
Response to Request for Proposal DASPS-2880-18

State of Oregon
Strategic Capital Development Plan

August 22, 2018

Submitted by:

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August 20, 2018

State of Oregon - Higher Education Coordinating Commission

SUBJ: DASPS-2880-18 Strategic Capital Development Plan

Dear Members of the Selection Committee:

In our new knowledge economy, higher education, as a pathway for personal advancement and strategic public benefit, has never been more important. However, higher education has entered a time of constrained resources and must adapt to make the most of existing assets and future investments. Existing space and future capital plans represent precious resources whose deployment should be aligned with both strategic intent and the potential for maximum impact. Our team understands this challenge and we are excited by it. Our team, consisting of nationally recognized firms and university leaders, is uniquely qualified to assist you with this effort.

Paulien & Associates, leading this effort, is a nationally recognized professional services firm focused on providing higher education planning, utilization analytics, space needs analyses, and tailored capital planning solutions. We have provided planning services to clients at over 700 campuses across the United States and internationally. With a staff of architects, space planners, academic planners and data analysts, we offer the skill-sets needed for this project. We are also experienced with understanding demographic and workforce and translating those into space and capital needs. We have enjoyed a long history of collaboration with our two primary partners on this project.

National Center for Higher Education Management Systems (NCHEMS) is a private nonprofit organization whose mission is to improve strategic decision making in higher education and to turn data into usable knowledge for policy makers. Their clients include statewide systems, governing boards and coordinating commissions, include past work for the Oregon Higher Education Coordinating Commission. Virtually every NCHEMS engagement begins with an analysis of population projections demographic characteristics, and workforce projections; this data sets the table for shared understanding among multiple stakeholders and the creation of a shared vision.

SmithGroup is a national planning and design firm with offices in 12 cities. Paulien has worked with their campus planning group for over a decade and will be using their GIS (Graphical Information System) capabilities to geo-map key sets of data for our regional analysis of issues. We have worked together on similar engagements, where mapping population growth, enrollment and socio-economic student groups provided crucial information which informed both academic and space planning.

Finally, we have assembled an **Advisory Board** of higher education leaders who are well versed in capital planning at system and statewide levels. Among them is **Dr. Russ Deaton**, who had led the country by implementing similar effort at the Tennessee Higher Education Commission to align capital planning and funding with statewide strategic goals.

As a former university architect, I understand the need for both data-informed decisions and realistic, well-reasoned capital plans. Space is one of the most valuable resources that a university can leverage to achieve student success. We are committed to an integrated and inclusive process to help you analyze current conditions and chart a strategic future.

As you review the enclosed materials, we hope that you can sense our collective passion for the success of higher education and our excitement about your project. This would be an important project for us and our team, and we appreciate this opportunity to submit our proposal.

Sincerely,



Paul M. Leef, AIA, LEED AP
President

4.3 | Executive Summary

4.3.1 Minimum Proposer Requirements

4.3.1.1 Company Experience (general)

Describe your firm's unique professional experience that qualifies your firm to develop the Plan. Describe any policies, processes or procedures that will be implemented to increase the likelihood of successful plan development.

Paulien & Associates

Paulien & Associates is a nationally recognized, professional services firm focused on providing higher education planning, space analyses and tailored solutions. We have focused on academic and facilities-related studies for higher education for almost 40 years.

Our planning and programming projects have included more than 700 campuses across the United States and around the world. The outcomes of our work inform institutional leadership as they guide the fulfillment of strategic, academic and physical planning goals.

Our team of accomplished college and university planners includes multi-skilled staff whose experience ranges from individual program plans to campus-wide studies and from single campuses to state-wide systems, with each person bringing exceptional dedication and insight to every project. Our broad-based staff includes architects, planners, doctoral degreed academic planners, software developers, data analysts and data visualization expertise.

We listen and observe and customize our wide array of services to best meet the needs of each campus, institution or system. Our specialized software, combined with our depth of experience and deep understanding of higher education, allows us to provide objective, data-driven results to our clients. Peer comparisons and benchmarking studies are used to confirm these findings.

We have assisted institutions and various coordinating and governing boards in developing educational master plans based on current and future economic and workforce needs, as well as addressing their space efficiency, programming, and planning issues. We are versed in the unique issues facing campuses as they address funding issues, evolving pedagogies that require flexible learning environments, more effective stewardship of existing resources through increased efficiency, and ever-present student recruitment and retention goals.

Statewide studies include:

- Kentucky Council on Postsecondary Education
- Minnesota State College and University System
- Utah System of Higher Education
- Indiana: Ivy Tech Community College System
- Wyoming Community College Commission
- Connecticut State University System
- State University of New Jersey
- City University of New York (CUNY) System
- North Dakota University System
- University of Missouri System

The specifics of these projects are detailed in Section 4.3.3.1, Specific Company Experience.

Paulien is pleased to be partnered with The National Center for Higher Education Management Systems (NCHEMS), with whom we have teamed on many previous occasions.

The National Center for Higher Education Management Systems (NCHEMS)

The National Center for Higher Education Management Systems (NCHEMS) is a private nonprofit (501)(c)(3) organization whose mission is to improve strategic decision making in post-secondary education for states, systems, institutions, and work-force development organizations in the United States and abroad. Beyond technical capacity associated with data analysis and presentation, NCHEMS has developed considerable expertise in helping decision-makers use this information in making strategic level decisions. The areas of particular expertise are:

- Strategic planning (environmental scans are a component of this activity)
- Finance and resource allocation/institutional productivity
- Outcomes assessment and quality assurance
- Institutional and state-level governance of higher education
- Alternative modes of educational delivery – online, competency-based, etc.
- Higher education/workforce alignment

The scope of work ranges from conceptual development (often for foundations) to very practical problem-solving, always with a strong quantitative base. Recent work for Oregon has included engagements with the Oregon Higher Education Coordinating Commission and the Oregon Department of Community Colleges.

Statewide work includes work for:

- Western Governor’s University
- Midwest Education Compact
- Massachusetts Department of Education
- Kentucky Council on Post Secondary Education
- Connecticut Planning Commission for Higher Education
- Illinois Board of Higher Education

Throughout our combined, collective experiences, we believe that successful plan development will result from a process that is inclusive, participatory, transparent and driven by sound data analysis.

SmithGroup

SmithGroup is an award-winning, multi-national organization that employs research, data, advanced technologies and design thinking to help clients solve their greatest challenges.

