**New York University**

**Center for Urban Science + Progress**

**Civic Analytics & Urban Intelligence**

**Spring 2021**

Mondays 11:00AM – 1:30PM EST

Rogers Hall, Room 315 Brooklyn campus

*(Please check announcements for weekly updates and notification about how class will meet in person and virtually)*

Instructor:

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Professor, Center for Urban Science + Progress

**I Course Description**

This course provides an overview of city government, operations, and the role of information and communication technologies within cities and related policy domains. There will be an emphasis on new approaches to urban governance ranging from performance management to innovation delivery units to smarter cities frameworks and public entrepreneurship. Throughout the course we will focus intently on the importance of data and how to collect it; and also how it should be presented from a policy, management, and political perspective to ensure impact. In addition, the role of civic engagement and community participation in the context of open data and citizen science is explored. Case studies and best practice examples will be used extensively.

**II Course Objectives**

* Understand the overall structure and governance of urban operations
* Analyze drivers, constraints, and metrics of key urban domains
* Learn about the roles of data and emerging technologies in cities and opportunities and constraints to employing data analytics
* Realize the role of citizens in the effective functioning of urban systems
* Develop the skills to create plans and evaluate the effectiveness of technologies in urban government spaces
* Evaluate race and equity issues, challenges and solutions

**III Assignment Grading Rubric**

Reaction Paper, Blog post -- 10%

Component assignments building up to final project -- 30%

Final project (includes actual project and presentation) -- 40%

Participation (as measured by Zoom, in class comments and final presentation PowerPoint slides) -- 20%

**IV ASSIGNMENTS**

**Semester long assignment: Drafting an Innovative Data Operational Data Plan**

The main assignment is development of an operational plan for data-based policy and program reform in one government department/agency (e.g. public safety, transportation) or nonprofit (e.g. the Red Cross or Rockefeller Foundation). You will create an overarching reform framework, and then identify an area that has potential for significant impact. The focus could be on culture change and training, partnership management, data management, organizational structure, outreach; or some combination of these components or others. The plan will include operational and policy detail about existing efforts, assessment of the department or nonprofit, and identification of at least one new technology or platform to be applied. The plan will also include an assessment of community impact; race and equity; and examples of similar reform plans from other agencies, cities, or organizations. The core elements of the plan will be developed in a series of parts, based on the modules of the course and should encapsulate discussion questions, various writing assignments and original research that you will conduct independently.

An example of a plan would be to boost employment opportunities for individuals leaving state prisons in Allegheny County, Pennsylvania by coordinating criminal justice records with public workforce centers. Your framework might be one of cooperation and support for job seekers. Your work would entail learning about the data systems in the courts and criminal justice system and within the workforce community. You would also identify employment trends and identify exemplary policies and programs that in other locales have been proven to increase employment options, opportunities and wages for formerly incarcerated law breakers. The plan will also include an analysis of race and equity: how race (and other equity) factors have influenced policy and programs in the past and your proposal going forward. Your plan will touch on the benefits of the program, but also the operational detail and challenges of making it happen. This includes looking at the often unconnected and uncoordinated data systems and frontline workers charged with administering them.

There will be four deliverables to be completed throughout the semester that will form the building blocks of the final operational plan (totally five assignments). The entire project taken together should take approximately 50 hours to produce.

RESEARCH PLAN ASSIGNMENT: DUE LESSON 4

This assignment is the development of a plan that will guide your work on the project throughout the semester. It should capture your initial thinking about the topic and how you imagine conducting your work going forward.

The initial research plan will include:

* Description of your target focus (whether it be a policy or program)
* Background about the current state of your policy/program; what are its accomplishments, challenges, where it fits within broader city operations and how favorably it is viewed by senior leadership
* Your focus, your proposed solution
* The initial list of resources you have reviewed including city documents, relevant documents from other cities, relevant documents that provide a conceptual and operational grounding for your assignment
* Resources and documents you plan to use going forward including interview subjects, primary and secondary sources.

Time Expectations:

Approximately 10-15 hours should be dedicated to this first assignment which consists primarily of “desk research” – reviewing material on the internet.

The plan should be written to a specific administrator, with an assumed broader audience needed for coalition building. As such, the design and structure of the plan should be taken into consideration at the early stages of development, and you should think through questions such as ‘who needs to buy into this plan?’, ‘how do I structure this as a pitch for those people?’, and ‘what does success for various stakeholders look like or how will this make their lives easier or their work more impactful?’ Work for this research plan should fall roughly into the following categories:

* Web searches about data efforts and plans in your chosen region and other regions that share similar demographic, economic and geographic characteristics. – (3-4 hours)
* A deeper look at material and analysis about focus you wish to pursue – (3-5 hours)
* Full review of material and then search for additional material – (3-4 hours)
* Memo drafting and editing – (1-3 hours)

Resources:

* + Plans drafted by other students will be posted on the Classes site for your review

ORGANIZATIONAL REVIEW PART I—PROPOSED STRUCTURE: DUE BY LESSON SIX

By lesson 6, you should deliver a more technical organizational review, encompassing the needed resources, both in terms of technology and personnel in order to implement your strategy. This analysis will include work conducted for the roles and responsibilities module. You will conduct a thorough review of your department and provide an assessment of the current and ideal organizational structure. You will look at key functions, staff lines, funding and responsibilities at the organizational and individual job levels.

