistics with the resources that are likely to be available.

Senior government officials need to understand the importance of good statistics for informed decision making and the critical importance of their production in accordance with the UN Fundamental Principles of Official statistics.

The media plays a critical role in disseminating statistics to a wide audience. The media can also play a crucial role in framing public opinion about the quality of available statistics and the professional standing of the agency producing them.

Other stakeholders, such as non-government agencies and other community organizations, as users of statistics as well as information providers, can also play a critical role in shaping views on the quality and integrity of official statistics.

Stakeholder expectations are varied and should be explicitly managed at all stages in the statistical production process.

2.1.3 Managing Statistical standards

Standards refer to a comprehensive set of statistical concepts and definitions used to achieve uniform treatment of statistical issues within a survey or across surveys, and across time and space. Standards assist in maximising the effectiveness of statistical outputs and the efficiency of the production process in terms of inter-temporal, national and international comparability and coherence (i.e. the capacity for integration) of the statistics.

While comparability and coherence are important for any dataset, they are particularly important where data are obtained from multiple sources and have to be combined or where outputs are used in a wide variety of contexts. For example, the use of standard collection units (e.g. families, households, establishment, enterprise, etc.) helps

the compilation, comparison and dissemination of statistics for these standardised units.

There are basically two broad types of standards – those that are applied to the structure and content of data, and those that are applied to the structure and content of metadata.

Statistical agencies should aim to use consistent names and definitions for populations, statistical units, concepts, variables, and classifications in their statistical programmes/domains.

2.2 Managing the institutional environment

2.2.1 Assuring professional independence

Statistical agencies should develop, produce and disseminate statistics without any political or other interference or pressure from other government agencies or policy, regulatory or administrative departments and bodies, the private sector or any other persons or entities which may be considered as potential conflicts of interest. Such professional independence and freedom from inappropriate influence ensures the credibility of official statistics. This should apply to national statistical offices and may or may not apply to statistical units within ministries, central banks, etc.

2.2.2 Assuring impartiality and objectivity

Statistical agencies should develop, produce and disseminate statistics respecting scientific independence and in a manner that is professional, transparent, neutral and unbiased, in which all users are treated equitably.

2.2.3 Assuring transparency

The statistical agencies' statistical policies and practices and the terms and conditions under which their statistics are developed (including the legal basis and purposes for which the data are required), produced, and disseminated (and, if applicable, subsequently revised) should be documented and available to users, survey respondents and the public. Products of statistical agencies/units should be clearly identified as such.

2.2.4 Assuring statistical confidentiality and security

Statistical agencies should guarantee that the privacy of data providers (persons, households, enterprises, administrations and other respondents) will be protected and that the information they provide will be kept confidential, will not be able to be accessed by unauthorized internal or external users, and will be used for statistical purposes only. Statistics shall not be considered confidential when they allow statistical units to be identified, either directly or indirectly, thereby disclosing individual information. Examples of purposes that are not exclusively statistical include administrative, legal or tax purposes.

2.2.5 Assuring the quality commitment

Statistical agencies should be dedicated to assuring quality in their work, and systematically and regularly identify strengths and weaknesses to continuously improve process and product quality. Processes, staff and facilities should be in place for ensuring that the data produced are commensurate with their quality objectives.

2.2.6 Assuring adequacy of resources

The financial, human, and technological (IT) resources available to statistical agencies should be adequate both in magnitude and quality, and sufficient to meet their needs with regard to the development, production and dissemination of statistics.

2.3 Managing statistical processes

2.3.1 Assuring methodological soundness

In developing and compiling statistics, a statistical agency should use sound statistical methodologies based on internationally agreed standards, guidelines or best practices and consistent with established scientific principles. Effective and efficient statistical procedures should be implemented throughout the statistical production chain.

2.3.2 Assuring cost-effectiveness

Statistical agencies should assure that resources are effectively used. They should be able to explain to what extent the set objectives were attained and that the results were achieved at a reasonable cost consistent with the principal purposes for which the statistics will be used.

2.3.3 Assuring soundness of implementation

In order to produce timely, reliable and accurate statistics, a statistical agency should carefully plan the implementation process of its statistical activities based on internationally agreed standards and guidelines and the application of sound and scientific methods. The implementation process refers to all activities which lead to the production of statistics including design and preparations, data

collection, data processing (coding, editing, imputation, etc.), assessment and compilation.

