Cloud ruins: Ericsson's Vaudreuil-Dorion data centre and infrastructural abandonment

Patrick Brodie & Julia Velkova

To cite this article: Patrick Brodie & Julia Velkova (2021): Cloud ruins: Ericsson's Vaudreuil-Dorion data centre and infrastructural abandonment, Information, Communication & Society, DOI: 10.1080/1369118X.2021.1909099

To link to this article: https://doi.org/10.1080/1369118X.2021.1909099

© 2021 The Author(s). Published by Informa UK Limited, trading as Taylor & Francis Group

Published online: 14 Apr 2021.

Submit your article to this journal

Article views: 68

View related articles

View Crossmark data
Cloud ruins: Ericsson’s Vaudreuil-Dorion data centre and infrastructural abandonment

Patrick Brodie and Julia Velkova

ABSTRACT
The past decade has seen the accelerated growth and expansion of large-scale data centre operations across the world to support emerging consumer and business data and computation needs. Built out rapidly, these emergent digital infrastructures carry the promise for new local industrial futures, all while their paths to obsolescence are shortened. Their lifespans are dependent on financial speculation, shifting corporate strategies, and advances in consumer technology. In this article we track the promise and afterlife of an abruptly abandoned data centre constructed by the global telecom giant Ericsson in Vaudreuil-Dorion, a town near Montréal, Québec, Canada, in order to expand emergent debates about digital ruination. Employing site visits, press reports, and qualitative interviews with architects and staff involved with the data centre’s development in Sweden and Canada, we propose ‘cloud ruins’ as a sensitising concept to capture some of the specific meanings and material articulations that the abandonment of global data infrastructures may evoke in local contexts. Simultaneously familiar and novel, cloud ruins anticipate an emergent landscape of post-digital ruination that unfolds in the built environment in peripheral communities, part of the global logistical cities from within which our contemporary understandings of digitalisation are produced.

Introduction
In a press release from September 8, 2014, the Swedish telecom giant and 5G infrastructure provider Ericsson announced the launch of the first of three global data centres that the company intended to build as part of ‘taking another step in its journey towards the Networked Society, providing industry-leading cloud-enabled technology’ (Ericsson, 2014). Two of these centres would be located in the cities of Linköping and Stockholm in Sweden, and one in Canada. The press release proclaimed the construction of this network as a milestone in transferring Ericsson’s operations to ‘the cloud’: ‘the Global ICT

CONTACT Julia Velkova julia.velkova@liu.se www.juliavelkova.org Department of Thematic Studies - Technology and Social Change (TEMA-T), Linköping University, Sweden

† Research conducted at Concordia University. Dr. Brodie is currently FRQSC Postdoctoral Fellow at McGill University, Department of Art History and Communication Studies, Montreal, Quebec, Canada.

© 2021 The Author(s). Published by Informa UK Limited, trading as Taylor & Francis Group

This is an Open Access article distributed under the terms of the Creative Commons Attribution-NonCommercial-NoDerivatives License (http://creativecommons.org/licenses/by-nc-nd/4.0/), which permits non-commercial re-use, distribution, and reproduction in any medium, provided the original work is properly cited, and is not altered, transformed, or built upon in any way.
Centers are our own industrial commitment to the cloud. With our cloud-based technology, the centers will enable our cross-functional teams to collaborate beyond borders. It will allow us to get quality products and services to our customers faster than ever before. For us this is a milestone. The launch of the first such centre in Linköping in 2014 was followed by the second one in Stockholm in 2016. The last one, in Vaudreuil-Dorion, Québec, Canada, a small city on the shore of Lac des Deux Montagnes just south-west of l’Île de Montréal, was inaugurated in December 2016, with great media attention and a public local celebration, only to be abruptly shut down and abandoned ten months later.

Tucked away in a suburban industrial park, and surrounded by logistics centres, warehouses, and office blocks, Ericsson’s ostentatious former Vaudreuil-Dorion facility still stands out today against the surrounding landscape. As of February 2020, the building remains mostly vacant, sold to a US real estate company and locally administered by a Montréal firm. After active local political mobilisation, government tax breaks, and years of anticipations of local jobs and prosperity, the inert site now employs only a skeleton crew of security and maintenance professionals tasked with not letting the impressive structure fall to ruin while waiting for new buyers. The mechanical connections in the building wait to be fired up by a new influx of tech capital and machinery to rescue them from financial ruin. Joining the category of abandoned industrial sites such as closed steel mines, paper or car production factories, this data centre stands now as a ‘cloud ruin’, an imposing remainder of the global and local post-industrial dreams of digitalisation.

The perennial ‘promise of infrastructure’ at sites of new developments (Anand et al., 2018), especially in terms of digital infrastructures, offers real and imaginary access to global interconnectivity. But in the era of digital capitalism, these infrastructures are tied into a turbulent global market, demonstrating that the ‘promise’ of global interconnection overlays the roving and uneven speculations of transnational tech capital. Sites across territories, while connected to one another, are also subject to the rise and fall of profits, and the decisions that must be made by companies to hedge against losses, risk, and to protect shareholders. As the ‘cloud’ has come to increasingly animate public discourses that anticipate ‘a fourth industrial revolution’ (Schwab, 2015) through data, the shutdown of Ericsson’s data centre in Vaudreuil-Dorion is a timely reminder that any industrial revolution, including the digital one, is bound by the logics of capital growth to leave its ruins (Harvey, 2001).

