University of Rochester & Affiliates
NEW YORK STATE ECONOMIC IMPACT
2019

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• Government & Education • Economics & Public Finance
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cover photos

Intro to Computer Science class in Hoyt Hall // photo by J. Adam Fenster, University of Rochester

Graduates walk towards the quad at the University of Rochester commencement // photo by Matt Wittmeyer, University of Rochester

SUMMARY

The University of Rochester (UR) engaged CGR to assess the economic and fiscal impact of the University and its affiliates on the State of New York during 2019. This report is the eighth in a series of reports exploring the impact of the University since 2006. Total employment—both direct and spillover—more than doubled over the period, reaching 68,000 in 2019.

While these reports have previously been issued biennially, the COVID-19 pandemic delayed issuance of the 2019 report beyond the typical following-year (2020) release date into 2021. As with previous reports, CGR analyzed the broad diversity of specialized academic schools and affiliated organizations to develop a profile of the University's wide-ranging economic and fiscal impact.

Education and healthcare are a major part of New York's economy. The Bureau of Economic Analysis estimates that 15% of all jobs and 12% of all earnings in New York State are attributable to the education and healthcare sectors. The importance of these two sectors is especially notable in Upstate New York. With approximately 32,500 employees (an estimated 28,000 full-time equivalent or FTE), the University of Rochester (and its affiliates) is the largest private employer in Upstate New York and ranked seventh across the Empire State in terms of full-time equivalent employment. These employment figures are growing. UR directly employed about 1,700 more in 2019 than in 2017 (a 5% increase).

TABLE 1. University of Rochester and Affiliates Employment, 2019

	Headcount	FTE (est.)
University of Rochester*	**24,887**	**22,188**
UR (without SMH)	12,811	10,814
Strong Memorial Hospital	12,076	11,374
University of Rochester Affiliates	**7,606**	**6,073**
Highland Hospital	3,054	2,440
FF Thompson	1,686	1,402
UR Medicine HomeCare/VNS	720	620
The Highlands**	695	487
Noyes Health	575	446
Jones Memorial Hospital	360	260
St. James Hospital	491	397
NextCorps	20	17
Excell Partners	5	4
Total	**32,493**	**28,261**

** See the introduction of the full report for a complete list of who is included*

***Includes Highlands at Brighton, Highlands at Pittsford, and Highlands Living Center*

Additional jobs come as a result as UR purchases goods and services from its vendors, and its employees spend their paychecks. UR directly paid about $2.26 billion to its workforce in 2019. Major capital investments made by UR support construction and related jobs in the economy. Over the last five years, UR has averaged about $324 million annually in capital investment spending. UR students also contribute as they annually spend an estimated $88 million in the economy. Outside visitors to UR commencement, conferences, cultural, sports and other events support additional jobs in the economy.

All told, UR is responsible for sustaining a total of nearly 68,000 jobs in the NYS economy. The "traded sector," the subset of jobs resulting from spending from outside the region, contributed about 40,000 jobs in 2019.

TABLE 2. University of Rochester's Employment Impacts, 2019
(Thousands of Jobs)

	Traded Sector			Local & Traded Sectors		
Area of Business Activity	**Direct**	**Spillover**	**Total**	**Direct**	**Spillover**	**Total**
UR & affiliates	15.0	18.2	33.2	28.3	31.0	59.2
Supplier Purchases	0.8	0.9	1.7	1.6	1.6	3.2
Capital Spending	2.9	1.4	4.3	2.9	1.4	4.3
Student Spending	0.7	0.3	1.0	0.7	0.3	1.0
Visitor Spending	0.1	0.0	0.1	0.1	0.03	0.1
Total	**19.5**	**20.8**	**40.3**	**33.6**	**34.3**	**67.9**

The intellectual property created by UR resulted in 82 patents and 122 invention disclosures in 2019. Thirty-three startups were formed from FY 2009 to 2019. Seventy percent of them remain open for business, significantly higher than the 47% national average.

- The University continues to be a stable employer and economic contributor to the City of Rochester. An estimated 12,000 UR employees earning a half billion dollars in payroll live within the city, with 499 taking advantage of the University's homeownership benefit. Through leased space, UR pays $730,000 in property tax.
- The University's role in the region's economic development space is on full display in NextCorps and its Luminate startup accelerator, plus the ongoing contribution of the Excell Partners venture fund.
  - NextCorps supports more than 150 companies annually.
  - Luminate is the world's largest and only optics, photonics & imaging (OPI) startup accelerator; it has selected finalists for its 4th cohort.
  - Excell Partners has $40 million under management and 35 companies in its portfolio.
- Physical expansion of the various UR facilities provides steady employment to the region's construction industry. Recent examples include the Ambulatory Orthopedic Center at the Marketplace Mall.
- The significance of the Laboratory for Laser Energetics, the largest U.S. Department of Energy (DOE) funded university-based research center in the nation, is likely to grow as UR seeks additional funding for the proposed EP-OPAL laser, which is likely add 250-270 jobs.
- Wilmot Cancer Institute's application to be designated as a National Cancer Institute Cancer Center promises a significant expansion of Wilmot's clinical services footprint.

ACKNOWLEDGEMENTS

This report is a team effort between CGR and many University of Rochester employees. CGR wishes to thank everyone who helped to provide the data necessary to perform the analysis, including Robert Alexander, Michael Andrews, Carrie Ballou, Kevin Berg, Rebecca Boyd, Lucy Carroll, Scott Catlin, Chris Colaluca, Laurel Contomanolis, Theresa Danylak, Debbie Flotteron, Tom Ford, Diane Frank, Christine Garland, James Helms, Laurie Hume, Jessica Kaufman, Kris Lantzky-Eaton, Rebekah Lewin, Jennifer Linton, Marina Marchioli, Theresa Mazzullo, Mark Michaud, Dennis O'Donnell, Chuck Parsels, John Podvin, Diane Roney, Christine Rovet, Cam Schauf, Judy Seier, Candice Sheffer, Roberta Spezzano, Steve Stagnitto, Kathy Strojny, Anne Tucker, Karen VanOrder, and Tom Viola. In particular, we thank Josh Farrelman and Mike Kennerknecht for their work/efforts in coordinating data requests, providing feedback and enabling the development of the report.

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INTRODUCTION

The University of Rochester (UR) engaged CGR to assess the economic and fiscal impact of the University and its affiliates on the State of New York during 2019, the eighth in a series of reports beginning in 2006. That was the year that the University's job total exceeded that of the Eastman Kodak Company, long the region's top employer.

As with previous reports, CGR analyzed the broad diversity of specialized academic schools and affiliated organizations to develop a profile of the University's wide-ranging economic and fiscal impact.

For the purposes of this report, the University of Rochester includes all adjunct faculty, full-time faculty, post-doctoral fellows, research and teaching fellows, medical residents, and University staff. In addition, CGR includes all employees of Strong Memorial Hospital, Highland Hospital, FF Thompson Health Care, Jones Memorial Hospital, St. James Hospital, Noyes Hospital, UR Medicine HomeCare (formerly Visiting Nurse Service), NextCorps, Excell Partners, Inc., the Memorial Art Gallery, the Highlands Living Center, UR Medicine Urgent Care and Labs, and both the Highlands at Pittsford and the Highlands at Brighton. In expressing the economic impact, CGR refers to this entire body as the University of Rochester.

OUR APPROACH

CGR's technical approach to analyzing economic impact is consistent with the standard practice of economic impact analysis. CGR has made every attempt to replicate the previous study's methodology, thus providing a consistency of results, while updating and improving methodology and estimates where appropriate.

WHAT IS MEASURED?

CGR's economic impact studies principally estimate the wages and jobs that an institution stimulates as a result of its economic activity. We attempt to answer the question, "How is the economy larger because of this institution's activity in the community?" We analyze five primary areas of economic activity conducted by UR in order to quantify the economic impact. This measures the impact of the *use* of funds regardless of the *source* of funds. The source of funds does determine the allocation of impact between "traded sector" and the total impact.

The five areas are:

1. Employment
2. Purchasing
3. Capital Investments
4. Student Spending
5. Visitor Activity

Geographic Scope

This study focuses on UR's impact within New York State. This is consistent with the previous 2017 study's focus on the full impact of UR activities, especially UR Medicine, which increasingly extends and impacts well beyond the Rochester metropolitan area.

Time Period

The focus of this study is calendar year 2019, although some data were only available for the fiscal or the academic years. As well, given the uneven nature of capital project expenditures, CGR uses a five-year rolling average to estimate the economic impact of capital investments.

Traded vs. Local Sector Impacts

Economists distinguish between economic activities that bring dollars into a region and those that reallocate dollars already "earned" from other trading.

The goal of any economic impact analysis is to assess how the economy in question is larger as a consequence of the activity being studied. In layman's terms, the question posed is this: How would the economy be smaller if the activity were to disappear?

Economists distinguish between economic activities that bring dollars into a region (i.e., dollars earned from trading with other regions) and those that simply reallocate dollars already "earned" from other trading. This might be illustrated as activities that "grow the pie" versus those that change the way the "pie is sliced." A new grocery store, for example, will not attract spending from shoppers living outside the region; instead, the new store only reallocates spending on groceries that would have occurred anyway.

Although this is an important distinction, the dividing line between a "traded" activity and a purely local one is not easily drawn for an institution as complex as the University of Rochester. In theory, the traded sector is defined as those aspects of UR that would not be provided by another entity if UR did not exist. If UR were to disappear, the millions of dollars flowing into Rochester to support UR Medicine's research enterprise would likely not be replaced. By contrast, normal childbirth or appendectomies would be unlikely to move to Cleveland or Tampa if Strong Memorial Hospital or Highland Hospital were to close.

It is impossible to allocate every dollar of revenue flowing to an institution like the University of Rochester according to source, however. Although CGR treats the educational function of the University as part of the "traded sector," some UR students may have chosen to attend another college or university in the region had they not been accepted at the University of Rochester. We do not attempt to draw such distinctions in this study.

Strong Hospital's highly regarded liver transplant program attracts patients from outside the region.

CGR does, however, distinguish between clinical service revenue to Strong Memorial Hospital or Highland Hospital that would likely be earned in the local economy anyway if these hospitals were to close. Although routine surgery would be performed in the area regardless, Strong Hospital's highly regarded (and quite large) liver transplant program is unusual and attracts patients from outside the region. Local residents who receive liver transplants would otherwise travel to another city if Strong did not provide this service. Analysis of UR Medicine data suggests that approximately 37% of clinical revenue flowing to Strong Memorial Hospital is highly specialized. It is this component of the clinical service revenue that CGR includes as part of UR's unique contribution to the Rochester economy, and which qualifies as traded sector activity.

The remaining 63% represents routine medical procedures that could be satisfied by other health care providers were these services not available from UR Medicine. Employees and direct spending related to these types of procedures are considered "local" and are not counted in the economic impact analysis of the traded sector.