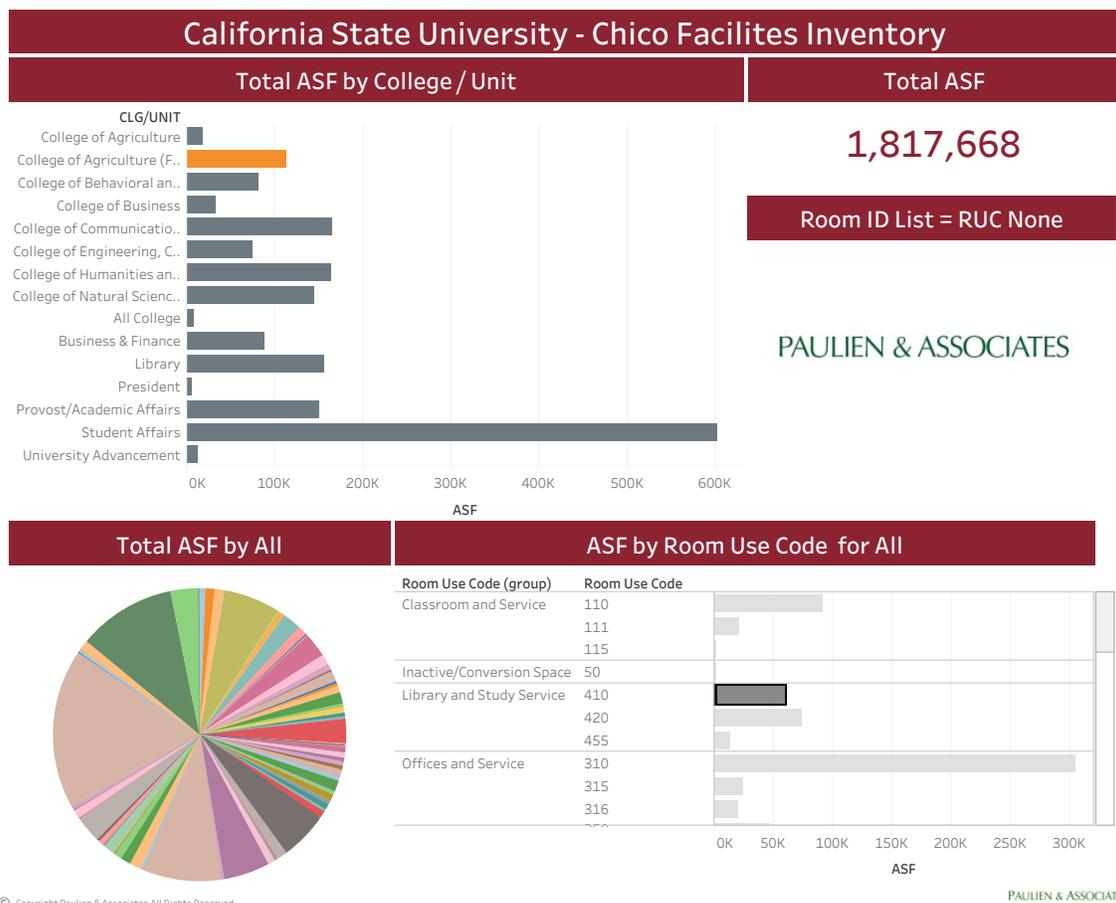
Working across a network of 12 offices internationally, their team of 1,300 experts is committed to excellence in strategy, design and delivery—giving rise to new and innovative processes and methodologies that are redefining the way people work as teams. Their specialists—from architects and engineers, to nurses, workplace strategists and beyond—develop beautiful, sustainable, future-focused solutions, science and technology organizations, higher education and cultural institutions, among others. For this project, the SmithGroup team of GIS experts will be geo-mapping critical data sets.

4.3.1.2 Tools and Resources

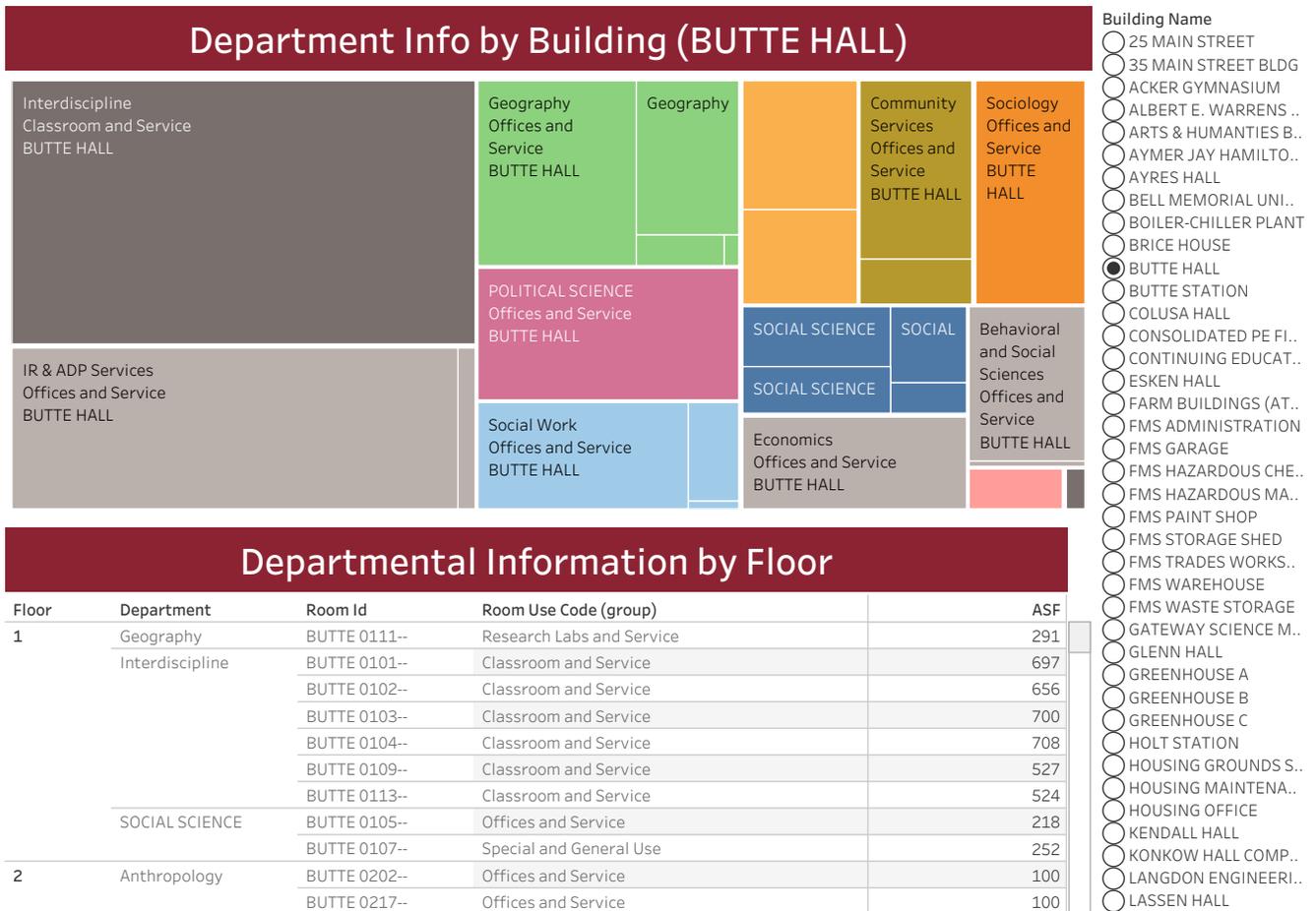
Describe the tools and resources that your firm commonly uses in successful and effective plan development.

