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HOW TO USE SIMPLE MOBILE MAPPING TOOLS IN QUALITY OF LIFE AND COMMUNITY WELL-BEING ASSESSMENT

JEROEN VERPLANKE
JAVIER MARTINEZ

OUTLINE

- 45 min   introduction to workshop
- 60 min   Survey examples on community well-being/inclusiveness
- 90 min   Practical training on using tablets and software

We will use the android app "MapIt"

You can download this on your android phone (now)

Tomorrow
- 120 min   Practical training on Campus
- 90 min   Discussion session

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INTRODUCTION TO QUALITY OF LIFE AND COMMUNITY WELL-BEING ASSESSMENT

THE NEW URBAN AGENDA
QOL AND COMMUNITY WELL-BEING

point 72

"fostering sustainable economic development and **all persons' well-being and quality of life** through environmentally sound urban and territorial planning, infrastructure, and basic services" as well as the commitment to include "the **participation of relevant stakeholders and communities**".


HABITAT III
QUITO - OCTOBER 2016

The New Urban Agenda

PUBLIC SPACE – NUA POINT 37

We commit to promote **safe, inclusive, accessible, green,** and **quality** public spaces, including streets, sidewalks, and cycling lanes, squares, waterfront areas, gardens, and ***parks*** that are multi-functional areas for <u>social interaction</u> and inclusion, human <u>health</u> and well-being, economic exchange, and <u>cultural expression</u> and dialogue among a wide diversity of people and cultures, and which are designed and managed to ensure human development, to build peaceful, inclusive, and participatory societies, as well as to promote living together, connectivity, and social inclusion.

To foster <u>all persons'</u> well-being and quality of life

we need to be able to recognize, identify and monitor existing (unequal)

quality of life conditions

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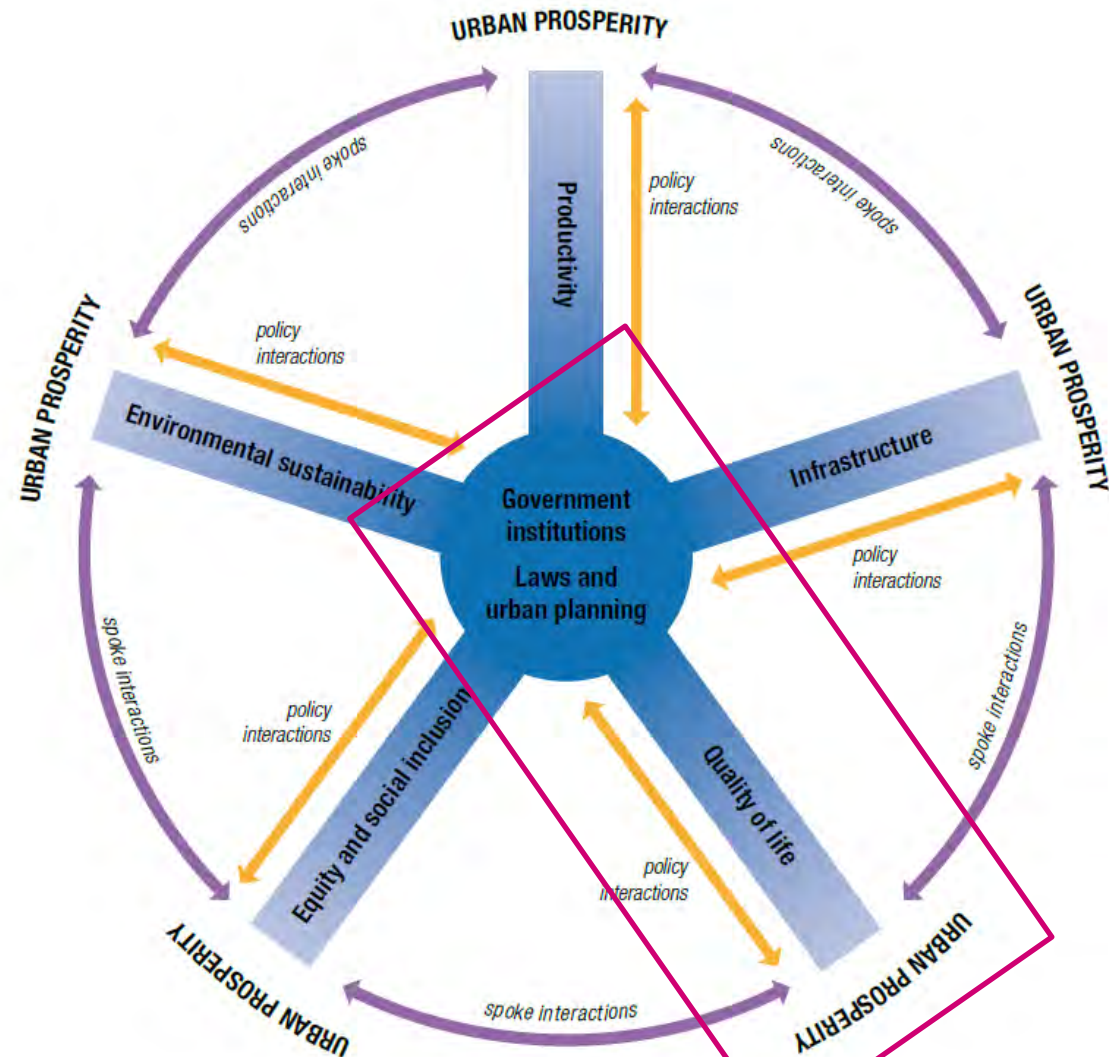
INEQUALITY IN QUALITY OF LIFE CONDITIONS
A GLOBAL PROBLEM

QUALITY OF LIFE

QoL is multidimensional, relates to various domains (housing, income, built and natural environment, health) and the level of satisfaction that individuals have with those domains

[different stakeholders and contexts

will have different views towards domains and
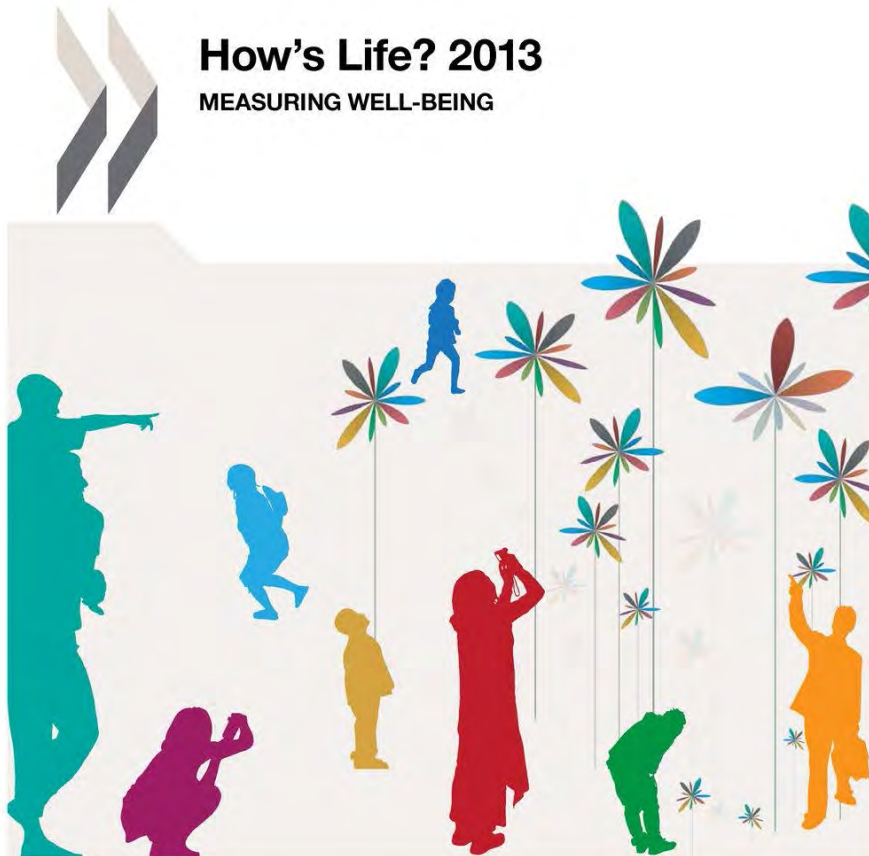
will produce different knowledge about QoL conditions]

COMMUNITY WELL-BEING

Community well-being stresses on what quality-of-life means to residents (Lee et al. 2015) and on those particular domains that matters to them (Lee et al. 2015).

(OECD well-being indicators)

# WHAT MATTERS MOST TO PEOPLE?

COMMUNITY WELL-BEING KEY DOMAINS

Housing	Housing
Income	Income and Wealth
Jobs	Jobs and Earnings
Community	Social Connections
Education	Education and Skills
Environment	Environmental Quality
Governance	Civic engagement and Governance
Health	Health Status
Life satisfaction	Subjective Well-being
Safety	Personal Security
Work-Life balance	Work and Life

HOW MOBILE MAPPING TOOLS ARE BEING USED

- Informal settlements are invisible on maps
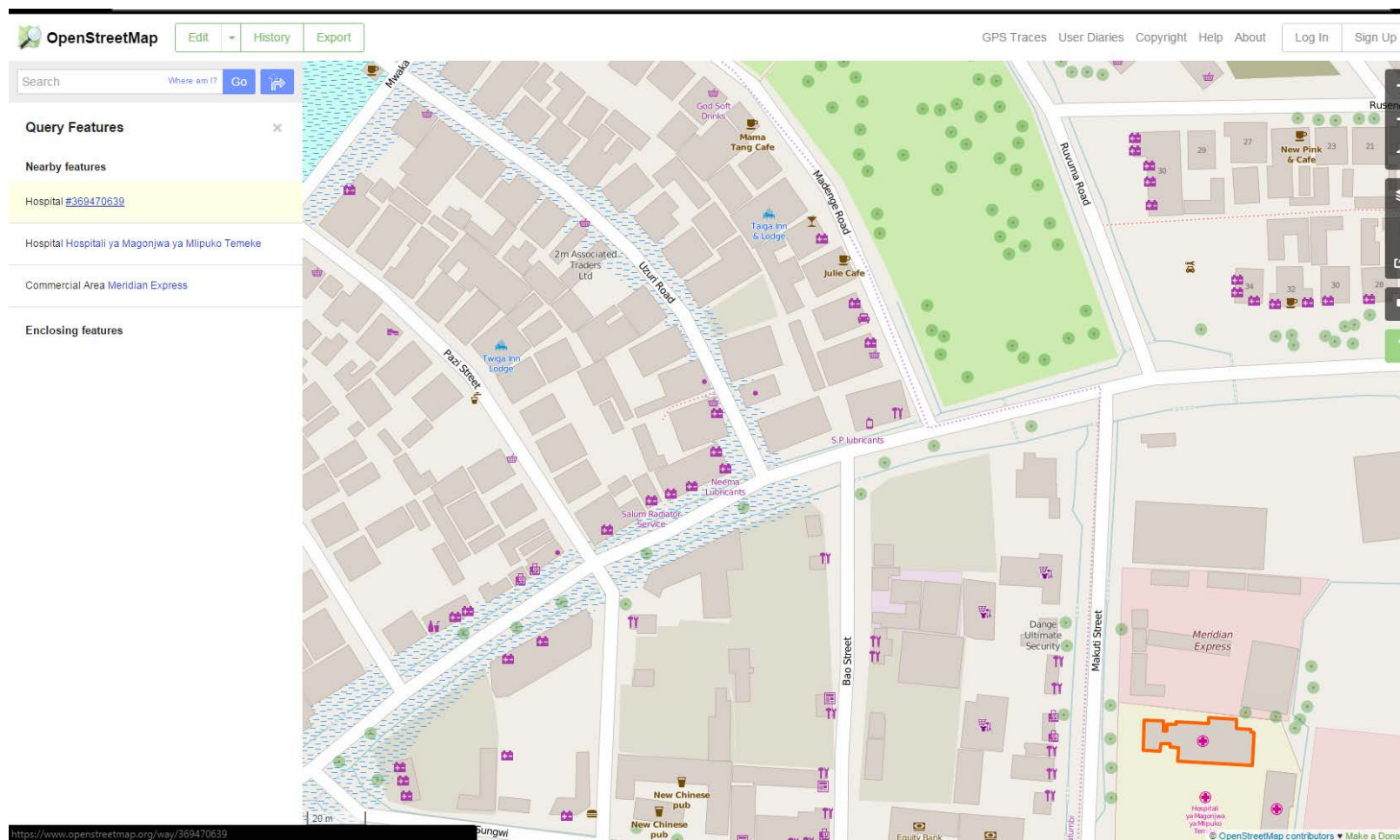- Local population enabled to record and map their own existence

