Artificial Intelligence: A Survey for Policymakers

School of International & Public Affairs
Columbia University

January 31, 2023 - Lecture 3

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Today

- Review of Week 2 reading

- NYC government - context for Week 3 readings

  - Overview of NYC government

  - Algorithms Management and Policy Officer (AMPO)

  - AI Strategy

  - Reflections on NYC government experience

New York City
by the numbers

8.8 million

population

39

states with smaller population

13%

of US AI workforce

~1.1 million

students in NYC public schools

~1 million

New Yorkers living with a disability

260,000

CUNY students (Ivy League: 146K)

~$1.7 trillion

GMP (NYC metro area)

~9%

of US GDP

200 million

emergency meals distributed during first year of pandemic

3.2 million

foreign-born residents (~40%)

~50%

residents who speak a language other than English at home

~25%

not English proficient (1.8M people)

100

languages available for telephonic interpretation (311)

10

"official" (Local Law 30) languages

40%

digitally underconnected New Yorkers

18%

lacking access to both home and mobile broadband (1.5M people)

#1

in number of billionaires (107) among global cities

#1

in income disparity among US cities

44%

of income goes to the top 1%

43%

of income tax paid by the top 1% of residents

~39,000

(general-purpose) governments in the US

~300,000
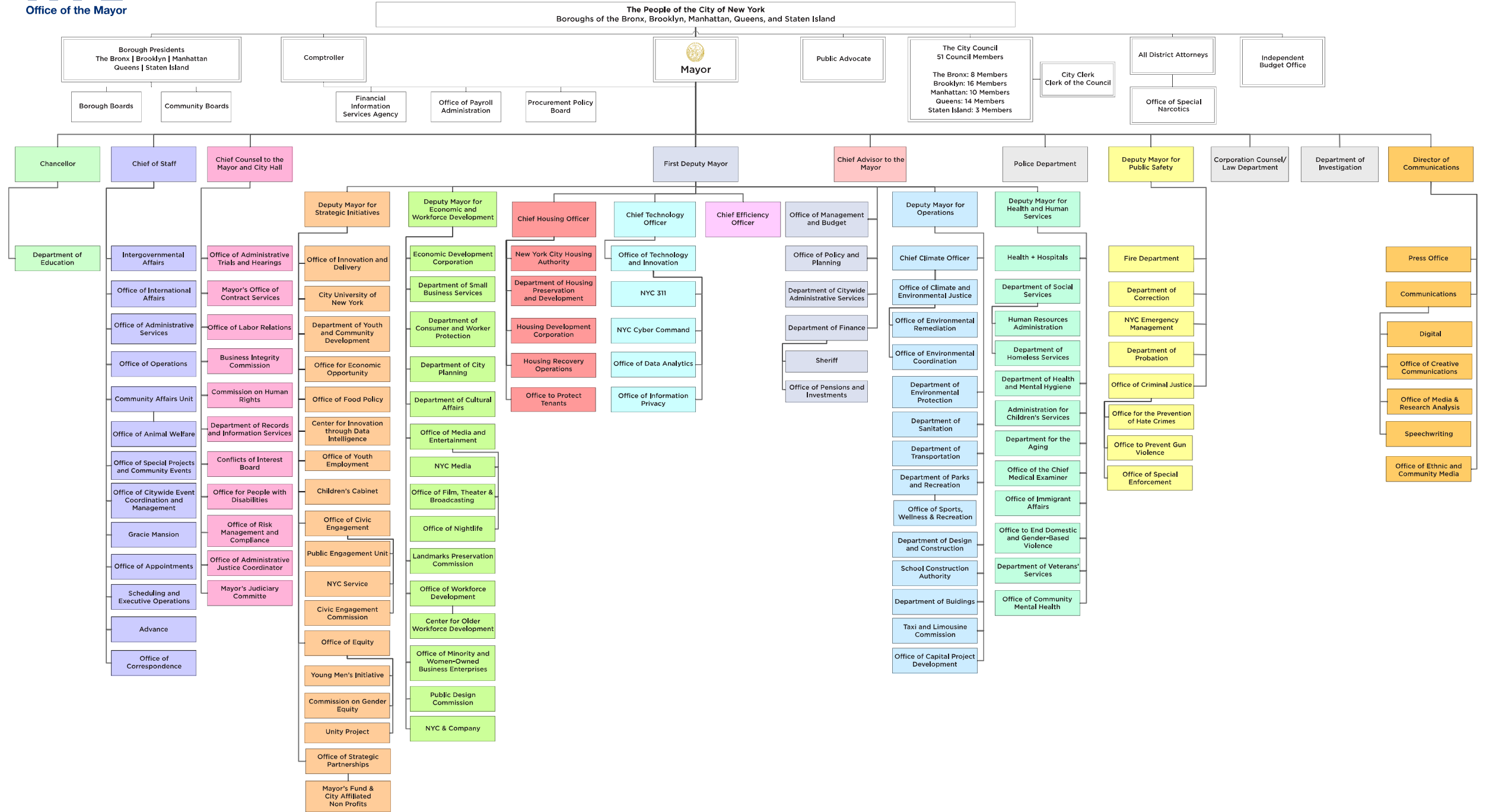
NYC government employees

~$100 billion

NYC budget

Who's in charge of New York City?