At Paulien, we believe that for data to be used effectively, it needs to be communicated effectively. We therefore develop data visualizations for our clients which are customized to their specific needs. However, any credible analysis begins with reliable data. As national leaders in higher education space planning, we have encountered many data conditions across a variety of institutions. We have therefore developed tools and exception reports to detect discrepancies and anomalies in the data sets. And if needed, we have a variety of space planning tools and approaches at our disposal to address situations where data is not consistent or dependable.

Most of our engagements involve assessments of space, so we provide dashboards to permit the institution(s) to interact with this asset related data. This dashboard illustrates a high level summary of space at a regional comprehensive university:



This dashboard is interactive and allows the user to drill into the space in each college or unit and see the distribution of space by department or type. The following dashboard provides a facility profile for a particular building on that campus and organizes a detailed summary by floor.



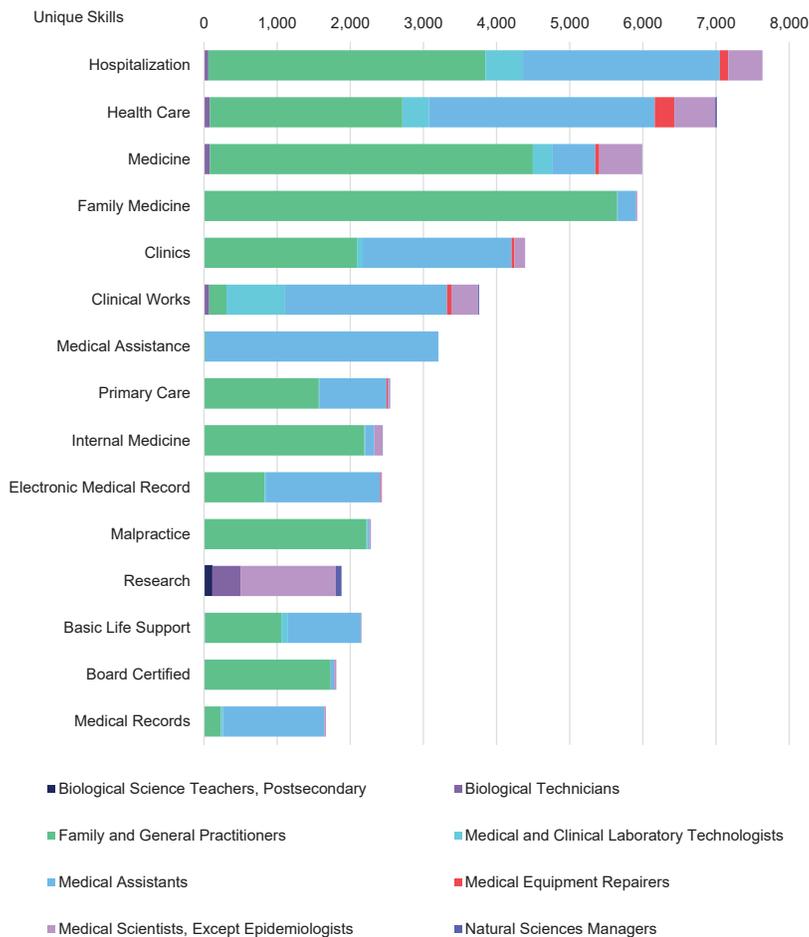
Paulien has also worked with data service providers to visualize economic, demographic, and occupational data. The following is an excerpt from a study that we conducted for a public college of engineering, comparing academic program supply with occupational demand for those degrees and types of skill-sets. The following charts are from a recent project at Northern Arizona University, where analyses of population, student enrollment, and occupant demand informed space needs and capital plans.

Figure 5.6 - Employment Concentration (LQ) by Industry Sector in Arizona, 2015 to 2025



Source: QCEW Employees, Non-QCEW Employees, and Self-Employed Data 2016.4.

Figure 5.11 - Top Fifteen Unique Skills for Job Postings Related to Biological Sciences in Arizona



To ensure effective project management, we use tracking sheets for monitoring issues and data requests. In our experience, schedules can easily get derailed when data is incomplete or meetings cannot be scheduled. We will also regularly review and update a project schedule, such as the one shown in Section 4.8 of this response. To ensure that the project goals are met, we jointly define them at the outset of the project and revisit them at milestone events in the process. These process checks act as bumper guards to keep the project proceeding on course.

To create dynamic forecasting tools, NCHEMS will adapt and update previous work for Oregon and other states in which we compiled and utilized data about student characteristics (geographic origin, age, income, attendance behavior and patterns). (In our prior work these analyses were utilized to estimate the costs and impact of the Oregon Promise Grant program). We have also built models for multiple states to forecast the postsecondary credential production requirements associated with meeting state goals. This heuristic modeling will be drawn from publicly available data and data to be supplied by Oregon (from data sources with which we are familiar), and will include models for:

