Gauteng City Region Observatory

Quality of Life Survey 2015

Technical Report

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1   Introduction

Every two years the Gauteng City-Region Observatory (GCRO) conducts a Quality of Life (QoL) survey with respondents from across South Africa's Gauteng Province. The aim of the survey is to gauge the changing socio-economic circumstances and social and political attitudes of residents across the region.

Ask Afrika was commissioned to conduct the 4th QoL survey in 2015 in which a final sample of 30 002 interviews was achieved.

The purpose of this report is to describe the survey's research methodology, sampling procedures, fieldwork, and quality assurance processes. The report details problems and limitations encountered, how they were resolved, and outlines a set of recommendations for future QoL surveys.

2   Basic Methodological Principles

2.1   Data collection

A Computer Aided Personal Interviewing (CAPI) method was used for the fieldwork. This is a face-to-face interviewing method that utilises a portable electronic device, such as a tablet, from which the interviewer reads the survey questions and captures the responses. The CAPI methodology can be used for closed and open ended questions.

2.1.1   Hardware used

A total of 120 tablets were used for the data collection. Various makes and models were used including:

- Samsung Galaxy Tab 3 / Lite,
- Samsung Galaxy Tab 4.
- Nexus 7,
- Vodacom Smart Tab 3G,
- Lenovo Tablet Yoga 10, and
- Mecer Tablet 7".

2.1.2 Software/operating system - the application of "SurveyToGo"

SurveyToGo software on the Dooblo platform was installed and used on all the tablet devices. The tablet software supports handheld data collection on devices with either Android or Windows operating systems. The SurveyToGo software provides a robust platform for interviewing and is simple to use, both on the back- and front-end. The software functionality includes question branching, skipping and looping, GPS location capturing, recording capability, exporting into Excel and SPSS, and has offline data collection support.

2.2 Research instrument

The research instrument was designed by the GCRO and the final questionnaire included 228 questions, of which 224 were closed ended and 4 open ended questions. In addition, 32 questions contained '*other specify*' response options, which were coded back into the original response frame after the fieldwork was completed. The 12 sections of the questionnaire included:

1. Dwelling and household information, access to services, satisfaction with services;
2. Migration into Gauteng;
3. Community/suburb;
4. Transport;
5. Internet access and household characteristics;
6. Public participation, satisfaction with government, social and political views/opinions;
7. Personal life;
8. Employment;
9. Crime, safety;
10. Community participation, protest activity;
11. Health; and
12. Demographic and household information.

The final questionnaire was translated into Afrikaans, Sesotho, isiZulu, and isiXhosa by a professional linguistic and translation agency.

2.3 Questionnaire programming

The questionnaire was programmed to include question skips, logic checks and randomisation of questions. Some of the questions were randomised to avoid possible response bias, which can occur when a number of similar questions are asked in sequence. A number of groups of questions were differently ordered for each respondent (e.g. for Q6.6-Q6.8 the order for one

respondent may have been Q6.6; Q6.8, followed by Q6.7, whereas another respondent may have seen the following order: Q6.7; Q6.6, followed by Q6.8.). Randomisation was applied to the following questions:

- Q6.6-6.8 "How satisfied are you with the performance of:
    - o Q6.6 The National Government,
    - o Q6.7 The Gauteng Provincial Government and
    - o Q6.8 The Local Municipality where you live."

- Q11.20 – 11.22 were also randomised: "The following questions ask about how you felt yesterday on a scale from 0 to 10. Zero means you did not experience the feeling "at all" yesterday while 10 means you experienced the feeling "all of the time" yesterday.
    - o Q11.20 How about happy?
    - o Q11.21 How about worried?
    - o Q11.21 How about depressed?"

A number of logic checks were programmed into the questionnaire to ensure consistency across respondent responses. In each case where a logic check was violated an error message would be activated and the interviewer was required to review these responses with the respondent and to adjust the selections where appropriate. The following checks were included:

- Respondents that selected that they were paying off a bond (Q1.3, were given an error message if they later identified that they were not in debt (Q5.6).

- **Q4.1 and Q4.5 and Q4.6:** Although Q.4.4 and Q4.5 were spontaneous response questions, respondents were prompted by the interviewer about whether they walked as one of the modes in their most frequent trip (Q4.1). This was done because many respondents in the past have not thought of walking as a mode of transport and have thus neglected to include it in the range of modes that they utilise.

- **Q5.2 and Q5.7:** Respondents that selected that they accessed the Internet from home, on a cell phone/tablet or laptop in Q5.2 were given an error/check message if they later then indicated that they do not have a cell phone, computer, laptop or Tablet, or Internet connection (Q5.7).

- **Q6.4 and Q6.25:** Respondents that indicated that they had attended an Integrated Development Plan (IDP) meeting (Q6.4) **were** given an error message if they later indicated that they had never heard of IDP (Q6.25).

2.3.1 Changes made to the research instrument and data corrections

During fieldwork a number of changes were made to adjust for errors and omissions that crept in during design and programming.

Initially the 'age' variable was captured in the respondent selection section of the questionnaire. In some cases the person that reported the respondents age was not the respondent themselves, which led to some inaccuracies. In light of this, an additional age question was added later on in the questionnaire for the respondent to answer directly (this change was implemented on 12 October 2015). This issue was identified in the call backs. Incorrectly captured age responses that were identified in the call backs were corrected in the data (see data report for further detail).

Due to a questionnaire programming error, 'Semi-detached house _not_ in a complex' was programmed as 'Semi -detached house _in_ a complex'. This error remained throughout the duration of fieldwork. A total of n=175 respondents selected this option, and their responses were recoded from 'Semi -detached house _in_ a complex' into 'Cluster house in a complex'. There were 2 open-ended responses that indicated dwelling type was 'Semi-detached house _not_ in a complex', these were coded into the 'Semi-detached house _not_ in a complex' category.

2.4 Coding of open ended 'other specify' responses

There were 32 questions where '*other specify*' options were provided in addition to the predefined response frame. The verbatim responses were coded back into the original question options where possible, and where not possible the responses remained coded as 'other'. There were a few instances where the response frame was adjusted based on the 'other specify' responses. (Please refer to the QoL 2015 Data Report for the list of questions that were coded and the number of open ended and '*other specify*' responses).

The '*other specify*' responses were coded throughout and after the data collection phase.

Q8.4 was an open-ended question in which respondents were asked "What does your business do". The verbatim responses were coded according to the seventh edition of the 'Standard industrial classification of all economic activities' (SIC7) (StatsSA, 2012). The responses were

classified according to the first four levels of SIC7, including Section, Division, Group and Class. (*For further detail on SIC7 see 'Standard Industrial Classification of all Economic Activities (SIC) Seventh Edition/ Statistics South Africa. Pretoria: Statistics South Africa, 2012'*)

2.5 Pilots

Ask Afrika conducted three pilot phases including an internal, an external and a programming pilot phase.

2.5.1 Pilot phase 1: Internal pen and paper method

The first phase took place on the 23rd of June. Two interviewers were briefed on the questions and their logic patterns. Each interviewer then conducted a 'pen and paper' interview with Ask Afrika employees. The interviewers then provided feedback on their experiences of administering the questionnaire. The two interviews were also assessed in terms of length, flow, and comprehension. Both internal pilots took approximately 70 minutes.

2.5.2 Pilot phase 2 – External pen and paper method

The second phase of the pilots took place on the 24th of June. This included two external pilots that were conducted with respondents who had been recruited from Mamelodi and Soshanguve respectively. The interviews were video recorded and live-streamed for assessment purposes. The interviews were conducted with paper and pen, and again each interviewer provided feedback on their experiences of administering the questionnaire. The external pilots took 77 minutes and 57 minutes respectively. The length of these pilot interviews was affected by limited training on the questionnaire and the use of pen and paper rather than the CAPI. The purpose of these pilot interviews was to assess flow and comprehension of the questionnaire rather than an accurate assessment of responses, because factors such as location (at the Ask Afrika offices) and the use of video recording equipment likely affected the responses that were selected, particularly for sensitive questions. In addition, after completion of these pilot interviews each respondent received a R300 incentive for participating in the process.

2.5.3 Questionnaire feedback after the first and second pilot phases

After the first and second phases of the pilots were completed the following recommendations were made. Respondents commented that some portions of the questionnaire became tedious, in particular when there was a long series of questions with the same response format.

Thirdly, question wording changes and the need for definitions/explanations of concepts were identified.

