

2009

2013

2017

2023

2030



America's Next Great Academic Health Sciences Campus

2013 Economic Impact Study Update

Final Report July 2013

Prepared By:

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Research • Strategy • Impact

Background

In 2009, Tripp Umbach completed a comprehensive economic impact report of the Riverpoint Campus health and biomedical programs, and those envisioned for an expanded Academic Health Sciences Campus at Riverpoint over a 20-year period. The study measured both the current and future community and economic impacts of the following programs regionally and statewide:

- ❖ The expansion to a four-year research-intensive medical school;
- ❖ The expansion of clinical clerkships;
- ❖ The expansion of residency positions at hospitals;
- ❖ The expansion of other health science programs (e.g., dentistry, pharmacy, nursing, allied and public health);
- ❖ The expansion of healthcare programs and services;
- ❖ The expansion of research; and
- ❖ Related commercial spin-offs.

The Tripp Umbach report also highlighted potential healthcare cost savings to the Eastern Washington region related to the presence of an expanded Academic Health Sciences Campus at Riverpoint, namely:

- ❖ Primary Care physicians trained at the Academic Health Sciences Campus who practice in underserved areas;
- ❖ Research-related cost savings;
- ❖ Community health improvements that have positive impacts on reducing healthcare spending; and
- ❖ Increased access to appropriate quality healthcare.

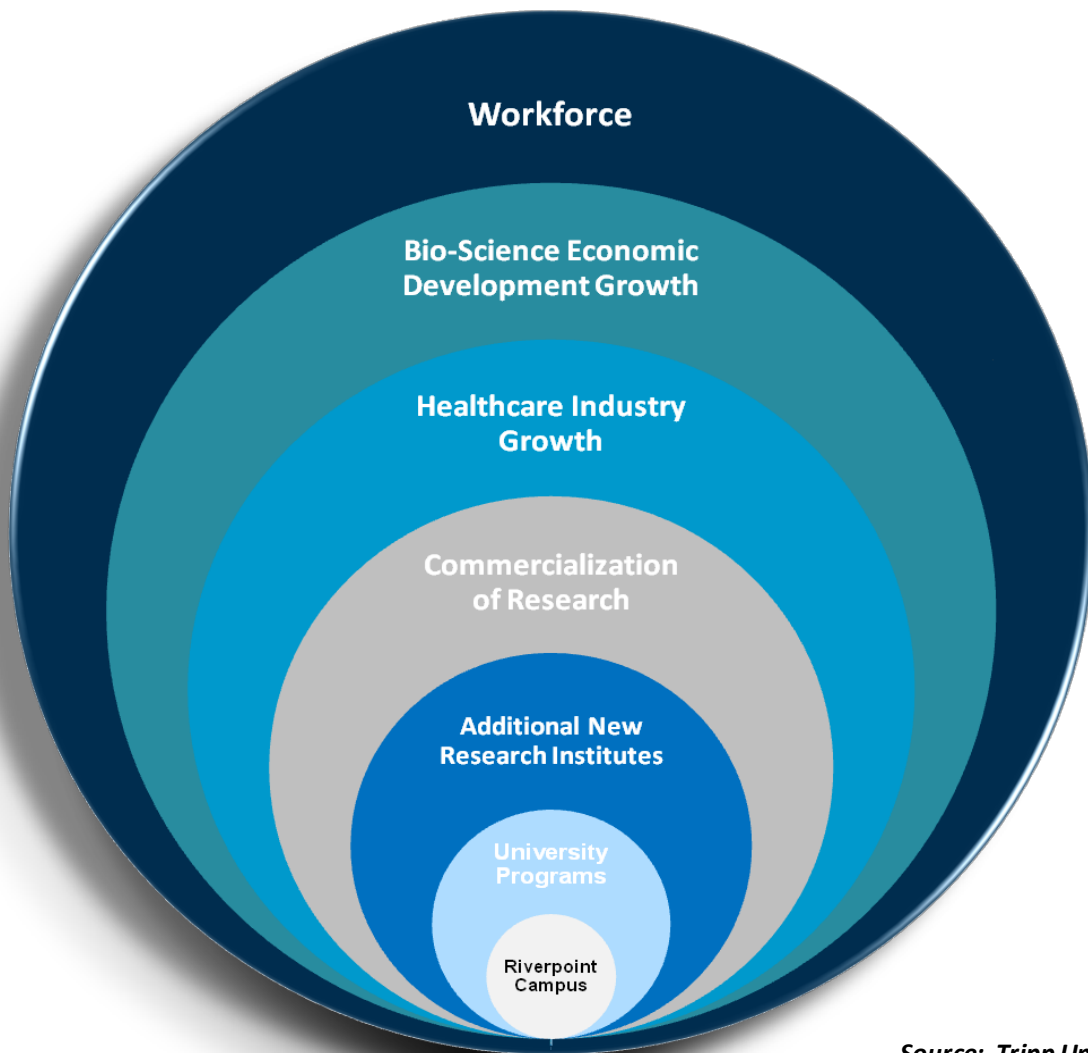
The 2009 study presented economic and employment impacts at both the Eastern Washington and State of Washington geographies for benchmark years 2017, 2023, and 2030. It proved to be a valuable tool in raising awareness regionally and statewide of the multiple economic benefits of the Riverpoint campus project. Since the completion of the impact study, approximately \$100 million has been invested in the Riverpoint campus and adjacent University District by both public and private entities.

