

Geography and the Statistical Value Chain CS 2016

Mr. Coleman Dube
Geography
ISIbalo July 2016

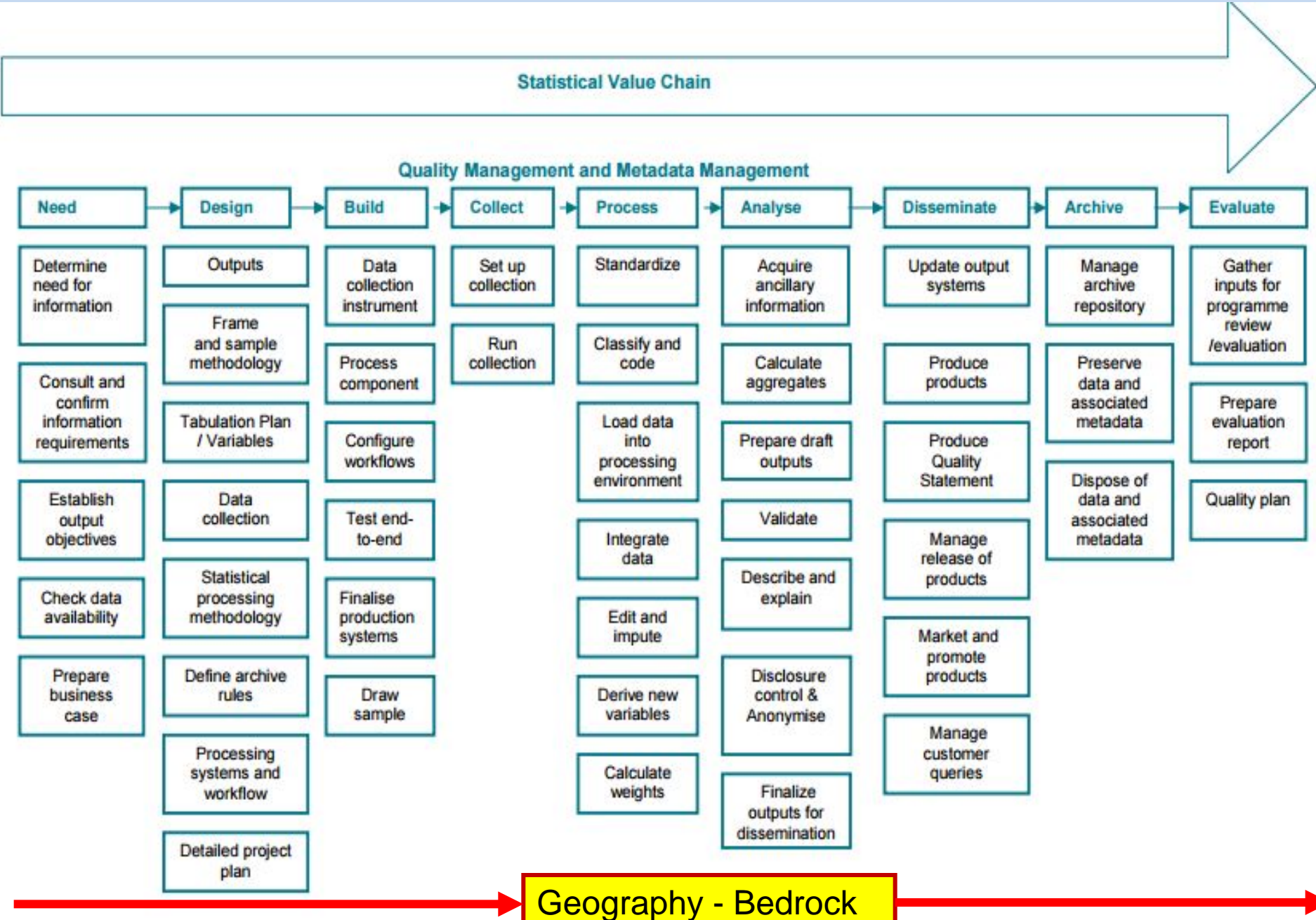
Statistical Value Chain

- Introduction
- Statistical Value Chain
 - Need
 - Design
 - Build
 - Collect
 - Process
 - Analyse
 - Disseminate
 - Archive

