WASHINGTON STATE UNIVERSITY

TRI-CITIES

DRAFT for Public Input

Academic Master Plan

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Dynamic Student Engagement

Dynamic Research Experience

Dynamic Community Engagement

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Background and Regional Needs

Washington State University (WSU) Tri-Cities was founded in July of 1958 as the Joint Center for Graduate Studies. This collaborative effort between WSU, the University of Washington, and Oregon State University supported the growing industry demand of the Hanford project. Construction of the East Building, located in North Richland, began in July of 1967. The building was finished one year later, and in the fall of 1968, it housed classes for 380 students led by 79 adjunct faculty. The city of Richland, in cooperation with the school district and community organizations, donated land which now makes up the 240 acre parcel that has become the WSU Tri-Cities branch campus. In 1989, WSU adopted the Joint Center for Graduate Studies as one of four branch campuses. Since then, WSU Tri-Cities has been authorized by the state legislature to expand services to undergraduate students. Today, the Tri-Cities campus has grown to approximately 1,300 students supported by 60 full-time faculty and 75 adjunct faculty. The growth of the Tri-Cities campus, located next to the Columbia River adjacent to the Hanford industry district, is reflective of the region and immediate community.

From its inception, the WSU Tri-Cities branch campus has enjoyed regional and statewide support for its development. The demand for continued campus development has been fueled by the growing population and industry of the Mid-Columbia Valley region. WSU Tri-Cities strongly aligns with the WSU land-grant mission to serve the region by offering world-class opportunities for higher education and research.

Washington State Priorities

State industry employment priorities will be met by the WSU Tri-Cities Academic Master Plan through the expansion of baccalaureate and graduate offerings in engineering, education, business, management, computing, and mathematics. These priorities reflect the fact that our local industry needs parallel statewide demands (Appendix E and F).

The Washington State Dual Credit Committee emphasizes the state's strong commitment to the development of programs that accelerate degree accomplishment and reduce expenses to students. Additionally, the Office of the Superintendent of Public Instruction identifies the need to design a more streamlined K-20 system that better transitions students from the K-12 system into the university.

The state legislature and industry emphasize the need for increased STEM professionals. WSU Tri-Cities is committed to meeting this charge through campus relationships with Hanford industry, agriculture, food and wine science, and educational fields. The State Board of Community and Technical Colleges has identified the potential for approximately 1,800 transfer students in our region. Our goal of increasing the number of work-ready STEM professionals will be accomplished through a polytechnic approach, as well as an increase of partnerships at the K-12, community college, and industry levels.

Industry Needs

To address the local scientific and technical industry attrition within the Hanford Project, 400 to 500 new engineers will need to be hired each year for the next five to six years. These numbers do not take into account the addition of the new Hanford Tank Waste Treatment and Immobilization Plant or other industry needs outside of the Hanford Project site. The WSU Tri-City campus will need to increase infrastructure and instructional capacity in order to fill industry demands over the next 20 years. The student body size of WSU Tri-Cities should increase to approximately 3000 students over the next decade. Additionally, it will be essential to leverage partnerships with WSU Pullman and the entire university system in order to meet our local industries' employment needs.

Community Needs

The Mid-Columbia Valley (MCV) region demonstrates strong support for increased degree offerings. Regionally, our college participation rate is below the state rate (Appendix J2) and displays room for growth. The low participation rate relates to the need for transition programs to engage graduating high school students and community college transfers while attracting community members at large. Essential to attracting regional students are programs aligned with local industry that provide students with job-ready experiences along the way. A polytechnic approach to program development is a core expectation by our potential customers (Appendix D).

City planners and leaders have expressed the need for a robust local university to attract and retain companies that offer desirable, high-paying jobs (Appendix O). WSU Tri-Cities has been successful in numerous technology transfer projects, such as BSEL and the Einstein facilities, over the past two decades. These projects are supported by federal grants through the Department of Energy, NSF and Department of Defense since 1989. Additionally, WSU Tri-Cities offers several outreach programs in vocational rehabilitation, packaging engineering, product design, industrial design, and others areas integral to assisting existing and start-up companies to become more competitive in the global market.

Regional Population Growth

From 2000 to 2012, the 28% growth of Benton County's population outpaced Washington State's 17% growth to reach 182,398. Currently, the population within a 30-mile radius of our campus surpasses 268,200 and is projected to exceed 310,000 over the next decade. Contributing to this growth pattern is the diversification of industry and national recognition in "Top 10 U.S. Cities People Are Moving To" due to purposeful city planning, steady economic development, and the quality of our educational institutions.

As the population has grown, so have industry diversity and volume expanded. Labor market studies show that, due to this high rate of industrial growth, the Mid-Columbia Valley region has a disproportionate need for highly skilled engineers, educators, and professionals in health care and business. The region encompasses cities of Yakima, Moses Lake, Walla Walla, and the Tri-Cities. The professional, scientific, and technical services industry is the largest private industry in Benton County, carrying 12.2% of total employment. This equates to 10,189 positions in 416 establishments averaging an annual wage of $85,216 in 2012. The roughly 13,000 scientists, technicians, and researchers in the Hanford industrial region generate high demand for continuing education, advanced degrees, and certifications. Furthermore, the retirement and attrition rates of these science, technology, engineering, and math (STEM) personnel require a robust replenishment source of qualified employees.

With the increase of population and industry development, WSU Tri-Cities is geographically positioned to serve the increasing demands for highly educated workers. A number of studies have analyzed the need for increased access to university level degree completion programs for the Mid-Columbia Valley region. Thus, in 2008, the state granted WSU-Tri Cities the ability to offer undergraduate programs, bringing freshmen and sophomores to the local campus.

Now that WSU Tri-Cities has the authority to be a four-year university, the institution must transform itself to become responsive to diverse students and expanding industry through the 21st century. This requires that WSU Tri-Cities develop the capacity to attract and serve more students with programs targeted toward industry needs, especially with a STEM focus (Appendix L).

Our Mission

WSU Tri-Cities is committed to WSU's land-grant heritage and tradition of service to society. This Academic Master Plan aligns to WSU's Strategic Plan (Appendix A). As a branch campus of WSU, our mission is threefold:

- To advance knowledge through creative research and scholarship across academic disciplines, meeting the needs of south central Washington
- To extend knowledge through innovative educational programs and partnerships in which students are mentored to realize their highest potential and assume roles of leadership, responsibility, and service to society
- To apply knowledge through local and global engagement that improves the quality of life and enhances the economy of the region, state, nation, and world

Our Vision

WSU Tri-Cities will be a culturally diverse destination campus with signature programs in science, technology, engineering, math, education, and business that provide students with real-world opportunities supported by vibrant research and industry partnerships.

Our Strategy

In order to focus the development of our campus, our strategies have centered on increasing student services, maintaining WSU brand quality, leveraging strengths of the campus, and engaging our community in order to meet the mission of Washington State University.

The first step in our effort to serve the needs the local community is to listen carefully to our constituents. Chancellor Moo-Young has held multiple community events from which input has been collected, organized, and prioritized into three domains of leverage: Dynamic Student Engagement, Dynamic Research Experiences, and Dynamic Community Engagement.

Dynamic Student Engagement focuses on the learning experiences and relationships of students at WSU Tri-Cities. Feedback from our community, students, and industry identified a desire for a rigorous curriculum that is centered on problem-based learning and constructivist instructional strategies. Constructivist instructional strategies enable students to build their understanding from real-life experiences. Students coming from local high schools are accustomed to these instructional experiences, which have not traditionally been seen at the university level. Faculty development and participation in the design of experienced-based learning will be fundamental to the creation of engaging classrooms.

Complementary to engaging classrooms is the personalized attention that faculty-student relationships bring to a quality learning experience. Specifically, student retention and success tied to high levels of faculty advising was strongly recommended from our community. Consultants assessed WSU Tri-Cities system and identified our advising and mentoring resources as a significant area for improvement. A personalized student experience is viewed by faculty and our region as a strength on which we need to capitalize. Therefore, "A private educational experience at a public cost" is a marketing concept that WSU Tri-Cities will emphasize.

Dynamic Research Experiences apply to both faculty and students on the WSU Tri-Cities campus. For faculty, our geographical positioning allows for increased opportunities to partner with local industries to develop solutions to problems. In turn, WSU Tri-Cities faculty are seen as a resource for industry. For

students, learning is amplified through real-world experience that can be found through Capstone Projects, internships, and assistantships in research. Each of these research experiences stems from a strong partnership with local industry.

Dynamic Community Engagement includes the support of both research and student engagement but more importantly provides meaningful feedback to WSU Tri-Cities that helps to ensure we are adjusting to the needs of our community. This domain involves the development of several collaborative communities in connection with our campus. The Advisory Counsel for the Tri-Cities (ACT) is led by our Chancellor for the purpose of advancing WSU Tri-Cities interests. The ACT will consist of regional community leaders from STEM industries, business, and education. This group will provide opportunities for continual reflective input to the Chancellor. Additionally, advisory boards will be developed for each department wherein feedback about programs and development can be directly addressed by faculty. Community Engagement also supports the philanthropic focus of alumni and community members to support the advancement of our mission and vision.

Out of these domains emerged eight development goals:

1. Leveraging the Location
2. Student Success Results
3. Innovative Instruction
4. Embracing Entrepreneurship
5. Cultural and Global Inclusion
6. Increasing Research and Development
7. Creating a Culture of Creativity
8. Building the Brand.

Our Goals

Leveraging the Location.

WSU Tri-Cities is optimally located for partnerships with industry in a growing community. The Hanford science community is located within a mile of our campus. Historically, industry relies on the WSU Tri-Cities campus for ongoing professional development opportunities and has invested approximately $60 million into partnerships such as the Bioproducts, Sciences, and Engineering Laboratory (BSEL). Geographically centered in Washington State, our campus is positioned well to serve our entire region.

Our location is also a benefit to the entire WSU system, allowing us to facilitate internship opportunities and research opportunities for all other WSU campuses. The volume of industry outpaces the immediate scope of the Tri-Cities campus; however, the capacity of the entire WSU system to provide students from Engineering, Education, Agriculture and other colleges is much larger. With the volume of industry relative to our location, WSU Tri-Cities is poised to serve as a resource for our state and the WSU system.

Student Success Results.

By increasing the awareness and accountability of student services, the WSU Tri-Cities campus will maintain and continue to improve program quality. Annually, our campus will review indicators for student success and use this information to guide programmatic decisions. Examples of student success indicators include student satisfaction surveys, course student ratings, scholarship awards, grant awards, internship awards, graduation rates, and successful career placement. Additionally, our campus will be reorganized to either

obtain or retain students. Annual systems reviews will include review of effectiveness measurements for the purpose of informing practice and organizational structures.

Innovative Instruction.

Twenty-first century industry demands prepared workers that understand systems structures and thinking. Basic skills and knowledge are not enough to keep industry competitive in the world market. Additionally, the workforce requires abilities to work collaboratively. Because of this, students must demonstrate high levels of learning and the ability to apply solutions both independently and collaboratively. Abilities needed to synthesize multiple solutions to a problem, think dynamically, and work collaboratively cannot be cultivated in a lecture format.

High levels of learning can be achieved through a focus on project-based, constructivist instruction. Academic Affairs will engage faculty and instructional staff in ongoing development that encourages innovative instructional practices. As a complement to innovative instruction, Academic Affairs will develop support structures such as professional learning communities, collaborative classrooms, and improved technology integration for both teaching and learning. By using a polytechnic approach to instruction, we will better prepare students for the workforce.

Embracing Entrepreneurship.

Essential to the preparation of job-ready students is the ability to embrace entrepreneurship. Both at the programmatic and individual level, entrepreneurial thinking will be encouraged through incentives and rewards. Faculty and directors will be afforded new opportunities for growing and retaining students outside traditional program formats and structures. Students will be encouraged to engage in projects and internships that foster out-of-the-box thinking. To facilitate such entrepreneurship, a clearly defined process for project adoption will be implemented in order to determine priority investments that increase student enrollment and persistence.

Cultural and Global Inclusion.

WSU Tri-Cities campus is poised to meet our land-grant mission through the inclusion of regional minority students, veterans, and the international community.

Attracting a student population that is representative of our region will be crucial. In order to accomplish a good representation, we will approach marketing and program development with a social justice agenda. Part of this agenda will leverage current partnerships and grant programs such as GEARUP, TRIO and MESA – groups which seek to transition first generation students to the university, college, and trade systems. Our campus life will foster an inclusive atmosphere celebrating diverse ethnic orientations and religious backgrounds. Student Affairs unit will develop processes for students to create interest-based clubs and activities that are open to all students. Student representation will be visible in many organizational committees and decision-making groups.

To reduce barriers for potential students, special efforts will be made in our Outreach Programs to engage middle and high school students. Examples include summer STEM camps for middle and high school students, a High School Bridge program that provides dual credit opportunities, professional summer programs, and community college bridge programs that facilitate increased transfer rates. These efforts will help to attract and retain diverse students that are bound to our region because of family or career.

Our community includes a large veteran population. Additionally, industry is actively seeking qualified veterans to fill positions. WSU Tri-Cities is ideally positioned to assist veterans in transitioning to the work force through our Veteran's Center, which incorporates counseling, advising, and financial aid services to support veterans in accessing career development opportunities through higher education.

The international community has emerged as key component of global inclusion. The Hanford industry draws professionals from around the world. Our community features several organizations that sponsor international people to settle in the area. Given these connections, WSU Tri-Cities can act as a conduit for international students to integrate with the WSU system. Our small size and intimate campus setting encourages international students to transition into higher education through English Language Learner courses, eventually certifying into programs that give them the opportunity to attend any WSU campus.

Increasing Research and Development.

With a large volume of scientific industry, we have the opportunity to solicit and nurture research and development opportunities for both the Tri-Cities and WSU system campuses. WSU Tri-Cities administration in partnership with colleges and local directors will market a message about our abilities to conduct or partner on research for their business. In support of emerging businesses, we can offer resources for research that they normally would not be able to access themselves. Large and cross-discipline research will also be emphasized.

To help facilitate, encourage, and implement increased research, WSU Tri-Cities has established an executive office dedicated to these efforts. A grant writer/coordinator position will be developed to increase the success rate of all grant applications by working with Primary Investigators and with the business office to ensure timely and successful completion of applications.

Campus development will be facilitated through an executive office of Advancement and Community Engagement. The purpose of this office will be to purposely and strategically seek out relationships with individuals and community organizations to enhance and develop campus structures, programs, and research.

Creating a Culture of Creativity.

Risk-taking is essential for innovation and renewal of the WSU Tri-Cities campus. Working within a clear focus and parameters of high quality expectations, we will establish a culture of creativity and collaboration. The sharing of ideas and collaborative problem-solving will be encouraged through campus processes, incentive grants, and recognition. Key to creating this culture is the noting and celebration of faculty and student successes.

Building the Brand.

Defining and reinforcing the quality of a WSU education will stand at the forefront of all work. How we do business, and the elements of programs, marketing voice, and positioning will all be guided by the desire to achieve exemplary status in every aspect. Quality controls will be put in place through marketing processes and reviews. Programs will be benchmarked based on market exemplars. Certification for programs will be sought out to increase their rigor and quality. Pullman colleges will be asked to provide guidance and partnerships to ensure quality programs and cohesive brand messaging.

A Definition of a 21st Century Urban University

Jacobs (2010) speaks to the significant shifts required by education to meet the demand of the 21st century world economy. These shifts include the need to make curriculum meaningful in the current information age, structuring classrooms and schools to emphasize collaboration and experiential learning, and to incorporate the application of technology in research and solutions to problems (Huggins, Scheurich, & Morgan, 2011; Senge, 1990, 2006).

To achieve these shifts, WSU Tri-Cities will engage faculty in dialogue and build expertise on dynamic student experiences through our Academic Strategic Plan (Appendix B). The plan includes both the classroom and the campus climate as a whole. Within the classroom, we will encourage and support efforts to develop project-based learning and the use of constructivist instructional strategies. Faculty will engage students in highly rigorous thinking and develop student skills and knowledge with a balanced theoretical and application foundation. To help facilitate application learning, capstone projects that focus on problems-of-practice will be developed for each discipline. These capstone projects will incorporate faculty, industry, and community input. Additionally, internships within various industries will be developed by each discipline to facilitate real-world experiences.

Campus climate will be inclusive, challenging, and nurturing. Climate, viewed as a supportive structure for student success, includes both social and academic supports. Socially, WSU Tri-Cities will establish bridge activities to engage regional high school students and provide avenues into the university system. Such activities include High School Running Start, College in the High School, and Summer STEM Camps. Cultural diversity will be celebrated on campus among students and the community to build a sense of inclusion. Student Government will provide input to programs and projects. Structured social events for campus life will purposefully create opportunities to build relationships, foster collaboration, and establish a campus community.

Student advising will become integral throughout campus life. Freshman and sophomore guidance will be structured to offer high levels of direction based upon student interests with regular interaction and information. A course will be developed for freshman to create cohesion and build a campus cultural foundation to our community. Junior and Senior students will receive advising by success coaches and mentorship from discipline-specific faculty that can best ensure successful degree completion. All of these efforts, coupled with high performance standards, will support our students' capacity to successfully complete degrees and become gainfully employed.

Form will follow function in the structural design of WSU Tri-Cities and the use of human resources. In order to make our campus welcoming, services will be designed with student success in mind. This means Student Services will facilitate integration of financial aid, registration, enrollment, and recruitment. Such integration, in turn, will provide our student-customers with easier and less complex interactions to achieve their academic goals. Additional support programs, such as a Career Development Center and tutoring services, will be available for all students. Spaces for student collaboration during non-class time will be established. The Consolidated Information Center building will be restructured to facilitate collaboration, information services, and research supports to students and faculty.

New construction and campus development will provide spaces to which our students, faculty, and community will have access, supporting collaboration and innovation. With the increase of traditional students, a student union building will be built to accommodate social and intramural activities. New academic buildings will facilitate flexible spaces that accommodate collaborative learning and teaching for both faculty and students.

Eventually, student housing will be added in order to accommodate student campus life, visiting faculty, summer internships, summer camps, and regional events.

Cyclical financial planning and budgeting processes will allow for priority adjustments to funding resources. An annual review of program effectiveness and rate of investment return will allow for programmatic improvements by departments to ensure quality and delivery of projects. Technology, program development, and classroom improvements will be established within the budgeting process to ensure the sustainability of efforts to meet the new 21st century needs.

Complementary to student experiences and community engagement is the development of research opportunities. In order to gain life-experience, support project-based learning, and meet the needs of local industry, we must establish a symbiotic relationship with the local STEM industries. As an R1 research institution, our ability to partner with national research and scientific organizations provides unlimited opportunities for our faculty and students. WSU Tri-Cities established an Office of Research, Graduate Studies, and Extension programs to facilitate the expansion of research, community college connections, and the development of graduate programs. Examples of such projects include a Wine Science Center and the Bioproducts, Sciences & Engineering Laboratory (BSEL). It is the desire of WSU Tri-Cities to develop more industry partnerships such as these, supporting innovative and creative solutions to industry needs.

By focusing on Dynamic Student Engagement, Dynamic Community Engagement, and Dynamic Research Opportunities, WSU Tri-Cities will embody the characteristics of a 21st century university responsive to changing industry needs and the development of highly skilled, job-ready workers.

WSU Tri-Cities Development Proposal

Financial Efficiency and Discipline

Financial efficiency is key to the success of campus programs. Project and program development depends upon financial solvency. To ensure positive revenue flow that supports the ability to market and develop programs, a zero based budget (ZBB) will be established each year outlining unit and department operational budgets. Each unit will be accountable to review budgets for their departments and manage expenditures. Accounts will be developed for specific projects in order to track revenue and expenditures. Rate of Investment summaries will be produced for executive review in order to guide project development. Communications of budget status will be established by the business office. Professional development for unit and department leaders will be provided in order to increase the quality of their fiscal management.

Financial discipline will be established through our budgeting process and accountably. Unit leaders and the Chancellor's office will reviewed budgets quarterly, making corrections, if needed. Balancing budgets will be the responsibility of unit leaders. Project planning will reinforce disciplined efforts by the WSU Tri-Cities campus to prioritize monies, time, people, and resources efforts. A project approval process will be established by the Chancellor's Executive Council for this purpose.

Polytechnic Approach

During feedback meetings, our community emphasized the importance of creating job-ready, highly skilled, and community service-minded students (see Appendix D). WSU-Tri Cities will utilize a Polytechnic Approach to create career prepared professionals who learn while doing through capstone experiential learning and cooperative education and internships. The Polytechnic Approach seeks to partner and collaborate with

industry in our local market to increase the job preparedness of students and meet the industries' needs for a professionally trained workforce.

Our polytechnic approach is defined by the following three tenets: a) dynamic student engagement; b) dynamic research experiences; and e) dynamic community engagement.

The polytechnic approach is comprehensive and modeled after those of other research universities offering professional, career-focused programs grounded in the liberal arts and social sciences. The goal is to produce graduates in the arts, social and related behavioral sciences, engineering, nursing, education, natural sciences and technology who are job-ready, able to collaborate effectively, think systematically, and apply creative and innovative solutions to problems of practice.

WSU Tri-Cities is seeking to use the polytechnic approach to develop a distinction among its peers in the field of education. This distinction will convey a unique brand for WSU-TC, providing a clear difference from other state universities and the basis for a marketing effort in a time of increasing competition from both private and public institutions. The characteristics that define the 100 or more American polytechnic universities mirror those of WSU Tri-Cities and its evolution over the past quarter century. WSU-TC is a fine university, one that has focused sharply on its select mission, served its constituents well, and is now positioned to move to an even higher level of excellence.

No single definition of a polytechnic university exists, although all share characteristics. WSU-TC will develop the concept around its historic mission of balancing student excellence, the land grant mission of WSU, and local programmatic uniqueness. WSU Tri-Cities will continue to offer high-quality, challenging programs in research, teaching, and public and community engagement.

Community members and industry both agreed on this approach. In response, WSU Tri-Cities will develop programs across campus with a polytechnic approach to produce career-prepared professionals. Our campus will develop teaching and learning by creating a learn-by-doing pedagogical approaches vested in problem-based learning, cooperative education, and real world problem solving that makes a local, regional, and national impact. Real-world internship partnerships will be developed with STEM industries, business, and education so that students have opportunities to gain experience. The Office of Advancement and Community Engagement will coordinate the internship demands with the Office of Student Affairs and the Office of Academic Affairs. Our Career Development Center will be charged with facilitating students through the career discovery process and tracking job placement.

Program Clustering

In an attempt to create maximum efficiency among program offerings, WSU Tri-Cities will develop degree programs that complement and build upon each other. Such efficiency benefits WSU through the consolidation of course offerings, thus reducing overhead. Students benefit by selecting from career and degree options that are flexible to their interests and changing needs.

The five core program clusters are as follows:

1. Energy
2. Health Science
3. Environment
4. Agriculture
5. Innovation

Program Prioritization and Planning Procedures

Higher education is a competitive market in which the WSU Tri-Cities branch campus must remain relevant in order to draw future students. In order to prioritize program development, we will take into account a comprehensive evaluation of industry demand, community needs, market competition, and national trends. Once market analysis is complete, these priorities will be aligned with current programs and campus faculty skill-sets (Appendix G). Current programs that can be adjusted in order to meet changing market demands will be developed in cooperation with the associated college. New programs will be cooperatively developed with associated colleges using the WSU faculty approval process. Partnerships within the Pullman system will be nurtured to ultimately benefit students and ensure mutual benefits between WSU and WSU Tri-Cities program offerings (see Appendix O).

Program Development

WSU Tri-Cities intends to build on the strength of the region to provide bachelor, master, and doctoral programs in areas that will improve the economy and quality of life. Figure 1 demonstrates the three program development phases. Phase I includes current programs and initial additions for the next four academic years. Phase II consists of the next six academic years. Phase III begins in the fall of 2023 and beyond. Our program development plan includes input from Washington State economic indicators (see Appendices E and F), regional industries (see Appendix N), and local community leadership (see Appendix D).

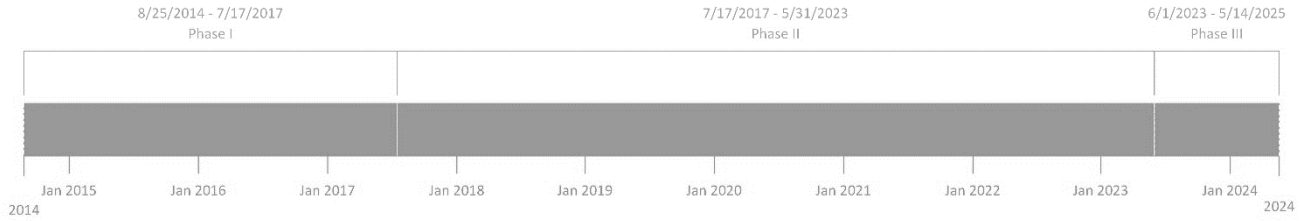

Figure 1

As does Washington State in general, the Tri-Cities economy needs skilled workers in Science, Technology, Engineering, and Math (STEM) industries. Additionally, the Tri-Cities population will grow to exceed 300,000 within ten years and will require more health care, education, business management, and business management professionals.

In the 2014 Tri-Cities Development Council (TRIDEC) study, Figure 2 illustrates professions rated with high interest by our community. Five domains are identified that include eighteen professions. The programs identified in Table 1 reflect the needs outlined by the 2013 TRIDEC study and align to the five domains.

The TRIDEC 2013 study recommended that the Tri-Cities Research District focus on four core technologies: a) Clean Energy; b) Biosciences; c) Environmental Technologies; and, d) Software & Computation. Because our campus is located approximately half a mile away from the Tri-Cities Research District, we have made efforts to support this endeavor through the alignment of degrees, certifications, and programs via our academic clusters (see the Academic Affairs section of this report).

TABLE 8 - TRI-CITIES TARGET INDUSTRIES

NAICS	DESCRIPTION
Energy: Nuclear SMR, biofuels manufacturing, solar testing facilities, smart grid	
221100	Energy technology
221113	Nuclear electric power generation
221119	Other electric power generation
541712	Physical and engineering research
325193	Biofuel manufacturing
541712	Solar testing
3345	Smart meters
3359	Energy storage
3344	Sensing & measuring
3342	Integrated communications
Logistics	
493120	Refrigerated warehousing & storage
488510	Freight transportation arrangement
488991	Packing & crating
488999	All other support activities for transp.
424800	Wholesale beer/wine
424400	Wholesale produce
424480	Fresh fruit and vegetable merchant wholesalers
Food Processing	
311411	Frozen fruits & vegetables
311900	Frozen specialty foods
311423	Dried & dehydrated foods
311911	Perishable prepared foods
Machinery Manufacturing	
333294	Food processing machinery
Carbon Fiber Manufacturing	
325222	Noncellulosic organic fiber mfg
Training	
611420	Computer training
611430	Management training

Figure 2

In addition to community and industry needs, we have considered the regional higher education market. In order to draw students into our programs, the WSU Brand must maintain a correlation with trending needs. These trends are determined based on market analysis of fellow state, community, and regional universities.

The academic programs proposed in the WSU Tri-Cities master plan are designed to represent a menu of options for our institution to pursue, and will be developed in conjunction with annual reviews of community, industry, state, region and market needs. Current programs have been established over the past 25 years, with 16 undergraduate and 13 graduate programs totaling 29. Our first efforts will be to maximize these established programs.

The current plan is outlined in three phases:

Phase I introduces five degree programs that align with currently established programs (see Table 1). These programs help to establish the program clusters outlined in the Academic Affairs section of this report. Most have already been approved for our campus and will require minimal logistical effort to re-establish. These additions bring the total number of degree offerings at WSU Tri-Cities to 34.

Table 1: Phase I Programs

Degree Descriptions	Degree Types		
	UGRAD	GRAD	Grand Total
Phase I			
Fine Arts	1		1
Hospitality Business Management	1		1
Wine Business Management	1		1
Education, Masters in Teaching		1	1
Nuclear Engineering Certificate		1	1
Phase I Total	**3**	**2**	**5**

Phase II aggressively prepares for industry demands and community needs by introducing 11 new degree programs, beginning in 2017. These programs continue to develop our five program clusters. These projections are conservatively calculated based on the anticipated growth for the counties that WSU Tri-Cities serves. Additional enrollment is anticipated through aggressive program development, transfer agreements, flow of international school students, and transfers from the High School Bridge program. For this reason, program capacity in this phase contains a large menu of programs and degrees to select from.

Table 2: Phase II Programs

Degree Descriptions	Degree Types		
	UGRAD	GRAD	Grand Total
Biology	1		1
Biosystems Engineering	1		1
Chemistry (Health Science)	1		1
Criminal Justice	1		1
Cyber Security (certificate)		1	1
Doctorate of Nursing Practice		1	1
Entrepreneurship	1		1
Liberal Arts		1	1
Project Management (certificate)		1	1
Radiation Safety (certificate)		1	1
Six Sigma (certificate)		1	1
Phase II Total	**5**	**6**	**11**

Phase III begins in the fall of 2023. Phase III outlines 33 programs which will be implemented over a 10 year period. Programs planned for this phase center on high demand and require a development of faculty, program certification, and college support. These programs will take time to develop and require significant capital investment. Placing these programs in this phase allows WSU Tri-Cities to build community support leading to private program investment and partnerships with colleges across the WSU system.

Table 3: Phase III Programs

Degree Descriptions	Degree Types		
	UGRAD	GRAD	Grand Total
Aerospace Engineering	1	1	2
Accounting		1	1
Biotechnology	1		1
Brewery Science	1		1
Biology Education	1		1
Biomedical Engineering		1	1
Biosystems Engineering	1		1
Engineering Industrial Manufacturing	1		1
Agricultural Economics	1		1
Applied Mathematics	1		1
Biomedical Engineering		1	1
Biotechnology		1	1

Degree Descriptions	Degree Types		
	UGRAD	GRAD	Grand Total
Computer Engineering	1	2	3
Construction Management	1		1
Criminology (Forensics)	1		1
Engineering Science/Physics	1		1
Engineering, Chemical	1		1
Global Agricultural Management		1	1
Fruit and Vegetable Management	1		1
Human Development (Gerontology)	1		1
Management	1		1
Marketing	1		1
Mechatronics		2	2
Political Science	1		1
Health Science	1		1
Information Technology		1	1
Scientific & Engineering Computing	1	1	1
Six sigma (certificate)		1	1
Technical Communications	1		1
Environmental Engineering	1		1
System Engineering	1	1	2
Phase III Total	**23**	**15**	**38**
Grand Total	**31**	**23**	**54**

Human Resource Alignment

A baseline evaluation of personnel positions will be conducted in each unit to determine appropriate functions. Efficiencies will be increased through integration of services where appropriate. Specifically, human resources will be aligned to attract students, support students to degree completion, or support research development. All positions will be aligned within units with a clear chain of command to increase effective oversight of quality assurance. Each unit director will be responsible for understanding personnel skill sets and contributing to a professional development plan. Additionally, each will be responsible for evaluating unit members with clear performance expectations and plans for improvement.

Student Affairs

Student demand is estimated using state and regional census data (Appendix J1), college participation rates for the state and region (Appendix J2), and transfer program enrollment data from CBC, Yakima, Walla Walla, Big Bend, and Wenatchee Community Colleges (Appendix N). These data indicate that the regional population mirrors the state age distribution and will outpace statewide population growth over the next 20 years. Figure 1 illustrates a comparison between projected WSU Tri-Cities Enrollment and the FTE needed to increase the region's baccalaureate participation rate to meet the state average. As seen in Figure 1, WSU Tri-Cities has growth potential above its existing programming capacity.

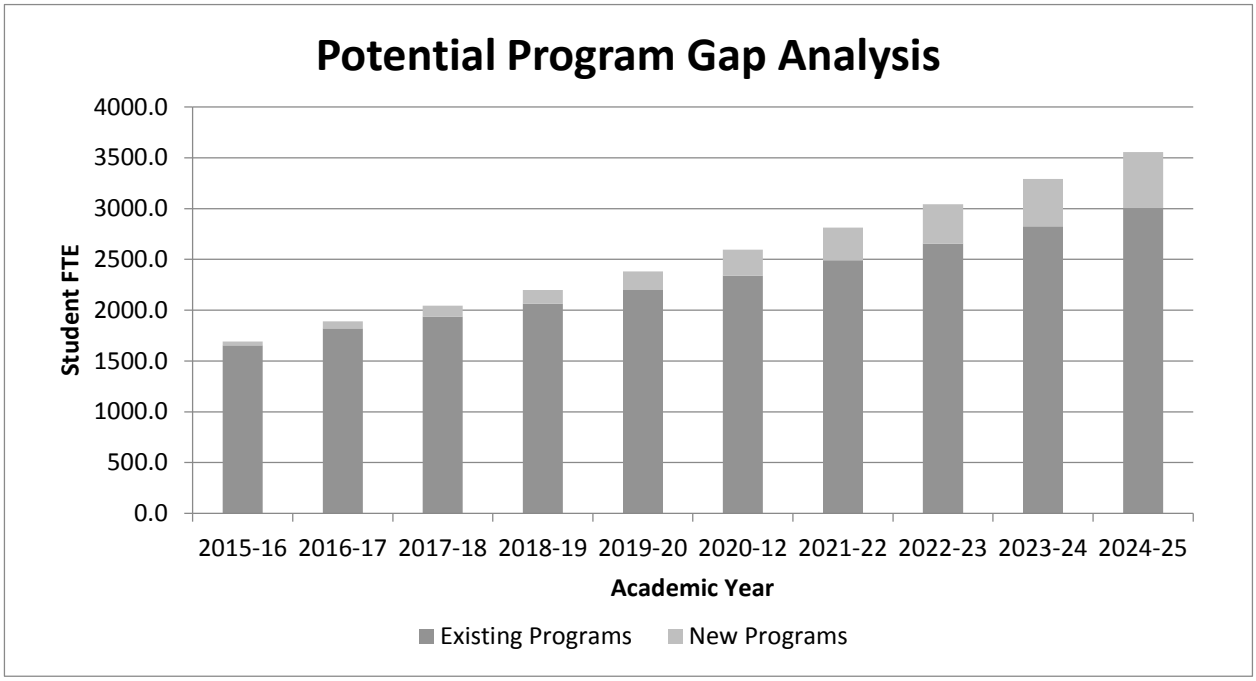

Figure 1

Summary of Recruitment Strategies to Support Undergraduate Enrollment Growth

For the first time in WSU Tri-Cities history, the campus has developed a comprehensive undergraduate recruitment plan, effective for the 2015 admissions cycle. This plan focuses on fully implementing core contemporary admissions practices, engaging academic colleagues in the recruitment cycle, leveraging a data-driven approach to recruiting new undergraduate students, and creating sustainable practices that can grow with the campus' projected enrollment growth. For 2015, the Office of Admissions, a unit of the Division of Enrollment Management and Student Services, is leading the following 17 key strategies.

Inquiry and Funnel Development

1. Develop a student search plan to build the inquiry pool and broaden awareness of WSU Tri-Cities.
2. Generate a sufficient number of inquiries of the right type and mix to achieve stated enrollment goals. The number we project for 2015 is 5,361 (4,074 first-year and 1,287 transfer).
3. Effectively build and communicate with a prospect pool to achieve targeted conversion rates for both first-year and transfer markets.
4. Implement an electronic communications flow consisting of at least seven to ten contacts at the prospect stage in order to build awareness and generate applications and campus visits.

Communications and Marketing

5. Continue to build a high-quality array of marketing and recruitment literature to support the direct mail communications flow (academic program brochures, view book, campus visit, and value and affordability pieces) that are segmented for first-year and transfer markets.
6. Implement an admitted student communication program to capitalize on the small campus, individual attention, and benefits of WSU Tri-Cities.
7. Staff a student communications team throughout the academic year (and summers if possible) to facilitate increased contact between current and prospective WSU Tri-Cities students.

8. Develop a cell phone recruitment plan to address a new channel of communication with prospective first-year and transfer students at both the inquiry and admitted stages of the enrollment funnel.
9. Develop a social media communication plan to build and sustain relationships with prospective students from inquiry to enrollment.

