

# ACCESS TO DRINKING WATER 2

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Year: 2025

Acknowledgement to ALX Africa

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# DATA OVERVIEW

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- We've had a look at the different features and definitions of the dataset in Part 1
- How are these features represented in the dataset in this second part of the project?

01.

Becoming  
**familiar with the dataset**

—● Original 16 features

02.

Investigating  
**year representation**

—● New: **y\_diff**

03.

Investigating  
**Annual Rates of Change (ARC)**

—● New: **ARC\_n, ARC\_r, ARC\_u**

04.

Investigating  
**access by area**

—● New: **wat\_bas\_n (rounded), wat\_bas\_r (rounded), wat\_bas\_u (rounded), ARC\_n\_full, ARC\_r\_full, ARC\_u\_full, ARC\_diff**

05.

Investigating  
**access by region**

—● New: **region**

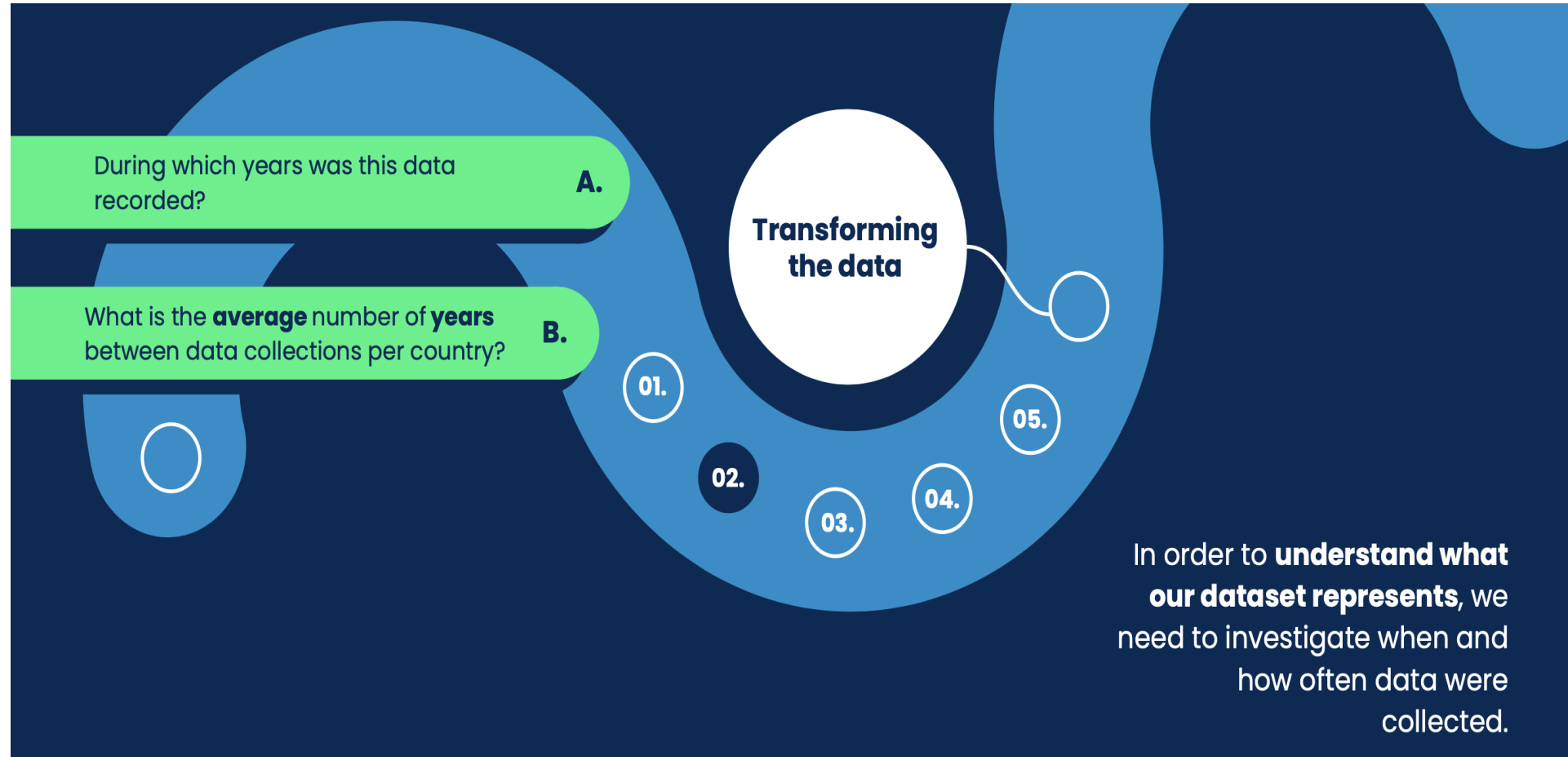
**28**  
features

Including the original and  
newly created features

Investigating <b>year representation</b>	<ul style="list-style-type: none"><li>➤ A summary of the dataset year and year difference, including the median, minimum, and maximum.</li><li>➤ A histogram of the year column.</li></ul>
Investigating <b>Annual Rates of Change (ARC)</b>	<ul style="list-style-type: none"><li>➤ The median, minimum, and maximum of each of the three newly created ARC columns based on the national, rural, and urban change in access.</li></ul>
Investigating <b>access by area</b>	<ul style="list-style-type: none"><li>➤ The number of countries that have no ARC value, full access, <math>ARC &lt; 0</math>, and <math>ARC &gt; 0</math> for each of the three newly created ARC columns.</li><li>➤ A histogram of the difference in ARC values for rural versus urban areas.</li></ul>
Investigating <b>access by region</b>	<ul style="list-style-type: none"><li>➤ A summary per region that at least includes the number of countries per region, the average ARC on a national level, and the average ARC values in rural and urban areas.</li><li>➤ A visualization (of choice) that represents the national ARC, rural ARC, region, and population size.</li></ul>

# DATA OVERVIEW

# INVESTIGATING YEAR REPRESENTATION



What is the **ARC** for the **national, rural,** and **urban** areas per country?

A.

What is the **average** of the **different ARCs** for all countries?

B.

Transforming  
the data

01.

02.

03.

04.

05.

We want to see if access to **services is improving or declining** across national, urban, and rural areas.

The United Nations (UN) uses **Annual Rates of Change (ARC)** to see whether the proportion of access to drinking water is declining or improving.

# INVESTIGATING ANNUAL RATES OF CHANGE (ARC)

# INVESTIGATING ACCESS BY AREA

What does the **change** in access to **basic** water look like for **different areas**?

**A.**

How does the **ARC differ** between **rural** and **urban** populations?

**B.**

**Transforming  
the data**

01.

02.

03.

04.

05.

In our previous investigation of access by area, we observed that **rural populations on average have lower access** to basic water services than the national or urban populations.

Now, we want to investigate whether countries have made **significant enough effort to improve** this in the years leading up to 2020.

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# INVESTIGATING ACCESS BY REGION



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*THANK YOU*

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