

National Research University Higher School of Economics

Saint-Petersburg Branch

Department of Public Administration

**Urban Innovation and Policy
2018-2019**

Master Program “Urban Development and Governance”
direction 38.04.04 “Public Administration”

ECTS: 4

Quarter / semester: 1 / 1

Contact hours: 44

Author of the course:

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Course Overview

This course explores issues in the development and application of innovative technologies and approaches in the management of the contemporary city. The aim of the course is to provide students with an advanced understanding of what public innovation is, who manage it in the city, for whom and how. The course is inter-disciplinary in nature and is intended to develop knowledge and skills related to successful urban governance in the digital world. It covers many of the cutting edge services, solutions and products that help to reframe the contemporary urban management for the city and citizens' sake.

The course consists of three parts. The first part presents the theoretical framework of innovation in the contemporary urban management. It stresses the importance of transition from public administration to the management of the urban environment, and shows the role of governance innovation in this process.

The second part focuses on the analysis of the new services, products or approaches that are used in the cities worldwide to improve outcomes for the urban environment. Special attention is paid to innovative ideas and approaches in the public sector and urban governance. A particular focus is made on the challenges of innovations and on the ways to develop institutional conditions within the public sector that can stimulate the implementation and diffusion of innovations in the city. Students learn to understand the innovative ways to manage key areas of urban environment, such as urban energy planning and governance; urban design and planning; housing innovations; public transport and urban mobility.

The third part discusses *how* to manage people, budgets, processes and other resources to improve outcomes for the city. This part provides students with comprehensive tools, methods, processes and structures of resource flexibility for more innovation in the urban environment. Students examine the role of urban analytics for management of the urban environment; discuss the prospective skills of urban managers in the contemporary world. A particular focus is made on the importance of citizen engagement and building the city community to improve the design, management and public programs for innovations.

The course includes analysis and class discussions of case examples of the development, implementation and management of public sector innovations. Students learn to argue the possibility for applying the best international practices in Russia. At the end of the course, students write a group project proposal targeting public sector innovation on the example of Saint-Petersburg.

On completing the course, students will be able to:

- Understand the basic theoretical foundations of innovative process in the urban environment,
- Classify the different models and strategies of the “innovative city” development,
- Categorize the innovative services and actions developed by the city government,
- Understand the role and relationships between the different stakeholders in the process of innovation in the urban environment,
- Know the different field of application of innovative ways to manage the key areas of urban environment,
- Justify the prospective skills of urban managers,
- As a final project, to build and present an innovative city initiative with its corresponding sources of funding.

Prerequisites

There are no formal prerequisites for this course. Students should have fluent English and be acquainted with conceptual and terminological features of the main frameworks in public administration and urban governance.

Structure of the Course

№	Theme	Contact Hours		Self-Study
		Lectures	Seminars	
I. Theoretical framework of the contemporary urban management				
1	Urban management and innovations	4	2	-
2	The innovation in the urban environment: key theories and management models	4	2	5
3	Tools and goals of innovations in the management of the urban environment	2	2	5
II. The innovative ways to manage the key areas of the urban environment				
4	Effective urban energy planning and governance	2	4	12
5	Urban design and planning and housing innovations	2	4	12
6	Public transport and urban mobility	2	2	12
III. Prospective skills of urban managers				
7	Urban analytics for management of the urban environment	2	2	10
8	Concluding workshop		4	40
	TOTAL	20	24	108

Academic Contents

Part I. Theoretical framework of the contemporary urban management

Class 1: Urban management and innovations

- a. Urban management as a reform of city administration in the age of Digital Economy;
- b. The “inevitable” technological developments: “technium”, artificial intelligence (AI), data flowing, screening, accessing, sharing, filtering, remixing, interacting, tracking, questioning, “holos” (collective mind);
- c. Technological change and society. The concept of innovation;
- d. Smart governance, smart communities and citizen engagement.

Assigned Readings (= Required for classroom discussion):*

*Anttiroiko, A.-V., Bailey, S. J., & Valkama, P. (Eds) (2011). *Innovations in public governance*. IOS Press. [ProQuest](#) (HSE Access) pp. 23-38.

Brenner N., Marcuse P., & Mayer M. (2012). *Cities for people, not for profit: Critical urban theory and the right to the city*. Routledge. [Google Books](#) (Partially Open Access) Ch. 1.

