GRID3 NIGERIA

Bill & Melinda Gates foundation

UKaid from the British people

world pop FLOWMINDER.ORG

UNFPA

Center for International Earth Science Information Network
Earth Institute | Columbia University

Evolution of GRID^3

The idea behind GRID^3 started with an effort to eradicate Polio in Nigeria, and grew out of the collaboration between UNFPA and WorldPop/Flowminder in Afghanistan.

To Help Nigeria Stop Polio, Bill Gate Launches "Governor's Immunization Leadership Challenge"

States eligible for $500,000 grant to address pressing health issues

"If things stay stable in the conflicted areas, humanity will see its last case of polio this year."

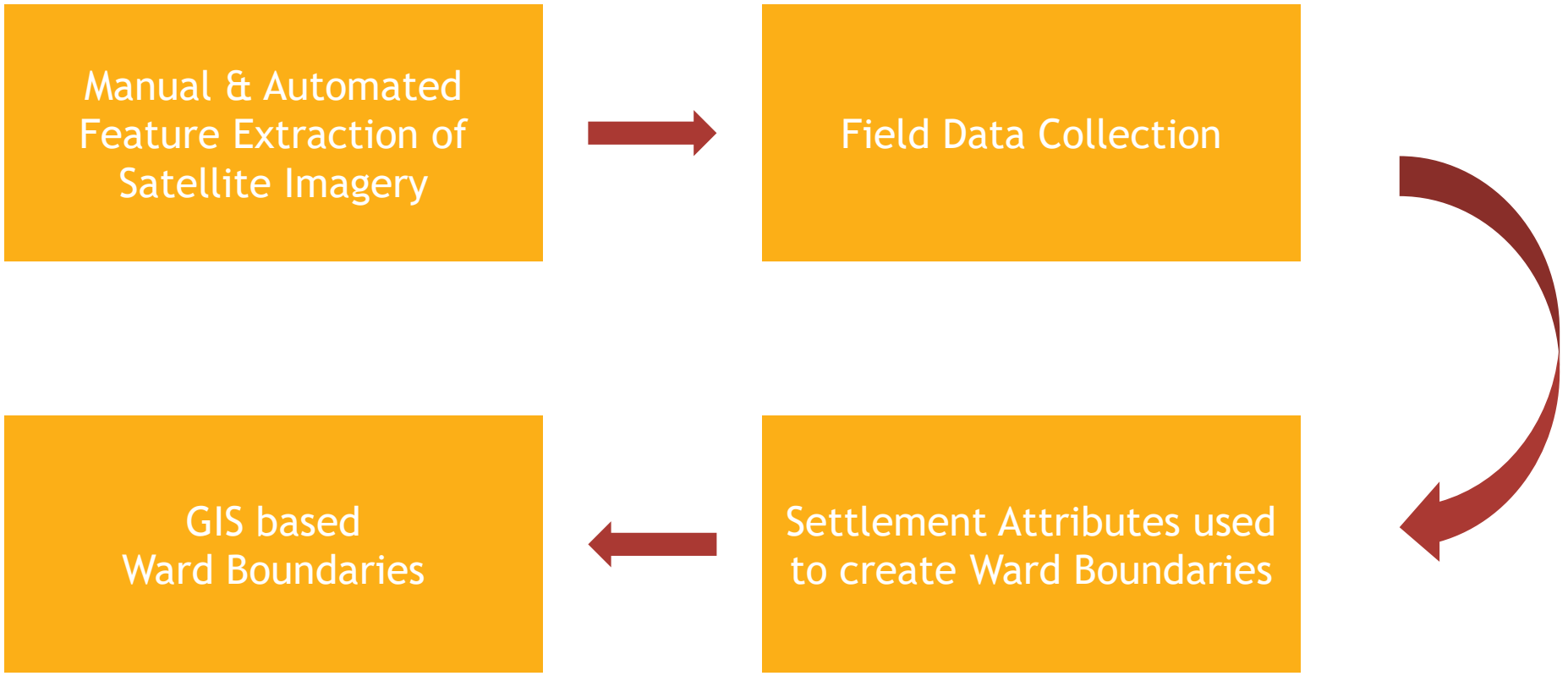
- Bill Gates, in The Bill and Melinda Gates Foundation 2017 annual report

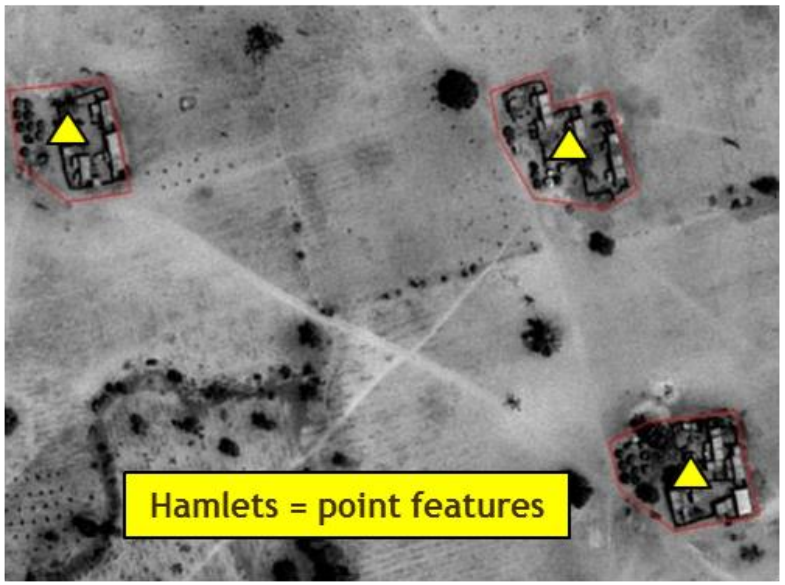
Evolution of GRID^3

Fighting polio in Nigeria

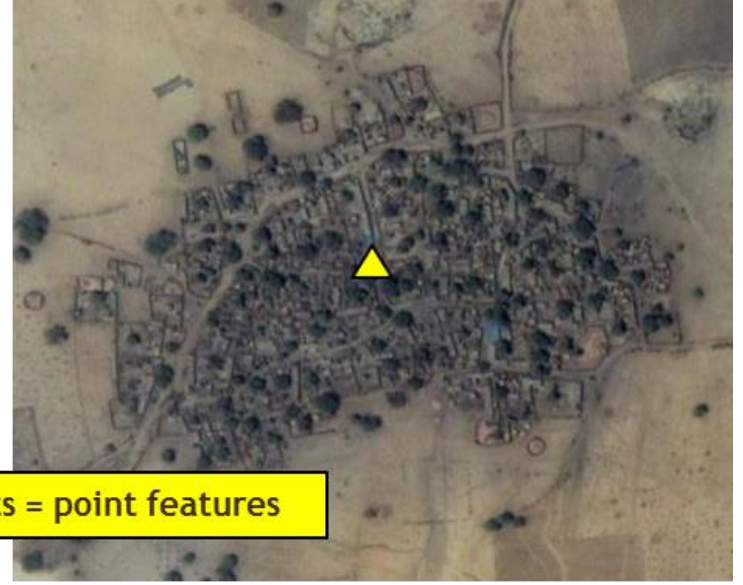
- Geographic Information Systems (GIS) mapping work in 11 northern States in Nigeria from 2013 to 2015.
- Creation of maps to **support polio micro-planning** and serve as a base layer for **GIS Vaccination Tracking System (VTS)**
- As a result, GRID^3 has expanded data collection and mapping across **all states** in Nigeria.

