



**United  
Nations**

DESA  
Statistics Division

# Session 1.4: The Roadmap for NQAF implementation and other tools and guidance

Harumi Shibata Salazar

Workshop on the Implementation of a National Quality Assurance Framework for Official  
Statistics in Countries of the Latin American and Caribbean Region

Bogota, Colombia, 22-24 November 2023



# Content

- Manual: web-version
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# Manual: web-version

- Available at: <https://unstats.un.org/UNSDWebsite/data-quality/user-manual>

The screenshot displays the web interface for the 'Manual' page. At the top, the United Nations logo and 'Department of Economic and Social Affairs Statistics' are visible. A navigation bar includes 'Home', 'Resources', 'Meetings and events', and 'About'. The breadcrumb trail reads 'UNSD > Quality Assurance > Manual > About'. The main heading is 'Manual', with a 'Download PDF' link and language options (En | Fr | Es | Ru). Below this is the 'About' section, which features the title 'United Nations National Quality Assurance Frameworks Manual for Official Statistics' and a subtitle 'Including recommendations, the framework and implementation guidance'. A 'Chapters' section at the bottom lists three chapters: 1. 'Content and use of the Manual' (3 Sub-Chapters), 2. 'Recommendations on quality assurance for official statistics' (3 Sub-Chapters), and 3. 'United Nations National Quality Assurance Framework: principles and requirements' (5 Sub-Chapters). A left sidebar contains a search bar and a list of navigation items under 'About', including 'Department of Economic and Social Affairs', 'Preface', 'Acknowledgements', 'Abbreviations and acronyms', and five chapters.

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# e-Learning

<https://learning.officialstatistics.org/course/index.php?categoryid=4>

- Self-paced course consisting of six modules
- Developed by the United Nations Statistics Division (UNSD)
- Aims at providing an overview of the United Nations National Quality Assurance Frameworks Manual for Official Statistics (Manual). The Manual contains recommendations on quality assurance, the UN National Quality Assurance Framework for Official Statistics (UN NQAF) and guidance for the development and implementation of a NQAF
- The course is intended for statisticians working on quality assurance and quality improvements in their countries and anyone interested in quality assurance of official statistics
- After successful completion, a certificate is provided

# e-Learning

## Other courses

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Course categories:

This category contains courses on statistical topics not covered in other categories, as well as courses of a general nature, such as general prerequisites for more specialized courses.

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### Towards the 2025 SNA [➔](#)



This e-learning material was designed to help users interested in the SNA update to access various resources related to the update process, some of the main topics included in the update, and country experiences with the new topics. The site provides material and links to some of the general webinars and topical webinars held for the SNA update. This is a joint UNSD, ECLAC, ESCAP, ESCWA, UNECA, and UNECE effort.

### National Quality Assurance Framework (NQAF) [➔](#)



This e-learning course is a self-paced course consisting of six modules developed by the United Nations Statistics Division (UNSD), aimed at providing an overview of the United Nations National Quality Assurance Frameworks Manual for Official Statistics (UN-NQAF Manual) - the recommendations on data quality, the principles and requirements of the UN national quality assurance framework and guidelines for its implementation. The course is intended for statisticians working on quality assurance and improvement in their countries or anyone interested in quality assurance of official statistics.

### How to Prepare an Impactful Media Release [➔](#)



This microlearning provides guidance, practice and resources on preparing a press release in order to help increase the impact of official statistics in informing decision making and public debate.

### Using Social Media for User Engagement [➔](#)



This microlearning is for those who want guidance in using social media to support their engagement with users of official statistics and data.

# e-Learning

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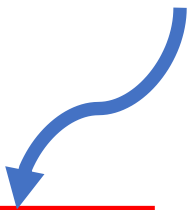


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## Course categories

- Big Data
  - What is Big Data? (1)
  - Automatic Identification System (AIS) (2)
  - Scanner data (1)
  - Mobile phone data (1)
  - Privacy preserving techniques (3)
- Energy Statistics (5)
- System of Environmental Economic Accounting (SEEA) (16)
- Social and Demographics Statistics (3)
- Sustainable Development Goals (SDGs) (7)
- Other courses (6)**

The National Quality Assurance Framework (NQAF) e-learning is under "Other courses".



