Survey Design and Implementation

LSMS Support to Implement High-Quality MTF Energy Surveys

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Outline of Presentation

1. **The Living Standards Measurement Study (LSMS)**

2. **Survey Design and Implementation**

3. **LSMS and ESMAP Collaboration**
   - Implementing standalone MTF Surveys
   - Integration into national multi-topic surveys
   - Harmonizing MTF instruments and tools

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1.
The Living Standards Measurement Study (LSMS)

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What is the Living Standards Measurement Study (LSMS)?

LSMS is the World Bank's flagship household survey program focused on:

- Strengthening household **survey systems** in client countries.
- Improving the **quality of microdata** to better inform development policies.

It was created in 1980 in response to a need for policy **relevant data**

- Initial focus was on **poverty.**
- **Expanded to other areas** such as labor, climate, human capital, etc.
  - » To allow policy makers to understand drivers, inter-relationships

How does the LSMS Program work?

DATA PRODUCTION

Supporting the **design**, **implementation**, and **dissemination** of surveys - households, farms, firms, and facilities

METHODS AND TOOLS

Improving methods and tools for survey data collection and analysis - through field experiments and rigorous research

POLICY RESEARCH

Conducting and promoting research to inform evidence-based development policies

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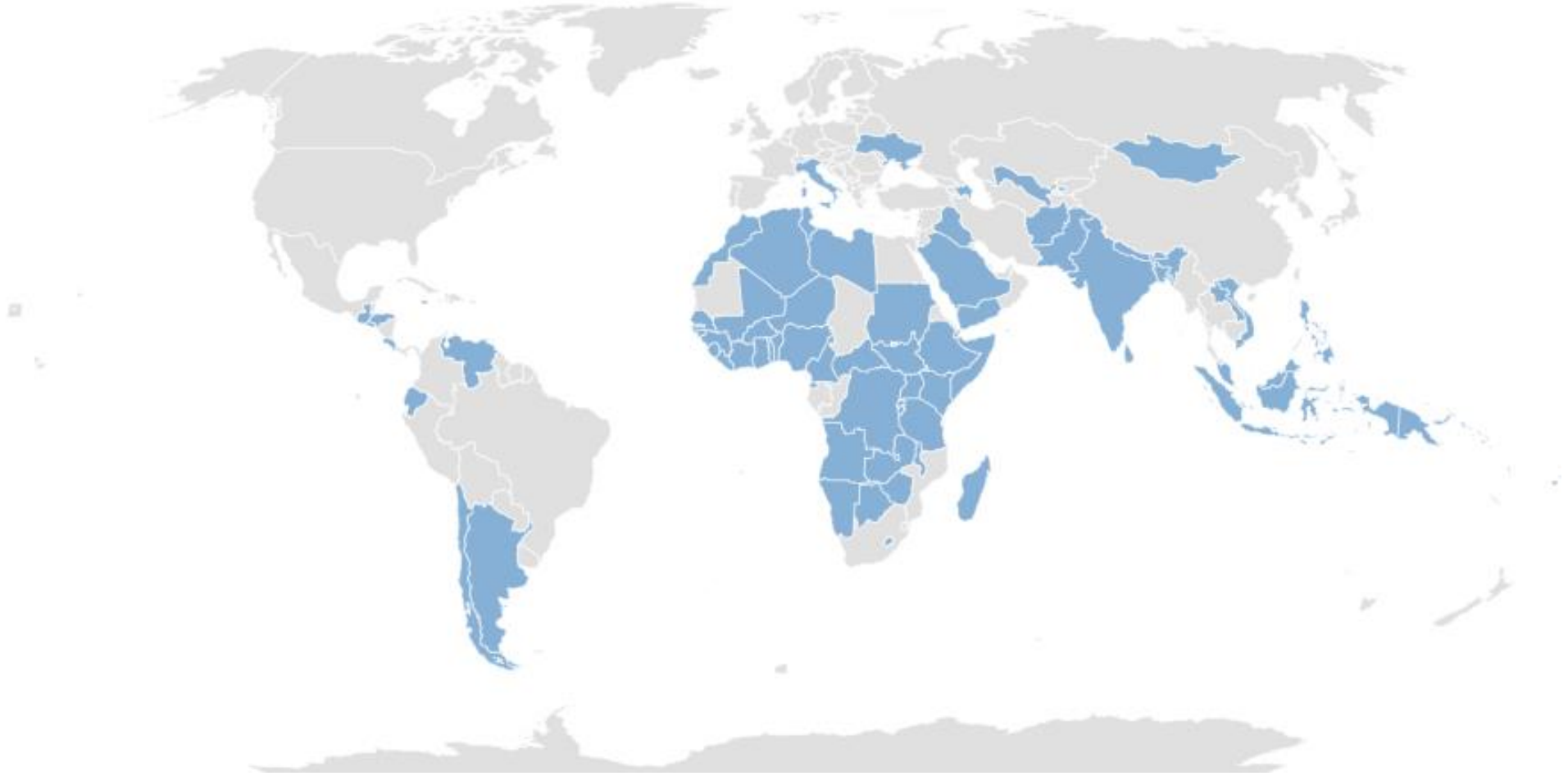
LSMS Support 2019- 2024

