Geography &
Spatial Planning

Digital urban development – How large digital corporations shape the field of urban governance (DIGI-GOV)

Project summary

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Abstract

DIGI-GOV is a research project that aims to understand (I) the role of large digital corporations (LDCs) in digital urban development, (II) how the presence of LDCs in urban planning practice challenge pre-existing modes urban governance, and (III) how LDC-led urban development constitutes a new relational geography of digital cities. DIGI-GOV is thus a chance to call attention to this critical shift in the ways that contemporary digital cities are constructed, planned, mediated and governed. DIGI-GOV expands on prior research that examined Alphabet Inc.'s digital city project in Toronto that raised a number of important issues for urban planners, development practitioners, and urban studies scholars – even if this particular digital city project was ultimately unsuccessful. DIGI-GOV expands this research because the range of services that LDCs provide has increased in both volume and centrality; more and more public and private institutions rely on LDCs for essential digital infrastructures. There is an urgent need to study the trajectories of urbanization that are rolled out under the leadership of LDCs and the tensions in urban governance that are unleashed. DIGI-GOV will shed light on four further cities in addition to Toronto, which have been challenged by the presence of LDCs—namely, Seattle, Arlington, Bissen, and Eemshaven. The selected cities are some of the few exemplary cases available where LDCs have secured their position in the local urban field. Through qualitative methodological approaches, DIGI-GOV will tease out how these cities are relationally connected through LDC-led urban development, and what scholars and practitioners can learn from these experiences. Examined together, one can scratch at the surface of, and unearth, this new emerging relational geography.

Keywords

digital cities / urban governance / cities / digital institutions / large digital corporations

Funding

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Institutions

DIGI-GOV is housed at DGEO's Urban Studies group led by Prof. Markus Hesse. DIGI-GOV also receives institutional support from the CITY Institute, York University.

Introducing DIGI-GOV-

A new research direction

DIGI-GOV is a research project that aims to understand (i) the role of large digital corporations (LDCs) in digital urban development, (ii) how the presence of LDCs in urban planning practice challenge pre-existing modes urban governance, and (iii) how LDC-led urban development constitutes a new relational geography of digital cities. Seated at the Department of Geography and Spatial Planning (DGEO) of the University of Luxembourg, DIGI-GOV is a chance to call international scholarly attention to, and raise awareness among local practitioners concerning, this critical shift in the ways that contemporary digital cities are constructed, planned, mediated and governed.

DIGI-GOV was conceived as an expansion to "Digital Urbanism and the Challenge of Urban Governance (DIG_URBGOV)," a project led by Constance Carr and Markus Hesse that examined Alphabet Inc.'s digital city endeavours in Toronto. In 2017, the peri-governmental body, Waterfront Toronto (WT) (Desfor & Laidley 2011), announced that it had procured Sidewalk Labs (SL)—one of Alphabet Inc.'s moonshot companies and sister to Google—to build a state-of-the-art digital city along its quayside (figure 1). The announcement unleashed a media storm worldwide (Carr & Hesse 2020a/b). It also raised the attention of urban scholars who wondered why one of the world's most successful LDCs with an annual advertising revenue of, at the time, ca. 110 billion (Alphabet Inc. 2017; Fuchs 2017; Glowik 2017) was suddenly interested in urban real estate (Carr 2018). Inspired by the "digital turn" (Ash et al. 2015) in urban geography, urban governance, market-led land use under growth pressure, and sustainability

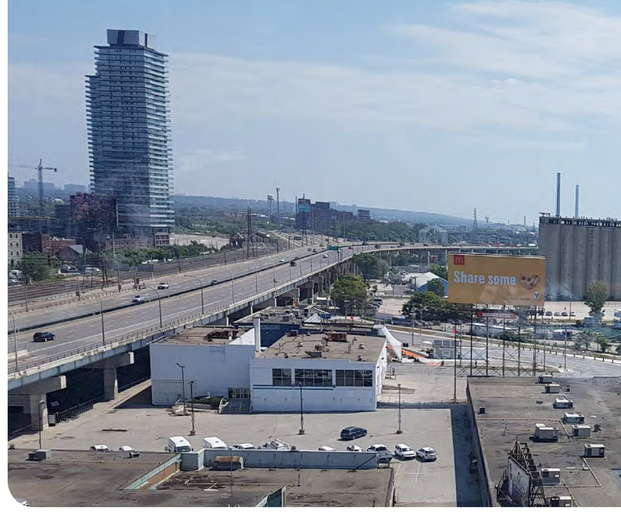

Figure 1 Looking over the Quayside property (photo from Carr, 2019)

normatives in urban planning (Carr et al. 2015; Krueger & Gibbs 2007; Krueger et al. 2018), DIG_URBGOV examined how this process unfolded and what the impacts were on Toronto's pre-existing modes of urban planning and urban governance (Carr & Hesse 2019). This work was generously supported by DGEO, and the CITY Institute, York University.