# e-Learning: content

- General: course introduction
- Module 1: Introduction to the UN-NQAF Manual and its recommendations
- Module 2: UN-NQAF: Principles and requirements
- Module 3: Assessment tools and risk management
- Module 4: Development and implementation of NQAF
- Module 5: QA - Statistics from different data sources
- Module 6: Quality assurance for SDG indicators
- Final Assessment
- Feedback survey
- Conclusion

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# Self-assessment checklist: web-version

<https://unstats.un.org/UNSDWebsite/data-quality/check-list>



Department of Economic and Social Affairs  
Statistics

Home Resources Meetings and events About

UNSD Quality Assurance Checklist

Checklist

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Introduction Questionnaire Elements to be assured Summary

## Introduction

### Purpose of conducting a self-assessment

1. Self-assessments are comprehensive, systematic and regular reviews of an organization's activities carried out by the organization itself (see [Manual](#), paras. 4.16 and 4.17). They can be conducted for different purposes and with different scope. For official statistics, a self-assessment may cover the entire national statistical system (NSS), only the national statistical office (NSO), other statistical agencies, a specific statistical domain, a specific data source or specific statistics.

### Purpose of this self-assessment checklist and conduct of the self-assessment

2. This present checklist is primarily meant to be used for an assessment of the NSS from the point of view of the coordinating body (typically the national statistical office) at the institutional level and primarily for internal purposes.

3. The purpose of the self-assessment is the identification of areas of strength and weakness (and risks), and subsequently, the identification of possible improvement actions. It should then be followed-up by the development and implementation of an improvement plan. The self-assessment checklist can also help in monitoring progress. The self-assessment is not an audit and its purpose is not the comparison of the final score with others, while acknowledging that scoring can have positive and motivating effects and helps to keep track of the progress made. To achieve the purpose of the self-assessment, it is strongly encouraged to make use of the column that allows to specify strengths and weaknesses, or to record other comments.

Note: The self-assessment can also utilize a "maturity" model as propagated by ISO 9004:2018, distinguishing different levels of achievement. This checklist does not incorporate such maturity model. However, users of this checklist may identify different levels of achievement and improvement actions for themselves, according to their specific circumstances.

4. The self-assessment should be done by a group of staff from the different levels of management and should involve subject matter experts from across the statistical agency with adequate experience and training in order to mitigate the risk of being overly subjective and positive, and dis-attached from the actual situation and to help in creating a common understanding; documentation/metadata and independent verification of the evidence are other measures that can help to address the risk of subjectivity.

5. This self-assessment checklist is meant for conducting regular and rigorous quality assessments with the objective to identify improvement actions. However, it can also be used to provide an initial assessment (as part of a scoping exercise) for learning purposes to introduce staff of the NSO and NSS to quality assurance.

### The checklist is based on the UN National Quality Assurance Framework

6. This self-assessment checklist has been developed by the Expert Group on National Quality Assurance Frameworks (EG-NQAF) and uses as reference the United Nations National Quality Assurance Framework (UN NQAF) contained in the new United Nations National Quality Assurance Frameworks Manual for Official Statistics (Manual), Chapter 3 and Annex A. UN NQAF aims at assuring quality at four levels, ranging from the over-arching institutional and cross-institutional level through the statistical production processes to the outputs (see [Manual](#), paras. 3.1 – 3.6). UN NQAF consists of 19 principles and 87 underlying requirements. It is geared towards the NSO as the coordinator of the NSS and some principles are not relevant or less relevant for other statistical agencies.