TYPES OF ECONOMIC IMPACTS

Direct Effects

Direct economic effects come from the actual expenditures of the University of Rochester in the community—i.e., the institution is directly involved with the transaction. Added to the direct expenditures is the local spending of students and visitors to campus and/or the hospitals. Examples of direct expenditures include:

- UR and its affiliates' payroll expenditures for faculty, physicians, staff, residents, and students;
- UR and its affiliates' purchases of goods and services from a variety of suppliers; and
- UR's payment to a construction firm for a capital improvement project (e.g., a new building).

Spillover Effects

Spillover effects result from the subsequent spending of the recipients of the direct expenditures. These are calculated as "indirect" and "induced" impacts, although reported as a summed value. A vendor company that supplies a product or service to the University of Rochester uses the proceeds of that sale to make expenditures of its own, typically for both materials and labor (an "indirect" impact). Similarly, employees of the University of Rochester spend their wages, which become income for other businesses in the region (an "induced" impact). These types of expenditures are categorized as spillover. Examples of spillover impacts include:

- The firm hired to construct a new building buys materials from local businesses. The local businesses will, in turn, have income to hire workers. Those workers will then spend money in the community. The spending of the businesses affected by the construction, and also the spending of the employees of those businesses, is considered spillover.
- A resident or lab tech purchases dinner in a restaurant, and the restaurant then uses the money to pay suppliers or staff.

DATA SOURCES AND MODELING

Most data for the study were provided by UR, gathered by CGR from the various academic schools and affiliated organizations and compiled for analysis by CGR. Where necessary, CGR consulted with external sources to obtain benchmarks for analysis. We also consulted data from U.S. government bureaus of the Census, Economic Analysis (BEA), and Labor Statistics (BLS); the New York State Department of Tax and Finance; and other sources.

CGR used IMPLAN, a regional input-output modeling system, to estimate the spillover economic impacts. The IMPLAN database, created by MIG, Inc., is a widely accepted model of economic activity. It consists of two major parts: 1) a national-level technology matrix and 2) estimates of sectoral activity for final demand, final payments, industry output and employment for each county in the U.S., along with state and national totals. Data are updated annually. IMPLAN estimates the direct, indirect and induced impacts of economic change through the use of multipliers, and estimates the impact of an increase in demand in a particular sector on 535 different industries/sectors in the economy.

OUR FINDINGS

UR LARGEST UPSTATE EMPLOYER, 7TH LARGEST IN NEW YORK STATE

As part of this periodic study, CGR compiles a list of New York State's top private employers. Since private employment figures are not public information, CGR has used various business journals, market research reports, self-reported numbers and estimation to provide the most accurate data. There is no publicly available source to independently verify our findings. We welcome corrections and updates.

With around 32,500 employees and over 28,000 FTE staff, UR is the largest private employer in Upstate New York and the seventh largest private employer in New York State. Healthcare, finance and higher education remain the dominant players in New York State's economy. The majority of the largest employers are headquartered in New

York City and on Long Island. UR, Cornell (including Weill Cornell Medical Center in NYC), Wegmans Food Markets and Rochester Regional Health System are the list's Upstate representatives.

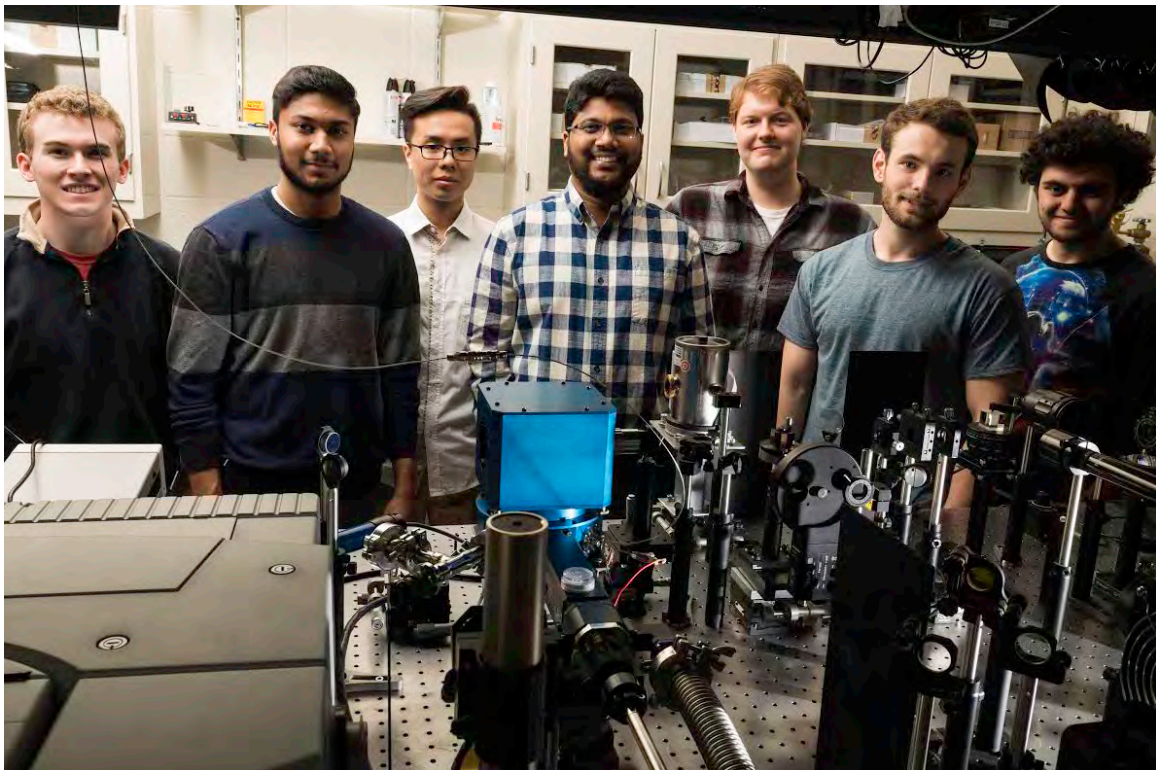
TABLE 3. Top 20 Private Employers in NYS
Estimated full-time equivalent employees
(most recent year of data noted as superscript)

Rank	Company Name	NYS Employment
1	Northwell Health [2021]	68,400
2	JP Morgan Chase [2018]	41,100
3	NYU/NYU Langone Medical Center [2018/2019]	40,600
4	New York Presbyterian [2019]	36,800
5	Amazon [2020]	34,000
6	Montefiore Health System [2021]	30,700
7	**University of Rochester & Affiliates [2019]**	**28,300**
8	Walmart [2020]	27,000
9	Mount Sinai Health System [2019]	27,000
10	Bank of America [2018]	23,700
11	Columbia University [2019]	20,000
12	Memorial Sloan-Kettering Cancer Center [2019]	19,400
13	Cornell University/Weill Medical College [2019]	17,900
14	McDonalds [2020] *	17,600
15	Wegmans Food Markets [2021]	17,600
16	Citigroup Inc. [2018]	17,100
17	Home Depot [2019] *	16,500
18	Morgan Stanley [2018]	16,000
19	Rochester Regional Health System [2020]	15,300
20	Consolidated Edison [2018]	14,600

Sources: Crain's New York Business, U.S. Department of Education IPEDS, Rochester Business Journal, company web postings, personal communications.

**CGR estimate*

ECONOMIC IMPACT



Employment

The largest impact is generated by the direct employment of workers at UR and UR Medicine Affiliates. The table below compares total year-end employment for 2017 and 2019. This includes full-time, part-time and hourly (time-as-reported or TAR) employees. UR and its affiliates expanded their overall headcount by about 1,700 workers, a 5% increase from 2017 levels.

TABLE 4. University of Rochester and Affiliates Employee Total

	2017	2019	Change
University of Rochester	23,877	24,887	4%
Highland Hospital	2,819	3,054	8%
FF Thompson	1,615	1,686	4%
UR Med HomeCare/VNS	728	720	-1%
The Highlands*	704	695	-1%
Noyes Health	561	575	2%
Jones Memorial Hospital	498	491	-1%
St. James Hospital	N/A**	360	N/A
NextCorps	13	20	54%
Excell Partners	N/A***	5	N/A
Total	**30,815**	**32,493**	**5%**

**Includes Highlands at Brighton, Highlands at Pittsford, and Highlands Living Center*
***St. James become a UR affiliate in 2018*
****Excell Partners was formerly counted within NextCorps*

Full-time equivalent (FTE) employment totals are reported in the next table and also shows an increase of 5%. Estimated FTE employment grew from 26,905 to 28,261.

TABLE 5. University of Rochester and Affiliates FTE Employment

	2017	2019	Change
University of Rochester	21,182	22,188	5%
Highland Hospital	2,314	2,440	5%
FF Thompson	1,489	1,402	-6%
UR Med HomeCare/VNS	622	620	0%
The Highlands*	485	487	0%
Noyes Health	438	446	2%
Jones Memorial Hospital	362	397	10%
St. James Hospital	N/A	260	N/A
NextCorps	13	17	31%
Excell Partners	N/A	4	N/A
Total	**26,905**	**28,261**	**5%**

**Includes Highlands at Brighton, Highlands at Pittsford, and Highlands Living Center*
***St. James become a UR affiliate in 2018.*
****Excell Partners was formerly counted within NextCorps*

CGR only includes the wages of those employees with zip codes in New York State. Beyond the direct employment impact, CGR estimates the employment and payroll impacts of other activities associated with the University, specifically capital improvements, external purchasing, plus the spending of students and visitors.

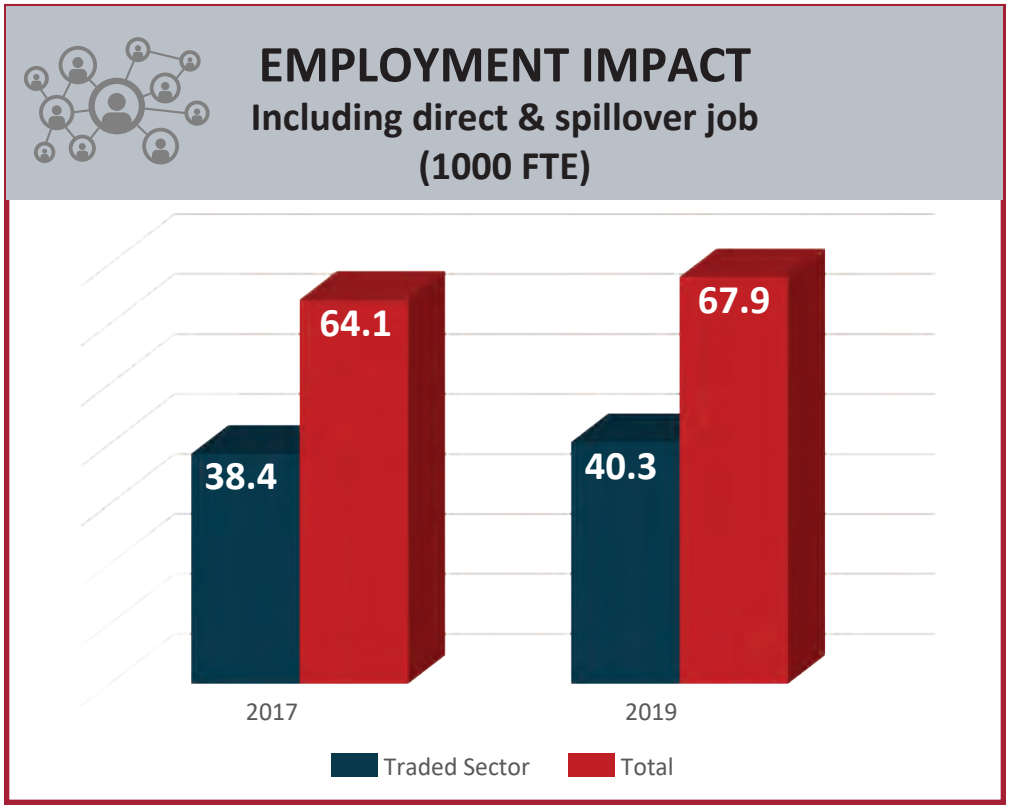
As discussed above, "spillover" employment is spurred by the employment and other activities of the University and affiliates and includes external spending by the University on goods and services (referred to as the "indirect" impact)) and the spending of employees (the "induced" impact).

