

Question 1: How have systems thinking approaches and tools been incorporated in activities to improve health equity? Were these approaches useful in achieving health equity goals? If so, what are the pathways by which these approaches helped to address the root causes of inequity?



# Analytical solution to address child malnutrition in Guatemala

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## Context

In Guatemala, according to the most recent national maternal and child health survey (2015), nearly half of all children suffer from chronic malnutrition. For decision makers in the Ministry of Health (MOH), responding to this structural social inequality requires evidence-based interventions. It also requires intersectoral coordination among multiple agencies including the MOH, the Ministry of Finance (MOF), the Ministry of Agriculture, the National Civil Registry, and other government entities.

To address the challenge, Data.FI/Guatemala developed an analytical solution—a dashboard that gathers information on maternal and child health and nutrition from various programmatic and financial sources. The combined data is used to deliver visual insights to decision makers at the MOH.

## Activity Description

The systems-thinking approach used in this project included the joint development of a logical framework with prioritized indicators for decision making at different levels of the MOH.

### Theory of Change:

If we build the technical capacity of technical officials from the MOH to provide analytical solutions based on existing information systems, then they will be able to scale these solutions to achieve an impact on prioritized indicators and transform the lives of Guatemalans.

### Description:

In early 2023, Data.FI officially handed over the maternal and child health and nutrition dashboard to Guatemala's MOH. The dashboard contained 15 indicators that were prioritized by technical teams, including the National Reproductive Health Program (PNRS), Tropical Disease Program, Promotion of Food Security and Nutrition (PROSAN), the National Immunization Program (PNI), and the Expanded Technical Team. Selected indicators included children younger than five suffering from acute diarrhoea or respiratory infections, use of micronutrients by pregnant women, people's access to family planning, women's access to prenatal care, and the availability of potable water.

The dashboard integrates information from different data sources managed by the MOH and MOF, such as Health Management Information System (SIGSA), the Integrated Accounting System (SICOIN), and the Integrated Management System (SIGES). Being able to collectively review data with the participation of government officials is enabling greater clarity on surveillance, follow-up, and basic actions that need to be implemented to address the most urgent maternal and child health needs.

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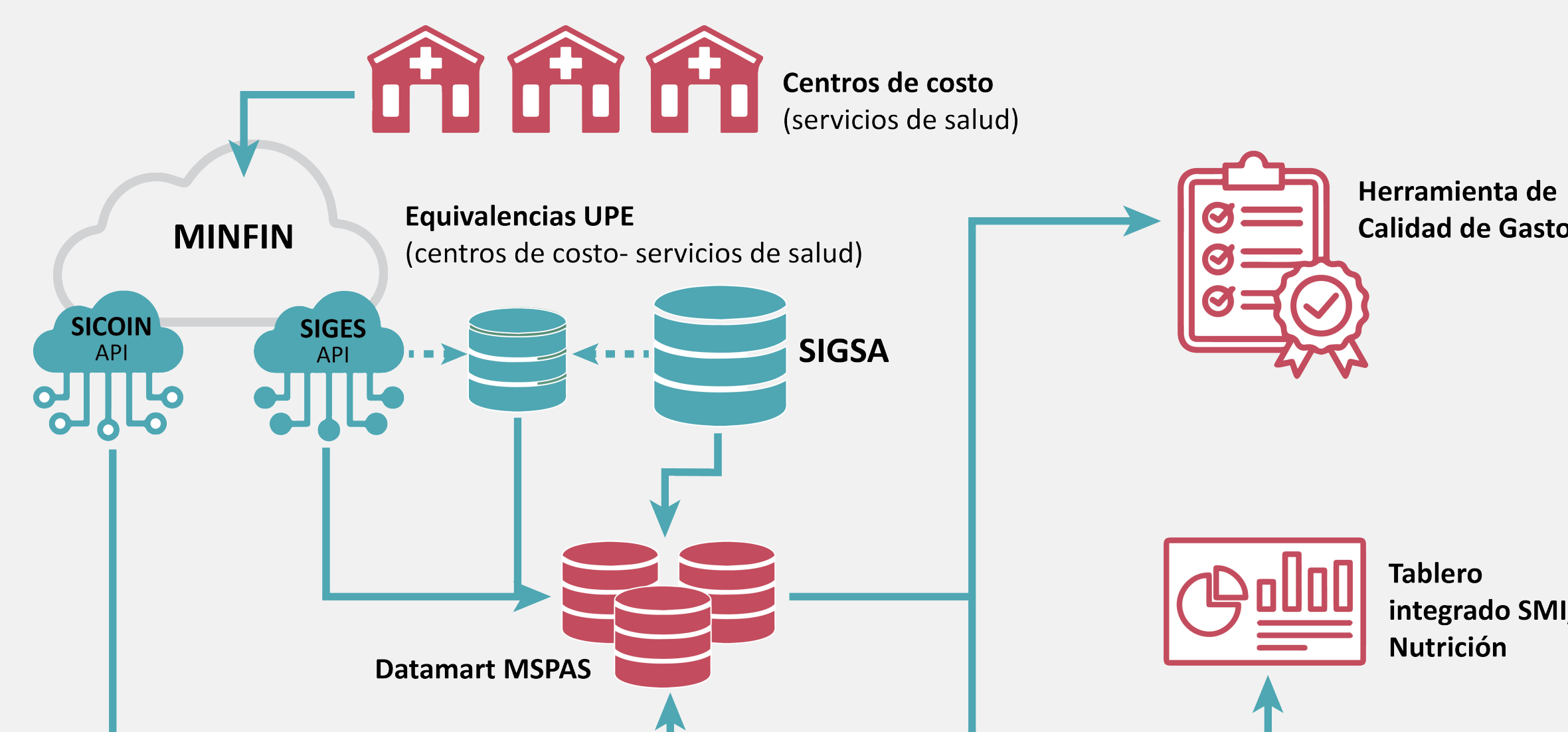
## Activity Impact

