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### **Business-government relations in the digital age**

*Corporate responses to policymaking in the European Union*

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## CHAPTER 4

### **Multi-level Socio-Political Engagement Strategies: A Case Study of Datacenters in the Netherlands<sup>5</sup>**

#### **4.1 Introduction**

Over the past few years, IB scholars have directed substantial attention to digitalization in general and digital firms in particular due to their grown prominence in cross-border transactions and the global transmission of ideas and innovation (Banalieva & Dhanaraj, 2019; Nambisan & Luo, 2022). By digitalization, I refer to the systemic development and implementation of digital technologies to modify and enhance business operations, interactions and value propositions, which encapsulates not just the transformation of information and communication, but also the revolutionizing of organizational structures, strategic management perspectives and transaction methods of companies (cf. Vila Seoane, 2021). The existing body of literature posits that digitalization expedites internationalization processes (Autio et al., 2021; Monaghan et al., 2020). It is also suggested that, due to the unfettered nature of digital technologies, digital MNEs are less likely to be affected by the investment risks tied to the liability of foreignness (Zaheer, 1995), in comparison to physical-product based firms (Brouthers et al., 2016; Chen et al., 2019). In addition, scholars theorize that digitalization leads to a transformation in the role of information: as the costs associated with seeking information, accessing foreign markets, and monitoring and coordinating operations have dramatically fallen, so too have the costs and risks related to international market transactions, and the structure of global business networks (Tallman & Cuervo-Cazurra, 2021). Thus, digital technologies are closely associated with ‘born globals’, which are firms that internationalize rapidly at or near their founding (Knight & Cavusgil, 2004). These

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<sup>5</sup> An early version of this chapter (Ocelik, V., & Kolk, A. Multi-Level Nonmarket Strategies: A Case Study of Datacentres in the Netherlands) was accepted for presentation at the Academy of International Business Conference, Warsaw, July 2023. Preceding versions were presented at the ‘When Digital goes Global’ Conference at the University of Cambridge (9-10 December 2022) and the ‘New trends in Strategy, International Business, and Innovation’ workshop at the University of Amsterdam (8 May 2023).

technologies make internationalization a more feasible and cost-effective option.

Yet, recent developments highlight the importance of deglobalization and locational factors, such as techno-nationalism and digital sovereignty (Luo, 2022b; Petricevic & Teece, 2019; Svahn et al., 2017), in terms of effectively managing risks and sensitivities (Rammal et al., 2022). Regulatory complexity presents a hurdle to digitalization, given the myriads of regulations, rules, and standards (Luo, 2022a). This regulatory ‘labyrinth’ encourages MNEs to adopt certain corporate political behaviors and formulate corporate sociopolitical engagement (CSPE) strategies (Boddewyn & Brewer, 1994; Sun et al., 2021, 2024). For instance, some digital MNEs follow a ‘self-categorization strategy’ – i.e., the purposeful use of banners, rhetoric and narratives to position themselves strategically in relation to regulators and local incumbents, as a way to harmonize their business strategy with the institutional environment of the host market (Curchod et al., 2020).

Interestingly, while policymakers, notably in the EU, have prioritized these issues, IB scholars have, thus far, afforded them limited attention. For instance, the GDPR and the Schrems-II judgement by the European Court of Justice (ECJ) place significant restrictions on the types of data that may be transferred across borders, and stipulate where this data must be stored (cf. Coche et al., 2024). Moreover, the EU links digitalization with the green transition (see also the next Chapter), asserting that digital technologies are indispensable for achieving sustainability objectives, and calling upon the digital sector to enhance its sustainability and energy efficiency (EC, 2019). A prime example of this is the EU’s mandate for data centers to increase their energy efficiency, repurpose waste energy, utilize more renewable energy sources, and achieve climate neutrality by 2030 (EC, 2020a). These developments indicate that, in the forthcoming years, policymakers will implement regulations aimed at promoting sustainability in the digital sector, thereby presenting MNEs with new regulatory challenges.

This chapter starts from the notion that MNEs operating in the digital sector are subjected to an ever-widening scope of regulations and sustainability requirements, originating from different levels of government. This multi-layered regulatory activity not only transforms but also obscures the institutional environment of MNEs, thereby necessitating their engagement with policymakers at local, national, and supranational levels.

While IB research examines how institutional variation influences MNE behavior and performance at the national level (Aguilera & Grøgaard, 2019; Cuervo-Cazurra et al., 2019), and more recently, at the subnational level (Chakravarty et al., 2021; Hutzschenreuter et al., 2020), the subject of *multi-level* institutional complexity has garnered limited attention (for a recent exception, see Andrews et al., 2022), particularly in relation to wider societal and environmental concerns in the digital age.

This study takes the case of datacenters in the Netherlands to scrutinize the range of government and regulatory pressures that these firms encounter. I utilize the concept of multi-level governance (MLG), which is derived from political science literature (Marks et al., 1996; Stephenson, 2013), to frame my examination of the regulatory challenges that MNEs face in terms of the territorial organization of governments, and I elucidate the strategic multi-level responses that MNEs deploy in response. I leverage these insights to advance a theoretical contribution, integrating perspectives from both the IB and digitalization literatures.

This chapter has two key contributions. First, I respond to recent appeals from IB scholars for a deeper examination of the relationships between institutions at the subnational and (supra)national levels (Hutzschenreuter et al., 2020). Subnational perspectives are progressively being adopted in the IB literature, yet the interplay between institutions at different levels, and how this interaction shapes MNE behavior, largely remains unexplored territory. While existing research clarifies how conflicts between various tiers of government influence MNEs' behavior (Andrews et al., 2022), this study illustrates that MNEs must account for the differing responsibilities, knowledge, interests and authorities in policymaking across government levels. As such, I build upon recent research focusing on the regulatory challenges for MNEs in the digital age. While scholars have shed light on regulatory challenges MNEs face in the digital era overall, such as the mandate to store data within the countries they operate in (Luo, 2022a), current scholarship lacks a comprehensive examination of how firms interact with policymakers and regulations at *multiple* levels. Consequently, the regulatory complexity MNEs face is not confined to regulatory multiplicity and variance between countries: the *interactions* between institutions at various levels also holds great significance.

Second, I demonstrate that, notwithstanding the emphasis in recent academic literature on how digital technologies enable and expedite internationalization, locational factors retain their importance. To achieve success in their internationalization efforts, MNEs in the digital sector must develop and leverage environmental firm-specific advantages (Patchell & Hayter, 2021; Pinkse & Kolk, 2012), as well as implement multi-level sociopolitical engagement strategies. As the digital transition is intrinsically linked to the green transition, digital MNEs are compelled to make significant investments in environmental, social, and economic sustainability. Failure to do so can result in substantial loss of capital, as the recent botched Meta datacenter operation in Zeewolde in the Netherlands demonstrates<sup>6</sup>.

This chapter proceeds as follows. Below, I first review relevant literature on subnational and multi-level institutional complexity and introduce the theoretical concept of MLG that underpins the case study. Section 4.3 describes the context, data and methodology, utilizing a blend of primary data, including interviews with policymakers and industry officials, and archival data, encompassing technical and policy reports from governments and trade associations, as well as newspaper articles. This is followed by a presentation of findings at subsequently the supranational, national, and regional/local levels. Section 4.4 narrows the focus to the various elements of data centers' multi-level CPSE strategies. I conclude by proposing directions for future research and acknowledging the limitations of the study.

## **4.2 Theoretical background**

### **4.2.1 Institutional Variation and International Strategy**

For a considerable duration, IB scholars have taken a country-level perspective on international strategy (Asmussen et al., 2018; Dai et al., 2013; Nielsen et al., 2017). However, more recently, the IB field has begun to view international strategy from a subnational level (Hutzschenreuter et al., 2020). This shift towards regional and local levels stems from the recognition that

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<sup>6</sup> As also referenced to in Chapter 2, Meta had to suspend its planned 410-acre data center in Zeewolde following protests by local politicians who cited its excessive energy requirements (Waterfield, 2022).

countries exhibit heterogeneity in terms of their culture, formal and informal institutions, natural resource endowments, and levels of economic development, all of which have far-reaching implications for firms' international strategies (Beugelsdijk & Mudambi, 2013; Shi et al., 2017; Sun et al., 2015). Therefore, for MNEs to successfully internationalize – i.e., operate profitably in multiple locations across national borders – they cannot overlook subnational variation. Similarly, IB scholars cannot neglect subnational variations if they aim to fully comprehend and elucidate the international strategies of MNEs. In this context, by international strategies, I refer to the “cross-border activities of economic agents or the strategies and governance of firms engaged in such activity” (Tallman & Pedersen, 2015, p. 273). Accordingly, subnational analyses of international strategy provide a more nuanced and contingent understanding of the antecedents, phenomena, and outcomes associated with internationalization processes.