*Crawford, S., & Goldsmith, S. (2014) *The Responsive City: Engaging communities through data-smart governance*. San Francisco: Jossey-Bass. [URL \(Open Access\)](#) Ch. 4.

Hargadon, A. B., & Douglas, Y. (2001): When innovations meet institutions: Edison and the design of the electric light. *Administrative Science Quarterly* 46, 476-501. [SAGE \(HSE Access\)](#)

*Osborne, Stephen & Brown, Louise. (2011). Innovation, public policy and public services delivery in the UK. The word that would be king?. *Public Administration*. 89. 1335 - 1350.

*Osborne, Stephen & Flemig, Sophie & Kinder, Tony. (2016). Risky business—reconceptualizing risk and innovation in public services. *Public Money & Management*. 36. 425-432.

Osborne, Stephen & Flemig, S.-S. (2015). Conceptualizing risk and social innovation: An integrated framework for risk governance. 37. 165-182.

Osborne, Stephen & Svidroňová, Mária & Flemig, Sophie & Brandsen, Taco & van Genugten, Marieke & Mele, Valentina & Merickova, Beata & Nemeč, Juraj. (2015). Risk Definition and Risk Governance in Social Innovation Processes: A comparative case study across 4 EU-countries.

Osborne, Stephen & Svidroňová, Mária & Voorberg, William & Tummers, Lars & Bekkers, V & Torfing, Jakob & Tõnurist, Piret & Kattel, Rainer & Lember, Veiko & Timeus, Krista & Nemeč, Juraj & Svidronova, Maria & Merickova, Beata & Gascó, Mila & Flemig, Sophie. (2015). Co-creation and citizen involvement in social innovation: A comparative case study across 7 EU-countries.

*Osborne, Stephen & Brown, Kerry. (2005). *Managing Change and Innovation in Public Service Organizations* / S.P. Osborne, K. Brown.. *Managing Change and Innovation in Public Service Organizations*. 10.4324/9780203391129.

*Rigby, D. K., Gruver, K., & Allen, J. (2009). Innovation in turbulent times. *Harvard Business Review* 87 (6), 79-86. [HBR \(Open Access\)](#)

*Song, H., Srinivasan, R., Sookoor, T., & Jeschke, S. (2017). *Smart cities: Foundations, principles, and applications*. John Wiley & Sons . [Books 24x7 \(HSE Access\)](#) Ch. 12.

Class 2: The innovation in the urban environment: key theories and management models

- a. The taxonomy of contemporary models of urban development. Best urban practices in innovation, sustainability, equity and connectedness;
- b. Smart City;
- c. Sustainable City;
- d. Livable City;
- e. Creative City;
- f. Data-rich City.
- g. Future Cities and the symbiotic relationship between the smart governance and citizen engagement.

Assigned Readings (= Required for classroom discussion):*

Almirall, E., Wareham, J., Ratti, C., Conesa, P., Bria, F., & Gaviria, A. (2016). Smart Cities at the crossroads: New tensions in city transformations. *California Management Review*, 59 (1), 141-152. [SAGE \(HSE Access\)](#)

Bakici, T., Almirall, E., & Wareham, J. (2013). A Smart City initiative: The case of Barcelona. *Journal of the Knowledge Economy*, 4 (2), 135-148. [Springer \(HSE Access\)](#)

Brenner N., Marcuse P., & Mayer M. (2012). *Cities for people, not for profit: Critical urban theory and the right to the city*. Routledge. [Google Books](#) (Partially Open Access) Ch. 7.

*Caragliu, A., Del Bo, C., & Nijkamp, P. (2009) *Smart Cities in Europe*, Serie Research Memoranda 0048, VU University Amsterdam, Faculty of Economics, Business Administration and Econometrics. [URL](#) (Open Access)

*Gurin, J. (2014). How open data is transforming city life. *Forbes*. September 12. [URL](#) (Open Access)

*Shao Z. (2015). New Eco-City, Low-Carbon New City, Low-Carbon Eco-City, Sun City. *The New Urban Area Development*, 331-344. [Springer](#) (HSE Access)

Class 3: Tools and goals of innovations in the management of the urban environment

- a. The role of public management in urban innovation development;
- b. New city standards and indicators: sustainability, quality of life, and digitalization;
- c. Innovating through regulation;
- d. The infrastructure of innovations in the management of the urban environment: mobile networks, Big Data, the Internet of things;
- e. Key stakeholders of innovation implementation, and strategies of collaboration;
- f. Challenges and barriers for urban innovations.

