New Project Development and Marketing of Smart City Initiatives: An Empirical Study

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ABSTRACT

Purpose: The study will examine the major influences on decisions concerning the initiation, development and marketing (including branding) of UK smart city projects.

Design/methodology/approach: Smart city managers are being interviewed and asked to relate stories of how decisions had been reached, who was involved, and the main difficulties experienced. Interview transcripts will be analysed using an argumentative narrative discourse methodology.

Findings: To be inserted.

Research limitations/implications: The study covers a sample of smart city initiatives in a single country. Although the results should be generalisable to countries in Europe and North America, they might not apply to smart cities in other continents.

Practical implications: To be inserted.

Originality/value: The study is one of the first to explore stakeholder influences on decisions about the development and marketing (including branding) of smart city initiatives.

Key words: smart cities, marketing, co-creation, argumentative discourse analysis, storytelling, new project development.

1. Introduction

The development of smart city districts and initiatives is an international phenomenon (see Manville, 2014; Angelidou, 2017; Giffinger, Kramar, Hainlmaier and Strohmayer, 2015; Yigitcanlar et al., 2018). Tokoro (2015) reported the existence in 2013 of 608 smart city areas across the globe, including 225 in China, 124 in North America and 91 in Europe. Many more smart city places have emerged since 2013: India alone has created over 100 smart city districts (OECD, 2020). Although a voluminous literature surrounds the concept of the smart city (Araral [2020] reported the publication or presentation at conferences of at least 17,000 papers about smart cities between 2014 and 2019), important gaps in the literature exist regarding the ways in which decisions about the initiation and marketing of smart city projects are taken and the main influences involved. The present research examined these matters within the United Kingdom via a series of interviews with smart city managers.

1.1 Smart city situations

The term "smart city" is used to describe several contrasting situations (for examples see Kummitha and Crutzen, 2017; Guedes et al., 2018; Saxena and Al-Tamimi, 2018; Crutzen, Van Bockhaven,, Schaltegger and Giffinger, 2019; Singh and Singla, 2020). Candidates include (i) collections of ad hoc initiatives applied across entire urban conurbations (e.g., ICT-driven city-wide energy conservation schemes or sensor- controlled traffic flow arrangements), (ii) pre-existing business parks converted into smart city districts, (iii) places

within existing cities designated as smart city areas and in receipt of governmental technology-related financial support, and (iv) new purpose-built smart city urban areas. Guedes et al. (2018) surveyed 807 managers of places referred to as smart cities yet was unable to identify any consensus regarding the participants' understanding of the term. Indeed, according to Yigitcanlar et al. (2018), the smart city concept "has evolved to mean almost any form of technology-based innovation in the planning, development, operation and management of cities" (p.146). Singh and Singla's (2020) review of academic literature on smart cities published between 2000 and 2017 found 24 different definitions.

Nevertheless, most definitions associate a "smart city" with the application of ICT to improve an area's infrastructure (Ruhlandt, 2018; Yigitcanlar et al., 2018; Ryan and Gregory, 2019), to create "business-friendly" environments with plentiful supplies of digitally skilled labour, universities, and high quality financial and business support services (Deakin and Husam, 2011; Van Dijk and Teuben, 2015; Foth, 2017), to facilitate environmental protection (Riffat, Powell and Aydin, 2016; Apurva, Tailor and Rastogi, 2017), and to promote the use of Artificial Intelligence, Big Data, and the Internet of Things (Kyriazopoulou, 2015; Ryan and Gregory, 2019; Cugurullo, 2020; Yigitcanlar, Desouza, Butler and Roozkhosh, 2020).

Internationally, most smart city developments were initiated by national and/or local governments (in Europe sometimes with the support of the European Union [EC, 2018]) and (as stated in official documentation) had two primary aims: (i) to improve an area's international competitiveness (see Albino, Berardi and Dangelico, 2015; Araral, 2020; OECD, 2020), and (ii) to enrich residents' quality of life (see Kostatis, Bauwens and Niaros, 2015; Engelbert, van Zoonen and Hirzallac, 2019). In the UK (and in several other countries) smart city initiatives were typically instigated in or alongside economically and socially deprived areas, in the hope that incoming investment would raise local living standards (cf. Freudendal-Pedersen, Kesselring and Servou, 2019). Manville (2014) reported publications

of the European Parliament which stated that the main objective of one third of all EU-supported smart city developments was the reduction of poverty (see end note 1), and this aim has been prominent in smart city initiatives in other parts of the world (see, for example, White House, 2015; Government of India, 2018).