Taking Ericsson’s data centre in Vaudreuil as a point of departure, we track in this article the meanings that digital ruination takes on when articulated through the infrastructures that support global data traffic – data centres. Our work is in part a response to an earlier call for the need to take data centres’ impermanence as a vantage point through which to address the contingent relation between global capitalism and media infrastructures (Velkova, 2019), and a contribution to emergent debates on the ways in which the materialities of digital media relate to multifaceted processes of ruination and discard (Gabrys, 2013; Miller & Garcia, 2019; Parikka, 2012) rather than progress. Data centres have been both built, shut down, or pre-emptively abandoned dynamically in the past decade (see Brodie, 2020; Burrell, 2020; Velkova, 2019), some lingering still as infrastructural ruins while others disappearing from the built landscape. We treat Ericsson’s former Vaudreuil-Dorion data centre as one case within an emerging landscape of ‘cloud ruins’, their promises foreclosed by arcane and rapidly changing corporate strategies, markets, politics, and technological obsolescence.
Inspired by earlier writings on (post-) industrial ruination (Edensor, 2005; Storm, 2016; Willim, 2008), we began our research with the aim to understand how the development of Ericsson’s data centre in Vaudreuil-Dorion and its aftermath were experienced at a community level, and what remainders and potentially ‘scars’ (Storm, 2016) had been left in the aftermath of the data centre closure. However, calling and emailing around to Ericsson’s headquarters, municipal offices, community groups, and companies involved, we hit a number of dead ends. We were bounced around offices; we were denied material that may have compromised Ericsson’s (or the new tenant’s) proprietary knowledge; officials and community members could not put their finger on who may have been involved to the degree that they could still comment and were often confused as to why we were interested. As far as the media, the company, and the community were concerned, as we were researching the site in 2020, the data centre might as well have no longer existed.

We embrace these ‘dead-end’ experiences as instructive analytic devices to understand the cultural form, sensibilities and in part, the afterlife that animated the now abandoned data centre in Vaudreuil-Dorion. We further complement them with an analysis of a dossier of over 20 items of publicly available media coverage, corporate communication, and planning materials published between 2015 and 2017 in Sweden and Canada; four interviews with architects, Hydro Québec, and Ericsson staff in Sweden and Quebec; and an encounter with data centre security in Vaudreuil-Dorion. Inspired by media archaeology, this approach also inverts it as a method – rather than tracking what remains present in the aftermath of ‘dead’, devalued media entities, we excavate and follow the absences, gaps, and silences that continue to linger and surround them as remainders. In this sense, also borrowing from fieldwork-based studies of media infrastructure scholars like Lisa Parks and Nicole Starosielski (2015), we look not only inside of the ‘black box’ of the abandoned media object but at its surroundings, what remains beyond the built space and technologies themselves. Based on this analysis, we use the notion of the ‘cloud ruin’ as a perspective to capture some of the specific meanings and material articulations that the abandonment of global data infrastructures may evoke in local contexts, such as Vaudreuil-Dorion.1

Inspired by Stoler (2008), we approach ‘ruin’ not as a static or inert object but as the active process of refuguration of sensibilities and structures that tells more about what people are ‘left with’ rather than being simply about material ‘leftovers’. Our analysis reveals then not only the industrial and material dimensions of digital media, but also another modality of digital ruination. Like the metaphor of the cloud itself, we suggest, its ruins dissolve from the public view and imaginaries leaving a semiotic absence of expressions and affect, while paradoxically enduring in remote places through their anonymous physical form as an imposing reminder of the global fantasies that tend to imbue digital infrastructures with meaning and value. These places, often shielded from view or forgotten in urban peripheries, are a crucial part of the global infrastructural supply chains that produce our contemporary understandings and experience of digitalisation, within which the temporalities of the digital take on a different significance in their development and aftermath.

**Digital ruins: chemical, virtual, infrastructural**

In theorising the material sedimentation of digital technologies, two tropes have recently crystallised. One of them approaches ruination at an elemental level, as part of a larger
enquiry into media materiality, or medianatures (Parikka, 2012) within a broader turn in
the humanities and social sciences to ‘new materialisms’. The premise there is that the
materiality of digital objects leaks in many directions and concretises in formations
such as electronic waste, new chemical fossilisation in the Earth subsurface, or new re-
compositions of minerals all the while being abstracted into algorithms, data, or visual
imagery. Ruination with digital technologies takes in these cases the meaning of the
ruined health and environment for those workers in the Global South who daily confront
and inhabit the growing piles of dissolving electronics, batteries, gases, and plastics that
used to compose into digital objects, but in their discarded, devalued afterlife get shipped
to backyards or factories where they are left to degrade or make up for new forms of liv-
ing (Cubitt, 2017; Gabrys, 2013; Maxwell & Miller, 2012; Mukherjee, 2017).