The following changes were made based on the pilot feedback and GCRO streamlining the questionnaire:

- A standardised introduction was included in the survey instrument.
- Show cards were created for frequently used response options, such as the five-point satisfaction and agreement scales (Please refer to Appendix A Show cards).
- The wording of the following questions was changed:
  - Q1.3: "Please tell me about your tenure in this dwelling" was changed because "tenure" was an unfamiliar concept. The final question wording was changed to: "Please tell me about this dwelling you live in. Is it:";
  - Q3.1: "Have you seen an improvement and/or deterioration in this community or suburb in the last 12 months?" was ambiguous because of the "And/or". The final question wording was changed to: "Have you seen an improvement or deterioration in this community or suburb in the last 12 months?"
  - Q5.6: "Do you owe money to anyone including a bank or a shop or a money lender?" was changed to align with the previous surveys. The final question wording was changed to: "Many people are in debt at the moment, either from credit cards or bonds or other types of debt. Do you owe money to anyone including a bank or a shop or a money lender?"
- The following response options were changed:
  - Q4.6: "How often, if ever, do you use Bus Rapid Transit (BRT) systems (e.g. Rea Vaya BRT, A Re Yeng TRT)", was changed from 'Daily', 'Often', 'Hardly ever' and 'Never' to 'Daily', 'Weekly', 'Monthly' and 'Never', to ensure better alignment with the following question related to satisfaction with BRT.
  - The response option "Internet connection" in Q5.7: "Does this household have any of the following that are in good working order, that is not broken?" was expanded to "Internet connection (e.g. modem, ADSL)" to avoid confusion with other types of internet access (e.g. cell phone).
  - Q6.25: The question "Your local council is meant to develop a plan for developing your area, called the Integrated Development Plan or IDP. Have you ever heard of IDPs before?" was changed to "Your local municipality is meant to develop a plan for developing your area, called the Integrated Development Plan or IDP. Have you

ever heard of IDPs before?" The word "municipality" eliminated possible confusion between the municipality structure and the local councillor.

o The word "foreign people" in the third statement of Q6.42 was changed to "foreigners" for consistency. The final wording was changed to "Imagine that there are three friends who are talking about life in Gauteng. The first one says: "Gauteng should be for South Africans only. They must send the foreigners back to their countries." The second one says: "A lot of foreigners came to work in South Africa for poor wages under apartheid. We all suffered under the same system. They should be allowed to stay." The third one says: "Foreign people living in Gauteng are alright, but only if they have legal permission from the government." Which one person best describes how you feel?"

o Q6.55: The question "I most strongly identify with…" was changed to "Which of the following do you most strongly identify with?..."

o Q8.28: The option "financial services" was changed to "banks."

o Q8.30: The full word for EPWP and CWP was added to the question and the final question wording was "During the past 12 months, did you work in any government job creation programme, such as Jozi@work, Expanded public works programme or Community Works Programme."

o The wording for Q10.1 was changed from "In the past year, have you participated in the activities of any of the following clubs?" with a multi-mention list of response options to "In the past year, have you participated in the activities of any clubs or societies (e.g. religious organisation, sports club, burial societies, rate payers, choir etc.)" which required a Yes/No response.

o Q11.9: The question "In the past 12 months, did anybody in this household not seek health care when they needed it?" was changed to "In the past 12 months did anybody in this household fail to look for healthcare when they needed it?"

o Q11.10: The question "What was the MAIN reason that no health care was sought?" was changed to "What was the main reason that they didn't get the healthcare?"

o Q11.11: The response options were changed to be mutually exclusive (see Table 1**Error! Reference source not found.**)

o Q12.8: The question "Does anybody in this household receive a social grant of any type, such as an old age pension, child care or disability grant, or is anyone registered on a municipal indigency register?" was changed to "Does anybody in this

household receive a social grant of any type, such as an old age pension, child care or disability grant?"

- o Question 12.9: "Is anyone registered on the indigency register" was changed to "Is your household registered with your municipality (e.g. on an indigency register) for rates rebates or for more free/subsidised services like water, electricity, waste etc.?"

Table 1: Wording changes made to Q11.11 after pilot phases 1 and 2

Previous wording	Revised wording
R100 or less	None, less than R100
R500 or less	R101- R500
R1 000 or less	R501- R1 000
R5 000 or less	R1 001 - R5 000
R10 000 or less	R5 001 - R10 000
More than R10 000	More
No or Don't know	Don't know

- The following questions were removed:
    - o "What is the tenure of your business premises" – The question was removed.
    - o "In the past 12 months, how often did you or any household member have to eat a limited variety of foods due to a lack of resources (money)?"
    - o "In the past 12 months, how often did you or any household member have to eat a smaller meal than you feel you needed because there was not enough food?"
    - o "In the past 12 months, how often did you or any household member have to eat fewer meals in a day because there was not enough food?"
    - o "Do you interact regularly with the community where you live in an organised way"
- The following questions were added to the questionnaire:
    - o Q5.10 "Are there any children in this household that benefit from a school feeding scheme",
- Q12.10: numerical values were shown together with the response options on a show card for the question "Can you tell me what is the total amount of money brought into the household per month by all household members? This is after deductions such as tax, medical aid and pension contributions."
- In addition, some of the questions were moved to different sections/areas of the questionnaire to avoid the disruption of the flow of the questionnaire.
- A series of logic checks were identified and subsequently programmed into the questionnaire. See section 2.3 for details on these logic checks.

2.5.4   Pilot phase 3

The third pilot phase consisted of testing the skip and trigger patterns of each section of the programmed questionnaire on the tablet devices. This involved checking that the programmed version matched the exact paper version especially comparing the interviewer instructions, and questionnaire skip logic. The GCRO team received a tablet for testing the programming as well. After rigorous testing (by running various scenarios through the programmed version) from both teams and adjustments to the programming, the final questionnaire was signed off.

2.6   Changes made to sub-place list for 8.7 and 8.8

Due to issues in previous QoL surveys, the following changes were made to the sub-place list that was used in the questionnaire for Q8.7 and Q8.8:

1.   All sub-places with 'NU' (non-urban) in the sub-place name were removed as per Table 2.
2.   Some sub-places with 'SP' were removed to avoid confusion with the actual central areas within each main place, as per

4. Table 3.

5. A number of sub-places were renamed to avoid confusion and ensure that the central/CBD was selected where appropriate. Names were changed in the questionnaire as per

6. Table 4. The original sub-place names and codes are used in the final dataset.

Table 2: Sub-places including 'NU' that were removed from the questionnaire version of Q8.7 and Q8.8

Sub-place code	Sub-place name
798002003	City of Johannesburg NU
797002003	Ekurhuleni NU
760006002	Emfuleni NU
762004002	Lesedi NU
766002002	Merafong City NU
761002002	Midvaal NU
763001002	Mogale City NU
764003001	Randfontein NU
799026001	Tshwane NU
765004002	Westonaria NU

Table 3: Sub-places including 'SP' that were removed from the questionnaire version of Q8.7 and Q8.8

Sub-place code	Sub-place name
799059090	Centurion SP1
799059089	Centurion SP2
799059002	Centurion SP3
799059012	Centurion SP4
799035104	Pretoria SP
764002031	Randfontein SP1
760009006	Vereeniging SP1
760009026	Vereeniging SP2

Table 4: Sub-places that were renamed to include 'Central/CBD' in the questionnaire for Q8.7 and Q8.8

Sub-place code	Sub-place Original name	Sub-place name to appear in drop down list
798015089	Johannesburg SP	Johannesburg central/CBD
797006020	Kempton Park SP	Kempton Park Central/CBD
760009032	Vereeniging Central	Vereeniging Central/CBD
762014004	Heidelberg Central	Heidelberg Central/ CBD
766004009	Carletonville Central	Carletonville Central/CBD
761006012	Meyerton Central	Meyerton Central/CBD
763004038	Krugersdorp Central	Krugersdorp Central/CBD
764002017	Randfontein SP	Randfontein central/CBD
799035058	Pretoria Central	Pretoria Central/CBD
765008001	Westonaria SP 1	Westonaria Central/CBD
797007010	Edenvale SP	Edenvale Central/CBD
797026002	Tsakane SP	Tsakane Central/CBD

2.7   Interview duration

On average the interviews took 45 minutes to complete. The distribution of the duration of interviews is presented in Figure 1. Some 11% of the interviews were recorded at more than two hours in length. The extended interview length can be attributed to a range of factors including:

- Fieldworkers not closing the interviews properly on the devices after completing an interview.
- Interviews that began, but were completed at a later stage, as arranged by the fieldworker and respondent.
- Tablet times not synchronised back to the start of the interviews.
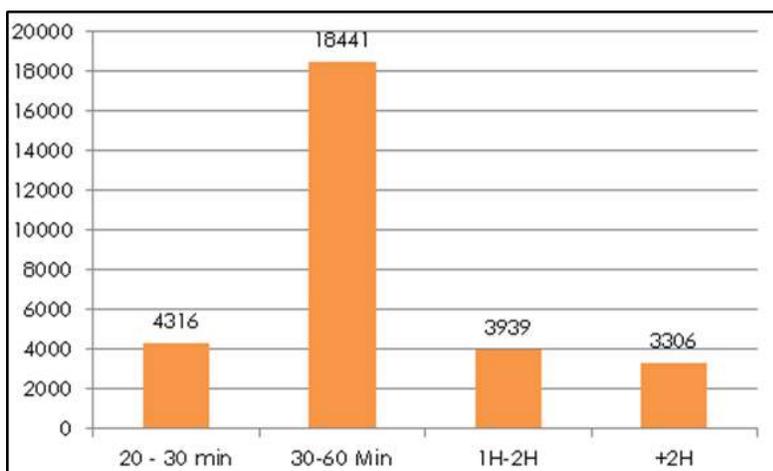
Figure 1: Distribution of interview duration

2.8   Misinterpretation of questions

Fieldworkers/respondents provided inappropriate answers in certain instances, where they did not understand the question. These instances include:

- In Q1.9 fieldworkers captured more than one type of electricity source which could not be used in conjunction with each other for example:
    - o   Electricity with prepaid card
    - o   Electricity with smart meter
    - o   Electricity with conventional meter

  These errors were kept in the data file. Refer to Appendix 4 for respondents who indicated that they used a conventional meter, as well as a Prepaid Meter or Smart Meter.

