Cornell Tech Impact Study

Economic and Fiscal Impact Study of Campus Construction and Ongoing Operations, 2012-2030

Prepared by HR&A Advisors, Inc.

Fall 2024





Table of Contents

EXECUTIVE SUMMARY	3
ABOUT IMPLAN	4
ECONOMIC IMPACTS	5
ONE-TIME CONSTRUCTION IMPACTS TO DATE: 2012-2021	5
ONGOING IMPACTS: FY 2022-2023	6
Institutional Spending	6
Student Spending	
EVENTS	8
Alumni Employment	8
Startups	
PROJECTED ONE-TIME CONSTRUCTION IMPACTS: 2026-2030	11
PROJECTED ONGOING IMPACTS: FY 2029-2030	
Institutional Spending	
Student Spending	
EVENTS	
ALUMNI EMPLOYMENT	
Startups	
CUMULATIVE INSTITUTIONAL IMPACTS: 2018-2030	
FISCAL IMPACTS	
ONE-TIME CONSTRUCTION IMPACTS	17
To Date: 2012-2021	
Projected: 2026-2030	
Ongoing Impacts: FY 2022-2023	18
ABOUT HR&A ADVISORS, INC.	20
METHODOLOGICAL APPENDIX	21

Executive Summary

Cornell Tech's vision is to develop the leaders and technologies of tomorrow through foundational and applied research, postgraduate education, and new ventures. Through rigorous, practical research and interdisciplinary innovation, Cornell Tech advances lasting economic and social prosperity for New York City and the world. Cornell Tech hired HR&A Advisors, Inc. (HR&A) to conduct an economic and fiscal impact analysis of its campus construction to date and its operations, student spending, and events in Fiscal Year (FY) 2022-2023, as well as to project economic and fiscal impacts for its upcoming next phase of construction and anticipated operations, student spending, and events in FY 2029-2030.

This memorandum describes the direct, indirect, and induced impacts of Cornell Tech for New York City in jobs, labor income, and economic output, as well as fiscal revenue to the City of New York. Impacts include both one-time construction effects and ongoing (annual) effects from day-to-day operations and spending. HR&A modelled the job, labor income, and economic impacts using IMPLAN, an input-output model that relies on local economic multipliers to derive total impact. We present all dollar amounts related to construction to date as nominal, and present all dollar amounts related to current and projected future impacts in 2024 dollars to account for inflation.

Cornell Tech impacts the New York City economy through multiple channels linked to its mission. It has built and plans to expand an innovative campus that brings together educational programming, startup incubation, and food and beverage activity across multiple buildings. Construction on Cornell Tech's Roosevelt Island campus from 2012 to 2030 constitutes 1.4M gross square feet of new space for the institution, totaling \$1.6B in development costs. Collectively, construction to date and upcoming construction will generate an impact of 10,700 job-years, \$1.1B in labor income, and \$2.4B in economic output.

Cornell Tech operates educational and entrepreneurial programs, attracts students to New York City, and organizes events, contributing to the city's tech ecosystem and economy. In FY 2022-2023, Cornell Tech's institutional, student, event, and alumni employment impacts generated 2,310 jobs, \$311M in labor income, and \$564M in economic output, equivalent to an economic impact per graduate student of \$321,000. In FY 2029-2030, we project that the impacts from these activities will more than double, producing 6,260 jobs, nearly \$762M in labor income, and \$1.2B in economic output, equivalent to an economic impact per graduate student of \$288,000.

Cornell Tech attracts world-class talent who remain in New York City after graduation to work in high-paying industries. Cornell Tech estimates that 75% of Cornell Tech students move to New York City to attend the institution, making student-related economic impacts mostly net new to the City. In FY 2022-2023, there were 1,000 Cornell Tech alumni working in New York City generating \$390M in annual economic output, \$293M of which is net new to New York City. HR&A estimates that the number of Cornell Tech alumni remaining in New York City is expected to grow to 2,600 in FY 2029-2030, generating \$956M in annual economic output, \$717M of which will be net new to New York City.

Cornell Tech incubates innovative startups that contribute to the New York City tech ecosystem and create new, local jobs for tech workers. In FY 2022-2023, Cornell Tech startups generated 525 jobs, \$74M in labor income, and \$204M in economic output for New York City. Across the 230 direct employees of Cornell Tech startups in New York City, the average compensation of a startup employee was \$183,000. In FY 2029-2030, Cornell Tech startups will conservatively generate a total impact of 875 jobs, \$101M in labor income, and \$278M in economic output. Benchmarking FY 2022-2023 Cornell Tech startups against industry standards for founder demographics, Cornell Tech outperforms national and New York City averages for the share of companies founded by women and in the share of funds raised that go to women-founded companies. However, Cornell Tech startups trail industry averages for companies founded by people of color, though outcomes vary by program and group, with some performing comparably to outside benchmarks. As Cornell Tech's startup portfolio is still young, net new impacts to New York City could grow exponentially as startups scale over time.

About IMPLAN

IMPLAN (IMpact Analysis for PLANning), created by MIG, Inc. (formerly Minnesota IMPLAN Group, Inc.), is an industry standard input-output model used to conduct economic impact analyses by leading public and private sector organizations across the United States, including the federal government, New York State Department of Labor, and New York Office of the State Comptroller. IMPLAN traces the pattern of commodity purchases and sales between industries that are associated with each dollar's worth of a product or service sold to a customer, analyzing interactions among 546 industrial sectors within the geographies under study.

IMPLAN allows for an analysis to break out the direct, indirect, and induced impacts of economic activity.

- **Direct impact:** The initial change in spending or employment attributable to new investment (e.g., construction of a new building or annual institutional spending on staff or programs).
- **Indirect impact:** The change in spending or employment by businesses that supply the directly affected industry (e.g., construction material suppliers or vendors to the institution).
- **Induced impact:** The change in household spending of employees who are compensated for working in the directly and indirectly affected industries (e.g., food and beverage spending by construction workers or institution employees).

Indirect and induced impacts are also known as "multiplier" impacts.

Economic Impacts

One-Time Construction Impacts To Date: 2012-2021

Construction on Cornell Tech's Roosevelt Island campus from 2012 to 2021 produced five major buildings totaling 880,000 gross square feet and 2.5 acres of public open space that house Cornell Tech's core programs and activities. These buildings are the Bloomberg Center (162,000 GSF), Tata Innovation Center (236,000 GSF), The House (272,000 GSF), Graduate Hotel (159,000 GSF), and Verizon Executive Education Center (41,000 GSF). Cornell Tech also built a Central Utility Plant (11,000 GSF), for a total of approximately 880,000 GSF. Planning and construction costs—including soft and hard costs—totaled approximately \$889M and occurred between 2012 and 2021, though some fitout has been ongoing through 2024. HR&A used the construction data provided by Cornell Tech to assess the economic impacts generated by construction, which include full-timeequivalent (FTE) construction job-years supported, labor income, and economic output.

Construction to date has generated a total impact of 6,700 job-years, \$684M in labor income, and nearly \$1.5 billion (B) in economic output. Most one-time construction impacts were concentrated between 2014 and 2017. At the peak of construction in 2017, construction produced more than 1,200 jobs, \$111M in labor income, and \$243M in economic output. On average, construction workers earned \$88,000 each, while jobs generated indirectly or through multiplier effects paid an average of \$98,000 per worker.