NYC Office of the Mayor

February 2022

The People of the City of New York
Boroughs of the Bronx, Brooklyn, Manhattan, Queens, and Staten Island

Borough Presidents
The Bronx | Brooklyn | Manhattan
Queens | Staten Island

Comptroller

Mayor

Public Advocate

The City Council
51 Council Members

The Bronx: 8 Members
Brooklyn: 16 Members
Manhattan: 10 Members
Queens: 14 Members
Staten Island: 3 Members

City Clerk
Clerk of the Council

All District Attorneys

Independent Budget Office

Borough Boards

Community Boards

Financial Information Services Agency

Office of Payroll Administration

Procurement Policy Board

Office of Special Narcotics

Top-level offices

Chancellor

Chief of Staff

Chief Counsel to the Mayor and City Hall

First Deputy Mayor

Chief Advisor to the Mayor

Police Department

Deputy Mayor for Public Safety

Corporation Counsel/ Law Department

Department of Investigation

Director of Communications

Chancellor
- Department of Education

Chief of Staff
- Intergovernmental Affairs
- Office of International Affairs
- Office of Administrative Services
- Office of Operations
- Community Affairs Unit
- Office of Animal Welfare
- Office of Special Projects and Community Events
- Office of Citywide Event Coordination and Management
- Gracie Mansion
- Office of Appointments
- Scheduling and Executive Operations
- Advance
- Office of Correspondence

Chief Counsel to the Mayor and City Hall
- Office of Administrative Trials and Hearings
- Mayor's Office of Contract Services
- Office of Labor Relations
- Business Integrity Commission
- Commission on Human Rights
- Department of Records and Information Services
- Conflicts of Interest Board
- Office for People with Disabilities
- Office of Risk Management and Compliance
- Office of Administrative Justice Coordinator
- Mayor's Judiciary Committe

Deputy Mayor for Strategic Initiatives
- Office of Innovation and Delivery
- City University of New York
- Department of Youth and Community Development
- Office for Economic Opportunity
- Office of Food Policy
- Center for Innovation through Data Intelligence
- Office of Youth Employment
- Children's Cabinet
- Office of Civic Engagement
- Public Engagement Unit
- NYC Service
- Civic Engagement Commission
- Office of Equity
- Young Men's Initiative
- Commission on Gender Equity
- Unity Project
- Office of Strategic Partnerships
- Mayor's Fund & City Affiliated Non Profits

Deputy Mayor for Economic and Workforce Development
- Economic Development Corporation
- Department of Small Business Services
- Department of Consumer and Worker Protection
- Department of City Planning
- Department of Cultural Affairs
- Office of Media and Entertainment
- NYC Media
- Office of Film, Theater & Broadcasting
- Office of Nightlife
- Landmarks Preservation Commission
- Office of Workforce Development
- Center for Older Workforce Development
- Office of Minority and Women-Owned Business Enterprises
- Public Design Commission
- NYC & Company

Chief Housing Officer
- New York City Housing Authority
- Department of Housing Preservation and Development
- Housing Development Corporation
- Housing Recovery Operations
- Office to Protect Tenants

Chief Technology Officer
- Office of Technology and Innovation
- NYC 311
- NYC Cyber Command
- Office of Data Analytics
- Office of Information Privacy

Chief Efficiency Officer

Office of Management and Budget
- Office of Policy and Planning
- Department of Citywide Administrative Services
- Department of Finance
- Sheriff
- Office of Pensions and Investments

Deputy Mayor for Operations
- Chief Climate Officer
- Office of Climate and Environmental Justice
- Office of Environmental Remediation
- Office of Environmental Coordination
- Department of Environmental Protection
- Department of Sanitation
- Department of Transportation
- Department of Parks and Recreation
- Office of Sports, Wellness & Recreation
- Department of Design and Construction
- School Construction Authority
- Department of Buidings
- Taxi and Limousine Commission
- Office of Capital Project Development

Deputy Mayor for Health and Human Services
- Health + Hospitals
- Department of Social Services
- Human Resources Administration
- Department of Homeless Services
- Department of Health and Mental Hygiene
- Administration for Children's Services
- Department for the Aging
- Office of the Chief Medical Examiner
- Office of Immigrant Affairs
- Office to End Domestic and Gender-Based Violence
- Department of Veterans' Services
- Office of Community Mental Health

Deputy Mayor for Public Safety
- Fire Department
- Department of Correction
- NYC Emergency Management
- Department of Probation
- Office of Criminal Justice
- Office for the Prevention of Hate Crimes
- Office to Prevent Gun Violence
- Office of Special Enforcement