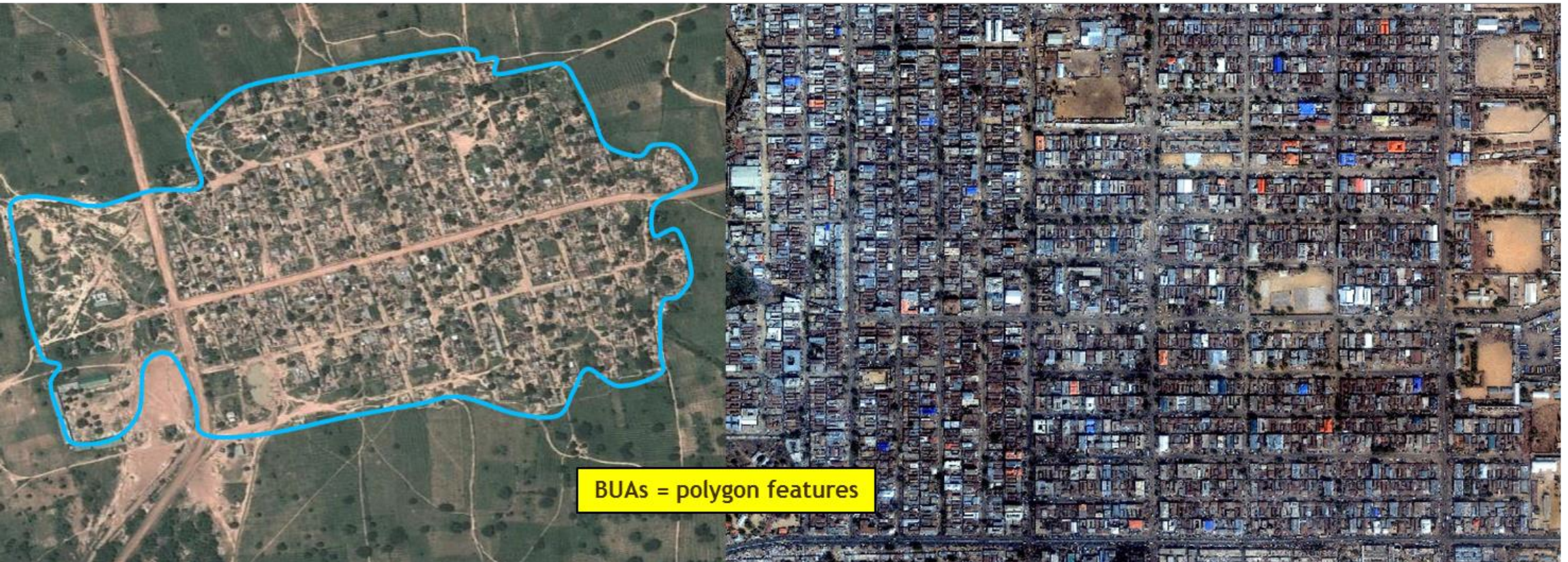
GIS data collection processes

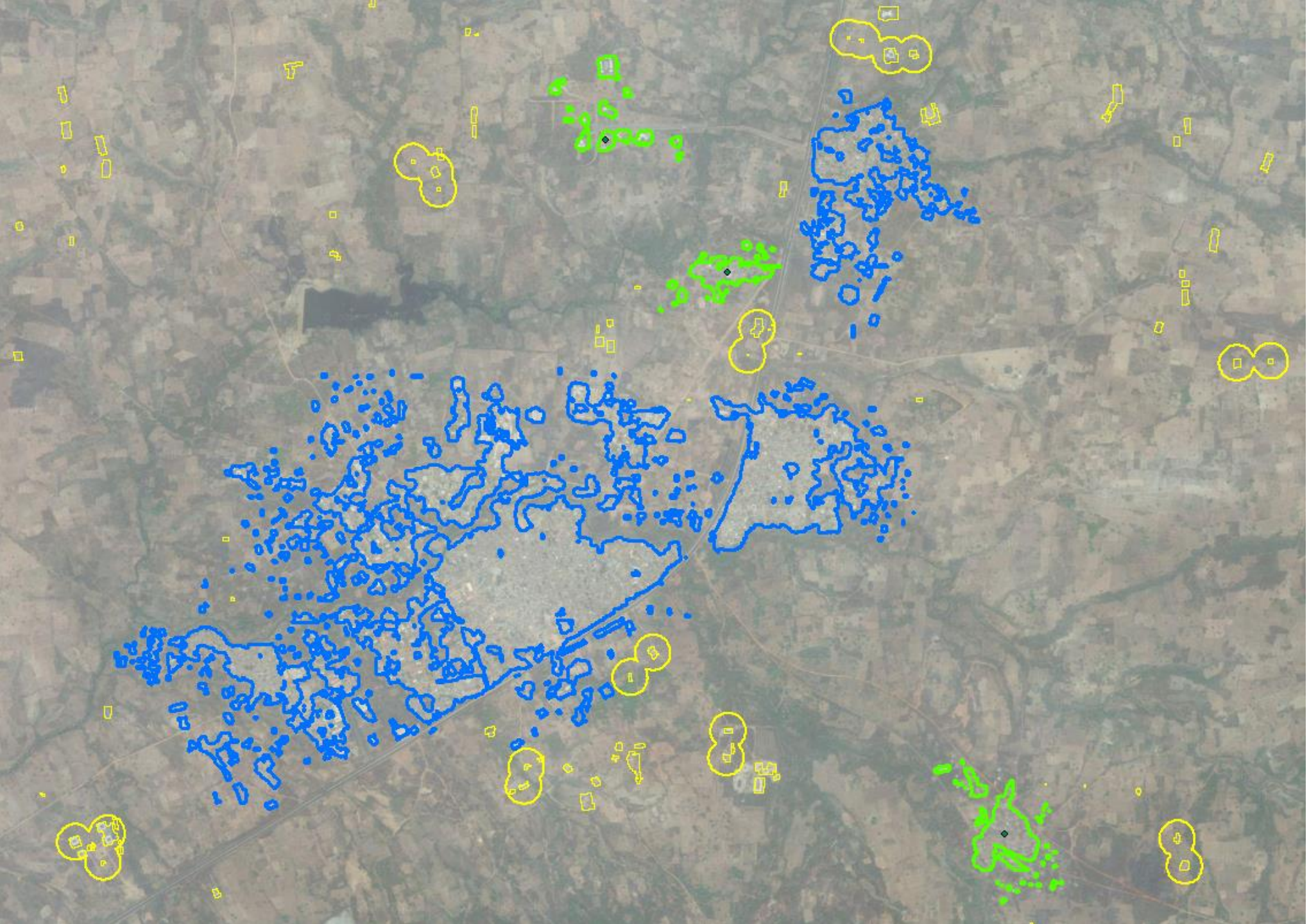



Hamlets = point features


Small Settlements = point features

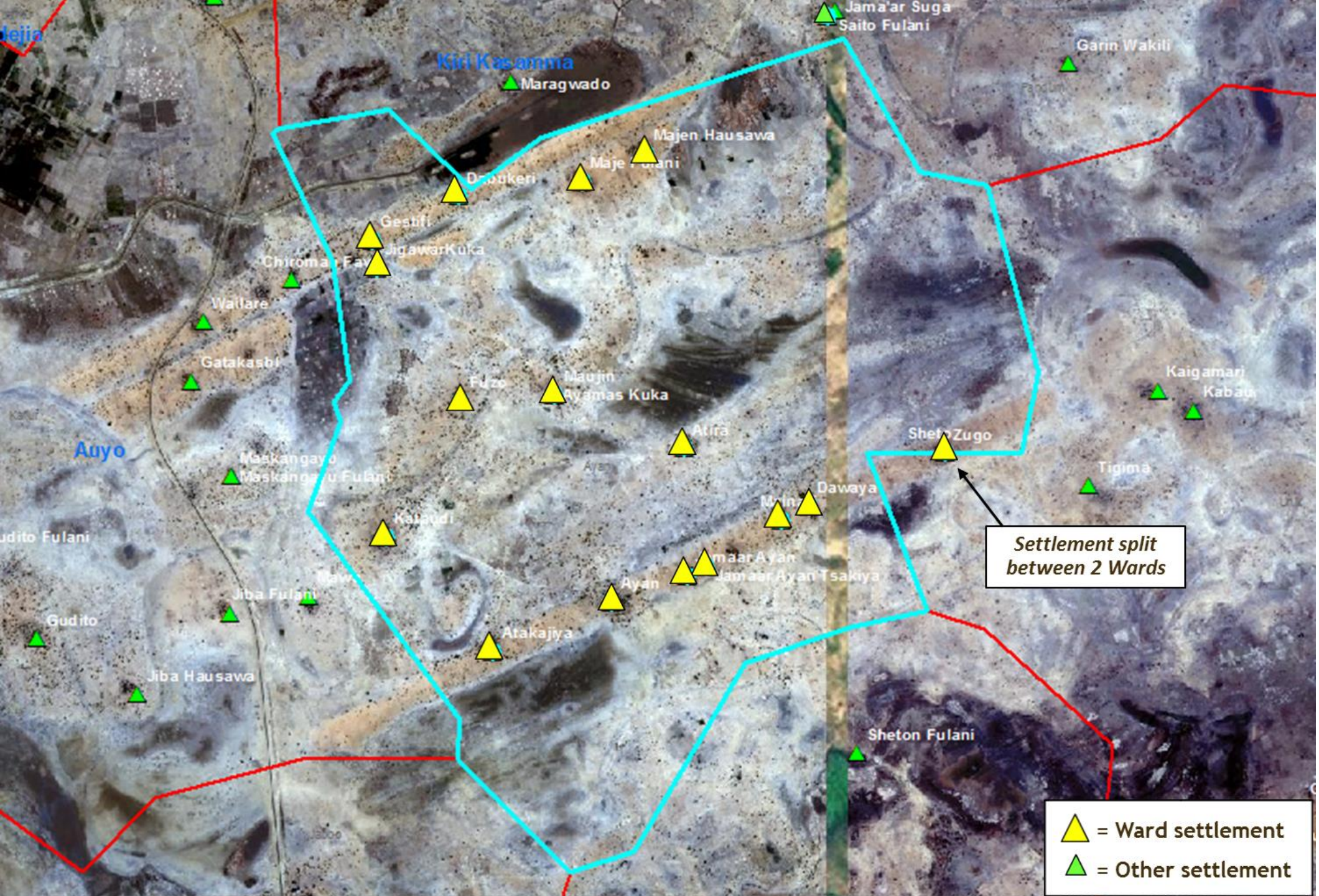



BUAs = polygon features

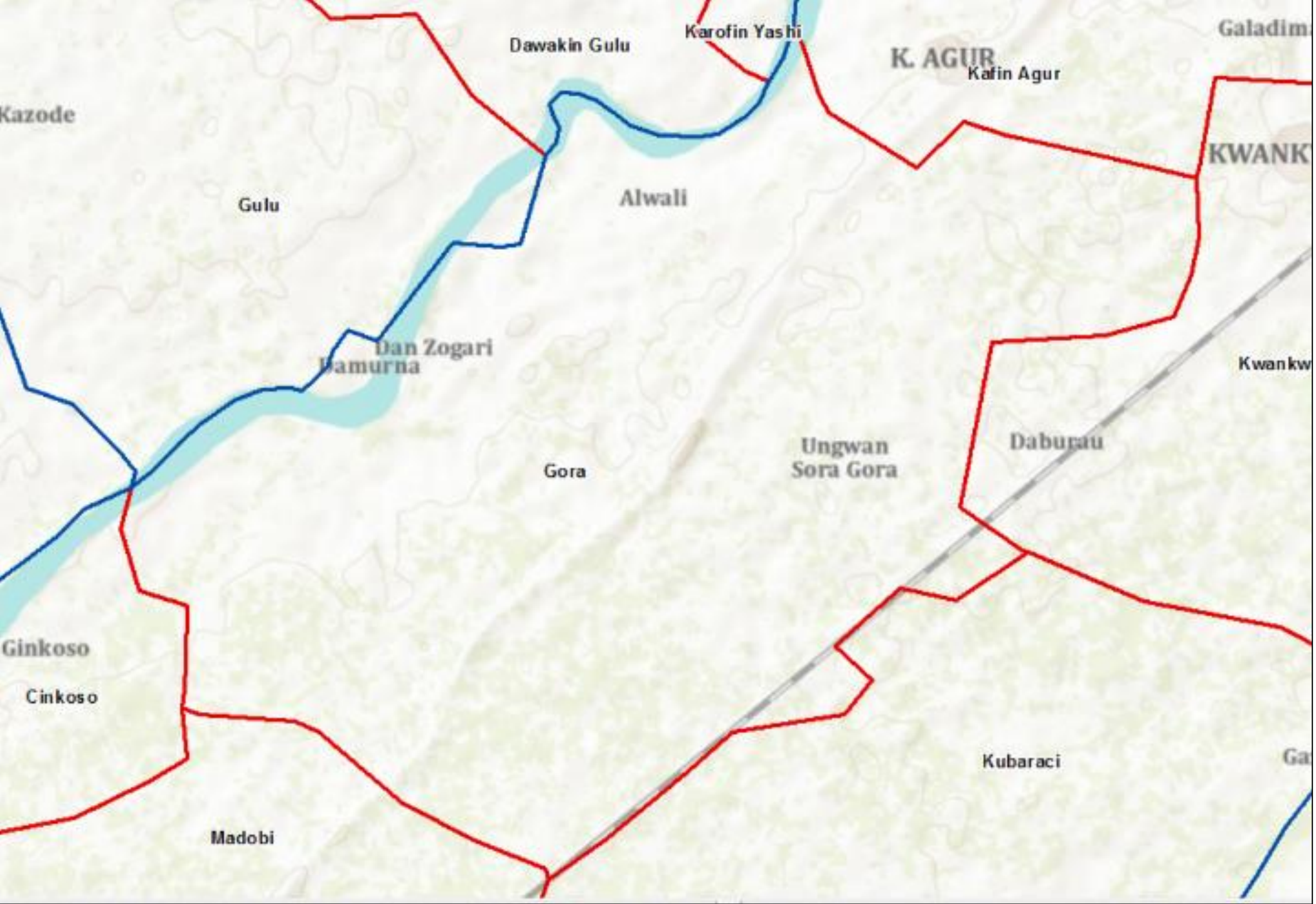


Feature extraction processes

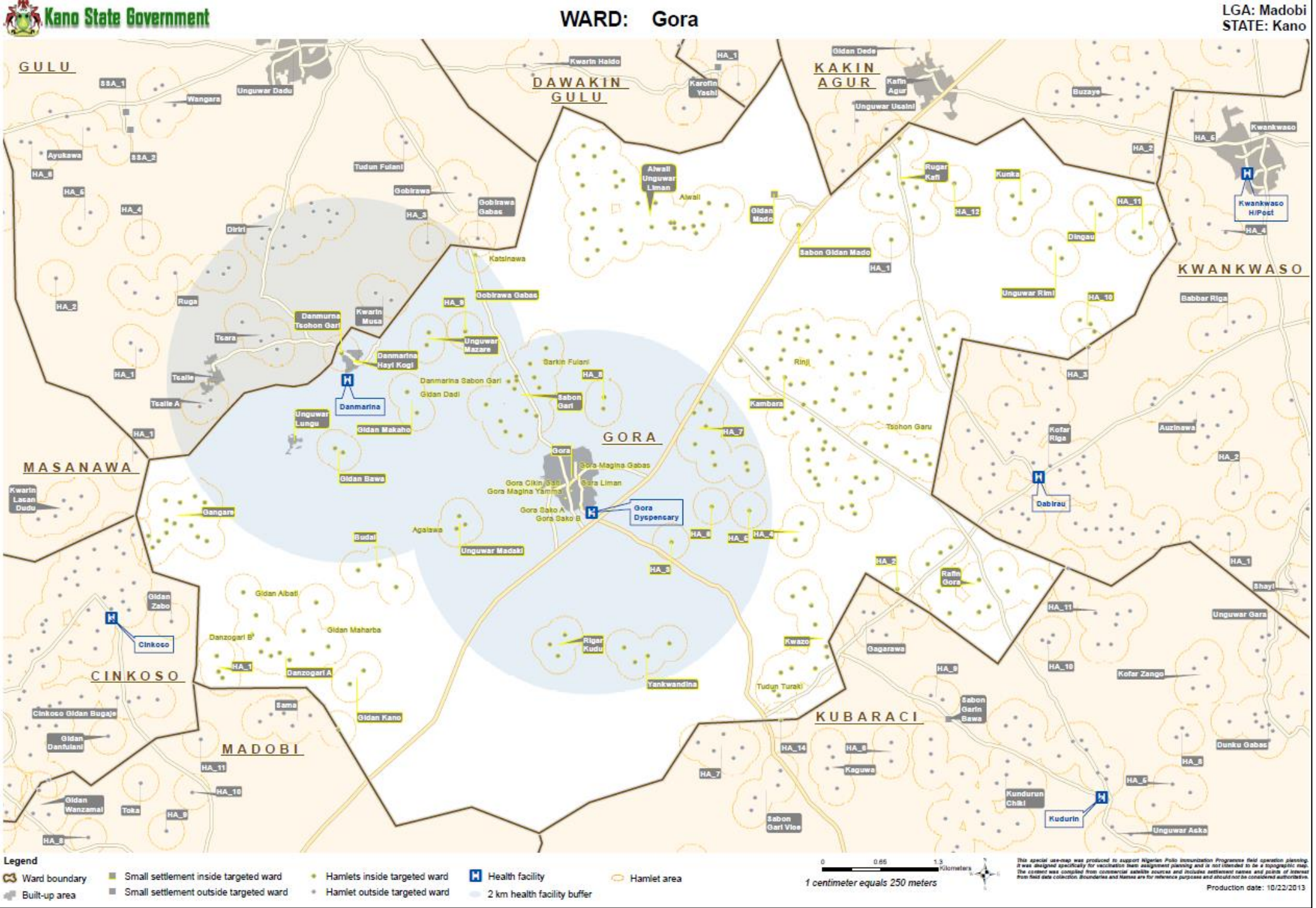
Field data collection



Settlement attributes as guide to ward boundary delineation



Delineated Ward boundary



GIS based ward boundary with HF catchment areas

GRID³ Nigeria Outcomes and Applications

Outcomes

1. **Engagements**
2. **Data Generation**
   - High-resolution georeferenced population data
   - High precision administrative boundary data
   - Accurate settlement data
   - Spatial infrastructure data (Points of Interests)
3. **Dissemination and Use**
4. **Capacity-building**

Coordination mechanism and Linkages

Coordination

Applications (Use cases)

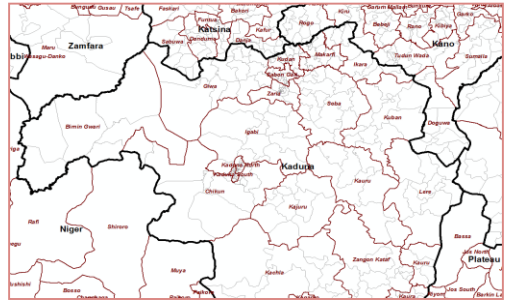
- **Improve national sampling frames**
- **Informed decision making**
- **Better service delivery**
- **Support humanitarian efforts**