1.2 Aims of the present research

The present investigation is being completed in the UK, where a number of areas within large urban conurbations have been designated and supported by national and local government as smart districts (e.g., East London Tech City, the Manchester Corridor, Liverpool KQ, Newcastle Science Central). Concurrently, city-wide initiatives have been executed without their being confined to pre-designated areas, e.g., city-wide systems for transport and traffic control, energy conservation, district lighting, healthcare, and personal security. Management teams, usually funded by local and/or national government (sometimes with corporate support), undertake overall control of smart city activities within designated areas. The present investigation examines the ways in which decisions were taken in relation to the initiation and management of smart city projects and to their marketing to stakeholders, e.g., commercial investors, government funders, and local residents.

Specifically, the study addresses the following questions.

1. How were decisions taken regarding which new projects to adopt, the form and content of the marketing (including branding) activities associated with new projects, and how marketing decisions were executed?

2. Which stakeholders exercised major influences on decisions regarding which new projects to adopt and how to market (and brand) projects. Why were these stakeholders prioritised?

3. Was the presence of multiple stakeholders (including local resident communities) recognised when taking decisions? If so, why? If not, why not?

4. What forms of marketing usually accompanied new project developments?

2. Choosing and marketing smart city activities

2.1 Selection of projects

Critics have complained that smart city initiatives tend to favour the corporate sector rather than citizens and frequently fail to consider the backgrounds and/or the needs of local people (see for example Hollands, 2008; Kitchin, 2014; Morozov and Bria, 2018; Sovacool, Kester, Noel, and de Rubens, 2019). According to Freudendal-Pedersen, Kesselring and Servou, 2019, national or local government support is usually channelled into fresh commercial initiatives on the assumption that a globally competitive smart city area will *automatically* be good place for people to live. Yet, incoming businesses and the well-educated and highly paid professionals they employ will often coexist alongside pre-existing low-income residents and a sizable secondary low-skilled workforce (Shelton, Zook and Wiig, 2015; Madden, 2018; Appio, Lima and Paroutis, 2019).

A substantial volume of literature has suggested that globalisation and competition among cities has resulted in urban politicians and governing regimes adopting an economic ideology which favours the corporate sector (e.g., Hunter, 1953; Peterson, 1981; Scott and Storpe, 2015; Ruhlandt, 2018). Successful cities require local infrastructures that support the needs of business (see World Bank, 2018). Hence, city officials are induced to initiate urban revitalization projects likely to attract private investment (Glaeser and Resseger, 2009). Close relations between local politicians and business leaders develop, and the latter become better able to push forward their favoured urban projects. Community participation in choosing projects might not be welcome in such circumstances (Borkowska and Osborne, 2018; Engelbert et al., 2019). Logan and Molotch (1987) claimed that powerful networks of

business interests and local politicians can exert excessive influences on urban development processes and damage the interests of neighbourhood residents and other vulnerable groups.

2.2 Smart city marketing

Marketing activity is required in relation to several actual and potential smart city stakeholders, e.g., possible corporate investors, existing businesses, local residents, local and national politicians, "smart employees", suppliers of ICT equipment, community pressure groups, and commercial, community and political interests in adjoining areas (see Anttiroiko, 2014; Chan, Peters and Pikkemaat, 2019; Molinillo, Anaya-Sánchez, Morrison and Coca-Stefaniak, 2019; Vulfovich, 2020; Christofi et al., 2021). Marketing to citizens, according to Ker and Simpson (2021), is needed in order "to explain, communicate and narrate the expected benefits of how smart city technology can improve everyday life" (e.g., cleaner air, safer roads, tidier streets) (p.2). Farthing (2015) suggested that an important benefit of marketing for smart city citizens is the transmission to them of "incredibly targeted product and service information and special offers based on a person's known behaviour and preferences" (p.1). Sensors and other devices that speak to each other, Farthing (2015) continued, create an "immense lake" of information on the routines, preferences, shopping habits and general behaviour of every smart city inhabitant (p.1). This data may then be matched with social media profiles and data on the online purchases of individual residents (p.1). Limited research has been completed into smart city marketing, but it is known that (i) social media is used extensively (Molinillo et al., 2019; Petrikova, Jaššo and Hajduk, 2020), (ii) focus groups are sometimes employed to obtain stakeholders' views (Zenker and Efrgen, 2014), and (iii) that citizen ambassadors are useful for spreading positive word-of-mouth (Yu and Kim, 2020).