Figure 1: Economic Impacts of Construction (To Date), 2012-2021

	Direct Impact	Indirect Impact	Induced Impact	Total Impact
Job-Years Supported (FTE)	5,100	600	1,000	6,700
Labor Income	\$505,000,000	\$74,000,000	\$105,000,000	\$684,000,000
Economic Output	\$983,000,000	\$201,000,000	\$269,000,000	\$1,453,000,000

Ongoing Impacts: FY 2022-2023

Cornell Tech's direct employment, day-to-day operations, student spending, alumni employment, and startups in New York City generated 2,835 total jobs, \$386M in total wages, and \$768M in total economic output in FY 2022-2023. These impacts include direct, indirect, and induced benefits. Activity tied to Cornell Tech's institutional spending, currently enrolled student spending, and events translates to an economic impact of \$321,000 per graduate student, based on 539 current students.

To assess Cornell Tech's ongoing economic impacts, HR&A used the following categories of inputs:

- **Institutional spending:** Spending by Cornell Tech on all its programs, operations, and staff.
- Student Spending: Spending by current Cornell Tech students, excluding tuition.
- Events: Spending by attendees of events hosted at Cornell Tech's Verizon Executive Education Center (excluding costs of event registration).
- Alumni employment: Number, industry, and salary of Cornell Tech alumni who remain in New York City for work after graduation.
- Startups: Number and industry of New York City-based employees of Cornell Tech startups.¹

Employment Labor Income Economic Output Cornell Tech-Related Activities 710 \$93,400,000 \$173,600,000 495 Institutional Spending \$78,000,000 \$129,000,000 **Student Spending** 160 \$11,500,000 \$35,200,000 **Events** 55 \$3,900,000 \$9,400,000 \$390,000,000 **Alumni Employment in New York City** 1,600 \$218,000,000 **Startups in New York City** 525 \$74,400,000 \$204,200,000 \$767,800,000 **Total Ongoing Benefits** 2,835 \$385,800,000

Figure 2: Summary of Cornell Tech Ongoing Economic Impacts, FY 2022-2023

Institutional Spending

Cornell Tech's institutional spending on operations alone generated a total impact of 495 jobs, \$78M in labor income, and \$129M in economic output in FY 2022-2023. Institutional spending here refers specifically to spending by Cornell Tech on all expenses and labor for academic programs, facility operations, administration, and other items, which amounted to \$86M. HR&A calculated impacts from institutional spending based on Cornell Tech data on its personnel and annual budget. The direct employment figure reflects Cornell Tech's full-time equivalent employees—including faculty, leadership, and all other staff—in FY 2022-2023.² These impacts reflect the broader benefits to New York City from Cornell Tech's educational mission and operations.

¹ HR&A's economic impacts analysis of Cornell Tech startups are based on the number of startups as of end-of-year (EOY) 2023, as provided by Cornell Tech. HR&A grouped this analysis with the overall FY 2022-2023 impacts for simplicity.

² Cornell Tech employed 527 personnel across all staff categories in FY 2022-2023, 334 of whom are considered full-time equivalent employees. We present a rounded figure of 335 for clarity, though we calculated impacts based on the actual staff number.

Figure 3: Economic Impacts of Cornell Tech Institutional Spending, FY 2022-2023

	Direct	Indirect	Induced	Total
	Impact	Impact	Impact	lmpact
Employment	335	50	110	495
Labor Income	\$63,000,000	\$4,000,000	\$11,000,000	\$78,000,000
Economic Output	\$86,000,000	\$16,000,000	\$27,000,000	\$129,000,000

Student Spending

Cornell Tech also contributes to New York City by attracting students who live and spend money in the city during their studies, producing more than \$35M in additional economic output. This reflects spending from all students across Cornell Tech's core Master's and PhD programs as well as the CFEM and EMBA programs. An estimated 75% of Cornell Tech's student population move to New York City to attend the institution, making most of these economic impacts net new to New York City.

Figure 4: Combined Economic Output of Cornell Tech Students, FY 2022-2023

	Direct Impact	Indirect Impact	Induced Impact	Total lmpact
Economic Output	\$24,000,000	\$5,900,000	\$4,800,000	\$35,200,000
Master's and PhD	\$21,000,000	\$5,000,000	\$4,000,000	\$30,000,000
CFEM	\$1,000,000	\$300,000	\$200,000	\$1,500,000
EMBA	\$2,500,000	\$600,000	\$600,000	\$3,700,000

Spending from students enrolled in Cornell Tech's core degree programs generated a total economic impact of \$30M. In FY 2022-2023, there were 539 Cornell Tech students enrolled in the institution's core programs: the Professional Master's (MBA and LLM), Technical Master's (MEng CS³, MEng ORIE⁴, MEng ECE⁵, Jacobs CM⁶, Jacobs HT⁷, Jacobs UT⁸), and PhD programs. Based on Cornell Tech's cost-of-living estimates for core degree program students, HR&A assumed that a Master's/PhD student spent \$38,000 annually on transportation, lodging, and board. Applied to Cornell Tech's total core degree student population, the total spending for all students was \$21M in FY 2022-2023.

Beyond Cornell Tech's core degree programs, student spending from the institution's executive programs (CFEM⁹ and EMBA¹⁰) generated \$5.2M in economic output in 2023. The CFEM program runs during the Fall semester only for a cohort of around 60 students, while the EMBA program hosts classes for 20 weekends for a cohort of 215 students. On a per-student spending basis, HR&A estimated that a CFEM student spends \$16,000 during the Fall semester—bringing the total spending for all CFEM students to around \$1M—and that an EMBA student spends \$11,000 across 20 weekends, bringing the total spending for all EMBA students to \$2.5M.

See the Appendix for more detailed breakout tables of student spending impacts.

³ MEng CS: Master of Engineering in Computer Science

⁴ MEng ORIE: Master in Operations Research and Information Engineering

⁵ MEng ECE: Master in Electrical and Computer Engineering

⁶ Jacobs CM: Jacobs Technion-Cornell Dual MS Degrees with a Concentration in Connective Media

⁷ Jacobs HT: Jacobs Technion-Cornell Dual MS Degrees with a Concentration in Health Tech

⁸ Jacobs UT: Jacobs Technion-Cornell Dual MS Degrees with a Concentration in Urban Tech

⁹ CFEM: Financial Engineering Concentration and Cornell Financial Engineering Manhattan

¹⁰ EMBA: Executive Master of Business Administration. Cornell Tech hosts the Cornell Johnson School's EMBA Metro NY program and the Cornell Johnson / Weill School's EMBA/MS in Healthcare Leadership program.

Events

One of Cornell Tech's core missions is to be a convener. In 2023 Cornell Tech hosted 131 events that attracted almost 12,000 local and out-of-town visitors to Roosevelt Island and New York City, and generated nearly 60 jobs, nearly \$4M in total wages, and more than \$9M in economic output. There was an almost even split between local New York City-based attendees and those coming from out of town. Over 50% of Cornell Tech events were two-day events or longer, providing event attendees with the opportunity to drive additional economic activity in the city.

HR&A estimated that a local event attendee spends \$310 for a two-day event, bringing the total spending for all local event attendees to around \$2M. We estimated that an out-of-town event attendee spends \$700 for a twoday event, bringing the total spending for all out-of-town attendees to \$4.5M.