Looking for instructions about 'How to complete the checklist'? [Click Here](#)

Please provide your feedback on the use of this checklist so that the instructions and checklist can be further improved as needed. If you wish, you can also share the results of the self-assessment performed in your organization with the Expert Group on National Quality Assurance Frameworks. Please use the following contact information to provide your feedback, raise any questions or to share the results of your assessments: [statistics@un.org](mailto:statistics@un.org) with subject line "Data quality" and with copy to [reister@un.org](mailto:reister@un.org).

[Start Assessment](#)



Checklist

Download Excel version

- Introduction
- Questionnaire
- Elements to be assured
- Summary

## Introduction

### Purpose of conducting a self-assessment

1. Self-assessments are comprehensive, systematic and regular reviews of an organization's activities conducted by the national statistical office (NSO), other statistical agencies, a specific statistical domain, a specific data source or a specific official statistics, a self-assessment may cover the entire national statistical system (NSS), only the

### Purpose of this self-assessment checklist and conduct of the self-assessment

- This present checklist is primarily meant to be used for an assessment of the NSS from the point of view of the NSO.
- The purpose of the self-assessment is the identification of areas of strength and weakness (and risks) and to develop an improvement plan. The self-assessment checklist can also help in monitoring progress. The self-assessment, it is strongly encouraged to make use of the column that allows to specify strengths and weaknesses, or to record other comments.

Note: The self-assessment can also utilize a "maturity" model as propagated by ISO 9004: 2018, distinguishing between different circumstances.

4. The self-assessment should be done by a group of staff from the different levels of management and to ensure a common understanding; documentation/metadata and independent verification of the evidence are other

5. This self-assessment checklist is meant for conducting regular and rigorous quality assessments with

### The checklist is based on the UN National Quality Assurance Framework

6. This self-assessment checklist has been developed by the Expert Group on National Quality Assurance Frameworks and Annex A. UN NQAF aims at assuring quality at four levels, ranging from the over-arching institutional level to the level of some principles and 87 underlying requirements. It is geared towards the NSO as the coordinator of the NSS

## Self-assessment checklist instructions

(last update: 31. October 2019)

### How to complete the checklist.

#### a. Scoring a requirement / scoring a principle / overall score

For each principle, there are several underlying requirements which are vital indicators that provisions have been made to assure quality. A requirement can be scored as "Full compliance" (numerical score "1"), "Partial compliance" (numerical score "0.5"), "No compliance" (numerical score "0") or as "Not assessed" (if not sufficient information is yet available). The principle is scored as the average of the numerical scores of the underlying requirements (excluding requirements that are not yet assessed) multiplied by 100; hereby the score is expressed as a number between 0 and 100. For example, if a principle has 4 requirements and one requirement is fully met ("Full compliance"), one requirement is partially met ("Partial compliance"), one requirement is not met ("No compliance") and one requirement is not assessed, then the principle is scored as  $(1*1 + 1*0.5 + 1*0)/3*100=50\%$ .

Scoring across multiple/all principles: The score for a group of principles is the average of their individual scores and is expressed as a number between 0 and 100.

#### b. Evaluating a requirement - how to consider the elements to be assured (assessment guidelines)

3. Ideally, users of the self-assessment checklist should evaluate the requirements based on a detailed analysis of the compliance with the elements to be assured (herein referred to as elements) provided in the Manual, Annex A. This will assure a more comprehensive and potentially more objective self-assessment. However, analyzing all elements is demanding and users may not have sufficient time to finish the full evaluation in such detail. Therefore, it is advisable to focus a first, initial or basic self-assessment

Looking for instructions about 'How to complete the checklist'? [Click Here](#)

Please provide your feedback on the use of this checklist so that the instructions and checklist can be further improved as needed. If you wish, you can also share the results of the self-assessment performed in your organization with the Expert Group on National Quality Assurance Frameworks. Please use the following contact information to provide your feedback, raise any questions or to share the results of your assessments: [statistics@un.org](mailto:statistics@un.org) with subject line "Data quality" and with copy to [reister@un.org](mailto:reister@un.org).