DAR ES SALAAM, TANZANIA

PUTTING SETTLEMENTS ON THE MAP

PUTTING SETTLEMENTS ON THE MAP

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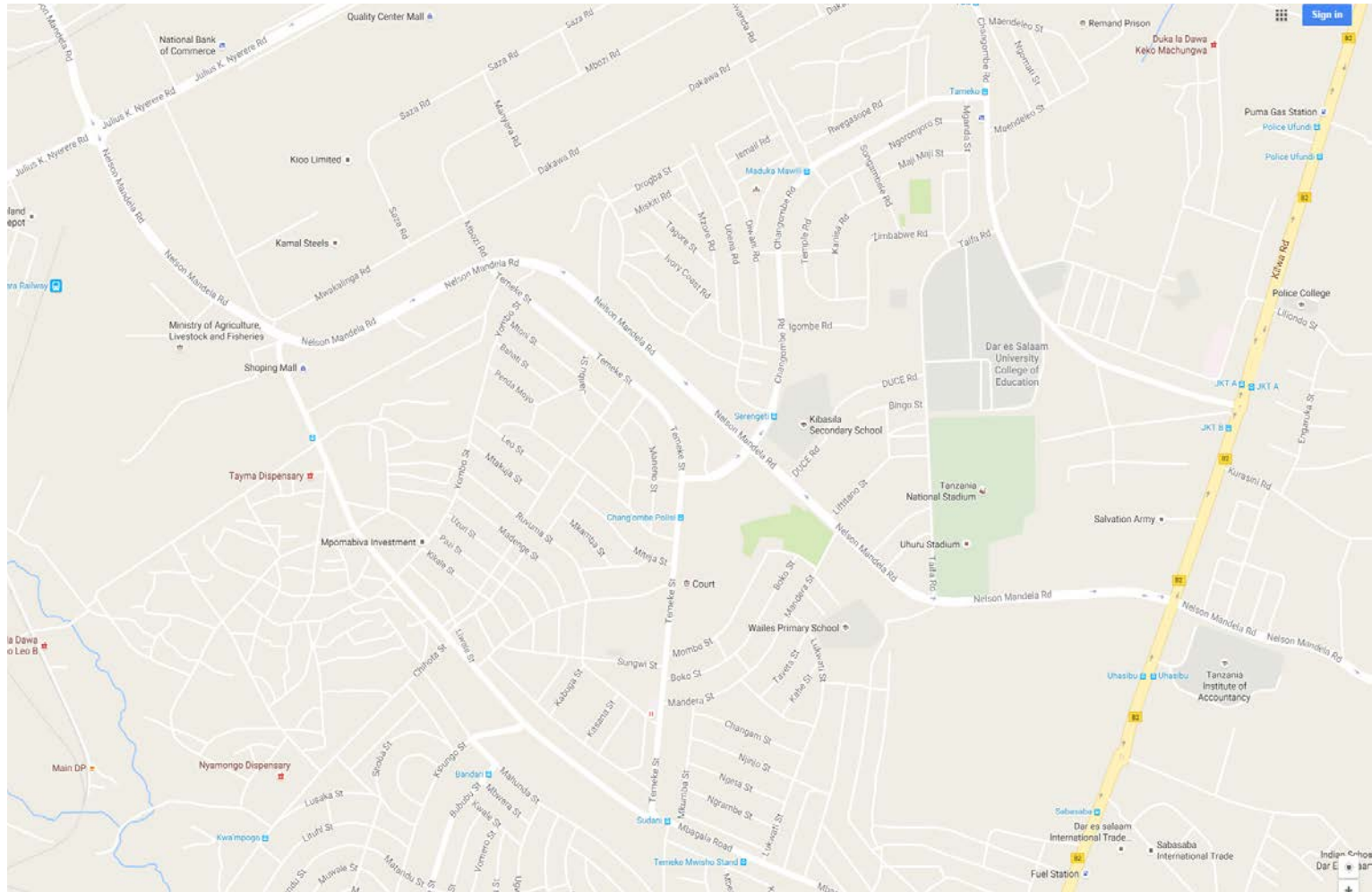
SURVEY EXAMPLES
ON COMMUNITY WELL-BEING AND INCLUSIVENESS

FACULTY OF GEO-INFORMATION SCIENCE AND EARTH OBSERVATION

Quality of Life in Bristol
Quality of Life in your Neighbourhood
Survey results
2011

Quality of life in Bristol 2015-16
Results of 2015 survey

% respondents who say air quality & traffic pollution is a problem in their neighbourhood

Ward	%	+/-	lower confidence limit	upper confidence limit
Ashley	72	6.5	65.5	78.3
Avonmouth	68	8.2	59.1	75.1
Bedminster	63	7.6	55.2	70.0
Bishopston	70	6.5	63.1	75.7
Bishopsworth	52	7.9	43.8	59.1
Brislington East	63	7.5	55.5	70.2
Brislington West	66	8.5	57.6	74.1
Cabot	68	10.9	56.9	78.0
Clifton	67	7.7	58.6	73.7
Clifton East	49	10.8	38.7	59.5
Cotham	60	10.7	49.4	70.1
Easton	70	8.6	61.2	78.0
Eastville	68	9.1	58.5	76.2
Filwood	55	8.5	46.7	63.2
Frome Vale	59	9.2	49.7	67.6
Hartcliffe	53	7.1	46.2	60.1
Henbury	57	9.3	47.8	65.9
Hengrove	49	7.9	41.0	56.5
Henleaze	48	7.3	41.3	55.5
Hillfields	59	8.3	50.4	66.5
Horfield	66	7.5	58.3	73.0
Kingsweston	47	8.4	39.0	55.3
Knowle	70	7.9	61.4	76.8
Lawrence Hill	78	6.9	70.7	84.3
Lockleaze	55	7.8	47.6	62.8
Redland	63	7.8	54.9	70.1
Southmead	57	9.3	48.1	66.1
Southville	61	7.6	53.1	67.8
St George East	47	8.7	38.3	55.2
St George West	68	9.1	58.0	75.7
Stockwood	45	8.7	36.3	53.2
Stoke Bishop	33	10.5	23.6	43.9
Westbury-on-Trym	46	6.8	39.5	52.7
Whitchurch Park	45	8.6	36.8	53.6
Windmill Hill	63	7.44	55.2	69.7
BRISTOL	58.4	1.4	57.0	59.8

Question number			15d	
Sample size			5113	
Year			2011	
Priority neighbourhoods	61	2.9	58.1	63.7
Older people	59.5	1.9	57.6	61.4

%
- 33 to 41.9
- 42 to 51
- 51.1 to 60
- 60.1 to 69.2
- 69.2 to 78.2

Source:
Quality of Life survey
Bristol City Council 2011

maps of intra-urban variations

Source:
Quality of Life survey
Bristol City Council 2011

69.2 to 78.2
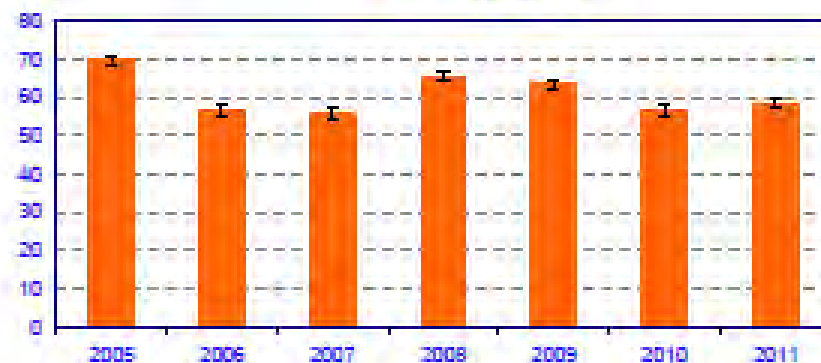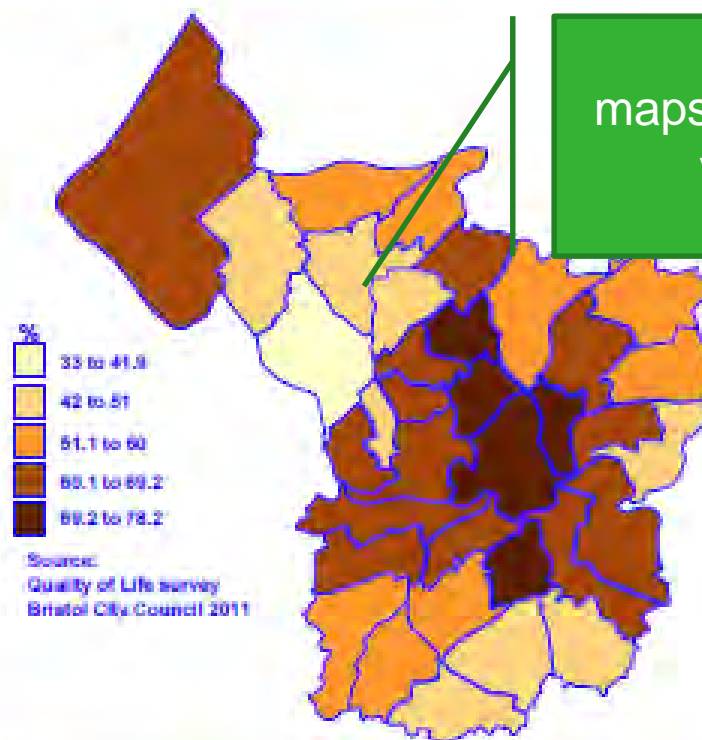
46.2	60.1
47.8	65.9
41.0	56.5
41.3	55.5
50.4	66.5
58.3	73.0
39.0	55.3
61.4	75.8
70.7	84.3
47.6	62.8
54.9	70.1
48.1	66.1
53.1	67.8
38.3	55.2
58.0	75.7
36.3	53.2
23.6	43.9
39.5	52.7
36.8	53.6
55.2	69.7
57.0	59.8