78 countries supported in the last **5 years**



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2.
Survey design and implementation

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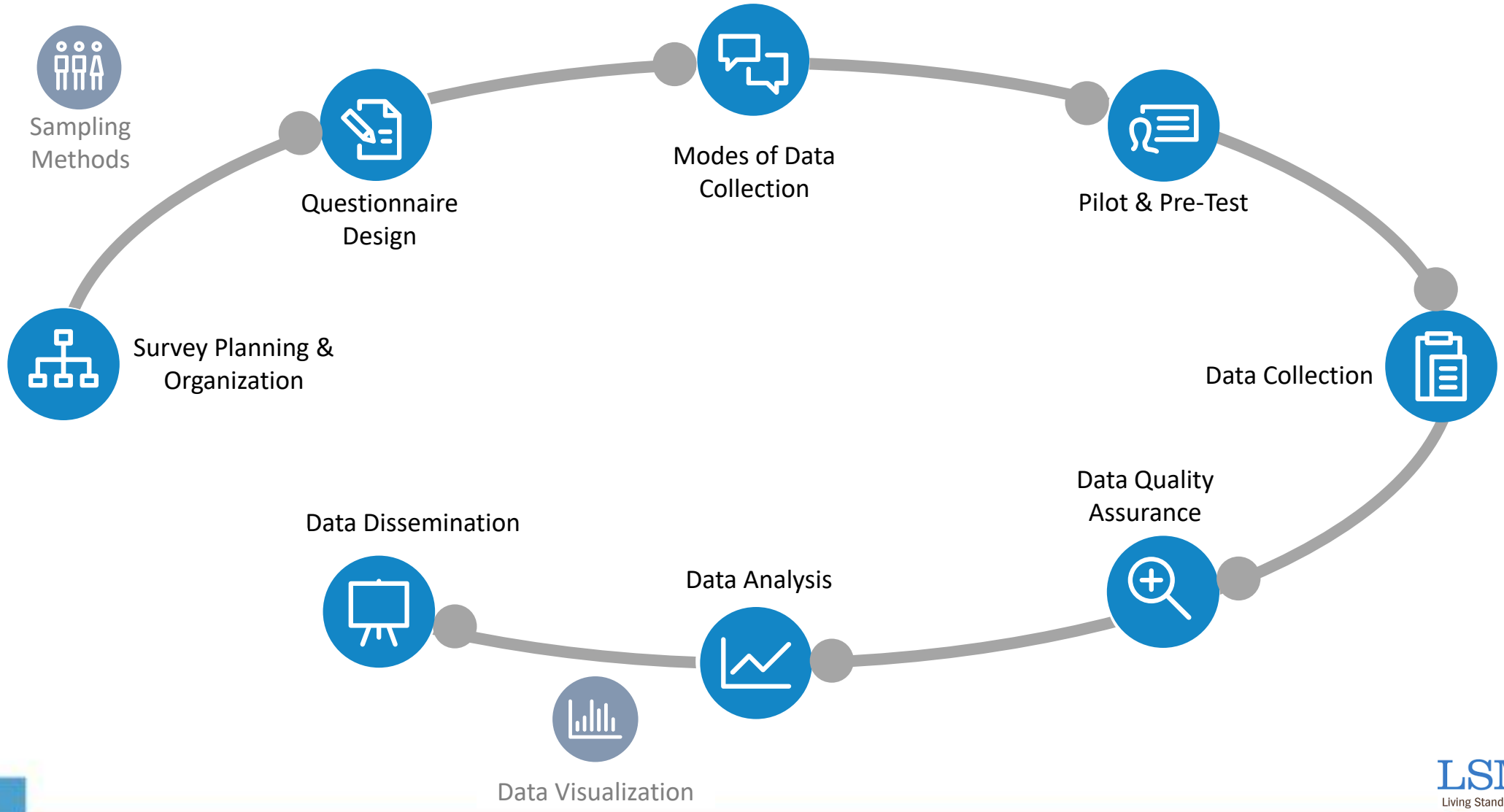
Survey Cycle