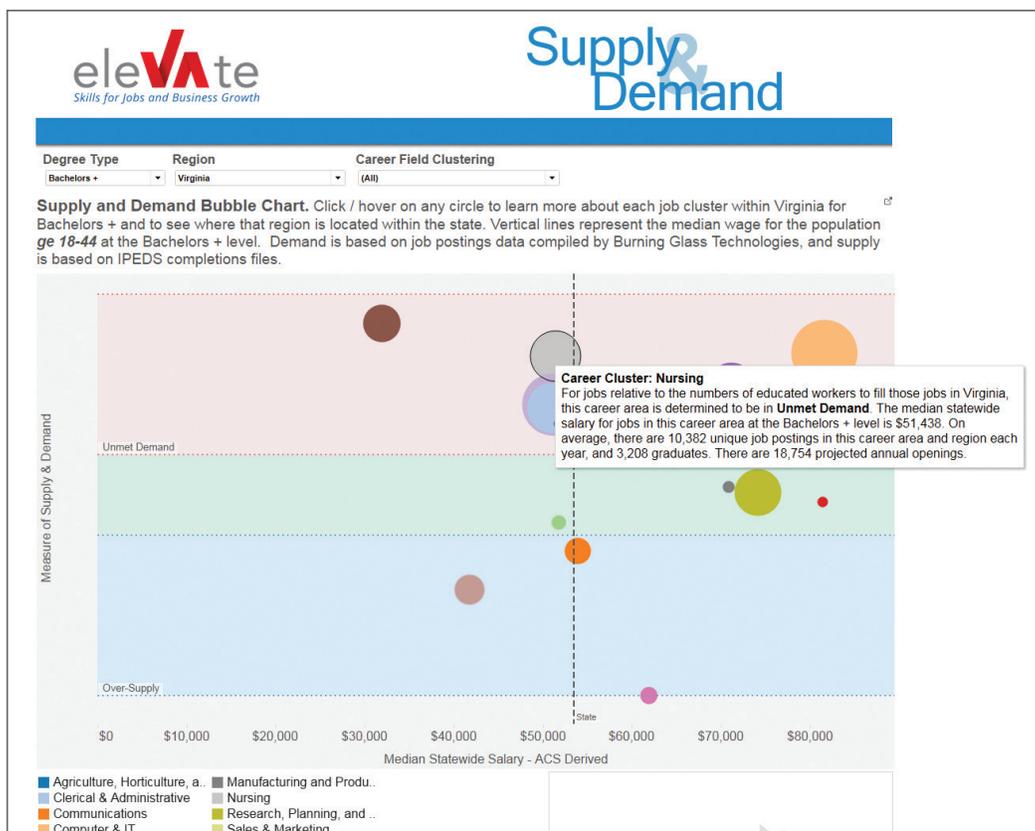
Student flow

NCHEMS' student flow model captures the flow of students from high school into college and through to completion by degree level, as well as for adult students, based on a set of assumptions about participation and completion rates. NCHEMS will adapt this model based on those it has previously built for Oregon and other states, examples of which may be viewed at <http://nchems.org/projects/increasing-college-attainment-in-the-united-states/>. NCHEMS proposes to adapt and update this model to:

- Estimate the number of additional degrees needed to achieve 40-40-20
- Be sensitive to student flows to and through institutions by geographic location, low-income and under-represented populations, age, etc.
- Estimate related returns on investment from improvements in these flows based on increases in personal income and state taxes and on decreases in costs associated with corrections and health care.

Future Workforce Demand and Supply Alignment

Projections of workforce demand in the future rely on patterns evident in how occupations were distributed across a region in the past. NCHEMS has built a version of an interactive tool to explore the alignment between supply and demand for different parts of several states, as shown in a static form in the figure below.



NCHEMS proposes to build a heuristic model that dynamically estimates workforce needs and, by extension, the academic degrees and certificates needed to meet those demands by:

- Starting with estimates of differential growth of different industries in regions of the state. These estimates will be based on data, but will also incorporate judgments from consultation with economic and workforce development experts in the state and in each of the regions.
- Using data on the distribution of occupations across industries, as well as on job postings data to be supplied by Emsi, translate these changes into estimates of employment by major occupation group.
- Crosswalking these occupational estimates into estimates for required degree production.

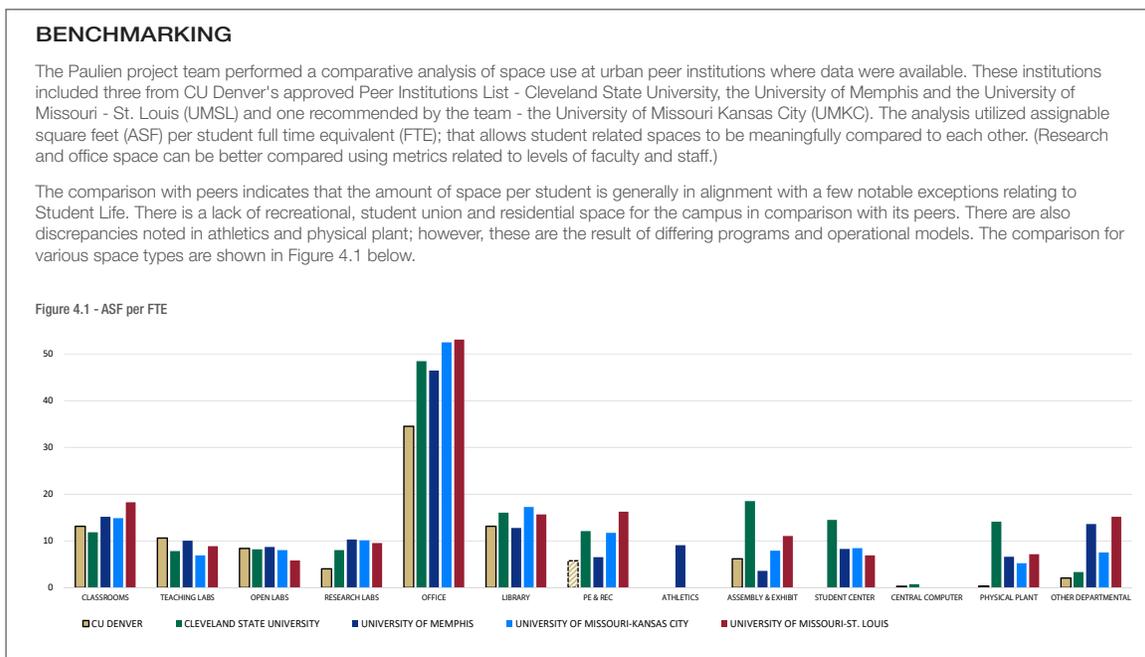
Costs of Alternative Delivery

NCHEMS built a costing model (available at <http://nchems.org/projects/cbe-cost-model/>) originally to estimate costs for the delivery of competency-based education, but it can serve as a costing model for a variety of alternative approaches to educational delivery. As an additional service, NCHEMS proposes to adapt that model for use in estimating the costs of alternative delivery modes that represent increased capacity, which may have relevance for a strategy of using the capital budget in ways that are not solely reliant on physical facilities. This costing tool produced the estimates that were used as the basis for the development of the new statewide online community college now being created in California, including for the costs associated with developing the curriculum and the technology infrastructure, as well as the annual costs of keeping these current.

Additional Resources

Benchmarking Data

Paulien maintains an extensive database of utilization and space metrics from a variety of institutions and systems throughout the country. This becomes valuable for benchmarking institutions of similar size or mission.



Advisory Panel

As described elsewhere in this submittal, we propose the use of an advisory panel of subject matter experts to provide counsel and advice throughout the course of the project. We have assembled a group of leaders in higher education who have considerable experience with higher education capital planning at statewide and system levels. The panel will weigh in on the project workplan, review preliminary data, and advise during the development of recommendations. These experts are listed in the following Section 4.3.2.1.

SmithGroup - GIS/Geo-mapping

Paulien has enjoyed a relationship working with SmithGroup campus planners for over ten years. For this project, we are pleased to have SmithGroup on our team.

SmithGroup is an award-winning, multi-national organization that employs research data, advanced technologies and design thinking to help clients solve their greatest challenges.

Working across a network of 12 offices internationally, the SmithGroup team of 1,300 experts is committed to excellence in strategy, design and delivery—giving rise to new and innovative processes and methodologies that redefining the way they work as teams.

SmithGroup has expertise with multiple GIS applications to synthesize data, generate vivid graphic depictions and model/evaluate future alternatives. Their capabilities allow us to integrate a broad spectrum of information in response to critical decision-point questions.

