Procurement Circuit under Machine Learning Political Order: Governance *of*, *through*, and *for* AI

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Abstract

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Meaghan Wester

In a landscape where governments are shaped by and depend on private AI providers, what does it mean to govern artificial intelligence (AI)? Public procurement is a point of intervention where the entrepreneurial pull of states to integrate digital expertise and reformulate its problem within machine-learning logics can be halted, questioned and examined. This thesis examines public procurement of AI as a crucial site where governments and AI providers engage in a complex co-shaping process, which I term the *procurement circuit.* Specifically, the thesis examines Canada's procurement of AI as part of its national Responsible AI Strategy.

Through situational analysis, this thesis maps and explains how this co-shaping occurs and considers how the *procurement circuit* distributes authority and legitimacy over normative questions on AI between AI providers and government. I argue that Canada's regulatory architecture is built under what Louise Amoore coined Machine Learning (ML) political order. Chapter 3 maps the regulatory architecture Canada built to enforce Responsible AI and evaluate suppliers. Chapter 4 considers 11 suppliers' responses to these requirements and outlines their normative views on both AI and its governance. In conclusion, I suggest recommendations on how Canada might reformulate the *procurement circuit* as a space where legitimacy and authority is negotiated to resist ML political order.

Table of Content

Chapter 1. Introduction

The ownership of AI infrastructure is increasingly concentrated (Srnicek, 2022; Whittaker, 2022; Dyer-Witheford & al.,2019; Luitse & Denkena, 2021). While this has implications for anti-trust law and research, it also has profound consequences on AI governance at the level of procurement. Governments who want to procure AI services must buy them from private actors. Thus, procurement guidelines play a dual role in regulating what AIs make into public administration and services. Simultaneously, it is also one of the rare opportunities when governments can enforce regulation on these providers. The ownership of AI makes governments dependent on AI providers.

My thesis explores the critical change nature of governance in Canada through the intersection of AI in procurement in Canada's public service (CPS). AI procurement is a prime place in Canada to study AI governance as it is both (1) the mechanism by which government organizations procure AI and (2) how Canada claims to enforce its normative framework for AI (i.e., Responsible AI). Procurement allows me to study the government's eagerness to embed AI in public service and administration and its role in defining this technology through regulation. But it also allows me to study the limits of the power the government claims over AI providers. When the CPS procures AI, they also regulate AI. A race to shape and define AI has been unfolding. When describing the urgency to craft AI governance frameworks, the CPS often uses the language of "playing catch up" with AI providers, further granting them authority and legitimacy on normative matters on AI and society.

I understand the relationship between firms and governments as the *Procurement circuit*. The relationship is circular as private companies structure how public services

approach AI just as the CPS tries to define its approach to AI when supplying AI. Conversely, the government attempts to structure how AI providers manufacture AI (i.e. responsibly) through procurement guidelines and other policies. I argue that as clients and regulators of AI providers, governments do not merely govern AI they also govern *with* and *through* it. The *procurement circuit* refers to the co-shaping of governance through procurement. It is the result of the regulatory architecture described in chapter 3 and chapter 4. The *procurement circuit* produces two interlocking problems. It leaves AI providers' legitimacy and authority over normative questions on AI unquestioned. It prevents society from assessing, debating and resisting the aims of policies regulating AI and through AI.

My thesis asks:

> RQ1: How does AI procurement work in Canada and does this process define the government's relationship with the technology and its providers?
>
> RQ2: How and where can the functions of AI governance policy be located, opened, and negotiated to re-insert citizens, society and policy aims?

I answer these questions from a focus on the Canadian Governments AI source List of pre-approved suppliers. After reviewing key works in AI governance as well as describing my novel application of situational analysis and mapping to policy studies, I focus first on how the AI Supplier's list organizes the relationship between the public service and firms in Chapter 3. My second chapter looks at the ethical statements associated with being approved as part of the AI supplier's list.

The AI source list is a crucial site for studying AI procurement in Canada. It represents one of the two key prongs of the Canadian AI Strategy. Drawing on situational analysis and, more specifically, arena maps, I outline how procurement works and how different stakeholders interact with the AI source list. I argue that the mechanism of pre-qualification

that is the list upholds ML political order. This is significant because the regulatory design/ choice itself participates in the asymmetry in the *procurement circuit*. AI providers remain dominant in this space as the regulatory configuration lets them retain legitimacy and authority on normative questions on AI.

In the following chapters, I mobilize situational analysis positions map to articulate 11 AI suppliers' ethical stances along key axes. The axes are:

(1) the way suppliers understand and claim power should be distributed in AI governance; and,

(2) a continuum between AI as neutral to agential.

I deconstruct the rigidity of AI ethics and demonstrate how this closure ultimately serves AI providers. The material used for the map originates from an Access to Information Request (ATIP) (see appendix). First, I identified 11 of the 114 pre-approved suppliers across different industries. Then, I requested access to the part of their submissions where they were asked to outline how they would behave ethically in delivering AI goods and services. I expand further in the methods sections on which materials I used to make the maps and how I accessed them.

Theoretical Framework

AI procurement is at the nexus of governmentality, or what Michel Foucault (1977, 1978) refers to as: "the ensemble formed by institutions, procedures, analyses and reflections, calculations, and tactics that allow the exercise of this very specific, albeit very complex, power that has the **population** as its target, **political economy** as its major form of knowledge, and apparatuses of **security** as its essential technical instrument. ([2007], p.144). " Foucault's concept of governmentality has, however, changed today. Sociologists Marion

Fourcade and Jeffrey Gordon (2020) identify a shift in governmentality — one not entirely captured as neoliberalism — where statecraft itself requires private technology firms, an arrangement done as much for the state to legitimate itself as for companies seeking the security of state contracts. Similarly, feminist political geographer Louise Amoore (2022) argues that a shift occurred in how governments and societies understand themselves and their problems, a shift in political episteme from rules-based to Machine Learning political order.

Procurement fits with how Fourcade and Gordon understand the restructuring of governments by tech firms and AI providers. AI providers replace located expertise traditionally held within the tacit knowledge of seasoned bureaucrats with data-driven expertise. Shifting where the expertise is located makes AI providers' services crucial to the policy process. Fourcade and Gordon explain how restructuring and relocation of expertise produces competition between States and AI providers. That is because "when the state defines itself as a statistical authority, an open data portal, or a provider of digital services, it opens itself up to competition from private alternatives that may command equal or greater legitimacy on these terms (Fourcade & Gordon, 2020, p.95)." In other words, within a solutionist understanding of policy, the authority to deliver services to the population is no longer tethered to the representativeness of the institution or its public nature. Fourcade and Gordon underscore AI providers' peculiar role in reshaping governments and how both states and society understand themselves and their problems.

Further probing the relationship between AI and governmentality, Amoore introduces Machine Learning (ML) political orders to how societies and governments are being re-shaped by the logics of AI . Where Fourcade and Gordon detail the implications of the private sector being an integral part of this reshaping, Amoore considers how Machine Learning

(ML) logics re-formulates policy problems. The function of the policy is determined through the target output first, like in ML, and the policy works retroactively to approximate that target. As Amoore explains, there is a reversal of the relationship between problem and solution. Instead of the problematization determining the possible solutions, under ML political order, the solution or target output predetermines conditions for problematization. Amoore expands on what she means by this "notion of beginning from a solution and working back to the problem (2022, p.28)", and continues, "The retroactive move from target solution to the weights in the model means that the parameters and dimensions of an intractably difficult political question – democracy, pandemic response, border security, stability in the economy – become configured as infinitely adjustable in relation to the solution (Amoore, 2022, p.29)."

Amoore traces back the alignment of political and computational rule back to neo-functionalism informed by post-war cybernetics. She writes, "ML finds optimal 'function' by mapping the representation of input data in order to achieve a target output"(p.29). As this logic remakes the process of policymaking, much is lost. Where the policymaking process is used to first problematize a situation to set a policy goal and solution accordingly, ML political order begins with the target output or the solution and retroactively determines the function of the policy through emergent patterns in the input data representations. A policy goal is fundamentally different from a policy function, "Where one might envisage adjudicating the success of a policy decision on the basis of whether it has achieved a stated function, the machine learning model can always approximate a function and is, therefore, indifferent to success or failure as such" (Amoore 2022, p.27).

Though not identical, Fourcade and Gordon similarly explore how, under ML political order, a policy is thought within the bounds of representation from the data, the function of

the policy and the target output. They explain that where states traditionally would have made policies to attempt to fix the cause of a problem, they now focus on the effects. I read this proposition as analogous to Amoore's analysis, where causes or policy goals are no longer part of the problematization process. Instead, the target output data determine the function of the policy from the input data. The implications of "governing the effects," they write, "often means striving to identify which people are vulnerable to a social problem—illness, gang membership, bankruptcy—and triaging resources their way, even at the expense of attacking the underlying problem" (Fourcade & Gordon, 2020, pp.86-87). This emphasis on the effects requires constant monitoring, only possible at this scale through deep learning models, to assess whether or not the policy function is achieved.

The imbrication of AI and governments have patterns of operation. A key feature of ML political order that Amoore outlines is the replacement of testing for trialling. The fundamental difference between the two is that it again turns on its head how we typically conceive of policy making. Where testing would inform how to tackle the cause of a policy problem, trialling is rather the process of constant monitoring whether the function of the policy is approximated. For example, testing for a policy on facial recognition entails research on whether or not it would improve security prior to implementing the technology in public spaces. But facial recognition technology is a deep neural network technology that requires exposure to input and target data to learn and work. Therefore, trialling the technology is prioritized, and so long as the function of public security is approximated, the trial continues. Trialling prevents us from debating and assessing the extent to which facial recognition technologies cause or correlate with security in public spaces. Let alone assessing whose security and what we mean by security. Amoore explains how trialling is in this way akin to perpetual re-designing, where a failure of a policy is impossible. Failure under this

political order, she writes, is a learning opportunity for the model. I would like to further underscore that under this political order, questioning whether or not we want facial recognition technologies in public spaces is impossible because the policy function supersedes the policy goal or justification. The possibility of formulating political alternatives is foreclosed, in Amoore's words.

Under ML political order, the policy aims fade behind policy functions. As a result, the possibility of formulating different political outcomes is foreclosed. Inextricably placing AI providers and expertise at the centre of making policy functions emerge, ML political order complicates AI governance. To govern AI is also now to govern with and through it. Given that AI infrastructure and expertise is privately owned, governments are clients and regulators of this industry.

My thesis looks at AI governance through procurement as a key case of the shifts described by Fourcade, Gordon, and Amoore above. Procurement is subject to the shift toward ML political order: AI strategies globally begin with the function of the policy, which is to find ways to bring AI into government and foster acceptability. At the same time, procurement is also where states negotiate with private actors the extent to which the latter will reshape them, and compete with them in delivering services to the population. Population is the passive subject of governmentality deprived of individual or collective agency. Remaining within an analysis of population depoliticizes solidarity and prevents resistance, both of which are crucial in assessing AI governance. For this reason, I work through Amoore's analysis which shifts the scale of analysis to the infrastructure of AI governance and reclaims the concept of society from population.

Linnet Taylor provides a salient account of the implications of the *procurement circuit* under ML political order for society. As states rely more on digital expertise to inform

policies, the boundary between public and private actors becomes increasingly blurred and so does the relationship between citizens and states. Not only tech companies are central to make policy functions emerge, they also growingly exhibit state-like behaviour and become steadily more entrenched in public services (Taylor, 2021). A few examples Taylor provides are how tech firms provide welfare system services, law enforcement, and communications to the state. As she outlines, this marks a departure from other forms of public-private partnerships. Taylor writes: "a different type of claim is being made by both parties involved: that **there is no difference between public services provided by government and by business,** despite the profit interests involved and the different regulatory architectures occupied by firms and government (Taylor, 2021, p. 5)." The conflation of services delivered by government and AI providers hinges on the shift in political episteme towards ML political order. The *procurement circuit* is both where we can study this overlapping and where ongoing negotiation over normative questions on AI and its governance can unfold.

Structure

These investigations of the relationship between AI and governmentality above prove central to my analysis of how stakeholders, logics and ethics interact in the *procurement circuit*. Canada's procurement today is part of fundamental shifts in the nature of the state. The state itself becomes decentered, reliant on AI providers. Procurement is crucial to understand how fundamentally AI providers, through their products and logics, are shaping how governments and societies understand themselves and their problems. I identify this mutual governance as the *procurement circuit* and return to it throughout this thesis to make sense of what is at stake in procurement within AI governance. This circuit is central to my thesis. Building on these arguments about changing state logics, Chapter 3 discusses the effects of trialling and

what I call the vitrine of Canadian AI procurement. Underlying this procurement remains a troubling depoliticization of AI, following Amoore, through a language of ethics that I discuss in Chapter 4. I conclude by returning to what it means that AI providers' services and expertise are reframed as crucial to the policy process under ML political order (Fourcade & Gordon, 2020; Taylor, 2021). I further expand on the dire need to resist ML political order and to reframe the *procurement circuit* outside ML logics.

Chapter 2. Literature Review

My own theoretical interest in AI governmentality is one thread of a growing scholarship on AI governance. Governance acts categorically to include critical works of governmentality as well as more empirical studies of AI regulation. These trends exist in Canada with a growing scholarly body investigating the governance of AI (e.g. McKelvey and McDonald, 2019) and a parallel thread more critically concerned with AI's relationship to changes in the Canadian state itself (Roberge, Senneville, & Morin, 2020; LePage-Richler & McKelvey, 2022).

A key theme in the literature is the global turn toward national AI strategies. The Centre for Artificial Intelligence and Digital Policy (2022) lists and analyses over 30 countries' AI strategies. Strategy-type policies present key characteristics suited to AI/ML logics and the way it has been governed up until this point (mainly through iterations of private actors self-regulating). The broader landscape of AI regulation and governance led many countries to participate in what Smuha (2022) coined the "AI regulation race" to highlight how the pressures for fast adoption to AI-led countries to craft frameworks balancing "protection and innovation" (p.60).

Different studies document how various national contexts formulated and imagined this urgency to adopt and govern AI. J Scott Brennen, Philip N Howard, and Rasmus K Nielsen (2020) is one such study detailing the role of sociotechnical imaginaries in national AI regulation. Through critical discourse analysis, their study details how the United Kingdom's news outlets "mediate future-oriented expectations surrounding AI [by] choosing sources and offering comparisons" whereby they "construct the expectation of a pseudo-artificial general intelligence: a collective of technologies capable of solving nearly any problem" (2020, p.22). Their findings underscore how the sociotechnical imaginaries encouraged solutionist

expectations in AI policy and regulation. Paulo Nuno Vincente and Sara Dias-Trindade (2021) investigated the performance of the Fourth Industrial Revolution in the Portuguese national press circulation. They, too, explore the role of the press in constructing and reflecting sociotechnical imaginaries promoting AIs as solutions for various social ills. Brennen et al. (2020) and Vincente et al. (2021) both identify constructions and circulations of AI imaginaries that are solutionist and essentialize the future and innovation. Similarly, studying the role of media in producing sociotechnical imaginaries, Sne Scott Hensen (2022) explains how the public AI imaginaries produced by newspapers and magazines in Denmark shaped the definition of AI (as intelligence augmentation) adopted in the Danish AI Strategy.