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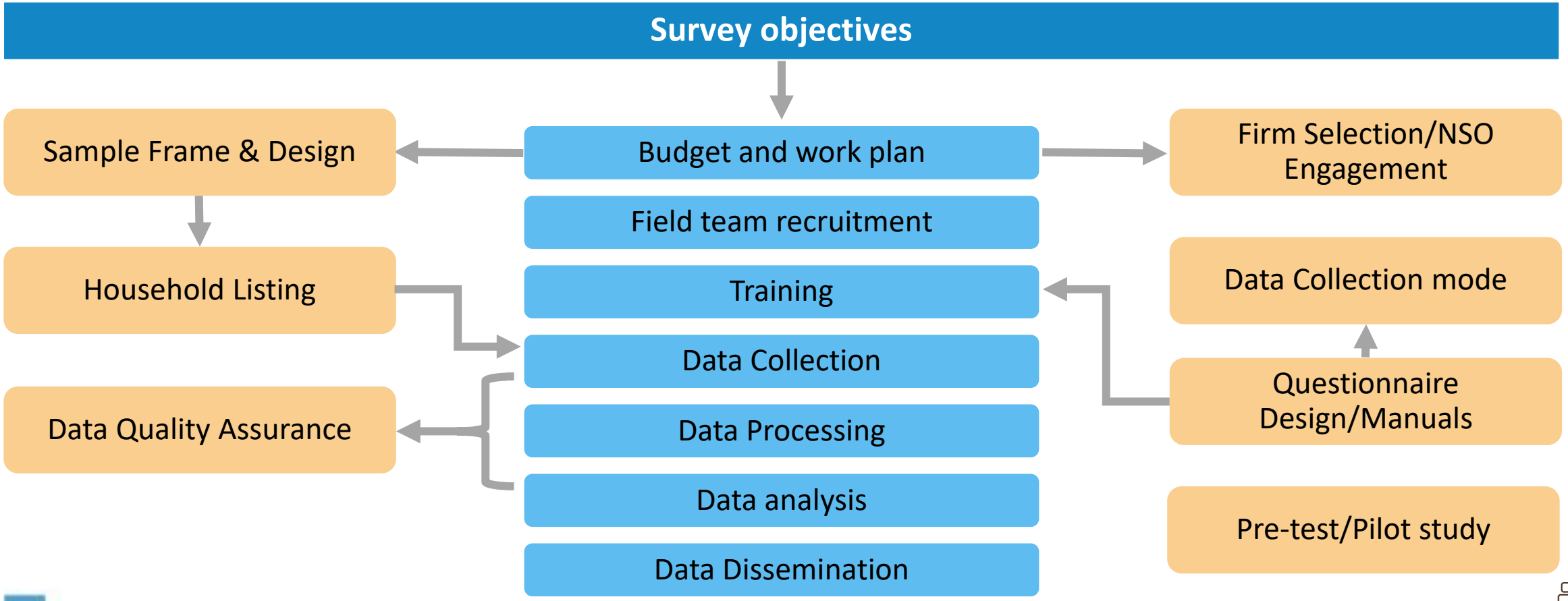
Survey planning