They are currently utilizing GIS for the benefit of institutions of higher education to align enrollment and student characteristic data with census tract data to inform strategic decisions regarding campus growth scenarios, locations of campuses and centers, new programmatic offerings, and programmatic migration opportunities.

4.3.2 Principal Investigators Planning Experience

4.3.2.1 Principal Investigators Experience

Describe how your firm's principal investigators unique professional experience will be relevant to the plan development.

Principal Investigators

Paul M. Leef, AIA, LEED AP

As a planner and architect, Paul has more than 25 years experience in higher education facilities planning, programming, design, and construction with a focus on collaboration, teamwork, and balanced solutions. He is a passionate advocate for the physical and environmental settings of higher education, a leader and team player with a keen sense for strategic planning, and possesses proven communication skills critical for managing teams and guiding projects to successful outcomes.

Paul has led campus master plan projects, large scale design and construction projects, and numerous smaller scale efforts for his clients. As the former campus architect for Colorado's two oldest public universities, he brings a deep understanding of the business of higher education from the perspective of operations, finance, and academics.

As the director responsible for planning, programming, design, and construction at multiple campuses, he is adept at taking strategic campus and translating them into capital planning and programming. In that capacity, he also dealt with state wide agencies, legislators, and higher education commissions.

With Paulien, Mr. Leef has assisted North Dakota regarding capital planning procedures and performed space needs and utilization analyses on campuses ranging from small public regional universities to urban institutions to technical colleges and large R1 research, public flagship universities.

Brian Prescott, Ph. D.

Brian T. Prescott has been at NCHEMS since 2016, where he works with states to develop evidence-informed policy leading to better and more equitable outcomes for students. His work since arriving has concentrated on affordability and state financial aid and finance policy; demographic and economic analyses and their links to access, success, and workforce alignment; and the organization of postsecondary structures. Previously, Prescott spent more than 11 years at the Western Interstate Commission for Higher Education (WICHE), where he co-managed the policy unit's activities and led projects related to state financial aid, data systems development and use, and demographic projections, including leading the production of WICHE's widely used Knocking at the College Door series of projections of high school graduates by state and race/ethnicity. In 2007, Prescott consulted with the State of Oregon in the redesign of the Oregon Opportunity Grant program. He holds a Ph.D. in Higher Education from the University of Virginia.

Dennis Jones

As President Emeritus of NCHEMS, Mr. Jones has more than 50 years of experience in research, development, technical assistance, and administration in the field of higher education management and policy-making. He is widely recognized for his work in such areas as developing "public agendas" to guide state higher education policy-making; financing, budgeting, and resource allocation methodologies for use at both state and institutional levels; linking higher education with states' workforce and economic development needs; and developing and using information to inform policy-making. His expertise has led to consultations with hundreds of institutions and every state in the country, as well as international engagements, over his long career. Together with Sally Johnstone, NCHEMS' current President, he led the design and early development of the Western Governors University, an institution that helped pioneer the effective use of competency-based education. Jones has also served as an advisory to the U.S. Secretary of Education, the Lumina Foundation for Education, the National Center for Public Policy and Higher Education and to numerous other associations, policy organizations, and state agencies.

Marty Mahler, Ph.D.

Dr. Mahler specializes in providing solutions for education, economic development, space planning, academic planning and workforce development challenges to his clients. Marty has served in a variety of leadership positions in postsecondary education at both two-year and four-year institutions. He has worked with an array of industry clients from Fortune 500 companies to businesses with less than 100 employees and with state-level economic development entities to create workforce development strategies designed to recruit businesses for relocation. At Paulien, Marty assists clients with the design and evaluation of demand-driven workforce development strategies based on the analysis of regional economic data and industry talent demand. Marty has developed sector-specific training programs in collaboration with postsecondary institutions and local employers that allow institutions of higher education and their regions to ensure a steady supply of talent for employers. Marty is able to understand the perspective of university and college leadership, having worked as a higher education administrator for many years.

Advisory Panel

Mr. Patrick Lenz has been involved in California higher education support budget and capital facility issues during his career with the California Senate Budget and Fiscal Review Committee, the California Community Colleges, California State University, and the University of California. Mr. Lenz had direct responsibility and oversight for all ongoing maintenance, deferred maintenance and capital facility issues at both the University of California and the California Community Colleges. The University of California is comprised of 10 campuses, 5 medical facilities serving approximately 160,000 students. The California Community College system during Lenz' tenure included 110 community colleges, now soon to comprised of 115 community colleges serving more than 2 million students. Mr. Lenz had oversight responsibility for review of campus 10-year Capital Outlay Plans submitted for approval to the respective governing boards, approval by the State Department of Finance, the Governor and the Legislature. Lenz was also responsible for the approval of both state supported and non-state supported facilities for classroom, libraries, student services, athletic, and medical projects. He was also the author of the "Paying for Space" outlining accountability and financing ongoing campus maintenance, addressing deferred maintenance, and funding critical capital facility projects through collaboration among the higher education segments; joint projects between public and private colleges and universities; and public/private joint facility projects between higher education and non-higher education entities.

Dr. Russ Deaton is Executive Vice Chancellor for Policy and Strategy at the Tennessee Board of Regents, where his responsibilities include leadership of the Offices of Academic Affairs, Student Success, Organization Effectiveness, and Research and Data. He was appointed Executive Vice Chancellor in July 2017 after a 17-year career at the Tennessee Higher Education, capped by 19 months as Interim Executive Director and most recently as Deputy Executive Director and Leader of the Policy and Data Division.

Dr. Deaton joined THEC in 2000 as a Policy Research Analyst, before being named Director of Facilities Planning. He later served nine years as the Director of Fiscal Policy Analysis and then four years as Associate Executive Director for Fiscal Policy and Administration. In addition to his responsibilities as THEC's chief fiscal officer, his policy work has included the development of higher education funding formula, tuition policy and financial aid research. He has designed several higher education finance policy tools for state government, including a tuition model and most recently Tennessee's higher education outcomes-based funding formula, the first of its kind in the nation.

He received his PhD in Higher Education Administration from Vanderbilt University in 2006, where he studied the public policy adoption process in state government. Since 2007, he has served as an adjunct faculty member and lecturer at Vanderbilt, teaching courses in Higher Education Finance, Public Policy and Policy Economics. He was honored with the Distinguished Adjunct Faculty Member Award from Vanderbilt's Peabody College for the 2014-2015 academic year. He earned a Bachelor of Engineering in Civil Engineering from Vanderbilt in 1998, a Master of Science in Human Performance and Sport Studies at the University of Tennessee, Knoxville, in 1999, and a Master of Science in College Student Personnel at UTK in 2001. He has authored and co-authored numerous research publications and presentations.