Recruitment Activities

10. Implement a comprehensive community college recruitment plan to improve market share at local community colleges, expand into secondary market community colleges, and become a high-quality, transfer-friendly institution.
11. Implement an annual faculty contact program designed to reach 80% of the admitted students annually via telephone, personal notes, or electronic channels.
12. Continue to build the number of campus visit opportunities for prospective students and their families. This effort includes the Crimson Academic Challenge, which is WSU Tri-Cities academic scholars' day.
13. Develop an alumni referral program to include prospect name generation and regional receptions for all referred students and alumni following admission to the college.
14. Consider special population recruitment strategies to target the Latino population and students interested in pursuing degrees in the STEM disciplines.
15. Expand comprehensive recruitment and marketing plans to improve promotion of all academic programs at WSU Tri-Cities.
16. Implement an effective scholarship and financial aid strategy to ensure projected net revenue and enrollment goals.
17. Implement a data-driven, face-to-face travel recruitment program that is segmented for first-year and transfer student markets.

Student Life and Supports

The Division of Enrollment Management and Student Services has formulated a three-year strategic map with an emphasis on enhancing student success, student learning, and the overall quality of campus-life for students (see Appendix L). The Strategic Map is the product of many hours of intentional, thoughtful work and involvement by Enrollment Management and Student Services professionals, faculty, university staff and students. It provides a "road map" for our continued development as a division and represents the culmination of our collective commitment to fostering dynamic student engagement, research experiences, and community engagement.

The development of this strategic map coincides with the appointment of new leadership within the Division of Enrollment Management and Student Services, and is imbedded in the Chancellor's 8 design principles for the 21st century, with particular attention to:

Principle 1: Leveraging the Location

Principle 2: Student Success

Principle 5: Cultural and Global Inclusion

Principle 8: Building the Brand

The cornerstone of the plan is to continue to develop a student experience based in a residential model to meet the needs of the highly competitive market for new students. The recruitment strategies mentioned above comprise a significant part of the strategic enrollment management strategy, but of equal importance is the ability to retain more students throughout the lifecycle. To this end, the Division of EMSS is leading the development of a strategic retention plan that will be finalized by the end of the 2014-5 school year, focused on improving advising and strategically aligning resources to meet student needs.

In terms of enhancing the campus life experience, the map addresses specific objectives to further encourage retention, student satisfaction, and degree completion. Since its implementation in March of 2014, the strategic map has played a role in the following examples of recent developments and accomplishments:

- The student body has voted for a $100 per semester student union building fee. ASWSUTC and campus leadership are now finalizing the funding model to proceed with construction of the first campus space designed solely around the student experience.
- The Port of Benton is taking the lead in soliciting potential developers for a private residence hall project next to campus.
- A small fitness facility has been built on campus, but student demand indicates a strong desire to build a self-standing recreation facility with appropriate playfields to support and grow club and intramural sports.
- The first year for competitive club sports at WSU Tri-Cities, saw the advent of a men's rugby, men's soccer, and women's soccer teams. Students are calling for more recreational activities.
- The Division of EMSS has hired a new position dedicated to enhancing new student programs, parent resources, and learning/living communities.
- A student leadership program is being piloted this year to allow students the opportunity to enhance leadership skills and provide community service for which they receive official recognition.
- In an effort to develop more student support services, a childcare task force is being assembled to assess student child care needs, and the Division of EMSS is implementing a student food bank.

In addition to the developments mentioned above, the strategic map also outlines the direction for more student services and, most importantly, developing a culture of accountability and assessment for tracking performance and stewardship of student fees.

Academic Affairs

Cultural Shift in Norms

Faculty and staff outline six core values from which to operate: a) Collaboration; b) Innovation; c) Student-centered decision-making; d) Community focused service; e) Sustainability; and, f) Diversity. From these core values, the following operational principles have been established: a) Promoting interdisciplinary Research and Teaching; b) Cultivating STEM Habits of Mind; c) Providing a Dynamic Learning Environment; d) Promoting Career Readiness; and, e) Fostering a Culture of Assessment and Continuous improvement. The strategy of Academic Affairs is to develop programs within four clusters. These clusters allow the combination of courses between disciplines and to enact the core values mentioned above. The Academic Affairs Unit will focus on providing incentive for and developing faculty understanding of what it means to work together in this new academic environment.

Research and Teaching Clusters

WSU Tri-Cities will develop degree programs that complement and build upon each other. This coordination benefits WSU through the consolidation of course offerings, thus reducing overhead. Students benefit as they are provided career and degree options that are responsive to their interests and changing needs. Figure 2 illustrates how various disciplines are grouped into five core clusters.

WSU Tri-Cities Instructional Clusters				
Health Science	Energy	Environment/Hanford	Agriculture	Innovation
• Health Management • Public Health Policy • Food and Nutrition • Nursing • Genomics/DNA • Forensics • Bioinformatics • Drug Discovery • Chemistry, Bio Chemistry • Health Disparities	• Engineering • Renewable • Sustainable • Fuel Cell • Grid • Modular Nuclear • Wind • Solar • Biofuels • Energy Security • Environmental Science	• Toxicology • Risk Assessment • Hanford legacy waste • Environmental Science • &Engineering • K-12 STEM Education • Technical Communications • Engineering • Social Science • Public Policy • Engineering Challenges	• Wine Science • Fermentation Science • Food Processing/Science • Food Quality • Sustainable Agriculture • Tree Fruit Science • Hospitality Management • Wine Business Management	• Cyber security • Fine Arts • Business • Communications • Scientific Computing/ • Engineering • Biosciences • Computer Science • Software • Video games • Digital Culture
College Partnerships Agriculture, Business, Computer Science, Education, Engineering, Liberal Arts, Sciences, Nursing				
Partnerships Laboratories, Industry, Higher Education	Logistics Scalable Infrastructure	Engagement Faculty, Students and Staff		

Figure 2

In a time of ever-shrinking resources, it is imperative that we build upon our existing program strengths while strategically seeking new areas of opportunity for growth and development. The faculty committee identified five potential research and teaching themes (clusters) that can foster the development of interdisciplinary models and teams to help solve social, environmental, medical, biological, and physical problems of practice.

Faculty hiring must be undertaken with intentionality. Foundational to the success of discipline clustering is the willingness by staff and faculty to collaborate and integrate projects and course instruction. For this reason, targeted faculty hires are essential. Interviews will be designed to gauge potential faculty readiness to participate in the culture defined above, and whenever possible try to link real-world research with inquiry-based learning.

Agriculture Cluster

The Ag/Food Systems and BioCentrum teams are grouped into one cluster. The BioCentrum (BioCenter) links together the Wine Science, Bioproducts, Engineering, Hospitality, and Agricultural Business signature areas. The disciplines at the core of the BioCentrum are the common scientific base shared by all three signature areas – Wine Science, Bioproducts Engineering, and Agricultural Business. The three signature areas carry interrelated implications for food security, environmental health, economic development, economic sustainability, and public policy.

Energy

Wind, solar, nuclear, and hydro power are all an integral part of our region's industry. Multiple disciplines, such as engineering, biology, chemistry, education, and the health sciences complement each other in the development of solutions to current energy problems and innovation for energy sustainability. The energy cluster focuses on the interdisciplinary approach to creating renewable and sustainable sources of energy for the 21st century. Energy security and environmental science are also important elements to this cluster.

Health Science Cluster

The goal of the Interdisciplinary Health Sciences program at WSU Tri-Cities is to provide students with a liberal arts education upon which they build a strong appreciation for the fundamental concepts of science, engineering, and/or technology. The program is comprised of faculty from many disciplines including biology, psychology, anthropology, fine arts, education, engineering, business, nursing, and environmental science. Through project-based and service learning, the Health Science Cluster challenges students to explore and understand the interrelationships between science, technology, and society within the health fields. Essential student outcomes include skills in creativity and innovation; critical thinking and problem solving; and communication and collaboration. We will draw on new developments in medical education that emphasize the importance of Scientific Thinking and Integrative Reasoning Skills (STIRS; Reigelman et al., 2012) as the basis for developing and evaluating non-nursing degree opportunities.

Innovation

The aim of the Innovation Cluster is to provide opportunities for experimentation, innovation, production, creativity, and social change by integrating technology, art, engineering, education, and the social sciences. Opportunities for interdisciplinary collaboration include a community research and project space; grant opportunities; and cross-disciplined classes culminating in interdisciplinary group projects and new majors. Interdisciplinary initiatives of the DTC cluster could include physical computing; robotics; virtual reality; video game design; 3D animation; design software; multimedia performance and CAVE environments; industrial design; bio-art; interactive and experimental media; social, public and kinetic sculpture; rapid prototyping; bioinformatics; sustainability and eco-practices; as well as community outreach and entrepreneurship.

Environment/Hanford

Environmental stewardship, green industry, and sustainable practices are an emerging area requiring highly skilled professionals. WSU Tri-Cities serves the nuclear industries where toxic cleanup, resource management, workplace safety, and risk management are in high demand. The purpose of this cluster is to

provide interdisciplinary learning and collaboration to solve problems pertaining to environment, policy, and industry practices.

Mentorship and Advising of Students

Academic Affairs and Student Affairs will collaborate to integrate student mentorship and advising. The purpose is to increase student academic success and graduation completion. Freshman and sophomore success coaches will focus on organization skills and develop curriculum to assist students in their academic planning. Completion coaches will focus on Junior and Senior undergraduates in their academic planning and career orientation, working collaboratively with all departments to establish faculty mentors who will assist students in the completion of their degree and transition to the work force. Graduate students will be advised by program directors and faculty.

Mentorship and advising processes will be developed from research-based practices. Interventions will be developed and coordinated through a student intervention team consisting of advising teams, faculty, intervention specialists, and counselors. The purpose of this group will be to assess student responses to advising and make programmatic recommendations to intervene, if needed.

Financial Supports for Proposal

The WSU Tri-Cities campus is currently funded through a combination of student tuition and fees, state support, and grant revenue. The proposed budget for the WSU Tri-Cities campus assumes continued state support based upon AAFTE to cover the existing operating costs. As student enrollment increases, the baseline funding will need to increase accordingly to compensate for growing operating costs. Figure 1 outlines the calculations used for the increased FTE enrollment. Current program enrollment numbers were used as a baseline. New Student FTE was based upon Washington State's calculations for population and industry growth over the next ten years. In addition, conservative numbers were calculated based upon potential enrollment growth from current market capacity. Campus, program, and degree overheads include the expenses acquired from the campus administrative services. Core WSU Tri-City staff overhead was calculated based on the current staffing requirements by colleges in order to deliver the degrees on the WSU Tri-Cities campus. Finally, expenses for potential classroom and lab space leases were included in the overall estimated program costs.

Figure 3

**Includes direct instruction and related costs to support student learning and instruction.*

For budget purposes, program and enrollment expansion was calculated using student FTE, as measured from the current level of student enrollment (see Table K2). The current level of student enrollment was calculated based on the greater of either a) the funded enrollment level or b) actual enrollment level as of fall 2012. Currently, there is capacity for approximately 865 FTE. Under this Academic Master Plan, state funded enrollment would grow by 100% (nearly 1000 student FTE) over the next ten years.

This financial plan estimates the cost of program expansion and revenue growth. The budget estimate includes expenses from direct instruction, student support, operations, and maintenance. Budget revenue includes state funding and student-based tuition and fees.

Estimated Budget by Revenue Source

Table K3 presents the estimated revenue from state funded FTE enrollment and the additional campus enrollment. Projected revenue increases from $3.6 million to approximately $24.5 million within ten years. This includes a projected growth in tuition of $13 million and an increase of state funding to $29.3 million.

Estimated Budget by Program Code

Table K4 estimates the budget required to operate proposed programs in this plan. These calculations are based on projected student enrollment and revenue outlined above. The instructional budget is projected to grow from $2.2 million to $15.1 million. Staff FTE would grow to 166.4. The primary support budget is projected to grow from $309 thousand to $2.1 million and 23 staff FTE. The library service budget is projected to grow from $134,000 to $913,000 with 10 staff FTE. The student services budget is projected to grow from $242,000 to $1.6 million with 18 staff FTE. Institutional support is projected to grow from 4 to 27 staff FTE and increase its budget from $363,000 to $2.5 million. Finally, the campus maintenance and operations budget is projected to grow from $336,000 to $23 million.

Overall, it is projected that program budgets will grow from $3.6 million to $24.6 million. Staff FTE is projected to grow from 40 to 270. These projections are commensurate with the projected revenue growth.

Logistical Supports for Proposal

Development of Student Life and Community Engagement

Essential to the development of programs is the ability to attract and serve students on or near campus. WSU Tri-Cities will purposely seek out community relationships to facilitate student living, learning, and playing on or near campus. Specifically, we will develop relationships with local apartment complexes and PNNL Guest House to accommodate student living within a 5-mile radius of campus. Additionally, we will partner with the Port of Benton to develop student housing adjacent to campus. Simultaneously, WSU Tri-Cities will work closely with the WSU Pullman team to develop student housing through public, private, or a combination public-private partnerships.

Student services will be developed in partnership with the three local hospital systems and the city of Richland. As the WSU Tri-Cities campus develops a greater population of students on or near campus, agreements will be developed to create a healthcare center for students to access. Additionally, city planners will be involved in establishing police and fire services. Mental and social services will also expand in cooperation with local and regional organizations such as Lourdes Mental Health Services.

Central to student life are the intramural programs. Currently, WSU Tri-Cities has male and female soccer and rugby teams, with a high interest in volleyball and other sports as well. As the traditional student population grows on our campus, we will need support staff and facilities that accommodate athletic and social events on campus. The student body approved the funding of a student union building. This building will be developed with student input and a focus on creating spaces for social and athletic events.

Our community takes pride in WSU Tri-Cities and repeatedly seeks out collaborative opportunities affording usable space for conferences or athletic events. Currently, WSU Tri-Cities has a positive relationship with the Richland School District whereby we are temporarily able to use their fields for athletic practices; however, gym and field space are at a premium across the Tri-City area, which precludes adequate gym or field time for

WSU Tri-Cities intramurals. To remedy this shortage, facilities and programs will need to be developed in order to support student life.

Safety Planning

In regard to strategic safety and emergency planning, WSU Tri-Cities will work with a Risk Management consulting firm in all aspects of operations and planning. Development of crisis response protocols will be developed in collaboration with the Richland Chief of Police and Fire departments. Partnerships will be established with the Richland School District for reciprocating crisis response services. Our campus safety officer will be involved in the design and execution of staff professional development, drill exercises, and immediate responses to crises as they arise. A plan for continued operations will be developed to manage the potential situation should facilities need to be rebuilt after a disaster.

Space Needs for Program Development

In order to improve WSU Tri-Cities' capacity to develop programs and meet the quality demands of a 21st century university, our physical space will need to be modernized and expanded over the next fifteen years. This section is meant to inform future planning and decision-making and contribute to the Campus Master Plan. These recommendations all tie into our core mission of providing quality higher education to our region and support WSU Tri-Cities' strategic goals to create Dynamic Student Engagement, Dynamic Community Engagement, and Dynamic Research Opportunities.

Current Space

Current facilities and grounds need updating in order to support the integration of teaching and research. The WSU Tri-Cities community consists of approximately 1,400 students with 298,793 total building square feet. Offices, administrative space, student services, classrooms, labs, and storage are all included in this square footage. The campus covers 202 acres with 300 acres of additional land remotely located in the Horn Rapids area of Richland, WA. The Capital Planning and Development (CPD) office of WSU calculates that the WSU Tri-Cities campus has the capacity to facilitate programmatic development for Phase I classrooms but not office and lab space. When Phase II begins, additional space will be essential.

Current programmatic demands already pose facility usage challenges to the WSU Tri-Cities campus. Several of the UCORE courses at the center of the WSU undergraduate curriculum have almost doubled in enrollment for the freshman class in fall 2014. For example, PSYCH 105 has 60 students registered (compared with 33 in fall 2013) and we have two more freshman orientations set for August where more freshmen will be registering for classes. With our average student age ranging between 26 to 28 years old, many of these students need classes held during non-normal work hours. While the CPD doesn't take facility usage beyond 6:00 p.m. into account, available classroom space has been difficult to procure.

Technology and furniture no longer meet the demands of highly engaged and collaborative learning. Desks and chairs are not easily moved due to their size, shape, and weight, making classroom arrangement for student collaboration difficult. Additionally, the teaching technology is antiquated and inhibits dynamic instruction. Specifically, the incorporation and integration of collaborative technology such as SMART® boards, classroom response tools, and classroom computer systems need updating.

Current office space can scarcely accommodate the campus' administrative needs. At this point, some graduate and adjunct faculty are using closets as office space, and no more faculty workspace is available to be assigned unless we are to lease or rent. Based on existing faculty and staff counts, space planning assumptions and the staffing projections, Phase I may anticipate the addition of 15 faculty FTEs and 9 staff FTEs. Additional space is required for conference rooms, mail/copy rooms, work rooms, and reception areas. Lab use schedules are also

filled to capacity. These space and resource constraints mean that WSU Tri-Cities has had to contract with Columbia Basin College, which is located approximately 10 miles away, to use their facilities for a number of upper-division laboratory courses (e.g., organic chemistry, analytical chemistry). These circumstances do not reflect well on WSU as a Carnegie-ranked top public research university, and neither WSU students nor the community college are pleased with this arrangement.

Phase I Space Needs

Beginning fall 2014, WSU Tri-Cities has made efforts to improve efficiency in space usage. Facility use efficiency is accomplished through accurate documentation of space-usage, creative scheduling, and the leasing of remote lab, classroom, and office space. However, these are short-term solutions; creating additional classroom, office, lab and administrative support space will prove crucial over the next 10 years in order to accommodate student-centered, activity-based learning.

The new Wine Science Center building will open in the fall of 2015 – a wonderful addition to the campus, serving the programs associated with the College of Agriculture, Human, and Natural Resource Sciences (CAHNRS). While facilities within this building comprise additions to the campus, the corresponding expansion of CAHNRS programs, staff, and faculty will result in no net gain to classroom, lab or office space. WSU Tri-Cities will nurture a positive relationship with CAHNRS to partner in developing programs and sharing facilities whenever possible once they become available.

The original building of the WSU Tri-Cities campus, known as the East Wing, will soon reach its 50-year capacity. The building will require refurbishment, posing an opportunity to modernize the facilities and better optimize space.

Phase II Space Needs

For Phase II, a new academic building is listed on the WSU Capital Development Plan, with initiation of construction slated for 2015 to 2017 (with a six year design to occupancy timeframe). The Consolidated Information Center lease to the US General Services Administration will end in 2017, making the space available for campus use. Both of these additions to the WSU Tri-Cities campus will be helpful in adding more classroom, office, lab and common area space.

The new Academic Building will be located adjacent to the BSEL building. Hence, this new STEM focused building is a key complement to BSEL's research related teaching. WSU Tri-cities has a significant working student population (90% of 2014 spring graduates held part time or full time jobs while completing their degrees), so certain times of day are scheduled more fully than others. The new building will allow added student opportunities during peak time usage. The new academic building will also facilitate an integrated environment that joins together teaching and research. Physically, the classrooms and teaching laboratories will be designed to enhance student involvement in research-based learning. Adjacent and integrated spaces will allow for flexible teaching to occur within the labs and research to be incorporated in the classroom. Additionally, appropriate "social learning spaces" in which students can collaborate with one another and staff will be specifically created and support the 21st century university concepts.

The furniture within the new academic building and all future buildings will allow a variety of spatial configurations and facilitate easy modification from one type of activity to another. Such activities might include small and large group discussions, working with digital archives and information resources, video conferencing using WSU's virtual learning environments, and producing collaborative research papers or presentations.

Phase III Space Needs

By the end of the 2019-21 biennium (Phase III), the WSU Tri-Cities campus is projected to have outgrown currently available facilities and will need more classrooms, laboratories, offices, student service areas, and storage space. It is anticipated that WSU Tri-Cities will lease at least 14,607 useable square feet of space off campus on an annual basis. It is also projected that WSU Tri-Cities will need to increase space (Classroom, Lab, Office) from 20,000 GSF ($19.8 million project) to a 65,000 GSF (39,000 assignable SF), an estimated $69 million project. Of that 39,000 square feet of assignable space, the campus will occupy 14,607 square feet immediately, leaving 24,393 square feet yet to be secured.

In order to determine specific WSU Tri-Cities space needs for Phase I, Phase II, and Phase III, a functional space audit will be conducted by a consulting firm. The audit will incorporate the student, faculty, and staff projections provided by the partner institutions to calculate requisite teaching space such as technology-equipped classrooms, teaching labs, and skills labs; offices, student support spaces such as library, student services, and childcare; and estimated parking needs. This information will be used to create a Campus Master Plan.

As required by the Board of Regents, WSU Tri-Cities will engage in facility planning under the guidance of the Maintenance and Operations Department. As funding emerges for the development of new programs, communication and planning will commence following the WSU processes. As an interim measure for budget planning until a capital plan is confirmed, the operating budget provides for additional leased instructional and office space for the 2015-17 and 2017-21 biennia – makeshift provisions estimated to cost $ and $ per year, respectively.

Table 4 Functional Space Needs

Type of Space	Assignable Square Feet	Percentage of total
Instructional Space (Classrooms, Teaching Labs, Research Labs, Classrooms)	52,830 20 teaching labs @ 1,080 SF (45 SF X 24 students), 20 research labs @ 660 SF (200 SF to 460 SF per person), 1 large auditorium @ 4,000 SF (16 SF X 500 students), 4 large lecture @ 1008 SF (14 SF X 72 Students), (3 seminar @ 333 SF, 5 classrooms @ 800 SF (16 SF X 50 students))	68%
Student Advising/Counseling Services	1,110 (120 SF X 6 Offices, 250 SF X3 greeting areas)	3%
Childcare		
Faculty offices	6,480 (120 SF X 108 Offices)	17%
Administrative	840 (140 SF X 6 Offices)	2%
Maintenance/Central Stores/Student Center	4,155 (50 SF X 4 custodial closets, 150 SF X 2 Storage Rooms, 3,655 SF Mechanical Room Space)	11%
Total	39,000	100%

Our Improvement Process

Participatory Action Research (PAR) is the foundation for WSU Tri-Cities cyclical, reflective, and collaborative self-improvement process (Creswell, 2009). This process, in simple terms, has three phases: a) Look & Learn, b) Think & Plan, and, c) Do & Assess. This process will be enacted annually at the executive level and nested down through the department level. The purpose is to actively engage the WSU Tri-Cities campus in reflection on and improvement of practices. Such a process allows our campus to be responsive to the changing demands of our market, refine systems, and work to meet our goals.

Measurement and Benchmarking

Most of our peer institutions will be STEM universities that provide career preparation while grounding students in the liberal arts and social sciences. We plan to benchmark and share best practices with institutions that have similar core values, embrace a similar educational philosophy, and face like challenges. Specifically, we will learn best practices common in 21st century urban universities, such as strong lab-based experiences. This collaboration with comparable institutions will enrich the student experience at WSU Tri-Cities and provide important benefits to the state of Washington. Figure 4 provides an example of benchmark institutions from which we would wish to learn.

Fall 2013 Benchmark Comparison							
Institution Name	**Location**	**Enrollment FTE**	**Retention Rate**	**Graduation Rate**	**Cost per Student FTE**	**Cost per Degree**	**Total Annual Budgets**
Missouri University of Science and Technology	Rolla, MO	6718	85.60%	65.20%	$17,078	$66,940	$171,731,162
Colorado School of Mines	Golden, CO	5130	89.10%	66.50%	$17,365	$79,530	$197,054,576
Michigan Technological University	Houghton, MI	6,524	83.40%	66.30%	$15,499	$65,832	$213,863,000.00
New Jersey Institute of Technology	Newark, NJ	7,839	81.90%	54.50%	$15,729	$58,166	$277,862,000
New Mexico Institute of Mining and Technology	Socorro, NM	1,641	74.40%	47.30%	$11,609	$60,869	$135,387,458
South Dakota School of Mines and Technology	Rapid City, SD	2,798	75.20%	45.30%	15,107	$59,195	$24,538,000
University of Alabama at Huntsville	Huntsville, AL	6011	79.30%	47.30%	$14,082	$56,693.00	$212,000,000.00
	Average	5,237	81.27%	56.06%	$ 15,210	$ 63,889.29	$ 176,062,314
	WSU	24,712	81.50%	67.30%	$ 13,505.00	$ 51,508.00	$ 902,000,000.00
	WSU Tri-Cities	**1,120**	**68.00%**	**38.00%**	**$ 13,505.00**	**$ 51,508.00**	**$ 32,000,000.00**

Figure 4

Appendix A: Washington State University Strategic Plan

WASHINGTON STATE UNIVERSITY

Washington State University will be one of the nation's leading land-grant universities, preeminent in research and discovery, teaching, and engagement.

EXCEPTIONAL RESEARCH, INNOVATION & CREATIVITY

Goal 1: Increase productivity in research, innovation, and creativity to address the grand challenges and opportunities of the future.

Goal 2: Further develop WSU's unique strengths and opportunities for research, innovation, and creativity based on its locations and land-grant mandate to be responsive to the needs of Washington state.

Goal 3: Advance WSU's reach both nationally and internationally in existing and emerging areas of achievement.

TRANSFORMATIVE STUDENT EXPERIENCE

Goal 1: Provide an excellent teaching and learning opportunity to a larger and more diverse student population.

Goal 2: Provide a university experience centered on student engagement, development, and success, which prepares graduates to lead and excel in a diverse United States and global society.

Goal 3: Improve curricular and student support infrastructure to enhance access, educational quality, and student success in a growing institution.

OUTREACH & ENGAGEMENT

Goal 1: Increase access to and breadth of WSU's research, scholarship, creative, academic, and extension programs throughout Washington and the world.

Goal 2: Expand and enhance WSU's engagement with institutions, communities, governments, and the private sector.

Goal 3: Increase WSU faculty, staff, and students' contributions to economic vitality, educational outcomes, and quality of life at the local, state, and international levels.

INSTITUTIONAL EFFECTIVENESS

Diversity, Integrity, and Openness

Goal 1: Create and sustain a university community that is diverse, inclusive, and equitable.

Goal 2: Cultivate a system-wide culture of organizational integrity, effectiveness, and openness that facilitates pursuit of the institution's academic aspirations.

Goal 3: Steward and diversify resources invested by students, the public, and private stakeholders in a responsible way to ensure economic viability of the institution.

Quality and Excellence: We are committed to providing quality and excellence in all our endeavors.

Integrity, Trust, and Respect: We are committed to ensuring trust and respect for all persons in an environment that cultivates individual and institutional integrity in all that we do.

Research, Innovation, and Creativity: We are committed to the pursuit of inquiry and discovery and to the creation and dissemination of knowledge.

Land-Grant Ideals: We are committed to the land-grant ideals of access, engagement, leadership, and service to bring the practical benefits of education to the state, nation, and global community.

Diversity and Global Citizenship: We embrace a worldview that recognizes and values the importance of domestic and global diversity, global interdependence, and sustainability.

Freedom of Expression: We are committed to the free exchange of ideas in a constructive and civil environment, including the canons of academic freedom in research, teaching and outreach.

Stewardship and Accountability: We are committed to serving as ethical and responsible stewards of University resources.

Strategic Plan
2014-2019

Appendix B: Academic Affairs Strategic Plan

WASHINGTON STATE UNIVERSITY

TRI-CITIES

Washington State University Tri-Cities
Academic Strategic Plan

Fall 2015

Dear University Community:

The transition of Washington State University Tri-Cities to a four-year campus in 2007 marked a significant new stage in the growth and development of this campus. With that shift behind us, now is the time to revisit the campus's academic mission, core values, and stated goals. The Academic Strategic Planning (ASP) process will articulate the campus's vision and mission in alignment with the priorities of the Washington State Legislature, WSU's 2014-19 System-Wide Strategic Plan, and the Chancellor's Three Tenets for its next developmental phase. In doing so, the plan will guide the prioritization of new programs and the revision of existing programs in order to facilitate offerings and programs of study that are responsive to and reflect the needs of our community, region, state, and nation.

I. CONTEXT

In the previous 10-year master plan for Washington State University Tri-Cities, entitled "Signature 2020," our faculty, staff, students, and university and community stakeholders asserted a commitment to making WSU Tri-Cities a culturally diverse destination campus with signature programs in engineering and the sciences that provide students with real-world opportunities supported by vibrant research and industry partnerships. As a liberal arts-based land grant STEM (Science, Technology, Engineering, and Math) campus with signature programs in Wine Science, Bio-products, and K-12 STEM Education, we now undertake an Academic Master Planning initiative that will strategically position WSU Tri-Cities to be the premier smaller-scale liberal arts-based STEM polytechnic campus in the United States.

With emphasis on the three tenets of dynamic student engagement, dynamic research experiences, and dynamic community engagement, the Academic Master Plan will:

- Identify strategies for building upon existing programmatic strengths
- Highlight new opportunities for innovative, interdisciplinary research, and instruction
- Establish effective processes for prioritizing program development and hiring needs
- Convey a multi-biennium budget that addresses both operational and capital requirements

This document represents phase 1 of Washington State University Tri-Cities' Academic Strategic Plan, the first component of the campus's Academic Master Plan, launched by Chancellor Keith Moo-Young upon his arrival in June of 2013. Our work to this point is intended to provide a guiding vision for WSU TC's academic mission over the next decade and

beyond. Building upon past successes and guided by our core mission, the ASP charts a course for our future that is simultaneously specific and flexible, both realistic and visionary.

II. MISSION

A product of collaboration by a comprehensive host of university stakeholders, the plan addresses our one central and compelling question: ***How do we position WSU TC to become, over the next ten years, the premier smaller-scale liberal arts-grounded polytechnic campus in the country—a regional campus with global reach?*** Our academic mission is guided by the Vision Statement set forth in this ASP.

III. VISION

Our vision is built upon responsible stewardship emphasizing interdisciplinary, integrative, STEM habits of mind and innovative endeavors that are rooted in transformative teaching, learning, and research as well as in collaborative partnership with our students, colleagues, and community.

IV. GUIDING PRINCIPLES

This plan reflects our campus's commitment to transformative research, education, and community engagement. Our core principles reflect and guide that commitment in every area of our mission and relative to a range of settings: on campus, within the wider university community, and in relation to the mid-Columbia community, our state, the nation, and the world.

Collaboration is central to the success of the WSU Tri-Cities campus. We work with faculty, staff, students, and administrators across campuses to ensure the quality and consistency of our programs. We likewise work with colleagues across campuses to ensure faculty, staff, and student success. Frequently, we collaborate with colleagues on other campuses to conduct research, to provide cutting edge instruction, to move the university forward through the development of appropriate policies and procedures, and to address many of the most pressing issues with our community.

Chancellor's Three Tenets

- *Dynamic Student Engagement*

On our own campus, the classroom, lab, studio, and the field present the first and natural nesting grounds of collaboration. Faculty and students collaborate in the teaching and learning process. Likewise, students learn collaboration through and from each other, often in the productive

processes of trial and error. They try, they fail, they try again, and they succeed; they persist to learn and learn to persist.

Hence, our classrooms will be spaces for collaboration, innovation, and experiential learning. Our classroom experiences and facilities will enable students to develop new knowledge through course-based learning outcomes that cross-disciplinary boundaries. For example, our newly launched, campus-specific version of History 105, Roots of Contemporary Culture, offers one such model.

While we remain committed to the value and benefit of traditional disciplinary degrees, we encourage our students to understand that knowledge is generated in an infinite number of contexts and that wisdom is, in part, the recognition that our understanding is always partial and relative. The interdisciplinary pursuit of knowledge represents an aspiration to see the larger picture.

As we develop and expand our interdisciplinary degree programs, we will simultaneously collaborate on projects that move beyond student FTEs and degree programs. By engaging in more creative collaborative relationships, we can also more effectively articulate end results and develop appropriate metrics. For student skills in collaboration, for example, one metric would be feedback from employers to gauge whether graduates have been adequately prepared for the workplace. Establishing and promoting annual themes to unify research, curriculum, and teaching and to cross multiple disciplinary lines while remaining linked to mission-based activities will constitute one more way to foster a culture of useful, rather than superfluous, collaboration.

Classrooms are only one of the many spaces where students learn, and collaborate. Through internships and co-ops, volunteerism and service-learning, and team-based projects, students learn to work with others and develop new knowledge and real-world skills. We will actively seek out these opportunities for WSU Tri-Cities students in our community. We need clearer support structures that best align students' skills with available opportunities. In addition, we need to imaginatively recognize and celebrate collaboration by, for instance, hosting collaboration fairs and industry symposia on campus or identifying yearly themes that cross college lines to shape curricula, research, and other mission-based activities.

- *Dynamic Research Engagement*

Dynamic Research Engagement is a tenet that applies to both students and faculty on the WSU Tri-Cities campus. For faculty, our geographical positioning allows for increased opportunities to partner with local industries to develop solutions to problems. In turn, WSU TC faculty are positioned to serve as a knowledge resource for industry. For students, learning becomes

amplified through real-world experience rooted in capstone projects, internships, and service-learning opportunities.

- *Dynamic Community Engagement*

Students and faculty in all disciplines benefit from learning that is tied to solving real-world problems. We will partner with our community through relationships that enhance research and scholarship, tapping the strengths and resources that industry, businesses, community agencies, schools, and other community partners bring to WSU Tri-Cities. Research partnerships with business and industry will also help us to contribute toward the development of new technologies and services. By tying research to learning in a community context, we will enhance development opportunities for both students and faculty, as well as for the community.

In instances when we have collaborated with our community in the past – as with Delta High School and with the Bridges program at Columbia Basin College – we have helped to open new avenues for student success. Through programs such as College in the High Schools and Running Start, and in close collaboration with area community colleges, we will continue to develop innovative and effective partnerships within the K-20 educational realm.

Internal collaboration – whether on campus through interdisciplinary coursework and research or within the broader field of education – will also open doors to collaboration with regional industry partners in areas such as sustainability, bioengineering, viticulture and enology, and agriculture business management. We will also look at needs-based opportunities within the community in the area of community health. A strong nursing program in partnership with area medical centers will provide a solid foundation upon which we and our students may better meet the many health-care needs of those in our community.

V. CORE VALUES

The transformative environment we seek to create will be shaped by our core values:

Collaboration

Collaboration is fundamental to everything we do at Washington State University Tri-Cities. As an integral part of a multi-campus system embedded in local, state, and regional economies, we strive to act in accordance with the best interests of those communities. WSU Tri-Cities has and will continue to embrace this knowledge and this responsibility in a myriad of ways: through business and industrial partnerships; internships and co-ops; service and experiential learning courses; curricular and interdisciplinary work linking programs within our campus and across the system; and in collaborative projects to facilitate work with local, regional, and national employers, schools, state and federal agencies, and non-profit organizations.

Innovation

The campus will broaden, strengthen, and extend curricular offerings to provide an innovative curriculum for the 21st century, one that will help develop the minds of our students as active and engaged participants in both the workforce and civic life. A world-class education is responsive to the whole student and involves transformative experiences and relationships that occur both inside and outside of the classroom. To that end, we are committed to continuous evaluation and transformation of our pedagogical practices.

We are also committed to providing our students and faculty with 21st-century learning tools, facilities, and opportunities, such as the learning communities, effective technologies, expanded opportunities for experiential and interdisciplinary learning, and state-of-the-art research facilities at the graduate and undergraduate levels alike. For such learning tools to work most effectively, connection is key – characterized by both synergy among students from different colleges and clear connections between the classroom and the outside world. We will also develop ways to reward and promote faculty for excellence in and interdisciplinary commitment to teaching and research, and for entrepreneurialism (e.g., licensing income, patents, etc.). We will accomplish this through a range of both external and internal faculty awards and other means of recognition that raise WSU Tri-Cities' reputation among national and international audiences.

Student-Centered Culture

Excellent, engaging, student-centered learning opportunities will be a priority for our campus. Students will achieve clearly stated learning outcomes for their courses and forge meaningful connections between their courses, across the curriculum, and between the university, local, and global communities. To this end we will incentivize creative and successful teaching (as demonstrated by student mastery of learning outcomes) and provide significant support for a robust faculty development program. These efforts will include additional training and advising resources for faculty, including professional support in instructional technology, as well as the creation of a Learning Resource Center. We also will ensure that we establish and maintain the learning environments and technological infrastructure to deliver and support innovative pedagogy, 21st-century learning tools, hybrid learning formats, and undergraduate research, including IT, classrooms, library facilities, and other collaborative spaces.

Moreover, in order to better understand the effect we are having on students, we will measure our desired student learning outcomes regularly and rigorously. We will measure student learning and progress, regularly reviewing our standards and metrics, and we will make public those figures for the benefit of prospective students, employers, graduate schools, and other external constituencies.