* Organizational Chart
* Job / Role Descriptions
* Funding and Budget Considerations (operating vs capital expenses)

Time Expectation (6-9 Hours)

* Research of organizational structures (2 hours)
* Resource / Tool Analysis research (2 hours)
* Org chart and Role Descriptions (2-3 hours)

ORGANIZATIONAL REVIEW PART II—ASSESSMENT OF RACE, EQUITY AND CULTURE: DUE BY LESSON NINE

By lesson 9, you will produce a memo to a key administrator providing an organizational review of culture, race, and equity. Using information and analytic skills for the modules on this topic you will conduct an analysis and assessment of your department or organization, drawing from the tools, as well as individual research. This review should identify and use an organizational tool or methodology to serve as a framework for analysis. As you discuss the organization with key stakeholders, you should begin to identify the organization’s strengths, weaknesses, and risks as it relates to rolling out a new data-centered approach.

* Organizational assessment based on interviews and document research.
* Identification of potential early adopters and champions.
* Identification of key training needed to advance the department/organization’s data capacity.
* Identification of risks/concerns around the types of data to be collected and used.
* Include a section about partnerships and how specific collaborations or alignment with external organizations can help advance your reform plans.

Time Expectations (10-12 hours)

* Web searches to solidify which model of assessment makes the most sense for your organization and the goals you wish to achieve. (2-3 hours)
* Conversation(s) with at least 3 individuals inside and stakeholders of the organization/agency to pilot the assessment tool and documentation of perspectives, current skills and capacity, and areas of opportunity. (2-3 hours)
* Material review and additional research (3-4 hours)
* Memo drafting and editing (2 hours)

DRAFT PLAN: DUE BY LESSON 11

To ensure your operational plan is moving in the right direction you will draft an annotated outline of your entire plan with a few bullets highlighting and summarizing key points. In addition to the content, this will be an important outline as you will now convey how you propose to structure the final deliverable including what sections, sidebars, visuals and other features you will include. This should be approximately two pages in length.

* Time Expectation: 2 Hours
* Plan Outline (2 hours)

FINAL DELIVERABLE: DUE AFTER IN CLASS PRESENTATIONS

This final deliverable will be the culmination of the entire semester of work, synthesizing your original research and all of the learnings and material from the semester. The deliverable, inclusive of visuals, should be approximately six to eight pages in length, with supporting appendices as needed (role descriptions, budget, etc). This final plan should be inclusive of all the prior submissions and should be designed/structured to develop needed buy-in from key stakeholders. This will be due during the exam period of the semester.

Time Expectation: 18 Hours

* Original research including readings, interviews, site visits and any data analysis (8 hours)
* Synthesizing, writing, drafting and designing of the final document (10-12 hours)

NOTE:

* There is flexibility in terms of the exact presentation, look AND feel of the final deliverable.
* There will also be a brief presentation to be made during the final class meeting

GRADING RUBRIC

Below is the grading rubric that applies to each assignment that is part of the semester long assignment. Below is the section that describes what is required to receive the full 100 points for the assignment. The complete rubric can be found at the end of each assignment within the designated module.

|  |  |
| --- | --- |
|  |  |
| **Critical analysis** | Writing has a clear perspective or hypothesis with supporting arguments and effective use of data and research – 35 pts |
|  |  |
| **Structure and tone** | Presentation appeals to the target audience, keeps the audience’s attention, and is easy to follow- 20 pts |
|  |  |
| **Expertise** | Student demonstrates expertise of the reading and research, both a general overview, deep understanding of a specific example, and original research – 20 pts |
|  |  |
| **Presentation** | Student presents material persuasively, within allotted time, used media effectively, and engaging audience throughout – 10 pts |
|  |  |
|  |  |
| **Grammar and spelling** | Grammar, punctuation, and spelling are without error  10 pts |

**Reaction paper assignment DUE September. 21**

You will write one reaction or blog-type paper as a response to the weekly readings and discussion in lesson three.

This should not be a summary paper. I have already read these pieces and participated in the discussion – we are not looking to review this material again. Tell me something I don’t know. Pick one point you want to emphasize and elaborate upon it. Overall, I am looking for your critical take on the class discussion and readings. I am looking to evaluate the strength of your writing and your critical thinking.

**File format:** Word document, with your name in the file path

**Assignment format:** Word document, NO PDFs

**Length:** Less than 1 page. You should aim for about 600 words

**Sources:** Sources are not necessary for your reaction paper, but you can certainly include a few. You can use any style you prefer – footnotes, APA, MLA are all fine

**V SEMESTER SCHEDULE**

**Lesson 1: Overview of the public policy making process, and an introduction to the course**

**September 13**

Learning objectives:

* The public policy process and the components of the policymaking process
* Big picture about the data and tech environment in government
* Get to know each other and our goals for the semester

Readings:

* Kingdon, John. Agendas, Alternatives, and Public Policies. Pages 71-98, 116-144, 165-195
* New City O/S Chapter 1

Optional reading:

* *New Yorker* article about Estonia the digital republic. Download at <https://www.newyorker.com/magazine/2017/12/18/estonia-the-digital-republic>

