HOW IS MONITORING DONE?

Program monitoring involves the following steps:

» **Step 1:** Regular data collection — Monitoring is based on processing data that relates to the operation of programs. These data can either be produced internally or retrieved from external data banks. When launching a monitoring system it is important to find out which data are available, in which databases and how often the database has been updated.

» **Step 2:** Data processing and transmission — using information tools and systems.

» **Step 3:** Production of indicators based on raw data (it is also possible to use ready-made indicators produced by official agencies and international organizations).

» **Step 4:** Monitoring and analysis of the indicator variations over time.

» **Step 5:** Retention, correction or adjustment of activities — The data produced in the previous step makes it possible to monitor the development of the different aspects of programs, and therefore to adjust their implementation in accordance with what was originally planned.
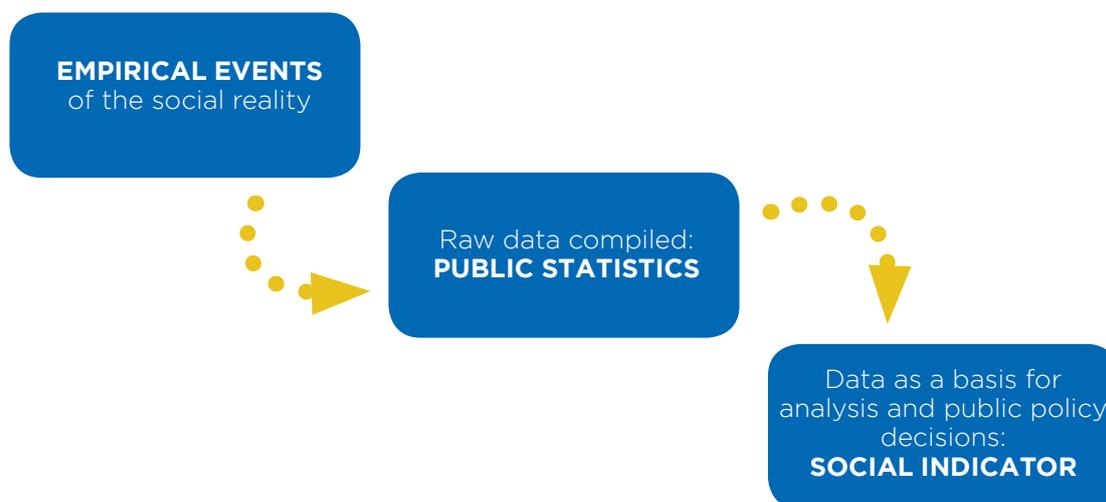
WHAT TOOLS ARE USED IN MONITORING SOCIAL PROGRAMS?

The main monitoring instruments are the social indicators used in the monitoring dashboards within the monitoring systems and based on the logic model.

Social indicators are numerical measures for transforming abstract concepts such as hunger and poverty into something that can be analyzed and quantified. They are methodological resources for portraying social reality in a simplified, objective and standardized form.

Examples of social indicators: proportion of poor people, illiteracy rates, child mortality rates.

The indicators convert aspects of reality into numbers, rates and ratios — whether this is a given reality (social situation), or a constructed reality (arising from government intervention) — which make it possible to observe and evaluate this reality.

EMPIRICAL EVENTS of the social reality

Raw data compiled: **PUBLIC STATISTICS**

Data as a basis for analysis and public policy decisions: **SOCIAL INDICATOR**

Indicators can be economic and social, or quality and performance-related, etc., depending on the type of intervention and on the aspect(s) to be evaluated. The indicators are invaluable for public management because they denote a given social reality, providing information for the decision-making process and highlighting any changes in the characteristics of a particular population or in the supply and demand for services.