Communication policy scholars Jascha Bareis and Christian Katzenbach (2022) work through the lens of sociotechnical imaginaries but look at AI strategies themselves. They outline defining characteristics of Strategy type policies in AI: “Firstly, they are not set in stone but are subject to substantive updates, adjustments, or even radical dismissals and reorientations” (p.861). I read this characteristic within the broader trend of prototyping rather than planning policies (Johns, 2022). As Amoore aptly explains, what characterizes this type of policy imbued with ML logics is that “solutions get the problem they deserve” (2022, p. 28). Amoore's phrase explains the constant displacement of the policy goals as the normative aim is not predetermined but, instead, retroactively determined. Strategy-type policies, according to this characteristic Bareis and Katzenbach (2022) identify, operationalize ML logics.

The second characteristic of strategy-type policy Bareis and Katzenbach (2022) identifies is that “AI strategies are often not limited to one condensed official document or even one type of medium alone” (p.861). In the case of the Canadian AI Strategy, I similarly observe this diffuse nature of the Strategy: key documents representing it are 1) the Responsible AI

strategy landing page, 2) the AIA string of documentation, and 3) the AI source list. I argue that these mediums play an essential performative and legitimating function. I tease out these functions in the following chapter introducing the concept of the vitrine.

Countries and governments reclaim oversight on AI ethics and suppliers' self-regulation through national AI strategies often emulating them. Alexandra James and Andrew Whelan (2022) and Roxana Radu (2021) both study how industry-led ethical principles of self-regulation become incorporated into government frameworks for AI regulation. James and Whelan (2022) "argue that the propagation of ethical principles legitimates established new public management strategies and pre-empts questions regarding the efficacy of AI development; instead positioning implementation as inevitable and, provided an ethical framework is adopted, laudable" (p.22). Both studies underscore how ethical AI becomes entrenched in hybrid governance formats where both government and AI providers govern AI and under which essential debates on the purpose of AI for states and societies are ultimately unquestioned. The meaning of 'ethical' has coagulated to mean a specific thing as it emerged from the industry. However normalized, this definition of 'AI ethics' and 'ethical AI; by AI providers must not remain static. Especially when, as suggested by James and Whelan (2022) and Roxana Radu (2021), these principles play a key role in governments AI strategies.

In the following section, I survey different ethics of technology and their understanding of the relationship between society and technology as a way to re-open what AI ethics can mean. I do so with the premise that technology is inextricably political. Accordingly, there exists a plethora of ways to describe the relationship between society and technology. Cutting through the literature on the societal impacts of technology and ethics of technology, I outline four conceptions of technology. I have delineated the clusters based on the definition and the

role technology plays in relation to societal impacts. I then compare and contrast the clusters of authors amongst themselves. The resulting clusters, while not exhaustive, serve to make sense of the vast literature on the societal impacts of technology and the ethics of technology. I mobilize this survey in chapter 4 to map pre-approved suppliers' M3.

Technology as Development Cluster: AI and Technology as Inherently Good

Technology as progress is one of the areas in the literature characterized by the conflation of technology with progress, ideas of modernity, development, and the 'good.' One of the authors arguing this stance is the historical economist Walter Rostow (Ish-Shalom, 2006; Rostow, 1959). For authors such as Rostow, science and technology play a key role in developing a prosperous economy that yields modernization and democracy. In his theory of modernization, all societies go through five stages: Traditional or Pre-Newtonian, Preconditions for Take-off, Take-off, Maturity, and finally, the Age of High Mass Consumption. The tipping point, according to Rostow, is the discovery and awareness of Newtonian laws. As he writes in his A non-socialist Manifesto, "Newton is here used as a symbol for that watershed in history when men came widely to believe that the external world was subject to a few knowable laws, and was systematically capable of productive manipulation" (Ish-Shalom, 2006, p. 296). The imbrication of the idea of predictability, efficiency, modernization, and democracy in a causal chain is emblematic of this area in the literature and remains widespread today. For instance, in 'L'intelligence Artificielle: Notre Meilleur Espoir'(2020), Boussabat argues that data — rather than labour — becomes a more secure source to value capital. He then claims that his proposition promises universal income and centralized conversion across currencies globally.

Another salient characteristic of this cluster of authors in the literature is the belief that technology is inherently good insofar as it yields progress. Accordingly, technology must be invested in, exported, and its development must not be slowed down as it would slow down progress and modernisation. In this view, the regulations ought to accelerate technological innovation and not slow it down by any means. Chivot and Castro (2019) critique the General Data Protection and Regulation (GDPR) for being too strict for innovation and competition. The premise of this argument is that innovation and competition in the realm of data and AI — the Algorithmic economy, as Chivot and Castro call it— will promote the greater good, presumably under the form of progress, development, or growth.

Associated with this view of technology as good-in-itself is the teleological narrative on the public's adoption of new technologies. In his recent book, Calestous Juma argues that new technologies have historically been resisted but that innovation always prevails (2016). This cluster is characterized by faith in technological innovation as good-in-itself, rarely placing boundaries on what ought to be developed. Cath et al. (2018) provide an example of this argument in their analysis of the United States' vision for the Good AI Society. They write, "[in this view of the Good AI Society] AI is good for innovation and economic growth, and this is good for society, especially because it is commercially developed." (n.p.)

Saliently, this cluster contrasts with the liberal one (which follows) as it does not see threats to values and institutions. This area of the literature differs from the 'Structural Cluster' in its failure to recognize the historical and material implications of 'progress' and 'innovation.' Additionally, this cluster contrasts the cluster on 'Technology and Relational Justice' in its understanding of technology as neutral and universally beneficial, yielding good outcomes for all.

The Liberal Cluster: AI technology as a device for control/liberal theory of redress

Other authors understand technology as potentially threatening to liberal values and institutions and argue that the societal impacts of technology can and should be mitigated and channelled through a liberal rights approach to technology. For instance, aspects of new technology, such as algorithmic homophily, present a new challenge for the institution of the public sphere. Cass Sunstein's concept of 'echo chambers' is an example of this threat to liberal democratic society caused by technological innovations such as social media platforms (2019). Similarly, Helberger, Pierson, and Poell call for a 'collective responsibility' approach to the governance of technology, arguing that information intermediaries and platforms must step up as organizational and regulatory actors concerning key public values (2018). They argue that as mediums of major public values, platforms hold responsibility from governments to citizens.

This cluster is also concerned with new technologies' role in ideals primordial to liberal thought, such as privacy and autonomy. What characterizes this cluster is also the belief that redress lies within liberal tools. For Karen Yeung, the illiberal aspects and ultimate threat of hyper-nudging data-driven technology pose to democracy and human flourishing. Yeung outlines how the individual's privacy and autonomy are often framed, saying, "Big Data's extensive harvesting of personal digital data is troubling, not only due to its implications for privacy but due to the particular way in which that data is being utilised to shape individual decision-making to serve the interests of commercial Big Data barons" (Yeung, 2017, p. 2).

This cluster shares with the 'Technology as Development' cluster the idea that if technologies were to be used properly, they would wield tremendous social good. The reserve the 'Liberal Cluster' raises can be redressed with a myriad of liberal and moderate regulatory devices such as economic incentives, regulations to preserve fundamental rights, policing,

and cosmopolitan governance, to name a few. This cluster believes that technology presents new risks that humans must overcome to retrieve an equilibrium, unlike the structural and the 'Technology and Relational Justice' clusters, which do not believe in a techno apriori state that ought to be retrieved.

The Structural Cluster: AI as Differential Device of Control and Access

This area of the literature is concerned with the material and historical legacies of technology as artifacts inhabiting systems of power. They emphasize the non-neutrality of technology and its complicity in structural inequalities. Generally, this area of the literature emphasizes how technologies — understood here as communication or infrastructure — serve groups and map onto existing systems of power. In their book Data Feminism, Catherine D'Ignazio and Lauren Klein (2020) draw on the work of Patricia Collins to outline how data and data science interact with power. The authors use Collins' domains of power (1990)— the hegemonic, the disciplinary, the structural, and the interpersonal — to tease out the many scales at which data participate in reinscribing the matrix of domination. Redden and Brand (2017) and Dencik et al. (2019) map data harms and how the matrix of domination produces structural harm. Other authors, such as Eubanks (2018) and Noble (2018), have also written about the way in which digital technology reinscribes racial and class oppression.

Another key aspect of the matrix of domination is how intersecting identities can produce oversights. Kimberly Crenshaw's concept of intersectionality — both political and structural (1994) — serves to name the opacities resulting from overlapping identities. Authors such as Browne mobilized her concept to explain how technology erases some social locations-- in occurrence, race (2015). Ciston specifically calls for developing and deploying more intersectional AI (2019). In her discussion on Design Justice (2018), Costanza-Chock

engages both the matrix of domination and intersectionality to argue that technology will continue to replicate the matrix of domination so long as an intersectional approach to the development of AI is not adopted.

In many ways, what is argued in this cluster makes visible the ways in which the 'Technology as Development' understanding of technology as correlated to growth, modernization and democratization is directly tied to the legacies of colonialism and imperialism. From the asymmetrical relations, risks, and harms that technology produces to the way communication and infrastructural technologies have been instruments and channels for imperialism (Coleman, 2019). Furthermore, this cluster enables us to see how technologies have been vectors for the transit of the Empire (Byrd, 2011). In her book Transit of Empire, Jodi Byrd outlines how liberal humanism and rationalization structured time and space through colonization and imperialism; the proximity of the four continents they describe was enabled by — amongst other devices— technologies.

In its normative aims, this cluster shares with the 'Liberal Cluster' desire for more equality of freedoms in the societal impact of technology. Despite the 'Liberal Cluster' and the 'Structural Cluster' both being concerned with the risk technology poses to the greater good, the main difference is in the scale at which coercion and domination occur. The "Liberal Cluster' contends — tacitly or explicitly— that harm and redress occur at the scale of the individual. At the same time, the 'Structural Cluster' holds that these processes are enabled through social locations and at the collective scale. For the 'Liberal Cluster,' it is at the individual scale that prevention and redress must be tailored. In contrast, this cluster understands that technology's impacts are structural first and foremost, as Gangharan and Niklas have argued: same systems of power, and new tools (2019).

Technology and Relational Justice Cluster: AI and Threatening Multiplicity

This last cluster differs from the structural one in its understanding of the world as a continuum between humans and non-humans. Drawing on new materialism and posthumanism, the implication of this continuum is that freedom and equality are defined as preserving diversity in the political and the world (Lewis et al., 2018). This conceptual shift makes for an understanding of technology that contrasts starkly with most other clusters. Accordingly, this cluster's concerns with technologies lie in relationality. I will expand on two relational concerns in this section: imposing order and extracting life.

One way this reduction of the embeddedness and fluidity of life can be witnessed is in the ordering role of technologies. Abeba Birhane's articles detail this process. She describes how the automation process — through AI or ML — understands humans and social life as a finite, predictable, bounded entity that can be predicted, which is at odds with the definition of human and the social as fluid with boundaries that are hard to posit (2021b). She goes on to argue that "The practice of categorizing, ordering, and forecasting a future necessarily entails making moral and ethical choices as deemed "correct" from a given point of view" (2021b, n.p.). Hence, given the differential social, political, and financial relations of power, not all groups in society get to determine the values and categories that order society.

Another way the complexity of the human-to-non-human spectrum is reduced is by applying the logic of extraction to life. Theorists working in this space include Couldry and Mejias, who conceptualize data colonialism. In their account, "our everyday relations with data are colonial in nature, that is, they cannot be understood except as an appropriation on a form and scale that bears comparison with the appropriations of historical colonialism (2019, p. 2)." In a presentation titled "Posthuman, All Too Human? A Cultural Political Cartography" (2015), Rosi Bradotti aptly connects the work of Melinda Cooper in Life as

Surplus: Biotechnology and Capitalism in the Neoliberal Era (2011) with the pivotal role computers and algorithms play in advanced capitalism and similarly argues that the extractive logic participates in reducing life.

This cluster in the literature shares with the 'Liberal Cluster' the worry for democracy and the societal impacts of technology on the world. There are, however, two salient differences. First, the fear of illiberal uses of technology perceives technology as neutral and potentially good or bad. Conversely, the 'Relational Justice cluster sees this conceptualization of technology as problematic because the technologies are contingent on the networks within which they are developed and deployed (Birhane, 2021a).

Second, the definition of what ought to be protected is different. For the former, what is at stake is democracy, freedom and equality as defined under a liberal tradition inasmuch as these concepts assume a universally free and equal subject of technology. The liberal tradition and humanist lineages more broadly construct who qualifies as human. Historically disqualified from the category of human by these systems of thought, indigenous and black scholars and activists have both pushed to expand the definition of 'human' but also surfaced what is at stake in a humanist epistemology. "Their social and symbolic existence was denied, leaving them disposable and unprotected. They are multiple and disqualified, whereas 'Man' is One and fully entitled (Braidotti, 2022, p.19)." What is at stake then is reducing the complexity of the 'political' and the world. This definition of democracy is more closely tied to the definition of community Levinas articulates in Totality and Infinity (1979), " characterized by its irreducible multiplicity and plurality" (Zhao, 2016,p.4). Viljoen's concept of 'data democracy' mobilizes a similar definition of democracy (2020).

This cluster differs from the structural harm clusters in the normative aims of proposed redress. The 'Structural Cluster' is committed to humanist values and argues for expanding

the category of those who qualify for technology's benefits and freedom from harm. Ultimately, the 'Relational Justice Cluster' argues that such aims leave a political aspect of technology unaddressed, namely the commitment of the autonomous humanist individual. Finally, this cluster also asks whether liberal rights — human rights, property rights, and trade rights — should be the only mechanism undertaken to prevent the compression of the world's complexity.

In this chapter, I have highlighted works in Canada and globally on AI governance and governmentality that explore how technology shapes and is shaped by sociotechnical imaginaries. National AI strategies and global discourse on AI governance tends to conflate AI ethics with industry-led standards. However, this chapter's cartography challenges the notion that the relationship between technology and society is singular. Rather, it details intricate ways in which society and technology are fused, enmeshed. Far from being closed, the landscape of AI governance and normative questions on AI therefore ought to be understood as contested and contestable, open and heterogeneous.