Dr. Sally Montemayor Lenz has a passion for student success. She brings 25 years community college experience as an administrator and counseling faculty member. During her tenure with the California Community Colleges Chancellor's Office she had oversight responsibility for the review and implementation of systemwide curriculum processes in the approval of courses and programs for 114 community colleges and the review and implementation of student success programs and practices to include: the student data element dictionary; matriculation and student assessment; STEM programs; concurrent enrollment and high school partnerships; Guided Pathways; inmate education; and transfer and articulation. She also served as a counseling faculty member at Sierra College. While at the Contra Costa Community College District, she led the implementation of statewide initiatives for the District's three colleges and two satellite centers. Student success initiatives included: Student Equity; institutional effectiveness; dual enrollment; inmate education programs with county probation departments; career technical education; adult education reform; financial aid initiatives; and College Promise programs. She also participated in the research and selection of technology programs designed to maximize space utilization to meet student demand for courses and programs.

4.3.3 Company's Planning Experience

4.3.3.1 Company Experience (specific)

Describe your company's number of years of experience in each aspect of higher education strategic capital planning; include at a minimum strategic capital leadership, demographic trend analysis, economic trend analysis and facilities development planning in your description.

Paulien & Associates

For almost 40 years, the core of our higher education practice at Paulien has been translating strategic goals into space needs, capital planning and facility development. A majority of our work on over 700 campuses has focused assessment of space needs as they relate to strategic and academic planning. Many times, the academic planning can also be informed by analyses of demographic and economic trends. This frequently occurs at the two year and four year regional comprehensive universities, whose students tend to be local and regional. Recent examples include assignments at Cal State Chico and Northern Arizona University, as well as Metropolitan Community College in Kansas City. The research institutions have a larger catchment area for recruitment and service, so their strategic focus often connects economic development through research activity. In all cases, we approach space as a valuable resource which needs to be deployed in alignment with overarching strategic vision. Furthermore, the creation of new space or the revitalization of old is capital intensive and these investments likewise need to be strategic, providing the most value and impact for the money.

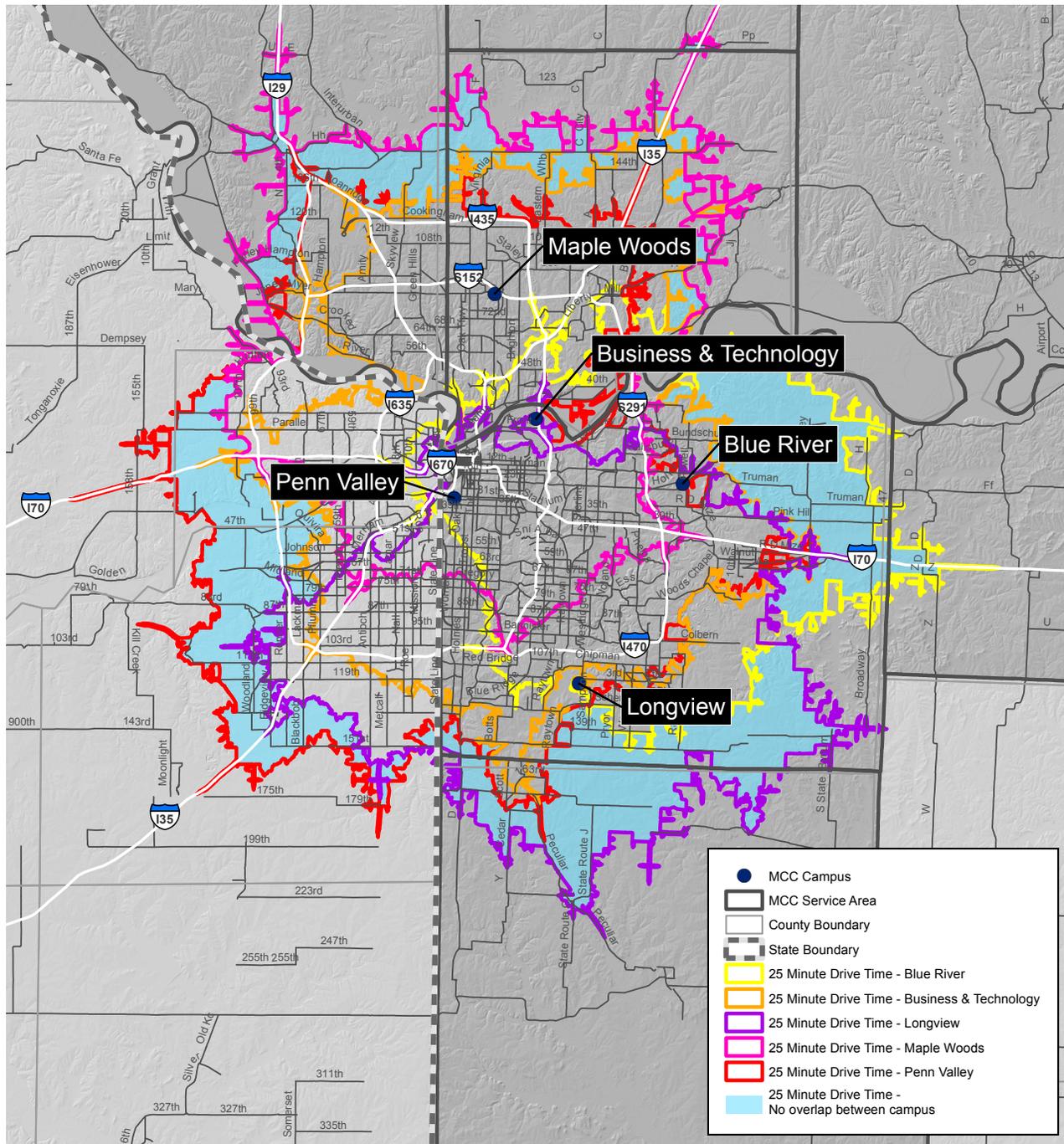
In an extensive portfolio of work that has both depth and breadth, Paulien has provided planning leadership in partnership at the level of institutions, systems and statewide bodies. At the institutional level, we have integrated demographic, economic, and space analysis with strategic capital planning and development. For example, at CU Denver, an urban institutional peer of Portland State University, we conducted a demographic and occupational analysis of the Denver Metropolitan Service Area and this informed key initiatives to expand infrastructure to support STEM-related teaching laboratories and a new facility for the College of Engineering. A similar study for Northern Arizona University, which included a program demand gap analysis, identified strong recruitment potential and occupational need for science and engineering programs not only in state but also in the adjacent area of Southern California. Analyses of demographics, occupational demand and historical trends informed enrollment projects. Furthermore, the president's strategic vision for increased research activity was translated in to significant office and laboratory space needs. This culminated with the University's plans to renovate tired science buildings and investing in new laboratory research space.