**Lesson 2: Overview of government, it’s role and different structures; plus an introduction to digital mater planning (lineage to urban master planning)**

**September 20**

Learning objectives:

* The role, authority, and service delivery function of municipal government
* Different types of local government structures (e.g. strong mayor, city manager)
* Federalism: the difference between national, regional, and local government
* City operations: the distinction between agency-based priorities, and citywide priorities and management.
* What’s a digital master plan
* Learn about different master plans

Readings:

* **Urban Text reading.** These pages from a textbook by Dennis Judd and Todd Swanstrom, covers foundational topics and issues about city politics and policy. Pages 1-8, 44-47, 91-99
* **Digital Master Planning: An Emerging Strategic Practice in Global Cities**. With the trends toward urbanization and the rapid evolution of information technology, there has been a flurry of digital master plans and smart city strategic plans across the globe. Townsend and Lorimer explore the range of these efforts and define four strategic approaches. Townsend, A. & Lorimer, S. (2015, June) Digital Master Planning: An Emerging Strategic Practice in Global Cities. NYU Working Paper #25. *NYU Marron Institute of Global Management*. Retrieved from:<https://marroninstitute.nyu.edu/uploads/content/Working_Paper_25_Digital_Master_Planning.p>

Supporting/Additional reading

* **Smart Cities: What Do We Need to Know to Plan and Design Them Better?** In this article, we hear from Anthony Townsend on the definition of smart cities. He looks to the work of Sir Patrick Geddes, one of the fathers of the Garden Cities movement, as inspiration for a new civics for smart cities. In this article, he advocates for skepticism, responsible crowdsourcing, and measured, data-driven urban science. Townsend cautions against the over-promise of technology but seeks the integration of data into how city government works.. Townsend, A. (2017, June 15) Smart Cities: What Do We Need to Know to Plan and Design Them Better? *Medium*. Retrieved from: [medium.com](https://medium.com/@anthonymobile/smart-cities-what-do-we-need-to-know-to-plan-and-design-them-better-b6d05e736ea1)
* **Strategic Planning for Smarter Cities**. This article presents the planning process for smart cities; one that starts by defining a clear vision of the desired future state, articulating measurable goals and specific objectives and moving toward an approach for execution. Reichental, J. (2017) Strategic Planning for Smarter Cities. In H. Geng (ed.) *The Internet of Things and Data Analytics Handbook*, (pp. 83-93) New Jersey: Wiley. Retrieved from: [wiley.com](https://www.wiley.com/legacy/wileychi/geng/)
* **WeHo Smart City Plan**. Incorporated in 1984, the City of West Hollywood is less than two (2) square miles in the heart of the expansive Los Angeles County, California. With a population of approximately 36,000 people (US Census 2010), this is a city that relies on shared public safety services from the County (one of 88 cities in LA County), outsources and partners with external stakeholders to get a lot of their work done and has a small but dedicated city hall staff with a long-standing commitment to high-quality customer service. WeHo Smart City is a digital master plan that evolved from the work of an internal innovation team, embedded within the City's Community Development Department. It provides a framework for the continued evolution of high-quality customer services and equitable access to opportunity. Through the planning process, this plan focused more on creating a "smart city hall" with only a few externally-focused projects. The City of West Hollywood has been implementing this plan since its adoption in February 2018. The City of West Hollywood’sInnovation Division has received the [American Planning Association (APA) Technology Division’s Smart Cities Award](https://www.weho.org/Home/Components/News/News/8480/23) for the WeHo Smart City Strategic Plan. The Smart Cities Award recognizes and celebrates communities that are using technology to be intelligent about growth, quality of life, inclusivity, sustainability, and resiliency. [**Download WeHoSmartCityStrategicPlan.pdf**](https://tulane.instructure.com/courses/2214997/files/110555755/download?wrap=1)  [**wehosmartcity.org**](http://wehosmartcity.org/) **(website opens in new tab)**
* **Anaheim SMART City Roadmap Initiative**. Anaheim is a city of 358,000 residents, 20,000 businesses and 25 million annual visitors. In addition to being home to the Disneyland Resort, Anaheim boasts the largest convention center on the West Coast. A full-service city, Anaheim began its SMART City Roadmap initiative in late 2018 to incorporate a broad set of technologies to enhance the quality of life for Anaheim's residents, businesses and visitors. Very different in the approach and scope by the City of West Hollywood, this roadmap is designed to be a "living document" that continues to evolve as community needs, council priorities, technology, and funding change[SMART CITY ANAHEIM\_FINAL\_201811271211082553.pdf](https://tulane.instructure.com/courses/2214997/files/110557605/download?wrap=1)[Anaheim Council Agenda Report.pdf](https://tulane.instructure.com/courses/2214997/files/110557604/download?wrap=1)

**Lesson 3: Overview of policy making and how to determine if a policy is successful**

**September 27**

Learning objectives:

* What data accountability is and how data accountability can ensure if a policy/service area is successful
* How data accountability has evolved over the past 25 years
* Some unintended consequences of data dashboards
* How specifically are these issues are playing out in the area of criminal justice and policing

Assignment due: Reaction Paper

Readings:

* **Innovation Playbook**: This reading helps establish accountability procedures and routines to ensure work gets done. Skim chapters one and two; ***read chapters three and four***. <https://www.bbhub.io/dotorg/sites/2/2014/08/Innovation-Team-Playbook_2015.pdf>
* **COMPSTAT: Its origins, evolution, and future.**  CompStat is the progenitor of CitiStat, and most all data management platforms that have come to define government performance management everywhere. This article does an excellent job of reviewing CompStat definitions, origins and ways it can boost information sharing, decision-making and organizational transformation. The piece also provides numerous examples from around the country and demonstrates how different the approach can be in practice. This is a report that can be skimmed and highlighted; no need to read every word from start to finish. Bureau of Justice Assistance and Police Executive Research Forum, "CompStat: Its Origins, Evolution, and Future in Law Enforcement Agencies." 2013. PLEASE JUST SKIM THIS READING. Retrieved from <https://bja.ojp.gov/sites/g/files/xyckuh186/files/Publications/PERF-Compstat.pdf>
* **Reply All Jack Maple profile**. This two-part podcast profiles Jack Maple and his invention of the CompStat program, which we studied in Module three. This review of CompStat describes the ways in which data has the power to alter motivation, policy goals, who is rewarded and punished; how data can either liberate government officials to be more creative or it can drastically diminish options. Above all else, the podcast reminds us data programs are designed by people and that the process and policy intentions are far more important than the actual data itself. Reply All, "The Crime Machine Part 1 and Part 2," Gimlet Media, October, 2018. Retrieved from: https://gimletmedia.com/shows/reply-all/o2hx34 and <https://gimletmedia.com/shows/reply-all/n8hwl7>

Optional readings

* **What All Mayors Would Like to Know About Baltimore’s CitiStat Performance Strategy**. CitiStat is the premiere performance management platform mayors and other local leaders have used for the past thirty years. Often it is a platform used by chief executives and senior management and this report is helpful as it is written directly for those executives. It allows you to see what advice an expert would provide. Hence, there is much practical knowledge including what CitiStat is and isn’t; what types of staff to hire and even how to arrange meetings. This is a report that can be skimmed and highlighted, no need to read every word from start to finish. Robert Behn, "What All Mayors Would Like to Know About Baltimore’s CitiStat Performance Strategy," 2007. IBM Center for Business of Government. Retrieved from: <http://www.businessofgovernment.org/sites/default/files/BehnReportCiti.pdf>
* [Using a GIS-based network analysis to determine urban greenspace accessibility for different ethnic and religious groups](http://mural.maynoothuniversity.ie/5898/1/CB_GIS.pdf)
* [Map of Gentrification and Displacement for The Greater New York](http://www.udpny.org/static/media/report.8f3f1564.pdf)
* [Site Planning and Revenue Prediction: Optimizing Food Truck Locations in New York City](https://medium.com/@carto/site-planning-and-revenue-prediction-optimizing-food-truck-locations-in-new-york-city-7639c5c31cba)

**Lesson 4: Role of information and communication technologies within cities; organizational staffing of tech and data functions**

**October 4**

Learning objectives:

* Evaluate pros and cons of =centralized vs decentralized approaches with IT
* Role of data offices vs traditional DoITT office
* Cybersecurity
* Review of SWOT analysis

Assignment Due: Research Plan

Readings:

* **Bill Rials IT staffing paper**: This paper by Tulane professor Bill Rials spotlights key principles, organization and approaches to traditional IT (information technology departments). While the focus is on IT the themes can be applied to other agencies and civic enterprises. Pay particular attention to the discussion of centralized versus decentralized structure.
* **National Governors Association - Risk Management Framework** This visual heavy document from the National Governors Association provides a clear and sharp framework for managing risk. It can serve as a foundation for any cybersecurity strategy or reform plan. National Governors Association, (2020, January 27) NGA Governor's Guide to Cybersecurity Risk Management.

Optional readings:

* **Innovation team reading from IBM Center for the Business of Government**: This report from the IBM Center for the Business of Government details how to establish an innovation office. There are a number of helpful strategies, principles and suggestions for setting up such an office within local government. But bear in mind this is about establishing a small team as opposed to reforming or improving government operations more broadly: <http://www.businessofgovernment.org/sites/default/files/A%20Guide%20for%20Making%20Innovation%20Offices%20Work.pdf>
* **Boston Consulting Group HR report**: The article applies private sector know-how and advice to public sector HR challenges. There are a set of ten principles and strategies described in clear detail and worth reviewing. <https://www.bcg.com/publications/2016/people-organization-creating-people-advantage-public-sector>
* **Deloitte-NASCIO Cybersecurity Study**. This 50 state survey of chief information security officers provides valuable insights into what are the top priorities of officials charged with addressing security issues throughout the entire enterprise of state government. You only need to skim this document, but look for findings about statewide vision, sophistication of threats, the fundamental need for resources and internal staffing. Pay particular attention to the proactive recommendations including ways cybersecurity can enable innovation and better partner with the business and higher education sector. Robinson, D. & Subramanian, S. (2018, October 23) States at Risk: Bold Plays for Change. *Deloitte and the National Association of State Chief Information Officers*. Retrieved from:<https://www.nascio.org/resource-center/resources/2018-deloitte-nascio-cybersecurity-study-states-at-risk-bold-plays-for-change/>

**Lesson 5: Organizational culture/leadership/management strategies October 18 {Note, there is no class on October 11}**

Learning objectives:

* Evaluate the importance of organizational culture to effectively advance data reform and innovation.
* Describe organizational culture characteristics and various organizational styles.
* Evaluate strategies for organizational transformation and the leadership traits needed to advance such transformations.

