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The Human Side of Data Centres

Social and Community Impact
Considerations

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Agenda



Introductions
and Human
Environment



Social Impact
Consideration
s for AI Data
Centres



Assessing
Social Risks



Case Studies
for Social
Impact



Community
Engagement
Best Practices



Applications
for AI Data
Centres



Introduction and Human Environment





About Me

- PhD in medical anthropology
- Currently a socioeconomic and human environment specialist at SLR Consulting
- Work with First Nations communities in Canada to research how water insecurity impacts Indigenous health
- Frame health as holistic: physical, spiritual, cultural, and social components shape health



About Me

- Worked with Six Nations of the Grand River First Nation to determine how a lack of clean water on their reserve shaped health experiences
- Collaborative work with a team of Indigenous Knowledge keepers, Elders and youth, scientists, engineers, lawyers, and anthropologists
- Worked to understand how ongoing use of a freshwater aquifer outside of Guelph, Ontario by Nestle was reducing water supply
- Linked with government policy and regulation to understand how these limitations shaped water access and health





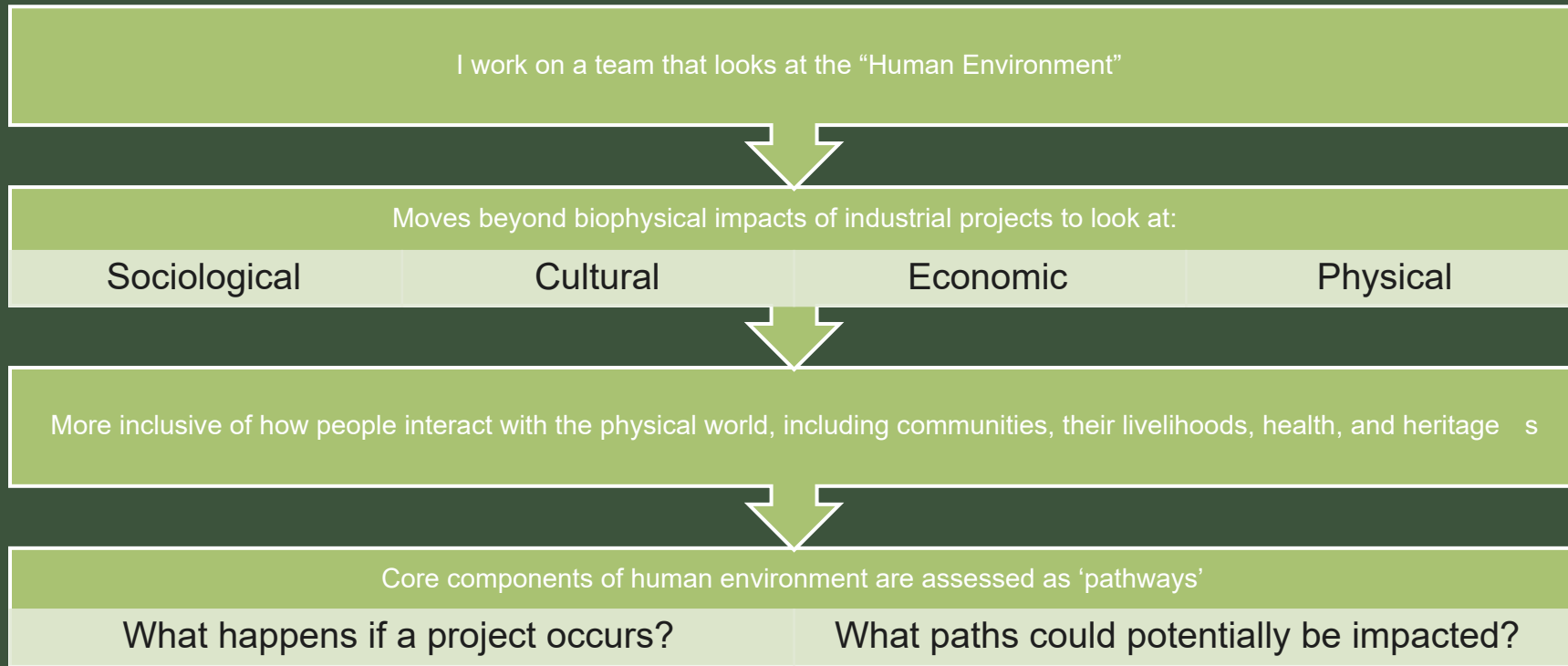
Water and Social Impacts

- This work and research made national and international news
- It sparked public interest as it related to a very real, human concern about water, health, and our collective futures
- It was community -driven, and helped me understand the social and cultural impacts of industry operate in more of an ecosystem than a silo





