



Towards understanding the impact of mapathons – Reflecting on YouthMappers experiences

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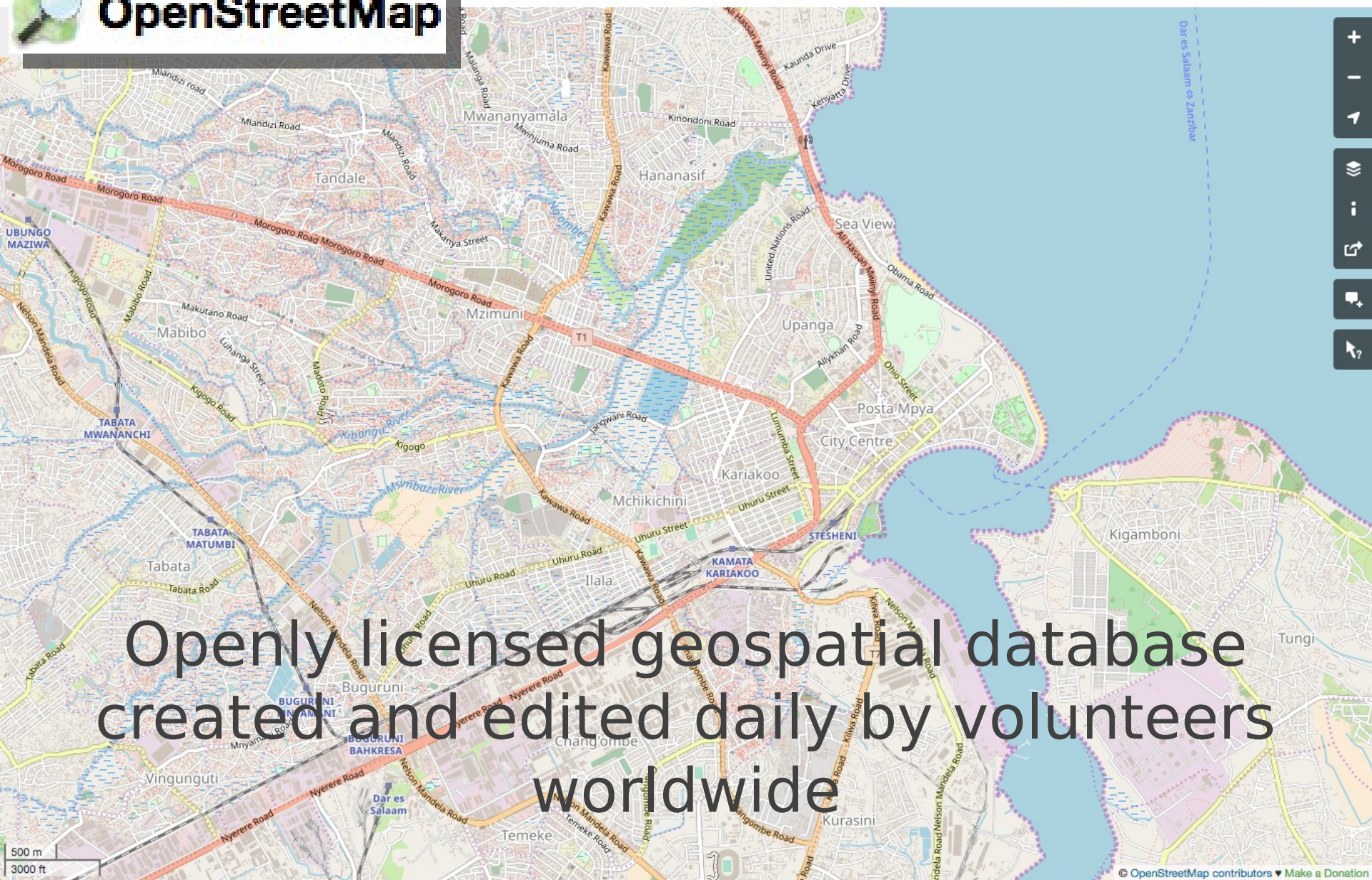
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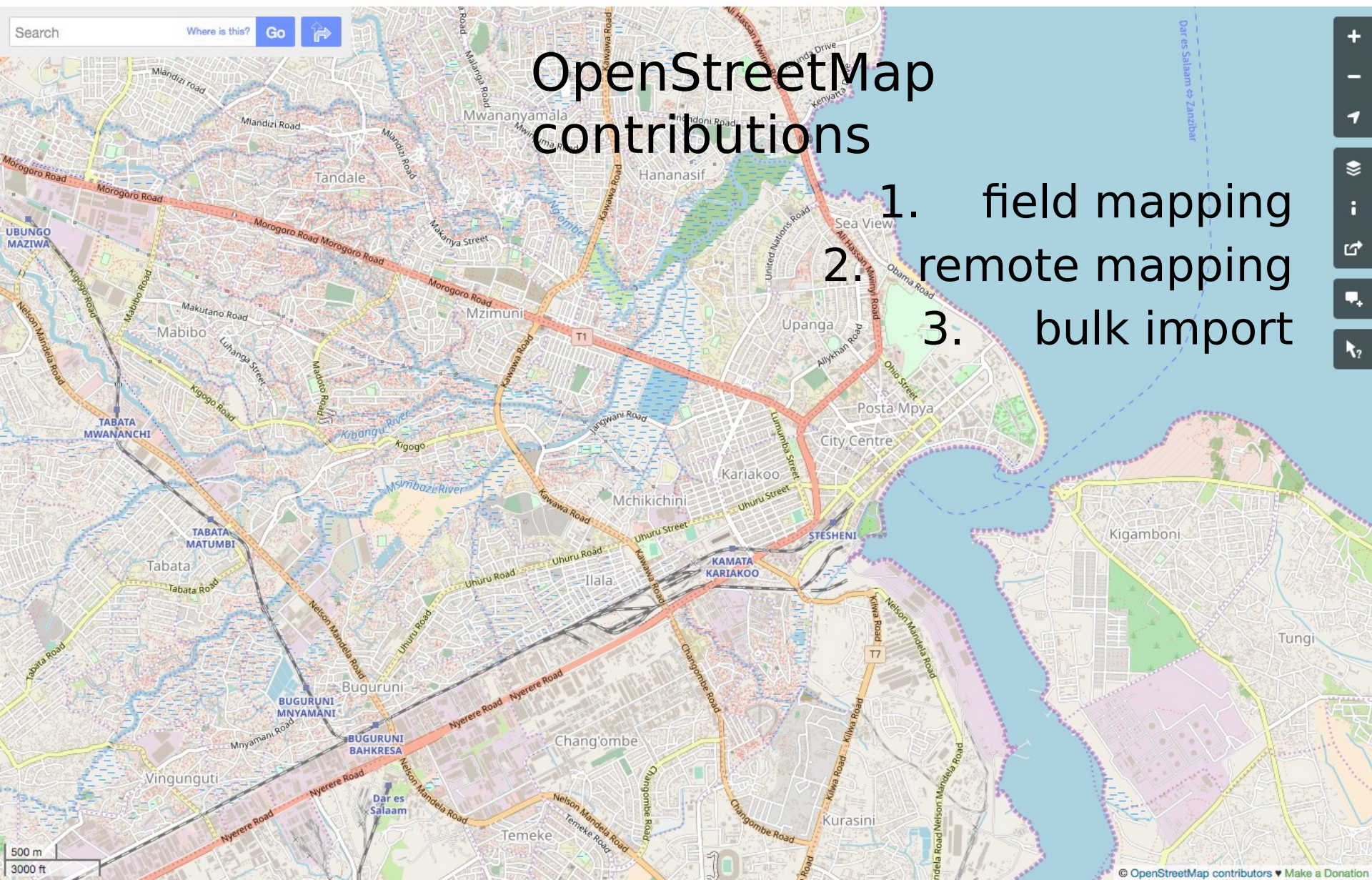


