

UNCOVERING THE SOCIAL AND ECOLOGICAL IMPACTS OF DATA CENTRES

PROMOTING INDIGENOUS PERSPECTIVES AMIDST CANADA'S DATA CENTRE BOOM



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Introduction

This research argues that data centres are not a neutral technical infrastructure, but act as a site of power and capital that accelerate settler colonialism. The report analyzes the environmental impacts of data centres, particularly focusing on land, energy, and water, grounding these analyses in the historical context of environmental racism towards Indigenous peoples across Canada. Finally, it explores the social implications of data centres by examining data colonialism, economic impacts, and the surge in community-led resistance to data centres.



Research Question

What are the social and ecological impacts of data centres in Canada? How does this impact Indigenous peoples?

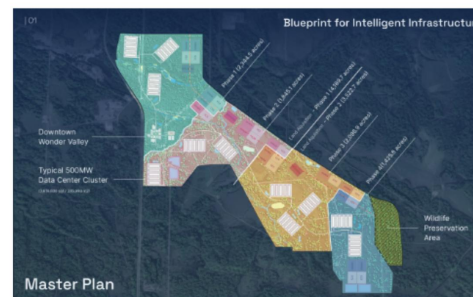
Provincial share of planned data centre capacity

Total capacity of centres that have been announced or are under construction

Alberta	12,618 MW
Ontario	252 MW
Saskatchewan	198 MW
New Brunswick	191 MW
Quebec	175 MW
British Columbia	131 MW

Results & Analysis

- 1 Data centre development has a hyper-localized impact, but is part of a larger story of extraction, marginalization, and colonialism in exchange for profit.
- 2 Sociotechnical imaginaries purposefully associate data centres with "the cloud" in order to disassociate them from their tangible, physical impacts.
- 3 In reality, data centres have an insatiable thirst for resources such as water, energy, and land. Socially, data centres are the physical infrastructure supporting data colonialism



Methodology

In order to analyze the social and environmental impacts of data centres, I employ a mixed-methods research strategy. To analyze the environmental impacts of data centres, I use the province of Alberta's hyperscale data centre industry as a case study, with a focus on the Wonder Valley data centre. To determine the social impacts of data centres, I conducted 4 open-ended interviews with an industry expert, two community organizers, and an Indigenous leader working to decolonize data. Combined with a literature review across academic disciplines.



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Key Sources

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Karunakara Malige, Lohith. 2024. "The Impact of Artificial Intelligence on the Modern Data Center Industry." *SSRN Electronic Journal*, ahead of print. <https://doi.org/10.2139/ssrn.4922638>.

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