



# **Statistical production infrastructure, data sources, information technology, dissemination and user support**

Session 1: Supporting the transformation of statistical production processes from the data collection to dissemination in the context of the digital and technological revolution



The presentation will outline the content of chapters:

- **VIII “Data sources, collection and processing”** *(drafted)*
- **X “Dissemination and user communications”** *(drafted)*
- **XI “Common statistical infrastructure”** *(not yet drafted)*
- **XIII “Data, information and knowledge management”** *(drafted)*
- **XIV “Information technology management”** *(drafted)*



# MANAGING A STATISTICAL ORGANISATION IN TIMES OF CHANGE

## CARIBBEAN 2019



Manage Metadata



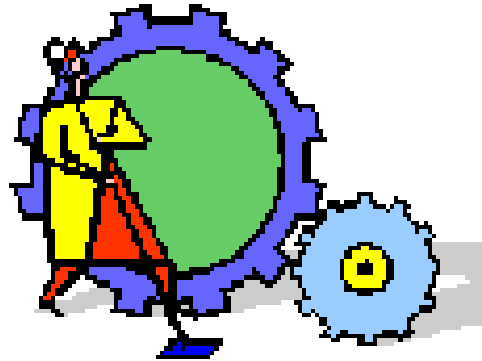
Analyse



Disseminate Data



Create Output Series



Validation



Publish Books



Data capture and Import



Produce EDPs



**VIII “Data sources, collection and processing” *the collection and processing of data from various types of sources, including secondary and non-traditional.***



## VIII “Data sources, collection and processing”

This chapter:

- covers statistical processes that are used to turn inputs into statistical products.
- provides an overview of survey functions, survey types, survey design, respondent relations, survey processing, survey staff training and expertise.
- discusses statistical processes and their specificities in relation to mode of collection
- provides guidance on the choice of appropriate collection mode.
- maps statistical processes according to the General Statistical Business Process Model (GSBPM).



## **VIII “Data sources, collection and processing”**

- i. Surveys and censuses
- ii. Administrative sources
- iii. Geospatial data
- iv. Big data
- v. Non-traditional data sources - the future of data collection
- vi. Relevance to other producers of official statistics



## **X “Dissemination and user communications”**

*Chapter X: covers all aspects of data dissemination and user communication are reviewed. The chapter also covers dissemination policy, data types, dissemination platforms and recovering the costs of dissemination.*



### X “Dissemination and user communications”

Dissemination is the phase in statistical processing in which data collected and compiled by statistical agencies are released to the public.

For an NSO the dissemination and use of its statistics that contribute towards understanding and better decision making should be considered the main objective of a statistical system –“Only used statistics are useful statistics”.

The practice of communication is a relatively new field for many NSOs. With limited resources and in an increasingly competitive environment-today communication can no longer be viewed as a ‘nice to have’ but as a ‘must have’.

An NSO needs to communicate that the data it disseminates meets requirements of timeliness, disaggregation and reliability.

NSOs must build internal expertise in the field of communication and put in place appropriate dissemination and communication strategies.





## **X “Dissemination and user communications”**

- i. Dissemination and communications strategies
- ii. Providing information on the properties of statistical data (metadata)
- iii. Different data types for dissemination
- iv. Dissemination methods
- v. Recovering dissemination costs
- vi. User relations
- vii. Other dissemination issues
- viii. Statistical literacy
- ix. Skills needed
- x. Relevance to other producers of official statistics



## **XIII “Data, information and knowledge management”**

*Chapter XIII: covers the ownership and custody of records, documents, data, information and other intellectual assets held by the national statistical office, and the policies, guidelines and standards for their collection, storage, maintenance, retrieval, dissemination and destruction.*



## **XIII “Data, information and knowledge management”**

Managing statistical data, information and knowledge is at the heart of an NSOs work and is of critical importance to the functioning of an NSO.

Data is transformed into information, and then into knowledge, which subsequently has to be made available to both internal and external users.

Statistical metadata are needed for, and describe the processes and tools used in the proper production and usage of statistical data.

To ensure that statistical information is available to the right people, in the right format, at the right time an NSO needs well-functioning data systems, information systems and knowledge management systems.

A knowledge management can reduce the time needed to find information, prevents the loss of knowledge and allows people to work faster in a more efficient and agile manner and make an NSO more effective.



## **XIII “Data, information and knowledge management”**

- i. General information management concepts, principles and policies
- ii. Managing statistical data and metadata
- iii. Managing other information and knowledge
- iv. Managing microdata archives
- v. Relevance to other producers of official statistics



## **XIV “Information technology management”**

*Chapter XIV: covers recent advances in technology, including cloud technology, the use of smartphones and tablet computers, big data, data-visualization techniques, new methods of data collection and dissemination and data integration.*



### **XIV “Information technology management”**

This chapter will describe changes in the IT landscape since the last handbook, review emerging and existing standards, and look at the technology infrastructure required by a modern NSO.

Information Technology (IT) plays an essential role in all aspects of statistical processing throughout the entire production life cycle from data collection through to dissemination.

This is a fast moving and rapidly changing environment with new innovations being developed at a breath-taking rate.

Since the publication of the last handbook in 2003 the IT landscape has changed almost beyond recognition with the growth of personal computers, distributed databases the explosion of the internet, smart phones and tablets, cloud technology and new data sources.

NSOs can expect a continued and accelerating rate of change in the years to come with further advances in Artificial Intelligence, machine learning, increased computing power, smart data and the “Internet of Things”.

These developments combined with changing work practices, increased user expectations, competition from other data providers and a constant drive for modernisation and increased efficiency provide an ongoing challenge for NSOs.

Harnessing the power of IT can help to meet these challenges by innovating in new products and processes – the rapidly changing environment also provides challenges of its own.

The ability to harness IT depends on capacity level – different approaches are required for different countries.



## **XIV “Information technology management”**

- i. Review of changes since previous edition, current trends
- ii. Models of information technology management
- iii. Other current information technology issues
- iv. Use of standards and generic models
- v. Basic information technology infrastructure needs and skill requirements
- vi. Relevance to other producers of official statistics



## **XI “Common statistical infrastructure”**

*Chapter XI: covers the statistical infrastructure required to support the statistical production programme, including the development of internal registers, methods, tools, systems and standards.*





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## **XI “Common statistical infrastructure”**

- i. Statistical business register
- ii. Statistical farm register
- iii. Household address register
- iv. Questionnaire design
- v. Sample design and estimation
- vi. Editing, imputation and outlier determination
- vii. Seasonal adjustment and time series analysis
- viii. Statistical policies, standards and guidelines
- ix. Statistical policies
- x. Standard concepts, variables and classifications
- xi. Statistical guidelines
- xii. Application to other producers of official statistics



## Issues for discussion

Your input required !



### **Issues for discussion**

- Have we missed any issues you would like to see covered?
- Can you provide us with any relevant success stories, new initiatives or best practices?