



A polycrisis unlike any we have seen in our lifetimes...

Our present times are defined by long-term global challenges

- **Ending extreme poverty** by 2030 (SDG #1) requires bold action.
 - Around 8.4 percent of the world's population (670 million people) still live in extreme poverty.
 - Despite expansion of SP during COVID-19, 4 billion people remain unprotected.
- **Today's global challenges have far-reaching consequences** that jeopardize human capital gains and reverse poverty declines, with implications for productivity and economic growth.
- **Harnessing technology, data, and innovations offers a unique opportunity** to rapidly scale up and coordinate the delivery of SP in times of need and over the lifecycle.

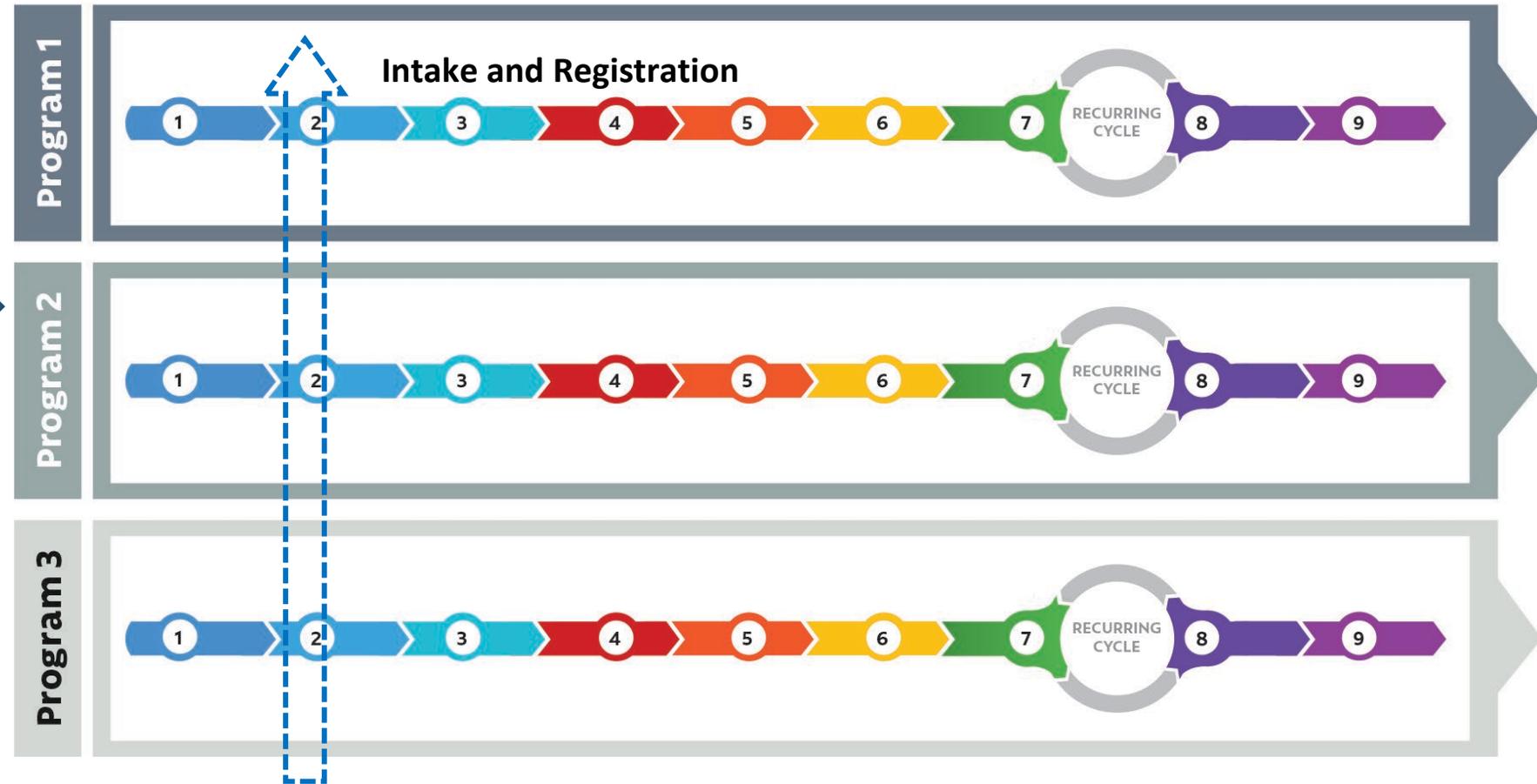


A PERFECT STORM...FRAGMENTATION OF SOCIAL PROGRAMS

Figure Source: Lindert and Karippacheril, SP Delivery Systems (2017)
Adapted for the Playbook on Dynamic Inclusion and Interoperability (Forthcoming 2024)

