

Challenges and Resolutions of a 95 Million People Digital Census

Egypt 2017 Housing, Population, & Establishments Census

Presented By

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تعدادنا ... مستقبلنا

Our Census ... Our Future



Agenda

- 2017 Census in Numbers
- Egypt's 14th Census Challenges
- New in 2017 Digital Census
- Risk Management
- Census Planning & Preparations
- Effect of Digital on Data Quality
- Effect of Digital on Field Control
- Effect of Digital on Cost Reduction
- Transferable Experiences



2017 Census in Numbers



95M
People



23.5M
Families



6.4M
Establishments



16.2M
Buildings



43.2M
Units



41,000
Field Agents



31,500
Maps



5,000
Support People



700
Trainers



7
TB Database
4,000
Transaction / Sec

Egypt 14th Census Challenges

GIS Maps
Coverage
Efficiency

Magnitude

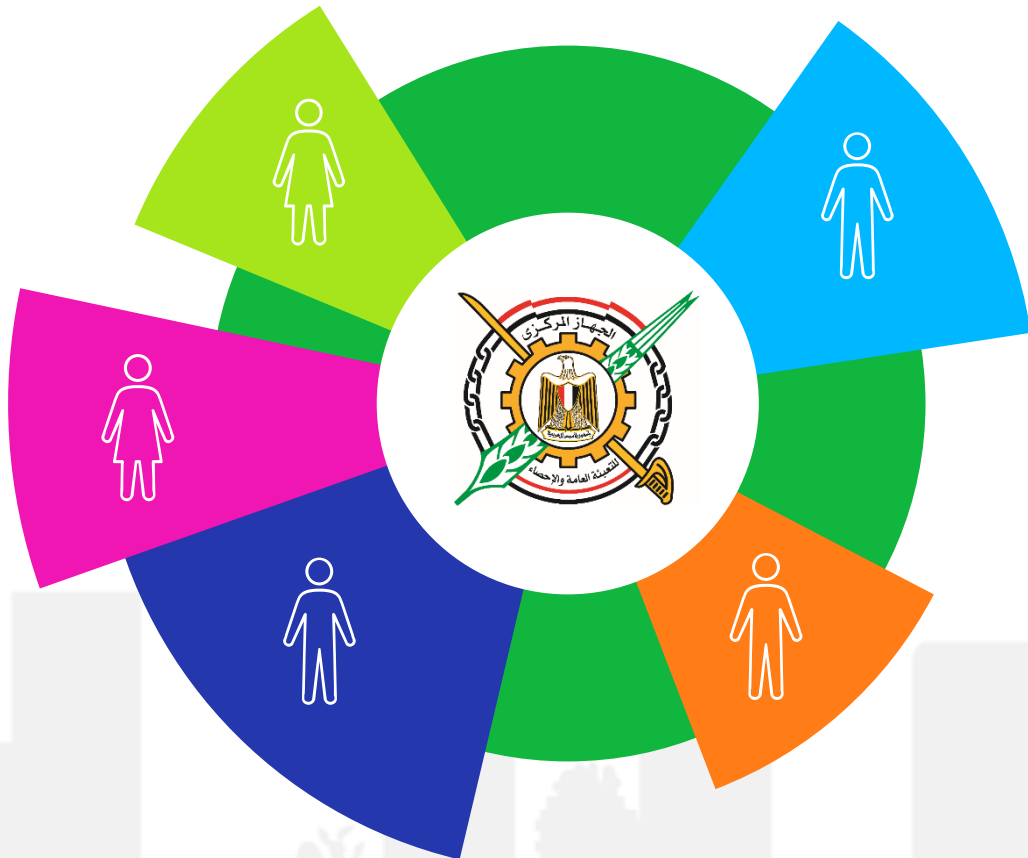
Number of