2.2.1 Smart city branding

In the words of Grebosz-Krawczyk (2020), "authorities responsible for smart city branding and marketing are not wondering *whether or not* to brand, but rather *how* to brand" (p. 2). Two types of smart city brand are required, the first involving brands that relate to entire collections of smart activities within a municipality. UK examples include "Digital Birmingham" (associated with a logo labelled "# Smartbrum"); "City Verve" (a Manchester entity covering 21 organisations under the tag line "Smart Innovative Inspiring Manchester"); "Connected Liverpool"; and Newcastle's generic smart city brand "Urban Foresight". The second type of brand relates to individual brands for specific initiatives, e.g., Manchester's "Dimmer" project (a city lighting initiative), "Triangulum" (relating to the Manchester Corridor), and "Ebb and Flow" (an energy conservation project). Liverpool has separate brands for its "Mother" initiative (involving connected sensors within houses); its "ARM" project (an Internet of Things initiative), and for several other programmes. At the time of writing, Birmingham had 27 separately branded smart city initiatives (e.g., "City4Age" [health services] and PURE COSMOs [support for SMEs]) each with a separate logo and/or other unique forms of imagery.

2.2.2 Branding dilemmas

Academic interest in smart city branding has focused on smart city area brands rather than the branding of specific projects (Maček, Ovin and Starc-Peceny, 2019; Vulfovich, 2020; Yu and Kim, 2020), especially vis-à-vis the portrayal (or absence) of local communities in brand images (Hollands, 2015; Kummitha and Crutzen, 2017; Grebosz-Krawczyk, 2020). Commercial interests within a smart city area might favour a brand displaying commercial advantages, whereas local politicians and other community representatives may want a brand that projects local history and culture (cf. Bennett and Koudolova, 2001; Bennett and Savani,

2004). Kitchin (2014), Calzada and Cobo (2015), Morozov and Bria (2018) and others have observed how many UK smart city places are ethnically diverse, multi-cultural, and economically deprived, i.e., factors that militate against the presence of a sense of community, unity of purpose, or common interest among residents.

According to Freudendal-Pedersen et al. (2019) a smart city brand is required that "balances, serves and satisfies" all interested parties (p.4). Freudendal-Pedersen et al. (2019) described the creation of such a brand as a "wicked" problem without a straightforward answer (p.4). Smart city managers "walk on quicksand", Freudendal-Pedersen et al. (2019) continued, and take numerous social, political, and economic risks when branding smart city projects (p.4**)**. Critics have complained that smart city promotional messages and brand images often fail to respect the backgrounds and/or the needs of existing residents (cf. Hollands, 2008; Kitchin, 2014; Morozov and Bria, 2018; Sovacool et al., 2019). Rather, critics allege, commercial interests are favoured (see Shelton, Zook and Wiig, 2015; Allam and Newman, 2018; Madden, 2018; Appio, Lima and Paroutis, 2019). Zelenskaya and Elkanova (2021) suggested place brand multidimensionality as a way forward, i.e., the employment of a *portfolio* of sub-brands, each targeting a particular genre of stakeholder. Sub-branding could leverage the overall place brand across markets and segments and be difficult for competitors to copy.

3. Methodology

In early 2021 thirty self-described UK smart cities were identified from Internet sources (e.g., Computer World, 2019; DIT, 2020), of which 24 appeared from their websites to be currently engaged in smart city activities. The heads of the management teams of the 24 smart cities were approached by email; 18 (75%) agreeing to participate in the study. All 18 of the smart city places in the sample contained or were immediately adjacent to areas of economic and

social deprivation. One smart city district in the sample was alongside a Borough where 53% of resident children lived in households with incomes below the official poverty level. Comparable figures for the remaining 17 areas varied from 26% to 47% (DWP, 2020).

3.1 The interviews

Online interviews are being conducted with the participants consequent to a review of documentation (promotional materials, newspaper and magazine reports and other grey literature) relating to each smart city area. Interviewees are asked to relate stories describing events that occurred during the initiation of new projects and their marketing and branding: what happened, which parties were most influential, the positions adopted by various stakeholders, why certain options had been disregarded, nature of disagreements, how disputes were resolved, and how decisions had been rationalised and justified (cf. van Eemeren and Grootendorst, 2004; Hajer and Dassen, 2014). Probing questions then obtain insights into specific events.