Reading:

* **City Hall Culture Transformation Guide**. An advance copy of a document intended to help mayors lead culture change written by Professor Kleiman will be posted.
* **Leading Public Sector Innovation**. This chapter from Christian Bason's book describes key characteristics of organizational change and leadership. Bason careful distinctions between leaders and managers and lays out a helpful typology of administrators: visionaries, enablers and 360 degree innovators; and how they must all work in concert to meet organizational goals. Christian Bason. Leading Public Sector Innovation: Co-creating for a Better Society. Policy Press, University of Bristol. 2010. Chapter 11.
* **The Leader's Guide to Corporate Culture: How to Manage the Eight Critical Elements of Organizational Life**. This article is an excellent overview of organizational culture. It is based on a comprehensive review of the literature; provides razor sharp definition of culture and offers a clarification and distinction between 'strategy' and 'culture' and describes how the two are linked; succinctly presents cultural attributes and at the end offers suggestions for transforming culture. It also provides a summary of eight cultural styles that are more helpful for describing private sector companies, but still helpful to review. Groysberg, B, Lee, J., Price, J., & Cheng, J. Y. (2018, January-February) The Leader's Guide to Corporate Culture. *Harvard Business Review.* Retrieved from:<https://hbr.org/2018/01/the-culture-factor#:~:text=The%20Leader's%20Guide%20to%20Corporate%20Culture&text=Strategy%20offers%20a%20formal%20logic,collective%20action%20and%20decision%20making>[.](https://hbr.org/2018/01/the-culture-factor#:~:text=The%20Leader's%20Guide%20to%20Corporate%20Culture&text=Strategy%20offers%20a%20formal%20logic,collective%20action%20and%20decision%20making.)

Optional:

* **Delivering for Citizens: How to Triple the Success Rate of Government Transformations**. This McKinsey report is one of the very few documents assessing public sector organizational culture. It uses a review of 80 attempts at public sector transformation around the world to provide compelling reasons for addressing culture and a sense of how hard it is to advance meaningful change. It also provides a very helpful catalog of strategies. There is a lot here, but it is worth a careful read. Allas, T., Checinski, M., Dillon, R., Dobbs, R., Hieronimus, S., & Singh, N. (2018, May 31) Delivering for Citizens: How to Triple the Success Rate of Government Transformations. McKinsey & Company. Retrieved from: [https://www.mckinsey.com/industries/public-sector/our-insights/delivering-for-citizens-how-to-triple-the-success-rate-of-government-transformations#](https://www.mckinsey.com/industries/public-sector/our-insights/delivering-for-citizens-how-to-triple-the-success-rate-of-government-transformations)
* **Instruction to Deliver.** The previous readings have discussed how difficult organizational change is when advancing innovation practice; and the tremendous courage leaders need when doing so. These book chapters provide an up close look at what exactly such leadership looks like. You may skim the first chapter but read the second one and note the strategies Barber uses; both in one-on-one interactions and in larger group settings. Michael Barber, Instruction to Deliver, Methuen Publishing, 2008, Chapter 1 and 2.

**Lesson 6: Race and equity issues as related to the implementation of technologies and innovation**

**October 25**

Learning objectives:

* Identify where bias in data comes from
* How bias can be tracked
* How bias can corrected for

Assignment Due: Organizational Review Part One

Readings:

* **The Smart Enough City.** The passages in this text are critical to this module and the entire class. Green makes the point that technology is not worth advancing for technology’s sake, but must be in the service of larger civic goals such as equity, better race relations, and improved service delivery. Tech itself is not neutral, nor is it a social good; only when deployed as part of a larger civic strategy and policy. And, note the Array of Things profile and its emphasis on community input. Green, Ben. The Smart Enough City: Putting Technology in its Place to Reclaim our Urban Future. 2019. Pages 1-12, 42-46, 107-115. MIT University Press.
* **Race Equity Toolkit**. This guide offers various strategies for operationalizing equity in decision-making, policies, practices, programs and budgets. Nelson, Julie and Lisa Brooks. Racial Equity Toolkit: An Opportunity to Operationalize Equity. Local and Regional Government Alliance on Race and Equity. 2016.<https://racialequityalliance.org/wp-content/uploads/2015/10/GARE-Racial_Equity_Toolkit.pdf>

Optional reading:

* **On the Wrong Side of the Digital Divide**. This is a Greenlining Institute review of the impact of internet access during COVID-19 and the disproportionate impact the digital divide has had on community resiliency during the pandemic. Best viewed on the site and with a specific focus on California as a case study, explore the numbers and the human perspective on the data. Le, V. & Moya, G. (2020, June 2) On the Wrong Side of the Digital Divide: Life Without Internet Access, and Why We Must Fix It In The Age of COVID-19. *Greenlining Institute*.<https://greenlining.org/publications/online-resources/2020/on-the-wrong-side-of-the-digital-divide/>