Another trope spins back on the understanding of digital objects as immaterial and
identifies the formation of virtual digital ruins in the form of abandoned, yet fully-func-
tioning spaces of mediated sociality, such as online virtual worlds and game environ-
ments. Connecting such virtual spaces to discussions of post-industrial ruination,
Miller and Garcia (2019) suggest that digital ruins are to be understood as an absent pres-
ence, not easily found in everyday life. Marginalised from the flows of algorithmicised
traffic on the web, they exist in a temporal stasis, ‘an eternal presence’ (Miller & Garcia,
2019, p. 440), saturated by the material abundance while remaining unwanted, depre-
ciated, and abandoned. In this conceptualisation, digital ruins are not about an environ-
mental or human degradation or breakdown, but about the arrival of digital entities to a
state of contextual irrelevance.

In both these tropes, ruination emerges as an effect of a seemingly natural temporal
progression of the ‘life’ of digital objects – from a state of production and use, to their
afterlife as decomposed or socially abandoned entities. But, the temporal horizon –
and use – of technological infrastructure is non-linear. It ebbs and flows, and tends to
be one far less smooth than dominant technological discourses of ‘speed’ and ‘obsoles-
cence’ (Burrell, 2020). From what globalisation theorists identified as ‘space–time col-
lapse’ (Harvey, 1990) to the ‘real-time’ and ‘just-in-time’ modes of production across
today’s simultaneously dispersed and accelerated supply chains (Andrijasevic, forthcom-
ing), it is crucial to keep in mind the actual operations of spatial and labour exploitation
on-the-ground through digital technologies.

While technological devices are, on the one hand, supporting an economy reliant
upon simultaneity and real-time communication across vast distances, the speed and
scale of technologically-driven capital also requires production and circulation appara-
tuses that organise material supply chains across space, necessarily leaving a trail of dis-
card that operates on far different timescales. This is true across the more environmental
considerations brought up above as well as within the future-driven promises they rep-
resent. For instance, computer components leave toxic remnants in soils and bodies for
decades, while local communities experience the development of infrastructure as a slow,
protracted, and frustrating process (Carse & Kneas, 2019) and its aftermath and aban-
donment similarly. Munn (2020) terms the production of such temporal disjunctures
as processes of temporal arbitrage of capital, when the value of digital commodities
and infrastructures is achieved by means of mediation and ‘compression of durations’
that turn time into a ‘material to be leveraged, a productive hinge that fosters both
accumulation and dispossession’ (2020, p. 48). Temporal arbitrage, especially in this
case, is unevenly experienced (see Sharma, 2014), intensifying spatial, corporeal, and
temporal inequalities which are required for the ‘always on’ mode of connectivity associ-
ated with modern economies (cf Adam, 1998). In the case of digital infrastructures, as
companies must adapt their global operations, dispersed across a variety of localised
nodes, to fluctuations of the market and slim profit margins, their operations also
leave behind abandoned, large-scale, capital and energy-intensive infrastructures.

These temporal logics of capital expansion are certainly not new – they are at the heart
of neoliberal globalisation (Harvey, 2001; Smith, 2010). As Harvey famously wrote, capi-
tal grows through time–space compression, or the temporal intensification and accelera-
tion of exchanges that in turn depend upon the creation of fixed, immobile
infrastructures at particular places. Yet, the very fixity of these infrastructures eventually
slows down capital and requires their devaluation, abandonment, and destruction in
order to make way for new paths of accumulation. But thus far, theorised objects of
spatial excesses and infrastructural abandonment have seemed to belong largely to the
pre-digital industrial era: closed factories, empty warehouses and silos inland from
now-containerised ports, decommissioned nuclear power plants and mining pits.
These spaces have left behind local communities negotiating industrial decline and its
aftermath (Mah, 2012) and multifarious ‘scars’ (Storm, 2016) in the built environment.
But just as industrial ruination emerged from restructuring of the global economy,
including through automation and digitalisation, we need to account not only for the
afterlives of these environments, but also for the new meanings of ruins within cycles
of capital accumulation that may still feel here and now, including financial (Kitchin
et al., 2014) and, increasingly, digital ruination. What is at stake is not necessarily under-
standings of past and futures, but continuing strategies and practices of meaning (and
value)-making in the present that constitute the endurance of both localised relations
to infrastructures and more large-scale determinations of power (e.g., Mukherjee,
2017; Stoler, 2008).

Seemingly restoring the value of abandoned factories and urban infrastructure, global
tech corporations emerged from within these past ruined landscapes with the promise of
renewed local development by either converting parts of the derelict built environment
into data centres, or by building new imposing data storage buildings that would tell the
story of a future prosperity with data and digital communications (Jacobson & Hogan,
2019; Johnson, 2019; Vonderau, 2017). Emplaced in often rural locations, data centres
have been vital for intensifying processes of value production from data aggregation,
shaping new modalities of capitalism built around ubiquitous surveillance. As the real-
time mode of this data economy tries to further push time–space boundaries towards
pre-emption and speculative anticipation of value (Andrejevic, 2020), so do the geogra-
phies and material infrastructures that support these flows need to be calibrated and
develop in anticipatory and speculative fashion.