CGR estimates aggregate employment impact of the University as totaling nearly 68,000 jobs, an increase from 64,000 in 2017. The "traded sector" impact is about 40,000 jobs, a gain of about 2,000 from 2017.

TABLE 6. Employment Impact of the University of Rochester, 2019
(Thousands of FTE Jobs)

	Traded Sector Only			Local & Traded Total		
Area of Business Activity	**Direct**	**Spillover**	**Total**	**Direct**	**Spillover**	**Total**
UR & affiliates	15.0	18.2	33.2	28.3	31.0	59.2
Supplier Purchases	0.8	0.9	1.7	1.6	1.6	3.2
Capital Spending	2.9	1.4	4.3	2.9	1.4	4.3
Student Spending	0.7	0.3	1.0	0.7	0.3	1.0
Visitor Spending	0.1	0.0	0.1	0.1	0.03	0.1
Total	**19.5**	**20.8**	**40.3**	**33.6**	**34.3**	**67.9**

FIGURE 1. Employment Impact 2017 v 2019



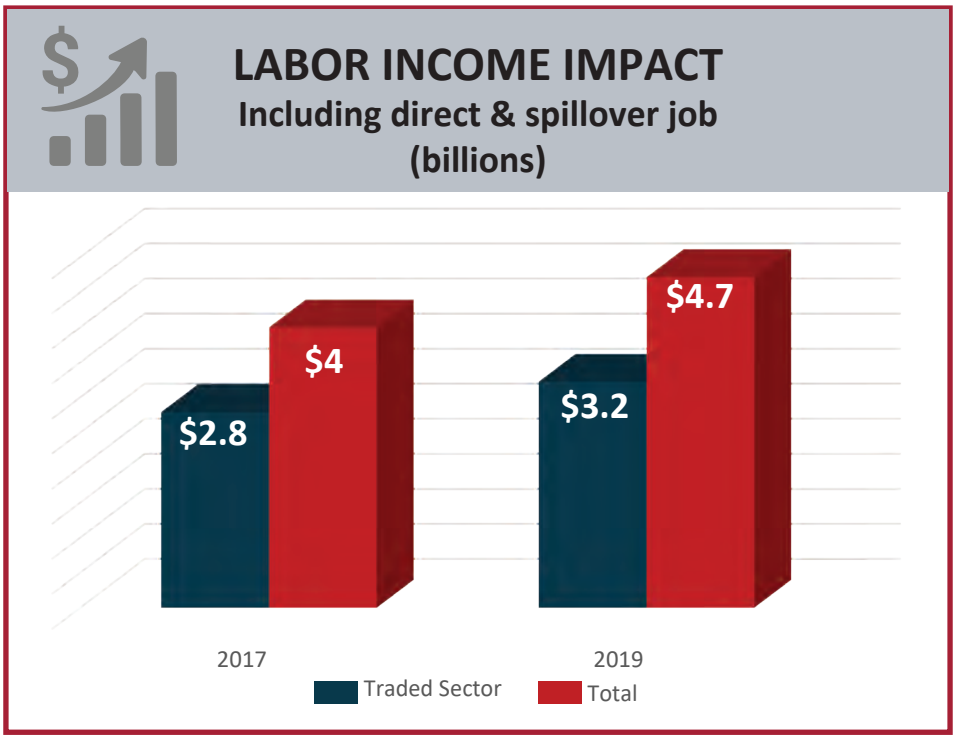
Payroll

During 2019, UR paid wages of $2.2 billion to employees living in New York State. The largest component of UR's economic impact in the NYS economy is based on the wages it pays to its employees and the subsequent buying power that generates for them. With spillover impacts included, UR and its affiliates are responsible for $4.7 billion in income in New York State, an 18% increase from 2017. We estimate the total payroll of the traded sector in NYS as $3.2 billion in 2019, a 15% increase from 2017.

TABLE 7. Labor Income Impact of the University of Rochester and Affiliates, 2019
(Dollars in Millions)

	Total			Traded Sector Only		
	Direct	Spillover	Total	Direct	Spillover	Total
UR & Affiliates	$2,212	$1,861	$4,073	$1,415	$1,283	$2,698
Supplier Purchases	$154.2	$119.8	$274.0	$84.9	$70.5	$155.4
Capital Spending	$218.7	$108.3	$327.0	$218.7	$108.3	$327.0
Student Spending	$28.0	$12.2	$40.2	$28.0	$12.2	$40.2
Visitor Spending	$3.1	$0.03	$3.2	$3.1	$1.6	$4.7
Total	**$2,616**	**$2,102**	**$4,718**	**$1,750**	**$1,476**	**$3,225**

FIGURE 2. Labor Impact 2017 v 2019

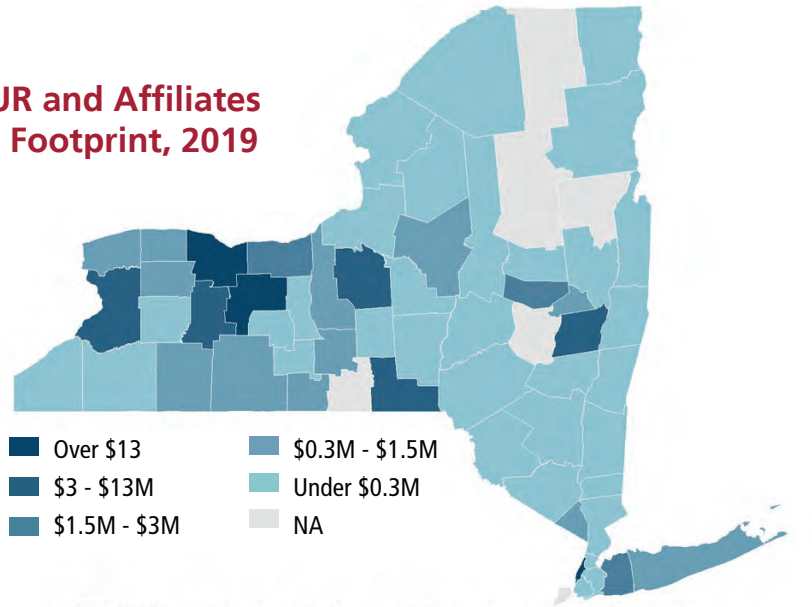


Purchasing Impact

UR and its affiliates purchased goods and services totaling approximately $1.3 billion in 2019. Of this total, $317 million or 24% was spent in New York State[1], a 6% increase since 2017. These purchasing "leakages" occur across all parts of UR but are especially noticeable within the hospitals. This leak outside the NYS economy is due to the dearth of medical equipment and pharmaceutical manufacturers located within the state.

The map below illustrates UR's purchasing footprint within New York State. Those counties shown with darker shading sourced more goods and services to UR and its affiliates than lighter shaded ones. UR purchased goods and services from all but six of the counties in NYS. CGR estimates that the UR's purchases sustain approximately 3,200 jobs in the state.

FIGURE 3. UR and Affiliates Purchasing Footprint, 2019



1 Location of spending based on zip code of the vendor. May understate total impact to NYS as spending may flow to headquarters out of state but distribution center may be located in New York State.

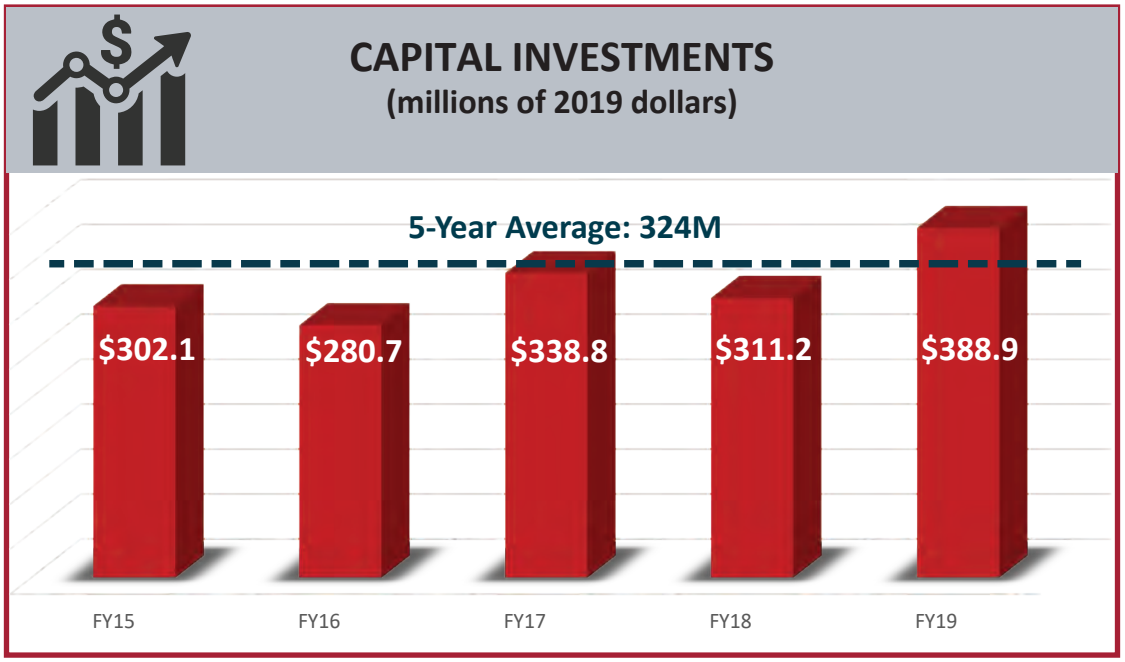
TABLE 8. Purchasing Impact of the University of Rochester and Affiliates, 2019

Purchases Impact (excluding capital expenditures)	Direct	Spillover	Total
Total			
Employment (1000s)	1.6	1.6	3.2
Labor Income ($m)	$154.2	$119.8	$274.0
Traded Sector Only			
Employment (1000s)	0.8	0.9	1.7
Labor Income ($m)	$84.9	$70.5	$155.4

Capital Construction Impact

UR continues to make considerable capital investments throughout its areas of operation. Because of considerable variation in the year-over-year capital investment numbers, CGR uses an annual average over five years to estimate the economic impact of capital investments. During the past five fiscal years (FY2015 – FY2019), UR and its affiliates made over $1.6 billion dollars in capital project expenditures, adjusted for inflation. This averages to about $324 million in capital investments per year.