Director of Communications
- Press Office
- Communications
- Digital
- Office of Creative Communications
- Office of Media & Research Analysis
- Speechwriting
- Office of Ethnic and Community Media

Examples

Trash and sanitation	Department of Sanitation, Parks Department
Airports	Port Authority (1921 interstate compact), US Department of Homeland Security
Power grid	Consolidated Edison (investor-owned public utility)
Subways	Metropolitan Transportation Authority (NYS) (public benefit corporation)
Criminal justice	District Attorneys, NYPD, Courts, CJA, …
Elections	Board of Elections
Public schools, housing, hospitals, colleges, …	Department of Education, NYCHA, H+H, CUNY, …

Tech Challenges

Three Contractors Sentenced to 20 Years in CityTime Corruption Case

By **Benjamin Weiser**

April 28, 2014

MTA

"There are people who do not work here who we are paying," said Feinberg.

"It's crazy … I absolutely believe there are a lot of people wandering around and no one knows who they report to."

NYC Transit chief Sarah Feinberg says MTA has no organizational chart, vows to cut fat out of agency

By **Clayton Guse**
Transit Reporter • Jul 13, 2020 at 12:01 am

MTA officials have run into a unique obstacle in their efforts to cut costs: The agency has no organizational chart detailing what each of its 70,000 employees do, or who they even report to.

Interim NYC Transit president Sarah Feinberg said in an interview with the Daily News Thursday that she was confounded last month when no one was able to provide her with a full breakdown of the workforce she's led since March.

Some managers maintain a chart of their own employees, but there is no unified document for the whole agency, Feinberg said.

Redlining
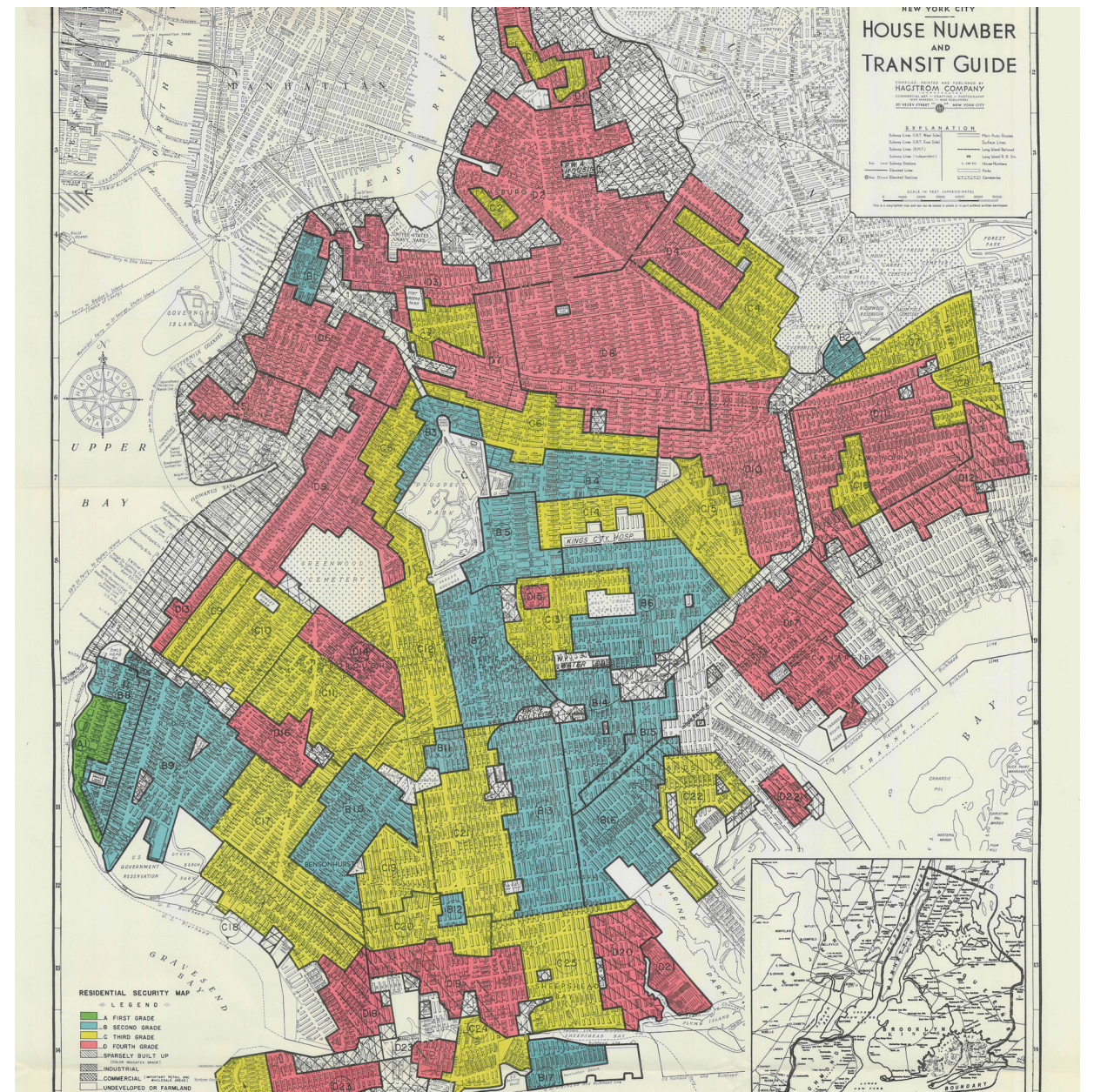
Map 1: Combined Home and Mobile Broadband Adoption Rates by Public Use Microdata Area [1]