The sudden and rapid closure of Ericsson’s data centre in Vaudreuil-Dorion invites us
therefore to consider the form and politics of a new iteration of industrial ruination, one
in which still emergent, digital built environment itself is rendered into ruins, by the digi-
tal tech industry abandoning or decommissioning its own infrastructures of communi-
cation meant to enable digitalisation. These, as we show further in our analysis, reconcile
different features of ‘virtual’ and material ‘digital ruins’ and yet inflect them differently, in
a novel configuration.
Suspended optimism

For the residents of Vaudreuil-Dorion, the Ericsson data centre transformed from a promise for local development through digital enterprise into a ruin literally overnight. On 20 October 2017, ten months after the facility had become operational, the local media broke the news of its premature closure with headlines such as ‘Already the end…’, and ‘Ericsson closing its $1.3-billion facility in Vaudreuil-Dorion’, contrasting with the relatively recent news that had celebrated the inauguration of the facility. The news about the closure had come as a surprise for both the media and the community after four years of the same media and municipal administration boosting the importance of the project through extensive local media coverage, public funding in the form of significant tax reductions, and authority and legitimacy crafted through photo sessions in which local politicians posed alongside Ericsson representatives in front of the construction site of the building. Overnight, all these efforts by the local community had lost meaning, causing confusion and surprise in Vaudreuil-Dorion.

Large-scale global infrastructures like data centres do not simply arrive in a place fully formed. Like other media buildings such as newspaper publishing houses, they make up both places and their publics (Wallace, 2012). Vaudreuil-Dorion appears today as a suburb of Montréal, with a smattering of shopping centres, residential cul de sacs, cultural and leisure businesses overlooking the lake, and research and distribution centres clustered away in industrial parks. Vaudreuil-Dorion supports many industries in the nearby metropolitan centre, and has been incentivized by the local and provincial government as a logistics hub within the heavily trafficked and populated corridor between Montréal and Toronto (Kramberger, 2015) due to its strategic location off both highway and rail transport links. Like other areas encircling contemporary urban formations whose economic function is to act as ‘logistical cities’, the region surrounding Montréal is saturated not only with the usual industrial warehouses but with tech service centres and other infrastructures supporting expanding digital, ‘smart’ economies. If Montréal appears as a hub of soft tech, with booming AI and machine-learning clusters built on both locally trained talent and global companies, the ring of smaller communities around it has quickly turned into an emergent infrastructural backbone supporting future tech, largely through establishing the so-called ‘hyperscale’ data storage and computation halls whose size is measured in hundreds of megawatts of electricity consumption.

Data centres, unsurprisingly, have come to be regarded as strategic within province-wide investment and enterprise strategies at state and corporate levels, most notably evidenced by the semi-state energy provider and grid operator, Hydro Québec, setting up a specialised task force for attracting data centre investment (Hydro Québec, n.d.). The centrality of the tech industry in Montréal proper has pushed smaller communities in the area into a competition with the larger metropolitan region over attracting big tech investment. Vaudreuil-Dorion was proud to attract Ericsson as far back as 2013, locally pioneering on this front several years ahead of the French multinational OVH-Cloud getting a brownfield site in Beauharnois for their North American expansion in 2016, Google opening a hyperscale data centre in the Montréal area in 2018, and the south-eastern suburb of Varennes hosting a data centre by Amazon Web Services also in 2018.
The opportunity to host a new extension of Ericsson’s digital infrastructure appealed to the local community in Vaudreuil-Dorion, which also saw itself becoming part of the knowledge capital and tech infrastructure of Ericsson that has resided in Canada since 1953. Hosting Ericsson’s data centre evoked a sense of global significance to the suburb in the shade of the nearby metropolitan centre, as the area spent the last few decades adapting to the demographic and industrial changes that came with suburbanisation. The local Vaudreuil-Dorion Action Party and a local municipal community development project called Je Suis … aimed to simultaneously encourage social cohesion and cultural diversity in the city, and mobilised the arrival of the Ericsson’s data centre as a banner for local development. In a publicity document from 2014, the Je Suis … project indicates that such projects ‘have helped to build a better quality of life for … residents and in doing so … have made [Vaudreuil-Dorion] a more attractive option for companies. The $1.3 billion dollar investment announced by Ericsson, for instance, is in part a direct result of the transformations undergone by the City’ (Agenda21culture.net, 2014).

