NOVEMBER 2024

Center for an Urban Future

Maximizing New York City's AI Opportunity

Center *for an* Urban Future

Maximizing New York City's AI Opportunity is a publication of the Center for an Urban Future.

Researched and written by Jonathan Bowles and Eli Dvorkin. Additional research by John Surico, Madison Cheng, and Nicole Lu. Edited by Eli Dvorkin and Dorian Block. Designed by Sarah Tan.

Center for an Urban Future (CUF) is a leading New York City–based think tank that generates smart and sustainable public policies to reduce inequality, increase economic mobility, and grow the economy.

Fisher Brothers Foundation and Winston C. Fisher

This report was made possible thanks to the Fisher Brothers Foundation and Winston C. Fisher. General operating support for the Center for an Urban Future has been provided by The Clark Foundation and the Altman Foundation.

Maximizing
New York's AI Opportunity

Maximizing
New York's AI Opportunity

THE BOOMING TECH SECTOR has become New York City's most reliable new source of high- and middle-wage jobs, adding well over 100,000 jobs in the past decade and far outpacing the growth of other well-paying job generators like finance, advertising, and legal services. To keep this going in the years ahead, New York will need to capture a significant share of the growth expected in a range of emerging tech fields. None will be as important as artificial intelligence, a field that many economic experts believe will be the fastest growing segment of the tech sector in the decade ahead and one of the drivers of economic growth nationally.

In addition to the significant potential for new job creation, AI represents a once-in-a-generation opportunity to vastly improve services provided by city government and its nonprofit partners. And AI-powered tools and services are well-positioned to help address some of New York's biggest challenges—from housing affordability to climate change.

While New York City has many of the building blocks needed for success in AI, the future of this rapidly changing field is very much up in the air. New York has the clear potential to be one of the globe's two leading AI hubs, but it's uncertain whether New York will be able to maximize this opportunity and come out ahead of the global competition. Several other cities, states, and countries are already making big bets on AI, most of which have several advantages over New York, including significantly lower housing prices (which could help attract AI talent) and, for companies, far lower office rents, electricity bills, labor costs, and taxes.

To maximize New York City's AI opportunity, city leaders will need a different economic development playbook than has been used in the past. Our research suggests that the city's nascent AI industry is less responsive than other sectors are to conventional economic development tools, such as property tax abatements and help financing capital projects. Instead, city leaders should launch a set of creative new economic development initiatives and strategies specifically designed to attract and retain AI start-ups and talent.

This new toolkit should leverage the city's unique assets, including wielding its procurement powers to spark AI innovation and massively unlock access to city data; address the unique needs of AI start-ups by subsidizing the cost of computing power; and bring exceptional AI talent to New York by launching a prestigious fellowship in city government and recruiting the world's leading AI events to the city for the next five years.

New York's emerging strength in the AI economy

THE GOOD NEWS is that New York City already has strong AI foundation to build on. Companies in New York have attracted 20 percent of all AI venture capital investment, making it a clear #2 nationally, behind only San Francisco (with 40 percent). According to the New York City Economic Development Corporation (NYCEDC), there are currently more than 270 startups in the city that are powered by or innovating with AI/machine learning. Companies like Hugging Face, Runway, Osmo.ai, and Modal are all headquartered here, while others such as Clarifai, Together, and Databricks have a major presence here.

Demand for AI talent in New York City is surging—and leading all other U.S. cities. According to the Center for an Urban Future's analysis of data from labor-market analytics firm Lightcast, there were 14,448 unique job postings in the five boroughs seeking candidates with specific AI-focused skills from July 2023 to July 2024—up from 10,031 the year before, a 44 percent increase. By comparison, second-ranked San Francisco had just over 9,000 unique AI-related job postings in the same period.

In February, San Francisco-based Open AI—arguably the world's most well-known AI company—announced that it was opening a major office here. This adds to the already-significant presence of AI research teams in New York at Google, Palantir, and Meta's FAIR (Fundamental AI Research) office. In addition, the city—and the surrounding region—boasts several cutting-edge university research labs in the AI space, including New York University's CILVR Lab, Columbia University's ML x Systems Biology Lab, Princeton's NLP Group, Cornell Tech, and the Memorial Sloan Kettering Computational & Systems Biology Group. And Governor Hochul launched the Empire AI Consortium, one of the nation's largest public investments in AI research and computing power. The $400 million initiative, created in collaboration with several New York universities—including Columbia University, NYU, and CUNY—has the potential to give New York a leg up over other states in attracting top-flight AI researchers and spurring AI uses that benefit the public good.

Sharpening New York's competitive edge in AI

IN THE BROADER TECH SECTOR, New York has largely overcome structural disadvantages such as high costs and a chronic housing shortage to become the clear #2 leading tech hub. But especially in today's economic landscape—in which many tech companies have embraced hybrid work—New York's continued global leadership is not a given in the AI field. New York City policymakers will need to take aggressive steps to make sure the city builds on its significant assets and solidifies its status as one of the globe's two leading AI hubs.