Human Environment Work





Human Environment Pathways

Pathway	Description
Socioeconomic Conditions	• Local employment and economy • Income levels • Housing affordability and availability • Regional economic stability • Community services • Emergency services • Infrastructure
Cultural and Heritage Resources	• Historic sites • Tangible and intangible heritage • Archaeological sites and findings • Sacred and culturally important areas • Current use of areas to maintain cultural practices (e.g., for Indigenous Peoples)
Public Health & Community Wellbeing	• Direct impacts on human health (noise, air, water quality) • Physical health risks • Consumption of traditional foods (ability to hunt and harvest) • Traffic changes • Community wellbeing (personal safety, cultural dimensions of health)
Land Use (Traditional)	• In Canada, relates specifically to land use protected for Indigenous Peoples through the Constitution • Ability to continue exercising their right to harvest on their traditional lands (e.g., hunting, trapping, fishing, plant gathering) • Varies by Nation and community
Land Use (Non-Traditional)	• All other land uses • Commercial and industrial • Recreation and tourism • Parks and protected areas • Non-Indigenous hunting and harvestings



Social Impact:

Considerations for AI Data
Centres





Social Considerations for Data Centres

- Data centres are driving and supporting the growth of digital economies
- Powering things such as:
 - Cloud computing
 - Artificial intelligence
 - Expansion of data-driven services
- Digital growth in these arenas comes at a social cost: they place pressure on local energy grids and water systems
- What pressures do these place on the communities hosting the data centres?



Social Considerations for Data Centres



Data centres are typically being constructed in areas that are already burdened by major industrial projects (e.g., renewable energy, infrastructure)



Data centre construction is not subject to the same regulations and environmental assessments as other major projects.



For municipalities engaging with proposed data centre construction, questions about their cumulative impact are important:

What is the cumulative social impact of data centres in heavily burdened regions?

How will data centres be managed and mitigated?

What are key considerations to include for communities that historically have not seen material benefits for major infrastructure in their region?



Lessons from Other Industrial Sectors

- Many communities face ongoing fatigue by pace and scale of regional development
- Projects can feel imposed without much community say on shape and design
- Failure to engage with communities increases project risks across planning, construction, operations, and closure



Project Opposition



Community History



Exclusionary Historic
Legislation or
Regulation



Real or Perceived
Exclusion from
Development



Lack of Local Benefits



Poor Communication
or Transparency While
Project Planning



Ripple Effect of Public Opposition

- Can delay project timelines
- Can escalate public opposition (e.g., media stories escalating from municipal to state-wide)
- Can escalate the cost of building and running the project
- Social risk management is increasingly something mandated in other fields



Defining Social Impacts and Risks

- **Social Impact:**

- Significant, lasting changes that programs, organizations, investments, or projects can create in people's lives
- Can be positive or negative, intended or unintended

- **Social Risk**

- Risks an organization or business faces from public opposition, negative community perceptions, or protests driven by its operations (e.g., labour disputes, human rights violations in supply chains, or environmental pollution)

- **Social Value**

- Benefits or positive changes brought by a project to a community, beyond financial profit
- May include job creation, support of local suppliers, local charity support, building community spaces, protecting important environmental areas or wildlife species



Case Study

Proposed Data Centre in
Hamilton, Ontario, Canada





Hamilton, Ontario, Canada

- Highly industrial city on the shores of 'the bay' (Hamilton Harbour), which is the western tip of Lake Ontario
- Proposed data centre by Toronto-based company Slate Asset Management
- Steelport Project, described as "worldclass AI, advanced manufacturing, and clean infrastructure district" with data centre in it





Case Study: Hamilton

- Data centre met by massive public protest
- Supporters advocated for it as an economic win for Hamilton (estimated 30,000 jobs and \$10 million into local economy)
- Environmental and human health impacts a major concern
 - Staggering electricity and water demands
 - AI data centres generating massive amounts of heat that require round -the- clock cooling