Community Focus

In aspiring to embody a regional urban campus with a global reach, WSU Tri-Cities will become much more actively involved in the community, defined broadly and variously as comprising the WSU system, Tri-Cities area, the state, region, and beyond. Our community partners – which include the Pacific Northwest National Laboratory, Tri-Cities Research District, the wine industry, Hanford contractors, the Department of Energy, and hospitals such as Kadlec, Trios, Lourdes, and Prosser Memorial, as well as dozens (if not hundreds) of middle- and small-sized industries, provide ample resources for us and our students that are often unavailable in metropolitan regions twice our size. Community support for WSU Tri-Cities is strong. Accordingly, we must envision even more ways to leverage our urban setting and commitment to community. We will ensure that community remains accessible for students as a resource for their own learning and discovery and as an environment offering an array of areas to which they can contribute.

As we have in our successful partnerships with PNNL, the wine industry, and local engineering firms, we will work toward greater connection and involvement in the national and international community. We will capitalize on these connections and coordinate in bringing external experts (from businesses, industries, other universities) to campus for extended academic experiences benefiting faculty, students, and the community. Given its unique location, WSU Tri-Cities will position itself as the academic epicenter for STEM and bioengineering business and industry.

Sustainability

The WSU Tri-Cities campus believes in whole systems and long-term thinking. We will work toward sustainable development, addressing the environmental, economic, and social aspects of the campus in a manner that encourages innovative growth while promoting environmental and economic stewardship. The needs of our current students will be addressed without compromising those of future students.

WSU Tri-Cities will promote and support research providing new products and practices for a more sustainable economy and healthy environment. We will cultivate teaching and learning that focus on strategies for awareness and responsible stewardship of the environment both locally and globally.

Diversity

WSU Tri-Cities must partner with diverse projects, institutions, and communities both locally and abroad to engage students and faculty in global issues, challenges, and opportunities. We will strengthen local relationships to understand the complexities of global issues in our local communities, and we will partner with our local community to diversify our campus community. We will increase opportunities for students and faculty through participation in global

experiences both locally and abroad, and we will increase opportunities for students to explore diversity through global certificate programs, course offerings, and real-world experiences.

VI. OPERATIONAL PRINCIPLES

Promoting Interdisciplinary Research and Teaching

World-class research, with an emphasis on solving real-world problems, is a hallmark of Washington State University system-wide. WSU faculty regularly seek out opportunities to collaborate with colleagues across disciplines, colleges, and campuses. Because of its relatively small size and the close proximity of faculty working in different fields, WSU Tri-Cities is uniquely situated to foster cross-disciplinary research teams. Identifying core research cluster areas maximizes resources by enabling WSU Tri-Cities to leverage existing strengths and develop associated areas of strength that address the needs of our local and state-wide communities and to help solve real-world problems.

As responsible stewards of increasingly scarce resources, we must prioritize hiring plans that strategically promote progress in developing areas of excellence, interdisciplinary research projects, and other areas of critical need. Appropriate and targeted faculty hires are essential to an ongoing, accelerating research agenda across the disciplines. We will intentionally recruit student-centered faculty who combine real-world research with inquiry-based learning and whose research interests and approaches lend themselves to working collaboratively across disciplines.

Within the classroom, our campus-specific, team-taught, interdisciplinary Freshman Seminar will serve as a model for future courses and, specifically, for a campus-wide interdisciplinary senior capstone course. In these courses, students gain real-world experience through team-based, collaborative learning. They are encouraged to think outside traditional boundaries and to make connections via an integrated and evidence-based learning environment.

While continuing to emphasize traditional disciplinary programs, we are committed to broadening our students' perspectives and educational horizons in the classroom, laboratory, and beyond. We must create more research opportunities for all students. Moreover, that research must be envisioned and pursued broadly, not merely within STEM disciplines and Professional Programs but in the Social Sciences, Humanities, and Fine Arts as well. Research based internships and service-learning opportunities not only expand our students' breadth of knowledge and real-world experience, they also help equip them to be career-ready. Research mentoring programs could link first-year students with seniors or graduate students, and research fairs could be open to all students.

Cultivating STEM Habits of Mind

A "STEM habit of mind" is woven into the fabric of everything we do. Interdisciplinary, integrative, innovative, and rooted in a commitment to real world learning, STEM habits of mind extend across every academic discipline on our campus, from Engineering to English and from Physics to Psychology. What do we mean by "STEM habits of mind"? Focused as much on mastering the skills of integrative learning, analytical thinking, evidence-based reasoning, and real-world problem solving as on mastery of content, "STEM habits of mind" is short-hand for a commitment to research-demonstrated best practices for higher education in the twenty-first century, applicable to all disciplines. "STEM habits of mind" also embodies an emphasis on hands-on, experiential learning experiences. We view learning experiences such as co-ops, internships, student research, study abroad, interdisciplinary collaboratives, clinical experiences, student teaching, and service learning— with their common thread of interweaving theory with practice—as essential to WSU Tri-Cities' identity. Not only an established strength upon which to build, experiential learning is an approach that must be incorporated into all degree programs. Thus, STEM habits of mind will guide campus planning and assessment and drive hiring priorities, program development, research, and the development of rigorous student learning outcomes.

Providing a Dynamic Learning Environment

The campus must strengthen and extend its curricular offerings to provide an innovative curriculum for the 21st century, one that will help develop the minds of our students as active, critical-minded participants in the workforce and in civic life. We need to recognize that the depth of world-class learning – that is, the ability to discern and critically analyze complex sets of relationships and intersections – is critical to educating the whole student.

A well-designed curriculum is essential, but no resource on any campus is more crucial to student success than the caliber of its faculty. Hence, we must make transformational, student-centered teaching a top priority on this campus. We will reward strong teaching (as measured by student learning outcomes) with significant incentives and encourage even stronger teaching through faculty development programs. The Michael and Susan Dell Foundation grant received by the campus this fall allowed us to implement AVID for Higher Education, which is one such program. We need to seek out and access still more such opportunities for development.

We can achieve transformative learning across the campus by broadly adopting innovative pedagogical techniques and the instructional technologies that make them possible. If we are to be innovative in our teaching, it is also imperative that we provide our students and faculty with 21st century learning tools. For the students, these include the Freshman Seminar and First Year Experience, learning communities, effective use of new technologies, expanded opportunities for experiential and interdisciplinary learning, state-of-the-art research facilities available for both graduate and undergraduate students; for the faculty, they include incentives for excellent teaching, expanded interdisciplinary avenues, and support for faculty development programs.

Synergism is key to the success of these learning tools; both the synergism resulting from collaborative cross-disciplinary teaching and learning and that created in the overlap of classroom learning and real-world experience. Inter-disciplinary problems such as those raised by Hanford (with its implications for science, the environment, economics, politics and policy, military history, the Cold War, Native American issues, land use, and, simultaneously, both western frontier and world history) provide an opportunity for just such connections to be made at the curricular level.

Finally, we need to ensure that we possess the learning environments and technological infrastructure to deliver and support innovative pedagogy, 21st-century learning tools, distance learning, and undergraduate research, including IT, classrooms, library facilities, and other collaborative spaces. Additionally, we must utilize AMS, develop hybrid offerings, and schedule classes and program offerings that allow the greatest flexibility for our students.

Promoting Career Readiness

Instilling career readiness in our students comprises a central tenet in our mission to become the premier smaller-scale liberal arts-grounded polytechnic institution in the country. We are committed to the belief that to be career ready in our ever-changing global economy requires adaptability and a commitment to lifelong learning, along with mastery of key knowledge, skills and dispositions that vary from one career to another and change over time.

Our career ready students will be proficient in the core academic subjects as well as more specialized fields of study. The curricula in every field of study on our campus will advance the career readiness of our students by fostering foundational workplace skills, including the ability to clearly and effectively communicate; to think critically and problem solve; to work productively in teams and independently; to use technology effectively; to practice ethical decision-making and social responsibility; to set and meet goals; and to manage transitions from school to work and back again, and from one set of disparate responsibilities to another.

Through real-world opportunities such as internships, job shadowing, service-learning, and co-operative experiences, our students will engage in workplace activities that allow them to apply academic learning to real-world projects and problems alongside working professionals.

Fostering a Culture of Assessment and Continuous Improvement

The implementation of our Academic Strategic Plan will be guided by robust, ongoing assessments based on our core values, vision, tenets, and organizing principles to evaluate our progress toward the outcomes we have established. We will seek feedback informed by real-world voices and responses from our students, faculty, and community. Through Math and Writing Placement Exams and the Junior Writing Portfolio, we will measure students' skills and abilities upon admission to the university and at the mid-way points of their careers. We will

establish graduation exit exams and a senior survey in order to identify areas of needed improvement and to demonstrate our value proposition with hard data.

Other assessment measures should be developed to capture the academic success of our transfer students and, through post-baccalaureate surveys of employers, graduate schools, and other external constituencies, to gauge our success in creating career- and profession-ready students.

VII. RESEARCH AND TEACHING CLUSTERS

In a time of ever-shrinking resources, it becomes increasingly imperative that we build upon our existing strengths while strategically seeking out new areas of opportunity for growth and development. The committee has identified five potential research and teaching themes, or clusters, which can foster the development of interdisciplinary models and teams to help solve social problems as well as environmental, medical, biological, and physical ones. Faculty hiring must be undertaken with great intentionality to support developing areas of excellence, interdisciplinary research projects, and other areas of critical need. Appropriate and targeted faculty hires are essential to an ongoing, accelerating research agenda across the disciplines. When hiring faculty, we must ask hard questions to gauge their readiness to participate in the culture defined above, endeavoring whenever possible to link real-world research with inquiry-based learning.

Research and Programmatic Cluster Areas

1. Agriculture
2. Energy
3. Interdisciplinary Health Sciences
4. Innovation
5. Hanford and the Environment

1. Agriculture

The Ag/Food Systems, Bioproducts, and Hospitality Business Management areas form one cluster: the Science and Business of Agricultural and Food Systems. This Agriculture cluster links together the Wine Science, Bioproducts, Engineering, Hospitality, and Agricultural Business signature areas. These signature areas, in turn, support an application of these and other disciplines to a distinct set of problems that influence one another and have interrelated implications for food security, environmental health, economic development and sustainability, and public policy. The Science and Business of Agricultural and Food Systems cluster will provide a synergistic center for faculty and students to collaborate on research rooted in biology and cutting across disciplinary boundaries. This interdisciplinary focus will foster collaboration and innovation in research that uses multiple perspectives to solve complex, biologically-based problems while drawing from a solid base in an academic discipline.

2. **Energy**

Wind, solar, nuclear, and hydro power are all integral to our region's industry. Multiple disciplines such as engineering, biology, chemistry, education, and the health sciences complement each other in the development of solutions to current energy problems and innovation for energy sustainability. The Energy cluster focuses on an interdisciplinary approach to creating to creating renewable and sustainable sources of energy for the 21st century. Energy security and environmental science are also important elements to this cluster.

3. **Interdisciplinary Health Sciences**

The goal of the Interdisciplinary Health Sciences program at WSU Tri-Cities is to provide students with a liberal arts education through which they can build a strong appreciation for the fundamental concepts of science, engineering, and/or technology. The program includes faculty from many disciplines including biology, psychology, anthropology, fine arts, education, engineering, business, nursing, and environmental science. Through project-based and service learning, the program challenges students to explore the interrelationships between science, technology, and society, enabling them to succeed in 21st century careers with strong skills in creativity and innovation, critical thinking and problem solving, and communication and collaboration.

Societal and demographic changes have led to increased resource allocation to medical and health care. This is revealed by the expansion of health insurance in the form of the Affordable Care Act, and by growth in the number of facilities that cater to health-related needs of the population (i.e., hospitals, urgent care facilities, walk-in clinics, etc.). This growth in resources is paralleled by growth in employment opportunities not only in traditional health jobs (nurses, physicians, therapists), but also in areas of management, public policy, education and communications. WSU currently offers nursing and other health-related majors (clinical psychology, speech and hearing sciences) and is pursuing medical education at its Riverpoint campus in Spokane. At the WSU Tri-Cities campus, we seek to ensure that we provide our students with the opportunities related to these exciting developments nationwide and at WSU. We will draw on new developments in medical education that emphasize the importance of Scientific Thinking and Integrative Reasoning Skills (STIRS; Reigelman et al., 2012) as the basis for developing and evaluating non-nursing degree opportunities. We will also seek to generate an advising framework that acquaints students with a broad array of health-related career opportunities and enables them to identify the skills and experiences they need to compete for them effectively.

4. **Innovation**

The Innovation cluster promotes innovative interdisciplinary projects and research at the convergence of art, design, engineering, science, technology, community planning, and

entrepreneurship. The aim of this cluster is to provide opportunities for experimentation, innovation, production, creativity, and bringing about social change. Opportunities include an interdisciplinary research and project space; grant opportunities for interdisciplinary projects; cross-discipline classes culminating in interdisciplinary group projects; and new majors stemming from the intersection of existing ones. Interdisciplinary initiatives of the DTC cluster could include: physical computing; robotics; virtual reality; video game design; 3D animation; design software; multimedia performance and CAVE environments; industrial design; bio-art; interactive and experimental media; social, public and kinetic sculpture; rapid prototyping; bioinformatics; sustainability and eco-practices; and community outreach and entrepreneurship.

5. Hanford and the Environment

The Hanford Site embodies many of the most pressing geopolitical issues of the 20th century and beyond. Its rich history cuts across diverse areas of academic and historical inquiry, including its indigenous Native American and pioneering European settlers, the military-industrial complex, the Second World War, the history of science, the rise of agri-business, the sociology and politics of the Cold War, the impact of hydro-power on natural and human habitats, literatures of the environment, and, more recently, its role in delivering cutting-edge science in the areas of waste remediation and environmental sciences. The Hanford cluster will be the catalyst in our community for collaborative promotion of interdisciplinary cultural, educational, and scientific research opportunities relating to the Hanford Site.

Appendix C: Student Service Strategic Plan

Division of
Enrollment Management
& Student Services
WASHINGTON STATE UNIVERSITY
TRI-CITIES

Fall 2015
Undergraduate Recruitment Plan
Office of Admissions

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INTRODUCTION

The 2013-14 academic year has been an astounding success. The renewed focus on strategic enrollment management has allowed us to enroll another record class of 183 freshman students and 199 transfer students for a combined 23% increase in new students from Fall 2013. This rise is quite remarkable considering the more stringent competition in the higher education market.

The enrollment growth has brought a new energy to campus and the effects are far-reaching. For example, our students have committed funds to build a student union building and the administration is diligently working on plans to build a residential campus. Faculty have become more engaged in recruitment activities and retention is at the forefront of event and academic planning.

Our first recruitment plan, which has been created in consultation with our partners at Noel-Levitz, marks the beginning of a new adventure for our campus into targeted marketing, specialized communications, and new programming. We look forward to implementing new initiatives and learning which strategies will work best for our campus. Every year, will we build on our experiences to create an innovative and executable plan that the campus community can endorse.

By following this plan, WSU Tri-Cities will work to increase inquiries and applications to shape a new class of 219 freshman and 224 transfer students for the Fall 2015 semester.

This particular plan is the result of the hard work of an eager and dedicated recruitment team within the office of admissions (Jana Kay Lunstad, Mariella Lora, Brittany Nass, Kristy Phillips, and Adrianna Sanchez-Sanchez) and also expresses our collective value that everyone at WSU Tri-Cities contributes in shaping the incoming class.

This plan could not have come to fruition without the strong support from the WSU Tri-Cities executive leadership, especially Chancellor Keith Moo-Young; the entire team in the Division of EMSS, and our peers and colleagues across campus.

Go Cougs!
Chris Meiers, PhD
Vice Chancellor for Enrollment Management & Student Services

STRATEGIC DIRECTION

The recent restructuring of the Division of Enrollment Management and Student Services allowed for a strategic mapping process to begin in earnest. The final product is a 3-year plan with an emphasis on enhancing student success, student learning, and the overall quality of campus-life for students. The strategic map is the product of many hours of intentional, thoughtful work, and involvement by Enrollment Management and Student Services professionals, faculty, university staff, and students. It provides a “road map” for our continued development as a Division and is the culmination of our collective commitment to fostering dynamic student engagement, research experiences, and community engagement.

The development of this strategic map coincides with the university’s strategic plan, and is one that incorporates the Chancellor’s 8 design principles and tenets for a 21st century, with particular attention to:

- Principle 1: Leverage the Location
- Principle 2: Student Success
- Principle 5: Cultural and Global Inclusion
- Principle 8: Building the Brand

In pursuit of achieving the objectives of the strategic map, the Division of Enrollment Management and Student Services has identified six goals of prioritization for 2014. The majority of focus and work in 2014 will be surrounding these goals but will not be exclusive of all the objectives outlined in the strategic map. The specific strategic objectives from the strategic map are referenced by their location on the map. (See Appendix 1)

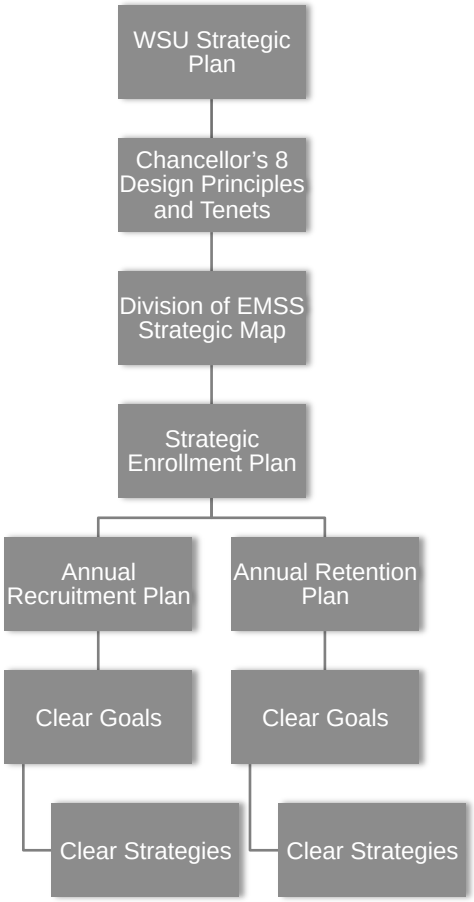
Goal #1 Strategic Enrollment Management and Student Communications

Charge: To determine, communicate, implement, measure, and refine a strategic enrollment management and communications plan that results in attaining the most appropriate enrollment for the WSU Tri-Cities campus as measured in student quality, degree completion, and quantity.

Associated Strategic Objectives:

A-1 Involve Faculty More in Recruitment
A-2 Expand Transfer and Bridges Programming
A-4 Establish a High-Quality Campus Visit Program
B-1 Implement a Comprehensive Communications and CRM Strategy
B-2 Implement an External Branding and Marketing Plan
B-3 Improve Web Content and Resources
F Establish a Campus Culture of Strategic Enrollment Management and Retention

This annual recruitment plan is part of the strategic planning for WSU Tri-Cities and is specific to each year of an admission cycle with detailed enrollment goals. In the months ahead, the overall strategic enrollment and retention plan will be developed with our Noel-Levitz partners and will draw heavily from the academic master planning exercises that are also being conducted across campus.



EXECUTIVE FALL 2015 GOALS SUMMARY

1. Enroll 443 new students by the following breakdown:
   a. 219 first-time freshman (20% increase from Fall 2014)
   b. 224 transfer students (13% increase from Fall 2014)
2. Enroll a minimum of 1,127 FTE.
3. Award an average of $1000 in merit-based waivers to new students.
4. Fall 2015 funnel goals are as follows:

STAGE	FIRST-YEAR	TRANSFER	TOTAL
Inquiry	4,074	1,287	5,361
Yield	15%	40%	21%
Applications	611	515	1126
Yield	64%	75%	69%
Admit	391	386	777
Yield	56%	58%	57%
Enroll	**219**	**224**	**443**

SUMMARY OF RECRUITMENT STRATEGIES TO SUPPORT UNDERGRADUATE ENROLLMENT GROWTH

The admissions office views the following **17 key enrollment strategies** as the key priorities that must be effectively implemented to achieve the 2015 goals.

Inquiry and Funnel Development

1. Develop a **student search plan** to build the inquiry pool and broaden awareness of WSU Tri-Cities.
2. Generate a **sufficient number of inquiries** of the right type and mix to achieve stated enrollment goals. The number we project for 2015 is 5,361 (4,074 first-year and 1,287 transfer).
3. Effectively build and **communicate with a prospect pool** to achieve targeted conversion rates for both first-year and transfer markets.
4. Implement an **electronic communications flow** consisting of at least seven to ten contacts at the prospect stage designed to build awareness and generate applications and campus visits.

Communications and Marketing

5. Continue to build a high-quality family of **marketing and recruitment literature** to support the direct mail communications flow (academic program brochures, view book, campus visit, and value and affordability pieces) that are segmented for first-year and transfer markets.
6. Implement an **admitted student communication** program to capitalize on the small campus, individual attention, and benefits of WSU Tri-Cities.
7. Staff a **student communications team** throughout the academic year (and summers if possible) to facilitate increased contact between current and prospective WSU Tri-Cities students.
8. Develop a **cell phone recruitment plan** to address a new channel of communication with prospective first-year and transfer students at both the inquiry and admitted stages of the enrollment funnel.
9. Develop a **social media communication plan** to build and sustain relationships with prospective students from inquiry to enrollment.

Recruitment Activities

10. Implement a comprehensive **community college recruitment plan** to improve market share at local community colleges, expand into secondary market community colleges, and become a high-quality, transfer-friendly institution.
11. Implement an **annual faculty contact program** designed to reach 80 percent of the admitted students annually via telephone, personal notes, or electronic channels.
12. Continue to build the number of **campus visit opportunities** for prospective students and their families. This includes the Crimson Academic Challenge, which is WSU Tri-Cities academic scholars' day.
13. Develop an **alumni referral program** to include prospect name generation and regional receptions for all referred students and alumni after admission to the college.
14. Consider **special population** recruitment strategies to target the Latino population, and students interested in pursuing degrees in the STEM disciplines.
15. Expand comprehensive recruitment and marketing plans to improve **promotion of all academic programs** at WSU Tri-Cities.
16. Implement an effective **scholarship and financial aid strategy** to ensure projected net revenue and enrollment goals.
17. Implement a highly-effective, data-driven, **face-to-face travel recruitment program** that is segmented for first-year and transfer student markets.

DETAILED ACTION ITEMS

The following core strategies will serve as the baseline for the 2015 annual marketing and recruitment plan.

1. Student Search

Key Strategy: Develop a student search plan to build the inquiry pool and broaden awareness of WSU Tri-Cities.

Description/Explanation:

2015 search:

- NRCCUA: 7,408
- College Bound: 8,304
- Chegg: 1,448
- SAT: 7,473

- Publication work with design and writing
- Email plan with Kelmscott for non-responders
- Schedule conference call with Reed once through purchasing
- Discuss how to treat responders; same-day response for all responders
- Discuss how we integrate into this search follow-up to responders
- Work with Kelmscott on timeline content
- Four weeks for approval and mail drop August 22

Implementation Schedule/Timetable

Task	Completion Date
Kelmscott will draft print piece	09/17/2014
Kelmscott will develop microsites	09/17/2014
Kelmscott will 12 draft e-communications	09/17/2014
Kemlscott will email students, mail print material, and share responders with admissions.	10/01/2014
Responders will be added to the CRM and flow into the inquiry communication plan.	10/15/2014
Send Kelmscott prospects to communicate with	10/01/2014

Responsibility: Jana Kay Lunstad, Chris Meiers

Budget:

See Prospect Development Plan

Evaluation/Control:

The WSU Tri-Cities admissions management team will monitor inquiry-by-source reports monthly to determine if the plan is successfully being implemented.

2. Inquiry Development

Strategy: Generate a sufficient number of prospects of the right type and mix to achieve stated enrollment goals. In order to hit the targeted number of new student applications, we will need to achieve 5,361 unduplicated prospects.

Description/Explanation: The plan calls for a distribution of inquiries over four major categories or broad initiatives that will generate these names (see table below). This is an estimate, as currently no existing historical comparison is available**, and this year will be a base-line to develop an inquiry-by-source report.**

Travel-initiated • College fairs: 900 • College nights: 360 • Community college fairs and programs: 180 • School visits: 400 • Receptions: 60	1,877 or 35%
Referrals • Alumni: 335 • Student: 168 • Faculty: 167	670 or 12.5%
Student-initiated • Email: 200 • Web: 600 • Walk-in: 100 • Application as first source: 200 • Transcript: 40 • ACT: 25 33 • SAT: 25 34	1,207 or 22.5%
Campus-initiated/solicited • Other: 160 • Chegg: 380 • Community colleges: 380 • Petersons: 160 • Kelmscott search: 520	1,607 or 30%
Total	5,361

Implementation Schedule/Timetable

Task	**Completion Date**
Research banner advertising	11/1/2014
Order NRCCUA, Chegg, and SAT names	06/15/2014 (except SAT)
Begin Chegg participation	07/03/2014
Develop process with main campus for ACT and SAT transcripts	07/22/2014
Secure outside name search vendor (Kelmscott)	07/25/2014
Finalize all search components with Kelmscott	08/01/2014
Drop search begin campaign	09/26/2014
Assign member of staff to oversee Chegg recruitment	07/15/2015

Responsibility: Jana Kay Lunstad and Vacant e-Recruiter Position

Budget: Chegg: $13,500 NRCCUA $1,289.08 Kelmscott $52,000 Initial view book mailing to 1,000 inquiries: $317 (mailing) and $160 (postage)
Evaluation/Control: The WSU Tri-Cities admissions management team will monitor inquiry-by-source reports monthly to determine if the plan is successfully being implemented.

3. Prospect Pool Communication

Strategy: Effectively build and communicate with a prospect pool to achieve targeted conversion rates for both first-year and transfer markets.

Description/Explanation: Converting prospects to the application stage of the enrollment funnel takes strategic communication with prospective students. Written communication flows are developed to build and sustain interest in the programs and services at WSU Tri-Cities. We are developing a six or seven phase written plan from prospect to application.

Implementation Schedule/Timetable

Task	Completion Date
View book	9/18/2014
Academic program pieces 'major pagers'	10/15/2014
Outcome value piece	11/01/2014
Visit postcard	11/01/2014
Crimson Academic Challenge	9/15/2014

Responsibility: Jana Kay Lunstad, Brittany Naas, Jordyn Wright

Budget:

View book creative production $10,000

View book printing $5,606

Academic program piece printing: $4,000

Outcome value piece printing: $2,000

Visit post card printing: $500

Crimson Academic Challenge postcard printing: $500

Evaluation/Control: The WSU Tri-Cities admissions management team will monitor inquiry-by-source reports monthly to determine if the plan is successfully being implemented.

4. Inquiry Communications

Key Strategy: Implement an electronic communications flow consisting of at least seven contacts at the inquiry stage designed to build awareness and generate applications and campus visits. The following items are currently planned although this is subject to annual modification.

Description/Explanation: Electronic communications will automatically move from inquiry flow to applicant flow depending on what the student has received at the time of application. Communication will begin at the time of inquiry and will be sent every seven to ten days.

Email Campaign Inquiry 2015

Introduction: Your Story Begins Here
Academic Programs (faculty profiles)
Cost
Career Development (student profiles)
Undergraduate Research (student and faculty profiles)
Student Leadership
Location
Outcomes (alumni profiles)

Ad Hoc Emails Inquiry 2015

Crimson Academic Challenge
Financial Aid and Scholarship Deadlines
Open House Invitation
Complete non-responders with Kelmscott

Click-through opens go to the student communication team

Implementation Schedule/Timetable

Task	Completion Date
Draft communications	10/15/2014
Create HTLM design for each message	10/15/2014
Build landing pages for each call to action in the individual messages and install Google Analytics code	10/15/2014
Draft student and faculty profiles for landing pages	10/15/2014
Schedule delivery campaign through the CRM	10/15/2014
Draft communications	10/15/2014
Create HTLM design for each message	10/15/2014

Responsibility: Jana Kay Lunstad, e-Recruiter, Marketing and Communications

Budget: no budget control

Evaluation/Control: Admissions staff will monitor click-through reports time to application after messages.

5. Marketing and Recruitment Literature

Strategy: Continue to build a high-quality family of marketing and recruitment literature to support the direct mail communications flow (academic program brochures, view book, campus visit, and value and affordability pieces). Develop these between the first-year and transfer markets.

Description/Explanation: Converting prospects to the application stage of the enrollment funnel takes high-quality literature to peak interest. Pieces are intended to outline the areas of distinction between the WSU Tri-Cities campus and other institutions.

Implementation Schedule/Timetable

Task	Completion Date
Travel piece postcards	10/15/2014
View book (outsourced IdeaWave)	09/11/2014
Crimson Academic Challenge postcard	09/15/2014
Academic program piece	10/01/2014
“Compare the Difference” postcard	10/15/2014
Outcomes of WSUTC graduates	10/15/2014

Responsibility: Jana Kay Lunstad, Marketing and Communications

Budget:

View book creative production $10,000

View book printing $5,606

Academic program piece printing: $4,000

Outcome value piece printing: $2,000

Visit post card printing: $500

Crimson Challenge postcard printing: $500

Evaluation/Control:

Material will be reviewed regularly by a marketing and communication committee that will include staff from admissions, marketing, and academic affairs.

6. Admitted Student Communications

Key Strategy: Implement an admitted student communication program to capitalize on the small campus, individual attention, and benefits of WSU Tri-Cities. Communications should be personalized.

Description/Explanation: The admissions counselor staff is to manage relationships and communications with each of the following four groups or individuals:

1. Chancellor
2. Alumni
3. Faculty
4. Current students

Each category will assist the admissions office and counselors in providing second party endorsements and direct contact with individual admitted students. Admit flow communication will be broken down into five broad categories:

#1
Outcomes
Internships
Research
#2
Fun
Student Profile
Activities
#3
Transfer Ready
Advising Intake
Special Needs
#4
Financial Aid
Graduate Rates
#5
WSU Reputation #1
WSU Reputation #2

Implementation Schedule/Timetable

Task	**Completion Date**
Draft communications	11/01/2014
Create HTLM design for each message	11/01/2014
Build landing pages for each call to action in the individual messages and install Google Analytics code	11/01/2014
Draft student and faculty profiles for landing pages	11/01/2014
Schedule delivery campaign through the CRM	11/01/2014
Build click-through rates for each hyperlink in HTMLs	11/01/2014
Build and schedule CRM report of newly admitted students to distribute to faculty for personal follow-up	11/01/2014
Create faculty-specific postcards	11/01/2014
Build funnel report by academic area to distribute to academic units	11/01/2014

Responsibility: Jana Kay Lunstad, e-Recruiter, Marketing and Communication staff
Budget: Post card printing & cutting: $350 Postage: $265
Evaluation/Control: Click-through rates and funnel reports will be monitored on a regular basis.

7. Student Communication Team

Key Strategy: Staff a student communications team throughout the academic year (and during the summers if possible) to facilitate increased contact between current and prospective WSU Tri-Cities students.

Description/Explanation:

Implementation Schedule/Timetable

Task	Completion Date
Hire four or five student communication team members	09/12/2014
Hire two social media communication team members	09/12/2014
Develop a detailed contact plan to reach 80 percent of the fall 2015 inquiry pool by February 1	11/01/2014
Develop a specific message plan for each phone call, script detail for each	11/01/2014
Student communication team assessment plan for each call 1-2-3	11/01/2014
Develop text communication plan (phones/software) and messages for the communication team	11/01/2014
Require cell phone on all web request forms	11/01/2014
Ensure a process to hand-off all hot leads to admissions counselors	11/01/2014
Develop management plan with weekly meetings and weekly reports	11/01/2014
Develop incentives for student communication team members	11/01/2014

Responsibility: Jana Kay Lunstad, Kristy Phillips

Budget: WAGES

Evaluation/Control:
Monitoring of funnel reports and turnaround time metrics

8. Cell Phone Recruitment

Key Strategy: Develop a cell phone recruitment plan to address the new channel of communication with prospective first-year and transfer students at both inquiry and admitted stages of the enrollment funnel.

Description/Explanation:

Text messaging
Instagram campaign
Twitter
Focus group high school
Content management
Management of all social media at WSU
Hiring position
Incentives sweepstakes
Text messaging management
Assessment evaluation

Implementation Schedule/Timetable

Task	Completion Date
Purchase cell phones and set up data plan	11/01/2014
Create editorial calendar	11/01/2014
Script text messages	11/01/2014
Curate Instagram site	11/01/2014

Responsibility: Kristy Phillips

Budget:

$2,400 every two years ($400 stipend every 2 years to cover the cost of a new phone for 5 recruiters + office)

$5,400/year ($75/month stipend to help cover the cost of cell phone data plan for 5 recruiters + office)

Evaluation/Control:

Monitor response rate from text messages

9. Social Media Communication

Key Strategy: Develop a social media communication plan to build and sustain relationships with prospective students from inquiry to enrollment.

Description/Explanation:

Establish quarterly communication plan (messages platforms campaigns)

Purchase direct text communication software

Organize social media strategy with new webmaster position

Implementation Schedule/Timetable

Task	Completion Date
Facebook for parents	01/15/2015
Content map for fall and spring semester	10/01/2014
Text message plan for counselors and student recruiters	11/01/2014
Instagram Twitter, and Facebook plan	10/01/2014
Hire two student communication team members to deliver social media communication	09/12/2014

Responsibility: Jana Kay Lunstad, Kristy Phillips, Román Lara

Budget: no budget control

Evaluation/Control:

Evaluation of response rates based on platforms

10. Community College Recruitment

Key Strategy: Implement a comprehensive community college recruitment plan to improve market share at local community colleges, expand into secondary market community colleges, and become a high-quality, transfer-friendly institution.

Feeder School Strategy: Develop enrollment funnel history for three distinct community college market regions:

1. Columbia Basin
2. Central and Eastern Washington Community Colleges
3. Western Washington Community Colleges

Description/Explanation: The campus has traditional relied on transfer enrollment from Columbia Basin College. Due to CBC's expansion of applied baccalaureate programs and WSU Tri-Cities inability to offer online courses, the number of students have steadily declined over the last few years. It is imperative that we maintain a strong relationship with CBC, but it's even more critical that we foster new relationships with our other community college partners in the state.

Implementation Schedule/Timetable

Task	Completion Date
Create declaration of intent to transfer forms for east-side community colleges	11/01/2014
Review plans of study with community college counselors	11/01/2014
Update Bridges website with finalized plans of study	11/01/2014
Draft plans of study to be reviewed by academic advisors	09/02/2014
Visit community colleges to meet staff and introduce new transfer recruiter	09/11/2014
Participate in new student orientation sessions at community colleges	09/18/2014
Schedule regular visit schedule at each community college	09/18/2014
Host on-campus luncheon for community college counselors	04/15/2015

Responsibility: Jana Kay Lunstad, Mariella Lora, Brittany Naas

Budget:

Travel to community colleges

Luncheon for counselors, academic advisors, and recruiters $800

Evaluation/Control

Admissions staff will monitor the funnel to determine yields from Bridges program.

11. Faculty Contact Program

Key Strategy: Implement an annual faculty contact program designed to reach 80 percent of the admitted students annually via telephone, personal notes, or electronic channels.

Description/Explanation: Studies show that students who develop a meaningful relationship with faculty are retained at a higher rate. We will engage students and faculty in the admit stage and use relationship building as a recruitment tool to convert students to the accepted and enrolled stages.

Implementation Schedule/Timetable

Task	Completion Date
Build and schedule CRM report of newly admitted students to distribute to faculty for personal follow-up	11/01/2014
Identify faculty to send admits hand-written notes	11/01/2014
Create faculty-specific postcards	11/01/2014
Build funnel report by academic area to distribute to academic units	11/01/2014
Develop faculty recruitment award program	11/01/2014
Build yield reports by academic program	11/01/2014

Responsibility: Chris Meiers, Jana Kay Lunstad, e-Recruiter

Budget:

Postcard printing & cutting: $350

Postcard mailing: $265

Evaluation/Control: Yield reports by academic program will be shared with academic units.

12. Campus Visit Plan & Crimson Academic Challenge

Key Strategy: Continue to build the number of campus visit opportunities for prospective students and their parents. This includes WSU Tri-Cities Academic Scholars Day to be called Crimson Academic Challenge.

Description/Explanation: Students who visit a campus will be more likely to apply for admission to the campus. We will increase the number of visitors to highlight the benefits of attending WSU Tri-Cities.