In March 2013, Greater Spokane Incorporated re-engaged Tripp Umbach to prepare a four-year update of the 2009 study – providing the community with a mid-point estimate between 2009 and 2017. This document provides a summary of how the Riverpoint campus has expanded the regional economy over the most recent four-year period.

Background

As first presented in 2009, the expansion of the existing Riverpoint Campus represents a “rock hitting the pond” (see Image 1 below) as it creates significant additional economic and social benefits for both Eastern Washington and the State of Washington over a 20-year period. The development of the Academic Health Science Center at Riverpoint will drive a larger healthcare workforce remaining within Eastern Washington and throughout the state.

Image 1: Multiple Impacts Over Time of the Riverpoint Campus



Source: Tripp Umbach

2013 Economic Impact Highlights:

The goal in 2009 to create a comprehensive, research-intensive Academic Health Sciences Campus at Riverpoint is well on its way –

- A new \$80 million facility will open in November 2013 – ahead of the anticipated opening date of Fall 2014.
- The Riverpoint Campus has expanded research expenditures from \$12 million in 2009 to \$21 million in annual awards in 2013. Research is on pace to exceed \$100 million annually by 2030 (\$30 million more than anticipated in 2009 based on current growth rates).
- Total economic impact of the Riverpoint Campus in 2013 is nearly \$350 million – an increase of \$140 million since 2009 – approximately \$20 million more than anticipated by 2013, based on original projections.
- Total employment impact of the Academic Health Sciences Campus at Riverpoint in 2013 equals more than 1,800 total jobs – an increase in 700 jobs since 2009.
- The total regional economic impact of Riverpoint is now on pace to equal \$1.7 billion annually in 2030 (\$100 million more than anticipated in 2009 based on current growth rate) and to generate regional employment for nearly 10,000 Eastern Washington residents (750 more than anticipated in 2009 based on current growth rate).

Report Methodology

Tripp Umbach was retained to measure:

- The “economic architecture” of Spokane’s Riverpoint campus in 2013, (providing a four-year update from original economic impact analysis completed in 2009, including a mid-point estimate between 2009 and 2017).
- As in the previous report, Tripp Umbach measured both on-campus elements (academic and research programs) and off-campus elements (hospital program growth such as Graduate Medical Education (GME), commercial spin-off activities, and spending by graduates that remain in the region).
- Results outlined below in this report are presented at the regional level – i.e., showing the total economic impact of the campus on Eastern Washington. As in the previous report, all economic and employment numbers include both “direct” and “indirect” spending within the regional economy. For comparison purposes, all 2013 and future impact estimates are presented in constant 2009 dollars. All economic impact estimates are presented on an annual basis – i.e., the amount of economic growth in the region during a single year, such as 2009, 2013, 2017, 2023, and 2030.

Tripp Umbach completed the following during the course of the assignment:

- Interviews with 17 key stakeholders throughout the region representing academic, healthcare, industry, and community development.
- Gathered program enrollment and research data over the period of 2009-2012 from Riverpoint Campus entities.
- Reviewed media reports and information posted on websites of partner organizations.