The success of a household survey is directly **related to the degree of investment in survey preparation**



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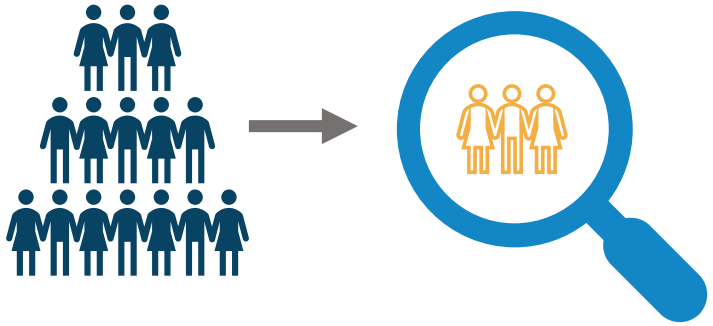
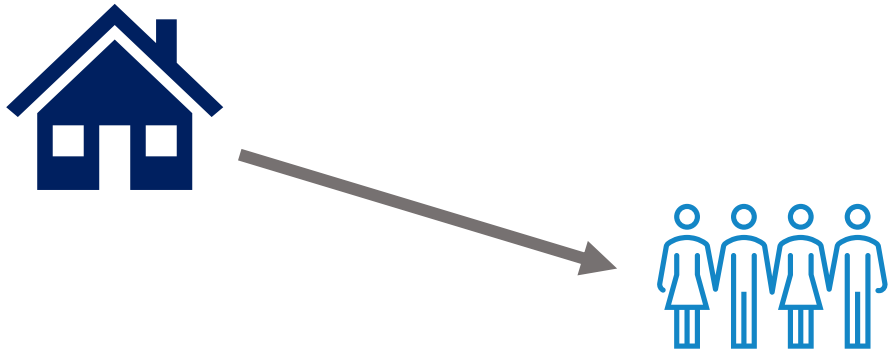
Sample Frame & Design

One of the **most important steps in the survey planning process** is identifying the target population and sample requirements for the survey, based on the defined survey objectives.



A sampling expert who can provide different scenarios for selecting the sample



A household listing exercise to update a sampling frame and provide current information on household characteristics

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Ensuring Representativeness of Household Surveys (1)

- Proper sample design is vital for achieving the right level of representativeness.
- Household surveys usually follow a multi-stage cluster sampling approach to draw a sample from the population of interest.
- The sample is designed to provide estimates at the desired level of representativeness – e.g., national, regional, rural/urban, etc.
- First, Primary Sampling Units (PSU) are selected from a census or sample frame prepared by the country's NSO.

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Ensuring Representativeness of Household Surveys (2)

- Following the selection of PSUs, a household listing exercise is conducted, and then secondary sampling units (households) are selected.
- The selection of households in the second stage for the main survey could be guided by the specific indicators needed – access to electricity, connected to the national grid, etc. in the case of Energy survey.
- Once the survey is done, survey weights are computed, taking into account potential non-response.
- The survey weights allow for generalizing the sample estimates to the population.