- In Q2.1 some respondents indicated that they migrated to Gauteng from another county, however, in the follow up question (Q2.3 Which country did you move into Gauteng from?) they indicated that they had moved from a province within South Africa. Similarly some respondents indicated that they migrated to Gauteng from a province within South Africa, however, in the follow up question (Q2.2 From which province did you move into Gauteng?) they indicated that they had moved to Gauteng from another country. In both situations, the original response in Q2.1 was changed to correspond with the detailed responses provided in the subsequent questions.

- Fieldworkers misinterpreted the dwelling type questions. In some instances the following answers were misinterpreted as 'House, brick or concrete structure on a separate stand':
    - o   Cluster house in a complex

- o   Semi-detached house not in a complex
- o   House, flat or room separate from main dwelling in backyard
- o   Unit in a retirement home or barracks etc.

3   Sampling

A stratified multistage sample design was designed for the 2015 QoL survey by Dr Ariane Neethling. A sample of 30 000 South African residents, 18 years and older in Gauteng was drawn and was spread across all 508 wards in the province.

3.1   Sampling frame

Since Statistics South Africa (StatsSA) did not release an EA (enumerator area) sampling frame based on the 2011 population census, a new 2011 EA sampling frame was constructed by Dr Neethling, in cooperation with GTI (GeoTerraImage (Pty) Ltd) and AfricaScope. StatsSA's Census 2011 information on Small Area Layer (SAL) data, main- and sub-place were firstly superimposed on the 2011 set of EA's through GIS techniques. This information was further combined with the newest available imagery, aerial photography and dwelling unit counts from GTI to form the basis of the EA sampling frame (based on the 2011 EA boundaries).

The EA sampling frame is updated annually with new GTI figures and fieldwork reports. The sampling frame was checked and benchmarked against the Census 2011 population figures including the number of households, sex, race, and age at SAL level. The EA sampling frame used was also adjusted by benchmarking the totals to the latest 2014 StatsSA midyear estimates on District Municipality level.

3.2   Sampling methodology

In stratification a distinction is made between 'explicit' and 'implicit' stratification. 'Explicit stratification' refers to when the population of sampling units are explicitly divided into strata and a separate sample is selected per stratum. 'Implicit stratification' is where the population of sampling units is sorted by some characteristic(s) and then the sample is selected from the sorted list. For this project, the population of adults was sorted by wards, and then, within wards by dominant population group. The population of sampling units within these stratums were then sorted by main-place, sub-place, and EA. After this stage the predetermined numbers of EAs were drawn using probability proportional to size (PPS). EA's were considered as the primary sampling units and households as secondary sampling units. The number of persons 18 years and older per EA was considered as the measure of size.

3.3   Allocation

The allocation of the sample was done using a PPS approach. A PPS sample of EA's per ward was determined based on the number of persons aged 18 years and older in the EA (or section of an EA) and in a specific ward. The allocation was done in the following manner:

1. The number of EAs/visiting points per ward, using proportional allocation was determined.
2. After the allocation was done, all wards in local municipalities with less than 30 visiting points were increased to 30 and all the wards in metropolitan municipalities with less than 60 visiting points were increased to 60.
3. Visiting points in local municipalities greater than 30 and in metropolitan municipalities greater than 60 were proportionally decreased to compensate for the increased size of the smaller wards that needed to be supplemented with additional interviews (step 2 above).

3.4   Selection of EAs

The following EA types were excluded from the survey design: vacant, recreational, and industrial EAs.

In instances where wards consisted of fewer EA's than was required by the sample design, some EAs were drawn more than once. All visiting points in an EA were drawn independently. EAs were only substituted in selective cases (e.g. if an area was completely inaccessible for some or other reason). Refer to Appendix B for the list of substituted EA's. A total of 5 860 EA's were drawn across the 508 wards in Gauteng.

3.5   Selection of visiting points

GTI supplied dwelling unit counts with their GIS coordinates of all dwelling units per EA in Gauteng. Each dwelling unit was sorted according to its GIS coordinate and 5 visiting points were selected per EA. These visiting points were selected with equal probability and one adult aged 18 and older was randomly selected per visiting point. An additional 5 visiting points were selected per EA as oversampling points. These visiting points were used when the original visiting point resulted in a substitute because of refusal to participate, vacant homes, or when nobody was at home after three independent visits.

In order to assist the fieldworkers to find the correct visiting points, A3 colour maps were printed for each of the EAs (See Figure 2). These maps clearly indicated the EA boundaries and street names. The GPS coordinates of the selected visiting points were indicated on the maps to ensure that the fieldworkers visited the correct area and visiting point.
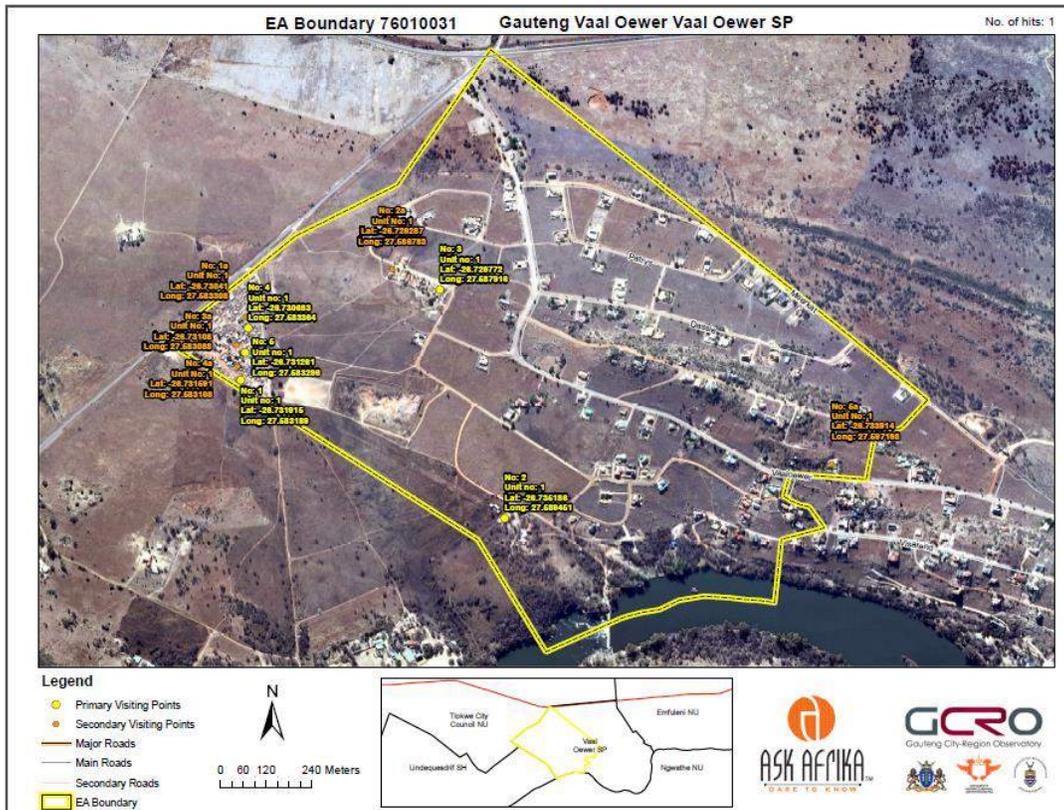
Figure 2: Example of the Enumerator Area (EA) maps used during fieldwork

3.6   Respondent Sampling

3.6.1   Selection of dwelling, household and respondent

Where there was more than one dwelling on a stand, household in a dwelling, and individual in a household, an automated Kish grid was used to randomly select the dwelling, household and respondent. Only 1 person 18 years or older per household was permitted to complete the questionnaire.

A Kish grid (or Kish selection grid) is a method used to randomise a selection of an individual from a group, through the use of a pre-assigned table The Kish grid (Table 5) was programmed into the survey instrument and automatically selected the dwelling, household and respondent for

the interview. The following list provides the set of steps required for the selection of dwelling, household and respondent, using the programmed Kish grid.

1. The interviewer counts the number of dwelling units[1] on the stand and allocates each a number. The interviewer then records the total number of dwelling units on the survey instrument and the programme automatically selects the dwelling number in which the interview has to be conducted.

2. The interviewer then asks the first contact person how many households[2] live within the selected dwelling unit, and allocates each a number. The interviewer then records the total number of households on the survey instrument and the programme automatically selects the household number from which the interview has to be conducted.

3. The interviewer then asks the first contact person to list, in ascending age order, the adults (older than 18years of age) living within the selected household (by sex). The interviewer records the information on the survey instrument and the programme automatically selects which individual has to be interviewed.

