

UNECE/EFTA Expert Meeting on Modernizing Statistical Legislation

Session 1: Access to privately held data



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



NSS Data Ecosystem

● National Statistical System-NSS

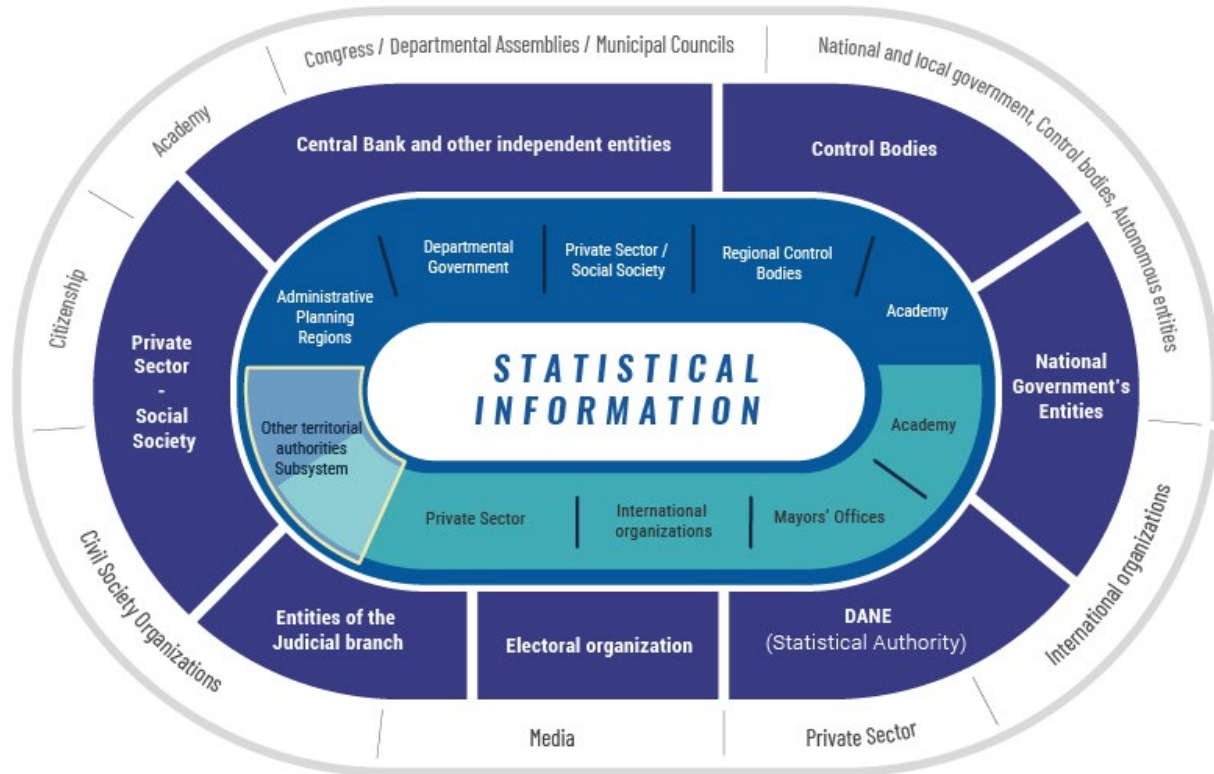
● Regional Subsystem

● Municipal Subsystem

○ Users of Statistical Information

○ * Subsystem of other territorial authorities

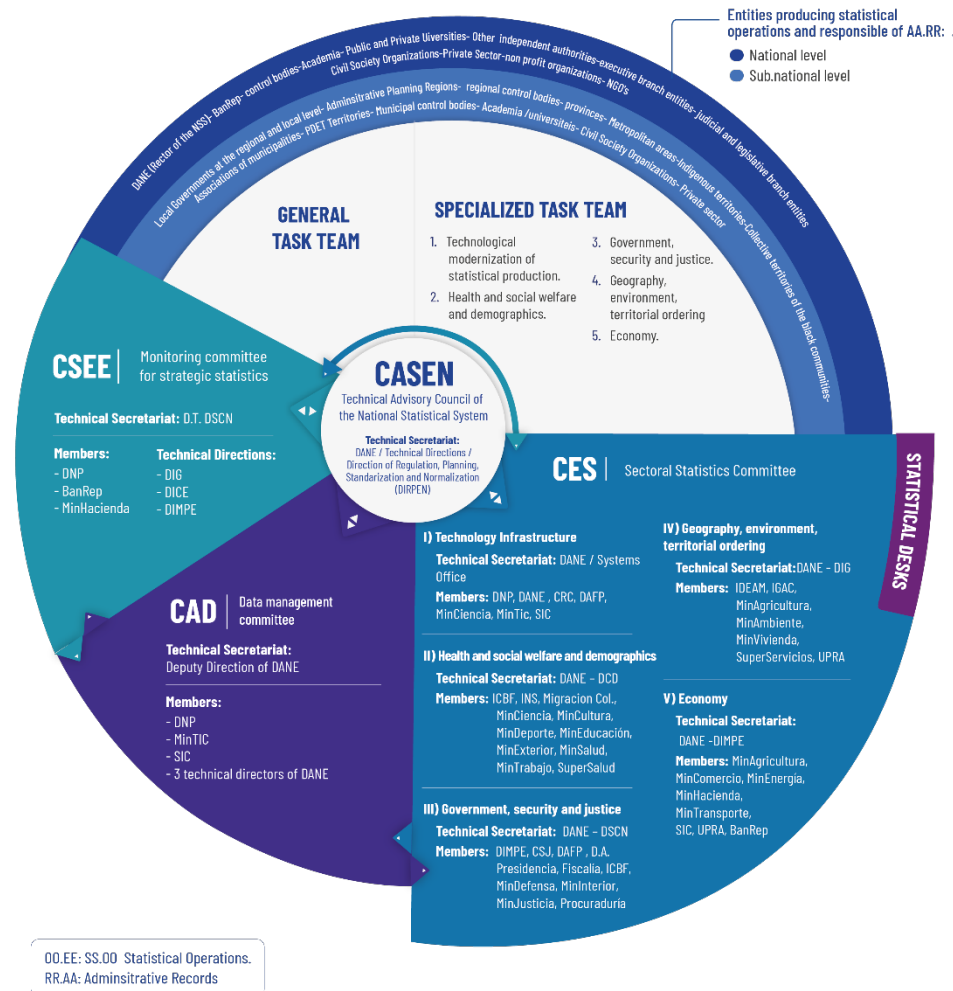
- Provinces
- Metropolitan Areas
- Indigenous territories
- Collective territory of black communities
- Associations of municipalities
- PDET Territories