Case Study: Hamilton

- Project planned to avoid burdening city's water system and draw water from the bay with existing permits
- Longstanding pollution and air quality concerns in Hamilton as an industrial city
- 2019 McGill study published in *Cancer* scientific journal reported high instances of respiratory-driven cancers in neighbourhoods closest to industrial activity





Case Study: Hamilton

- Hamilton Planning Tribunal denied developer's application
- Site met all the regulations needed
- Residents of Hamilton pushing back against its construction created the motion to deny the application
- Residents requested greater scrutiny for data centre proposals
- Registered municipal officials requested more time to identify legislative tools to address data centres





Risks to Identify with Community

- Hamilton case study outlines risks of assuming public does not need to be involved
- Social values and impacts are dynamic and ongoing forms of community engagement
- *“For the people, it’s their land, home, resources, and sanctuary. There’s not going to be a lot of trust —it’s like a mass invasion”* – Erin Brockovich



Considerations Building Social Impact Assessment

Transparency



Responsive proponents and developers



Trust as absolutely necessary for success



Three primary elements for social impacts of data centres:

Risk assessment for proposed data centre

Preparing stronger community engagement

Building recommendations for best path forward



Risk Assessments

Considerations for AI Data
Centres





Social Risk Assessments for Data Centres

- Making a consistent rating scale to assess the social risks across multiple projects (in region, or state -wide)
- Use of a risk matrix for socioeconomic and environmental factors (takes out “woo woo” that socio -ec can be met with)
- Map how communities position themselves in relation to project (for, against, involved, disengaged)