Source: 2017 5-Year Estimate of Presence and Type of Internet Subscription in the Household data, provided by the American Community Survey. The legend categories represent the following percentages: Low 34%-54%, Low Medium 55%-60% High Medium 61%-66.5%, High 67%-81%.

- Low
- Low Medium
- High Medium
- High
- Parks, Cemeteries, Airports, etc.
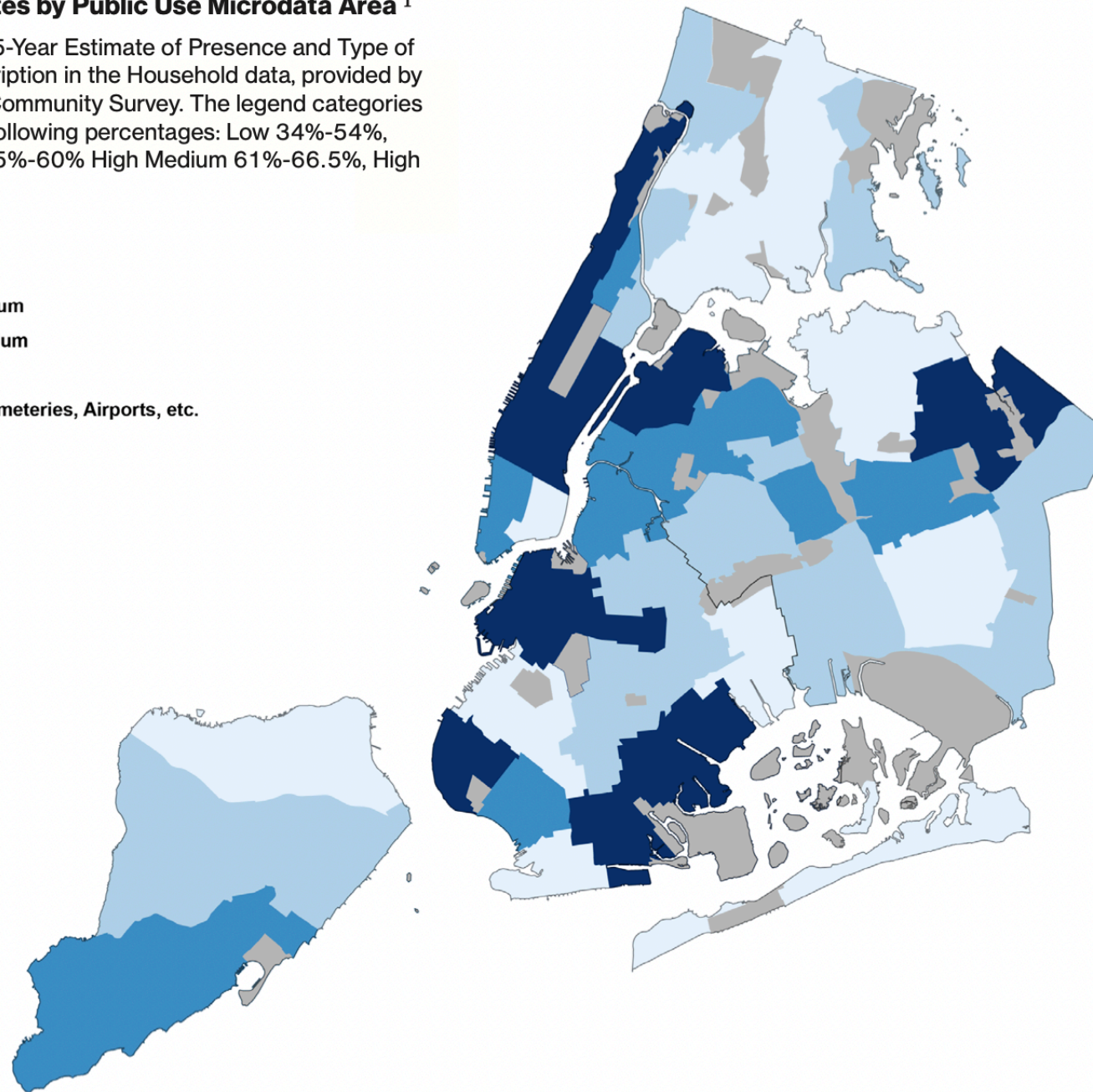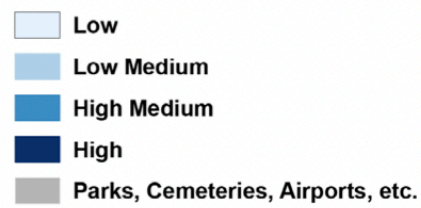
Amazon Doesn't Consider the Race of Its Customers. Should It?