The anticipated 40,000 square-metre complex that Ericsson would build was proclaimed as the largest investment ever made in Quebec’s high-tech sector, boosting optimism in Vaudreuil-Dorion, which felt obliged to reciprocate in order to show the mutual confidence in the project. The city offered Ericsson a five year, 2.7 million CAD tax-exemption package, and reports assert that the provincial government was prepared to provide upwards of 30 million CAD in total advantages over the first ten years of operation (Kramberger, 2017). Hydro Québec committed to extending its electricity grid by making a dedicated power line directly to the new building to ensure enough energy capacity for servers and other telecoms equipment, in addition to offering discounted electricity rates. Despite some local opposition to such forms of local financial and infrastructural support, it was seen as a necessary concession for the community to build its identity as a regional actor in the global tech industry, as noted in the media coverage of that period. For instance, the Financial Post wrote how ‘Quebec competed with China, other Canadian provinces and Ericsson’s home base – Sweden – for the centre, Ms. Marois [then premier of Québec] said. Critics decried the government’s financial backing as yet more unnecessary corporate welfare, but the premier insisted “Quebec ends up a winner here” on a net basis’ (Van Praet, 2013). The ability of the local community to mobilise these resources to attract Ericsson co-produced the regional significance of the project.

In light of these local readings of Ericsson’s plans to build a data centre in Vaudreuil-Dorion, and the economic concessions and infrastructural accommodations that the local public administration provided, its premature closure seemed sudden, inexplicable, and baffling. But in hindsight, there were already indicators of Ericsson’s changing strategic and managerial considerations during construction: after promising a 40,000 square metre building to open in early 2015, the finished building was half the size and delivered over a year late in 2016. These events also become less surprising if seen as reactions and sense-making practices of Ericsson’s carefully staged communication and PR that surrounded the project, through which it alluded to the global significance and anticipated permanence of the building in Vaudreuil-Dorion, but never really promised much to the local community beyond scale, attention, and investment. As it turned out, the scale guaranteed by Ericsson was also part of the project’s undoing, as the company’s global strategic considerations trumped localised promises.
Since 2013 Ericsson had set on a course to re-organise the work of its globally dispersed research and development staff by channelling it through its own, custom-built proprietary ‘cloud’. Much of the detail about this expansion has been veiled in secrecy, with the company only occasionally communicating about it through press releases, such as when it reported that it had invested more than a billion CAD in the construction of a network of large-scale data centres which would be inaugurated in the course of three years, between 2015 and 2017. Using a range of symbolic and rhetorical means, the corporation built up anticipations, public support, and legitimacy to its three new infrastructural developments in Sweden and Canada. For instance, the public name of the project – Ericsson’s Global ICT Centres – did not directly allude to data storage, but evoked associations with digital technologies, knowledge capital, and a sense of globalism. Video shots circulating on YouTube featuring the former Swedish minister of finance endorsing the project gave legitimacy and trust to this emergent network of interconnected – and aesthetically identical – ‘cloud’ sites. Featuring prismatic, easily scalable white, walled facades, the Swedish architecture firm hired to design all three sites sought to convey a sense of permanence and classicism across a dispersed network: ‘working with simple forms and using classical designs will make it timeless’, one of them commented in an interview with Velkova (Figure 1).

The prismatic walled facades of semi-transparent white perforated steel were intended to evoke a sense of transparency and completeness, while remaining visually impene-trable, covering-up the messiness and unfinishedness of the construction works behind and obscuring details perceived as ugly or amodern, such as carbon-emitting diesel generators. Instead, local features that further reinforced ideas of futurity had been rhetori-cally mobilised. For example, the Swedish node of the data centre network was proclaimed as a contribution to the future de-carbonisation of Stockholm as it supplied excess heat to the urban district heating system. Its Québec counterpart was in turn presented as energy efficient and powered by renewable energy that would come through

Figure 1. Prismatic wall surrounding Ericsson’s data centre in Stockholm, Sweden. Image: Julia Velkova.
Hydro Québec’s new power line (Bruns, 2014). As Wallace (2012) argues with the example of the architecture of the print press industry’s buildings in New York, new media buildings are symbols of success and promise, they tell a story of power and stability, transparency, and faith in new technology even when the ledger does not (pp. 9–11). In the case of Ericsson’s data centre in Vaudreuil-Dorion, the designs and plans for a grand building told the story of trust in the capital and multiple future-orientation of the company, even when the product that these buildings were supposed to enable was still largely unclear and in the making.

The media and public administration in Vaudreuil-Dorion reiterated the promise of the building by overemphasising its great size (equal to 8 football fields), the great investment that Ericsson made to build it, and the fact that it was complementary to the two sites in Sweden. These large-scale and global emphases built up assumptions about the implicit value that such a grand project must have for the local community, alluding to jobs and tax income in the long-term future. The sudden bust of these anticipations by the announcement of Ericsson’s closure was met by surprise rather than anger by the community in Vaudreuil-Dorion mostly because it made these interpretations seem misguided rather than because an actual promise had been broken. Vaudureil-Dorion’s mayor, Pilon, while disappointed, even wished Ericsson luck in their future endeavours in the subsequent media coverage.