While the aforementioned research focuses on provinces or regions within countries as its empirical context, municipalities have also gained popularity in IB research. A particularly prevalent topic in recent years concerns the so-called ‘global cities’ (Chakravarty et al., 2021; Nachum & Wymbs, 2005). Global cities are distinct from large cities as they are characterized by a high degree of interconnectedness to local and global markets, a cosmopolitan environment, and high levels of advanced producer services (Beaverstock et al., 1999; Goerzen et al., 2013). These characteristics help reduce the liability of foreignness by offering superior locational advantages for gathering contextual knowledge about countries (Belderbos et al., 2020). This incentivizes MNEs to locate in and around global cities. In addition to global cities, researchers find that locational factors at the city level attract MNEs. For instance, Japanese MNEs in China consider the degree to which cities have a political (Beijing) or economic (Shanghai) orientation when evaluating their locational advantages. These differences help firms avoid policy uncertainty and political hazards (Ma & Delios, 2007).

Furthermore, subnational-level research has reignited the debate as to whether MNEs are attracted to locations with less stringent environmental and social regulation, referred to in literature as the ‘pollution haven hypothesis’ (Kolk, 2010; Madsen, 2009). Based on evidence from China, scholars find that firms with environmental capabilities invest in regions with more stringent regulations (Bu & Wagner, 2016), and that cities which invest in

sustainability, specifically in wastewater treatment and air quality, receive higher amounts of FDI compared to cities that do not (Pisani et al., 2019). In addition, an analysis of MNEs operating in hazardous sectors in Turkey reveals that they are more likely to locate their plants in subnational regions with higher occupational health and safety standards (Maggioni et al., 2019).

However, few studies on international strategies *combine* different geographic levels of analysis to examine how institutions at various levels within a country interact and how these interactions affect MNEs (Hutzschenreuter et al., 2020). This is a striking omission, as institutions at different levels interact in a multitude of ways, and these interactions exert distinct pressures on MNEs. Most studies adopting a multi-level perspective constitute quantitative research that includes subnational institutions as control variables. While quantitative multi-level studies are of great added value, they mostly sidestep the complex dynamics between institutions at different levels. For instance, multi-level studies clarify the importance of accounting for cultural variations within host countries, as neglecting these differences yields incorrect estimates regarding the effect of cultural distance on MNEs' international operations (Beugelsdijk et al., 2014; Slangen, 2016).

Similarly, Dow et al. (2016) posit that within-country diversity is an additional source of uncertainty and information asymmetry, over and above the effects arising from cross-national differences. Lu et al. (2014) find that international diversification is positively affected by firms' domestic industrial and regional diversification. Zhang et al. (2016a) discover that institutional factors at the country, region, and firm levels do not only affect firms' adoption of multiple firm-based tactics but also shape their collective-oriented associational activities. Mataloni (2011) finds that MNEs engage in sequential decision-making processes in relation to their location choice, as they first select a particular host country based on one set of attributes, and subsequently select a region within that country on another set of attributes. Interestingly, supranational institutions are seldom researched in multi-level studies, with the exception of Blevins et al. (2016), who find that supranational institutions shape MNEs' decisions between acquisition and a strategic alliance.

In recent times, IB scholars have pointed out that the focus on single-level research distorts our academic understanding of the institutional complexities MNEs face, as it fails to illuminate how institutions at different

levels within a nation interact (Andrews et al., 2022). Therefore, IB scholars ought to explore the conditions and mechanisms through which institutions interact at different levels. To this end, recent research investigates how subnational informal institutions exacerbate or ameliorate voids in national formal institutions through the alignment of expectations between different levels of government, and the extent to which different levels of government engage with each other (Onuklu et al., 2021). Scholars also elucidate the role of conflict between levels of government, which is determined by the distribution of economic resources within a country and that country's regime type.

Specifically, Andrews et al. (2022, p. 2) point out that nation-states and lower-level institutions enact policies that may not necessarily align: "The reality in which MNCs operate is such that institutions often reside on different theoretical or analytical levels as well as interact with each other to exert opposing pressures, but current scholarship does not account for these structural complexities, let alone explicate how MNCs may develop novel strategies to overcome them". MNEs formulate innovative response strategies to cope with conflicts between different levels, which are distinct from strategic responses at a single institutional level (cf. Dorobantu et al., 2017; Greenwood et al., 2011; Sun et al., 2021). In sum, IB scholars need to further theorize how the *interaction* between institutions at different levels within a country presents challenges for MNEs (cf. Meyer & Peng, 2016).

#### **4.2.2. Multi-Level Governance**

As mentioned in the previous section, MNEs must cope with pressures from governments originating from different levels. In order to conceptualize this reality, I will utilize the concept of MLG. MLG was first proposed as a concept to understand political decision-making mechanisms within the EU (Marks et al., 1996). MLG offers a straightforward method for scholars to assess how the EU performs as a political entity by simplifying the complexity of the policymaking process, which is considered more intricate compared to national arenas (Kohler-Koch & Eising, 1999). The increase of shared rules and competencies among levels of government of EU member states prompted scholars to advance multi-level frameworks that address territorial power



struggles and the erosion of the nation state (cf. Scherer et al., 2016; Scherer & Palazzo, 2007, 2011).

Although MLG finds its origins in EU policymaking, political scientists have since then successfully applied the concept in a wide variety of empirical settings, though most applications have been in developed countries (Jeffery & Peterson, 2020). MLG depicts the differentiation and coordination of political authority across scales of jurisdiction, and thus contains an inherent critique of focuses on national processes and explanations (Benz et al., 2021; Giraudy & Niedzwiecki, 2022). Conceptually, MLG attempts to capture the fact that policymaking is a highly dispersed and pluralistic activity where multiple actors participate at various political levels, and as such, attempts to overcome the complexity and ambiguity of international policymaking (Stephenson, 2013).

Furthermore, it is crucial to understand that MLG focuses on governance rather than government. Although the concept of governance has a rich and intricate history, meaning different things to different scholars at different points in time (Levi-Faur, 2012), I define governance as “institutionalized modes of social coordination to produce and implement collectively binding rules, or to provide collective goods” (Risse, 2012, p. 700). In this sense, government is not synonymous with governance: it is merely the most formal form of governance (Levi-Faur, 2012). Therefore, MLG incorporates societal actors and organizations outside the state into its framework, positing that different governmental levels are linked by both institutional and non-institutional actors (Piattoni, 2009, 2010). The inclusion of non-state actors in a governance framework highlights the fact that, under certain circumstances, governments lack the competence, authority, or expertise to define effective collectively binding rules, and as a result, rely on other organizations to fill this void (Scherer et al., 2016; Scherer & Palazzo, 2007, 2011).

Moreover, MLG incorporates the study of supranational actors and institutions (Giraudy & Niedzwiecki, 2022). Actors like the European Commission (EC) feature prominently in MLG, underscoring the fact that supranational institutions shape and are shaped by both national and subnational governments. Indeed, MLG emphasizes that regions within countries, both local and provincial, are becoming increasingly consequential actors in policy formulation, crafting their own regulatory frameworks and

strategies at the intersection of digitalization and sustainability. This resonates with key arguments for federalism and decentralization, which advocate for substantive representation by allowing local and regional governments to ‘experiment’ with policies and adopt those that align with the interests and preferences of their constituents (Barber & Dynes, 2023).

In other words, the content, scale, and scope of these policies are shaped by the distinct interests and locational characteristics of each jurisdiction. While the EU has labelled digitalization and the mitigation of climate change as the ‘twin transition’, and has begun to implement legislation to advance both developments (EC, 2019, 2020a), the local, regional, and national governments within EU member states are implementing policies in line with their unique circumstances and attributes. While different levels of government may agree on the importance of enhancing the sustainability of digital technologies and leveraging digital technologies to achieve sustainable solutions, it should not be expected that each municipality, province, or nation will formulate the same policies. This is a critical point for MNEs, as it implies that they must monitor and respond to policymakers at multiple levels of government, each with varying interests, constituencies, resources, and expertise.

