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Modernizing data systems in Africa

Snapshot of the road map for the transformation and modernization of official statistics in Africa

I. Introduction

1. A primary aim of the road map for the transformation and modernization of official statistics in Africa is to take stock of the challenges and opportunities for transforming and modernizing official statistics in Africa. The road map sets out principles and priorities for transformation and modernization to guide national planning and the design of national strategies for the development of statistics. It is also a framework to guide members of the African statistical system in helping to create and sustain virtuous cycles for the administration of official statistics, in ensuring that digital technology is used in the most appropriate manner and that it is tailored to the needs of each country, and in facilitating the design of national road maps. It should be noted that the road map is not a final document nor a set of finalized targets with agreed upon actions. The final document is expected to be completed by March 2023. The road map contains general guidance that will need to be adapted to each country. It should not be considered as a replacement for a national strategy for the development of statistics.

2. The road map was developed in close collaboration with a number of African national statistical offices, the African group on transformation and modernization of official statistics, the African Union, the African Development Bank, the East African Community, the Common Market for Eastern and Southern Africa, the Eastern Africa Statistical Training Centre, the World Bank, the Partnership in Statistics for Development in the 21st Century, a number of global United Nations bodies, including the Statistics Division of the United Nations and the United Nations Population Fund, and development partners from outside Africa, including the Office for National Statistics of the United Kingdom of Great Britain and Northern Ireland, Statistics Norway, Statistics Sweden and Eurostat.

* E/ECA/STATCOM/8/2022/1.



II. Key concepts

3. The following four key concepts are of central importance to the road map:

(a) Transformation is the process of moving from a current state to a fundamentally different desired state, which involves significant and systematic changes across statistical business processes and institutional environments;

(b) Modernization refers to the process of adapting, enhancing, and in some cases moving away from, traditional approaches to official statistics, and adopting the latest available statistical processes and systems. Modernization may not always be appropriate for all parts of a statistical system or in all countries. Rather, as part of a transformation strategy, modernization goals should be identified, prioritized or excluded, depending on their relevance and cost-benefit ratio and the priorities in a given national context;

(c) Digitalization is the use of digital technology to change all or parts of a statistical business model, and includes using new forms of digital data and digitalized versions of data obtained from traditional sources. Digitalization can be undertaken as part of both the transformation and modernization processes;

(d) Continuous improvement is both part of a desired state and a means to help to achieve a desired state. It refers to organizational and staff learning activities that are focused on meeting user needs. The process is systematic and culture-specific and influences the design and delivery of business processes.

III. Functions and core principles of the road map

4. A function of the road map for the transformation and modernization of official statistics in Africa is to support the development of national road maps and facilitate action planning. It provides guidance on ways in which countries can develop and implement national strategies for the development of statistics and annual workplans to optimize transformation and modernization. It also provides guidance on how to determine the desired state of a transformed and modernized national statistical system.

5. The road map is a framework to guide strategic action by members of the African statistical system. It provides guidance for action planning by members of the African statistical system and development partners to efficiently support accelerated and sustained cross-cutting transformation and modernization processes. It also helps to identify priorities for technical action by members of the African statistical system. While strategic actions are essential for all countries, joint technical action is proposed to support the modernization of the use of administrative data and surveys, as this is a technical priority for most countries.

6. The underlying principle of the road map is that no national statistical system should be left behind. In addition, the road map was developed on the basis of the following core principles:

(a) All national statistical systems should operate in accordance with international standards. However, there is considerable diversity among national statistical systems in Africa;

(b) Each country needs a nationally tailored road map for transformation and modernization;

(c) Members of the African statistical system both can and should support transformation and modernization of statistical systems across Africa;

(d) The transformation and modernization of all national statistical systems in Africa should benefit all countries and users.

IV. Key findings

7. The following key findings on the current state of national statistical systems in Africa have been identified:

(a) While African countries have been successful in putting in place national strategies for the development of statistics, they have been less successful in securing sufficient funding in that regard;

(b) Countries face significant challenges in implementing digitalization, in particular with regard to strategic action, legal procedures, information technology and human resources;

(c) There are significant gaps and inconsistencies in the methodologies used and the availability of data;

(d) Many countries have fallen, or are at risk of falling, into a vicious cycle of low interest and demand for official statistics if their national statistical systems are not aligned with modern data systems. Such vicious cycles result in:

(i) Weak statistical institutions and inadequate governance structures;

(ii) Inadequate staffing levels, infrastructure and tools;

(iii) Limited human capacity in terms of both data producers and users;

(iv) Insufficient funding from Governments and a lack of coordination and collaboration among stakeholders.

V. Drivers of transformation and modernization

8. Several common drivers of transformation and modernization have been identified in terms of supply- and demand-related issues. These are discussed below.

