To: Jatinder Singh (Supervisor)
From: Ruchit Bhardwaj (Software Development Engineer – Intern)
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We, as a company know that we should collectively work towards reducing it, but what exactly is a carbon footprint? It is the total amount of greenhouse gases released to the atmosphere as a result of the activities of an individual or an organization. Greenhouse gases trap heat inside the atmosphere, which is in turn, overheating the planet. Now, that we know what it is, the logical next question to answer would be – how we can measure our carbon footprint and turns out, it is very simple to understand. We just need to find out what amount of greenhouse gases, such as carbon dioxide, are we responsible for creating. Although easy to understand, it is difficult to measure. There can be direct impacts such as fuels that we are releasing to the atmosphere, or the indirect impact, such as creating the energy required for creating the tools that we use on a day today basis. In order to maintain a sustainable ecosystem, this needs to change, and constant efforts should be made for reaching to a point of carbon neutrality.

What does this mean for an organization as a whole? At ZS, it being primarily a professional services firm, we do not have production plants. But our major factor contributing to the carbon footprint is the process of heating or cooling the offices. ZS has more than 30 offices across the globe and the process of heating or cooling the office is the major carbon footprint contributor. While this can be contributed to 'Scope 1' and 'Scope 2' of the carbon emissions scope (also known as the Direct Scopes), 'Scope 3' or the Indirect scopes are related to the use of a company's product or service. Often, Scope 3 makes up most of the company's carbon footprint. Together, scrutinizing and evaluating all the aforementioned scopes, can help us uniquely identify the areas of carbon footprint emissions that we should focus on more.

As an organization, it is our responsibility to understand that a climate catastrophe is not preordained, it is preventable if we adopt a low carbon lifestyle, we can reduce our carbon footprint by 80%. I propose the following potential solutions that could help us do just that. Focusing on Scope 1 and 2 mentioned above, we can make a constant effort to use renewable energy to power up all offices. As for heating and cooling the offices, we can insulate the office space which can reduce the carbon footprint of a person by up to 1 ton per year.

Talking about using renewable resources, the biggest office in terms of workforce for ZS is located in Pune, India. As of early July 2022, the Pune office has been steadily using more renewable energy resources such as solar energy, wind energy and hydro energy. Considering the fact that ZS Pune comprises of 25% of the total ZS electric consumption, and that 40% of the worldwide carbon emissions are from the city, it looks like ZS is close to achieve its goal of reaching 80% carbon neutrality by 2025. This came after the fact that most its 2 largest offices in the Europe and America, i.e., in London and Evanston, Illinois had already made the transition a couple of years ago. Keeping on with the flow, we should not lose the momentum and strive to make the other available ZS offices to be energy efficient as well.

As for some other means that can be adopted to reduce carbon neutrality is using advanced heating/cooling systems and motion sensing lights. These technologies might not seem to have any effect at first, but if you compound it over, the results are definitely astonishing. Insulating can also work – in a way that insulation acts as a heat barrier so it slows down the transfer of heat from warm places to cold places. So, for all buildings, the more insulation you have the slower they will take to cool down if it's cold outside and the building will retain more heat, and in summertime, when it's hot outside and you are cooling the building, more insulation is beneficial because it will slow down the heat ingress into the building. This means less work for your heating and cooling systems. This act alone can save another ton of CO2 emissions per person per year.

Yet another solution could be optimizing the company transport facilities. According to reports, ZS offices in India provide private cab services for employee transportation. This can amount to about 2 ton/person/year. Switching to electric cars, with readily available charging stations can help reduce the carbon footprint of the organization significantly as well.

I am sure that if these suggestions are implemented, the organization can contribute significantly to reducing its carbon footprint. For, we have to make this planet sustainable for the generations to come.

References:

1. Harrabin R. May 12, 2022. Record number of polluters set CO2 emissions targets. https://www.bbc.com/news/business-61414133
2. Taylor C. November 12, 2021. Climate change: These charts show what carbon emissions are doing to the planet. https://www.cnbc.com/2021/11/12/cop26-charts-show-what-carbon-emissions-are-doing-to-the-planet.html
3. Asplund J. July 01, 2022. Chicago health systems look towards net zero emissions. https://www.chicagobusiness.com/health-pulse/chicago-health-systems-look-toward-net-zero-emissions