### Step 1: Ask

- Comparing the trend of new cases before and after vaccination began in VietNam from 2020 to 2022

#### Use SMART

- Specific: Vietnam 2020-1-1 => 2022-12-31
- Measurable: data from WHO
- Action-oriented:
  - + New cases per million
  - + Trend before vaccination, after vaccination
  - + Compare rate yearly
- => I want to know the trend of new cases before and after vaccination began
  - + Có data => Vẽ graph
  - + So sánh và đưa ra kết quả
  - Relevant:
    - + How many cases per million
    - + After implementing vaccinations, how many people recovered
  - Time-bound: 2020-1-1 => 2022-12-31
  - Stakeholders: WHO, Ministry of Health

## **Step 2: Collect**

- Github:

https://github.com/owid/covid-19-data/blob/master/public/data/owid-covid-data.csv

- Advantages: Easy to assess

#### Step 3: Prepare

- Filter the data: Vietnam + time + period (before or after vaccination)
- Find key dates:
  - + 8/3/2021: First implemented vaccination
  - + 1/7/2021: Publicly implemented vaccination
- Put the data into tableau and create a line chart for each period
- Filter: Vietnam + time + period

## Step 4: Analyze & Share

### **Keypoints:**

- Vietnam was not severely affected by COVID - 19 before vaccination

- However, after vaccination period, the cases and deaths increased drastically
- However, by publicly implemented vaccination at July 2021, the cases and deaths decrease significantly, recovered greatly since then

# Step 5: Act

- By implementing the vaccinations, Vietnam has successfully recovered
- Vaccinations have proven effective in reducing the severity of COVID-19 cases and lowering mortality rates