Introduction

- Geography is the bedrock of the organisation's core functions and activities
- Geography Supports the Statistical Value Chain from beginning to end for Censuses and Surveys as well as any other activities e.g.
 - Internal activities – CS2016, CS2016 Evaluation Survey
 - External activities – IEC, Geo-Coded Address Identifiers
 - User paid surveys – KZN CSS, NCSS, SADHS

Statistical value chain

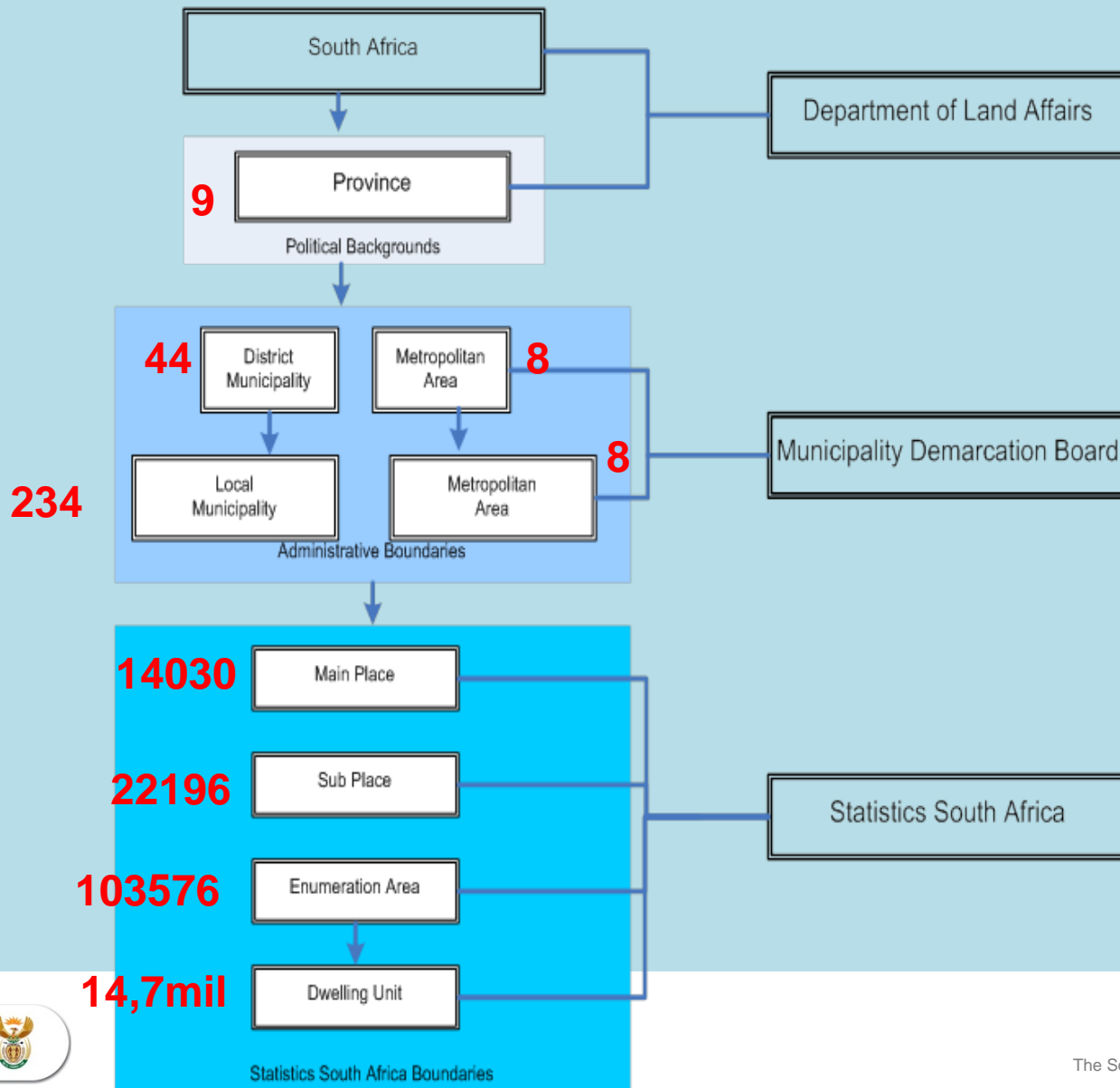


Need assessment

Geography forms the core of discussion during the identification of needs as it provides:

- Baseline information
- Benchmark
- Scope of the problem (spatial)
 - Stakeholders participants require geographical information to hold informed discussions

Design - Geographical Hierarchy



Design - Sample Methodology

- Dwelling Frame (DF), EAs, Local Municipalities used as the sampling Frame for:
 - CS2016, CS2016 Evaluation Survey
 - SADHS
 - KZN-CSS, NCSS
- Dwelling Frame, EAs and Place Names used to resolve:
 - IEC Issues of voters without sufficient address information

Geography adopting spatial and mobile technologies

Game changer:

From Traditional methods to mobile technologies

- Cost saving
 - Shorten the data processing period
 - Improved quality – in-built quality checks
 - Really time monitoring

Design - Data collection

- Geographical Hierarchy Frame used to facilitate data collection Censuses and Surveys:
 - Planning
 - Sampling
 - Logistics
 - Field Operations
 - Monitoring
 - Processing
 - Analysis
 - Products
 - Dissemination

Build -Data Collection instruments

Geography plays a vital role in field operations

– *Silverlight* Dwelling Frame Update

- Application used to update spatial points (DUs) and associated dwellings:
 - Moving Points
 - Deleting Points (obsolete)
 - Creating Points
 - Updating Attribute information

– Navigation Tools

- ORUX – KZN-CSS: navigating to sampled DUs
- GoSurvey – Tailor made to facilitate CS2016 and CS2016 Evaluation Survey : navigating to sampled DUs

The Dwelling Frame

- The Dwelling Frame is a point based data set (coordinates) of all structures in the country.
- Feature Classification Categories:
 - Dwelling Units
 - Business
 - Service
 - Recreation
 - Special Dwelling Institution
 - Other

