



---

# Overview of UNSD World Census Programme Use of Technology in Censuses

**Meryem Demirci**  
United Nations Statistics Division

“Experiences, good practices and challenges for the National Statistical Systems of Latin American countries in the light of the 2020 Population and Housing Census round”

UN ECLAC, Santiago, Chile, November 27-29, 2017

---



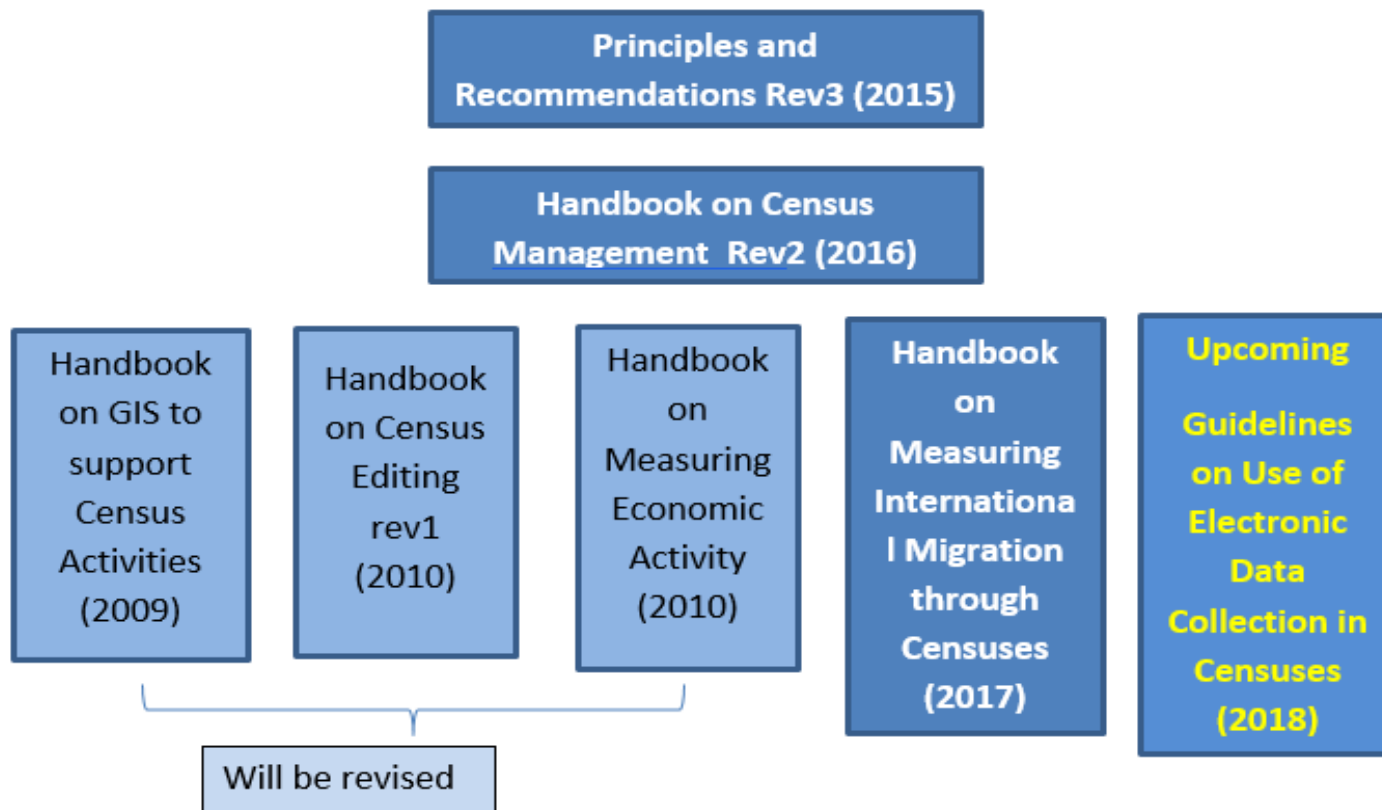
# World Population and Housing Census Programme

Population Statistics Division

- 
- ❑ World Population and Housing Census Programme over six decades
    - 2020 Census Programme, 2015-2024
      - ECOSOC approved the 2020 World Census Programme on 5 August 2015
      - Urges Member States to conduct at least one census during the round taking into account international and regional recommendations
      - Underscores need for setting quality standards for reliable and accurate results
      - Emphasizes the importance of the programme to SDG's
      - Requests UN to develop statistical standards, methods and guidelines and to monitor the implementation of the World Programme
-