National GRID³ Project

Opportunity

- The Polio Eradication Initiative has produced high-resolution spatial data for settlements, boundaries and population.
- The country-wide data will be complete by end 2018.
- They will be available for immediate use where appropriate
- They can support spatial data development within Government agencies

Settlements



Boundaries

Population

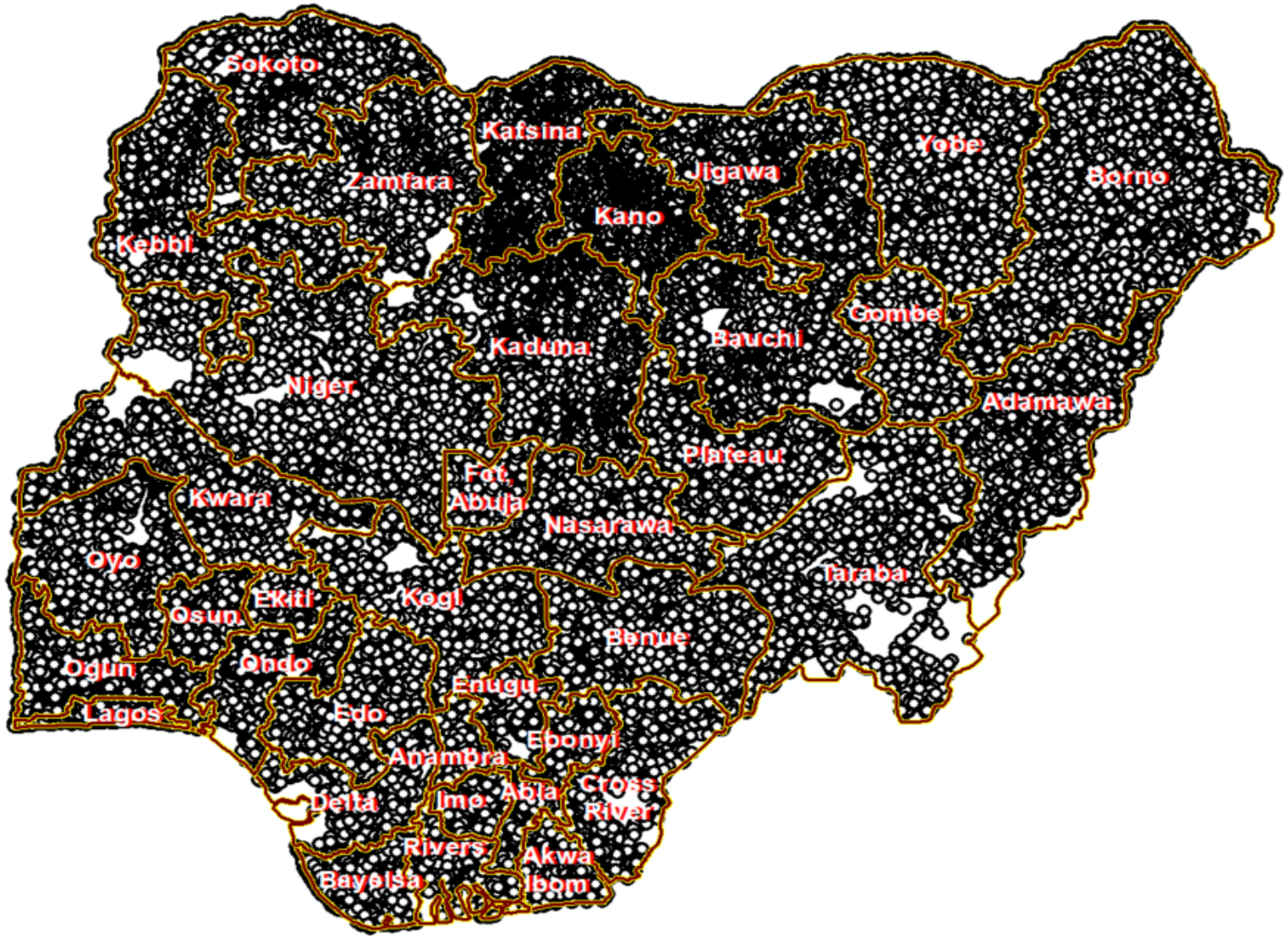
National GRID^3 Project

Approach

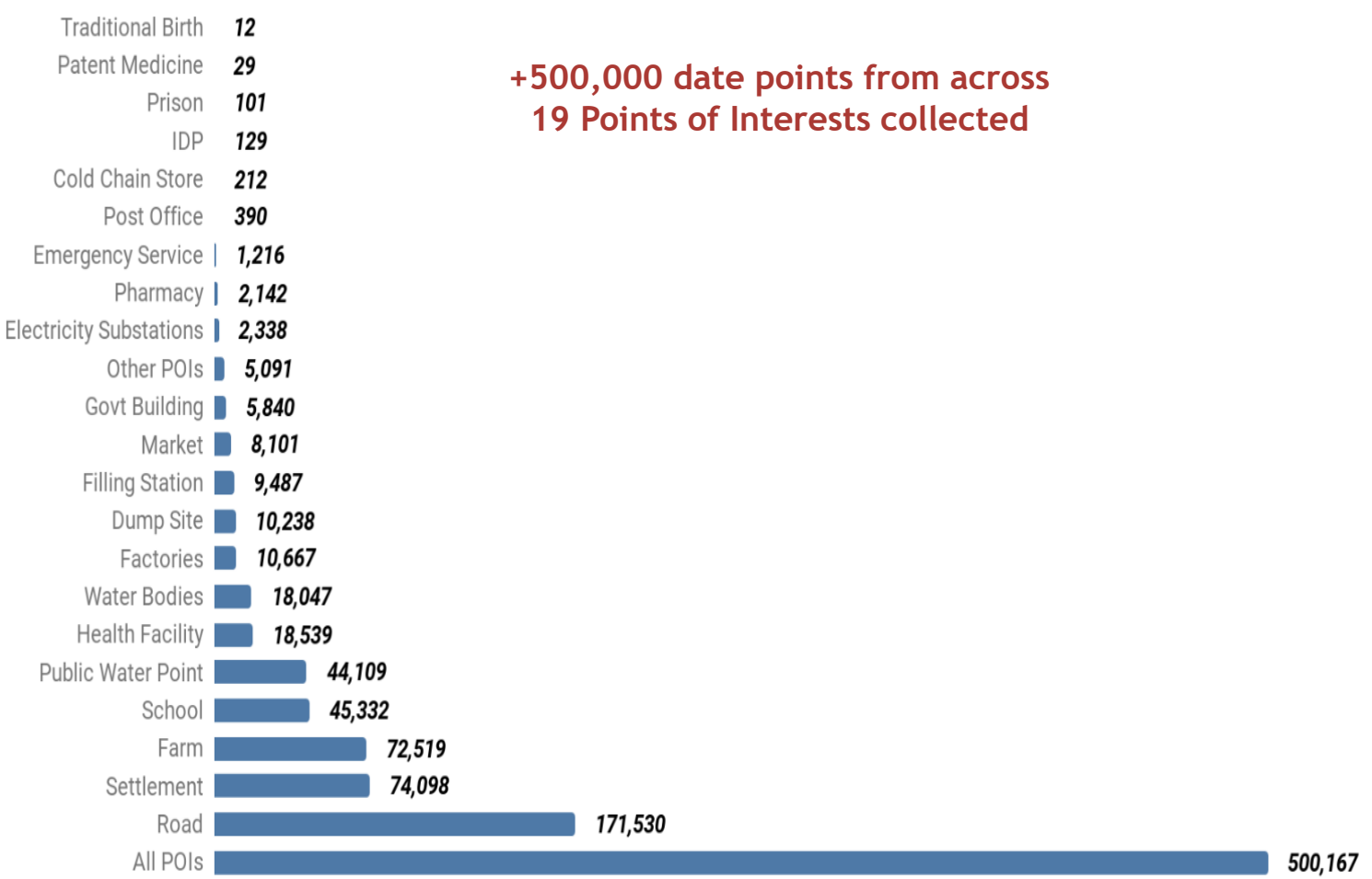
- Work with the Government of Nigeria to make effective and efficient use of geo-data across defined interventions - Health, Education, Water Resources, Agriculture, Demography etc.
- Develop innovative tools to support decision and policy making across the country at all levels (Tools and Use-cases)
- Build in-country capacity/capability (Federal & State level)
- Use cross-cutting power of core reference layers to enhance Nigeria Data Ecosystem
- Achieve a coordinated approach to the use and application of geo-databases for common good of Nigerians