Overall Key Findings from 2013 Update

Economic Impact: Tripp Umbach estimates annual economic impact of the Riverpoint campus on Eastern Washington at just under **\$350 million** – about \$20 million more than expected based on the foundation study in 2009 and projections for 2017. The total regional impact in 2013 of the Riverpoint campus has grown by approximately \$140 million since 2009.

- The faster than anticipated expansion of facilities and research on the Riverpoint campus is a major driver of economic impact growth over the four-year period. The economic impact in 2013 of Academic and Research is already approaching 2017 estimates. Economic Impact growth in the Academic and Research area grew significantly from \$105 million in 2009 to \$150 million in 2013.
- The campus is well on its way of reaching its goal of \$70 million in annual research revenue by 2030, as total research expenditures have grown from \$12 million in 2009 to an estimated \$21 million in 2013.
- University District Infrastructure is in place to fuel more campus growth between 2013 and 2030. Biomedical Industry Growth resulted in more spin-off companies than expected since 2009, as the 2013 regional economic impacts are approaching 2017 estimates.
- Industry and academic research investments through the Health Sciences & Services Authority (HSSA) of Spokane County, local foundations such as Empire Health Foundation, as well as private investments such as the McKinstry Innovation Center and commercial investments are also poised to fuel significant economic impacts in future study periods.
- Medical School expansion is well on its way. The total medical student count (including second-year students) will increase from 20 in 2012 to 60 in 2014.

Employment Impact: Regional employment in 2013 has grown to more than 1,800 total jobs (direct and indirect), an increase in more than 700 jobs since 2009. The majority of employment growth has occurred in the academic, research, and industry sectors.

Government Revenue: Total state and local government revenue collected in 2013 as a result of Riverpoint campus has grown to \$27.5 million, an increase in more than \$10 million annually since 2009.

Achieving Future Economic Impact Targets:

While the economic impact of the Riverpoint campus between 2009 and 2013 is slightly ahead of schedule, reaching the target of \$442 million by 2017 and \$909 million by 2023, will require growth in several areas, namely, expansion of the medical school class to 80 students, expanding Graduate Medical Education positions by approximately 100, and growing research at hospitals and industry partners.

Medical School Expansion: While having a four-year program with 20 students per class is an important step in meeting future workforce needs, in order to keep pace with economic impact projections, the WWAMI Spokane program, in partnership with Washington State University, needs to grow to a minimum of 80 students per year by 2017. The recent announcement to increase campus size to 60 students in 2014 is a positive sign that this goal will be achieved.

- A key strategy in meeting class size growth is to achieve official regional campus status through the LCME (medical school accreditation body).
- Moving from 60 students in 2014 to a full-scale regional campus with 80 students per year will present a state funding challenge that will need to be addressed by 2016.

Health Sciences Expansion:

- Continued growth in current health sciences programs in Nursing, Pharmacy, and Allied Health is important if the campus is to reach 2023 targets.
- Additional new health related programs in Public Health, Dentistry and other areas should be evaluated over the next year to insure that new programs can be in place by 2023.

GME Expansion: Graduate Medical Education expansion through a regional consortium model with local leadership from hospitals and integrated healthcare delivery systems.

- The community risks falling behind in reaching workforce targets if residency positions are not expanded to a minimum of 144 by 2023 (based on findings from a feasibility study completed by the University of Washington in 2010).
- New funding strategies and models for expansion must be evaluated and implemented in 2014-15 to meet GME expansion goals and to keep pace toward reaching economic impact goals. Local funding through foundations and private donations stands as an important element driving GME expansion as are state partnerships with federal government, following successful models in Florida, Georgia, and Arizona.

Achieving Future Economic Impact Targets:

Hospital Research Growth: Hospital Research Growth in “clinical translational” research through an incubation/innovation center as an anchor of a regional simulation center.

- While research growth at hospitals is on track to reach 2017 estimates, reaching 2023 goals will require developing new research facilities both on the Riverpoint campus and at participating hospitals. The development of a “bio-innovation” facility on the campus where physician scientists from the medical school, hospitals, and industry can participate in translational research projects should be considered in the next five years.
- Clinical and behavioral research focused investments at local hospitals will also be needed to reach projections for 2023 and beyond. A feasibility study showing the cost benefit of research investments should be considered over the next two-years to encourage investment needed from hospitals, universities, public, and private sources.

Biomedical Industry Growth: Biomedical Industry Growth through a proactive Regional Bioscience Marketing Initiative is needed over the next two years to leverage the \$100 million investment made in and around the Riverpoint campus.