	Direct Impact	Indirect Impact	Induced Impact	Total Impact
Employment	45	5	5	55
Local Attendees	15	2	2	18
Out-of-Town Attendees	30	3	5	38
Labor Income	\$2,700,000	\$600,000	\$600,000	\$3,900,000
Local Attendees	\$800,000	\$200,000	\$200,000	\$1,200,000
Out-of-Town Attendees	\$1,900,000	\$400,000	\$400,000	\$2,700,000
Economic Output	\$6,300,000	\$1,500,000	\$1,600,000	\$9,400,000
Local Attendees	\$1,800,000	\$500,000	\$500,000	\$2,800,000
Out-of-Town Attendees	\$4,500,000	\$1,000,000	\$1,100,000	\$6,600,000

Figure 5: Economic Impacts of Event Attendee Spending, FY 2022-2023

Alumni Employment

Cornell Tech had graduated approximately 1,900 students as of 2023, of whom 1,000 currently live and work in New York City, generating a total impact of 1,600 jobs, \$218M in labor income, and \$390M in economic output. HR&A used Cornell Tech's data on the number of alumni who pursued careers in New York City and their distribution among the four primary industries in which they are employed to calculate the economic activity that all the institution's graduates produced. More than half of Cornell Tech graduates (53%) remained in the city to work in technology (55%), financial services (22%), consulting (18%), and law (4%). This analysis includes all alumni who graduated from Cornell Tech between its first class and the spring 2023 class, and excludes graduates who pursued further education or who started their own companies as no earnings data is available for them.

	Direct Impact	Indirect Impact	Induced Impact	Total Impact
Employment	1,000	180	420	1,600
Labor Income	\$157,000,000	\$22,000,000	\$39,000,000	\$218,000,000
Economic Output	\$241,000,000	\$50,000,000	\$99,000,000	\$390,000,000

Figure 6: Economic Impacts of Cornell Tech Alumni Employed in New York City, FY 2022-2023

Startups

Cornell Tech has a growing startup presence in New York City, with 76 startups employing 230 people directly in the city.¹¹ In FY 2022-2023, Cornell Tech startups generated 525 jobs, \$74M in labor income, and \$204M in economic output. On average, the annual compensation of a Cornell Tech startup employee was \$183,000.12

Cornell Tech provided HR&A with startup data from three Cornell Tech incubator programs: Spinouts, Runway, and IGNITE. The Spinouts program incubates startups founded by master's students, Runway provides similar support for postdoctoral students, and IGNITE is a lab-to-market program that provides gap funding to promising technologies and innovations. HR&A only analyzed the impacts of active startups across these programs, which comprised 80 companies in total, 76 of which have headquarters and/or employees in New York City. 13

	Direct Impact	Indirect Impact	Induced Impact	Total Impact
Employment	230	170	125	525
Labor Income	\$42,500,000	\$20,800,000	\$11,100,000	\$74,400,000
Economic Output	\$127,300,000	\$48,400,000	\$28,500,000	\$204,200,000

Figure 7: Economic Impacts of Cornell Tech Startups in New York City, FY 2022-2023

In FY 2022-2023, Cornell Tech startups operating in the health tech sector generated \$94M in economic output for New York City, accounting for almost 50% of total economic output from startups and 47% of total New York City employees (109 employees). Startups in economic development and business productivity employed 25% of all employees (59) and those in built environment and real estate employed 10% of all employees (23). Fashion, civic solutions, and e-commerce accounted for the remaining 18% of New York Citybased workers, with 41 employees.

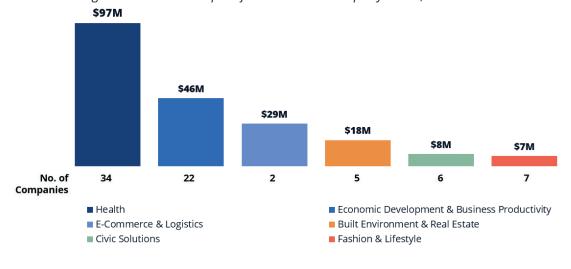


Figure 8: Economic Output of Cornell Tech Startups by Sector, FY 2022-2023

¹¹ Cornell Tech startups employed 232 direct workers in FY 2022-2023. We present a rounded figure of 230 for clarity, though we calculated impacts and average compensation based on the actual number of direct employees based in New York City.

¹² Average compensation, as calculated using IMPLAN, reflects the combined cost of total payroll to employees (including wages and salary), benefits, and proprietor's income.

¹³ Active startups include startups that have been acquired. HR&A excluded from our analysis 24 Cornell Tech startups that have shut down, ceased operations, or are dissolving.

To analyze the diversity impacts of Cornell Tech startups, HR&A conducted a benchmarking analysis that compared Cornell Tech startups against New York City and national industry standards.¹⁴ HR&A used data for national startup benchmarks from RateMyInvestor and DiversityVC, platforms that provide data on diversity, equity, and inclusion metrics for the venture capital and tech industries. We use data from the New York City Economic Development Corporation (NYCEDC) for New York City startup benchmarks. Crunchbase, a leading provider of startup data, provides underlying information for all benchmarks.

Cornell Tech outperforms New York City and national benchmarks when it comes to women-founded startups, with 32% of Cornell Tech startups founded by women, higher than the national average of 22%. Additionally, 24% of all funds raised for Cornell Tech startups went to women-founded startups, compared to the national average of 23% and New York City average of 19%. Out of the \$330M of total funding raised by all Cornell Tech startups, funding raised by women-founded Cornell Tech startups totaled \$77M.

¹⁴ The sources for HR&A's benchmarking analysis are <u>RateMyInvestor and DiversityVC's</u> "Diversity in U.S. Startups" report, <u>Crunchbase's</u> article "Untapped Opportunity: Minority Founders Still Being Overlooked," and NYCEDC's "Diversity in Venture Capital" report. NYCEDC drew data from Crunchbase, a leading startup database.

Cornell Tech is anticipated to grow both in its physical footprint and in its institutional operations. The following sections detail the economic impacts from both one-time construction and ongoing impacts, projected forward to 2026-2030 and FY 2029-2030, respectively.

Projected One-Time Construction Impacts: 2026-2030

Upcoming construction on Cornell Tech's campus is anticipated to add an additional 500,000 GSF of academic and residential space for the institution, totaling approximately \$650M in development costs. The program for upcoming construction is broken down into the following construction categories: an academic building (160,000 GSF, approximately \$300M), a residential building (330,000 GSF, approximately \$250M), and enabling infrastructure (approximately \$100M). Cornell Tech provided these construction assumptions, and HR&A then used them to analyze the impacts anticipated to be generated by the institution's upcoming round of construction projects occurring between 2026 to 2030.

Upcoming construction is expected to generate a total impact of 4,000 job-years, \$417M in labor income, and \$957M in economic output. Averaged out over five years of upcoming construction (2026-2030), annual impacts are approximately 800 jobs, \$83M in labor income, and \$191M in economic output. Construction workers are estimated to earn \$107,000 each. Jobs supported through indirect and induced impacts are estimated to earn \$97,000 each on average.

Figure 9: Economic Impacts of Construction (Upcoming), 2026-2030

	Direct Impact	Indirect Impact	Induced Impact	Total Impact
Job-Years Supported (FTE)	2,800	470	730	4,000
Labor Income	\$300,000,000	\$51,000,000	\$66,000,000	\$417,000,000
Economic Output	\$650,000,000	\$138,000,000	\$169,000,000	\$957,000,000

Projected Ongoing Impacts: FY 2029-2030

In 2030, Cornell Tech is projected to generate 7,135 total jobs, \$862M in total wages, and more than \$1.5B in total economic output from direct employment, day-to-day operations, student spending, and alumni **employment**. These impacts, which include direct, indirect, and induced benefits, translate to an economic impact of \$288,000 per graduate student based on a projected student population of 1,000 in the 2029-2030 academic year. HR&A discounted dollar impacts projected in FY 2029-2030 to 2024 dollars, assuming a 3% annual general inflation rate over this period.

