

WaQuAC-Net Webinar
28th October, 2020

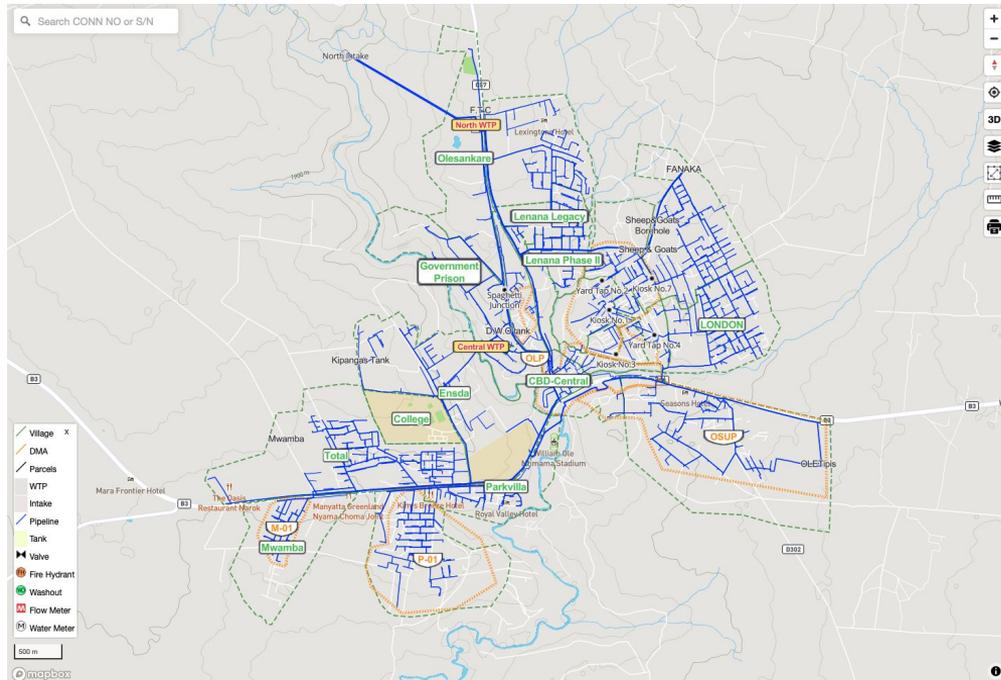
A cheap and easy way to utilize GIS for effective management of water utility