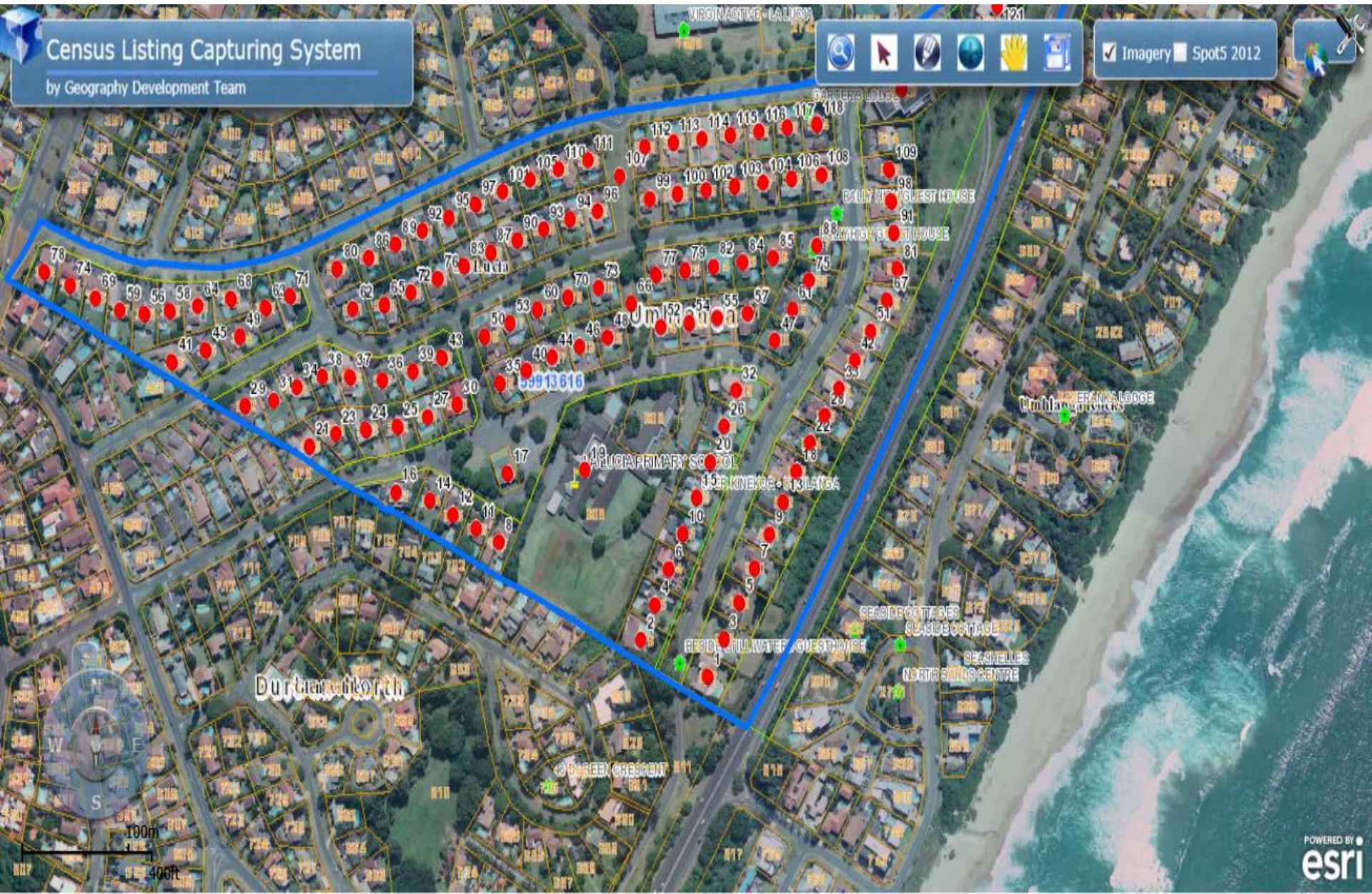
The Dwelling Frame



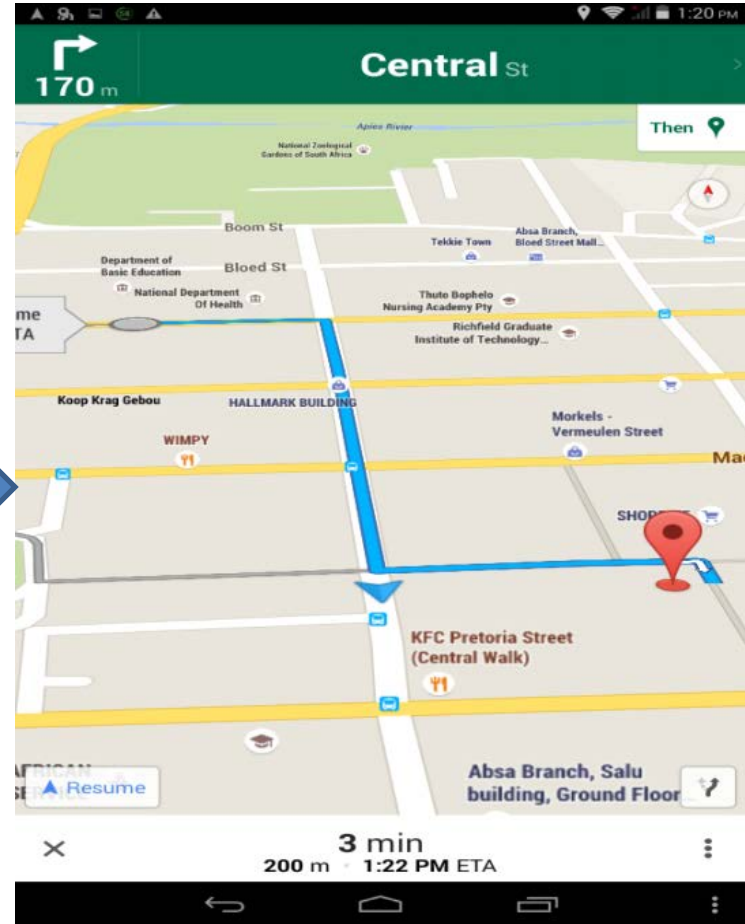