	Employment	Labor Income	Economic Output
Cornell Tech-Related Activities	1,850	\$150,500,000	\$287,700,000
Institutional Spending	1,370	\$124,000,000	\$210,000,000
Student Spending	370	\$21,800,000	\$66,100,000
Events	110	\$4,700,000	\$11,600,000
Alumni Employment in New York City	4,410	\$611,000,000	\$956,000,000
Startups in New York City	875	\$100,500,000	\$277,700,000
Total Ongoing Benefits	7 135	\$862 000 000	\$1 521 400 000

Figure 10: Summary of Cornell Tech Projected Economic Impacts, FY 2029-2030

Institutional Spending

Projecting forward to 2030, Cornell Tech's institutional spending on day-to-day operations is estimated to generate a total impact of 1,370 jobs, \$124M in labor income, and \$210M in economic output. These impacts are based on a forecast operating budget of \$140M in the 2029-2030 academic year, at the advice of Cornell Tech to assume an institutional operating budget growth rate of 10%. The projected FY 2029-2030 operating budget is a 95% increase in institutional spending from FY 2022-2023.

	Direct	Indirect	Induced	Total
	lmpact	lmpact	Impact	lmpact
Employment	1,060	100	210	1,370
Labor Income	\$100,000,000	\$7,000,000	\$17,000,000	\$124,000,000
Economic Output	\$140,000,000	\$26,000,000	\$44,000,000	\$210,000,000

Figure 11: Projected Economic Impacts of Institutional Spending, FY 2029-2030

Student Spending

In 2030, student spending is projected to generate \$66M in economic output. Additionally, as Cornell Tech continues to expand its physical footprint, its core student population is also expected to grow, from 539 students in FY 2022-2023 to 1,000 in FY 2029-2030. This increase in student population is expected to generate further economic activity in New York City.

Figure 12: Combir	ned Economic Ou	tput of Cornell 1	Tech Students, FY 2029-2030

	Direct Impact	Indirect Impact	Induced Impact	Total Impact
Economic Output	\$45,400,000	\$11,900,000	\$8,800,000	\$66,100,000
Master's and PhD	\$42,000,000	\$11,000,000	\$8,000,000	\$61,000,000
CFEM	\$1,000,000	\$300,000	\$200,000	\$1,500,000
EMBA	\$2,400,000	\$600,000	\$600,000	\$3,600,000

Student spending from Cornell Tech's core Master's and PhD programs is estimated to generate \$61M in total economic output in 2030. Cornell Tech expects its enrolled core program student population to reach 1,000 in FY 2029-2030. Adjusting for inflation, HR&A estimated that a Cornell Tech core degree program student spends \$49,000 annually in 2030 dollars on expenses such as transportation, lodging, and board. Applied to the expected student population of 1,000 in FY 2029-2030, HR&A calculated the total amount of student spending from core degree program holders to be \$49M. Note that HR&A calculated impacts based on spending in 2030 dollars (\$49M), but the table above shows monetary figures deflated to 2024 dollars.

Student spending from executive programs (CFEM and EMBA) will generate nearly more than \$5M in economic output in 2030. HR&A estimated CFEM student spending over the Fall semester to be around \$19,000 in 2030 dollars, bringing the total spending for 60 CFEM students to \$1.1M. HR&A estimated that an EMBA student would spend \$13,500 in 2030 dollars across twenty weekends that the EMBA program is in session, which brings the total spending for 215 EMBA students to \$2.9M. Note that HR&A calculated impacts based on spending in 2030 dollars, but the table above shows monetary figures deflated to 2024 dollars.

See the Appendix for more detailed breakout tables of student spending impacts.

Events

In 2030, Cornell Tech-hosted events will generate 110 jobs, nearly \$5M in total wages, and nearly \$12M in economic output. HR&A estimated the economic impacts of event attendee spending to FY 2029-2030 by using local and out-of-town attendee spending for a two-day event, adjusted for inflation assuming a general inflation rate of 3%. HR&A assumed that the number of event attendees will grow by 25% through FY 2029-2030, increasing to 15,000 attendees. With data from Cornell Tech, HR&A estimated that a typical Cornell Tech event in FY 2022-2023 accommodated 100 attendees. Assuming that the average event size will stay the same in 2030, HR&A estimated that Cornell Tech will host around 150 events in FY 2029-2030. HR&A estimated that a local event attendee would spend \$370 for a two-day event in 2030 dollars, bringing the total spending for all local event attendees to \$2.7M. We estimated that an out-of-town event attendee spends \$840 for a one- or two-day event in 2030 dollars, bringing the total spending for all out-of-town attendees to \$6.5M. Note that HR&A calculated impacts based on spending in 2030 dollars, but the table below shows monetary figures deflated to 2024 dollars.

Figure 13: Projected Economic Impacts of Event Attendee Spending, FY 2029-2030

,	Direct Impact	Indirect Impact	Induced Impact	Total Impact
Employment	85	10	15	110
Local Attendees	30	5	5	40
Out-of-Town Attendees	55	5	10	70
Labor Income	\$3,300,000	\$700,000	\$700,000	\$4,700,000
Local Attendees	\$1,000,000	\$200,000	\$200,000	\$1,400,000
Out-of-Town Attendees	\$2,300,000	\$500,000	\$500,000	\$3,300,000
Economic Output	\$7,700,000	\$1,900,000	\$2,000,000	\$11,600,000
Local Attendees	\$2,200,000	\$600,000	\$600,000	\$3,400,000
Out-of-Town Attendees	\$5,500,000	\$1,300,000	\$1,400,000	\$8,200,000

Alumni Employment

By the end of FY 2029-2030, we estimate that Cornell Tech will have graduated approximately 4,900 students, of whom 2,600 will live and work in New York City, generating a total impact of 4,410 jobs, \$611M in labor income, and \$956M in economic output. HR&A used Cornell Tech data on anticipated enrollment through 2029-2030 to calculate how many new graduates the institution will produce and how many will remain and seek jobs in New York City. This analysis excludes graduates who pursued further education and who started their own companies as no earnings data is available.

	Direct Impact	Indirect Impact	Induced Impact	Total Impact
Employment	2,600	530	1,280	4,410
Labor Income	\$463,000,000	\$54,000,000	\$94,000,000	\$611,000,000
Economic Output	\$591,000,000	\$123,000,000	\$242,000,000	\$956,000,000

Figure 14: Economic Impacts of Cornell Tech Alumni Employed in New York City, FY 2029-2030

Startups

Projecting forward to FY 2029-2030, we conservatively estimate that 130 New York City-based Cornell Tech startups will employ 390 local employees, generating a total impact of 875 jobs, \$101M in labor income, and \$278M in economic output. In FY 2029-2030, we project that Cornell Tech will lead to the creation of 50 new active startups based in New York City, employing 155 additional local employees, as compared to FY 2022-2023.

HR&A conservatively calculated the impacts of New York City-based Cornell Tech startups using a straight-line projection methodology. In practice, this approach likely underestimates startups' impacts as these could grow exponentially as startups scale over time: because of the dynamics inherent in startup growth, a few highly successful startups in Cornell Tech's portfolio could generate very large impacts. As it is impossible to predict or estimate these trends, HR&A and Cornell Tech decided to use a more conservative methodology, whose results should be seen as a floor for what Cornell Tech startups' impacts can be.

Using Cornell Tech data on startups as of FY 2022-2023, HR&A assumed that Cornell Tech created 10 new startups per year in total across its startup programs. Historical data provided by Cornell Tech on startups grown from the university since 2014 shows that, annually on average, the Runway and Spinouts programs help establish 5 new startups each. Basing FY 2029-2030 impacts on startups incubated within the Runway and Spinouts programs also provides a conservative estimate of projected impacts because Cornell Tech alumni could create New York Citybased startups outside of Cornell Tech's formal program offerings.