Stakeholders

Field
Control

Controlling
Data Quality

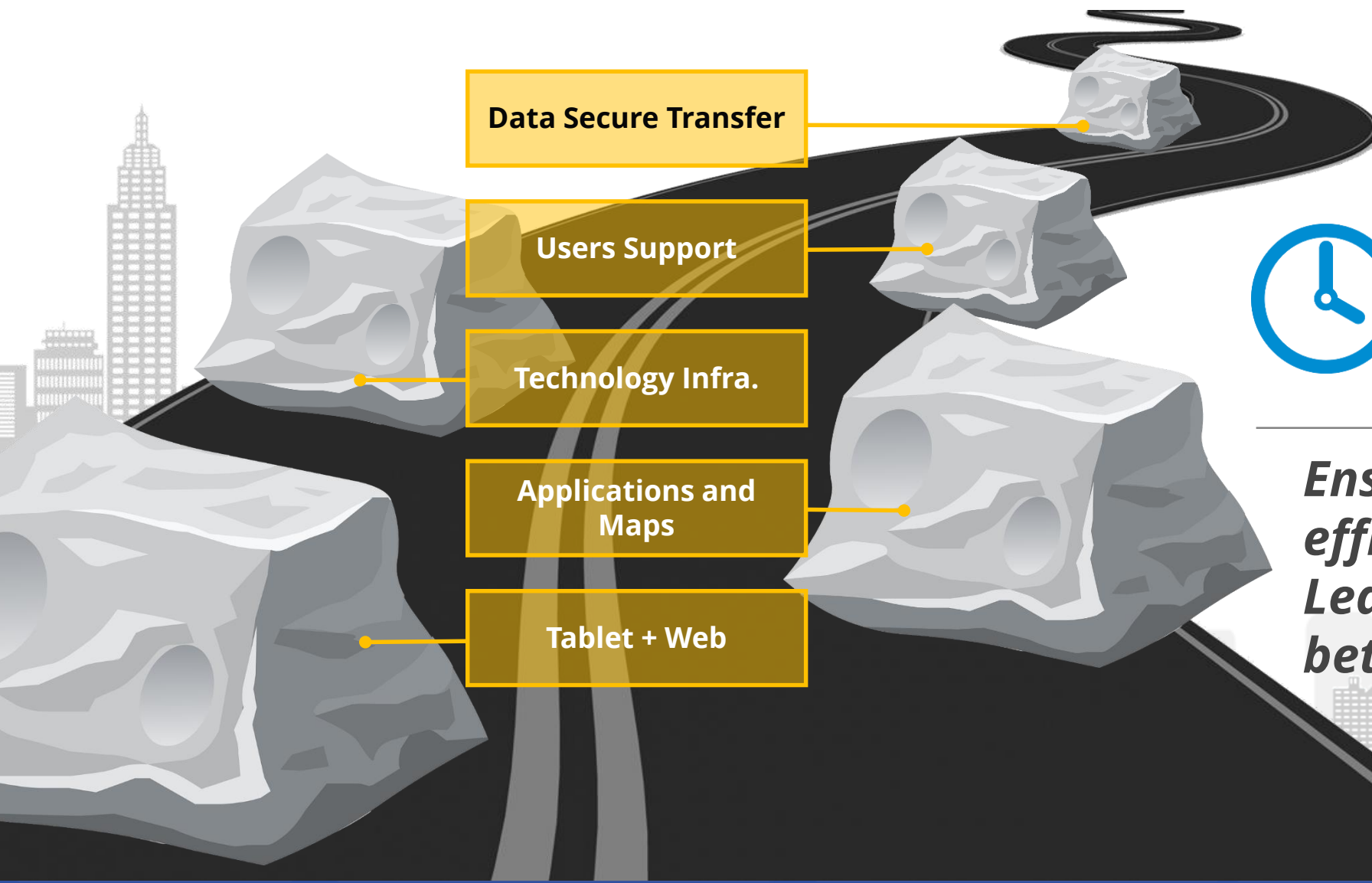
Awareness
& Culture

New in Egypt 2017 Digital Census



- Stages Sequence: Building, People, Establishment
- De jure Census Method
- Using Short & Long Survey Forms
- Using GIS Maps and Base Data
- Unify Gov. Administrative Borders
- Digitally Control Field Operations
- Dramatically Decrease Census Costs & Duration
- Ensure correct, coherent, and accurate data
- Boost Operational Efficiency
- E-Training Material and Snowball 3 Stages TOT
- Fully Digital Control Room
- Self-enumeration Portal and Process
- Rapid Generation of Final Results (60 days)
- Improve Citizen Trust in Government
- Save environment via Paperless Solution
- Create and Use Location Number
- Media Campaign and Society Awareness

E-census Key Success Factors



Data Secure Transfer

Users Support

Technology Infra.