### **4.3. Datacenters in the Netherlands: Multi-level Governance and Sustainability Issues**

#### **4.3.1 Context, Data & Methodology**

The case study scrutinizes the multi-level regulatory challenges faced by data centers in the Netherlands. Even though definitions of a data center can vary depending on the main activities of the concerned company (EC, 2022d), Dutch regulators define a datacenter as a physical facility that hosts computer servers, and stores, analyzes, and exchanges data while providing security, cooling, energy, and services (DNG, 2019; Municipal council of Amsterdam, 2019; Province of North-Holland, 2021). In plain terms, datacenters are essentially buildings that house large amounts of computer servers, providing these servers with energy, cooling and physical security. Datacenters can be further differentiated as ‘hyperscalers’, which are large, single-tenant facilities usually owned by the world’s largest technology MNEs, such as Google and

Meta; and ‘colocation’ datacenters, which are medium to large, multi-tenant facilities owned by an operator and utilized by different companies to store their data servers.

Importantly, both regulators and data center operators concur that datacenters are foundational to digitalization and thus play an essential role in the digital transition. Without data centers, digital technologies such as AI, cloud computing, BDA, and the IoT would not be possible (EC, 2021; DNG, 2021; DDA, 2021, 2020). Insofar as all advanced digital technologies require the storage, processing and exchange of enormous amounts of data, datacenters are indispensable for the modern digital economy. However, datacenters in the Netherlands occupy considerable physical space in densely populated areas, and consume substantial amounts of scarce (renewable) energy and water resources, all while contributing limited direct employment. This leads to disputes at local, national, and sometimes international levels, involving different layers of government, various types of datacenter owners and customers, and a wide range of societal stakeholders. Given the crucial role datacenters play in the digital transition, combined with the multi-level regulatory and stakeholder pressures they have recently encountered, I posit that they deserve more attention from the IB community.

The Netherlands, the chosen empirical context, hosts an unusually high number of datacenters in relation to its geographical size (BCI, 2021). Its attractiveness to datacenters operators can be attributed to its political and economic stability, availability of renewable energy, well-developed digital infrastructure, and the presence of one of the world’s most substantial internet exchange points, AMS-IX. Despite these advantages, the Netherlands’ small geographical size and dense population result in the scarcity of physical space, water, and electricity. The GDPR and Scherms-II have further spurred the establishment of datacenters in the EU by necessitating companies to store and process EU data within the EU or countries recognized by the EC as having an adequate data protection regime (Chander, 2020; Coche et al., 2024). Consequently, stakeholder pressures are felt more quickly and intensely in the Netherlands.

Simultaneously, different governmental levels within the Netherlands – municipal, provincial, and national – have implemented or proposed unique datacenter-specific regulations in recent years (DNG, 2019; Municipality of Amsterdam, 2019; Province of North-Holland, 2021). Such regulations

govern the location choice of datacenters and impose sustainability standards on their operations and construction. Therefore, datacenters in one region of the Netherlands might face a different set of standards and regulations compared to those in another region. For example, datacenters located in North-Holland might be obliged to ‘recycle’ their waste heat (offering the heat generated by cooling systems to warm neighboring buildings) in order to secure a building permit, while datacenters located in the province of Groningen would not need to do so.

I utilized a multi-method research approach to collect data on the development, operation, and governance of datacenters in the Netherlands. The data collected comes from a variety of sources including official policy documents, reports from industry associations, media coverage and other secondary sources, as well as interviews with stakeholders from industry and government. This diverse dataset allows for a deep dive into the complex dynamics surrounding the regulation of datacenters in the Netherlands and their sustainability challenges.

The policy documents reviewed cover a wide range of governmental levels including local (city council, municipality), provincial, national, and supranational. These documents are integral to understanding how different governmental levels perceive and manage the sustainability challenges posed by data centers. In-depth interviews were conducted with a broad range of stakeholders involved in the operation, regulation, and impact of datacenters. These stakeholders include representatives from datacenter operators, industry associations, governmental bodies at various levels, environmental and community groups, and academic researchers specializing in this field. These interviews, 10 in total, were conducted both in-person and online, and lasted between 40 and 150 minutes. Media coverage and secondary sources provide valuable context and insight into the public perception and the broader societal impacts of datacenters. The media sources include both national (e.g., *Volkscrant*) and local (e.g., *Dagblad van het Noorden*) outlets, providing a variety of perspectives on the issues.

The data collection process involved compiling a comprehensive corpus of pertinent policy documents, technical reports, expert testimonies, and presentations related to the datacenter industry from municipal, provincial, national, and supranational perspectives. To qualify for inclusion in the dataset, a document needed to satisfy at least one of the following

conditions: it explicitly tackles new or prospective regulations and standards regarding datacenters; it elaborates on or scrutinizes the intersection of datacenters and sustainability; or it generally discusses the role datacenters play in the digital transition. These documents were authored by regulatory agencies, datacenter operators, trade associations, or professional service firms.

The analysis was conducted without a predefined coding framework, due to the wide variety of data sources. Instead, I employed a more organic and iterative approach to identify themes and patterns directly from the data. I manually reviewed the interview transcripts and archival materials, allowing themes to emerge naturally through repeated readings and reflections. This approach facilitated a deep immersion in the data, which enabled me to capture subtle nuances. Moreover, I engaged in a constant comparative method by continuously juxtaposing insights from the interview data with those derived from the archival sources, as well as incorporating insights from previous interviews into subsequent interviews, which allowed me to challenge and sharpen these insights. One example of this, which I will elaborate on below, is the manner in which datacenters define ‘digital sustainability’ compared to NGOs. In short, this iterative process was crucial in identifying recurring themes and patterns, and corroborating findings.

Lastly, I validated my data against recent research on complex institutional environments (Andrews et al., 2022; Onuklu et al., 2021; Vogel, 2021) to ensure adherence to academic best practices. The analysis aims to illuminate the differing roles, competencies, and regulations that various levels of government produce in response to unique stakeholder pressures, and the reaction of the datacenter industry to these multi-level pressures and regulations. The complete dataset is summarized in *Table 4.1*.

**Table 4.1.** Overview of data sources.

Level	Name of Document	Source	Stakeholder	Date
<b>Supra-national</b>	<i>Energy-efficient Cloud Computing Technologies and Policies for an Eco-friendly Cloud Market</i>	European Commission	Government	2020
	Study on Greening Cloud Computing and Electronic Communications Services and Networks	European Commission	Government	2022

Level	Name of Document	Source	Stakeholder	Date
	<u>Shaping Europe's Digital Future</u>	European Commission	Government	2020
	<u>Shaping the Digital Transformation in Europe</u>	European Commission	Government	2020
	<i>Best Practice Guidelines for the EU Code of Conduct on Data Centre Energy Efficiency</i>	European Commission	Government	2020 - 2022
	<u>Path to the Digital Decade</u>	European Commission	Government	2021
	<u>Digitalisation for the benefit of the environment</u>	Council of the European Union	Government	2020
	Uptime sustainability report series (4 documents)	Uptime Institute	Trade Association	2021 - 2022
	Interview with representative from Uptime Institute	Primary data	Trade Association	20/10/22
	Interview with representative from the Sustainable Digital Infrastructure Alliance	Primary data	Non-governmental organization	14/12/22
<b>National</b>	<i>Nederlandse Digitaliseringsstrategie</i>	Dutch Central Government	Government	2018 - 2021
	<i>Nationale Omgevingsvisie (NOVI)</i>	Dutch Central Government	Government	2020
	<i>Ruimtelijke strategie datacenters</i>	Dutch Central Government	Government	2019
	<u>Digitaal Duurzaam</u>	Dutch Central Government	Government	2021
	Verkenning relatie accommoderen datacentervraag en digitaliseringskansen	Buck Consultant International	Consultancy	2021
	Financieel Dagblad	NexisUni	Newspaper	2015 - 2022
	NRC	NexisUni	Newspaper	2015 - 2022
	Telegraaf	NexisUni	Newspaper	2015 - 2022
	Volkskrant	NexisUni	Newspaper	2015 - 2022

