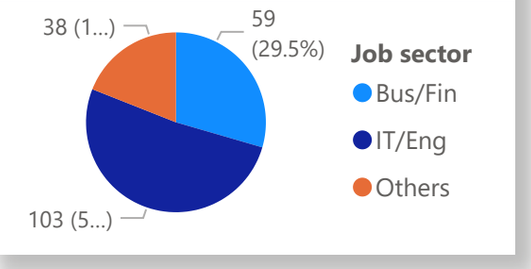
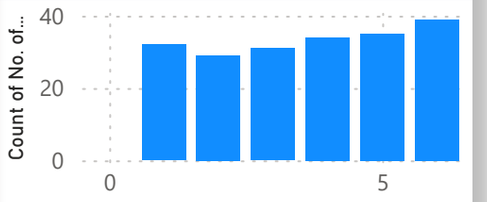
Rejuvenating Prestige Mall

Profile of Customers

Count of Jobs by Job sector



Count of No. of Visits / month by No. of Visits / month



Median No of Visits/month

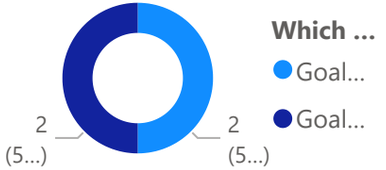
4

Sum of Amount spent/month

100.24K

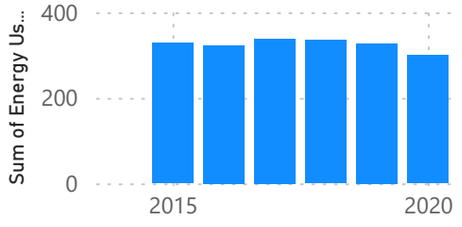
List 3 words that you would associate with sustainable buildings

Count of Which UNSDG goal is this context most likely related to? by Whic...

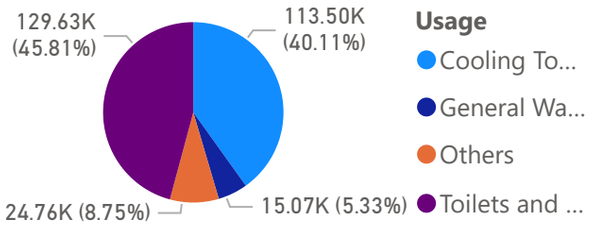


Water and Electricity Consumption

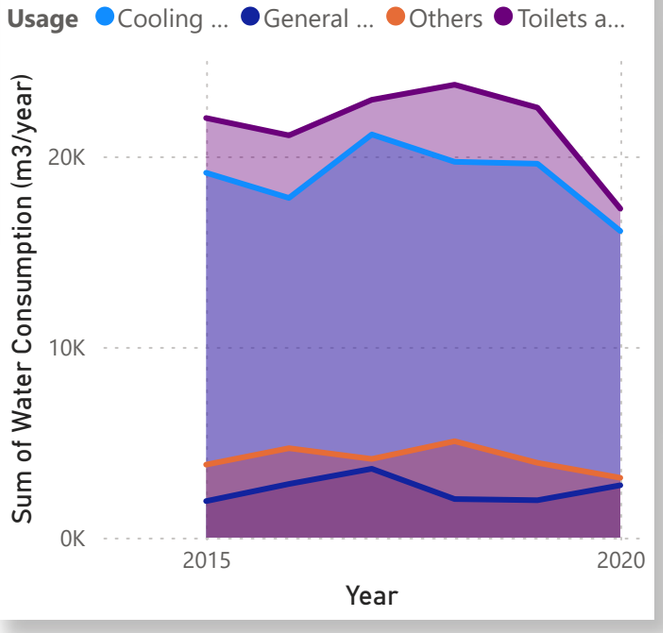
Sum of Energy Use Intensity (kWh/m2/year) by Year