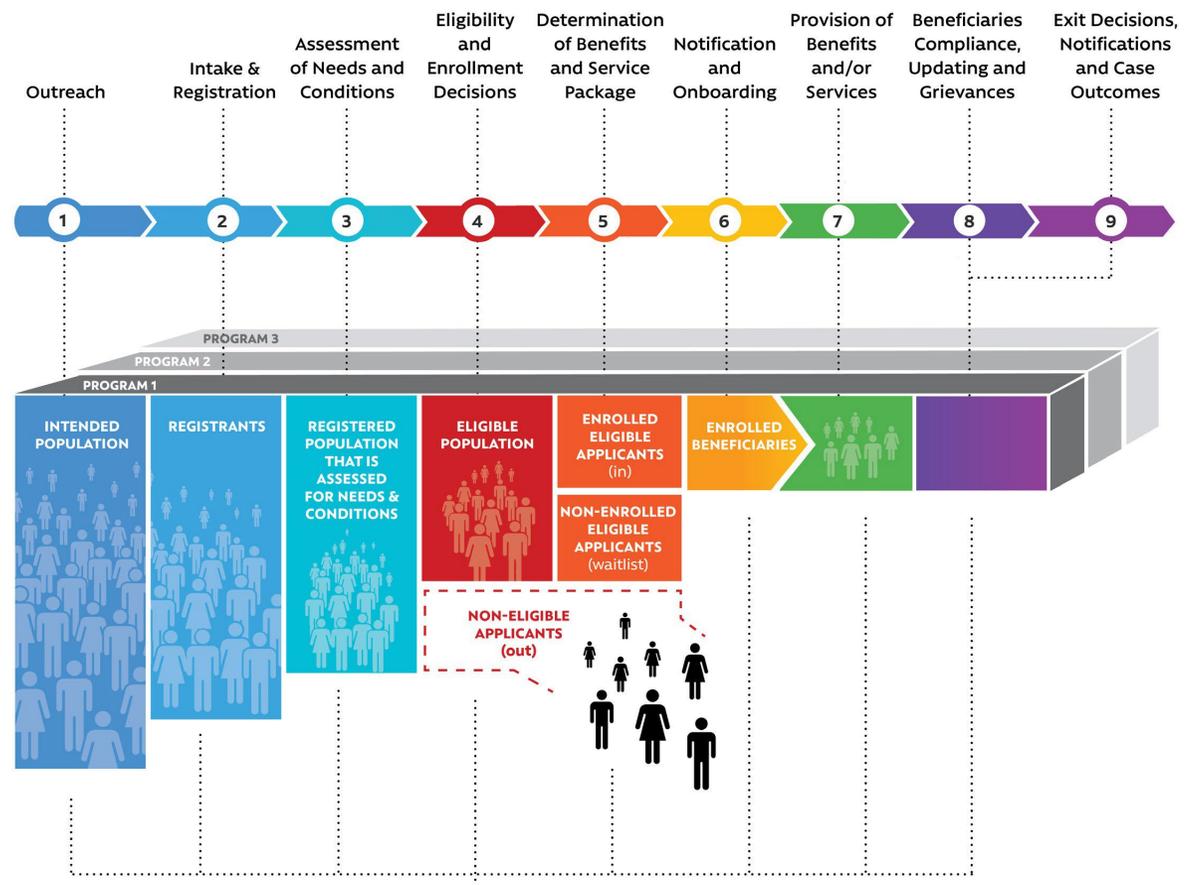
THE CHALLENGE OF COORDINATION

Complexity of delivering multiple fragmented social programs



COORDINATION

Delivery systems constitute the operating environment for implementing social protection benefits and services



Source: Sourcebook on the Foundations of Social Protection Delivery Systems (2020)



Key actors (People and Institutions) intermediating along the delivery chain— facilitated by technology, data, and communications among other factors.

The Social Protection Delivery Systems Framework illustrates how people and institutions interact through the delivery chain.



These interactions are facilitated by technology and data.

The core implementation phases along the delivery chain are:

- **ASSESS:** outreach, intake and registration, and assessment of needs & conditions
- **ENROLL:** eligibility determination, enrollment and benefit-service package decisions, and onboarding
- **PROVIDE:** payments of benefits and provision of services
- **MANAGE:** beneficiary operations management including their compliance, data updates, grievances, exits, and case outcomes

Social protection delivery systems are a means to an end and not the end in itself

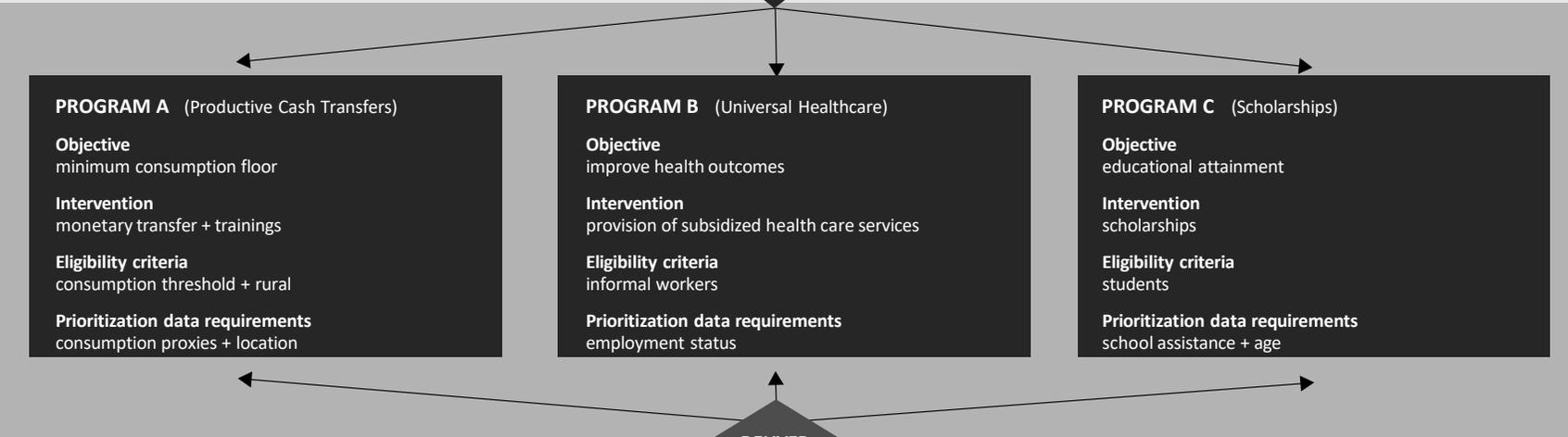
POLICY

- Social protection delivery systems and digital infrastructure cannot operate in a policy vacuum.
- National policies set the strategic medium- and long-term goals of social protection programs.



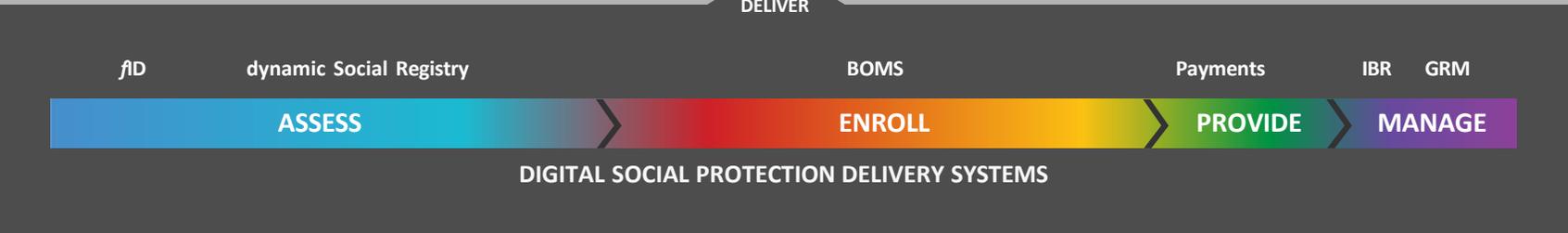
PROGRAMS

- Social protection policy frameworks underpin the institutional architecture of social protection programs and their enabling delivery systems.
- Programs define the eligibility criteria, coverage targets and the interventions to be delivered.