Today, the San Francisco Bay Area has staked out a lead position as the epicenter of the first wave of AI companies focused on building core infrastructure for the AI era, including most of the leading large language models and a significant share of the world's computing capacity. But New York City can capture a major share of the growth in AI 2.0—the phase of development in which business and consumer apps, hardware, and services are developed to enable wide adoption of AI tools and solutions across a broad range of industries, and in the public sector.

Most importantly, city leaders will need to maintain New York's greatest asset: its status as the world's most desirable place to live. This will require new investments and zoning changes that support the development of hundreds of thousands of new units of housing, which is key to attracting and retaining the workers, entrepreneurs, and researchers that will power a growing AI sector; improve the experience of getting around the city by reducing congestion, improving public transit, and expanding micromobility options; and investing in vibrant parks, public spaces, and culture.

However, in addition to bolstering the city's fundamentals, there are also several specific initiatives that city leaders can launch to strengthen the city's position as an AI hub. This report offers five actionable ideas that city policymakers can implement to maximize the city's opportunity with AI.

They include:

1	2	3	4	5
Launch three major challenge-based AI procurements to make New York a more livable city	Offer subsidized compute to incentivize AI startups to move to NYC	Massively unlock city data accessibility	Launch an NYC AI Service Corps to upgrade AI capabilities to serve the public good	Recruit the most coveted AI conferences to New York for the next five years

This report, which was researched and written by the Center for an Urban Future (CUF) and published with support from Fisher Brothers Foundation and Winston C. Fisher, was informed by more than 25 interviews with AI entrepreneurs and experts. It is the second in a series of three CUF reports focused on high-impact policy ideas for helping New York City thrive in the post-pandemic economy.

5

Ideas to Maximize NYC's Opportunity with AI

1 Launch three **major challenge-based AI** procurements to make New York a more livable city

MORE THAN ANY TAX INCENTIVE, subsidy, or grant, the most effective investment that New York City government can make in its emerging AI industry is the opportunity to earn the city's business. Local and national governments across the globe are competing to attract and grow clusters of high-potential AI companies, offering more—and more expensive—financial incentives for companies that start, relocate, or add jobs locally. But New York City has something unique to offer: the chance to deploy innovative technology in one of the most complex, fast-moving, and high-profile urban environments on the planet.

To anchor and grow the city's emerging AI sector, New York should launch three major new challenge-based AI procurement competitions, where the prize is a multimillion-dollar contract to deploy an AI-powered solution at scale. Developed in partnership with the New York City Economic Development Corporation and relevant city agencies, these procurement challenges should start with a robust pilot phase and scale toward citywide deployment, with key outcomes-based milestones that align pay with performance—attracting best-in-class teams with the prospect of significant ongoing revenue, while reducing the city's exposure if a promising pilot fails to succeed. These challenges would be aggressively marketed to start-ups already based in the city, but open to teams from anywhere, providing local founders with a major new business opportunity while helping to recruit highly qualified teams from around the world.

A challenge of this kind could help the city address some of its most difficult challenges, while generating publicity globally for New York as a leading AI hub, signaling to the city's AI builders that New York is serious about creating opportunities for them to succeed at scale, and giving winning companies a case study that they could use to generate additional business from other governments or private sector clients. These challenges would also enable the city to leverage its procurement power to support a more diverse and inclusive AI industry, for instance, by requiring winning firms to help train New Yorkers on their technologies, or facilitating hands-on learning partnerships with the City University of New York, New York City Public Schools, or nonprofit tech training organizations.

"What I think will inspire AI builders is ongoing public commitments from New York," says Brian Schechter, a partner at the New York–based venture capital firm Primary. "New York City should become the world leader of creating efficiencies and better performance in public services through AI, and we see founders notice when the city steps up."

The city should start with three areas of significant need where AI could generate substantial benefits: boosting housing affordability; making streets smarter and safer; and strengthening social services.

Making housing more affordable

NEW YORK FACES FEW, if any, challenges more pressing than the need to address the city's affordable housing crisis: building more housing in neighborhoods citywide, preserving existing affordable housing stock, delivering new units to match demand at every income level, and reducing the costs of housing development while maintaining quality and safety standards. Today, New York is struggling with the tightest housing market in more than 50 years, with rental vacancy rates hitting a record low of 1.4 percent in 2023. This problem didn't emerge overnight: housing supply has fallen short of demand for decades. Since 2010, the number of jobs in New York City has grown a whopping 23 percent, while the number of housing units increased just 9 percent. Half of all New York City households are now rent burdened—paying more than 30 percent of their income toward housing costs. As a result, the housing crisis has become the top concern for a broad swath of New Yorkers—from lower-income families and older adults to tech workers and artists.