¹ **Article 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 others. Translated with www.DeepL.com/Translator (free version)

Data Stewardship Guidelines and Premises

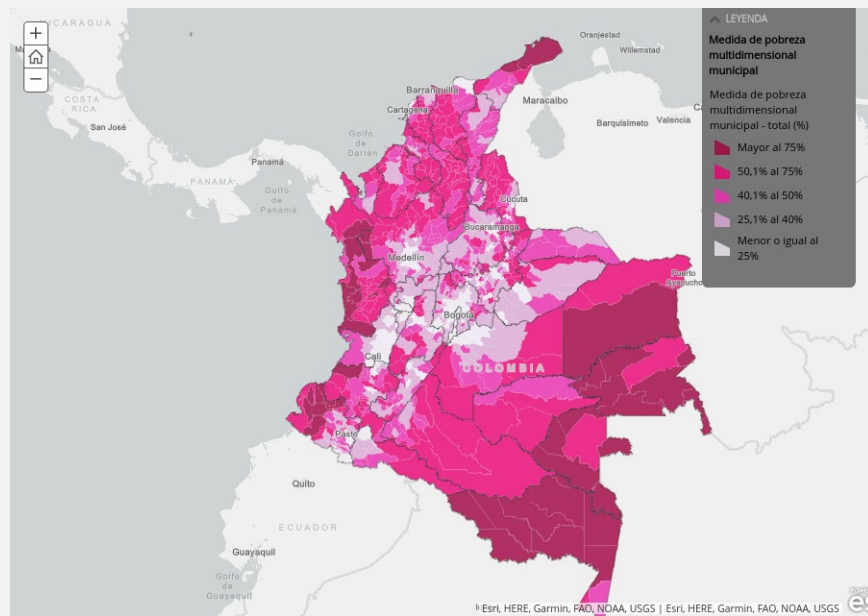
- It is based on the **coordination** and articulation of instances so that the information contributes to the public good and decision-making processes.
- Recognizes the importance of the **capacities** of organizations and individuals to respond to growing information needs.
- It seeks to optimize the use of innovative technologies and methodologies, based on **data science**.
- It is supported by a robust **Regulatory Framework** that establishes the scope and responsibility of the actors