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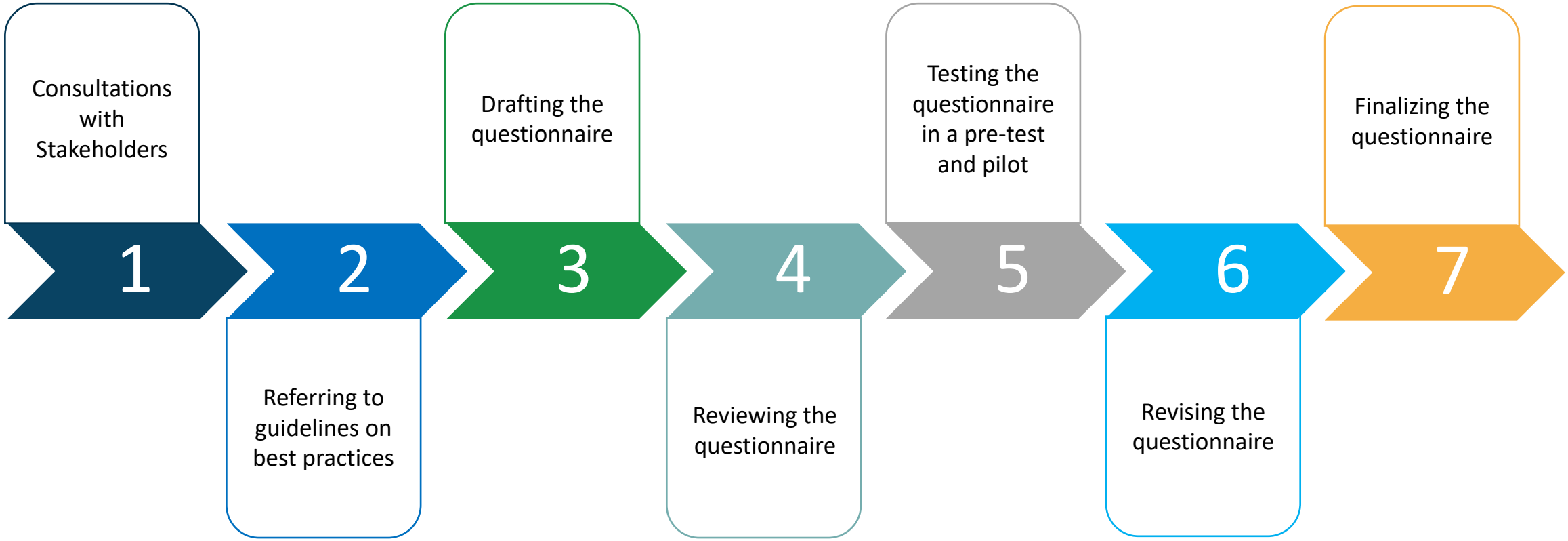
Questionnaire Design Process



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Modes of Data Collection

The World **Survey Solutions Computer-assisted-personal interviewing (CAPI)/Computer-assisted telephone interviewing (CATI)** software is used for the survey.

- Relies on an interviewer recording responses in real-time into a computer or a tablet that has been programmed with a questionnaire.
- If the interview is conducted in-person, this mode of data collection is called CAPI, If conducted over the phone, it is called CATI.

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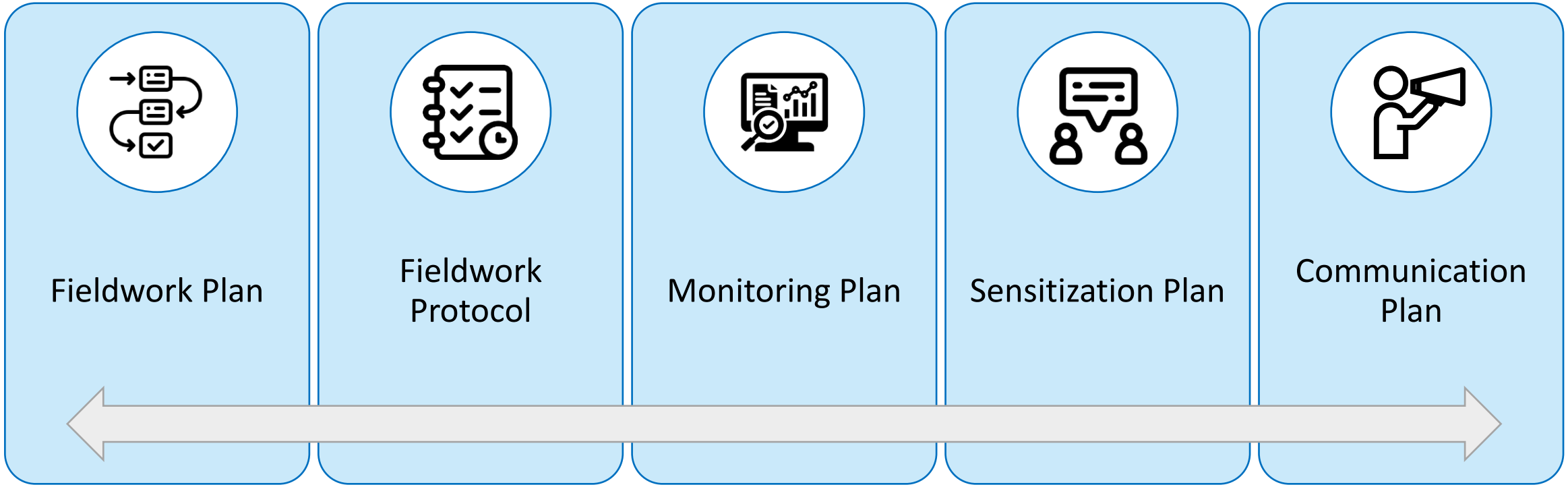
Fieldwork Preparation