A. Demand-side drivers: putting users first

9. Engagement by users and a wide range of stakeholders at the national level is the primary and essential pivot upon which effective transformation and modernization can be carried out. The following actions can be taken to ensure such engagement:

(a) **Sustaining a virtuous cycle.** With the advent of digital technology, established data services risk becoming increasingly irrelevant to users and may thereby lose appeal as a source of investment. To sustain a virtuous cycle for the administration of official statistics, producers of official statistics need to prioritize engagement with users, collaboration with a wide range of stakeholders and the adoption of new and flexible statistical products;

(b) **Ensuring a national consensus on official statistics.** There needs to be a national consensus on the appropriate role, relevance and value of official statistics within the wider data system of each country. This should be reflected in legal frameworks and national strategies for the development of statistics and will determine the level of government funding and other resources dedicated to the national statistical system. Such consensus is typically implied rather than written, dynamically managed and based on sound multilateral relationships and regular communication;

(c) **Meeting needs through international cooperation.** Consistent and high scientific standards and comparability should be ensured while

carrying out the transformation and modernization process. As far as possible, sectoral statistics at the national level should be produced and disseminated according to internationally adopted standards and methodologies.

B. Supply-side drivers: optimizing resources

10. National statistical systems must respond to key challenges and opportunities to enhance efficiency. Common supply-side issues that need to be addressed to drive transformation and modernization include the following:

(a) **Basic infrastructure.** All national statistical systems require adequate infrastructure, such as buildings, computers, transportation, Internet connectivity and stable electricity supplies;

(b) **Financial resources.** The stable or increasing provision of funding cannot be assumed. Enhanced stakeholder engagement is required to mitigate the risk of insufficient funding. National statistical systems need to be visibly focused on national user needs to drive political commitments to provide funding, while potential funders need to be convinced that the system is efficient, agile and resilient;

(c) **Use of technology.** While digitalization and the use of technology can be highly effective in improving the efficiency of production and dissemination, there needs to be emphasis on ensuring that investments therein are good value for the money and sustainable in each national context;

(d) **Human capital.** Action is required to ensure that national statistical systems have access, internally or through partnerships, to the skills needed to operate within the emerging data systems, with limited resources;

(e) **Legal frameworks and well-functioning national statistical systems.** Laws and other institutional arrangements for national statistical systems need to be adapted to new opportunities and emerging challenges;

(f) **Learning processes.** The scope of learning approaches needs to extend beyond the traditional boundaries of official statistics and needs to be focused on long-term and sustainable outcomes in national contexts;

(g) **External support for capacity development.** Investments and support should continue to be focused on achieving international standards, where relevant. However, there needs to be a shift towards ensuring greater and more sustainable impact through a focus on national priorities and longer-term and better coordinated support from development partners.

VI. Foundational and priority enablers

A. Foundational enablers

11. A set of mutually supportive foundational enablers should be the core building blocks of success for the transformation and modernization of official statistics. The four foundational enablers are set out below:

(a) **Statistical advocacy and leadership.** While senior management teams in national statistical systems need to be focused on leadership both internally and externally, leadership and advocacy should be core skills of staff at all levels. This will result in future leaders of national statistical systems having the proper balance of technical and other skills. National statistical systems should encourage statistical literacy throughout society and shape the labour market. Staff of national statistical systems should have the confidence to provide value-added services to users through statistical analyses and commentary;

(b) **Balanced autonomy.** Scientific and operational independence needs to be balanced with institutional arrangements that facilitate effective

engagement with governments (including across national statistical systems), parliaments and financial providers. Such collaboration is also essential for wider advocacy efforts and to ensure political engagement;

(c) **National statistical systems.** While the legal establishment of a national statistical system can drive effective transformation and modernization, coordination mechanisms and the adoption of shared approaches are also essential to the operation of the system, in particular for the sharing of data, skills and stakeholder influence;

(d) **Financial resources.** Support for national development priorities must be emphasized within national statistical systems, and the systems' efficiency in the use of resources must be proven. Action is required to establish a national consensus on statistics and to drive efficiency. Official statistics need to be integrated into national financial planning and policy monitoring mechanisms.

12. Regulations provide support across many aspects of the foundational enablers and will continue to be essential for the delivery of official statistics. Accordingly, statistical laws and regulations need to reflect the agility required of national statistical systems, that is to say, a balance will need to be found between determining the right safeguards to ensure integrity while allowing for flexibility in using data and establishing partnerships.

B. Priority enablers

13. A set of four priority enablers are also of major importance for strategic action planning and monitoring among members of the African statistical system. These are set out below:

(a) **A strategic toolkit.** A toolkit will support the design of national road maps by helping to set priorities, establish schedules, determine the right approach to learning and capacity development, identify the appropriate desired state of a national statistical system and its organizational capital, and plan for the strategic use of digitalization in the transformation and modernization process;

(b) **Organizational capital.** New skills, infrastructure, partnerships and cultures that are in tune with modern data systems are needed. Support is required for the design and development of traditional and new types of organizational capital that are adapted to each national context;

(c) **Targeted digitalization.** Action is required to support effective decision-making, investment and shared learning in connection with the tailored use of digital technology. Investments need to be optimized according to national circumstances, supported through efficient and relevant learning approaches and adapted to all levels and types of organizational capital;

(d) **Improved capacity development.** Approaches to learning and capacity development should be focused on supporting suitable and agile responses by national statistical systems to modern data systems and not just on traditional technical capabilities. New ways of driving sustainability and efficiency are needed, such as encouraging learning activities led by national actors, encouraging learning from stakeholders that are active in areas other than official statistics, and identifying opportunities for improving statistical literacy across governments.