While there is no one solution to the city's affordable housing challenges, AI-powered tools and services are well positioned to help New York City make progress on these efforts, starting with bringing down the costs of housing construction to boost supply at the most affordable levels.

One key factor contributing to the city's sky-high costs for developing new housing is the complexity of the pre-construction process. The New York City Zoning Resolution and the New York City Construction Codes are each more than 3,000 pages long. It's little wonder, then, that the city is home to more than 3,500 registered expeditors—independent contractors whose sole role is to help navigate the city's zoning and construction permitting processes. Speeding up site selection, traffic analysis, construction inspections, and permitting can all shave months from development timelines and drive down associated project costs.

Start-ups are already developing AI agents trained on municipal zoning and building codes, answering questions in seconds that previously took days or weeks. New York–based start-up PermitFlow is using large language models to parse construction permitting requirements, providing builders with a nearly automated system for preparing and submitting permits across multiple jurisdictions. However, although the company is still based in New York, it has seen the largest uptake for its services in California, Florida, and Texas. CivCheck is working to speed up reviews by using AI to guide applicants through the plan submission and permitting process, improving the completeness and accuracy of initial submissions and helping city agencies turn them around faster. In a small recent pilot launched in Honolulu, the platform reduced residential plan review times by more than 70 percent.

While housing experts say that there are no shortage of challenges when it comes to boosting affordable housing production and preservation, tackling New York City's perennially slow review and approvals processes can provide tangible benefits.

"Speeding up the process is of huge value," says Howard Slatkin, executive director of Citizens Housing & Planning Council, a nonprofit research and education organization focused on housing policy in New York City. "Technology can be a force multiplier for the plan examiner, and help level the playing field for smaller and less well-resourced developers as well."

Advances in AI are poised to help address the affordable housing challenge in other ways, too. Bob.ai helps renters with public housing assistance vouchers find apartments that will accept them, saving time and money and helping renters move to higher-opportunity neighborhoods. New York–based Builders Patch is using AI to speed up multifamily housing finance for lenders and borrowers, including nonprofit housing

developers, financial institutions, and the city's Housing Development Corporation. Other start-ups are working on everything from streamlining the process for designing and permitting accessory dwelling units to optimizing building design to reduce construction costs, carbon footprints, and waste, and take advantage of urban infill opportunities.

"We don't have enough human intelligence to address every family's needs, one by one," says Bejoy Narayana, CEO of Bob.ai. "There are just not enough case managers available. You have to actively embrace technology to make a meaningful difference in people's lives—and that technology exists now. So it's a question of adopting it faster."

Successful AI-powered challenge-based procurement projects in New York could support the Adams administration's critical efforts to address the city's major housing challenges, while helping the city's AI start-ups prove their worth, boost their revenues, win new business, and grow their economic impact in New York.

Making streets smarter and safer

NEW YORK CITY'S CENTURY-OLD STREET GRID is struggling to adapt to 21st century problems. The city needs to protect its most vulnerable road users as traffic fatalities remain stubbornly high, but physical infrastructure is too often failing to keep New Yorkers safe. Government leaders are seeking to coax more residents onto greener forms of transportation—like buses, bikes, and e-bikes and scooters—to help achieve the city's emissions reduction goals, but even slight changes to streets can drag on for months or years. Meanwhile, the costs of congestion continue to rise—to $9.1 billion in lost time alone in 2023.

Arguably no city in the world presents greater opportunity for AI-enabled streets improvements and innovation than New York City. To help accelerate this important segment of the AI economy while addressing a major urban challenge, city officials should launch a second procurement challenge around making the city's streets smarter and safer.

The city has already seen that AI can help. Automated enforcement leveraging advances in computer vision is being deployed to catch speeding, red light infractions, and bus lane blockages, resulting in safer streets and faster buses. Transit planners are installing sensors to track street usage and "near misses" that often go unnoticed in official studies, informing faster and more responsive changes, such as widening bike lanes or adding crossings. As a multitude of uses jockey for curb space—from surging deliveries, to growing numbers of bikes, e-bikes, and scooters, to electric vehicle charging stations—machine learning tools are developing insights to power more optimal space allocations, like short-term loading and metered parking, as is the case in a pilot program underway on the Upper West Side.

These innovations are proving critical in New York City's efforts to achieve its goals for climate resiliency, faster mobility, and Vision Zero, or zero traffic fatalities, without overly relying on traffic enforcement agents or citizen-led complaints, which have both practical and equity limitations. But much more is possible. The New York City Department of Transportation (NYCDOT) and the Metropolitan Transportation Authority (MTA) should seek out robust citywide solutions to adapt to the challenges of today and the near future. They can focus on three specific areas:

SAFER STREETS. Crosswalks and intersections are where most traffic injuries occur. But due to limited resources, transit officials often wait until a 311 request, inspection, or a crash before they consider or implement life-saving fixes. The current approach in most U.S. cities

to address problem streets and intersections involves a complex web of actors, says Mark Pittman, the CEO of Blyncsy, an AI start-up that uses dashcam footage to monitor crosswalk conditions.