DANE's approach for 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.
- The current regulations (Decree 2404 of 2019) empowers DANE to use alternative sources in coordination with mobile operators as members of the SEN.



MPI with census source information, with geo-referenced information.

Fuente: DANE



DANE's approach for alternative sources data (ii)

- Methodological innovations (use of statistical techniques to calculate statistical indicators such as small area estimation for MPI; use of *machine learning* for automatic company classification).
- Improvements in data visualization (use of geospatial information to display NHPC data, MPI, others).
- Dissemination of experimental statistics:
 - Early Estimator for Manufacturing Industry in Colombia
 - MPI estimates with satellite imagery
 - SDG Indicator 9.1.1 Proportion of the rural population living within 2 km of a road that is passable year-round
 - SDG Indicator 11.3.1 Ratio of land consumption rate to population growth rate

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.

Working schemes between statistics producers and mobile operators

In 2016, DANE participated in a pilot exercises with ITU and Mintic to approach mobile data to produce ICT indicators, the project was carried out with CLARO data and ended in November 2017. Work scheme B was applied in which DANE performed the processing and calculation of the indicators from the operator's data.

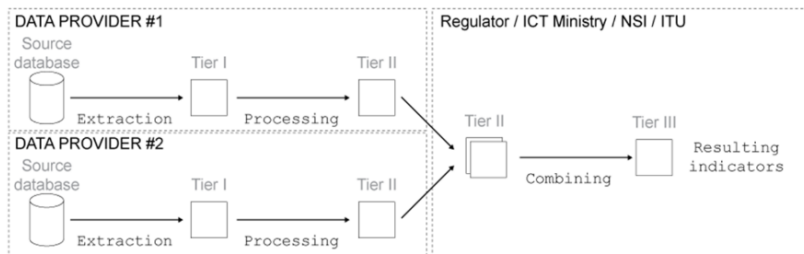


Figure 3.2 Type A partnership model – Mobile network operators mainly responsible for data processing⁹

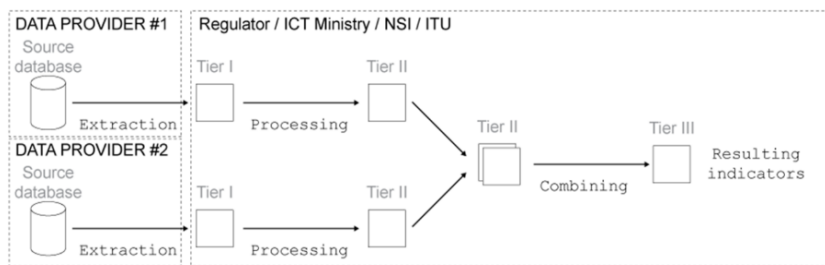


Figure 3.3 Type B partnership model – Government stakeholders mainly responsible for data processing

Table 3.2 Accessing mobile phone data in six pilot countries: ITU’s big data project for measuring the information society

Country	Partnership Model	Responsibility for Data Processing
Colombia	B	National Statistical Office
Georgia	B	Telecom Regulator
Kenya	A	Network Operators
Philippines	A	Network Operators
Sweden	B	ITU
United Arab Emirates	A	Network Operators