FIGURE 4. University of Rochester and Affiliates Capital Investments



Using the five-year average, CGR estimates UR's capital investments support around 4,300 jobs and add about $327 million of labor income to the New York State economy.

TABLE 9. Capital Investments Impact of the University of Rochester and Affiliates, 2019
(Dollars in Millions)

	Direct	Spillover	Total
Employment (thousands of jobs)	2.9	1.4	4.3
Labor Income	$218.7	$108.3	$327.0

Student Spending Impact

Students bring considerable buying power to the region during their on-campus experiences. During the 2019 spring semester, UR:

- Enrolled 11,200 full-time undergraduate and graduate students; and
- Provided housing to 5,353 undergraduate and graduate students.

Many students continue classes during the summer. During the summer of 2019, UR:

- Enrolled 3,103 full-time undergraduate and graduate students; and
- Provided housing to 1,857 undergraduate and graduate students.

During the 2019 fall semester, UR:

- Enrolled 12,237 full-time undergraduate and graduate students;
- Provided housing to 5,594 undergraduate and graduate students.

During 2019, UR provided over 2.9 million meals.

Based on these numbers, it is reasonable to assume that during the 2019 calendar year students either:

- Ate off-campus on a semi-regular basis—spending their money locally to eat in restaurants or shopping at grocery stores; and/or
- Lived off-campus, investing their living expenses in the Rochester economy.

CGR estimates that spending by students totaled approximately $88 million in 2019. This spending supports in total roughly 2,460 jobs in the New York State economy and $90 million in total labor income, as summarized in the table below.

photo by Matt Wittmeyer, UR

TABLE 10. Student Spending Impact, 2019
(Dollars in Millions)

	Direct	Spillover	Total
Employment (100s)	7.4	3.0	10.4
Labor Income ($m)	$28.0	$12.2	$40.2

Visitor Activity Impact

Another way UR is an economic engine involves the attraction of visitors who spend money. The University of Rochester hosts visitors throughout the year for events such as Meliora weekend, commencement, concerts, recitals, athletic events, and admissions visits. Visitors to these events are a vital source of economic impact because they bring new dollars to the New York State economy. These visitors include alumni; prospective students and their families; family and friends of current students; visiting faculty who

attend conferences or conduct scientific experiments; family and friends of Strong Memorial Hospital patients; musicians; athletic opponents and their fans; and UR fans and families of student athletes.

About 430,000 people attended a UR event in 2019. An estimated 40,000 people were out of town visitors. They lodged more than 35,000 nights in local hotels (these numbers are nearly identical to visitor counts in 2017).

During 2019, CGR estimates visitors to UR spent nearly $9 million on food, lodging and gasoline. CGR estimates that the influx of spending generated by visitors resulted in approximately 107 jobs and roughly $4.7 million of labor income to the NYS economy.

TABLE 11. Visitor Activity Impacts, 2019
(Dollars in Millions)

	Direct	Spillover	Total
Employment (100s)	77	30	107
Labor Income ($m)	$3.1	$1.6	$4.7

Economic Impact Summary

UR is a major contributor to the Upstate economy. It directly employs about 32,500, an estimated 28,000 FTEs. Through spillover spending and its other economic impacts, its total employment impact is nearly 68,000, with earnings of $4.7 billion.

TABLE 12. Employment & Payroll Impact of the University of Rochester and Affiliates, 2019
(Direct and Spillover, Dollars in Millions)

	Employment (1000 FTE)	Payroll ($m)
UR & affiliates	59.2	$4,073
Supplier Purchases	3.2	$274
Capital Spending	4.3	$327
Student Spending	1.0	$40
Visitor Spending	0.1	$3
Total	**67.9**	**$4,718**

FISCAL IMPACT

In addition to being a job engine, the University of Rochester and its affiliates are a significant source of revenue to state and local governments.

CGR estimates the total fiscal impact of the University to be nearly $300 million. This includes all sales tax, personal income tax and property taxes to state and local governments. Sales tax revenue is divided equally between the state and county governments. While the largest share of the local sales tax likely accrues to Monroe County, counties across the state share in this revenue.

When this is limited to the traded sector, the total is an estimated $85 million. The total impact includes the property taxes paid on leased locations. The following tables break out these totals by the type of tax revenue:

TABLE 13. University of Rochester Total Fiscal Impact, 2019
(Dollars in Millions)

	Direct	Spillover	Total
NYS Sales Tax	$34.1	$27.4	$61.5
Local Sales Tax	$34.1	$27.4	$61.5
NYS Personal Income Tax	$112.0	$59.8	$171.8
Local Property Tax paid by UR	$4.5	N/A	$4.5
Total	**$184.7**	**$114.6**	**$299.3**

TABLE 14. University of Rochester Local and Traded Sector Fiscal Impact, 2019
(Dollars in Millions)

	Direct	Spillover	Total
NYS Sales Tax	$22.8	$19.2	$42.1
NYS and Local Sales Tax	$22.8	$19.2	$42.1
NYS Personal Income Tax	$0.0	$42.0	$42.0
Local Property Tax paid by UR	$1.0	N/A	$1.0
Total	**$23.9**	**$61.2**	**$85.1**

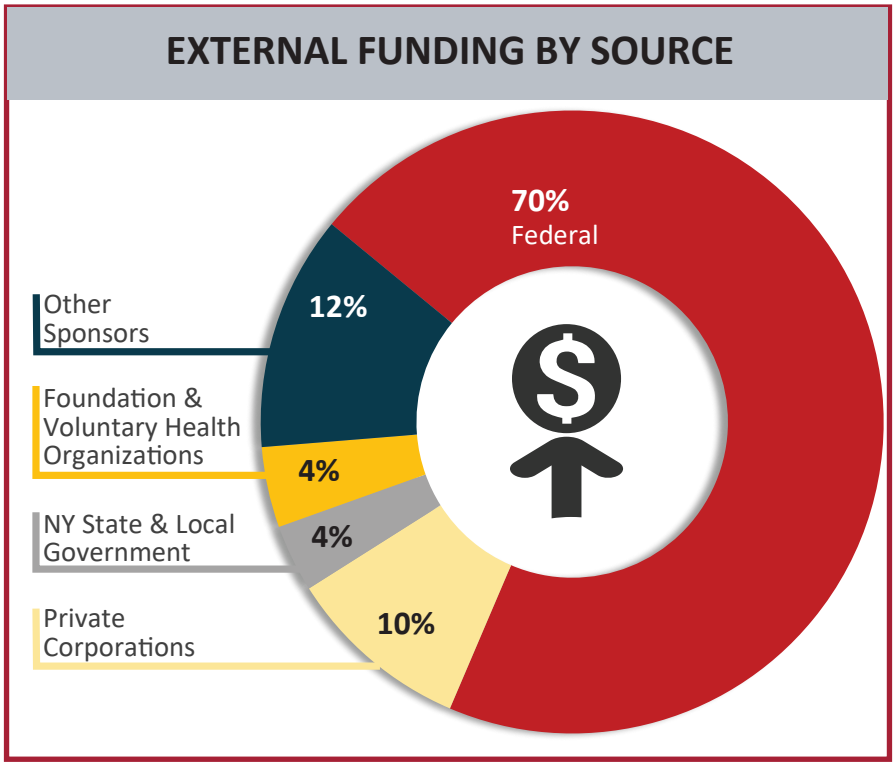
UR RESEARCH ENTERPRISE

The University of Rochester is one of the top research institutions in the nation, ranking among the top 50 in federal research funding in fiscal year 2019[2]. Not only does UR provide employment and paychecks for 32,500 workers, but it also contributes to the economy by attracting dollars into the region through research.

External Research Funding

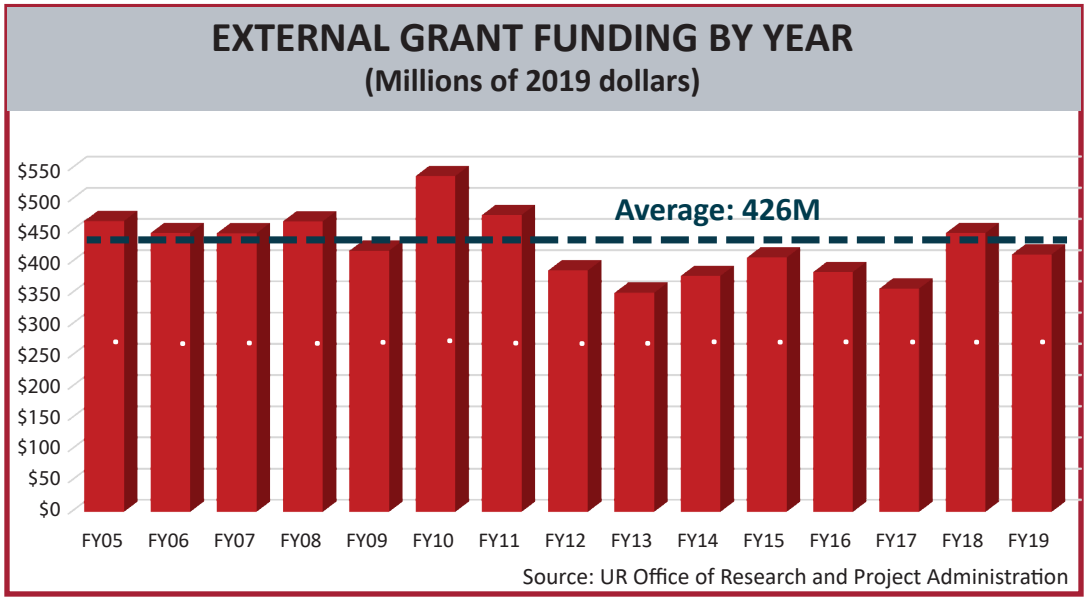
UR attracted over $412 million in external funding (federal and non-federal) in 2019. Since 2005, external funding has totaled $6.4 billion in inflation-adjusted dollars. Awards to the University of Rochester averaged $425 million per year from FY2005 to FY2019.

FIGURE 5. Source of Grant Funds



2 National Science Foundation/National Center for Science and Engineering Statistics, Higher Education Research and Development Survey: https://ncses.nsf.gov/pubs/nsf21314#data-tables, Table 23.

FIGURE 6. External Grant Funding by Year



The $413 million in external research funds about 940 FTE positions at the University plus an additional 1,200 in spillover employment. Total payroll for these positions (direct and spillover) is an estimated $348 million about $27 million in income and sales tax revenue.