"We might look at a crosswalk and say, 'Okay, that crosswalk looks fine,' but what we don't realize is that at night, the street light overhead is out. Someone was evaluating that crosswalk during the day because the federal highway guidelines say so, but no one was out there at night," says Pittman. "A separate team has to go out there and inspect the street light conditions. And now you quickly get into this point where separated responsibilities become a problem."

Technology can help reduce this friction, improving the speed and efficiency of interventions and reducing bad outcomes. AI-powered computer vision technology is increasingly able to detect flaws—like potholes, misplaced barriers, and missing paint—before they lead to injury or even potential fatality. And rather than focusing on a specific request or problem—say, a resident request to consider adding a speed bump—they can capture a holistic view of the street. "The same technology that's detecting the crosswalk is missing can also detect the street light, and that there is a sign, tree or parked car in the way, or a construction barrel blocking the bike lane," said Pittman. "Now you've got five different use cases, all stemming out of the same image that would require five different agencies to react and respond to, if someone even told them about it."

BETTER MOBILITY. Streetside infrastructure—like protected lanes, bike-share, and bus countdown clocks—have allowed an increasing number of New Yorkers to seek out or consider alternative modes of transit in recent years, like cycling, micro-mobility, and buses. But installing anything on streets or sidewalks is an arduous process that involves multiple agencies and a hefty price tag, even though these amenities are crucial in giving New Yorkers more options to get around.

Inefficiencies in the process for identifying, assessing, and siting streetside infrastructure drive up costs, limiting New York's ability to do more with limited resources. Costs start at $100,000 to site a single piece of infrastructure, "whether you're talking about a Oonee bike parking pod or the Citi Bike stations that recently got connected to the grid, or an EV charger that's not going through a lamppost, that's the price to pay," says Laura Fox, the former general manager of Citi Bike and co-founder of Streetlife Ventures, a venture fund focused on urban climate solutions.

Expanding streetside infrastructure requires a major allocation of staff time today, whether for curbside dining, or grid-connected charging, or secure bike parking—a highly manual process that could be majorly accelerated with technology to map, assess, and plan new infrastructure investments. Crucially, AI could help coordinate infrastructure and maintenance planning across large geographies, multiple asset classes, and multiple city agencies, helping to achieve efficiencies in both short- and long-term planning.

"Can you be using AI to help simplify coordination problems in specific use cases that have a tangible cost reduction basis?" asked Fox. "Coordinated with other kinds of road work, you would probably see extraordinary kinds of cost savings and benefits."

FASTER RESPONSE. Most streets in New York City still rely on a technology first adopted in the early 1900s: the stop light. Although still critical for traffic management, it has failed to keep pace with contemporary trends, as growing demand for ride-hailing apps, the boom in online shopping and same-day delivery, and new types of vehicles like e-bikes and scooters have snarled the city in some of the worst congestion in the world. This confluence of factors has spiked fire and ambulance response times to the highest levels since March 2020, during the height of the pandemic, and posed real risks to the health and safety of New Yorkers.

New AI-powered traffic signal systems are able to monitor real-time data from vehicles and adjust timing accordingly. Unlike existing devices, they can respond quickly to sudden disruptions, like crashes, emergencies, or special events. Several bus routes use a similar technology called transit signal priority, which holds lights for incoming buses; that has led to increases in speed of up to 18 percent.

The Fire Department is partnering with NYU Tandon School of Engineering to create "digital twins" of existing city streets to help craft solutions. But so far, the innovation has been limited to just a handful of streets and routes.

Satish Rao, chief product officer at Newlab, a global venture platform for technology start-ups, with various innovation hubs including in the Brooklyn Navy Yard, says that deploying emerging technology to help solve major challenges can give innovative companies the revenue—and case studies—they need to succeed. This approach can also enable New York City to make progress on issues that may have otherwise seemed intractable. He offers Popwheels as an example: the company, which provides users with e-bike battery swapping stations, had to make a case for the New York City Department of Transportation and other agencies to let it hook up its public battery-charging infrastructure to the power grid, which had never been used for that purpose before. "You're asking the existing infrastructure to step up and make a new world of its own," says Rao. "That's difficult. But when it works, it can be consequential for the city."

Strengthening social services

NEW YORK CITY'S HUMAN SERVICES nonprofit organizations have become even more essential to the city in recent years, stepping up immeasurably during the pandemic and taking action to confront a rising tide of poverty, homelessness, mental health crisis, an unprecedented influx of migrants and asylum-seekers, and other growing challenges. Making more progress on these social services needs will prove essential to the city's long-term viability. At the same time, the city's human services sector is facing several escalating problems of its own, including a staffing crisis in which the average human services nonprofit has more than 15 percent of its positions vacant, as well as unsustainably high levels of staff turnover.