Table 5: Standardised Kish grid for dwelling, household and respondent selection

Eligible people	Kish grid							
	A	B	C	D	E	F	G	H
1	1	1	1	1	1	1	1	1
2	1	2	1	2	1	2	1	2
3	1	2	3	1	2	3	1	2
4	1	2	3	4	1	2	3	4
5	1	2	3	4	5	3	4	5
6	1	2	3	4	5	6	3	6
7	1	2	3	4	5	6	7	4
8	1	2	3	4	5	6	7	8
9	1	2	3	4	5	6	7	8
10 or more	1	2	3	4	5	6	7	8

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[1] A housing unit is defined as a separate dwelling situated on a stand and includes for example, freestanding house, garden flat, or backyard dwelling.

[2] A household is defined as a group of people living within the same dwelling and usually eating together at least four times per week or more

The respondent selection for the following three dwelling types deviated slightly from the original respondent selection process outlined above, along with the additional steps that were required in each case:

1. **Block of flats:** When the selected visiting points fell in a block of flats, the number of the unit(s) was (were) also allocated in the visiting point selection. When Interviewers arrived at the block of flats they counted the units sequentially from the first unit in the block of flats to the specified unit number. Once the selected unit had been identified, the interviewer continued from steps 2 to 5 (above).

2. **Hostels**: When the selected visiting point(s) fell in a hostel, a similar process to that for blocks of flats was applied. In the case of hostels, the interviewer counted the hostel room numbers sequentially from the first room in the hostel to the specified number. Once the selected room had been identified, the interviewer continued from steps 2 to 5 (above).

3. **Complexes/Estates/Retirement Villages**: When the selected visiting points fell in a complex, estate or retirement village, unit numbers were allocated in the visiting point selection. Initially the dwelling units were selected in the same way as blocks of flats, however, due to the difficulty in gaining access to these dwelling types, the selection process was adjusted to ensure that sufficient interviews were conducted in these areas. Interviewers made contact with residents at the entrance of the respective complex, estate, and/or retirement villages where visiting points had been selected. Once first contact had been made, respondents requested permission from the residents to conduct the survey. Any dwelling unit that gave permission was interviewed, following steps 2 to 5 of the above process.

4   Data collection approach

4.1   Fieldwork training

Extensive training sessions were conducting at training venues across Gauteng. In addition, continuous in-field training sessions were conducted to ensure that all teams were fully trained on the requirements of the survey. New supervisors and team members were fully briefed when they joined the fieldwork teams. All training sessions were video/audio recorded and distributed to the supervisors. Each interviewer received a document file containing the permission letter from the GCRO (Appendix C), the training documents, show cards (Appendix A), and translated

questionnaires (including Afrikaans, Sesotho, isiXhosa and isiZulu). During the training sessions, the interviewers were trained on the following aspects:

- Introduction to the study
- Interviewing skills
- Sampling and substitution
- Dwelling, household and respondent selection using the Kish Grid
- Map training
- Tablet functionality and usage
- GPS capturing
- Tracklocate usage
- Questionnaire requirements

Mock interviews were conducted to ensure comprehension across the fieldwork force.

4.2 Field personnel structure

Over the data collection period, the field team consisted of a national field manager, regional field managers, 16 supervisors/ suppliers, 66 team leaders and 536 Interviewers. The interviewer attrition rate was high throughout the duration of the project due to the complexity of the sampling and the length of the survey. Many of the interviewers who were part of the original group that were trained dropped out of the study early on as they soon realised the complexity of the data collection approach.

4.3 Location of attempted and successful interviews

The tablet devices have a built in GPS functionality which enabled coordinates to be automatically captured for each successfully completed interview. The interviewers/teams also made use of Tracklocate devices to capture the coordinates of completed interviews (see section 4.4.1).

At the start of the project interviewers were able to capture GPS coordinates manually (from their Tracklocate devices) when the tablet devices could not capture the GPS location due to poor signal. This however proved problematic for verification purposes and the manual entry functionality was removed, after which all interviews had automatically captured coordinates.

In some cases the automatically captured coordinates were not entirely accurate, due to the triangulation of the cell phone towers (GSM network) or a loss of signal. Changes were made to both the tablets' GPS settings and the Dooblo software which lead to more accurate

coordinates that were drawn directly from satellite positions. During the quality assurance (QA) process, all the locations were checked on GIS software for accuracy. Interviews flagged as invalid due to inaccurate GPS locations were redone in field. The checking process is explained in detail in section 5 and the process for identifying invalid interviews is outlined in Appendix D.

4.4   Other fieldwork materials

4.4.1   Tracklocate devices

Tracklocate is a tracking, monitoring and management solution system customised specifically to optimise the safety, security and productivity of personnel and vehicles. Each team leader/ interviewer carried a Tracklocate device with them and captured the coordinates of the successfully completed interviews. Location information was automatically sent to the central control base every minute. This meant that the exact journey of the teams was mapped. The Tracklocate devices made use of satellite and GSM networks, and each contained a SIM card with data. The devices also allowed the teams to send '*Please Call Me*' messages to the relevant supervisors if they were lost or needed assistance to reach their interviewing points. A pre-programmed button allowed the teams to signal to the supervisors that they were in an emergency situation and needed assistance (including being injured, in an accident, attacked or under threat for any reason).

These devices were used to provide coordinates as a means of validating where the interview took place. However, a fundamental flaw in this approach was that there was no way of linking the Tracklocate coordinates to the individual interviews. In addition, the interviewers did not successfully implement the use of the devices either. Many of the interviewers failed to press the button upon completion of the survey or pressed the button at a different location from where the interview took place. This caused problems when attempting to link the coordinates back to the visiting points using GIS software. Many issues were encountered with the use of Tracklocate devices and the methodology was deemed unreliable for the following reasons:

- The Tracklocate devices were shared between interviewers which led to some interviewers not having a Tracklocate device whilst completing an interview. In these instances, team leaders were given the devices and had to press the button when interviewers completed the interviews. However the issue of linking the Tracklocate device with the interview prevented this method from holding any value.
- Interviewers neglected to keep the devices fully charged.

- Interviewers forgot to take the devices with them into field, which increased the need to share devices with other team members.
- Interviewers did not always notify management that data bundles had depleted.

Due to the above issues an additional three opportunities (i.e. start, middle and end of the questionnaire) to capture GPS coordinates were added to the questionnaire. These changes were included on the 9th of September 2015. This methodology replaced the manually captured coordinates, and the Tracklocate devices were removed from the field force at the end of December in favour of the coordinates captured via the survey device.

4.4.2　Show cards
Fieldworkers used four types of show cards during interviews. The range of show cards included language options in English, Afrikaans, Sesotho, isiXhosa, and isiZulu including:

1. A frequency scale,
2. A satisfaction scale,
3. 'Three friends' question options, and
4. An agreement scale (see Appendix A).

4.4.3　Maps
Ask Afrika made use of A3 colour maps that illustrated all the wards in the various municipalities in the Gauteng province for planning purposes (See example in Figure 2). The maps enabled Ask Afrika to plan data collection in the various areas, timing and the wards that had to be visited by the field teams. The fieldwork planning map contained information regarding the visiting point, the oversample points, and the geographic coordinates of each visiting point. Each point had a unique identifying number on the map to avoid possible errors and these were programmed into the questionnaire for easy identification and access. The geographic coordinates on the maps were used as waypoints by the interviewers who entered it into their GPS for easy navigation to the EAs and visiting points.

4.5　Planned and actual field survey timelines
- Planned fieldwork period: 6 July 2015 to 4 October 2015.
- Actual fieldwork period: 6 July 2015 to 17 May 2016.
- Fieldwork was discontinued during December to complete extensive quality assurance on the coordinates collected during fieldwork.

- During December and January some of the suppliers/supervisors were sent back into field to redo work that did not meet the quality standards (in particular interviews that were flagged as invalid).
- An additional set of Invalid interviews, identified through GIS techniques, were redone during February and March 2016. Outstanding interviews were also conducted during this period.
- Another set of invalid interviews were identified after the February/March 2016 fieldwork and these were redone from 1 April to 10 April 2016.
- The final set of outstanding interviews was conducted between 22 April 2016 and 17 May 2016.

4.6   Field incident report

A range of challenges were experienced during the data collection phase. These are described below:

4.6.1   Security incidents/risks and poor weather conditions

- Some teams were forced to leave certain EAs due to local security demanding that they leave the area.
- One interviewer was robbed of his tablet and belongings.
- Interviewers stole 11 tablets.
- Farmers were reluctant to assist interviewers due to the high rate of reported farms attacks in their areas.
- Certain EAs were also deemed unsafe or risky and unfit to enter (e.g. Berea). In some of these cases Ask Afrika requested a police escort to accompany the teams.
- Production was slowed down during October, November, and March due to heavy rainfall and storms. In some cases vehicles got stuck in muddy conditions, and in others they could not enter certain areas at all.

4.6.2   Interviewer attrition

- A high interviewer attrition rate was experienced due to many reasons including a lack of experience with location based interviews. Many of the interviewers were dismissed due to poor quality work and failing to follow the correct sampling procedure (i.e. where interviews were conducted at shopping malls or taxi ranks).
- Many of the interviewers were dissatisfied with the payment rate and therefore dropped out of the study.