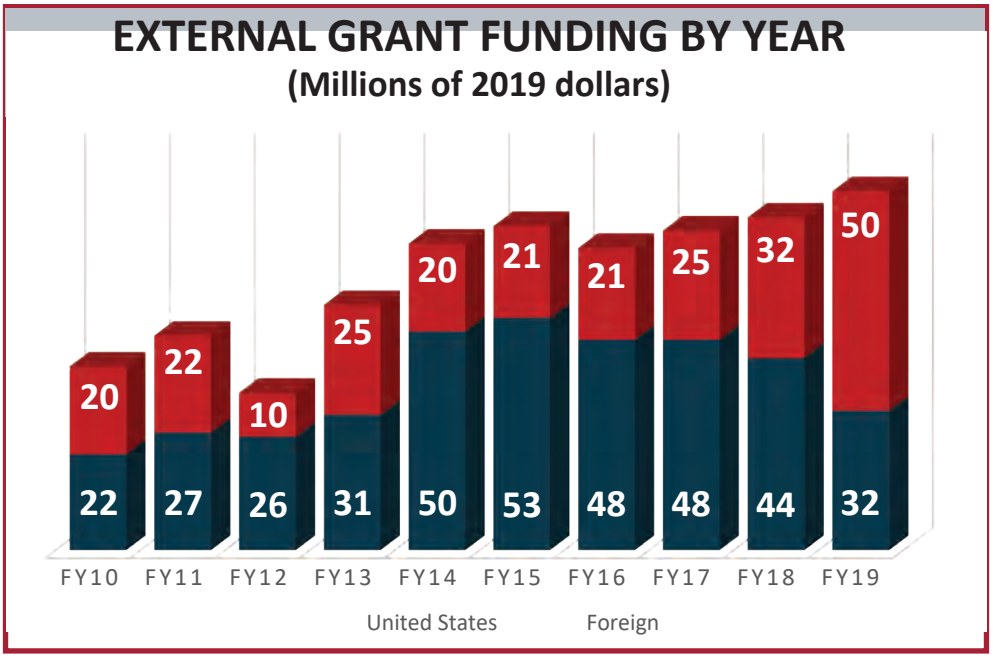
Patents, Invention Disclosures and Start-ups

UR research has generated patented intellectual property and in some cases commercialization through start-ups.

Patents Issued

UR had 82 patents issued in 2019. This represents a recent high for patents. UR has generally been increasing the number of patents issued per year since 2010.

FIGURE 7. Patents Issued to the University of Rochester



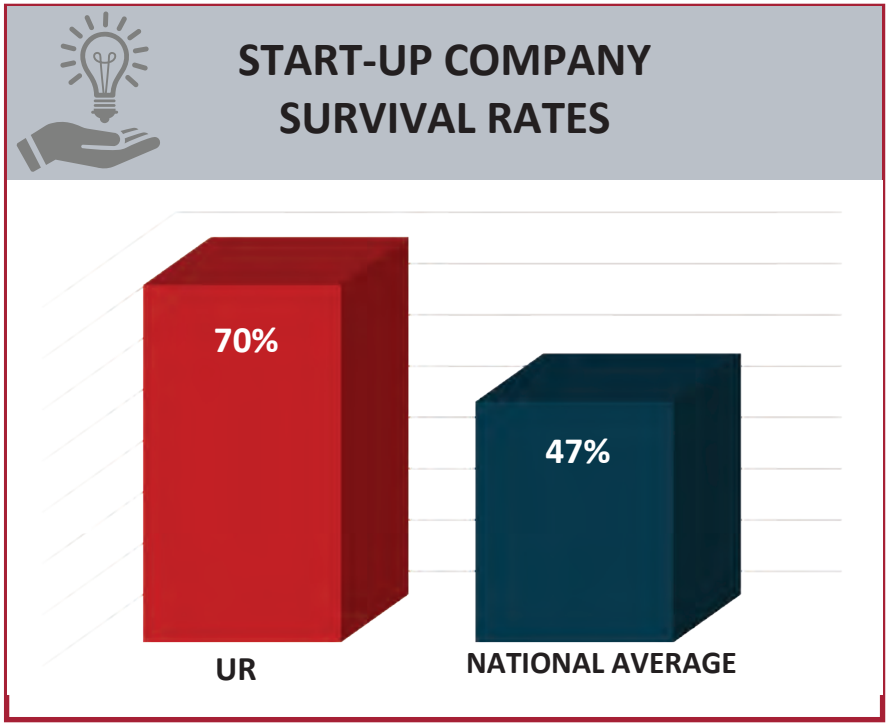
Invention Disclosures

Over the past decade, UR has averaged 141 disclosures per year. In 2019, UR had 122 invention disclosures. This is up slightly from the last study (106).

Start-up Companies

From FY 2009 to FY 2019, UR has been responsible for starting up 33 local companies. Twenty-three of them are still in operation, which is a 70% survival rate. This is well above the national average survival rate of 47%, according to recent U.S. Census data of similarly aged companies.

FIGURE 8. Start-up Company Survival Rates



UR Laboratory for Laser Energetics (LLE)

Another unique research asset in the region is UR's Laboratory for Laser Energetics (LLE), presently the largest university-based Department of Energy (DOE) program in the nation. The Laboratory was established in 1970 as a center for the investigation of the interaction of intense radiation with matter. One of the ultimate objectives of the LLE is to demonstrate the feasibility of Inertial Confinement Fusion as an inexhaustible energy source.

The LLE is home to the OMEGA and OMEGA EP lasers, which are the largest and most capable lasers at any academic institution in the U.S. or worldwide. Consequently, the LLE attracts outside researchers and visitors. In total, more than 500 people from outside of the region visited the LLE to do research or participate in a conference in 2019.

Current Impact

The LLE contribution to the University's economic impact was very significant in 2019. Direct employment (including LLE staff and employment spurred by NYS purchasing and visitors) totaled 400. We estimate that spillover employment exceeded 500. Aggregate labor income was about $72 million.

EP-OPAL Projected Impact

Working with the federal government, the LLE has proposed building, subject to funding, a next-generation laser user facility dedicated to the study of ultrahigh intensity laser-matter interactions. Called **EP-OPAL**, the new facility would leverage the existing OMEGA-**EP** laser system to power two 25-PW **O**ptical **P**arametric **A**mplifier **L**ines and, in addition, deliver multiple high-energy laser beamlines with unprecedented scalability, flexibility, and readiness. The envisioned system would establish a national user facility with the most powerful lasers in the world, coupled with existing and highly productive research infrastructure available to academic users, industry, federal agencies, and national laboratories

EP-OPAL will be a unique world-class facility able to achieve powers five times greater, with focused intensities 10 times greater, than any currently operating laser facility in the world. Employing novel laser-based techniques, this facility may also be capable of producing electron beams with energies 10-100 times larger than existing electron accelerators. Studying the interaction of light and matter under extreme conditions is currently limited by laser performance (peak power and/or intensity), system flexibility, and minimal co-location of laser and experimental infrastructure. EP-OPAL would overcome these limitations and provide the state-of-the-art laser and experimental infrastructure needed to reestablish the United States as the world leader in short-pulse laser science and technology, facilitating innovative applications in fundamental physics research, as well as medicine, manufacturing, and national security.

Construction Phase

EP-OPAL will be housed in an approximately 70,000 square foot building. An adjacent 55,000 square foot laboratory and office building would support operations. The cost of the two buildings alone is currently estimated at $145 million. The total construction costs for the EP-OPAL facility, including the buildings and necessary laser system infrastructure, is estimated at $260 million. The construction phase will have a total impact of 2,600 person-years of employment and a payroll impact exceeding $200 million over the construction period. Construction phase payroll will generate an estimated $16 million in income and sales tax.

TABLE 15. EP-OPAL Construction Period Economic Impact
(Dollars in Millions)

Construction Period			
	Direct	**Spillover**	**Total**
Employment (FTE, full year positions)	1,700	900	2,600
Total payroll (total over const period)	$142.4	$63.1	$205.5
NYS Income Tax	$7.4	$3.1	$10.5
NYS and Local Sales Tax	$3.7	$1.6	$5.4

Operational Phase

The key benefit to the regional economy will be LLE's ability to secure external grant funds to expand its contribution to fundamental physics research and national security. These new funds will support resident scientists and UR's highly regarded

and productive educational programs. The steady stream of visiting scientists will also significantly increase in volume, drawn by the unique capabilities of EP-OPAL, further supporting local economic activity.

The benefits of the EP-OPAL project:

- Re-establish LLE, the University of Rochester, and New York State as the world leader in short-pulse, high power laser technology and its physics and technology applications.
- Sustain LLE as a major research institution for many years to come, complementing on-going research at the OMEGA-60, OMEGA-EP, and MTW laser facilities. LLE was founded in 1970 and celebrated 50 years of operations in 2020.
- Increase LLE operating funding by an estimated $15 million per year.
- By accelerating scientific discovery and establishing new capabilities, EP-OPAL will enable LLE to expand on-going efforts to attract additional sponsored research support (DOE, NSF, Department of Defense, and international collaborations) to augment the NNSA and NYSERDA funding. LLE-sponsored research funding is expected to increase by $10-12 million.
- The increased funding for LLE would support 40-50 additional students along with additional faculty support.
- EP-OPAL's unique capabilities and technological needs would support partnerships with industry and foster R&D collaborations among universities and national labs.

The level of non-NNSA sponsored research support for LLE in the first year of EP-OPAL operation (2026) is estimated to be $15 million to support EP-OPAL operations, plus additional research funding estimated by LLE staff to range from $10 million to $12 million by year 10.

Once fully operational, EP-OPAL is estimated to support the employment of 250 to 270 FTE positions (both direct and spillover) earning an annual payroll of $18.1 to $19.7 million. The annual fiscal impact is estimated at about half a million dollars.