- Stronger than anticipated growth in biomedical industry sector over the period 2009 – 2013 has Eastern Washington well positioned for accelerated growth to meet future economic impact targets.
- The community should consider launching a comprehensive biomedical industry recruitment and retention program.

Clinical Growth: The Riverpoint Health Sciences Campus has the opportunity to provide needed healthcare services to underserved populations as it provides an excellent training environment for inter-professional training. Campus partners should evaluate the feasibility of locating a Multidisciplinary Community Care Clinic on the campus for healthcare professional training and community benefit.

Recommended Next Steps:

- Move forward with an implementation-focused business plan to expand **Graduate Medical Education** (implementing a plan with the same spirit and intensity as the plan for medical and health sciences expansion undertaken by the community in 2010).
- Move forward with attracting, retaining, and growing biomedical companies through a proactive and coordinated **Regional Bioscience Marketing Initiative**.
- Evaluate the feasibility of incorporating a **Bio-Innovation Center** to the campus to serve as the “front door” for industry and hospital research partners. Research focus should include a focus on behavioral health, community and population health improvement, quality outcomes as well as traditional biomedical research activities.
- Evaluate the feasibility of locating a **Multi-disciplinary Community Care Clinic on the campus** for healthcare professional training and community benefit. Partnerships should be closely evaluated with existing health systems to insure close coordination between health sciences programs, federally qualified health centers, physician practices, and local hospitals.

Presentation of Findings

- **In 2009**, the Riverpoint Campus and associated partnerships with academic institutions, healthcare organizations, research institutes, and private industry had a total annual regional economic impact of **\$212** million, supporting **1,106** full-time high-paying jobs and generating **\$16.3** million in government revenue.
- **In 2013**, the Riverpoint Campus and associated partnerships with academic institutions, healthcare organizations, research institutes, and private industry had a total annual regional economic impact of **\$346.7** million, supporting **1,837** full-time high-paying jobs and generating **\$27.5** million in government revenue.
- **By 2023**, Tripp Umbach estimates that the Academic Health Sciences Campus at Riverpoint will have a total **annual regional economic impact** of approximately **\$900 million**, support **5,000 jobs** and generate more than **\$63 million in government revenue**.

Total Regional Economic Impact

Total Direct and Indirect Economic Impact (in Millions) on Eastern Washington	2009	2013	2017	2023
Academic				
WWAMI Medicine Spokane	\$4.3	\$8.2	\$17.4	\$92.4
WSU Pharmacy	\$47.7	\$68.5	\$64.4	\$86.4
EWU Health Sciences	\$19.7	\$ 45.0	\$23.6	\$32.5
WSU Nursing	\$38.2	\$ 22.0	\$39.5	\$45.6
Other Riverpoint Health Science Programs	\$5.6	\$6.0	\$10.8	\$21.2
Healthcare				
WWAMI Medicine Spokane Graduates	\$3.6	\$14.5	\$24.9	\$43.3
Healthcare Industry Growth (GME, Hospital Growth, and Hospital Research)	\$60.3	\$105.0	\$179.6	\$329.7
Industry				
Commercialization of Research	\$5.1	\$ 22.0	\$26.4	\$136.8
Research Institutes	\$18.4	\$33.0	\$41.5	\$69.2
Bioscience Industry Cluster Impact	\$9.3	\$22.5	\$13.6	\$51.8
Total Regional Economic Impact	\$212.2	\$346.7	\$441.7	\$908.9

Important Note: Economic impact estimates outlined above do not include significant economic, employment, and tax revenue impacts related to expanding the health science workforce. In addition to physicians that are located in Eastern Washington, nurses, pharmacies, and allied health students that remain in the region add additional millions of dollars annually to the numbers presented above.