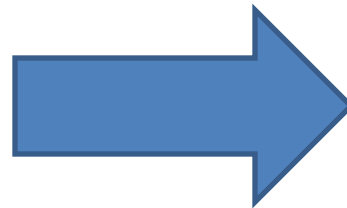
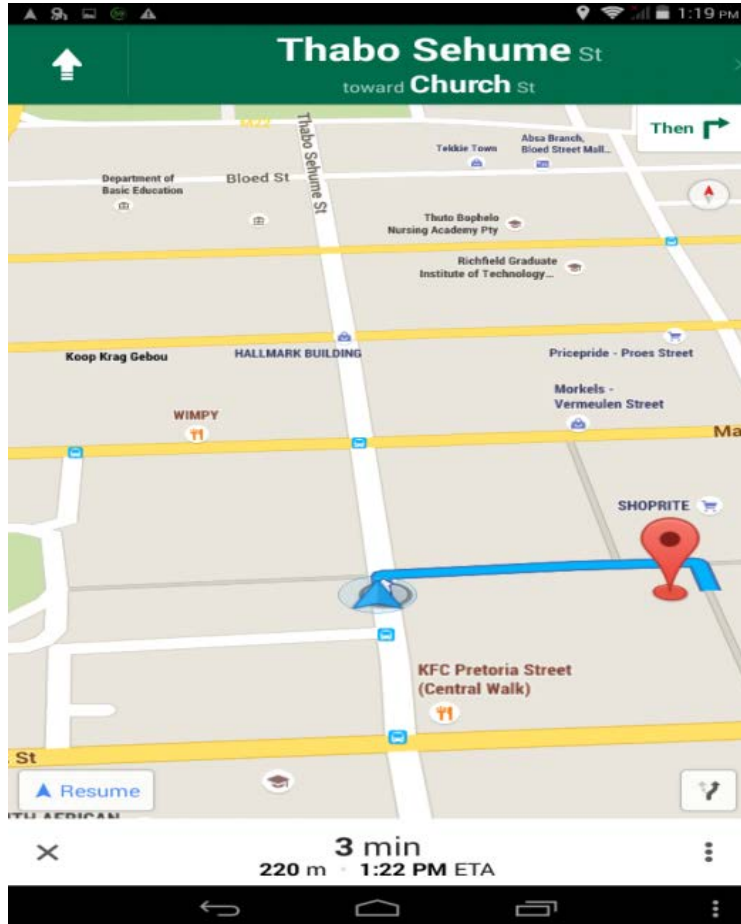
A Spatially Referenced Point on
a Structure (coordinate)