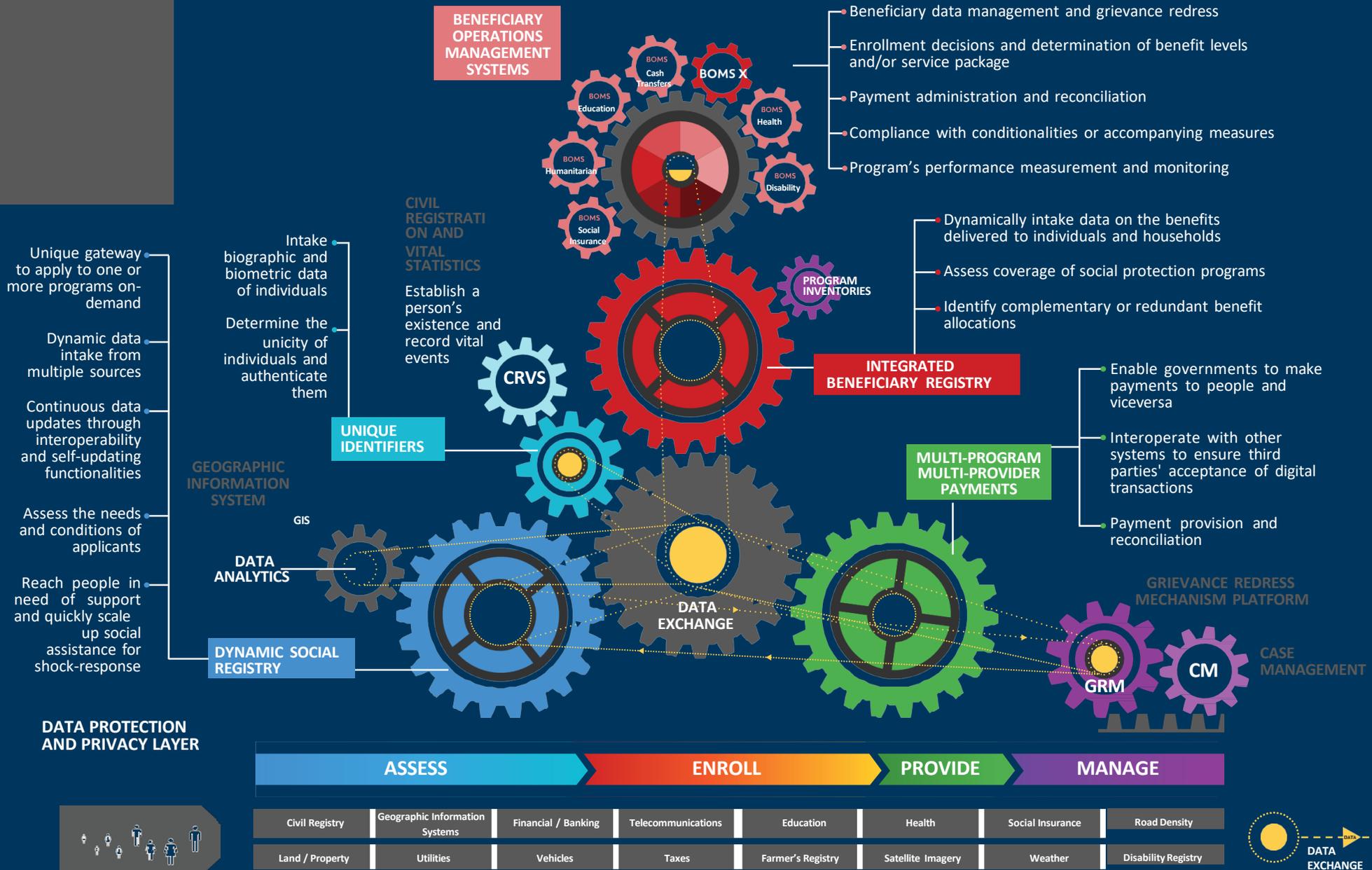
DELIVERY SYSTEMS

- Delivery systems are enabling instruments to reach those policy objectives.



DSPDS DIGITAL SOCIAL PROTECTION DELIVERY SYSTEMS

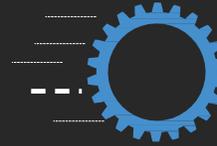
Just as different gears in an engine must mesh perfectly to transfer power and make the engine work, DSPDS - components are calibrated to work together seamlessly, to ensure smooth and uninterrupted information flow and enable ever-improved SP.



DYNAMIC SOCIAL REGISTRIES (dSR)



PLATFORM LAYERS



LAYER 1

FRONT OFFICE APPLICATIONS (PEOPLE)



LAYER 2

BACK OFFICE APPLICATIONS (ADMINISTRATION)



LAYER 3

BACK OFFICE APPLICATIONS (DATABASES)

- They provide a unique gateway for households, families, and individuals to apply to one or more programs on-demand, reducing the burden on applicants and programs
- They intake data dynamically from multiple sources facilitated by an interoperability framework with data security and privacy protocols based on people's consent
- They ensure that the data of already registered households is kept up-to-date
- They can register new households that might have fallen into poverty during crises to quickly scale up shock-responsive programs
- By serving as a repository of a wide range of information, they allow administrators to dynamically assess applicants' needs and conditions to determine potential eligibility based on program-specific criteria for more precise targeting