Employment Impacts (2009-2023)

Total Direct and Indirect Jobs in Eastern Washington	2009	2013	2017	2023
Academic				
WWAMI Medicine Spokane	22	43	198	796
WSU Pharmacy	249	357	291	387
EWU Health Sciences	103	115	90	137
WSU Nursing	199	234	295	356
Other Riverpoint Health Science Programs	29	31	58	115
Healthcare				
WWAMI Medicine Spokane Graduates	19	76	133	231
Healthcare Industry Growth (GME, Hospital Growth, and Hospital Research)	314	577	958	1,758
Industry				
Commercialization of Research	27	115	138	684
Research Institutes	96	172	122	180
Bioscience Industry Cluster Impact	48	117	91	360
Total Number of Jobs in Region	1,106	1,837	2,374	5,004

Government Revenue Impacts (2009-2023)

Government Revenue Impacts	2009	2013	2017	2023
Academic				
WWAMI Medicine Spokane	\$.34	\$.66	\$1.6	\$10.5
WSU Pharmacy	\$3.8	\$5.48	\$5.6	\$9.4
EWU Health Sciences	\$1.6	\$1.7	\$2.1	\$3.5
WSU Nursing	\$3.0	\$3.6	\$3.6	\$5.1
Other Riverpoint Health Science Programs	\$.45	\$.48	\$.95	\$2.3
Healthcare				
WWAMI Medicine Spokane Graduates	\$.29	\$ 1.2	\$1.2	\$2.1
Healthcare Industry Growth (GME, Hospital Growth, and Hospital Research)	\$4.2	\$ 8.4	\$8.6	\$15.8
Industry				
Commercialization of Research	\$.41	\$1.8	\$1.9	\$7.7
Research Institutes	\$1.5	\$2.4	\$2.3	\$3.9
Bioscience Industry Cluster Impact	\$.74	\$1.8	\$.82	\$2.9
Total Regional Government Revenue	\$16.3	\$27.5	\$28.7	\$63.2

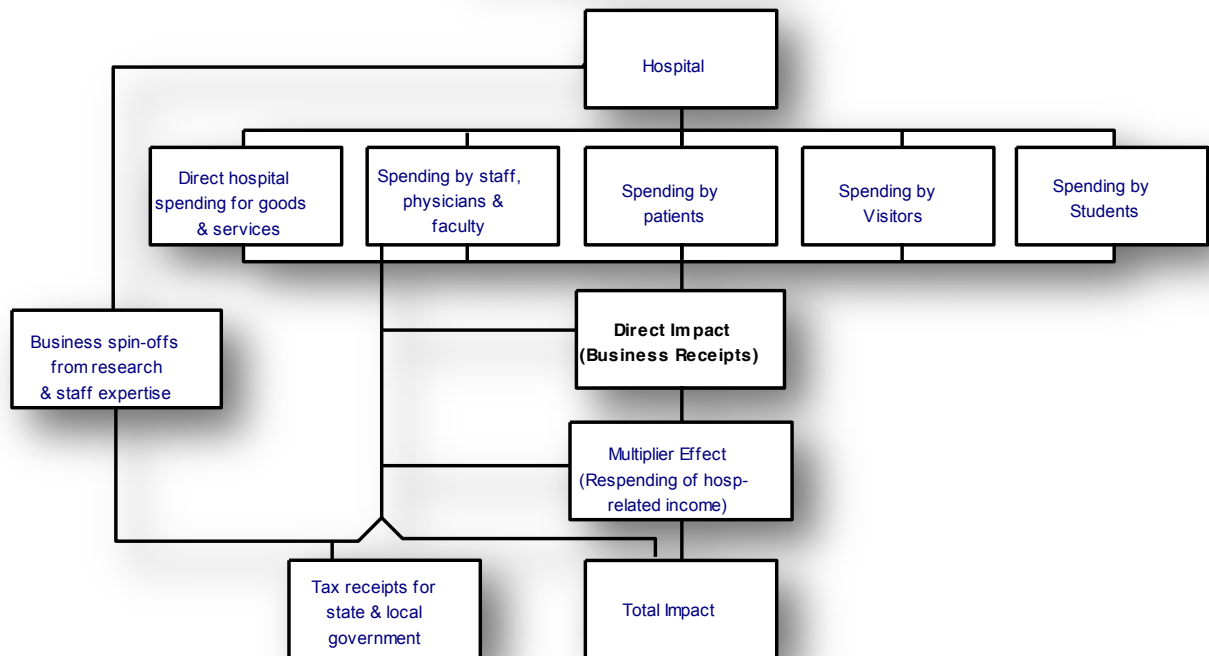
Appendix A: Methodology Employed in the Economic Impact Study

Tripp Umbach has performed more than 300 economic impact studies for both academic institutions and large healthcare systems, including the Mayo Clinic Rochester, Mayo Clinic – Florida entities, UPMC Health System, and North Mississippi Health System. The methodology generally employed in these studies was originally derived from a set of research tools and techniques developed for the American Council on Education (ACE).³ The ACE-based methodology employs linear cash flow modeling to track the flow of institution-originated funds through a delineated spatial area. While this methodology is generally well suited to evaluate a hospital’s impact on its local service area, it tends to be too limiting for a project with the complexity of a medical school with integrated systems or an entire academic health sciences campus.