Assigned Readings (= Required for classroom discussion):*

*Attard, J., Orlandi, F., Simon, S., & Auer, S. (2015). A systematic review of open government data initiatives. *Government Information Quarterly* 32 (4), 399-418. [ScienceDirect](#) (HSE Access)

*Crawford, S., & Goldsmith, S. (2014) *The Responsive City: Engaging communities through data-smart governance*. San Francisco: Jossey-Bass. [URL](#) (Open Access) Ch. 1, 2, 7, 8.

*Glaeser, E. L., Scott D. K., Luca, M., & Naik, N. (2015). Big Data and Big Cities: The promises and limitations of improved measures of urban life. *Economic Inquiry* 56, 1, 114–37. [URL](#) (Open Access)

Rauch, D. E., & Schleicher, D. (2015). Like Uber, but for local governmental policy: The future of local regulation of the “Sharing Economy.” *SSRN Electronic Journal*. <http://doi.org/10.2139/ssrn.2549919> (Open Access)

Part II. The innovative ways to manage the key areas of the urban environment

Class 4: Effective urban energy planning and governance

- a. Climate change, renewable energy and energy efficiency in the urban environment;
- b. Renewable, carbon neutral energy as a basis for the sustainable energy economy;
- c. Innovative instruments for planning and managing energy systems in urban areas;
- d. Zero carbon cities. Eco Cities;
- e. Electrical grid and urban energy transition;
- f. Energy storage and community energy planning.

Assigned Readings (= Required for classroom discussion):*

- Allegrini J, Dorer V, Carmeliet J. 2012. Influence of the urban microclimate in street canyons on the energy demand for space cooling and heating of buildings. *Energy and Buildings* 104–106: 464–473. [ScienceDirect](#) (HSE Access)
- Capello, R., Nijkamp, P., & Pepping, G. (Eds.). (1999). *Sustainable cities and energy policies*. Verlag Berlin: Springer. [Google Books](#) (Partially Open Access) Ch. 1.7, 1.8
- Kammen, D. M., & Sunter, D. A. (2016). City-integrated renewable energy for urban sustainability. *Science* 352(6288), 922–28. [Link](#) (Open Access)
- Rutherford, J., & Coutard, O. (2014). Urban energy transitions: Places, processes and politics of socio-technical change. *Urban Studies* 51(7), 1353–77. [SAGE](#) (HSE Access)
- *Sioshansi, F. P. (2011). *Energy, sustainability, and the environment: Technology, incentives, behavior*. Butterworth-Heinemann. [Books24x7](#) (HSE Access) Ch. 1, 2, 3, 13.
- *Song, H., Srinivasan, R., Sookoor, T., & Jeschke, S. (2017). *Smart cities: Foundations, principles, and applications*. John Wiley & Sons . [Books 24x7](#) (HSE Access) Ch. 17, 19, 20, 24.

Class 5: Urban design and planning and housing innovations

- a. Land, property and the urban environment in a contemporary city;
- b. Priorities of the contemporary urban design and the “place making”;
- c. Innovation districts in modern city;
- d. The mechanisms of managing the built environment: policies, planning, and placemaking;
- e. How to evaluate the design quality in the contemporary urban environment;
- f. Plan-making as a task of urban management and collaborative city planning strategies.
- g. Goals and tools of managing the housing innovations;
- h. New directions in urban public housing;
- i. Alternatives in public housing and future perspectives: the concepts of affordable housing, shared housing, social housing;
- j. Internal (bureaucratic) and external (environmental) factors of housing policy development in contemporary cities;
- k. Resilient housing and its future perspectives.

