

# New York

# Works

INDUSTRY  
SPOTLIGHT

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Creating Good Jobs in Cybersecurity

# About New York Works

*New York Works* is the City's roadmap for creating 100,000 good jobs over the next ten years.

New York City Economic Development Corporation (NYCEDC) publishes *New York Works Industry Spotlight* to introduce the public to important industries and job-creating initiatives that the City is adopting, as well as to explore how both contribute to the City's 10-year goal.



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# New York Works Industry Spotlight: Cybersecurity

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## What is Cybersecurity?

Cybersecurity encompasses technology used to:

- Protect data and information systems from attacks
- Monitor networks for disruptions
- Remediate any breaches that occur

Cybersecurity services and technologies are in demand across industries, especially financial services, media, retail, and health care.

## Cyber NYC: A Catalytic Investment

Global demand for cybersecurity services is surging amid increasingly frequent and damaging cyberattacks on government, businesses, and individuals. In 2017, cyber crime cost companies an average of \$11.7 million, while high-profile ransomware and attacks on firms like Equifax struck at core functions of the economy.<sup>1</sup> As a result, spending on cybersecurity is expected to more than double between 2015 and 2020 to \$170 billion.<sup>2</sup>

**New York City has an exciting opportunity to make a major investment in this growing industry and become a global leader in cybersecurity.**

Cyber NYC is this investment. The initiative will help advance New York City's robust and collaborative cybersecurity community, develop local talent and improve access to cyber jobs, and spur innovation in cybersecurity technologies.



Cyber **NYC**  
Catalyzing Innovation. Creating Jobs.

# NYC Sector Overview



Cybersecurity affects employment in nearly every industry. While large firms, especially in financial services and health care, create in-house cybersecurity groups, many companies hire independent cybersecurity firms to address their needs.

- New York City is home to more than **100 cybersecurity firms**<sup>3</sup>
- The city's **6,000 cybersecurity professionals** are split between cybersecurity firms and companies in financial services, health care, and media<sup>4</sup>
- In 2016, the city's **average cybersecurity wage was \$105,100**, compared to \$96,000 nationally.<sup>5</sup> Nearly all cybersecurity jobs (95 percent) in New York City pay above \$50,000<sup>6</sup>
- New York City's **45 Fortune 500 company headquarters** and the size of the New York metro area's financial services sector both lead the nation—showing the high need for cybersecurity services<sup>7</sup>
- **Demand in New York City for cybersecurity analysts rose almost 17% annually** between 2011 and 2016, compared to a 12.5% increase in job postings across all industries<sup>8</sup>
- Over the next decade, the Bureau of Labor Statistics **projects the number of information security analysts to rise 28.4%**, compared to 7.4% for overall employment<sup>9</sup>
- As a result of this fast growth, **cybersecurity jobs take 8% longer to fill** than comparable occupations, as employers struggle to find applicants with the right mix of skills and experiences<sup>10</sup>
- In the first 10 months of 2017, venture capitalists invested \$1.2 billion in cybersecurity firms based in the New York metro area, **more than four times the total 2016 investment**<sup>11</sup>

# City Investment and Impact— Creating a Hub for Cybersecurity

New York City has the opportunity to establish itself as a global cybersecurity leader by connecting local talent to the major purchasers of cybersecurity services; drawing global talent, resources, and innovation to the city; and establishing new networks within the city's cybersecurity ecosystem. Despite being home to the country's largest talent pool and the most potential clients of cybersecurity services, the city has not yet fully capitalized on the emerging demand.

To expand cybersecurity in New York City and meet the goal of creating 10,000 new jobs in the next 10 years, the Cyber NYC initiative will foster innovation by investing in local talent and building a premier cyber community. A public request for proposals was released in November 2017, and Cyber NYC is expected to launch in late 2018.

## Supporting Entrepreneurship

A new **Cyber Center** will support Community Programs and offer networking opportunities and event and work space for corporate R&D teams, startups, and entrepreneurs to connect across industry, academia, and the investment community.

The City will launch a first-of-its-kind **Accelerator Program** within the center dedicated to scaling cybersecurity-related startups. The accelerator will offer access to potential customers, investors, industry mentors, space, training, and other resources to at least 10 growth-stage startups per year.



# City Investment and Impact— Creating a Hub for Cybersecurity *continued*

## Developing Local Talent

Cybersecurity jobs require specialized skills. Most of the city’s cybersecurity jobs (94 percent)<sup>12</sup> require at least a bachelor’s degree and many seek skills in programming languages or information systems. By collaborating with local educational institutions, the City can provide students with intensive curricula and training to build real-world skills that will prepare them for jobs in cybersecurity. These **Talent Partnerships** are a cornerstone of Cyber NYC and will establish New York City as a leader in cybersecurity education. The core component of the Talent Partnerships—the **Applied Learning Initiative**—will deliver curricula and academic collaborations across city institutions to offer students new, interdisciplinary, experience-based, and industry-informed programs.

The City will also establish a **Cyber Boot Camp**, which will strengthen the pipeline of homegrown talent by training a diverse group of at least 50 New Yorkers per year with skills critical to securing and succeeding in targeted cybersecurity jobs.

## Investing in Innovation

New York City is home to enormous intellectual resources, with over 525,400 students at 98 institutions of higher education.<sup>13</sup> But the academic community alone often lacks the resources to commercialize research and launch startups. Cyber NYC’s **Academic Innovation Exchanges** will bring together academic researchers, students, and entrepreneurial resources to foster the development of new and dynamic technologies and companies. These exchanges will ensure the commercialization of cutting-edge cybersecurity R&D from academia. The Academic Innovation Exchanges will include **Cyber IP Link**, which will connect university-affiliated creators of IP with experienced entrepreneurs to launch ventures; and **Cyber Innovation Bridge**, which will provide growth opportunities for academia-led startups through a program offering access to entrepreneurship training and early-stage funding.

# End Notes

1. Accenture. [https://www.accenture.com/t20170926T072837Z\\_w\\_/us-en/\\_acnmedia/PDF-61/Accenture-2017-CostCyberCrimeStudy.pdf](https://www.accenture.com/t20170926T072837Z_w_/us-en/_acnmedia/PDF-61/Accenture-2017-CostCyberCrimeStudy.pdf)
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3. Pitchbook
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