Program monitoring and evaluation is based on studying these indicators. However, monitoring a program involves more than just using any given social indicator. In order to produce information on the social reality aspects that are being targeted by the planning process, an indicator must possess a number of specific properties. The main properties of a social indicator are the following:

Property	Definition
Validity	Ability to represent, as closely as possible, the reality to be measured and changed.
Reliability	Indicators must originate from reliable sources, using recognized and transparent methodologies for retrieval, processing and dissemination.
Simplicity	Indicators should be easily obtainable, constructed, maintained, and communicable to and easily understood by the general public.
Sensibility	Indicator should reflect the changes resulting from interventions.
Disaggregatability	Capacity to represent socio-demographic groups from a regional perspective, given that territorial aspects are presented as an essential component in the implementation of public policies.
Economicity	Capacity for obtaining the indicator at reasonable cost.
Stability	Ability to establish stable historical series that allow monitorings and comparisons.
Measurability	Ability to provide measurements whenever necessary, and as accurately as possible.
Auditability	Any individual should be capable of confirming that the usage rules of the indicators have been properly complied with (retrieval, processing, formatting, distribution, interpretation).

How are the social indicators constructed?

The first step in constructing an indicator consists of defining the programmatic objective, i.e. deciding which element of social reality requires measuring. For example, to improve mathematics learning at the basic education level or to reduce mortality among children of under five years old.

These objectives are not in themselves directly observable and measurable. Therefore we need to convert them into quantities in order to facilitate the diagnosis, monitoring and evaluation of the situation in terms of whether it has improved, deteriorated or stabilized.

The second step in constructing an indicator involves outlining which data is most applicable to the abstract concepts of "health" or "education". In the case of "health" for example, we have:

- » Life years of the population
- » Number of hospital beds in the city
- » Number of live births
- » Number of doctors

The above data are normally in the public domain, generated by governments, and are available in official registries, medical and other records, or publicly accessible statistics produced by the Brazilian Institute of Geography and Statistics (IBGE) and other institutions.

When combined in the form of rates, proportions, indexes or even absolute values these data are transformed into social indicators. In the case of healthcare, we would have the following indicators:

» Life expectancy at birth
» Number of hospital beds per thousand inhabitants
» Infant mortality rate
» Number of medical jobs per thousand inhabitants

The following figure illustrates the various steps in the construction of social indicators where raw data is transformed into indicators:
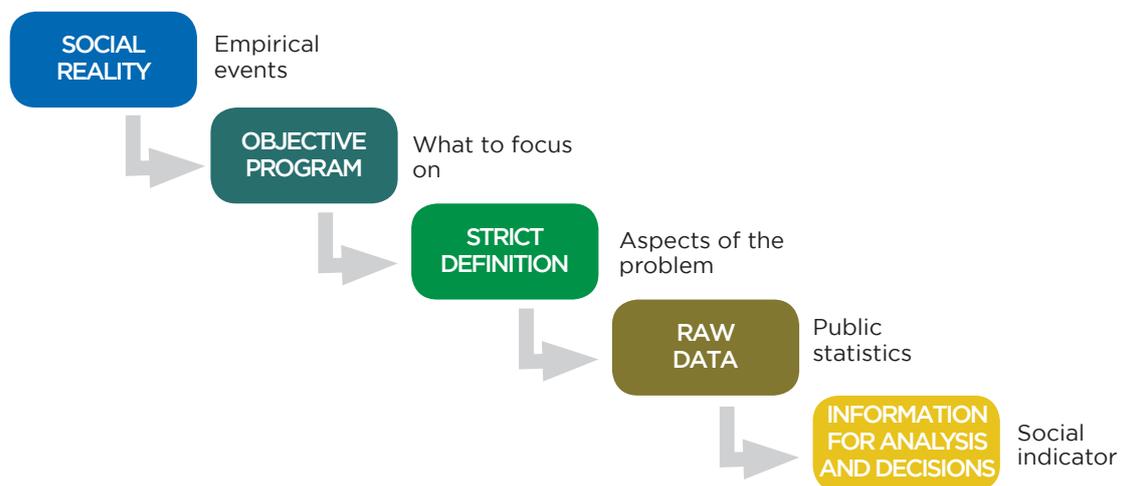
LOGIC MODEL

The logic model is a graphic representation of the way in which a program works, and which shows the links between:

» The resources that are invested;
» The activities that are implemented;
» The social changes that result from the entire process.