Implementation Schedule/Timetable

Task	Completion Date
Revised campus tour	09/01/2014
Track all campus visitors in CRM, both groups and individuals	09/01/2014
Goal to have 300 or more campus visitors (not including GEAR UP tours)	05/01/2015
October open house	10/01/2014
Crimson Academic Challenge	11/15/2014
Host College Planning Day	03/16/2015
Junior campus visit day (GEAR UP for WSU Tri-Cities)	04/22/2015

Responsibility: Kristy Phillips, Mariella Lora, Jordyn Wright

Budget:

Open House:
Postcard printing & cutting: $400
Heavy Appetizers: $1,000

Crimson Academic Challenge:
Postcard printing & cutting: $400
Breakfast: $875

Visit Day
Postcard printing & cutting: $400
Heavy Appetizers:$500

College Planning Day
Postcard printing & cutting: $400

Evaluation/Control: Yield reports by campus events.

13. Alumni Referral

Key Strategy: Develop an alumni referral program to include prospect name generation and regional receptions for all referred students and alumni after admission to the college. Consider also spring yield events.

- 100 inquiries goal
- 50 applications
- 20 enrolled

Budget:

- $9,000 for book waivers
- $500 printed material and reception
- Foundation pays reception

Description/Explanation:

WSU education alumni that live in Tri Cities, 729 students (also send to all Tri-Cities alumni living in area)

- August 20, postcard mailed out to these alumni announcing program and "save the date" for reception, will include timeline
- September 9, reception
- September 16, mailing out to alumni
- Students eligible for waiver by January 31
- Each alumni gets own special code
- Students must complete online form
- If they enroll, they receive a $300 book scholarship

Reception:

- Wine and cheese
- Chancellor vision
- Explanation of program
- Campus tours, student-led

Implementation Schedule/Timetable

Task	Completion Date
Write invitation letter from Chancellor	09/03/3014
Identify alumni to invite	09/03/2014
Create referral form	09/04/2014
Mail letters	09/15/2014
Host reception	09/27/2014
Send hand-written thank you note to attendees	10/01/2014
Monitor alumni referral submissions and track through funnel	05/01/2015

Responsibility: Adriana Sanchez-Sanchez

Budget:
Postage: $350
Waivers: $6,000

Evaluation/Control: Yield reports by referral program.

14. Special Student Population Recruitment & Outreach

Key Strategy: Consider special population recruitment strategies including Hispanic/Latino, science, engineering, and other.

Description/Explanation: WSU Tri-Cities is uniquely situated to target specific populations of students to recruit.

V & E

Transferability Walla Walla
NRCCUA
Purchase list wine production newsletter
World-class facility

Military Student Recruitment

Highest percentage in WSU system
Veteran's Center Tutoring Lab
Admissions friendly
Veteran graduation rate
Veteran job placement
Active duty or post-service

Hispanic and Latino

Summer program (HSI and Summer Institute)
High school program
Spanish financial aid
Hispanic leadership club
Translation strategies
Graduation rates compared to Caucasian students

68/161 first-year
52/189 transfer
77 College-bound

Pre-pharmacy

40 students save seat program
Pharmacy (Spokane)
Career track

Undecided (198 +108)

Develop online assessment
Campus to Career
Undecided student selection receive $500 second semester stipend

Implementation Schedule/Timetable	
Task	**Completion Date**
Assign V&E to Brittany for planning	11/01/2014
Assign Military to e-recruiter for planning	11/01/2014
Assign Latino leadership to Adriana for planning	11/01/2014
Assign Pre-pharmacy to Brittany for planning	11/01/2014
Assign Undecided to Kristy for planning	11/01/2014
Assign College Bound to Mariella	11/01/2014
Responsibility: Admissions Staff	
Budget: TBD	
Evaluation/Control:	

15. Academic Program Promotion

Key Strategy: Expand comprehensive recruitment and marketing plans to improve promotion of all academic programs at WSU Tri-Cities.

Description/Explanation:

Complete funnel reports by academic program

- Education
- Social science
- General science
- Business
- Engineering
- DTC
- Environmental science

Implementation Schedule/Timetable

Task	Completion Date
Develop individual academic program flyers, make changes required	11/01/2014
Student guides fully trained on academic meeting	11/01/2014
Crimson Academic Challenge (November 15) • Faculty leads • High school counselors • August 15, tests sent to Reed to review • September 1, publications ready • September 15, marketing starts • October 1, program finalized • October 15, application deadline • November 7, notifications finalized to students and counselors • December 1, scholarship announcements and thank-yous • December 1, winner school press releases	11/15/2014
Number of exams 50-70 students	
Plan yield rates and net revenue for each program? Goal to have 40% enrollment rate for 100 students	

Responsibility: Admissions Team and Jordyn Wright

Budget:

Printing and cutting: $2,800 (1,000 per program)

Evaluation/Control:

Yield rate on winners

Yield rate on non-winners

Cost per student attended

Cost per student enrolled

16. Financial Aid and Scholarships

Key Strategy: Implement an effective scholarship and financial aid strategy to ensure projected net revenue and enrollment goals.

- Build a 2013-14 historic matrix for analysis and planning
- Gather data on Cougar commitment and WSU grants
- Send planning matrix spreadsheet
- Build net revenue model for this next recruitment cycle

1. Establish matrix framework and parameters
2. Place number awarded and enrolled with yield rate in each cell

Implementation Schedule/Timetable

Task	Completion Date
Establish net revenue goals	11/01/2014
Finish financial aid matrix	10/15/2014
Develop new criteria for new student awards	11/01/2014

Responsibility: Chris Meiers, Jordyn Wright, Peter Smith

Budget:
$400,000 waiver budget

Evaluation/Control:
Evaluation of yield rates based on financial awards

17. Face-to-face Recruitment and Territory Management

Strategy: Implement a highly-effective, data-driven, face-to-face travel recruitment program. Segment for first-year and transfer student markets.

- College nights
- In-state college fairs
- Out-of-state college fairs
- WUE fairs
- High school visits
- Receptions
- Research and assess face-to-face travel

Description/Explanation:

Pre-visit

- Lists to counselors
- Text or email prior to visit to inquiries
- Generate counselor packet with list of currently enrolled students from school highlighting graduates from school

During visit

- Complete travel assessment worksheet
- Identify hot leads

Post-visit

- Thank you
- Personal invite to all to visit campus

Research travel

- Funnel report by miles from campus

Use of alumni

Counselor Territories:

Adriana Sanchez-Sanchez: Franklin and Yakima County High Schools

Brittany Naas: Eastern and Central Washington Community Colleges

Kristy Phillips: Benton County High Schools

Mariella Lora: Columbia Basin College

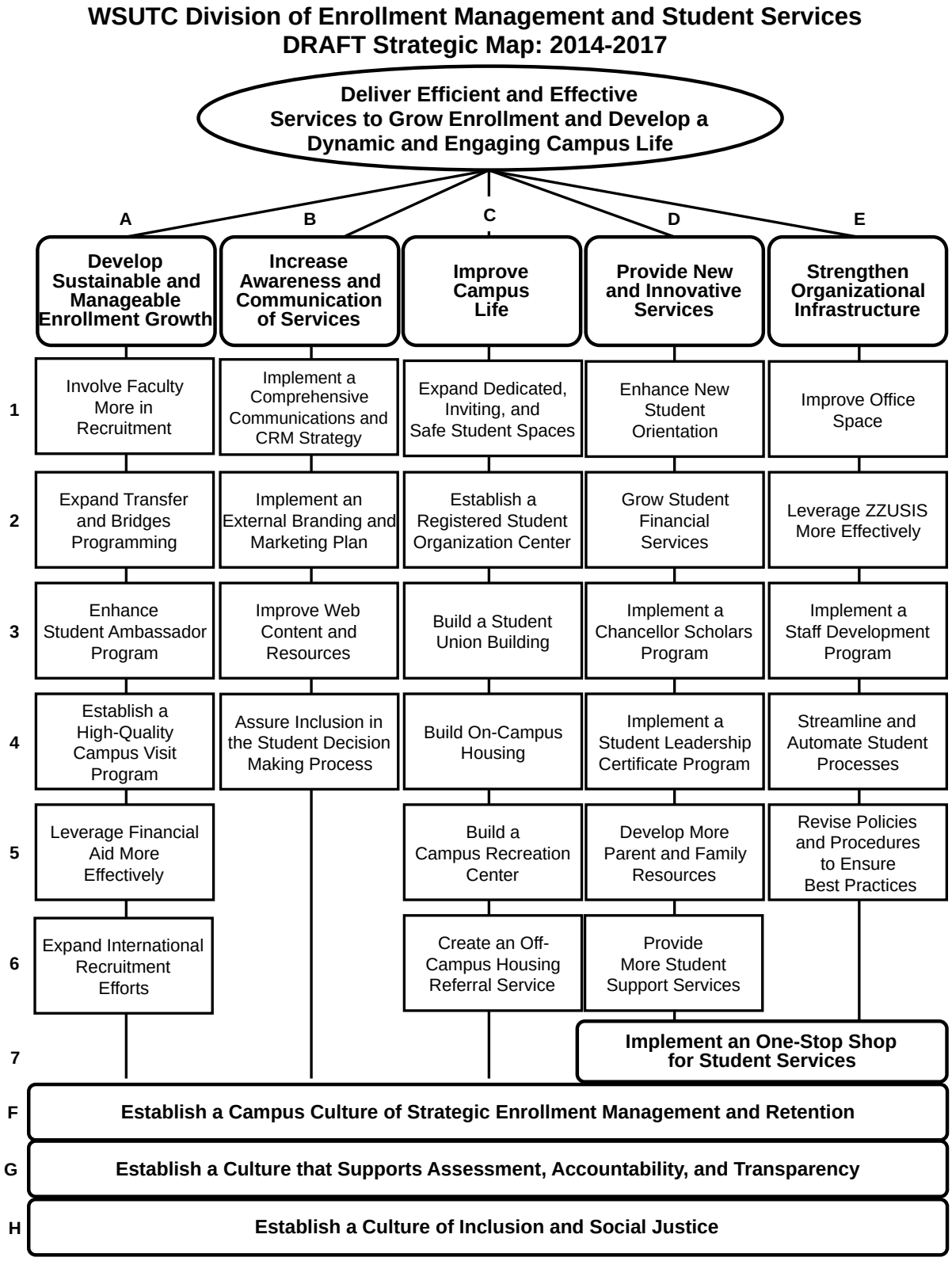
E-recruiter: travel as-needed, CRM

Implementation Schedule/Timetable

Task	Completion Date
Assign territories for admissions staff	07/15/2014
Analysis for territory include • Funnel by county or counselor • Review and assess last year's travel	10/15/2014
Travel plan developed	09/15/2015

Responsibility: Each enrollment counselor in charge of goals by funnel
Budget: No budget control
Evaluation/Control: Weekly monitoring of funnel reports

Appendix I: Division of Enrollment Management and Student Services Strategic Map



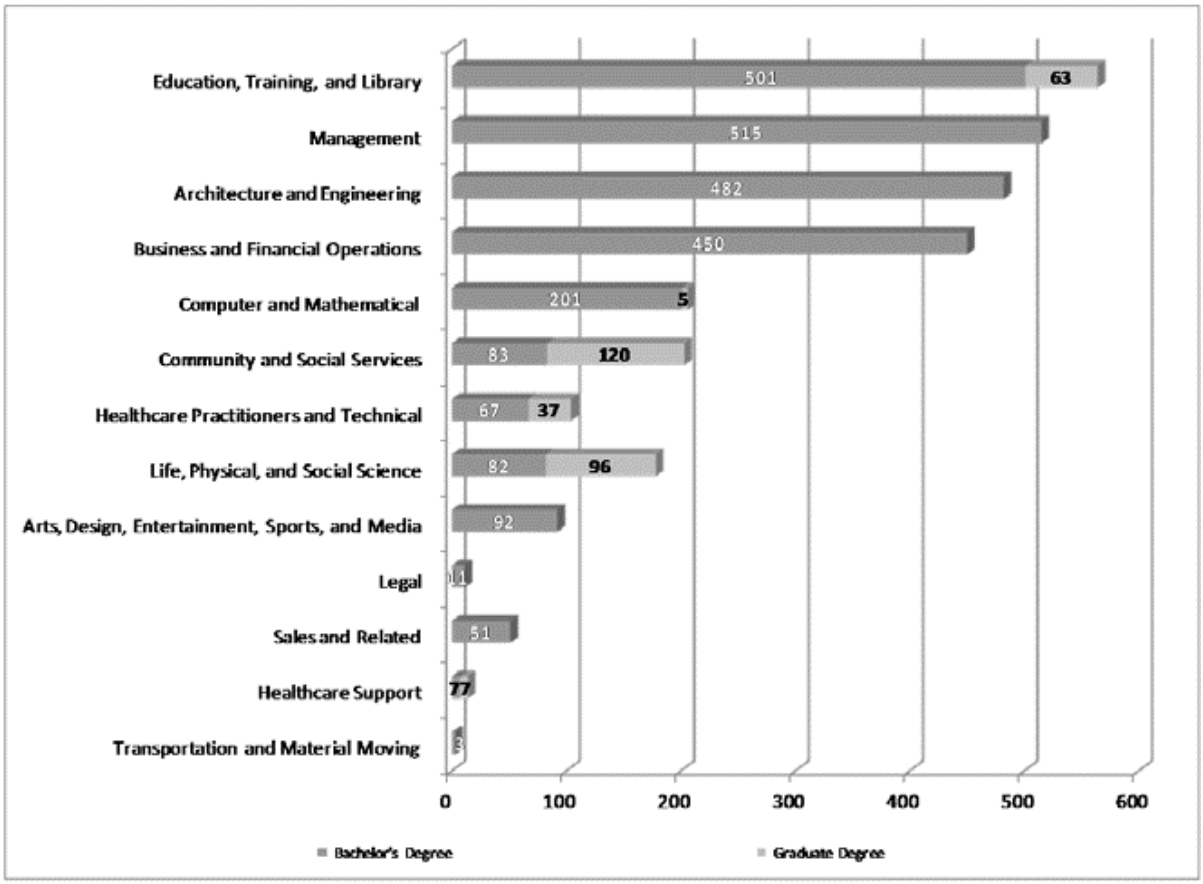
Appendix D: Summary of Mid-Columbia Valley Community Input

As part of the WSU Tri-Cities strategic planning process, Chancellor Moo-Young held eight forums in the fall of 2013. These forums were open to the public, faculty and community members. Each of the eight goal areas were a topic for each of the forums allowing for input through conversation and electronic clicker responses. There were general themes that provided desirable outcomes for the development of our campus.

1. Community leaders from several WSU Tri-Cities planning meetings held across the mid-Columbia Valley region evoked a series of themes and concerns for the future campus. Recommendations were to:
    a. Expand access to "quality" postsecondary educational opportunities.
    b. Align new programs with employer and workforce needs.
    c. Strengthen the pipeline of qualified students from K-12 a community college to enter STEM programs.
    d. Develop collaboration in synergy among research units of WSU.
    e. Partner institutions and local industry to support local/regional economic initiatives and long-range goals.
    f. Seek opportunities to attract new resources (public and private) for WSU Tri-Cities growth.
    g. Provide cost effective program opportunities for both traditional age students as well as older adult learners.
    h. Partner with the seven committee colleges across Eastern Washington to increase the rate of transfer students.
2. There is tremendous need to reduce the gap between employer needs for skilled workers and the available local qualified workforce pool.
3. In order to adequately meet workforce demands and expand the economic base of the mid-Columbia Valley region, local access to postsecondary education and degree completion is critical.
4. For many years, employers have relied heavily on the importation of highly skilled technical workers to fill jobs. This was often at the expense of local residents.
5. The state, as a whole, is not yet meeting the current demand (let alone projected future need) for baccalaureate and graduate/professional degree workers in general. This is particularly evident in the make Columbia Valley region as seen with higher than average job openings requiring for your degrees or greater in the stem disciplines.
6. Expressed programmatic needs include: hospitality, business/management, education, healthcare, communications/media, manufacturing related fields, agriculture, Marine science, nursing, and veterinary medicine to name a few.
7. The difficult economic environment the last five years is significantly read strict and resources to expand local program access. Despite the WSU Tri-Cities being a low-cost model of degree production, local leaders fear that such constraints will impede the ability of the local campus to expand as proposed in the strategic plan.

Appendix E: Mid-Columbia Valley Region Annual Occupational Group Openings* (2014-2019)

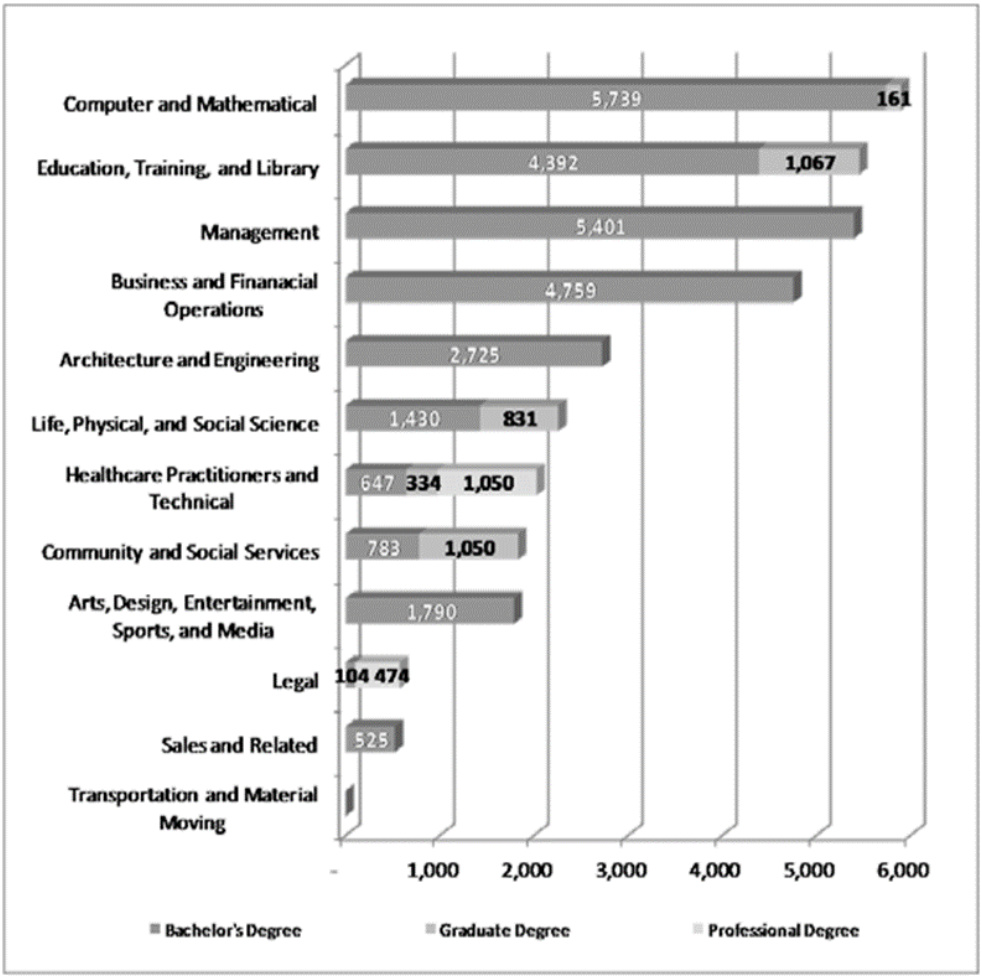
Requiring a baccalaureate degree or higher**



Source: Washington Employment Security Department, Labor Market and Economic AnalyMCV Branch, Occupational Employment Projections, May 2011.
MGT analyMCV of educational requirements, March 2012.
**Includes both new positions and replacements.*
***Degree requirements represent the education level most predominant for each specific SOC occupational category within the larger grouping in order to accumulate total openings by degree level*

Appendix F: Washington State Annual Occupational Group Openings* (2014-2019)

REQUIRING A BACCALAUREATE DEGREE OR HIGHER**



Appendix G: Academic Program Prioritization and Planning Procedures

The Advisory Council (ACT), in cooperation with Washington State University and its partners, developed Prioritization and Planning Procedures for its current and future academic programs at the WSU Tri-Cities. These procedures establish a process for prioritizing new programs and revising existing programs that facilitate timeliness of new offerings, recognizes the internal processes of the proposing institutions, and addresses each proposal's fit with the needs of the region." The new procedures are as follows:

1. Potential new program proposals will be considered by the ACT based on:
    a. STEM and "high demand" programs.
    b. Analysis of current and projected regional workforce information.
    c. Analysis of baccalaureate and graduate degree programs with high student demand across Washington's public colleges and universities.
    d. Suggestions from stakeholder input across MCV.
2. Criteria to assess newly proposed programs will include:
    a. Mode of delivery that is tailored to needs of potential MCV clientele.
    b. Class scheduling that is optimal for identified target audience.
    c. Program's ability to attract sufficient enrollments to justify funding.
    d. Ability of program to meet current and projected regional workforce demand.
    e. Alignment of baccalaureate and/or graduate programs with high student demand in Washington's colleges and universities.
    f. Community priorities as suggested by stakeholder input.
3. Upon approval by the ACT, responsibility for newly identified programs will either be assumed by WSU as follows:
    a. For new programs that are closely aligned with existing programs, the current provider will have right of first refusal.
    b. For new programs that are not closely aligned with existing programs, WSU will determine if it commits to offer the program in the near future.
    c. For new programs where neither the current provider of a closely aligned program or WSU commits, ACT and WSU will entertain proposals from other current partners and, as necessary, new partner institutions.
4. Current programs receiving FTE funding will be funded at current levels, except as follows:
    a. Programs in which enrollment falls significantly and remains lower over several years may be reviewed by the ACT for a level of funding proportional to enrollment.
    b. Programs in which enrollment grows significantly over several years may be reviewed by the ACT for a higher level of funding when new funding becomes available.
5. New FTE funding appropriated by the state for the WSU Tri-Cities will be allocated to cover direct instructional costs as well as critical student support and operational costs of the center.
6. New programs of interest to the community and individual institutions that are not part of the current plan and do not fall under the preceding funding categories may be proposed by partner universities. With a positive WSU recommendation and final consent of the Coordinating and Planning Council, the program may be implemented on a self-supporting basis.
7. In the event that a program is discontinued, the partner institution offering the program will insure that a "teach out" arrangement enables students admitted to the program to graduate.

Appendix H: WSU Tri-Cities Beautification Report

WASHINGTON STATE UNIVERSITY

World Class. Face to Face.

Washington State University
Tri-Cities Campus

Campus Identity & Design Guidelines

G G L O architecture I interior design I landscape architecture I planning and urban design

Agenda

Goals For The Meeting - 5 Minutes

What We Heard - 10 Minutes

Initial Design Ideas - 30 Minutes

Summary & Next Steps - 5 Minutes

WASHINGTON STATE UNIVERSITY

World Class. Face to Face.

Table of Contents

WASHINGTON STATE UNIVERSITY

World Class. Face to Face.

"Create a quintessential high desert Columbia river basin environment that fits within the WSU family and represents the values of dynamic student engagement, research excellence, community engagement"

Introduction

The WSUTC Buildings & Grounds Design Guidelines set forth WSU's desire to create a cohesive and unified campus that celebrates its setting while it looks toward the future.

The project will provide campus leaders with a strong identity based on the local landscape and as a center for technology and learning. The design elements described by this document support the design ambition of WSUTC. Over time, as these elements become part of the physical campus it will be recognized as a distinctly focused place for academics, technology and the future that draws its energy from the spectacular setting along the Columbia River.

This *riparian landscape* consisting of flora and fauna native to the river's edge provides a unique image and inspiration to connect the physical campus to the river. The design utilizes patterns, materials, colors and textures that are either drawn from this zone or recalls them. The resulting character will be deployed in frameworks for a campus experience that integrates the river, the desert landscape and the idyllic academic courtyard.

Tech Corridor

WSUTC should consider the long-term future image of the Technology Corridor that incorporates new buildings for Battelle, the Innovation Center and the Richland Innovation Center. Architecture and landscapes of these envisioned structures will be about the future, which means new technologies and building systems. WSUTC has the opportunity to set the tone for an interrelated environment of technological prowess that establishes WSU identity at the forefront.

2009 Master Plan

Phase 1

Phase 2

Phase 3

"…architectural unification starts with the siting of its buildings in creating a walkable campus that is compact yet open and inviting. The buildings should exhibit a high degree of transparency, particularly in shared or public spaces, fostering a merging of interior and exterior. Exterior building materials must be durable, of local origin and aesthetically compelling. Campus buildings will have a visual and physical connection, with clearly visible entrances. Connections may serve dual functionality by offering refuge from intense climatic conditions, with covered walkways or vertical screens for sun and wind protection."
-WSUTC Master Plan, 2009, TVA Architects

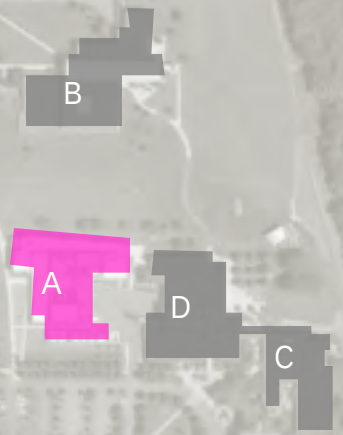
WASHINGTON STATE UNIVERSITY
World Class. Face to Face.

Existing Buildings

A BSEL
B CIC
C East
D West
E Wine Science Center

WASHINGTON STATE UNIVERSITY
World Class. Face to Face.

Existing Buildings



A BSEL
B CIC
C East
D West
E Wince Science Center

DISCLAIMER: THE BUILDING IMAGES CONTAINED IN THIS STUDY ARE TO ILLUSTRATE CONCEPTS ONLY. THE IMAGES DEPICT BUILDINGS DESIGNED BY OTHERS AND NOT GGLO.

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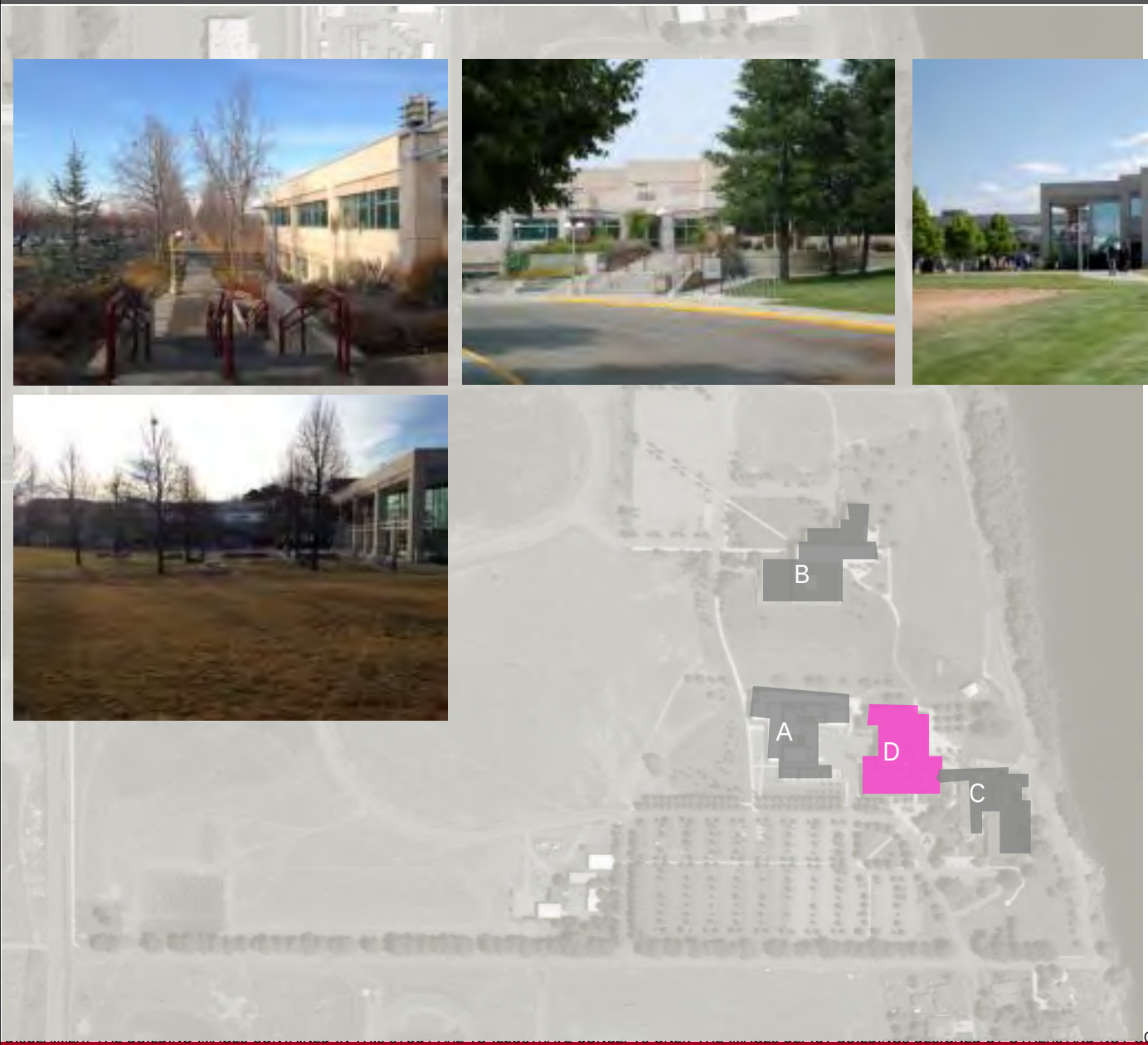

A BSEL
B CIC
C East
D West
E Wine Science Center

Existing Buildings

A BSEL
B CIC
C East
D West
E Wine Science Center

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Site Analysis
Building Entrances

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Site Analysis
Gateways

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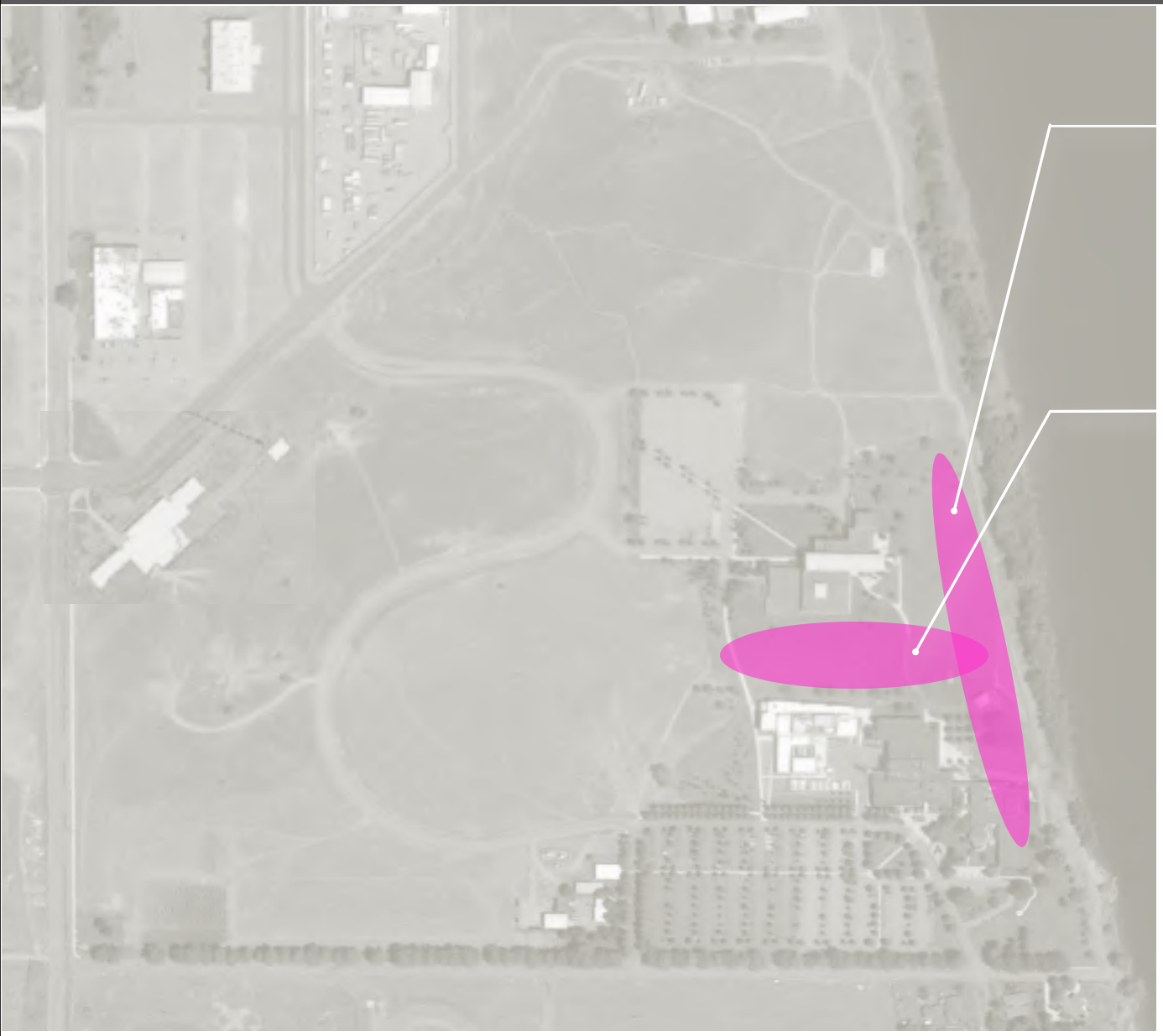
Site Analysis
Landscape



Columbia Basin Riparian Edge

- Native Plant Species
- Indigenous Stone/Rock
- Connection to Trail
- Interpretive Elements

Campus Green

- Lawn
- Formal Events
- Paved Pathways
- Ornamental Plants
- Tree Allee
- Lighting
- WSU Standard Signage/ Wayfinding

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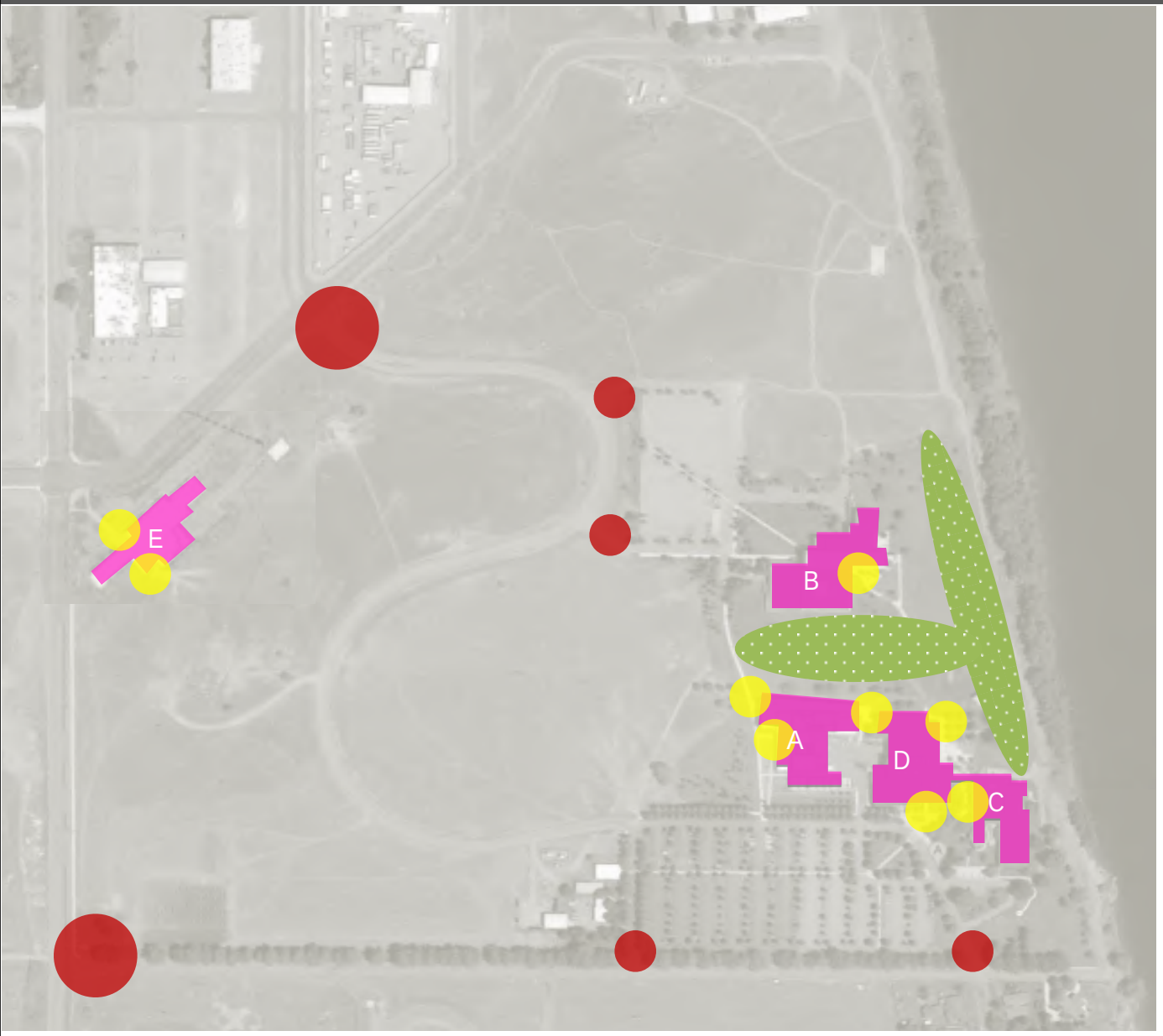
Site Analysis
Design Priorities



Existing Building

Gateways

Building Entrances

Landscape:
- Campus Green
- Riparian Edge

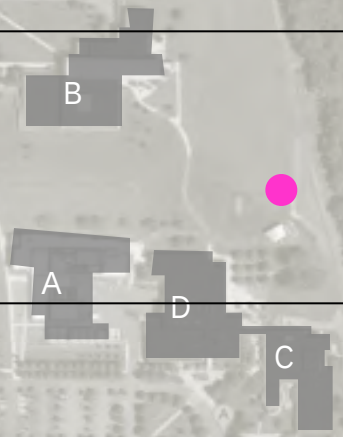
WSU Standard
Accessories*
Art*

*Applied Throughout Campus

DISCLAIMER: THE BUILDING IMAGES CONTAINED IN THIS STUDY ARE TO ILLUSTRATE CONCEPTS ONLY. THE IMAGES DEPICT BUILDINGS DESIGNED BY OTHERS AND NOT GGLO.