15d
5113
2011

58.1	63.7
57.8	61.4
60.4	68.0
53.3	63.8
60.2	66.0
51.3	71.1
55.7	59.9
56.9	60.6
55.8	59.4
42.8	63.5
56.1	60.8

e accurate
e questions was also
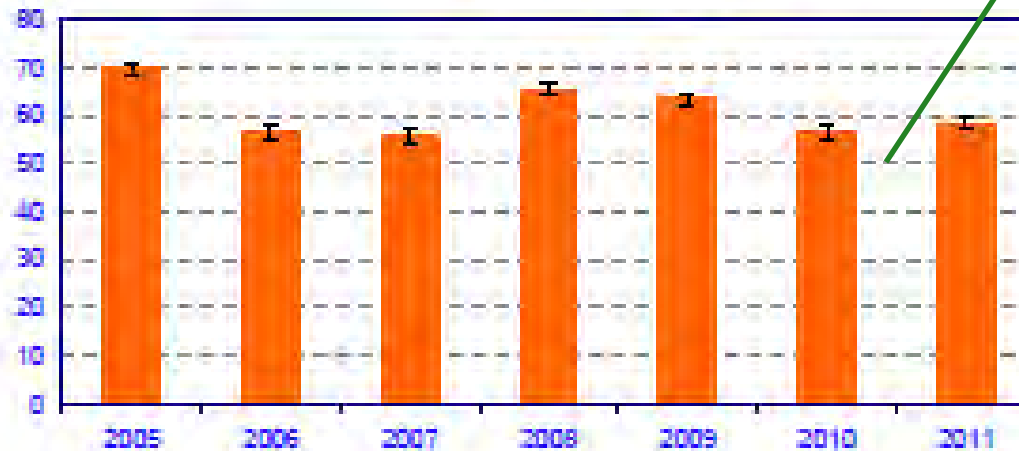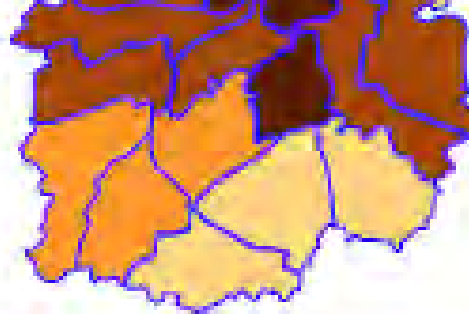
Temporal dynamics and trends

Gender and minorities perspectives
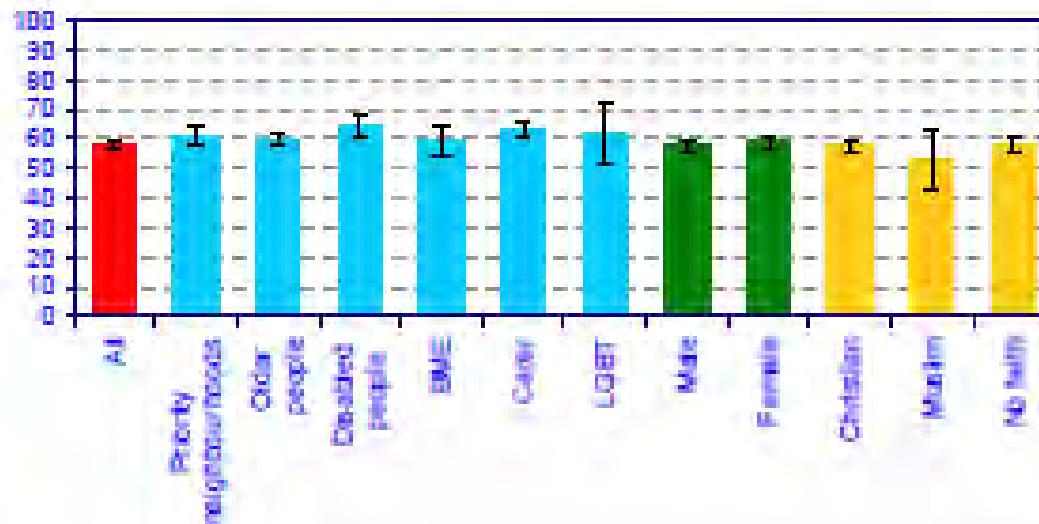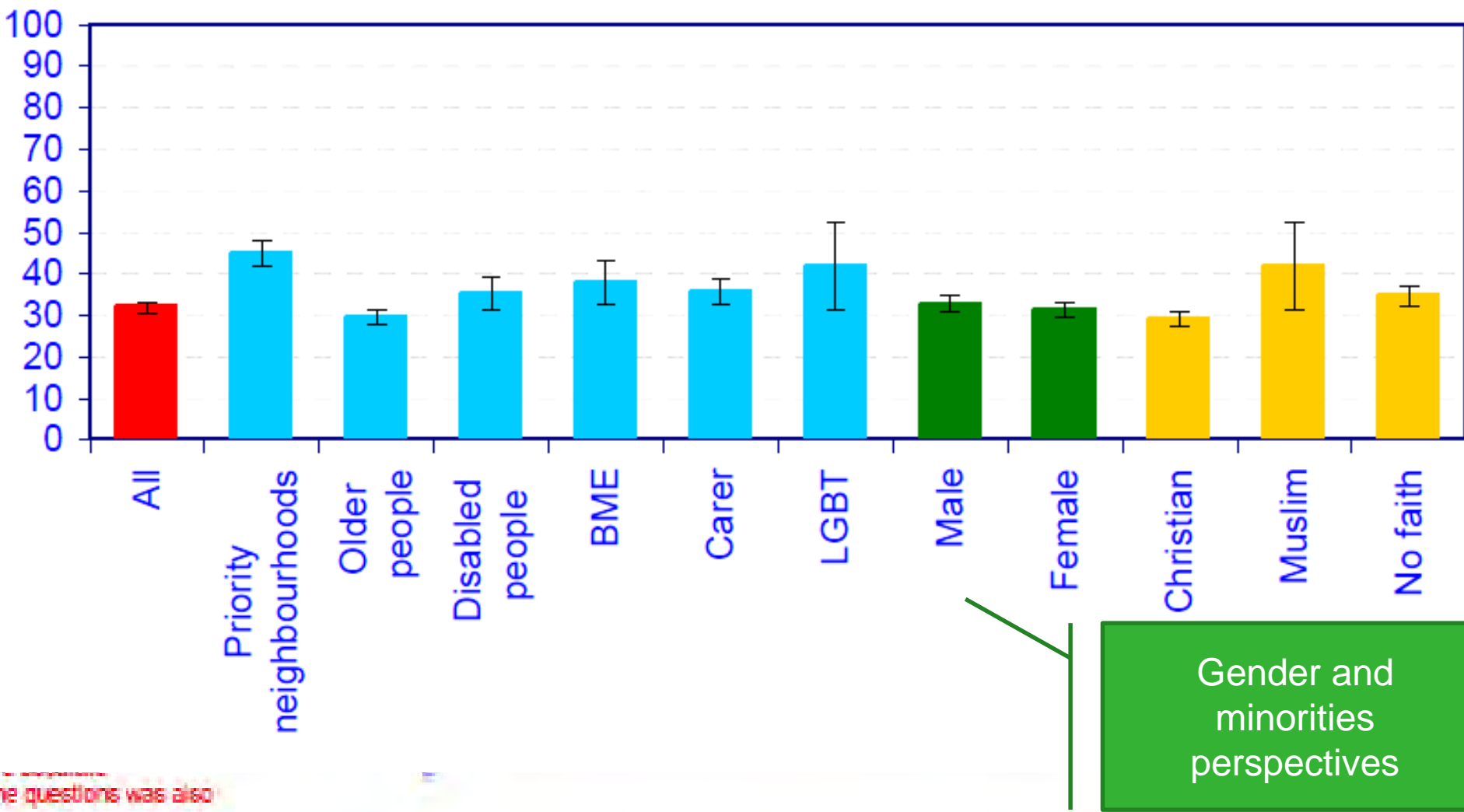
ANALYSIS OF GENDER AND MINORITY GROUPS

Equalities analysis

Each indicator is analysed to show the differences for each 'equalities' group (groups of special interest including minority groups). The following groups have been chosen for further analysis:

Male

Female

Residents living in priority neighbourhoods (deprived areas previously known as neighbourhood renewal areas)

Older people – people aged 50 years or more

Disabled people – people who think of themselves as disabled

BME – Black and minority ethnic groups

Carer – people who provide unpaid care for someone with long term physical or mental health illness or disability, or problems related to old age

LGBT – people who say their sexuality is lesbian, gay or bisexual or they are transgender

**Christian** – people who say they are of Christian faith

Muslim – people who say they are of Muslim faith

No faith – people who say they have no faith/religion.

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Safer Bristol

% respondents who say personal safety is a problem in their neighbourhood ☺

This indicator and feeling safe outside after dark and during the day (next page) measure

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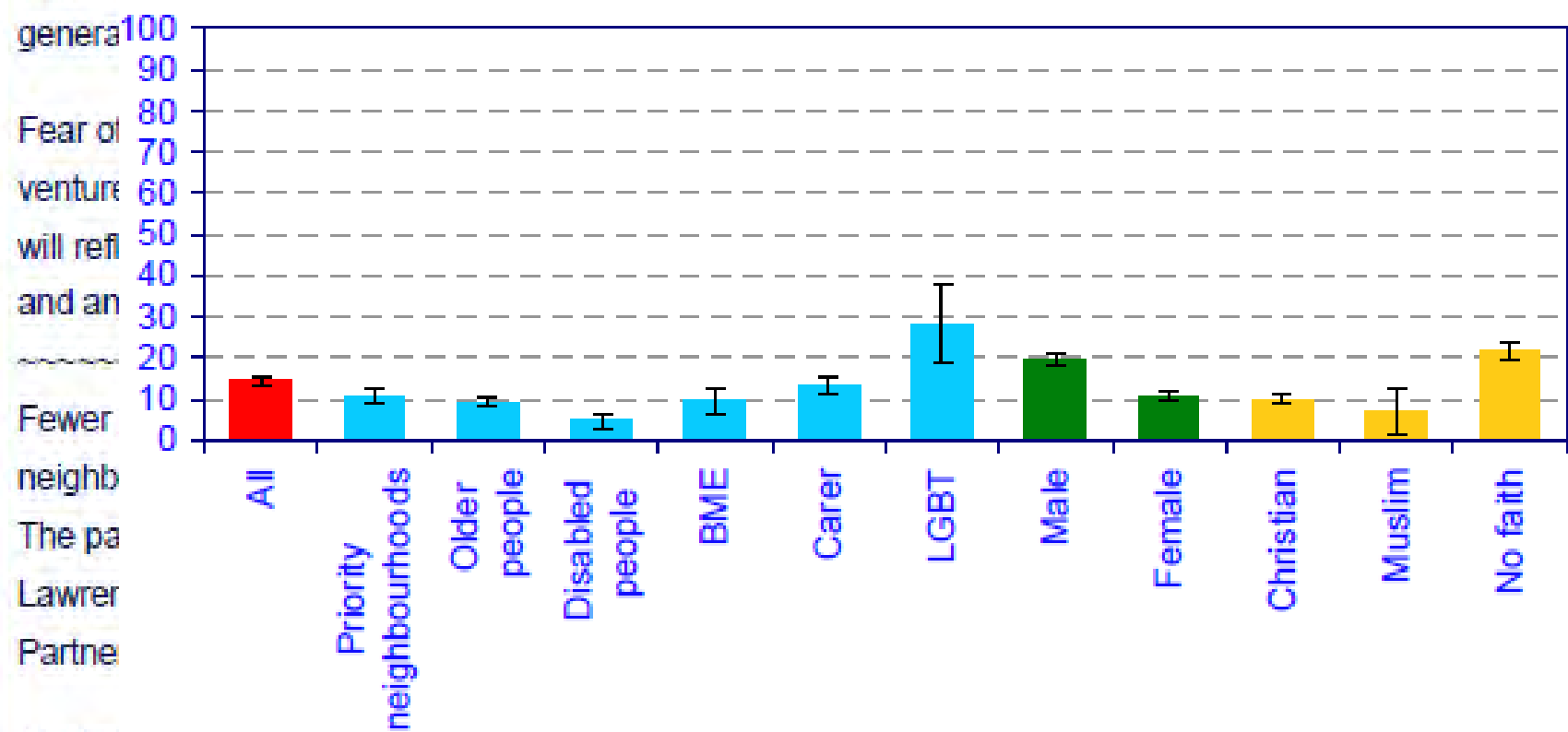
Analys

areas felt they had problems with their personal safety. This was also the case for disabled people (38%), Black and minority ethnic groups (39%), and the indicator was particularly high for lesbian, gay, bisexual and transgender groups (LGBT at 44%). Further analysis (not

Objective QoL: observable and measurable conditions (e.g. durable housing, adequate water provision);

[relatively "objective" assessment done by experts]
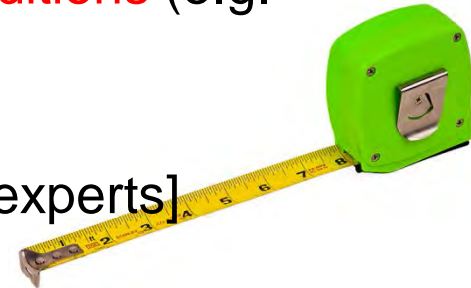
[relatively "subjective" assessment done by residents]

Subjective QoL relates to the perceived or (self-) expressed (dis)satisfaction with specific domains or life in general.

