

Demystifying the Impact of Energy and Water Consumption During and After Remote Work



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Introduction

Consumption patterns have shifted significantly since the pandemic. Key literature sustains that residential electricity consumption increased by 16% during working hours, with an additional 3% rise in areas with more remote workers.



Research questions

How significant was the shift to remote work during the COVID-19 pandemic in impacting individual water and electricity consumption patterns?

Methodology

Perception analysis

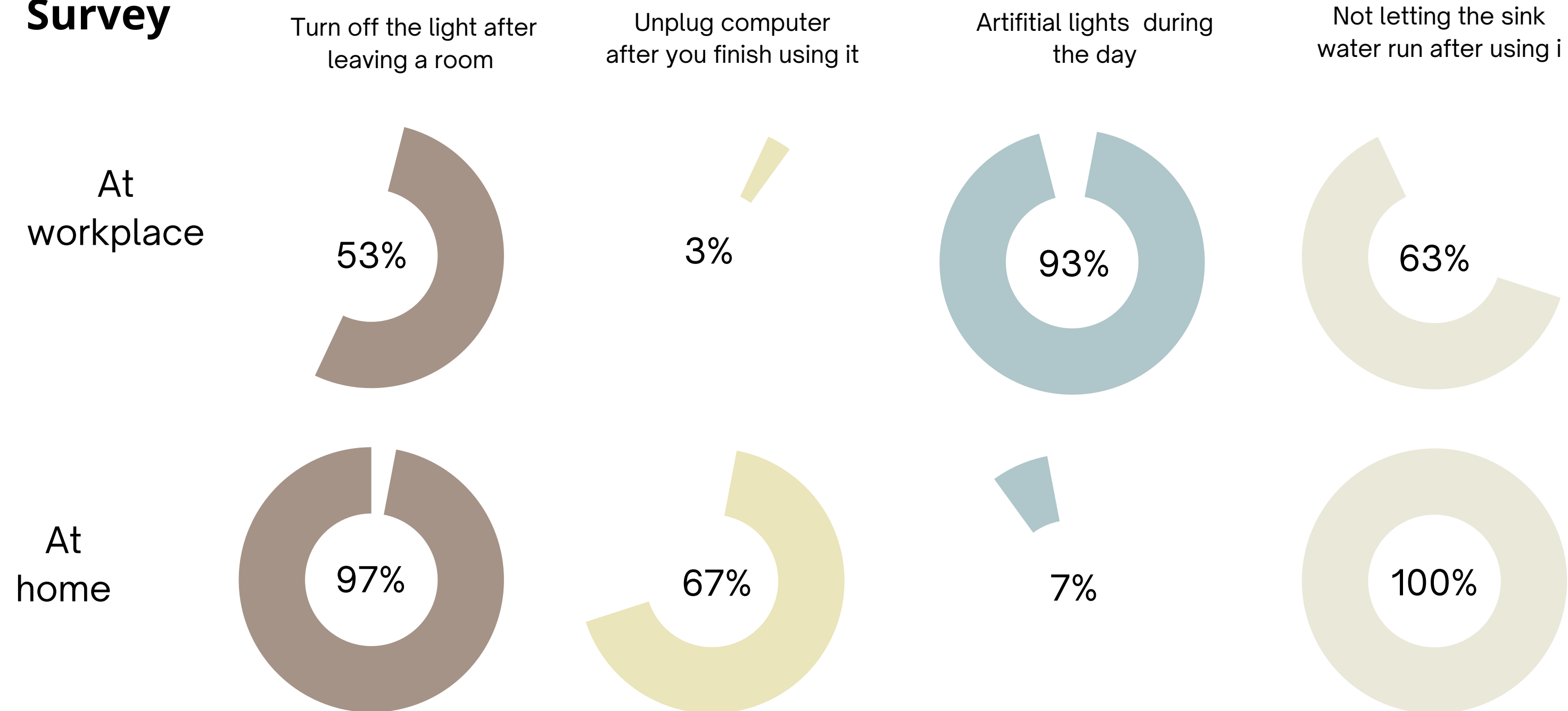
- **Survey:** 30 people from different ages and different countries.
- **Interview:**
 - 7 outstanding responses
 - 3 average responses.

Case Study Analysis

- **Small business with 14 employees that, during the pandemic, worked from home.**

Results

Survey



Interview



Case study

	Electricity	
	Home	Workplace
2020	199.00 kW	145.00 Kw
2024	139.00 kW	916.78 kW
Difference	-60 kW	771 kW

	Water	
	Home	Workplace
2020	372 m3	56.50 m3
2024	120 m3	262.20 m3
Difference	-252 m3	205.7 m3

The pandemic expenses at home are generally proportional to the expenses in 2024. This means that, in this specific case, the change to remote work during the COVID-19 pandemic does impact the water and electricity consumption patterns of people within the company. This contradicts the above-mentioned results and the results obtained in the surveys and interviews.