Applications and Maps

Tablet + Web



Census Field and Operations Control, Monitoring, Evaluation and Guidance

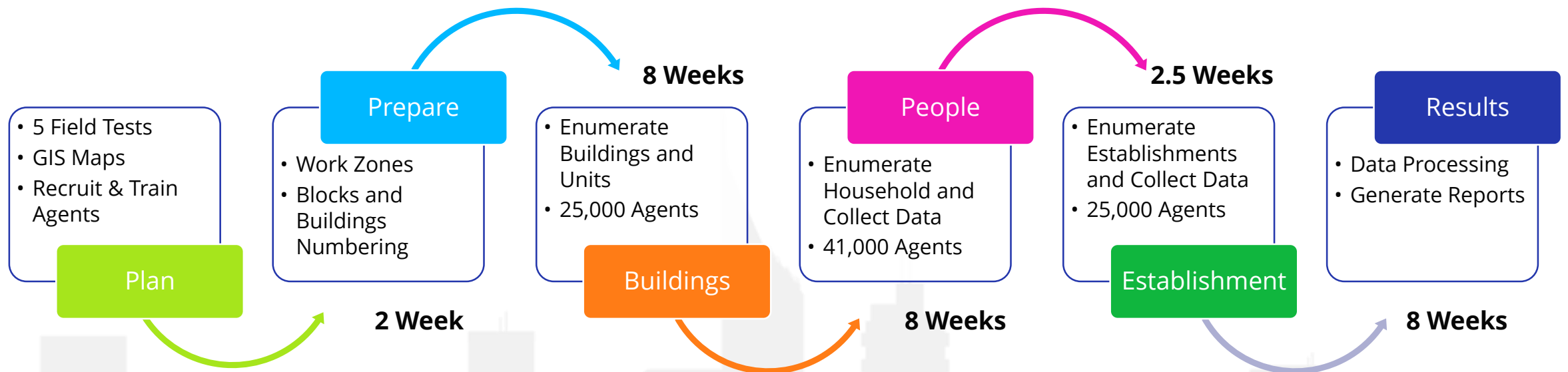
Ensures a smooth & efficient data collection Leads to Quality data and better Findings

Risk Management

- **Manpower:**
 - Spare Agents
 - Unified Distributed Training Material
 - Continuous Training Refresh
 - SW Controlled Capacity Building
- **HW, Devices, and Connectivity**
 - DR Environment
 - Spare Tablets
 - Power Banks
 - Backup Connectivity Lines in 1,200 Location (for Wifi)
 - Backup SIM Cards
- **Software (SW) and Data**
 - Secured Application
 - Secured Data Transfer
 - Offline Tablet App Feature
 - Agile Agent Assignment
 - Agile SW to handle unplanned Validation Rules
 - Agile SW to handle non-standard Agents Behavior
 - Agile SW to create ad-hoc Reports
 - SW Operated and Controlled Census (Census Management Platform)
 - Teams Communication: SMS, Tablet App Messages, Call Center