Statistical potential of cell phone data in Colombia

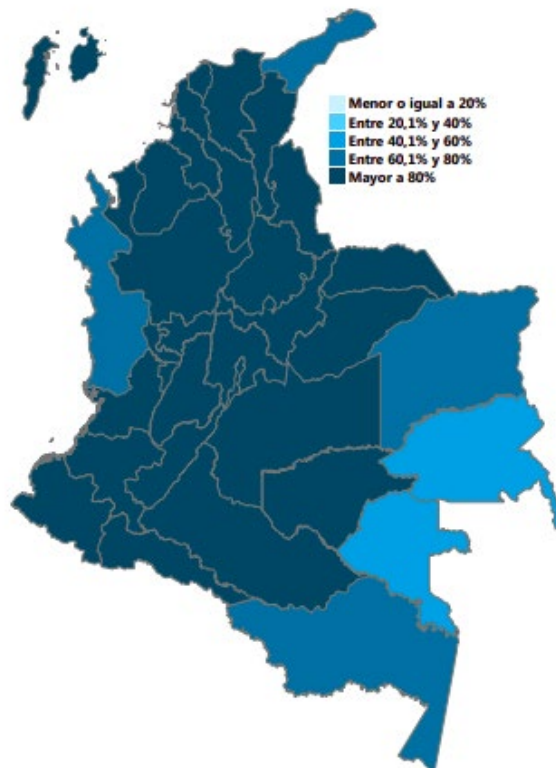
In Colombia, by 2018, 72.2% of people over 5 years old had a cell phone.

Cell phone data, together with geographic information, can reflect population dynamics (depending on the number of users per antenna per hour).

Data subject to reservation but with high statistical potential to measure population mobility and social network structures.

Methodologies approved by the United Nations (Manual on the use of mobile data for official statistics).

Telefonía celular*



*Proportion of households with cellular telephony.
Departmental total. 2018. Source: DANE – LCS*



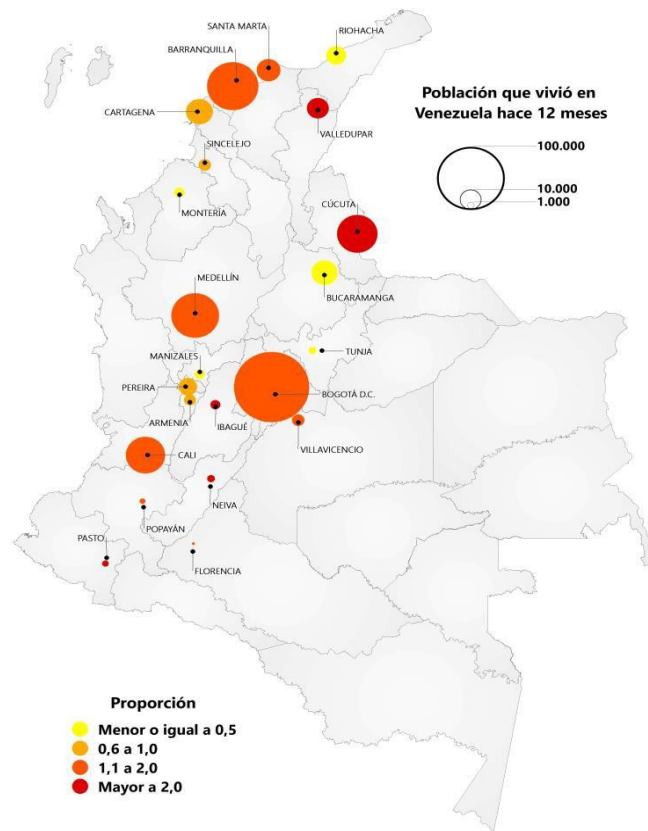
Benefits for DANE.

Strengthen its capabilities for the collection, processing and analysis of mobile data.

Monitor population dynamics with greater timeliness based on cross-referencing information between mobile data and CNPV.

Expand the information and analysis of mobility patterns and integration of migrant population in the national economy, with cell phone data and information from censuses, surveys and administrative records to create, among others, origin/destination matrices.