# UNSD Methodological framework





# Trends in the use of technology

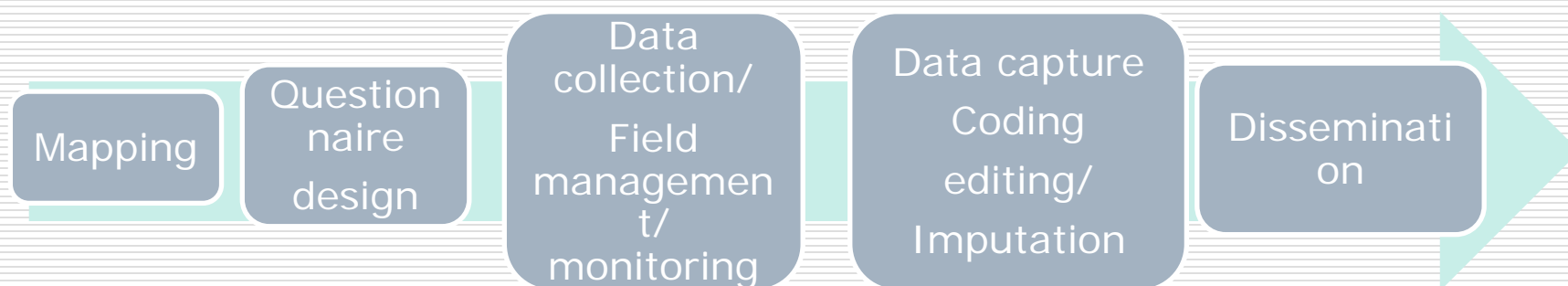
United Nations Statistics Division

Census Rounds					
	Before 1990	1990	2000	2010	2020
<i>Mapping</i>	Sketch	Digital Sketch	Digital Sketch	Digital Georeferenced data Sketch	
<i>Enumeration</i>	Paper questionnaire	Paper questionnaire	Electronic questionnaire – Internet Paper questionnaire	Electronic questionnaire – Internet, hand-held devices and telephone Real-time monitoring Paper questionnaire	
<i>Data Processing</i>	Manual data capture	Optical data capture Manual data capture	Optical data capture Manual data capture	Optical data capture Automatic data capture (Internet and hand-held devices) Web-based manual data capture Manual data capture	
<i>Dissemination</i>	Paper publication		Paper publications Online / digital publications	Online interactive databases Digital publications Paper publications	



## Growing dependency on technology

### *Technology adoption throughout census operation*



### *Coverage, Data quality, Timeliness, Accessibility*

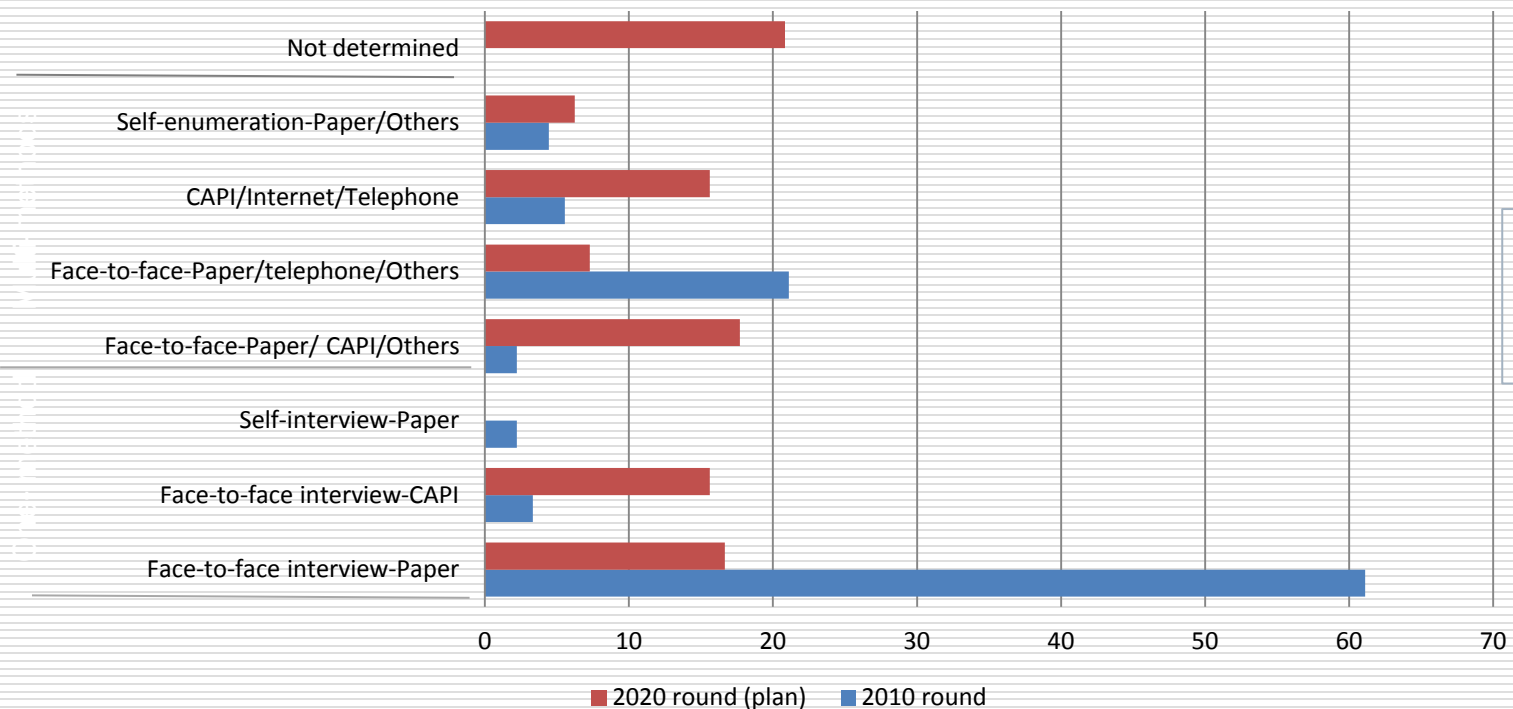
Calls for: Improving institutional capacity  
Building IT infrastructure  
Redesigning census procedures