GIS Mapping and Data Visualization

Over the last several years as Geographic Information System (GIS) information has become more readily available, Paulien has been incorporating GIS generated maps and visualizations to help clients better understand two-dimensional data in a three-dimensional world. With GIS information, higher education analysts are able to make more informed decisions when using data coupled with geographic maps. GIS provides a very effective means of graphically conveying complex information, especially in reports and presentations where patterns are quickly and more clearly observed when viewing mapped data. Maps produced from GIS data can be used to depict complex relationships and significant "hotspots" within specific geographic boundaries that better the guide decision-making processes.

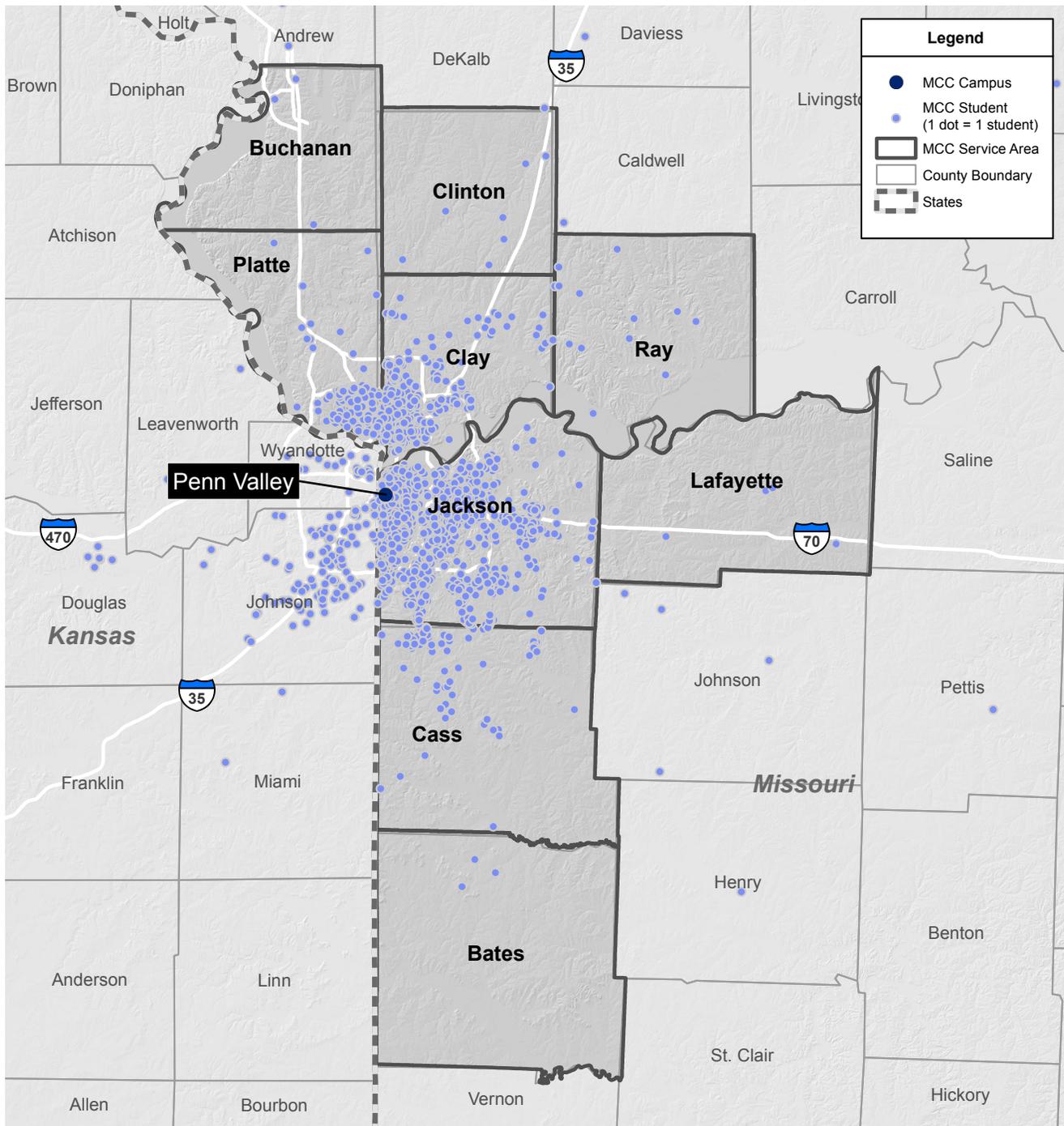
Recently Paulien completed a Strategic Location and Programmatic study for Metropolitan Community College in Kansas City, Missouri. By using GIS mapping and data visualizations we were able to show the college unique characteristics of the travel patterns by their prospective students and their relationship to each of their existing campuses through a drive-time analysis.

Metropolitan Community College 25 Minute Drive Time Analysis Service Area



GIS information can also be used to identify unique patterns of attendance by mapping students home address and their campus attendance location.

Metropolitan Community College Student Location Primary Campus - PennValley



Based upon our previous experience using GIS generated maps and visualizations, we will be able to provide the geo-mapping deliverables outlined in Exhibit 2, 2-c; and 2-d.

Paulien's experience has also included impactful work at System and statewide levels. The following are examples of similarly scaled projects which share attributes in common with the Oregon HECC study:

North Dakota University System

Paulien completed a systemwide master plan for the North Dakota University System (NDUS) that encompassed all 11 institutions including community colleges, regional universities, and research universities. The systemwide master plan was developed to act as a guide for the individual institution master plans and in response to changing state demographics, economics, technologies, learning environments, and research and development.

The Paulien team performed multiple studies with tasks including statewide demographic and workforce analysis/ program alignment; facilities data acquisition, refinement, and analysis; classroom utilization; deferred maintenance and life cycle assessment; review of the most campus recent master plans; review of research and development activities; and compilation of IT infrastructure recommendations.

Paulien conducted on-site meetings for each of the 11 campuses to tour facilities, review current academic instruction environments, and meet with campus administration and facilities representatives to discuss their current situation and future goals. Additional meetings were held with system-level representatives to address and coordinate systemwide initiatives.

Paulien supervised the work of consultants who performed life-cycle assessments and conducted the IT analysis.

Significant deferred maintenance was found in the facilities conditions assessment on approximately 1/4 of the buildings. Approaches were suggested for addressing that significant current deficit. NDUS was encouraged to have the balance of their buildings assessed so that accurate data for all the state supported buildings could be recorded.

The Paulien team presented the findings to the Finance and Budget Committee of the State Board of Education, the Chancellors Cabinet, and the Higher Education Funding Committee of the North Dakota legislature.

Pennsylvania State System of Higher Education (PASSHE)

Paulien conducted space planning studies for several universities in Pennsylvania using the Pennsylvania State System of Higher Education (PASSHE) space standards and guidelines.