Level	Name of Document	Source	Stakeholder	Date
	Manifest duurzame digitalisering	Coalition	Trade association	2022
	Datacenter Gids	Dutch Data Center Association	Trade Association	2020 - 2022
	Ecosystem Guide	Dutch Data Center Association	Trade Association	2021 - 2022
	Interview with representative from the Nationale Coalitie Duurzame Digitalisering	Primary data	Public-private partnership	30/11/22
	Interview with representative of the Dutch Datacenter Sector	Primary data	Trade association	22/11/22
	Interview with sustainability representative at the Dutch Data Center Association	Primary data	Trade association	18/11/22
	Interview with public policy manager at NLDigital	Primary data	Trade association	26/10/22
	Interview with representative from the Dutch Data Center Association	Primary data	Trade association	28/04/22
	Interview with representative from the Dutch Cloud Community	Primary data	Trade association	14/12/22
	Interview with representative from Digital Infrastructure Association	Primary data	Trade association	21/12/22
	Interview with an energy officer of a colocation datacenter in the Netherlands	Primary data	Business	16/11/22
<b>Regional and local</b>	<i>Datacenterstrategie Noord-Holland 2022-2024</i>	Province of North-Holland	Government	2022
	<u>Duurzaam doorpakken!</u>	Province of North-Holland	Government	2019
	<u>Informatiebijeenkomst datacenters Hollands Kroon</u>	Municipality of Hollands Kroon	Government	2022
	<i>Amsterdam Duurzaam Digitaal</i>	Municipality of Amsterdam	Government	2020
	<i>Besluit van de gemeenteraad van de gemeente Haarlemmermeer houdende regels omtrent Datacenterbeleid gemeente Haarlemmermeer</i>	Municipality of Haarlemmermeer	Government	2020
	Dagblad van het Noorden	NexisUni	Newspaper	2015 - 2022

Level	Name of Document	Source	Stakeholder	Date
	Noord Hollands Dagblad	NexisUni	Newspaper	2015 - 2022
	Haarlems Dagblad	NexisUni	Newspaper	2015 - 2022
	Stentor	NexisUni	Newspaper	2015 - 2022
	Toekomstbeelden datacentra in de Metropoolregio Amsterdam	Stratix	Consultancy	2018
	<i>Interview with representative of the regional government</i>	Primary data	Government	12/0 4/22
	<u>Interview with senior account manager at colocation datacenter</u>	Primary data	Business	22/0 5/22

*Note: In the ‘Name of Document’ column, italic text corresponds to a policy proposal; underlined text corresponds to a position paper; regular texts correspond to technical reports, studies or interviews.*

### 4.3.2. Findings

#### 4.3.2.1 The Supranational Level

The EC released a document titled ‘Shaping Europe’s Digital Future’ in February 2020 (EC, 2020). In this document, the EC states that, guided by the strategic directions set by the EC President (von der Leyen, 2019), Europe needs to be at the forefront of the transition to a sustainable planet and a new digital era. The EC identifies these transitions as a ‘twin challenge’, acknowledging the interdependence of the green and digital transformations (EC, 2022b). In other words, the realization of sustainability necessitates the realization of digitalization, and vice versa.

The EC further stipulates that a digital transformation based on European values and norms can only succeed if the EU joins forces with national and regional governments, as well as civil society and the private sector. This underscores the fact that managing the twin transition requires collaboration between private and public actors at various levels, each wielding specific authority or relevant technical expertise.



Interestingly, the document details specific policy requirements for datacenter operators. These include the need for data centers to enhance energy efficiency, reuse waste energy, utilize more renewable energy resources, and most importantly, achieve climate neutrality by 2030 (EC, 2020, p. 6). Subsequent EC studies discuss the possibility of introducing an “Emission-Free Data Centers” policy to ensure data center growth is carbon neutral by enforcing increased energy efficiency (EC, 2020, p. 36).

The Council of the European Union (Council) supports the strategic direction set by the EC, acknowledges the symbiotic relationship between digitalization and sustainability, and calls for regulatory and non-regulatory measures to lessen the environmental footprint of data centers in the EU (European Council, 2020). In later communications with other EU institutions, the EC reasserts its goal to make datacenters climate neutral by 2030, introducing mechanisms to measure datacenters’ energy efficiency as part of its enhanced Digital Economy and Society Index (EC, 2021, 2021a).

These recent publications depart from the prior approach to regulating data center operations, which largely relied on voluntary initiatives. For instance, the EU’s ‘Code of Conduct on Data Center Energy Efficiency’, a voluntary initiative published annually since 2008, was developed to mitigate the environmental and economic impacts of data centers (EC, 2018).

Reacting to the EU policymakers’ actions, 26 CEOs of ICT companies signed a declaration in 2021 under the ‘European Green Digital Coalition’ (EGDC) banner. They pledged to support the EU’s green and digital transformation by investing in the development and deployment of energy and material-efficient digital solutions. They also committed to developing methods and tools, in partnership with NGOs and relevant expert organizations, to define and measure the net impact of green digital technologies. They aim to co-create guidelines and recommendations for green digital transformations.

Furthermore, 25 companies and 17 trade associations from both the data center and cloud computing industries established the ‘Climate Neutral Data Center Pact’ (CNDP) in 2021. This self-regulatory initiative aims to make European data centers climate neutral by 2030. The CNDP sets ambitious goals for its members in areas such as energy efficiency, clean energy, water usage, and the circular economy. Both the EGDC and the CNDP are initiatives from the digital sector, aiming to contribute to the sustainability

transition by voluntarily committing to stringent environmental targets. These initiatives seem to signal to stakeholders that data centers are genuinely pursuing environmental sustainability. However, a critical aspect of these initiatives is that the sector will help formulate the rules and standards for monitoring the environmental efficiency of digital technologies. This approach allows the sector to shape these regulations to some extent, instead of having them unilaterally imposed by regulators.

*“Those [EGDC & CNDP] are built specifically to try and influence regulations. They are intended to be a vehicle by which it generates dialogue with the other stakeholders in that space. Ideally, that dialogue is intended to converge to a set of agreeable standards to manage the operations.”* – UI representative, interview October 2022.

*“Self-regulation is obviously preferable to top-down imposed regulations. If one can steer regulation into a particular direction, it can come closer to one’s ideal point in for example cooling requirements. And if you commit yourself to a certain limit, you prevent governments from forcing these limits upon you. So, this helps in any case to offer policymakers a certain framework in which to think about potential rules and regulations, so they do not come up with extreme regulations that destroy capital.”* – Energy efficiency officer at a datacenter in the Netherlands, interview October 2022.

Uptime Institute (UI), a professional service organization, is one of the most impactful entities in the global data center industry. UI provides a tier system based on the availability of data services, along with a certification program. Its intelligence team publishes reports and provides expert presentations on transnational issues impacting data centers, which are utilized by EU and other regulators (e.g., EC, 2020c).

Between 2021 and 2022, UI published a series of reports on sustainability issues related to the data center industry. The series covered topics such as sustainability strategies, managing regulations and standards, and reducing energy footprints and water usage. In these reports, UI made four significant claims regarding forthcoming sustainability standards and requirements. First, sustainability regulations that are currently voluntary will likely become mandatory over the next decade. Presently, these regulations are voluntary because there is no broad consensus on what defines sustainable

data center operations or how to measure the environmental impact of data centers. However, this is expected to change in the near future. This aligns with the observation of the EC's apparent move away from voluntary mechanisms like the code of conduct on energy efficiency.

Second, data centers should anticipate inconsistent legislation due to location-specific interests and the potential influence of biases and limited knowledge levels of regulatory authorities.

*“This operates at a couple of levels. From a location standpoint, different jurisdictions will have different interests, concerns, infrastructure restrictions and economic interests. When you combine those, you will get different regulations. Some may be more interested in water, some in power.” – UI Representative, interview October 2022.*

Third, data centers must prepare to educate non-specialists, including regulators and governments, about industry practices, operational constraints, business models, and sustainability metrics. This task is further complicated by the fact that governments at different levels vary in terms of their time, resources, and expertise. Generally, these resources increase as we ascend the governmental hierarchy, though much also depends on the individuals involved.