Chapter 3. Methodology

The Government of Canada's page about Responsible use of artificial intelligence lists two initiatives to actualize its project, one of which is the AI source list. A centralized list of pre-approved suppliers who qualified as ethical AI vendors. To date unstudied, my project uses situational analysis (Clarke et al., 2017) to study the regulatory architecture (which includes the AI source list) Canada implemented to navigate the *procurement circuit.*

Situational analysis (SA) offers three main cartographic approaches building upon and extending Strauss's situation-centered "social worlds/arenas/negotiations" framework (Clarke, 2005, p.xxii).The approach differs from grounded theory(GT) in its focus on relationality as well as the various theoretical lineages it incorporates. GT emphasizes the poles of the ecology, while SA is concerned with the relational linkage between the elements in the map. In studying the normative approaches to AI in Canada through the AI ethics statements, SA presents the advantage of mapping the relations among actors and the way their stance overlaps and interacts.

In studying new technologies such as AI and its governance, a substantial challenge is a way the object of study changes fast due to innovation. For instance, it is often the case in platform studies that by the time the research is completed, the platform changes the features or its terms and conditions. The same goes for the AI source list; the list is subject to change, and the applications too. As researchers in this field, we need to find ways to work with an object of study that is perpetually changing, shifting and/or updating. SA's focus on relationality— tracing the network— provides this opportunity.

SA also shares many ties with Actor-Network-Theory (ANT). Most notably, this strand of Science and Technology Studies (STS) made SA engage more seriously with non-human

actants. Two implications follow this decentering of humans. First, as Clarke et al. (2017) argue in their book, it can be a renewed way to look at old dynamics. For instance, considering the way an inanimate object's agency shapes the network and the interactions can be greatly informative. For instance, the way M3 plays a key role in situating a supplier in the normative maps and societal impacts accounted for.

A notable difference from ANT is the destabilization of the binary between humans and non-humans. Considering the spectrum between humans and non-humans —from cyborgs to communicating alive-but-not-human entities— SA provides the opportunity to engage new materialists and post-human ways of thinking. Engaging new-materialist and post-human elements in the mapping stages also creates new possibilities to interrogate what is present and absent in the normative approaches within the solidification of AI as mundane— or the closure of AI.

Both substantive chapters (3 and 4) include and are built around a situational analysis. I relied on information obtained through Access to Information Requests for this analysis. The data was sent to us incrementally; I received over 2200 pages of documents submitted to be added to the Responsible AI source List (410 of M3, approximately 1800 pages of rubrics, and less than five pages on training and guidelines). I also received training documents given to onboarding employees on the evaluation committee. Together, these materials of various natures enabled me to map how key stakeholders, namely interested suppliers, interested departments, and the public, interact with the regulatory architecture built around the AI source list. The goal of this map and chapter is to hold in the same timeplace what the current regulations of AI procurement tell us about AI governance and normative questions on governance.

Access to Information Requests

In this subsection, I will give a brief overview of how and why I had to fill an Access of Information Request (ATIP) to study AI providers' ethical stances in the *procurement circuit*. As a result, my research collects key documents produced in the approval process.

From the beginning of the project, my aim was to investigate the intersection between normative discussions on AI and AI governance. Thus, in the research design stage, I first scanned the AI source list to see if AI providers who qualified had ethics statements on their websites, LinkedIn or press material. Next, I moved through the list randomly to get a sense of what I could find across the varying bands, service provided and headquarter location. None of the 30 randomly selected suppliers had ethics statements available to the public on their websites.

To be on the AI source list, suppliers had to submit an application in which they outlined how they would meet the three main requirements:

- M1: The supplier must demonstrate, as a prime contractor or subcontractor, to have successfully delivered AI products, solutions, or services within at least one of the three determined AI areas of work* within the last three years. This includes having clearly described the scope, complexity, results and outcomes. At least one reference** must be provided.
- M2: The supplier must demonstrate that their team is qualified to deliver AI. Suppliers must clearly describe expertise and experience, and any other skill sets or qualifications*.
- **M3: The supplier must provide examples of how it addresses ethical* practices when delivering AI. This includes demonstrating experience in applying**

frameworks, methods, guidelines or assessment tools to test datasets and outcomes. (see Appendix 2)

Thus, we (Professor McKelvey and I) proceeded to draft and send a request to Access to Information and Privacy (ATIP). :

> "Responses to M3 requirements to the ITQ for tenders EN578-180001/A and EN578-180001/B for suppliers included on the "List of interested artificial intelligence (AI) suppliers" (available at: https://www.canada.ca/en/government/system/digital-government/digital-government-innovations/responsible-use-ai/list-interested-artificial-intelligence-ai-suppliers.html#wb-auto-5) between 2018/9/20 to the present."

We also filed one requesting any documents (emails, presentations, rubrics) used to analyze the supplier's response.

After exchanging a few emails, our designated ATIP officer informed us that the ATIP could take up to four months to complete as the list of suppliers is long, and each of them needs to be contacted. To manage the scope of the project both in terms of size and time commitment, we narrowed the ATIP to:

> "Responses from Donna Cona Inc. / Mastech Infotrellis Inc. in Joint Venture, Chillwall AI, OVA Inc., KPMG, Deloitte, PricewaterhouseCoopers LLP, and Simon Fraser University, IBM Canada, Service Now, and Thales Canada Inc. to M3 requirements to the ITQ for tenders EN578-180001/A and EN578-180001/B for suppliers included on the " List of interested artificial intelligence (AI) suppliers" (available at: https://www.canada.ca/en/government/system/digital-government/digital-government-innovations/responsible-use-ai/list-interested-artificial-intelligence-ai-suppliers.html#wb-auto-5) between 2018/9/20 to the present."

I have determined the narrowed list is based on choosing a few companies with different types of service provided, all of which responded 'Yes' to the Treasury board's non-binding demand to comply with the Responsible AI principles established by the Canadian Government.

Chapter 3. Procurement mobilizes principles of arena map to answer the key questions: How does procurement work in Canada? How is this resulting regulatory architecture negotiating the *procurement circuit*? How are various stakeholders, ethics, and logics interacting in the *procurement circuit*? The materials for this map include the Responsible AI landing page, the videos it links to, the PSPC website and documentation, the Buy and sell platform, the GC platform, the Invitation to Qualify for 2018, 2020, and 2022, the material on the GC platform addressing interested suppliers and interested departments.

Chapter 4. Foreclosure of AI Ethics, is built around a second map based on situational analysis principles of positions map to answer the questions: How do providers understand their role in the *procurement circuit*? What are normative approaches to AI solidified through the qualification of AI providers on the AI source list? Materials mobilized to make this map include 11 out of the 114 pre-approved suppliers M3 accessed through an Access to Information Request. M3s are one of the three requirements suppliers must submit submissions for to qualify for the AI source list. M3 requirement states: "The supplier must provide examples of how it addresses ethical* practices when delivering AI. This includes demonstrating experience in applying frameworks, methods, guidelines or assessment tools to test datasets and outcomes (see appendix 1)."

I inductively coded a total of 410 pages (which includes the redacted pages) of M3 submissions from the 11 suppliers. The coding criteria include governance and AI narratives,

Fairness-Accountability-Trusworthy-Explanable (FATE) keywords, definition or explanations, and outlinks directing reviewers toward external material or achievements. I interpreted the resulting codes through the ethics of technology cartography outlined in the last chapter. This map and chapter aim to represent and investigate the negotiation over normative matters on AI and its governance taking place in the specific regulatory architecture around the AI source List. The *procurement circuit* results from the regulatory architecture.

The map is the territory, but the map is a flow + fluidity of ethics

Situational analysis requires rigorous memoing of the material selected to make the maps. A central advantage of this method is to hold different types of material and a changing object of study. In addition, memoing enables iterative mapping and remapping for the second map, specifically in Chapter 4. Foreclosure of AI ethics, the memoing stage produced the objects to be mapped; it translated the supplier's answer to the M3 requirements into a position in the broader situation and onto the map. To make this map, I used the ethics of technology cartography outlined in the literature review to spatially organize the varying ethical frameworks.

The situational map presents the advantage of mapping many layers and types of information in one place, such as actors, discursive points, roles, events, organizations, statements, etc. Building on the guiding questions Clarke et al.(2017) list to build the situational map out of discursive material (pp.248-249):

1. Who (individually and collectively) is involved (supportive; opposed; providing knowledge, materials, money, what else?) in producing these discourses?

2. What material things —non-human elements— are involved in the discourse? How are they constructed?
3. How can I best label these on the map?

I include below the central questions which guided the mapping process of both maps.

Guiding questions for the Procurement Map include:

1. How does procurement work?
2. How are companies arriving at the AI source list?
3. Why use pre-qualification?
4. Can companies sell AI without being on the list?

The Foreclosure of AI Ethics Map asked:

1. What do companies mean by ethics?
2. How do they claim to act ethically?
3. How can I label these ethical statements?
4. What and who do these discourses render invisible? How?
5. How will I name the invisibled on my map?
6. Are there implicated/silent actors/actants? (p.248-249)

While the maps are visual representations, this research is not part of the current AI research invested in 'opening' or making transparent 'black-box processes. Rather, choosing Situational analysis as a method anchors this project in an epistemic current emphasizing that data and research are constantly in flux. The perceived informality of these maps is an active resistance to data visualization trends that erases the partiality and ambiguity of the data presented. The aesthetics of the notebook should remind the reader of the 'in-progress-ness'

of this research. It was important to me not to fall into the same trap I am pointing out: Ethics is a relationship; they are never total or fixed.

On data visualization: why keep it pen and paper? + Situatedness

These maps decidedly situate me – the researcher – through my handwriting and design choices. As outlined above, situational analysis emphasizes the role of the researcher in surfacing and representing information. If another researcher were to use the same material and the same research questions, the maps would look different. This research and my knowledge are situated.

The choice to keep the maps with analog materials intentionally stresses that decisions were made to display this information. Algorithmically generated data visualizations similarly pick up on pre-selected and automatically generated attributes. These decisions determine which world becomes visible through the mapping. Analogously, my design and research expertise worlded a specific understanding of the AI procurement and ethics landscape. Technology tends to erase these decisions with its guise of objectivity. Therefore, it was also crucial to address this topic in my methods.

Developing a mapping practice on AI makes perceptible the process of worlding that AIs perform all the time. This project, specifically chapter 4, highlights how making categories, selecting attributes, picking up on features, and producing an output, are all decisions in themselves and have politics.

Chapter 4. Procurement

Introduction

In this chapter, I explain the complex process into procurement. Though seemingly public – a centerpiece of Canada's Responsible AI Strategy – procurement is confusing and poorly documented. As I discussed in the Introduction, the *procurement circuit* is a space of mutual governance between government and AI providers. I ask how has Canada built its regulatory architecture to grapple with the *procurement circuit* and what is this regulatory architecture doing for the stakeholders? And how are stakeholders (public/society, AI providers, interested departments) navigating the regulatory architecture put in place by the Canadian government to regulate AI procurement?

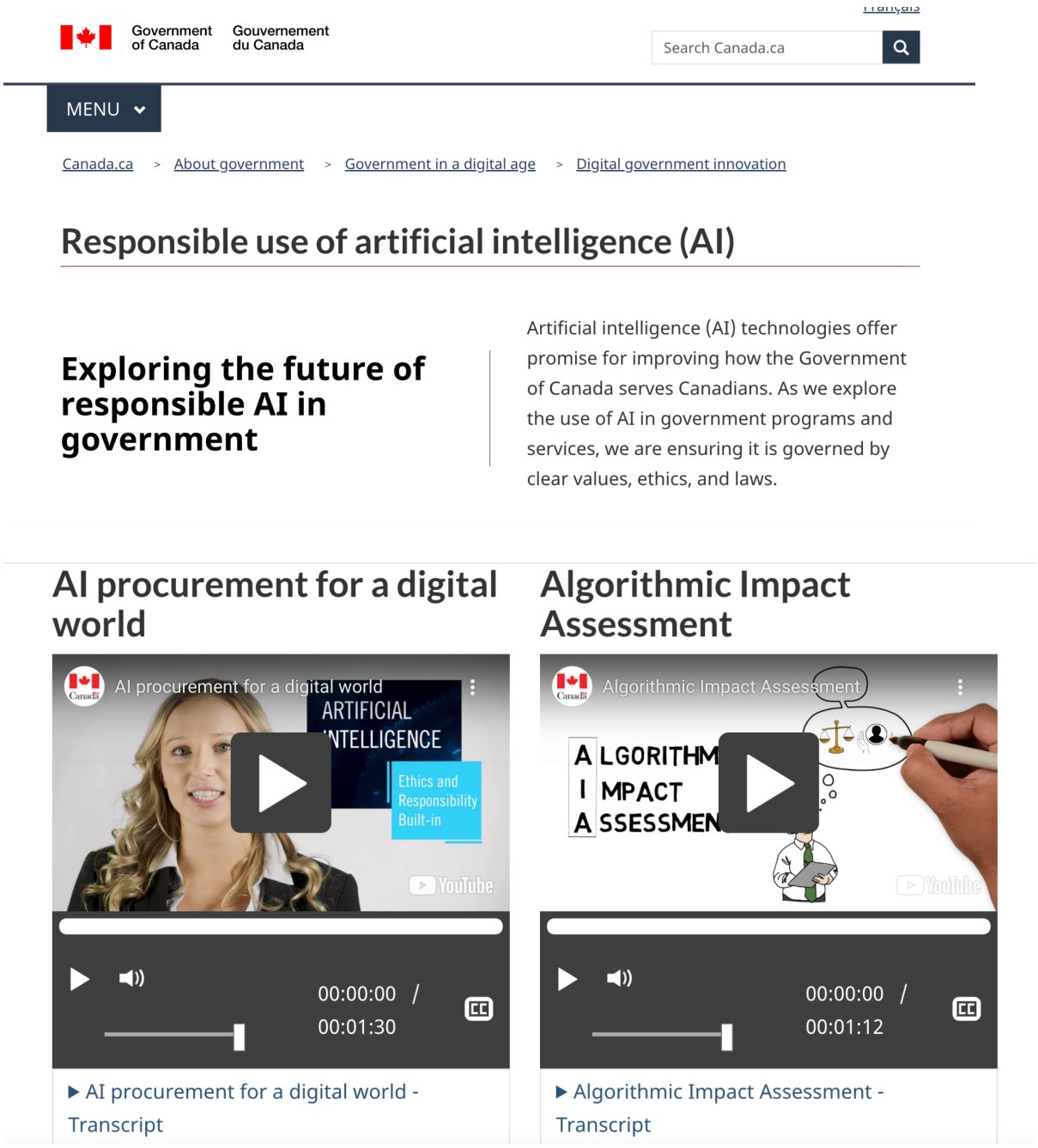
I introduce the concept of the *vitrine* and explain how procurement performs responsibility, perpetually displaying trialling and approximating 'responsible AI' in this iteration of the AI strategy. The Strategy works along retroactive design principles; the solution is already to bring more AI/ML into government, and from there, it retroactively formulates an ethical problem that can be solved. The regulatory architecture already takes on many features of ML logics political order, which in light of the *procurement circuit,* further exacerbates the asymmetry of mutual governance.