Existing Buildings Scope of Work*

PRIORITY		EXTERIOR CANOPY	EXTERIOR FINISH	LOBBY	GLAZING UPDATES	EXTERIOR REPAIRS	BUILDING SIGNAGE
1 EAST		●	●	●	●	●	●
2 BSEL			●				●
3 WEST		●		●			●
4 CIC				●			●



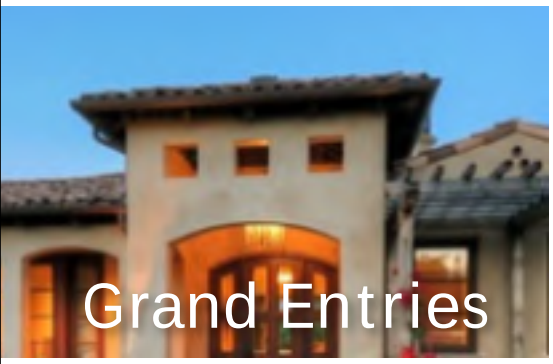
* The Wine Science Center is omitted from the scope since it is currently under construction

Existing Buildings Scope of Work*

PRIORITY		LANDSCAPE MAIN ENTRIES	SIGNAGE/ LIGHTING	EXTERIOR PATHWAYS	LANDSCAPE	TREES	TRELLIS/ CANOPY
1 EAST		●	●	●	●	●	
2 BSEL		●	●	●	●	●	●
3 WEST		●	●	●	●		
4 CIC		●	●	●	●		

* The Wine Science Center is omitted from the scope since it is currently under construction

Design Inspiration



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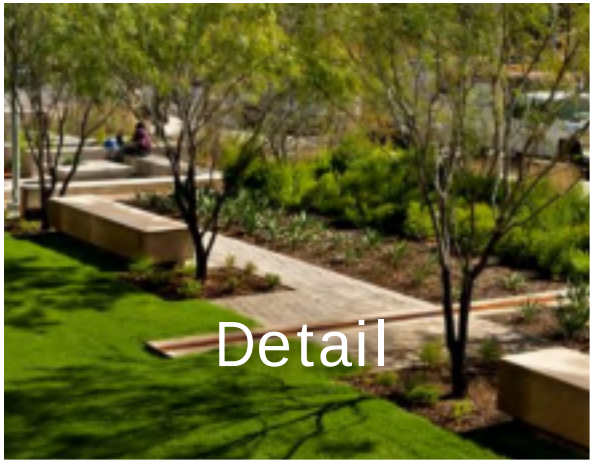
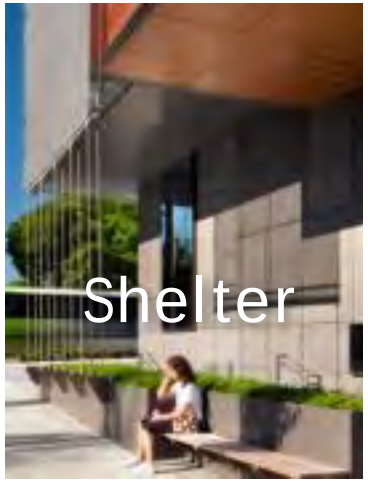
Design Inspiration





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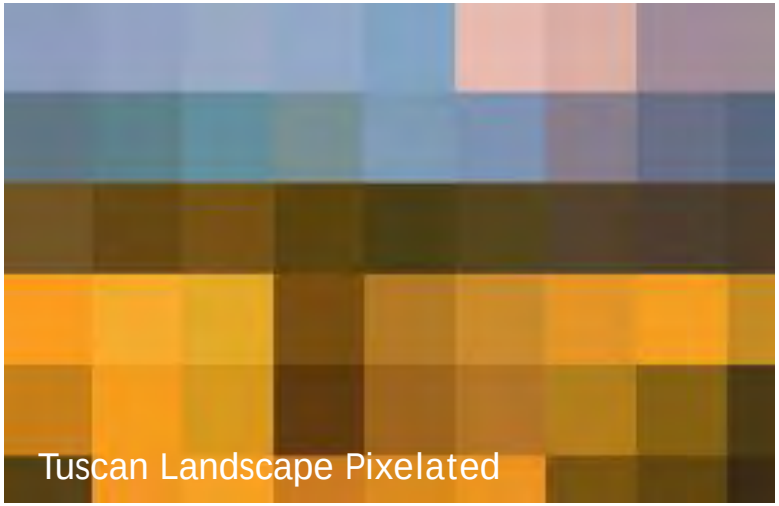
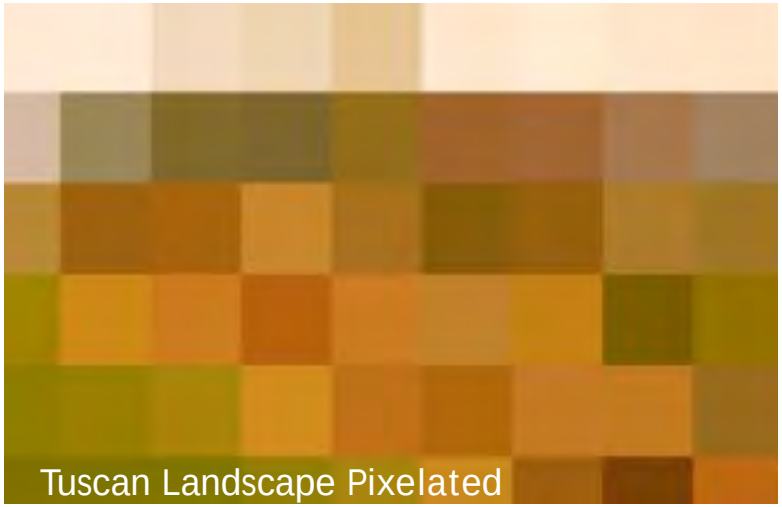
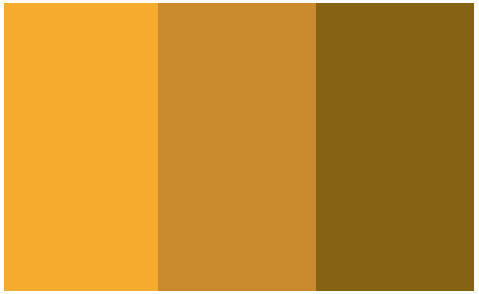
Design Inspiration

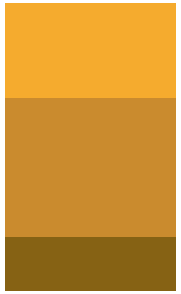
Tuscan Color Palette



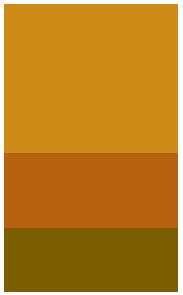


Tuscan Color Palette



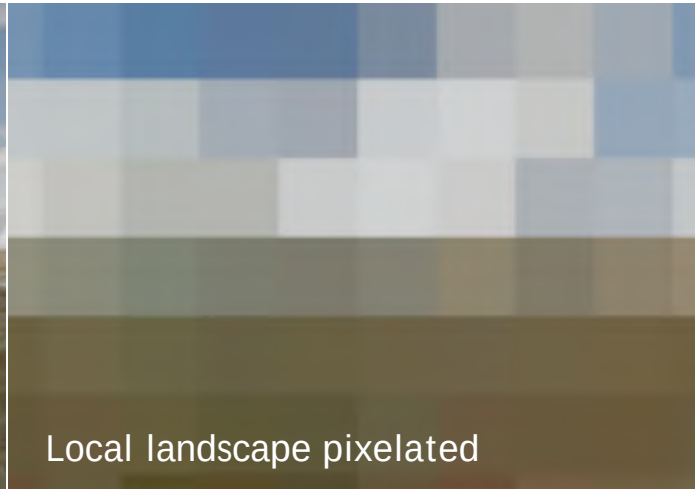


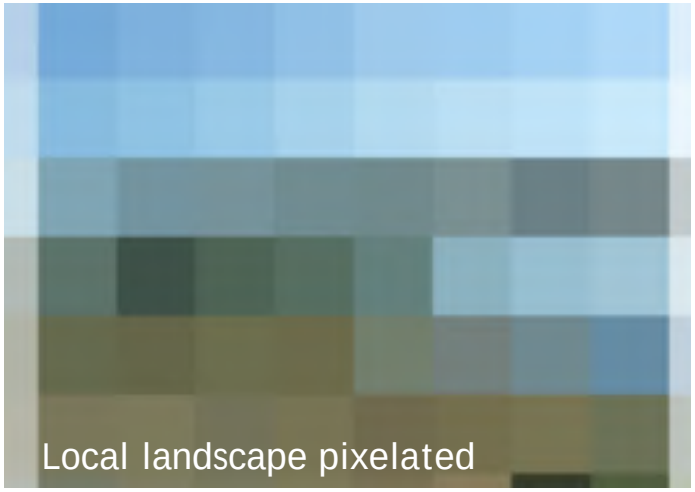
R=245	R=202	R=134
G=171	G=139	G=98
B=46	B=46	B=20



R=205	R=183	R=124
G=138	G=99	G=93
B=23	B=13	B=2

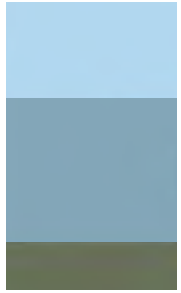
Local Color Palette

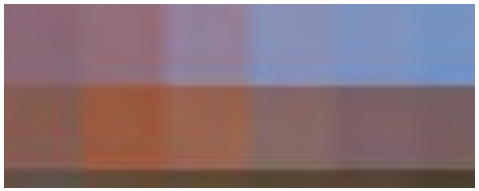


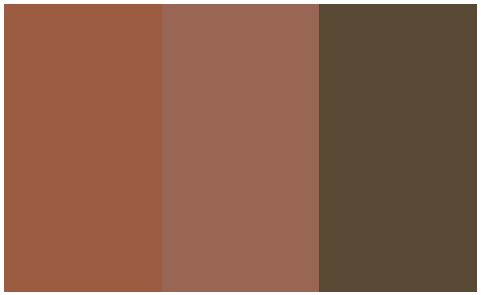


Local Color Palette

R=178	R=132	R=107
G=216	G=165	G=112
B=239	B=182	B=90







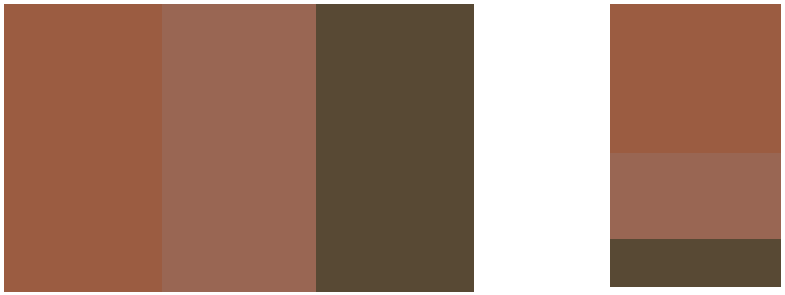
R=155	R=153	R=88
G=92	G=102	G=73
B=65	B=83	B=52

Blended Color Palette

R=245 G=171 B=46	R=202 G=139 B=46	R=134 G=98 B=20

R=178 G=216 B=239	R=132 G=165 B=182	R=107 G=112 B=90

R=205 G=138 B=23	R=183 G=99 B=13	R=124 G=93 B=2

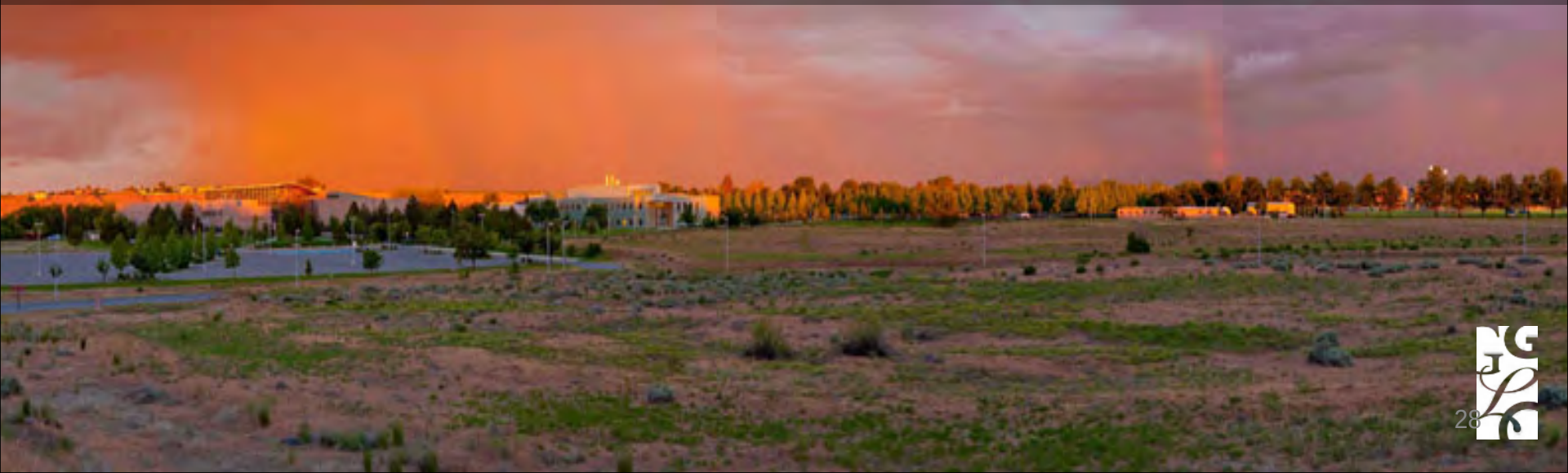


R=155 G=92 B=65	R=153 G=102 B=83	R=88 G=73 B=52

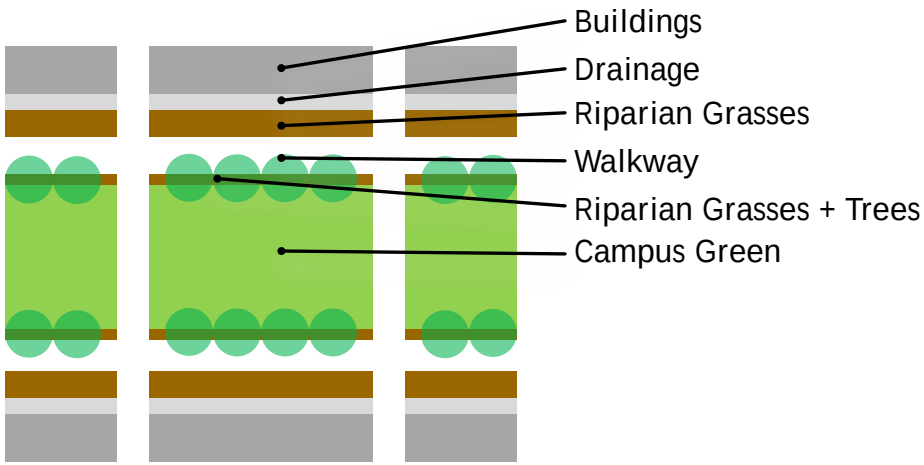
Design Concept

WSU Tri-Cities Campus embodies the quintessential high desert Columbia River Basin environment.

Set along the River's edge, the campus personifies the values of dynamic student engagement, research excellence, and community engagement.



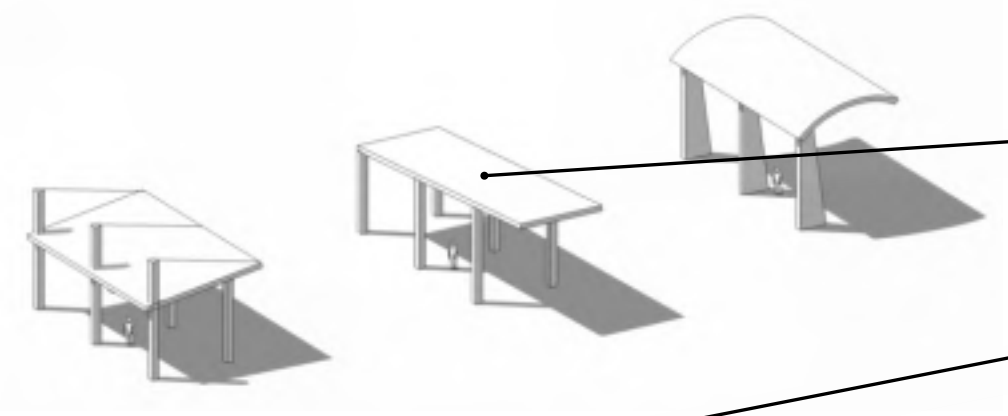
Campus
Kit of Parts



The campus lawns should be framed by walkways and Riparian landscape edges in order to anchor the campus to its setting.

Typical Section Between Buildings

Existing Buildings
Kit of Parts



Metal Clad Entry Canopy

Wood Veneer Composite Soffit

Coating or re-clad exterior wall(s) with concrete, composite panel or naturally weathering metal

Building Signage
- Integrated
- WSU Standard

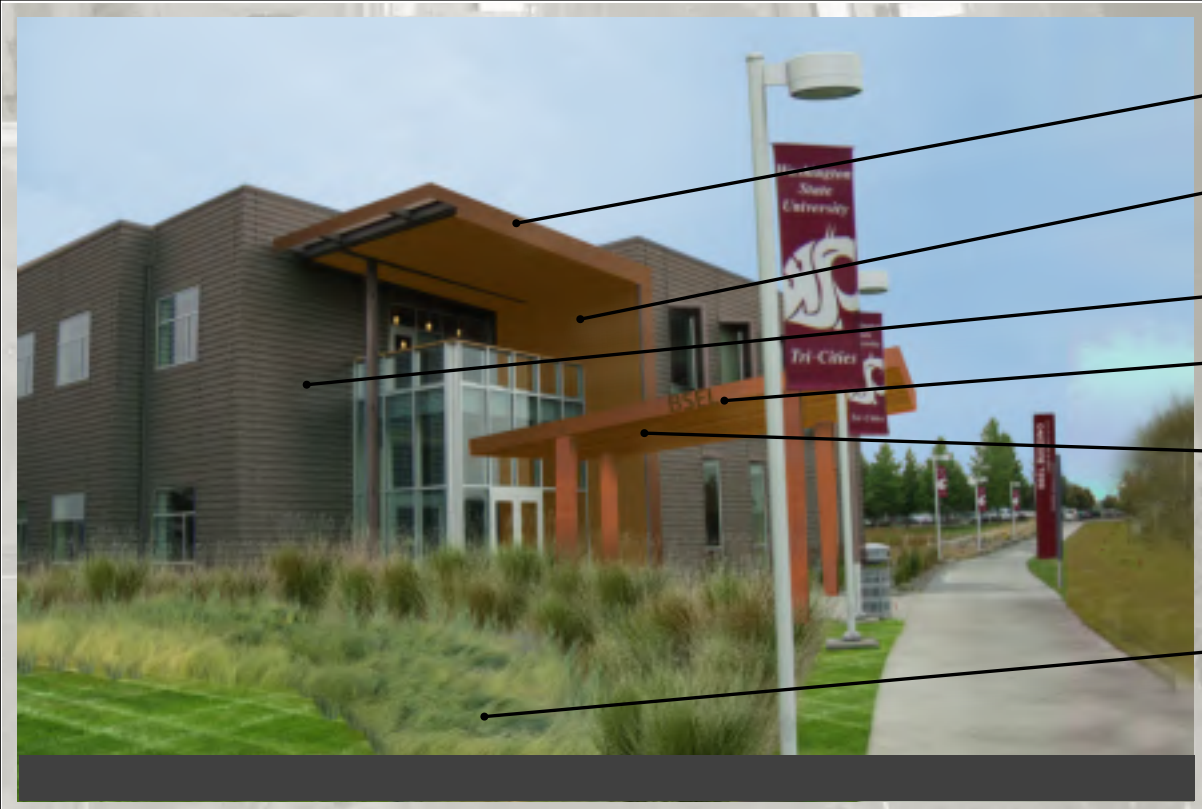
High-quality cabinetry for display and signage at lobby

Existing Buildings

- Integral Building Sign (size dependent on conditions)
- Weathering steel canopy
- Precast concrete panels
- Wood veneer composite (soffit)
- Colored concrete (or weathering steel) column
- Silica Coating
- River's Edge Landscape

A BSEL
B CIC
C East
D West
E Wine Science Center

Existing Buildings



Weathering steel fascia

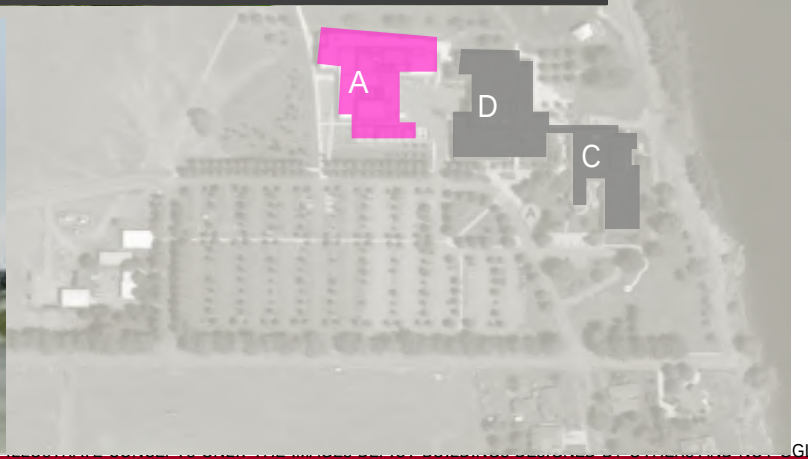
Wood Veneer Composite

Replace Metal Cladding

Canopy Building Signage

Weathering steel canopy and wood soffit

River's Edge Landscape



A BSEL
B CIC
C East
D West
E Wince Science Center

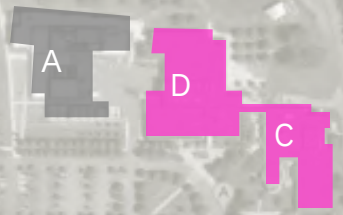
Existing Buildings

Entry Canopy and Lighting

Wood Veneer Composite

Building Sign: Weathering Steel with Lettering Cutouts

River's Edge Landscape



A BSEL
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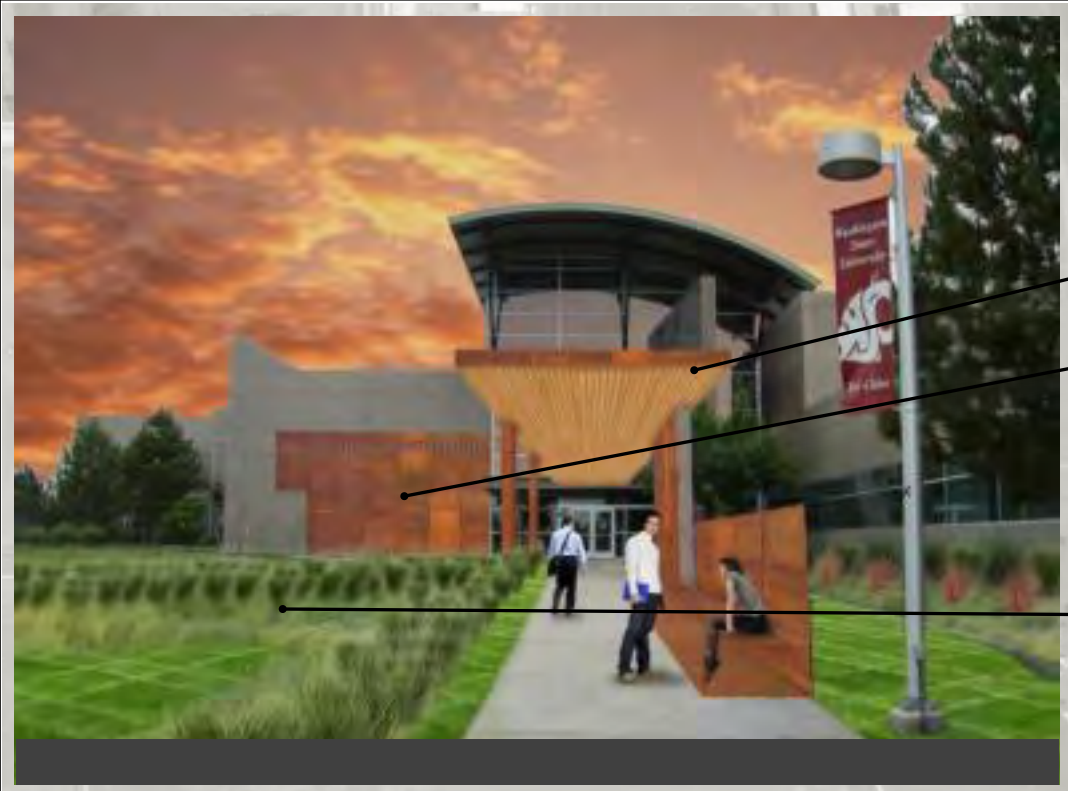
E Wine Science Center

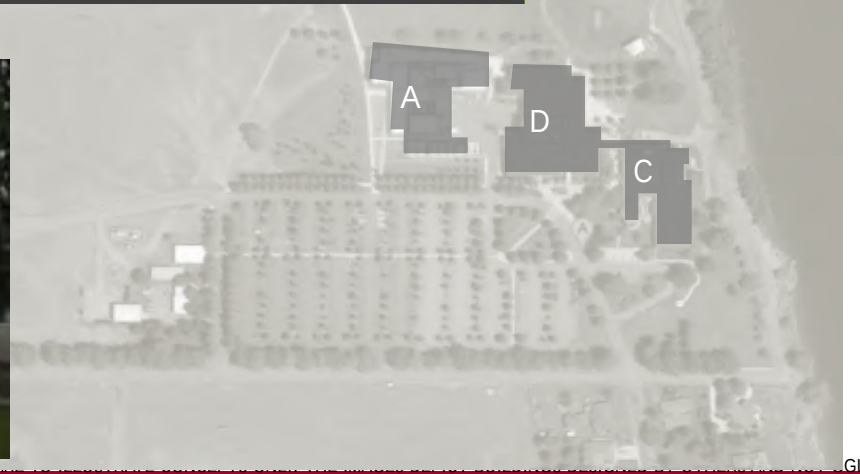
Existing Buildings



Weathering steel canopy

Building Sign: Weathering Steel with Lettering Cutouts

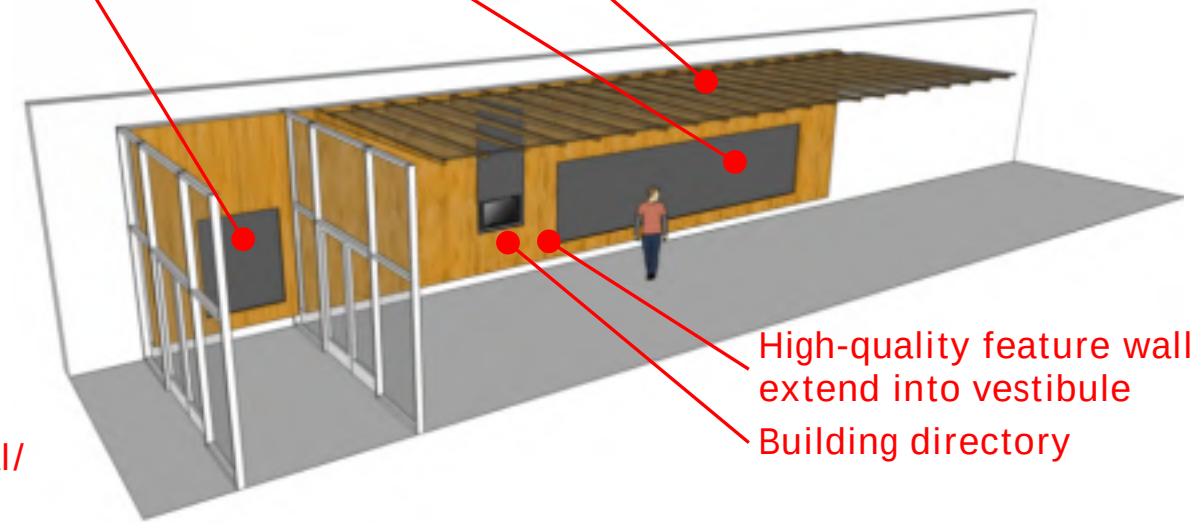
River's Edge Landscape



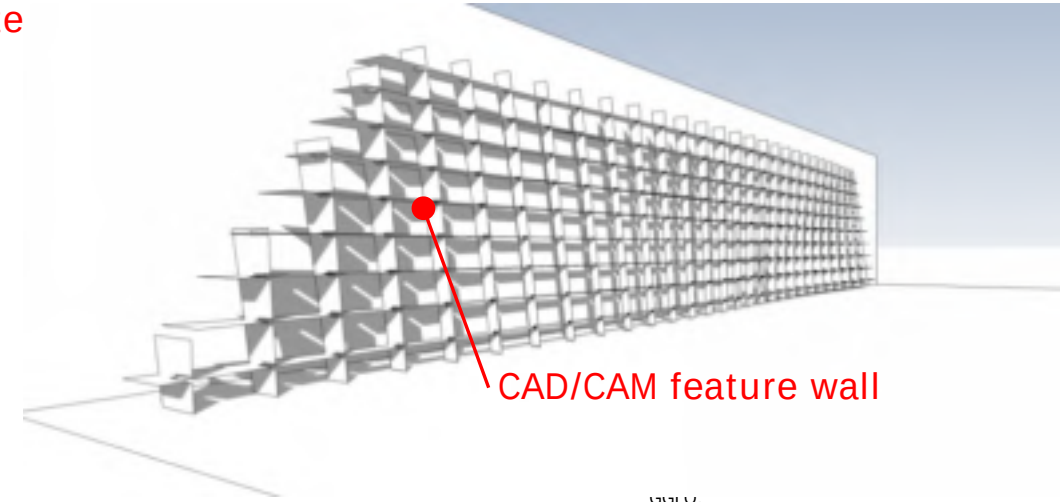
A BSEL
B CIC
C East
D West
E Wine Science Center

Existing Buildings
Lobby Options

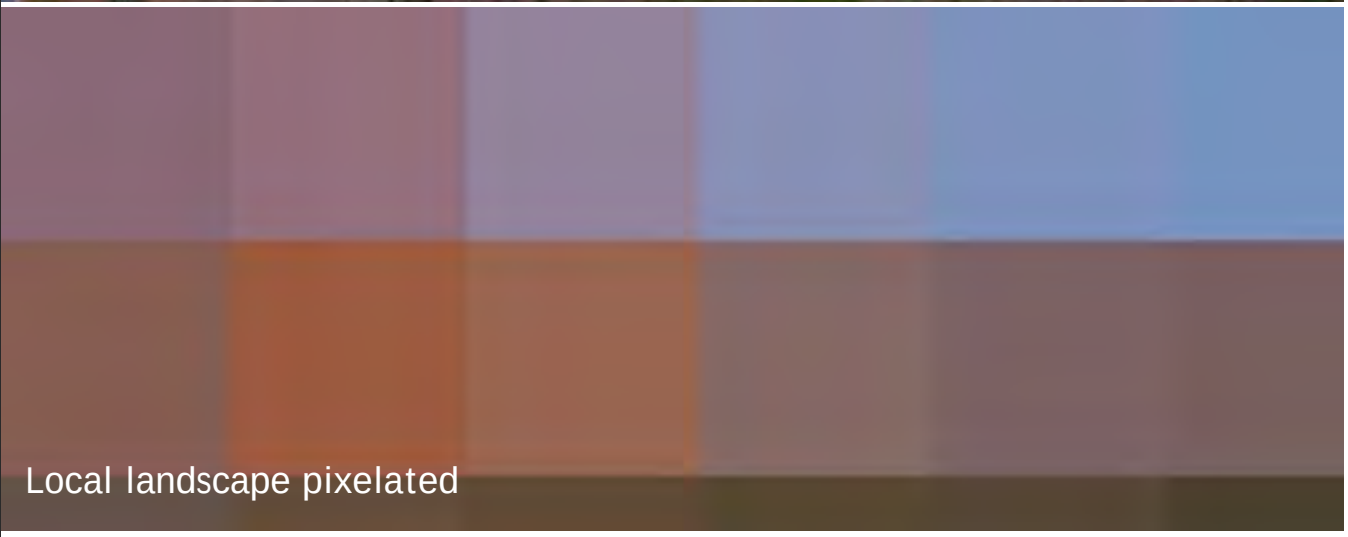
Translucent material/ lighting system



Modular wood wall syste



Existing & New Buildings
Color palette



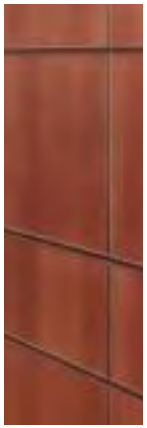
Existing & New Buildings
Building Products

Long-term coating: Penetrating Silicate-based mineral paint over existing substrate

Weathering steel for exterior building cladding, landscape details and signage

Metal cladding with concealed fasteners

Exterior grade wood veneer composite panel



Wood panel system at lobby

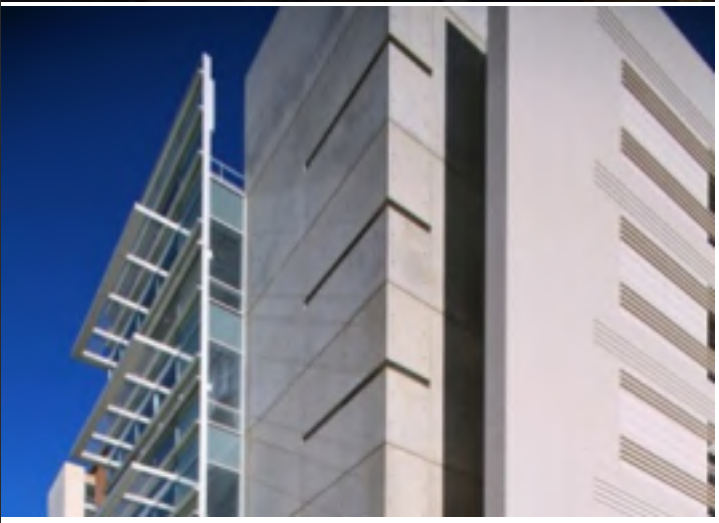
Translucent panel system + wood screen ceiling system with integral lighting at lobby

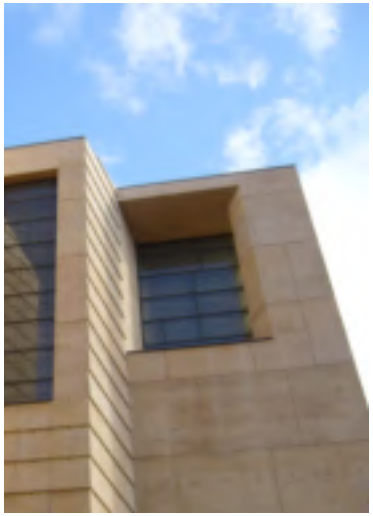
New Buildings

Cast Concrete
Cement Cladding
Metal Cladding
Entrances
Window Walls
Solar Control
Signage
Color

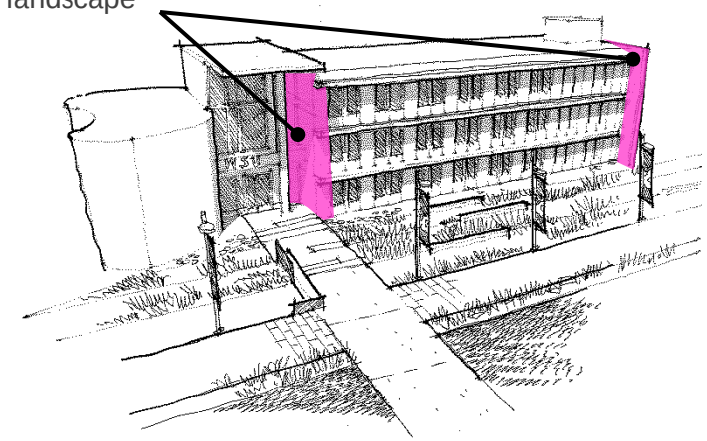
New Buildings
Cast Concrete

Cast concrete projects a monumental, modern identity that is appropriate for desert climates and educational institutions. Stone-like in texture, and sculpted by form-work it conveys a timeless presence on the campus.

