



بنك مصر
BANQUE MISR



ATM Location

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Presentation outline

- Problem
- Solution
- Steps
- Finds
- Conclusion



Problem

- ATM allow consumers to perform quick self-service transactions. These services may charge an additional fee if the ATM is affiliated with a different bank. These fees can be avoided by using an ATM directly operated by the bank that hosts the user's account.
- To locate ATMs at locations that provide access to the largest number of major categories of potential customers - individuals and businesses (ie, corporate customers).

Briefly:

- Determine if the region and subregion have enough ATMs.
- Figure out a better ATM distribution based on the distance between ATMs to have a better ATM coverage area.



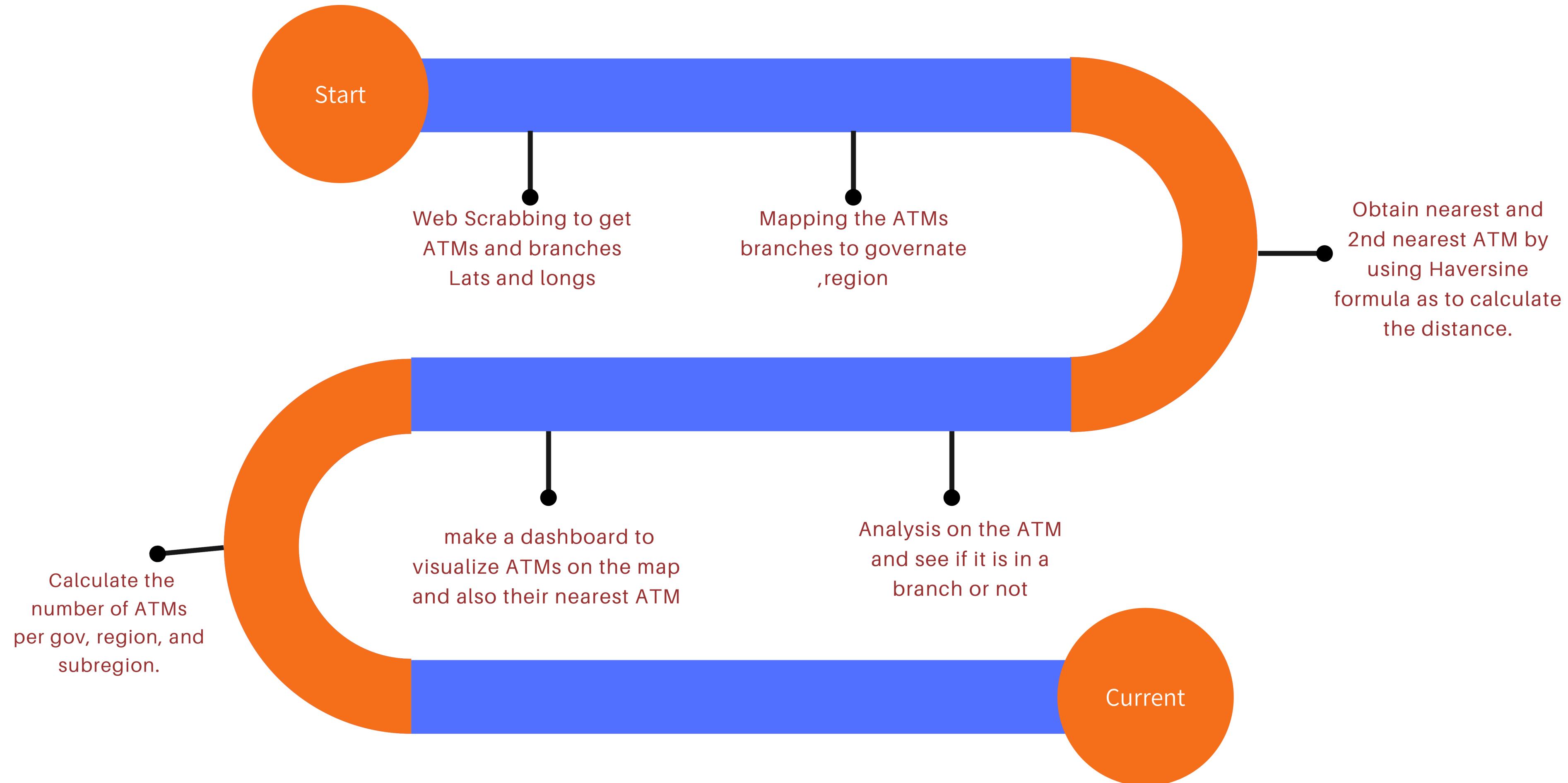
Needs and Mission

Needs

- where the current ATMs of the bank located in map.
- get the estimated population of every possible region or subregion.
- Find a formula to know if the number of ATMs and distribution are well organized or not. we may need to use (polygon centroid, atm distance comparison, and average distance)