The ambivalence of the regulatory architecture stems from how the problem of AI governance is understood. In adopting ML political order through the Strategy and the AI source list, the government forfeits the authority and legitimacy to formulate a policy goal, a normative aim for AI and its governance. The forfeiting occurs on two levels. At the level of policy, where it could prescribe what kinds of ML they will purchase and fund, but also at the governance scale, insofar as the products and services government purchases shape

government itself. The chapter contends with the attempts at creating a regulatory architecture to navigate the *procurement circuit.*

What is the AI source list?

The Government of Canada's Responsible AI is a twin approach to the Responsible AI initiated in 2018: the AIA directive and the Artificial Intelligence (AI) Source List (Treasury Board of Canada, 2020).



Like a vitrine, a display cabinet in a shop or a museum, the GC Responsible AI page is a strategic display of transparency. Importantly, as the map displays, the AI source list, as positioned in the vitrine, is a joint project between Treasury Board (TBS) and Public Service Procurement Canada (PSPC). Two videos explain the Federal Responsible AI strategy's two initiatives. The video titled "Artificial Intelligence: Ethics and Responsibility Built-in" describes the role of the AI source list; the narrator states:

> 'While AI is a powerful tool, it must be used responsibly. We have to eliminate bias, be open about how AI is informing decisions, and ensure potential benefits are weighed against unintended results. That is why we build responsible use into everything we do, including our first AI procurement process. (Treasury Board of Canada, 2021,0:14-0:32)."

The list promises to simplify procurement for the departments by grouping suppliers in one location and accelerating procurement. However, let us remember that departments do not need to buy only from those on the list. AI providers do not need to be on the list (Public Gathering #2, 2022). Accordingly, if the list is used, the requirements can enforce 'responsibility'; if it is not used, the requirements merely perform 'responsibility.' Thus, with the AI source list landing page and other documentation of the Strategy, this video acts as a vitrine displaying the responsibility performance.

The aesthetics of transparency, as Fourcade and Gordon argue, do not necessarily translate into the politics of open government (2020, p.83), something I lived with in trying to translate the openness of the supplier's list with its actual workings. For suppliers, the list is a performance on two accounts. First, providers do not need to be on it to sell AI to the

government, meaning they could behave irresponsibly and still obtain the contracts. Second, they publicize it; suppliers use this endorsement to display, often on their website, they meet the Canadian standard for responsible AI.

The vitrine plays a binding role in Strategy-type policies to recall Bareis & Katzenbach. As mentioned in the literature review, strategies are not a singular official document but a myriad document across various mediums (Bareis & Katzenbach, 2022). Accordingly, governments adopting them must find ways to communicate to their population how 1) they are responsible (i.e., how they strive to balance protection and innovation), and 2) they must be able to change and deploy the revisions. The vitrine is the communication device where responsibility is performed; it mobilizes aesthetics of transparency while failing to actualize principles of open government (which would require remaining in a planning-type policy paradigm). Strategy-type policy inherently negates the state's duties towards its population; to set clear policy goals to enable contestation and democratic debate.

As a document presented to the public on the GC website, the list takes the form of a chart detailing in rows the 114 pre-approved artificial intelligence suppliers (updated quarterly to add suppliers (Deshaies, 2021). Some suppliers who qualified to be on the list are Accenture Inc., Amazon Web Services Inc., Deloitte Inc., Element AI, Pricewaterhouse-Coopers, and IBM. The chart includes seven columns: company name, business type, sector, stage, headquarters location, band, and lastly, supplier's commitment. The document states that goods and services departments can source ranges from and include IT Solutions, Quantum Computing, Consulting, Cloud services, and Telecommunications services. Headquarters locations vary in Dublin, Montreal, Amsterdam, Kalua, North Carolina, New York, Paris, and Tokyo, to name a few.

To be on the list, an interested supplier had to submit responses to three requirements which a committee inside PSPC then evaluated. Requirements are:

1. Submit proof that they have already delivered a project at this scale, which is known as M1;
2. demonstrate they have the expertise and team capacity to deliver the project known as M2; and,
3. explain how they intend to behave ethically in delivering AI goods and services, M3.

Aside from the list itself, the AI source list landing page includes a drop-down menu of a legend describing "Supplier's commitment to support the Government of Canada's effort in leading the way on ethical AI." This passage is one of the many occurrences where ethical and responsible are used interchangeably in the AI source list material. Despite the AI Source List landing page's emphasis on ethics and responsibility, only 52 out of the 114 suppliers committed to “Canada's effort in leading the way on ethical AI.” A contradiction emerges; all suppliers had to submit a satisfactory answer to M3. However, not all suppliers consented to be subject to Canada's Algorithmic Impact Assessment (AIA), procurement's twin policy under the Responsible AI strategy.

The Supplier’s List website consolidates the connection between suppliers' pre-qualification and responsibility performance. More broadly, this page also signals the requirements' potential to regulate. Accordingly, the organizing of procurement of AI as a pre-qualification tendering process plays a necessary role in this performance of responsibility. In the following sub-section, I explore practical advantages and possible justifications for PSPC's choices in Canada's broader context of public procurement. To understand the role pre-qualification plays, we must start by understanding the changing

context of procurement in Canada, specifically the modernization of Public Service Procurement Canada.

How does AI procurement work?

In Canada, public procurement does not fall under a centralized federal jurisdiction which means that the different procurement processes are dealt with internally by departments and agencies (Fasken, 2020). As a result, the policies are scattered and localized within the different government silos. Each department oversees the internal approval process through directives and policies. The directives and policies can change during a singular tendering period, which makes the process highly flexible and uncertain for suppliers. Some departments are, however, constrained by trade agreement requirements which can provide longer-lasting indications of requirements. The AI source list is a product of this modernization of PSPC and an attempt at dealing with the siloed tendering of AI.

Public procurement started modernizing its process in 2018 through the Electronic Procurement Solution (EPS) and the Buy and Sell platform, transitioning gradually to the CanadaBuys platform. The 2018 Budget allocated "$196.8 million over 5 years to establish an e-platform for simpler, better procurement" (PSPC, 2021, n.d.). PSPC explains, "Canadian companies have long asked the federal government to improve its relationship with suppliers by making opportunities easier to find, simpler to navigate and faster to award, with less administrative burden. Government procurement to date has been heavily paper-based with limited self-serve options for suppliers" (2021, n.d.). The bidding to provide PSPC with IT solutions to modernize is a different one than the AI source list. With this being said, they both follow an Invitation to Qualify (ITQ) model to pre-qualification, they promote 'agile' procurement, and many suppliers who qualify are on both lists.

Pre-qualification

In its way, the project of the AI suppliers list was also an attempt to deal with the scattered and siloed procurement processes. In 2018, as PSPC and TBS worked on this project, they could choose from myriad mechanisms to organize public procurement of AI. While tracking down how they arrived at this decision is beyond the scope of this thesis, it is possible to outline critical reasons why the pre-qualification mechanism was deemed adequate for the list. Berjis defines pre-qualification as a process "to assess the capability and competence of potential bidders through screening of contractors according to a given set of criteria" (2012, p.1). In Canada, pre-qualification involves the following steps:

1. Vendors will submit responses to specific requirements (M1, M2, M3 in the case of the AI source list) to the Invitation to qualify (ITQ),
2. Their submissions will be assessed by the appointed PSPC committee,
3. Vendors who qualify will subsequently be invited to bid on specific tenders.

These steps contrast with the more traditional and single-layered tendering process where a Notice to Public Procurement (NPP) — a specific tendering bid containing the contract details and specific departments' requirements and demands— is published. Then interested bidders submit bids directly to this NPP, which are then evaluated by PSPC based on the client department's stated requirements. Pre-qualification then presents an additional step and takes place prior to a specific NPP being published. Then, interested suppliers submit responses to the Invitation to qualify (ITQ), which consists of responding not to specific bids but to requirements. In the case of the AI source list: M1, M2, and M3. This pre-tendering step presents distinctive advantages and limits for the government procuring as well as for the sellers.

For governments (and in this case, PSPC), pre-qualification as a mechanism presents two main advantages. First, it lowers the barrier of entry and thus widens the pool of potential vendors while minimizing the number of bidders. Second, pre-qualification ensures that specific standards are met as they are embedded as one of the requirements.

First, it is argued that pre-qualification can help with the competition among vendors by lowering the barrier of entry in the tendering process (Berjis, 2012). It is because it takes fewer resources to submit a response for pre-qualification than a full bid to a tender notice (Fasken, 2020). As mentioned above, since the tenders are regulated by a given department's varying directives and policies, smaller players new to the public procurement process may need more resources to sift through these policies. As such, it is an incentive on the part of departments to widen the applicant pools and increase diversity. This would be aligned with their stated goals of modernizing their process (PSPC, 2021). Importantly, this two-step mechanism also reduces the overall number of bidders on specific bids as PSPC invites— in the case of AI, 10 suppliers (3 departments selected and 7 randomly) — from the list to compete for the contract. Accordingly, pre-qualification lowers the barrier of entry which can produce a more diverse pool of applicants while promoting efficient contract attribution by reducing the number of bidders to assess for each NPP. For the procurement of AI, lowering the barrier of entry may enable smaller players to compete, which is valuable considering the Canadian ecosystem of smaller AI start-ups and superclusters.

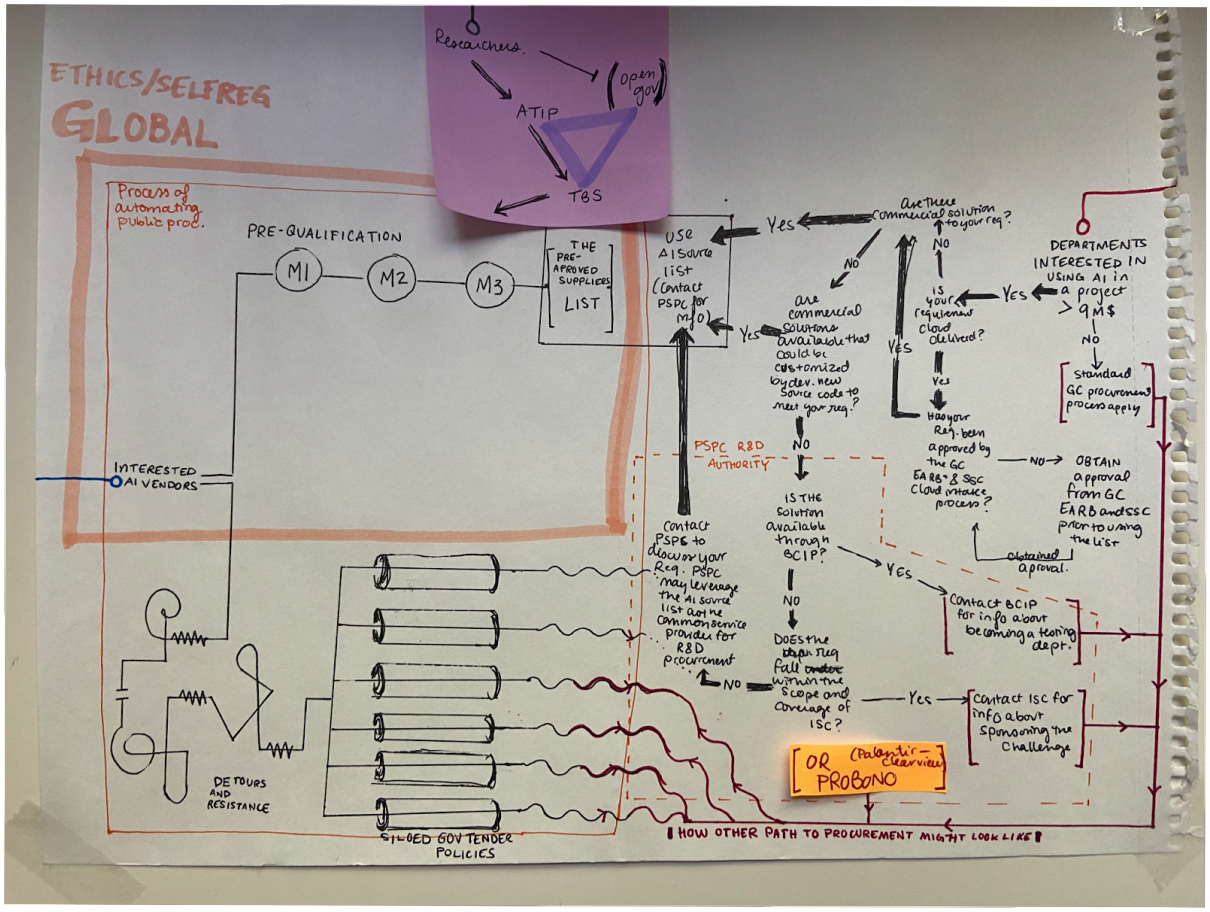
The second advantage pre-qualification presents for the government is that it enables it to embed certain normative standards in public tendering when specific risks or normative values need to be accounted for. For instance, if there are particular ecological risks, ensure that the vendors meet a certain standard. On the government's end, this step ensures quality services that are not dictated by the lowest price. According to Stephen Bauld, who wrote

extensively on the topic, although in the context of municipal procurement, many factors weigh in choosing pre-qualification. He lists "if the goods or services to be supplied must meet some defined standard such as safety or level of performance; or if the performance of the contract involves complex, multi-faceted activity, highly specialized expertise, equipment, materials or financial requirements" (Bauld, 2016, n.d.). In the case of AI, most of these characteristics apply.

The Supplier's List is key to the performance of AI policy in Canada. Less of a text, the document coordinates how governments, suppliers, and vendors perform ethical AI. What becomes clear is that these performances are like the wares in a vitrine, isolated and disconnected from the rest of the store.

Public Procurement Map

Based on situational analysis arena and system mapping, this map outlines how three different types of actors interact with the AI source List. Three lines extend beyond the map's frame and represent the way three groups of actors interact with the map. If we look at the map clockwise, noon is the public and researchers' entrance towards interacting with the AI source List. As discussed above, the Canadian public is introduced to the list through the vitrine here, represented as a purple triangle. At two o'clock is the interested departments' entry point. Finally, at nine o'clock is the interested suppliers' entrance towards the AI source list. The following section walks through the interested vendors' entrance and the interested departments' entrance outlining significant aspects of the AI source list.



Organizational pathways: Interested Supplier

The map's entry point represents the pathways that lead different actors to the AI source list. As discussed in the previous section, the AI source list attempts to streamline the siloed and often changing terrain of procurement, which can be resource-intensive for suppliers. When entering the map from the left, the first fork represents these competing/alternative paths. Interested AI suppliers either choose to go through the resource-intensive process of sifting through the specific departmental policies and tendering notices, or they can be part of the AI supplier's list.