Assigned Readings (= Required for classroom discussion):*

- Basolo, V., & Scally, C. P. (2008). State innovations in affordable housing policy: Lessons from California and New Jersey. *Housing Policy Debate* 19(4), 741–774. [Taylor & Francis Online](#) (HSE Access)
- Castells, M. (2014). *Technopoles of the World: The making of 21st century industrial complexes*.
- *Brenner N., Marcuse P., & Mayer M. (2012). *Cities for people, not for profit: Critical urban theory and the right to the city*. Routledge. [Google Books](#) (Partially Open Access) Ch. 13.
- *Brown, L. J., Dixon, D., & Gillham, O. (2014). *Urban design for an urban century: Shaping more livable, equitable, and resilient cities*. John Wiley & Sons. [Books 24x7](#) (HSE Access) Ch. 6. Routledge. [Google Books](#) (Partially Open Access)
- Corburn, J. (2013). *Healthy City Planning: From neighbourhood to national health equity*. Routledge. [Google Books](#) (Partially Open Access)

- Katz, B., & Wagner, J. (2014). The rise of innovation districts: A new geography of innovation in America introducing innovation districts. *Metropolitan Policy Program* 3. [URL](#) (Open Access)
- Lehning, A. (2012). City governments and aging in place: Community design, transportation and housing innovation adoption. *Gerontologist*, 52(3), 345–356. [Oxford Academic](#) (HSE Access)
- *Nicol, L. A., & Knoepfel, P. (2014). Resilient housing: a new resource-oriented approach. *Building Research & Information* 42(2), 229–39. [Taylor & Francis](#) (HSE Access)
- Rankin, K. N. (2009). Critical development studies and the praxis of planning. *City* 13(2–3), 219–29. (HSE Open Access)
- Seltzer, E., & Mahmoudi, D. (2013). Citizen Participation, open innovation, and crowdsourcing. *Journal of Planning Literature*, 28(1), 3–18. [SAGE](#) (HSE Access)
- *Song, H., Srinivasan, R., Sookoor, T., & Jeschke, S. (2017). *Smart cities: Foundations, principles, and applications*. John Wiley & Sons . [Books 24x7](#) (HSE Access) Ch. 21, 22.
- Tomlinson, R. 2012. *Australia's unintended cities: The impact of housing on urban development*. Csiro Publishing. [Google Books](#) (Partially Open Access)
- *Varady, D. P., Preiser, W. F. E., & Russell, F. P. (Eds.). (2017). *New directions in urban public housing*. 2nd ed. London: Routledge. [Google Books](#) (Partially Open Access) Introduction.
- Wissen H., Efthymiou, D., Farooq, B., von Wirth, T., Teich, M., Neuenschwander, N., & Grêt-Regamey, A. (2015). Quality of urban patterns: Spatially explicit evidence for multiple scales. *Landscape and Urban Planning* 142, 47-62 [ScienceDirect](#) (HSE Access)

Class 6: Public transport and urban mobility

- a. Green urban transport policies and sustainable transportation in the City of the Future;
- b. Urban governance and the transportation demand management;
- c. Key objects for the innovative urban management: streets, pedestrians, bicycles, motor vehicles, parking, car sharing;
- d. Smart technologies, infrastructures and management tools for Smart Mobility Cities.

Assigned Readings (= Required for classroom discussion):*

- Carvalho, L., Mingardo, G., & Van Haaren, J. (2012). Green urban transport policies and cleantech innovations: Evidence from Curitiba, Göteborg and Hamburg. *European Planning Studies* 20 (3), 375–96. [Taylor&Francis](#) (HSE Access)
- Lissandrello, E., Hrelja, R., Tennøy, A. & Richardson, T. (2017). Three performativities of innovation in public transport planning. *International Planning Studies* 22(2), 99–113. [Taylor & Francis](#) (HSE Access)
- *Song, H., Srinivasan, R., Sookoor, T., & Jeschke, S. (2017). *Smart cities: Foundations, principles, and applications*. John Wiley & Sons . [Books 24x7](#) (HSE Access) Ch. 7, 29.
- Thompson, R., and Yamada, T. (2014). Recent trends and innovations in modelling city logistics. *Procedia - Social and Behavioral Sciences* 125, 4–14. [ScienceDirect](#) (HSE Access)
- *Tumlin, J. (2012). *Sustainable transportation planning: Tools for creating vibrant, healthy, and resilient communities*. John Wiley & Sons. [Books 24x7](#) (HSE Access) Ch. 2, 4-14.
- *Weber, K., Heller-Schuh, B., Godoe, H., & Roeste, K. (2014). ICT-enabled system innovations in public services: Experiences from intelligent transport systems. *Telecommunications Policy* 38 (5–6), 539–57. [ScienceDirect](#) (HSE Access)

Part III. Prospective skills of urban managers

Class 7: Urban analytics for management of the urban environment

- a. Smart Cities as cyber-physical systems;
- b. Big Data analytics processes and platforms for urban analytics;
- c. Design thinking, data-driven modeling and collaborative data-driven innovation;
- d. The examples of data-driven solutions for urgent urban issues;
- e. Challenges and problems of the open data initiatives;
- f. The “mindset” of city managers;
- g. Funding and financing for Smart Cities.