Mission

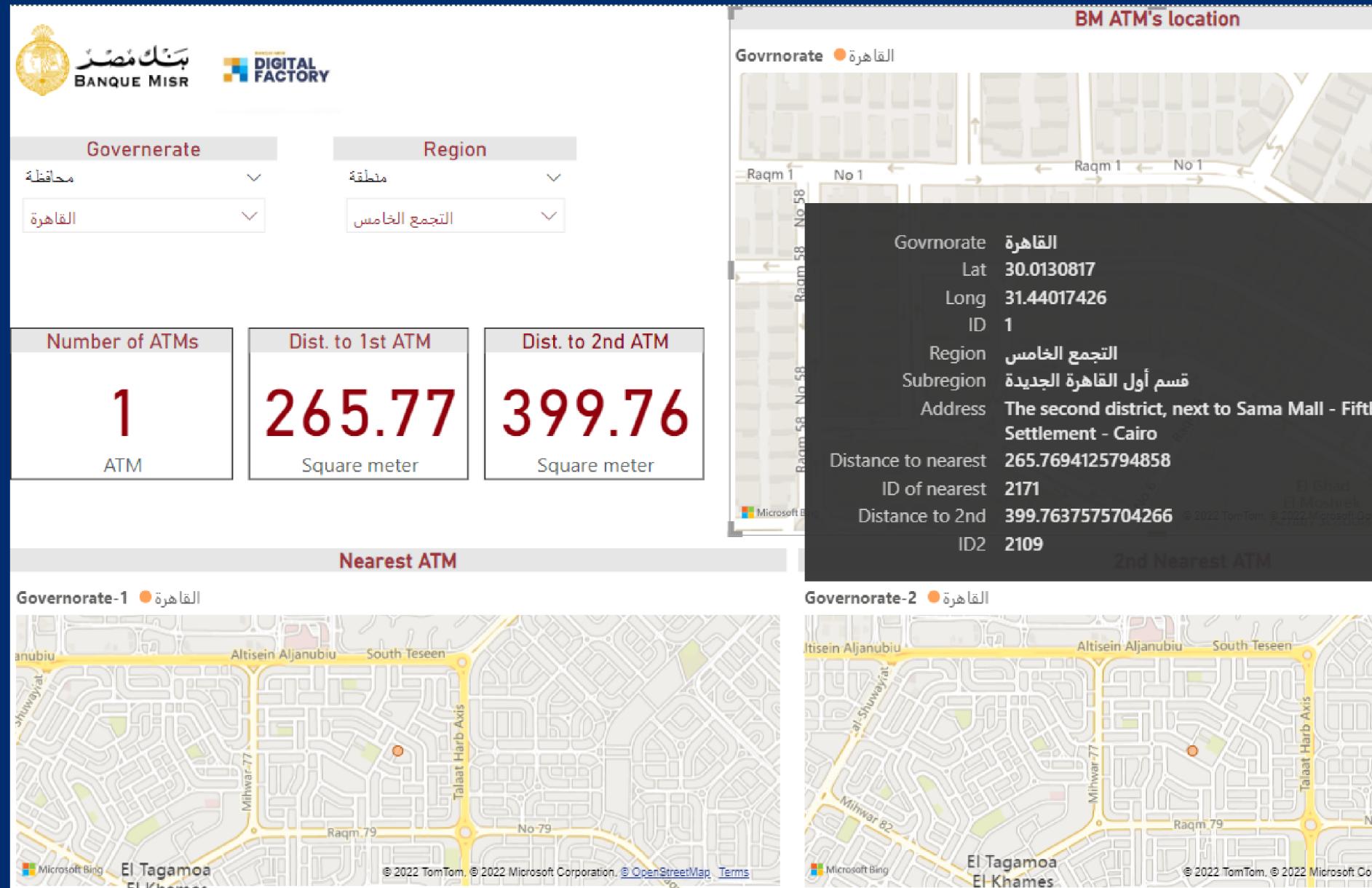
- map every atm to its gov, region, and subregion
- calculate population distribution in the regions to know if the atm is distributed well in the region or not.
- Visualize the process (ATMs, branches location)





Dashboard

Here we use the dataset that contains all ATMs and that ATM's distance to their nearest and 2nd nearest ones in PowerBI.