If they choose the pre-qualification route, the steps from the supplier's perspective are the following. The Invitation to Qualify can be found through the Buy and Sell platform and the GC platform. Multiple business blogs and trade organizations circulate Invitation to Qualify

or Notices of Procurement. Companies then submit their responses to M1, M2, and M3. A committee evaluates their submissions according to prior-stated requirements (ATIP A-2021-00322, p. 1). Then, they are not yet assigned a tender. Rather, the various departments are referred to the list if their project is of a maximum of $9M. The vendors are classified into bands to specify the budget of projects they can take on. The departments can choose 3 suppliers they would like to compete for their bid, and PSPC randomly selects 7 other ones for a total of 10 (Treasury Board of Canada, 2021). Lastly, the winning supplier is notified and receives the contract.

The reasons why a vendor may choose not to go through the pre-qualification process include how confident and how many resources they have to respond to a specific department tender notice. In addition, the industry within which the vendor competes may also impact this choice as tenders that fall under trade agreements tend to be more static, which makes it easier for the vendors to keep track of the otherwise often-changing requirements (Fasken, 2020).

In the case of AI and how the pre-qualified list is used as a demonstration of Responsible AI, TBS highlights that "many [vendors] are proud to be on the list and use it in their publicity. Beyond this, it is a potential source of contracts for them.» (Public Gathering #2, 2022). Vendors who decide not to go through the pre-qualification may have the necessary resources to bid to NPPs confidently.

Companies that do not submit themselves to the pre-qualification process can also do so to avoid being subjected to this (light level of) scrutiny. We can think here of how Clearview AI and Palantir offered their services pro-bono, effectively hacking the procurement process (ATIP A-2020-00060, n.d.). Both companies offered free trials to different government organizations, respectively various law enforcement agencies, and the Public Health Agency

of Canada (PHAC), thereby evading/bypassing the pre-qualification requirements as well as more general tendering steps outside of the list.

Organizational pathways: Interested Departments

The last entrance into the map represents the departments interested in using AI. If departments are interested in using AI for a project that is less than $9M, they need to ensure their requirements are not cloud-delivered. If they are, they must receive approbation from the GC EARB (Enterprise Architecture Review Board) and SSC(Shared Services Canada) cloud intake process. GC EARB is responsible for ensuring alignment "with enterprise architectures across business, information, application, technology and security domains to support strategic outcomes." (Treasury Board of Canada, 2022, p. 4)

Once the department has the approval, they need to assess whether or not there are commercial solutions to the requirement of their project. If there are, they should use the AI source list. If no solutions exist, they should assess if there are commercial solutions that could be customized by developing new source code to meet their requirements. If so, this redirects the department to the source list. If not, they move into the PSPC's Research and development (R&D) authority and must assess whether the solution is available through BCIP (Build In Canada Innovation Program). If it is, the department should contact BCIP for information about becoming a testing department. If the solution is not available through BCIP, the department should assess if it falls under the scope and coverage of ISC (Innovation Solutions Canada). If it does, the department contacts ISC for information on sponsoring the challenge. If it falls outside the scope and coverage of ISC, the department is asked to contact PSPC to discuss its requirements. PSPC may leverage the AI source list as

the common service provider for R&D procurement. (see Flowchart 2018 GC platform in Appendix)

Although there are opacities, there are at least four ways the departments can source AI outside of the AI source list 1) if the project is for over 9M$, 2) if the department becomes a testing department through BCIP, 3) if ISC sponsors the challenge, 4) if they receive a free trial from a company.

Conclusion

In this chapter, I have emphasized the ambivalent role of the regulatory architecture in navigating the *procurement circuit.* I have explained how genuine and strategic efforts to negotiate authority and legitimacy with AI providers overall fall short of reclaiming it because the regulatory architecture itself adopts ML logics.

The regulatory architecture ensuing from the Responsible AI strategy does underscore the importance of regulating AI through procurement while also seizing the opportunity to embed normative standards in the goods and services they buy through the mechanism of prequalification. It also grapples with the siloed nature of procurement and attempts to centralize resources for interested departments. However, in order to grapple with the asymmetry of mutual governance in the *procurement circuit*, these normative standards have to be more fleshed out, explicit, burdensome. Within the current regulatory architecture, the policy function (e.i.:approximate responsible AI) supersedes the policy goal or justification (e.i.: grapple with the ethicopolitics of AI through governance).

I emphasize how the *procurement circuit* enables stakeholders to negotiate legitimacy and authority on normative questions on AI. Understanding AI procurement – and AI governance more broadly– as a terrain where legitimacy and authority over normative questions on AI is negotiated allows us to reframe the policy goal. This shift in framework moves the

procurement circuit outside of ML logics. Under ML logics, procurement of digital expertise and AI/ML plays a necessary role in making policy functions emerge. That is because, under ML political order, the function of the policy is retroactively determined to approximate the target output drawing from representations from the data. The validity of the target output, the use of strategy-type policy, or the policy goals are placed beyond what can be debated democratically. Furthermore, in staying within ML logics, AI Strategies fail to grapple with the co-shaping nature of the *procurement circuit* exacerbating the power asymmetry favouring AI providers.

Moving the *procurement circuit* outside ML logics and into a negotiation terrain over normative questions on AI creates new possibilities for AI governance regime. For instance, we can reimagine the role of the vitrine and implementations of additional mechanism through this framing. The vitrine, instead of displaying trialing of the policy and performing responsibility, could be a public record of all the contracts and projects using AI in government. Additionally, to move beyond performance of responsibility and aesthetics of transparency and actually fulfil these ideals, there should be mechanisms for taking suppliers off the list. If AI providers do not comply with normative standards whilst delivering contracts or in their wider activities and role as a public actor. There should also be a mechanism that requires AI providers to re-submit responses to regain their spot on the AI source list; it is widely acknowledged that both AI and ethics are widely morphing domains. That AI providers submit once and remain on the list indefinitely a) fails to reflect how the conversations on AI governance and the societal impacts of AI move along, and b) does not provide a clear framework for when suppliers do breach the current definition of what it means to be ethical with AI if they operate with a framework that is a few years old.

By reclaiming legitimacy and authority over normative matters on AI, governments would have the opportunity to be more specific (normatively and technically) in their demands to AI suppliers. More specific demands from the government would not only ensure products and services procured serve society, but also potentially serve start-ups. The prequalification mechanism already is designed to encourage smaller players to submit requirement responses– not as heavy as submissions to NPP. As a result smaller starts up would have the incentive to be creative with the guidelines fleshed out specific normative and technical requirements. In setting up the regulatory architecture to buy AI, Canada had the choice to establish that they would only buy X type of ML/AI, built in Y fashion, for specific predetermined purposes. Setting up narrow demands on what AI could be bought by the government would encourage smaller start-ups and research centres affiliated providers to build ML/AI that meets these demands. Making the requirements more expensive would create great value for start-ups, specifically when they would be bought (a common goal for tech start-ups). The goal of most of these small players is to be bought by bigger AI providers; smaller players could supply this value to bigger players making them very valuable commodities. Purchasing locally developed startups designed in meeting narrow government demands would be an easy way for big AI providers to have compliant branches and still be able to sell to governments. We could only hope that the strict, democratically minded constraints governments demanded would then contaminate these AI providers from within. Additionally, massive amounts of public money already goes into these innovations. Through the network of supercluster and public funding of certain start-ups, public money is already funnelled into building AI. Reclaiming authority and legitimacy in this context means creating a regulatory architecture in which these publicly funded start-ups could thrive and fulfill public/social informed goals and aims.

In the following chapter I dive into the AI providers submissions to be on the AI source list and their understanding of the *procurement circuit*, AI ethics and AI governance.

Chapter 5. The M3 category and foreclosure of AI ethics

In part due to AI providers' push for self-regulation, AI governance has been synonymous with AI ethics. While much ink was spilled on the extent to which this self-regulation approach is legitimate or desirable, AI ethics, as a category, has remained singular and stable(Green, 2021; Jobin et al. 2019; Mittelstadt, 2016; Munn, 2022; Stark et al., 2022). As governments negotiate the power distribution with AI providers in the *procurement circuit*, they propose a regulation that enforces 'ethical' and 'responsible' AI. As such, this category of ethical AI makes its way into the government regulatory architecture.

ML political order is a governmentality mode that favours AI providers because it positions their products as necessary to make policy functions emerge. Whether that be through the gathering of data to produce a representation, the formulation of a policy problem retroactively from a solution, or more broadly through an account of society's need through a web of relational data which prevents contestability, the erasure of uncertainty by the creation of pre-emptive space for governance decision and action, or through the perpetual trialling and impossibility to admit failure. ML political order operates under the premise that populations must be managed.

The un-controversiality of the category of ethics plays an important role in sedimenting ML political order as a mode of governmentality. I support this observation by mapping 11 AI providers' M3s along two key axes: how they understand the power to be distributed in the *procurement circuit* (vertical) and along different normative views on AI (horizontal). I expand on findings along these axes. I also discuss how the regulatory architecture set up to evaluate M3s adopts ML logics. Notably, through the closure of AI ethics ensuing from the

procurement regulatory devices' (M3s) inability to assess AI suppliers' ethical stance because of its met/not met mechanisms. I expand on the concept of the procurement circuit through close reading and mapping of the suppliers' M3. Finally, I then explain how the protocol-based approach of assessing suppliers' ethical stance and how procurement's rationalist understanding of technology contributes to the non-controversiality of ethics in AI. This chapter thus grapples with the homogenizing tendency and conflation of "AI ethics" in the context of AI governance at the site of procurement.

Context: Reading the map

My research locates all 11 submissions on a conceptual map developed through situation analysis. The location of each company on the map corresponds to my interpretation of its M3 submission, mapping the conceptual submissions to my discussion of political approaches to technology from the literature review. KPMG, for example, is in the technology-as-development cluster in the upper part of the map because they claim authority and legitimacy over governance while not articulating clear societal risks or impacts they foresee in delivering AI goods or services. The node's size corresponds to the company's scale measured by the number of employees.[1] I have included a legend at the top right corner of the map detailing the three node sizes. The number of employees was chosen as an indicator of the company's size because it represents how established enterprises and start-ups are as opposed to more volatile indicators such as market shares or valuation.

The map's horizontal axis represents 4 clusters of technology and ethics of technology that I identified in the literature review:

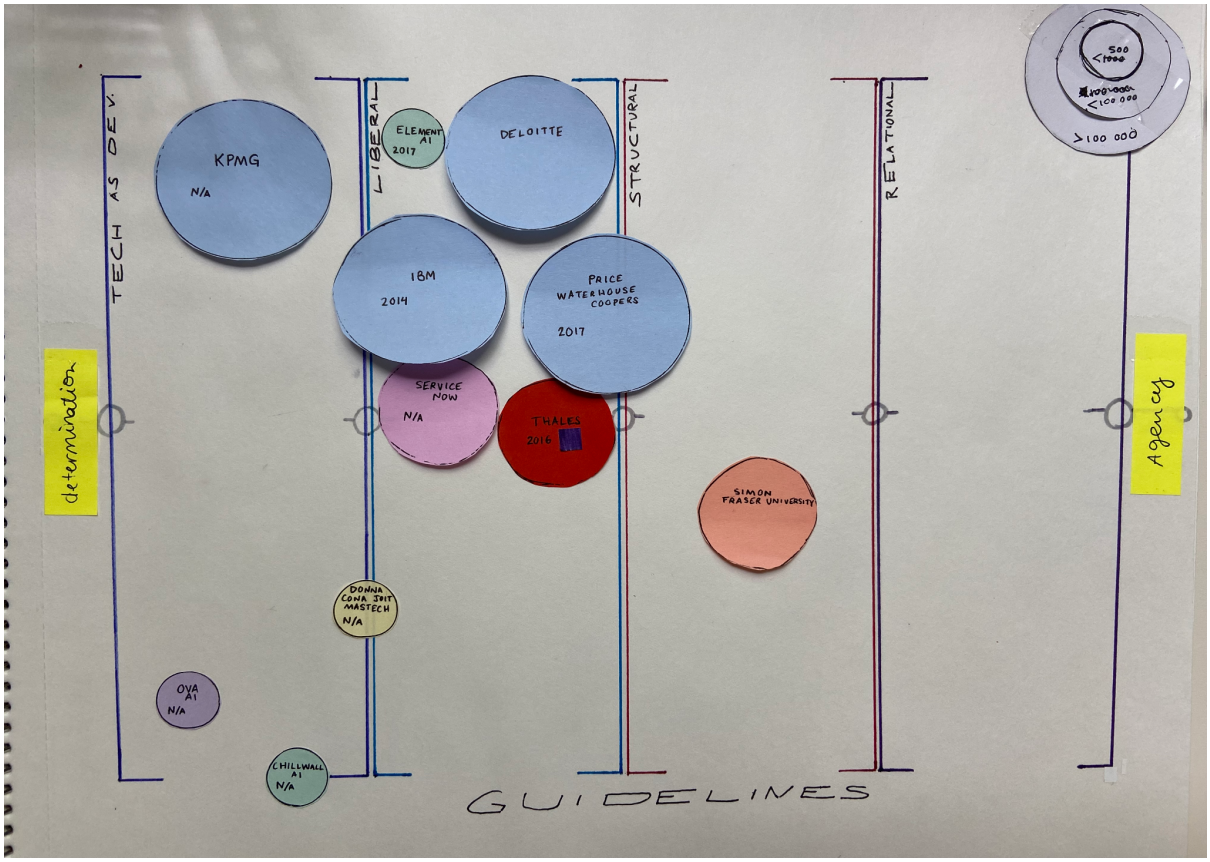
[1] Fewer than 500 employees; between 501 but less than 100 000 employees; and more than 100 000 employees.

1. Technology as a development cluster understands technological advancements as progress and modernity; such an ethical approach to technology is concerned with the risk that technological progress could be slowed by regulation.
2. The liberal cluster understands tech as having the potential for good only if threats to liberal goods and institutions are mitigated.
3. The structural cluster wrestles with technology's inherent political and historical legacies as infrastructures enabling and enacting systems of domination such as sexism, racism, and colonialism.
4. The relational cluster is concerned with technology's potential for reducing and foreclosing the multiplicity of politics and life.

In spatially and visually organizing the clusters, I experimented with different configurations. I settled on this one because it captured/owned-in/illustrated well two intrinsic dimensions of the governance of AI. First, the horizontal axis, along which the clusters are organized, illustrates how various ethics of technology can be placed on a continuum between technology as neutral to technology as agential. As such, this axis represents the inherent tension that attempts to govern technology (including AI) must grapple with.

The vertical axis captures the negotiation process taking place in the M3 responses between the guidelines themselves and the suppliers' assertiveness in explaining their role in AI governance as primordial, active and making recommendations within their submission. The closer a supplier is to the top of the map, the more their stance on governance and normative questions on AI operate within ML logics. Conversely, the closer a supplier is to the bottom, the closer they are to the guidelines themselves and demonstrate compliance.

The vertical axis of this map configuration underscores how AI providers understand their role within the mutual governance occurring in the *procurement circuit*.