TABLE 16. EP-OPAL Operating Economic Impact
(Dollars in Millions)

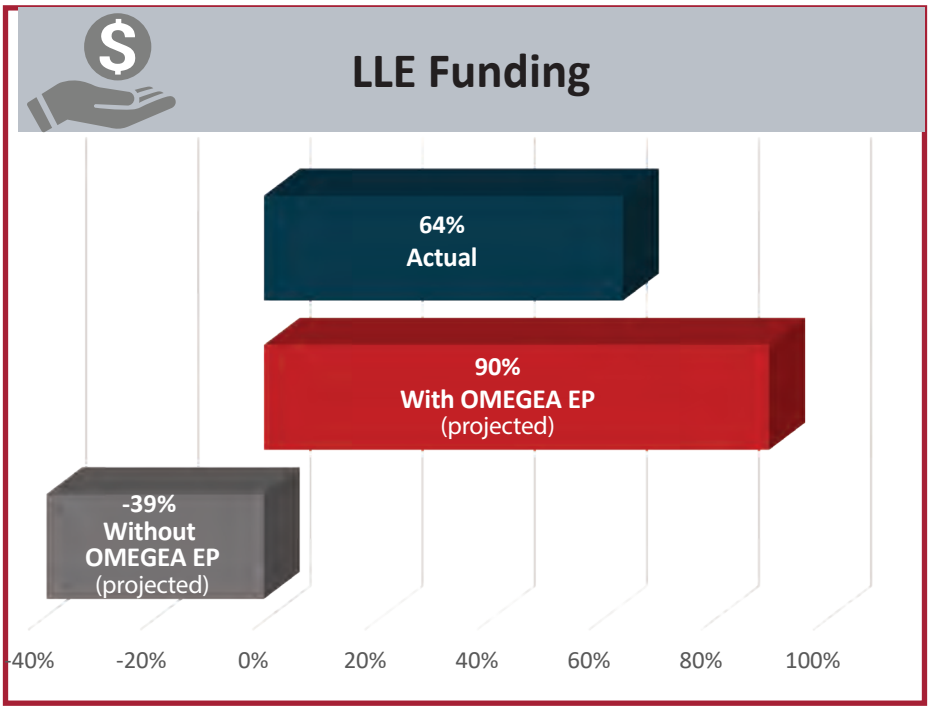
Annual Impact at Full Operation (10 yrs after first light)						
	Low			High		
	Direct	Spillover	Total	Direct	Spillover	Total
Employment	110	140	250	120	150	270
Payroll	$9.3	$8.8	$18.1	$10.1	$9.6	$19.7
Income Tax	$0.5	$0.4	$0.9	$0.5	$0.5	$1.0
Sales Tax	$0.24	$0.23	$0.47	$0.26	$0.25	$0.51

Sponsored Research

As previously noted, LLE staff estimate that EP-OPAL will attract additional sponsored research dollars into the region and anticipate an increase in funding of $10 million to $12 million per year above the pre-EP-OPAL non-NNSA sponsored research baseline by year 10. The LLE has an excellent track record of meeting their funding projections. Prior to the OMEGA-EP expansion, LLE staff estimated that the addition of the OMEGA-EP laser would lead to a NNSA sponsored research funding increase of 90% by 2010

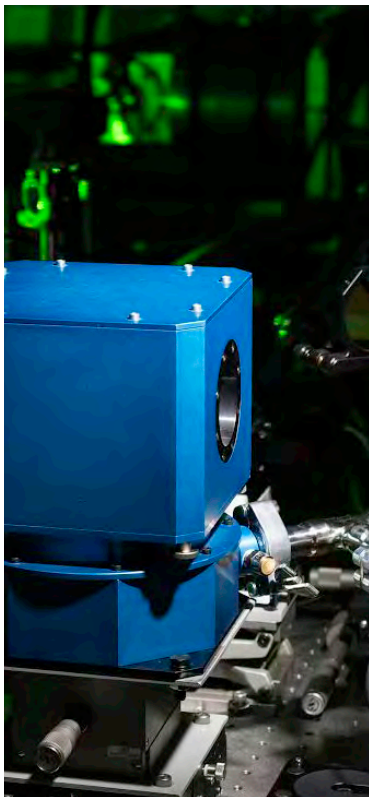
and that without OMEGA-EP, funding was expected to decline. With OMEGA-EP, actual funding to the LLE increased by 60% over the same period. Funding for LLE has continue to grow, reaching a highest-ever annual appropriation in Fiscal Year (FY) 2020.

FIGURE 9. LLE Funding Projections vs Actuals, FY02-FY10



Visiting Scholars

The unique and unparalleled capabilities offered by EP-OPAL will draw researchers from universities and national labs throughout the U.S. and the world to perform cutting edge research only possible in New York State. About 500 people from outside of the region currently visit the LLE to do research or participate in conferences each year. Sixty percent of the 2,300 "shots" fired at LLE each year are conducted for outside scientists who stay for several nights or more, supporting the local economy during their visit. The addition of EP-OPAL will significantly increase these numbers. Staff at LLE estimate that EP-OPAL would attract between 225-400 additional visiting scholars, annually. Many of the additional researchers who visit Rochester to conduct research on EP-OPAL would be funded by grants that are directed to them (not LLE funds).



CGR estimates that over the first 20 years of operation, spending by visiting scholars to EP-OPAL would result in an additional 27 to 40 jobs in the local economy, and $571,000 to $1.0 million of income to workers. The spending would result in $36,000 to $62,000 in income and sales tax combined each year.

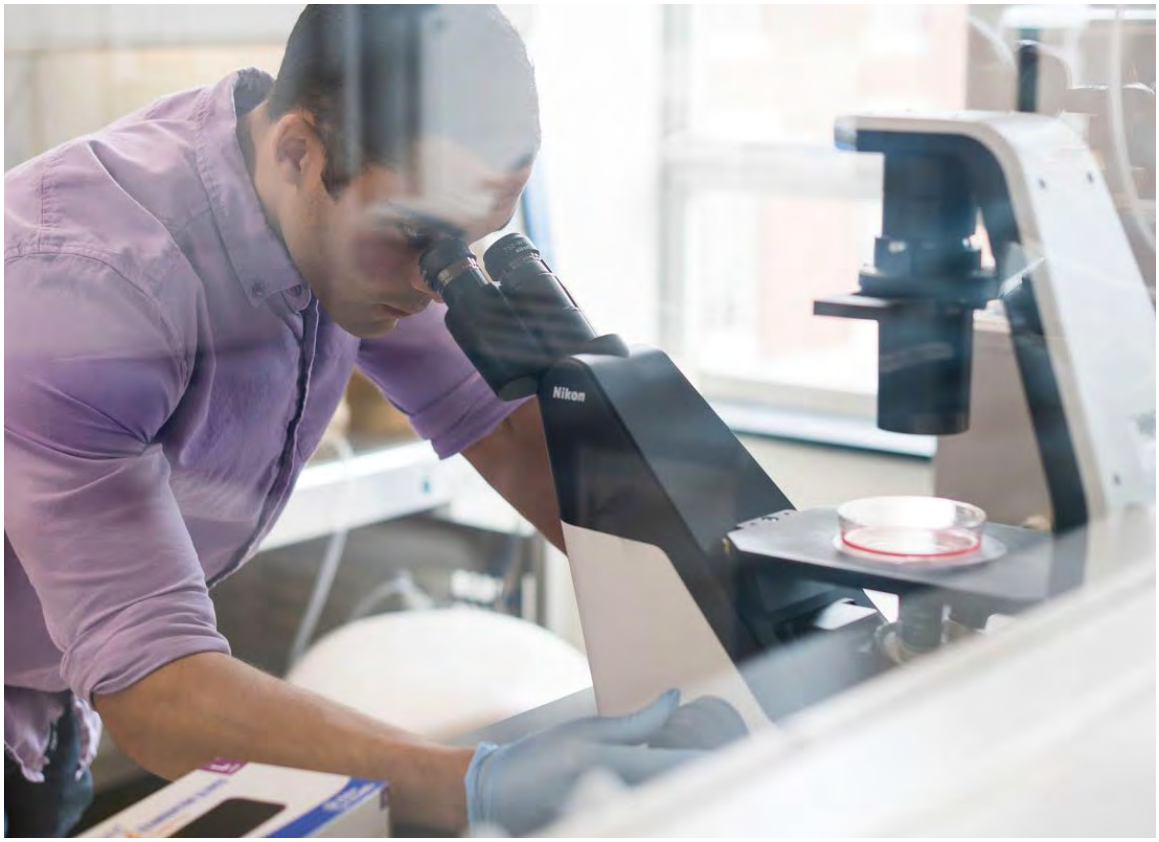
TABLE 17. EP-OPAL Visiting Scholar Economic Impact – First 20 Years
(Dollars in Thousands)

	Low Scenario			High Scenario		
	Direct	Spillover	Total	Direct	Spillover	Total
Employment	20	7	27	30	10	40
Payroll – $1000	$336	$235	$571	$597	$419	$1,016
Income Tax - $1000	$12	$11	$23	$21	$19	$40
Sales Tax - $1000	$8	$5	$13	$13	$9	$22

Student Research

LLE typically hosts more than 200 students, including 70 UR graduate students, 60 outside graduate students and about 80 undergraduate researchers from UR, RIT, MCC, SUNY Geneseo and Houghton College. The vast majority of these students remain in the STEM or medical fields after graduation. Throughout its history, LLE has produced over 500 Ph.D.'s, with many going to work at the National Laboratories or other national security fields or industry. The addition of EP-OPAL is expected to provide 40-50 additional students with the opportunity to work on cutting-edge research.

In addition, LLE holds an annual summer research program for Rochester-area high school students who have just completed their junior year. The eight-week program provides an exceptional opportunity for highly motivated students to experience scientific research in a realistic environment. Students accepted into the program are assigned to a research project and supervised by an LLE staff scientist. These projects form an integral part of the research program of the Laboratory. Over 350 students have participated in the program, to date.



UR BUSINESS DEVELOPMENT INITIATIVES

NextCorps

NextCorps is a UR affiliate and the region's only non-profit with state- and federally-funded programs for startups. It is a place where entrepreneurs, university researchers and inventors get together and seed new business ideas. NextCorps reports:

- 106 startups were supported by NextCorps from 2018 through 2020.
- NextCorps was selected by the NYS Energy Research & Development Authority to administer a new ClimateTech accelerator.
- As part of the Manufacturing Extension Partnership National Network, NextCorps completed 152 projects with 136 manufacturers, with an estimated $137 million economic impact and creating or retaining 737 jobs.

Luminate

NextCorps also hosts Luminate, the world's largest and only optics, photonics & imaging (OPI) startup accelerator.

- In its first three cohorts, Luminate helped incubate 30 firms with a portfolio valuation of $160 million, collectively employing 80 in the region. Thirteen new firms are participating in the current fourth cohort.

Excell Partners

Excell is a venture capital fund developed in 2006 through partnership between the University of Rochester and New York State Empire State Development, focused on supporting high-tech startups in Upstate NY.

In 2019-2020, Excell had $40 million under management and was leading due diligence on $21 million impact fund raised from high-net-worth regional investors. It had 35 companies in its portfolio, 33 of which were located or had significant presence in New York State. These 35 companies employed 532 FTEs and represent a total payroll of over $30 million, an average salary of $77,000 and approximately $42 million in vendor purchases during this time period.