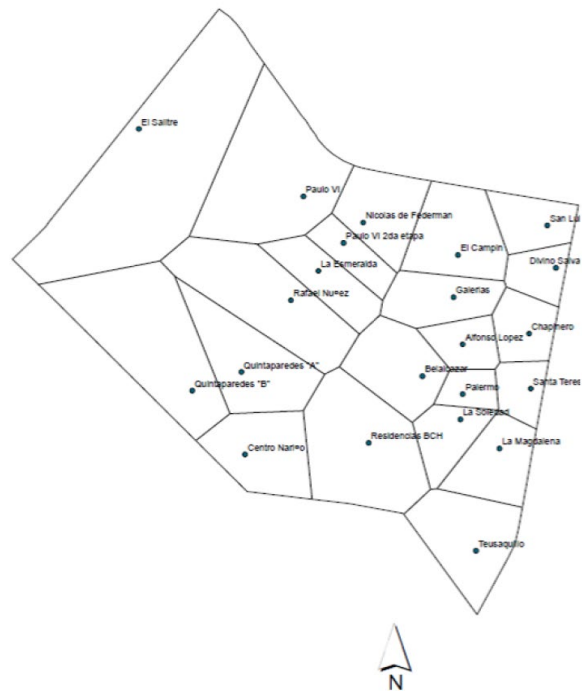
Characterize tourism flows by origins, seasons and main destination.





Benefits for mobile operators

- **Link NHPC statistical information with geo-referenced antenna information:** Operators obtain census information summaries by antenna or service center coverage area to generate penetration rates by coverage area.
- **Perform a geo-demographic segmentation with NHPC data:** with which they can characterize the area of influence of the antennas or service centers based on the relative participation of the identified segments.



Simulation of Voronoi polygons for the District of Teusaquillo in Bogotá..

DANE's Bill of Law *"Whereby provisions are issued on official statistics in the country"*



El futuro
es de todos

Gobierno
de Colombia



1 **Relevance of the Bill of Law**

🎯 **Filled** on the 11th of August 2021; Currently undergoing its Review within the lower house of Congress.

🎯 The Bill arises from the need to update, compile and systematize the legal regulations on statistical matters in Colombia.

🎯 Consolidates DANE as a technical, transparent and cutting-edge entity that uses a broad portfolio of information sources, which includes not only high-quality censuses and surveys but also administrative records of public and private origin that comply with high standards and interoperability..

🎯 Updates and systematizes the regulations on statistical matters in Colombia, strengthening the National Statistical System, under the leadership of DANE.

🎯 In a cross-cutting manner, the LP reflects the national need for coordinated and systemic statistical production through a robust National Statistical System.



2 International references

Raises to the rank of law the international standards (OECD, ECLAC) that DANE has adopted and that bring Colombia up to date with the best international practices for statistical production..

- Builds on the Regional Generic Law on Official Statistics for Latin America, approved in the framework of the Tenth Meeting of the Statistical Conference of the Americas (SCA) of the Economic Commission for Latin America and the Caribbean (ECLAC) in November 2019.
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- The initiative seeks to adopt the recommendations issued by the Organization for Economic Co-operation and Development (OECD), both as part of the OECD Council Recommendation on Good Statistical Practice, as well as those included in the Formal Opinion of the Committee on Statistics and Statistical Policy (CSSP) within the framework of Colombia's accession process to that organization.
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3 Main Themes contained in the Bill of Law

- The Bill Law establishes the general **legal framework** for the planning, production and dissemination of the country's official statistics, as well as the guiding principles and general rules governing statistical activity. For example, it introduces the principle of inclusion.
—————
- It contains the guiding principles and provisions that establish the purpose, objectives and general rules of the **National Statistical System (NSS)**.
—————
- Establishes provisions to promote the interoperability of information, the use of administrative records and the strengthening of the use of ICTs.
—————
- Incorporates census regulations, updating current legislation and establishing provisions to guarantee the planning and execution of census operations.
—————



3 Main Themes contained in the Bill of Law (ii)

- Provides for rules focused on the promotion of statistical quality in accordance with international standards and DANE's leadership in quality.

- It establishes that the President of the Republic shall ensure compliance with international standards and best practices in the appointment of the person who heads the General Directorate of DANE, in order to strengthen the technical, operational and administrative autonomy of the Entity.

- Develops standards for international cooperation in order to strengthen regional coordination spaces and with supranational organizations.

- Establishes regulations on the dissemination and publicity of information, as well as the provision of statistical processing services..

- It contains provisions on infractions related to the statistical activity and its sanctioning regime.

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