Based on previous economic impact studies performed for academic health centers in Pennsylvania and Virginia, Tripp Umbach recommended that the traditional model of economic impact for hospitals (see Figure 1), based on the ACE model, be modified for the purposes of this research.

Figure 1

**Hospital Economic Impact
(A Traditional Model)**

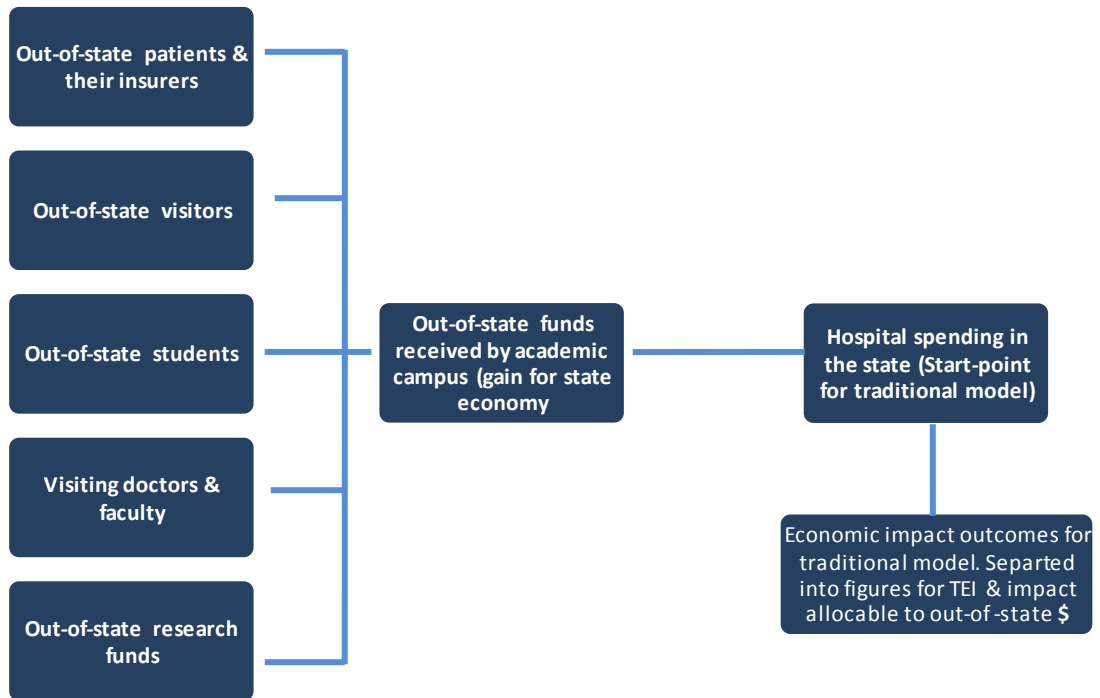


³ Caffery, John and Issacs, Herbert, “Estimating the Impact of a College or University on the Local Economy,” American Council on Education, 1971.

The “traditional” model of hospital economic impact provides a good measure of the impact of hospital expenditures and their flow within an economy. However, the model does not account for the origination of hospital revenues, and thus, counts the spending of revenues received by the hospital from in-state sources. The traditional model counts some of the spending of dollars that already existed in the Washington economy.

The Tripp Umbach research team felt it important to distinguish the economic impact of the individual entities who will occupy the Academic Health Sciences Campus at Riverpoint that are attributable to funds brought into the state from out-of-state sources. The application of this "fresh dollar" model provides a first-line measure of the initial direct expansion in the state economy caused by the Academic Health Sciences Campus at Riverpoint. The final model concept evolved into a hybrid model including a fresh-dollar approach feeding into a traditional model, which tracks in-state spending. Thus, the final model used for this research measures funds brought into the state together with the ultimate flow of these funds through the Washington economy and the effect on economic expansion, job growth, and enterprise development (see Figure 2). The final methodology closely matches the impact study methodology recommended for individual medical schools by the Association of American Medical Colleges (AAMC).