States of quality of life

		Objective condition	
		Good	Bad
Subjective condition	Good	Well-being	Adaptation
	Bad	Dissonance	Deprivation

Tesfazghi, E., Martinez, J., & Verplanke, J. (2010). Variability of Quality of Life at Small Scales: Addis Ababa, Kirkos Sub-City. Social Indicators Research, 98(1), 73-88.

SUBJECTIVE AND OBJECTIVE QoL
INFORMING POLICY AND PLANNING

Targeting

deprived

areas
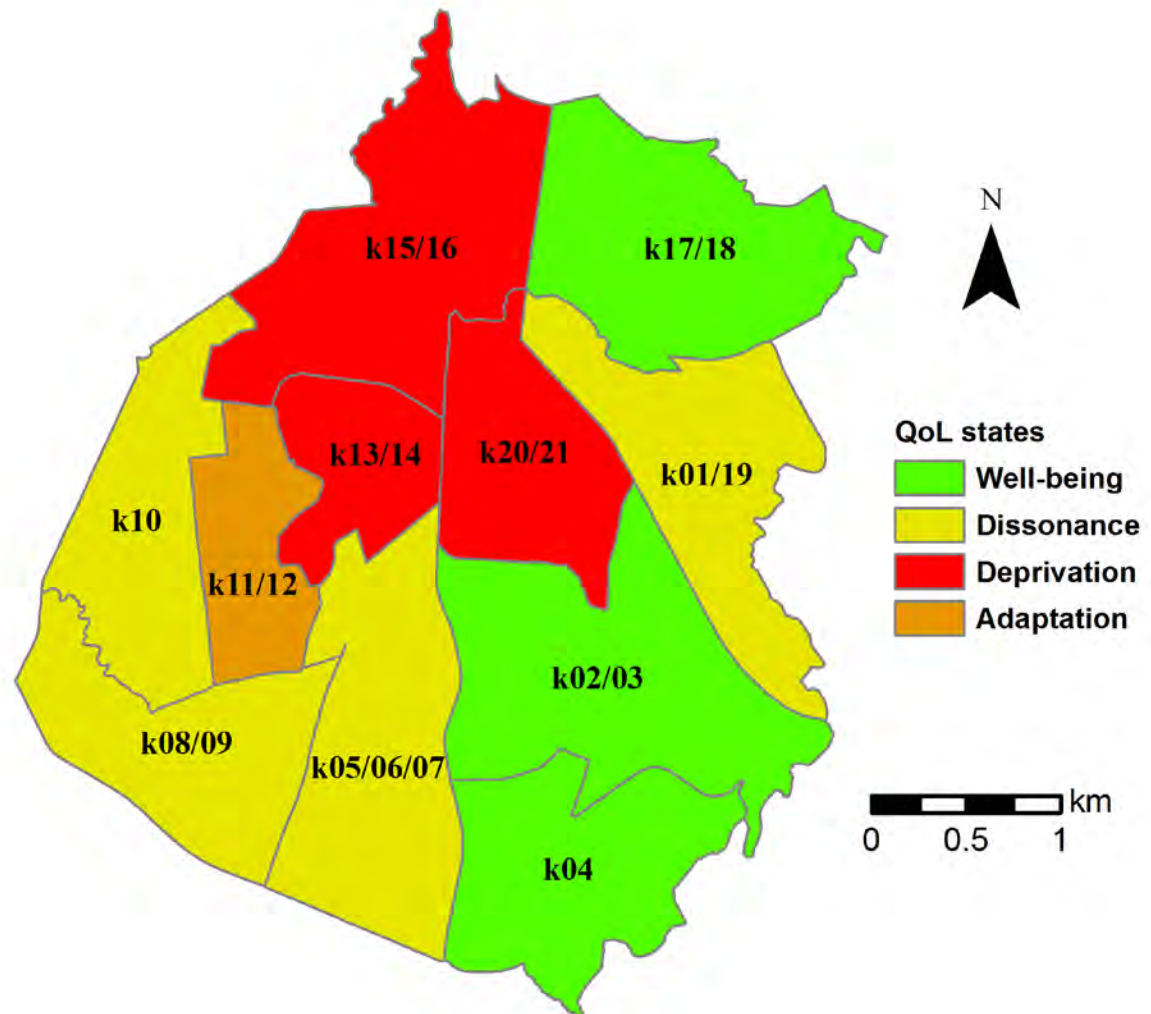
CASE OF ADDIS ABABA / HOUSING CONDITIONS

Quantitative approach

(Objective QoL)

Secondary data: (census data on adequate housing, wall-roof-floor materials,etc)

(Subjective QoL)

Household survey with a likert scale (1-6):

1. How do you assess your housing condition?	Extremely Poor	Very Poor	Poor	Good	Very Good	Extremely Good

Photos: Getu, S. (2011) Analyzing variation of urban quality of life using participatory approach in Addis Ababa, Ethiopia
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We know where adaptation and dissonance occur…

But

What are the reasons?

QoL states
- Well-being
- Dissonance
- Deprivation
- Adaptation
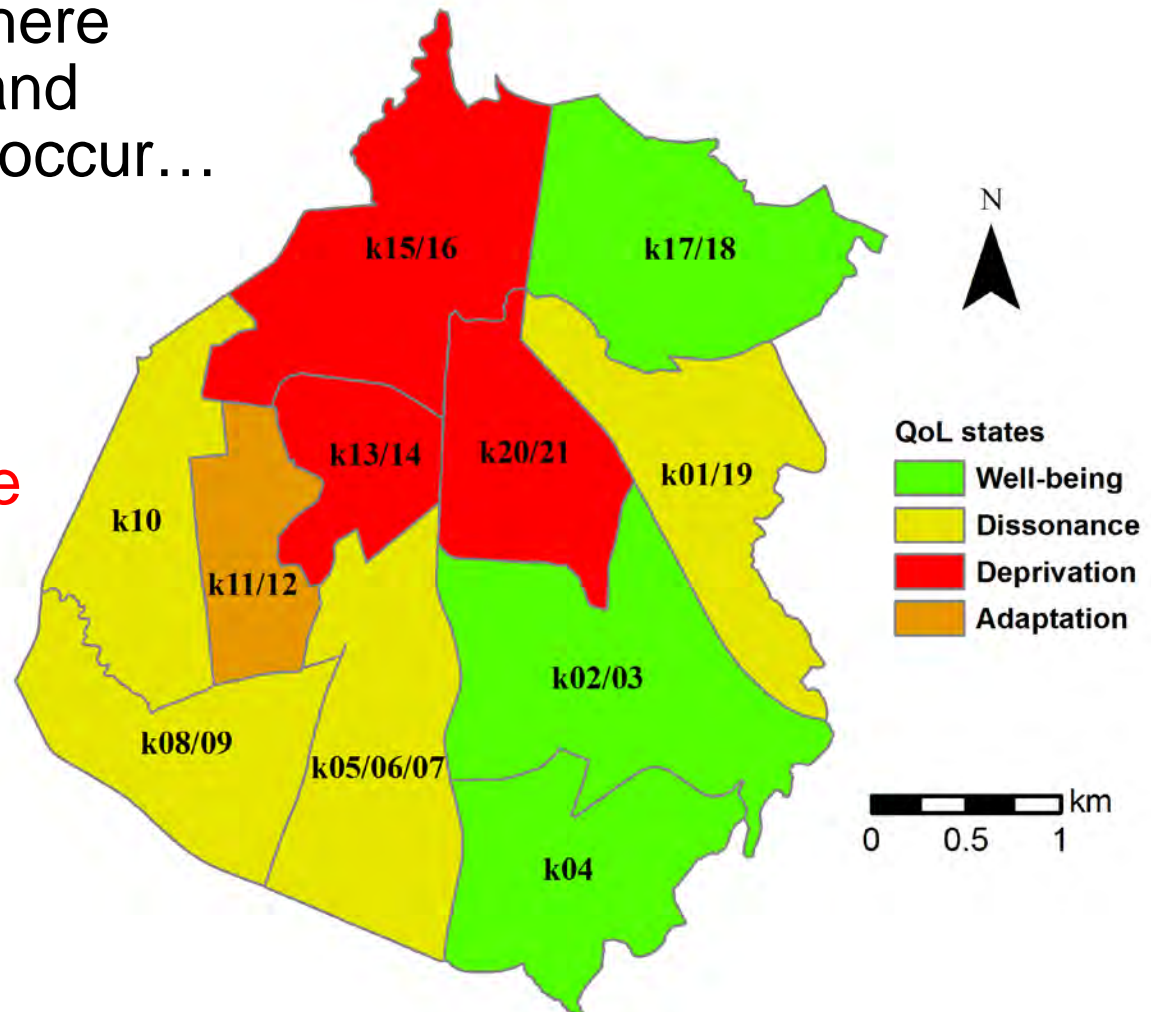
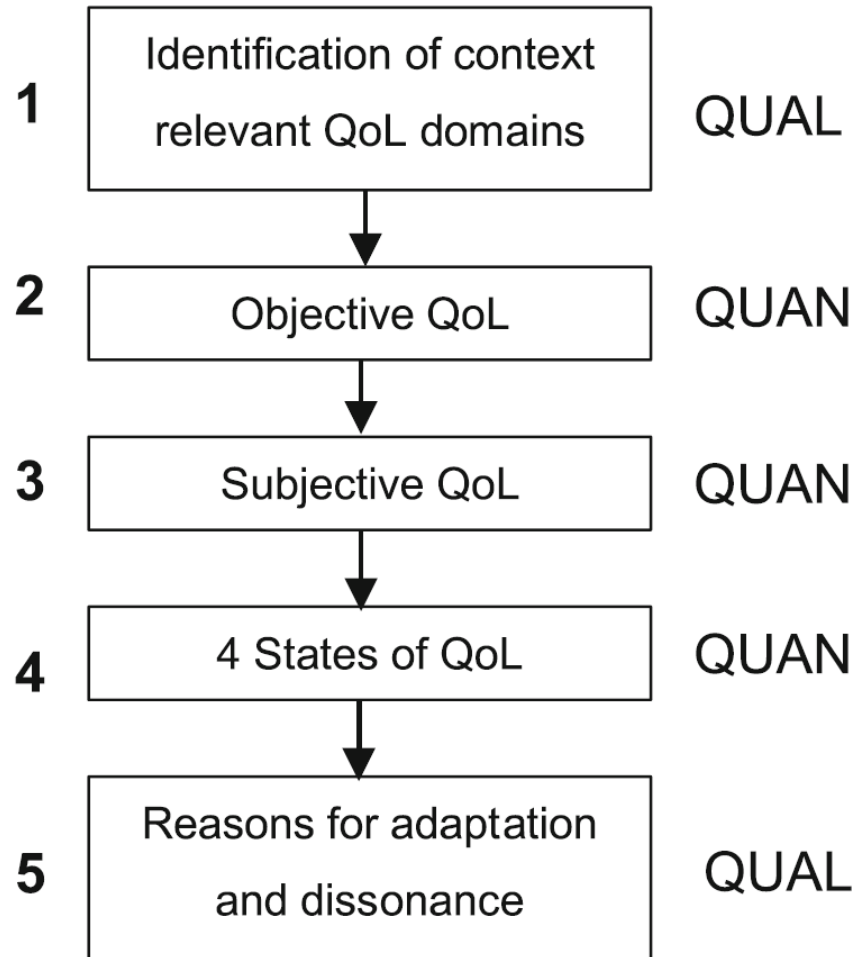# UNDERSTANDING ADAPTATION AND DISSONANCE