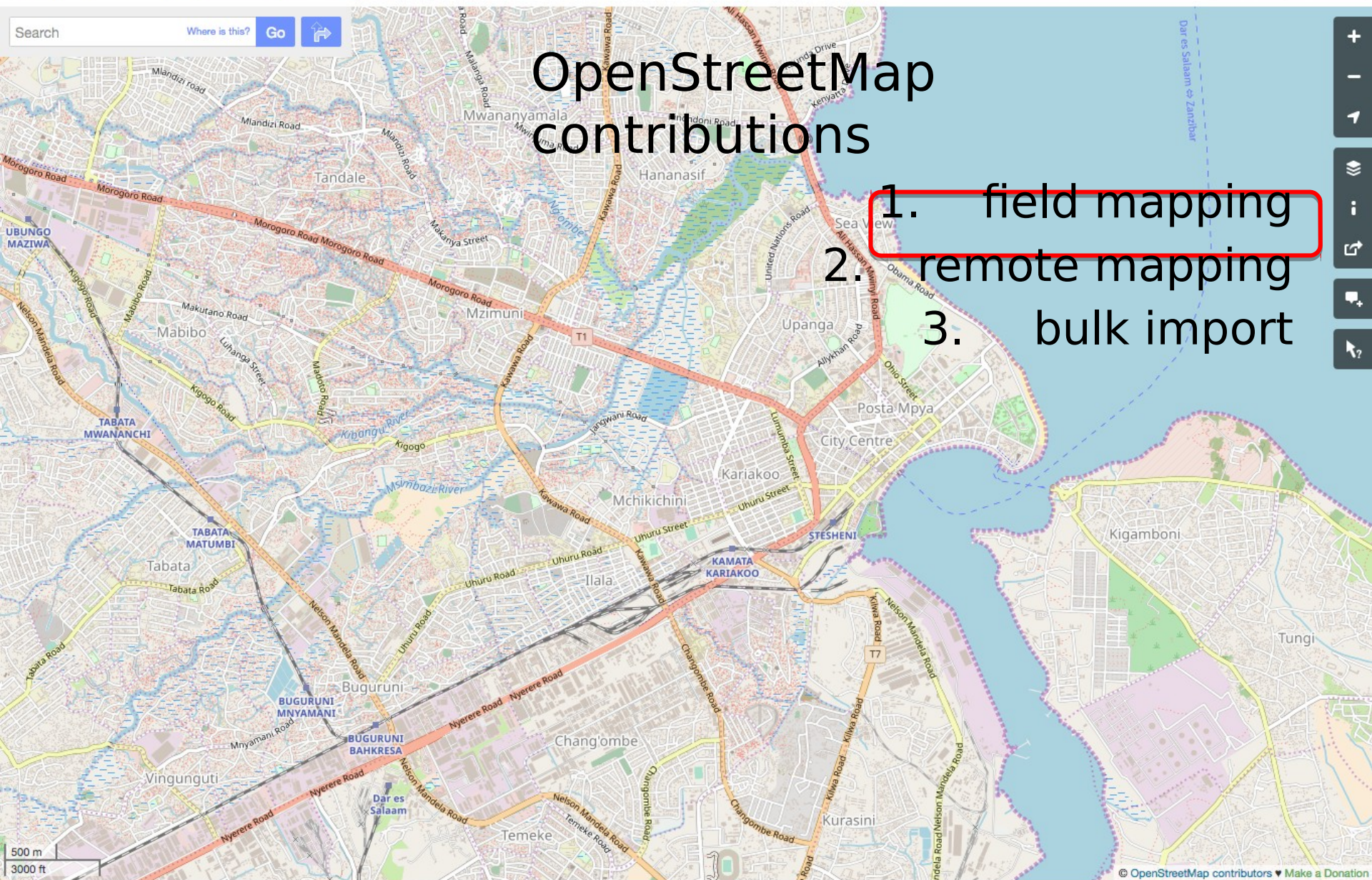
Openly licensed geospatial database
created and edited daily by volunteers
worldwide