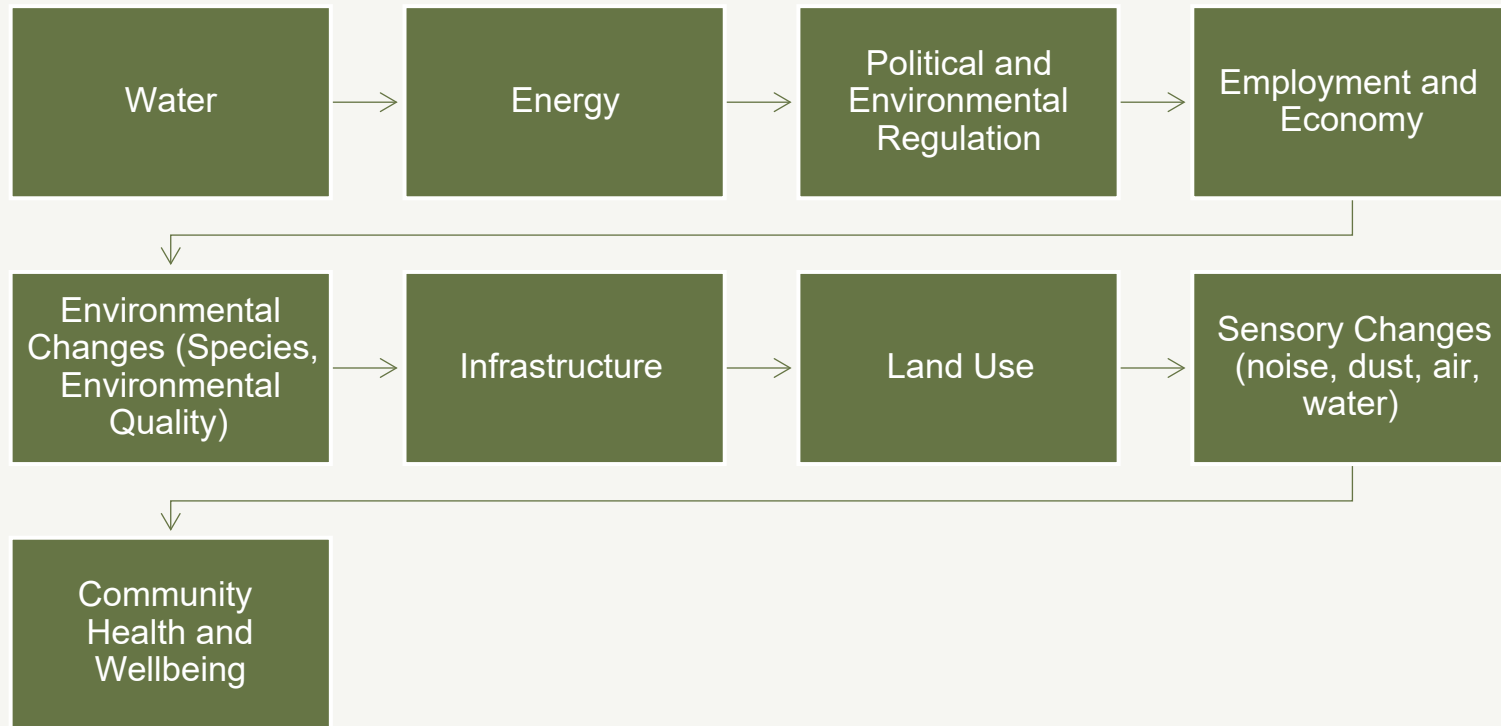


Risk Buckets

- Risk assessed by placing distinct categories into ‘buckets’ to pull a cumulative assessment of social impacts and risks
- Risk buckets would vary by region, depending on their unique histories with environmental development and issues
- Canada has clear regulations that are embedded into our assessment frameworks nationally and at province level, often called “Valued Components”



Risk Buckets Categories for AI Data Centre





Looking at Risk Buckets

- Outlining publicly known information about communities through desktop research (statistical data sets on population)
- Primary interviews with local or regional key stakeholders (service and care providers)
- Reports from subject matter experts to create a baseline of conditions



Risk Methodology & Measures

- Risk buckets can be turned into a risk assessment to understand social risks if a data centre is constructed in or around a particular community
- Factors in perceptions of project from public
- Existing public commentary on key issues can identify early 'stakeholders' and their level of interest



Example of Risk Matrix Item

Focus	Risk Levels				
	Minimal	Low	Moderate	High	Significant
Social Impact	Low levels of social inequity across stakeholder group. High capacity and interest in partnering. Willing and interested to partner	Inequity in one to two areas of stakeholder group (e.g., age, gender). Some low-level capacities to support and interest in partnering	Moderate levels of inequity across stakeholder group. Partnerships available but limited to one theme or minimal organizations	Moderate to high social inequities. Limited capacities and partnership opportunities due to restricted capacities or limited interest	High levels of inequity, low levels of capacity to partner or low to no interest.



Case Study

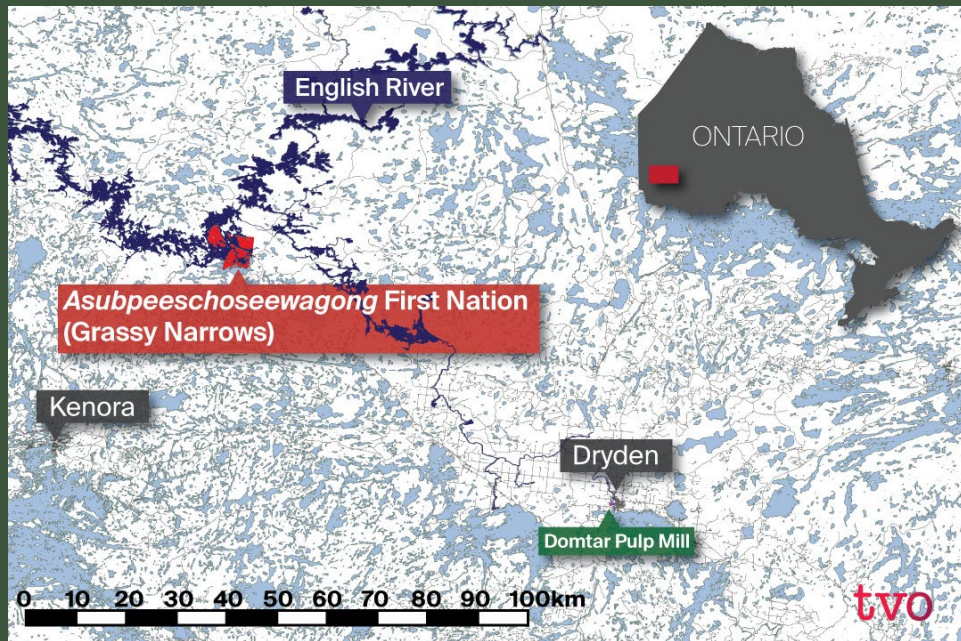
Mining Company and Grassy
Narrows First Nation





Case Study: Grassy Narrows First Nation

- Proposed mining project in northern Ontario
- Mine would source water from English-Wabigoon River System, which has made national news after a 1960s paper mill released high levels of mercury into the river system
- Mercury contamination has had devastating consequences for Grassy Narrows First Nation