Assigned Readings (= Required for classroom discussion):*

*Anttiroiko, A.-V., Bailey, S. J., & Valkama, P. (Eds) (2011). Innovations in public governance. IOS Press. [ProQuest \(HSE Access\)](#) pp. 158-183; 194-216; 217-234.

Hua, T. C. (2017) Opening big data for urban innovation. [LeekKuanYewWorldCityPrize \(Open Access\)](#)

*Kramer, R. (2016). From skillset to mindset: A new paradigm for leader development. *Public Administration Issues* 5, 26–45. [URL \(Open Access\)](#)

*Raj, P., & Raman, A. C. (2015). *Intelligent cities: Enabling tools and technology*. Boca Raton, FL: Auerbach Book. [Books24x7 \(HSE Access\)](#) Ch 4.

*Song, H., Srinivasan, R., Sookoor, T., & Jeschke, S. (2017). *Smart cities: Foundations, principles, and applications*. John Wiley & Sons . [Books 24x7 \(HSE Access\)](#) Ch. 2, 3, 5, 9, 10.

Class 8: Concluding workshop

Final in-class presentations

Teaching, Learning and Evaluation

The course syllabus supposes seminars and workshop as the main teaching formats. During the course, the students work as individuals, in teams, and as large groups. The majority of the “self-study” time the students are working on papers describing cases or providing exercises / questions devoted to different aspects of innovations in the management of the urban environment. Each class typically has multiple components: presentation by lecturer on topic area, students presentations, group discussion, video / case analysis, business games, in-class reading.

Teaching is in English.

For successful completion of the course, it is required that students read the assigned chapters and articles. Active participation in classroom discussions is a must, and it is expected that students will come to class prepared with questions and comments. Each week, every student should read and be ready to present / discuss at least one or two of the required papers. The preparation to discussion includes: 1) identifying the main argument(s) of the text, 2) setting 3 to 5 questions to the audience based on the central topic of the class; 3) finding two or more key terms to define and discuss in the class. More detailed information will be distributed in class.

Course evaluation will be based on three assignments (see the table below), seminar and workshop participation, and the final exam. The overall **grading structure** of the course will consist of:

- Class participation 25%
- Assignment#1 (case description) 20%
- Assignment#2 (project) 25%
- Final examination 30%

Course assignments:

Assignment	Subject	Mode	Format of presentation
1. Case description	Students should explore and present the case of any smart / sustainable city mentioned in the class. They should stress the strengths and weakness of the management model and make some links to the Russian (potential) experience.	Team work (5 to 7 people in a team) The grade is equal for all of the members of the group, unless someone is suspected in an inappropriate academic behavior.	Oral, 8-10 slides + interactive materials (videos, maps, forum discussions etc.)
2. Project	As a final project, students build and present an innovative city initiative with its corresponding sources of funding. The purpose of this task is to place students in the role of decision-makers in a contemporary city, asking them to formulate a problem, to outline the innovative management strategies, and to develop reasonable policy recommendations. This task is cumulative in its nature, it addresses all the materials that have been learned in the class, as well as through the individual assignment. The detailed steps to complete the project will be distributed in class. The structure of the project should be the following: Background Study Questions Literature Review Empirical Data Budget Evaluation	Small Group Project (2 to 3 people). The grade is equal for all of the members of the group, unless someone is suspected in an inappropriate academic behavior.	Written, 1000-2000 words Oral, 10-15 slides

Final examination consists of 10 short-answer questions. The questions should be answered in approximately 20-30 words each.

The exam will reflect lectures, required reading content, class discussions, distributed book outlines, and cases and projects presented by the students.

Each correct answer gets 1 point. Partially correct answer gets 0.5 points. The maximum grade for the examination is 10.

Sample questions for preparation to final examination:

- What innovation is and why it is important for the management of the urban environment?
- What are the different kinds/locations of innovations in the urban environment?