As becomes clear when tracing the contours of this case, a variety of local and regional actors were involved in generating and reproducing the sense of promise that came with such a large-scale, global investment opportunity. Read as a cluster of promises for Vaudreuil-Dorion, the data centre project thrived upon what Berlant (2011) calls ‘cruel optimism’, or ‘the condition of maintaining an attachment to a problematic object in advance of its loss’. Such forms of affective attachment underpin the everyday reality of small localities whose existence is defined by a sense of marginality and economically dependent upon forms of potentially harmful development. As Burrell (2020, p. 287) argues in the context of a half-built Facebook data centre in rural Oregon in the US, local leaders recognise the limits of their abilities to act in the face of the opportunities presented by powerful companies, with their only alternative remaining to act as hopeful agents in the limited ways available to them. Molotch (1976) contends in his theory of the ‘urban growth machine’ that emerging ‘urban’ communities are often nested within various interests across scales. But unlike the often ‘public’ projects that Molotch speaks of in his foundational article, such as parks and traffic lights, digital capitalism is far more dependent upon privatised and often global ventures. Investing in a data centre with hopes for development is ‘cruel’, then, because even if built in part with local public funds, it is administered by a global technology corporation leaving the faith of the ‘urban growth machine’ to its business strategies.

At the global scale that Ericsson works within, the steep paths between communities and even regional development projects become far more difficult to ascend, as public decisions are being made in deference to the needs and goals of private sector finances and supply chains. Any public responsibility, even tokenistic, dissolves at the point that profit margins are jeopardised, and yet regions and communities still invest hope in these gambles. The perceived structural necessity of large-scale investment leaves places subject to the accelerated cycles of technological development, which are experienced more as the ebb and flow, boom and bust of hope, opportunity, and disappointment.
Forgetting in the aftermath

In the winter of 2020, Brodie visited the site in Vaudreuil-Dorion to explore what was left of the Ericsson’s data centre three years after its closure. It was a cold, grey Saturday in February, with snow blanketing the landscape. The Ericsson facility, in spite of its ostentatious design, sat comfortably within the surrounding distribution centres and warehouses of the quiet suburb. An empty field across the street, part of the surrounding industrial park, seemed primed for development. On the other side of the field was a suburban community and a small outdoor hockey rink, which offered an excellent vantage for a photograph of the data centre and its surroundings (see Figure 2).

When the social life of urban industrial infrastructures comes to an end, highly encoded and regulated spaces open up for weird encounters, imaginative interpretation, and transgressive possibilities (Edensor, 2005). Such was Brodie's experience of the Vaudreuil-Dorion site. There was a single car in the car park, which was of course inaccessible to Brodie behind a gate. Parking on the street, which was mostly empty on a Saturday, Brodie approached the guard station, which had signs printed on printer paper and scotch taped up to the glass: while none of the signage indicated any names or ownership, there were a variety of phone numbers to call for anyone who wanted to visit or gain information about the site. Brodie speculatively pressed the security buzzer and was surprised to receive an answer on the other end. Speaking briefly with the guard, Brodie asked who occupied the site, and the guard would not say. He asked who Brodie was, to which he replied that he was a researcher interested in data centres. The voice, however, quickly turned hostile as the conversation progressed. The guard threatened Brodie with legal action if he took any photos of the premises: ‘We will find you. We will follow through’.

Figure 2. The ruin of Ericsson’s data centre facility in Vaudreuil-Dorion in 2020.
Such clearly overbearing security tactics seem at odds with the idea of the data centre as a pillar of community investment and development. Against the idea of a somehow ‘transparent’ structure representing the opposite of a typical ‘black boxed’ digital infrastructure, the new management had re-inscribed a kind of hostile and secure enclosure around the facility. In 2018, Ericsson had quickly sold the site to the US real estate firm GI Partners, only months after the public announcement for closing down the site. In the interim, the new owners of the space clearly had adopted an entirely different corporate strategy towards the community. If a researcher from a local university was threatened with legal action for asking honest questions at the site, which even advertised phone numbers to speak with representatives about it, how could this infrastructure possibly interact positively with more local community members? These phone numbers were clearly there for potential buyers, investors, and clients, and not for the purpose of information sharing, contrary to the original purpose of that very same infrastructural building. Communities become stranded when they hitch wagons to companies responding to a volatile market, however much these companies claim to represent stable and prosperous futures – and even when these infrastructures remain, they often operate behind doors closed to all but a few.

Resonant with Edensor’s (2005) insights about the transgressive and disruptive experience of actually visiting ruins, Brodie encountered several pieces of brightly coloured but clearly unused contemporary furniture scattered outside the entrance, a clear remnant of when there was more than one employee on site. The strange and hostile encounter with security contrasted with the mundaneness of the surroundings, as the building seemed a spot of inactivity amongst an otherwise busy logistical suburb. Residents did their shopping, went out to eat, played hockey, and ice fished and kite boarded on the frozen lake, against the Ericsson ruin in the background. The total absence of indication that the data centre was at all significant, from the ongoingness of everyday life to the clearly intentional lack of signage, seemed to have relegated the once ‘eventful’ site out of the public eye and back into the arcane global processes of technological and finance capital. The speed that had accelerated the site towards ruin continued to carry its investors’ concerns far into the future, but in the present, it remained a glossy remainder on the landscape of Vaudreuil-Dorion.