OpenStreetMap contributions

1. field mapping
2. remote mapping
3. bulk import





OpenStreetMap contributions

1. field mapping
2. remote mapping
3. bulk import

mapathon ~ map marathon



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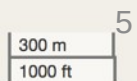


collaborative effort

by groups of people who meet together
(e.g. at a university or a company)

for collecting specific map data
where OpenStreetMap data is scarce or non-existent
(typically for humanitarian purposes)

through remote mapping



Kwa-Mototolong

What is the **impact** of mapathons?

- Do mapathons improve the map data?
 - Can newcomers contribute quality data?
 - If unfamiliar with the area, can one contribute quality data?
 - Is the data validated properly?
- Do mapathons increase the number of contributors?
 - Do newcomers contribute again?
 - Why do some continue to contribute?
 - If not, what do they take with them from the mapathon?

What is the **impact** of mapathons?

- What others have found...
 - How mapathon is conducted is important
 - Be careful not to attract floods of newcomers who cannot be coordinated (Dittus et al. 2016)
 - Mapathons can positively affect school children's engagement, enthusiasm and attitude towards geography (Ebrahim et al. 2016)

What is the **impact** of mapathons?

- What others have found...
 - Experienced users uploaded most of the data after FOSS4G 2015 Europe mapping party in London (Mooney et al. 2015)
 - Difficult to convert newcomers into long-term contributors, but long-term contributors just carry on... (Juhász and Hochmair 2018)

YouthMappers

- 113 chapters in 35 countries
- > 5,000 students
- Mapped in OpenStreetMap since 2016:

2,776,167 buildings

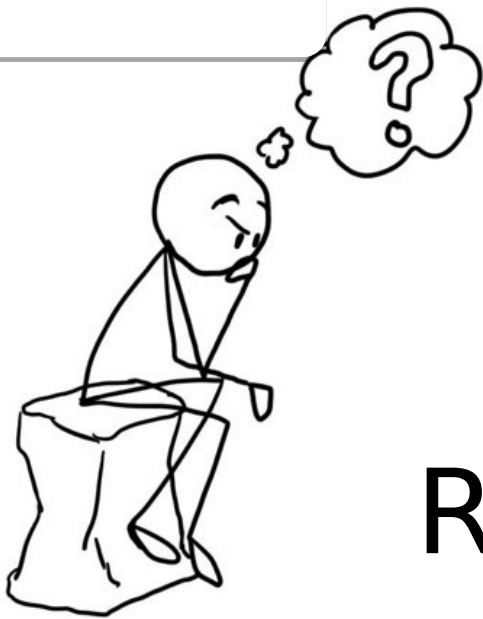
422,344 roads

> 20,000 other features

2,000,000 map changes per month

(Statistics: April 2018)

What is the impact of YouthMappers mapathons?