-- By using *Mapbox Vector Tiles* --

Jin IGARASHI
GIS Software Developer

Look a demo

<https://narok.water-gis.com/#13.39/-1.08818/35.86407>



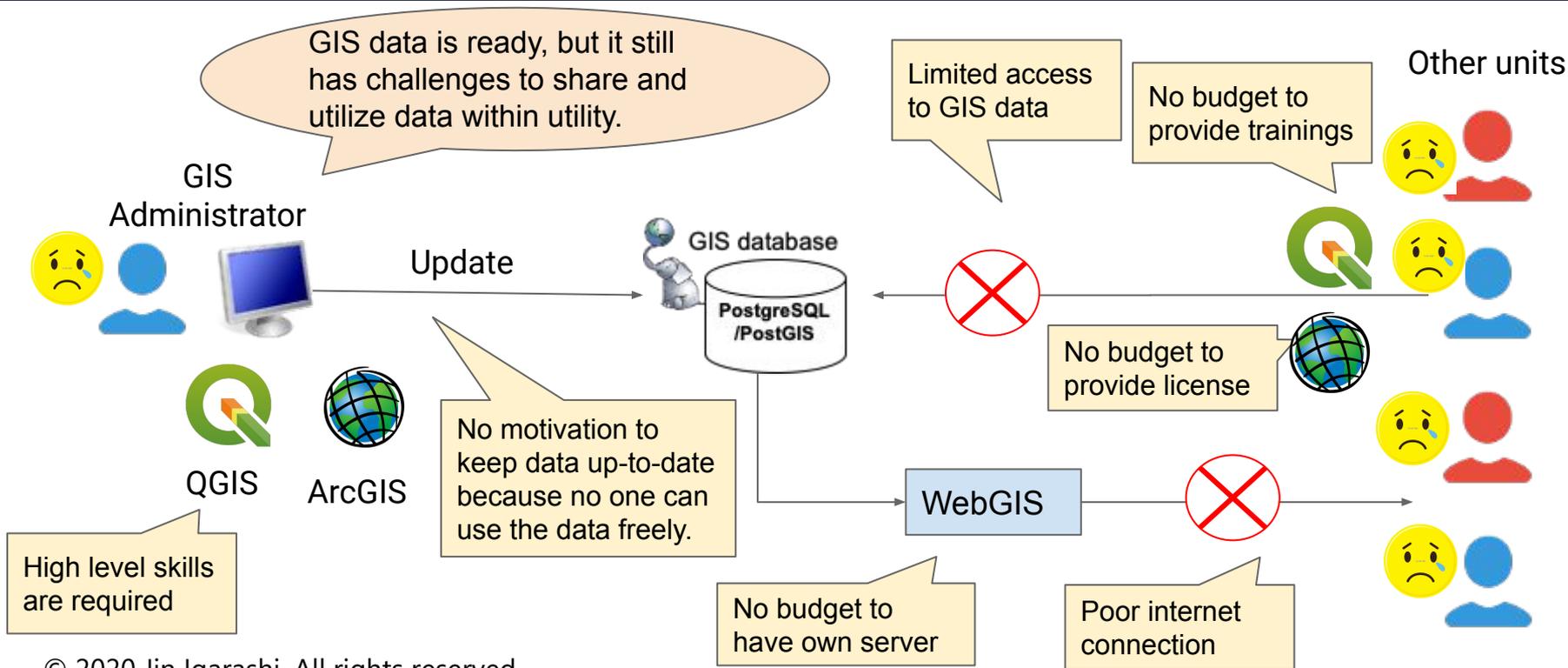
Narok Water, Kenya

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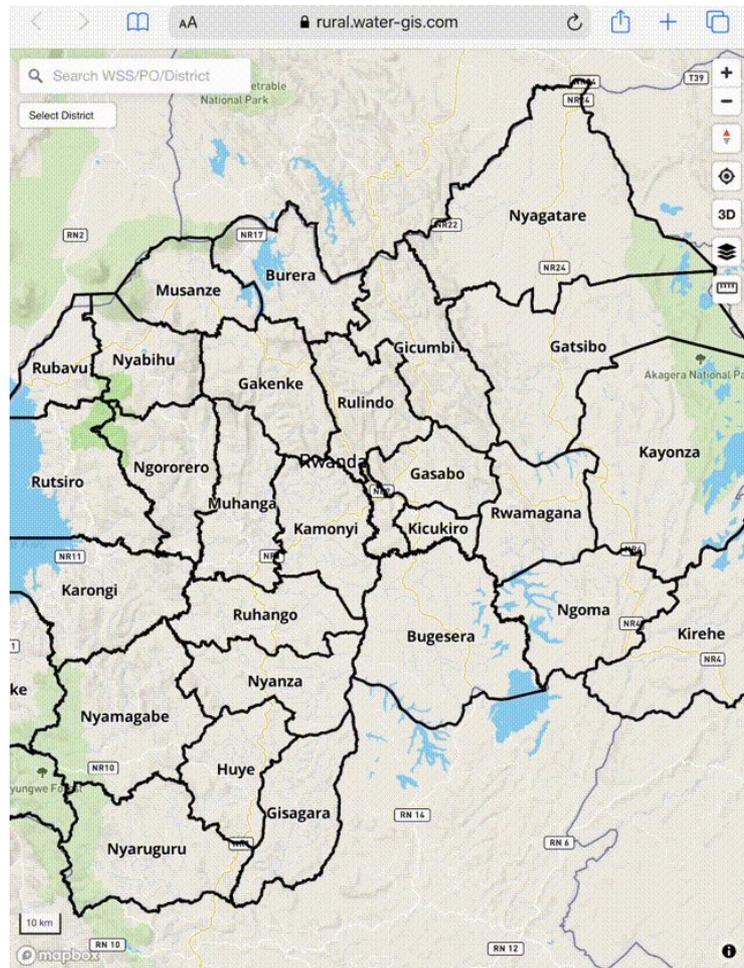
Current situation of GIS in water utility



Use Vector Tiles!

What is Vector Tiles?

- Vector Tiles is one of the most sustainable mapping distribution method.
- It's very light and fast to render map on browser.
- It is flexible to change the styling of map.
- Operation cost is much cheaper
- Nowadays, many application like Google Map, Apple Map, use vector tiles.