The map suggests three key findings. First, most players cluster toward the top of the map. This first finding is consistent with the last chapter's discussion on the limits of thinking the *procurement circuit* within ML logics; that is, not as a terrain where AI providers and government are co-shaped through procurement and its regulation. In their M3 responses, suppliers— and more specifically, larger players in the consulting field — retain legitimacy and authority over normative questions on AI. Second, the majority of suppliers cluster in the liberal ethics of technology cluster. Finally, no supplier from the sample displays relational ethics. The following analysis animates these findings and explores how they interlock.

The vertical axis: Procurement Circuit

What I have identified as evidence of this circuit of reciprocal governance in the M3s is

1. suppliers' awareness of their role as shapers of public institutions,
2. states' increased reliance on private sector infrastructure and expertise to see at a population level, and finally,
3. the displacement of located for digital expertise.

When we consider the role of M3s, a necessary function they perform is legitimating this circuit and the aforementioned public-sector and technology firms overlapping.

First, technology firms shape the future of the regulation they will be asked to abide by. In a governance landscape where consultations are seen as a solution to fix the democratic deficit (Frahm et al., 2022), private actors play an overbearing role in shaping public policy and regulation. Whether running the consultations, imbuing them with consulting logics, setting industry standards that governments follow, lobbying efforts, or providing expertise, technology firms shape policies and regulations. All of these submissions uphold ML political order as they understand their role in technology governance as primordial and active.

Suppliers are aware that the regulatory architecture leaves their legitimacy and authority over normative questions on AI unquestioned. Out of the 11 suppliers' M3 coded, suppliers, highlight how they "provided training on AI Ethics to some of Canada's largest institutions. " (Deloitte M3, 2018, p.64), aim to provide training to government employees on ethical AI (Deloitte M3, 2018, p.66), and encourage government to "develop AI applications that promote Canadian values" to "increase the likelihood of deploying AI in an ethical manner"(Deloitte M3, 2018, p.71). This self-awareness is reflected in the map, with suppliers clustering towards the top of the map. Deloitte writes: "The Government must be able to assess AI use cases and draw a line that best represents not just what Canadian law states, but the beliefs and values of Canadians. This is not just a responsible approach; it is also key in

obtaining citizen acceptance of AI" (Deloitte M3, 2018, p.71). It is important to note that while Deloitte offers an array of services ranging from accounting to consulting, they answered this in the context of their submission to be on the AI source list of pre-qualified suppliers. What stands out from this passage is also how Deloitte firmly operates within ML logics by redefining on their own terms the policy problem as one of acceptability and literacy of AI use case. This document (M3 response) asks suppliers to display compliance with Canada's norm on ethical AI. Instead, they formulate recommendations. In a similar vein, PriceWaterhouseCoopers use its submission to encourage further regulations. They write: "For concerns related to disruptive technologies like AI, the central theme is a need for responsible use and governance by an organization implementing AI, along with a need for greater regulations and oversight by government." (Price Waterhouse Coopers M3, 2018, p.55) As the previous chapter suggests, this call for further regulations does not mean the re-location of legitimacy and authority in the governance of AI. While these recommendations may not be enforced, AI providers understand their authority and legitimacy as **necessary to make policy functions on AI emerge.** Suppliers are aware of their role in advising the government in their AI governance framework.

States rely on technology and automation to know their population and inform policies, making them dependent on the private tech sector to provide the infrastructure, capacity, and expertise (Johns, 2019). Statistical and algorithmic ways of 'seeing' at the population level are not new. Cybernetic or neoliberal modes of governance have privileged this mode of 'seeing' populations in governance because of the purported rationality and reliability that system-level analysis aloud. Nonetheless, what entrenched algorithmic ways of seeing in contemporary state governance is the perceived solution it presents to deal with and or evade/ detour doubt. Amoore writes: "Amid the pervasive twenty-first-century political desire to

incorporate all doubts into calculation, algorithms are functioning today with the grain of doubt, (Amoore, 2020, p.134).” In this chapter, Amoore explores the ambivalent relationships between truthfulness and doubt that we navigate engaging with technoscience. Her chapter moves beyond but first wrestles with the algorithmic promise of doubtlessness, of putting outputs beyond doubt. She continues: “Though this arrangement of probabilities contains within it a multiplicity of doubts in the model, the algorithm nonetheless condenses this multiplicity to a single output. A decision beyond doubt. (Amoore, 2020, p.134).
” Functioning with the grain of doubt means that if outputs are beyond doubt, to speak against them or to contest them requires making a truth claim empty and sanitized of all doubts. To govern with and through such an algorithm thus jeopardizes contestability and what truth-telling entails. The remainder of her chapter finds ways to re-introduce doubt in our relationships with AI/ML and explains the necessity of this doubtfulness for ethics and politics. Crucially, Amoore demonstrates in this sinuous and ambivalent relationship between doubt and truth that by eradicating doubtfulness in decision-making processes, we also expel truthfulness, ethics and politics. One of the potent examples she provides to describe the absurdity of the political call to use algorithms as a way to absorb all doubt goes as follows: “ How could one person say, ‘That is false; I am not in fact likely to reoffend if I am release,’ if the truth-telling of the algorithm is anchored in the ground truth data and not in their situated life? (p.137)”

The political desire to deal with uncertainty tends to displace expertise. Analogously to the recidivism example above, where the person’s situated life expertise is devalued when the government adopts ML logic as a way to absorb doubt, other located expertise is replaced. Linnet Taylor describes tech companies’ new mode of involvement in public services, “ formerly unrelated capacity (data processing, cloud storage, analytics) [are] entrepreneurially

repurposed to take on public service tasks in a particular field, but without the 'implicit values, norms and skills' that characterize existing actors in that field (Taylor, 2021, p.4)." In other words, "digital expertise—has been converted into advantages in the sphere of health and medicine (where epidemiological expertise should be the main source of legitimacy) and in the sphere of politics (where democratic accountability should be the source of legitimacy) (Taylor, 2021, pp.5-6)." Under this governance paradigm, tech companies are thus construed as reliable public service providers offering digital expertise and apt advisors overcoming doubt and uncertainty by their way of 'seeing' populations.

In sum, a reciprocal governance relationship emerges that private companies structure government when supplying AI. Conversely, the government attempts to structure how AI providers to manufacture AI (i.e. responsibly) through procurement guidelines as well as other policies. I understand and represent this reciprocal and circular relationship as a circuit.

Clusters: Why bother qualifying 'AI ethics'?

Investigating suppliers' views on the ethics of technology is crucial in light of the *procurement circuit*. How, in other words, do these ethics shape public services and administration? Accounting for the vast variability of ethical approaches that meet the requirement is necessary for public-sector and citizens to engage in the ethicopolitics of AI. As Amoore defines ethicopolitics, us, there exists a narrow definition of "ethics as code that determines which acts are permitted which acts are forbidden"(2020, p.7). A broader one, defines ethics as "the inescapably political formation of relation of oneself to oneself and to others"(2020, p.7). Amoore invites us to consider "a certain kind of ethical practice in relation to algorithms, one that does not merely locate the permissions and prohibitions of their use but rather engages its ethicopolitics"(2020, p.7). There is a deep contradiction

between this need to qualify the approaches of suppliers and the rigidity of procedures such as guidelines where the only information accounted for is 'met or not met.' This section demonstrates the deep incompatibility between the procedural — and ultimately computable/ algorithmic— mechanism of "met/not met" and working through ethical considerations as political processes.

As part of the ATIP material, I was able to review the evaluation grid documenting how the evaluation committee assessed suppliers' submission to the Invitation to Qualify (ITQ) (see chapter 1). In reviewing the suppliers' evaluation grids, I was pleasantly surprised to see that at almost every quarterly update of the AI source list, some suppliers failed this M3 criterion. In most cases, suppliers who failed to meet this requirement wrote that "AI ethics did not apply to them because of the type of service they delivered." As such, I applaud certain reviewers' attention to detail, expertise and consideration of myriad processes to ensure 'AI ethics' — e.g., "Company principles are high-level, but cover important components of quality, bias, choosing uses (benefits society, not weapons), focus on testing, privacy and human rights (p.1499)" "They have clearly articulated ethical principles on page 12 that align well with the ethical framework established by TBS. (i.e. human in the loop, open source, etc.) (p.1505)". Nonetheless, this mechanism fails to actively regulate as it does not consider what AI providers normatively propose in these submissions. In effect, M3s can only evaluate if there is *an* ethic considered. To match or not to match TBS/PSPC best practices on data and ethics is binary: met or not met. The type of ethic or the reasoning why these best practices are in place remains undifferentiated in the evaluation grids.

This "Met (1)/ not met" framework does not capture the two tensions mentioned above in governing AI I underscored with the axis of the map. Namely, (1) where power is located and

how it is distributed in governing technology, and (2) whether technology is neutral or agential. The failure to assess suppliers' position on these issues makes it impossible to engage with their normative stance critically. Two patterns I identified in coding illustrate what is not captured by the binary (met/ not met).

The vast variability between submissions is indicative of the evaluation protocol's inability to assess AI providers' stances on how the power to govern AI ought to be distributed. Even if all 11 met the M3 requirement, they all hold different views on how and where the authority and legitimacy to govern AI is located in the *procurement circuit*. Some suppliers barely comply and meet the values listed under M3; others use their M3 submission to form recommendations. I have discussed extensively in the last section suppliers who fall in the latter. Three suppliers in the sample — Ova Inc., Dona Cona, and Chillwall AI — represent the former. All three submitted very brief, bare-bone, strictly following guidelines' keyword signalling submissions. Ova Inc. emphasized their human-in-the-loop or human-on-the-loop approach to demonstrate explainability, pointed to their use of alphanumeric code replacing participants' names in lieu of privacy guardrails and highlighted their fulfillment of the GBA+ Canadian guidelines with their workforce counting 25% of women. Needless to say that these measures are rudimentary. Donna Cona, in a joint venture with MasterTech, and SFU both stayed close to the language in the guidelines and kept their M3 brief. Chillwall AI submitted less than a page for their M3, which contrasts starkly with Deloitte's 83 pages M3. The company that sells emotion detection technology dispels privacy concerns in their M3 by stating: "Events data that we use is non-personal and thus there are no questions or concerns that could be raised with regards to privacy." (Chillwall AI M3, p.6). These examples highlight how the line for 'met' or 'compliance does not require suppliers to

understand and demonstrate the breadth and depth of their ethical and political role as a supplier of AI to the public sector.

Gathering these suppliers on the vertical axis prompts profoundly ethical and political questions. For example, do we prefer private actors increasingly behaving as public actors who demonstrate they understand how profoundly ethical and political their role is if this awareness comes to their claim to self-rule? Or— as a democratic body— do we prefer suppliers who fail to understand how profoundly political AI is but respond to the authority of our government?

Another pattern underscoring the salient/crucial need to qualify suppliers' ethical stances along the horizontal axis (neutrality-agency) is evidenced in how suppliers outline how they foresee and work towards normatively specific human-machine relationships (HMR). Despite this not being part of the M3 requirement, the majority of the suppliers in my sample made human-machine prescriptions in various areas of life. Many suppliers voiced how they foresaw the future of work and automation. Deloitte and Service Now align on how they understand AI to 'free up' employees from dull and unskilled labour. Conversely, Element AI and Service Now want to ensure that human work remains meaningful and sufficient and that technology ought to improve human lives. Another area of the human + machine relationship that wielded myriads of stances is autonomous weapons. Element AI state in their M3 response that they "established areas where [they] will not apply AI, such as lethal autonomous weapons" (ElementAI M3, 2018, p.5). Deloitte, on the other hand, uses the topic to discuss the cultural relativity at work in determining a country's tolerance for autonomous and semi-autonomous lethal weapons. Furthermore, the sample also presents vast differences in suppliers' stances on intelligence, intent, and human values. Service Now is concerned with AI performing the task intended by the developer and AIs aligning with human values.

IBM claims that cognitive systems should be used to augment and not replace human intelligence, whereas KPMG asks, “If we can repair genes that cause cancer or cystic fibrosis, why not add a few hundred IQ points while we are at it?”

All of these examples of HMR have distinct and inextricably normative trajectories. It does not matter whether or not they come to be realized. The two axes have a compounding effect: the extent to which a supplier understands themselves to be self-ruling and the normative vision they work towards, be it HMR or other, have ethicopolitical consequences.

More broadly, the failure to grapple with the two tensions represented by the vertical and horizontal axis with this met (1)/ not met(0) approach has significant ramifications. It limits the very ethicopolitical questions and debates the pre-qualification process— and by extension, the regulation of AI in public procurement through the AI source list — can account for. My proposed typography of these 11 suppliers helps me understand what ethical stances are being submitted and deemed qualifiable by the evaluation committee. The map more broadly highlights what is lost when the chosen regulatory mechanism does not allow one to grapple with the inherent tensions of governing AI.

Clusters: Liberal to Relational ethics?

In the AI ethics and governance space dominated by industry-lead standards and declarations, we have grown accustomed to “ethics” meaning one thing. This framing conceals dominant views on what constitutes good tech. The met/not met contributes to this foreclosure of what can be AI ethics. Saliently, this dominant “ethics” keyword makes it inconceivable to assess various theories of the good and theories of the right regarding technology and society. Through the typographies of the cluster, I aim to open up what ought to be debated and protected, what is at stake in the implementation of tech, and what constitutes a societal

impact of tech. Considering the *procurement circuit*, AI providers are active political actors shaping public life, administration, and services. As such, the views they hold and promote on tech ethics have material consequences for the public apparatus and ought to be teased out.

Researchers have highlighted the prevalence and limits of liberal ethics in dealing with the risks of harm that come with AI (Greene & al, 2019; Hoffmann, 2017, 2019, 2020). Arguably, this is part of the homogenizing and universalizing of "ethics." The sample reflects the literature and presents a strong prevalence of liberal ethics. Suppliers display it through many flavours of the school of thought.

Element AI, for instance, advocates for Cosmopolitan values of AI. In their M3, under " Build capacity at points of need" they write,

> "We believe in supporting social growth by investing in people, supporting and building communities globally, and creating and disseminating knowledge internationally. Investments we make in this respect are thoughtful and placed to maximize impact. For example, we sponsored the participation of high schools students from Ghana to MISE (Mathematics Inspired Science and Engineering) program last year, as part of our build talent outside of traditional tech communities." (Element AI M3, p.6)

Perhaps unsurprisingly, there is wide use of utilitarianism, both qualitative and quantitative. Whether it is formulated in terms of minimizing bad outcomes:

> "To provide an example of potential future explainability tool applications, consider the circumstance whereby a model used to predict lending risk reveals that its predictions disproportionately penalize a certain race. This issue could be diagnosed through examining explanations that identify the features that influence this

> prediction the most, and various criteria to enforce fairness could then be applied to the model to ensure a fair treatment of protected features (i.e., gender, race, etc.) (Element AI M3, 2018, p.6)."

Or maximizing good:

> "As part of our efforts to democratise AI and make AI accessible for everyone, it's important to make sure that we explore ways to use AI to help society. Problems like poverty, climate change, disease and much more can leverage AI and machine learning to make these issues easier to table. In that spirit, we opened a lab dedicated to AI for Good earlier this year to work with NGOs to bring AI research into the nonprofit world (Element AI M3, p.5)."

