DANE's role within the 4th Industrial Revolution and the Public Administration Digital Transformation.

INDUSTRIA 4.0

A WORLD THAT COUNTS

2014

2014

BigData
UN Global Working Group

2015

OBJETIVOS DE DESARROLLO SOSTENIBLE

Capacity Development 4.0
PARiS 21
Enabling countries to navigate the new data ecosystem

DATA STEWARDSHIP — A SOLUTION FOR OFFICIAL STATISTICS' PREDICAMENT?

UNSD - Data Stewardship Working Group

2019

2020

2021

DANE
INFORMACIÓN PARA TODOS

NSS 2.0 in Colombia
established by Decree in 2019

SEN 2.0
Sistema Estadístico Nacional - Colombia

- Guidance, norms and Standards;
- Interoperability framework
- Open Data
- Ethical System

CASEN – NSS Advisory Council

CAD – Data Stewardship Committee

CES – Sectorial Statistics Committees

CSES – Strategic Statistics Follow-up Committee

NSS Data Ecosystem

- ● **National Statistical System-NSS**

- ● **Regional Subsystem**

- ● **Municipal Subsystem**

- ○ **Users of Statistical Information**

- ○ *** Subsystem of other territorial authorities**
  - Provinces
  - Metropolitan Areas
  - Indigenous territories
  - Collective territory of black communities
  - Associations of municipalities
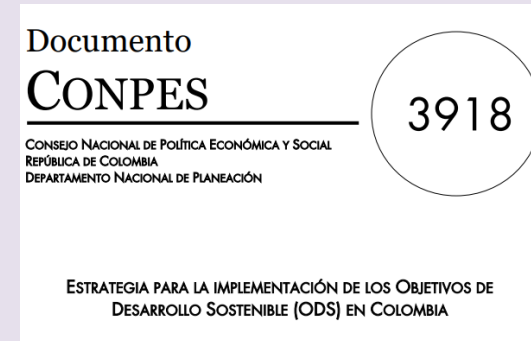 - PDET Territories
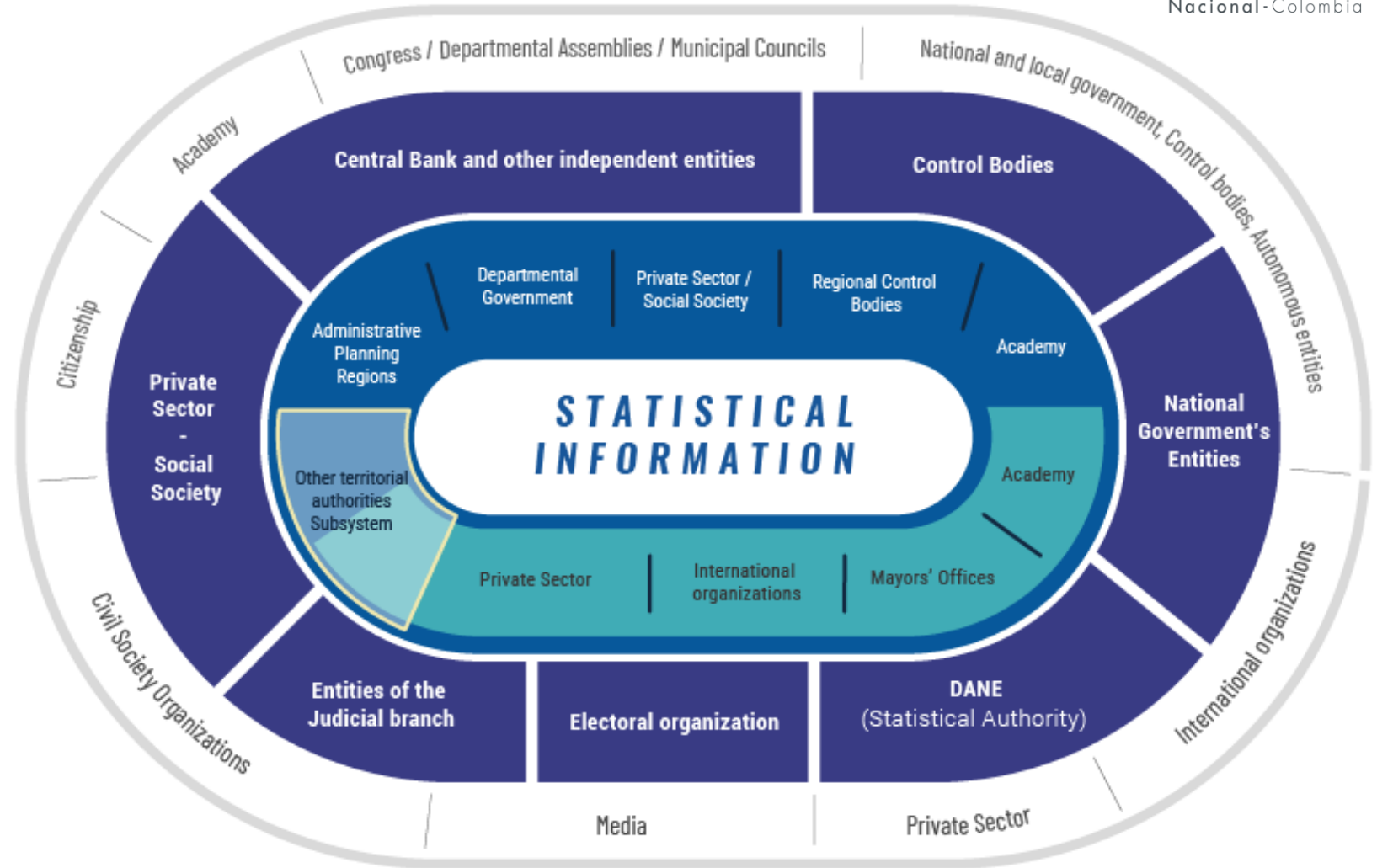
¹ **Artícle 155 of the 1955 Law from 2019.** From the supply side, in addition to national and sub-national entities that produce statistical information; there are the legal entities, public or private, that provide public services and the legal entities that own, produce or manage administrative records in the development of their corporate purpose, which are necessary inputs for the production of official statistics. Civil society organizations (CSOs) include: nongovernmental organizations (NGOs), nonprofit entities (ESALs), which in turn include chambers of commerce, unions, social, community, professional, ethnic, and academic organizations, among othersTranslated with www.DeepL.com/Translator (free version)