- Some outside supervisors approached and recruited interviewers who were working on the QoL survey to work on different projects.
- University students were recruited to work as interviewers although most of the students failed to work on the study for longer than a week.

4.6.3   Loss of supervisors

- The loss of supervisors was mainly due to the strict QA procedures that were applied, the large number of interviews required from them within the required timeline, and poor performance.
- Due to the high attrition rate, the workload was continuously shifted between teams to ensure that the targets were met. As such maps and materials had to be couriered to or between teams and planning had to be adjusted.

4.6.4   GPS/EA boundaries issues

- The GPS settings on the tablets were manually updated for every device to increase the GPS accuracy of the tablets. Since the supervisors and interviewers did not follow the correct instructions a team from Ask Afrika had to visit each interviewer to change the settings.

4.6.5   Security estates, complexes, and mine hostels

- Ask Afrika fieldworkers were refused access to several security estates, mine hostels, and complexes. As far as possible Ask Afrika contacted the body corporates or facility caretakers to explain the purpose of the interviews. In certain instanced the body corporates requested that an Ask Afrika manager speak to them, and subsequently the national or regional field manager communicated with the body corporates to gain entry for the fieldworkers.
- In order to interview respondents in estates or complexes where formal access was not granted, interviewers approached residents at the entrance of the estate or complex, and requested to conduct an immediate interview or arrange an appointment to conduct the interview later. Due to the difficulty of penetrating these EAs and securing interviews, there was a high substitution rate for these areas. White interviewers had greater success in predominantly white areas and black interviewers were more successful in predominantly black areas.

5   Quality Assurance

5.1   In-field quality assurance (QA)

Upon completion of an interview, the supervisor/team leader conducted in-field QA. Where no issues were found during these checks, the interview was categorised on Dooblo as 'QA completed'. This QA check required the team leader to return to the respondent's address and ask several questions to establish the validity of the interview. Discrepancies or queries were addressed with the interviewer, who had to resolve issues as soon as possible. Upon solving these, the interview was marked as 'In-field QA completed'. In total 10.7% (n=3972) in-field QA checks were conducted.

Towards the end of January 2016, all the interviews were geofenced, which prohibited interviewers from conducting interviews further than 100m of the allocated visiting point. However, the geofence programming was not always effective and interviews could still be conducted beyond the 100m radius 'fence'. In addition, geofencing was not able to prevent clusters of interviews occurring in the same location.

5.2   In-office quality assurance

The following in-office QA checks were used as markers for where more detailed checking was necessary:

- Duplicate open ended responses per interviewer were checked. If one interviewer consistently provided the same open ended answer for different respondents, this was investigated.
- The selected race was checked against the sub-place list for major discrepancies.
- The water source and sanitation questions were checked against the dwelling types.
- 'Other specify' answers where checked.
- When people indicated that they attended IDP meetings, these responses were checked against the follow up questions where they indicated that they have never heard of an IDP meeting.
- Age and education were checked to ensure respondents who indicated they had tertiary education were old enough to have obtained this.
- Monthly household income was checked against the dwelling type.

5.3 Co-ordinate location verification

Issues related to capturing the accurate location of interviews, and interviews being conducted at incorrect locations necessitated that a specific QA process was required to ensure that all the accepted interviews had verifiable location records. A three phased approach was implemented to check the validity of the coordinates (Please refer to Appendix D for an example). This approach included a series of steps where a range of location-based information for each interview was compared to ascertain the most likely location where the interview took place. The three phases of this process are detailed below:

1. The first step compared the automatically generated GPS coordinates from the CAPI devices against each other and against the sampled visiting point where the interview should have taken place. In each case the respective coordinates were assessed on whether the coordinates were within 100m radius of each other.

2. The second step compared the specifically captured Tracklocate coordinates with the four automatically generated coordinates from the CAPI device. The alignment between the coordinates not only required that the coordinates were within 100m of each other, but also that they had been captured at comparable times. Two different GIS specialists completed this phase.

3. The Tracklocate device trails (tracking points for every device captured at 10 second intervals) were compared to the automatically generated GPS coordinate from the CAPI devices. The interview coordinates were considered acceptable if there were 15 or more Tracklocate trail points within 100m of the device generated coordinate, and were captured on the same date.

The outcomes of the three phases detailed above were combined to provide a consolidated indication of how accurately the location of each interview had been recorded (e.g. if all of the above comparisons aligned, there was 100% accuracy but if none aligned there was 0% accuracy). In the final dataset only one coordinate could be used for location of the interview, thus a process was undertaken to identify the most accurate coordinate based on the above two processes. An addition step of checking the coordinates against the reported address was applied to all interviews that were collected in 2016.

5.4 Invalid interviews

In some cases, there was poor alignment between where interviews should have been conducted and where the interviews took place. In some of these instances, interviews could be

considered valid and thus kept in the dataset. However, there were cases where interviews had to be rejected and redone. Interviews were rejected based on the following criteria:

- Coordinates that did not fall on a house or close to a house, for example:
    - Empty fields
    - Malls, shopping centres or standalone shops
    - Restaurants and fast food outlets
    - Train stations and taxi ranks
    - Schools
    - Public parks
- Coordinates that fell far from the address captured by the interviewer
- Clusters of interviews within the same EA/Wards that exceeded the desired number of completes
- Where manually captured coordinates could not be verified against the address recorded, call backs or any automated coordinate.
- In some cases interviews were rejected when the racial profile did not match the expected racial profile of an area (e.g. a cluster of white respondents on Vilikazi Street in Soweto).

The rejected interviews were redone and they were verified through the QA process described above. Table 6 provides detail on the number of interviews that were rejecting and for what reason.

Table 6: Reasons for categorising an interview as invalid (rejecting an interview)

	Reason that interview was invalid	Number of interviews
In-field QA	In-Field QA (from n=3972 (10.7%) checks)	1191
In-office QA	2015 Interviews not passing visual checks (with GIS software)	2374
	Dec 2015 to Jan 2016 Interviews not passing visual checks (with GIS software)	107
	2016 Interviews not passing visual checks (with GIS software)	1759
	Call Centre back checks	298
	Call Centre back checks (to verify addresses of the manually captured coordinate interviews)	34
	Addresses that did not pass the geocoding exercise (which includes the manual coordinates)	1274
	Race inconsistent with area profile	79
	Total	**7116**

6 Relevant statistics

6.1 Respondent realisation rate

The substitution[3] and incident[4] rates are calculated on a sample of n=24 889, not on the full sample (n=30 002), because the first n=5 113 interviews lacked the necessary information for this analysis. Programming changes were implemented in the 4th week of data collection to correct for this programming error.

The respondent realisation rate is:

- Original completed interview: 68.97%
- Substitution rate: 31.03%
- Incident rate: 1.63.

The 3 main reasons for substitution (as logged by the fieldworker) included:

1. There was no one at home,
2. The first contact person on the stand refused to participate,
3. No access possible because of fence and/or locked gated

Error! Reference source not found., Table 8 and Table 9 provide the breakdown of the total number of interviews that were completed over the course of fieldwork and within which of the five rounds of substitution they were completed.

Table 7: Successful interviews at the original sampled visiting point

	No. of interviews	% of	Visits made per interview	Total visits made
1st visit	16783	97.77%	1	16783
2nd visit	379	2.21%	2	758
3rd visit	4	0.02%	3	12
Total	**17 166**	**100%**		**17 553**

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[3] In some cases interviewers were unable to complete an interview at the visiting points drawn in the original sample. These points were substituted with an alternative visiting point.

[4] The incident rate is the number of number of people targeted before a completed interview was realised.

Table 8: Successful interviews through the five rounds of substitution

Round of substitution		No. of interviews	% breakdown of each round	*No. of visits per interview*	*Total visits made*
Substitution round 1	*1st visit*	1107	66.17%	2	2214
	2nd visit	266	15.90%	3	798
	3rd visit	300	17.93%	4	1200
	TOTAL	**1673**	**100.00%**		**4 212**
Substitution round 2	*1st visit*	5697	95.83%	3	17 091
	2nd visit	94	1.58%	4	376
	3rd visit	154	2.59%	5	770
	TOTAL	**5945**	**100.00%**		**18 237**
Substitution round 3	*1st visit*	20	40.82%	4	80
	2nd visit	26	53.06%	5	130
	3rd visit	3	6.12%	6	18
	TOTAL	**49**	**100.00%**		**228**
Substitution round 4	*1st visit*	14	43.75%	5	70
	2nd visit	12	37.50%	6	72
	3rd visit	6	18.75%	7	42
	TOTAL	**32**	**100.00%**		**184**
Substitution round 5	*1st visit*	9	37.50%	6	54
	2nd visit	9	37.50%	7	63
	3rd visit	6	25.00%	8	48
	TOTAL	**24**	**100.00%**		**165**
GRAND TOTAL		**7 723**			**23 026**

Table 9: Summary of interviews, attempts and incident rate

Total number of visits/attempts made	40 579
Total number of interviews achieved	24 889
Incident rate	1.63

6.2 Call back statistics

6.2.1 In-field call backs

During the fieldwork a total of 4 071 interviews were called back, and of these 298 (7%) were rejected based on information gathered during the call that indicated the interviews were invalid. During the call backs an issue was identified between the face-to-face interview responses and the call back responses for sex and age variables. In these instances respondents confirmed that they had participated in the survey and the other response data was correct.