**Lesson 7: Partnerships November 1**

Learning objectives:

* Partnerships: Working with universities, start-ups, consultants, large corporations
* Approaches
* Emerging technologies and how each has been applied (e.g. Blockchain)

Partnership readings:

* **Partnership report.** This report documents the history of local government partnerships with anchor institutions (universities, hospitals and medical centers). It tracks the rise in such partnerships and articulates a framework that benefits both anchor institutions and local communities. The partnership approach and framework in this report can also serve as a template for partnerships with other sectors including start up businesses, large corporations, philanthropy and other levels of government. Kleiman, N., Getsinger, L., Pindus, N., & Poetig, E. (2015, September) Striking a (Local) Grand Bargain: How Cities and Anchor Institutions can Work Together to Drive Growth and Prosperity. *National Resource Network*. <https://wagner.nyu.edu/files/labs/strikingbargain.pdf>
* **Chapter 6, Mashed Up Government**, A New City O/S: The Power of Open, Collaborative, and Distributed Governance, selected pages.
* **Government as a Platform.** This is a foundational article discussing the role of government in relation to new technological advances. The author discusses the core role of government as a platform for collective action. This means government has an important role to play as a convener, enabler and regulator. And like all platforms, it must be continually updated. O' Reilly, T. Government as a Platform. *O' Reilly Media*. Chapter 2. Retrieved from:<https://www.oreilly.com/library/view/open-government/9781449381936/ch02.html>

**Lesson 8: Domain Overview—Mobility November 8**

Learning objectives:

* Learn about the function of different groups to facilitate transportation in cities
  + Private → Uber / Ford
  + Public → local/regional government
* Gain an understanding of the role of City Planning in shaping policy and how it can impact operations

Readings:

* **In Depth Mobility report**: As automated decision-making takes over, how do we reconcile the differences between governing the physical realm with the growing digital realm? This report looks to how the algorithm is shaping transport activity and the potential policies and governance framework to adapt to these changes. Most importantly, it underscores the changes required of regulators in the digital age as it is no longer possible to "regulate and forget" -- calling for a more diversified approach to regulation that includes risk-based approaches, iterative and adaptable regulations, limited regulatory exemptions, performance-based outcomes and collaborative regulation. [itf-oecd.org](https://www.itf-oecd.org/governing-transport-algorithmic-age)

Optional reading:

* **NY Times overview article**: Many new mobility services -- from ride-hailing to carsharing to bikeshare to micro-mobility -- has been enabled by the advent of the smartphone and increased connectivity. The emergence of many private sector providers has moved cities to adapt from solely providing infrastructure and public transit to working as a "mobility manager," navigating an evolving role for the regulator in the digital age: <https://www.nytimes.com/2020/02/05/technology/data-micromobility-electric-scooters-mds.html>
* **LA DOT article**: The Los Angeles Department of Transportation has developed the Mobility Data Specification, a standard for data-sharing between mobility providers and the city. The intent is to be able to better manage the public right-of-way and access to mobility services but this has been met with considerable resistance from some private sector players. This standard has not been without controversy, but it is always hard to be the first to do so something. So It Decided to Become One. *CityLab*. Retrieved from: <https://www.bloomberg.com/news/articles/2020-02-21/as-l-a-plays-tech-disruptor-uber-fights-back>
* [Mobility, Economic Opportunity and New York City Neighborhoods](https://wagner.nyu.edu/files/faculty/publications/JobAccessNov2015.pdf)
* [Analyzing 1.1 Billion NYC Taxi and Uber Trips, with a Vengeance](https://toddwschneider.com/posts/analyzing-1-1-billion-nyc-taxi-and-uber-trips-with-a-vengeance/)

**Lesson 9: Open data and data analytics November 15**

Learning objectives:

* How to use open data, its history in NYC, open data policies, and different teams in NYC government
* Open data platforms and policies throughout the US
* Introduce different data collection techniques and new analytical techniques (i.e. AI)
* Discuss issues around data and algorithm bias
* Present what predictive analytics are and how they’re used

Assignment Due: Organizational Review Part Two

Readings Open Data:

* **Smart Citizens, Smarter State: The Technologies of Expertise and the Future of Governing.** NYU professor, Beth Noveck maps out a logic and philosophy for open government in this chapter of her book. Note how she draws a sharp distinction between the traditional monopoly on information that the public sector has with increasing demand and ability to open government up. As she notes, it is a well established fact that problems are easier to solve with outside input. The chapter is helpful in clarifying notions of expertise, governance in a modern era and data ethics. Noveck, B. S. (2015) Smart Citizens, Smarter State: The Technologies of Expertise and the Future of Governing. 2015. Chapter One.
* **Government Designed for New Times.** This McKinsey Report provides a solid overview of open data and some of its key applications at the local government level. As such, it's a useful primer and level-setter for students. Mayersohn, N. (2014) Innovation in Local Government: Open Data and IT. McKinsey. Retrieved from: mckinsey.com. Government design for new times.pdf
* **NY Times article about Allegheny County**. This *New York Times* article provides another look at Allegheny County, one of the only human service data warehouse programs in the country. The first reading looked at the intervention point of a child welfare case, whereas this article focuses on the front end, before a case is opened, the in-take process. The article discusses how predictive data using multiple administrative datasets can significantly improve decisions about child abuse and decrease racial bias. It also discusses how big data can improve the decision-making ability of frontline administrators, and in some instances take discretion away from administrators. Hurley, D. "Can an algorithm tell when kids are in danger?" *New York Times*, Jan 2 2018. Retrieved from: [nytimes.co](https://www.nytimes.com/2018/01/02/magazine/can-an-algorithm-tell-when-kids-are-in-danger.html)m