Use of the logic model makes it possible to view the causal link between the elements that comprise a program:

» Development of the activities requires adequate resources to be available;
» Achievement of results depends on implementing the pre-defined activities;
» The impact of the program on society depends on achieving the results.

Understanding these dependency relationships helps to identify program design defects that might undermine the performance of the program. The basic structure of the logic model can be represented as follows:

RESOURCES	→	ACTIVITIES	→	PRODUCTS	→
→	INTERIM RESULTS	→	FINAL RESULTS	→	IMPACTS

The logic model contributes to an understanding of the phases of a program and their interface with other phases. In this way we can select the monitoring indicators relevant to each phase.

What is the importance of the logic model for monitoring?

The logic model provides an organized, logical and succinct presentation of the program. It enables us to check whether the program is well structured, and to oversee the activities systematically (i.e. to monitor them).

Monitoring depends on knowing how the program should function. The design of the program is the point of reference which provides the basis for management to formulate the monitoring process.

The logic model helps us to understand the phases of the program and its links to other phases. If this is done, we can select the monitoring indicators of each phase. By way of illustration the logic model of the Unified Registry[1] is reproduced below:

1 The goal of the Unified Registry tool is to identify and describe the socioeconomic situation of low income families. These families are understood to be those with a monthly per capita income of up to one half of a minimum salary, or up to a total monthly income of up to 3 minimum salaries.

Unified Registry for Social Programs – Logic Model

The Unified Registry is a tool for identifying and describing the socioeconomic situation of low-income Brazilian families. It can be used for various different social policies and programs. Through the use of the Registry´s database, it is possible to know who these families are, where they are, and what are the main features of the poorest and most vulnerable sector of the population.

INPUTS

- Financial resources of the MDS, and counterpart by the states and municipalities
- Human resources of the MDS, states and municipalities
- Infrastructure for attending to families (fixed and mobile registration units, vehicles for home visits, etc).
- Internet connection
- Ordinary legislation and other norms
- Availability of the databases of other administrative registries for audits/registration inquiries

ACTIVITIES

- Preparation of the forms for data collection
- Development of the registration system
- To select and train interviewers and operators of the registration system
- To identify the priority areas for registration (urban and rural)
- To mobilize, select and register the families
- To engage with the local government in order to set up partnerships with the purpose of registering families in remote areas or population groups requiring "agreements" or prior consultation
- To establish routines for monitoring the updating and consistency of data entered in the system
- To undertake crosschecking of the database of the Unified Register with other databases in order to identify inconsistencies
- To undertake campaigns/activities to raise awareness of the Unified Registry

PRODUCTS

- Forms and registration system implemented
- Interviewers and operators trained
- Planning of the registration process completed
- Families registered
- Databases available for use by some of the social programs users
- Routines established for monitoring the updating and consistency of data
- Audits /inquiries undertaken in the national database of the Unified Registry
- Unified Registry known by the low-income families and user programs

RESULTS

- Data and information disseminated on low-income families
- Increased access by enrolled families to the different federal social programs
- Increased focus of federal social programs users
- Improved procedure for awarding benefits
- Design and implementation of state and municipal social programs
- Improved consistency in the quality of Unified Registry data

IMPACTS

- Citizenship promotion
- Reduction of socioeconomic inequality
- Better quality of life of the population
- Increased household income
- Increased integration and efficiency of the Brazilian social protection system

MONITORING DASHBOARDS

A **dashboard** is a selected set of key indicators for monitoring the most important aspects of a particular program. The data in the monitoring dashboard are displayed in the form of graphics (one for each indicator) that represent the evolution of the numbers over time.