Start Assessment

Checklist

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Assessment of compliance with the United Nations National Quality Assurance Framework (2019)

- **Instructions:** Assess the degree of compliance for each of the requirement and describe strengths/weaknesses, include other comments.
- For each of the requirements you can refer to the detailed list of elements to be assured (please, use the link next to the requirement).
- All requirements are applicable. The only case where "not assessed" can be used, is if there is a not enough information. In this case a special note is displayed in the summary of the assessment saying that the assessment is not fully complete.

Degree of compliance ? ■ Full Compliance ■ Partial Compliance ■ No Compliance ■ Not Assessed

Your Progress  
0%  0/87

[Save Draft](#) [Retrieve Draft](#) [Instructions](#) [Export](#)

Level A Managing the statistical system

Principle	Requirement	Elements	Compliance	Specify strengths, weaknesses, other comments
1. Coordinating the national statistical system	1.1 A statistical law establishes the responsibilities of the members of the national statistical system including its coordination. Its members are identified in a legal or formal provision.	Pending <a href="#">View</a>	<input type="text"/>	<input type="text" value="Type here"/>
	1.2 There are a body and mechanisms for the coordination of the national statistical system for activities at the local, national, regional and international level.	Pending <a href="#">View</a>	<input type="text"/>	<input type="text" value="Type here"/>
	1.3 There is a mechanism for considering statistics produced outside the national statistical system, and if appropriate, for these statistics to become official.	Pending <a href="#">View</a>	<input type="text"/>	<input type="text" value="Type here"/>
	1.4 There is a national plan or program for the development and production of official statistics.	Pending <a href="#">View</a>	<input type="text"/>	<input type="text" value="Type here"/>
2. Managing relationships with data users, data providers and other stakeholders	2.1 Stakeholders are identified and consulted regarding their interests, needs and obligations.	Pending <a href="#">View</a>	<input type="text"/>	<input type="text" value="Type here"/>

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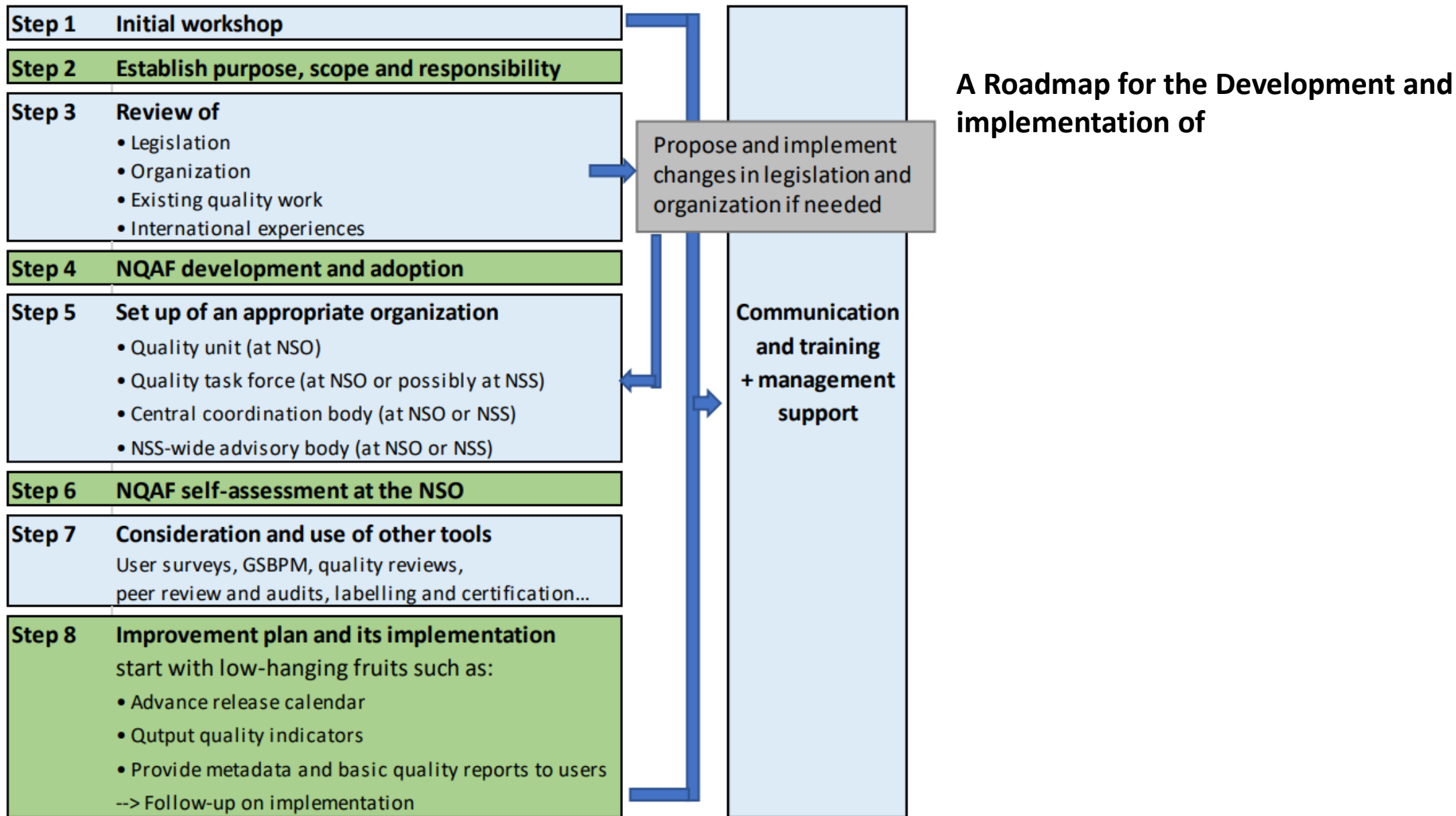
# The Roadmap for NQAF implementation