We incorporated community sketch mapping and walking interviews to bring a contextual explanation of adaptation and dissonance

SUBJECTIVE AND OBJECTIVE QoL
A MIXED METHODS APPROACH

Berhe, R., Martínez, J. A., & Verplanke, J. (2014). Adaptation and Dissonance in Quality of Life: A Case Study in Mekelle, Ethiopia. Social Indicators Research, 118(2), 535-554. doi:10.1007/s11205-013-0448-y

(WALKING) INTERVIEWS
UNDERSTANDING REASONS BEHIND ADAPTATION AND DISSONANCE

- *"the house is small and it is not in a good condition but I am satisfied* because I cannot pay more than what I am paying now for house rent if I do so my kids will starve"

- while "objective" measures of accessibility to social infrastructure show good conditions walking interviews with residents revealed dissonance and other dimensions attached to accessibility (e.g. affordability / schools located at the side of high ways > children are exposed to traffic accident)

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ITC

(MIXED) METHODS FOR ASSESSING
OBJECTIVE AND SUBJECTIVE QUALITY OF LIFE

SUBJECTIVE QOL: PARTICIPATORY MAPPING

(Subjective QoL)

Participatory mapping

Photos: Getu, S. (2011) Analyzing variation of urban quality of life using participatory approach in Addis Ababa, Ethiopia

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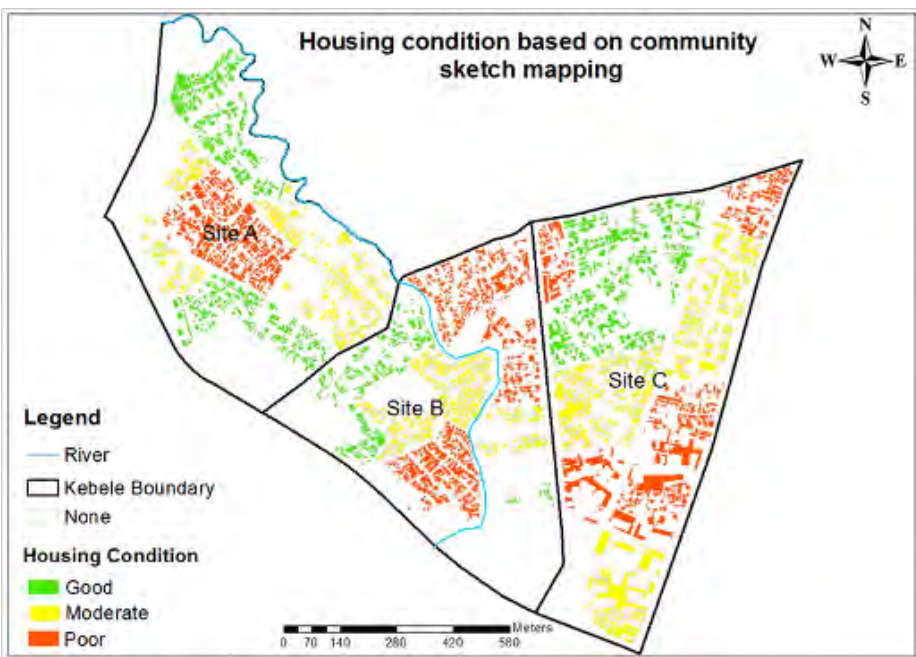
PARTICIPATORY TRANSECT WALK
/ Walking interviews

BIRMINGHAM, ENGLAND
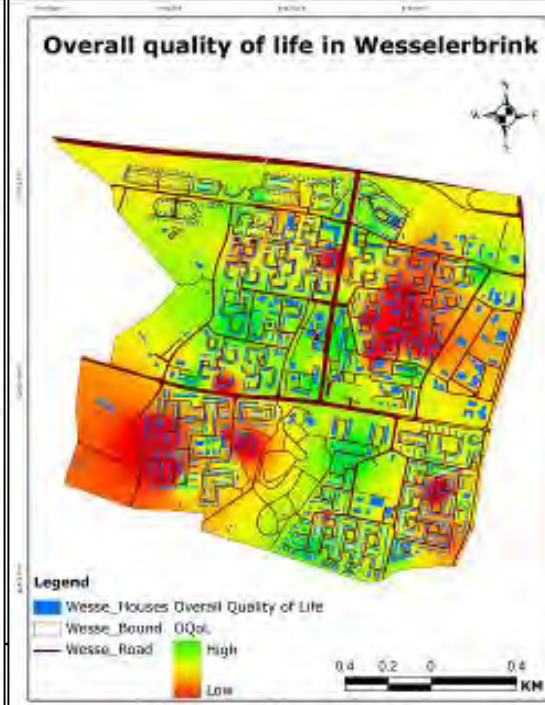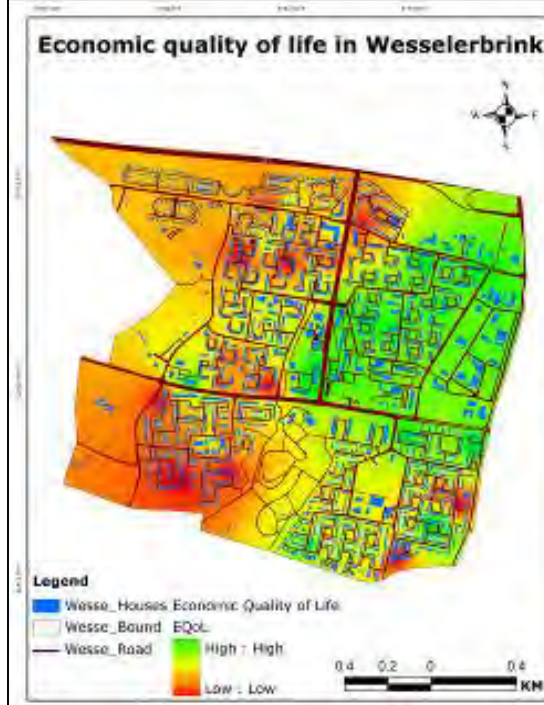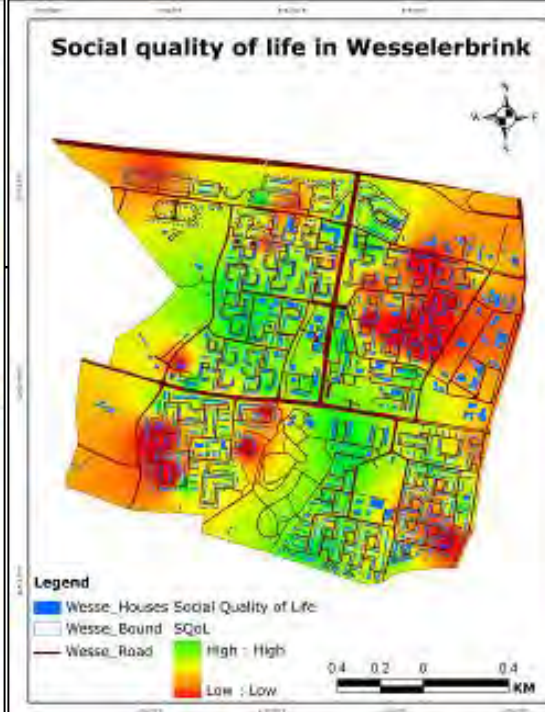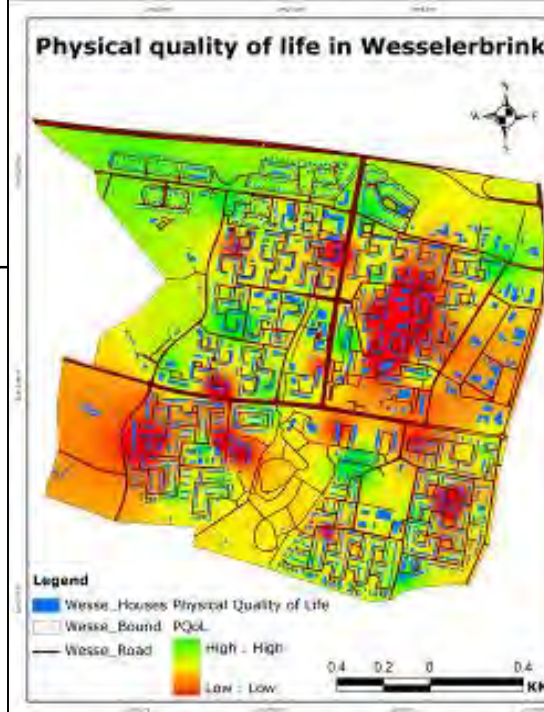## GENDER PERSPECTIVE

Women

Men

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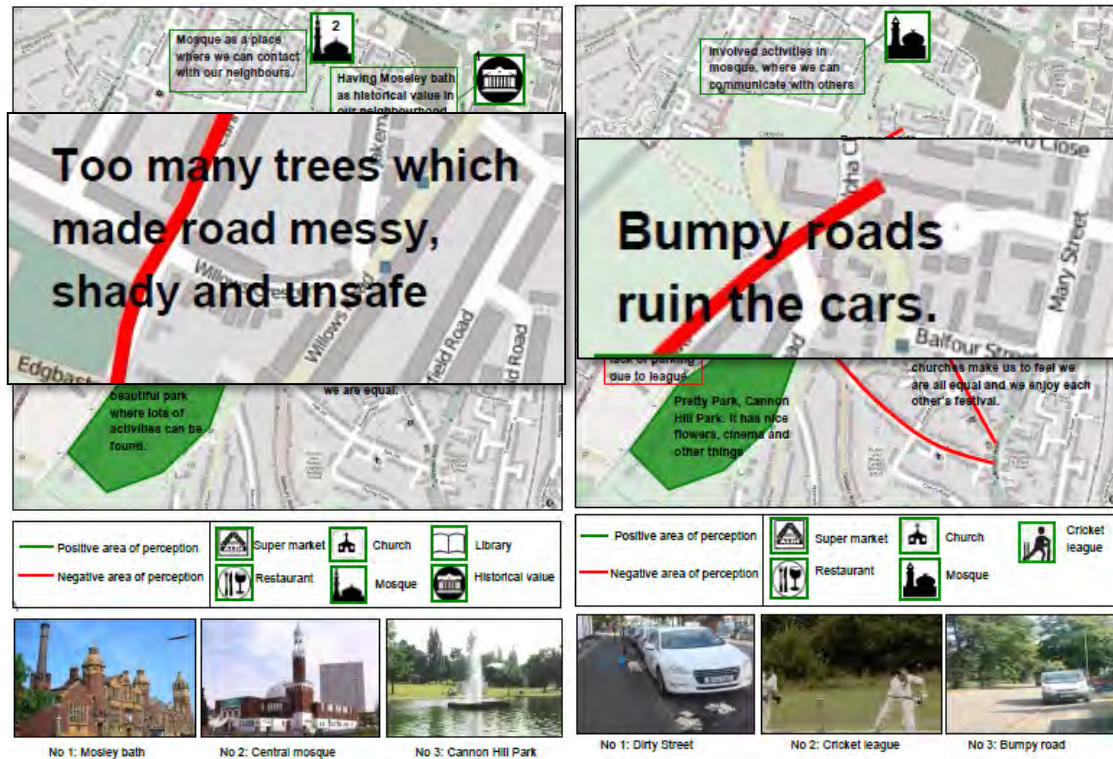
ENSCHEDE, THE NETHERLANDS

VISUALIZATION OF QOL

Adapted from Kumar Dashora, L. (2009) Visualisation of urban quality-of-life at neighbourhood level in Enschede. Enschede, ITC, 2009.