Case Study: Grassy Narrows First Nation

- In 2021, Grassy Narrows partnered with academic researchers to measure levels of methylmercury still in the English - Wabigoon River system
- Looked at how it affected culturally important plants and fish species
- Identified that the current owner of the paper mill in Dryden, Ontario was releasing effluent into water that had high levels of sulphate (not a contaminant of concern, a natural substance)
- Sulphate created a very good bacterial environment, which has made the methylmercury levels worse in the river system





Case Study: Grassy Narrows First Nation

- Any new industrial projects on the river system immediately more vulnerable
- Mining company was notified of these concerns, and offered opportunities to produce more rigorous mitigations and First Nation engagement, but did not
- Relationship between the mining company and Grassy Nations deteriorated, no engagement has occurred
- Several provincial and national media stories in relation to these issues





Case Study: Grassy Narrows First Nation

- The environmental assessment was submitted to the federal government in March 2026 by the mining company
- Mining company has been informed that it did not adequately assess the impacts to water changes as a result
- Delays that come with an unwillingness to engage and co-develop mitigations that are suitable for diverse cultural communities
- Demonstrates lack of understanding for how historic and ongoing contamination informs social risks to communities





Risk Example

Ontario											
Parameter	Red Lake Mining Division	Kenora Mining Division	Patricia Mining Division	Thunder Bay Mining Division	Porcupine Mining Division	Sault Ste. Marie Mining Division	Sudbury Mining Division	Larder Lake Mining Division	Southern Ontario Mining Division	Average Risk Rating	GEM Score
Water	4.00	6.00	12.00	4.00	5.33	4.67	4.67	4.67	20.00	7.29	4-B (Good)
Environmental Sensitivities	10.00	10.00	10.00	6.67	4.67	5.33	3.33	7.33	20.00	8.59	4-B (Good)
Physical Access	8.00	8.00	18.67	1.67	4.67	4.00	2.67	4.67	2.00	6.04	4-B (Good)
Community	4.67	4.67	9.00	1.00	1.67	1.00	1.00	9.00	20.00	5.78	4-B (Good)
Indigenous People	12.33	12.33	10.67	10.00	7.00	2.00	2.00	7.33	18.66	9.15	3-C (OK)
ASM (Provincial-Level)	1.30	1.30	1.30	1.30	1.30	1.30	1.30	1.30	1.30	1.30	5-A (Very Good)
Tenure	7.00	6.00	9.00	6.33	6.33	7.00	2.66	5.33	2.00	5.74	4-B (Good)
Permitting (Provincial Level)	9.67	9.67	9.67	9.67	9.67	9.67	9.67	9.67	9.67	9.67	3-C (OK)
Jurisdiction	9.00	9.00	10.67	6.00	4.00	5.33	2.67	5.33	20.00	8.00	4-B (Good)
Infrastructure	9.00	9.00	20.00	4.00	4.67	5.33	3.33	4.00	2.00	6.81	4-B (Good)
Competitive Land Use	4.00	4.00	2.00	9.00	9.00	9.00	9.00	4.00	20.00	7.78	4-B (Good)
									Totals	76.15	
									Final Averages	6.92	4-B (Good)

**separate risk assessment, unrelated to Grassy Narrows*



Engagement with Communities

Best Practices for Proposed Data Centres





Best Engagement Practices

01

IAP2
Spectrum of
Public
Participation

02

Free, Prior,
Informed
Consent
(FPIC)