<https://unstats.un.org/unsd/methodology/dataquality/references/BG-3m-Roadmap-for-NQAF-implementation.pdf>

- Aims to support statisticians and managers that are tasked with implementing a national quality assurance framework or considering doing so in their own or other statistical organizations
- Emphasizes the main steps and tools in the development and implementation of an NQAF based on chapters 4, 5 and 6 of the Manual

National circumstances are different, and flexibility is necessary!





Important milestones

# Step 1: Initial workshop

Conduct an initial workshop, typically by the NSO or the agency responsible for the coordination of the NSS; the workshop is usually conducted by an initial quality team as determined or established by management.

- **Introduce NQAF to senior and middle management** at NSO and other statistical agencies (as applicable) and the staff directly responsible for supporting the work on quality.
- **Cover the basics:** quality concept, quality management, quality management in statistics and quality management frameworks for official statistics, UN NQAF, the [Manual](#) and tools.

Note: **High-level commitment** and **basic staff resources** in terms of time commitment are absolute prerequisites for the introduction of an NQAF.

# Step 7. Use of other tools (aside self-assessment)

The tools can be used at different levels, such as

- for individual statistics, in individual statistical domains, at individual statistical units, the entire NSO or the entire NSS with all its statistical products.
  - Typically, the management at the respective level decides on the use of the different tools, unless it is decided at higher level or externally.
1. Use the **essential tools** for quality assessment such as **quality indicators, quality reports** and **user surveys** which constitute the basic level of quality assessment.
  2. Use more **advanced assessment tools** such as
    - Internal audit or quality review (done by someone independent within your organization)
    - External peer review (done by a peer or a team of peers that are independent and from outside of your organization)
    - External audit (done by someone independent and outside of your organization, but not a peer)