01

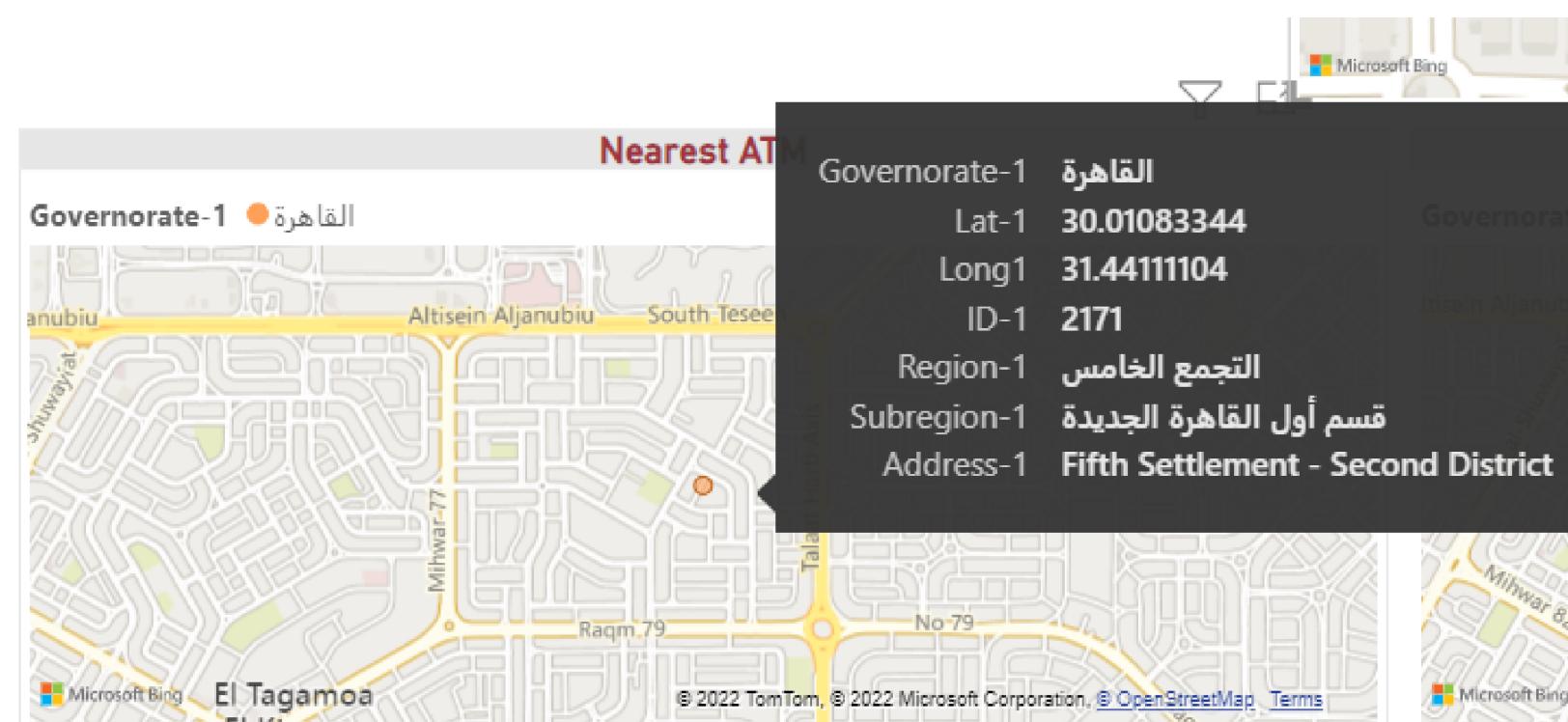
- Filter by Governorate / Region.
- Show the total number of ATMs.