In order to construct a dashboard it is necessary to define beforehand what will be monitored, the purpose of the monitoring exercise and the target public that will use the resulting data. Continuous use of the dashboard enables us to identify whether there is any disconnection between the tasks underway and the hoped-for outcomes, and thereby makes it possible to diagnose and take decisions on whatever needs to be corrected.
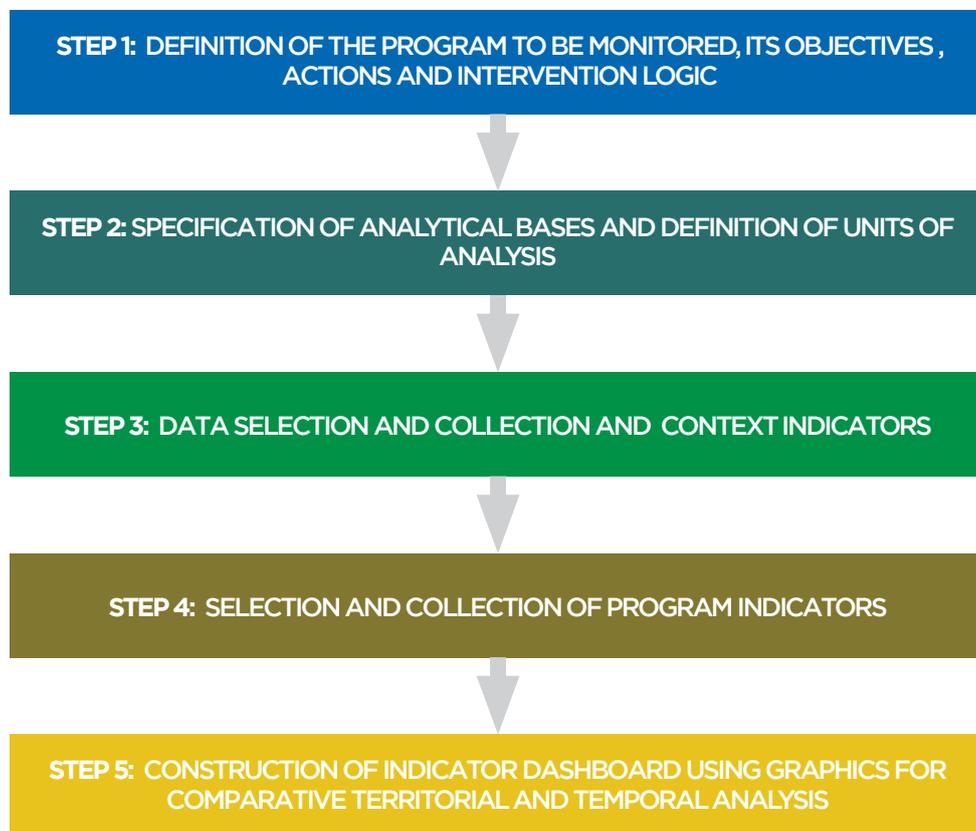
For an indicator to form part of a monitoring dashboard it is important that the indicator should always be up-to-date and linked to the program management computer systems. This is the only way possible to analyse the evolution of the indicator over time.

Tip: The managers and agents responsible for implementation normally record, on spreadsheets, large amounts of data on the operation of a program. When preparing the monitoring dashboards it is important to make use of this data generated during the day-to-day operation of a program.

The various steps to be followed when constructing an indicator dashboard are listed in the figure below:

STEP 1: DEFINITION OF THE PROGRAM TO BE MONITORED, ITS OBJECTIVES , ACTIONS AND INTERVENTION LOGIC

STEP 2: SPECIFICATION OF ANALYTICAL BASES AND DEFINITION OF UNITS OF ANALYSIS

STEP 3: DATA SELECTION AND COLLECTION AND CONTEXT INDICATORS

STEP 4: SELECTION AND COLLECTION OF PROGRAM INDICATORS

STEP 5: CONSTRUCTION OF INDICATOR DASHBOARD USING GRAPHICS FOR COMPARATIVE TERRITORIAL AND TEMPORAL ANALYSIS

Example of a monitoring dashboard used in Brazil: Dashboard Summarizing Monitoring Indicators for the Brazil Without Extreme Poverty Plan[2]

This dashboard contains the graphics of the six strategic indicators:

» Number of beneficiary families;