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QOL AND GENDER
WHY BUILDING SAFE CITIES FOR WOMEN AND GIRLS?

- In Shumi et al. 2015, we used a mixed-method approach and elicited emic views to understand how the quality-of-life of women garment workers in Dhaka (Bangladesh) was affected by the walking conditions of the routes the take from home to work.

Route 1 - Objective and Subjective Walkability

Day time walking environment of women garment workers

Night time walking environment of women garment workers

Pleasant and Unpleasant places

225 112.5 0 225 Meters

- Narrow and dark road - Uncomfortable
- Malfunctioned street light - Afraid of dark road
- Crossing - Afraid of accidents
- Place of attraction
- H Home location
- J Job location
- High Walkability
- Medium Walkability
- Low Walkability

CHILDREN'S PERCEPTION OF THEIR CITY CENTRE

Alarasi, H., Martinez, J., & Amer, S. (2016). Children's perception of their city centre. A qualitative GIS methodological investigation in a Dutch city. *Children's Geographies, 14*(4), 437-452. doi:10.1080/14733285.2015.1103836

WORKSHOP

1. Identification and ranking of QoL domains;

2. Attributes of public space domain;

3. Mapping of public space

4. Discussion

EXAMPLES OF DOMAINS OF LIFE IN OTHER STUDIES

Domains of Life	Studies
Housing	Foo (2000), Turksever and Atalik (2001), Ibrahim and Chung (2003), McCrea et al.(2006), Santos et al. (2007), Li and Weng (2007), Das (2008), Apparicio et al.(2008), Zebardast (2009)
Built-environment	Turksever and Atalik (2001), Li and Weng (2007), Das (2008), Apparicio et al.(2008)
Neighbourhood safety	Foo (2000), Turksever and Atalik (2001), Ibrahim and Chung (2003), Santos et al. (2007), Das (2008), Apparicio et al.(2008)
Neighbourhood sanitation	Richards et al.(2007), Das (2008)
Quality of Public of service	Foo (2000), Ibrahim and Chung (2003), Santos et al.(2007), Rojas (2008), Das (2008)
Access to public services	McCrea et al.(2006), Brereton et al.(2008)
Social connectedness	Foo (2000), Turksever and Atalik,(2001), Ibrahim and Chung (2003), Bonaiuto et al. (2003), Richards et al. (2007), Lee (2008)
Family income	Foo (2000), Brereton et al. (2008), Rojas (2008),

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RELEVANT ATTRIBUTES OF DOMAIN: PUBLIC SPACE

Attribute	Objective	Subjective
Safety (lighting)	Availability of street lights (y/n, count) Broken (yes/no) Working*	Satisfaction / evaluation 1 (Satisfied /Good) 2 (Moderate) 3 (Unsatisfied / Bad) (In)Sufficient*
Attribute 2		
Attribute 3		
Attribute 4		

The question of subjective vs objective

ATTRIBUTES OF QUALITY OF PUBLIC SPACES

Location name (label)
Environmental Risk (flooding, pollution)
Safety (gender based)
Accessibility (obstruction)
Inclusiveness (social interaction, child friendliness)
Amenities (abundance)

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TUTORIAL FOR MOBILE MAPPING

B_IN_U_COM

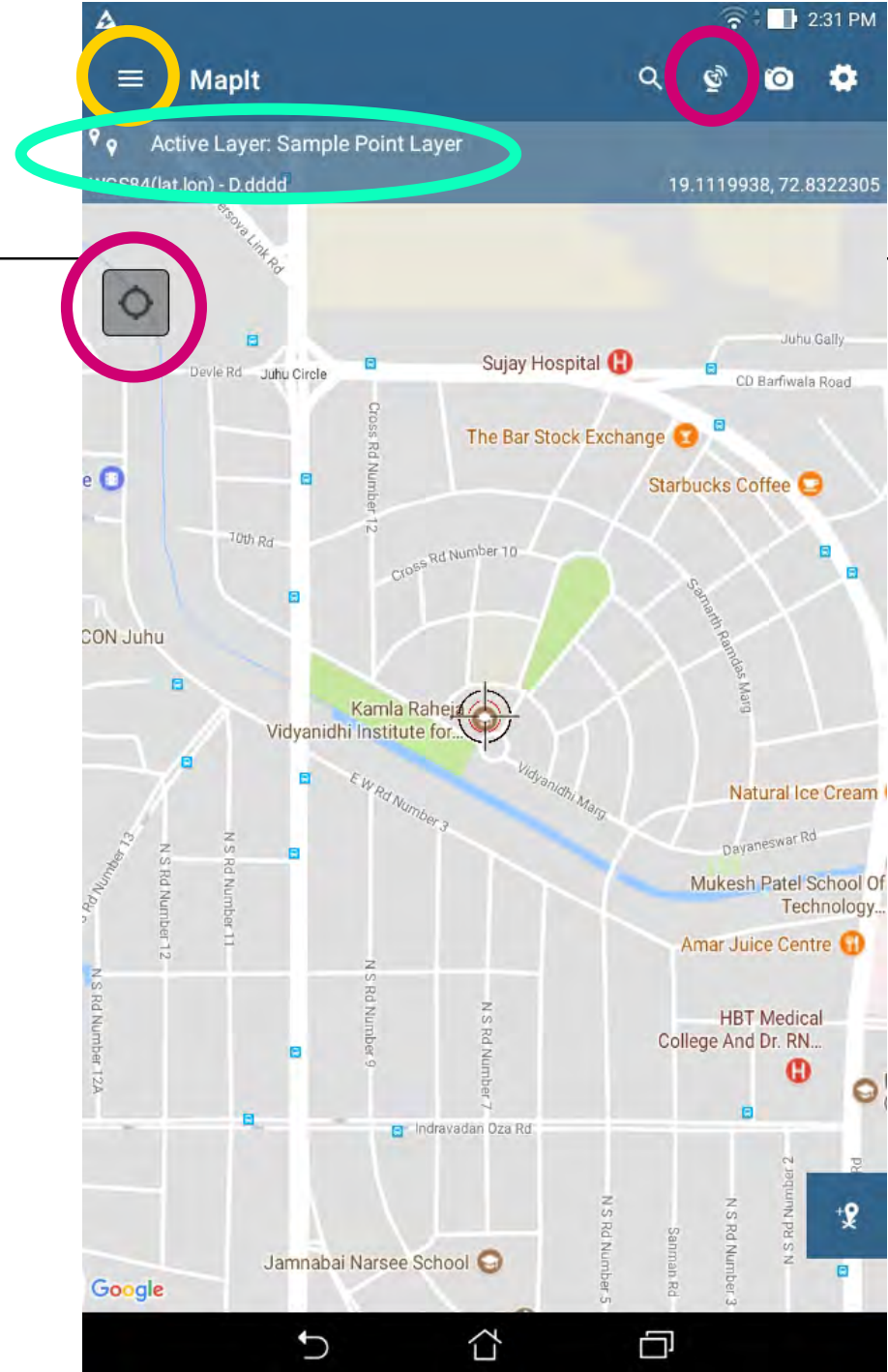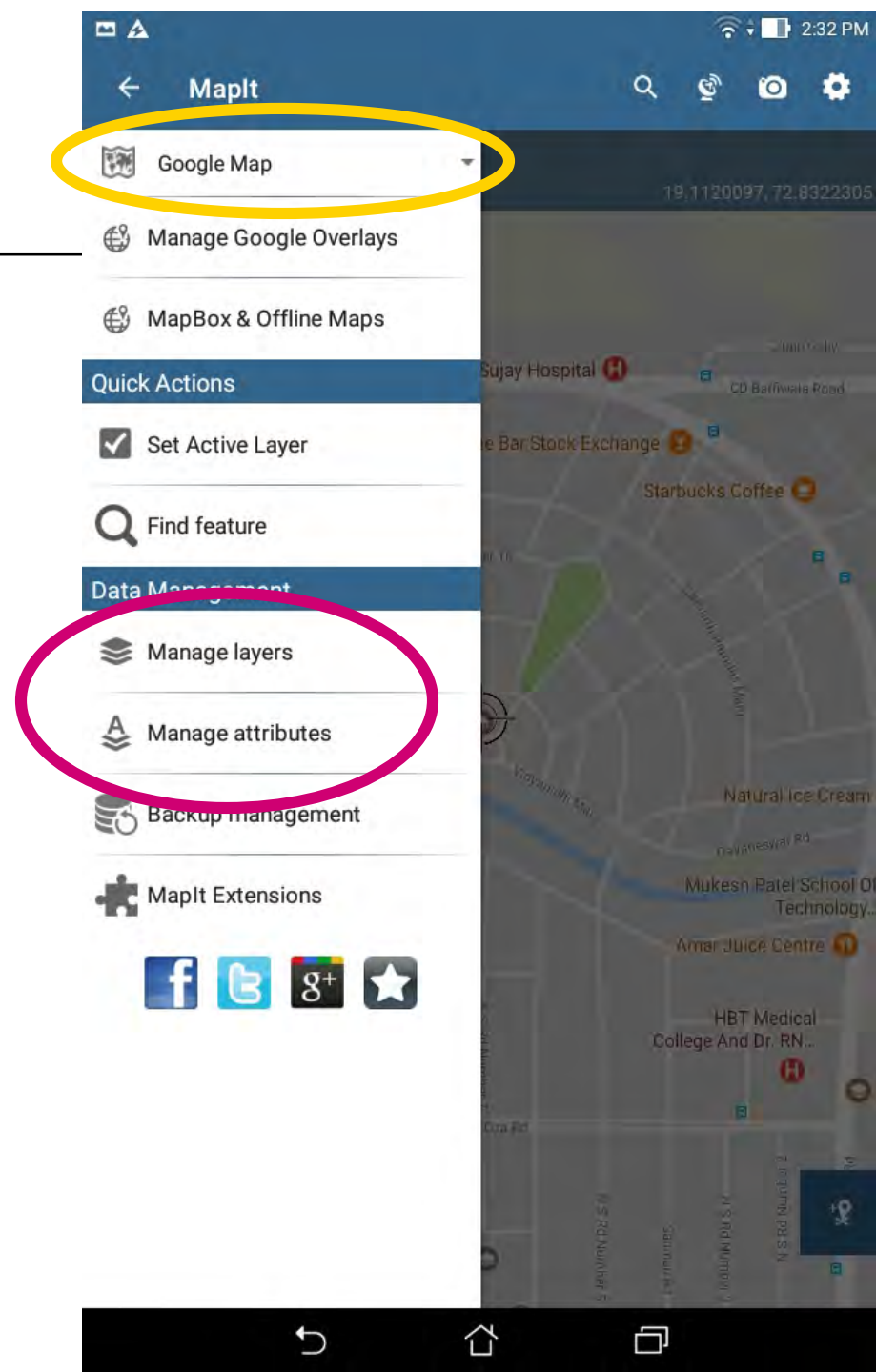FACULTY OF GEO-INFORMATION SCIENCE AND EARTH OBSERVATION
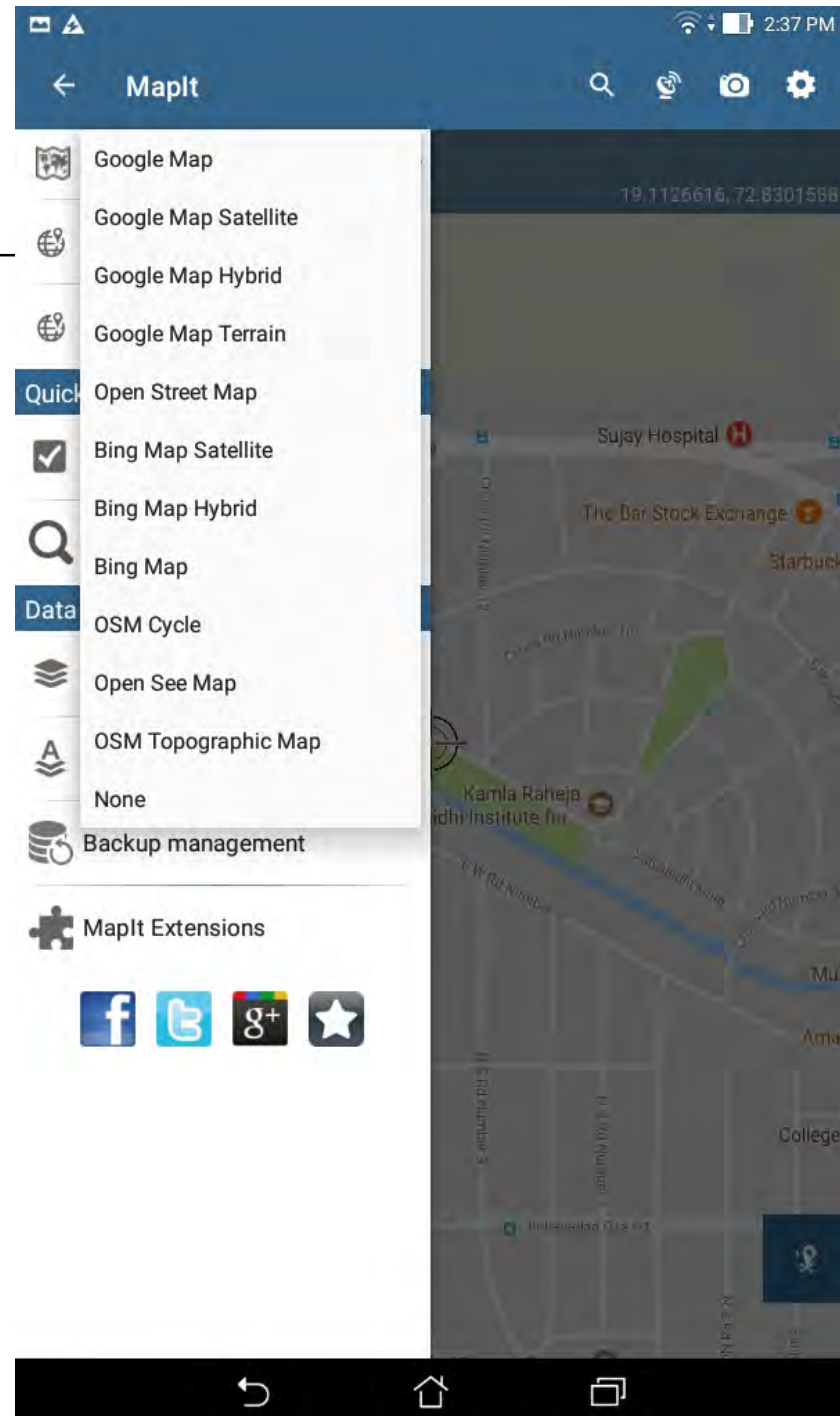
MAPIT