02

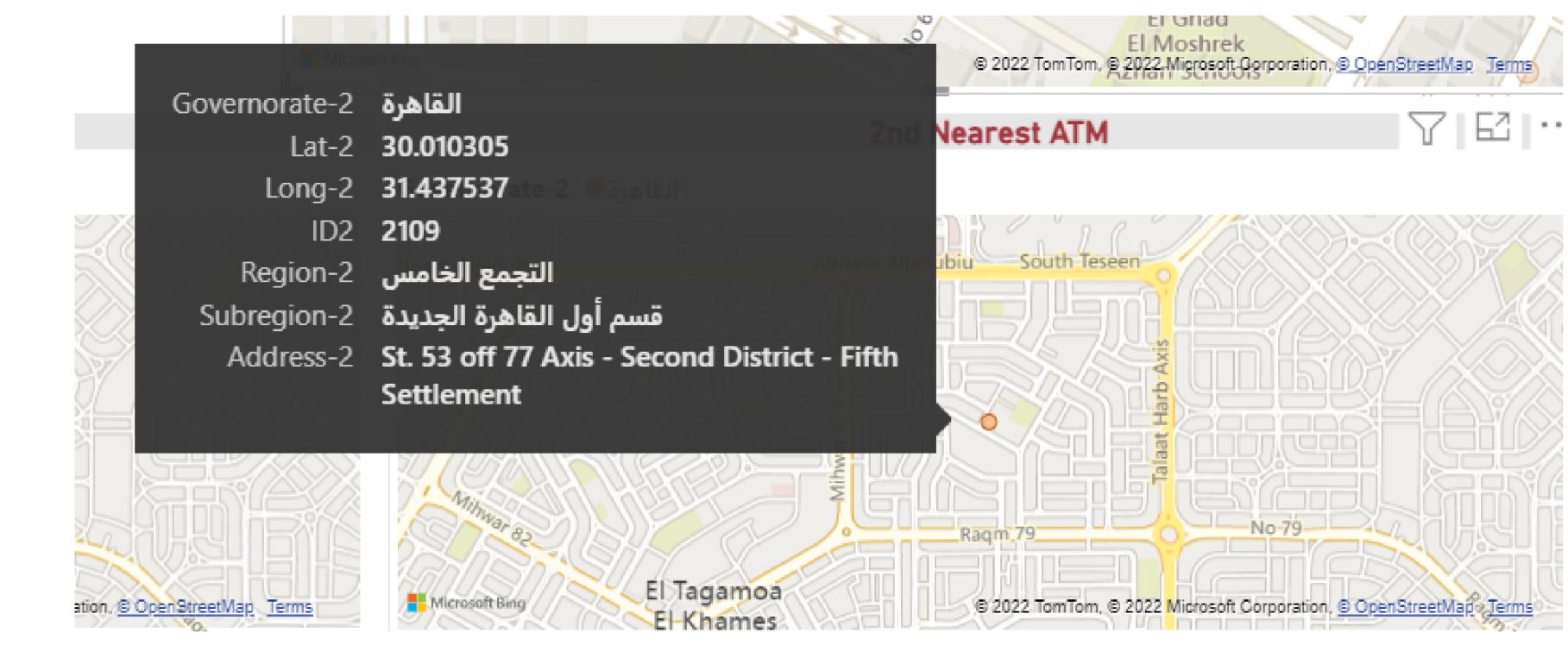
- Display distance to nearest ATM.
- Display all the ATM's information (address, subregion,).

Nearest ATM

When choosing a certain ATM on the map, the nearest ones will be shown on the nearest ATM map with all its information.