Few people in Vaudreuil-Dorion wanted to talk about the site in the aftermath of its closure. Speaking with a representative from Hydro Québec about their supply line project for Ericsson, Brodie asked whether it would be possible to receive information as to whether the data centre was still using the energy that had been predicted. The representative spoke with his superiors, and it was concluded that any information on energy usage could compromise the privacy of whoever still owned and operated the site. Trade secrets could be gleaned from how much power was being drawn – in spite of its operation on a public grid, and even when a facility is already dysfunctional. Municipal offices were similarly silent, although for different reasons. We contacted them after the first wave of the covid-19 pandemic in Montréal, when it must be imagined that local government had bigger concerns than researchers interested in an apparently no longer functioning data centre. One single call back, received from a municipal official just before the pandemic, also failed to generate a response. When Brodie returned the call (repeatedly), there was no answer.

In the wake of this silence, the community of Vaudreuil-Dorion seems intent on forgetting. In spite of wishing Ericsson luck, Mayor Pilon also expressed deep
disappointment in the company’s withdrawal, and these statements on the matter have been removed from the municipal website. In the aftermath of the closure, various local press write-ups argued that because Ericsson had not fulfilled their promises, their tax holiday would be revoked, and this would bring significant revenue into the municipalities’ pockets. Mayor Pilon was quick to assure everyone that Ericsson would be compelled to repay their tax breaks and that not many local jobs had actually been lost – of the 50 or so workers employed at the site, very few had been living in Vaudreuil-Dorion, demonstrating that in spite of promised jobs and ‘ripple effects’, most of these benefits are difficult to measure at best, and chimeric at worst. After Ericsson withdrew, there was little the municipality could do except claw back the initially forgiven tax revenue, which was not insignificant (over 1 million CAD). On social media and in the local presses, residents expressed similar disappointment, bordering on bitterness, but there was also eagerness to move on from the whole affair. From 2018 and onwards, references to the data centre entirely disappeared from the public discourse and materials available to us, losing its news value as it turned into a thing of the hyper-recent past.

As Ericsson’s Vaudreuil-Dorion data centre evaporated from the medial politics of attention, folk theories about the occupancy and status of the abandoned site proliferate. Media reports assert that Ericsson maintains a physical presence in the building, leasing back from the new owners ‘a portion of the facility’s critical power and space on a short term basis for development of its cloud-based technologies’ (Baxtel, 2018). Other brochures tell us that vague multinational Stream Data Centres is now in charge of the building (‘Hyperscale Data Center – Montreal’, n.d.), in spite of no evidence of this elsewhere than on Stream’s website – a link to the company’s site, backslash Montréal, leads straight to the company’s home page, and Montréal is then not an account listed in their holdings. A comment on Facebook, underneath a newspaper article about the Ericsson facility’s closure, suggested that Amazon Web Services should take over the site, as they have been expanding their infrastructure region in Montréal over the last few years, including building the abovementioned data centre in Varennes and renting space from other undisclosed colocation companies. It becomes clear that enduring formations of power – in terms of control by multinational corporate interests with little local input or transparency – structure the ‘cloud ruin’ in Vaudreuil-Dorion.

Confronted with the lingering residual forms and relations after the media attention has gone away, all that is left of incomplete and abandoned data centre projects is the possibility for speculation from their ruins (Brodie, 2020, p. 23), much like with their potential promise. Hidden in the server stacks, and against the story of ‘transparency’ offered by the facility’s design and construction, Ericsson purportedly continues to rent server space, the only client reported at the site. At the time of Brodie’s visit, the cloud in Vaudreuil-Dorion seemed both present and evaporating, both states embodied in the remainders of the giant building in the suburb that still stands out with its prismatic white facade telling of eternal tech progress and frustrating obscurity.

Cloud ruins

Infrastructural ruins of post-industrial development are often associated with a particular social afterlife – they tend to give rise to memory practices and remembering which
occasionally could push them to be re-evaluated as objects of modern heritage, pleasure, or entertainment (Edensor, 2005; Olsen & Pétursdóttir, 2014). At other times they persist as absences and remembered anticipations of never-arriving futures. In the spirit of fast-paced, speculative supply chain capitalism, the ruins of digital communication infrastructure as the case we explored tells, seem too fast to remember, too empty of content despite its spectacular form to evoke a sentiment or need for local remembering. As modern ruins, they are fast, ‘sometimes too fast’ (Olsen & Pétursdóttir, 2014, p. 6). Lingering ‘in spite of’ the structural scale of market events under neoliberalism, ‘optimism’ and ‘hope’ could still be negotiated at communal level through enduring ways of life unaccounted for in global capital, writes Berlant (2011). But in the world of fast-paced digital capitalism that is further sped up through the infrastructures of the ‘cloud’, there is no time nor space for such negotiations.

Bringing the slower textures of community goals and concerns into the fold would require time, a scarce resource that can hardly be mobilised while awaiting a new buyer, especially with narrow profit margins made even more slim by the digital technology market’s accelerated paths to obsolescence.