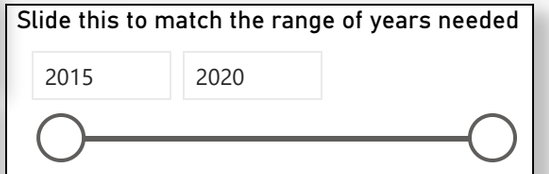
Sum of Water Consumption (m3/year) by Usage



Sum of Water Consumption (m3/year) by Year and Usage



Slide this to match the range of years needed



Total energy consumption

1,950.40

Total water consumption

282,947.80

Avg energy usage (per year)

325.07

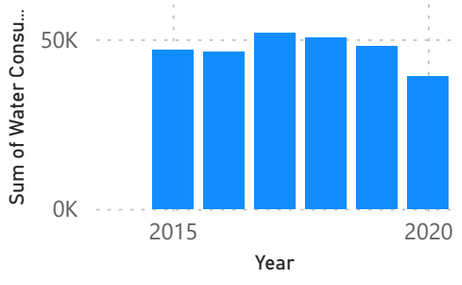
Avg water usage (per year)

70,736.95

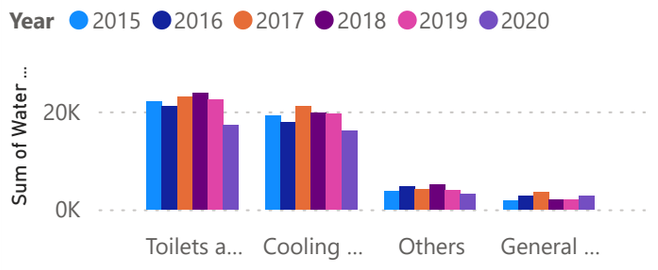
Avg water consumption (per year)

47,157.97

Sum of Water Consumption (m3/year) by Year



Sum of Water Consumption (m3/year) by Usage and Year



My reflection

I have chosen SDG goal 11, Sustainable Cities and Communities. Since Singapore is resource limited, focus is on reducing environmental impact through lowered energy production emissions and water pollution from consumption.

Aligned with SDG 11, the Singapore Green Plan and Green Building Masterplan, our dashboard tracks the mall water and energy consumption, highlighting opportunities for improvement for these areas.

In general, there is a decreasing trend between 2015 and 2020 for both energy use and water consumption as seen from sum of energy use intensity decreasing from 328.60kWh to 299.20kWh and from sum of water consumption decreasing from 46,884.60m^3 to 39,218.50m^3. However, there is an anomaly from 2016 to 2017 where both experienced a large increase in use and consumption where energy use increased from 323.10kwh to 338.30kwh and water consumption increased from 46,415m^3 to 51,843.40m^3.

Lets zoom into the years where there is a large increase, we can see that water usage increased for toilets and pantries, general washing and the largest being the cooling tower. To mitigate this, we can learn from City Square Mall Singapore and Singapore Green Building Masterplan. To reduce water usage, we can use AI systems to analyze real-time data and optimize temperature based on occupancy and weather conditions so less water is used in cooling towers or just use alternative cooling methods like City Square Mall with its insulated backing walls and sunshade. To reduce energy usage, using AI-controlled lighting systems with motion sensors to automatically turn lights off when areas are unoccupied and using solar energy aligns with Singapore Green Plan Energy Reset.

Overall, the commitment to a sustainable and inclusive society is crucial for future generations. We must be accountable and responsible for our actions, and collective efforts can drive success in achieving SDG goals in Singapore.

References:

1. Google Form live survey: https://docs.google.com/forms/d/e/1FAIpQLSfBzxtuQbNL-p9mWn66kPsYFeJFEf_Wf4MmAG_ScuM9QxMOIg/viewform?usp=sf_link
2. Data source: Burning Glass Technologies. burning-glass.com, 2021
3. City Square Mall Singapore: https://www.citysquaremall.com.sg/about-us/the-mall/eco/
4. Singapore Green Building Masterplan: https://www1.bca.gov.sg/buildsg/sustainability/green-building-masterplans
5. Singapore Green Plan 2030 energy reset: https://www.greenplan.gov.sg/key-focus-areas/energy-reset/