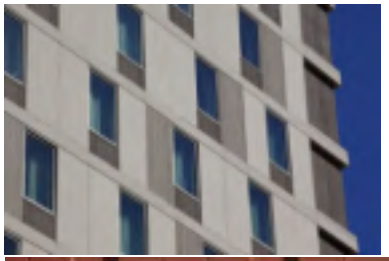




Cast concrete wall with joint articulation expressive of its making, color based on landscape



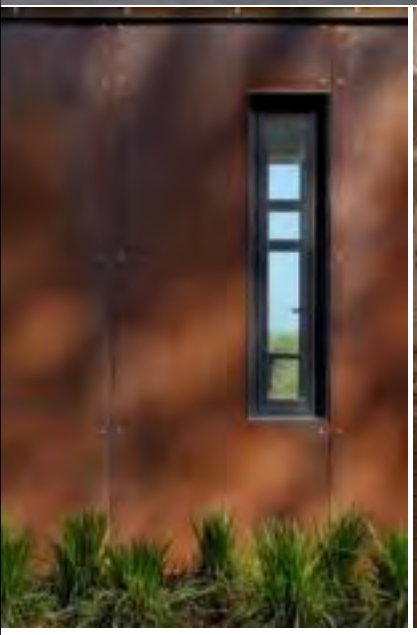
New Buildings Cement Cladding



As a low-cost alternative to cast concrete, cement cladding panels can be arranged in modules to achieve interesting building textures and patterns that reflect forms and colors of the landscape.

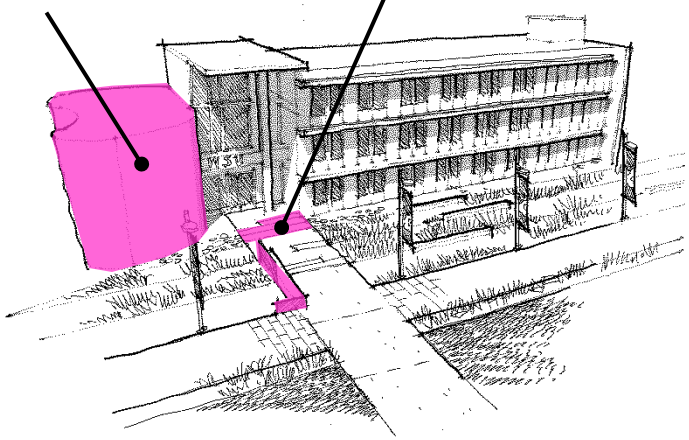
New Buildings
Metal Cladding

Metal cladding that weathers naturally complements the desert colors. The material will patina gracefully suggesting the age and longevity of the institution.



Metal can be cut flat or formed into expressive shapes. A wide variety of surface articulations are possible.

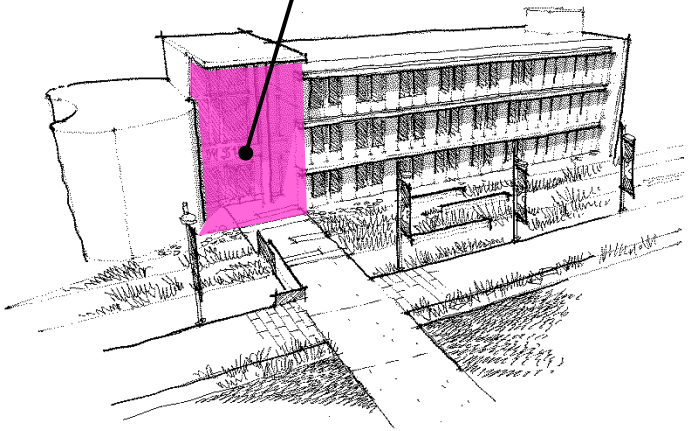
Weathering metal incorporated on the building and with the landscape details



New Buildings Entrance

Building Entrances shall be generous in scale and large enough for gatherings. They shall also include signature architectural features such as canopies, high-quality materials and special lighting. The entry exterior and interior lobby shall be well integrated. Curved geometry may be used at the entry area in order to distinguish it from the rest of the building.

Main building entrances are transition spaces between the inside and the outside. They should be sized in a manner that embraces the large-scale desert landscape.



New Buildings Lobby

The building lobby is a transition space that should be generously sized in relation to the rest of the building. It should be able to accommodate student displays, sitting space and appropriate directory information. The interior design should be related to the exterior architecture.

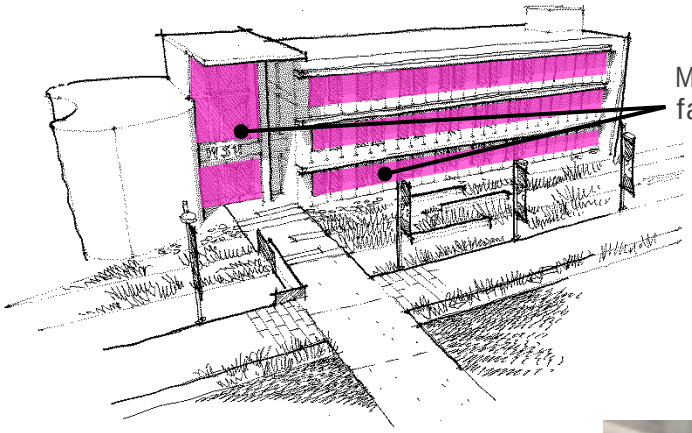
New Buildings
Interior Signage

High-quality signage that relates to the building design

Lobby electronic signage/ directory that is well-integrated with the interior design

New Buildings Window Wall

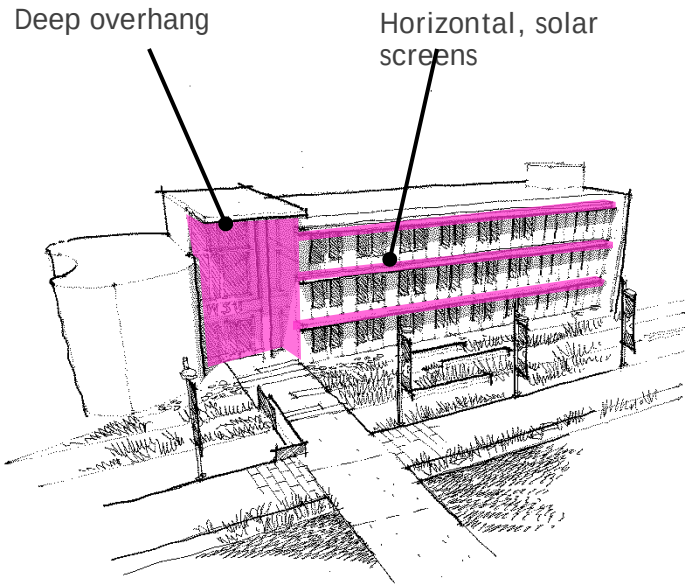
The buildings shall be transparent, making a strong connection to the landscape both inside and outside



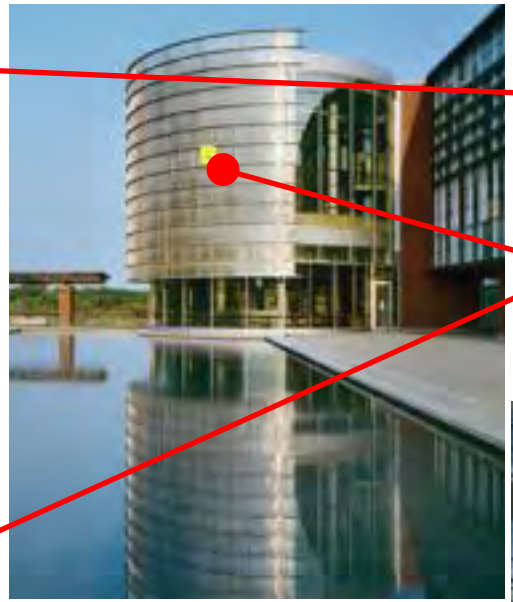
Main entrance and south-facing façade is generously glazed

New Buildings Solar Control

Solar Control on the South and West facades shall be integrated with the exterior architecture, specific building orientation and in conjunction with the mechanical system. The designer shall deploy glazing, sunscreens and/or overhangs that are both effective and aesthetically pleasing.



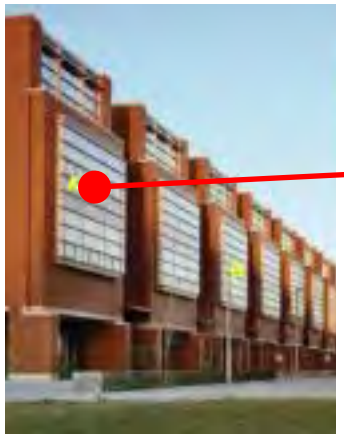
New Buildings
Solar Control



Overhang

Solar screen

Solar fins

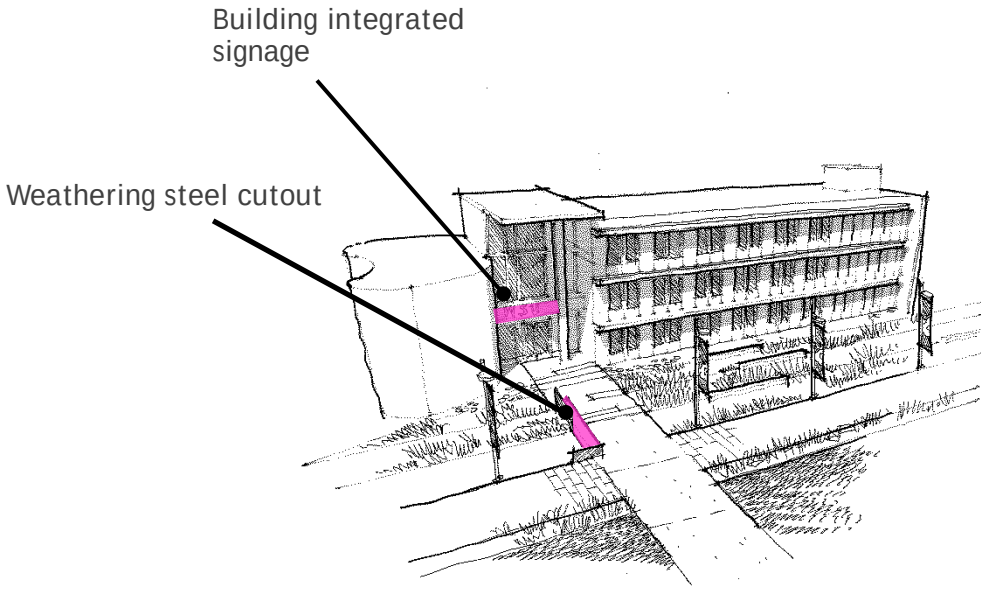


Solar glazing

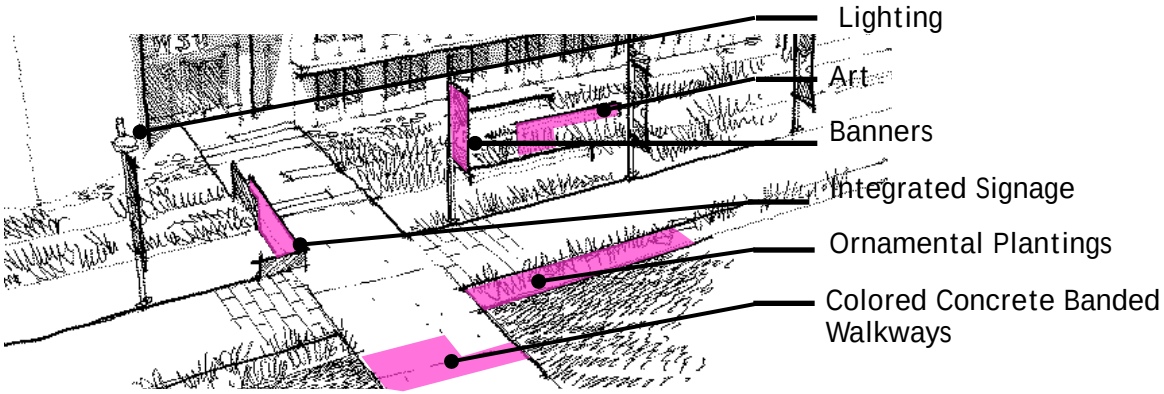
DISCLAIMER: THE BUILDING IMAGES CONTAINED IN THIS STUDY ARE TO ILLUSTRATE CONCEPTS ONLY. THE IMAGES DEPICT BUILDINGS DESIGNED BY OTHERS AND NOT GGLO.

New Buildings
Building Signage

Building Signage should be integrated with the exterior building materials. High-quality metal letters are preferred. Cutouts from a single sheet of weathering steel are an option. The size of 3-d letters shall be large enough to be in scale and proportion with the size of the façade on which they are attached.



New Buildings Landscape



The landscape will provide a contextual buffer anchoring the buildings to the Campus Green. A combination of ornamental grasses along with native trees and shrubs will unify the campus.

DISCLAIMER: THE BUILDING IMAGES CONTAINED IN THIS STUDY ARE TO ILLUSTRATE CONCEPTS ONLY. THE IMAGES DEPICT BUILDINGS DESIGNED BY OTHERS AND NOT GGLO.

Site Accessories

WSU Tri-Cities Campus Accessories

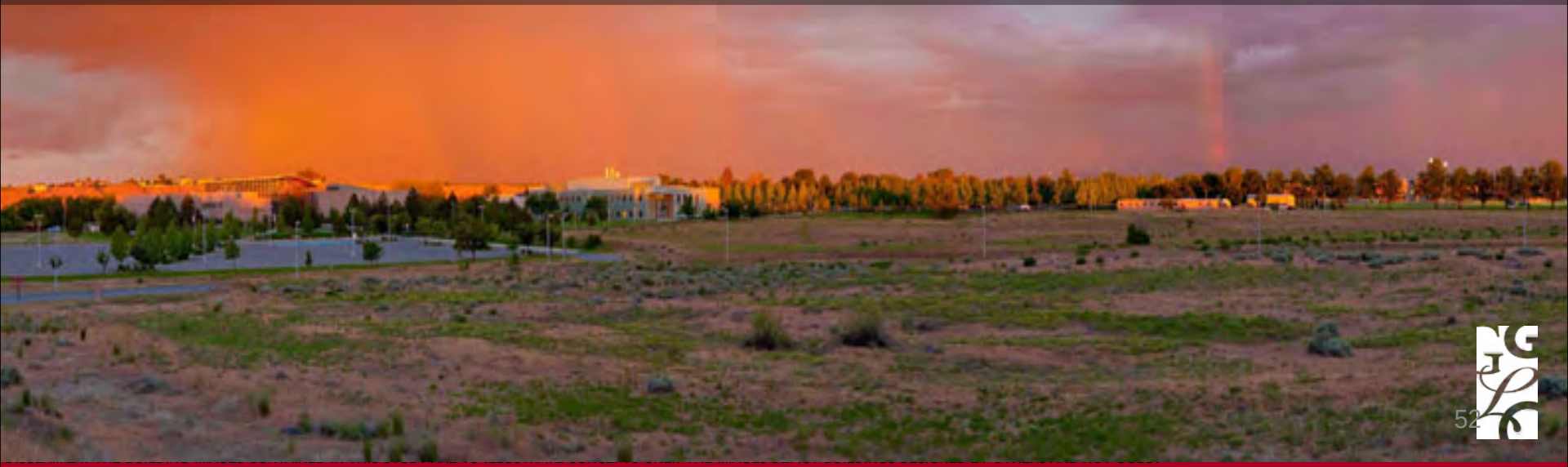
Site Artwork

Campus artwork can convey subtle messages that are rooted in the place , express timeless ideas and provide places for reflection. Artwork that is both textual and visual is highly appropriate for the academic campus.

Design Concept

WSU Tri-Cities Campus embodies the quintessential high desert Columbia River Basin environment.

Set along the River's edge, the campus personifies the values of dynamic student engagement, research excellence, and community engagement.



WASHINGTON STATE UNIVERSITY

World Class. Face to Face.

Washington State University
Tri-Cities Campus

Campus Identity & Design Guidelines

Appendix I: Leased Space Needs 2012-2018

Teaching Laboratories	Costs FY12	Costs FY 13	Costs FY 14	Costs FY 15	Costs FY 16	Costs FY 17	Costs FY 18	Total Costs
Biology lab	$53,209	$54,805	$56,449	$58,143	$59,887	$61,684	$63,354	$407,712
Physics lab			$56,449	$58,143	$59,887	$61,684	$63,354	$299,698
Research Lab Needs								
One Research Lab	$53,209	$54,805	$56,449	$58,143	$59,887	$61,684	$63,354	$407,712
One Research Lab				$58,143	$59,887	$61,684	$63,354	$243,249
One Research Lab					$59,887	$61,684	$63,354	$185,105
One Research Lab					Grant	Grant	Grant	
One Research Lab					Grant	Grant	Grant	
Office Space Needs								
Ten Cube Spaces	Grant	Grant	Grant	Grant	Grant	Grant	Grant	
Ten Offices	Grant	Grant	Grant	Grant	Grant	Grant	Grant	
Six Offices		$16,933	$17,441	$17,964	$18,503	$19,058	$19,630	$109,531
Three Offices				$8,721	$8,983	$9,252	$9,530	$36,485
Three Offices					$8,983	$9,252	$9,530	$27,766
Total Lease Cost	**$106,418**	**$164,416**	**$234,016**	**$307,646**	**$325,595**	**$335,363**	**$345,424**	**$1,717,257**
Total Useable SF	**4,494**	**6,241**	**6,241**	**7,238**	**8,610**	**9,607**	**9,607**	

Appendix J: Population Statistics

Table 1: Population Projections and Percentage Growth by State and MCV Counties 2010-2030

Year	AREA								
	Washington State	**MCV Total**	**Benton County**	**Franklin County**	**Yakima County**	**Walla Walla**	**Grant**	**Adams**	**Kittitas**
2012	6,724,540	717,143	180,678	78,163	246,977	59,404	91,265	19027	41,629
2015	7,022,200	779,627	204,292	104,430	300,341	62, 483	101,720	21,085	47,759
2020	7,411,977	927,490	221,542	128,310	321,341	65,853	114,891	23,158	52,395
2025	7,793,173	1,014,157	238,812	153,318	342,314	69,223	128,253	25,172	57,065
2030	8,154,193	1,102,019	256,072	179,327	363,341	72,593	141,847	27,187	61,652
% Growth	**21.3%**	**53.67 %**	**41.7%**	**129.4 %**	**47.1 %**	**22.2%**	**55.2%**	**42.9%**	**48.1%**

Source: Washington Office of Financial Management, Forecasting Division, 2012.

Table 2: Benton, Franklin and Yakima County Overall College Participation Rates

	WA	**MCV TOTAL**	**Benton**	**Franklin**	**Yakima**
Number enrolled in college or graduate school	470,103	15,764	1,505	7,824	6,435

Source: 2010 American Community Survey, 1-Year Estimates.

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Appendix K: Projected Financial Impact

Table 1: Projected FTE by Program

Program	*2015-15 FTE*	*2016-17 FTE*	*2017-18 FTE*	*2018-19 FTE*	*2019-20 FTE*	*2020-12 FTE*	*2021-22 FTE*	*2022-23 FTE*	*2023-24 FTE*	*2023-24 FTE*
B.A. Fine Arts	8	10	12	15	18	20	20	20	20	20
B.A. Hospitality Business Management	15	30	45	60	65	70	75	80	85	90
B.A. Wine Business Management	5	10	20	20	20	20	20	20	20	20
Education, Masters in Teaching	5	10	15	20	25	30	35	40	40	40
Nuclear Engineering Certificate	5	10	15	20	20	20	20	20	20	20
B.S. Biology					10	20	30	40	50	60
Doctorate of Nursing Practice					5	10	15	20	25	30
B.S. Biosystems Engineering					10	20	30	40	50	55
B.A. Chemistry (Health Science)					10	20	30	40	50	60
B.A. Criminal Justice						20	30	40	50	60
Cyber Security (certificate)						5	10	15	20	25
Bachelors Entrepreneurship							5	10	15	20
M.A. Liberal Arts								5	10	20
Project Management (certificate)									5	10
Radiation Safety (certificate)									5	10
Six Sigma (certificate)										5
Totals	38	70	107	135	183	255	320	390	465	545

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Table 2: Current Program Enrollment Expansion

Degree Program - Snapshot Totals	2013-14 FTE	2014-15 FTE	2015-16 FTE	2016-17 FTE	2017-18 FTE	2018-19 FTE	2019-20 FTE	2020-21 FTE	2021-22 FTE	2022-23 FTE	2023-24 FTE	2023-25 FTE
B.A. Business Administration	98.77	104.7	120.4	132.4	141.0	150.2	160.0	170.4	181.5	193.2	205.8	219.2
B.S. Civil Engineering	7.97	8.4	9.7	10.7	11.4	12.1	12.9	13.7	14.6	15.6	16.6	17.7
B.A./B.S. Computer Science	33.22	35.2	40.5	44.5	47.4	50.5	53.8	57.3	61.0	65.0	69.2	73.7
B.A. DTC	19.33	20.5	23.6	25.9	27.6	29.4	31.3	33.3	35.5	37.8	40.3	42.9
B.A. Elementary Education	76.46	81.0	93.2	102.5	109.2	116.3	123.8	131.9	140.5	149.6	159.3	169.7
B.S. Electrical Engineering	26.15	27.7	31.9	35.1	37.3	39.8	42.4	45.1	48.0	51.2	54.5	58.0
B.A. English	58.97	62.5	71.9	79.1	84.2	89.7	95.5	101.7	108.3	115.4	122.9	130.9
B.S. Environmental Science	26.77	28.4	32.6	35.9	38.2	40.7	43.4	46.2	49.2	52.4	55.8	59.4
B.A. History	48.53	51.4	59.2	65.1	69.3	73.8	78.6	83.7	89.2	95.0	101.1	107.7
B.A. Humanities	10.30	10.9	12.6	13.8	14.7	15.7	16.7	17.8	18.9	20.2	21.5	22.9
B.S. Integrated Plant Sciences	13.42	14.2	16.4	18.0	19.2	20.4	21.7	23.1	24.7	26.3	28.0	29.8
B.S. Mechanical Engineering	41.67	44.2	50.8	55.9	59.5	63.4	67.5	71.9	76.6	81.5	86.8	92.5
B.S. Nursing/R.N. to B.S. Nursing	96.60	102.4	117.8	129.5	138.0	146.9	156.5	166.6	177.5	189.0	201.3	214.4
B.S. Psychology	74.47	78.9	90.8	99.9	106.3	113.3	120.6	128.5	136.8	145.7	155.2	165.3
B.S. Science	125.60	133.1	153.1	168.4	179.4	191.0	203.4	216.7	230.7	245.7	261.7	278.7
B.A. Social Science	37.80	40.1	46.1	50.7	54.0	57.5	61.2	65.2	69.4	74.0	78.8	83.9
UGRD Totals:	*796.03*	*843.8*	*970.4*	*1067.4*	*1136.8*	*1210.7*	*1289.4*	*1373.2*	*1462.4*	*1557.5*	*1658.7*	*1766.5*

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Degree Program - Snapshot Totals	2013-14 FTE	2014-15 FTE	2015-16 FTE	2016-17 FTE	2017-18 FTE	2018-19 FTE	2019-20 FTE	2020-21 FTE	2021-22 FTE	2022-23 FTE	2023-24 FTE	2023-25 FTE
M.S. Environmental Engineering	8.85	9.4	10.8	11.9	12.6	13.5	14.3	15.3	16.3	17.3	18.4	19.6
M.S. Computer Science	9.05	9.6	11.0	12.1	12.9	13.8	14.7	15.6	16.6	17.7	18.9	20.1
M.S. Electrical Engineering	5.35	5.7	6.5	7.2	7.6	8.1	8.7	9.2	9.8	10.5	11.1	11.9
M.S. Mechanical Engineering	9.90	10.5	12.1	13.3	14.1	15.1	16.0	17.1	18.2	19.4	20.6	22.0
M.B.A. Business Administration	17.60	18.7	21.5	23.6	25.1	26.8	28.5	30.4	32.3	34.4	36.7	39.1
M.S. in Chemistry	2.65	2.8	3.2	3.6	3.8	4.0	4.3	4.6	4.9	5.2	5.5	5.9
Master of Educational Leadership	18.25	19.3	22.2	24.5	26.1	27.8	29.6	31.5	33.5	35.7	38.0	40.5
Doctor of Educational Leadership	5.20	5.5	6.3	7.0	7.4	7.9	8.4	9.0	9.6	10.2	10.8	11.5
Master of Education*	19.35	20.5	23.6	25.9	27.6	29.4	31.3	33.4	35.5	37.9	40.3	42.9
Master of Environmental Science	15.25	16.2	18.6	20.4	21.8	23.2	24.7	26.3	28.0	29.8	31.8	33.8
Doctor of Environmental Science & Natural Resource Sciences		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Master of Nursing	17.75	18.8	21.6	23.8	25.3	27.0	28.8	30.6	32.6	34.7	37.0	39.4
GRAD Totals:	*129.20*	*137.0*	*157.5*	*173.2*	*184.5*	*196.5*	*209.3*	*222.9*	*237.4*	*252.8*	*269.2*	*286.7*
UGRD & GRAD Subtotal:	925.23	980.7	1127.9	1240.6	1321.3	1407.2	1498.6	1596.0	1699.8	1810.3	1927.9	2053.3
Other FTE Not Accounted For:	133.08	141.1	162.2	178.4	190.0	202.4	215.6	229.6	244.5	260.4	277.3	295.3
Final Count Total FTE:	1058.31	1121.8	1290.1	1419.1	1511.3	1609.6	1714.2	1825.6	1944.3	2070.7	2205.2	2348.6

WSU Tri-Cities Academic Master Plan

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Table 3: Estimated Budget by Revenue Source

	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-12	2021-22	2022-23	2023-24	2023-25
Funded FTE Enrolled	865.00	865.00	865.00	865.00	865.00	865.00	865.00	865.00	865.00	865.00	866.00
WSUTC Enrollment	1121.81	1290.08	1419.09	1511.33	1609.56	1714.19	1825.61	1944.27	2070.65	2205.24	2348.58
Enrollment Growth	0.00	269.77	430.78	560.02	686.25	838.88	1022.30	1205.96	1402.34	1611.93	1835.27
Net Operating Tuition Generated	$ -	$2,238,132.40	$3,573,927.13	$4,646,166.24	$5,693,479.88	$ 6,959,698.36	$ 8,481,450.92	$10,005,214.86	$11,634,453.21	$13,373,325.45	$15,226,261.44
Net State General Fund Investment if funded	$ -	$1,375,826.44	$2,196,967.18	$2,856,094.81	$3,499,900.24	$ 4,278,271.02	$ 5,213,723.91	$ 6,150,413.22	$ 7,151,939.85	$ 8,220,860.70	$ 9,359,898.91
Total	$ -	$3,613,958.84	$5,770,894.32	$7,502,261.06	$9,193,380.12	$11,237,969.38	$13,695,174.83	$16,155,628.08	$18,786,393.06	$21,594,186.15	$24,586,160.36

Table 4: Estimated Budget by Program Code

NET New Cumulative By Program	2015-16		2016-17		2017-18		2018-19		2019-20		2020-21		2021-22		2022-23		2023-24		2024-25	
	Staff FTE	Dollars	Staff FTE	Dollars	Staff FTE	Dollars	Staff FTE	Dollars	Staff FTE	Dollars	Staff FTE	Dollars	Staff FTE	Dollars	Staff FTE	Dollars	Staff FTE	Dollars	Staff FTE	Dollars
Instruction	24.5	$ 2,230,175	39.1	$ 3,561,221	50.8	$ 4,629,648	62.2	$ 5,673,238	76.1	$ 6,934,955	92.7	$ 8,451,297	109.4	$ 9,969,644	127.2	$ 11,593,090	146.2	$ 13,325,780	166.4	$ 15,172,129
Primary Support	3.4	$ 309,000	5.4	$ 493,422	7.0	$ 641,457	8.6	$ 881,000	10.5	$ 960,867	12.8	$ 1,170,963	15.2	$ 1,381,336	17.6	$ 1,606,272	20.3	$ 1,846,343	23.1	$ 2,102,162
Library	1.5	$ 134,348	2.4	$ 214,531	3.1	$ 278,894	3.7	$ 381,000	4.6	$ 417,768	5.6	$ 509,114	6.6	$ 600,581	7.7	$ 698,379	8.8	$ 802,758	10.0	$ 913,984
Student Services	2.7	$ 241,826	4.2	$ 386,156	5.5	$ 502,010	6.7	$ 675,000	8.2	$ 751,983	10.1	$ 916,406	11.9	$ 1,081,046	13.8	$ 1,257,082	15.9	$ 1,444,964	18.0	$ 1,645,171
Institutional Support	4.0	$ 362,739	6.4	$ 579,235	8.3	$ 753,015	10.1	$ 1,037,000	12.4	$ 1,127,975	15.1	$ 1,374,609	17.8	$ 1,621,569	20.7	$ 1,885,623	23.8	$ 2,167,446	27.1	$ 2,467,756
M&O	3.7	$ 335,870	5.9	$ 536,328	7.6	$ 697,236	9.4	$ 1,501,000	11.5	$ 1,044,421	14.0	$ 1,272,786	16.5	$ 1,501,452	19.2	$ 1,745,947	22.0	$ 2,006,895	25.1	$ 2,284,959
Total	39.6	$3,613,959	63.3	$5,770,894	82.3	$7,502,261	100.9	$9,193,380	123.3	$11,237,969	150.2	$13,695,175	177.2	$16,155,628	206.1	$18,786,393	236.9	$21,594,186	269.7	$24,586,160

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Table 5: Estimated Budget by Object Code

By Object	2015-16		2016-17		2017-18		2018-19		2019-20		2020-21		2021-22		2022-23		2022-24		2022-25	
	Staff FTE	Dollars	Staff FTE	Dollars	Staff FTE	Dollars	Staff FTE	Dollars	Staff FTE	Dollars	Staff FTE	Dollars	Staff FTE	Dollars	Staff FTE	Dollars	Staff FTE	Dollars	Staff FTE	Dollars
Salaries																				
Faculty	15.5	1,296,819	24.8	$ 2,113,298	32.2	$ 2,754,665	39.5	$ 3,389,877	48.3	$ 4,158,479	58.8	$ 5,080,922	69.4	$ 5,993,753	80.7	$ 6,969,769	87.9	$ 8,011,460	100.1	$ 9,121,484
AP	5.5	263,258	8.8	$ 428,867	11.5	$ 558,808	14.0	$ 687,404	17.2	$ 843,239	20.9	$ 1,030,602	24.7	$ 1,215,758	28.7	$ 1,413,731	17.8	$ 1,625,015	20.3	$ 1,850,167
TA/GA	2.0	67,762	3.2	$ 110,038	4.1	$ 143,867	5.1	$ 177,422	6.2	$ 217,168	7.6	$ 265,816	8.9	$ 313,573	10.4	$ 364,634	4.6	$ 419,128	5.2	$ 477,198
Classified	8.7	325,568	13.8	$ 529,500	18.0	$ 690,559	22.1	$ 850,255	27.0	$ 1,042,799	32.9	$ 1,273,891	38.8	$ 1,502,756	45.1	$ 1,747,464	22.0	$ 2,008,619	25.1	$ 2,286,918
Wages	7.9	230,546	12.7	$ 375,259	16.5	$ 489,146	20.2	$ 602,550	24.7	$ 738,568	30.0	$ 902,199	35.4	$ 1,064,286	41.2	$ 1,237,594	15.6	$ 1,422,543	17.8	$ 1,619,638
Benefits	0.0	656,588	0.0	$ 1,068,405	0.0	$ 1,393,234	0.0	$ 1,714,223	0.0	$ 2,103,206	0.0	$ 2,570,309	0.0	$ 3,032,087	0.0	$ 3,525,829	0.0	$ 1,350,941	0.0	$ 922,873
Goods/Services	0.0	341,145	0.0	$ 555,834	0.0	$ 724,633	0.0	$ 891,396	0.0	$ 1,093,667	0.0	$ 1,336,966	0.0	$ 1,577,163	0.0	$ 1,833,987	0.0	$ 702,702	0.0	$ 480,040
Travel	0.0	59,973	0.0	$ 97,812	0.0	$ 127,208	0.0	$ 156,851	0.0	$ 192,712	0.0	$ 235,405	0.0	$ 277,698	0.0	$ 322,918	0.0	$ 123,728	0.0	$ 84,523
Equipment	0.0	101,253	0.0	$ 164,587	0.0	$ 215,043	0.0	$ 264,848	0.0	$ 324,774	0.0	$ 396,472	0.0	$ 467,701	0.0	$ 543,861	0.0	$ 208,384	0.0	$ 142,354
Leased Space	0.0	271,047	0.0	$ 327,293	0.0	$ 405,098	0.0	$ 458,555	0.0	$ 523,356	0.0	$ 602,592	0.0	$ 710,853	0.0	$ 826,607	0.0	$ 316,719	0.0	$ 216,362
Total	39.6	3,613,959	63.3	$ 5,770,894	82.3	$ 7,502,261	100.9	$ 9,193,380	123.3	$ 11,237,969	150.2	$ 13,695,175	177.2	$ 16,155,628	206.1	$18,786,393	236.9	$21,594,186	269.7	$ 24,586,160

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Appendix L: High Demand STEM Degree Categories

Degree Categories	Count
Agriculture, Agriculture Operations, and Related Sciences	25
Biological and Biomedical Sciences	90
Business, Management, Marketing, and Related Support Services	1
Computer and Information Sciences and Support Services	30
Engineering	53
Engineering Technologies and Engineering-Related Fields	64
Mathematics and Statistics	17
Multi/Interdisciplinary Studies	9
Natural Resources and Conservation	22
Physical Sciences	43
Psychology	1
Science Technologies/Technicians	8
Grand Total	363