Optional readings:

* **How a Citizen Satisfaction Survey Led to an $800 Million Bond to Fix Kansas City's Infrastructure.** Listening to the community can take a variety of forms. In the case of Kansas City, a rigorous citizen satisfaction survey has helped the city identify community priorities which translated to a major infrastructure program to rehabilitate broken or missing sidewalks, roadways, and other critical shared assets. Read this quick case study and then listen to the interview with the brains behind this work, Kate Bender and Julie Steenson. McCall, B. (2017, May 10) How a Citizen Satisfaction Survey Led to an $800 Million Bond to Fix Kansas City's Infrastructure. What Works Cities. Retrieved from: whatworkscities.bloomberg.org Download Bo McCall blog entry.
* **How to Do Data Analytics in Government.** This is a useful step-by-step analysis of lessons learned from city-level analytics projects. With specific examples across the domains of public safety, housing, public health and transportation, this is an interesting dive into how you might tailor your own global assignment project. Gover, J. (2018, July 16) How to Do Data Analytics in Government. Government Technology. Retrieved from: govtech.com Download the article.
* **Health Department Use of Social Media to Identify Foodborne Illness - Chicago, Illinois, 2013-2014.** Recognizing this is not open data but data that is easily accessible to the public, this is a case study that explores the practice of "listening" to social media for clues that can help a city be more proactive and responsive to community needs. The question to consider is how do we assess the cost-benefit of these approaches and practices? While there are clear public benefits in addressing health, we must evaluate the trade-offs and recognize the potential bias of the data. Harris, J. K., Mansour, R., Choucair, B., Olson, J., Nissen, C., & Bhatt, J. (2014, August 15). Health Department Use of Social Media to Identify Foodborne Illness - Chicago, Illinois, 2013-2014. Centers for Disease Control and Prevention. Retrieved from: cdc.gov Download the article.
* **The Power of Data Visualization in Cities**: Pittsburgh's Burgh's Eye View. *Data-Smart City Solutions: Harvard Kennedy School Ash Center for Democratic Governance and Innovation*. Retrieved from: [datasmart.ash.harvard.edu](https://datasmart.ash.harvard.edu/news/article/the-power-of-data-visualization-in-cities-pittsburghs-burghs-eye-view-1096).
* **Book chapter about Allegheny County**. This chapter of the New City O/S points to ways in which big data can provide more discretion to government administrators. This chapter focused on the intervention point (when a case is actually being investigated). It also provides useful background about how the program began. Goldsmith and Kleiman, The New City O/S, Pages 109-113

**Lesson 10: Data translation and citizen engagement November 22**

Learning objectives:

* How to make effective data visualizations; data translation
* Data evidence movement
* Techniques to garner citizen input

Readings:

* **Storytellers in Chief**. This report provides an overview of best practices in storytelling and makes a case for why effective leaders need to master this skill. This is about adapting leadership (not just organizations) during times of crisis and change. While you can just read the executive summary, there are various gems throughout the entire report. Please read the Executive Summary, pp. 7-13. Bennett, M. & Orr, K . Storytellers in Chief: How top local government managers use storytelling to lead. *Solace, ICMA*, and *CAMA/ACAM*. Retrieved from:<https://icma.org/sites/default/files/Storytellers%20in%20Chief%20-%20A%20report%20in%20conjunction%20with%20Solace.pdf>
* **The Human-Centered Design Toolkit**. This comprehensive guide demystifies the concept of human-centered design and provides a variety of tools and tactics ready for deployment. This field guide was developed with the financial support of crowdfunding. IDEO.org. (2015) The Field Guide to Human-Centered Design. IDEO.org, San Francisco, CA. Retrieved from:<https://www.designkit.org/resources/1>
* **Crowdsourcing**. A tool that goes beyond the capacity of any given organization by looking to a network of people to solve problems. Waze crowdsources information on traffic flow and speed to give you real-time information about your commute while Yelp collects reviews on restaurants and services to help you evaluation your options. As a tool, crowdsourcing can bring more people to the decision-making table but there are often cultural barriers to embracing it fully for its potential. Bloomberg Cities. (2019, May 22) Explainer: What you need to know about crowdsourcing. *Medium*. Retrieved from [medium.com](https://medium.com/@BloombergCities/explainer-what-is-crowdsourcing-9dc2914e1845)