By David Ingold and Spencer Soper
April 21, 2016

Update 1 — Following the publication of this story, Boston Mayor Martin J. Walsh and Massachusetts Senator Ed Markey called upon Amazon to provide Prime Free Same-Day Delivery to Boston's excluded Roxbury neighborhood. On April 26, Amazon agreed to expand the same-day delivery area to include all Boston neighborhoods. On May 4, all Boston ZIP codes were included. Read More

Update 2 — Following criticism from Bronx Borough President Ruben Diaz Jr. and New York State Assemblyman Jeff Dinowitz, Amazon announced on May 1 it will bring same-day delivery to every ZIP code in New York City in the coming weeks. Expanded coverage will include the Bronx, the only borough entirely excluded from the service. Read More
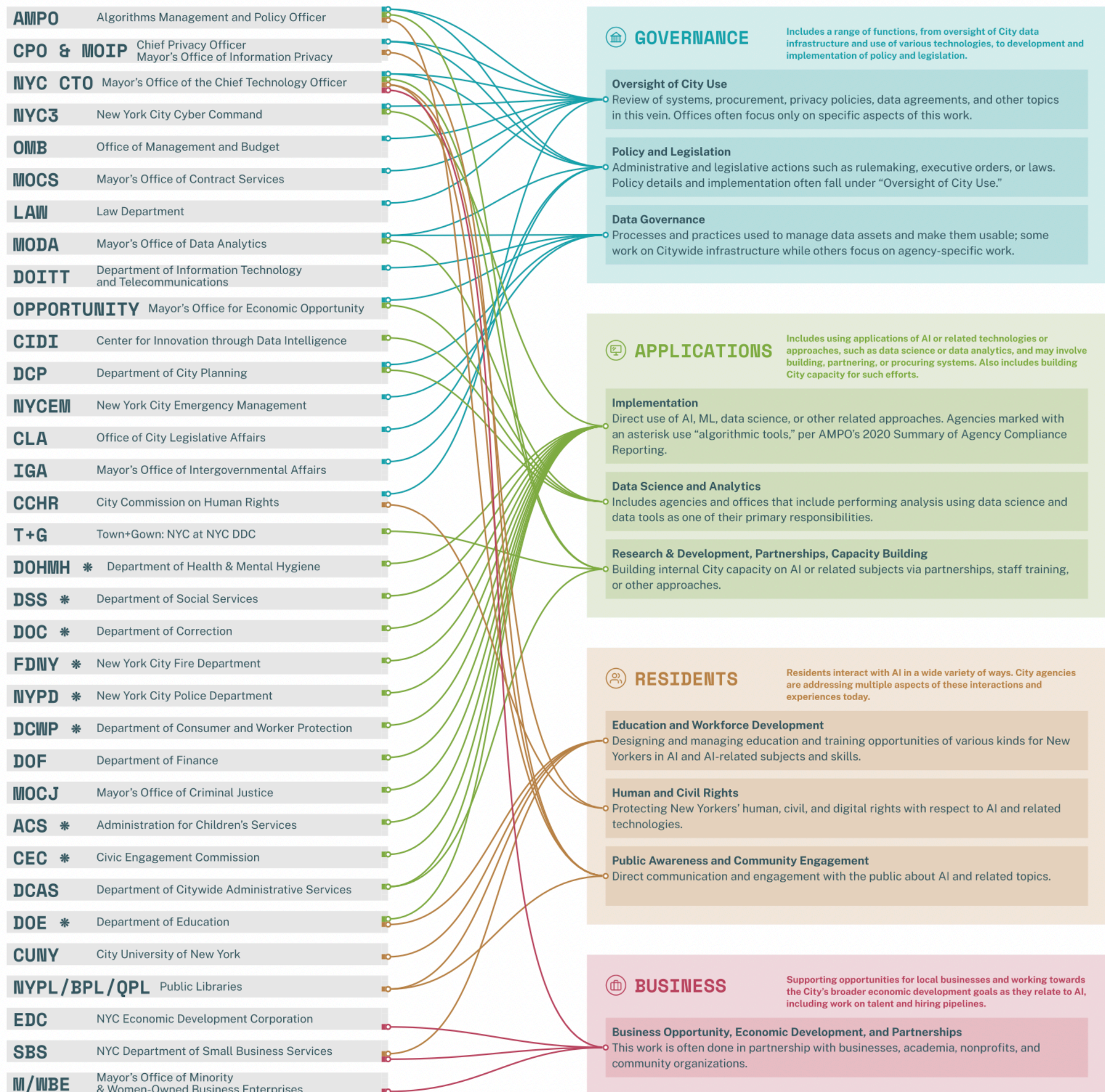
Update 3 — After demands from U.S. Rep. Bobby Rush, whose district covers excluded neighborhoods in Chicago's South Side, Amazon announced on May 2 it will extend the same-day service area to cover every ZIP code in Chicago in the coming weeks. Read More