TEXAS TECH UNIVERSITY



UNIVERSITEIT VAN PRETORIA
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Reflections from three universities...

- PoliMappers (since 2016)
 - Community of mappers based on OpenStreetMap, open data and open source
 - Empower students to work with OpenStreetMap and geospatial data!
 - Mapping activities every 2 months
 - Field mapping and remote mapping
 - Wide variety of technologies used, e.g. Field Papers, Mapillary, maps.me, Geopaparazzi, ...

- mapathons by PoliMappers
 - announced in lectures
 - email invitations to students and previous participants
 - open to all students

Politecnico di Milano (Ital



POLITECNICO
MILANO 1863

After lectures, late afternoon, starting 16:00 or 17:00

30–70 voluntary participants per mapathon

Participants bring their own laptops

Last for a few hours



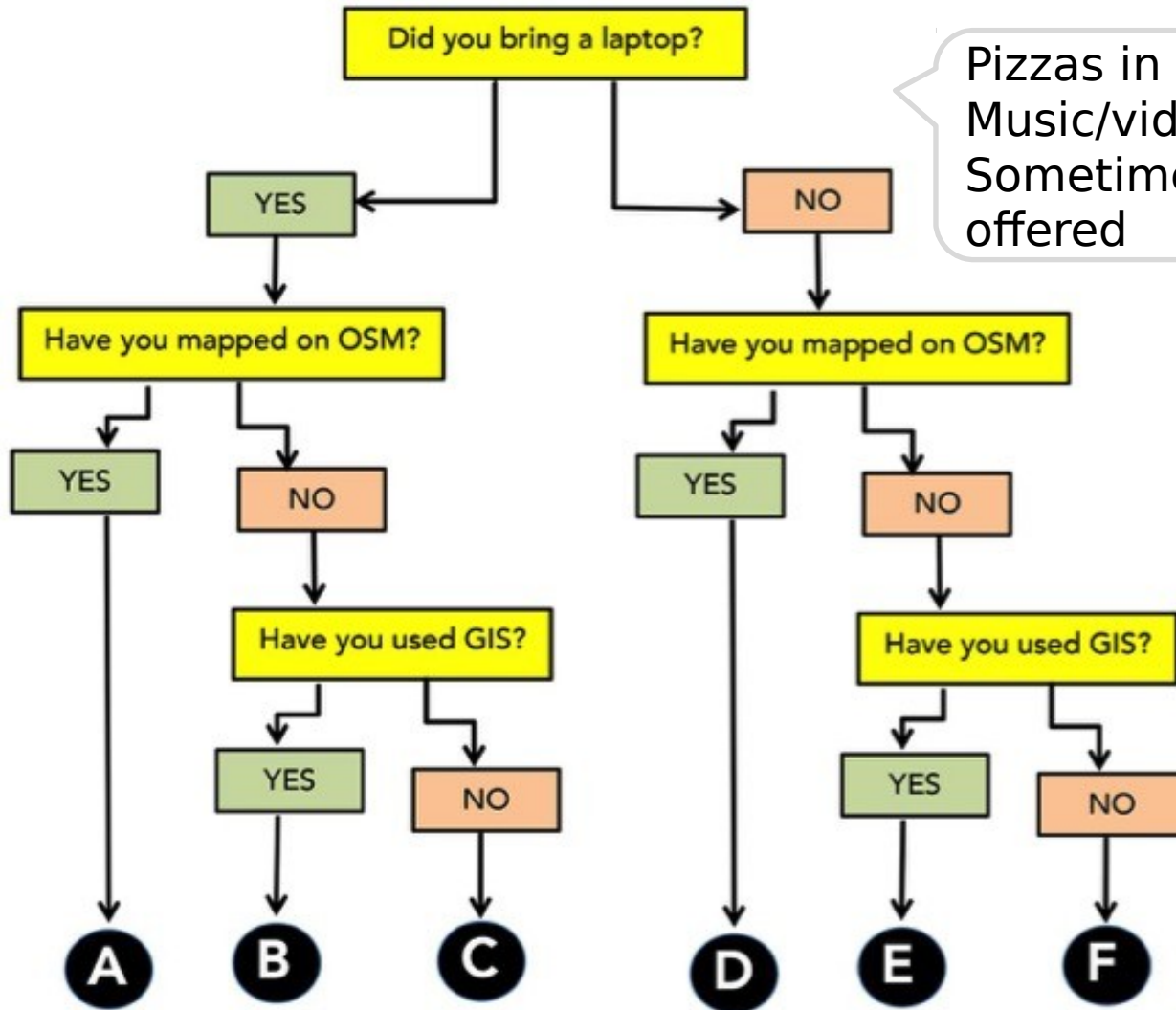
- If there are many newcomers
 - Introductory presentation
 - Hands-on tutorial in iD editor, stress importance of quality of data
- Mix of novice and experienced mappers
 - Long-term members guide newcomers
- Validation
 - Changesets are marked with #polimappers and event tag (e.g. #polimappers03)
 - Long-term members validate contributions