Settlements locations

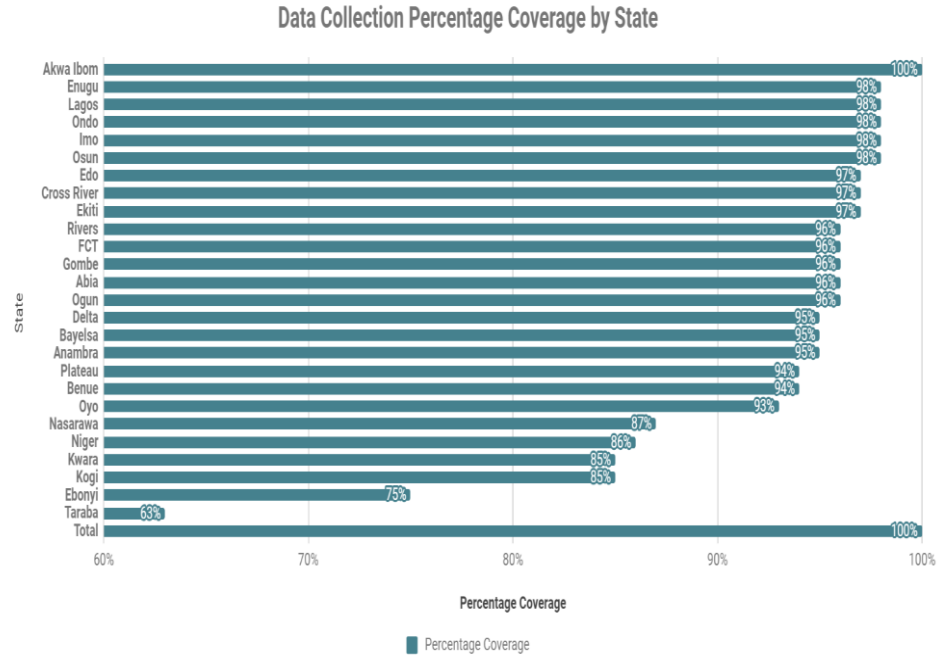
280,120 settlement (place) names



Other Spatial Data Improvements



+500,000 date points from across 19 Points of Interests collected



11 states fully mapped under Polio		GRID3			
		16 fully mapped states		10 mapped mop-up states	
Adamawa	Katsina	Abia	Imo	Akwa Ibom	Kogi
Bauchi	Kebbi	Anambra	Lagos	Bayelsa	Kwara
Borno	Sokoto	Benue	Ogun	Delta	Nasarawa
Jigawa	Yobe	Cross River	Ondo	Edo	Niger
Kaduna	Zamfara	Ebonyi	Osun	Fct, Abuja	Rivers
Kano		Ekiti	Oyo		
		Enugu	Plateau		
		Gombe	Taraba		

A total of 500,167 field points were downloaded from the Gather2 server at the end of the field data collection exercise in all the twenty-five GRID states and the FCT. A final check was carried out on all the devices used during the field data collection exercise to ensure that no data is left out. The average percentage coverage of all the 25 states and the FCT is 90%. This is the final status of the GRID3 data collection activities.

Govt. leadership & ownership is a critical success factor to GRID^3 Nigeria

- National Population Commission
- National Bureau of Statistics
- Ministry of Health & NPHCDA
- Ministry of Agriculture and Rural Development
- Ministry of Education & UBEC
- Ministry of Budget and Planning
- Ministry of Finance
- National Boundary commission
- Ministry of Water Resources
- OSGOF
- NASRDA
- Private Sector Organisations
- Development Partners (DFID, UNFPA)
- Global GRID^3 team (DFID,UNFPA)

Coordination remained a key strategy

- → GRID³ seeks to promote effective coordination amongst stakeholders
- → Coordination Platform

Steering Committee

Co-chaired by **Hon. Minister of Budget and National Planning** and **Hon. Minister of Finance**

Technical Committee

Responsible for providing **technical guidance** to Steering Committee and oversees **implementation**

GRID³ Secretariat

The **engine room** of GRID³ Nigeria. Provides secretariat and managerial support to the functioning

Our Goals

Short/medium term goals (6-24 months)