Krueger (2010) argued that stories reveal motivations, identify memorable events, and describe the main factors influencing behaviour far better than asking straightforward questions. The aim is to establish how and why specific new project development and marketing options are selected for consideration (Fischer and Gottweis, 2012; Freudendal-Pedersen, Kesselring and Servou, 2019) while others are ignored (Hajer and Dassen, 2014) and the points deemed the most important (Hajer, 1995). Research into urban planning processes has found storytelling to be a valuable means of collecting information (for details see van Hulst, 2012; Söderström, Paasche and Klauser, 2014) as they "clarify opaque, complex and problematic issues" (Lynch, Glasby and Robinson, 2018 p.50) that are not easily explored via a linear set of interview questions.

3.2 Stories and argumentative discourse

Hajer (2006) contended that because stories are "narratives on social reality" based on discursive understandings of issues (see end note 2), they are often presented *in attempts to gain their acceptance* (p.16). Hence, reasons and justifications for accepting the contents of a story will often be offered. Accordingly, Hajer's (2006) method of argumentative discourse analysis was employed to deconstruct the interviewees' stories. Argumentation in this context refers to "*giving*" an argument, and *not* to "having" an argument. Research in urban planning has found argumentative discourse analysis appropriate for establishing decision-making processes and outcomes, as it "embraces the complexity of the organisational, social, political and policy context in which developments are introduced and supported" (Lynch et al., 2018 p.46). Thus, interview transcripts are being analysed to identify argumentative structures within the participants' stories and the main rhetorical suggestions implied (cf. Thompson and Zhou, 2000; Jordan, 2001), i.e., the claims made by the participants and the reasons and/or evidence given in support of them.

Transcripts are being analysed firstly by the authors physically using Quirkos software (quirkos.com) and secondly via Catpac (an artificial neural network which generates dendograms showing associations among words and hence possible themes within narrative data [see Woelfel, 1998]). Argumentative components are frequently associated with words such as think, believe, should, ought (Stab and Gurevych, 2014). Catpack options show the text portions that precede and follow such words and their synonyms. Certain assumptions are likely to underlie particular claims (Van Eemeren and Garssen, 2015), as will be discussed in the final paper.

4. Results and discussion

The final paper will contain a full analysis and discussion of the results.

End notes

1. Nevertheless, Engelbert, van Zoonen, and Hirzalla's (2019) examination of smart city projects that received European Union funding concluded that, in actuality, success in attracting EU funds was often associated with the exclusion of the "perspective and interests of citizens" (p. 347).

2. Hajer (2002) defined discourse as a communication in speech or writing that contains "an ensemble of ideas, concepts, and categories" through which meaning is assigned to entities or events (p. 63). Discourse analysis seeks to "describe the forms, practices, patterns, structures, and functions of everyday discourse, and also the procedures and mechanisms through which participants - - - lend and attribute order, coherence, and meaning to this discourse" (Van Rees, 2007 p.1455). Importantly, discourse analysis may be employed to examine how a discourse serves an interviewee's standpoint on an issue.

References

Albino, V., Berardi, U. and Dangelico, R. (2015). Smart cities: Definitions, dimensions, performance, and initiatives. Journal of Urban Technology, 22, 3-21.

Allam, Z. and Newman, P. (2018). Redefining the smart city: Culture, metabolism and governance. Smart Cities, 1(1), 4–25, https://doi.org/10.3390/Smartcities1010002.

Angelidou, M. (2017). The role of smart city characteristics in the plans of fifteen cities. Journal of Urban Technology, 24(4), 3-28.

Anttiroiko, A. (2014). The Political Economy of City Branding. London: Routledge.

Appio, F., Lima, M. and Paroutis, S. (2019). Understanding smart cities: Innovation ecosystems, technological advancements, and societal challenges. Technological Forecasting and Social Change, 142, 1-14.

Apurva, S., Tailor, S. and Rastogi, N. (2017). Smart materials for smart cities and sustainable environment. Journal of Materials Science and Surface Engineering, 5(1), 520-523.

Araral, E. (2020). Why do cities adopt smart technologies? Contingency theory and evidence from the United States. *Cities,* in press website.

Bennett, R. and Koudelova, R. (2001). Image selection and the marketing of downtown areas in London and New York. International Journal of Public Sector Management, 14(3), 205-220.