Texas Tech University (L TEXAS TECH UNIVERSITY

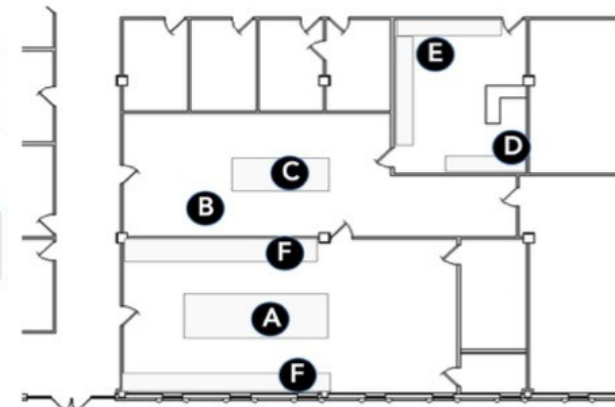
- Co-founding YouthMappers chapter (since 2015)
 - Members from many different majors
 - Formal status on campus (eligible for funding)
- Meetings once a month
 - Several mapathons per year
 - Training workshops (e.g. JOSM)
 - Symposia showcasing open data
 - Map-Offs against university sports rivals
 - “Map your way home”
 - add detailed attribute data in Texas



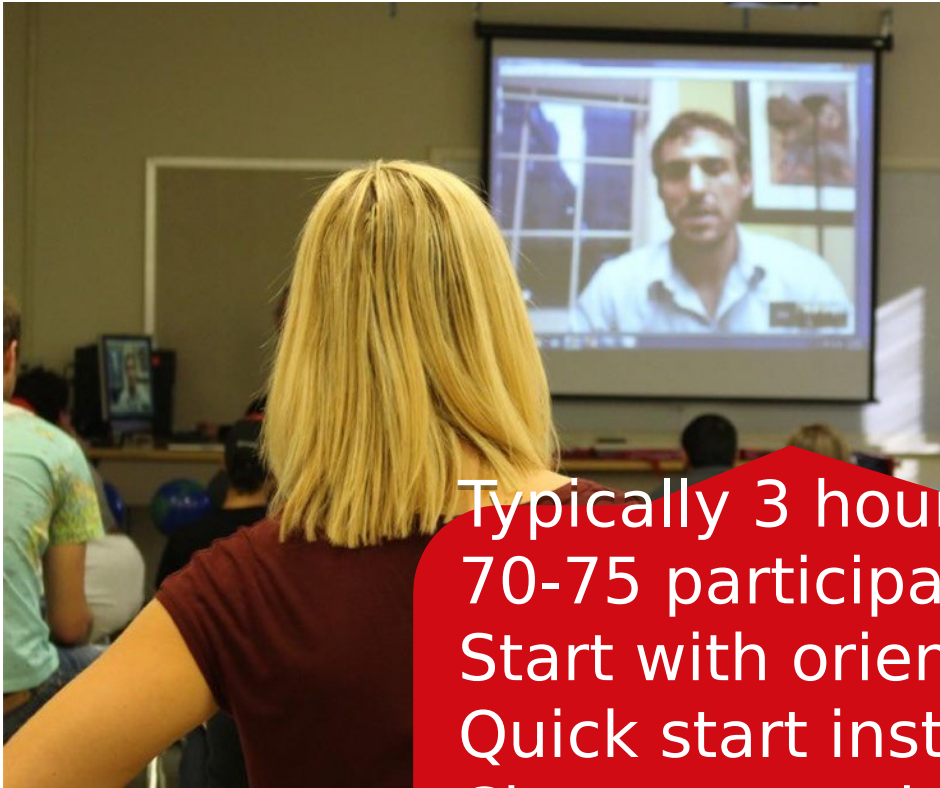
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Pizzas in map room
Music/videos from mapped area
Sometimes ad hoc extra credits offered