*Testing Testing Testing !!!*



# Practices in 2010 round and Plans for 2020 round

## Percentage of countries by enumeration method

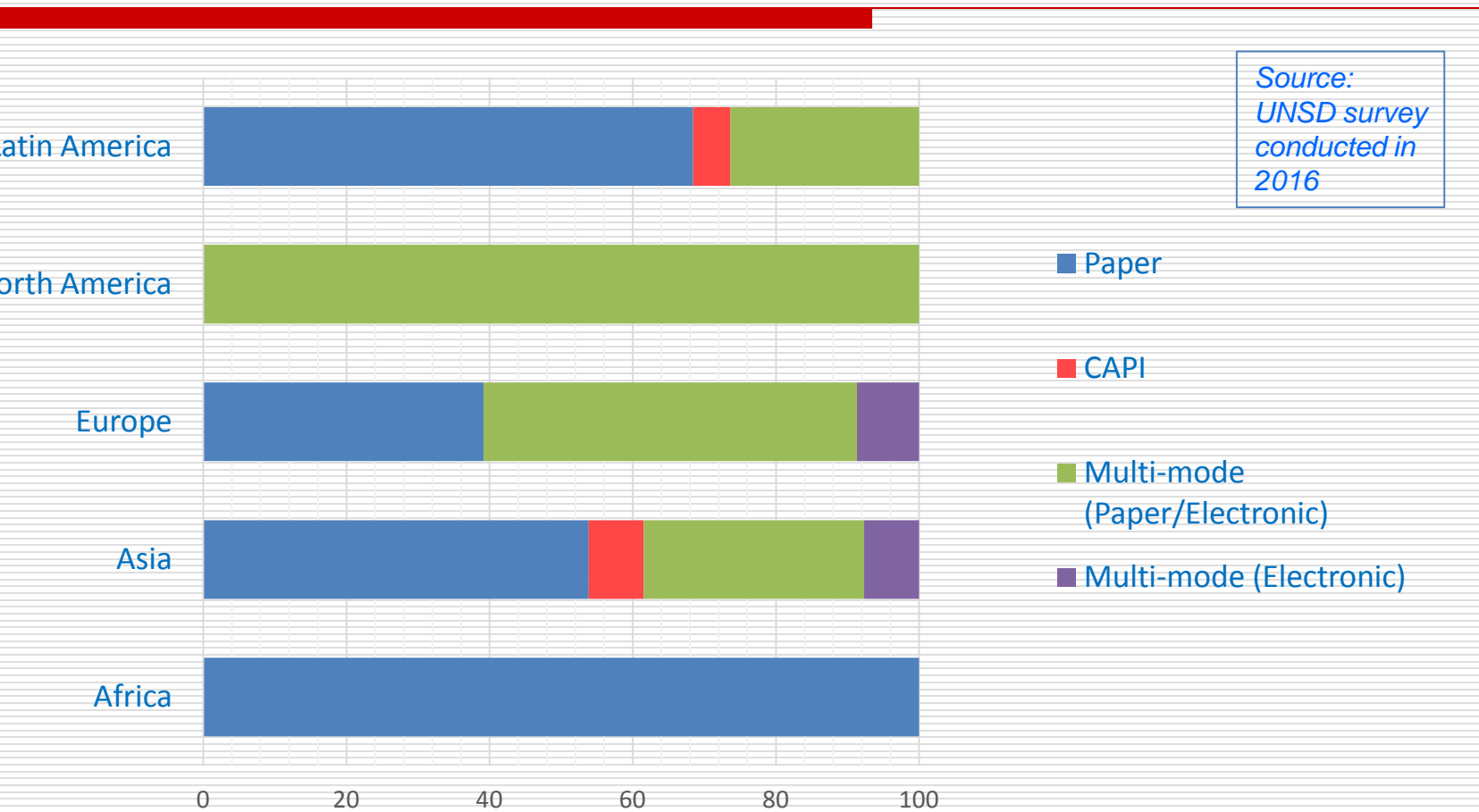