HR&A also assumed that the average New York City-based startup would continue to employ 3 local employees, and that the sectors that Cornell Tech startups worked in in FY 2029-2030 remained the same as FY 2022-2023. HR&A also factored startup shutdowns and active startups based in New York City (as a proportion of total Cornell Tech startups) into the FY 2029-2030 impacts projections.

	Direct Impact	Indirect Impact	Induced Impact	Total Impact
Employment	390	280	205	875
Labor Income	\$57,200,000	\$28,300,000	\$15,000,000	\$100,500,000
Economic Output	\$173,200,000	\$66,000,000	\$38,500,000	\$277,700,000

Figure 15: Economic Impacts of Cornell Tech Startups in New York City, FY 2029-2030

Cumulative Institutional Impacts: 2018-2030

The impact of Cornell Tech's institutional spending and operations between FY 2017-2018 and FY 2029-2030 will be approximately \$1.1B in labor income and \$1.9B in economic output. These impacts, presented in 2024 dollars, reflect Cornell Tech's growing annual operations and how the institution's activities contribute to employment and economic activity in New York City. They do not include alumni or startup impacts.

Figure 16: Institutional Spending Cumulative Benefits, FY 2018-2030

Year	Labor Income	Economic Output
2017-2018	\$63,000,000	\$112,000,000
2018-2019	\$65,000,000	\$116,000,000
2019-2020	\$67,000,000	\$120,000,000
2020-2021	\$69,000,000	\$124,000,000
2021-2022	\$72,000,000	\$128,000,000
2022-2023	\$78,000,000	\$132,000,000
2023-2024	\$79,000,000	\$142,000,000
2024-2025	\$84,000,000	\$151,000,000
2025-2026	\$90,000,000	\$161,000,000
2026-2027	\$96,000,000	\$172,000,000
2027-2028	\$103,000,000	\$184,000,000
2028-2029	\$110,000,000	\$197,000,000
2029-2030	\$124,000,000	\$210,000,000
Total	\$1,100,000,000	\$1,949,000,000

HR&A calculated the trendline for Cornell Tech's cumulative ongoing impacts between FY 2017-2018 and FY 2029-2030. HR&A projected these trendlines based on our analysis described in the sections above and using compound average growth rates to project values between 2018, 2023, and 2030. These numbers are indicative to show the trend of Cornell Tech's accelerating impact as its operations, programs, and number of students, alumni, and startups expand.

Figure 17. Economic Output Trend for Cornell Tech-Related Activities, Alumni Employment, and Startups, 2018-2030

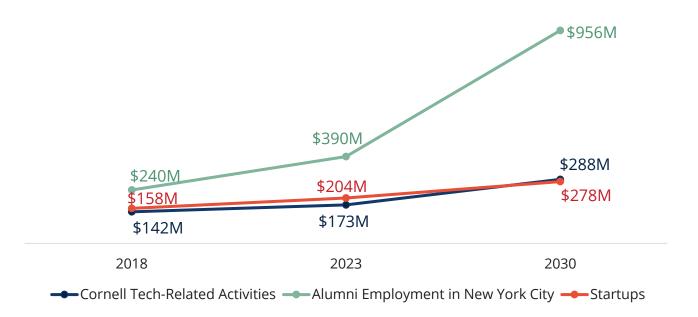
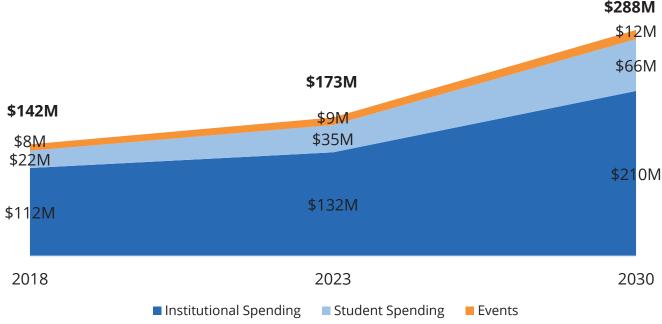


Figure 18. Economic Output Trend Broken Out for Cornell Tech-Related Activities, 2018-2030



Fiscal Impacts

One-Time Construction Impacts

To Date: 2012-2021

Cornell Tech's construction to date—totaling approximately \$889M— generated \$14.9M in direct tax revenue for New York City and \$100,000 for the Metro Commuter Transportation District (MCTD) tax.

Figure 19: Fiscal Impacts of Construction Materials Spending for Construction to Date, 2012-2021

	NYC Personal Income Tax	NYC Sales & Use Tax	Metro Commuter Transportation District Tax
Construction Workers	\$13,600,000	-	-
Construction Materials	-	\$1,300,000	\$100,000

Construction Labor

Construction labor from Cornell Tech construction to date generated \$13.6M in New York City personal income tax. To provide a conservative approximation of total personal income tax, HR&A calculated only the personal income tax generated from direct construction employees for construction to date (5,145 workers).

Construction Materials Spending

Construction materials spending from Cornell Tech construction to date generated \$1.3M in local sales and use tax and \$100,000 for the Metro Commuter Transportation District tax. Due to Cornell Tech's taxexempt status, only the construction materials used to construct the Tata Innovation Center Base Building and the Graduate Hotel were subject to local sales and use taxes.

These fiscal impacts are largely based on Cornell Tech's direct spending. Indirect and induced activity from 2012 to 2021 would have generated additional tax revenues for New York City across all tax categories.

Projected: 2026-2030

Cornell Tech's upcoming construction will generate \$9.1M in direct tax revenue for New York City. Tax revenue refers to New York City personal income tax, calculated for the anticipated number of construction workers. To provide a conservative approximation of total personal income tax, HR&A calculated only the personal income tax generated from the anticipated number of direct construction employees for upcoming construction (2,795 workers).

HR&A did not calculate local sales and use tax revenue generated from construction materials spending for upcoming construction due to Cornell Tech's tax-exempt status.

Ongoing Impacts: FY 2022-2023

Collectively, Cornell Tech's employment, alumni employment in New York City, and on-campus spending generated approximately \$8.3M in annual taxes. The institution's 2023 generated tax revenue was \$5.1M in local personal income tax, nearly \$1.5M in local sales and use tax, \$1.6M in hotel occupancy tax, and more than \$100,000 in MCTD surcharge.

To assess Cornell Tech's ongoing fiscal impacts, HR&A used the following categories of inputs:

- Direct Cornell Tech employment: salary and count of Cornell Tech direct employees in 2023 to calculate New York City personal income tax.
- Alumni employed in New York City after graduation: salary and count of Cornell Tech alumni who are employed in New York City after graduation in 2023 to calculate New York City personal income tax.
- On-campus retail and hotel: revenue generated by the on-campus café and The Graduate hotel in 2023 to calculate New York City sales and use tax, New York City hotel occupancy tax, and MCTD surcharge.
- Student spending: revenue generated by student expenses on meals in 2023 to calculate New York City sales and use tax and MCTD surcharge. Meals (prepared foods) constitute the main taxable category in student spending, with other categories like groceries, housing, and personal purchases (e.g., clothing) being mostly exempt from direct sales and use taxes or negligible.

HR&A was not tasked with analyzing the fiscal impacts of Cornell Tech startups based in New York City.