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Typically 3 hours

70-75 participants per mapathon

Start with orientation presentation

Quick start instructions at each desk

Chapter members point out mistakes early

Different assistance depending on experience

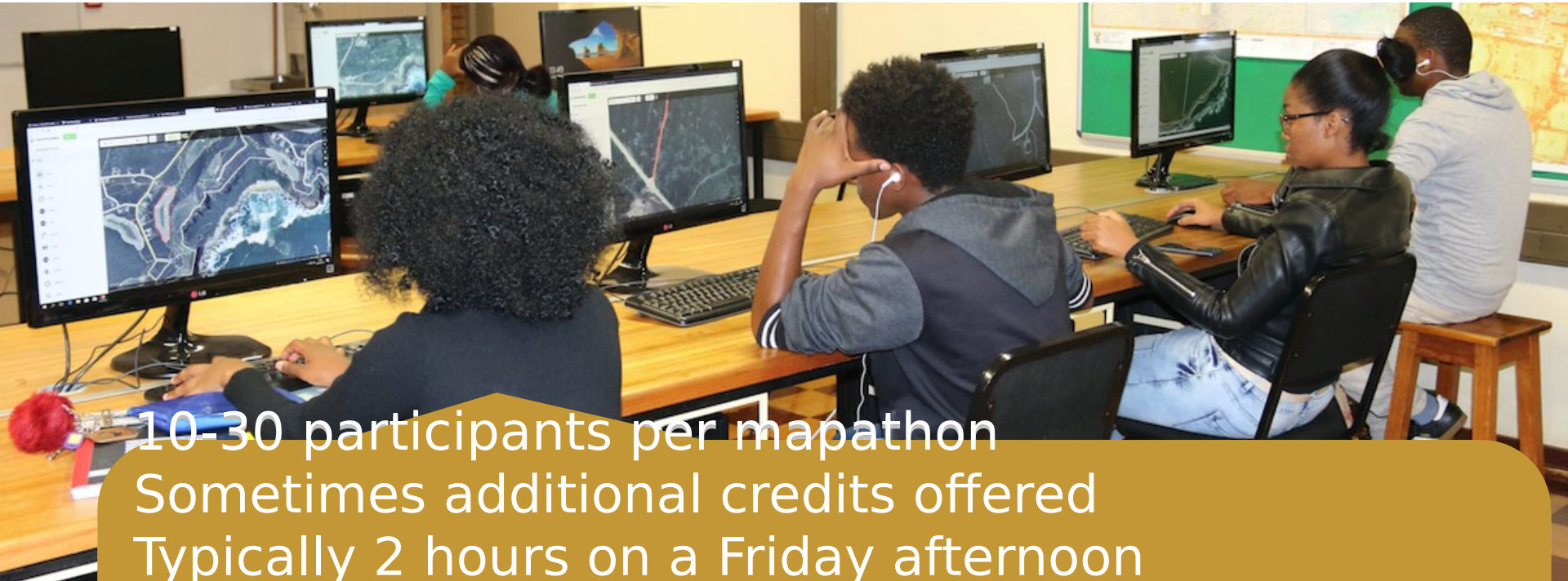
- mapathons in service-learning course
 - Learning objective
 - How to plan and execute a mapping project
 - Map data and research humanitarian or development issue at hand
 - Work with students from around the world
 - Quality of first 500 edits reviewed, feedback provided
 - Focus on US AID request themes
 - Class best edit marathon

Some students enjoyed it so much, they retook course, even though they had passed with high marks!

University of Pretoria (South Africa)

- Inaugural YouthMappers chapter (since 2016)
 - Activities focus on students and local schools
 - Monthly open data events for students
 - Final year geoinformatics students bulk upload their project data into OpenStreetMap
 - Regular events with groups of school children
- mapathons integrated into the curriculum as practical lab sessions for digitizing

University of Pretoria (South Africa)



10-30 participants per mapathon

Sometimes additional credits offered

Typically 2 hours on a Friday afternoon

Many newcomers at first mapathon of the year

Each mapathon focuses on different purpose and area

Introductory presentation, training video, iD editor

University of Pretoria (South Africa)