Source:  
UNSD survey  
conducted in  
2016



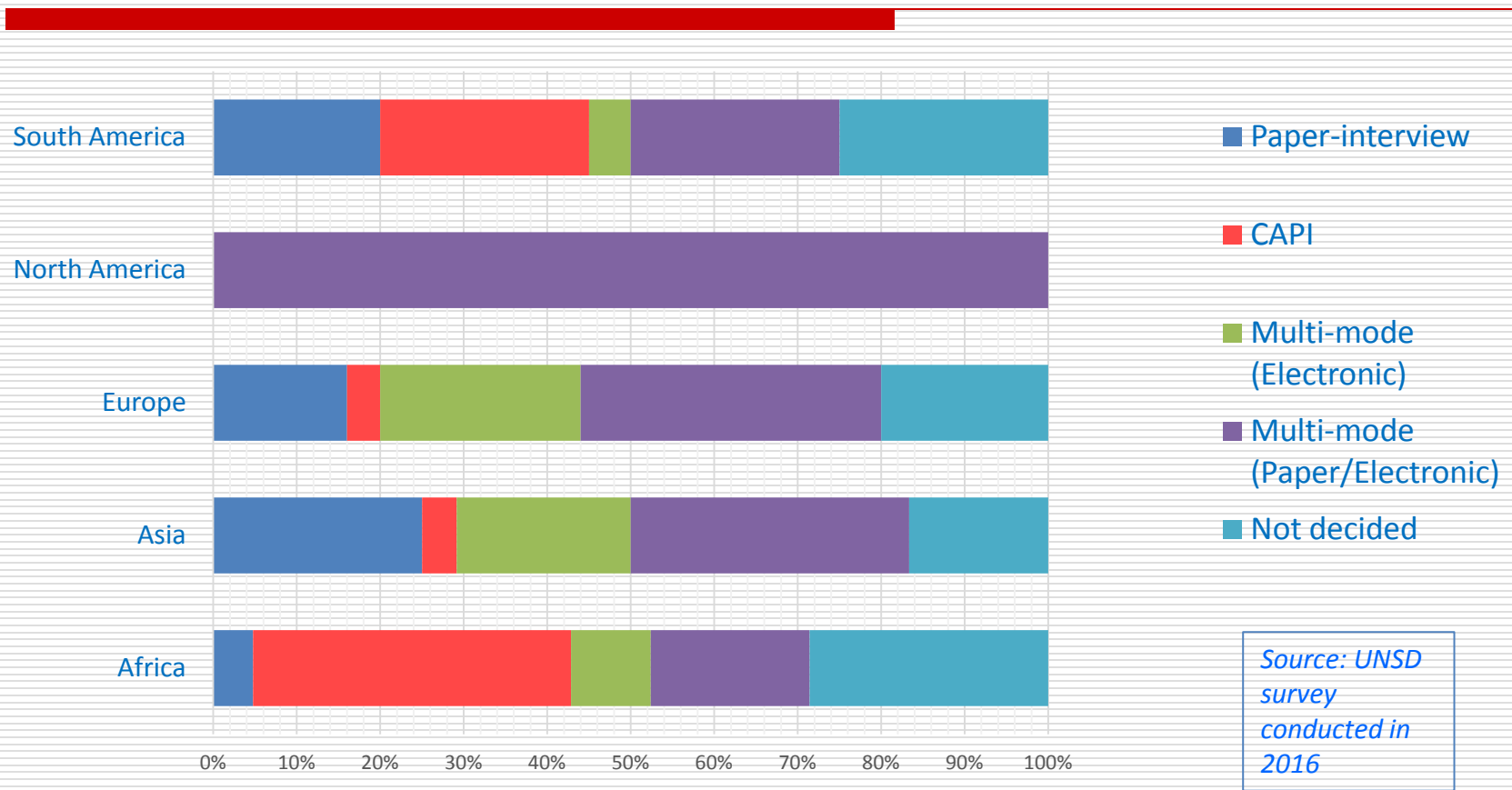
# Use of technology for data collection-2010 round