The capacity developed and the data repository created with Data.FI technical assistance is now being used by the MOH to coordinate interventions with other state entities to respond to individual cases of malnutrition in communities in Guatemala.

| ACTION  | OUTCOME   |
|---|---|
| 1. Develop an analytical solution through a dashboard for decision making   | Guatemala's Vice Minister of Primary Health Care is using a dashboard with prioritized indicators on maternal and child health and nutrition that integrates programmatic and financial information. The information is being used to define and implement interventions and to respond to the demands for information required by several stakeholders, including the Congress of the Republic.  |
| 2. Build or strengthen capacities in technological management to use information from existing systems in the MOH               | Technical officers working in the Health Management Information System (SIGSA) used their skills to use the data repository, created in coordination with Data.FI, to connect another information system that allows monitoring of individual cases of malnutrition at the community level. The integrated system can be used for nominal identification of children with malnutrition, monitoring of the Ministry of Agriculture for emergency food delivery, and monitoring of the MOF for the delivery of conditional transfers. |
| 3. Enable a technical group to lead a solution that integrates responses for maternal and child health and nutrition challenges | There is a high-level technical working group for maternal and child health and nutrition that leads the implementation of actions to reduce malnutrition. Decision makers no longer just see statistics, now they can identify individual cases to track the continuum of care.  |
| 4. Adapt to the local context approaches and share methodologies that facilitate the use of information                         | The lives of children can be saved when health interventions reach their communities thanks to government and stakeholder interventions. This transformation is shown in changes in indicators that decision makers can visualize in a dashboard.   |

## Evidence

There is a data repository that integrates information from different sources into a dashboard available on the MOH's server. Although there is currently no historical information that shows changes in the indicators, the system is prepared to document changes.



## Facilitators

A number of factors enabled efficient coordination among stakeholders. These involved developing and using the dashboard on maternal and child health and nutrition.

- Discussing and jointly developing a logical framework for the dashboard design helped to focus efforts and maintain the defined objective.
- Identifying and integrating a task force with leaders from different departments involved within the MOH streamlined the processes.
- The leadership of the Vice Minister of Primary Health Care was essential to promote the integration of a multidisciplinary team focused on a shared vision.
- The adoption of the work plan by SIGSA officials and the fulfillment of deadlines facilitated the success of this activity.

## Challenges

We faced a number of challenges during implementation of this activity, including the following:

- Coordinating the multiple dependencies of the MOH and other public entities demanded significant time and effort.
- The limited availability of human resources capacity in some dependencies of the MOH resulted in slow responses, which generated delays.
- The changes in demand for and the turnover of technical personnel to different posts caused delays and duplicative activities.

## Lessons Learned

This activity yielded important lessons learned:

- It's essential to develop and maintain a shared vision between technical staff and political decisionmakers in the MOH on the integral functioning of the health information system; having a shared vision contributes to achieving sustainable change.
- Knowing the environment and the needs of MOH leaders is useful for a project to propose analytical information solutions that are valued and adopted.
- Mapping and including key actors and users of information systems has a positive impact on the agility of processes adopted and the sustainability of changes made.
- Working with existing information ecosystems increases the openness of the MOH to promote changes in the short term.
- Showing results in the transformation of information systems (applications, visualizations, or others) generates confidence and adds value to continue investing in other areas or topics of interest.
- Promoting and maintaining a comprehensive and non-segmented vision of the health information system facilitates the implementation of interventions.
- The organizational and legal structure of the MOH can be a barrier to change in the information system.

