# Good Visualization

https://public.tableau.com/app/profile/gbolahan.adebayo/viz/TheChangeinGreenhouseGasesintheAtmosphere/GasEmissions

**Accessible:** This visualization uses a good colour pallet that has good contrast that distinguishes between the very low to very high in a manner that's incremental. The legend also describes the colour range and the percentage that it equates to from far left to far right.[1]

With regards to text, the labels for each chemical formula is bolded and in a bigger font size, and the actual corresponding name is below denoting what the formula stands for, which gives the audience the understanding of which gas each chart is referring to.  The typeface font that is used for the chart labels are easily distinguishable, and since its only two or three letters, its easy to make out. [2]

**Reproducible:** Although the raw data is downloadable, it does not show exactly how the author was able to produce this visualization. Furthermore, this visualization seems to require a program such as Tableau or Power BI to create which may make it harder for one to reproduce if they do not have the same program and/or are unwilling to purchase/install the program onto their computer. [3]

**Equitable:** This visualization does not take into account equitability. It does not describe where the measurements were taken of the different gas's. It does not separate between whether one community of people would be more at-risk versus others, or which part of the world has to be more conscious of the changes conveyed in this generalized visualization. [4]

**Improvements:** Have the data represented in a way that would be categorized based on different variables such as race, sex, geographic placement, and other categories so that the data can be more meaningful for each user interacting with the visualization.[5] Second improvement would be to denote a label regarding country of measurement so the user would know exactly where measurements were taken.[6]

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[1] Data Visualization: Visualization with Purpose: Accessible Data Visualization (pg 19)

[2] Data Visualization: Visualization with Purpose: Accessible Data Visualization (pg 27-30)

[3] Data Visualization: First Steps: Reproducible Data Visualization (pg 12-18)

[4] https://nationalequityatlas.org/lab/get-started-data-visualization
[5] https://nationalequityatlas.org/lab/get-started-data-visualization
[6] Data Visualization: Visualization with Purpose: Accessible Data Visualization (pg 27-30)

# Bad Visualization

https://public.tableau.com/app/profile/dennis.kao/viz/OttawaA15-
MinuteCity30DayChartChallengeDay16Environment/Dashboard1

**Accessible:** The text size is small and the faded grey font colour makes it hard to read. [7]

The colour palette used for the map is not the best of choices because during daylight hours, distinguishing between the colours may be a bit tricky.[8]

Furthermore, after clicking a dot, there is a small map that pops up on the top right showing the business's in the area annotated all in purple. Its easy to distinguish if the are very few, but if there are many, each circle is not distinguishable, making it hard to quantify and visualize.[9]

**Reproducible:** Similar to the above visualization, this one lets the user download the raw data, but after that, does not show exactly how the data was used to output this exact mapping. Similarly, Tableau or Power BI may be necessary which the user may not want to install on their computer. [10]

**Equitable:** This map does somewhat address equitability in that as you gradually go outbound from downtown Ottawa, there are less business's in the specific dot area's.  Also, this visualization only takes into account those who are able to walk or bike which leaves other community groups, such as those who can't walk or have other forms of disability, not being included in this. [11]

**Improvements:** Use of a different colour palette for the map that is more distinguishable (ie: allowing for higher contrast) allowing for more accessibility to wider audience.[12] Secondly, use a different font colour (not grey) so the contrast between the black background is better and have the text larger so its more viewable and accessible.  Secondly, I believe it would be an easy addition to have different colours for each business category so that when it appears on the map, the audience can distinguish between each of the categories. [13]

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[7] Data Visualization: Visualization with Purpose: Accessible Data Visualization (pg 19)

[8] https://www.highcharts.com/blog/tutorials/10-guidelines-for-dataviz-accessibility/

[9] Data Visualization: Graphing our Data: Graph Tables, Add Labels, Make Notes (pg 16)

[10] Data Visualization: First Steps: Reproducible Data Visualization (pg 12-18)

[11] https://nationalequityatlas.org/lab/get-started-data-visualization

[12] Data Visualization: Visualization with Purpose: Accessible Data Visualization (pg 17-21)

[13] Accessibility: A practical Handbook on Accessible Graphic Design (pg15-18)