- What does it mean for the management of the urban environment to become innovative?
- What conditions stimulate the effective innovations in the city?
- List the major models of the “Future City”. Briefly describe their similarities.
- Why the model of the Smart City is so popular?
- How does innovation involve the cross sector levers?
- Describe the innovations in the Singapore / Barcelona / Amsterdam / ... case.
- Please comment on the following statement: “The public sector is less innovative than the private sector”.
- What tools are available for innovations in the management of the urban environment?
- List five key skills of an urban manager in the “Future City”. Why do you think this skill set is so important?
- What is a mindset and how it could help in the innovative development of the management of the urban environment?
- What are the contemporary challenges of the urban innovation? Give an example.
- What is a role of citizen engagement in the innovative development of the contemporary city?
- How should the government innovators find the financial sources for the innovations?
- What is a role of big data in the development of the urban innovations?
- How does the open data and big data change the governmental programs and city management practice?
- What are the opportunities of the urban governance presented by data analytics?
- What limits the implementation of innovations in finding solutions to the urgent city problems?
- Give an example of the collaboration between the city managers, and public and private stakeholders of the urban innovations.

Course Literature

***=Required**

- Allegrini J., Dorer V., & Carmeliet J. (2012). Influence of the urban microclimate in street canyons on the energy demand for space cooling and heating of buildings. *Energy and Buildings* 104–106, 464–473. [ScienceDirect](#) (HSE Access)
- *Almirall, E., Wareham, J., Ratti, C., Conesa, P., Bria, F., & Gaviria, A. (2016). Smart Cities at the crossroads: New tensions in city transformations. *California Management Review*, 59 (1), 141-152. [SAGE](#) (HSE Access)
- Altshuler, A. (1997). Bureaucratic innovation, democratic accountability, and political incentives. In: Altshuler, A., & Behn, R. (Eds.) *Innovation in American Government*. Brookings Institution: Washington.
- Altshuler, A., & Zegans, M. (1997). Innovation and public management: Notes from the State House and City Hall. In: Altshuler, A. & Behn, R. (Eds.) *Innovation in American Government*. Brookings Institution: Washington.
- Anthopoulos, L. G. (2017). *Understanding Smart Cities: A tool for Smart Government or an industrial trick?* Cham: Springer International Publishing. [Springer Books](#) (HSE Access)
- *Anttiroiko, A.-V., Bailey, S. J., & Valkama, P. (Eds) (2011). Innovations in public governance. IOS Press. [ProQuest](#) (HSE Access)
- *Attard, J., Orlandi, F., Simon, S., & Auer, S. (2015). A systematic review of open government data initiatives. *Government Information Quarterly* 32 (4), 399-418. [ScienceDirect](#) (HSE Access)
- Attard, M., & Shiftan, Y. (Eds.). (2015). Sustainable urban transport. Lisbon: Emerald Group Publishing Limited. [ProQuest](#) (HSE Access)
- *Bakici, T., Almirall, E., & Wareham, J. (2013). A Smart City initiative: The case of Barcelona. *Journal of the Knowledge Economy*, 4 (2), 135-148. [Springer](#) (HSE Access)
- Basolo, V., & Scally, C. P. (2008). State innovations in affordable housing policy: Lessons from California and New Jersey. *Housing Policy Debate* 19(4), 741–774. [Taylor & Francis Online](#) (HSE Access)
- *Brenner N., Marcuse P., & Mayer M. (2012). *Cities for people, not for profit: Critical urban theory and the right to the city*. Routledge. [Google Books](#) (Partially Open Access)
- *Brown, L. J., Dixon, D., & Gillham, O. (2014). *Urban design for an urban century: Shaping more livable, equitable, and resilient cities*. John Wiley & Sons. [Books 24x7](#) (HSE Access)
- Buss, T. F., Redburn, F. S., & Guo, K. (2006). *Modernizing democracy: Innovations in citizen participation*. Armonk, New York: M.E. Sharpe. [ProQuest](#) (HSE Access)
- Capello, R., Nijkamp, P., & Pepping, G. (Eds.). (1999). *Sustainable cities and energy policies*. Verlag Berlin: Springer. [Google Books](#) (Partially Open Access)
- *Caragliu, A., Del Bo, C., & Nijkamp, P. (2009) *Smart Cities in Europe*, Serie Research Memoranda 0048, VU University Amsterdam, Faculty of Economics, Business Administration and Econometrics. [URL](#) (Open Access)
- Carvalho, L., Mingardo, G., & Van Haaren, J. (2012). Green urban transport policies and cleantech innovations: Evidence from Curitiba, Göteborg and Hamburg. *European Planning Studies* 20 (3), 375–96. [Taylor&Francis](#) (HSE Access)
- Castells, M. (2014). *Technopoles of the World: The making of 21st century industrial complexes*. Routledge. [Google Books](#) (Partially Open Access)