NYC Law Regulating AI Hiring Systems Needs Work

PUBLISHED APRIL 11, 2022

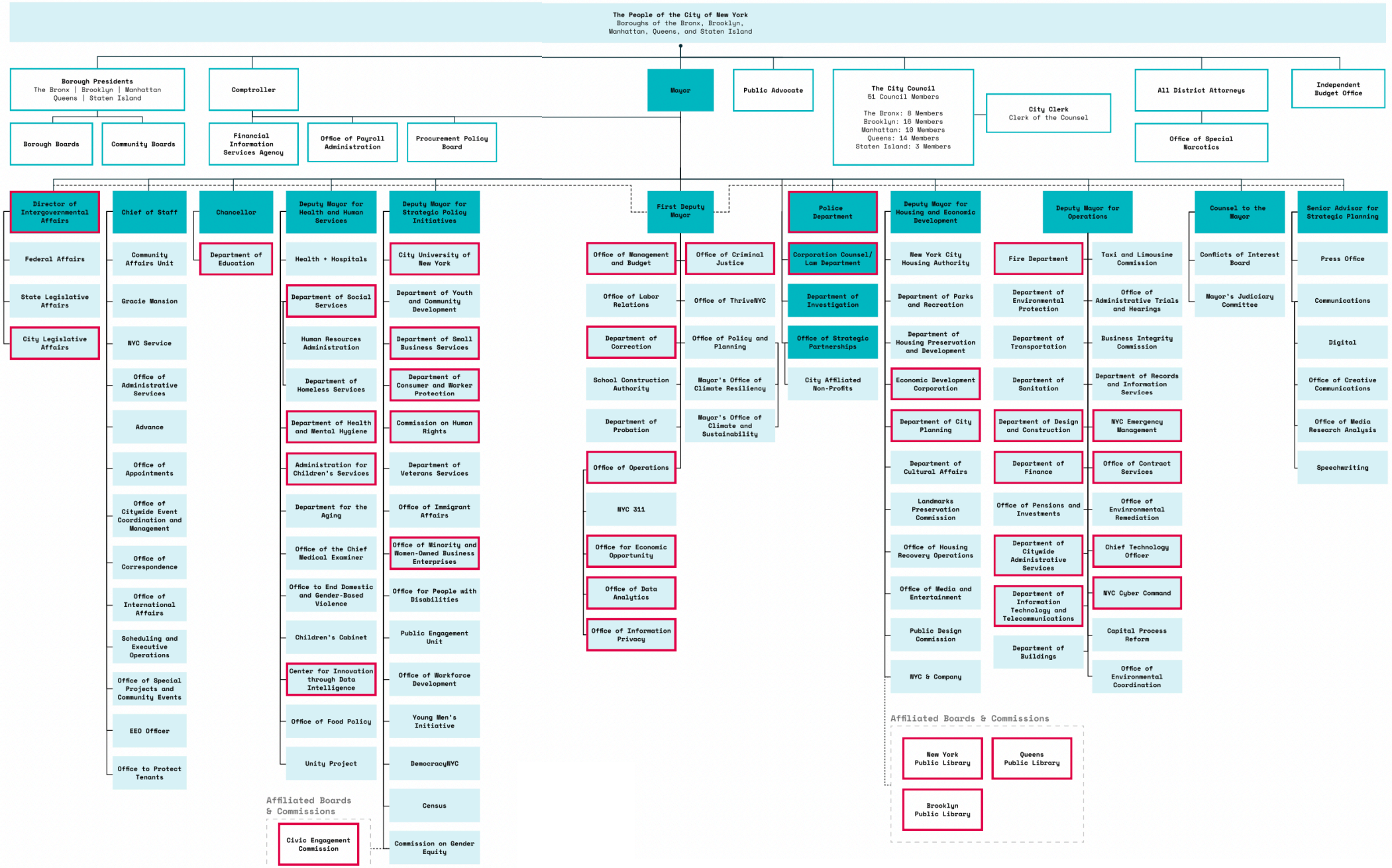# AI in NYC

AMPO — Algorithms Management and Policy Officer

CPO & MOIP — Chief Privacy Officer / Mayor's Office of Information Privacy

NYC CTO — Mayor's Office of the Chief Technology Officer

NYC3 — New York City Cyber Command

OMB — Office of Management and Budget

MOCS — Mayor's Office of Contract Services

LAW — Law Department

MODA — Mayor's Office of Data Analytics

DOITT — Department of Information Technology and Telecommunications

OPPORTUNITY — Mayor's Office for Economic Opportunity

CIDI — Center for Innovation through Data Intelligence

DCP — Department of City Planning

NYCEM — New York City Emergency Management

CLA — Office of City Legislative Affairs

IGA — Mayor's Office of Intergovernmental Affairs

CCHR — City Commission on Human Rights

T+G — Town+Gown: NYC at NYC DDC

DOHMH ✳ — Department of Health & Mental Hygiene

DSS ✳ — Department of Social Services

DOC ✳ — Department of Correction

FDNY ✳ — New York City Fire Department

NYPD ✳ — New York City Police Department

DCWP ✳ — Department of Consumer and Worker Protection

DOF — Department of Finance

MOCJ — Mayor's Office of Criminal Justice

ACS ✳ — Administration for Children's Services

CEC ✳ — Civic Engagement Commission

DCAS — Department of Citywide Administrative Services

DOE ✳ — Department of Education

CUNY — City University of New York

NYPL/BPL/QPL — Public Libraries

EDC — NYC Economic Development Corporation

SBS — NYC Department of Small Business Services

M/WBE — Mayor's Office of Minority & Women-Owned Business Enterprises

🏛 GOVERNANCE

Includes a range of functions, from oversight of City data infrastructure and use of various technologies, to development and implementation of policy and legislation.

Oversight of City Use
Review of systems, procurement, privacy policies, data agreements, and other topics in this vein. Offices often focus only on specific aspects of this work.

Policy and Legislation
Administrative and legislative actions such as rulemaking, executive orders, or laws. Policy details and implementation often fall under "Oversight of City Use."

Data Governance
Processes and practices used to manage data assets and make them usable; some work on Citywide infrastructure while others focus on agency-specific work.

🖥 APPLICATIONS

Includes using applications of AI or related technologies or approaches, such as data science or data analytics, and may involve building, partnering, or procuring systems. Also includes building City capacity for such efforts.

Implementation
Direct use of AI, ML, data science, or other related approaches. Agencies marked with an asterisk use "algorithmic tools," per AMPO's 2020 Summary of Agency Compliance Reporting.

Data Science and Analytics
Includes agencies and offices that include performing analysis using data science and data tools as one of their primary responsibilities.

Research & Development, Partnerships, Capacity Building
Building internal City capacity on AI or related subjects via partnerships, staff training, or other approaches.