New York can help address these challenges—and support its deeply strained social services sector—while growing its existing hub of social-impact-oriented start-ups and mission-driven companies. To achieve this, city leaders should launch a third procurement challenge focused on strengthening social services.

This challenge could focus on several areas where AI-powered tools have the potential to make existing services much more efficient, effective, proactive, preventive, and humane. For instance, AI can dramatically improve the experience that New Yorkers have as they interact with a range of government agencies and programs. Today, data silos across government create repeated roadblocks and redundancies for New Yorkers seeking help.

AI tools can help match data across systems, creating a more holistic understanding of a specific client's profile and needs and reducing repeat requests for the same information, forms, and documents. Clients can be automatically screened for and enrolled in the benefits programs for which they're eligible. Digital copies of personal documents can be encrypted and stored in the cloud, with AI agents guiding caseworkers through the process of sharing necessary documents with other government offices and agencies, saving clients dozens of hours of time. Crucially, these integrated systems can make services more proactive and preventive, whether that's deploying housing navigators or financial counselors to help a family that's fallen behind on utility bills or property taxes, or identifying that a student who has become chronically absent may need support for a range of other challenges.

"Data is the glue," says Rosanne Haggerty, president of Community Solutions, a nonprofit dedicated to ending homelessness. "We can provide better services with less money. It's an essential and untapped opportunity to create a more equitable and successful city."

A social services procurement challenge should also focus on opportunities to help social services

organizations themselves to function more effectively—reducing the stress on their workforce in the process. Today, the typical human services nonprofit spends hundreds if not thousands of hours of staff time fulfilling government and philanthropic reporting requirements—including in many cases inputting the same data into multiple systems. AI is well positioned to help by automating much of these reporting processes for both government agencies and nonprofit organizations, freeing up staff to focus on delivering the face-to-face services that humans should be performing—and that many staff say is the reason they gravitated to the field in the first place.

This procurement challenge can also help free up government staff time, while delivering better results for New Yorkers. For instance, research suggests that tens of thousands of New Yorkers every year are not getting the government benefits that they are eligible for—leaving millions of dollars in federal funding on the table. At the same time, processing delays cost eligible New Yorkers time and money, and force government to spend more on staff. For instance, the city recently took action to help clear a backlog of more than 50,000 applications for federal cash and food assistance programs by hiring more than 1,000 additional staff. In the near future, these backlogs could be cleared by AI-powered systems that could perform benefits eligibility assessments in seconds that currently take days.

"The biggest opportunity is systems connectivity," says Priya Ramanathan, head of partnerships at FutureFit AI, a start-up focused on leveraging AI to improve workforce development programs, and an experienced leader in New York City's workforce development system. "There is no lack of quality opportunity in New York, but a lack of quality navigation. AI can help New Yorkers find and access the services and supports they need, when they need them."

> "There is no lack of quality opportunity in New York, but a lack of quality navigation. AI can help New Yorkers find and access the services and supports they need, when they need them..
>
> **PRIYA RAMANATHAN**
> Head of Partnerships, FutureFit AI

2 Offer **subsidized compute** to incentivize AI start-ups to move to NYC

IN THE WORLD OF AI, computing power is the new electricity, the foundational resource that AI companies need to analyze massive quantities of data, train machine learning models, and attract users. Companies that can build or acquire more computing power—or "compute," as it is commonly known—are best positioned to dominate the emerging AI economy, training larger and more innovative AI models, producing the most advanced research, and testing out new AI applications and tools at a much larger scale.

The problem is that demand for raw computing power far exceeds supply—by a factor of 10, according to some experts in the field. And while simply running AI-powered tools requires significant computing power, training new AI models is arguably the most computationally intensive challenge undertaken in history. Due to these factors, compute is prohibitively expensive, especially for start-ups in the AI field who frequently need to spend half or more of their total capital raised on compute alone. Indeed, costs are so high that it can make it extremely difficult for smaller AI-focused firms to compete or even enter the market.

Compute isn't necessarily more expensive in New York than in other cities. After all, the underlying hardware costs the same whether purchased in New York or Texas, and the cost of access to cloud-based compute is generally consistent across regions of the world. But the costs of powering compute are higher: New York's commercial electricity rates are about 41 percent higher than the national average. When added to other costs that are greater here—from real estate and taxes to labor and insurance—it makes the economics significantly more difficult in New York. If city officials were able to lower computing costs, it would be immensely attractive to AI entrepreneurs and investors.

"If you can make compute cheaper in New York than other places, it's a huge incentive for people to move here," says Zach Carpenter, founder and CEO of VantAI, a New York–based company at the intersection of biology and computer science.