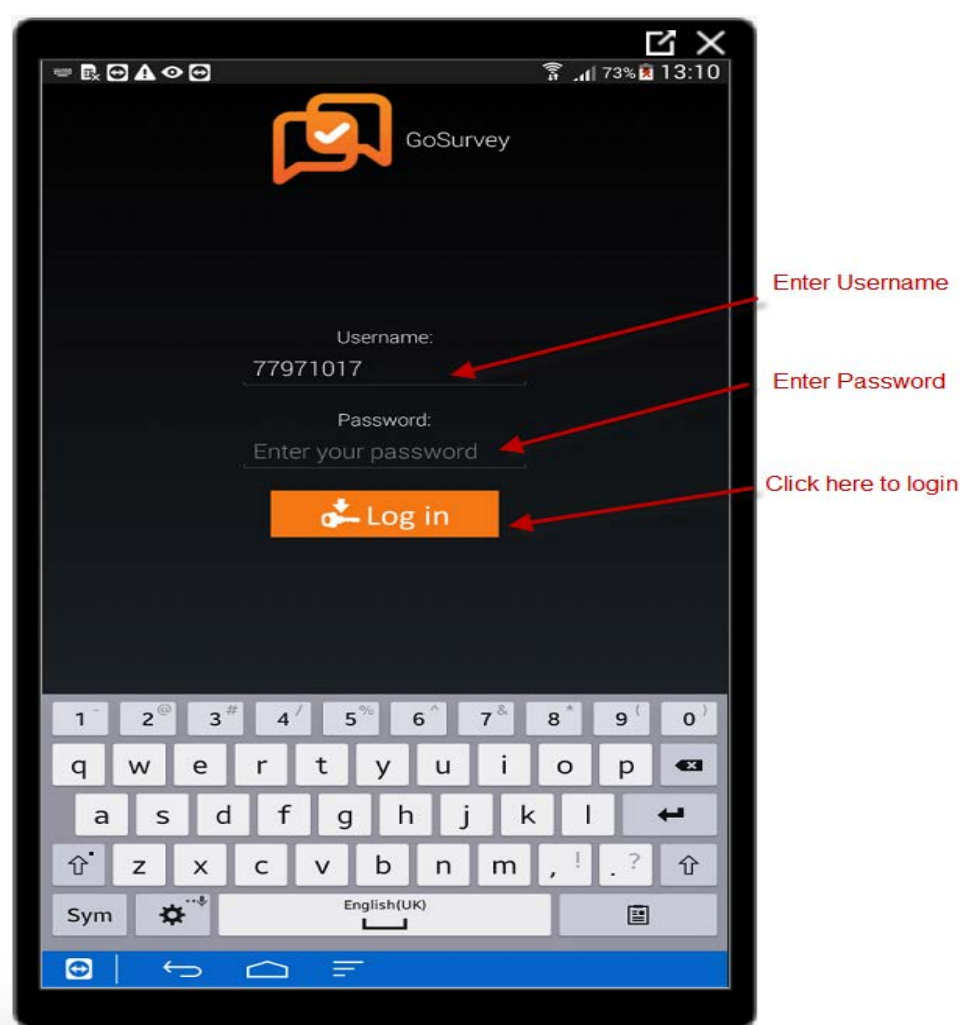
Data Collection instruments: Dwelling Frame Update



Data Collection instruments: ORUX Navigation Tool



Data Collection instruments: GoSurvey Navigation Tool

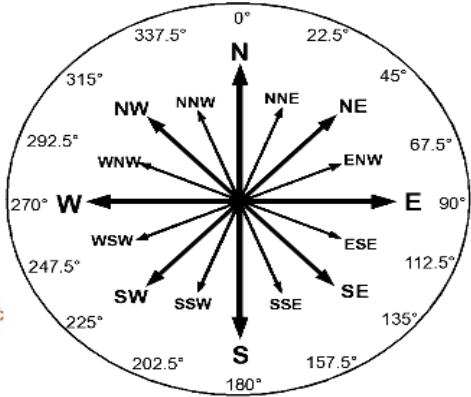
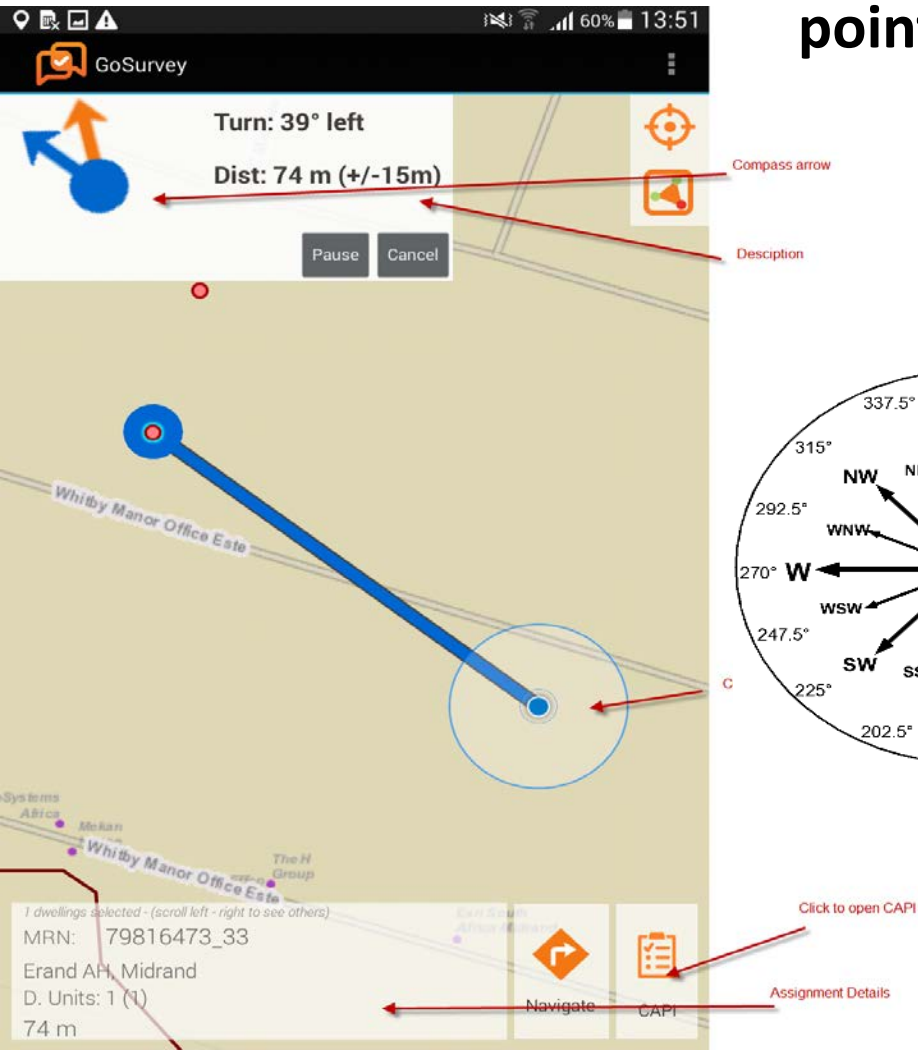