Figure 2. Input Model



Tripp Umbach healthcare researchers worked closely with representatives from Washington State University and partners to acquire the primary data utilized in this study.

Tripp Umbach utilized a forward-linkage modeling methodology to measure the potential impact of the commercialization of research and related commercial spin-offs in Washington and the Eastern Washington region. Traditional economic impact studies are based on direct spending and re-spending within the economy (multiplier effect) driven from the institution itself. Forward-linkage models measure the broader impacts that occur or may occur in the economy as a result of the research and development activities of an institution – beyond the traditional direct and indirect impacts. Examples of forward-linkage impacts include new businesses based on academic research discoveries, academic intellectual property licensed to existing businesses for development, and sponsored research relationships.

Original research conducted by Tripp Umbach for the Mayo Clinic and the University of Minnesota was used as a starting point for customized analysis. The Mayo Clinic and University of Minnesota research involved the creation of a series of 36 customized economic impact models based upon numerous assumptions. The basic architecture of these models is the methodology most widely accepted within the industry. Due to the complexity of measuring the impact of biotechnology and medical research, Tripp Umbach researchers developed a series of customized economic impact models showing the economic, employment, and government revenue impacts of both the recipient institutions and potential business spin-offs in the calendar year 2023. Economic impact projections were calculated for 2023 in two distinct scenarios: conservative and aggressive. The linear cash flow models developed for this project represent annual, point-in-time economic impact projections.

Economic projections for each scenario are based upon a specific and detailed set of assumptions. Each assumption is based upon secondary data research, primary research, and Tripp Umbach industry expertise.⁴

For the purposes of this report, Tripp Umbach calculated both direct and indirect impacts for the current health sciences campus and affiliates (2009) and the proposed Academic Health Sciences Campus in the following benchmark years: 2017, 2023, and 2030. To calculate the economic impact of the proposed Academic Health Sciences Campus and research commercialization in the state of Washington and Eastern Washington, Tripp Umbach used a

⁴ Tripp Umbach is confident in the model construction and projections presented herein; however, shifts in the overall economic climate in the state and nation and changes in state government policy toward biomedical science and medical research are not calculated or accounted for in this study. The projections presented in this study are based upon the state moving forward to make medical research and healthcare services an increasingly important industry sector in the eastern Washington region.

methodology derived from the original set of research tools and techniques developed for the American Council on Education (ACE).