	NYC Personal Income Tax	NYC Sales and Use Tax	NYC Hotel Occupancy Tax	MCTD Tax
Direct Cornell Tech Employment	\$600,000	-	-	-
Alumni Employment in NYC	\$4,500,000	-	-	-
On-Campus Retail and Hotel	-	\$1,250,000	\$1,600,000	\$110,000
Student Spending ¹⁶	-	\$190,000	-	\$16,000
Total Ongoing Benefits	\$5,100,000	\$1,450,000	\$1,600,000	\$126,000

Figure 20: Summary of Cornell Tech Ongoing Fiscal Impacts, FY 2022-2023

Cornell Tech Direct Employment

Cornell Tech's direct employment generated \$600,000 in personal income tax revenue for New York City. 17

Alumni Employment

Cornell Tech attracts students to New York City, serving as a talent pipeline for the city's tech economy. Beyond their studies, Cornell Tech students who accept jobs in the city after graduation continue to create positive impacts in the local economy, generating \$4.5M in personal income tax revenue in 2023. HR&A calculated personal income tax impacts for the 1,000 Cornell Tech alumni estimated to be working in New York City after graduation, between its first class through to its spring class in 2023, assuming an average salary of

¹⁶ Note that fiscal impacts generated from student spending may also include those from spending at the on-campus café, resulting in a small amount of potential double counting of fiscal impacts.

¹⁷ Cornell Tech employs 334 FTE employees. For the purposes of this analysis, HR&A rounded this number to 335.

\$152,000. HR&A estimated the median salary of alumni based on the four primary industries within which Cornell Tech students are typically employed (technology, consulting, financial services, and legal services). 18

On-Campus Spending

Spending at Cornell Tech's on-campus hotel (The Graduate) and café generated nearly \$3M in direct tax revenue for New York City and \$110,000 for the MCTD tax. In 2023, café and catering revenue was \$5.4M, and The Graduate hotel brought in \$24.1M in total revenue. Guests booked approximately 60,000 room nights and the average daily rate was \$260. Tax revenues for New York City included nearly \$1.3M in local sales and use tax and \$1.6M in hotel occupancy tax.

Figure 21: Fiscal Impacts of On-Campus Spending at the Café and The Graduate, FY 2022-2023

	NYC Sales & Use Tax	Metro Commuter Transportation District Tax	NYC Hotel Occupancy Tax
Café and Catering	\$250,000	\$20,000	-
Hotel	\$1,000,000	\$90,000	\$1,600,000
Total	\$1,250,000	\$110,000	\$1,600,000

Student Spending

Enrolled student spending generated \$190,000 in direct sales and use tax revenue for New York City and \$16,000 for the MCTD tax. HR&A estimated that the 539 enrolled Cornell Tech students in FY 2022-2023 spent \$4.2M on meals (2024 dollars). Note that the tax impacts generated from student spending may also include those generated from spending at the on-campus café.

¹⁸ Cornell Tech provided alumni employment estimates for Cornell Tech alumni employed in New York City through 2023.



About HR&A Advisors, Inc.

HR&A Advisors, Inc. (HR&A) helps create more equitable, resilient, and dynamic communities.

Our work turns vision into action through rigorous analysis, strategy development, and implementation planning. We have provided strategic advisory services for some of the most complex mixed-use, neighborhood, downtown, campus, and regional development projects across North America and abroad for over forty years.

With offices in New York, Los Angeles, Atlanta, Dallas, Raleigh, and Washington DC, we have a presence that allows us to serve clients worldwide.

From Southern California to Brooklyn, and London to Medellín, we have guided hundreds of clients in transforming real estate and economic development concepts, and public infrastructure, first into actionable plans then into job-producing, community-strengthening assets. We have served a range of clients – real estate owners and investors, hospitals and universities, cultural institutions, community development organizations and governments – since 1976.

Methodological Appendix

Note on rounding: HR&A rounded the impact figures we present below \$10,000,000 to the nearest \$100,000 and figures at or above \$10,000,000 to the nearest \$1,000,000, with some exceptions where additional precision was beneficial to understanding the benefits and to display sums in tables. Minor discrepancies in the tables and the narrative are due to rounding.

Note on dollar-years: HR&A presents all economic impacts in 2024 dollars. This means that all dollar figures from 2023 and prior years are inflated to 2024 dollars, and all dollar figures from 2025 and later years are deflated to 2024 dollars.

Economic Impacts

One-Time Construction Impacts

HR&A calculated the economic impacts of Cornell Tech's construction to date, which occurred between 2012 and 2021 (with some remaining fitout of educational spaces occurring through 2024) and projected the impacts of the institution's next set of construction projects, which are anticipated to begin in 2026 and conclude in 2030.

IMPLAN Industry Codes Used:

- 52: Construction of new power and communication structures
- 53: Construction of new educational and vocational structures
- 55: Construction of new commercial structures, including farm structures
- 56: Construction of other new nonresidential structures
- 59: Construction of other new residential structures
- 457: Architectural, engineering, and related services

Ongoing Impacts

HR&A calculated the economic impacts of Cornell Tech's ongoing (annual) institutional operations, student spending, events convened, and alumni employment in FY 2022-2023 and projected the same categories of impacts in FY 2029-2030 based on the anticipated growth of Cornell Tech's educational programming and other activities.

Institutional Spending

IMPLAN Industry Codes Used:

481: Junior colleges, colleges, universities, and professional schools

Student Spending

IMPLAN Industry Codes Used:

- 61: Maintenance and repair construction of residential structures
- 398: Wholesale Grocery and related product wholesalers
- 407: Retail Health and personal care stores
- 418: Transit and ground passenger transportation

- 507: Hotels and motels, including casino hotels
- 509: Full-service restaurants

FY 2022-2023

HR&A created two profiles of student spending: one for the spending habits of a CFEM student and another for those of an EMBA student. Based on data from Cornell Tech, given that CFEM students live in New York City but not on Roosevelt Island, HR&A included the following expense categories in the CFEM spending profile: meals, groceries, personal expenses, transportation, and housing. As the EMBA program sees a higher proportion of outof-town students who commute into New York City for classes, we included the following expense categories in the EMBA spending profile: meals, personal expenses, transportation, and accommodations.

Figure A1: Spending Per Student Estimates, FY 2022-2023

	Master's and PhD	CFEM	EMBA
		Fall Semester Only	20 Weekends
Spending Per Student	\$38,000	\$16,000	\$11,000

FY 2029-2030

To project student spending forward to FY 2029-2030, HR&A used the same student spending profiles and expense categories from our student spending analysis in FY 2022-2023 to:

- 1) adjust the spending amounts for inflation, assuming an annual general inflation rate of 3%; and
- 2) adjust the total spending for each student group by the projected increase of student enrolment in FY 2029-2030 (with student population projections data provided by Cornell Tech).

HR&A assumed that the student population for Cornell Tech's core Master's and PhD degree programs would increase to 1,000 in FY 2029-2030 and that the CFEM and EMBA cohort sizes stayed the same as in FY 2022-2023.

Figure A2: Projected Spending Per Student Estimates, FY 2029-2030

	Master's and PhD	CFEM Fall Semester Only	EMBA 20 Weekends
Spending Per Student	\$49,000	\$19,000	\$13,000

Events

IMPLAN Industry Codes Used:

- 407: Retail Health and personal care stores
- 418: Transit and ground passenger transportation
- 507: Hotels and motels, including casino hotels
- 509: Full-service restaurants

FY 2022-2023

HR&A calculated the economic impacts of event attendee spending by creating two profiles of attendee spending: one estimating the spending habits of a local New York City-based event attendee, and the other estimating that of an out-of-town visitor. For both types of event attendees, we assumed a two-day event.