Matthew Hartman, founder of early-stage VC firm Factorial, points out that Hugging Face, the Brooklyn-based open platform for AI builders, has already gone down this road with success. He says the city should follow its lead. "One of the smart things Hugging Face has done is provide $10 million in free compute to help AI start-ups compete with big players. New York could do something similar to encourage start-ups to build here,"

says Hartman, who led Hugging Face's first investment round.

"Everyone needs compute," adds Grace Isford, a partner in the New York City office of Lux Capital. "The foundations are already set for New York to be a global leader in AI. The question is how do we get AI companies to stay and grow here. We should incentivize AI startups here."

There is a long history of economic development officials in New York providing economic incentives to encourage companies in high-growth industries to start and grow in the five boroughs. Typically, these incentives have taken the form of tax breaks or low-cost electricity. But to make New York appealing—and affordable—to AI startups, city leaders should consider a different type of incentive: providing lower-cost compute. This effort could complement New York State's Empire AI initiative, which aims to provide New York colleges and universities with access to computing power for AI research and development in service of the public good, while focusing squarely on incentivizing New York City's AI start-up ecosystem.

To do this, NYCEDC should launch a pilot project offering 20 percent off compute costs to AI start-ups that meet specific conditions, such as opening a local office, hiring local talent, or partnering with education or training organizations to provide paid internships, apprenticeships, or other work-based learning opportunities. NYCEDC might partner with large compute providers to offer discounted rates to eligible start-ups, such as Google or Lambda Labs, or issue an RFP for hardware and software companies and nonprofit partners to build and deploy cloud-based GPUs, with subsidies offered to help offset hardware costs.

> "If you can make compute cheaper in New York than other places, it's a huge incentive for people to move here."
>
> **ZACH CARPENTER**
> Founder and CEO, VantAI

3 Massively **unlock city data** accessibility

NEW YORK CITY HAS THE POTENTIAL to become the most sought-after place in the world for companies to design, test, and scale innovative new uses of AI in government and the public realm. But in order to unlock this potential for innovation—and attract and retain the most high-potential AI founders and talent—New York City will have to do much more to expand access to the city's own data. What's needed now is a major new NYC Open Data 2.0 effort, which would massively scale up access to city data via application programming interfaces (APIs), sensor networks, and real-time feeds, enabling AI start-ups to design solutions to many more of the city's biggest challenges and opportunities.

New York has a lot to offer AI companies, including a growing talent pool, significant procurement opportunities, and proximity to many of the world's top companies and institutions. However, expanded access to data generated by city government operations might be the single most valuable incentive that New York can offer AI start-ups and founders.

"Companies are all in search of the data they need to solve big challenges," says Matthew Hartman, founder of the VC firm Factorial and an early-stage investor in AI companies. "New York City can help by identifying opportunities to surface new public data, whether that's monitoring internet speeds in real time, commuting times and patterns, cell phone data to understand how people are using the city, or wastewater sensors to track public health threats."

New York City has historically been a leader in making city data available to the public. The City Council passed comprehensive open data legislation in 2012, which was signed into law by then Mayor Michael Bloomberg, making New York one of just a few jurisdictions to legally require that all public government data be made freely available via a single web portal. Over the past decade, the city has made several amendments to its open data law, extending the mandate in perpetuity and improving guidance around data collection and reporting requirements.

But what was cutting-edge in 2012 is now falling behind the times. The majority of the data made available through the NYC Open Data portal takes months if not years to be published—making it far more relevant for historical research than real-time analysis. Despite these lengthy turnaround times, agencies often miss their deadlines. Over the past 12 months, just 6.2 percent of planned data releases were published on time. Participation and compliance also varies widely by agency. For instance, the Department of Parks and Recreation has published 144 datasets since 2012, and released updates on-time over 82 percent of the time. By comparison, the New York City Housing Authority has published just 27 datasets and achieved an on-time rate of less than 29 percent.

In addition to ramping up the frequency and timeliness of data releases, opportunities abound for city government to facilitate expanded access to useful data that can help founders and technologists build tools and services that can enable the city to better address its many challenges. For example, the city has begun to enable developers to build software that communicates

> New York City can help by identifying opportunities to surface new public data, whether that's monitoring internet speeds in real time, commuting times and patterns, cell phone data to understand how people are using the city, or wastewater sensors to track public health threats.

MATTHEW HARTMAN
Founder, Factorial

directly with agency systems via APIs—mechanisms that enable two software programs to exchange information in real time. But to date, the city has deployed just a handful of publicly available APIs. Notably, these include feeds from the Department of Transportation that provide access to some real-time traffic data, and a popular API from the Department of City Planning that turns addresses and other location inputs into mappable coordinates. However, these examples are just scratching the surface of what is possible using technology that exists today.