DIGI-GOV expands on this research because the range of services, platforms, technologies, and innovations offered by LDCs is increasing in both volume and centrality, as more and more institutions, public and private, rely on these for essential digital infrastructures. This trend impacts not only the palate of technologies that the future digital city might provide, it also challenges both urban governance and socio-political and intuitional patterns that characterize contemporary urbanity. The involvement of LDCs in urban planning is not without risks (ibid. 2019d; Goodman 2020) and the ramifications can be severe. There is thus an urgent need to understand how these processes progress, the trajectories of urbanization that LDCs are steering, and the associated risks for urban society, especially in regards to protecting both open markets and democratic process.

DIGI-GOV will examine further into LDC-led

development along Toronto's waterfront as there are still valuable lessons. DIGI-GOV also adds a comparative dimension, expanding research into other locales where LDCs have challenged pre- existing urban planning and modes of governance.

DIGI-GOV will visit Seattle, and examine the impact that Amazon's first headquarters (HQ1) had on the city. The research team will then look to Arlington and examine the implications of Amazon's future HQ2. In Europe, DIGI-GOV will also look at the impact that Google's data centre had on Eemshaven, while at the same time examining the implications of another upcoming Google data centre in Bissen. One can conceive of these as forerunner cities (Seattle, Eemshaven) and learner cities (Arlington, Bissen) respective of the form of LDC involvement. These cities also represent the visible (digital city products) and hidden dimensions (infrastructures) of digital city building. In each case, DIGI-GOV will aim to sort out the tensions in urban governance that were unleashed. Examined together, one can scratch at the surface of, and unearth, this new emerging relational geography.

Conceptual background - How urban studies deals with smartness

"Smart cities" has become a hegemonic concept in urban development and planning because new technologies can revolutionize how cities are organized and function. The palate of new technologies, digital services, platforms, digital management systems, prediction models, facial recognition technologies, artificial intelligence and machine learning, big data, and the "growing role of data analytics and sensors in urban life & quot; (Goodmann 2020, 2) all signal what Ash et al (2016) have called the 'digital turn': that is, urban geographies produced by, though, and of the digital.

Urban studies scholars address this turn not by simply evaluating the pros and cons of a particular technology or assessing needs and matching solutions; Rather, they focus on the socio-political patterns and consequences that constitute this turn. The aim is to understand the relationships of urban development, urban planning practices and politics, and technological innovation. This literature is booming (Ash et al. 2016; Barnes 2020; Carr 2018, 2019a/b; Carr & Hesse 2020a/b; Coletta et al. 2019; Glasmeier & Christopherson 2015; Goodman 2019; Graham et al. 2019; Hajer 2015; Hollands 2008 2015; Karvonen et al. 2019; Karvonen et al. 2020; Kitchin 2015; Raco & Savini 2019; Shelton et al. 2015).

One of the major outputs of this body is the understanding of unexpected externalities of urban digitalization. Some say that it raises questions about the fundamental organization of urban space:

> "The creation of smart cities raises a whole series of social, political and ethical questions. These include concerns about profit being placed before people and the environment, widening of inequalities between citizens, a loss of rights, and the erosion of democracy, fairness, justice and accountability, the privatisation of public assets and corporatization of surveillance, the application of predictive profiling and social sorting to deliver differentiated services, and a transfer of risk and liability form the private sector to the public sector. In turn this raises normative questions about what kind of city to we want to live in" (Graham et al. 2019).

Some would rush to call such a standpoint as anti-tech; Others snap "Luddite!" However, this position is both strategically inaccurate and misses the point: The triangle of technology, urban planning and politics is not new nor trivial.

Institutions matter for urban governance

LDCs are a relatively new institution in the field of urban development and are playing an ever increasing role, which has only hastened since the COVID-19 crisis. DIGI-GOV addresses the still unknown implications on urban governance.