Bennett, R. and Savani, S. (2004., The rebranding of city places: An international comparative investigation. International Public Management Review, 4(2), 70-87.

Borkowska, K. and Osborne, M. (2018). Locating the fourth helix: Rethinking the role of civil society in developing smart learning cities. International Review of Education, 64(3), 355-372.

Calzada, I. and Cobo, C. (2015). Unplugging: Deconstructing the smart city. Journal of Urban Technology, 22(1), 23-43.

Chan, C., Peters, M. and Pikkemaat, B. (2019). Investigating visitors' perception of smart city dimensions for city branding in Hong Kong. International Journal of Tourism Cities, 5(4), 620-638.

Christofi, M., Iaia, L., Marchesani, F. and Masciarelli, F. (2021). Marketing innovation and internationalization in smart city development: A systematic review, framework and research agenda. International Marketing Review. ahead-of-print.

Computer World (2019). Best smart cities in the UK. Computer World, 13 May 2019, accessed on 16 July 2021 at Which is the smartest city in the UK?

Crutzen, N., Van Bockhaven, J., Schaltegger, S. and Giffinger, R. (2019). Guest editorial. Sustainability Accounting, Management and Policy Journal, 10(4), 646-653.

Cugurullo, F. (2020). Urban artificial intelligence: From automation to autonomy in the smart city. Frontiers in Sustainability, Cities 2:38, 1-14.

Deakin, M. and Husam, A. (2011). From intelligent to smart cities, Intelligent Buildings International. 3(3), 133-139.

DIT (Department for International Trade) (2020). UK Smart Cities Directory. London, DIT, accessed on 16 July 2021 at

872bceb6be2ad3facad169d6bb718bb3_DITSmartCitiesDirectory.pdf (eventscloud.com).

DWP (Department of Work and Pensions) (2020. Children in Low Income Families: Local Area Statistics. London: DWP.

EC (European Commission) (2018). Smart Cities: Cities using Technological Solutions to Improve the Management and Efficiency of the Urban Environment. Brussels: European Commission.

Engelbert, J., van Zoonen, L. and Hirzalla, F. (2019). Excluding citizens from the European smart city: The discourse practices of pursuing and granting smartness. Technological Forecasting and Social Change, 142, 347-353.

Farthing, S. (2015). Marketing in a smart city. Digital Marketing Magazine, 2 June 2015, accessed at digitalmarketingmagazine.co.uk/digital-marketing-data/marketing-in-a-smart city/2031.

Fischer, F. and Gottweis, H. (2012). The argumentative turn revisited. In F. Fischer and H. Gottweis, (Eds), The Argumentative Turn Revisited, Durham UK, Duke University Press pp. 1–27.

Foth, M. (2017). The next urban paradigm: Cohabitation in the smart city. IT-Information Technology, 59, 259-262.

Freudendal-Pedersen, M., Kesselring, S. and Servou, E. (2019). What is smart for the future city? Mobilities and Automation. Sustainability, 11, 1-21.

Giffinger, R., Kramar, H., Haindlmaier, G. and Strohmayer, F. (2015), European Smart Cities 4.0, Vienna: Centre of Regional Science, Vienna UT, https://www.smart-cities.eu. Accessed on 13 January 2021.

Glaeser, E. and Resseger, M. (2009). Inequality in cities. *Journal of Regional Science*, 49(4), 617–646.

Government of India (2018). Smart Cities Mission. Delhi: Ministry of Housing and Urban Affairs.

Grebosz-Krawczyk, M. (2020), Place branding (r)evolution: The management of the smart city's brand, Place Branding and Public Diplomacy, in press website.

Gretzel, U., Sigala, M., Xiang, Z. and Koo, C. (2015). Smart tourism: Foundations and developments. Electronic Markets, 25(3), 179-88.

Guedes, A., Alvarenga, J., Goulart, M., Rodriguez, M. and Soares, C. (2018). Smart cities: The main drivers for increasing the intelligence of cities. Sustainability, 10, 1-19.

Hajer, M. (1995). The Politics of Environmental Discourse, Ecological Modernization and the Policy Process. Oxford: Oxford University Press.

Hajer, M. (2002). Discourse analysis and the study of policy making. European Political Science, 2(1), 61-65.

Hajer, M. (2006). Doing discourse analysis: Coalitions, practices, meaning. In M. Brink and T. Metze, Words Matter in Policy and Planning, Utrecht, The Netherlands: Knag/Nethur, pp. 13-20.