# Step 7. Use of other tools (aside self-assessment)

## 3. Introduce the [Generic Statistical Business Process Model](#) (GSBPM).

- The improvement in the quality of statistical products requires the improvement of statistical processes.
- The GSBPM describes and defines the set of business processes needed to produce official statistics, and thereby provides a framework for process quality documentation, assessment and improvement. (WARNING: This may be very resource intensive)

**→ See Manual, Chapter 4 Assessment tools and risk management**

# Step 7. Use of other tools (aside self-assessment)

## Note on the use of tools:

### **1. Sequence of application:**

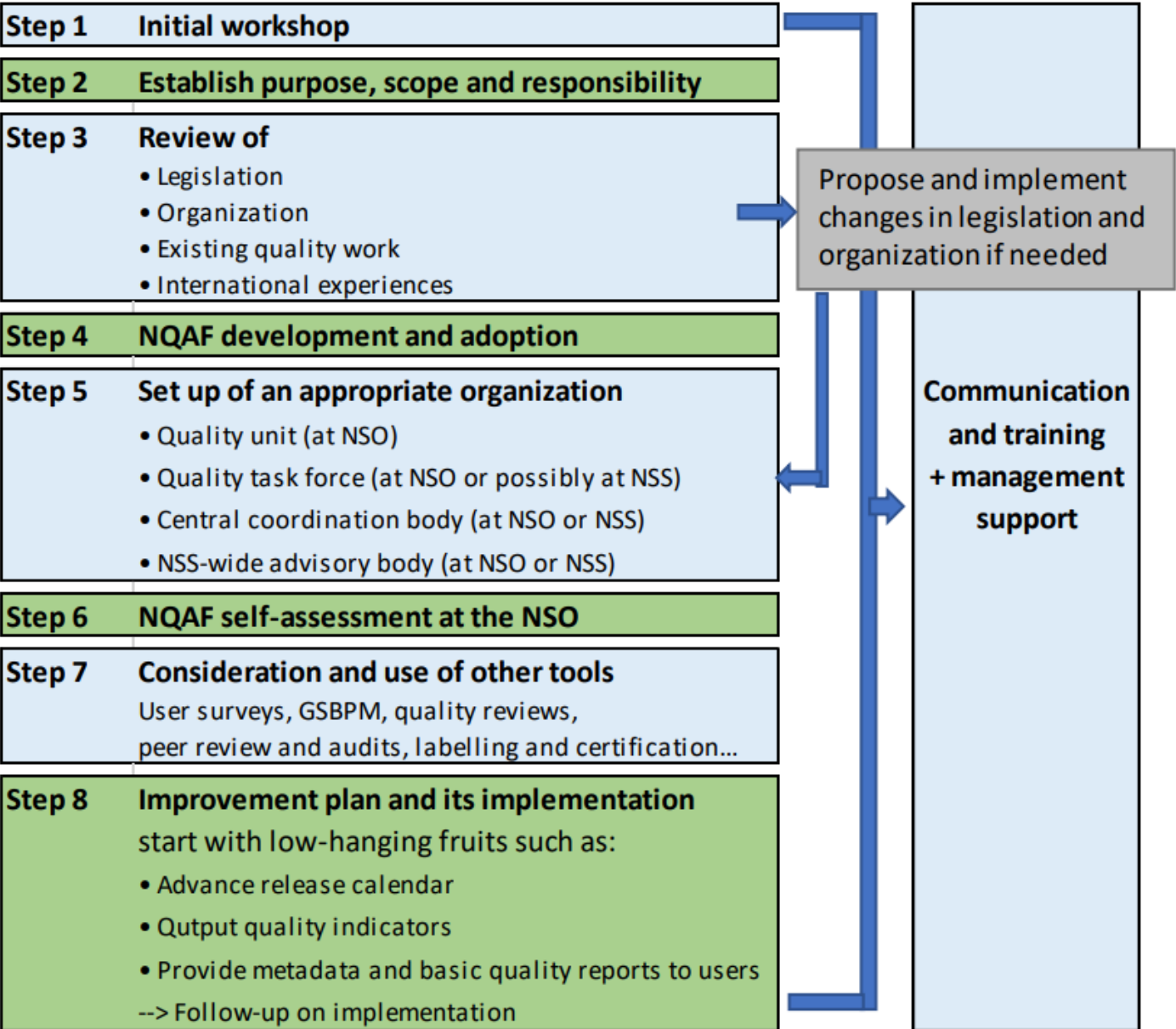
- Some of the possible measures are sequential, some can be carried out in parallel.
- Internal reviews of selected statistics carried out by a team with participants who are not responsible for working with these statistics may be a natural first step.
- User surveys, GSBPM, the use of quality indicators and quality reports for users can be implemented or utilized in parallel.