## Percent





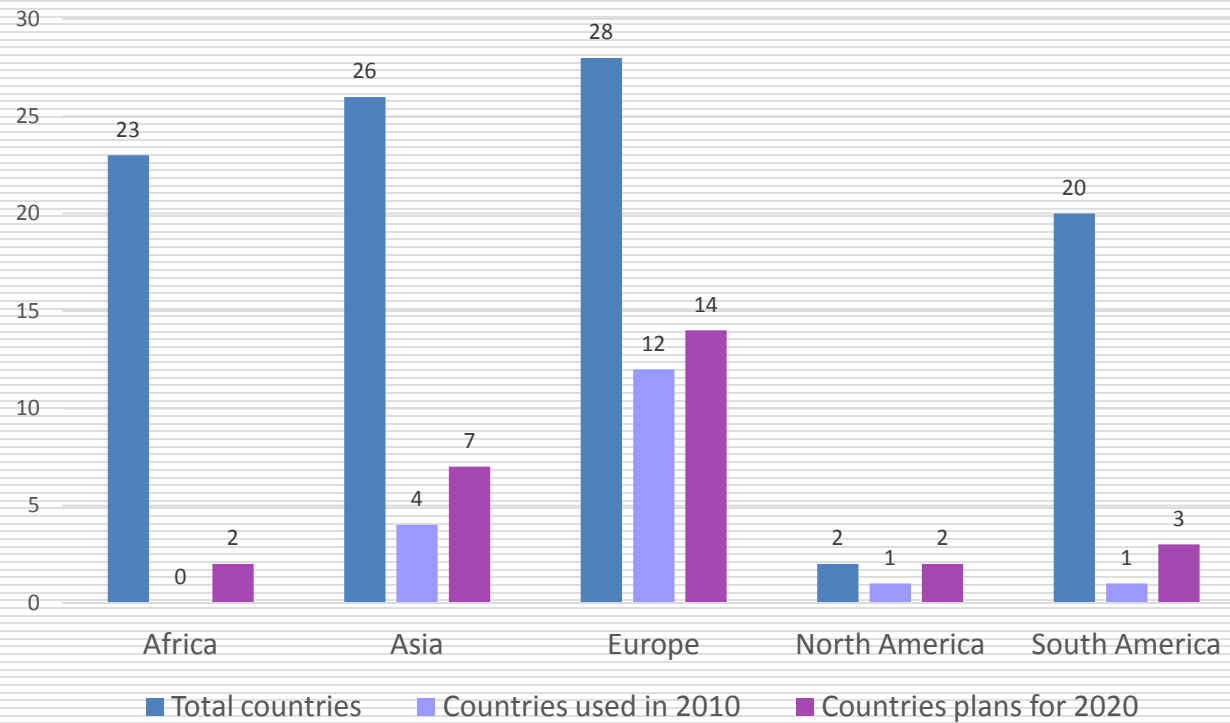
# Method of data collection-Plans for 2020 round