It is important to ensure that the following plans and protocol are developed to guide the fieldwork.



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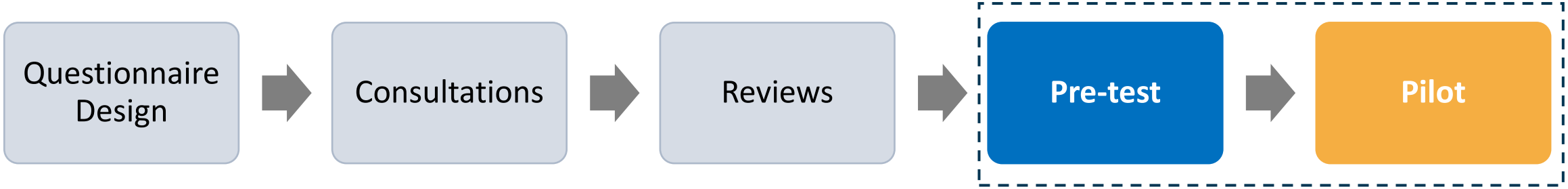
Pre-test and Pilot Survey



A pre-test involves testing the questionnaire at a small scale to receive and incorporate initial feedback

A **pilot survey** involves testing fieldwork organization processes in an environment that replicates the actual survey. It also tests survey instruments, including the questionnaire, the manuals, and the software used for data collection.

- The pre-test and pilot surveys will **identify areas**
  - » where fieldwork plan and fieldwork protocols need **to be improved**
  - » where questions need to be altered or replaced for **better understanding and flow**

- The pre-test and the pilot help **identify overlooked gaps**, providing opportunities for them to be addressed before the main survey effort begins.

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Training

During the training, field staff should:

- Learn the objectives of the survey and of each section.
- Conduct a **detailed review** of the questionnaire.
- Understand **terms and concepts.**
- Get familiarized with the questions and their **sequence.**
- Learn to use tools that will be used in fieldwork.
- Field practice.

Large number of field staff may require the training to be in two stages:

Training-of-trainers (ToT)

Trainers are trained

Training-of-interviewers (ToI)

Interviewers, supervisors, measurers, and all other staff that will be participating in the fieldwork process are trained

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Fieldwork

- The field work for the main data collection is the **core activity** of the survey operations.
- All the preceding survey preparations and training are done to ensure smooth fieldwork operations that allow for the successful **collection of high-quality data.**
- The field work implementation should follow the field work, monitoring, and communication plans to **minimize survey errors** from the field.

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Quality Control & Quality Assurance

1. Before fieldwork

- Every stage of the survey cycle is important in ensuring quality of the data.
- A Monitoring Plan should lay out the quality control measures.
- Embed validation and consistency checks into the CAPI program.

2. During fieldwork

- Use of Survey Solutions' survey management feature for quality control during fieldwork.
- Development of additional data monitoring checks on the incoming data.
- A syntax file that feeds back provision to field team of potential errors in the data.

3. After data is collected

- A thorough review of the data includes checking the flow and accuracy of the responses.

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Documentation

Every aspect of the survey must be documented for transparency and replication.

- Documentation starts from the very beginning of the survey planning process.
- They should be compiled into one document (Basic Information Document).