03

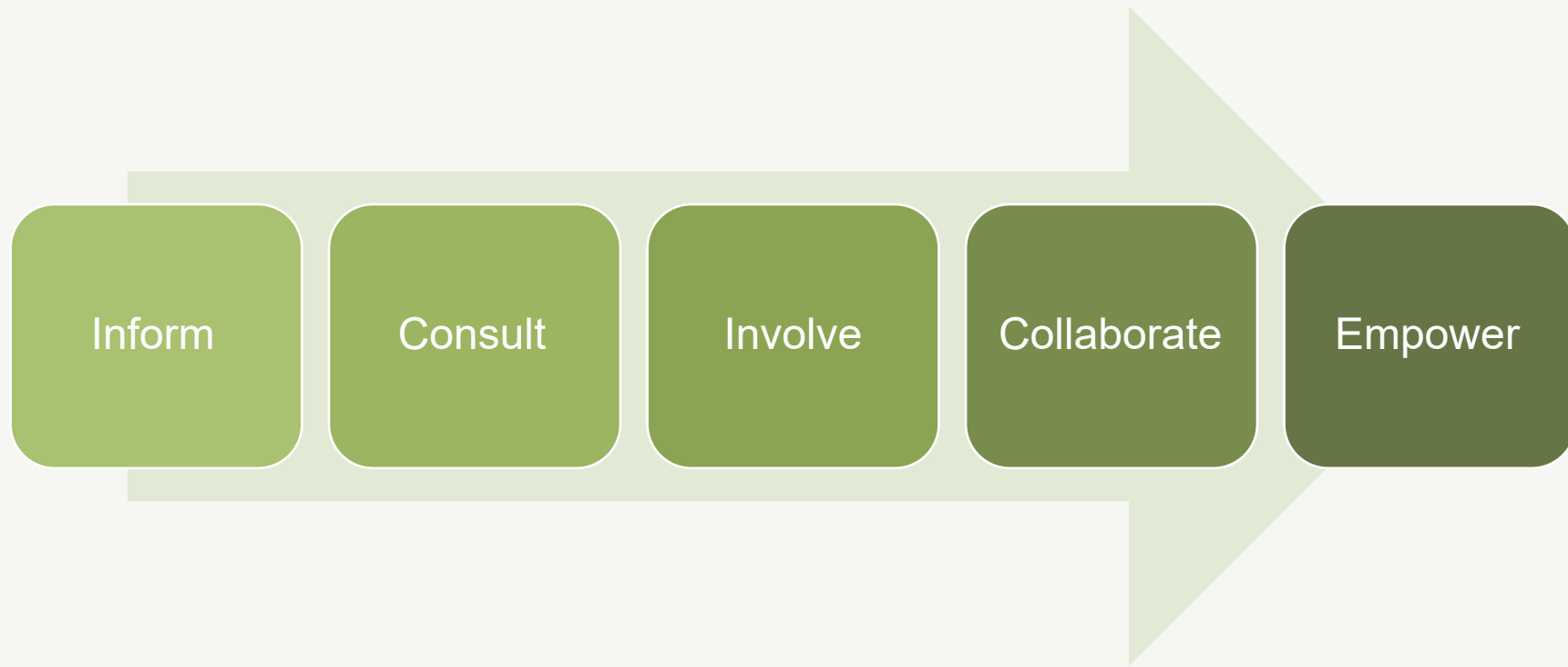
Stakeholder
Mapping

04

Social License
to Operate



1.IAP2 Spectrum of Public Participation





INCREASING IMPACT ON THE DECISION 					
	INFORM	CONSULT	INVOLVE	COLLABORATE	EMPOWER
PUBLIC PARTICIPATION GOAL	To provide the public with balanced and objective information to assist them in understanding the problem, alternatives, opportunities and/or solutions.	To obtain public feedback on analysis, alternatives and/or decisions.	To work directly with the public throughout the process to ensure that public concerns and aspirations are consistently understood and considered.	To partner with the public in each aspect of the decision including the development of alternatives and the identification of the preferred solution.	To place final decision making in the hands of the public.
PROMISE TO THE PUBLIC	We will keep you informed.	We will keep you informed, listen to and acknowledge concerns and aspirations, and provide feedback on how public input influenced the decision.	We will work with you to ensure that your concerns and aspirations are directly reflected in the alternatives developed and provide feedback on how public input influenced the decision.	We will look to you for advice and innovation in formulating solutions and incorporate your advice and recommendations into the decisions to the maximum extent possible.	We will implement what you decide.