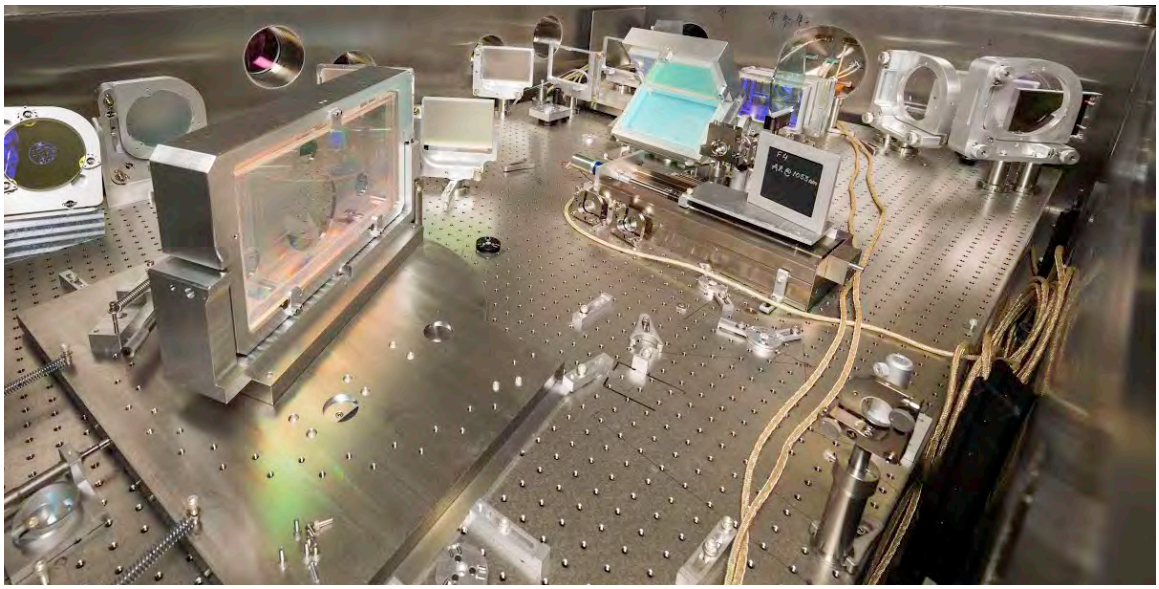
In 2019, after its initial investments, Excell bolstered the regional economy by attracting a further $447 million in follow-on funding to the companies in its portfolio. There have been 10 total exits, with former portfolio companies being bought and sold, merged, or paying off their initial investments.

Empire Discovery Institute

The Empire Discovery Institute (EDI) is a drug discovery partnership formed between UR, the University at Buffalo and Roswell Park Comprehensive Cancer Center, with the goal of rapid discovery, development and commercialization of groundbreaking pharmaceutical treatments.

The not-for-profit EDI will guide the development of basic life science laboratory breakthroughs from its partner institutions into viable medicines and treatments, while simultaneously supporting new jobs, investments and companies in New York State.

It has secured $47 million in funding for its first five years of operation: $35 million from the State of New York, with the addition of $12 million of in-kind support from the partner institutions. A recently announced partnership with Deerfield Management Company, a healthcare investment firm, will add another $65 million in investment over the next five years.



UR MEDICINE AMBULATORY ORTHOPEDICS CENTER

In November of 2019, the University of Rochester unveiled a plan to create an orthopedic center at The Marketplace Mall in Henrietta, New York. This project is currently slated to cost $227 million and would be the largest offsite building project in the UR's history. CGR was asked to assess the economic impact of this project.

Construction Phase

The construction of this project is estimated to have a total impact of 990 person-years of employment and a payroll impact of $57.0 million over the construction period, discounted to year one (defined here as the first year of construction). Construction phase payroll will generate an estimated $3.9 million in income and sales tax, again, discounted to year one.

TABLE 21. Construction Phase Economic Impact
(Dollars in Millions)

	Direct	Spillover	Total
Employment (FTE, full year positions)	800	190	990
Total payroll (total over const period)	$46.0	$11.0	$57.0
Income Tax	$2.2	$0.5	$2.7
Sales Tax	$1.0	$0.2	$1.2

Operational Phase

The ambulatory orthopedic project is being built in response to demand for orthopedic care. The Democrat and Chronicle reported at the time of the announcement that the URMC has seen a 25% increase in orthopedic surgeries over the past seven years, and a 60% increase in ambulatory cases in the same period.

Once operational, the orthopedic center will provide both orthopedic surgeries and procedures. The UR estimates the center will handle 8,500 additional surgeries and procedures and expects a substantial number of referrals from outside of UR Medicine's primary catchment area (Monroe, Seneca, Wayne, Livingston, Ontario, Yates, Genesee, Orleans, and Wyoming counties). Because of the unique sub-specialty orthopedic services, they expect patients to travel substantial distances (Cleveland, Toronto, New England, etc.) for specialized treatment.

CGR estimates these additional procedures would support 480 workers at the center. This estimate is based on CGR's use of surgery and procedure charges posted by Excellus and implies total revenue of about $79 million.

Whether spillover employment should be included in the economic estimate depends on the share of this revenue that would be new to the region. Were it all new to the region, we estimate maximum possible spillover employment of 390 additional jobs for a total impact of 870 jobs. Annual payroll would total $46.8 million. The center would also add $2.3 million in income tax and $1.1 in sales tax annually.

TABLE 22. Annual Operational Economic Impact
(Dollars in Millions)

	Direct	Spillover	Total
Employment	480	390	870
Total payroll	$29.6	$17.2	$46.8
Income Tax	$1.5	$0.8	$2.3
Sales Tax	$0.7	$0.4	$1.1

** assuming new clinical demand came from outside region*

WILMOT CANCER INSTITUTE*

The mission of the Wilmot Cancer Institute (Wilmot) at the University of Rochester (UR) is providing the highest-quality treatment and care, through expert and innovative medicine, science and education, for any patient burdened by any cancer within our region and beyond. Wilmot serves a distinct population in a catchment area confronted with a cancer incidence significantly above national averages, due to a disproportionately aging population, tobacco addiction, and challenges of predominantly poor and rural demographics.

Over a 45-year history, Wilmot's research has led to changes in oncology standards of care and paradigm-shifting discoveries. Wilmot investigators are recognized internationally as leaders in cancer control and supportive care research, and Wilmot's extraordinary expertise in this area has been recognized through an NCI-funded National Community Oncology Research Program research base award, making UR one of only two academic medical centers with this distinction. Wilmot is also a designated Lead Academic Participating Site of the National Clinical Trials Network. Wilmot researchers are recognized for their work in tobacco control through the award of a Tobacco Center of Regulatory Science award, jointly funded by the Food and Drug Administration and the NCI.

Wilmot led the way in two of the top five cancer discoveries of the past 50 years as identified by the American Society of Clinical Oncology: utilizing virus-like particles to create the first approved HPV vaccine and carrying out clinical trials to demonstrate the effectiveness of anti-emetic therapy in patients undergoing chemotherapy. Wilmot members continue to push the frontiers of cancer science: identifying bone marrow microenvironment characteristics that support myelodysplastic syndrome; mitigating toxic inflammatory effects of therapeutic radiation on normal tissues; harnessing the innate immune system to attack pancreatic cancer; and bringing to light through fundamental comparative biology studies mediators of cancer resistance with promise for translation to therapeutic agents.

* Text adapted from an overview of the Wilmot Cancer Institute's strategic plan written by Director Jonathan Friedberg.

History

UR's Board of Trustees chartered the University of Rochester Cancer Center in 1974, and the center received its first NCI Cancer Center Support Grant (CCSG) one year later. In 1981, local philanthropist James P. Wilmot formed the Wilmot Cancer Research Fellowship Program to provide salary support and protected time for advanced fellows and junior faculty with M.D. degrees to pursue cancer-related research. The current endowment for this program exceeds $16 million. In 2011, the cancer center's name was changed in recognition of the dedication and continuing support of Mr. Wilmot.

The center's CCSG grant was not renewed in 1999 due to concerns over leadership transitions, organization and lack of institutional investment in the cancer enterprise. Subsequent investment has demonstrated UR's renewed institutional commitment: In 2008, the Wilmot Cancer Center building opened, featuring five linear accelerators, comprehensive ambulatory space, an infusion center, clinical research space, and a translational laboratory floor. A three-story vertical expansion of this building opened in 2012, including 86 inpatient beds, increasing the building size to 270,000 square feet. In addition, the nearby Saunders Research Building opened in 2012 with 10,000 square feet of space for the Wilmot Cancer Institute.

In 2016, the WCI leadership launched a 5-year campaign to regain its National Cancer Institute Cancer Center Support Grant (CCSG). The benefit to the institution is twofold. First, the CCSG grant itself can be substantial: two institutions deemed by WCI as comparable institutions, the University of Miami Medical Center and the University of Kentucky, received five-year CCSG grants of $10.5 million and $12 million, respectively. Second, of greater significance than the CCSG grant itself is the anticipated increase in competitive research funding, support for clinical trials and a substantial increase in clinical services from the 27-county catchment area, only four of which overlap another NCI-designated cancer center. Using forecasts developed by WCI leadership, CGR estimates that NCI designation will add nearly 1,900 jobs earning $194 million. Income and sales tax generated annually will top $15 million.

FIGURE 10. Wilmot Clinical Catchment Area

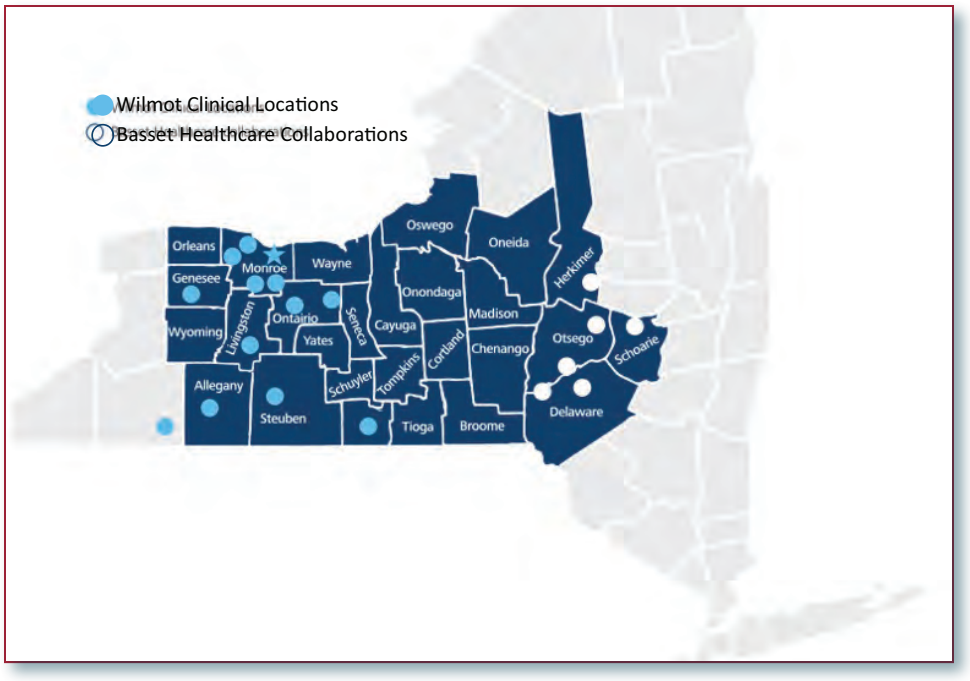


TABLE 23. Economic Impact: National Cancer Center Designation for Wilmot Cancer Institute