» Number of extremely poor families included in the Unified Registry and the Bolsa Familia program;

» Number of families that receive the benefit for overcoming extreme poverty;

» Number of individual microentrepreneurs registered in the Unified Registry;

» Percentage of children and adolescents aged between 6 and 15 monitored according to the educational conditionalities; and

» Percentage of families monitored according to the health conditionalities.
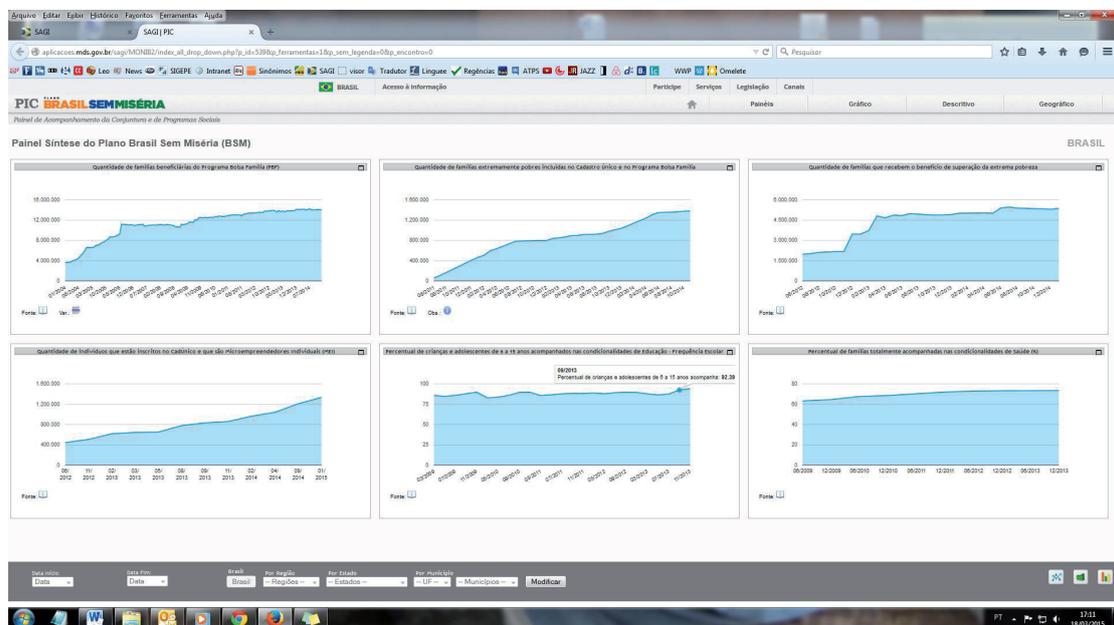
From the above dashboard it is possible to see some of the elements that are generally typical of the monitoring indicators dashboards:

» The dashboards display only a small number of indicators;

» They contain indicators that have been selected according to their relevance for monitoring a program;

» They show the indicators over a period of time;

» They make it easy to visualize the performance of the indicators over time.

The preparation of the dashboards is a preliminary step towards drawing up a **Monitoring Indicators System**, which is an articulated and broader set of data and information, as explained in the next section.

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2 The Brazil without Extreme Poverty Plan was launched in 2011 with the aim of overcoming extreme poverty in the country. Given that extreme poverty is manifested in many different ways in addition to shortage of income, this Plan was structured in three priority pillars: income guarantee, productive inclusion and access to services. The Ministry of Social Development and Fight against Hunger (MDS) is responsible for coordinating the Brazil Without Extreme Poverty Plan.

MONITORING SYSTEMS

A **monitoring system** consists of a set of activities for producing, recording, following up and analyzing information generated in the course of the management of public policies, programs and services, and is aimed at supporting decision-making by those responsible for the programs.

A monitoring system consists of specific indicators that refer to a given aspect of social reality. Structuring a system of this kind involves:

» Retrieving data from different sources such as research surveys, public registries and administrative records;

» Assembling the data on a single platform.