Census Planning and Preparations

Census Stages



Census Digital Transformation

Census Management Platform – Preparations Stage in Brief



Create Census Project Stages and Operational Settings



GIS Preparation – Areas, Buildings



Define GIS Maps and Create Zones on System



Survey Design & Creation



Survey Validation Rules Definition



Design Operational Reports



Teams Hierarchy Setup



Assigning Agents to Areas



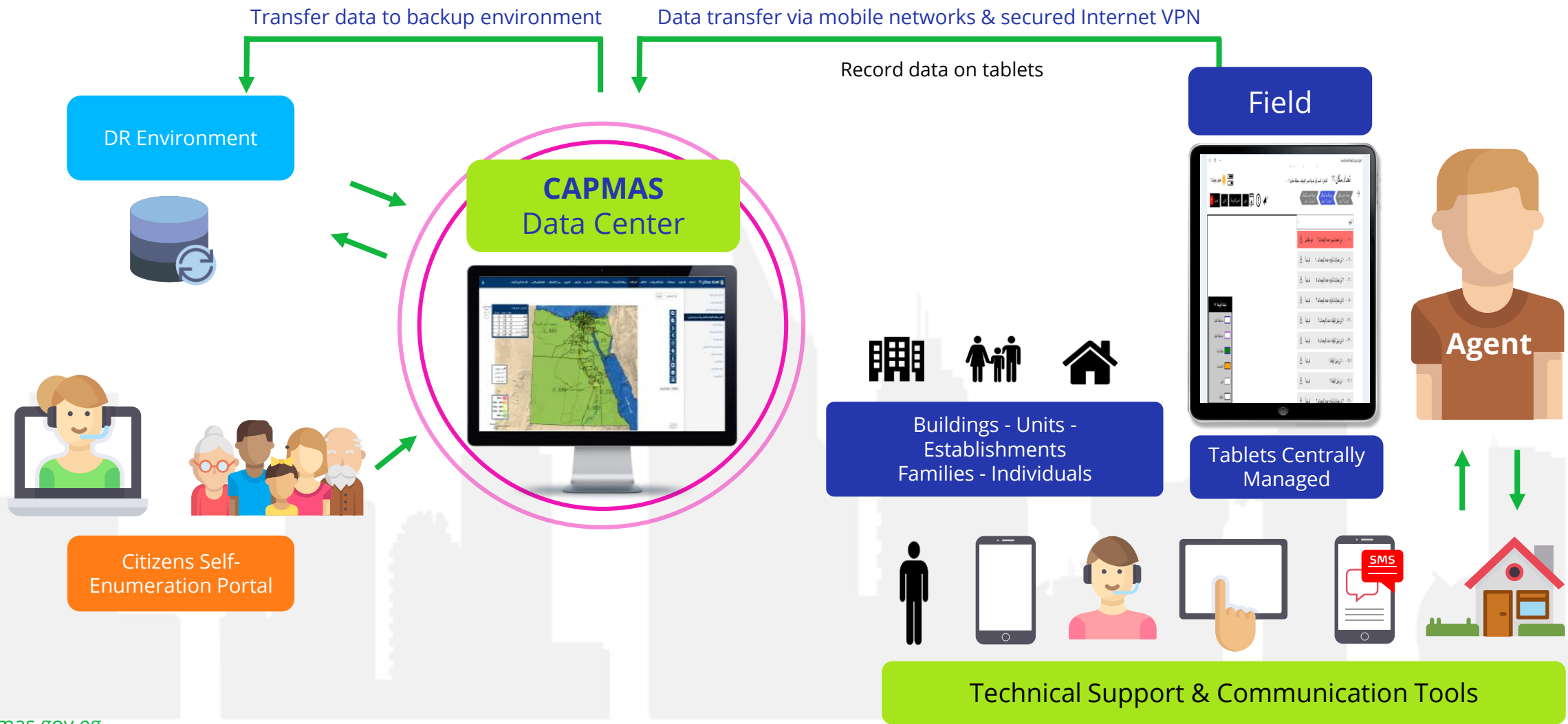
Agents Training Planning & Tracking



CountBig Backend Administration & Management Dashboard

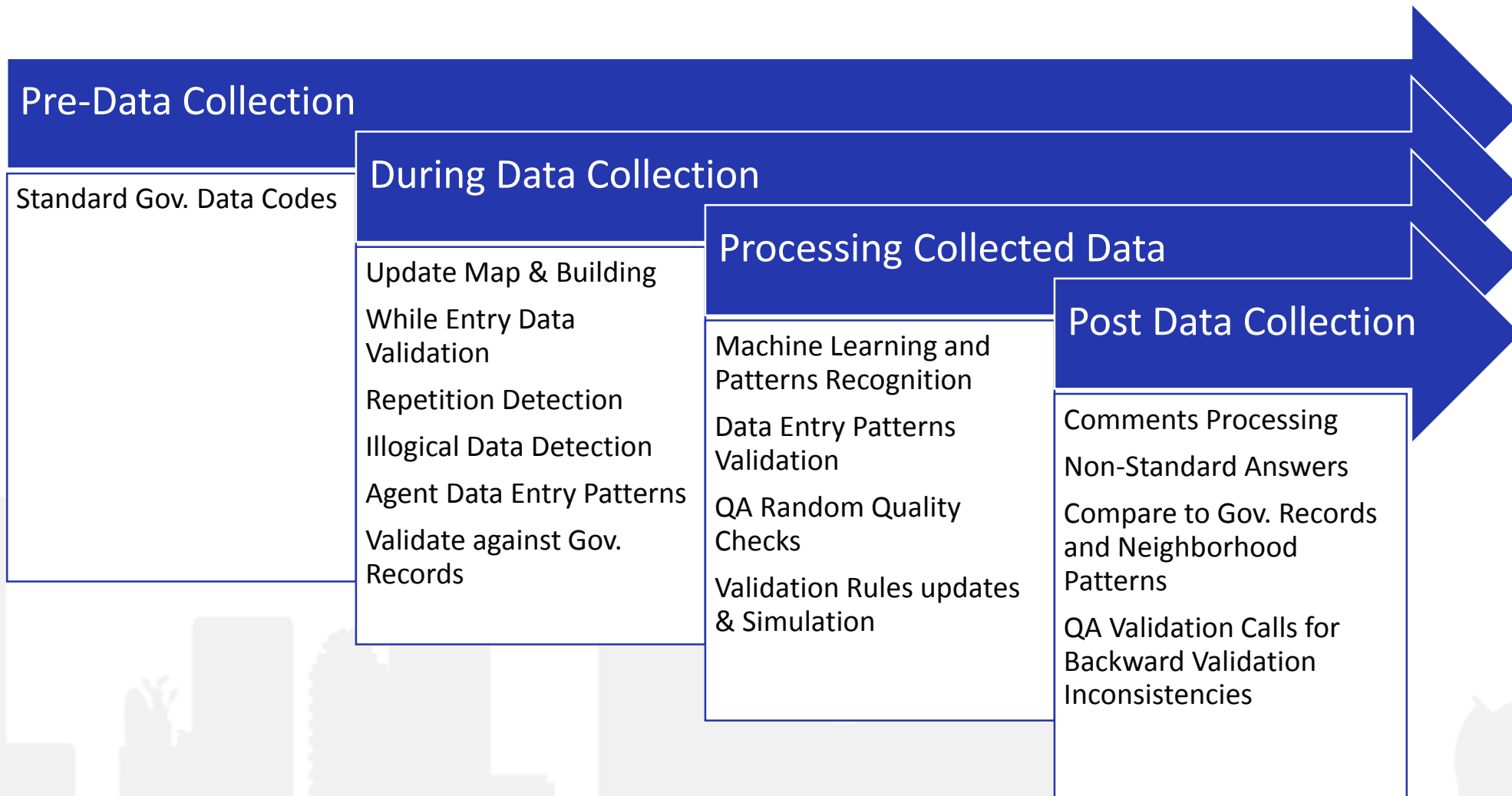
Work Cycle - Role of Digitalization

General Population, Buildings & Commercial Establishments Census 2017



Effect of Digital on Data Quality

4-Stages Data Processing