Institutional Arragements

POLICY DOCUMENTS

Innovation: "The integration of new sources into statistical production requires several levels of innovation to achieve this, including a new processing scheme, computational methods, data governance and access models, and human capabilities"

Documento CONPES 3920
CONSEJO NACIONAL DE POLÍTICA ECONÓMICA Y SOCIAL
REPÚBLICA DE COLOMBIA
DEPARTAMENTO NACIONAL DE PLANEACIÓN

POLÍTICA NACIONAL DE EXPLOTACIÓN DE DATOS (BIG DATA)

Documento CONPES 3918
CONSEJO NACIONAL DE POLÍTICA ECONÓMICA Y SOCIAL
REPÚBLICA DE COLOMBIA
DEPARTAMENTO NACIONAL DE PLANEACIÓN

ESTRATEGIA PARA LA IMPLEMENTACIÓN DE LOS OBJETIVOS DE DESARROLLO SOSTENIBLE (ODS) EN COLOMBIA

Reduce Data Gaps for SDG monitoring at national level and use of alternative data sources to calculate SDGs

ARTICLE 2.2.3.5.4. *On alternative sources*. DANE and the other members of the NSS shall endeavor to include alternative sources of data in the processes of generation of statistical information under the terms set forth in this Decree. DANE will officialize the guidelines and standards for statistical use of these sources that allow compliance with the attributes of statistical quality, as well as their integration to traditional sources. **(Decree 2404 of 2019).**

SEN '2.0
Sistema Estadístico
Nacional-Colombia

DECREE OF THE NATIONAL STATISTICAL SYSTEM

Diverse projects fostering the use of alternative sources data

- Since 2015 DANE has been working on alternative sources and techniques for obtaining information (Big Data - Smart Data - Data Analytics).

- Several innovation projects to take advantage of alternative sources such as: internet data (social networks, webscraping) and satellite images.

- Methodological innovations.

- Improvements in data visualization.

- Widen the availability of data sources.

- Until 2019, all were isolated exercises of diverse technical directorates, with any data published.

Use of satellite images for computing the SDG indicators from Goal 11

Using satellite images, it is possible to obtain historical and updated data on land cover to analyze the expansion of urban agglomerations.

Indicator 11.1.1
Proportion of urban population living in slums, informal settlements or inadequate housing.

Indicator 11.2.1
Proportion of population that has convenient access to public transport, by sex, age and persons with disabilities.

Indicator 11.3.1
Ratio of land consumption rate to population growth rate.

Indicator 11.7.1
Average share of the built-up area of cities that is open space for public use for all, by sex, age and persons with disabilities.

Early estimation of manufacturing production
Integration of administrative registers and survey´s

First approach we are currently working on:

Currently DANE measures:
• Estimate anual industry production growth with a lag of 45 days.

Goal:
• Early anual estimation of manufacturing production level with a lag of 15 days.

Sources:
• Manufacturing industry survey.
• Google trends.
• Energy consumption administrative register.

