Environmental sustainability reporting of ICT companies

Authors : Aurélie Bugeau and Anne Vialard
From an original subject by Anne-Laure Ligozat

Corporate sustainability reporting on the social and environmental risks of all large companies and all listed companies is now mandatory in EU law. Many companies publish yearly reports since several years.

In this practice, you will compare social and environmental reports of two major tech companies : Google and Nvidia.

1. Find the most recent environmental reporting of the two companies (be aware that FY24 is the fiscal year ending January 24).

2. Complete the following table, reporting carbon footprints for each company (when available). You will consider market-based emission. Specify if the number are gross or net emissions.

	Google		Nvidia	
	Total carbon footprint in MtCO2e			
	22 (FY23)	23 (FY24)	22 (FY23)	23 (FY24)

	Carbon footprint per scopes in MtCO2e			
	22 (FY23)	23 (FY24)	22 (FY23)	23 (FY24)
Scope 1				
Scope 2				
Scope 3				

3. What does MtCO2e stand for ?

4. Recall what are scopes.

5. For each company, can you find what are main sources of scope 1 and 2 emissions ?

6. What was the electricity consumption of companies for the past years ? If not reported in current report, you can look in previous ones. Is it increasing of decreasing ? Why ?

Electricity consumption (in TWh)					
Google			Nvidia		
2019 FY20	2021 FY22	2023 FY24	2019 FY20	2021 FY22	2023 FY24

7. Renewable energy

   (a) What percentage of the electricity consumed comes from renewable energies (if available) ?

   (b) Explain the difference between market-based and location-based emissions. Compare location-based and market-based emissions when possible, or look if renewable energy is produced or purchased. What do you observe ?

8. For each company, what are sources of scope 3 emissions in percent of total emissions (report only those $>1\%$ and indicate a $\times$ for those $<1\%$)? Scope 3 is made of 15 categories. Are they all reported by companies? Is it easy to find these information?

	Google	Nvidia
1-Purchased Goods& Services		
2-Capital Goods		
3-Fuel-and Energy-Related		
4-Upstream Transportation		
5-Waste generated in operations		
6-Business Travel		
7-Employee Commuting		
8-Upstream leased assets		
9-Downstream transp. and distrib.		
10-Processing of sold products		
11-Use of Sold Products		
12-EoL of Sold Products		
13-Downstream leased assets		
14-Franchises		
15-Investments		
Reported in other categories		

9. Do total carbon footprint and electricity consumption differ between companies? According to your opinion, how to explain the differences?

10. Do companies have net zero and carbon free electricity targets? What are their strategies to reduce emissions? What is your opinion on these strategies of each company?

11. Do companies explicitely mention AI and present strategies for sustainable AI? Are they developing AI for good?

12. Do companies report there water consumption? Has it evolved through years? Have companies fixed targets?

13. What is the amount of waste generated by each company? Do they have targets and strategies to reduce amount of generated waste? Do companies provide information on e-waste or IT waste? Are IT hardware recycled?

14. Do companies use recycled resources?