Hajer, M. and Dassen, T. (2014). Visualizing the Challenge for 21st Century Urbanism. Rotterdam, The Netherlands: NAI010 Publishers.

Hollands, R. (2008). Will the real smart city please stand up? City, 12(3), 303-320.

Hollands, R. (2015). Critical interventions into the corporate smart city. Cambridge Journal of Regions, Economy and Society, 8(1), 61-7.

Hunter, F. (1953). Community Power Structure: A Study of Decision-Makers. Chapel Hill: University of North Carolina Press.

Jordan, M. (2001). Some discourse patterns and signalling of the assessment – basis relation. In M. Scott, M. and G. Thompson, Patterns of Text: In Honour of Michael Hoey, pp. 159-192, Amsterdam: John Benjamin's Publishing Company.

Ker, J. and Simpson, J. (2021). The vital role of marketing in smart cities. Business Reporter Magazine, 2 April 2021, accessed on 15 July 2021 at https//business-reporter.co.uk/2020/11/19.

Kitchin, R. (2014). The real-time city? Big data and smart urbanism. GeoJournal, 79, 1-14.

Kostakis V., Bauwens M. and Niaros V. (2015). Urban reconfiguration after the emergence of Peer-to-peer infrastructure: Four future scenarios with an impact on smart cities. In D. Araya (Ed.), Smart Cities as Democratic Ecologies, pp. 116-124, London: Palgrave Macmillan.

Krueger, R. (2010). Using stories in evaluation. In J. Wholey, H. Hatry, and K. Newcomer (Eds), Handbook of Practical Program Evaluation, 3rd edition. San Francisco: Jossey-Bass, pp. 404-424.

Kummitha, R. and Crutzen, N. (2017). How do we understand smart cities: An evolutionary perspective? Cities, 67, 43-52.

Kyriazopoulou, C. (2015). Smart city technologies and architectures: A literature review. In Proceedings of the 2015 International Conference on Smart Cities and Green ICT Systems, Lisbon: Portugal, 20–22 May 2015; pp. 1-12.

Logan, J. and Molotch, H. (1987). Urban Fortunes: The Political Economy of Place. Berkeley: University of California Press.

Lynch, J., Glasby, J. and Robinson, S. (2018). If telecare is the answer, what was the question? Storylines, tensions and the unintended consequences of technology supported care. Critical Social Policy, 39(1), 44-65.

Maček, A., Ovin, R. and Starc-Peceny, U. (2019). Smart cities marketing and its conceptual grounds. Naše gospodarstvo/Our Economy, 65(4), 110–116.

Madden, P. (2018). Will smart cities inevitably worsen social inequality? Huffpost, 26 January 2018 https://www.huffingtonpost.co.uk/entry/will-smart-cities-inevitably-worsen-social-inequality_uk_5a689271e4b06bd14be506e4. Accessed on 20 November 2020.

Manville, C. (2014). Mapping Smart Cities in the European Union. Brussels, European Parliament.

Merrilees, B., Miller, D. and Herington, C. (2012). Multiple stakeholders and multiple city brand meanings. European Journal of Marketing, 46(7/8), 1032-1047.

Molinillo, S., Anaya-Sánchez, R., Morrison, A. and Coca-Stefaniak, J. (2019). Smart city communication via social media: Analysing residents' and visitors' engagement. Cities, 94, 247-255.

Morozov, E. and Bria, F. (2018). Rethinking the Smart City: Democratizing Urban Technology. New York: Rosa Luxemburg Foundation.

OECD (Organisation for Economic Co-operation and Development) (2020). Smart Cities and Inclusive Growth. Geneva: OECD.

ONS (Office for National Statistics) (2020). Internet Users, 2020. London: Office for National Statistics.

Pedersen, K. (2020). What can open innovation be used for and how does it create value? Government Information Quarterly, 37(2), 101459.

Petrikova D., Jaššo M., Hajduk M. (2020). Social media as tool of SMART city marketing. In: N. Lopes (Ed), Smart Governance for Cities: Perspectives and Experiences. EAI/Springer Innovations in Communication and Computing. Cham: Springer, pp. 55-72.

Riffat, S., Powell, R. and Aydin, D. (2016). Future cities and environmental sustainability. Future Cities and Environment, 2, 1-23.

Ruhlandt. R. (2018). The governance of smart cities: A systematic literature review. Cities, 81, 1-23.

