

Dynamic and Interoperable Social Welfare Integrated System (DISWIS) – A Data Architecture Model for Coordinated Health and Social Service Delivery

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The fragmented ecosystem of social service delivery in the Philippines has been negatively affecting social welfare service delivery among the population. The Philippines' mechanism for identifying poor households, which includes the National Household Targeting System for Poverty Reduction (NHTS-PR) or Listahanan, implemented by the Department of Social Welfare and Development (DSWD) from 2008 to 2025, and its predecessor, the Community-Based Monitoring System (CBMS) from 2019 to present and is being carried out by the Philippine Statistics Authority (PSA), is static in nature since it is periodically updated only every four and three years, respectively.

A complex and siloed data of beneficiaries of government services is also evident in many developing countries such as the Philippines. For elderly aging 60 and above, the National Commission of Senior Citizens (NCSC) has its own online registration platform, which recorded more than 9 million Filipino senior citizens as of December 2025. Separately, local government units through their barangay health workers and officials are also collecting and updating their data annually. Other government institutions implementing welfare services such as the Department of Health (DOH), Philippine Health Insurance Corporation (PhilHealth), Social Security System (SSS), Government Service Insurance System (GSIS), and other agencies are also collecting and processing their own data of older persons. These government institutions are, instead of acting in convergence manner through efficient data-sharing mechanisms, are operating separately and doing parallel efforts of each other, which may lead to confusion, duplication of services, poor decision-making, and unfair allocation of resources.

Aligned with the Philippines' E-Government Masterplan (EGMP) of 2022, the Dynamic and Interoperable Social Welfare Integrated System (DISWIS), a data architecture model, is proposed to address identified challenges in the Philippines' digitalization efforts, such as having static data and fragmented information systems across government agencies. The DISWIS key

features include a single-window system, use of unique beneficiary identification (National ID), smart beneficiary targeting, an integrated information system, auto-deduplication aided by Artificial Intelligence (AI), dynamic updating, real-time proxy means tests, data warehousing, interoperability-readiness, data visualization, and link to financial institutions. Although the model generally drives dynamic, integrated, and interoperable data management, human decision-making will remain a key component, particularly regarding eligibility outcomes and in data-sharing decisions, to ascertain that the system is aligned to existing guidelines, laws, regulations, and other policies as may be applicable.

This data architecture model is recommended for the implementation of universal health and social protection programs, crisis or disaster response, and even transitory shocks, where fast and accurate data is needed to ease social service delivery, especially among the elderly, poor, disadvantaged, and marginalized sector of the society.