2.3.4 Managing the respondent burden

Individuals, households or businesses who provide data, upon which statistical products are based, are fundamental contributors to the quality of data and information. The requirement to collect information (user needs) should be balanced against production costs and the burden placed on respondents (supplier costs). Mechanisms to maintain good relationships with individual providers of data and to proactively manage the response burden are essential for improving quality.

This difficult challenge is particularly topical with declining response rates in surveys. This decline lowers quality and increases the cost of surveys. Improving response rates requires a multi-dimensional strategy that addresses the issue of non-response at different stages of the survey process. This includes an assessment of the need to collect the information, the use of data from administrative sources or other surveys, and the use of sound statistical and survey methods to keep the burden to a minimum.

2.4 Managing statistical outputs

2.4.1 Assuring relevance

The relevance of statistical information reflects the degree to which the information meets the current and/or potential or emerging needs or requirements of clients, users, stakeholders, or the audience. Relevance therefore refers to whether the statistics that are needed are produced and whether those that are produced are in fact needed and useful, and shed light on the issues of most importance to users. Relevance also covers methodological soundness, particularly

the extent to which the concepts, definitions and classifications correspond to user needs.
Assessing relevance is subjective and depends upon the varying needs of users. The statistical agency's challenge is to weight and balance the conflicting needs of current and potential users in order to produce statistics that satisfy the most important and priority needs within given resource constraints. Relevance can be seen as having the following three components: completeness; user needs; and user satisfaction.

2.4.2 Assuring accuracy and reliability

Statistical agencies should develop, produce and disseminate statistics that accurately and reliably portray reality. The accuracy of statistical information reflects the degree to which the information correctly describes the phenomena it was designed to measure, i.e. the degree of closeness of estimates to true values. It is usually characterized in terms of estimation of sampling and non-sampling errors. These errors are traditionally decomposed into bias (systematic error) and variance (random error) components, and reflect the major sources of error (e.g. errors linked to sampling, coverage, measurement, non-response and processing). Reliability concerns whether the statistics consistently over time measure the reality that they are designed to represent.

2.4.3 Assuring timeliness and punctuality

Statistical agencies should minimize the delays in making data available. Timeliness refers to how fast -after the reference date or the end of the reference period - the data are released or made available, whether for dissemination or for further processing. Punctuality refers to whether data are delivered on the dates promised, advertised or announced (for example, in an official release calendar).

2.4.4 Assuring accessibility and clarity

Statistical agencies should ensure that the statistics and metadata they develop, produce and disseminate can be found or obtained without difficulty, are presented clearly and in such a way that they can be understood, are available and accessible to all users on an impartial and equal basis in various convenient formats, and are affordable, if not offered free of charge.

Provision should be made for allowing access to micro data for research purposes, in accordance with an established policy which ensures statistical confidentiality.

Supplementary explanatory information and metadata, which are necessary for the proper understanding of the statistics and the appropriate uses to which they can be put, should be made available by the statistical agencies. This information should normally cover the underlying concepts and definitions, origins of the data, the variables and classifications used, the methodology of data collection and processing, and indications of the quality of the statistical information.

2.4.5 Assuring coherence and comparability

Statistical agencies should develop, produce and disseminate statistics that are consistent internally and comparable over time and are produced using common standards with respect to scope, definitions, classifications and units. It should be possible to combine and make joint use of related data from different sources.

2.4.6 Managing metadata

Statistical agencies should provide information covering the underlying concepts, variables and classifications used, the methodology of data collection and processing, and indications of the quality of the statistical information - in general, sufficient

information to enable the user to understand all of the attributes of the statistics, including their limitations, for informed decision-making.

Chapter 3: Quality assessment and reporting

The purpose of quality assessment and reporting is to have mechanisms in place in order to prevent, reduce and evaluate problems that may arise during the statistical process and affect the statistical products. Having solid approaches to quality assessment supports the agency's claims of being professional and credible as a producer of high quality data.

The aim of this section is to provide a brief outline of what is involved in the assessment or evaluation of quality, i.e. the set of information on which the quality assessment is based, the different ways in which quality assessments can be conducted, how they can contribute to standardisation and to continuous quality improvement within a statistical agency.