### **2. If not already used, the GSBPM should be introduced at the NSO together with the NQAF**

### **3. Audits**

- Are typically carried out by a third-party and may result in a certification, such as an ISO certificate to the relevant organization.
- The ISO-standards are general and apply to any organization. Therefore, it does not necessarily assure the quality aspects specific for official statistics. The certification process required is quite time-consuming and costly.
- However, a key word is documentation, which is just as important for statistical organizations as for any other.

# A Roadmap for the Development and implementation of NQAF



Important milestones

See also  
Chapter 5 and 6  
of the Manual

# Step 8. Improvement plan – overview of the process

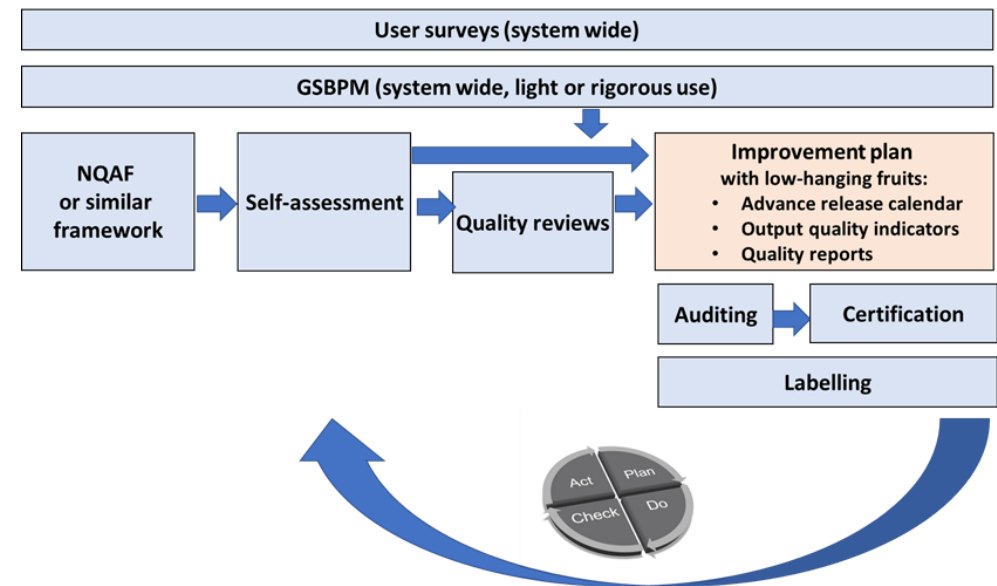
1. Develop an improvement plan based on self-assessments, possible reviews and audits.

2. Catch low-hanging fruits: Experiences show that there are some low-hanging fruits with quick/visible pay-off. These show ongoing commitment and can be relatively easily implemented not only at the NSO but other producers of official statistics. These are:

1. Establish an advance release calendar
2. Establish and publish some output quality indicators
3. Provide metadata and quality reports for users.

# Step 8. Improvement plan – overview of the process

3. Follow-up: Improvement plans should be regularly followed up and monitored, and regularly revised, in line with the PDCA-cycle ([Plan-Do-Check-Act](#)). The figure shows how quality assurance should follow the PDCA-cycle, by following up on the improvement plans and possibly repeat the self-assessment and reviews.







**Thank you.**