To unlock more of the economic potential of AI in New York City—and unleash more opportunity for AI-powered tools to improve the well-being of New Yorkers—New York City should focus on creating the next generation of Open Data infrastructure.

"This is an opportunity to think of what Open Data portal 3.0 looks like—to attract founders and entrepreneurs, and to become known for AI," says Laura Fox, co-founder of Streetlife Ventures, a venture fund focused on urban climate solutions. "There's a lot of opportunity from the data sets that the city already has if those were to be made open and available to entrepreneurs, and the city would directly benefit, too."

The next phase of the city's open data efforts should go beyond today's legally mandated requirements to dramatically expand access to real-time data. The city should launch procurement challenges to create APIs for dozens of additional city data feeds, bringing together the city's Office of Technology Innovation with technologists and legal experts to develop smart privacy frameworks and open source protocols for enabling access to real-time city data. The city can expand opportunities for start-ups to test sensors that can boost real-time awareness of everything from traffic congestion and trash accumulation to infectious diseases present in wastewater. And the city should invest in building the capacity of city agencies to speed up data collection, cleaning, and release—perhaps through competitive funding for city agencies to identify and deploy new publicly available data streams and boost on-time update rates.

In general, any expansion of publicly available data should be premised on the idea that this data should be freely accessible for all non-commercial uses. However, for companies seeking expanded access to city data streams for commercial purposes—including permission to collect data through sensor networks and other physical infrastructure—the city could require firms to make a range of commitments to the city's equitable growth. For instance, a company granted special access to install sensors on publicly owned land could be required to open an office in New York City, provide internship or training opportunities for public high school or CUNY students, or meet specific hiring targets, much as companies are required to do to receive certain tax incentives.

When it comes to cultivating a thriving ecosystem of AI-powered start-ups, however, no tax incentive is likely to prove as attractive to founders as a massive expansion of access to real-time city data.

4 Launch an **NYC AI Service Corps** to upgrade AI capabilities to serve the public good

AI HAS THE POTENTIAL TO REVOLUTIONIZE the way that city government designs and delivers services, dramatically expanding the city's ability to synthesize vast amounts of data, derive insights from complex signals and patterns, and produce actionable recommendations on everything from boosting energy efficiency and minimizing traffic injuries to responding to unexpected emergencies and preventing public health crises. But too little of this potential will be realized without a major new effort to boost the technological capabilities of the city's hundreds of individual agencies and offices—and to expand support for AI integration to benefit human services nonprofits, community development organizations, and other key government partners.

To help seize this opportunity, city leaders should launch a new NYC AI Service Corps (AISC), becoming the first city in the world to do so. More than a typical internship or fellowship program, the AISC would be laser-focused on recruiting highly talented early-career technologists and graduate/postdoctoral students with a specialization in AI for a prestigious, paid fellowship in government. AISC members would gain meaningful, hands-on experience developing and implementing AI-powered solutions within the nation's largest municipal government, while the city would benefit from a new source of high-level technology talent.

To further boost the effectiveness of the AISC, the city should also consider adding a new chief AI officer role at several city agencies where AI-powered tools and services have the greatest potential for impact, including the Departments of Social Services, Housing Preservation and Development, Citywide Administrative Services, and Transportation, and the Human Resources Administration. The chief AI officer would help ensure that each agency has a carefully scoped pipeline of AI projects in development—projects that AISC fellows could help execute.

AISC could function somewhat like the existing City Service Corps, an AmeriCorps program that recruits mission-driven individuals to embed in city agencies for nine months to work on specific projects, such as community engagement around emergency management or improving the sustainability of the city's vehicle fleet. Supported by about $21,000 per participant in federal government funding, plus free health insurance, student loan forbearance, a free monthly MetroCard, and a completion bonus, the City Service Corps tends to attract recent high school graduates interested in a career in public service.

AISC could build on this model while incorporating some unique features designed to attract the talent most needed in public service today. The program could be developed in partnership with New York–based universities and leading universities across the globe, providing talented students in graduate-level AI-focused programs and recent postdoctoral graduates with a unique opportunity to solve real-world problems with significant potential for life-changing impact. The program could

City leaders should launch a new NYC AI Service Corps, becoming the first city in the world to do so.

also recruit employees from leading tech companies for shorter-term sprints or on a part-time basis, enabling them to maintain their employment while serving in the AISC—much as tech industry professionals do currently in CUNY's well-regarded Tech-in-Residence Corps.

Members could be embedded in city agencies, assigned to city offices that work across agencies like the Office of Technology & Innovation and NYC Opportunity, or focused on supporting the adoption and integration of AI-powered tools among nonprofit partners, including human services organizations, nonprofit financial institutions, and workforce development organizations. The city could even consider awarding contracts to AISC members who develop highly promising projects during their fellowships, providing an additional layer of financial incentive along with the public service and resume-bolstering motives.