	Direct	Spillover	Total
Research recruitment			
UR operations spending: FTE jobs	90	115	205
UR operations spending: payroll ($m)	$39	$16	$55
Supplier spending ($m)	$11		
Supplier spending: FTE jobs		58	58
Supplier spending payroll ($m)		$4.5	$4.5
Research program growth			
UR operations spending: FTE jobs	43	55	98
UR operations spending: payroll ($m)	$18.75	$8	$26
Supplier spending ($m)	$1.25		
Supplier spending: FTE jobs		7	7
Supplier spending payroll ($m)		$0.5	$0.5
Clinical program growth			
UR operations spending: FTE jobs	360	365	725
UR operations spending: payroll ($m)	$37.50	$13	$51
Supplier spending ($m)	$112.50		
Supplier spending: FTE jobs		546	546
Supplier spending payroll ($m)		$40.2	$40.2
Related expansion			
Batavia			
UR operations spending: FTE jobs	10	10	20
UR operations spending: payroll ($m)	$1.20	$0	$2
UR capital spending ($m)	$4.50		
UR capital spending: FTE jobs		16	16
UR capital spending: payroll ($m)		$1.2	$1.2
Pharmacy spending	$1.50		
Pharmacy spending: FTE jobs		7	7
Pharmacy spending: payroll ($m)		$0.5	$0.5
Webster			
UR operations spending: FTE jobs	36	36	72
UR operations spending: payroll ($m)	$3.50	$1	$5
UR capital spending ($m)	$6.50		
UR capital spending: FTE jobs		24	24
UR capital spending: payroll ($m)		$1.7	$1.7
Pharmacy spending	$1.50		

	Direct	Spillover	Total
Pharmacy spending: FTE jobs		7	7
Pharmacy spending: payroll ($m)		$0.5	$0.5
Lattimore			
UR operations spending: FTE jobs	$4	4	8
UR operations spending: payroll ($m)	$0.40	$0.1	$0.5
UR capital spending ($m)	$2.3		
UR capital spending: FTE jobs		8	8
UR capital spending: payroll ($m)		$0.6	$0.6
Pharmacy spending	$0.15		
Pharmacy spending: FTE jobs		1	1
Pharmacy spending: payroll ($m)		$0.0	$0.05
Total Impact			
FTE	579	1,295	1,874
payroll ($m)	$103.9	$89.8	$193.7
income tax ($m)	$6.0	$4.5	$10.4
sales tax ($m)	$2.7	$2.3	$5.1

CITY OF ROCHESTER IMPACT

Economic Impact in Rochester

In addition to the statewide impact of the University of Rochester and its affiliates, UR also has a significant impact not only regionally, but specifically within the City of Rochester.

Spending, Payroll & Purchasing in Rochester

A substantial share of the student and visitor spending component occurs within the City limits. The University's investments in neighborhood retail at Brooks Landing/ Crossing and Collegetown have enhanced the City's "capture" of these expenditures.

In 2019, UR and its affiliates employed at least 12,000 workers living in City of Rochester zip codes and paid them more than half a billion ($513 million) in wages. Likewise, in 2019, UR and its affiliates spent at least $88 million on purchases from businesses located within City zip codes.[3]

Sales Tax Revenue

As noted above in the discussion of fiscal impact, Monroe County likely earns more of the estimated $61 million in annual local sales revenue than any other NYS county. This is also good for the City of Rochester as agreements with Monroe County ensure that the City and County share equally in local sales tax revenue.

Because of these agreements, University-stimulated taxable sales benefit the City financially regardless of where in the county the purchase occurs. The City benefits significantly from the sales tax, earning $138 million in FY20-21.

3 This is a conservative estimate of direct impact on City residents and businesses. These estimates were derived by summing payroll and purchasing for all zip codes that are fully or substantially within the geographic boundaries of the city itself. Zip codes with only a small portion within city boundaries (for example, zip code 14618, which is otherwise largely in Brighton), were excluded.

Homeownership Benefit

UR provides a $3,000 homeownership benefit to its employees, which encourages more employees to live in the city, driving local purchasing and increasing homeownership and property values, which in turn feed into a growing tax base for the City and its services. In 2019, 499 employees used the program, equaling $1.5 million in benefits.

Leased Space within the City

UR Medical Center and affiliates located primarily in the City of Rochester spent $60 million on leased space in 2019 and paid approximately $730,000 in property taxes to the city.

Partnership on Innovation Square

UR has been a continuing partner in the revitalization of Downtown Rochester, including on the Innovation Square project, which is currently transforming the former Xerox Tower into housing for college students from multiple local institutions, but primarily from UR.

Renovation of the 30-story building and accompanying space will provide up to 500 students, including undergraduate, Eastman and Simon School students from UR, with modern amenities and facilities including a 750-person auditorium, accompanied by easy access to downtown living, bringing new residents into the heart of Rochester.

Education and Culture

The University plays a leading role in the cultural life of Rochester and contributes substantially to the Rochester City Schooll District.

- The Memorial Art Gallery attracts more than 200,000 visitors every year to exhibits, workshops and arts festivals such as the Clothesline Festival.
- The Eastman Theater's three performance venues (Kodak, Kilbourn & Hatch halls) collectively host hundreds of concerts, plays, college and high school graduations and other events each year, hosting more than 100,000 visitors. The Eastman School brings world-renowned performers to the city, lending the community visibility in the arts and culture worlds that is vastly out of scale to the City's size.
- The University's Warner School of Education assumed responsibility for leading RCSD's East High School, an education effort widely considered successful.
- The Eastman School and the Eastman Community Music School are key partners in ROCMusic, a collaborative that brings musical education to the City's young residents, offering free instruction at three city recreation centers.
- The Eastman Institute of Music helps lead the Arts in the Loop initiative, bringing arts, entertainment and media experiences to the center city on the downtown Main Street corridor.

Economic Development Leadership

Through both financial support and the active involvement of University faculty, staff and students, the University plays a central role in local economic development.

- Through contributions to the Greater Rochester Enterprise Foundation, the Greater Rochester Chamber of Commerce and ROC2025, along with NextCorps, Excell, and

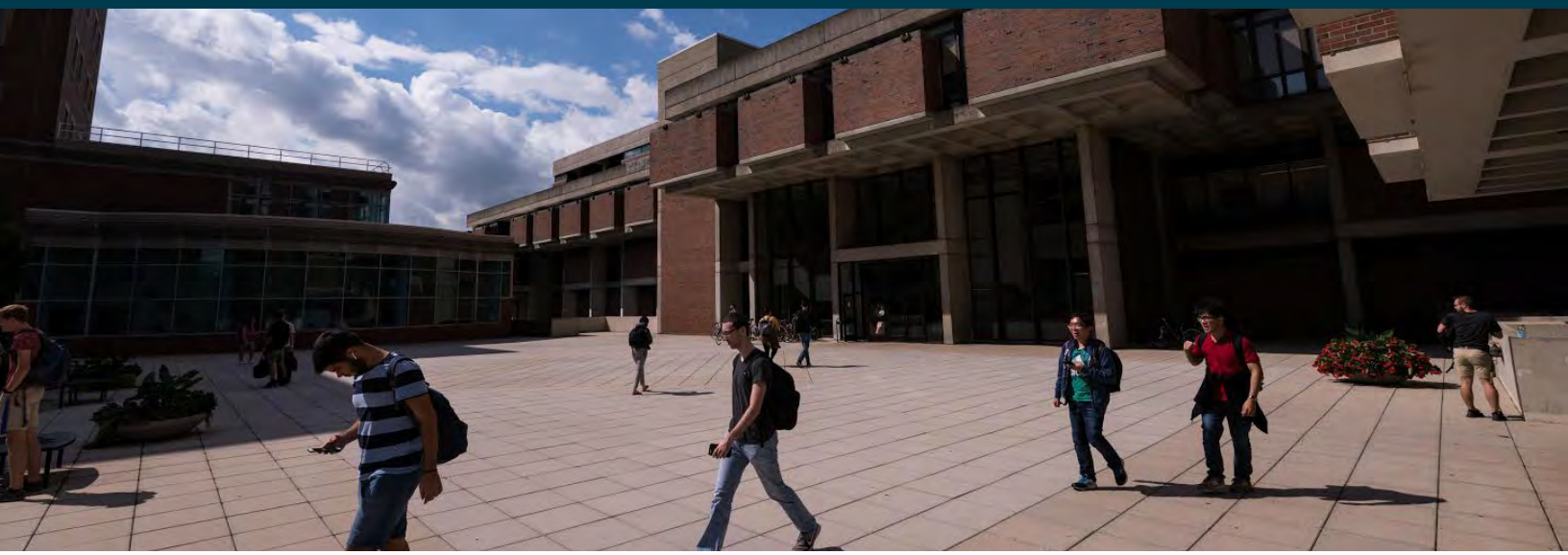
the NYS Center of Excellence for Data Science and the Center for Emerging and Innovative Systems funding, UR has contributed more than $14 million to promoting economic development in the Rochester region.

- The University played a critical role in the creation of the Rochester Fringe Festival, now recognized as one of the premier Fringe Festivals in the country. Other festivals benefit from the leadership, facilities and financial support of the University, particularly the Memorial Art Gallery's Clothesline Festival and the Xerox International Jazz Festival.

Uncompensated Care

Each year, UR Medical Center and its affiliates bear substantial costs in uncompensated care, offering what eventually becomes free care to residents of the Rochester region and beyond. In 2019, uncompensated care costs in the UR system were approximately $60 million.

CONCLUSION



With approximately 32,500 employees (over 28,000 FTE) the University of Rochester (and its affiliates) is the largest private employer in Upstate New York and seventh largest statewide (full-time equivalent employment). And it continues to grow, employing 5% more people in 2019 than two years previously.

Additional jobs come as a result of UR purchases of goods and services from its vendors, and its employees spending their paychecks. UR purchased $317 million of goods and services from New York State based vendors. UR directly paid about $2.2 billion to its workforce in 2019. Major capital investments made by UR support construction and related jobs in the economy. Over the last five years, UR has averaged about $324 million annually in capital investment spending. UR students also contribute as they annually spend an estimated $88 million in the economy. Outside visitors to UR commencement, conferences, cultural, sports and other events spent an estimated $9 million, supporting additional jobs in the economy.

All told, in 2019, UR was responsible for sustaining a total of about 68,000 jobs in the New York State economy. The "traded sector," the subset of jobs resulting from spending from outside the region, totaled about 40,000 jobs in 2019.

TABLE 24. University of Rochester's Employment Impacts, 2019
(Thousands of Jobs)

	Traded Sector			Local & Traded Sectors		
Area of Business Activity	**Direct**	**Spillover**	**Total**	**Direct**	**Spillover**	**Total**
UR & affiliates	15.0	18.2	33.2	28.3	31.0	59.2
Supplier Purchases	0.8	0.9	1.7	1.6	1.6	3.2
Capital Spending	2.9	1.4	4.3	2.9	1.4	4.3
Student Spending	0.7	0.3	1.0	0.7	0.3	1.0
Visitor Spending	0.1	0.0	0.1	0.1	0.03	0.1
Total	**19.5**	**20.8**	**40.3**	**33.6**	**34.3**	**67.9**