The user (i.e. the manager) is the primary beneficiary of the monitoring system. The system must produce data for supporting the manager's decisions and enabling him to compare between what was planned and what was achieved. It is for this reason that the data are made available to the responsible central body and stored in information systems.

The information produced is highly selective, given that it is targeted at a user with specific interests. The information systems therefore only load the material that is essential for monitoring a specific project. An excessive amount of information can distract the manager from his main goal and cause him to get lost in a jumble of data and indicators. Moreover, the data must be available to the manager in a timely manner and constantly updated, given that its purpose is to correct the course of social programs.

For example, the Municipal Monitoring of the Millennium Development Goals Portal (ODM) is a system of indicators that allows access to environmental, economic and social data on the MDGs of all the Brazilian municipalities. The same site contains the Advanced System of Indicators that enables monitoring of the Millennium Indicators.

What are the steps involved for constructing Social Indicators Systems?

1. Defining the social theme – healthcare, education and employment, land-use, housing, economic activities, social mobility.

2. Defining the aspects of the social themes to be quantitatively indicated.

3. Retrieving the raw data from public statistics or other regular sources.

4. Combining the raw data to formulate social indicators – rates, proportions, averages, distribution by class, indexes.

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│   Abstract concept or social theme of    │
│                interest                  │
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│   Defining the different aspects or      │
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    └─────────────┘       └─────────────┘
│                 Social Indicators System │
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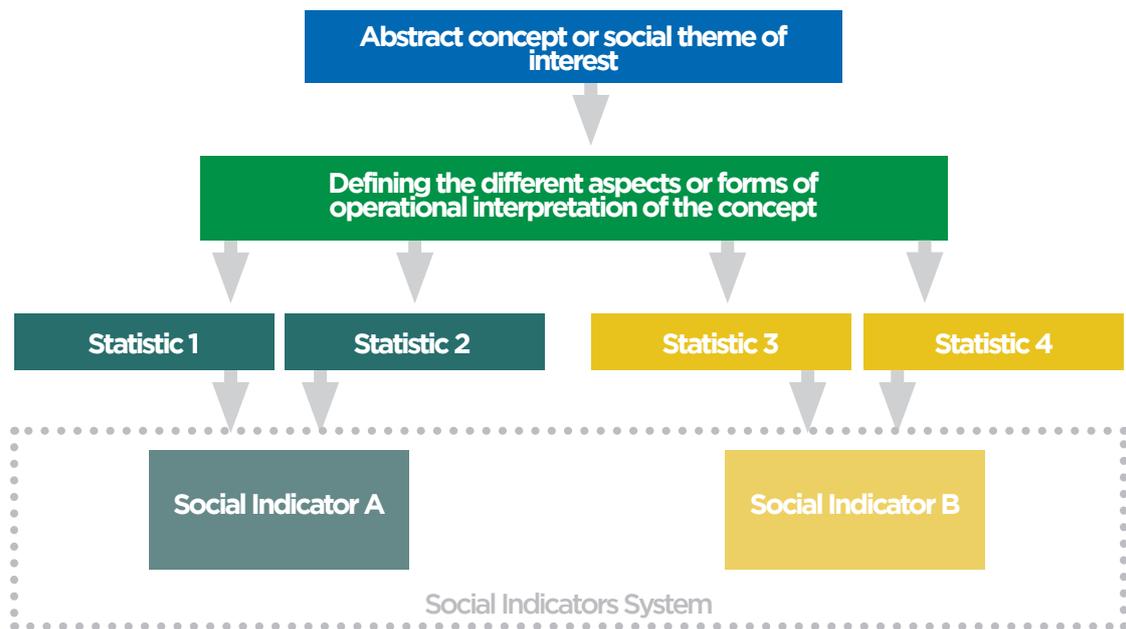
SOURCE:

BRAZIL. Ministry of Social Development and Fight against Hunger; Federal University of Rio Grande do Sul. **Caderno de Estudos do Curso em Conceitos e Instrumentos para o Monitoramento de Programas.** Brasília: SAGI; SNAS, 2014.