DANE's approach for alternative sources data

- Dissemination of innovation projects due to the establishment of experimental statistics:

  - MPI estimates with satellite imagery
  - SDG Indicator 9.1.1
  - SDG Indicator 11.3.1
  - SDG Indicator 11.7.1
  - Early Estimator for Manufacturing Industry in Colombia
  - Estimation of population volume of the ethnic groups of Colombia

- Scale economies in the use of alternative sources of information and new methods are acquired, for the whole statistic production.

- New data sources are agnostic to topics (UNECE

ESTADÍSTICAS EXPERIMENTALES

Roads captured next to the park as open spaces of a public nature, for the calculation of indicator 11.7.1 Average share of the built-up area of cities that is open space for public use for all. Source: DANE, 2018.

https://www.dane.gov.co/index.php/estadisticas-por-tema/estadisticas-experimentales

Experimental Statistics
Current Approach in DANE

Definition

Are the ones derived from projects in development that have at least one of the following innovative aspects:
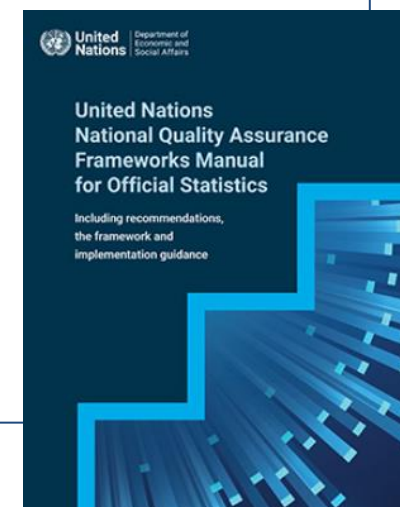
- new sources of information
- the statistical methodology used
- a new topic not previously measured.

They are considered experimental because they still show room for improvement (harmonization, coverage and methodology) and they have not yet reached sufficient maturity in terms of the reliability, stability or quality assessment of the data. In Colombia the experimental statistics are official statistics by decree 2404 of 2019.

Quality Attributes

1. **Relevance**
2. **Opportunity**
3. **Accesibility**
4. **Interpretability**
5. **Coherence**
6. **Transparency**
7. Accuracy
8. Comparability
9. Continuity
10. Credibility

Attributes required for experimental statistics

United Nations | Department of Economic and Social Affairs

United Nations National Quality Assurance Frameworks Manual for Official Statistics

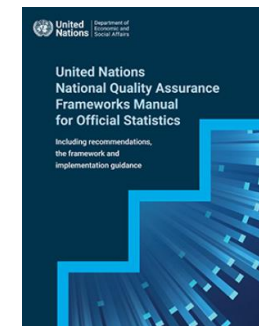Including recommendations, the framework and implementation guidance

SDGs indicators quality audit

In this context, SDG Group has developed a quality audit, focus on the quality of the SDG indicators.

Currently more than 25 national institutions report SDG Indicators using traditional sources; however not all statistical operations from all the NSS have gone through the quality assessment.

These audits includes SDG indicators calculated using alternative data sources!

PRINCIPIO DE CALIDAD		CRITERIOS	SI	NO
GESTIÓN DEL SISTEMA ESTADÍSTICO				
Coordinación del Sistema Estadístico Nacional	1	Para el caso de indicadores ODS del Marco Global ¿ha habido algún trabajo previo con el Working Group de Naciones Unidas?**		X
Gestión de relaciones con usuarios, proveedores de datos y partes interesadas	2	¿El indicador tiene definida la entidad responsable del reporte?	X	
	3	¿El indicador tiene definida la entidad responsable de la meta?		
	4	¿El indicador tiene definida la fuente de información?	X	
	5	¿La fuente de información hace parte de las entidades que conforman el Sistema Estadístico Nacional (SEN)?	X	
GESTIÓN DEL ENTORNO ESTADÍSTICO				
Asegurar la transparencia	6	a. Para indicadores que NO se relacionan con la Política de Revisión de Cuentas Nacionales, ¿los datos son definitivos?	X	
		b. Para Indicadores Relacionados con la Política de Revisión de Cuentas Nacionales ¿se evidencian aquellos datos provisionales, preliminares y definitivos? (ver anexo 3)		
	7	¿La disponibilidad de información es de manera abierta y pública?	X	
GESTIÓN DEL PROCESO ESTADÍSTICO				
Asegurar la Solidez Metodológica	8	¿El Indicador cuenta con una metodología establecida y aprobada?	X	

Key elements

- We are not thinking in new/alternative sources of information as substitutes of traditional sources.

  - Toolkit

  - Training technical staff

  - Partnerships

  - Privacy and ethic protocols

  - Develop data production models more specific to these new data sources

  - Develop more specific data quality protocols

  - Open the door for innovations