Optional readings

* **A Practical Guide for Establishing an Evidence Centre**. This report discussed the role of intermediaries that are established to increase the use of evidence in public policy and services. The article is written for anyone establishing a data center, which in many respects is what we are aiming to do with this class; to initiate or fortify data and evidence programming within a civic sector enterprise. The report provides an excellent foundation for clarifying your data focus and approach including how to best understand the context, data users and interplay with internal actors and mission. There are also helpful hyperlinks. Bazalgette, L. (2020, June 3) A Practice Guide for Establishing an Evidence Centre. *Alliance for Useful Evidence*. Retrieved from<https://media.nesta.org.uk/documents/Practical_Guide_Evidence_Centre_mjf4AUw.pdf>
* **Community Engagement**. This is a short survey of various tools and resources developed by Code for America (with links to other resources) for digital engagement. This article also outlines five key elements of effective community engagement in the digital age. Code for America. Community Engagement.<https://www.codeforamerica.org/practices/civic-engagement>**:**
* [5 Popular Thematic Map Types and Techniques for Spatial Data](https://medium.com/@carto/5-popular-thematic-map-types-and-techniques-for-spatial-data-b645fa7cb13b)
* [Maps We Love](https://medium.com/@Esri/cartography-plays-cupid-4dcd09671f24)
* [Cartographic Tips for Thematic Maps](https://carto.com/help/tutorials/cartographic-tips-for-thematic-maps/)
* [How to Lie With Maps](https://medium.com/financial-times/how-to-lie-with-maps-177b6ac97e6c)

**Lesson 11: Innovative approaches November 29**

Learning objectives:

* Learn various innovation technologies and the implications of each

Assignment Due: Draft Plan

Technology innovation readings (SKIM THESE READINGS):

* **Agile Manifesto**. It can be really hard to face change and uncertainty. This article walks us through how to embrace change and respond to unpredictable events rather than just trusting in your disaster plans. This article highlights some of the challenges that might face the public sector which is very intentional about mitigating risk. Fowler, M. & Highsmith, J. (2001, April 1) The Agile Manifesto. *Dr. Dobbs: The World of Software Development*.<https://www.drdobbs.com/open-source/the-agile-manifesto/184414755>
* **Agile Timeline**. This is a fantastic overview of the evolution of Agile, starting in 1968. This timeline -- which includes multiple links to additional content -- charts the course of the evolution of this approach and uses several case studies to illustrate its impact. Agile Alliance. Agile Practices Timeline. Retrieved from:<https://www.agilealliance.org/agile101/practices-timeline/>
* **Behavioral Economic**s. In this podcast of [Technopolis](https://www.citylab.com/solutions/2019/02/podcast-technopolis/583096/), Molly Turner and Jim Kapsis explore how government could use "nudges" to help the public good. A strategy that the private sector uses all the time, there are definitely consequences. What might this look like and are we comfortable with this approach? [Technopolis Episode 6: Nudge City: How is your city using tech to amplify hidden social cues?](https://megaphone.link/ATL4042189738)
* **Internet of Things.** Almost any object you can think of has the potential to be connected to the Internet. This does not necessarily make it *smart* but it does qualify the object as part of the Internet of Things (IoT). With the proliferation of these objects worldwide, this article highlights a few key concerns and needs as IoT scales. Burgess, M. (2018, February 16) What is the Internet of Things? WIRED Explains. *Wired*.<https://www.wired.co.uk/article/internet-of-things-what-is-explained-iot>
* **Machine Learning.** In this paper, Buchanan and Miller define the different types of machine learning, applications, and potential considerations for policymakers. Since machine learning can be difficult to grasp, it is important to understand the potential of this technology -- and its power to do something good -- with the lack of transparency of different algorithms and architectures. This paper highlights some of the key risks and challenges of machine learning while exploring potential use cases in war, healthcare and law enforcement. Buchanan, B. & Miller, T. (2017, June) Machine Learning for Policy Makers: What It Is and Why It Matters. The Cyber Security Project. *Harvard Kennedy School Belfer Center for Science and International Affairs*. Retrieved from [belfercenter.org](https://www.belfercenter.org/sites/default/files/files/publication/MachineLearningforPolicymakers.pdf)
* **Blockchain**. This white paper, completed for the International City/County Management Association (ICMA) and Government Finance Officers Association (GFOA), examines for the public sector various opportunities around blockchain, an encrypted and distributed ledger. There are some case studies which help illustrate the potential use cases. Hamill, J. & Bricken, H. (2018, November 1) Blockchain Technology: Local Government Applications and Challenges. *ICMA*. Retrieved from: [icma.org](https://icma.org/articles/article/icma-releases-whitepaper-blockchain-technology-and-its-application-local-government)
* **Artificial Intelligence**. This article defines how artificial intelligence (AI) works and its potential to scale. The authors argue that with the advent of AI in business and to fully capture its potential, leaders must look beyond their company resources to create a flow of data across networks. Additionally, AI will likely disrupt the job market and further challenge industry to adapt. This article provides an interesting -- albeit somewhat technical -- look at the influence this technology may have on the future of our economy and public institutions. Iansiti, M. & Lakhani, K. R. (2020, January-February) Competing in the Age of AI. *Harvard Business Review*. Retrieved from: [hbr.org.](https://hbr.org/2020/01/competing-in-the-age-of-ai)

**Lesson 12: Open workshop December 6**

Workshop final project and presentations.

**Lesson 13: Final class and final presentations December 13**