DIRECT INTAKE

SELF-SERVICE



Digital service window



Community Service Center



Mobile Teams/
Facilitators Agents



Home visits, census sweeps

INDIRECT INTAKE

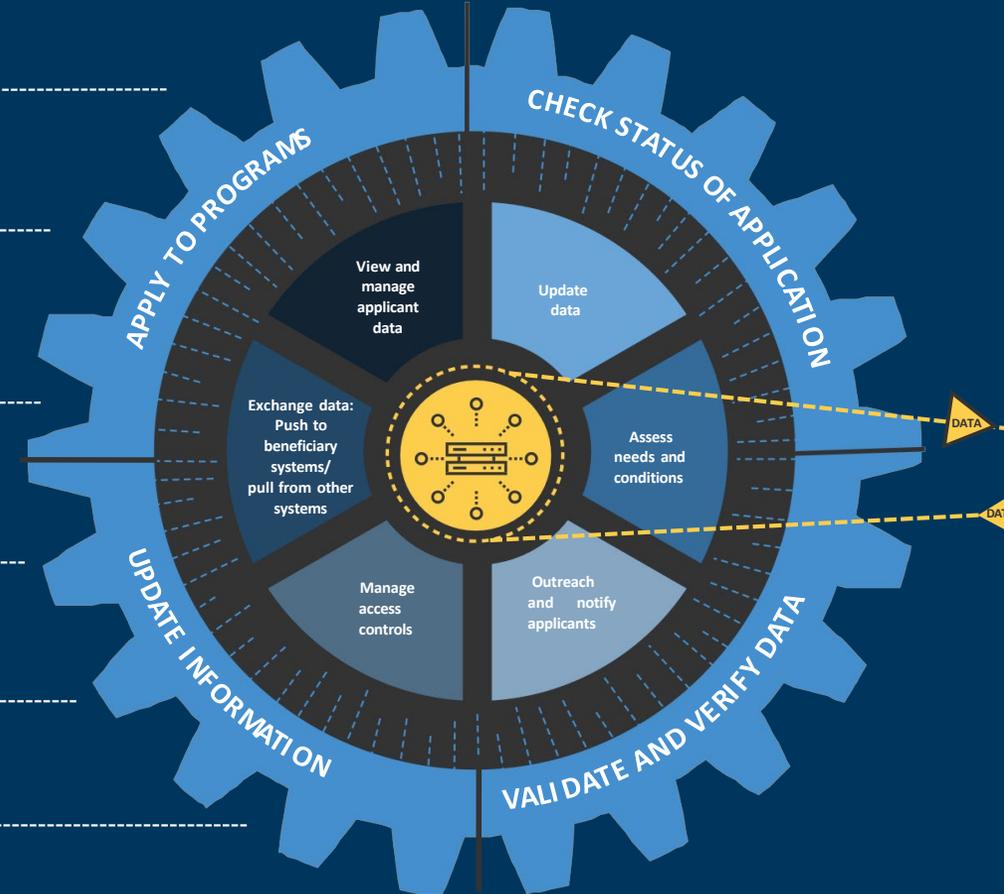


Admin data sources



Non-traditional data sources

DATA SOURCES





NOVISSI

PRIORITIZING THE POOREST CANTONS

TRAINING DATA



SURVEY DATA

EHCVM 2018-2019 survey with consumption data and geocoordinates used as ground truth

GEOSPATIAL DATA



SATELLITE DATA

Hi-res imagery, night lights



CONNECTIVITY DATA

Cell towers, devices



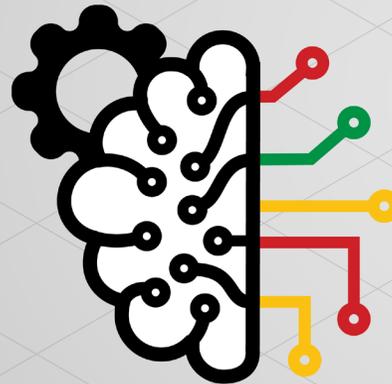
DEMOGRAPHIC DATA

Population, urban/rural



GEOGRAPHICAL DATA

Road density, elevation



MACHINE LEARNING

TRAINING DATA



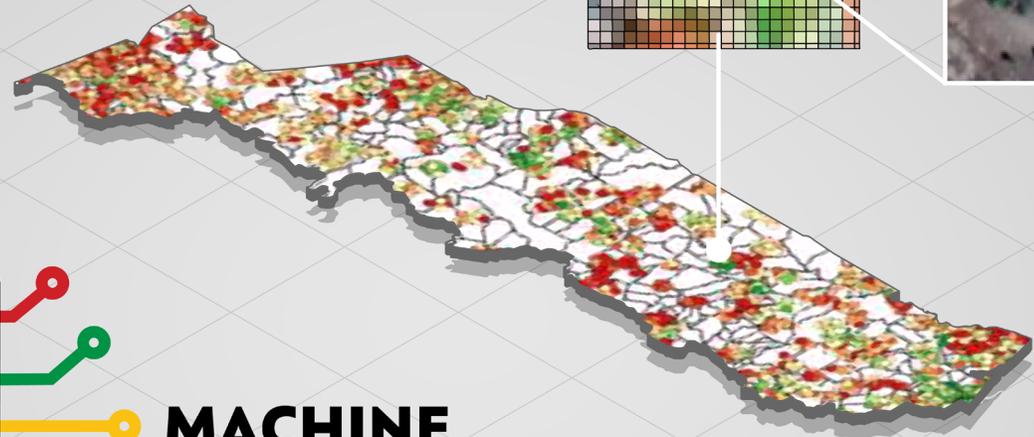
GEOSPATIAL DATA



These data sources were matched to train a supervised machine learning algorithm to find patterns of poverty and identify a model to predict consumption

POVERTY MAP

The result was a high-resolution map with the estimated average daily consumption per capita at the grid cell level (2.4km²) across Togo





NOVISSI

PRIORITIZING THE POOREST INDIVIDUALS

TRAINING DATA



Phone survey data collected in September 2020 was used as ground truth. A total of 8,915 individuals in the 100 poorest cantons responded to the survey and provided their consent to match their responses to call detail records.

CALL DETAIL RECORDS



Cell phone records transformed into metrics describing behaviors.

CALLS AND SMS



Volume, intensity, timing, social network characteristics, patterns of mobility and locations, international transaction features.

MOBILE DATA USAGE

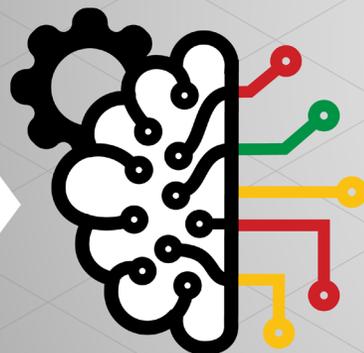


Mobile data transactions, days on which data is consumed.

MOBILE MONEY TRANSACTIONS



Amount, duration, direction



MACHINE LEARNING

TRAINING DATA



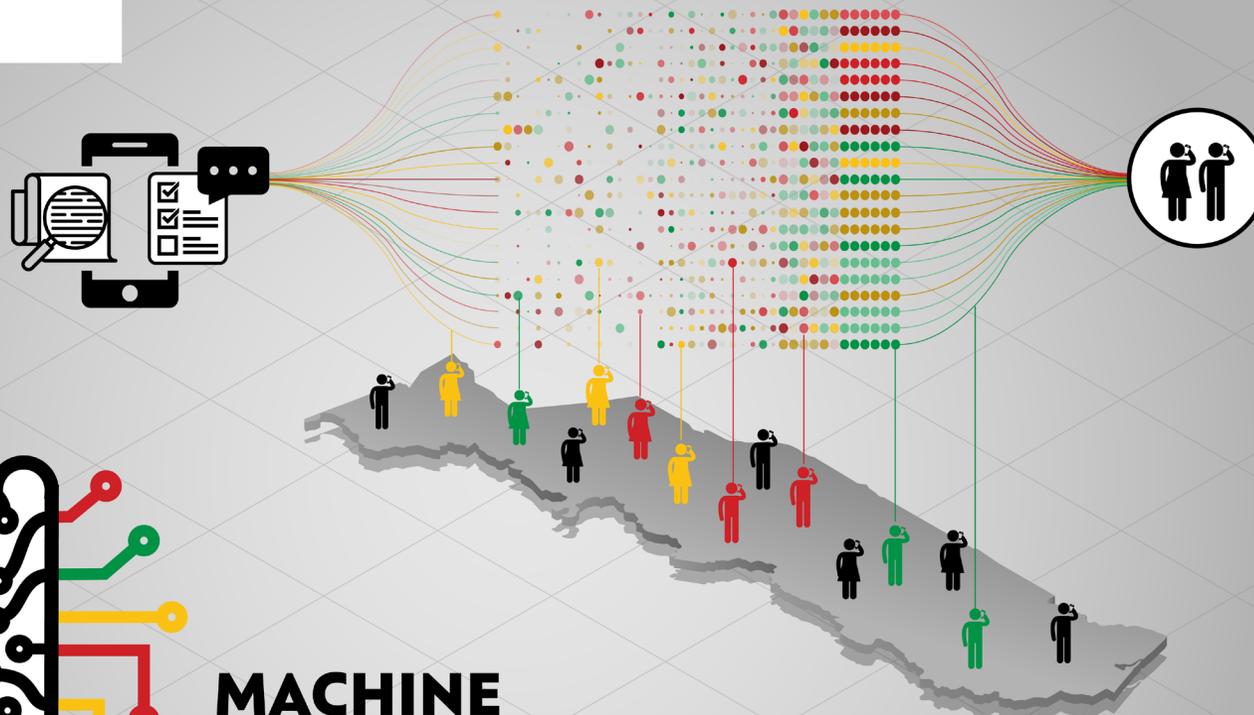
CALL DETAIL RECORDS



These data sources were matched to train a supervised machine learning algorithm to find patterns of poverty in CDR data and identify a model to predict consumption.