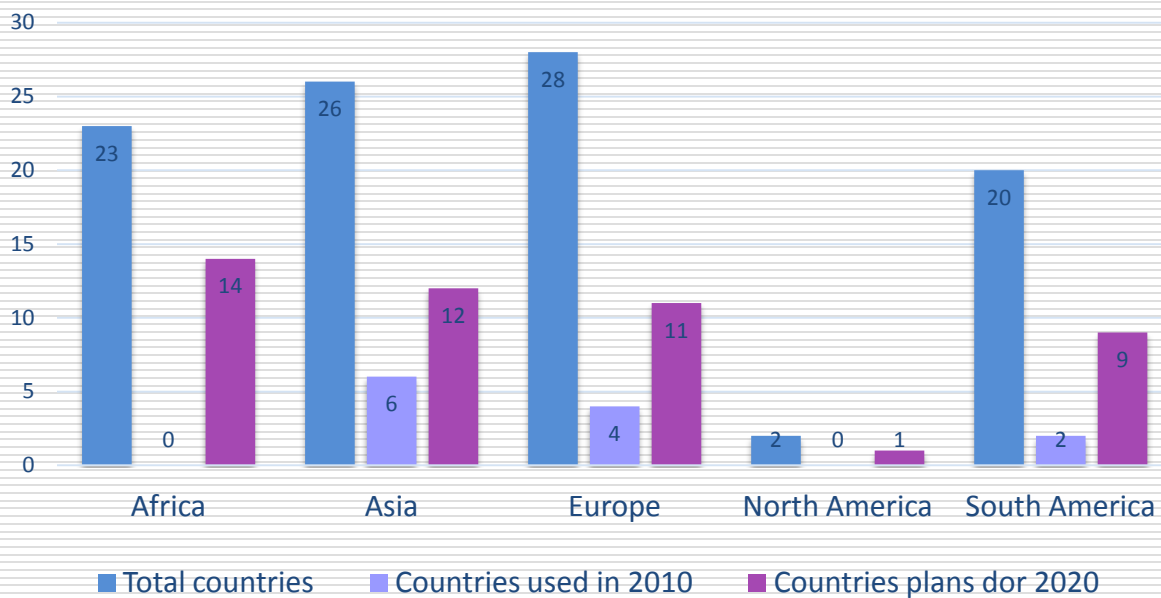


# Use of Internet in 2010 and Plans for 2020





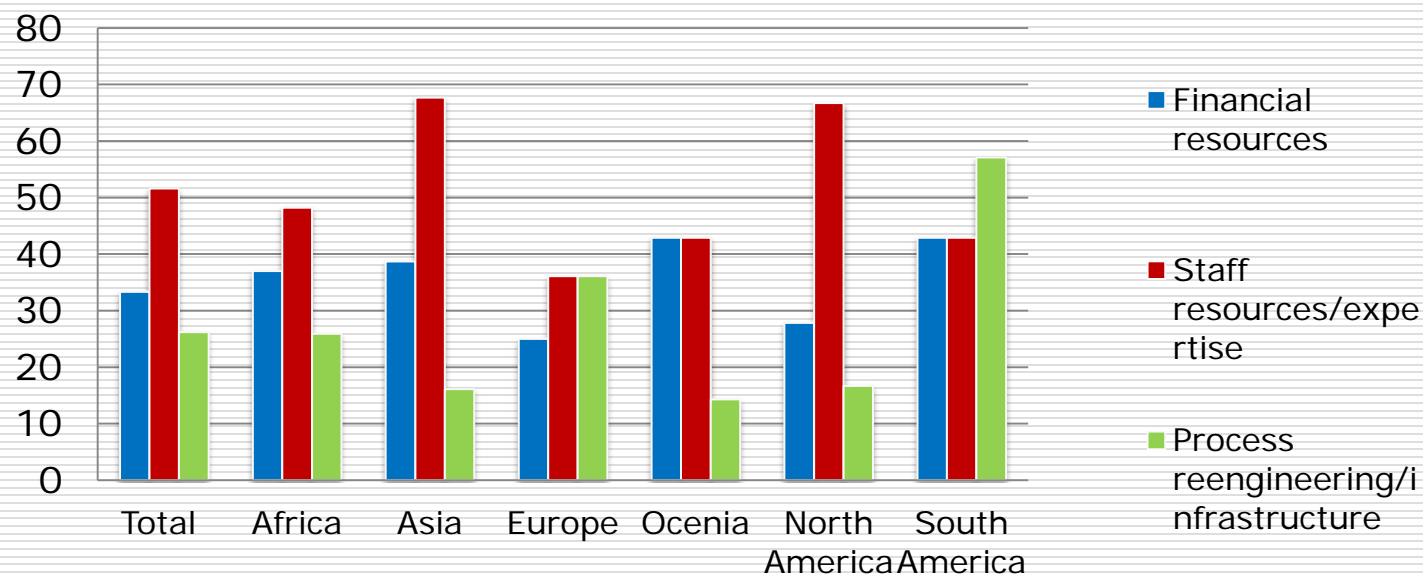
# Use of CAPI in 2010 and Plans for 2020





## Lessons learned from the 2010 round

Percentage of countries by obstacles faced in the use of new technologies during the 2010 census round (%)