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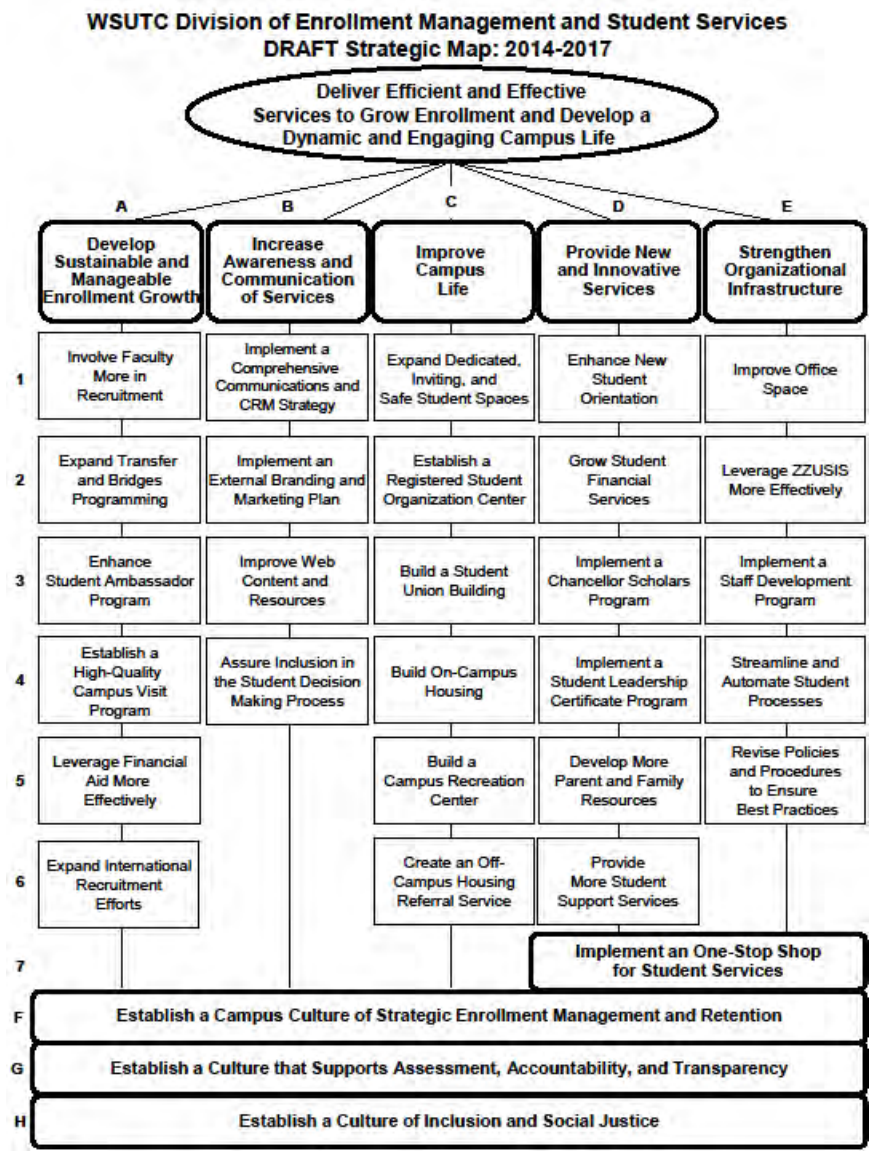
Appendix M: Student Services Strategic Map



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Appendix N: Transfer Population

Table 1

AFTER COLLEGE STATUS - TRANSFER
Source: SBCTC Independent College Transfer Survey 2012-13

	WSU Tri-Cities	To Baccalaureate Institutions	To Private Institutions	
Big Bend	14	160	38	
Columbia Basin	253	433	131	
Walla Walla	13	176	44	
Yakima Valley	19	387	141	
Total	299	1156	354	**1809**
Percentage	17%	64%	20%	

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Table 2

AFTER COLLEGE STATUS-TRANSFER

Transfers to Independent For-Profit Baccalaureate Institutions 2012-13 AY

	Antioch Seattle	Bastyr U	City U of Seattle	Cornish	Gonzaga U	Heritage U	Northwest U	Pacific Lutheran U	Seattle U	Seattle Pacific	St. Martin's U	Trinity Lutheran	U of Phoenix	U of Puget Sound	Walla Walla	Whitman	Whitworth U
Big Bend						13	1			1			22				1
Columbia Basin	0	0	5	0	7	43	3	0	1	1	0	0	69	0	1	1	0
Walla Walla	0	0	1	0	2	0	0	0	0	1	0	0	25	0	14	1	0
Yakima Valley	0	0	3	1	2	84	0	0	3	1	0	0	45	0	2	0	0
Total	0	0	9	1	11	140	4	0	4	4	0	0	161	0	17	2	1
Percentage	0%	0%	3%	0%	3%	40%	1%	0%	1%	1%	0%	0%	45%	0%	5%	1%	0%

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AFTER COLLEGE STATUS-TRANSFER
Transfers to Washington Public Baccalaureate Institution 2012-13 AY

	CWU	EWU	TESC	UW Bothell	UW Seattle	UW Tacoma	WGU	WSU Pullman	WSU Spokane	WSU Tri-Cities	WSU Vancouver	WWU Bellingham	CTC BAS	Portland State U	U of Idaho
Big Bend						13	1			1			22		
Columbia Basin	0	0	5	0	7	43	3	0	1	1	0	0	69	0	1
Walla Walla	0	0	1	0	2	0	0	0	0	1	0	0	25	0	14
Yakima Valley	0	0	3	1	2	84	0	0	3	1	0	0	45	0	2
Total	0	0	9	1	11	140	4	0	4	4	0	0	161	0	17
Percentage	0%	0%	3%	0%	3%	40%	1%	0%	1%	1%	0%	0%	46%	0%	5%

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Appendix O: Tri-Cities Target Industries Recommendation 2014

TRI-CITIES TARGET INDUSTRIES RECOMMENDATIONS

March 2014

Prepared for:
Tri-City Development Council

NEW ECONOMY TARGET INDUSTRY ANALYSIS
PART II OF IV

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TRI-CITIES TARGET INDUSTRIES RECOMMENDATIONS

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NEW ECONOMY TARGET INDUSTRY ANALYSIS
PART II OF IV

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INTRODUCTION

This is the second of four reports for the TRIDEC New Economic Target Industry Analysis. The purpose of this report – Tri-Cities Target Industries Recommendations - is to present methodology, data and rationale related to the identification of recommended target industries for the Tri-Cities region. Industry intelligence for target industries is also provided to enhance understanding of industry needs in order to build a strong case for the region.

Department of Energy-related employment will continue to be a significant part of the Tri-Cities economy in the next forty to fifty years. This research is to stabilize the regional economy for the long-term through diversification.

Identifying specific target industries is not done at the exclusion of other business recruitment opportunities. If leads come to the region outside of targets, TRIDEC and partner economic development professionals should work those projects aggressively. This research identifies industries that align to regional capabilities and provide an opportunity to diversify the regional economy. Target industries enable a focus for proactive marketing strategies and smart resource allocation.

METHODOLOGY

This study focuses on basic industries – *those industries that bring new wealth into the local economy in the form of investment, jobs, payroll and local purchasing*. Basic industries contribute the greatest economic impact to an economy.

The process to determine target industries for the Tri-Cities region involves two steps:

1. **Industry Trends Analysis:** This step includes research of industry growth at the 6-digit NAICS[1] level for the region (Benton and Franklin Counties) as well as a larger Washington/Oregon region. The most current data is utilized in this analysis. The last year of the data represented is 2012.

2. **Regional Fit Analysis:** Findings from the Tri-Cities Competitiveness Report Card will be used to identify industries as to what the Tri-Cities region can accommodate successfully. Both limitations and unique assets will be considered in the screening analysis.

For the recommended target industries, research of typical company profiles, priority location factors, key occupations for the industry, current industry issues, locations to source these industries and conversation starters for outreach to CEOs, human resources and CFOs is also presented.

[1] NAICS stands for North American Industry Classification System and is the standard used by Federal statistical agencies in classifying business establishments for the purpose of collecting, analyzing, and publishing statistical data related to the U.S. business economy. NAICS replaced the Standard Industrial Classification (SIC) in 1997.

INDUSTRY TRENDS ANALYSIS

The purpose of the industry trends analysis step is to document the regional economic base and analyze the trends to identify a universe of potential target industries. The analysis starts with a documentation of historical industrial trends for Benton and Franklin Counties, including:

- Industry growth including trends in employment over the time period of 2007 to 2012;
- Number of establishments and average regional wages by 6 digit NAICS from 2007 to 2012;
- National projected output and employment growth; and
- National capacity utilization rates for manufacturing industries as an indicator of expansion potential.

This data indicates what types of industries have been most successful in the larger region in recent years and which ones are likely to hold the best potential for future growth. Comparable data sets for Washington and Oregon (combined) are documented to identify similarities and differences. This analysis yields valuable information about Tri-Cities' niches and how the region differentiates itself in terms of its economic base. Complete economic base data is provided in Appendix A.

REGIONAL ECONOMIC SITUATION

To begin understanding the economic situation in Benton and Franklin Counties, private-sector basic industries in Benton and Franklin Counties with 2012 employment of 250 or more are presented in the following table[2]. The largest regional industry clusters, based on employment, include agriculture and food processing; engineering, research and remediation; chemicals; business support services; and hospitality. Sectors that experienced the largest growth from 2007 to 2012 are fresh fruit and vegetable wholesalers; hazardous waste collection; facilities support services; and telemarking bureaus. Employment decline is observed during this same period for remediation services and heavy machinery rental and leasing, with very slight employment drop in managing offices. Drop in remediation likely reflects achievements in environmental clean-up at Hanford with funding now directed at collection, and eventually processing of hazardous waste.

Of interest is the location quotient – calculated by comparing the industry's share of regional employment with its share of national employment – for the region's top employers. Industries with location quotients greater than 1.0 are technically serving customers outside the local area – an indicator of bring wealth into the local economy; while a location quotient above 2.0 is considered a specialty of the area. Every basic industry on the following table far surpasses 2.0 location quotients, except for managing offices; fitness and recreation sports centers; and hotels and motels.

However, of the top employment clusters in the region, only engineering, research and remediation as well as chemicals pay significantly above average wages.

[2] Comprehensive data for basic industries exceeding 250 employees is included in Appendix B.

TABLE 1 - EXISTING BASIC INDUSTRY CLUSTERS IN TRI-CITIES, WA REGION

NAICS	Description	Employment 2007	Employment 2012	2007-12 Absolute	2007-12 Percent	Firms	Average Wage	Location Quotient
	Agriculture and Food Processing							
111000	Crop production	7,939	9,037	1,098	14%	528	$22,274	20.05
112000	Animal production	385	629	244	64%	44	$33,348	3.22
115000	Agriculture and forestry support activities	2,024	2,423	399	20%	54	$23,549	8.54
311411	Frozen fruit and vegetable manufacturing	2,612	3,192	580	22%	14	$39,257	118.67
312130	Wineries	576	1,083	507	88%	57	$30,795	30.23
424480	Fresh Fruit and Vegetable Wholesalers	88	253	165	186%	3	$39,011	3.57
424490	Other Grocery and Related Products Wholesalers	240	259	19	8%	9	$41,139	1.43
424910	Farm Supplies Merchant Wholesalers	312	383	71	23%	32	$59,770	4.15
493120	Refrigerated warehousing and storage	223	316	93	42%	6	$40,948	7.52
	Engineering, Research & Remediation							
541330	Engineering services	3,284	3,569	285	9%	102	$96,942	4.82
541620	Environmental consulting services	225	372	147	65%	21	$71,554	5.54
541712	Physical and engineering research	2,897	4,342	1,445	50%	19	$91,128	11.82
562112	Hazardous waste collection	0	266	266	26641%	1	$69,113	32.29
562211	Hazardous waste treatment and disposal	1,138	1,227	89	8%	3	$101,515	39.47
562910	Remediation services	5,139	4,472	-667	-13%	27	$101,906	68.80
	Chemicals							
325188	All other basic inorganic chemical mfg.	604	639	35	6%	1	$96,165	25.38
	Business Support Services							
551114	Managing offices	329	325	-5	-1%	9	$95,367	0.21
561210	Facilities support services	40	578	538	1350%	6	$42,910	5.13
532412	Other heavy machinery rental and leasing	267	248	-19	-7%	9	$53,481	5.17
561422	Telemarketing bureaus	92	848	756	820%	3	$26,094	2.52
541513	Computer facilities management services	263	433	170	65%	1	$76,777	9.79
	Hospitality							
713290	Other gambling industries	335	371	37	11%	4	$19,479	11.40
713940	Fitness and recreational sports centers	522	736	214	41%	31	$11,436	1.76
721110	Hotels and motels, except casino hotels	813	823	10	1%	41	$19,430	0.68

Source: IMPLAN ES202 data, Bureau of Labor Statistics Employment 2012
* Location quotient relative to the U.S.

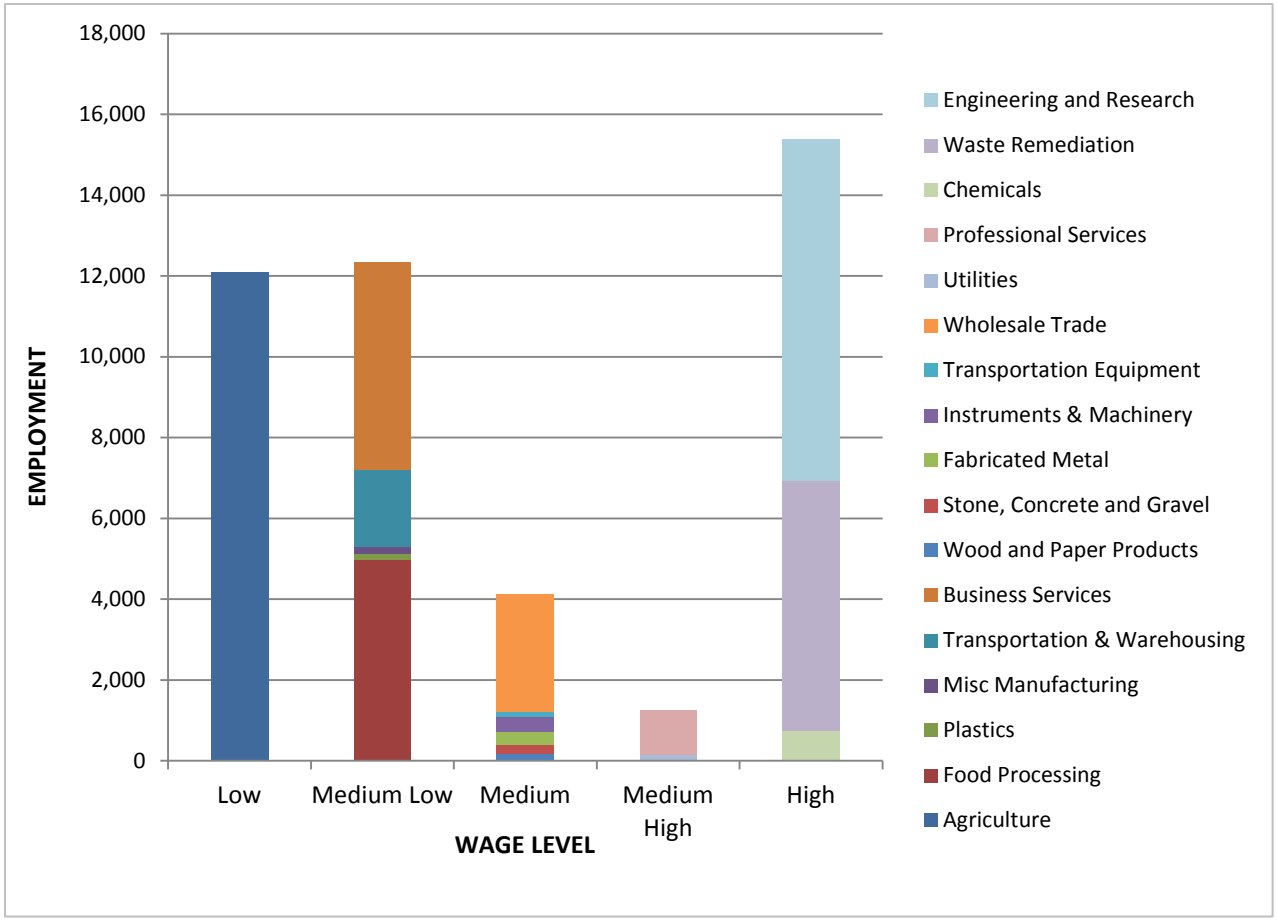
REGIONAL WAGE DISTRIBUTION

Another way to look at the regional economic situation is to examine wage distribution across all basic industries. In the figure below, industries are clustered by average industry wages and segmented by:

WAGE CLUSTER	WAGE RANGE	% TOTAL INDUSTRY AVERAGE WAGES
High	> $87,000	>200%
Medium High	$65,000 to $87,000	150% to 200%
Medium	$43,000 to $65,000	100% to 149%
Medium Low	$32,000 to $43,000	75% to 99%
Low	< $32,000	< 75 %

A substantial dichotomy exists in the region between agriculture at the low end to engineering and research; waste remediation and chemicals at the high end. The significant gap in medium and medium high wage levels should serve as a call to action for strategic business recruitment.

FIGURE 1 - REGIONAL WAGE DISTRIBUTION



REGIONAL SPECIALITIES

Industry location quotients quantify the relative "concentration" of an industry compared to other areas. In this case, the location quotient for the Tri-Cities Region compares to national data. Where an area has a concentration of industries at a higher concentration than the nation the region demonstrates an industry specialty. This analysis can be used to:

- Determine which industries create regional specializations because of their dominant presence.
- Identify the "export orientation" of an industry outside of the region.
- Identify emerging industries in initial stages of wealth generation for the region.

Although the existing business cluster showed location quotients, the following table encompasses more industries – those with 50 or more employees reported in 2012. This list of industries encompasses the same top regional clusters, although an expansion of sectors within each cluster provides for a broader analysis. New clusters of specialization appear on this list for wood and paper products; primary metals; and instruments.

Overall, the leading specialties for the region based on ranking of location quotients are:

1. **Frozen Food & Vegetable Manufacturing** – Lamb Weston, frozen potato products, is the largest regional employer in this sector.
2. **Remediation Services** – This sector along with the next two sectors align to the predominance of workers at Hanford and related Department of Energy contractors.
3. **Hazardous Treatment & Disposal**
4. **Hazardous Waste Collection**
5. **Wineries** – Tri-Cities is one of the top wine regions in the United States so we would expect to see a high location quotient.
6. **All other Basic Inorganic Chemical Manufacturing** – Indication of one very large employer in an important export niche market.
7. **Crop Production** – Farming is a large part of the Tri-Cities economy, with production values approaching $1 billion[3]. Although vineyards for wine grapes, hops and vegetables for frozen processing are significant, a large part of agricultural products are sold in fresh markets. Apples are the number one exported fresh product.

[3] Source: U.S. Dept. of Agriculture 2007 Census of Agriculture

TABLE 2 - BASIC INDUSTRIES IN TRI-CITIES REGION WITH HIGH NATIONAL LOCATION QUOTIENTS

NAICS	Description	Franklin/Benton Location Quotient
	Agriculture and Food Processing	
111000	Crop production	20.05
112000	Animal production	3.22
115000	Agriculture and forestry support activities	8.54
311119	Other animal food manufacturing	3.28
311411	Frozen fruit and vegetable manufacturing	118.67
311421	Fruit and vegetable canning	4.65
311423	Dried and dehydrated food manufacturing	5.63
311991	Perishable prepared food manufacturing	3.00
312130	Wineries	30.23
423820	Farm and Garden Machinery Wholesalers	3.00
424480	Fresh Fruit and Vegetable Wholesalers	3.57
424910	Farm Supplies Merchant Wholesalers	4.15
493120	Refrigerated warehousing and storage	7.52
	Wood and Paper Products	
321214	Truss manufacturing	4.94
322299	All other converted paper product mfg.	4.41
	Chemicals	
325188	All other basic inorganic chemical mfg.	25.38
325311	Nitrogenous fertilizer manufacturing	8.74
	Hospitality	
713290	Other gambling industries	11.40
721211	RV parks and campgrounds	2.58

NAICS	Description	Franklin/Benton Location Quotient
	Primary Metals	
331491	Nonferrous metal, except CU and AL, shaping	11.04
	Instruments	
334510	Electromedical apparatus manufacturing	2.11
334519	Other measuring and controlling device mfg.	5.87
	Business Support Services	
425110	Business to Business Electronic Markets	2.47
511140	Directory and mailing list publishers	2.14
532412	Other heavy machinery rental and leasing	5.17
541513	Computer facilities management services	9.79
561210	Facilities support services	5.13
561422	Telemarketing bureaus	2.52
611420	Computer training	15.49
	Engineering, Research & Remediation	
541330	Engineering services	4.82
541620	Environmental consulting services	5.54
541712	Physical and engineering research	11.82
562112	Hazardous waste collection	32.29
562211	Hazardous waste treatment and disposal	39.47
562910	Remediation services	68.80

NATIONAL HIGH GROWTH INDUSTRIES

The following tables present industries that have the highest projected national growth for employment and output. Both growth indicators are identified to explore employment and innovation opportunities. Often growth in output will shrink industry employment as a result of increased productivity from innovation and equipment upgrades. The Tri-Cities region is not well represented across these sectors. However, computer facilities management; environmental consulting services; and computer systems design services are growing in the region. Other high growth basic industries may be potential targets. Non-basic industry growth is largely occurring in healthcare.

TABLE 3 - NATIONAL HIGH EMPLOYMENT GROWTH BASIC INDUSTRIES

		Tri-Cities Employment		Historic Growth 2007-12		Projected Annual U.S. Growth 2010-2020	
NAICS	Description	2007	2012	Absolute	Percent	Employment	Output
541611	Administrative management consulting services	60	71	10	17%	4.7%	3.8%
541612	Human resource consulting services	4	2	-2	-55%	4.7%	3.8%
541613	Marketing consulting services	21	13	-8	-37%	4.7%	3.8%
541614	Process and logistics consulting services	2	0	-2	-100%	4.7%	3.8%
541618	Other management consulting services	1	12	11	1092%	4.7%	3.8%
541620	Environmental consulting services	225	372	147	65%	4.7%	3.8%
541690	Other technical consulting services	154	127	-27	-17%	4.7%	3.8%
321211	Hardwood veneer and plywood manufacturing	0	0	0	0%	3.9%	2.9%
321212	Softwood veneer and plywood manufacturing	0	0	0	0%	3.9%	2.9%
321213	Engineered wood member manufacturing	0	0	0	0%	3.9%	2.9%
321214	Truss manufacturing	66	71	5	8%	3.9%	2.9%
321219	Reconstituted wood product manufacturing	0	0	0	0%	3.9%	2.9%
541511	Custom computer programming services	206	101	-105	-51%	3.9%	6.1%
541512	Computer systems design services	96	123	27	28%	3.9%	6.1%
541513	Computer facilities management services	263	433	170	65%	3.9%	6.1%
541519	Other computer related services	62	24	-37	-61%	3.9%	6.1%
327310	Cement manufacturing	0	0	0	0%	3.2%	3.4%
327320	Ready-mix concrete manufacturing	82	115	32	40%	3.2%	3.4%
327331	Concrete block and brick manufacturing	0	0	0	0%	3.2%	3.4%
327332	Concrete pipe manufacturing	13	4	-9	-68%	3.2%	3.4%

TABLE 4 - NATIONAL HIGH EMPLOYMENT GROWTH NON-BASIC INDUSTRIES

NAICS	Description	Tri-Cities Employment 2007	Tri-Cities Employment 2012	Historic Growth 2007-12 Absolute	Historic Growth 2007-12 Percent	Projected Annual U.S. Growth 2010-2020 Employment	Projected Annual U.S. Growth 2010-2020 Output
621610	Home health care services	324	568	244	75%	6.1%	4.3%
624110	Child and youth services	117	128	11	10%	5.5%	3.2%
624120	Services for the elderly and disabled	121	196	75	62%	5.5%	3.2%
624190	Other individual and family services	177	191	14	8%	5.5%	3.2%
621111	Offices of physicians, except mental health	1,369	1,812	443	32%	3.2%	3.0%
621112	Offices of mental health physicians	28	31	3	11%	3.2%	3.0%
621210	Offices of dentists	796	905	109	14%	3.2%	3.0%
621310	Offices of chiropractors	88	143	55	63%	3.2%	3.0%
621320	Offices of optometrists	132	177	45	34%	3.2%	3.0%
621330	Offices of mental health practitioners	15	15	0	0%	3.2%	3.0%
621340	Offices of specialty therapists	165	207	42	25%	3.2%	3.0%
621391	Offices of podiatrists	19	16	-3	-14%	3.2%	3.0%
621399	Offices of miscellaneous health practitioners	41	94	53	129%	3.2%	3.0%
621410	Family planning centers	12	17	4	35%	3.2%	4.0%
621420	Outpatient mental health centers	67	27	-40	-60%	3.2%	4.0%
621491	HMO medical centers	0	0	0	0%	3.2%	4.0%
621492	Kidney dialysis centers	56	62	6	11%	3.2%	4.0%
621493	Freestanding emergency medical centers	25	91	65	257%	3.2%	4.0%
621498	All other outpatient care centers	273	312	39	14%	3.2%	4.0%
621511	Medical laboratories	273	293	20	7%	3.2%	4.0%
621512	Diagnostic imaging centers	12	5	-7	-57%	3.2%	4.0%
621910	Ambulance services	31	0	-31	-100%	3.2%	4.0%
621991	Blood and organ banks	31	41	10	32%	3.2%	4.0%
621999	Miscellaneous ambulatory health care services	16	16	0	-1%	3.2%	4.0%

TABLE 5 - NATIONAL HIGH OUTPUT GROWTH BASIC INDUSTRIES

NAICS	Description	Tri-Cities Employment 2007	Tri-Cities Employment 2012	Historic Growth 2007-12 Absolute	Historic Growth 2007-12 Percent	Projected Annual U.S. Growth 2010-2020 Employment	Projected Annual U.S. Growth 2010-2020 Output
334111	Electronic computer manufacturing	0	0	0	0%	-3.1%	14.5%
334112	Computer storage device manufacturing	0	0	0	0%	-3.1%	14.5%
334113	Computer terminal manufacturing	0	0	0	0%	-3.1%	14.5%
334119	Other computer peripheral equipment mfg.	0	0	0	0%	-3.1%	14.5%
511210	Software publishers	28	17	-11	-39%	3.1%	8.9%
334411	Electron tube manufacturing	0	0	0	0%	-0.9%	7.3%
334412	Bare printed circuit board manufacturing	20	0	-20	-100%	-0.9%	7.3%
334413	Semiconductors and related device mfg.	0	0	0	0%	-0.9%	7.3%
334414	Electronic capacitor manufacturing	0	0	0	0%	-0.9%	7.3%
334415	Electronic resistor manufacturing	0	0	0	0%	-0.9%	7.3%
334416	Electronic coils, transformers, and inductors	0	0	0	0%	-0.9%	7.3%
334417	Electronic connector manufacturing	0	0	0	0%	-0.9%	7.3%
334418	Printed circuit assembly manufacturing	15	47	32	221%	-0.9%	7.3%
334419	Other electronic component manufacturing	0	0	0	0%	-0.9%	7.3%
518210	Data processing and related services	26	1	-25	-96%	0.8%	6.1%
519110	News syndicates	0	0	0	0%	0.8%	6.1%
519120	Libraries and archives	0	0	0	0%	0.8%	6.1%
519130	Internet Publishing, Broadcasting, Web Portals	0	3	3	281%	0.8%	6.1%
519190	Other information services	0	0	0	0%	0.8%	6.1%
541511	Custom computer programming services	206	101	-105	-51%	3.9%	6.1%
541512	Computer systems design services	96	123	27	28%	3.9%	6.1%
541513	Computer facilities management services	263	433	170	65%	3.9%	6.1%
541519	Other computer related services	62	24	-37	-61%	3.9%	6.1%
334210	Telephone apparatus manufacturing	0	0	0	0%	-3.1%	5.3%
334220	Broadcast and wireless communications equip.	7	3	-4	-54%	-3.1%	5.3%
334290	Other communications equipment manufacturing	0	0	0	0%	-3.1%	5.3%
533110	Lessors of nonfinancial intangible assets	0	0	0	0%	2.9%	5.1%

PRIORITIZING INDUSTRIES

In narrowing the "funnel" of broad economic base data for target industry identification, it is necessary to prioritize industries. This analysis is based on employment and output growth, wage levels, manufacturing capacity utilization, and capital investment potential. For manufacturing sectors, national manufacturing capacity utilization is used as an indicator of expansion potential. High capacity utilization indicates opportunity, such that a need exists for expansion as current manufacturing facilities are at or near capacity.

This analysis is performed based on two different, but related, sets of guidelines for screening secondary data. The data encompasses industries not currently present in the local area, but that have a presence in the larger bi-state region (Washington and Oregon) indicating regional compatibility. The expanded data allows for more industries to be considered. Industries that have an established presence in Washington and Oregon, even if they are not currently in the Tri-Cities Region, are important potential targets because there is evidence that they are growing within the larger regional business climate.

Regional Growth

The first screening of industry trends for potential targets industries included:

- Regional employment growth of 10% or more from 2007 to 2012;
- Positive projected employment growth;
- Manufacturing capacity utilization of 65% or higher;
- Average wages approximately $45,000 and above; and
- Current employment of 250 or more.

It is important to note that growth of 10% is considered generally good during the 2007 to 2012 time period because the United States was experiencing a recession. More typically, the screen for employment growth would be at 20% for normal years.

In Table 6 below, you will find the industries and corresponding NAICS that resulted from the Regional Growth Screen. The comprehensive data used for the screening can be found in Appendix C. The results of this screening process is organized by industry cluster to group interdependent industries together, including primary producers with related suppliers and other support industries. The list excludes non-basic industries including retail, wholesale and local-serving professional services.

TABLE 6 - SCREENING OF BASIC INDUSTRIES WITH INDUSTRY GROWTH OF 10% OR MORE

NAICS	Description
	Food Processing
311942	Spice and extract manufacturing
	Biotech
325414	Other biological product manufacturing
541711	Biotechnology research and development
	Mineral Products
327910	Abrasive product manufacturing
	Primary Steel Products
331513	Steel foundries, except investment
	Fabricated Metal Products
332211	Cutlery and flatware, except precious, mfg.
332212	Hand and edge tool manufacturing
332919	Other metal valve and pipe fitting mfg.
332996	Fabricated pipe and pipe fitting mfg.
	Transportation Equipment
336112	Light truck and utility vehicle manufacturing
	Information Services and e-Commerce
454111	Electronic shopping
518210	Data processing and related services
519130	Internet Publishing, Broadcasting, Web Search Portals
541511	Custom computer programming services
541512	Computer systems design services
	Engineering & Research
541620	Environmental consulting services
541690	Other technical consulting services
	Waste Management
562211	Hazardous waste treatment and disposal
	Training
611430	Management training

Regional Growth Relative to National Growth

The second screening approach puts regional industry growth in context of national growth. If an industry is growing locally but experiencing no overall national growth it should not be prioritized for targeting.

Screening guidelines:

- Washington/Oregon employment growth higher than the national rate from 2007 to 2012;
- Positive projected output and employment growth;
- Average wages approximately $45,000 and above; and
- Current employment of 250 or more.

High growth industries relative to the national growth rate are presented in Table 7. The comprehensive data used for the screening can be found in Appendix D. Screened industries are organized by industry cluster to group interdependent industries together, including primary producers with related suppliers and other support industries. The list excludes non-basic industries including retail, wholesale and local-serving professional services.

TABLE 7 - SCREENING OF BASIC INDUSTRIES WITH INDUSTRY GROWTH ABOVE NATIONAL AVERAGE

NAICS	Description
	Food Processing
312111	Soft drink manufacturing
312112	Bottled water manufacturing
	Wood Products
321114	Wood preservation
321211	Hardwood veneer and plywood manufacturing
321212	Softwood veneer and plywood manufacturing
321213	Engineered wood member manufacturing
	Plastic Products
326111	Plastics bag manufacturing
326113	Nonpackaging plastics film and sheet mfg.
	Mineral Products
327310	Cement manufacturing
327320	Ready-mix concrete manufacturing
327390	Other concrete product manufacturing
327420	Gypsum product manufacturing
327910	Abrasive product manufacturing
	Primary Steel Products
331222	Steel wire drawing
331512	Steel investment foundries
331513	Steel foundries, except investment
	Waste Management
562211	Hazardous waste treatment and disposal
	Training
611420	Computer training
611430	Management training

NAICS	Description
	Fabricated Metal Products
332211	Cutlery and flatware, except precious, mfg.
332212	Hand and edge tool manufacturing
332313	Plate work manufacturing
332321	Metal window and door manufacturing
332322	Sheet metal work manufacturing
332710	Machine shops
332721	Precision turned product manufacturing
332811	Metal heat treating
332919	Other metal valve and pipe fitting mfg.
332996	Fabricated pipe and pipe fitting mfg.
	Industrial Machinery
333210	Sawmill and woodworking machinery
333291	Paper industry machinery manufacturing
333294	Food product machinery manufacturing
333295	Semiconductor machinery manufacturing
333298	All other industrial machinery manufacturing
	Transportation Equipment
336112	Light truck and utility vehicle manufacturing
336510	Railroad rolling stock manufacturing
336611	Ship building and repairing
336991	Motorcycle, bicycle, and parts manufacturing
	Furniture and Furnishings
337214	Office furniture, except wood, manufacturing
337215	Showcases, partitions, shelving & lockers

NAICS	Description
	Fabricated Metal Products
332211	Cutlery and flatware, except precious, mfg.
332212	Hand and edge tool manufacturing
332313	Plate work manufacturing
332321	Metal window and door manufacturing
332322	Sheet metal work manufacturing
332710	Machine shops
332721	Precision turned product manufacturing
332811	Metal heat treating
332919	Other metal valve and pipe fitting mfg.
	Information Services and e-Commerce
454111	Electronic shopping
518210	Data processing and related services
519130	Internet Publishing, Broadcasting, Web Search Portals
519190	Other information services
541511	Custom computer programming services
541512	Computer systems design services
	Engineering & Research
541330	Engineering services
541360	Geophysical surveying and mapping services
541380	Testing laboratories
541420	Industrial design services
541620	Environmental consulting services
541690	Other technical consulting services
541711	Biotechnology research and development

REGIONAL FIT ANALYSIS

Although the industry trends data is interesting and informative, it only covers historic reporting of industry performance. Historic trends do not take into account the real-time tangible assets nor limiting factors that may hamper business growth and highly efficient business operations. To complement the industry trends analysis, it is important to also evaluate potential target industries on how their needs aligned with the region's capabilities to meet those needs. The findings from the Tri-Cities Competitiveness Report Card document the region's strengths and weaknesses for site selection; it is the basis for this analysis.

CAPABILITIES SCREENING

Based on the Tri-Cities' current state of competitiveness, the two screened industry trends lists presented above were further reviewed to match industry needs with the region's capabilities. The following clusters were eliminated based on Tri-Cities current situation to meet the needs of these targets.

INDUSTRY CLUSTER	RATIONALE FOR ELIMINATION
Biotech	▪ No biotech companies are based in the region. Biotech companies do not want to be the first to enter an unknown market. Not only is the "island" effect risky for the company, it will be difficult to attract talent when no alternatives for employment exist in the region, incase the original employment opportunity does not work out. ▪ The region lacks Class A office space and campus settings for biotech firms. ▪ World-renown research at Washington State University (WSU) is focused on specialized fields of biotech for energy and wine productions; WSU Tri-Cities does not have prestige for pure biotechnology product development, at least at this time. The region does not have a competitive business case for recruiting biotech companies, but the research assets in the region will drive more specialized targets in alignment with unique assets.
Fabricated Metal Products	▪ As indicated in the Regional Wage Distribution table on page 5, there is minimal Tri-Cities employment in this medium range-wage manufacturing industry. Likely, the existing fabricated metal products companies in the region serve agriculture and specialty equipment manufacturing. In general, the regional workforce culture is absent for metal manufacturing. ▪ Although welding and manufacturing technology programs are offered at Columbia Basin College, the overall business case for this industry to be specifically targeted is weak.