INDIVIDUAL ASSESSMENT

The result was a model allowing to estimate average daily consumption for each of Togo's 5.83 million mobile phone subscribers.



DSPDS enables the interoperability of data from different sources into biographic, socioeconomic, and benefit management data sets to avoid redundancies and exploit complementarities.



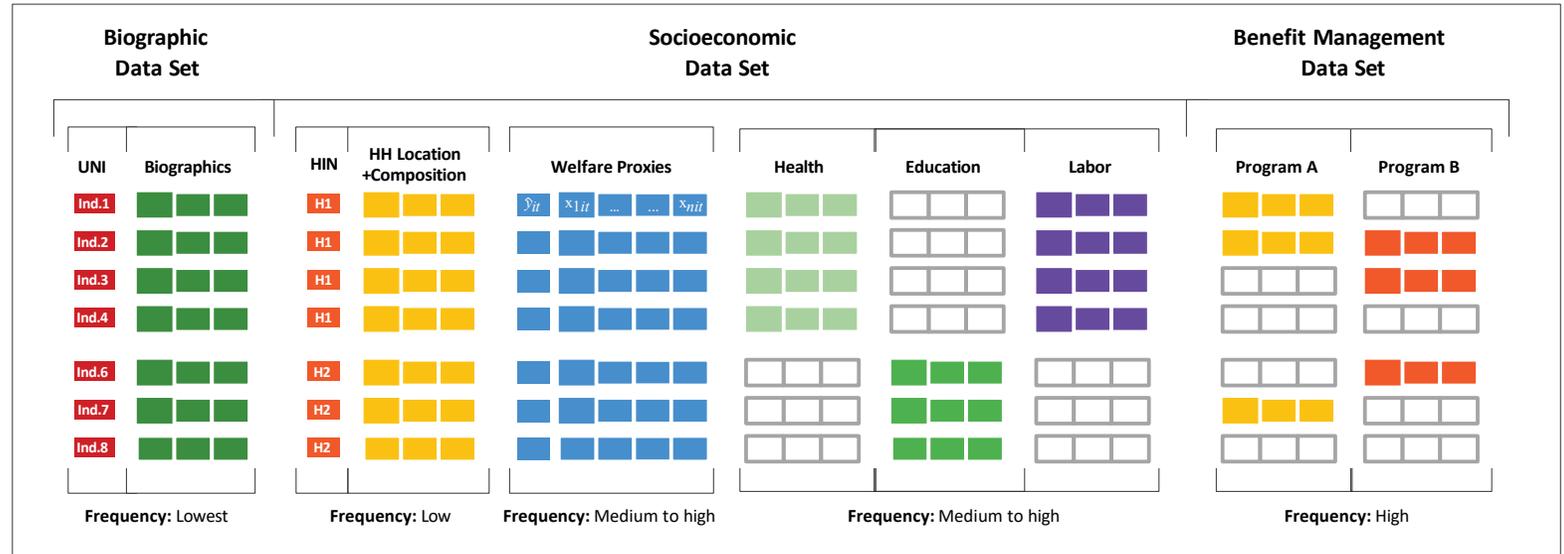
Data



Processing

Beyond the specific contents of the data sets, modularity and minimalism are key attributes needed to dynamically update DSPDS.

Data sets group together different data fields and help to organize the data models of the DSPDS component systems.



Source: Playbook on Dynamic Inclusion and Interoperability (Forthcoming 2024)

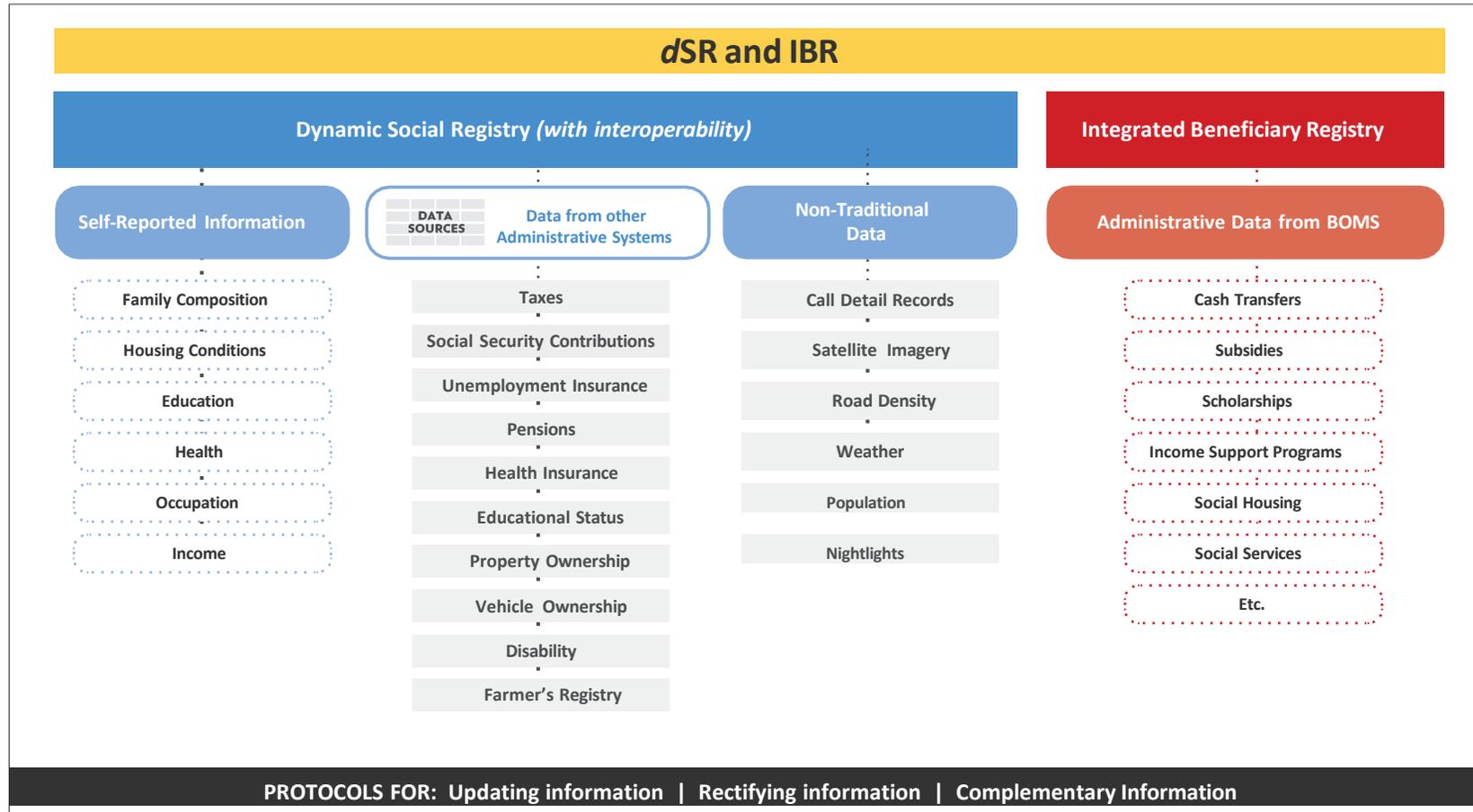
The most commonly used data sets include:

BIOGRAPHIC DATA SETS: contain basic biographic attributes of each individual as well as an associated unique identifier. This data structure needs to be part of all systems underlying the DSPI as it is necessary for interoperability.

SOCIOECONOMIC DATA SETS: contain the fields required to assess the needs and conditions of households and to determine eligibility according to eligibility criteria of programs. These dynamic data structures can be modular to facilitate data management, with core modules populated for all and complementary modules populated as needed.

BENEFIT MANAGEMENT DATA SETS: constitute the basis for the beneficiary registries generated by BOMS and integrated by IBR to allocate and keep track of benefits delivered, being transactional in nature (benefit amount, date and location of delivery, etc.)

dSR can harness data from different sources to populate and keep their data sets up to date



- dSR can harness data directly or indirectly collected, such as, such as self-reported questionnaires, and administrative public and private records.
- The most salient trade-offs between directly or indirectly collected data are the coverage, cost in time and resources to generate them, as well as the accuracy and degree of subjectivity embedded in them.
- Hybrid approaches, whereby directly and indirectly collected data are combined and complemented, can decrease the overall costs of keeping a dSR up-to-date and lead to a more accurate and fairer prioritization of policies.

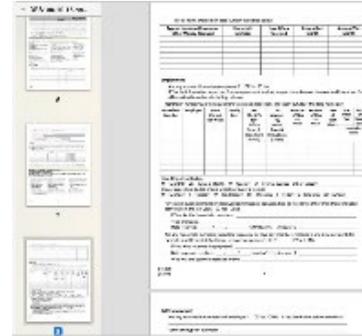
Source: Adapted for Playbook on Dynamic Inclusion and Interoperability (Forthcoming 2024)

**“DIGNITY”
IS KEY TO
INCLUSION**



INCLUSION

Complex application forms



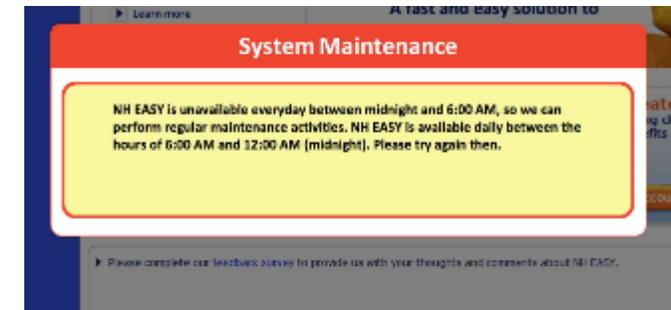
Unclear Processes



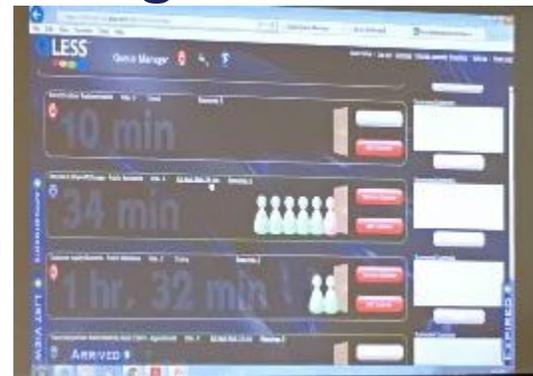
**Separate Processes
Numerous Programs**