Android only

Google App store

USD 10 for full version

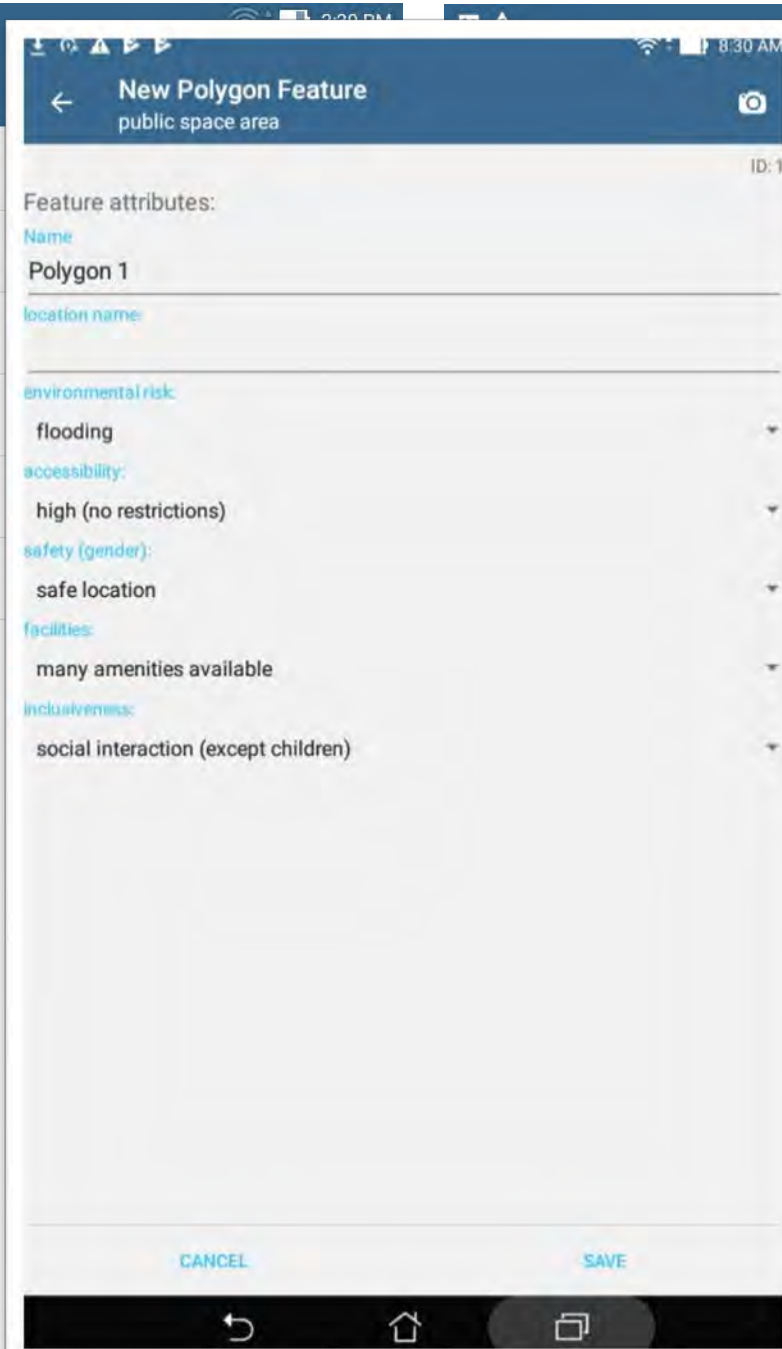Allows point, line, polygon

Multiple attributes

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Screen 1: Set Active Layer

← Set Active Layer

- ◇ Public spaces
- ♀ Sample no-attributes layer
- ♀ Sample Point Layer
- ↗ Sample Line Layer
- ◇ Sample Polygon Layer
- ♀ Public space

Screen 2: New Polygon Feature

← New Polygon Feature
public space area

ID: 1

Feature attributes:

Name
Polygon 1

location name:

environmental risk:
flooding

accessibility:
high (no restrictions)

safety (gender):
safe location

facilities:
many amenities available

inclusiveness:
social interaction (except children)