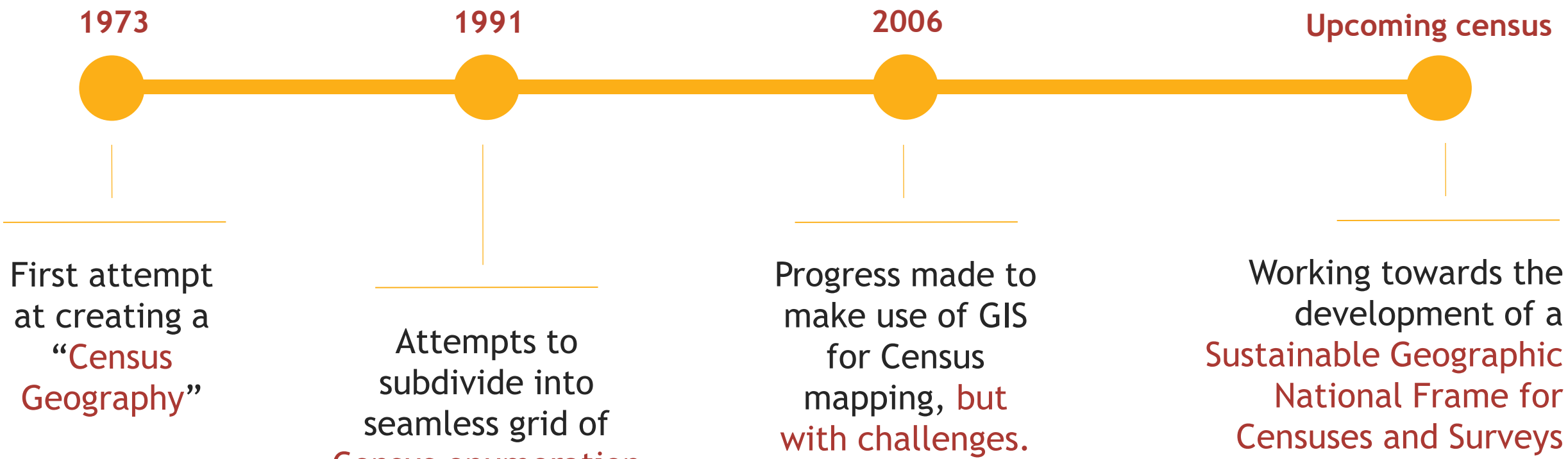
- Form Steering and Technical Committees to coordinate & oversee the project.
- Establish a national data portal and build capacity to Maintain, Update and Use the data portal
- Set up a national Spatial Data Infrastructure (SDI) plan.
- Achieve national consensus on boundary delineations at ward and local government area (LGA) levels.

Our Goals

Long term goals (>24 months)

- Develop and promote examples of data usage on health, education, agriculture, water resources, etc.
- Support planned national population and housing census activities and surveys
- Develop in-country capacity to maintain and drive the GRID3 philosophy in a sustainable manner
- Continue to maintain and update the data portal

Census in Nigeria: paradigm shift to GIS technology



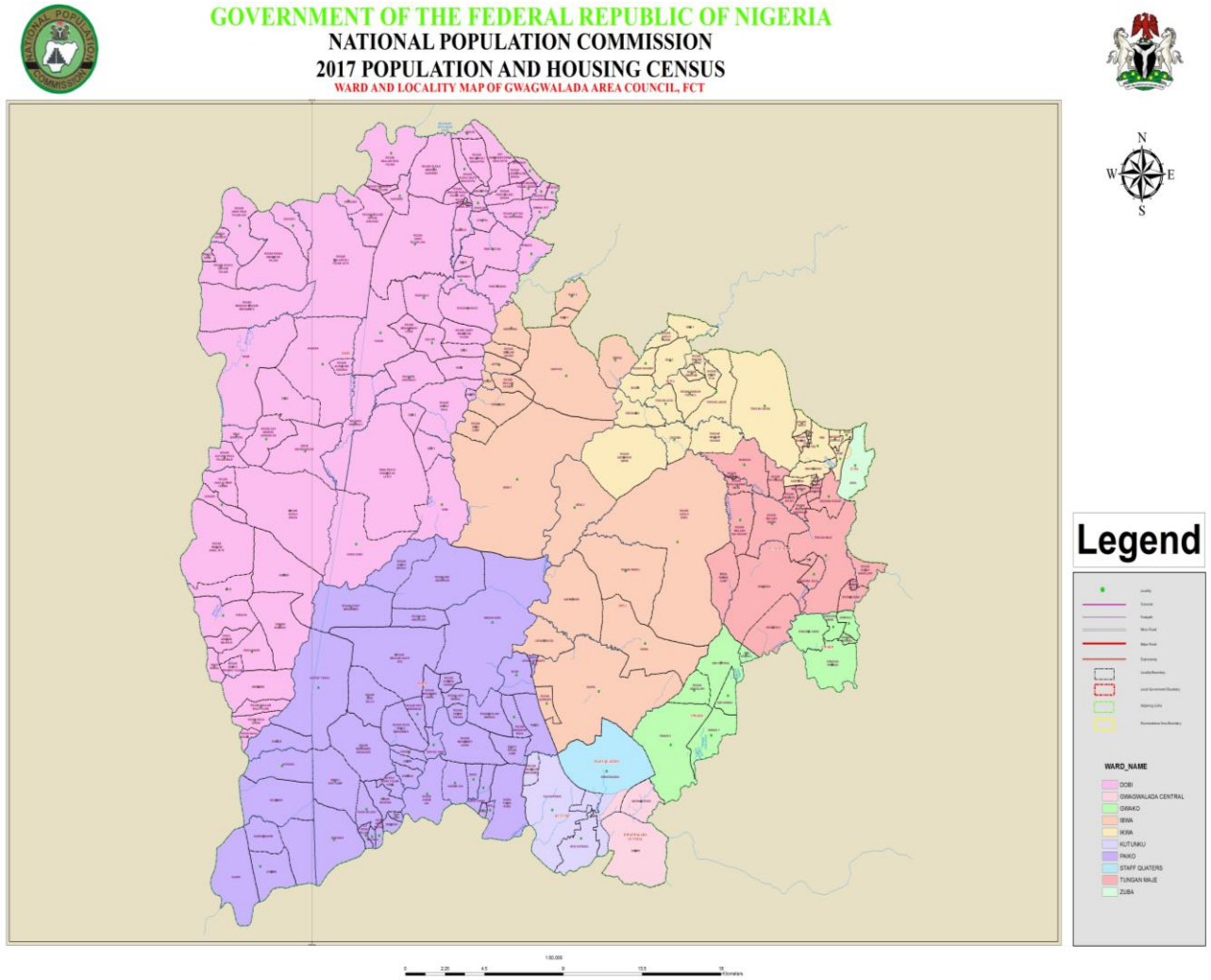
Census in Nigeria: paradigm shift to GIS technology