2. Free, Prior, Informed Consent (FPIC)





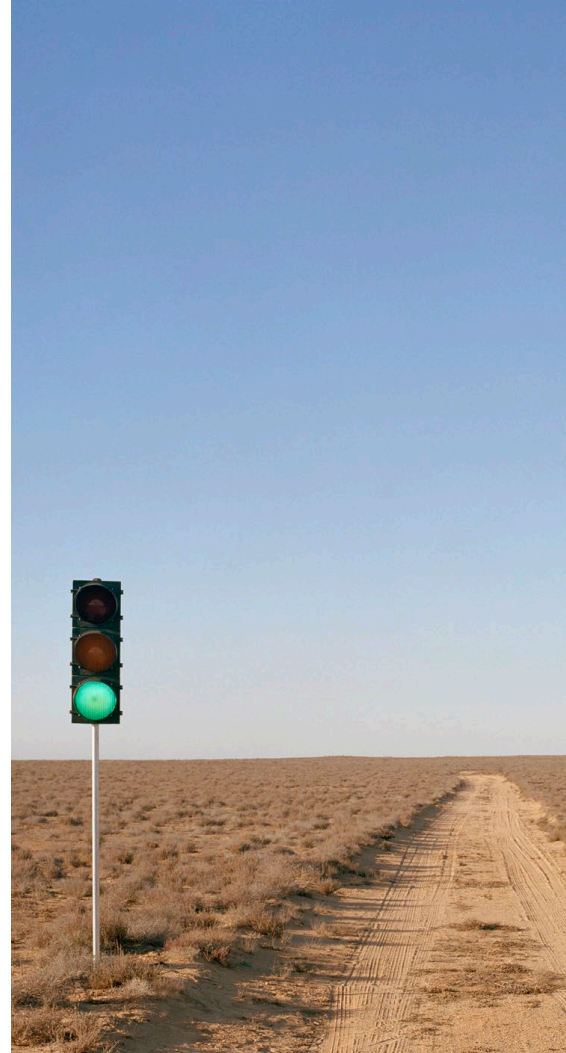
FPIC Mapping Example





FPIC Risk Mapping

- Assessed for risk at regional level due to multiple projects transecting for First Nations
- Examined the main concerns emerging from First Nations in these project development contexts
- Used a Red-Amber-Green (RAG) system across four criteria:
 - Governance
 - Climate Change & Culturally Important Ecosystems and Species
 - Human Health
 - Human Rights
- Criteria used to inform opinion about the likelihood of achieving Free, Prior, and Informed Consent (FPIC) under Equator Principles (EP4) and IFC Performance Standard 7 (PS7) for each region







3. Stakeholder Mapping



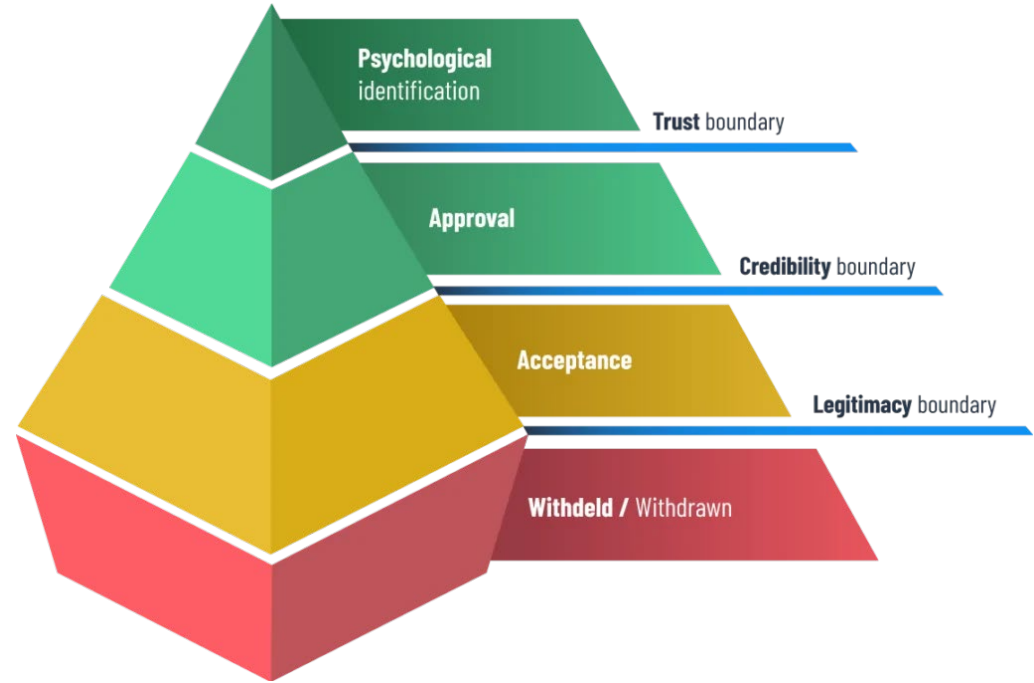
Groups to Identify on the Matrix:

- Government and Regulatory
- Academic Institutions
- NGOs and Community
- Businesses and Industries
- Media



4. Social License to Operate

- Community acceptance of a project (how much it is or is not supported)
- Ongoing practice, not a permanent buy-in





Case Study

Google Data Centre and Community
Pushback in Santiago, Chile





Case Study: Santiago

- Proposed data centre from Google in Santiago, Chile
- Slated for Cerrillos district on outskirts of Santiago
- Set to become a central tech hub in Latin America
- Significant local opposition due to ongoing water crisis in Chile
- Data centre proposed 7.6 million litres of water used daily to cool their servers





Case Study: Santiago

- Google reformulated their project to shift to air -cooling technology
- Company emphasized its commitment to adapt to Chilean social context
- Used engagement tools to build relationships
- Public sentiment was turned around to approve the project
- Yet as of 2026, it appears as though the Cerrillos district site plans are halted again





Case Study: Santiago

- Chile's push to become a tech hub has faced increasing public backlash
- Promises made about data centre sustainability elsewhere in country have not been kept
- High concentration of Google data centres in Quilicura, Chile (outskirts of Santiago)
- Residents observed partially protected swamp has been drying up rapidly





Case Study: Santiago

- Minimal job creation
- High power consumption
- Failed environmental offsets
- Water table levels beneath Quilicura wetland dropped at alarming rates from intensive water use the last decade
- Water crisis continues due to increased industrial activity and ongoing severe drought





Local Context for Mississippi

Examples to Consider





Tying into Local Contexts



Data centres are not passive infrastructure and carry material social risks



They should not be treated any differently than other major infrastructure or industrial projects



Consideration of regulatory frameworks and best practices to move forward in ways that support communities and economic and digital development

Canton and Madison County (Amazon)



SUMMARY

Two AI data centre campuses, including one with 300+ diesel generators. Permits allow up to 240 tonnes per year of nitrogen oxide emissions. The Mississippi Free Press reported that its less than 200 years from residential neighbourhoods, and has had an influx of traffic and noise during construction.

RESIDENT CONCERNS

- *"We had no idea all of this was coming. They didn't tell us anything, even when it was in the making."*
- A resident's teenage daughter with asthma needed multiple ER visits during the data centre construction
- Residents not provided advance notice

CONSIDERATIONS

- County economic development authority cited an NDA with Amazon as why the project could not be disclosed
- Who is most likely to be impacted by this? Who might be disproportionately affected?



State Wide Utility Laws (SB2001)



SUMMARY

In 2024, Mississippi passed Senate Bill 2001 (SB2001) that lets utilities sign confidential contracts with data centres. This curtails standard oversight on Public Service Commission over energy infrastructure, and makes it easier and faster to expand the electrical grid for data centres.

CHALLENGES

- **Transfers risk to residential consumers of energy, who lose a key transparency needed for electricity providers**

CONSIDERATIONS

- New report by Synapse Energy Economics outlined the rapid data centre buildout
- Found that average bills are already \$10.60 higher per month for Entergy Mississippi's residential customers as a result of data centre investments



Southaven (xAI Colossus 2)



SUMMARY

NAACP sued xAI for operated 27 gas turbines without an air permit near residential homes, schools, and churches in Southaven, Mississippi. The xAI Colossus data centre is powering the company's Grok chatbot. The company failing to get permits for the power plant created additional risks for families, and is in violation of the *Clean Air Act*.

CHALLENGES

- Gas turbines emit smog -forming pollution, including pollutants tied with increases in asthma, respiratory diseases, heart problems, and some cancers
- Same xAI Colossus Project that is occurring in Memphis (just across state lines), which received national attention for sitting in a predominantly Black neighbourhood with cancer rates 4x the national average

CONSIDERATIONS

- NAACP's lawsuit statement: *"True progress cannot be built by ignoring community health or our environment. Our right to clean air is not up for negotiation ,especially when companies prove expediency, not people, is their priority."*





Five Takeaways

01

Engage early, often, and locally with potentially impacted communities

02

Deliver tangible regional benefits (economic, social, cultural, health)

03

Build risk assessments and stakeholder maps that respect the histories of communities experiences

04

Make environmental performance visible and accountable

05

Build public understanding and relationships



Closing



Transparency



Early engagement



Disclosure



Do you
have any
questions?

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