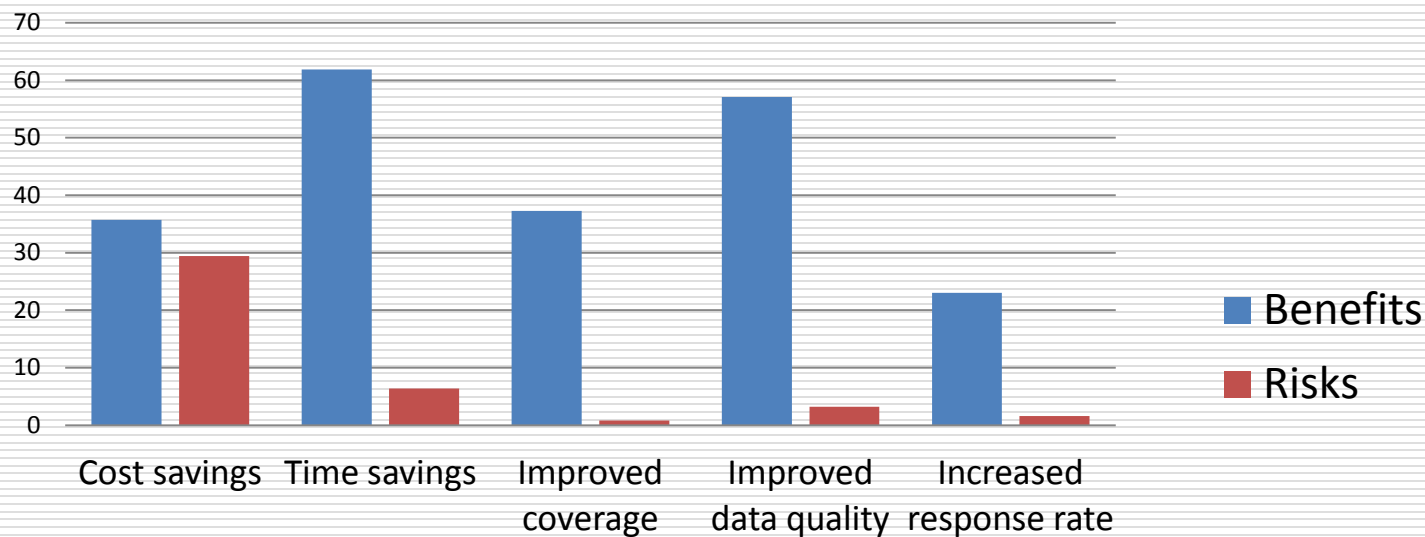


Source: UNSD survey conducted in 2012



## Lessons learned from the 2010 round

Benefits and risks of using new technology in census operations (%)

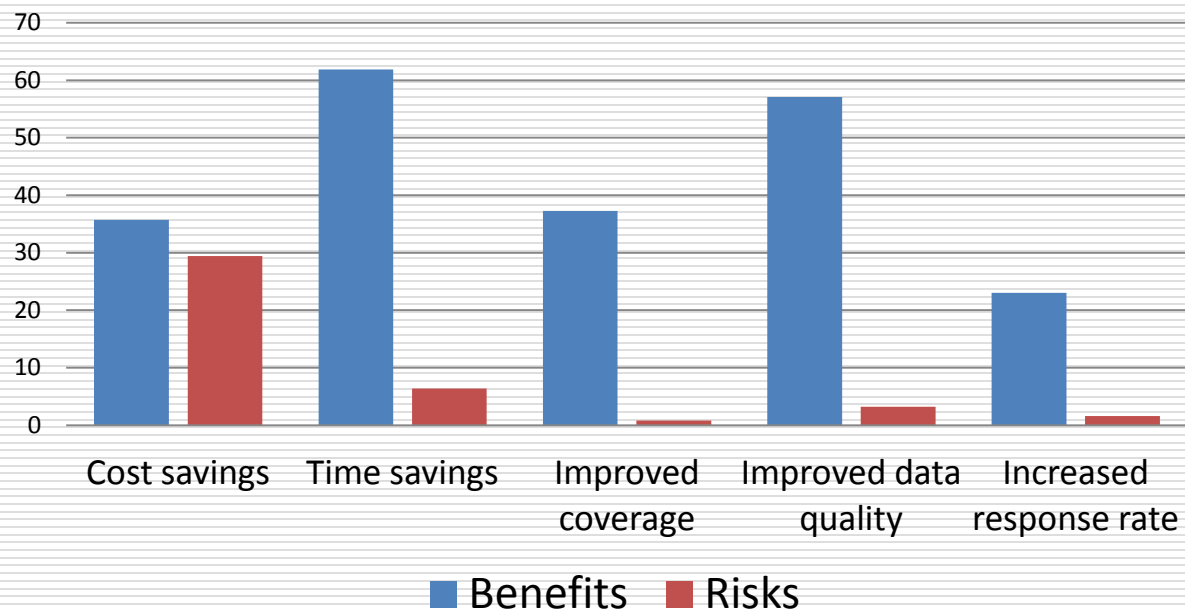


Source: UNSD survey conducted in 2012



## Country practice in 2010 round

Benefits and risks of using new technology in census operations (%)