*“There are a lot of variables, so it depends. But I would say you have a better chance of finding competent, technical people at the national level than you do at the local level.” – UI Representative, interview October 2022.*

*“One of the aspects of our mission we have not yet been able to achieve due to lack of resources is to improve the knowledge at the European, national, but especially regional level of civil servants and elected politicians.” – SDIA representative, interview December 2022.*

Fourth, and finally, the UI suggests that datacenters are viewed externally as a monolithic entity. This perception implies that datacenters can either proactively develop a collaborative strategy with their tenants, or risk having one imposed upon them by regulatory agencies.

*“They [datacenters] better play, engage [with policymakers], or they may get an outcome that’s going to be very, very undesirable. And sometimes even when you play, you still get an undesirable outcome. The regulators don’t want to listen to you, or if they don’t believe you’re being honest, they’ll just ignore you, as will the legislators”* – UI Representative, interview October 2022.

The Sustainable Digital Infrastructure Alliance (SDIA) is an independent alliance of stakeholders working across the digital sector to improve the sustainability of digital technologies, including datacenters. As such, the SDIA is one of the few NGOs that work on the topic of digital sustainability at the supranational level. Through a combination of technical reports, development of best practices and standards, as well as lobbying, the SDIA is pressurizing datacenters to improve the sustainability of their technology. During an interview with a representative of the SDIA, it became apparent that the reasons why they assign such importance to digital infrastructure and digital sustainability are the same as industry actors: without digital infrastructure, our modern economy would not be possible.

However, the SDIA approaches the concept of sustainability more comprehensively rather than having a singular focus on environmental issues compared to industrial actors, including UI.

*“I am familiar with their [industry associations] position, and here we can already see an important critique: their narrow definition of the problem [sustainability]. This reduced sustainable digitalization to more of a marketing tool, rather than an integral approach. The difference lies in the fact that they [industry associations] represent a certain constituency, and at the same time consider sustainability. We have sustainability at our core, and from that perspective we look at infrastructure.”* – SDIA Representative, interview December 2022

*“It seems to me that the enthusiasm the industry associations have for digital sustainability only increases when the (threat of) regulatory pressures increase. Second, I don’t believe there is anything like a scientific definition of ‘digital sustainability’. That is ultimately the problem: everybody can define it as they see fit.”* – SDIA Representative, interview December 2022

#### 4.3.2.2 *The National Level*

The Dutch National Government (DNG) set forth its first digitalization strategy in 2018 (DNG, 2018). This strategy encompassed a two-pronged approach, focusing on exploiting societal and economic opportunities and strengthening the digital foundation of the Netherlands. To achieve the former, the DNG expressed its intention to act as a catalyst and supporter of the digital transition in sectors such as healthcare, transport, energy, and agriculture. Crucially, the document outlines a vision of how different layers of government can contribute to the digital transition (DNG, 2018, p. 14).

At the European level, the EU is charged with introducing a comprehensive, future-proof framework that aligns digitalization with the protection of fundamental European human rights. At the national level, the DNG plans to implement new standards, regulations, and frameworks in labor markets, the education system, digital security, and research and innovation, in accordance with EU norms and values.

The responsibility for managing the societal, economic, and environmental consequences of digitalization falls on local and regional governments, as they are best positioned to craft tailored approaches to the digital transition and balance various competing local and regional interests. Therefore, from the DNG's perspective, the EU is assigned the role of constructing grand strategies and normative frameworks; national governments are tasked with coordinating and supporting various industrial sectors in line with that strategy; and regional and local governments are responsible for implementing innovative policies and engaging with local stakeholders. This observation elucidates the national government's perspective on the distribution of authority and responsibility in MLG.

In 2019, the DNG identified new priority areas and reemphasized the importance of the EU as a strategic planner in its digitalization strategy (DNG, 2019b). In the same year, the government also released its policy concerning the geographic distribution of data centers (DNG, 2019a), which was crafted in close cooperation with the Dutch Data Center Association (DDA). This document outlined the DNG's short, medium, and long-term vision for facilitating the sustainable growth of data centers in the Netherlands. Broadly speaking, data centers should be located where their energy supply can be

sustainably managed; where their waste heat can be utilized; and where stakeholder requirements for digital connectivity are met.

Furthermore, the 2020 digitalization strategy included the first explicit mention of environmental sustainability. The DNG, referencing the EC (2020a), articulated its aim to reduce the environmental impact of digital technologies while leveraging these technologies to achieve efficiency gains across various industrial sectors (DNG, 2020a). Additionally, in 2020, the DNG released its national strategy on spatial planning and the environment, where it reiterated the necessity for selective growth of new datacenters, given the scarcity of space and renewable energy (DNG, 2020b). Finally, the DNG further expanded on its location policy towards data centers in its 2021 digitalization strategy, emphasizing its preference for locations along the outskirts of the Netherlands, articulating its intent to facilitate selective datacenter growth in areas with ample availability of renewable energy and the opportunity to recycle waste heat, and once again highlighting the distinct roles regional, national, and supranational governments play in managing the twin transition (DNG, 2021).

The Dutch Data Center Association (DDA) is the recognized trade association for datacenters in the Netherlands. Established in 2014, the DDA represents around 93% of the market in the Dutch data center industry (DDA, 2022). The DDA's primary roles include articulating and representing the interests of datacenters in the Netherlands to the government, media, and civil society. The DDA primarily accomplishes this through lobbying and publishing technical reports for industry actors and policymakers. Moreover, the DDA contributes to establishing technical norms and standards that datacenters in the Netherlands can use to differentiate themselves from competitors. Consequently, the DDA also actively participates in formulating and promoting regulatory and technical standards adopted by Dutch datacenters. It is important to note that datacenter trade associations like the DDA are the main vehicles through which data center operators engage with governmental actors.

*“The big players will influence on their own. But the major efforts go through industry associations. In general, the smaller players have to work through the associations because they don't have enough resources to do it alone, and*

*the big boys will work both individually and through trade associations.” - UI Representative, interview October 2022.*

*“The DDA lobbies on behalf of us [datacenter operator in the Netherlands]. We anticipate a new location policy in the near future, and the DDA then helps explain to policymakers how a useful regulation might look like.” – Energy efficiency officer of a datacenter in the Netherlands, interview October 2022.*

The DDA publishes technical reports in various policy areas, such as the EU-U.S. Safe Harbor Agreement, Brexit, the disclosure of data breaches, the GDPR, and general reports about the Dutch data center industry. Importantly, three key trends can be discerned from these reports over time. First, the DDA has increasingly focused on the *environmental* sustainability of datacenters, rather than the economic and social sustainability (as discussed in Chapter 2) of datacenters. Second, the DDA has advocated for improving the socio-economic impacts that datacenters have on their local communities, such as providing employment opportunities in the tech sector. However, this impact is somewhat limited due to the fact that, on average, datacenters are capital-intensive and labor-extensive. Third, the DDA has been proactive in shaping national and regional policies concerning the operations and location choices of data centers.

In November 2015, the DDA released its first report on environmental sustainability, primarily focused on energy efficiency, the durability of hardware, and potential subsidies for implementing sustainable solutions (DDA, 2015). In February 2018, the DDA published a report on how data centers could and should utilize waste heat (DDA, 2018). In this document, the DDA states that data centers are offering their waste heat for free. However, effective exploitation of waste heat is a serious technological and practical challenge that requires sustained cooperation between different stakeholders, including energy companies, local governments, and data center operators.

Furthermore, the report criticized the EU Directive on the energy performance of buildings (EPDB), which does not recognize industry waste heat as a renewable energy source. This lack of recognition prevents the utilization of waste heat in new property developments. This lobbying effort was successful, as in November 2018, the Dutch lower chamber passed a

motion, co-authored by the DDA, to include data center waste heat as a renewable energy source.

The DDA has increasingly focused on the economic impact of data centers and ways to improve working conditions within the industry. In March 2017, the DDA published its first report on the economic impact of data centers, calculating that the total direct contribution to GDP from colocation (the core business of multi-tenant data centers) was €585 million in 2015, with a total tax and social contribution of €64 million (DDA, 2017). However, the DDA acknowledged that the employment contribution of data centers is minimal due to the capital-intensive but labor-extensive nature of data center operations. This potentially jeopardizes their ability to garner support among local communities, as they cannot claim significant direct economic benefits, while their presence impacts local aesthetics (not-in-my-backyard) and the energy grid. When accounting for indirect economic effects, the report posits that data centers contributed nearly €1 billion. Following this report, the DDA shifted its focus towards exploring how working conditions in the data center industry could be improved. In three subsequent reports (DDA, 2019, 2021b, 2021c), the DDA revealed survey results indicating that finding adequate personnel is the single biggest challenge facing data centers.