Effect of Digital on Data Quality

Data Entry Control

Pre-Data Collection

Work Zones
Assignment and GIS
Maps

During Data Collection

Just-In-Time (JIT)
Survey Access Control
Field-based Time
Stamp

Processing Collected Data

Agent Data Entry
Patterns

Effect of Digital on Data Quality

Data Cleansing Engine for Entered Data



Data Repetition



Data Consistency
and Homogeneity



Illogical Data

Data Cleansing Engine



Run Rules



Detect Issue



Report



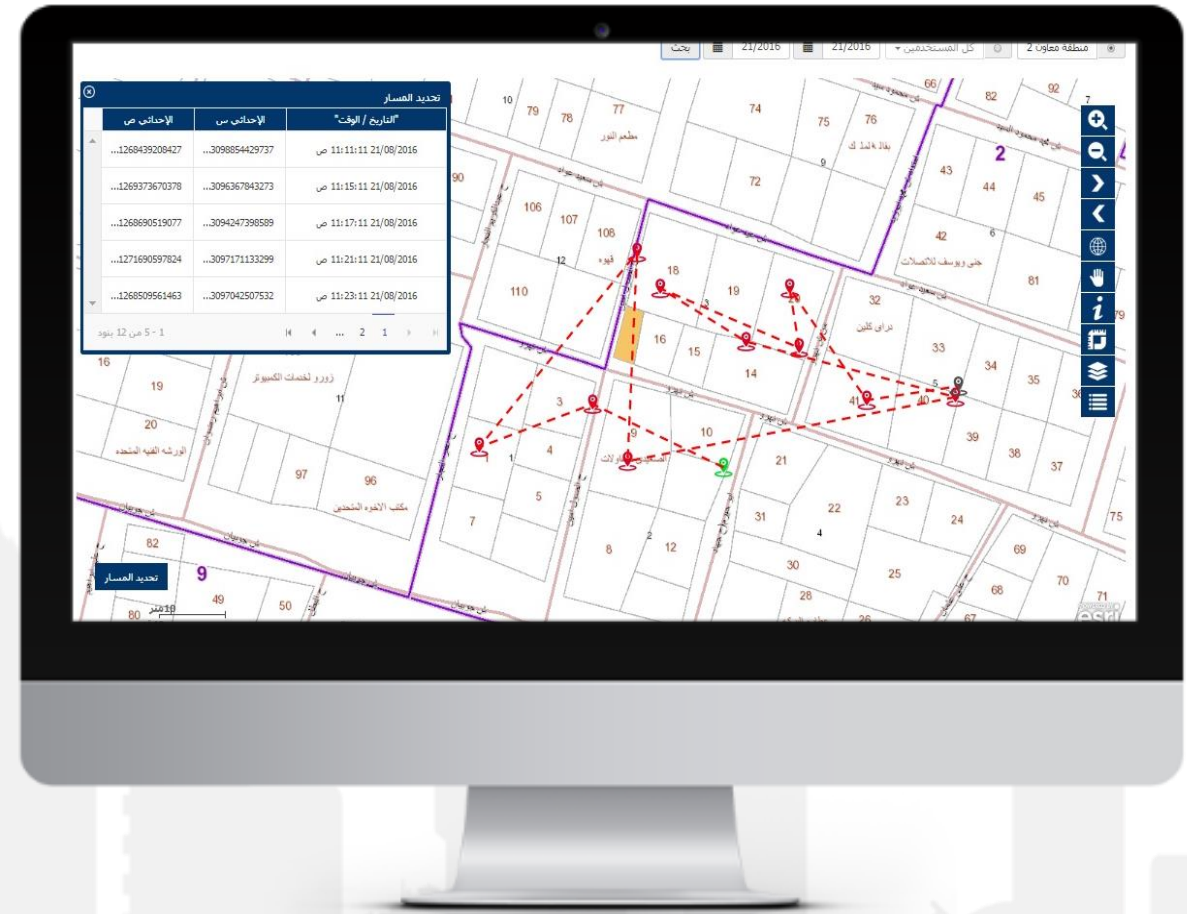
Review & Decide



Fix or Request Re-Entry

Effect of Digital on Field Control

- Agent Route Tracking
- Tablet Kiosk Mode and MDM Controlled
- Just-In-Time (JIT) Survey Access Control
- Closed Data Network
- Closed Phones Network
- Agent Pattern Recognition
- Agent Target Vs. Achievement Report to monitor performance
- Working Zones Dynamic Assignment



Effect of Digital on Cost Reduction

- Transforming Expenses into Investment
- Reduce number of agents dramatically due to automation (142K down to 35K + All Supporting Functions)
- Reduce data entry time (12 months to ZERO)
- Reduce effort for data processing after census to produce final results (9 months to 2 months)
- Eliminating papers, printing, shipping, and storage

Transferable Experiences

Preparation is Key – How Can We Help?





Thank you!

We will be glad to share with you more details in:

Digitalizing Egypt 14th Census – A 95 Million People Digital Census Experience

- 📅 Thursday 8th of March
- 🕒 13:15 to 14:30
- 📍 Conference Room 5 – GA-05