Against the bleeding edge of digital obsolescence, as Chun argues (2017), what matters most is not what replaces, but what and how things remain. If data centres point to the places ‘where the “cloud” touches the ground’ (Holt & Vonderau, 2015, p. 75), their articulation as cloud ruins tells both of the affective and elusive dimension of ruination with the digital. Digital ruination materially persists in buildings that still ‘spit image’ with their futuristic form and discourses, while remaining empty containers of the equally empty promises they had given rise to, seemingly frozen in time – kept secure in their emptiness and dysfunctionality. Cloud ruins articulate the pace of acceleration and performativity within a single set of industries, driven by the profit of the here and the now, an immediacy that requires enormous infrastructural apparatuses and even more destructive externalities and supply chains. Instantly forgotten both by their producers and as our empirical case suggests, their hosting communities, these externalities are left to linger in peripheries, ‘logistical cities’ rather than urban cores (Rossiter, 2016), for years to come, contextually irrelevant and yet persisting with their materialities and scale. The frequently occluded operations of these industries mean that their remainders risk being experienced in the same way, whether in terms of pollution, waste, or abandoned buildings. More so, the anticipatory economy of the now and the future that governs the construction of these facilities makes them into ruins already while operational – surrounded by a barren landscape of gravel, the handful of workers who are emplaced in them are already confronted with the need to cope with senses of abandonment, and emptiness (Velkova, 2020).

While we have engaged in our analysis with just one case among a burgeoning landscape of ‘cloud ruins’, it is to make a point about the analytical value in addressing infrastructural aftermath with digital infrastructures such as data centres, rather than falling into the more familiar tropes of approaching new media through a focus on its emergence. Bound to an atmospheric logic of digital immateriality, associating the cloud with ruin requires a stubborn grounding in sited relations and persisting materialities. As accelerated tech capitalism continues to produce infrastructures with an understanding and embeddedness of their economies of obsolescence into the built environment, we are bound to see more of these cloud ruins. Sometimes they will materialise as abandoned
infrastructure, at other times perhaps as half-built assemblages (Burrell, 2020) or as projects that never got traction to be built (Carse & Kneas, 2019). At other times they will remain lingering as affective absences and gaps of unfulfilled dreams for development that barely manage to take form before they burst and dissolve, cruel remains of social ‘optimism’ directed towards global capital. To conclude this article, we want to ask: who is going to care about these sites and temporalities of ruination if there are no communities nor workers who want to remember them? Or, perhaps more urgently for communities affected, what happens when the promises made by powerful companies, backed by enormous volumes of capital, turn out to be empty, and these buildings become what many scholars and activists fear: mechanical sheds, employing very few people, and using enormous amounts of energy? Because as is clear, delivering infrastructures just-in-time does not function in the same way as, for example, building workforces to support them, or building skills and capacity in certain areas, as these infrastructures are supposed to do. These ruins embody both the dissolved promise of economic development and the fantasies for development perpetuating the digital economy.

As they fall into forgetting, affectively disappearing from the public imaginary, it remains a project of scholarly work to excavate and engage with the multiplicity of industrial ruins of the cloud and digitalisation. As Burrell (2020, p. 292) tells us, ‘Stasis, partiality, and incompleteness, and consequent judgments of failure (or success) depend upon one’s historical vantage point. When we look back we see a completed assemblage, but must recognise it as one that took several decades to be realised and that it was never inevitable’. As we have argued, seeing ruins in this way overlooks their fundamental indeterminacy, and the different ways that temporalities of obsolescence create fleeting kinds of intensity within the particular spaces of these projects. Engaging with the unknowability and incompleteness of projects such as this is not to admit defeat and move on – rather, we are continuing to engage a perspective that refuses to let these places slip back into the ether of global capital. There is still a data centre in Vaudreuil-Dorion, and it may still operate, hosting data and funnelling capital for multinational tech and real estate interests, and this deserves attention.

Notes

1. We gathered the empirical material for this article at different intermittent periods between 2018 and 2020, after Ericsson withdrew from their high-profile Canadian expansion. The outbreak of the global covid-19 pandemic challenged and partially limited our contact with local workers and residents who had a relation to the data centre.

Acknowledgements

The authors would like to thank special issue editors Aphra Kerr and Jonathon Hutchinson for their tireless work getting the issue together in spite of a global pandemic, and the anonymous peer reviewers for their feedback.

Disclosure statement

No potential conflict of interest was reported by the author(s).
Notes on contributors

**Patrick Brodie** received his PhD from Concordia University, and is currently a FRQSC Postdoctoral Fellow in the Department of Art History and Communication Studies at McGill University. His research focuses on the geographies and politics of media infrastructures, and his writing has appeared in *Media, Culture and Society, Culture Machine, Environment and Planning E: Nature and Space, among other venues.*

**Julia Velkova** is an assistant professor in Technology and Social Change at Linköping University. Her research focuses on media infrastructures, data materialities and the intersection of digital economies with energy politics. Her work has been published in journals such as *New Media & Society; Media, Culture & Society* and *Big Data & Society.* She is currently co-editing the book *Media Backends: Digital Infrastructures and the Politics of Knowing.*

**ORCID**

Patrick Brodie [http://orcid.org/0000-0001-5359-754X](http://orcid.org/0000-0001-5359-754X)
Julia Velkova [http://orcid.org/0000-0002-1643-7392](http://orcid.org/0000-0002-1643-7392)

**References**