As a result, the reports recommend that the sector work on improving employer value propositions, seek out young talent, enhance collaboration with other sectors, strengthen relationships with educational institutions, improve the visibility and image of the sector, support career paths, and take a proactive approach to diversity and inclusion. These steps reflect a shift in focus towards ensuring the data center industry is not only economically beneficial but also socially responsible.

In its 2022 annual publication, “The State of Dutch Data Centres”, the Dutch Data Center Association (DDA) advocates for key changes in policy that could better shape the landscape for datacenters in the Netherlands. One of the main propositions is a call for the national government to assume a more decisive role in coordinating decisions that have national impacts, such as the development of hyperscale datacenters. Meanwhile, they also emphasize the need for preserving the autonomy of regional and local governments to make decisions concerning smaller datacenters.

The DDA also underscores the importance of stronger partnerships between the government and the private sector, suggesting that incorporating



input from the industry could lead to more practical and effective policies. They further bring to light the necessity for the government to consider the location-specific requirements of datacenters. They argue that understanding the difference between placing datacenters near heat networks or existing industrial sites versus future residential lands is crucial for their environmental impact and feasibility.

Another significant recommendation is the designation of digital development locations by the national government. The DDA envisions these as areas where different types of datacenters, which require mutual proximity for optimal operation, can be clustered. Lastly, the DDA is a firm proponent of openness and transparency in decision-making procedures. They advocate for clear communication about the challenges and opportunities that datacenters bring. They took their advocacy a step further by joining a national coalition on sustainable digitalization, which presented a manifesto urging the Dutch National Government to revise current rules and regulations to make sustainable solutions in the sector economically viable.

#### *4.3.2.1 The Regional and Local Level*

In late 2021, the Province of North-Holland (PNH) distinguished itself as the first province in the Netherlands to establish a regional policy concerning the selection of locations for new datacenters. This policy, titled ‘Datacenterstrategie Noord-Holland 2022-2024’, outlines the PNH’s stance on the development and placement of datacenters within its jurisdiction, focusing on three main objectives: providing a stable groundwork for the digital economy, promoting clustered growth of datacenters, and pioneering in sustainability and innovation.

The PNH’s strategy involves two key areas of focus, namely the allocation of physical space and the advancement of sustainability. Specifically, the PNH aims to apply environmental regulations to guide the placement of new datacenters, considering their potential environmental impact, the efficient use of space, and the compatibility with urban planning proposals. As part of this approach, the PNH’s plans to designate specific business parks as suitable locations for datacenters. However, datacenter operators are required to present comprehensive urban plans and thorough

assessments of how their facilities would affect the social and natural environment.

Sustainability is the second cornerstone of the PNH's datacenter strategy. The PNH mandates that datacenters operate in a carbon-neutral manner, produce their own renewable energy, and employ renewable energy in real-time. Furthermore, the datacenters are expected to contribute to the circular economy by delivering waste heat and employing circular construction methods. The PNH also encourages the datacenter industry to further exploit sustainable solutions, a move that could rebuild the waning local support for their presence.

In its strategy, the PNH also emphasizes its commitment to fostering collaboration among municipalities, the datacenter industry, and other stakeholders. It aims to enhance research and innovation and initiate pilot programs to explore fresh possibilities for sustainable solutions.

Parallel to the approaches of the EC and the DNG, the PNH lays out the roles and competences that different government levels hold in the realm of digital and green transitions. On the one hand, the DNG outlines large zones where datacenter growth is feasible and formulates regulations demanding sustainable solutions. On the other hand, within these designated areas, the PNH identifies specific clusters, taking into consideration scenic, logistic, and cultural aspects that can influence local community support.

At the municipal level, governments are responsible for creating their own policies related to the selection of datacenter locations. This multi-level approach to the governance of datacenters illustrates the need for coordinated action among different levels of government. As a result, datacenters face unique pressures and challenges, requiring them to navigate a complex landscape of policy and regulatory requirements.

The individuals involved in the creation of this strategy, particularly the policymakers, noted that the primary desire expressed by industry players was for policy clarity. Industry actors sought definitive guidelines and a clear regulatory framework that could help them effectively plan their activities, adhere to sustainability requirements, and make informed business decisions. The need for policy clarity underscores the importance of transparency and coherence in policymaking, which can significantly influence the operations and strategic planning of businesses in the datacenter industry.

*“The sector mostly asked us [regional policymakers] to be clear in what we wanted in relation to sustainability. The sector already had great ambitions to invest in sustainability, and just wanted clarity in what we expected them to do.”* – Regional policymaker, interview April 2022.

The multilevel interaction among different layers of government and their stakeholders presents a significant challenge for regional policymakers. Each level of government has different responsibilities and, consequently, interacts with a distinct set of stakeholders. At a high level, the DNG is responsible for designating broad areas suitable for new datacenter development. Taking it a step further, the PNH is tasked with identifying specific clusters within those areas for datacenter establishment.

However, the responsibility of specifying the precise locations for datacenter setup falls on the municipal governments. This layered approach means that each level of government engages with a different array of stakeholders, varying from datacenter operators and local communities to regulatory bodies and environmental groups. Understanding and effectively managing these diverse interests and perspectives can be complex, given the overlapping and intertwined nature of their roles and responsibilities. This scenario underscores the need for coordinated efforts and seamless communication among different government levels and their respective stakeholders in the governance of data centers.

*“As the regional government, we are mostly in contact with other governments and industry actors, whereas municipal governments are more in contact with citizens.”* – Regional policymaker, interview April 2022.

Policy makers often require insights from the industry to craft well-informed, practical, and effective policies. This is especially relevant in the case of the datacenter industry, which is a highly specialized and fast-evolving sector. The technical complexities and rapidly changing dynamics of this industry necessitate a deep understanding of the operational, environmental, and economic aspects of datacenter management.

Industry actors, such as datacenter operators, technology providers, and industry associations like the DDA, possess first-hand experience and extensive knowledge in these areas. Their expertise can, in theory, provide

valuable insights on industry trends, technological advancements, operational challenges, sustainability issues, and best practices. This information can help policy makers in creating regulations that are not only feasible and effective, but also supportive of innovation and growth in the industry. At the same time, we should not be naive in this regard and assume that industry actors would never attempt to influence policymakers for their own benefit (cf. Murray & Flyverbom, 2021; Murray & Nyberg, 2021; Nyberg & Murray, 2020). Therefore, policymakers should also actively seek access to independent information and knowledge that they can use to critically evaluate and challenge business arguments.

In this context, a collaborative approach between policy makers and industry actors can be highly beneficial. By engaging in open dialogue, conducting joint research initiatives, and incorporating industry input into policy formulation, government can ensure that their strategies and regulations align with the realities of the datacenter industry, and effectively address its challenges and opportunities.

*“I know more about datacenters today than I did before, but in specific cases, for example statistics on employment and the contribution of datacenters to the national income, we as a government rely on the industry to provide us those numbers. Of course, we also do independent research on our own to cross-validate these number, but we do need the input of the industry.”* – Regional policymaker, interview April 2022.

The PNH is taking an active role in preventing a potential ‘race-to-the-bottom’ scenario amongst other provinces in the Netherlands with regard to datacenter policy. Recognizing the importance of aligned policies across different regions, the PNH is leveraging the Interprovincial Consultation (Interprovinciaal Overleg or IPO) to share its strategy.

The IPO is a collaborative platform that facilitates knowledge exchange, mutual learning, and joint goal setting among the twelve Dutch provinces. Here, PNH is actively working to disseminate its datacenter policy, emphasizing the value of shared, consistent rules in promoting sustainable, balanced growth of datacenters across the country.

Moreover, the PNH is also aiming to influence national level policymaking. It is working to communicate and coordinate with the DNG to

raise the prominence of its strategy. The PNH's goal is to ensure that its policy on the sustainable and responsible establishment and operation of datacenters is not only adopted by other provinces, but also incorporated into the national digitalization strategy. The ultimate aim is to harmonize the policy landscape at all levels of government, ensuring coherent regulation and promoting sustainable practices across the datacenter industry nationwide.