The spending profile for local attendees assumed spending on meals, retail, and transportation, while that for out-of-town attendees also included spending on accommodations. HR&A based the expense assumptions for these event attendee profiles on desktop research of New York City conference cost estimators and conference attendee spending breakdowns.¹⁹ HR&A estimated that a local event attendee spends \$310 for a two-day event. We estimated that an out-of-town event attendee spends \$700 for a two-day event.

FY 2029-2030

HR&A estimated the economic impacts of event attendee spending to FY 2029-2030 by using the same local and out-of-town attendee spending profiles and expense categories from our event attendee analysis for FY 2022-2023 for a two-day event to:

- 1) adjust the spending amounts for inflation, assuming an annual general inflation rate of 3%; and
- 2) adjust the total spending for all event attendees in FY 2029-2030, at the advice of Cornell Tech to assume that the total number of event attendees will grow by 25% through FY 2029-2030 to 15,000 attendees.

Institutional Spending, Student Spending, and Events

FY 2017-2018

To estimate impacts for Cornell Tech-related spending in FY 2017-2018, HR&A used our analysis for FY 2022-2023 and FY 2029-2030 (described in the sections above) as a baseline to:

- 1) calculate a compound average growth rate for total economic output between FY 2022-2023 and FY 2029-2030; and
- 2) project backwards an estimation of total economic output for Cornell Tech-related activities in FY 2017-2018 using the compound average growth rate.

Alumni Employment

IMPLAN Industry Codes Used:

- 442: Financial investment activities
- 455: Legal services
- 460: Computer systems design services
- 462: Management consulting services

FY 2022-2023

HR&A used Cornell Tech's data on the number of alumni who pursued careers in New York City and their distribution among the four primary industries in which they are employed—technology, financial services, consulting, and law—to calculate the economic activity that all the institution's graduates produced. Based on average alumni salary data provided by Cornell Tech, HR&A calculated that the average salary for a Cornell Tech alumnus working in New York City was \$152,000 (in 2024\$).

¹⁹ Desktop research sources for event/conference cost estimators include <u>Social Tables Conference Cost Estimator for Budgeting</u> and Brightspot Incentives Event Budget Estimate Calculator.

FY 2029-2030

HR&A used Cornell Tech data on anticipated enrollment through 2029-2030 to calculate how many new graduates the institution will produce and how many will remain and seek jobs in New York City. HR&A used historical Cornell Tech data to estimate that:

- 1) Cornell Tech will graduate approximately 3,900 students between spring 2024 and spring 2030 (or 560 per year on average);
- 2) about 2,900 (75%) of new graduates will seek jobs, as opposed to seeking additional education or founding a company; and
- 3) 1,600 (56%) of these will remain in New York City.

Under these assumptions, HR&A:

- 1) added the number of new graduates who will remain in New York City in FY 2029-2030 (1,600) to the number of alumni who were in New York City as of 2023 (1,000), assuming the latter will remain constant;
- 2) distributed the 2,600 total cumulative alumni in the city among the four primary industries, using the same breakdown as for 2023.20

This analysis also excludes graduates who pursued further education and who started their own companies as no earnings data is available. Based on average alumni salary data provided by Cornell Tech, HR&A calculated that the average salary for a Cornell Tech alumnus working in New York City in FY 2029-2030 would be \$176,000, assuming 3% annual general inflation.

FY 2017-2018

To estimate impacts for alumni employment in New York City in FY 2017-2018, HR&A used our analysis for FY 2022-2023 and FY 2029-2030 (described above) as a baseline to:

- 1) calculate a compound average growth rate for total economic output from alumni employment between FY 2022-2023 and FY 2029-2030; and
- 2) project backwards an estimation of total economic output from alumni employment in FY 2017-2018 using the compound average growth rate.

Startups

IMPLAN Industry Codes Used:

- 125: Women's and girls' cut and sew apparel manufacturing
- 128: Apparel accessories and other apparel manufacturing
- 130: Footwear manufacturing
- 300: Computer terminals and other computer peripheral equipment manufacturing
- 301: Telephone apparatus manufacturing
- 317: Analytical laboratory instrument manufacturing
- 376: Surgical and medical instrument manufacturing
- 377: Surgical appliance and supplies manufacturing
- 382: Sporting and athletic goods manufacturing
- 394: Wholesale Household appliances and electronic goods

²⁰ Cornell Tech graduates work in technology (55%), financial services (22%), consulting (18%), and law (4%).

- 428: Software publishers
- 436: Data processing, hosting, and related services
- 464: Scientific research and development services
- 482: Other educational services

FY 2022-2023

Cornell Tech provided HR&A with a dataset on its startups across the Spinouts, Runway, and IGNITE programs. This dataset included information on each company's sector, product/service, founder demographics, headquarters location, and total funding raised. Additionally, Cornell Tech collected data from LinkedIn on New York City-based employees actively working at these Cornell Tech startups.

With the LinkedIn employment data that Cornell Tech provided, HR&A calculated the economic impacts generated by Cornell Tech startups in New York City. HR&A assumed that the LinkedIn employee data included both founders and employees for each company. Using qualitative information provided by Cornell Tech and desktop research on each company's industry and product, HR&A matched each company with an IMPLAN code to run an economic impact analysis for each Cornell Tech startup. To most appropriately assign IMPLAN codes to each company, HR&A based the IMPLAN code on the product/service that the company was providing, as opposed to the industry within which the company was operating. For example, if a company was providing a software as a service for the healthcare industry, HR&A coded that company as a software publisher instead of a healthcare provider for the purposes of aligning that company with the appropriate IMPLAN multipliers for the economic impact analysis.

HR&A excluded companies that Cornell Tech knew to have been dissolved, shut down, or ceased operations. HR&A included companies that had been acquired in the analysis as we assumed that some of these companies' employees continued to generate economic impacts in New York City. HR&A based this assumption on LinkedIn self-reported employment status, which may not be fully accurate or up to date.

Lastly, HR&A used the startup data provided by Cornell Tech to analyze founder demographics and funding raised by underrepresented groups in tech, including women founders and founders of color. This data is self-reported to Cornell Tech by participants in its incubator programs.

FY 2029-2030

HR&A used a straight-line projection method to estimate the impacts of Cornell Tech startups to FY 2029-2030. With Cornell Tech data on startups that have grown out of the Runway, Spinouts, and IGNITE programs as of FY 2022-2023, HR&A assumed that:

- 1) On average, Cornell Tech awarded 10 new startups across its startup programs each year, based on historical data on Cornell Tech startups which shows that, on average, the institution welcomes five new startups to participate in the Runway and Spinouts programs per year;
- 2) The total number of projected startups would be 174 in FY 2029-2030, according to the logic above;
- 3) 23% of startups (40 of 174) would shut down or cease operations out of the total number of startups;
- 4) Of the total active startups (134), 95% of startups would be based in New York City (127);
- 5) Each New York City-based startup would employ an average of 3 local employees, bringing the total number of local direct employees to 388; and
- 6) The sectors within which Cornell Tech startup employees worked would remain the same as in FY 2022-2023 (to allow HR&A to assign the appropriate IMPLAN codes to New York City-based employees to calculate impacts).

Note that while HR&A used a linear approach to project startup impacts, in practice, startup impacts could grow exponentially as companies scale over time. HR&A's FY 2029-2030 impacts represent a conservative estimate of how Cornell Tech startup impacts may grow in New York City.

FY 2017-2018

To estimate impacts from startups in FY 2017-2018, HR&A used Cornell Tech data on startups that participated in the Runway and Spinouts programs up until 2018. Based on this information and current employment data, HR&A assumed that:

- 1) There were 34 active startups in FY 2017-2018; and
- 2) These active startups employed 140 New York City-based employees.