The incorrect age and sex data were corrected in the dataset based on the call backs (Refer to the Data Report for a comprehensive list of these changes).

6.2.2 Call backs on manually entered coordinates

Specific validity checks were conducted on the 2015 interviews to verify the location of the interviews where automatic GPS coordinates had not been captured. The call backs confirmed that the interviews had taken place and they verified the address at which the interview had taken place. A total of 2 018 interviews had manually captured coordinates, however only the location of 386 of these interviews was verified through the call back exercise. Table 10 provides a breakdown of this call back exercise.

Table 10: The breakdown of the outcome from the call back process to verify manually entered coordinates

Verification of coordinate with address from call back	Number of interviews removed	Number of interviews kept
No contact details	224	
No answer or refused to talk to the call centre agents	1 165	
Not available to talk to call centre agents	146	
Did not participate in the study	34	
Coordinate & address verified		386
Mismatch between coordinate and address	63	
TOTAL	**1 632**	**386**

7 Limitations and recommendations

The following sections outline a range of limitations and recommendations based on Ask Afrika's experience in conducting GCRO's 2015 QoL survey.

7.1 Address information

The interviewers had to capture the addresses of successfully completed interviews. Initially the programmed questionnaire only contained a single address field to capture the entire interview address. This lead to poorly captured address fields. The programming was adjusted to include an address field for each of the following fields:

- house/stand number,
- complex name (if applicable),
- the street name, and

- suburb.

This improved the quality of the captured addresses, however some fields were left incomplete. Addresses in township areas remained a challenge to verify via geocoding.

7.2 Q3.3 response frame

The 'other specify' verbatim responses for Q3.3 (*What is the most important reason why you live in your suburb?)* revealed that the predefined response frame did not capture a range of responses related to people who live where they do not out of choice but circumstance. It is recommended that the response frame be adjusted to incorporate a wider range of options related to this group of people.

7.3 Pilots

Although both Ask Afrika and the GCRO conducted rigorous pilot phase tests that assessed the questionnaire length, flow, programming etc., it would be beneficial for future surveys to dedicate more time at the start of the project to test the GPS functionality and conduct more pilots with respondents as the in-office 'pen and paper' pilots with respondents were not sufficient. Respondent pilots should include pilots using the CAPI devices and the programmed questionnaire, and be conducted outside of the office environment. Ideally the pilot phase should include an in-field session that tests the full interview process from using EA maps, navigating to the correct sample point, using of the Kish grid to identify the correct household and respondent, testing the GPS functionality, and the full questionnaire. This extended piloting phase should also be applied to the training phase, which should span over a couple of days to ensure that the proper questionnaire logic and survey methodology is understood by each interviewer.

7.4 EA sampling

The sample for the survey covered all 508 wards in the Gauteng Province, and Ask Afrika used an EA-based sampling frame to distribute the interviews across the province. During fieldwork it was found that some of the EA's extended over the borders of one or more wards. This meant that additional interviews had to be conducted where interviews had been conducted within the allocated EA, but beyond the ward boundary. This was to ensure that the quota for each ward was achieved. It is recommended that if this methodology is used again that the EA and ward boundaries are mapped together and geofences are applied to prevent interviews being conducted outside of the ward to which they were allocated.

8   Appendices

8.1   APPENDIX A: SHOW CARDS

English	Afrikaans	Sotho	Xhosa	Zulu
Always	Altyd	Ka dinako tsohle	Asoloko	Njalo
Usually	Dikwels	Hangata	Adla ngokuba njalo	Imvamisa
Sometimes	Soms	Ka dinako tse ding	Ngamanye amaxesha	Kwesinye isikhathi
Hardly ever	Selde	Ho hang le ka mohla	Ngokunqabil eyo	Awajwayele
Never	Nooit nie	Le ka mohla	Akazange	Nhlobo

English	Afrikaans	Sotho	Xhosa	Zulu
Very satisfied	Baie tevrede	O kgotsofetse haholo	Ndaneliseke kakhulu	Nganeliseke kakhulu
Satisfied	Tevrede	O kgotsofetse	Ndanelisekile	Nganelisekile
Neither satisfied nor dissatisfied	Nóg tevrede nóg ontevrede	O kgotsofetse ebila ha o a kgotsofala	Ndaneliseke ndingonelisek anga	Akukho phakathi kokwenelisek a nokunganelis eki
Dissatisfied	Ontevrede	Ha o a kgotsofala	Andoneliseka nga	Angenelisekil e
Very dissatisfied	Baie ontevrede	Ha o a kgotsofala haholo	Andoneliseka nga kakhulu	Anginelisekile nhlobo

English	Afrikaans	Sotho	Xhosa	Zulu
First person	Eerste persoon	Motho wa Pele	Umntu wokuQala	Umuntu wokuqala
Second person	Tweede persoon	Motho wa Bobedi	Umntu wesiBini	Umuntu wesibili
Third Person	Derde persoon	Motho wa Boraro	Umntu wesiThathu	Umuntu wesithathu

English	Afrikaans	Sotho	Xhosa	Zulu
Strongly agree	Stem heelhartig saam	Ke dumela ka matla	Ndivumelana kakhulu	Ngivumelana kakhulu
Agree	Stem saam	Ke a dumela	Ndiyavumelana	Ngiyavumelana
Neither agree nor disagree	Stem nie met een of die ander saam nie	Ke a dumela empa hape ke a hana	Ndivumelana ndingavumelani	Angivemelani futhi angiphikisani
Disagree	Stem nie saam nie	Ke a hana	Andivumelani	Ngiyaphika
Strongly disagree	Stem glad nie saam nie	Ke hana ka matla	Andivumelani kakhulu	Ngiyaphikisana kakhulu

8.2   APPENDIX B – EA SUBSTITUTION

Substituted EAs	Number of Visiting Points per Sample
76010026	5
76010070	5
76010096	5
76010182	5
76010221	5
76010354	5
76010357	5
76010456	5
76010614	5
76010619	5
76010861	5
76110027	5
76210001	5
76210099	5
76210171	5
76210205	5
76310248	5
76310583	5
76310609	5
76310612	5
76310622	5
76310694	5
76410104	10
76510063	5
76510098	5
76510117	5
76510128	5
76510139	5
76510142	5
76610018	5
76610094	5
76610159	5
76610190	10
76610218	5
76610273	5
76610297	5
79710119	5

79710264	5
79710566	5
79710645	5
79710655	5
79711099	5
79711389	10
79711392	5
79711633	5
79711661	5
79711696	5
79711701	5
79711707	5
79711921	5
79711928	5
79711935	5
79712215	5
79712348	5
79712375	5
79712394	5
79712453	5
79712502	5
79712641	5
79712923	5
79712956	5
79712964	5
79712966	5
79712977	5
79713013	5
79713222	5
79713265	5
79713275	5
79713379	5
79713390	5
79713423	5
79713435	5
79713464	5
79713494	5
79713522	5
79713543	5
79713570	5
79713592	5

79713676	5
79713683	5
79713730	5
79713749	5
79713753	5
79713756	5
79713779	5
79713792	5
79713799	5
79713803	5
79713808	5
79713845	5
79713948	5
79713961	5
79713979	5
79713995	5
79714011	5
79714050	5
79714064	5
79714069	5
79714087	5
79714116	5
79714160	5
79714172	5
79714213	5
79714405	5
79714406	5
79714461	5
79714488	5
79714501	5
79714518	5
79714529	5
79714535	5
79714696	5
79714704	5
79714705	5
79714707	5
79714717	5
79714823	5
79714905	5
79714906	5

79714955	5
79715051	5
79715107	5
79715220	5
79715223	5
79715241	5
79715313	5
79715320	5
79715323	5
79715330	5
79715337	5
79810039	5
79810349	5
79810361	5
79810401	5
79810445	5
79810481	5
79810548	5
79810561	5
79810610	5
79810653	5
79810708	5
79810727	5
79810748	5
79810784	5
79810801	5
79810806	5
79810950	5
79810987	5
79811024	5
79811092	5
79811134	5
79811136	5
79811139	5
79811140	5
79811224	5
79811236	5
79811240	5
79811257	5
79811274	5
79811280	5

79811283	5
79811293	5
79811357	5
79811418	5
79811420	5
79811440	5
79811460	5
79811464	5
79811508	5
79811510	5
79811570	5
79811573	5
79811580	5
79811602	5
79811644	5
79811652	5
79811655	5
79811691	5
79811699	5
79811746	5
79811827	5
79811839	5
79811877	5
79811928	5
79811974	5
79812016	5
79812039	5
79812057	5
79812130	5
79812239	5
79812242	5
79812266	5
79812301	5
79812334	5
79812356	5
79812359	5
79812397	5
79812399	5
79812444	5
79812471	5
79812519	5