C. Using foundational and priority enablers to drive success

14. The primary goal of national statistical systems is to establish and sustain a virtuous cycle for the administration of official statistics on the basis of: multilateral engagement with users; collaboration in data production with a wide range of partners across the national data system to ensure that user needs are being met; and the prioritization of national action in accordance with foundational enablers.

15. To achieve that objective, national statistical systems should: establish a national consensus on official statistics and design national strategies for the development of statistics; be supported by members of the African statistical system in determining their desired state and navigating the process of transformation and modernization; and establish an end goal of continuous improvement, agility and resilience.

VII. Implementation strategy

A. Key milestones

16. The key milestones for the implementation of the road map are as follows:

(a) By the end of 2023, all African countries will have amended their national strategies for the development of statistics or related annual workplans in line with the principles and priorities of the road map, and all countries will be using the draft strategic toolkit to guide decision-making, including on digitalization;

(b) By the end of 2023, a finalized strategic toolkit will have been made available, and increasingly efficient processes for learning and capacity development will have been put in place and monitored;

(c) By the end of 2024, all African countries will have been assessed using the African maturity assessment model. Learning and capacity development activities will have been developed and delivered on the basis of those assessments. By that time, all national statistical systems will be highly integrated into national policy planning and reporting tools;

(d) In 2026, a review will be conducted of progress made on the basis of the road map, and strategic planning by the Statistical Commission for Africa will be adjusted accordingly.

B. Expected progress in core elements of the road map

17. The following list provides an overview of the progress that is expected to be made in relation to core elements of the road map:

(a) **Action plan for the implementation of the road map.** A final action plan will be developed and agreed upon by March 2023. Progress will be assessed by the Statistical Commission for Africa and adjustments will be made accordingly, in line with developments in emerging demand and supply issues in official statistics;

(b) **Strategic toolkit.** The toolkit will be used in the design of national strategies for the development of statistics and other strategies. A maturity assessment model will be used to monitor the development of national statistical systems, including their organizational capital, and to develop targeted strategies for learning and capacity development;

(c) **Learning and capacity development.** Learning processes will be improved. They will be increasingly efficient and strategically targeted towards the foundational enablers and the organizational capital required for transformation and modernization. Such processes will be driven, delivered and supported by national stakeholders. A key indicator of success will be the provision of long-term funding for national statistical systems from domestic sources;

(d) **Digitalization.** The digitalization of national statistical systems will be facilitated through an increasing range of guidance, support and sharing of best practices that are tailored to the overall level of maturity of the national statistical system in question. Digitalization will need to be supported by adequate organizational capital;

(e) **National strategies.** National strategies for the development of statistics, other statistical workplans and more general government strategies will increasingly reflect the objectives of the road map.

C. Strategic action plan

18. The following strategic actions are required for effective transformation and modernization across the continent, in line with the priority enablers:

(a) The development of a strategic toolkit is required for decision-making, including the development of maturity models to assess progress and determine possible next steps. Guidance must be provided on ways to integrate the road map into national strategies for the development of statistics;

(b) Action is required to ensure that national learning processes optimize peer-to-peer and South-to-South learning. Strategies are needed to ensure that learning approaches are sustainable, gradually embedded into the local context and help to improve statistical literacy among national stakeholders. Expertise and experience from the world beyond official statistics should be leveraged in the development of learning activities;

(c) Guidance, case studies, training programmes and other capacity-development initiatives that are focused on organizational capital need to be developed to:

(i) Enhance skills and establish institutional arrangements in support of the foundational enablers and to ensure virtuous cycles for the administration of official statistics;

(ii) Promote best practices for managing the transformation and modernization process;

(iii) Conduct business-process reengineering and identify information technology solutions;

(iv) Adapt strategies for ensuring adequate human capital for the digital era;

(v) Maintain core physical and technological capital;

(vi) Develop external professional support networks.

(d) More efficient capacity development assistance must be provided through: improved monitoring, coordination and communication; more accessible guidance and information on the assistance that is available; a strong African presence in international development; longer-term commitments and a continuous provision of resources to countries; and commitments to improve learning processes, in line with the road map.

19. Additional technical actions are recommended for members of the African statistical system to support the use of administrative data and increase the efficiency of survey methodologies.

Points for deliberation:

- The commission is requested to express its views on the road map, including on drivers, enablers, and the implementation strategy, and provide further guidance on its finalization.