Rural water map for Rwanda on iPad

Comparison between proprietary and open source

Proprietary



- It contains plenty of advanced functions.
- **Totally expensive (License, Trainings, Support)**

- Secure protection to owned data
- Free to develop your data
- **Limitation of using the data by outsider**
- **Limitation of using cloud platform for sharing the data cheaply**

Closed data

You can combine various softwares and platforms freely



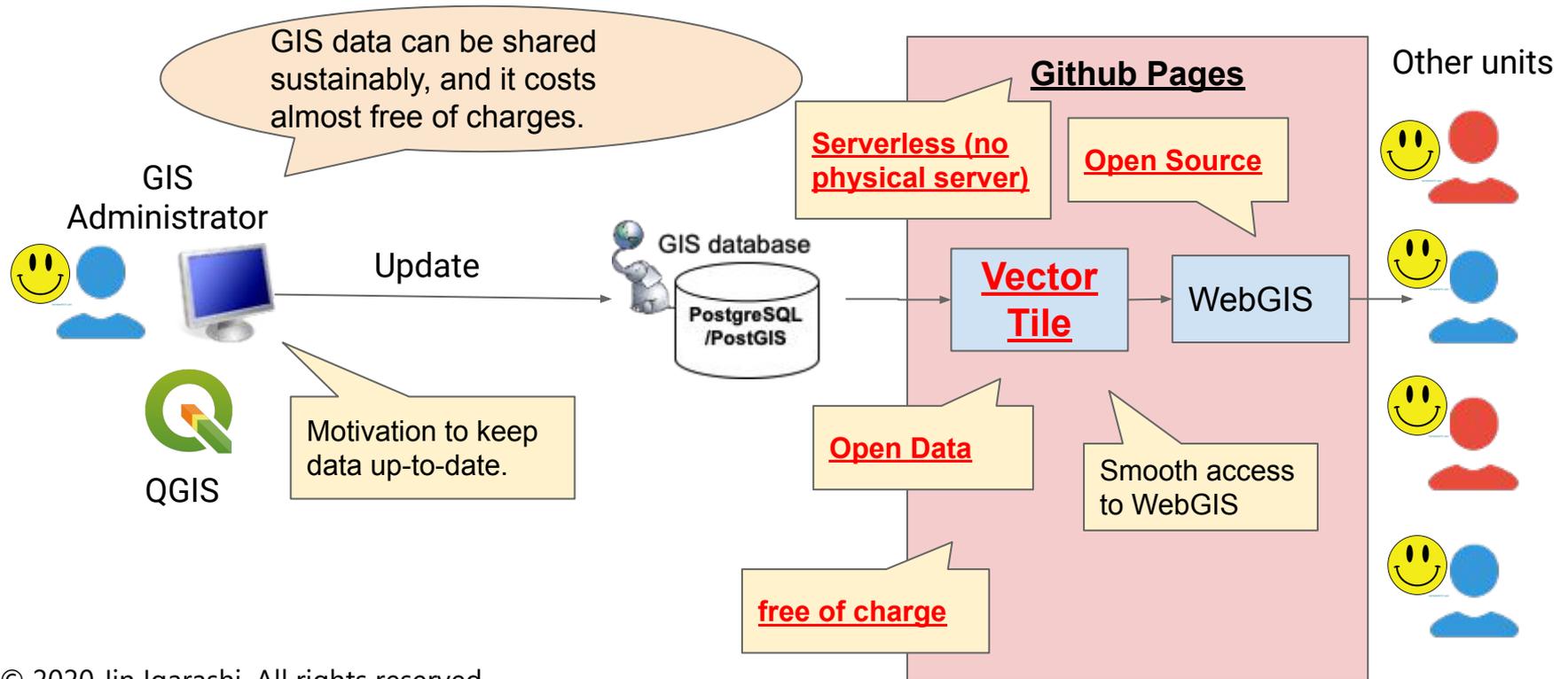
OpenSource

- Free of charges
- Trainings and supports are bit cheaper
- Github and other platforms provide free environment for developing

- Free to use the data by outsider
- Various choices of platforms to distribute data cheaply (almost free of charge if the data size is not huge)
- **Limitation of publishing some privacy data**