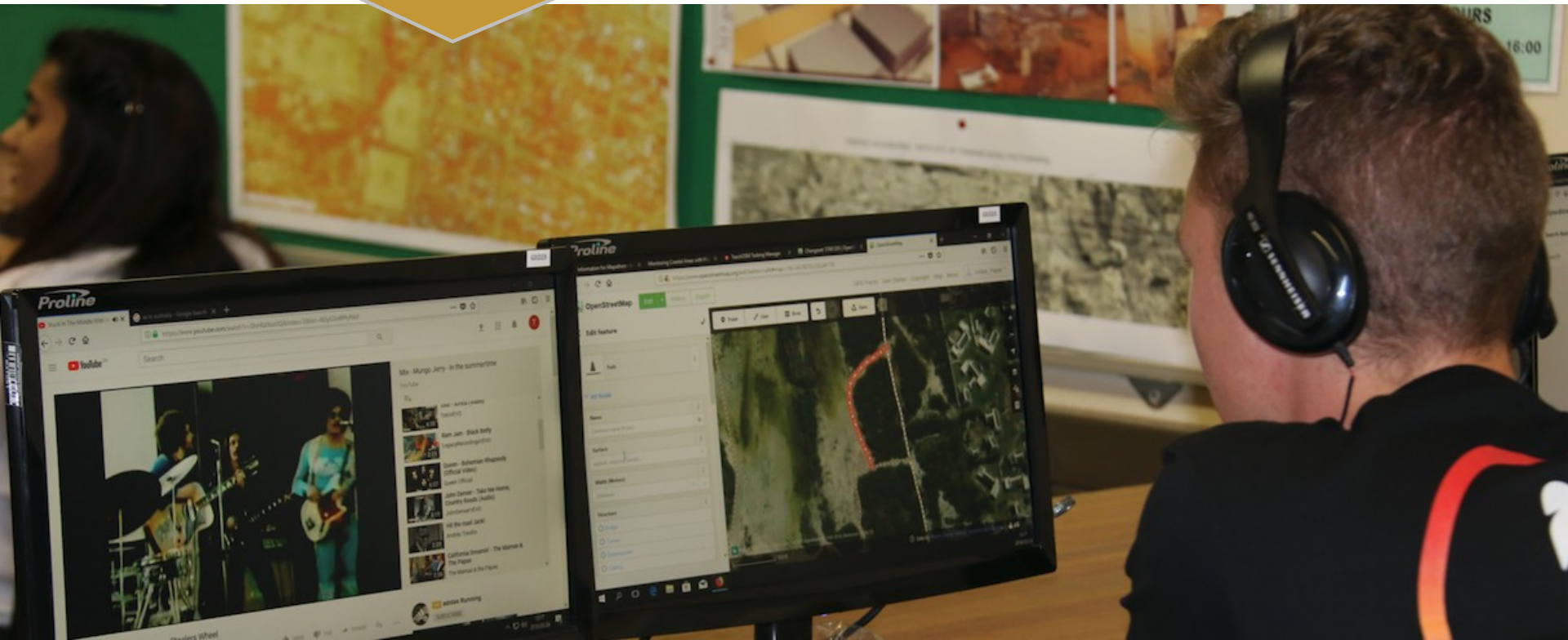
Challenges:

- Bad imagery or cloud cover (16%)
- Difficult to identify roads or footpaths (26%)
- Difficult to identify road surface (22%)

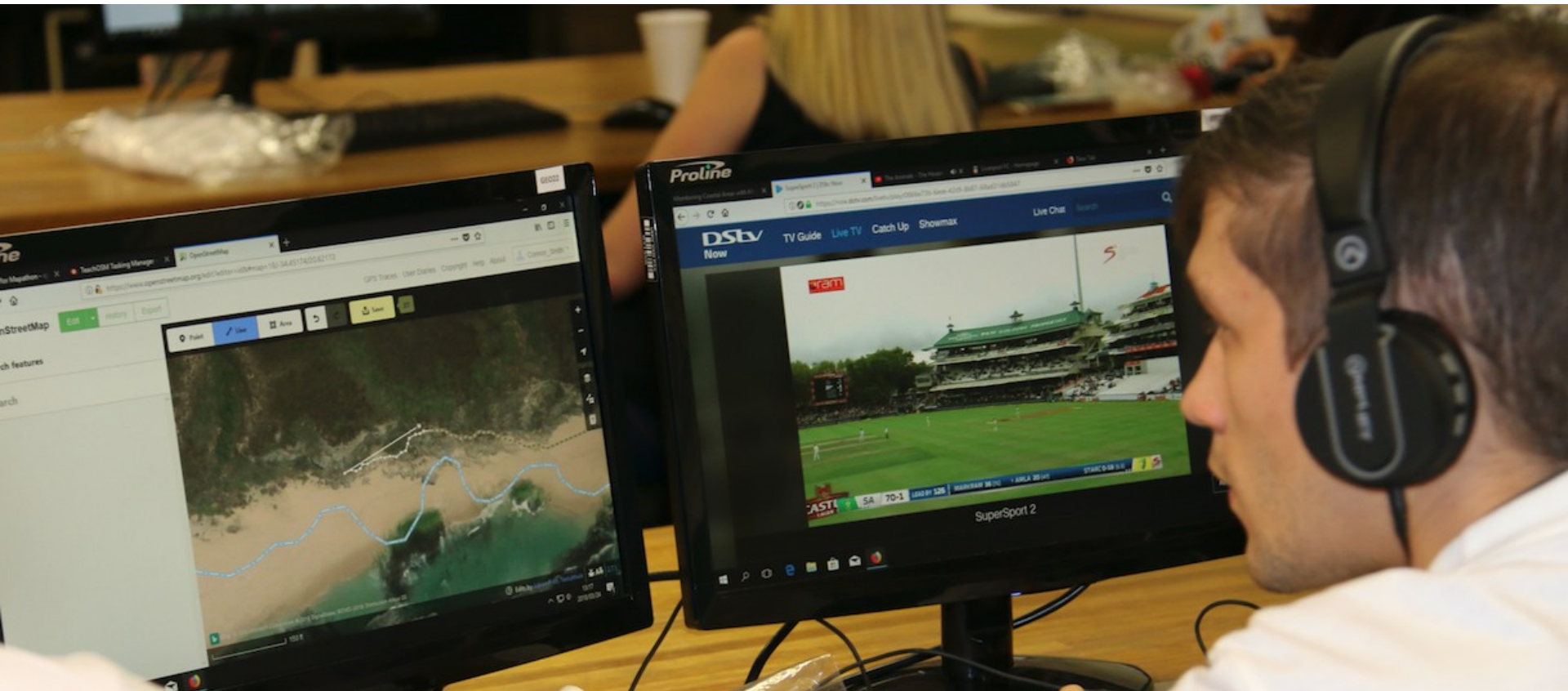


University of Pretoria (South Africa)