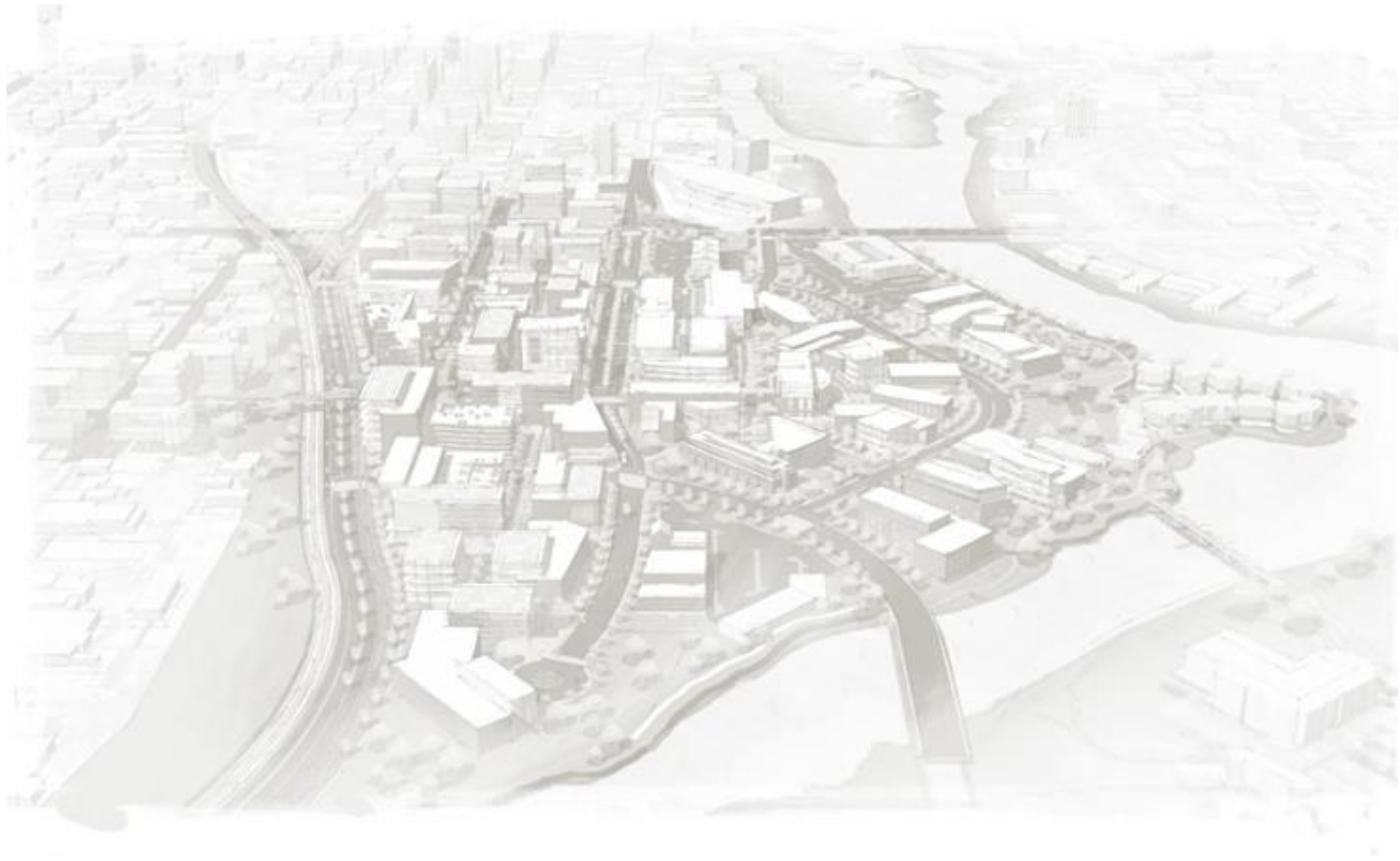
Appendix B: Definition of Terms

TOTAL ECONOMIC IMPACT	The total economic impact of an institution includes both the direct economic impact and the indirect economic impact generated in the economy as a result of the direct impact. Direct impact includes items such as institutional spending, employee spending, and spending by out-of-area visitors to the institution. Indirect economic impact, also known as the multiplier effect, includes the re-spending of dollars within the local economy.
TOTAL STATE BUSINESS VOLUME	Total sales receipts generated within a given geographic area; Eastern Washington region and State of Washington. Business volume includes wholesale, retail, and service sector spending, as well as value added in the manufacturing process.
MULTIPLIER EFFECT	The multiplier effect is the additional economic impact created as a result of the institution's direct economic impact. Local companies that provide goods and services to an institution increase their purchasing, creating a multiplier.
INDIRECT TAX PAYMENTS	Government revenue that is collected by governmental units in addition to those paid direct by an institution, including taxes paid directly by employees of the institution, visitors to the institution, and vendors who sell products to the institution.
DIRECT EMPLOYMENT	Total employees based on Full-Time Equivalents (FTEs).
INDIRECT EMPLOYMENT	Indirect employment is the additional jobs created as a result of the institution's economic impact. Local companies that provide goods and services to an institution increase their number of employees as purchasing increases, creating an employment multiplier.

Appendix C: Tripp Umbach Qualifications

Tripp Umbach is a national leader in conducting feasibility analysis/economic impact studies and consultation services for leading academic medical campuses and for new or expanded medical schools. Over the past six years, the firm has provided consultation and economic impact analysis services to 25 new or expanded medical schools. Tripp Umbach previously conducted economic impact studies in Spokane and the Eastern Washington region for both Washington State University and the Institute for Systems Medicine.

Since 1995, Tripp Umbach has completed four national studies measuring the economic impact of all 130 medical schools and more than 400 teaching hospitals for the Association of American Medical Colleges (AAMC), making Tripp Umbach the most qualified firm to assess the feasibility and economic impact of a new or expanded medical school or hospital campus. In 2012, 50 of the top 100 academic medical centers ranked by *U.S. News & World Report* were active clients of Tripp Umbach. Since 1990, Tripp Umbach has completed individual studies for more than 75 academic medical centers.



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