Systems interruptions



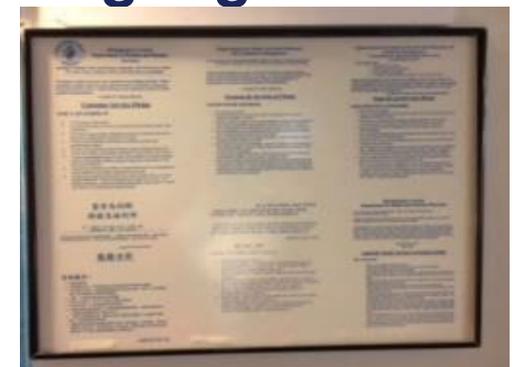
Long Wait Times



Stigma



Language barriers



A “Human Centered Design” approach to prioritizing delivery to vulnerable people

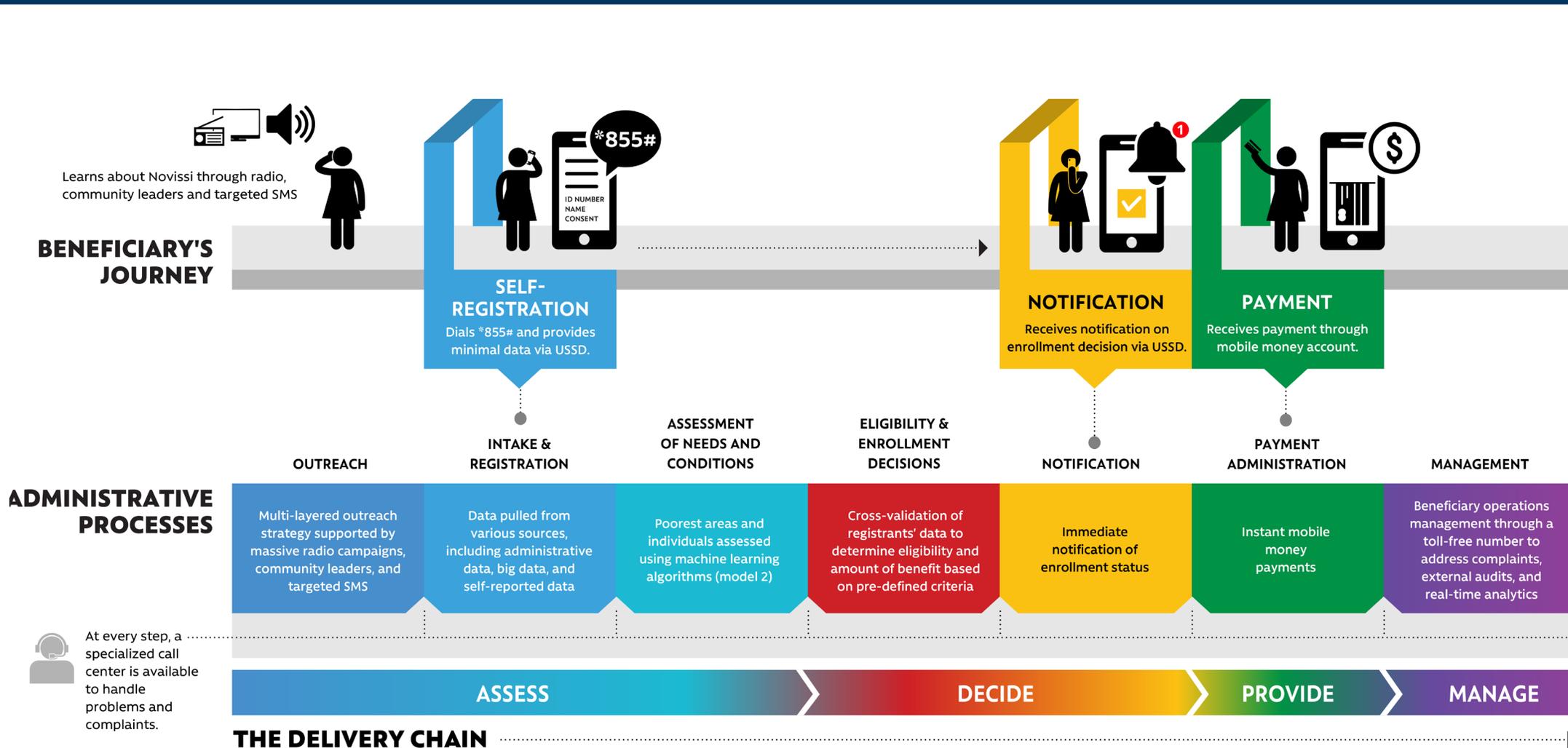


Figure Source: Novissi Togo: Harnessing AI for Shock-Responsive Social Protection (2023)

CLOSE THE GAP

**DYNAMIC
INCLUSION**

DIGNITY

**HUMAN
CENTERED
DESIGN**

**CLOSE THE GAP
SAFETY NETS
WORK**



RESOURCES

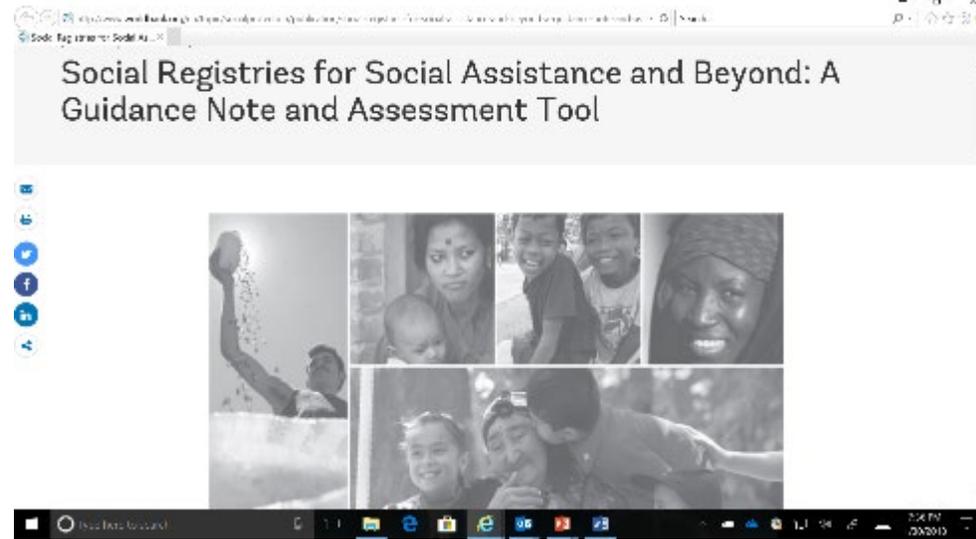
Social Registries for Social Assistance and Beyond: A Guidance Note & Assessment Tool

Phillippe Leite, Tina George, Changqing Sun, Theresa Jones and Kathy Lindert

[Click here for download](#)

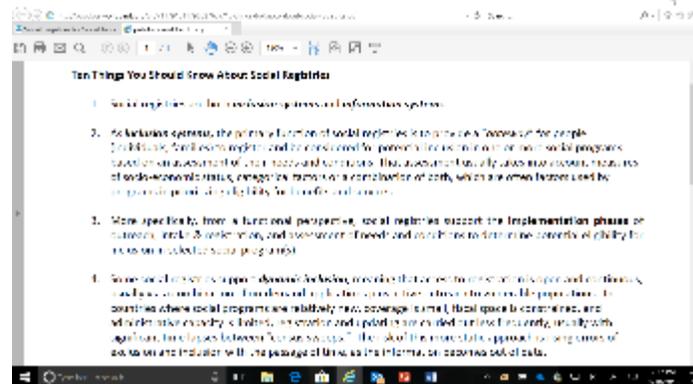


July 2017



[Blog](#)

[FAQs](#)



[10 Things to Know](#)

FAQs: SOCIAL REGISTRIES

What's the difference between Social Registries & Beneficiary Registries?

Distinct functions & population coverage. Both types of registries are related but distinct components of broader information systems for managing social programs. Social Registries support the processes of intake, registration, and determination of eligibility for social programs. They gather and retain data on all applicants, whether or not they become enrolled in a program. Beneficiary registries track information on beneficiaries and benefits to support program implementation (payments, case management, etc.). They maintain information on beneficiaries of specific programs, not of applicants.

Are Social Registries just "mechanisms for implementing proxy means testing?"

No. Social Registries gather and provide information on potential eligibility for social programs based on an assessment of needs based on socio-economic criteria, which vary by country context and the nature of the social programs. Many programs use means-testing, some use self-reported incomes combined with "proxy validations," many use proxy means testing (PMT), particularly in contexts of high degrees of informality and limited data capacity; some use hybrid means-testing; others use multi-dimensional poverty indices, and so forth. Programs often combine these socio-economic components with other criteria, such as categorical or geographic factors.

Are Social Registries only used for poverty-targeted social assistance programs?