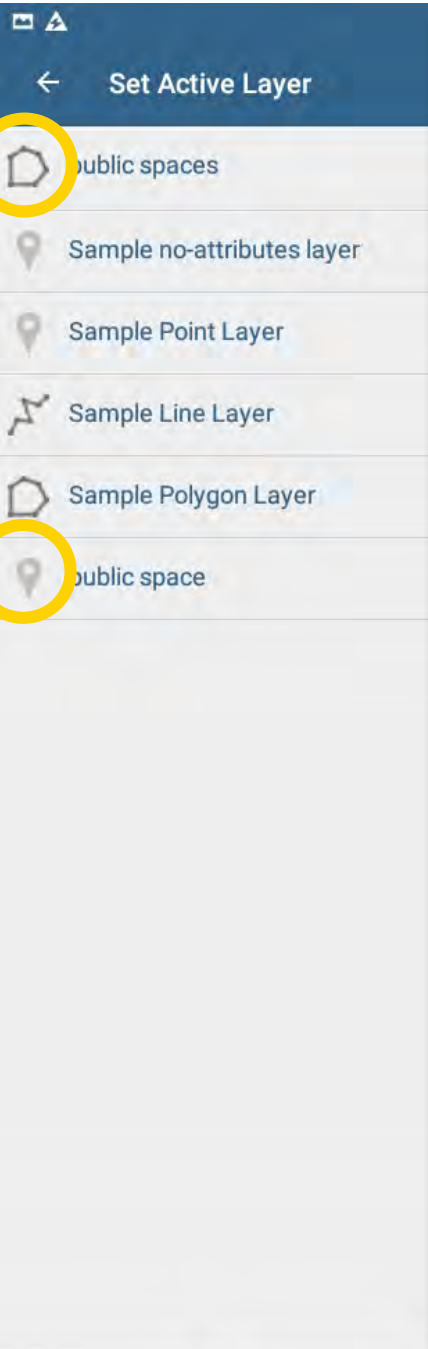CANCEL   SAVE

Screen 3: Map

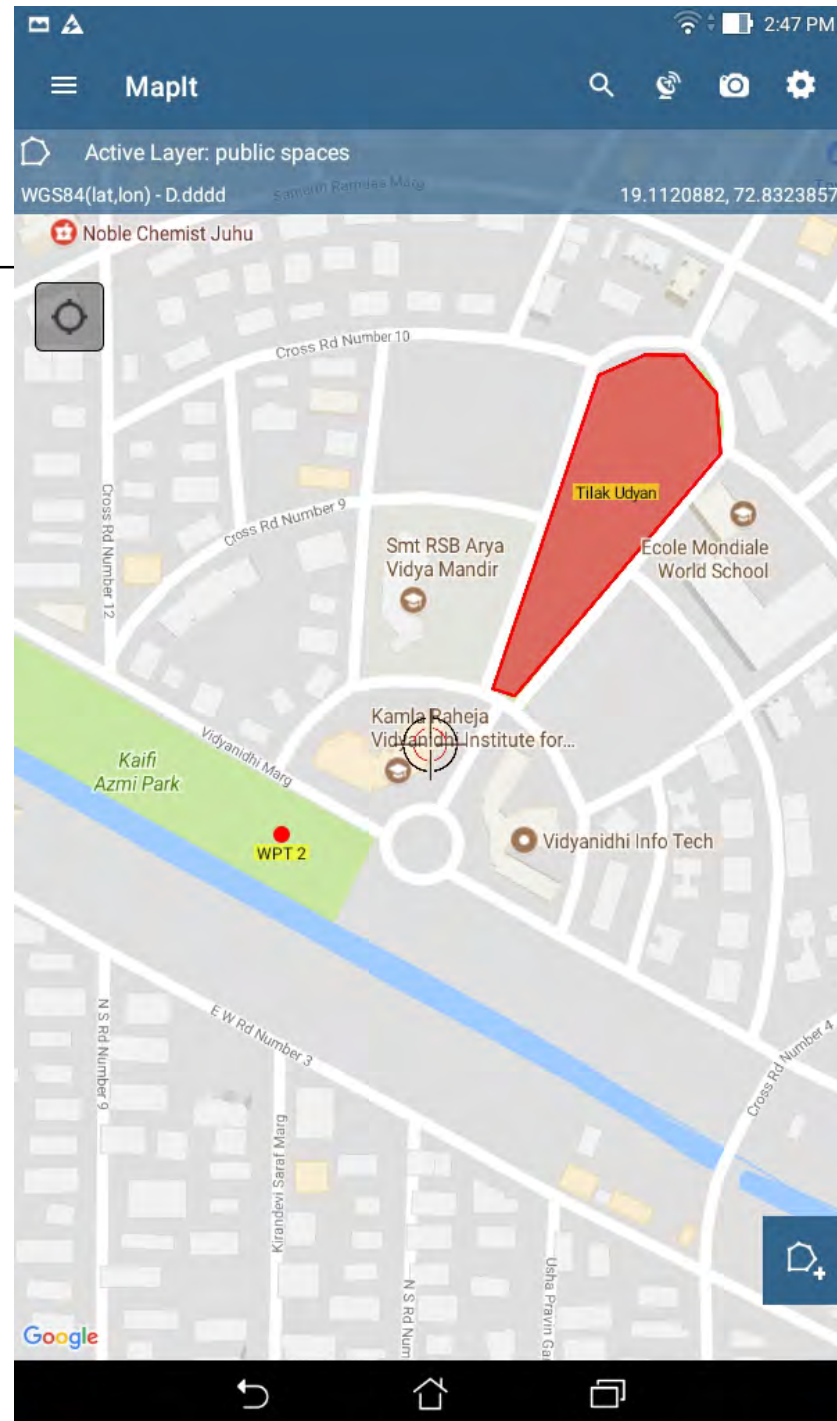19.1137875, 72.8332092

rec

END

P: 437.94 m

FIELD MAPPING THE QUALITY OF PUBLIC SPACE

- Create groups of **only** men or women
- Each group create a data collection strategy to enable you to visit as many public locations on campus as possible to map the attributes
- Consider the use of your own knowledge and perception or that of others.
- Use the MapIt app to record your data. Familiarize yourself with the app.

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MAPPING ATTRIBUTES OF PUBLIC SPACE

Funded by the
Erasmus+ Programme
of the European Union

B. IN. U. COM

WHAT TO DO?

- Go outside
- Make sure the GPS is operating (can take 10 mins)
- Keep track of time, be back here on time

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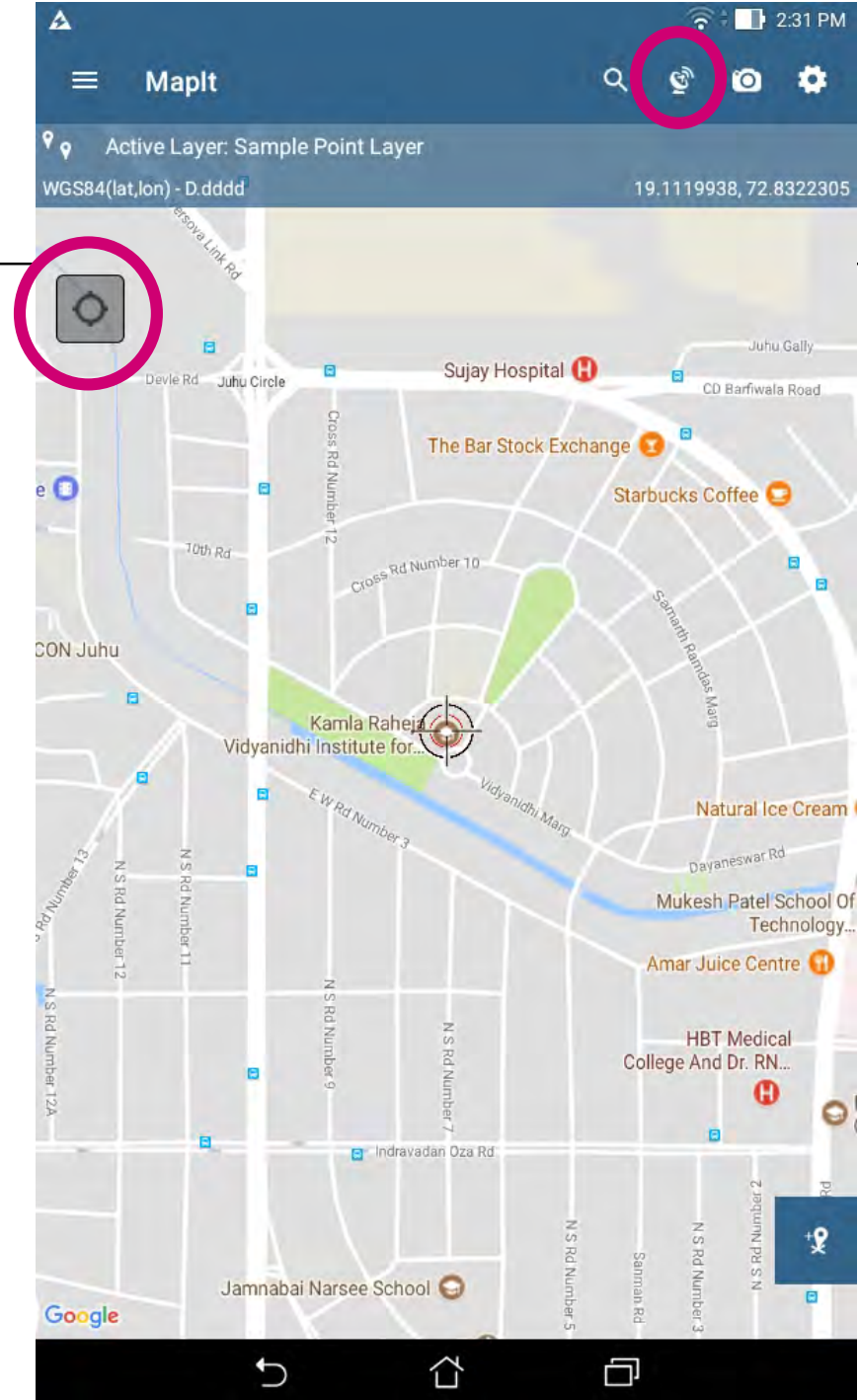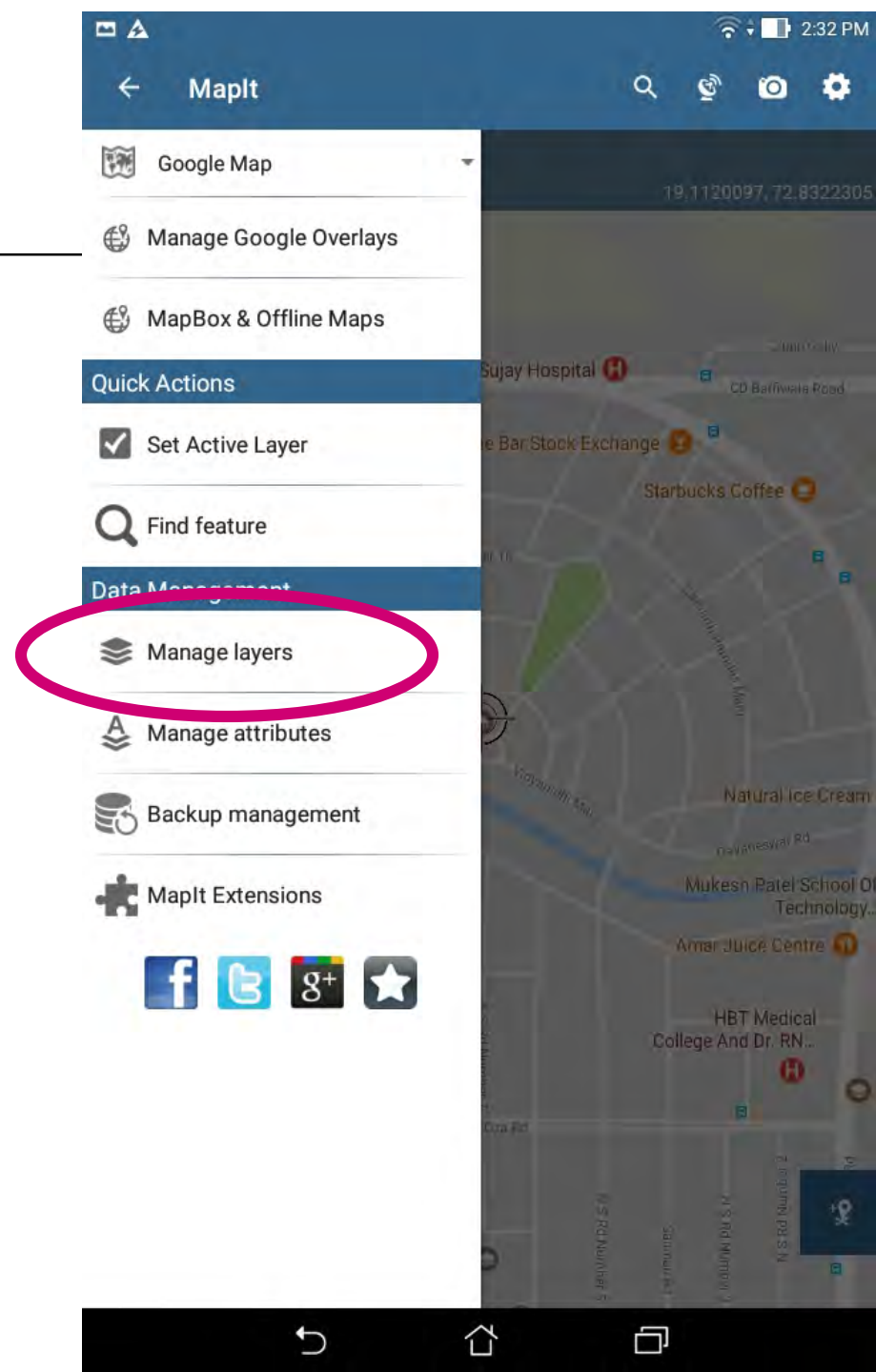
NOW GO FORTH AND MAPPETH!

AFTER MAPPING

- Export your collected data (pro-version tablets only)

    - Select layer
        - Menu>export
            - Share exported file
                - KML

- Send the file to
  j.verplanke@utwente.nl

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NOW WE DISCUSS …

DISCUSSION

- How can YOU apply these skills and tools?
- Challenges & limitations?
- Appropriate technology?

- Is there contrast between observations of men and women / groups? Is this surprising?
- Which questions remain?

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