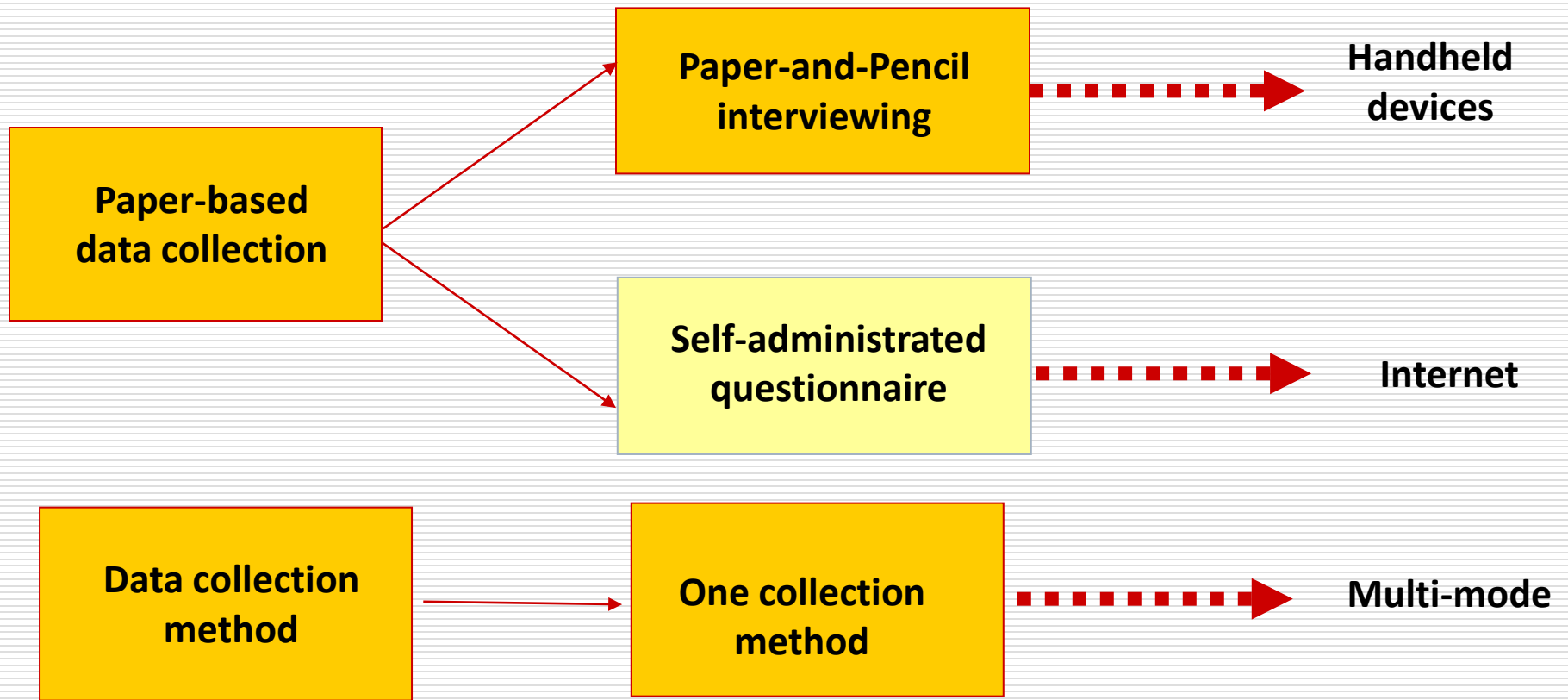
# Guidelines on the Use of Electronic Data Collection

---

- DA10 project –UNSD and UN Regional Commissions (ECLAC, ECA, ECE, ESCAP, ESCWA)
  - Aims to strength a capacity of national statistical offices on:
    - Identifying key factors for making sound decision on the use of electronic data collection technologies
    - Designing census processes with the use of hand-held devices and/or Internet
    - Developing strategies for maximizing the benefits from this investment
  - ✓ Target audience: National Statistical Offices and Census Authorities
  - ✓ Task Force: Country Representatives, UNSD, UN Regional Commissions, UNFPA, WB
-



# Transitioning from paper to electronic data collection





# Guidelines on the Use of Electronic Data Collection

---

- ❑ The guidelines discusses :  
(the content prepared through the global technical meeting in Dec 2016)
    - **Overview of data collection methods** including multi-mode data collection approaches
    - **Decision-making in adoption of electronic data collection technologies**
      - *Key determinants*: institutional, technological, operational, economic, social/cultural factors
      - *Information required for decision making* (cost estimates, benefits, risks, timetable, plans for reuse/disposition, success criteria, assumptions,
-





# Guidelines on the use of electronic data collection technologies

---

- ❑ The guidelines discuss :
    - **Planning and preparation considerations**
      - Institutional capacity development
      - IT acquisition management
      - IT systems development
      - Use of geospatial technology for census preparation
      - Supportive systems- Call center, MIS,..
      - Testing IT systems and processes
      - Information and system security
-



# Guidelines on the use of electronic data collection technologies

---

- ❑ The guidelines discuss :
    - **Data collection application**
      - Advantages/challenges
      - Essential functional features
      - Format/Layout
      - Acquisition/development of data collection application
-



# Guidelines on the use of electronic data collection technologies

---

- ❑ The guidelines discuss :
    - **Data collection with handheld devices**
      - Important features of handheld devices
      - Data transmission and security
      - Use of geospatial technology during enumeration
      - Testing data collection systems
      - Field operation, management and monitoring
      - Reuse/disposition of devices
-



# Guidelines on the use of electronic data collection technologies

---

- ❑ The guidelines will discuss :
    - **Data collection with Internet**
      - Requirements for adoption – high literacy, internet access, public trust, quality of address frame
      - Data collection portal
      - Contact and communication strategies
      - Identification of respondents (unique access code)
      - Management and monitoring
      - Security
      - Support for respondents
-



# Guidelines on the use of electronic data collection technologies

---

- ❑ Collaborative approach for drafting the guidelines with the participation of countries and international organizations
    - First draft by Oct-2017
    - Final draft by March 2018 based on regional consultations
  
  - ❑ Live document be updated for:
    - significant changes in adoption of the technology
    - technological changes
    - good country practices
-



---

THANK YOU...

---