This section contains subsections on Measuring product and process quality; Communicating about quality; Obtaining feedback from users; conducting assessment; and Assuring continuous quality improvement.

3.1 Measuring product and process quality - use of quality indicators, quality targets and process variables and descriptions

In order to assess quality, first of all a clear picture of quality concepts applicable to statistical processes and products is needed, their definition is a precondition. The UNSD recommendation is to define product quality in terms of the following components: relevance, accuracy and reliability, timeliness and punctuality, coherence and comparability, accessibility and clarity.

Quality indicators are specific and measurable elements of statistical practice that can be used to characterise the quality of statistics. As

simplified and generally quantified measures – calculated according to clear rules – they intend to characterise a complex phenomenon, i.e. the many different quality features of the data. Quality indicators measure the quality of statistical processes or products from several aspects, and for example, can give an indication of both output (e.g. timeliness) and process quality (e.g. response rates). Some product quality indicators are derived from processes, and are called process variables.

The quality indicators make the description of a product by quality components more informative and increase transparency. With them, users can assess the quality of different surveys or the same data in different periods by looking at the quality indicators; they also increase comparability. With regard to accuracy, for example, quality indicators can provide a direct measure of the impact of errors on the data (e.g. sampling variance) or be indirect or proxy measures of non-sampling errors source (e.g. frame errors) derived as a by-product of process monitoring.
Process quality is the degree to which a set of inherent characteristics fulfils process requirements. The recommended process quality components are: methodological soundness, cost effectiveness, soundness of implementation, and respondent burden, and error rates (in editing, coding and data entry).

3.2 Communicating about quality - quality reports

Communicating about the quality of a statistical process or product can be accomplished through the preparation of reports that review and explain the characteristics of the process and its products.
Because of the multi-dimensional nature of quality, the quality reports typically examine and describe quality according to those components or dimensions the agency has used to define its products' fitness for purpose, e.g. relevance, accuracy, reliability,

timeliness, punctuality, coherence, comparability, accessibility and clarity.

The reports are meant to convey the necessary information to enable users to assess product quality. While the main target group of a quality report is the users of the statistics, quality reports are also an important monitoring tool for producers and managers. In the optimal case, the quality reports are presented according to a standard reporting structure to facilitate comparability and are based on specific quality indicators.

3.3 Obtaining feedback from users

User feedback is needed for quality assessment purpose.. Together with the producers of the statistics, users are key stakeholders in the data produced. Therefore, the statistical agency should regularly consult its users about their needs and perceptions of quality, take them into account in the quality assessment exercise, and follow up on them, for example through meetings with them (e.g. focus group discussions) or in a more formalised way by using user satisfaction surveys. Since the main objective of User Satisfaction Surveys is normally to get information on the users' perceptions as a basis for improvement actions, the results of them provide valuable inputs to self-assessment and auditing activities. User satisfaction surveys can take different forms, e.g. using standardised questionnaires, qualitative interviews or web-based surveys, etc. and the choice will depend on the type of feedback required and on the resources available. In this context, NISR has carried out the first ever User Satisfaction Survey in 2012, using a standardized questionnaire developed by the World Bank. The results of which were important for NISR management to consider several actions leading to quality improvement. NISR plans to conduct its second User satisfaction Survey towards the end of 2014.

3.4 Conducting assessments

Based on the information collected by the statistical agency using the tools mentioned in the previous section, the quality of the processes and products can be evaluated. Evaluation can be done in the form of self-assessments, audits or peer reviews. It can be undertaken by internal or external experts and the timeframe can vary from days to months, depending on the scope. However, the results are more or less identical: the identification of improvement actions/opportunities in processes and products.

Self-assessments are comprehensive, systematic and regular reviews of an organization's activities and results referenced against a model/framework. The choice of the self-assessment tool is a strategic decision and its scope should be clearly defined. For example, it could be applicable to the whole institutional environment or simply to the statistical production processes. Oftentimes, self-assessment checklists are developed to be used for systematic assessment of the quality of the statistical production processes

A quality audit is a systematic, independent and documented process for obtaining quality evidence concerning the quality of a statistical process and evaluating it objectively to determine the extent to which policies, procedures and requirements on quality are fulfilled. In contrast to the self-assessments, audits are always carried out by a third party (internal or external to the organization).