- Childs, M. C. (2012). *Urban composition: Developing community through design*. Princeton: Princeton Architectural Press. [ProQuest](#) (HSE Access)
- Corburn, J. (2013). *Healthy City Planning: From neighbourhood to national health equity*. Routledge. [Google Books](#) (Partially Open Access)
- *Crawford, S., & Goldsmith, S. (2014) *The Responsive City: Engaging communities through data-smart governance*. San Francisco: Jossey-Bass. [URL](#) (Open Access)
- Florida, R. L. (2012). *The rise of the creative class, revisited*. New York: Basic Books. [Books24x7](#) (HSE Access)
- Ganapati, S. (2011). Uses of public participation geographic information systems applications in E-Government. *Public Administration Review* 71 (3), 425–34. [Wiley Online Library](#) (HSE Access)
- Gascó-Hernández, M. (Ed.). (2014). *Open Government Opportunities and Challenges for Public Governance*. New York: Springer International Publishing. [Springer Books](#) (HSE Access)
- Gil-Garcia, J. R., Pardo, T. A., & Luna-Reyes, L. F. (Eds.). (2018). *Policy analytics, modelling, and informatics*. Cham: Springer International Publishing. [Springer Books](#) (HSE Access)
- Gil-Garcia, R. J., Pardo, T. A., & Nam, T. (Eds.). (2016). *Smarter as the new urban agenda: A comprehensive view of the 21st century city*. Dordrecht: Springer International Publishing. [Springer Books](#) (HSE Access)
- Gomez, R., Isakov, A., & Semansky, M. (2015). Small business and the city: transformative potential of small-scale entrepreneurship. Toronto: Rotman-UPT.
- *Glaeser, E. L., Scott D. K., Luca, M., & Naik, N. (2015). Big Data and Big Cities: The promises and limitations of improved measures of urban life. *Economic Inquiry* 56, 1, 114–37. [URL](#) (Open Access)
- *Gurin, J. (2014). How open data is transforming city life. *Forbes*. September 12. [URL](#) (Open Access)
- Hargadon, A. B., & Douglas, Y. (2001). When innovations meet institutions: Edison and the design of the electric light. *Administrative Science Quarterly* 46, 476-501. [SAGE](#) (HSE Access)
- Hua, T. C. (2017). Opening big data for urban innovation. [LeekKuanYewWorldCityPrize](#) (Open Access)
- Janssen, M., Wimmer, M. A., & Deljoo, A. (Eds.). (2015). *Policy practice and digital science: Integrating complex systems, social simulation and public administration in policy research*. Cham: Springer International Publishing. [Springer Books](#) (HSE Access)
- Kammen, D. M., & Sunter, D. A. (2016). City-integrated renewable energy for urban sustainability. *Science* 352(6288), 922–28. [Link](#) (Open Access)
- Katz, B., & Wagner, J. (2014). The rise of innovation districts: A new geography of innovation in America introducing innovation districts. *Metropolitan Policy Program* 3. [URL](#) (Open Access)
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Internet Resources

The Urban Age (LSE Cities), an international research project of how the physical and social are interconnected in cities – <https://lsecities.net/ua/>

Urban Innovation (the National League of Cities), research and solutions portfolio to encapsulates the many new technologies and platforms that have come to redefine city governance and service delivery – <http://www.nlc.org/program-initiative/urban-innovation>.