79812556	5
79812570	5
79812603	5
79812680	5
79812737	5
79812828	5
79812845	5
79812849	5
79812857	5
79812909	5
79812914	5
79812931	5
79812933	5
79813019	5
79813038	5
79813058	5
79813076	5
79813098	5
79813102	10
79813297	5
79813343	5
79813348	5
79813378	5
79813381	5
79813477	5
79813528	5
79813538	5
79813579	5
79813592	5
79813671	5
79813677	5
79813770	5
79813853	5
79813901	5
79813929	5
79813935	5
79813948	5
79813997	5
79814002	5
79814011	5
79814015	5

79814020	5
79814102	5
79814123	5
79814128	5
79814159	5
79814167	5
79814175	5
79814186	5
79814192	5
79814198	5
79814232	5
79814244	5
79814261	5
79814308	5
79814381	5
79814428	5
79814434	5
79814517	5
79814559	5
79814582	5
79814591	5
79814631	5
79814650	5
79814732	5
79814842	5
79814908	5
79814944	5
79814949	5
79814956	5
79814971	5
79815032	5
79815073	5
79815099	5
79815168	5
79815183	5
79815189	5
79815246	5
79815294	5
79815302	5
79815329	5
79815348	5

79815350	5
79815370	5
79815408	5
79815412	5
79815463	5
79815529	5
79815576	5
79815591	5
79815597	5
79815610	5
79815612	5
79815626	5
79815666	5
79815697	5
79815711	5
79815732	5
79815750	5
79815754	5
79815758	5
79815774	5
79815894	5
79815895	5
79815915	5
79815937	5
79815939	5
79815994	5
79815995	5
79815996	5
79816009	5
79816043	5
79816066	5
79816120	5
79816135	5
79816144	5
79816198	5
79816207	5
79816219	5
79816249	5
79816266	5
79816302	5
79816319	5

79816352	5
79816397	5
79816403	5
79816412	5
79816415	5
79816455	5
79816473	5
79816519	5
79816593	5
79816672	5
79910001	5
79910003	5
79910013	5
79910024	5
79910079	5
79910096	5
79910120	5
79910173	5
79910182	5
79910201	5
79910248	5
79910255	5
79910272	5
79910295	5
79910351	5
79910359	5
79910391	5
79910402	5
79910432	5
79910477	5
79910561	5
79910567	5
79910644	5
79910656	5
79910668	5
79910689	5
79910699	5
79910714	5
79910737	5
79910800	5
79910801	5

79910840	5
79910849	5
79910860	5
79910918	5
79910925	5
79910986	5
79911019	5
79911058	5
79911062	5
79911441	5
79911461	5
79911466	5
79911483	5
79911492	5
79911498	5
79911500	5
79911566	5
79911575	5
79911583	5
79911686	5
79911748	5
79911822	5
79911906	5
79911912	5
79911976	5
79911995	5
79912035	5
79912037	5
79912109	5
79912162	5
79912204	5
79912216	5
79912220	5
79912237	5
79912300	5
79912305	5
79912326	5
79912347	5
79912429	5
79912509	5
79912513	5

79912563	5
79912601	5
79912654	5
79912727	5
79912733	5
79912746	5
79912758	5
79912778	5
79912800	5
79912812	5
79912823	5
79912847	5
79912887	5
79912900	5
79912942	5
79912980	10
79913055	5
79913070	5
79913121	5
79913134	5
79913221	5
79913248	5
79913263	5
79913285	5
79913292	5
79913338	5
79913344	5
79913420	5
79913436	5
79913499	5
79913500	5
79913560	5
79913572	5
79913748	5
79913792	5
79913930	5
79913936	5
79914063	5
79914065	5
79914142	5
79914160	5

79914205	5
79914207	5
79914290	5
79914417	5
79914434	5
79914481	5
79914494	5
79914596	5
79914682	5
79914706	5
79914738	5
79914742	5
79914748	5
79914757	5
79914765	5
79914794	5
79914796	5
79914804	5
79914824	5
79914860	5
79914941	5
79914977	5
79915030	5
79915103	5
79915161	5

8.3 APPENDIX C: QUALITY OF LIFE SURVEY INTRODUCTION LETTERS (2015 & 2016)

University Corner,
Braamfontein, Johannesburg
Private Bag 3
Wits
2050

T: 011 717 7280
info@gcro.ac.za

Wednesday, 1 July 2015

Dear fellow resident of Gauteng,

Every two years, the Gauteng City-Region Observatory – a partnership of Wits and the University of Johannesburg – carries out a 'Quality of Life' survey. We ask questions about a very wide range of issues affecting us all, from transport to education to social attitudes to pollution – we try to cover as much ground as possible. The results of the fourth survey – in which your answers will be sitting alongside 30 000 other people from Gauteng – are presented to government, citizens groups, in the media and elsewhere, so that we all have a better sense of what's going right and what's going wrong, and thus where government needs to focus its attention. This survey is funded by provincial and local government, but the Observatory is an independent university research centre, and we say what needs to be said, based on the data. Your participation is extremely valuable.

We have commissioned Ask Afrika to undertake the fieldwork – the interview process – for us. If you have any queries whatsoever about the survey, please feel free to contact me at the numbers below; and you can go to our website at www.gcro.ac.za and view the previous Quality of Life survey results (www.gcro.ac.za/qolviewer).

Thanks again for taking part,

Chris Wray
Acting Executive Director, GCRO
011 717 7280
0824635536

University Corner,
Braamfontein, Johannesburg
Private Bag 3
Wits
2050

T: 011 717 7280

info@gcro.ac.za

Wednesday, 17 February 2016

Dear fellow resident of Gauteng,

Every two years, the Gauteng City-Region Observatory – a partnership of Wits and the University of Johannesburg – carries out a 'Quality of Life' survey. We ask questions about a very wide range of issues affecting us all, from transport to education to social attitudes to pollution – we try to cover as much ground as possible. The results of the fourth survey – in which your answers will be sitting alongside 30 000 other people from Gauteng – are presented to government, citizens groups, in the media and elsewhere, so that we all have a better sense of what's going right and what's going wrong, and thus where government needs to focus its attention. This survey is funded by provincial and local government, but the Observatory is an independent university research centre, and we say what needs to be said, based on the data. Your participation is extremely valuable.

We have commissioned Ask Afrika to undertake the fieldwork – the interview process – for us. If you have any queries whatsoever about the survey, please feel free to contact me at the numbers below; and you can go to our website at www.gcro.ac.za and view the previous Quality of Life survey results (www.gcro.ac.za/qolviewer).

Thanks again for taking part,

Prof. Rob Moore
Executive Director, GCRO
011 717 7280
0843037295

8.4 APPENDIX D: PHASED APPROACH METHOD TO IDENTIFY CORRECT GPS COORDINATES

Please refer to the accompanying Excel document - APPENDIX D, for an illustration of the phased approach.

8.5   APPENDIX E: REALISED INTERVIEWS PER WARD

Note that a few of the wards did not achieve their targeted sample whereby a few wards exceeded their sample target. This was due to:

- Interviewers conducting interviews in wrong ward
- GPS coordinates of where the interview took place fell outside the border of the targeted ward
- Misalignment of GPS coordinates with address of visiting point
- Cheats that were not fully made up for

The realised ward targets are as follow:

Exceeded original ward target	201	40%
Met original ward target	149	29%
Below original ward target	158	31%
Total sample	508	

EA number	Original Interviews Required	Successful Interviews
74201001	50	49
74201002	30	33
74201003	40	45
74201004	40	38
74201005	55	53
74201006	45	43
74201007	40	40
74201008	30	32
74201009	30	30
74201010	50	46
74201011	40	45
74201012	30	34
74201013	35	35
74201014	30	32
74201015	35	35

EA number	Original Interviews Required	Successful Interviews
74201016	30	58
74201017	30	42
74201018	35	34
74201019	35	35
74201020	35	34
74201021	55	57
74201022	35	34
74201023	30	31
74201024	30	30
74201025	40	38
74201026	55	53
74201027	30	35
74201028	55	63
74201029	30	30
74201030	30	32
74201031	30	35
74201032	30	30
74201033	35	32
74201034	30	33
74201035	30	40
74201036	45	48
74201037	30	30
74201038	30	30
74201039	30	30
74201040	30	31
74201041	30	30
74201042	30	32
74201043	30	30
74201044	30	30
74201045	35	36
74202001	30	30
74202002	30	32
74202003	30	32
74202004	30	30
74202005	30	36
74202006	30	30
74202007	30	30

EA number	Original Interviews Required	Successful Interviews
74202008	30	30
74202009	30	30
74202010	30	33
74202011	30	32
74202012	30	30
74202013	30	30
74202014	30	37
74203001	30	30
74203002	30	32
74203003	30	31
74203004	30	32
74203005	30	31
74203006	30	30
74203007	30	31
74203008	30	30
74203009	30	30
74203010	30	30
74203011	30	30
74203012	30	31
74203013	30	30
74801001	30	30
74801002	30	30
74801003	30	30
74801004	30	33
74801005	30	33
74801006	30	30
74801007	30	30
74801008	30	31
74801009	30	30
74801010	30	32
74801011	30	31
74801012	30	35
74801013	30	30
74801014	40	36
74801015	30	33
74801016	30	30
74801017	30	31