It has been well documented that cities are increasingly integrated into global production networks in globally-integrated international industries, and there is the ever increasing influence of corporates inside a neoliberal and competitive mode of urban politics (McCann 2017), as Macleod vividly describes, cities are,

> "glittering commercial citadels [...] of iconic development [... with ...] globally mediated bidding process[es] to host prestige exhibitions [...] and events [... transforming ...] former industrial inner-city zones into mixed-use creative cultural quarters, buzzing economic districts, heritage and tourism villages and gentrified apartments [...] orchestrated by state-led coalitions and special-purpose agencies whose aim is to boost urban economies amid a quicksilver globalising capitalism" (MacLeod 2011, 2630).

The presence of LDCs does not challenge this; rather, new arrangements in urban governance are invoked. Raco & Savini (2019) call it: "technocracy." The objective of DIGI-GOV is to contribute to the knowledge based that conceptualizes digital urbanism and the possibilities of politics within current urban configurations. Specifically, the project will examine the role of LDCs and how they impact modes of urban governance.

Project objectives

DIGI-GOV aims are operationalized across three domains:

I. ***Institutional arrangements and the social production of digital urbanism*** The goal here is to understand the implications/impacts that the arrival of LDCs in urban development fields have on pre-existing institutional networks.

II. ***Urban governance and digital infrastructure*** The delivery of digital urbanism not only promises a supply new user interfaces responding to user demands (Zuboff's (2019) "first text"), they also mandate new infrastructures in their provision (Zuboff's (2019) "second text").

III. ***Urban comparison*** The goal here is to uncover the emerging relational urban geography of LDC-led urban development.

Qualitative methodology

DIGI-GOV engages a three-pronged methodological approach inspired by 'interpretative institutionalism' (Bevir & Rhodes 2006; Krueger & Gibbs 2012), the processuality of urbanization (Carr & Hesse 2020a; Bunce & Desfor 2007; Keil 2003), and urban comparison inspired by Robinson (2011) and Schmid et al. (2018).

Objects of analysis

DIGI-GOV focusses on five cites: 1) Toronto, and its experience with SL, continuing DIG-URBGOV; 2) Seattle that has been impacted by Amazon's HQ1; 3) Arlington, where the implications of an HQ2 loom; 4) Eemshaven, where a Google data centre operates; 5) Bissen, where a Google data centre is planned. Toronto, Arlington, and Seattle are ongoing cases of LDC-led digital city development, and all three have comparable urban contexts, as large

Figure 2 Site of future Google data centre in Bissen. (Photo from Carr 2020)

cites under growth pressure where local governments play a central role in urban planning. Eemshaven and Bissen are examples of the hidden side (second text) of LDC-led digital urban development. They are smaller municipalities on the countryside that either house, or will house, the data centres required to keep LDC's operating. DIGI-GOV will tease out the various experiences, the different lessons learnt, and compare them contextually with one another.

Feel invited!

DIGI-GOV also foresees a series of Deep Dives on Digital Urban Development (D4-Urban) to catalyse international and transversal geography of information exchange on the topic of digital urbanization on governance. D4-Urbans aim to animate an international idea exchange, bringing policy-makers, technology innovators, and urban planners/developers into conversation, ensuring further that social scientific observations and interpretations are set against the latest developments in the field.

Funded by the Luxembourg National Research Fund (FNR), DIGI-GOV examines challenges that are recognized by policy-making, such as,

- the European Commission (EC) priority "A Europe fit for the Digital Age" (EC 2020a)
- the EC strategy of "Shaping Europe's Digital Future" (EC 2020b)
- Luxembourg's mission of "harnessing digitalization [..,as] foundation for the future" (Digital Luxembourg 2020a, 2020b).

And yet, the research team of DIGI-GOV will remain dwarfed by the magnitude of LDC-led digital urban development. The research team thus hopes to inspire fellow scholars, policy-makers, and practitioners to keep in contact, get networked, and engage with us on this exciting research path.

Contact us

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About the Principal Investigator

Dr. Constance Carr is a Senior Researcher in the Urban Studies Group led by **Prof. Markus Hesse** at the Department of Geography & Spatial Planning, University of Luxembourg. She has further affiliations as a Visiting Scholar at the CITY Institute, York University, and Invited Faculty at Paris Institute for Political Studies. Her aim is to explore broad questions about how spaces and flows constitute contemporary urban processes, with particular emphasis on the urban governance of market-led sustainable development practices and contradictions with respect to the digitalisation and corporatization of cities. Find publications in Regional Studies, Planning Theory & Practice, European Planning Studies, Journal of Transport Geography, Urban Planning, and Environment and Planning C.

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