Ryan, M. and Gregory, A. (2019). Ethics of using smart city AI and big data: The Case of four large European cities. The Orbit Journal, 2(2), 1-36.

Saxena, S. and Al-Tamimi, T. (2018). Visioning "smart city" across the Gulf Cooperation Council (GCC) countries. Foresight, 20(3), 237-251.

Scott, A. and Storpe, M. (2015). The nature of cities: The scope and limits of urban theory. International Journal of Urban and Regional Research, 39(1), 1-15.

Shelton, T., Zook, M. and Wiig, A. (2015). The "actually existing smart city". Cambridge Journal of Regions. Economy and Society, 8(1), 13-25.

Singh, A. and Singla, A. (2020). Constructing definition of smart cities from systems thinking view. Kybernetes, ahead-of-print website.

Söderström, O., Paasche, T. and Klauser, F. (2014). Smart cities as corporate storytelling. City, 18(3), 307-320.

Sovacool, B., Kester, J., Noel, L. and de Rubens, G. (2019). Energy injustice and Nordic Electric Mobility: Inequality, elitism, and externalities in the electrification of vehicle-to-grid (V2G) transport. Ecological Economics, 157(part C), 205-217.

Stab, C. and Gurevych, I. (2014). Identifying argumentative discourse structures in persuasive essays. Proceedings of the 2014 Conference on Empirical Methods in Natural Language Processing (EMNLP), pp. 46–56, October 25-29, 2014, Doha, Qatar: Association for Computational Linguistics.

Thompson, G. and Zhou, J. (2000). Evaluation and organisation in text: The structuring role of evaluative disjuncts. In S. Hunston and G. Thompson, Evaluation in Text: Authorial Stance and the Construction of Discourse, pp. 121-14, Oxford: Oxford University Press.

Tokoro, N. (2015). The smart city and the co-creation of value: A source of new competitiveness in a low-carbon society. Tokyo: Springer.

Van Dijk, A. and Teuben, H. (2015). Smart Cities: How Rapid Advances in Technology are Reshaping our Economy and Society. The Hague: Deloitte.

Van Eemeren F.and Garssen B. (2015) Analysis and evaluation of argumentative discourse. In: Reasonableness and Effectiveness in Argumentative Discourse. Argumentation Library, vol 27, pp. 85-98, Cham: Springer.

Van Eemeren, F. and Grootendorst, R. (2004). A Systematic Theory of Argumentation; The Pragma-Dialectical Approach. Cambridge: Cambridge University Press.

Van Hulst, M. (2012). Storytelling, a model of and a model for planning. Planning Theory, 11(3), 299-318.

Van Rees, M. (2007). Discourse analysis and argumentation theory: The case of television talk. Journal of Pragmatics, 39, 1454-1463.

Vulfovich, R. (2020). The importance of "smart city" characteristics for a city brand: Comparative perspective. In: Chugunov A., Khodachek I., Misnikov Y., Trutnev D. (eds) Electronic Governance and Open Society: Challenges in Eurasia. EGOSE 2019, pp 55-70. Communications in Computer and Information Science, vol 1135. Cham: Springer.

White House (2015). Administration Announces New Smart Cities Initiative to Help Communities Tackle Local Challenges and Improve City Services. Washington DC: Office of the Press Secretary, The White House.

Woelfel, J. (1998). Catpac 2 User Guide. New York: Galileo.

Yigitcanlar T, Desouza, K., Butler, L. and Roozkhosh, F. (2020). Contributions and risks of artificial intelligence (AI) in building smarter cities: Insights from a systematic review of the literature. Energies, 13(6):1473, 1-38.

Yigitcanlar, T., Kamruzzaman, M., Buys, L., Loppolo, G., Sabatini-Marques, J., da Costa, E. and Yun, J. (2018). Understanding smart cities: Intertwining development drivers with desired outcomes in a multidimensional framework. Cities, 81, 145-160.

Yu, E. and Kim, J. (2020). The relationship between self-city brand connection, city brand experience, and city brand ambassadors. Sustainability, 12(3): 1-13.

Zelenskaya, E and Elkanova, E. (2021). Designing place brand architecture: The potential of a sub-brands strategy. Journal of Product and Brand Management, 30(1), 167–179.

Zenker, S., and Erfgen, C. (2014). Let them do the work: A participatory place branding approach. Journal of Place Management and Development, 7(3), 225–234.