While Thales raises how AI will bring great advances in the daily life of citizens so long as the risks are mastered. Service Now raises a paradigmatic question in consequentialism by asking: "Does the original intended use of the AI solution justify the potential risk and the impact it may have on the public?" (ServiceNow M3, 2018, p.21). IBM leans in an almost Tocquevillian approach and states: "At IBM, we believe AI should make ALL of us better at our jobs, and that the benefits of the AI era should touch the many, not just the elite few" (IBM M3, capitalization in the original, p.43).

From utilitarianism to consequentialism, the language adopted by the suppliers mobilizes the canon of liberal political and moral theory. Utilitarianism to consequentialism is just two examples. Others include the M3's reliance on deontology, cosmopolitan rights, common good, privacy, and universalism. Perhaps because most of these suppliers submitted their M3 back in 2018 (and because they do not need to resubmit them to remain on the list), there is a strong prevalence of the FATE/Responsible and Just AI, human in the loop, de-biasing

discourse. According to this cluster of literature, let us remember that what is at stake is the threat to liberal values or institutions.

This finding interlocks with those mentioned above one in deeply significant ways. The purported reliability of tech stabilizes (1) the dominance of liberal ethics as "AI ethics," as it solves (2) what is good tech for society, thereby foreclosing the democratic debate and legitimating (3) private tech firms as ethical and political leaders in public life, services, and administration. These assumptions hinge on a rationalist understanding of tech. The belief that AI is equipped to optimize resource allocation or policy outcome and provide certainty in an 'increasingly uncertain world' is ideological and has a genealogy and politics. In their M3 answer, Thales displays this rationalist belief by stating that "There are systems that can both interpret natural language and also learn to find the right answers at the speed of light without them having been pre-programmed." (KPMG M3, 2018, p.33)

As Louise Amoore poignantly underscores, this belief restructures how we problematize a policy object. She identifies practices of trial-by-design and retroactive design as ways policies adopt ML logics. In a certain way, the *procurement circuit* is also one such instance. By imbuing digital expertise with 'objectivity,' accuracy and doubtlessness, we commit to a particular politics of tech that informs policies. Conceiving AI/ML as a way to absorb doubts in calculation and the possibilities to politically contest policies informed by them requires going against the grain of doubt (Amoore 2020, ch. 5). In this configuration, contestation becomes a much bigger undertaking for citizens.

A contrasting view to a rationalist understanding of tech is a relational approach to tech ethics. No supplier from the sample mobilizes this view of tech; it is an absence in the stabilization of AI in the context of the AI source list (see map). Conceptualizing tech as a tool or as standing outside human relations, economics or politics limits our grasp on the

ethical stakes of technology. As feminist media scholar Kate Chandler reminds us in her work on drones broadly and in a conversation with Dr. Eleanor Drage and Dr. Kerry Mackereth, technology is a site where social, cultural, economic and political relationships unfold (Chandler, 2022). Not only are all forms of technology sites where these relationships unfold, but AI/ML and most data analytics are structured and structure relationally. It is within the web of data points that data has meaning. We are organized in relation to other profiles and through fragments and attributes of ourselves. ML inextricably works according to relational logics. As discussed in the relational cluster in the literature review, a relational view of tech ethics offers the potential not to engage in the reduction of the world and fosters the possibility of accounting in policies for the continuum of machines (human and non-human) in a more extensive system (Mhlambi, 2020). As such, it does not see tech as a fix but rather leaves room for deliberation and contestation. As Louise Amoore (2020, 2022) reminds us, we are always inherently part of the algorithms, and they are always inherently political.

Conclusion

In this chapter, I mapped the M3s of 11 out of the 114 suppliers. Three key findings emerged from the map: First, focusing on the vertical axis, most players cluster around the top of the map and more specifically, prominent players in the field of consulting operate within ML logics. Second, turning our attention toward the horizontal axis of the map, we see that most of the suppliers from the sample cluster are in the liberal ethic of technology cluster. Thirdly, no suppliers from the sample display relational ethics. Analytically, I have explored how the circuit of procurement is inherent to AI governance. I have also outlined how the rigidity of protocol-based assessment within the pre-qualification process only assesses if there is ‘an ethic.’Drawing again on Amoore’s distinction between ethics as code of conduct and ethics as

inescapably political. the protocol-based assessment merely validates that AI providers demonstrate some kind of code of permitted and forbidden actions. For example, that suppliers have data management and anonymization practices or protocols for explainable and/or transparent outputs is insufficient to assess the desirability or efficacy of these codes in the context in which they will be mobilised once goods and services are provided to the government.

Further, this chapter explored how the prevalence of liberal ethics hinders the very possibility of critical engagement. Finally, this map highlighted an absence or silence in the solidification of AI through the procurement process. In conclusion, I will explore this absence in the relational cluster as a productive site.

In this chapter, I have located and reopened the functions of AI governance. In expanding what we mean by AI ethics, we reopen its politics. I have provided examples of how a supplier's understanding of the *procurement circuit* is not accounted for by the met/not met framework. Finally, I have demonstrated how the un-controversiality of AI ethics as liberal ethics serve AI providers through a rationalist understanding of the technology and what it has to offer.

The rigidity and non-controversiality of AI ethics are significant. The evaluation protocols regulating procurement lack the affordances to evaluate the multidimensionality of AI ethics is both a function of ML logic and a regulatory architecture that privileges AI providers. The protocols by which M3s are evaluated have a predetermined target output (responsibility) against which inputs (suppliers' submissions) are checked. The function of the guidelines supersedes any debates and possibilities of policy goals which have two major implications.

The protocol of "met/ not met" conveniently produces an emergent definition of what it means to be ethical with AI. Crucially suppliers produce this input data through their submissions. Accordingly, the assessment of M3s further entrenches AI suppliers in AI governance at the *procurement circuit*. It should also be said that where power is located in this configuration does not give much leeway to governments or citizens to contest the definition.

AI ethics is non-controversial, closed, and rigid because of how the definition of what is ethical for AI comes about within this specific regulatory architecture. The emergent definition happens to be clustered around what I have called in my cartography' liberal ethics'. Given how this definition of ethical AI came about, we should be worried about the impossibility of debating normative policy goals for it. In the resilient loop between target output, input data, and policy function, there is no space to consider the political questions: what should AI be, do, to what extent, and how? Political theorists emphasize the question of where legitimacy and authority are located for this very reason: how is the regulatory mechanism of guideline evaluation equipped to deal with drifting, *dérives*, of what it means to 'be ethical' with AI in authoritarian territories?

Chapter 6. Conclusion: Governance *of*, *through* and *for* AI

My thesis has demonstrated that Canada has built its regulatory architecture to navigate the *procurement circuit* within ML political order. Under ML political order, AI providers play a central role in making policy functions emergent. As such, the regulatory architecture of AI procurement vastly privileges the authority and legitimacy of AI providers over normative questions on AI, effectively foreclosing AI ethics. I outlined how transformative reframing the *procurement circuit* outside ML logics as a terrain where government and AI providers are co-shaped by procurement can be. This shift emphasizes the centrality of AI procurement in negotiating authority and legitimacy over normative questions on AI.

The *procurement circuit* is part of what Fourcade and Gordon (2020) identify as a shift in governmentality — one not entirely captured as neoliberalism — where statecraft itself requires private technology firms, an arrangement done as much for the state to legitimate itself as for companies seeking the security of state contracts. Government procurement is the nexus of this relation, precisely the point where states and companies meet. My thesis finds a similarity to Fourcade and Gordon's interest in the prototyping or the entrepreneurial nature of these arrangements whereby procurements are premised on soft governance of companies and a larger ambivalence about what the state should desire in these technologies.

By adopting ML logics, the Canadian AI strategy mirrors a broader shift in governmentality that Louise Amoore describes as moving from a rules-based political order towards a Machine-Learning political order. As she writes: "A machine learning political order does not merely change the political technologies of governance, but is itself a reordering of politics, of what the political can be. (2022, p.1)"

Three features make ML political order's contours: retroactive design, perpetual trialling, and no space for resistance. All three types are part of the regulatory architecture stemming from the Canadian AI strategy to navigate the *procurement circuit.*

First, I have surfaced many instances of retroactive design principles structuring AI procurement. One striking example is in the choice of Strategy type policy to govern AI; the solution is determined first (e.i.: to implement AI in government), and the problem is inferred from there (e.i.: AI can have huge benefits but also unintended consequences).

Second, I have identified instances of this privilege of trialling, notably in the Strategy's use of the vitrine. I have outlined how the vitrine exists because strategy-type policies function under a trialling rather than testing logic.

Third, I have also outlined how the evaluation of M3s activates the function of AI ethics without having to set a policy goal. Crucially, chapter 4 underscores how the regulatory architecture engages both retroactive design and the reduction of the multiplicity of politics. In embracing ML logics, the evaluation of M3s' emergent function approximates the target output of responsible AI. I highlight the absence of relational ethics in the emergent function. The un-controversiality of the category of ethics plays an important role in sedimenting ML political order as a mode of governmentality. Throughout the chapters, I have expanded on the consequences and ramifications of ML political order becoming entrenched in AI governance. In the following section, I further unpack why this shift in mode of governmentality is significant.

Why does this matter

The challenge is that the underlying turn toward AI is never questioned. Instead, ML logics political order imposes itself as necessary. Policy functions are emergent; AI providers play a

necessary role in making them emerge. ML political order is a governmentality mode that favours AI providers because it positions their products as necessary to make policy *functions* emerge, whether that be through the gathering of data to produce a representation or the formulation of a policy problem retroactively from a solution. More broadly, through an account of society's need through a web of relational data which prevents contestability, the erasure of uncertainty by the creation of pre-emptive space for governance decision and action, or through the perpetual trialling and impossibility to admit failure. ML political order operates under the premise that populations must be managed. Moreover, AI providers replace located expertise traditionally held within the tacit knowledge of seasoned bureaucrats with data-driven expertise. Shifting where the expertise is located makes AI providers' services crucial to the policy process (Fourcade & Gordon, 2020; Taylor, 2021).

Amongst key features of this new political order, Louise Amoore discusses how ML providers create social fractures to harness the data by "creating havoc and riling up crowds in political campaign projects (2022, p.2)". This resonates with Fourcade and Gordon's claim that if firms compete with states in providing solutionisms, it can lead to the dissolution of state legitimacy. Both articles expand on how threats to social cohesion are opportunities for AI providers to profit directly off of. In this thesis, I have not looked at the specific applications and services suppliers sell to the government. Accordingly, I cannot comment on the extent to which these products and services actively "create havoc and rile up crowds. " However, merely entering a territory where AI providers compete with the state in delivering public services and administration is destabilizing the states' legitimacy, as outlined by Fourcade and Gordon, as well as Amoore. This competition and restructuring of governments occur through the adoption of ML Logics in defining policy problems and the

way AI displaces bureaucrats' and citizens' located expertise for a digital one. What states have to lose is social cohesion. What AI providers have to gain is more problems that can be understood through ML logics. In a global context of ML political order or dataism, true regulatory innovation would recognize AI procurement as a space where this legitimacy is negotiated.

Understanding AI procurement – and AI governance more broadly – as a terrain where authority and legitimacy are negotiated allow us to reclaim the formulation of policy goals which is currently abnegated under ML political order. The premise for embedding ML political order often takes on a formulation of the future as a crisis; some flavour of "AI will take over the world," "AI can have unintended consequences," or even "the incoming horizon of crisis makes AI a necessity." These frames put AI in the future tense. They also forfeit the right to formulate normative aims for AI and policies more widely. I see the *procurement circuit* as already involving ML political orders; a logic that ceaselessly defers the task of formulating normative policy aims and collective projects.

Consequences and next steps

There is a deep contradiction between the way ML structures our lives and how ML political order forecloses political possibilities. The adoption of machine learning political order reshapes how states and societies understand themselves and their problems. In a modernist-ideal configuration, policymaking would entail problematizing a situation, setting a policy goal, testing solutions, deciding and then implementing a solution. The function of the policy would be to meet the policy goal as defined at the problematization stage. This model was not without its faults; those who got to do the problematization often determined what could even be understood as a social problem and what are solutions.

Under an ML political order, the policymaking process no longer must establish a policy goal. Starting with a target output or solution and representation from the input data, the function of the policy emerges. What is legible as a political problem, then, depends entirely on the affordances of ML. Louise Amoore (2022) here gives the example of implementing ML systems to screen immigrants at a border. The target output is determined prior: Only let X number of Y type of migrants in. The ML runs the input data until the target output is approximated, and border agents screen people accordingly. The function of border security is approximated in relation to how the target output is defined. In this configuration, the policy goal never needs to be articulated and can thus never be debated. In Amoore's words, we never get to ask What is a border? What is security? Amoore describes this implication of ML political order as the foreclosure of different politics. The opportunity to democratically define a political/social problem is stolen as much as the possibility to contest policies following ML logics or implementing ML. Building collective social goals through discussion, disagreement, and contestation are all cornerstones of democracy. ML political order is thus chipping away at the necessary conditions for democratic life.

Simultaneously, and perhaps counterintuitively, this mode of governance dissolves the meaning of an individual. Increasingly, we are made legible to states and companies through the relational web of our data. Our data points only have value and meaning in relation to other data points. The implication is that our very possibilities and life choices are shaped by the relational web classifying us. Our individual choices are more than ever shaped by the collective. While on its own, this can be grim; I also think this has radical collectivist potential. If ML political order is a mode of governmentality that definitely dissolves the meaning of the individual politically, the incentive to be invested in democratic debate in managing collective decision-making is greatly heightened. If ML political order changes

how states and societies understand themselves, we agree that this configuration steals us from deciding collectively on policy goals but that this configuration also only reads and shapes our lives as part of clusters. To resist ML political order is in everyone's best interest. Of course, people are adversely impacted by this configuration. And granted that setting target output exists within the broader socio-historical conditions of dispossession and domination, which disproportionately harms some and serves others. In other words, some have much more at stake than others. But I would be remiss if I didn't underscore new ways in which solidarity could emerge from this political episteme.

It is crucial to underscore that resisting ML political order is different from the blanket statement of resisting AI and ML. ML and AI have internal logics, ethics and ways of structuring which ought to be considered when applying this technology to a dataset, set of reality, or realm of problems. Considering these logics and ethics as affordances is a way forward for states to grapple with the *procurement circuit* in ways that also resist ML political order. As I have outlined in this thesis, the specific logics and ethics of ML when applied to governance is ML political order, a mode of governmentality that forecloses the possibilities of different politics. With innumerable reports surfacing on the multiplying potential for humanitarian, justice, and environmental crises, fostering the possibilities of formulating different and alternative politics is vital.