- Cost & Time reduction are some of the benefits of GIS based census process

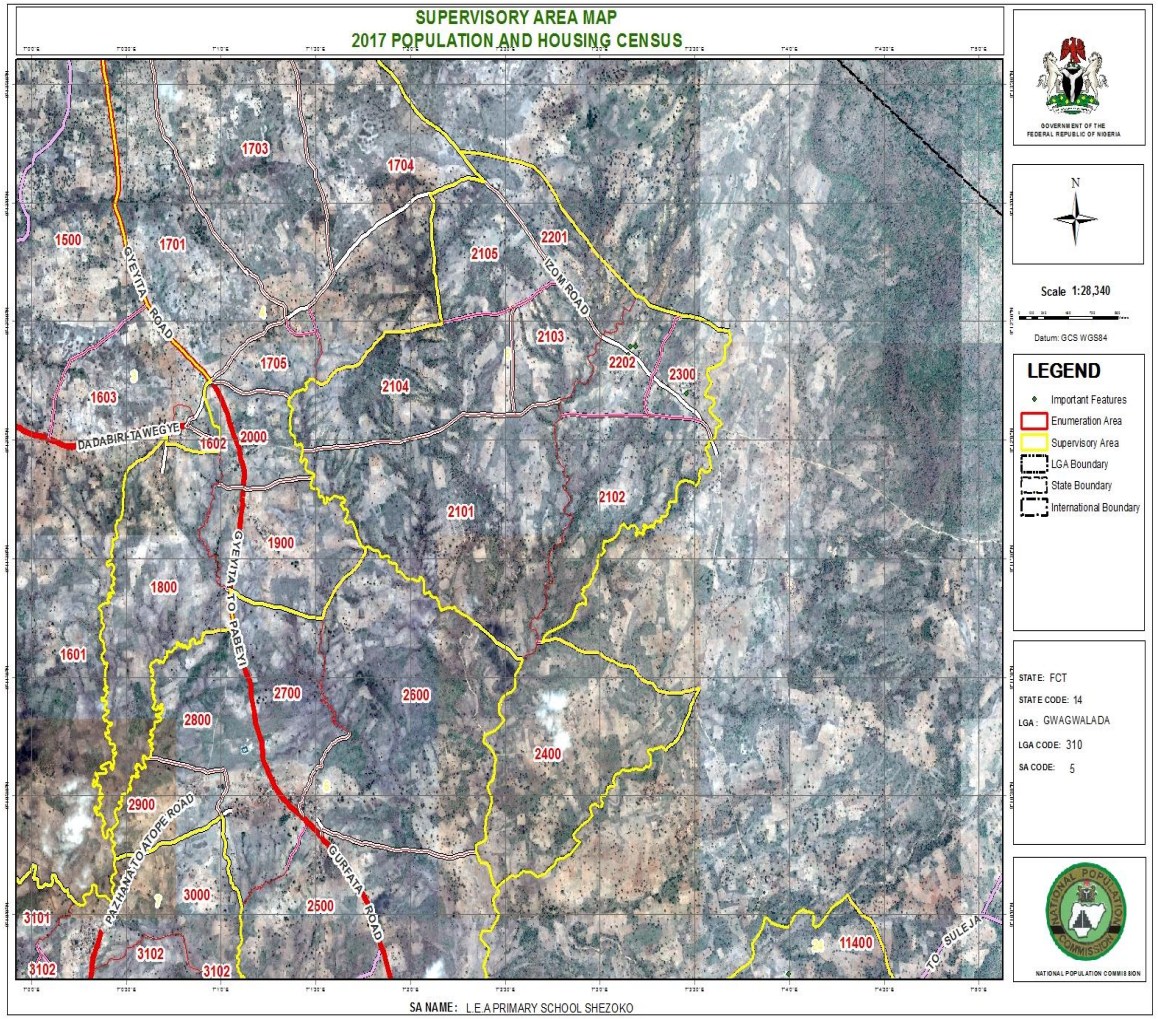
- Generally, GIS application cut across the three stages in the census process:
  - Pre-enumeration
  - During enumeration
  - Post-enumeration

- Heterogeneity and complexity of census datasets requires appropriate tools such as Satellite Remote Sensing (SRS) and GIS to handle it.

Digitised maps



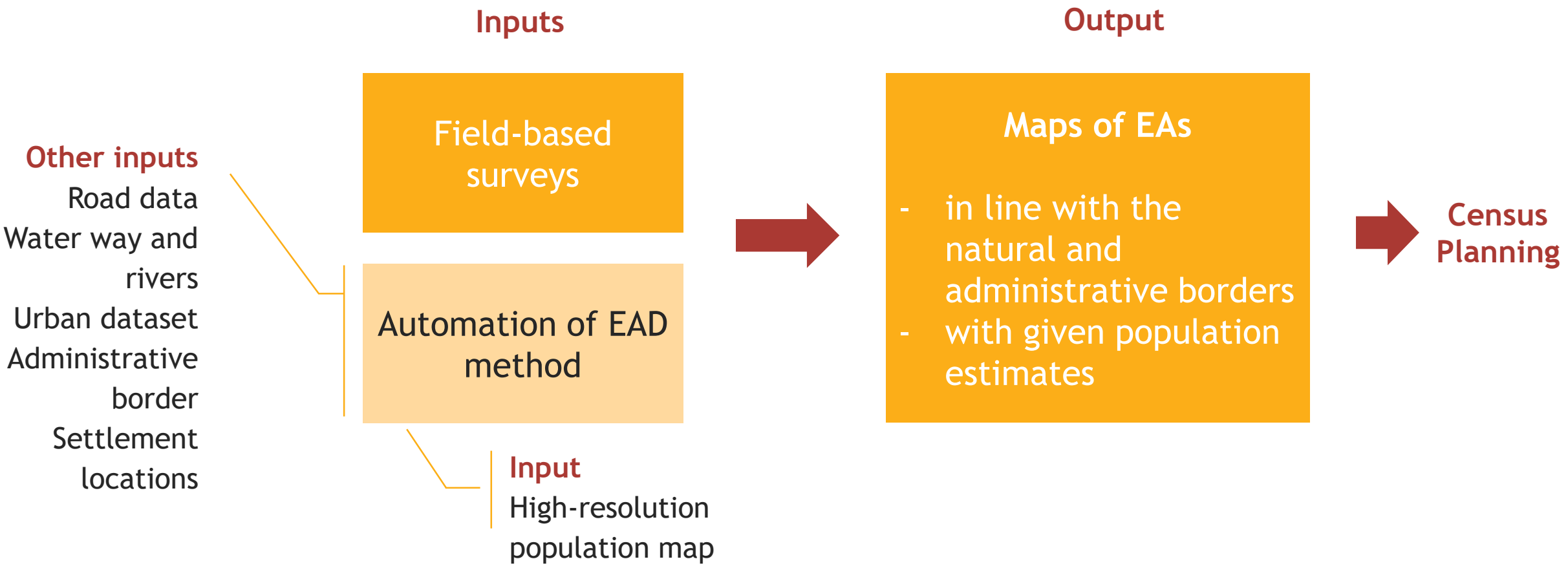
Digitised Ward and LGA map: FCT



Digitised supervisory area map: FCT

Automatic Designation of Sensible Enumeration Areas (EAs): GRID³ perspective for improved planning

Enumeration area demarcation (EAD) is a key component of population census planning. It involves approaches that requires population estimation before demarcating EAs for census.



GRID^3 NIGERIA

Thanks for listening