*“In the IPO, we are putting our strategy on the agenda, and viewed by others as an exemplar. But one of my most important tasks at the moment is to convince Hugo de Jonge [national minister of housing and spatial planning] that our strategy is the right one. The minister should not impose top-down instructions where in our province we are to locate datacenters, and that we coordinate the rules and regulations we establish to govern the location choices of datacenters, so that they become relatively uniform throughout the Netherlands.”* – Regional policymaker, interview April 2022.

An essential part of this regional policy is the collaborative approach taken by the provincial government and the datacenter industry. Recognizing the power of collective action, they are working together to influence the national government and advocate for the adoption of their policy strategy on a wider scale.

Their cooperative lobbying aims to demonstrate the effectiveness and benefits of their regional strategy, in hopes of it being incorporated into the national digitalization policy. By doing so, they aim to create a more uniform, sustainable, and efficient policy landscape across the Netherlands. This not only would streamline regulation for datacenter operators but also advance the broader goals of digital sustainability and regional economic development.

The collaboration also underscores the evolving dynamic between the datacenter industry and government entities. Rather than a traditional regulator-industry relationship, it is increasingly characterized by joint efforts and shared goals. This approach, it is hoped, will lead to more practical, implementable policies that effectively balance economic and environmental considerations.

*“We engage the national government and parliament in concert with the industry and local governments. We have recently paid a working visit to*

*Microsoft, together with the municipalities of Hollands Kroon and Haarlemmermeer, to work out what our collective position will be towards the Dutch government. So during the initial stage, datacenters need to lobby and convince us, which does not always succeed, while in subsequent stages, we are collectively bargaining and negotiation with other governments to prevent them from undermining our regional policies.” – Regional policymaker, interview April 2022.*

#### **4.4. Discussion**

Datacenters in the Netherlands navigate a multi-tiered regulatory landscape by tailoring their interactions with different levels of government based on their respective competences, roles, and legal authority. The Dutch governance system for digitalization and datacenter operation exemplifies a layered model, with national, regional, and local governments playing distinct but interconnected roles. At the national level, the government designates broad geographic areas suitable for new datacenter operations, considering overarching strategic and economic factors influenced by guidelines set out at a supranational level. Here, national-level matters of digital sovereignty and competitiveness come into play, which requires the datacenter industry to engage with policymakers with these overarching concerns in mind. The regional governments, operating within the areas earmarked by the national government, identify clusters suitable for datacenter operations. Their focus is more granular, considering local grievances from advocacy groups, communities, and the physical and infrastructural characteristics of the region. As such, datacenter operators must tailor their engagement with regional governments to address these region-specific factors. Municipal governments then have the task of specifying the exact physical locations for new datacenters within these clusters. Their role means that the datacenter industry must deal with an even more localized set of considerations in their interactions with municipal governments. At the supranational level, governments are responsible for establishing broad strategic frameworks and policy principles that align with globally recognized values, particularly in terms of energy efficiency and sustainable digitalization. This means that datacenters must also factor in these broader, globally relevant concerns in their operational and strategic planning.

Therefore, datacenters must engage in a balancing act, adapting their CSPE strategies to accommodate the distinct competences, legal authorities, and concerns of different levels of government. This dynamic interaction among various levels of government and their differing competences necessitates a flexible and nuanced approach by the datacenter industry. Below, I will not elaborate in more detail how this approach manifests itself.

First, one approach involves initially lobbying at lower levels of government, and then partnering with them to lobby at higher levels. This seeks to create regulatory consistency across regions within a country. For instance, a regional policymaker described how datacenters lobby local governments before collectively bargaining with national government to prevent them from undermining regional policies. This approach ensures that regulatory consistency is created across different regions, which lowers the regulatory burden of datacenter operators. Without first lobbying at the lower level, where much of the local knowledge on how to unify business objectives with stakeholder demands is situated, resulting legislation will likely undermine business operations. To be sure, this collaboration stems from a mutual interest; lower-level governments seek the diffusion of their regional policies, which they believe are economically beneficial to their region, while datacenters seek a harmonized regulatory landscape across regions to minimize the complexity and costs associated with adhering to varied regulations.

Importantly, this multilevel lobbying process does not only occur vertically but also laterally. As datacenters aim to align regional regulations, they must also be prepared for the introduction of supranational environmental standards that could influence municipal and state policies, both within and outside the EU. Such supranational policy initiatives can inspire lower-level governments to pursue more ambitious sustainability objectives, making them yet another essential factor in the multi-level CSPE strategy of datacenters.

*Proposition 1:* Multi-level lobbying is more effective in creating regulatory consistency and accommodating the interests of datacenters compared to a single-level approach.

The second component involves tailoring engagement with policymakers according to their specific level of government. A representative

from UI emphasized the importance of having staff members who focus on both local and national regulatory matters. Similarly, multiple respondents at all levels indicated that different levels of government have different competences, as thus the content and scope of regulation will differ between levels. Having profound understanding of which layer of government in the governance structure is responsible for what aspect is critical for datacenters. Similarly, companies differentiate between the knowledge and expertise across different government levels. This helps to influence policymakers towards particular regulatory outcomes by explaining what kinds of standards, practices, and frameworks are reasonable. As one UI representative pointed out, national policymakers often have more technical expertise than their local counterparts.

*Proposition 2:* Datacenters that tailor their CSPE engagement strategies to the specific competencies of different governmental levels achieve more favorable regulatory outcomes

Furthermore, datacenters work to build a reputation as green and responsible digital economy stakeholders. This enhances their influence over forthcoming regulations and helps secure their social license to operate. Two interviewees, an energy efficiency officer at a datacenter and a regional policymaker, underscore the significance of self-regulation and community building initiatives in maintaining a positive reputation. This supports previous findings that combining political and social strategies can yield the firm significant reputational resources that it can leverage in its interactions with stakeholders. Certainly, one of the most crucial aspects of datacenters' multi-level CSPE strategy is to establish and nurture a reputation for being responsible, green contributors to the digital economy. Their strategy spans across all levels of government, demonstrating their commitment to sustainable practices, corporate social responsibility, and community engagement. At the supranational level, the industry participates in self-regulation initiatives such as the EGDC and CNDP.

These initiatives serve a dual purpose. Firstly, they indicate the industry's readiness to invest in enhancing the sustainability of digital technologies, a crucial message in an era where digital technology is expected to contribute to environmental sustainability while becoming more energy



efficient. Secondly, they grant the industry leverage in shaping upcoming standards and regulations by providing them access to relevant policymakers. However, these high-level sustainability initiatives might not carry the same weight at local and regional levels, where stakeholders might be more concerned with immediate impacts like noise pollution and job creation. Consequently, the datacenter industry has been proactively involved in various local sustainability and social responsibility initiatives to garner support at the local level. For instance, companies like Microsoft and Google have undertaken efforts to train and develop local talent, a move that resonates well with regional policymakers. Additionally, they have engaged in other community-friendly initiatives such as supplying waste heat from datacenters to swimming pools and residential buildings. This all exemplifies the industry's understanding that earning a social license to operate within specific jurisdictions requires a multi-faceted approach to sustainability, namely one that addresses concerns at all levels of government.

*Proposition 3:* Datacenters that proactively build a reputation as green and responsible stakeholders are more likely to secure their social license to operate and influence future regulations across government layers.

Another important behavioral response of datacenters to the multi-level pressures from government authorities is the dissemination of knowledge and expertise. The datacenter industry has recognized that both national and supranational policymakers might lack the necessary technical understanding to devise feasible regulations. This gap in knowledge can result in policies that are hard to implement, thereby impacting the operation and growth of datacenters. In response to this, the datacenter industry has taken a proactive stance by 'educating' the policymakers. They have done so by publishing detailed documents that clarify the economic significance of datacenters and contextualize the industry's consumption of renewable energy, water, and physical space. This approach becomes particularly relevant as local communities raise concerns about the environmental impacts of datacenters, including energy and water consumption, as well as the visual pollution caused by their infrastructure. The industry recognizes the need to address these concerns by effectively communicating datacenter environmental performance to both regulators and the public. The industry's educational

initiatives need to be tailored according to the varying demands of stakeholders across different levels of policymaking. For instance, while policymakers at the supranational level may need guidance on measuring energy efficiency, those at the regional and local levels might require insights into how waste heat from datacenters can be utilized for community benefit.