HR&A assigned IMPLAN codes to each startup based on qualitative descriptions of each company's product or service in order to calculate the economic impacts generated by each company.

Fiscal Impacts

Note that New York City income-tax deductions vary based on a worker's income-tax bracket.

One-Time Construction Impacts

Construction Labor

To Date

HR&A calculated personal income tax revenues from construction labor by:

- 1) estimating the average salary of a construction worker to be \$88,000, based on data provided by Cornell Tech on development costs and construction timelines;
- 2) calculating the personal income tax revenue generated by a construction worker assuming a 15% tax deduction of gross income and a personal income plus tax rate of 3%; and
- 3) calculating a conservative approximation of total personal income tax generated only by direct construction employees (5,145 workers) who worked on Cornell Tech construction projects to date.

Projected

HR&A took the following steps to estimate potential personal income tax revenue generated by construction labor:

- 1) estimated the average salary of a construction worker to be \$107,000 from upcoming construction development cost and construction timeline estimations provided by Cornell Tech;
- 2) calculated the personal income tax revenue generated per construction worker assuming an 11% tax deduction of gross income and a personal income plus tax rate of 3%; and
- 3) calculating a conservative approximation of total personal income tax generated only by direct construction employees (2,795 workers).

Construction Materials Spending

To Date

HR&A calculated tax revenues from sales and use, as well as the MCTD surcharge through the following process:

- 1) obtained taxable spending on construction materials by subtracting direct labor income from the total direct construction spending for the Tata Innovation Center Base Building and Graduate Hotel;
- 2) conservatively estimated the share of construction materials sourced within New York City—and thus subject to local taxes—at 50%; and
- 3) calculated resulting taxes for the 4.5% New York City sales and use tax and 0.375% MCTD surcharge.

Ongoing Impacts

Cornell Tech Direct Employment

FY 2022-2023

HR&A estimated personal income tax revenues for employees through the following steps:

- 1) calculated the average salary of a Cornell Tech worker to be \$70,188 from employment data provided by Cornell Tech;
- 2) estimated the personal income tax revenue generated by a Cornell Tech employee based on an average salary of \$70,188, assuming an 18% tax deduction of gross income and a personal income plus tax rate of 3%; and
- 3) calculated a conservative approximation of total personal income tax generated only by the workers directly employed by Cornell Tech (335 workers).

Cornell Tech Alumni Employed in New York City

HR&A estimated personal income tax revenues for employees through the following steps:

- 1) calculated the average salary of a Cornell Tech alumnus employed in New York City to be \$152,000 from alumni employment data provided by Cornell Tech;
- 2) estimated the personal income tax revenue generated by a Cornell Tech employee based on an average salary of \$152,000, assuming an 11% tax deduction of gross income and a personal income plus tax rate of 3%; and
- 3) calculated an approximation of total personal income tax generated only by the number of alumni estimated to be employed in New York City from Cornell Tech's first graduating class through the Spring of 2023 (1,000).

On Campus Spending

HR&A calculated tax revenues on sales and use and for the MCTD surcharge through the following process:

- 1) obtained Cornell Tech data on 2023 revenue from The Graduate and café, and,
- 2) calculated resulting taxes for the 4.5% New York City sales and use tax and 0.375% MCTD surcharge.

HR&A calculated tax revenues on hotel occupancy at The Graduate by:

- 1) obtaining Cornell Tech data on 2023 revenue, average daily rate, total available rooms, and occupancy rate at stabilization at the Graduate;
- 2) calculating the tax revenue generated from the \$3.50 New York City nightly fee; and
- 3) calculating the tax revenue generated for the 5.875% New York City hotel occupancy tax.

Student Spending

HR&A calculated tax revenues on sales and use and for the MCTD surcharge through the following process:

- 1) estimated the total amount that enrolled students in FY 2022-2023 (539 students) spent on meals was \$4.2M (2024\$)
- 2) calculated the taxes for student spending on meals for the 4.5% New York City sales and use tax and 0.375% MCTD surcharge.

Note that for the economic impacts analysis, HR&A also calculated student spending on other categories, including groceries, transportation, and housing. However, we only calculated the fiscal impacts on meal expenses since most groceries are tax-exempt and transportation and housing expenses are not subject to sales and use taxes.

Data Tables

Figure A3: One-Time Construction Impacts (To Date), 2012-2021

Project	Start	Completion	Gross Square	Development
	Year	Year	Feet	Costs (total)
Overall Project Planning and Design	2012	2023	NA	\$15,839,214
(OPPD)				
Goldwater Hospital Demolition &	2012	2015	NA	\$57,702,887
Abatement				
Central Utility Plant (CUP) Building and	2012	2017	10,753	\$111,775,860
Site Landscaping				
Gas Project	2015	2015	NA	\$2,000,000
Barging and Community Issues	2015	2017	NA	\$2,735,395
Bloomberg Center	2012	2017	161,999	\$183,375,813
The House	2014	2017	271,798	\$148,000,000
Tata Innovation Center Base Building	2014	2017	235,819	\$140,000,000
Tata Innovation Center Cornell Tech	2015	2017	NA	\$28,156,316
Fitout				
Verizon Executive Education Center	2016	2021	40,794	\$54,634,145
The Graduate Hotel	2016	2020	158,680	\$114,527,531
NYC Ferry Roosevelt Island Stop (5-year	2017	2021		\$2,500,000
subsidy)				
Tata & Phase II Feasibility Study	2022	2022	NA	\$149,999
Tata Innovation Center 1F Maker Lab &	2022	2025	NA	\$22,000,000
4F Fitout				
Campus Visioning Plan	2023	2024	NA	\$5,550,000

Figure A4: Economic Impacts of Student Spending, FY 2022-2023

	Direct Impact	Indirect Impact	Induced Impact	Total Impact
Employment	117	22	21	160
Master's and PhD	98	20	18	135
CFEM Students	4	1	1	6
EMBA Students	15	2	3	19
Labor Income	\$7,300,000	\$2,300,000	\$1,900,000	\$11,500,000
Master's and PhD	\$6,000,000	\$2,000,000	\$1,600,000	\$9,600,000
CFEM Students	\$300,000	\$100,000	\$100,000	\$500,000
EMBA Students	\$1,000,000	\$200,000	\$200,000	\$1,400,000
Economic Output	\$24,500,000	\$5,900,000	\$4,800,000	\$35,200,000
Master's and PhD	\$21,000,000	\$5,000,000	\$4,000,000	\$30,000,000
CFEM Students	\$1,000,000	\$300,000	\$200,000	\$1,500,000
EMBA Students	\$2,500,000	\$600,000	\$600,000	\$3,700,000

Figure A5: Projected Economic Impacts of Student Spending, FY 2029-2030

	Direct	Indirect	Induced	Total
Employment	265	55	50	370
Master's and PhD	240	50	45	335
CFEM	5	1	1	7
EMBA	20	2	3	25
Labor Income	\$14,100,000	\$4,200,000	\$3,500,000	\$21,800,000
Master's and PhD	\$12,800,000	\$3,900,000	\$3,200,000	\$19,900,000
CFEM	\$300,000	\$100,000	\$100,000	\$500,000
EMBA	\$1,000,000	\$200,000	\$200,000	\$1,400,000
Economic Output	\$45,400,000	\$11,850,000	\$8,790,000	\$66,040,000
Master's and PhD	\$42,000,000	\$11,000,000	\$8,000,000	\$61,000,000
CFEM	\$1,000,000	\$250,000	\$190,000	\$1,440,000
EMBA	\$2,400,000	\$600,000	\$600,000	\$3,600,000