Internal audits are conducted with the purpose of reviewing the quality system in place (policies, standards, procedures and methods) and the internal objectives. They are led by a team of internal quality auditors who are not in charge of the process or product under review. External audits are conducted either by stakeholders or other parties that have an interest in the organization, by an external and independent auditing organization, or by a suitably-qualified expert.

Peer reviews are a type of external audit which aims to assess a statistical process at a higher level, not to check conformity with

requirements item by item from a detailed checklist. It is therefore often more informal and less structured than an external audit. Normally peer reviews do not address specific aspects of data quality, but broader organizational and strategic questions. They are typically systematic examinations and assessments of the performance of one organization by another, with the ultimate goal of helping the organization under review to comply with established standards and principles, improve its policy making and adopt best practices. The assessment is conducted on a non-adversarial basis, and relies heavily on mutual trust among the organization and assessors involved, as well as their shared confidence in the process.

3.5 Assuring continuous quality improvement

By implementing a quality approach following the different processes described above, a statistical agency can begin to define a framework for continuous quality improvement. If the new information on quality that becomes available is always fed back into the statistical outputs and statistical production processes, a cycle of continuous improvement of the quality of the statistics produced can be established as an integral part of the statistical agency's working practices.

Chapter 4: Quality and other management frameworks

Most operations and functions of a statistical agency have an impact on the quality of the agency's information. The management of quality is therefore an integral part of the management of every programme/domain in the agency, and an important component of the agency's management as a whole.
It is not a separate management function, but an aspect of the management of the agency that has to be addressed across all programmes/domains in the same way as, for example, financial management or human resource management.

Frameworks are used to manage a statistical agency's quality, human resources, financial resources and overall performance towards achieving its objectives or mandate. They are an effective way to ensure that its priorities are clearly articulated and considered as a whole rather than in a piecemeal fashion, which could result in inconsistent and duplicate activities. Frameworks must not be developed and implemented in isolation, but rather through close interaction. The purpose of this section is not to describe each of these frameworks, but to highlight how quality should be present in all of them.

4.1 Performance management

The performance management framework encompasses all other frameworks. It is through this framework that the statistical agency achieves its mandate. This mandate should be stated as simply as possible; for example, "to ensure that citizens have access to a trusted source of statistics". The mandate should be accompanied by clear objectives that explicitly include quality; for example, "providing access

to a trusted source of information can be established only if data are relevant and if users are confident that the information is of the highest possible quality". In addition, the extent to which a statistical agency can fulfil its mandate and related objectives depends on its ability to optimize its management and operations through organizational efficiency.

All the activities of the agency should be aligned with its mandate and related objectives (e.g. access, relevance, quality and efficiency). The performance management framework should be enabled by governance mechanisms, a comprehensive human resource strategy and a framework to address any risk that may prevent the agency from achieving its objectives.

4.2 Resource management

A significant feature of the management of quality is the balancing of quality and quantity objectives against the constraints of financial and human resources. For instance, quality should not be maximized at all costs. On the other hand, key agency decisions on increasing, reducing or reallocating resources should take quality into consideration. Like any public organization or business, a statistical agency should continuously seek ways of increasing its efficiency by reviewing its business practices, every process that it uses, how it manages its information, the system that it builds, the way it governs its programmes/domains and organizes itself. It should strive for greater standardization and harmonization, while leaving sufficient room for the innovative practices that are often demanded by users. Again, quality considerations should figure prominently in these reviews and all or some of the resources harvested by these efficiencies should be reinvested towards improving quality in well selected areas.

Effective human resource management is a key factor in achieving the objectives of the statistical agency. Efforts should be focused on recruitment, training, career advancement and maintaining a positive workplace. A comprehensive human resource framework aligned with agency objectives and fully integrated in the agency's business model is essential to ensure the availability of qualified and talented staff.

In addition to technical expertise, agency employees should have knowledge of quality issues, and be able to develop and implement practices and methods to meet quality objectives. Entry level recruitment will usually aim at hiring employees that are highly knowledgeable and skilled in specialized areas, such as economic analysis, sampling or project management. The required knowledge and experience in quality assurance, especially in the context of a statistical agency, is usually obtained by formal training and working in the agency. For this reason, quality should be an important element in the agency's human resource training, development and promotion strategy.