- Uses login details per Field Work Unit (FWU)
- Username and password are the same (FWU Number)
- Once-off downloading of assigned workload on first sign-on per FWU

Direction and distance towards the sampled point

The orange arrow is your direction towards which you are walking (It is always 0° zero degrees)

The blue arrow is the direction to your sampled point.



The aim is for the orange and blue lines to point the same direction and distance reduced

Collect - Monitoring progress

- Monitoring progress: visual and real time progress during fieldwork activities for CS2016 and CS2016 Evaluation using GoSurvey:
 - DUs were tracked using the change in colour for associated points:
 - Red – Not Touched
 - Yellow – In Progress
 - Green – Completed
 - Distance also used to ensure the correct DUs were visited
 - All points 30+ meters away, were system rejected so that supervisors and field monitoring teams could verify them
- **NB: Drastically improved Quality and Response Rate**



Tap MRN

Process

- **Classify and code** – Geography Used in instances of the Migration and Place of Birth Section in the Questionnaire
 - Coding places of Origin – Place name, Municipality, Country etc.
 - Coding destination places – Place name, Municipality, Country etc.

Analyses

- **Aggregation** – Geography is used to aggregate data hierarchically:
 - Dwelling Unit (DU)
 - Enumeration Area (EA)
 - Sub Place Name (SP)
 - Main Place Name (MP)
 - Local Municipality
 - District Municipality
 - Province
 - Republic of South Africa

Analyses

- **Validation** – Geography is used to Validate data to ensure:
 - It is correct
 - Spatially within the correct boundary
 - Acceptable standard
 - Consistency
 - Quality (according to specifications)

Analyses

- **Describe and explain**
 - Visualization of statistical data
 - Adding a spatial dimension
 - Display spatial relationships and distributions

Disseminate

- **Output systems** – geography used to inform the design of the output tools and systems for interactive mapping products:
 - Digital Atlas: any spatial entity in map, graph, tabular and report form
 - SuperCross: cross-tabulations, maps and tables
- **Products** - geography used to inform products:
 - Community Profiles
 - Thematic products (in a certain area)
 - Poverty Index, Unemployment Index, Service delivery Index, Quality of life Assessment, etc.

Archive

- **Previous spatial frames** – every census year a new frame is created since 1991 to 2011
 - Census 1991
 - Census 1996
 - Census 2001
 - Census 2011

THANK YOU