Innovation (the World Economic Forum) engages the foremost political, business and other leaders of society to shape global, regional and industry agendas – <https://www.weforum.org/agenda/archive/innovation>

The World Resources Forum (WRF), the science-based platform for sharing projects and publications about the economic, political, social and environmental implications of innovations in global resource use – <https://www.wrforum.org>

Ash Center for Democratic Governance and Innovation (Harvard Kennedy School) is a premier academic force for recognizing and promoting excellence in the public sector and fostering innovative policy solutions to the 21st century challenges of governing – <http://www.ash.harvard.edu>

Government Innovators Network (Harvard Kennedy School) is a marketplace of ideas and examples of government innovation striving to stimulate new ideas and bring people and ideas together around innovations in government – www.innovations.harvard.edu

Data-Smart City Solutions (Harvard Kennedy School) is working to catalyze adoption of data projects on the local government level to promote the combination of integrated, cross-agency data with community data to better discover and preemptively address civic problems– <http://datasmart.ash.harvard.edu>

CityLab (Bloomberg Philanthropies, the Aspen Institute and The Atlantic), the negotiation forum uniting mayors from around the world, along with urban experts, business leaders, artists and activists, to discuss the most pressing challenges that cities face around the world – <https://www.theatlantic.com/live/events/citylab-2017/2017/>

IESE Cities in Motion Index 2017 (University of Navarra), the interactive map of the smartest cities in the world - <http://citiesinmotion.iese.edu/indicecim/?lang=en>

Gehl (Copenhagen, Denmark) urban research and design consulting company specializing in improving the quality of urban life by re-orienting city design towards the pedestrian and cyclist – <http://gehlpeople.com>

Future Cities Catapult, the UK organization created to advance urban innovation, and to make cities better – <http://futurecities.catapult.org.uk/about/>

Urban Learning, a EU-project (H2020 energy call) that gathers cities to exchange and work on improving governance structures for integrative urban energy planning. Contains the [information \(pdf\)](#) about the innovative energy technologies urban development sites with innovative energy technologies and supply options – <http://www.urbanlearning.eu>

Video Sources Used in Class

What is a smart city? | CNBC Explains ([Link](#))

7 principles for building better cities ([Peter Calthorpe](#))

Smart Cities: New York ([Link](#)) Montreal ([Link](#)) Singapore ([Link](#)) Barcelona ([Link](#)) San Diego ([Link](#))

A new model for urban innovation – [Newcastle City Futures](#)

Quantified Cities: Big Data and Big Design ([Francesca Birks](#))

The future of our cities and towns lies in... Open Data ([Laurenellen McCann](#))

Coding for a better government ([Jennifer Pahlka](#))
Demand a more open-source government ([Beth Noveck](#))
How public spaces make cities work ([Amanda Burden](#))
The shareable future of cities ([Alex Steffen](#))
New cohousing that can make us happier ([Grace Kim](#))
Brilliant designs to fit more people in every city ([Kent Larson](#))
4 ways to make a city more walkable ([Jeff Speck](#))
A smog vacuum cleaner and other magical city designs ([Daan Roosegaarde](#))
Why good hackers make good citizens ([Catherine Bracy](#))
How public and private collaborations drive urban innovation ([Julie Lein](#))
How we found the worst place to park in New York City – using big data ([Ben Wellington](#))
Why smart statistics is a key to fighting crime ([Anne Milgram](#))

Further Study: MOOCs

Urban Innovation. Sustainability and Technology Solutions: An introduction to innovators and initiatives at the bleeding edge of urban sustainability and connected technology (Meeting of the Minds, San Francisco, CA) <https://www.udemy.com/urban-innovation>; <https://www.udemy.com/urban-innovation-2/>

Smart Cities – Management of Smart Urban Infrastructures (École Polytechnique Fédérale de Lausanne) <https://www.coursera.org/learn/smart-cities>

Smart Cities (ETH Zürich) <https://www.edx.org/course/smart-cities-ethx-ethx-fc-03x-1>

The City and You: Find Your Best Place (University of Toronto) <https://www.coursera.org/learn/city-and-you-find-best-place>

Future Cities (ETH Zürich) <https://www.edx.org/course/future-cities-ethx-fc-01x>

Quality of Life: Livability in Future Cities (ETH Zürich) <https://www.edx.org/course/quality-life-livability-future-cities-ethx-fc-02x-1>

Responsive Cities (ETH Zürich) <https://www.edx.org/course/responsive-cities-ethx-fc-04x>

Co-Creating Sustainable Cities (Delft University of Technology; Wageningen University & Research) <https://www.edx.org/course/co-creating-sustainable-cities-delftx-wageningenx-ams-urb-2x>

Engaging Citizens: A Game Changer for Development? (World Bank) <https://www.coursera.org/course/engagecitizen>

Open Government (Delft University of Technology) <https://courses.edx.org/courses/course-v1:DelftX+OG101x+1T2016/info>