

Management Considerations for Transitioning from PAPI to CAPI: Team Structure

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Overview

- Variations in CAPI operations
- Silo vs Matrix structures
- Hiring – timelines, qualifications
- Resistance to change
- Resolving resistance



El Salvador, 2022

Exercise

Thinking of your last census -

- Think about the major operations undertaken
- Think about the operational structure of teams and to whom they handed off deliverables



Variations in CAPI Operations

NSOs may use different strategies when they decide on using CAPI

- Do it entirely in-house
- Outsource most of the technology solution
- Partially outsource

The structure and integration of operational teams will vary with the strategy used.

Doing it Entirely In-house

- Mapping – create a digital geographic database using ArcGIS or something else
- Data Entry – programming the data entry software for the census or survey instruments
- Survey Management System – designing and programming assignment and return from region to headquarters, data analytics for monitoring

Doing it Entirely In-house

- Data Transfer – designing a data transfer system
- Supervisory check system – designing and programming software for checking the work of enumerators
- Database Management
- Facilities, IT support, Networking, etc.

Outsourcing

- One could outsource the entire technology solution, including mapping and address canvassing to a company
- Statistical office staff would work with the company to provide specifications and quality standards that need to be met
- Statistical office subject matter specialists would also provide input in the software development process

Partial Outsource

Statistical offices may choose to have a mixed solution, where some operations are done in-house and others outsourced.

- E.g. Mapping may be done in-house, but the data entry and collection system software is outsourced

2017 Mozambique Census



Silo vs. Matrixed Structure

- In **paper** based censuses, the operations are more linearly related and each team has a single expertise, like: mapping, questionnaire content and design, fieldwork, data processing, analysis, dissemination, etc.
- In an **e-census**, the technological solution needs staff with different expertise to collaborate, so a matrix structure is important

Examples of Matrix Structure

- Questionnaire content and design was largely left to subject matter specialists in a paper-based census
- In CAPI, the questionnaire team has to work closely with the IT team to develop the design of the questionnaire, the editing rules that need to be programmed as consistency checks, any measures of quality that are required, etc.
- Subject matter, field, and IT have to work together to design the survey management system and supervisory applications

Examples of Matrix Structure

- Field has to work closely with mapping to verify the digital maps and during address canvassing
- Field has to work with the IT team about logistics required
- Mapping, field and IT have to work closely if a geo-referencing method is used for collecting data

Silo vs. Matrixed Structure

- This change in structure may lead to:
 - Confusion
 - Resistance
 - Lack of ownership of responsibility
 - Poor quality

Hiring

- How does a CAPI census affect the hiring process?
 - Need more kinds of IT staff- developers, data administrators, technicians
 - Need more geographically spread-out IT trained staff: headquarters, regions, field
 - Need tech savvy staff (even locally) for enumeration
 - IT personnel have to be hired well in advance (during the pilot) of the census to be trained adequately to provide assistance

Resistance to Change

- Management needs to anticipate resistance to the new ways of doing work
- Common problems:
 - Fieldwork staff do not understand why Mapping is taking over block demarcation
 - Questionnaire content staff do not understand why software programmers can't program the paper questionnaire that has been provided
 - Technology and it's related issues become the imperative driving the census instead of being used as a tool. So non-IT staff may stop taking ownership of their operations

How do we Resolve This Resistance?

Resolving Resistance

- How does one resolve the resistance?
 - Hold joint training sessions, bringing all operations together to demonstrate how the new way of doing things will enhance their work and benefit data quality
 - Provide assurance of the need for all expertise and stress the importance of collaboration between them
 - Management should create teams with personnel from 2 or more areas to accomplish deliverables and hold them accountable.

Content Caveat

- Much of the content of this presentation comes from the experience of the International Programs Center in other countries

Questions?