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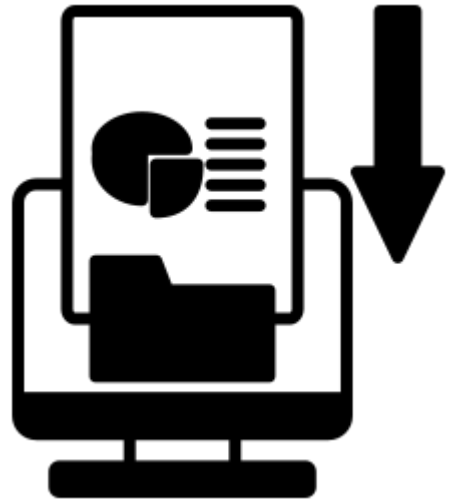
Data Dissemination

Once the data has been cleaned and documented, it should be disseminated.

- It can be made available in microdata format on the web.
- It should be accompanied by the survey documentation including the basic information document and survey instruments (questionnaires and manuals).
- A formal data launch event including primary and secondary stakeholders is also recommended.



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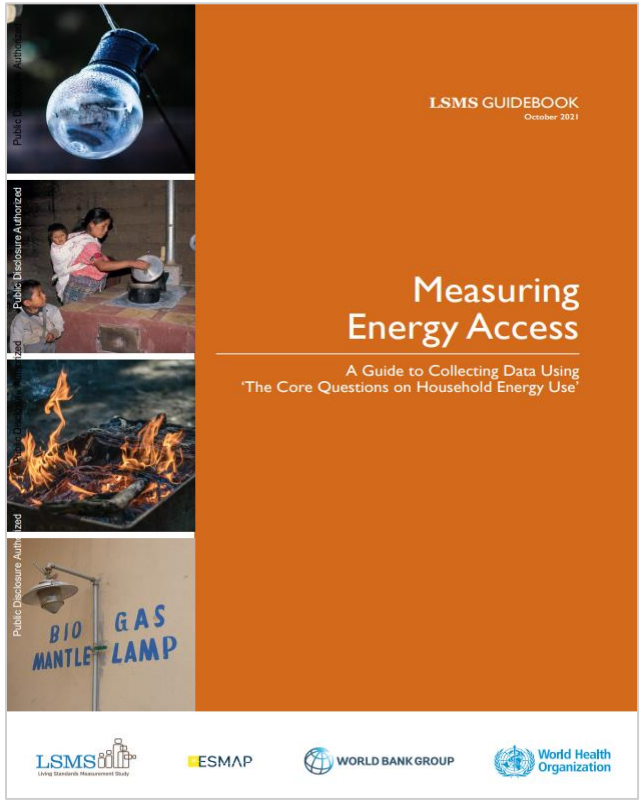
LSMS Program Collaboration with ESMAP



Guidebook on Measuring Energy Access in Household Surveys produced jointly with the MTF team.

The LSMS team has been collaborating with the ESMAP team since 2016 to implement the MTF Energy Survey.

During the first phase of the MTF surveys, the LSMS team provided full support to the team throughout the entire survey value chain.

- Support to preparing ToR and hiring a reputable firm to implement the MTF Energy surveys.
- Support to sampling and questionnaire design, training of field personnel, development of CAPI application, development and implementation of quality control, review of reports.
- Support to standalone MTF Energy surveys in different countries.

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Support to the MTF Energy Survey

As part of the Second Phase of the MTF Energy Surveys, the LSMS team is supporting MTF Energy Survey in all aspects of the program including:

1. Streamlining the MTF survey program

- Harmonization and design of questionnaires and other survey instruments to allow for cross-country comparability
- Design of a global Survey Solutions CAPI application
- Securing and management of Server to host the incoming data
- Development of data quality monitoring systems
- Data cleaning and analysis

2. Incorporation of Energy questions in nationally representative multi-topic household surveys

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Support to the MTF Energy Survey

As part of the Second Phase of the MTF Energy Surveys, the LSMS team is supporting MTF Energy Survey in all aspects of the program including:

3 Implementation of standalone, country-specific MTF Energy surveys

- Customization of global questionnaires and instruments of specific country contexts
- Training of field personal and in-person fieldwork monitoring
- Monitoring of data
- Namibia, Somalia, Ethiopia, Gambia, Angola, among others

4 Hiring and supervision of survey firms for MTF surveys

- Hiring of firms – review of ToR, and proposals
- Provision of needed capacity building to firms

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