Discussion

Two types of circumstances:
(Through surveys and interviews)

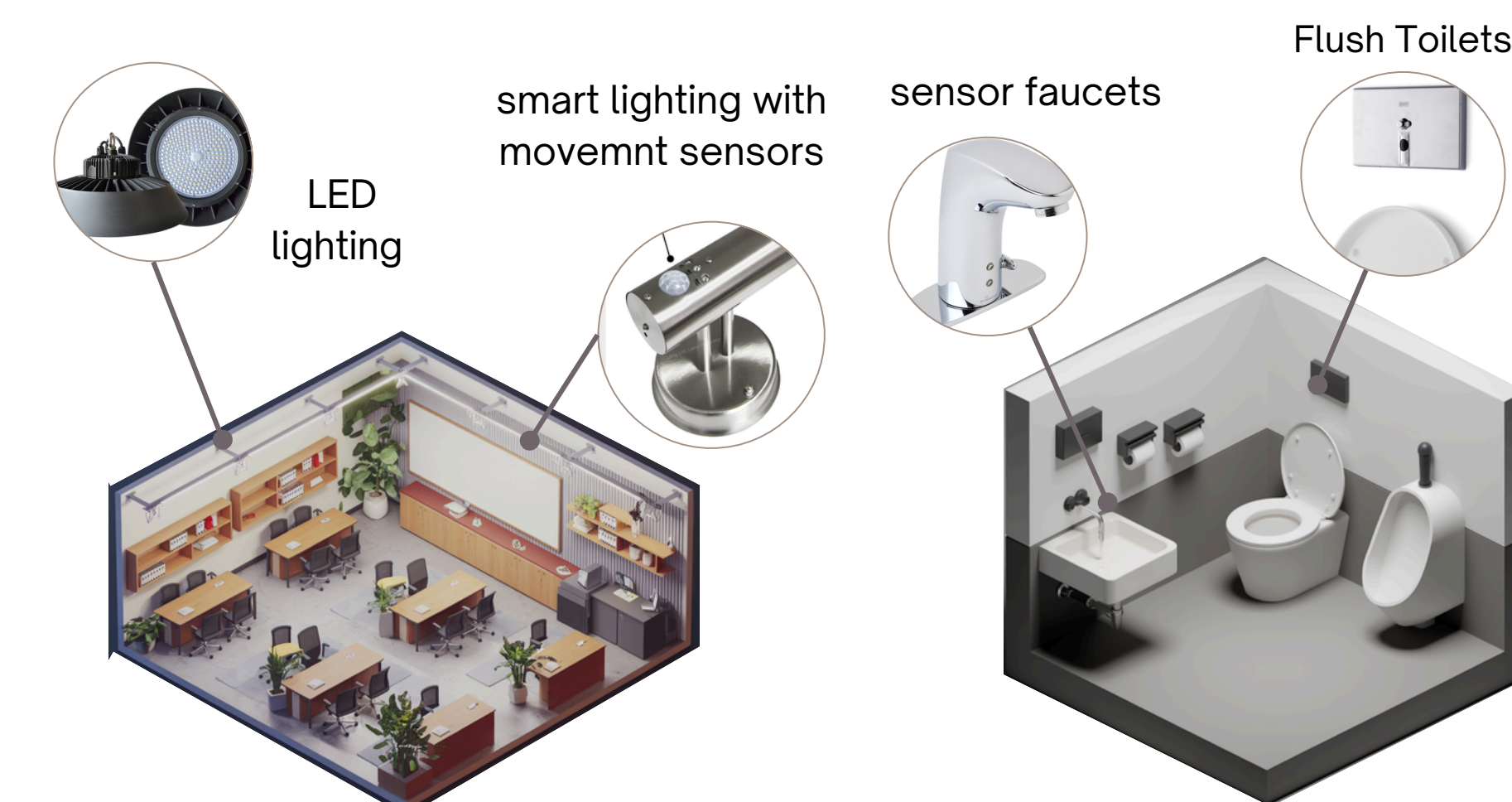
- Significantly diverse behavior in workers' habits during and after the pandemic
- A decrease in the environmentally conscious habits that workers acquired at home during the pandemic

(Through case study)

- No major difference between the patterns obtained at home and in the office

Conclusion

- These findings show the importance of the work environment, instead of the impact that the pandemic had on consumption patterns.
- The relationship one has with the owners of the company, and the size of the company, depends on the behavior of the workers, and their consumption patterns.
- Implement energy and water saving options that work independently, without having to depend on the behavior of the workers



References

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