“We learnt how to digitize,
that maps can have errors (map accurately!)
that we can help other communities through
mapping”



University of Pretoria (South Africa)

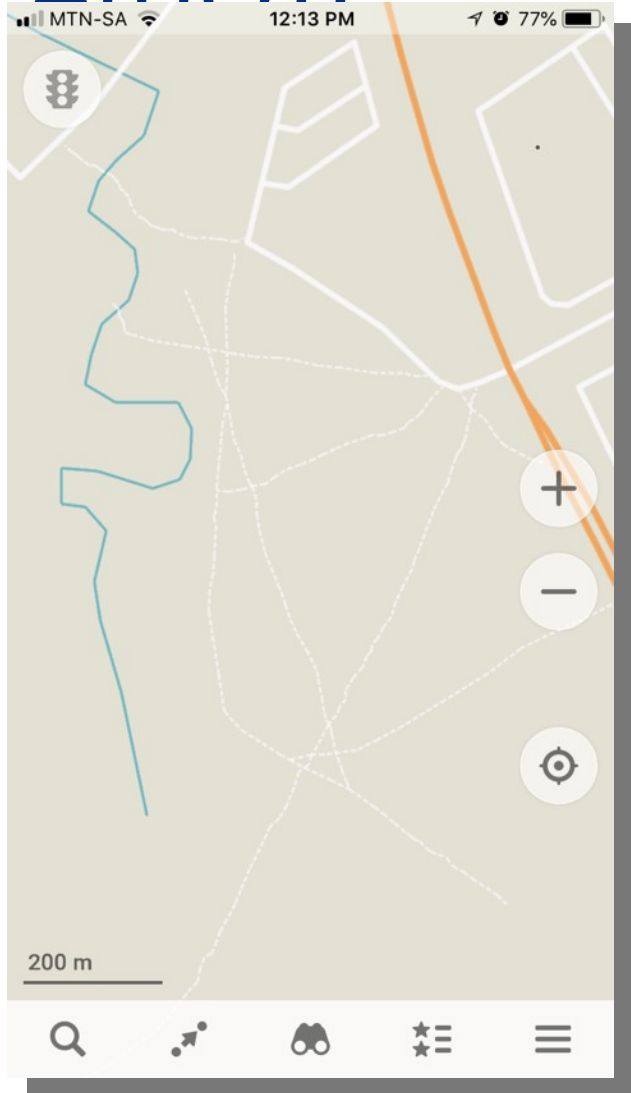


I will use OpenStreetMap again
(75%)



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University of Pretoria (South Africa)



- JOSM Validator
- Prepare before/after base map in QGIS – improvement?
- Can data be used for routing in maps.me?

What is the **impact** of mapathons?

- 1.map data
- 2.mapathon participants
- 3.hosting institutions

Impact on **map data**

2 million map changes per month by
YouthMappers!

YouthMappers data as good as that
from other contributors (2016 study)

General VGI quality challenges apply...

Impact on **map data**

- Ways to address quality challenges...
 - Set up a data collection protocol
 - Match remote mapping with field mapping trip (if possible)
 - Senior students validate data contributed by juniors
 - Check whether contributed data can be used in OpenStreetMap applications

Impact on mapathon **participants**

- Opportunity to network with peers (globally)
 - Sense of belonging, have fun, find friends
- Practical learning experience
 - Do not accept quality of map at face value!
- Supports learning in many domains
 - Technical, as well as humanitarian and developmental issues

Impact on mapathon **participants**

- Empowers students by including them on the map
- May prompt them to realize what a good citizen is
- Raises awareness of geospatial careers

Impact on hosting **institutions**

- ‘open’ into teaching
 - Course at Texas Tech University
 - Practical lab sessions at University of Pretoria
 - mapathons recognized as innovative teaching method at Politecnico di Milano
- ‘open’ into research
 - Research in OpenStreetMap, open data and open source
 - By postgraduate students and staff ...

Conclusions

Decide what the objective with your
mapathon is,
shape it accordingly

Aim for acceptable balance
between productivity and quality

Acknowledgements

Thanks to our mapathon participants!

YouthMappers network

www.youthmappers.org

US AID

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