In addition to the practical benefits of embedding highly skilled talent in city agencies to help build AI capacity and knowledge, the AISC can help address another core challenge: the lack of awareness within city government today about the possibilities and opportunities that AI presents.

"Part of the challenge is tempering the fear that city workers have around AI in general," says Priya Ramanathan, head of partnerships at FutureFit AI, a start-up focused on leveraging AI to improve workforce development programs, and a former official in the Department of Small Business Services. "Most city employees don't have access to AI tools today. Everyone is distrustful. How can government bring in talent to make AI less scary and help agencies identify the key tools and opportunities?"

5 Recruit major AI Conferences to New York for the next five years

FOR GENERATIONS NOW, New York City mayors have campaigned to bring big events here, from the Democratic National Convention and the Grammy Awards to the Super Bowl and, most recently, the World Cup finals. In today's economy, however, it may be even more economically strategic for New York officials to pull out all the stops to bring a different type of event to New York: the world's top AI conferences.

At a time when numerous cities are jockeying to become one of the globe's leading AI hubs, New York could get a leg up by convincing one of the most well-known AI conferences to hold their annual event in the five boroughs for the next several years, or by attracting several major conferences that haven't historically been held in New York City to do so in the years ahead. Doing so would bring leading AI investors, entrepreneurs, and researchers to the city on a regular basis, giving New York leaders a chance to showcase the city's own AI assets—while showing off the city—and make a case for them to be in New York.

To execute on this opportunity, New York City should leverage its existing event-recruitment entities to make AI a major area of focus. NYCEDC and Empire State Development should each direct staff to make recruiting major AI events a priority in the year ahead, perhaps by designating a specific AI recruitment officer at the agency who would meet with major event organizers to pitch them on New York. This effort should be co-led by New York City Tourism & Conventions, which can provide hands-on convention planning support and guidance to help offset the fact that a major event in New York is likely more expensive than a similar convening in many other cities.

"In the AI world, what's important are the conferences," says Zach Carpenter, founder and CEO of VantAI, a New York–based company at the intersection of biology and computer science. "If you could get those in New York it would be powerful. Having them here would help AI innovators from around the world to see the value of New York. The last big conference [NeurIPS] was in New Orleans and the whole city came alive. People from all over the world were there."

Today, the largest and most well-known AI conferences are mostly held elsewhere. The AI4 conference, with more than 5,000 annual attendees from over 75 countries, has been held in Las Vegas for the past three years. The World Summit AI (WSAI) has been held annually in Amsterdam since 2017. The San Francisco Bay Area has hosted the annual Generative AI Summit. Geneva has hosted the AI for Good summit since 2017.

> In the AI world, what's important are the conferences. If you could get those in New York it would be powerful. Having them here would help AI innovators from around the world to see the value of New York.

ZACH CARPENTER
Founder and CEO, VantAI

Meanwhile, none of the preeminent annual AI academic conferences has been held in New York in recent years. The AAII Conference on Artificial Intelligence moves to Philadelphia next year after being held in Vancouver this year. The Artificial Neural Networks (ICANN) is being held in Lugano, Switzerland this fall after being hosted Heraklion, Greece last year. The International Conference on Machine Learning (ICML) took place in Vienna this year and Honolulu last year. NeurIPS has never been held in New York City since its inception in 1987. Likewise, the Association for the Advancement of Artificial Intelligence's International Conference on Machine Learning has only been held in New York City once since 1980.

Primary partner Brian Schechter says that New York City should build on its strengths as a hub for globally significant events to help raise the city's profile in the world of tech and AI. With this goal in mind, Primary launched the city's first NYC Tech Awards in March of 2024, with many city leaders in attendance, and featured NYCEDC as a key collaborator on its invite-only NYC Summit in September. "The city should help take this to the next level," says Schechter. "This could be a major global event in the years ahead."

Conclusion

Seizing NYC's Global AI Opportunity

While New York City has many of the key ingredients needed to thrive in the growing global AI economy—and has emerged as a clear #2 to San Francisco—its position as a lasting world AI leader is far from assured. New York has the potential to secure its spot as one of the top two AI hubs worldwide and benefit from years of potential growth, but it faces fierce competition from other regions that benefit from lower costs of living and energy costs, cheaper office space, similarly attractive quality of life with fewer big-city hassles, and more favorable business conditions. Although New York has previously overcome many of these challenges to foster continued growth in tech, its future dominance in AI is not guaranteed—especially in today's hybrid work era. To ensure the city capitalizes on its strengths and secures its place at the forefront of AI, New York's leaders must act decisively and take bold steps to stay ahead of the competition, with the understanding that the policies and incentives that can help foster growth in AI may look notably different than those that have worked in other sectors, industries, and eras. To meet this moment, city leaders should consider running with one or all of the five ideas presented in this report, and make maximizing NYC's AI opportunity a top economic development priority in 2025.