EA number	Original Interviews Required	Successful Interviews
74801018	30	30
74801019	30	30
74801020	30	31
74801021	30	31
74801022	30	30
74801023	30	31
74801024	30	30
74801025	30	35
74801026	30	31
74801027	30	32
74801028	30	30
74801029	30	31
74801030	30	30
74801031	30	30
74801032	30	30
74801033	30	32
74801034	30	30
74802001	30	33
74802002	30	30
74802003	30	30
74802004	30	30
74802005	30	30
74802006	30	30
74802007	30	33
74802008	30	30
74802009	30	32
74802010	30	30
74802011	30	31
74802012	30	32
74802013	30	31
74802014	30	30
74802015	30	30
74802016	30	33
74802017	30	33
74802018	30	31
74802019	30	30
74802020	30	35

EA number	Original Interviews Required	Successful Interviews
74802021	30	33
74802022	30	30
74803001	30	30
74803002	30	32
74803003	30	30
74803004	30	30
74803005	30	31
74803006	30	31
74803007	30	30
74803008	30	30
74803009	30	30
74803010	30	34
74803011	30	33
74803012	30	30
74803013	30	36
74803014	30	30
74803015	30	34
74803016	30	30
74804001	30	30
74804002	30	30
74804003	30	30
74804004	30	31
74804005	30	32
74804006	30	32
74804007	30	32
74804008	30	32
74804009	30	30
74804010	30	36
74804011	30	32
74804012	30	30
74804013	30	40
74804014	30	30
74804015	30	32
74804016	30	32
74804017	30	35
74804018	30	32
74804019	30	30

EA number	Original Interviews Required	Successful Interviews
74804020	30	31
74804021	35	37
74804022	30	30
74804023	30	30
74804024	30	30
74804025	30	30
74804026	30	34
74804027	30	33
74804028	30	30
79700001	115	106
79700002	60	60
79700003	60	68
79700004	60	62
79700005	60	75
79700006	60	60
79700007	60	60
79700008	75	78
79700009	60	61
79700010	60	63
79700011	75	104
79700012	65	67
79700013	65	65
79700014	80	89
79700015	80	77
79700016	75	75
79700017	80	75
79700018	70	64
79700019	75	68
79700020	95	86
79700021	95	88
79700022	75	68
79700023	85	83
79700024	105	95
79700025	95	94
79700026	65	65
79700027	65	66
79700028	75	69

EA number	Original Interviews Required	Successful Interviews
79700029	60	60
79700030	60	64
79700031	90	82
79700032	65	61
79700033	80	74
79700034	60	61
79700035	60	62
79700036	60	62
79700037	80	75
79700038	90	86
79700039	85	77
79700040	70	69
79700041	85	85
79700042	85	79
79700043	60	61
79700044	65	60
79700045	65	65
79700046	60	61
79700047	65	66
79700048	60	61
79700049	60	62
79700050	60	60
79700051	60	60
79700052	65	60
79700053	75	80
79700054	60	60
79700055	65	69
79700056	60	65
79700057	65	60
79700058	95	97
79700059	65	74
79700060	60	62
79700061	80	80
79700062	60	61
79700063	70	79
79700064	70	69
79700065	75	73

EA number	Original Interviews Required	Successful Interviews
79700066	85	106
79700067	70	69
79700068	65	61
79700069	60	61
79700070	60	60
79700071	70	76
79700072	65	61
79700073	65	60
79700074	70	66
79700075	85	83
79700076	75	79
79700077	65	66
79700078	60	61
79700079	65	68
79700080	60	64
79700081	85	85
79700082	60	60
79700083	60	61
79700084	85	84
79700085	60	62
79700086	75	75
79700087	60	69
79700088	70	76
79700089	90	93
79700090	70	65
79700091	80	75
79700092	85	84
79700093	60	60
79700094	65	60
79700095	65	68
79700096	75	81
79700097	80	82
79700098	60	61
79700099	105	123
79700100	70	65
79700101	105	103
79800001	85	86

EA number	Original Interviews Required	Successful Interviews
79800002	85	80
79800003	65	60
79800004	80	80
79800005	95	92
79800006	80	73
79800007	80	76
79800008	100	92
79800009	65	62
79800010	70	65
79800011	65	60
79800012	60	60
79800013	70	65
79800014	60	60
79800015	60	61
79800016	65	70
79800017	80	73
79800018	85	79
79800019	60	60
79800020	75	73
79800021	65	63
79800022	65	62
79800023	90	87
79800024	75	68
79800025	70	65
79800026	65	60
79800027	60	61
79800028	65	60
79800029	75	70
79800030	75	69
79800031	60	62
79800032	100	95
79800033	65	60
79800034	60	61
79800035	70	64
79800036	60	60
79800037	70	64
79800038	60	61

EA number	Original Interviews Required	Successful Interviews
79800039	80	100
79800040	65	62
79800041	60	60
79800042	60	60
79800043	60	61
79800044	110	101
79800045	60	60
79800046	60	62
79800047	65	62
79800048	65	61
79800049	110	104
79800050	60	60
79800051	65	62
79800052	65	62
79800053	115	105
79800054	110	99
79800055	60	63
79800056	80	85
79800057	75	68
79800058	60	60
79800059	60	60
79800060	100	90
79800061	60	60
79800062	60	60
79800063	60	61
79800064	85	79
79800065	60	60
79800066	90	83
79800067	70	71
79800068	75	70
79800069	60	60
79800070	80	75
79800071	75	81
79800072	60	60
79800073	75	69
79800074	80	72
79800075	75	68

EA number	Original Interviews Required	Successful Interviews
79800076	60	60
79800077	110	108
79800078	95	116
79800079	95	87
79800080	60	60
79800081	75	70
79800082	60	60
79800083	70	63
79800084	75	72
79800085	80	75
79800086	80	72
79800087	60	61
79800088	70	65
79800089	65	60
79800090	60	65
79800091	60	60
79800092	110	99
79800093	65	61
79800094	60	61
79800095	80	98
79800096	140	127
79800097	135	122
79800098	80	74
79800099	60	60
79800100	100	91
79800101	90	82
79800102	85	79
79800103	105	97
79800104	65	60
79800105	120	130
79800106	90	81
79800107	60	61
79800108	60	63
79800109	60	66
79800110	100	96
79800111	120	117
79800112	130	119

EA number	Original Interviews Required	Successful Interviews
79800113	210	220
79800114	90	90
79800115	100	92
79800116	60	60
79800117	60	60
79800118	70	64
79800119	110	102
79800120	80	74
79800121	105	97
79800122	105	95
79800123	90	81
79800124	80	78
79800125	90	83
79800126	80	74
79800127	60	61
79800128	105	97
79800129	85	77
79800130	60	63
79900001	65	65
79900002	60	61
79900003	60	61
79900004	85	77
79900005	75	68
79900006	60	61
79900007	90	82
79900008	60	63
79900009	60	62
79900010	95	87
79900011	60	63
79900012	60	102
79900013	60	63
79900014	60	64
79900015	60	60
79900016	60	62
79900017	90	85
79900018	60	66
79900019	60	61

EA number	Original Interviews Required	Successful Interviews
79900020	60	81
79900021	70	73
79900022	75	79
79900023	60	72
79900024	105	120
79900025	60	65
79900026	60	60
79900027	60	60
79900028	60	60
79900029	60	67
79900030	80	83
79900031	60	62
79900032	60	60
79900033	60	65
79900034	60	63
79900035	60	60
79900036	60	60
79900037	110	107
79900038	60	62
79900039	65	63
79900040	120	109
79900041	60	60
79900042	60	61
79900043	60	60
79900044	60	60
79900045	60	63
79900046	60	61
79900047	60	61
79900048	90	99
79900049	70	68
79900050	60	60
79900051	60	68
79900052	60	60
79900053	65	62
79900054	60	60
79900055	65	61
79900056	60	60

EA number	Original Interviews Required	Successful Interviews
79900057	70	64
79900058	70	65
79900059	60	61
79900060	60	62
79900061	85	86
79900062	60	64
79900063	60	60
79900064	85	79
79900065	60	64
79900066	60	61
79900067	60	73
79900068	60	66
79900069	60	63
79900070	80	72
79900071	60	64
79900072	60	61
79900073	75	71
79900074	60	64
79900075	60	65
79900076	60	60
79900077	180	179
79900078	60	60
79900079	75	70
79900080	60	62
79900081	60	60
79900082	60	60
79900083	60	60
79900084	70	65
79900085	100	94
79900086	95	90
79900087	60	60
79900088	60	60
79900089	60	60
79900090	90	88
79900091	110	99
79900092	70	63
79900093	60	60

EA number	Original Interviews Required	Successful Interviews
79900094	60	65
79900095	60	61
79900096	70	64
79900097	60	60
79900098	65	63
79900099	70	63
79900100	70	64
79900101	75	68
79900102	65	65
79900103	60	66
79900104	60	60
79900105	60	60
Total	**30000**	**30002**