Open Data

Advantage of Open Source & Open Data together with vector tiles



Benefit of using Vector Tiles in water utilities

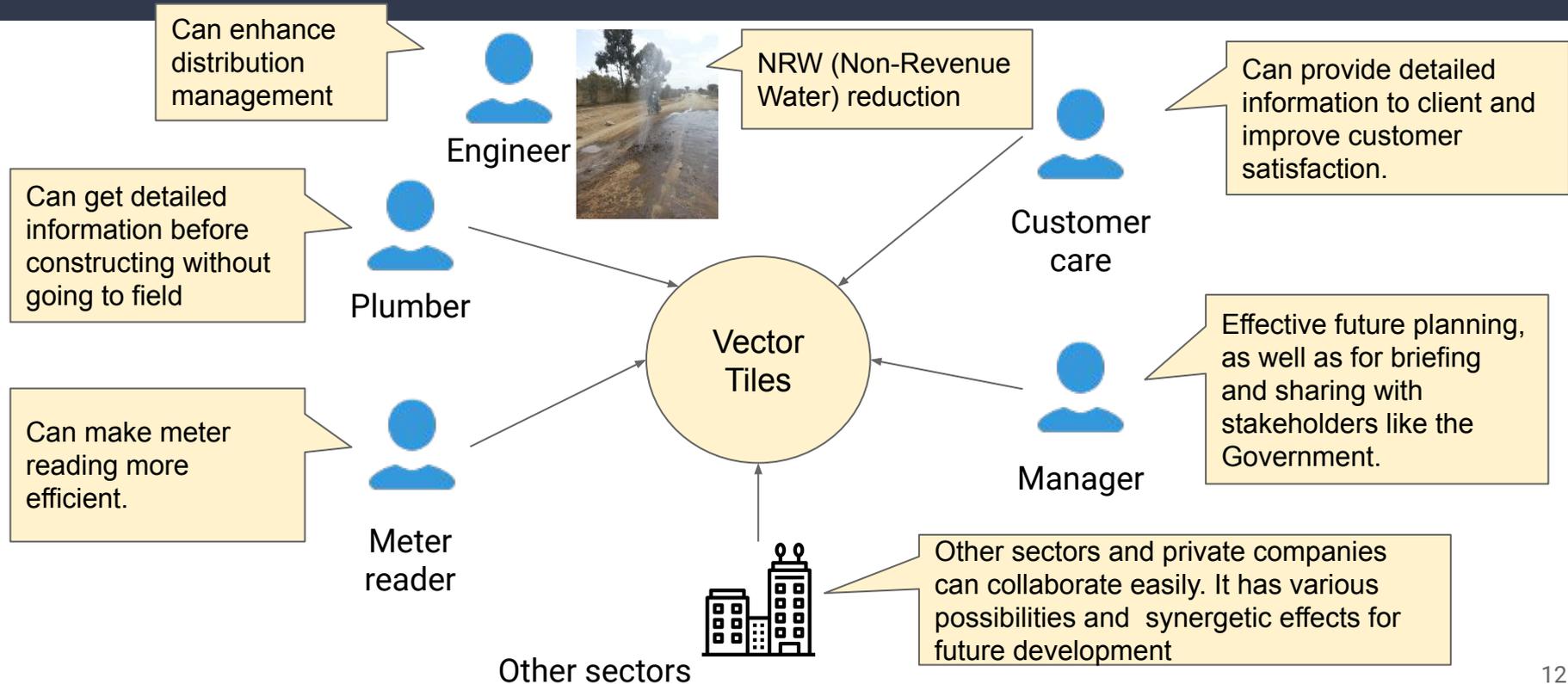
- To establish the effective way to share and utilize GIS data with all staffs after data collection
- To utilize GIS data more in order to improve work efficiency
- To use GIS data for all types of work in the water utility (NOT ONLY for NRW and water distribution)

GIS is just starting point for Water management.

Let us start from vector tiles to improve your water management!



Possibilities to utilize vector tiles as open data in water utilities



Let's open GIS data

Benefit

- Cheap cost for operation and maintenance of GIS data
- Effectiveness for water management in the whole utility
- Collaboration with outside of water sector

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- More than 10 years experience of GIS software development.
- 2009 – 2014: worked at Fujitsu and became a GIS specialist
- 2014 – 2016: developed GIS system at Narok Water and Sewerage Services Company, Kenya as a volunteer for international cooperation. .
- 2017 – 2019: worked for Water and Sanitation Corporation in Rwanda, conducted trainings of GIS data collection and developed their GIS system.
- 2020 - : I was involved to develop vector tiles in OneCompath co., Ltd. and MIERUNE, Inc. And started my open source project of vector tiles for all water services providers.

Thank you for your attention!

Let me know if you are fascinated by
vector tiles implementation in your
organization!

Please contribute to my projects
through Github Issues or Pull
Requests if you have any feedbacks.

<https://github.com/watergis>