Resisting ML political order requires reframing the policy problem of AI governance. Governing AI is also to govern with and through it because of the *procurement circuit*. The *procurement circuit*, as I have outlined throughout this thesis, is more accurately a space of negotiation over authority and legitimacy on normative questions on AI. Thinking the policy problem of AI governance outside of ML logics through this reframing is critical. In Chapter 3 on procurement, I have emphasized the role of the regulatory architecture in navigating the

procurement circuit. I have explained how genuine and strategic efforts to negotiate authority and legitimacy with AI providers overall fall short of reclaiming it because the regulatory architecture itself adopts ML logics. Similarly, in Chapter 4., I have outlined how the embeddedness of ML logics in the evaluation of submission foreclosed the possibility of establishing, debating and contesting AI ethics. In both chapters, I have made recommendations on how to shift our understanding of the policy problem of AI governance from ML political order to a negotiation space. To abandon Machine Learning Political order in AI governance is crucial. Many academic articles (rightfully) expose how profoundly big tech– and specifically AI providers – are bad public actors (Taylor, 2021). When governments take on AI providers' logics, the very purpose of governments is compromised. Governments, in principle, should not become more efficient for efficiency's sake. Governments should be efficient at serving society. This can only happen if policy goals are formulated, articulated, made debatable, and contestable as opposed to iterative, retroactive, on trial, and emergent from data and target outputs.

Chapter 7. Reflexive analysis

The society, the civilization they were talking about, these theoreticians, was evidently theirs; they owned it, they liked it; they were human, fully human, bashing, sticking, thrusting, killing. Wanting to be human too, I sought for evidence that I was; but if that's what it took, to make a weapon and kill with it, then evidently I was either extremely defective as a human being, or not human at all.
Ursula K. LeGuin, The carrier-bag theory of Fiction, 1986 p.4

There is a fine line between acknowledging the extent and seriousness of the troubles and succumbing to abstract futurism and its affects of sublime despair and its politics of sublime indifference.
Donna Haraway, Staying with the Trouble, 2016, p.3

The challenge of this project was to find a site where normative questions about AI and its governance were discussed. From the proposal stage of thesis writing, I have tried to find where these discussions were taking place and become solid in policy and regulation. Procurement is the site for this project.

The peculiar thing about normative questions on AI governance is that it entails studying both the planes of" how things should be" and "how things are". I struggled to move between these two planes in my writing. Not easy for anyone, I found it expressly difficult to offer a clear explanation of how something works while simultaneously questioning why *it should* work that way. I am not sure if academic writing is the best way to work on these two planes simultaneously.

My mapping exercises have stayed with me as a way out of this feeling of being boxed in by writing. The situational analysis maps answered these methodological challenges for me. On the one hand, it allowed me to think of these planes together and, by way of my visual

representation, to pin them. The maps acted as a translation tool to move between the different registers of analysis, from empirical to normative. Mapping enabled me to unfold the depth of meanings imbued in the regulatory documents on AI and its governance. More than a personal tool of the researcher, maps are a way to hold these two planes of analysis together long enough, in the same time-space, to unfold and discuss them. There are infinite possibilities of maps holding these two planes together; these are mine.

What maps capture is partial, and imperfect, located on my knowledge, expertise, and experiences. But I think this is what gives these maps value. What I have outlined throughout this thesis is the complexity and the difficulty of thinking and discuss AI and its governance — especially collectively. My hope in showing my process of deliberately thinking together " how things should be" and "how things are" is that projects mapping the interactions of these planes can proliferate, especially on the matter of AI governance. In that way, the project is never completed because these questions are never answered.

More broadly, another beautiful accident of choosing mapping as a method is an insulation from doomsday, world-swallowing analysis of "how things are." Haraway wrote, " There is a fine line between acknowledging the extent and seriousness of the troubles and succumbing to abstract futurism and its affects of sublime despair and its politics of sublime indifference." (Haraway, Staying with the trouble, 2016, p. Intro) I have found that working through engulfing concepts such as ML political order and governmentality is necessary to account for the interactions of" how things are" and "how things should be" at the site of procurement. But working through them together can feel totalizing and world-swallowing. I was not and am not interested in writing such an argument. Without an 'outside,' there is no room for alternatives to emerge from the frictions of the multiplicity of ideas and standpoints. And so my maps helped me return to "acknowledging the extent and seriousness of the

troubles" while not "succumbing to abstract futurism and its affects of sublime despair and its politics of sublime indifference."

Ursula K. LeGuin writes in the carrier-bag theory of fiction that "Science fiction properly conceived, like all serious fiction, however funny, is a way of trying to describe what is in fact going on, what people actually do and feel, how people relate to everything else in this vast sack, this belly of the universe, this womb of things to be and tomb of things that were, this unending story" (LeGuin, 1986, p.9). My interpretation of doing research telling this relational story is through maps. Specifically, situational analysis enables a collection of vastly varied material to exist in one place of analysis. In this piece, LeGuin discusses the purpose of the novel, and other researchers, such as Haraway, have taken inspiration from this account to reformulate what it is to make science, do research, and do epistemology. A through line is that both in fiction and in science, telling the myth of the Hero makes less and less sense analytically because of how we experience the world. As I wrote in the conclusion, AI and ML political order fundamentally understand people within a relational web. It is in part, why the category of 'population' is so potent. But it is also, in my perspective, a constraint that forces us to politically think ourselves relationally. Many other stories of our relationality— the climate crisis, global supply chains and extractions— also prompt us to politically think of ourselves this way. That our cultures are increasingly algorithmically mediated– whether we resist ML political order or not– ultimately tunes down the importance of the individual as a category to understand the world and the way we are in it. And I think this has radical collectivist potential.

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Appendix

ATIP Request

To access the ethical frameworks of the suppliers on the list, I will use a mixed method of data gathering relying on open data and access to information requests. My research will collect key documents produced in the approval process. To be on the pre-approved list, suppliers had to submit an application in which they outlined how they would meet the three main requirements:

- M1 : The supplier must demonstrate, as a prime contractor or subcontractor, to have successfully delivered AI products, solutions, or services within at least one the three determined AI areas of work* within the last three years. This includes having clearly described the scope, complexity, results and outcomes. At least one reference** must be provided.
- M2 : The supplier must demonstrate that their team is qualified to deliver AI. Suppliers must clearly describe expertise and experience, and any other skill sets or qualifications*.
- M3 : The supplier must provide examples of how it addresses ethical* practices when delivering AI. This includes demonstrating experience in applying frameworks, methods, guidelines or assessment tools to test datasets and outcomes.
- (emphasis added, See Appendix 1)

I will focus my analysis on M3. First, I contacted Peter Lessard who is the Director of the Tender's notice for further information on how to access the interested suppliers responses

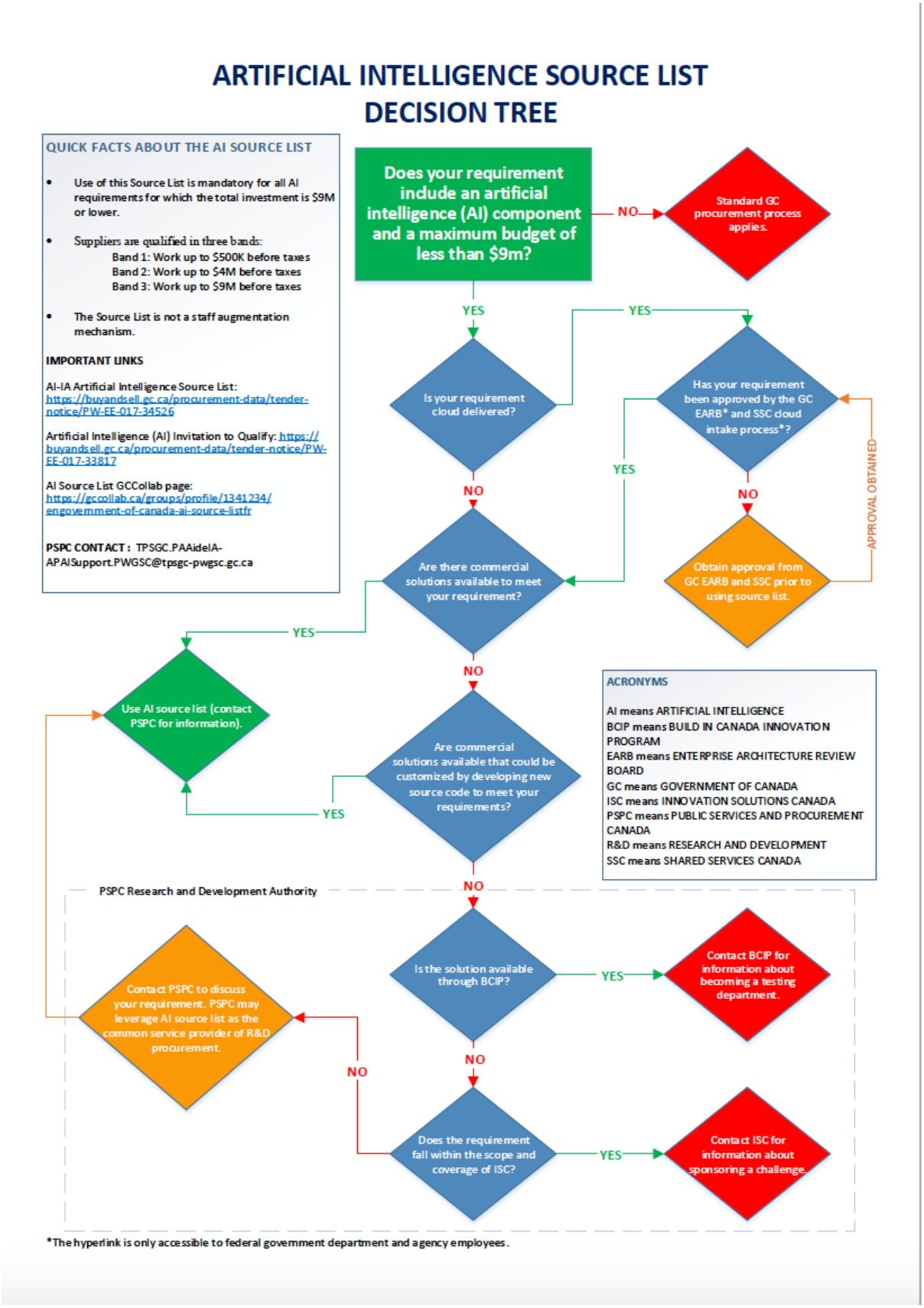
through the Buyandsell platform. After the email exchanges that can be found in the Appendix 3, he confirmed that the responses could not be accessed through the Buyandsell platform despite contradictory pieces of information in the Invitation to qualify.
Subsequently, I proceeded to scan the list of approved AI suppliers to see if they had ethics statements on their websites, LinkedIn or press material. I moved through the list randomly to get a sense of what I would be able to find across the varying bands, service provided and headquarter location. None of the 30 randomly selected suppliers had ethics statements available to the public on their website. Thus, we (Professor McKelvey and I) proceeded to draft and send a request to Access to Information and Privacy (ATIP):
"Responses to M3 requirements to the ITQ for tenders EN578-180001/A and EN578-180001/B for suppliers included on the "List of interested artificial intelligence (AI) suppliers" (available at: https://www.canada.ca/en/government/system/digital-government/digital-government-innovations/responsible-use-ai/list-interested-artificial-intelligence-ai-suppliers.html#wb-auto-5) between 2018/9/20 to the present."

We also filed one requesting any documents (emails, presentations, rubrics) used to analyse the supplier's response.
After exchanging a few emails, Olivier Jacques informed us that the ATIP could take up to four months to complete as the list of suppliers is long and each of them needs to be contacted. To manage the scope of the project both in terms of size and time commitment, we narrowed the ATIP to:
"Responses from Donna Cona Inc. / Mastech Infotrellis Inc. in Joint Venture, Chillwall AI, OVA Inc., KPMG, Deloitte, PricewaterhouseCoopers LLP, and Simon Fraser University, IBM Canada, Service Now, and Thales Canada Inc. to M3 requirements to the ITQ for tenders

EN578-180001/A and EN578-180001/B for suppliers included on the “List of interested artificial intelligence (AI) suppliers” (available at: https://www.canada.ca/en/government/system/digital-government/digital-government-innovations/responsible-use-ai/list-interested-artificial-intelligence-ai-suppliers.html#wb-auto-5) between 2018/9/20 to the present.”

I have determined the narrowed list is based on choosing few companies in different types of service provided, all of which responded ‘Yes’ to the Treasury board non-binding demande to comply with the Responsible AI principles established by the Canadian Government.

GC Flowchart interested departments



Invitation to Qualify

Public Works and Government Services Canada | Travaux publics et Services gouvernementaux Canada

Part - Partie 1 of - de 2
See Part 2 for Clauses and Conditions
Voir Partie 2 pour Clauses et Conditions

RETURN BIDS TO:
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11 Laurier St. / 11, rue Laurier
Place du Portage, Phase III
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Gatineau
Quebec
K1A 0S5
Bid Fax: (819) 997-9776

SOLICITATION AMENDMENT
MODIFICATION DE L'INVITATION

The referenced document is hereby revised; unless otherwise indicated, all other terms and conditions of the Solicitation remain the same.

Ce document est par la présente révisé; sauf indication contraire, les modalités de l'invitation demeurent les mêmes.

Comments - Commentaires

Title - Sujet AI goods and services	
Solicitation No. - N° de l'invitation EN578-180001/B	**Amendment No. - N° modif.** 001
Client Reference No. - N° de référence du client EN578-180001	**Date** 2021-02-03
GETS Reference No. - N° de référence de SEAG PW-$$EE-017-34526	
File No. - N° de dossier 017ee.EN578-180001	**CCC No./N° CCC - FMS No./N° VME**
Solicitation Closes - L'invitation prend fin **at - à** 02:00 PM Eastern Standard Time EST **on - le** 2025-01-15 Heure Normale du l'Est HNE	
F.O.B. - F.A.B. **Plant-Usine:** ☐ **Destination:** ☐ **Other-Autre:** ☐	
Address Enquiries to: - Adresser toutes questions à: Lessard, Peter	**Buyer Id - Id de l'acheteur** 017ee
Telephone No. - N° de téléphone (613) 850-7602 ( )	**FAX No. - N° de FAX** ( ) -
Destination - of Goods, Services, and Construction: **Destination - des biens, services et construction:**	

Vendor/Firm Name and Address
Raison sociale et adresse du fournisseur/de l'entrepreneur

Instructions: See Herein

Instructions: Voir aux présentes

Delivery Required - Livraison exigée	**Delivery Offered - Livraison proposée**
Vendor/Firm Name and Address **Raison sociale et adresse du fournisseur/de l'entrepreneur** **Telephone No. - N° de téléphone** **Facsimile No. - N° de télécopieur**	
Name and title of person authorized to sign on behalf of Vendor/Firm (type or print) **Nom et titre de la personne autorisée à signer au nom du fournisseur/ de l'entrepreneur (taper ou écrire en caractères d'imprimerie)** **Signature** **Date**	

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Page 1 of - de 1