4.3 Ethical standards

Ethical standards, fundamental values and principles should guide the personnel of a statistical agency in fulfilling their official duties and responsibilities. These principles serve to maintain and enhance public and user confidence in the integrity of the agency. Ethical standards can be applicable at the national level to all government employees or are can be specific to each agency or institution responsible for the production of statistical information.

Employees should be guided in their work and their professional conduct by a balanced set of values, such as:

- To serve the public interest
- To serve with competence, excellence, efficiency, objectivity and impartiality

- To act at all times in such a way to uphold the public trust.
- To demonstrate respect and fairness in dealing with both citizens and fellow employees.

Ethical standards could also include topics, such as confidentiality, conflicts of interest, use of information for personal advantage, acceptance of gifts and the management of public resources. Furthermore, ethical standards specific to statistical agencies could refer to international standards and guidelines (e.g. UN Fundamental Principles of Official Statistics).

New and existing employees could be made aware of the agency's ethical standards and practices for good behaviour through training programmes or seminars. The code of conduct should be easily accessible to all employees (disseminated on the internet or intranet, through publications or regular meetings). The roles of management and staff with respect to standards for behaviour should be clearly defined. The agency could have an internal ethics board which meets regularly and cases of noncompliance could be subject to disciplinary action.

4.4 Continuous improvement

Continuous improvement is another foundation of any organization. Several models or frameworks for continuous improvement have been developed for public administration in several countries: European Union's Common Assessment Framework, Canada's Management Accountability Framework and the United Kingdom's Capability Review are a few examples. These frameworks provide a self or peer assessment framework which is conceptually similar to the major Total Quality Management models, but which is especially designed for public-sector organizations, taking into account their characteristics.

These frameworks include an assessment of the agency's performance towards achieving its mandate and objectives. In the context of a statistical agency, this assessment could include many of the indicators mentioned in the NQAF guidelines: e.g. user satisfaction; time elapsed between reference date and release date; or accuracy of key estimates. They would also include other indicators related to the efficiency use of financial resources or to human resources, e.g. employee satisfaction.

4.5 Governance

To achieve its mandate and objectives, a statistical agency needs an effective governance and management structure, which integrates strategic priority setting and decision making and ensures accountability. This could take the form of a system of agency-level management committees, or other entities responsible for consultation and recommending strategic options for programme development and delivery. The membership of these committees should include senior managers from across the agency. Leadership should be provided by a senior executive committee, which is responsible for strategic direction and for corporate-level management and decisions. All significant corporate issues are reviewed at this highest level, with final decisions rendered by the Head of the statistical agency. The decision-making infrastructure ensures that decisions are based on what is best for the organization to achieve its mandate and objectives; it encourages innovation and strategies to improve efficiency; and it increases capacity by enabling the effective integration of issues and initiatives.

Key corporate-level decisions will rarely attempt to advance on all components of its mandate at the same time or at the same speed. The trade-offs between key objectives, such as relevance, accessibility, accuracy, confidentiality and cost-efficiency, could be based on a risk

management framework. There are inherent risks in producing statistical information. Inherent risk is the risk that is linked to an activity by the nature of the activity and by the very fact that the organization performs this activity. Managers should identify and categorize all inherent and emerging risks related to quality and the agency's other objectives. These risks are mitigated by strategies that have been in place over a number of years, based on the experience and judgment of managers in the statistical agency. What is left is the residual risk. This is what the agency is most concerned with, and needs to manage continually as well as external risk factors that are taken into consideration at the corporate level as part of the framework.

To fully measure the residual risk, managers provide their expert assessment of the probability of the risk materializing and the subsequent impact. They base their assessments on both quantitative information and subjective assessments derived from their experience. Experts are also asked to estimate the composite level of residual risk, or risk exposure, by combining the probability of the risk materializing and the subsequent impact. In planning the allocation of agency resources, an evaluation of the cost and benefit of various proposals to further mitigate the most important composite level of residual risks could be completed. The resource planning process therefore assesses return on investment in risk management activities towards the achievement of the corporate objectives.

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