2nd Nearest





Finds and Statistics

01

Item 1

98 ATMs (2%) that are only about (50-100) m away from their nearest branches.

03

Item 3

147 ATMs (3%) that are only about (0-50) m away from their nearest branches.

02

Item 2

452 ATMs (10%) that are located in branches.

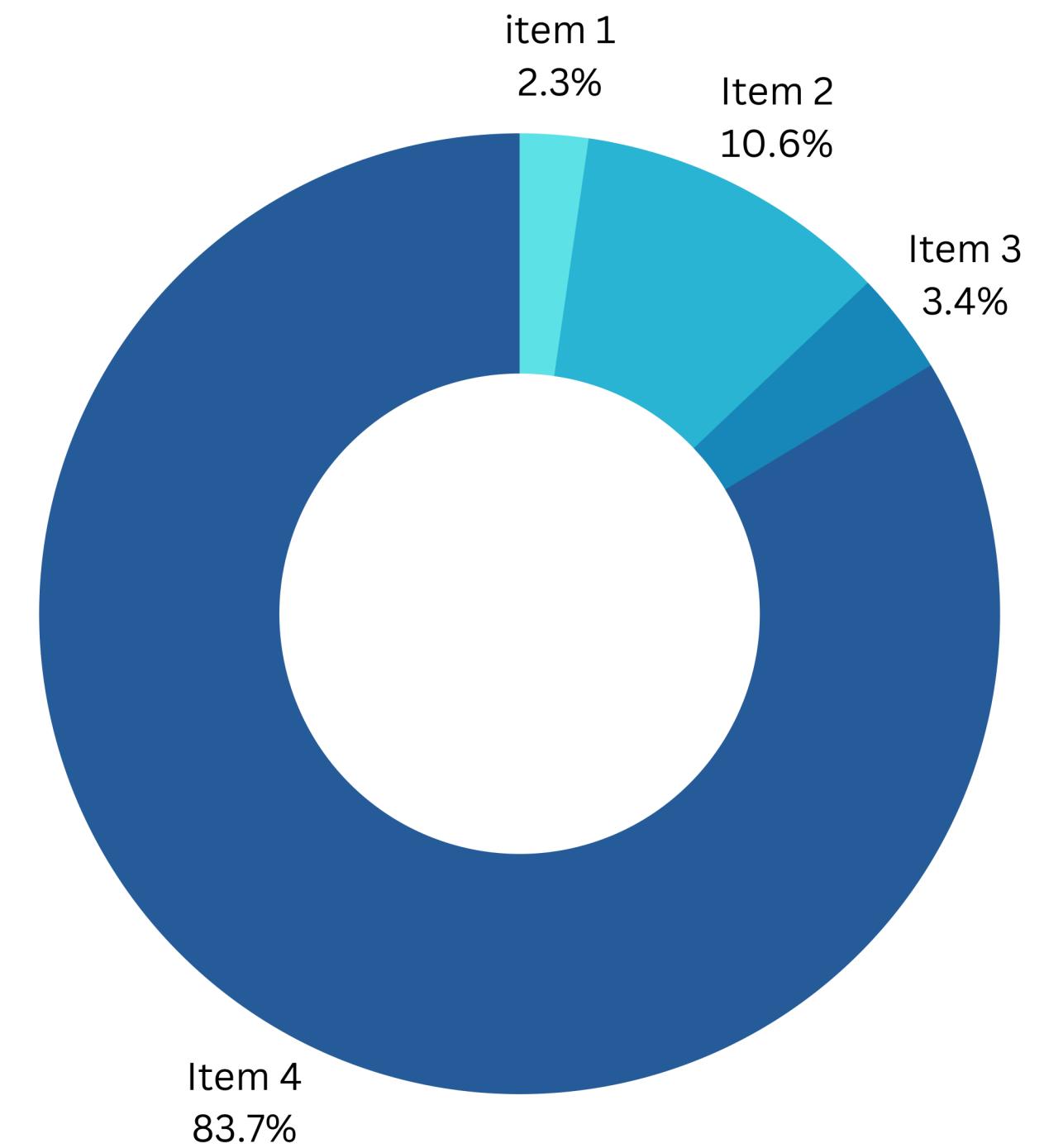
04

Item 4

After dropping ATMs that are in the branches or within 100 m range with branches, we now have 3566 ATMs that we can try to redistribute.

05

we find that 1779 (49%) of ATMs are located nearly to each other which means that distance to nearest ATM is approximately 0 m.





Conclusion

- As we couldn't get the population distribution in each subregion or region we couldn't measure if the ATMs are well distributed or not.
- Results show that number of ATMs closer to the branch is higher than the number of ATM further from the branch so it doesn't have a good coverage over the area.
- Results also shows that nearest ATM is mostly either very close or very far and those very close ATMs wont provide much benefits.
- So we can remove some of the ATMs from the regions that have it in excess and place it in the regions that are in need of it to have better coverage of ATMs for the area.



Quotes Today

*"A small improvement can
make a big development."*

what to improve ?



STUDIO SHODWE

Thank You