👥 RESIDENTS

Residents interact with AI in a wide variety of ways. City agencies are addressing multiple aspects of these interactions and experiences today.

Education and Workforce Development
Designing and managing education and training opportunities of various kinds for New Yorkers in AI and AI-related subjects and skills.

Human and Civil Rights
Protecting New Yorkers' human, civil, and digital rights with respect to AI and related technologies.

Public Awareness and Community Engagement
Direct communication and engagement with the public about AI and related topics.

🏛 BUSINESS

Supporting opportunities for local businesses and working towards the City's broader economic development goals as they relate to AI, including work on talent and hiring pipelines.

Business Opportunity, Economic Development, and Partnerships
This work is often done in partnership with businesses, academia, nonprofits, and community organizations.

✳ agency use described in 2020 AMPO report

The People of the City of New York
Boroughs of the Bronx, Brooklyn, Manhattan, Queens, and Staten Island

Borough Presidents
The Bronx | Brooklyn | Manhattan
Queens | Staten Island

Comptroller

Mayor

Public Advocate

The City Council
51 Council Members

The Bronx: 8 Members
Brooklyn: 16 Members
Manhattan: 10 Members
Queens: 14 Members
Staten Island: 3 Members

City Clerk
Clerk of the Counsel

All District Attorneys

Independent Budget Office

- Borough Boards
- Community Boards

- Financial Information Services Agency
- Office of Payroll Administration
- Procurement Policy Board

- Office of Special Narcotics

Director of Intergovernmental Affairs
- Federal Affairs
- State Legislative Affairs
- City Legislative Affairs

Chief of Staff
- Community Affairs Unit
- Gracie Mansion
- NYC Service
- Office of Administrative Services
- Advance
- Office of Appointments
- Office of Citywide Event Coordination and Management
- Office of Correspondence
- Office of International Affairs
- Scheduling and Executive Operations
- Office of Special Projects and Community Events
- EEO Officer
- Office to Protect Tenants

Chancellor
- Department of Education

Deputy Mayor for Health and Human Services
- Health + Hospitals
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- Human Resources Administration
- Department of Homeless Services
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- Office of Minority and Women-Owned Business Enterprises
- Office for People with Disabilities
- Public Engagement Unit
- Office of Workforce Development
- Young Men's Initiative
- DemocracyNYC
- Census
- Commission on Gender Equity

First Deputy Mayor
- Office of Management and Budget
- Office of Labor Relations
- School Construction Authority
- Department of Probation
- Office of Operations
- NYC 311
- Office for Economic Opportunity
- Office of Data Analytics
- Office of Information Privacy

- Office of Criminal Justice
- Office of ThriveNYC
- Office of Policy and Planning
- Mayor's Office of Climate Resiliency
- Mayor's Office of Climate and Sustainability