INDUSTRY CLUSTER	RATIONALE FOR ELIMINATION
Furniture and Furnishings	▪ There is no presence of this industry in the Tri-Cities region. Recruiting a business in this cluster would require an early adopter. Lack of suppliers and labor skills contribute to no compelling business case of regional assets. Wood resources are not available nearby and concentrated in other parts of the Pacific Northwest.
Information Services & Commerce	▪ This industry cluster contains some "new economy" sectors that may be desired in the Tri-Cities region. However, there is a lack of competitive core competencies for skills in the region as demonstrated in occupational location data. These industries do not exceed 1.0, the national average for occupational location quotients. ▪ Call centers and back office operations, also part of this industry cluster, may come to the region as a result of low cost labor and low energy costs, but no proactive marketing should be invested. ▪ Pursuit of this industry cluster for Tri-Cities is best served through a robust regional entrepreneurship program.
Mineral Products	▪ Although employment and output growth for this industry are high in the broader Washington/Oregon region, Tri-Cities has no unique resources to support mineral products as a strong target industry worthy of investing marketing resources.
Plastics Products	▪ Although Tri-Cities offers very competitive electricity rates – a priority location factor for the plastics industry – this industry is eliminated from targets for proactive marketing. For the most part, plastics are commodity products that pay medium-low wages. Tri-Cities has no presence of these industries and employment growth is nominal compared to output growth.
Primary Steel Products	▪ Outside of operations related to Hanford clean up, heavy manufacturing is scarce in the Tri-Cities region. As a result there is a huge gap in the workforce and no culture for working in the environment typical for steel product manufacturing.
Transportation Equipment	▪ According to IMPLAN ES202 data, one firm is involved in railroad rolling stock manufacturing, paying low average wages of $22, 694. West Richland is also home to the world's fastest car – custom built by Jarod Shelby. Production at this facility is more of a craftsman process and does not represent a broader regional capability for transportation equipment manufacturing. Tri-Cities is not located within or even near major truck and ship building regions. ▪ With the logistics industry growing in the Tri-Cities region, there may be longer-term opportunities for repair and after-market manufacturing of trucks and potentially rail road equipment.
Wood Products	▪ Wood products appear on the industry priority list for growth rates higher than the national average. That situation is true for the larger Oregon and Washington region, but not for the Tri-Cities region where wood natural resources are not immediately proximate. Over the 2007 – 2012 time period wood product manufacturing decreased with declining new construction market. Projections are high for growth by 2020 as the economy revives and remodeling also surges.

ALIGNMENT TO UNIQUE REGIONAL ASSETS

Industry trend data does not fully capture emerging or underdeveloped clusters that represent new opportunities for the region. This section of the report identifies unique assets and extraordinary strengths of the Tri-Cities region that contribute to target recommendations for the niche and emerging opportunities they offer.

- **BioProducts, Sciences & Engineering Laboratory (BSEL)** – This laboratory, a collaboration between Washington State University and Pacific Northwest National Lab, is focused on higher-value fuel development from biomass. BSEL is also a newly designated partner in the FAA Center of Excellence Alternative Jet Fuels and Environment. Research conducted in this laboratory is already gaining international acclaim. Together with increasing market demands and quality research that becomes commercialized, this unique regional asset can drive emerging industry opportunities. It is front and center as a compelling business case for the biofuel industry.
- **Wine Industry** – The very high concentration of wineries demonstrated with a national location quotient of 30.23 proves Tri-Cities standing in this high-value industry. Washington State wineries, in partnership with Washington State University, are investing in the future of the industry with the development of the Wine Science Center in North Richland. This innovation resource will bring international attention to the region as a leader in the wine industry. Opportunities that are expected to emerge from this asset include winery equipment, packaging equipment, and process improvement technologies. Leveraging BSEL, the Wine Science Center can also identify new processes and related equipment to reclaim winery by-products in a manner that may transform sustainability practices at wineries.
- **Megasite** – TRIDEC's work with the Department of Energy to procure a 1,341 acre portion of Hanford will create a megasite offering with development opportunities unique in the Pacific Northwest. Bonneville Power indicates this prospective site is one of the best locations in their entire service territory for major energy load projects. The availability of this site for targeting new economy industries will significantly elevate the Tri-Cities region for major recruitment projects, not just for its shear size but for the infrastructure of utilities and talent that surrounds it.
- **Railex** – Railex is a refrigerated, mega-transload distribution center that assembles railcars of fresh produce and wine for expedited transport to the East Coast and throughout the Railex system. Railex is poised to expand offerings to include non-refrigerated products and container services. Although the Railex asset is located in Walla Walla County, it offers Tri-Cities a competitive advantage for logistics not available through the traditional rail service providers in the region. Rail service provided by BNSF, UP and the Tri-City & Olympia short-line presently have limited service offerings. TRIDEC should be actively engaged with Railex for future opportunities it presents in logistics and distribution, not just as an industry target but for how Railex's value proposition supports industry growth in high-value industry clusters.

- **Pacific Northwest National Lab (PNNL)** – One of ten U.S. Department of Energy (DOE) national laboratories with research benefiting the DOE, the U.S. Department of Homeland Security, the National Nuclear Security Administration, other government agencies, universities and industry. Battelle has been the contractor to operate PNNL since its inception in1965. Research focuses on: energy, especially for the reduction of dependence on imported oil; prevention of counter terrorism and proliferation of weapons of mass destruction; and environmental sustainability. Research portfolios include: life sciences; process monitoring, including nuclear and environmental; chemistry and physical sciences; IT; Energy; and analytical instrumentation.

RECOMMENDED TARGETS

All of the previous analysis distills down to the recommendation of targets for the Tri-Cities Region. In this recommendation, our perspective takes into account the entire regional economy and a comprehensive value chain versus solely "new economy" industry sectors, which are already disproportionately high in the region with an abundance of highly skilled workers. The recommended targets build on the region's competitive assets and experience in agriculture along with world-class research capabilities. In essence, the recommended targets focus on each ends of the bi-modal labor market, working toward the middle to close the wage distribution gap and strengthen the regional economy against market fluctuations through diversification.

Table 8 (right) presents the proposed industry clusters and corresponding NAICS for target subsectors. A longer, detailed list of 6-digit NAICS is presented at Appendix E for Tri-Cities pertinent Smart Grid targets.

The targets represent the best opportunities for Tri-Cities within the next five years, for the most part. Some of the targets may require the region to work on additional asset development and positioning in the market as the industry evolves into active site selection mode. These industries are noted for longer-term prospecting.

TABLE 8 - TRI-CITIES TARGET INDUSTRIES

NAICS	DESCRIPTION
Energy: Nuclear SMR, biofuels manufacturing, solar testing facilities, smart grid	
221100	Energy technology
221113	Nuclear electric power generation
221119	Other electric power generation
541712	Physical and engineering research
325193	Biofuel manufacturing
541712	Solar testing
3345	Smart meters
3359	Energy storage
3344	Sensing & measuring
3342	Integrated communications
Logistics	
493120	Refrigerated warehousing & storage
488510	Freight transportation arrangement
488991	Packing & crating
488999	All other support activities for transp.
424800	Wholesale beer/wine
424400	Wholesale produce
424480	Fresh fruit and vegetable merchant wholesalers
Food Processing	
311411	Frozen fruits & vegetables
311900	Frozen specialty foods
311423	Dried & dehydrated foods
311911	Perishable prepared foods
Machinery Manufacturing	
333294	Food processing machinery
Carbon Fiber Manufacturing	
325222	Noncellulosic organic fiber mfg
Training	
611420	Computer training
611430	Management training

The rationale for recommended targets is provided below:

NEAR-TERM TARGETS	RATIONALE FOR RECOMMENDATION
Energy: Small Modular Nuclear Reactors	Small module nuclear reactors (SMR) are viewed as one component of a diverse platform of energy production technologies in our future. The concept is that "plug and operate" small reactors (perhaps generating 40 megawatts each) are shipped directly to sites on tractor-trailers for immediate installation and operation. Spent reactors are returned for refueling and maintenance. The SMR supply chain is large, complex, and spans the globe. While competition in this space is intense, there is a legitimate argument that says the Tri-Cities can find a niche in this potentially large energy sector. Local opportunities derive from: ▪ The Tri-Cities region is already positioning for SMRs in pursuit of a Department of Energy grant for design and licensing. The State of Washington supported Tri-Cities efforts to pursue federal grants with a grant to research and validate savings of siting the federal SMR project in Tri-Cities. ▪ This industry is complemented by Areva, a modern nuclear fuel production facility located in Richland. ▪ Nuclear Engineering & Research was a cluster that surfaced during the industry trends analysis and is relevant to SMR development. ▪ Design and manufacturing of SMR components, fuels, and other elements of the supply chain in Tri-Cities will benefit from regional workforce talent and from low cost electricity. However, since power is inexpensive, Tri-Cities will likely not be a good commercial test site. The goal for TRIDEC is to target businesses involved in the supply chain including design and assembly of systems.

NEAR-TERM TARGETS	RATIONALE FOR RECOMMENDATION
Energy: Smart grid	America's energy future will see the deployment of Smart Grid technologies that improve the ways we produce, distribute and use electricity. Smart Grids are built on systems integration including software and hardware. Tri-Cities has the opportunity to leverage local assets that are already aligned with next generation smart grid industrial sectors. These assets include: ▪ PNNL's smart grid research around new technologies and systems integration provides a solid platform on which to build a compelling business case for recruiting smart grid component and software companies to the region. Battelle received a Department of Energy National Renewable Energy Laboratory (NREL) grant to sponsor the Pacific Northwest Division Smart Grid Demonstration Project. The total project budget is over $177 million. This research will bring acclaim to the region by interested service providers and suppliers of smart grid technologies. ▪ Mid-Columbia Energy Initiative (MCEI) is a unique consortium of organizations, focusing resources and efforts to capitalize on local infrastructure, resources, and expertise in the energy sector. With proactive engagement, MCEI could create special attention to encouraging local companies and recruiting outside investment in smart grid products. ▪ Engineering & Research was a cluster that surfaced during the industry trends analysis and is relevant to smart grid development.
Logistics: Agriculture Processed foods Wine Craft beer	The Railex operation in Walla Walla County – a unique asset in the region - along with abundant land for development, offer the Tri-Cities an opportunity to build a stronger industrial base with strategic logistics industry growth. Although logistics is not a "new economy" industry, it is important at this time in the market to influence how the logistics sector evolves in the region so Tri-Cities can capture longer-term industrial growth. By targeting wholesalers and distribution companies for agriculture, wineries and even breweries to utilize Railex and other transportation services, Tri-Cities will be well-situated to attract high-value food processing, and more wineries and breweries because of this infrastructure. Development of Lamb Weston refrigerated consolidation cross-dock combined with continued expansion of the Railex facility is expected to create a large surplus of third-party refrigerated warehouse space within the region. This will create a lowering of rental prices which will attract other food processors and distributors to the region. The growth of small wineries and craft breweries throughout the Pacific Northwest provide a market opportunity for third-party logistics providers to help these businesses more efficiently process orders, package and ship their goods. TRIDEC needs to position the region as THE west coast location for east-west distribution of fresh produce, wine and craft beers. There are several west-coast communities, from British Columbia to California, all vying for this leadership position. The community that is aggressively marketing and pursuing target prospects will succeed but this will take a concerted effort of consistent and frequent marketing to make the best use of regional assets.

NEAR-TERM TARGETS	RATIONALE FOR RECOMMENDATION
Food Processing: Frozen fruit and vegetable manufacturing Frozen specialty food manufacturing Dried and dehydrated food manufacturing Perishable prepared food manufacturing	The Columbia Basin is one of the leading agriculture regions not only in Washington State but the entire Pacific Northwest. Fresh produce and potato processing currently dominate this cluster. There is also opportunity for production growth due to abundant irrigation water and land resources in the region. The growing demand for food products (fresh and processed, frozen and dry goods) puts pressure on growers and processors to expand operations. Many products come from the western United States and are shipped to markets in the east and throughout the world. Many growers, particularly those in California's Central Valley, are being squeezed by water shortages, urban encroachment, increased regulation, environmental contamination, and high operating costs. Consequently, growers and processors are looking both south (to Mexico) and to the Northwest for strategic investment. Consequently, the Tri-Cities region will likely see a long-term growth trend in the number of crops grown, crop acreage, and the need for local processing and storage. Best fit targets focus on higher value-add food production, thus advancing from processing only fresh crops to converting primary-processed products through secondary food processing. For example, frozen meals and other specialty frozen foods. Piggy-backing on logistics industry growth, perishable specialty foods will have distribution channels for just-in-time delivery. TRIDEC will certainly want to go beyond Pacific Northwest markets for marketing missions and tradeshows to reach fully-integrated operations and processors in other geographies that have not explored Washington.
Machinery Manufacturing: Food processing equipment Winery equipment	To enhance food processing and local winery growth, manufacturers of equipment used in food processing operations and wineries are a natural fit for TRIDEC to pursue with for business recruitment. A business case can be made for this specific manufacturing target, along with evidence of an aggressive TRIDEC marketing program for recruitment of their prospects (food processors and wineries). This industry target will also benefit from practical research at the Wine Science Center. Emerging relationships being created by Wine Science Center initiatives are creating synergies between growers, wineries, and other actors in the agriculture industry supply chain. Careful nurturing of these relationships by TRIDEC should result in opportunities for new business formation around machinery and equipment. Industrial machinery was a cluster that surfaced during the industry trends analysis and is relevant to machinery manufacturing.
Training: Security Hazardous material handling	Tri-Cities region has a long tradition for government and corporate engagement in hazardous waste handling, storage and transport, in environmental remediation, in the security of highly sensitive facilities, and in related complex management environments. However, the world is catching-up with Hanford and the Tri-Cities on these challenges. The combination of a training-rich tradition, local experts across a broad spectrum of needs, and unprecedented training grounds afforded by Hanford and surrounding lands, create a platform on which world-class training programs could be built and attracted globally. Training, along with waste management, were clusters that surfaced during the industry trends analysis. TRIDEC should develop a cluster attraction strategy around national and globally recognized training programs for hazardous waste handling, storage, and transport, environmental remediation, and security of highly sensitive facilities.

LONGER-TERM TARGETS	RATIONALE FOR RECOMMENDATION
Energy: Biofuel manufacturing	The future of biofuels is one of the key strategies for reducing dependence on foreign oil. Communities that can demonstrate a track record for innovation regarding highly-efficient processes and new biomass sources will be successful in driving the industry. The challenge will be for Tri-Cities to capture these innovations, and recruit complementary innovations, to the region for full-scale production of biofuels or related manufacturing equipment. The Tri-Cities region has a strong reputation in biofuel research based on the advanced technologies and platform chemicals studied at the BioProducts, Sciences & Engineering Laboratory (BSEL) and by PNNL. The FAA Center of Excellence Alternative Jet Fuels and Environment will provide more specialized opportunities for commercialization and full-scale production. In addition to world-class research institutions, abundant and diverse biomass feedstock is available from agriculture, wineries and other sources. The Wine Science Center, in partnership with BSEL, will also be investigating new opportunities for maximizing the value of wine by-products, which could be new biomass sources and fuels. Engineering & Research was a cluster that surfaced during the industry trends analysis and is relevant to the biofuels sector.
Energy: Solar testing facilities	The major reasoning for including solar testing facilities, and for that matter, solar farms, is the unique megasite located on the Hanford properties. Bonneville Power's endorsement of this site as fitting for major energy load projects supports opportunities for generating solar power. Because energy is so inexpensive, the solar power will not necessarily be sold locally, but outside the Pacific Northwest high-demand markets exist. Such large-scale solar installations located nearby to PNNL expand opportunities for advanced testing and research for efficiencies and design. Testing of solar panel components and systems is applicable in every diverse climate. Engineering & Research was a cluster that surfaced during the industry trends analysis and is relevant to solar testing operations.
Carbon Fiber Manufacturing	Market opportunities are increasingly growing for carbon fiber manufacturing because many industries are demanding lighter products but need to keep the cost of materials down. This will require new manufacturing processes to keep costs down and innovation and quality high in order to be competitive for larger market opportunities. Tri-Cities energy costs are a competitive strength, along with access to world-class research. This target is an emerging industry with most growth expected in five to ten years. However, it is important for TRIDEC to position Tri-Cities now for this emerging industry. One entrepreneur in the region is already pro-typing and piloting production of new carbon fiber technologies.

INDUSTRY INTELLIGENCE

In order to effectively market and speak informed with business prospects about their industry, it is important to gain insights on each target industry cluster. Different issues and needs drive site location and expansion decisions for each industry.

The following topics are presented in this section, with more in-depth resources available in the appendix:

- Industry Importance Factors
- Key Industry Occupations
- Industry Pro Formas
- Source Geographies
- Industry Profiles

INDUSTRY IMPORTANCE FACTORS

Every industry has different drivers for their site search. To better understand the differences, a list of priority location factors detailing which factors are of low, medium or high importance to each target cluster are found in Appendix F. Table 9 shows high priority factors for site selection projects by target industry cluster. TRIDEC should apply this information to customize marketing and prospect proposals, showing how a Tri-Cities location can competitively meets their specific needs.

TABLE 9 - HIGH PRIORITY SITE SELECTION FACTORS

Target Industry Sector	High Priority Site Selection Factors	Target Industry Sector	High Priority Site Selection Factors
Logistics	▪ Geographic proximity to markets ▪ Availability and cost of transportation services ▪ Quality transportation infrastructure ▪ Energy dependability and cost ▪ Workforce – sales; administrative support; transportation & material moving skills; handlers, equipment cleaners & laborers ▪ Effective cost of skilled and unskilled labor ▪ Land availability and cost ▪ Built space cost / Lease rates ▪ Construction costs	**Food Processing**	▪ Geographic proximity to markets ▪ Cost of transportation services ▪ Energy dependability ▪ Access to raw materials and intermediate manufactured products ▪ Workforce – operators & assemblers; transportation & material moving skills; handlers, equipment cleaners & laborers ▪ Effective cost of skilled and unskilled labor ▪ Regulatory policies

Target Industry Sector	High Priority Site Selection Factors	Target Industry Sector	High Priority Site Selection Factors
Carbon Fiber Manufacturing	▪ Energy dependability ▪ Water availability and cost ▪ Access to intermediate manufactured products ▪ Workforce – technical skills; precision production & repair skills; operators & assemblers ▪ Land availability and cost ▪ Built space cost Construction costs	**Machinery Manufacturing:** Food processing equipment Winery equipment	▪ Workforce – precision production & repair skills; operators& assemblers; reliability ▪ Effective cost of skilled and unskilled labor
Energy Cluster SMR	▪ Energy dependability ▪ Access to intermediate manufactured products ▪ Workforce – technical skills; precision production & repair skills; reliability ▪ Land availability and cost ▪ Regulatory policies	Solar Grid (smart meters, energy storage, integrated communications, sensing & measuring)	▪ Energy dependability ▪ Access to intermediate manufactured products ▪ Access to business, professional and technical services ▪ Workforce – executive, administrative & management skills; technical skills; precision production & repair skills; operators & assemblers; reliability ▪ Effective cost of skilled and unskilled labor
Biofuel Manufacturing	▪ Geographic proximity to markets ▪ Cost of transportation services ▪ Energy dependability and cost ▪ Water availability and cost ▪ Access to raw materials ▪ Access to intermediate manufactured products ▪ Workforce – technical skills; precision production & repair skills; reliability ▪ Cost of built space ▪ Regulatory policies	Solar Testing	▪ Geographic proximity to markets ▪ Access to intermediate manufactured products ▪ Access to business, professional and technical services ▪ Workforce – professional specialty skills; technical skills; reliability ▪ Effective cost of skilled and unskilled labor ▪ Land cost ▪ Climate/physical environment

KEY INDUSTRY OCCUPATIONS

The distribution of occupations has been sourced from the Bureau of Labor Statistics, Industry to Occupation Matrix. When preparing proposals and marketing materials, TRIDEC and workforce development partners will be informed of which occupations are most important to each industry. This data is also helpful in the development of workforce training programs. A prioritized list for each target industry cluster is presented in Appendix G.

INDUSTRY PROFORMAS

For each target industry cluster, the following table presents an overview of a typical company's operation based on employment, facility square feet, building type, capital investment and average wages. The pro formas have been developed in the context of establishments by employment size in the United States. This information will be useful for developing competitive sites and speculative buildings, as well as analyzing locational cost comparisons for marketing and sales materials.

TABLE 10 - TARGET INDUSTRY PRO FORMAS

	Total U.S.	U.S. Establishments by Employment Size						Average	Average	Square	Average Capital
	Establishments	Under 20	20 to 49	50 to 99	100 to 249	250 to 500	500 or more	Est Size	Wage*	Footage**	Investment**
Food Processing	1,552	766	264	173	205	83	61	87	$36,097	48,000	$12,301,476
Energy	61,086	53,752	3,975	1,656	1,055	374	274	128	$92,278	38,000	$39,795,000
Smart Grid	19,067	14,577	2,379	978	707	253	173	34	$75,514	15,600	$7,217,079
Logistics	30,029	24,250	3,244	1,425	874	192	44	18	$52,219	14,200	$2,085,201
Food Processing Machinery	490	294	114	47	27	7	1	31	$54,917	17,300	$5,083,176
Carbon Fiber Manufacturing	102	38	12	16	23	6	7	128	$48,029	59,000	$71,497,793
Training	7,276	6,689	386	130	56	13	2	8	$56,524	5,000	$434,569

Source: County Business Patterns, 2011; 2007 Economic Census.

*Average wage for the U.S.

**Based on average firm size for the U.S. as shown.

SOURCE GEOGRAPHIES

Geographies with a major presence of each industry cluster have been researched. Utilizing this information, TRIDEC will be able to target external marketing efforts for each industry cluster to specific areas. Following is a list of top United States and international source geographies for each target cluster. The complete list of U.S. geographies for TRIDEC targets is presented in Appendix H.

TABLE 11 - TOP SOURCE GEOGRAPHIES

Target Industry Sector	Top Five U.S. Source Geographies[4]	Foreign Direct Investment Source Geographies		
Energy SMR Biofuel manufacturing Solar testing	▪ Washington, DC-MD-VA-WV ▪ Boston, MA-NH ▪ Los Angeles-Long Beach, CA ▪ Chicago, IL ▪ Atlanta, GA	**SMR** ▪ Canada (Ontario, Quebec, New Brunswick) ▪ China ▪ Russia (Russian European part)	**Bio Fuels** ▪ Australia ▪ Brazil ▪ Canada (Ontario, Saskatchewan, Quebec) ▪ Sweden	**Solar Testing** ▪ Australia ▪ Canada (Ontario) ▪ Germany ▪ Israel
Energy Smart grid	▪ Los Angeles-Long Beach, CA ▪ Chicago, IL ▪ San Jose, CA ▪ Philadelphia, PA-NJ ▪ Houston, TX	▪ Canada (Ontario, Quebec) ▪ Germany ▪ Japan ▪ Korea ▪ Switzerland ▪ Taiwan		
Food Processing	▪ Los Angeles-Long Beach, CA ▪ Chicago, IL ▪ New York, NY ▪ Houston, TX ▪ Minneapolis-St. Paul, MN	▪ Canada (Quebec, Ontario) ▪ France ▪ Germany ▪ Italy ▪ United Kingdom		
Machinery Manufacturing: Food processing equipment Winery equipment	▪ Chicago, IL ▪ Los Angeles-Long Beach, CA ▪ Philadelphia, PA-NJ ▪ Seattle-Bellevue-Everett, WA ▪ Minneapolis-St Paul, MN-WI	▪ Germany (Bavaria) ▪ Italy (Northern Italy)		
Logistics	▪ Los Angeles-Long Beach, CA ▪ Chicago, IL ▪ Miami, FL ▪ Houston, TX ▪ New York, NY	▪ Canada (British Columbia – Vancouver, Ontario – Toronto, Montreal) ▪ China (Hong Kong) ▪ The Netherlands (Rotterdam) ▪ Singapore		

[4] US Metropolitan Statistical Areas based on number of establishments in target industry.

Target Industry Sector	Top Five U.S. Source Geographies[4]	Foreign Direct Investment Source Geographies
Carbon Fiber Manufacturing	▪ Los Angeles-Long Beach, CA ▪ Charlotte-Gastonia-Rock Hill, NC-SC ▪ St Louis, MO-IL ▪ Chicago, IL ▪ Atlanta, GA	▪ France ▪ Germany ▪ Japan ▪ Spain ▪ United Kingdom
Training Security Hazardous material handling	▪ Washington, DC-MD-VA-WV ▪ New York, NY ▪ Los Angeles-Long Beach, CA ▪ Chicago, IL ▪ Atlanta, GA	▪ Australia ▪ Canada (Alberta, Saskatchewan) ▪ The Netherlands ▪ Norway ▪ United Kingdom

INDUSTRY PROFILES

Appendix I provides several industry profiles covering subsectors and general industry clusters representative of TRIDEC's target industries. The information has been researched and assembled by First Research (www.firstresearch.com). First Research, the leading provider of market analysis tools, synthesizes hundreds of sources in an easy to read format that help sales and marketing professional better communicate with prospects.

Each report covers:

- **Industry Overview** – competitive landscape, product operations and technology, sales and marketing, finance and regulations, regional and international issues, human resources, employment growth, earning and wages
- **Recent Developments** – industry indicators, monthly news, quarterly industry update
- **Business Challenges** – critical issues
- **Trends and Opportunities** – business and trends, industry opportunities
- **Executive Insight** for CEO, CFO, CIO, HR, VP Sales/Marketing
- **Call Preparation Questions**
- **Financial Information**
- **Industry Forecast**
- **Web Links & Acronyms**

Regular updates are available and recommended for the TRIDEC to stay on top of industry trends and events. TadZo will provide three quarterly updates of industry profiles provided as follow up to this report.

Appendix P: Current Program Phase I

Degree Descriptions	Degree Types		
	UGRAD	GRAD	Grand Total
Current			
Business Administration	1	1	2
Chemistry		1	1
Computer Science	1	1	2
Digital Technology and Culture	1		1
Education		1	1
Education, Elementary	1		1
Educational Leadership		2	2
Engineering, Civil	1		1
Engineering, Electrical	1	1	2
Engineering, Environmental		1	1
Engineering, Mechanical	1	1	2
English	1		1
Environmental Science	1	2	3
History	1		1
Humanities	1		1
Integrated Plan Sciences	1		1
Nuclear Engineering		1	1
Nursing		1	1
Nursing/R.N. to B.S. Nursing	1		1
Psychology	1		1
Science	1		1
Social Science	1		1
Current Total	**16**	**13**	**29**

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Appendix Q: Academic Building

TRI-CITIES ACADEMIC BUILDING	Anticipated Growth in Bachelor's Degrees	Anticipated Growth in High Demand Bachelor's Degrees	Anticipated Growth in Advanced Degrees	Anticipated Growth in High Demand Advanced Degrees
2012-13 Actual	5275	1753	1257	740
Additional Degrees Generated by Project	80	50	20	10
Projected Degrees with Building Project	5355	1803	1277	750
Projected Growth Above 2012-13 Actual Degrees	1.5%	2.9%	1.6%	0.0%
Current 2014-15 Target	5893	1878	1350	0
Percent of 2012-13 Actual over 2014-15 Target	89.5%	2.7%	1.5%	0.0%
Projected Degrees as a % of 2014-15 Target	90.9%	96.0%	94.6%	0

*** An increase of 80 new bachelor's degrees is expected and of those 50 will be in high demand degree areas. An additional 20 advanced degrees will be awarded and of those, 10 will be in high demand areas.*

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Appendix R: State 4-year Trends

Table 1

Strategic Measures

What is the state's performance in regard to its four-year public colleges, based on seven strategic performance measures?

Goal	Strategic Measure	Outcome	National Rank Among All States	Trend
Completion & Progression	Graduation rate	67.9 %	# 6	↓
	First-year retention rate	84.4 %	# 8	↓
Efficiency	Cost per student (FTE)	$19,725	# 8	↓
Productivity	Cost per degree	$68,750	# 19	↓
	Cost of attrition *	$39.5m	N/A	↑
Gainful Employment	Student loan default rate	3.8 %	# 49	↑
	Ratio of student loan payments to earnings per recent graduates **	No Data	No Data	No Data

* Amount spent by the colleges to educate first-year undergraduate students (first-time, full-time) who did not begin a second year.
** Median starting pay data presently available for 950 of the 1,575 colleges featured on this website.

Table 2

Washington Public Colleges (change state)

Performance Scorecard | Compare Against Other States | Compare State's Public Colleges

Compare Against Other States

How does the state's performance in regard to its four-year public colleges compare with other states, for each strategic performance measure?

n = 54 states

State	Completion & Progression				Efficiency		Productivity				Gainful Employment	
	Graduation Rate		First-year retention rate		Cost per Student (FTE)		Cost per Degree		Cost of Attrition *		Student loan default rate	
Sort	Rate	Rank	Rate	Rank	Rate	Rank	Rate	Rank	Rate	Rank	Rate	Rank
Vermont (VT)	75.8 %	# 1	85.3 %	# 5	$22,965	# 3	$90,082	# 5	$8.2m	# 50	2.3 %	# 54
Delaware (DE)	70.5 %	# 2	85.2 %	# 6	$22,593	# 4	$97,909	# 3	$16.0m	# 43	5.5 %	# 32
Virginia (VA)	70.5 %	# 3	86.5 %	# 2	$15,365	# 27	$57,481	# 36	$58.4m	# 18	4.3 %	# 45
Iowa (IA)	69.6 %	# 4	84.9 %	# 7	$16,387	# 20	$66,770	# 22	$27.7m	# 34	3.8 %	# 48
New Hampshire (NH)	69.5 %	# 5	80.8 %	# 17	$14,194	# 35	$54,616	# 40	$14.7m	# 45	3.2 %	# 53
Washington (WA)	67.9 %	# 6	84.4 %	# 8	$19,725	# 8	$68,750	# 19	$39.5m	# 28	3.8 %	# 49
New Jersey (NJ)	67.0 %	# 7	84.3 %	# 9	$17,411	# 14	$64,120	# 28	$52.3m	# 21	4.9 %	# 37
California (CA)	64.7 %	# 8	87.2 %	# 1	$18,674	# 11	$69,174	# 17	$173.1m	# 2	4.3 %	# 46
Pennsylvania (PA)	63.4 %	# 9	80.9 %	# 15	$18,992	# 10	$76,737	# 9	$119.8m	# 4	5.4 %	# 34
Florida (FL)	62.8 %	# 10	86.3 %	# 4	$12,851	# 40	$42,987	# 54	$61.1m	# 16	5.5 %	# 33
Illinois (IL)	62.8 %	# 11	78.4 %	# 23	$20,631	# 6	$72,736	# 12	$113.6m	# 5	5.4 %	# 35
Connecticut (CT)	62.5 %	# 12	82.0 %	# 13	$23,297	# 2	$83,437	# 6	$28.2m	# 33	4.4 %	# 40
South Carolina (SC)	61.5 %	# 13	78.0 %	# 26	$14,447	# 33	$62,270	# 32	$51.9m	# 22	5.8 %	# 30
Michigan (MI)	61.5 %	# 14	81.8 %	# 14	$17,294	# 15	$68,406	# 20	$107.4m	# 6	6.4 %	# 27
New York (NY)	60.6 %	# 15	84.2 %	# 10	$18,365	# 12	$67,933	# 21	$106.8m	# 7	5.2 %	# 36
Maryland (MD)	60.6 %	# 16	84.0 %	# 11	$17,486	# 13	$62,960	# 30	$36.0m	# 30	7.5 %	# 19
North Carolina (NC)	60.3 %	# 17	82.6 %	# 12	$16,948	# 16	$66,176	# 24	$78.5m	# 10	6.9 %	# 24
Wisconsin (WI)	59.6 %	# 18	80.2 %	# 18	$13,326	# 37	$58,574	# 35	$60.0m	# 17	3.3 %	# 52

Table 3

Washington Public Colleges (change state)

Performance Scorecard | Compare Against Other States | Compare State's Public Colleges

Compare Against Other States

How does the state's performance in regard to its four-year public colleges compare with other states, for each strategic performance measure?

n = 54 states

State	Completion & Progression				Efficiency		Productivity				Gainful Employment	
	Graduation Rate		First-year retention rate		Cost per Student (FTE)		Cost per Degree		Cost of Attrition *		Student loan default rate	
Sort	Rate	Rank	Rate	Rank	Rate	Rank	Rate	Rank	Rate	Rank	Rate	Rank
California (CA)	64.7 %	# 8	87.2 %	# 1	$18,674	# 11	$69,174	# 17	$173.1m	# 2	4.3 %	# 46
Virginia (VA)	70.5 %	# 3	86.5 %	# 2	$15,365	# 27	$57,481	# 36	$58.4m	# 18	4.3 %	# 45
Puerto Rico (PR)	38.9 %	# 49	86.4 %	# 3	$12,220	# 42	$74,173	# 10	$15.5m	# 44	8.8 %	# 9
Florida (FL)	62.8 %	# 10	86.3 %	# 4	$12,851	# 40	$42,987	# 54	$61.1m	# 16	5.5 %	# 33
Vermont (VT)	75.8 %	# 1	85.3 %	# 5	$22,965	# 3	$90,082	# 5	$8.2m	# 50	2.3 %	# 54
Delaware (DE)	70.5 %	# 2	85.2 %	# 6	$22,593	# 4	$97,909	# 3	$16.0m	# 43	5.5 %	# 32
Iowa (IA)	69.6 %	# 4	84.9 %	# 7	$16,387	# 20	$66,770	# 22	$27.7m	# 34	3.8 %	# 48
Washington (WA)	67.9 %	# 6	84.4 %	# 8	$19,725	# 8	$68,750	# 19	$39.5m	# 28	3.8 %	# 49
New Jersey (NJ)	67.0 %	# 7	84.3 %	# 9	$17,411	# 14	$64,120	# 28	$52.3m	# 21	4.9 %	# 37
New York (NY)	60.6 %	# 15	84.2 %	# 10	$18,365	# 12	$67,933	# 21	$106.8m	# 7	5.2 %	# 36
Maryland (MD)	60.6 %	# 16	84.0 %	# 11	$17,486	# 13	$62,960	# 30	$36.0m	# 30	7.5 %	# 19
North Carolina (NC)	60.3 %	# 17	82.6 %	# 12	$16,948	# 16	$66,176	# 24	$78.5m	# 10	6.9 %	# 24
Connecticut (CT)	62.5 %	# 12	82.0 %	# 13	$23,297	# 2	$83,437	# 6	$28.2m	# 33	4.4 %	# 40
Michigan (MI)	61.5 %	# 14	81.8 %	# 14	$17,294	# 15	$68,406	# 20	$107.4m	# 6	6.4 %	# 27

Washington Public Colleges (change state)

Performance Scorecard | Compare Against Other States | Compare State's Public Colleges

Compare Against Other States

How does the state's performance in regard to its four-year public colleges compare with other states, for each strategic performance measure?

n = 54 states

State	Completion & Progression				Efficiency		Productivity				Gainful Employment	
	Graduation Rate		First-year retention rate		Cost per Student (FTE)		Cost per Degree		Cost of Attrition *		Student loan default rate	
Sort	Rate	Rank	Rate	Rank	Rate	Rank	Rate	Rank	Rate	Rank	Rate	Rank
District of Columbia (DC)	15.8 %	# 54	50.8 %	# 54	$30,537	# 1	$165,411	# 1	$4.9m	# 52	12.7 %	# 2
Connecticut (CT)	62.5 %	# 12	82.0 %	# 13	$23,297	# 2	$83,437	# 6	$28.2m	# 33	4.4 %	# 40
Vermont (VT)	75.8 %	# 1	85.3 %	# 5	$22,965	# 3	$90,082	# 5	$8.2m	# 50	2.3 %	# 54
Delaware (DE)	70.5 %	# 2	85.2 %	# 6	$22,593	# 4	$97,909	# 3	$16.0m	# 43	5.5 %	# 32
Hawaii (HI)	52.2 %	# 32	77.2 %	# 30	$22,335	# 5	$82,287	# 7	$12.5m	# 48	4.4 %	# 39
Illinois (IL)	62.8 %	# 11	78.4 %	# 23	$20,631	# 6	$72,736	# 12	$113.6m	# 5	5.4 %	# 35
Wyoming (WY)	54.4 %	# 28	75.7 %	# 34	$20,363	# 7	$82,254	# 8	$7.6m	# 51	3.7 %	# 50
Washington (WA)	67.9 %	# 6	84.4 %	# 8	$19,725	# 8	$68,750	# 19	$39.5m	# 28	3.8 %	# 49
Alaska (AK)	27.3 %	# 52	71.1 %	# 48	$19,347	# 9	$117,909	# 2	$14.6m	# 46	8.6 %	# 11
Pennsylvania (PA)	63.4 %	# 9	80.9 %	# 15	$18,992	# 10	$76,737	# 9	$119.8m	# 4	5.4 %	# 34
California (CA)	64.7 %	# 8	87.2 %	# 1	$18,674	# 11	$69,174	# 17	$173.1m	# 2	4.3 %	# 46
New York (NY)	60.6 %	# 15	84.2 %	# 10	$18,365	# 12	$67,933	# 21	$106.8m	# 7	5.2 %	# 36
Maryland (MD)	60.6 %	# 16	84.0 %	# 11	$17,486	# 13	$62,960	# 30	$36.0m	# 30	7.5 %	# 19

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