*Proposition 4:* Effective dissemination of technical knowledge and operational constraints to policymakers at different levels is crucial for the development of feasible regulations.

*Table 4.2* provides a comprehensive overview of the multi-level sociopolitical engagement strategy adopted by datacenters in the Netherlands. The table comprises 4 different components that are part of the strategy, each with their respective objectives and illustrative quotes from various industry and government representatives.

**Table 4.2.** Components of a multi-level sociopolitical engagement strategy adopted by datacenters in the Netherlands.

<b>Description</b>	<b>Objective</b>	<b>Example quote(s)</b>
<p>A company first lobbies a lower-level government, and subsequently lobbies in concert with that government at higher levels of government.</p>	<p>Create regulatory consistency between different regions within a country.</p>	<p><i>“We engage the national government and parliament in concert with the industry and local governments. We have recently paid a working visit to Microsoft, together with the municipalities of Hollands Kroon and Haarlemmermeer, to work out what our collective position will be towards the Dutch government. So during the initial stage, datacenters need to lobby and convince us, which does not always succeed, while in subsequent stages, we are collectively bargaining and negotiation with other governments to prevent them from undermining our regional policies.” – Regional policymaker, interview April 2022.</i></p>
<p>A company differentiates between the competences, knowledge and expertise of different levels of government, and lobbies them accordingly.</p>	<p>Tailor the engagement with policymakers to the particular level of government at which that policymaker operates by clarifying what types of standards, practices and frameworks are reasonable.</p>	<p><i>“The EU promulgated the reporting regulations and the efficiency regulations in the EED [European Energy Directive]. This creates complications, as you need somebody on your staff that’s paying attention to local stuff, and then somebody on your staff that’s paying attention to national regional stuff.” – UI representative, interview October 2022.</i></p>
<p>A company builds a reputation for being a</p>	<p>Enhancing the influence over forthcoming regulations and</p>	<p><i>“Those [EGDC &amp; CNDP] are built specifically to try and influence regulations. They are intended to be a vehicle</i></p>

<b>Description</b>	<b>Objective</b>	<b>Example quote(s)</b>
<p>green and responsible stakeholder in the digital economy.</p>	<p>securing a social license to operate.</p>	<p>by which it generates dialogue with the other stakeholders in that space. Ideally, that dialogue is intended to converge to a set of agreeable standards to manage the operations.” – UI representative, interview October 2022.</p>
<p>A company disseminates technical knowledge and operational constraints to policymakers at different levels.</p>	<p>Ensure that policymakers are aware of technical and practical challenges related to forthcoming policy intentions</p>	<p>“The DDA lobbies on behalf of us [datacenter operator in the Netherlands]. We anticipate a new location policy in the near future, and the DDA then helps explain to policymakers how a useful regulation might look like.” – Energy efficiency officer of a datacenter in the Netherlands, interview October 2022.</p>

## 4.5 Conclusion

Extant IB literature has predominantly focused on how either national or subnational institutions shape MNE behavior. The area of multi-level research, i.e., analysis of how institutions at various levels influence MNE behavior, has been relatively underexplored. This has led to a gap in understanding how institutions at different levels interact and how such interactions pose unique strategic challenges and opportunities for MNEs, as well as how MNEs respond to these challenges. The goal of this chapter has been to address this gap by illustrating the impacts of the territorial organization of governments on datacenters, using the concept of multi-level governance from political science.

While the prevailing sentiment in the IB literature highlights the facilitating role of digital technologies in internationalization and the emergence of ‘born globals’ and ‘born digitals’, this study emphasizes the continued importance of locational and physical factors in the digital age. Specifically, as the EU, along with the national and regional governments of its member states, increasingly ties digitalization to sustainability, digital MNEs are compelled to develop and execute multi-level CSPE strategies to successfully navigate the array of pressures they face.

The territorial organization of governments can directly impact the CSPE strategies of MNEs and shape their behaviors in complex ways. As digital MNEs strive to address the challenges posed by diverse levels of governance and regulation, their strategic approaches need to be as multifaceted and comprehensive as the political landscapes they navigate. Therefore, this study underscores the pressing need for further research in MLG and its role in shaping MNE strategies, particularly in the digital and sustainability-driven context of the EU.

Moreover, the case study of the datacenter industry in the Netherlands reveals how companies respond to these multi-level regulatory pressures. More specifically, it shows that they must coordinate their lobbying and advocacy activities between the local, regional, national and supranational level. An important finding here is that these activities can shift from adversary to cooperative. At the initial stage, MNEs lobby local and regional governments to convince them of their specific policy preferences. However,

once these governments are on board, they switch to a cooperative lobbying strategy, in which MNEs and governments work together to lobby these policies to higher levels of government. In this way, MNEs not only attempt to remove inconsistencies between regions within a country, but also create consistency between different regions within a country. In addition, these MNEs differentiate their engagement with policymakers based on the competences and authority of different levels of government. For instance, the lobbying of operational standards and requirements differs from the lobbying of location choice, as the former is more subject to local and regional interests, while the latter is of national concern.

Furthermore, MNEs provide technical knowledge and expertise to policymakers at various levels, depending on their specific informational needs and the complexity of the issue at hand. Here, the industry attempts to influence policymakers towards particular regulatory outcomes by clarifying what types of standards, practices and frameworks are reasonable from the perspective of business. In doing so, the industry aims to prevent the promulgation of unworkable regulations and standards. Finally, MNEs are actively building a reputation for being a green and responsible stakeholder in the digital economy. As they face scrutiny from different stakeholders at different levels, they must continuously prove their societal worth.

This study, while insightful, is not without its limitations. The emphasis on the datacenter industry within the confines of the Netherlands may raise questions regarding the general applicability and transferability of the findings. In other countries or industries, the configuration and manifestation of regulatory pressures might vary, leading to different industry responses. Particularly, countries with larger geographic sizes and lower population density may not present the same intensity and immediacy of stakeholder pressures as seen in the Netherlands, potentially causing variations in datacenter operations and behaviors.

In addition, my access to industry officials and policymakers, though substantial, may not have encompassed the full range of CSPE activities engaged in by the industry. Certain aspects of these activities may remain obscured from public view, resulting in a possible incomplete portrayal of the industry's responses to regulatory pressures. However, I strived to mitigate this limitation by thoroughly reviewing relevant policy documents and conducting detailed interviews with stakeholders across both government and

industry sectors. Moreover, my analysis falls more within the exploratory domain than confirmatory due to the innovative nature of my research subject in the field of IB scholarship – the multi-level institutional impacts on MNE behavior. While the central role of datacenters in digitalization warrants more attention from the IB community, I acknowledge the need for more confirmatory studies to corroborate the findings.

Despite these inherent limitations, I posit that my study offers valuable insights into the interaction between digital MNEs and the complexities of multi-level regulatory landscapes. This research contributes to the IB literature on MNEs and institutions' interplay, particularly relevant in the fast-evolving digital age. My findings aim to encourage further exploration into the multi-level governance of digital MNEs, with a focus on both theoretical development and empirical investigation. Given the rising prominence of digital technologies and the worldwide focus on sustainability, a more profound understanding of how digital MNEs navigate and influence these multi-level regulatory landscapes is paramount in aligning the objectives of the digital and green transitions. Moreover, while this study primarily focuses on the Netherlands and the EU, the concept of multi-level governance is equally applicable to other settings like the United States. A comparative approach involving different jurisdictions could unveil important contextual factors influencing MNE CSPE strategies.

On a more general note, I strongly encourage IB scholars to continue drawing on concepts, frameworks, and theories from the social sciences. These rich resources offer immense potential to further develop IB theory. The application of the MLG framework provided vital insights into the mechanisms of multi-level administration for datacenters, specifically in addressing their sustainability challenges. In light of these findings, I hope this study serves as a steppingstone towards more comprehensive research in understanding the CSPE strategies of MNEs in the face of multi-level governance. The interplay between digitalization and sustainability, coupled with the territorial organization of governments, is a complex terrain that MNEs must navigate. Unravelling these complexities can provide crucial insights to guide MNEs in harmonizing their operations with the twin transitions of digitalization and sustainability.