Police Department
- Corporation Counsel/ Law Department
- Department of Investigation
- Office of Strategic Partnerships
- City Affiliated Non-Profits

Deputy Mayor for Housing and Economic Development
- New York City Housing Authority
- Department of Parks and Recreation
- Department of Housing Preservation and Development
- Economic Development Corporation
- Department of City Planning
- Department of Cultural Affairs
- Landmarks Preservation Commission
- Office of Housing Recovery Operations
- Office of Media and Entertainment
- Public Design Commission
- NYC & Company

Deputy Mayor for Operations
- Fire Department
- Taxi and Limousine Commission
- Department of Environmental Protection
- Department of Transportation
- Department of Sanitation
- Office of Administrative Trials and Hearings
- Business Integrity Commission
- Department of Records and Information Services
- Department of Design and Construction
- Department of Finance
- Office of Pensions and Investments
- Department of Citywide Administrative Services
- Department of Information Technology and Telecommunications
- Department of Buildings
- NYC Emergency Management
- Office of Contract Services
- Office of Environmental Remediation
- Chief Technology Officer
- NYC Cyber Command
- Capital Process Reform
- Office of Environmental Coordination

Counsel to the Mayor
- Conflicts of Interest Board
- Mayor's Judiciary Committee

Senior Advisor for Strategic Planning
- Press Office
- Communications
- Digital
- Office of Creative Communications
- Office of Media Research Analysis
- Speechwriting

Affiliated Boards & Commissions
- Civic Engagement Commission

Affiliated Boards & Commissions
- New York Public Library
- Queens Public Library
- Brooklyn Public Library

Algorithms Management & Policy Officer

Algorithms Management & Policy Officer

- AI and algorithmic registries and governance

- ADS Task Force

- Executive Order 50

- AMPO

- Adams administration reorganization

NYC AI Strategy

OCTOBER 2021

AI Strategy

The New York City
Artificial Intelligence
Strategy

NYC Mayor's Office of the
Chief Technology Officer

nyc.gov/cto

Table of Contents

AI Strategy process

- Concept and scoping

- Structuring

- Interviews and input

- Writing and production

- Review and approval approves

- Press release and post-release process

- Policy vs politics

- X-factors: budgets, elections

Observations and Takeaways

"AI policy" includes a huge number of important topics, but is too often narrowly interpreted as being about regulation and algorithmic fairness in specific government and corporate systems.

The long tail

The government often plays the role of an actor of last resort, and deals with people in the long tail that the market realistically will not address.

This long tail can include the disabled, ill, food insecure, undocumented, unbanked, non-English-speaking, poor, homeless, and digitally under-connected, in addition to various categories of minority groups.

These categories are often the *primary* groups of concern in government, rather than being excluded from the "addressable market" or otherwise an afterthought.

The United States *contains* emerging markets, and not just in rural areas.

Cities vs. other governments

Many issues that people care about are handled at the city level, not the federal level, but the field and tech media focus mostly on (inter)national debates.

"State and local" governments are often lumped together rhetorically, but states often play the role of adversaries to their cities.

Org charts

Org charts are policy artifacts.

Good organizational design for
AI and AI policy is a huge and
under-explored open area for both
governments and other large institutions.

It is critical to figure out who is technically or de facto in charge of a thing in order to get things done or effect change. In emerging technology areas, this is often unclear.

Sources of challenges

Some key challenges in government technology implementation and policy are partly a result of democracy itself.

Many (needed) regulations are or likely will be bad, in part because they often fail to consider what happens when political valences reverse and market dynamics that policies may create.

The impediments to implementing better governance and oversight of tech and AI are often not ideological, but operational or financial, and work in AI ethics largely ignores this and often makes unimplementable or impractical suggestions.

Many perceived problems with technology implementation and policy are downstream effects of more "mundane" problems in civil service hiring procedures, union rules, the pension system, *etc.*

The skills and interests required to reform these mundane aspects of government are largely different from those represented in the AI, AI policy, or AI advocacy communities.

There has been a phase shift in AI ethics and policy from creating awareness about problems to operationalizing and engineering real improvements. This requires different skills and, in some cases, more willingness to accept incremental advances.

The (correct) recent emphasis on including a wider variety of fields in AI policy conversations has overcorrected — now often there are *no* AI/ML experts "in the room."

Communities, voters, and advocates

External experts or advocates pushing the government to act often lose credibility with otherwise sympathetic figures due to the form of approach and what can be a glaring lack of knowledge of the actual realities or basics of how government works.

Good regulations are sorely needed in some areas, but regulatory solutionism is also too common, and it is as limited and bankrupt a stance as techno-solutionism.

The lack of will
to confront and navigate inherent
trade-offs in systems and policies is a major
impediment to effecting positive change.

Technology policymaking in government often requires an entrepreneurial approach, since roles and responsibilities are typically not well-defined or codified.

"The capital has its order,
the village its customs."

Japanese proverb