No. Many countries use Social Registries to inform enrollment decisions and/or calculate benefit levels for a range of interventions, some targeted and some universal in nature. In fact, Social Registries are increasingly being used for programs that extend well beyond social assistance, such as subsidized health insurance, social energy tariffs, education and training vouchers, child care and other social services, housing assistance, financial inclusion services, eligibility for pro-bono legal services, or court fee waivers, and more. The advantages of using integrated Social Registries for multiple programs can be significant: lower burden on citizens who don't have to apply for numerous benefits and services separately, cost-savings and efficiency for user programs, and better coordination of social policy.

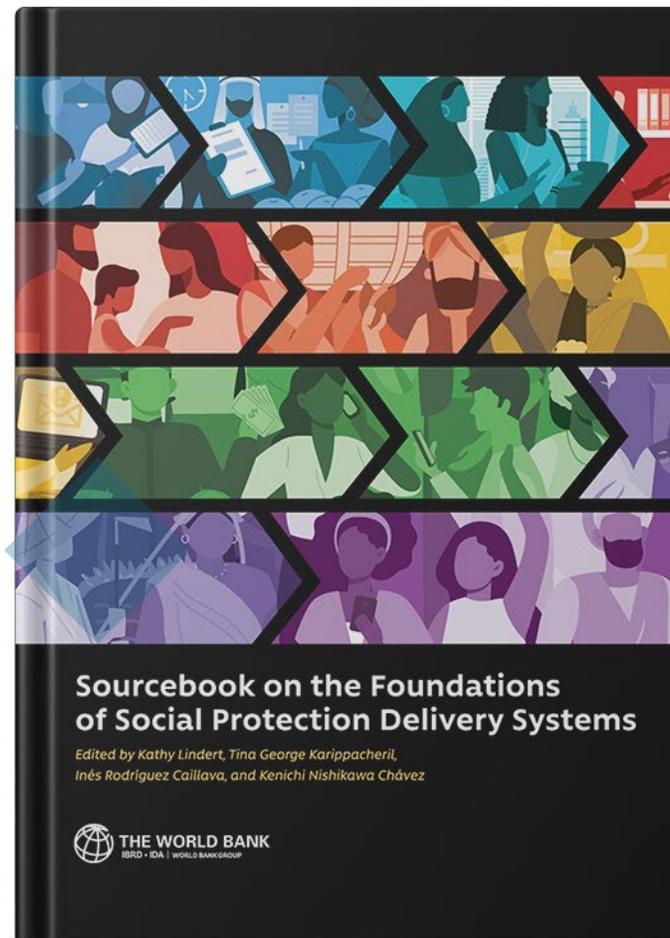
Are Social Registries "mere lists of households?"

No. Social Registries allow for flows of information on registrants (individuals, households) and their socio-economic conditions that informs decisions on enrollment, policy coordination, and monitoring. As information systems, their basic architecture includes data intake and exchange, software applications to support both front office and back office functions, database management and interoperability (in some cases), and ICT infrastructure. Moreover, Social Registries don't operate in isolation, and are usually part of broader information systems supporting social programs, including beneficiary registries and administration systems, payments administration, and case management systems.

SOURCEBOOK ON THE FOUNDATIONS OF SP DELIVERY SYSTEMS (2020)

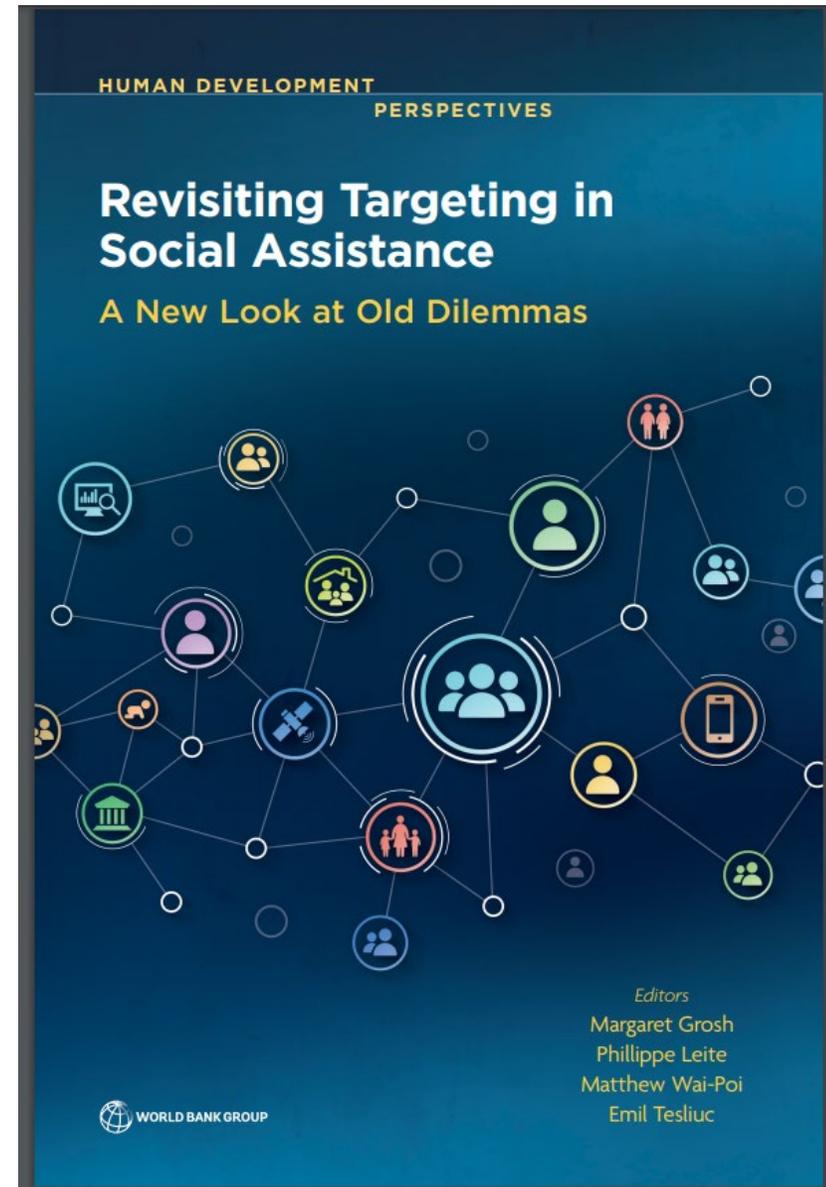
Available online at
<https://openknowledge.worldbank.org/handle/10986/34044>

IN FRENCH & ENGLISH



REVISITING TARGETING IN SOCIAL ASSISTANCE (2022)

Available online at
<https://openknowledge.worldbank.org/handle/10986/37228>



THANK YOU!

Forthcoming 2024: *Playbook on Dynamic Inclusion and Interoperability*

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Ana Lucia Cardenas Martinez, Conrad Daly, Satyajit
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FORTHCOMING