Kentucky

Paulien conducted a major complex study for the Kentucky Council on Postsecondary Education (KCPE). The project for the KCPE followed an assignment Paulien conducted to develop space guidelines for them as they were also reorganizing their system, bringing two-year institutions together under a new Board and attempting to advance the research mission of the University of Kentucky and the University of Louisville. Paulien prepared a space needs model that has served KCPE well over an extended period of time.

The KCPE study provided life cycle analysis and deferred maintenance costs for all facilities within the State's postsecondary education system. Paulien conducted an educational adequacy/ fit for continued use analysis for 141 key buildings across the system and costs to implement those improvements were also calculated. The space model prepared earlier by Paulien was updated to reflect more current thinking regarding pedagogy and student project work and produced a capital deficit for the next 15 years. The result was a budget to achieve State goals regarding participation in postsecondary education and the capital costs that would be needed to achieve those goals.

Minnesota

Paulien was hired by the Minnesota State College and University System (MnSCU) shortly after they were formed from three different governing structures. Paulien conducted a study that determined the instructional space utilization for each of the campuses on a detailed room-by-room level, organized a room-by-room facilities inventory across the system, conducted field verification to assure comparable data was available, and created a systemwide level space modeling system that allowed them to categorize each of the institutions and determine where their capital resources could best be spent.

Utah

Paulien conducted two separate studies for the Utah System of Higher Education. The 1996 study was conducted for the State government and actively involved representatives of the executive and legislative branches; the 2011 study was conducted for the System itself. In each case, the studies focused on the utilization and needs for each of the higher education institutions. Each institution was visited during each study. The space standards developed covered all campus space types. The projected impact of distance and on-line learning were projected for these studies.

Indiana

Paulien was selected to conduct strategic and facilities master planning for Ivy Tech Community College when it became the statewide two-year institution in Indiana. This analysis involved demographic analysis of the 14 regions served by the College, an analysis of the occupational needs in each of those regions, and development and application of utilization and needs metrics to allow the system to determine where their greatest needs were.

Wyoming

For the Wyoming Community College Commission, Paulien was chosen to conduct a study that verified the space classification and inventory for space on all of their campuses, evaluated the space needs for all major categories of space, and developed a database to allow the Commission to conduct its capital budgeting and maintain its facilities inventory. In Wyoming, the higher education system consists of the Wyoming community colleges and the University of Wyoming. Paulien & Associates has done multiple projects in Wyoming, including master plan level space needs for the University of Wyoming under a separate contract.

Connecticut

Paulien was hired to conduct the Program for the Master Plan for the Connecticut State University System. This effort involved doing extensive analysis for each campus that was based on target enrollments agreed to between the campuses and the System Chancellor. The guidelines used in Connecticut were intended to be programming level detailed guidelines, rather than the more macro level guidelines often used in statewide studies. This involved meeting with each academic and administrative department on each campus and producing the needs on a major space type and school/college basis with unit detail available. The program for the master plan was used in conducting physical planning for each of the campuses.

New Jersey

For Rutgers, the State University of New Jersey with a statewide university mission, Paulien was separately hired to produce programming for the master plan. This involved dealing with the quite unique missions of the Camden, Newark, and New Brunswick/Piscataway campuses. In each case, meetings were held with campus leadership and with the system administration in setting the overall metrics and approach for this process. The materials produced served as the basis for follow-up physical master planning.

New York

Paulien updated system-wide guidelines for the City University of New York System and in that process developed utilization and needs metrics for their entire 24 institution system that contained a mix of community colleges, four year colleges and universities, and professional schools.

University of Missouri System

Paulien conducted a utilization analysis and space needs assessment for each of the four campuses including one technical school, two regionals and the flagship research university.

It is worth noting that Paul Leef brings specific experience with strategic capital leadership and facilities development planning. As the campus architect for the two oldest public universities in Colorado, the Colorado School of Mines and the University of Colorado Boulder, he directed planning, design and construction. At both institutions, he played a key role in strategic and capital planning. At Mines, he worked closely with the provost in a strategic planning process that focused on growth of both undergraduate enrollment and research. This was used to forecast the amount of and type of space needed and to plan the physical growth of the campus. The resulting campus master plan has almost completely come to fruition over the past decade, and Paul planned the development of many prominent new facilities and renovations in support of the plan. At CU-Boulder, Paul played key roles in the Flagship 2030 strategic plan process, helping to lead several implementation task forces and leading the subsequent campus master plan initiative. The master planning efforts were aligned specifically with the strategic plan, and Paul was responsible for a \$1B capital program to develop the facilities identified in the campus plan. As an architect, he has a thorough understanding of both high level planning concepts and strategies, as well as the practical and tactical issues for programming and development of actual facilities.

Paulien is excited to be teaming with NCHEMS on yet another project. Our two firms have a lengthy association over many years. The North Dakota Statewide System project is one such example of a successful collaboration between our two firms.

NCHEMS

NCHEMS is uniquely qualified to partner with Paulien and Associates on this project because it has nationally recognized capabilities in all of the areas necessary to the successful completion of its scope of work, specifically:

- Data resources. The analytic work required of this project requires data from a wide variety of sources. NCHEMS has compiled, and routinely refreshes, data from these multiple sources. As a result, NCHEMS possesses among the most comprehensive set of data supportive of higher education policymaking to be found anywhere in the country. NCHEMS uses these data to conduct environmental scans of demographic and economic conditions critical for setting the context for the specific studies that NCHEMS undertakes and for developing the recommendations for state policy actions.
- In spite of these extensive data holdings, some data that are specific to Oregon will have to be collected from the Higher Education Coordinating Commission. NCHEMS long history of leadership in higher education data systems (e.g., NCHEMS developed the data categories and definitions at the core of the federal data collection system, IPEDS) allows it to develop data requests that are parsimonious and easy for respondents to understand. The data requests should not be onerous.
- The ability to convert data into information. In order for data to be useful in the strategic planning process, it must be converted into information that “tells a story” – it is presented in a way that helps decisionmakers identify key issues and points of leverage for best addressing those issues. NCHEMS has utilized its database resources to make information-rich presentations to policy analysts and decisionmakers on hundreds of occasions.
- Model Building. Not all the information needed to support the Commission’s work can be derived from analyses of data about past and current conditions. These analytic findings must be augmented by projections of future conditions – student demand and workforce requirements – and an exploration of ways in which alternative responses to these demands might be financed. NCHEMS has considerable experience in creating interactive models of all the types required for the successful conduct of this project, models that allow users (the Commission members) to assign different values to key input variables and see the consequences of these different assumptions. For the key factors underlying the recommendations the Commission will have to make, there are no foolproof projections; informed judgments based on an investigation of alternative assumptions will be required as a substitute. Examples of NCHEMS model-building capacity can be found at <http://www.elevatevirginia.org/snd/> and <http://nchems.org/projects/increasing-college-attainment-in-the-united-states/>.
- Specific examples of recent projects that feature analyses of demographic and economic conditions or interactive model building include:

Pennsylvania State System of Higher Education(PASSHE)

NCHEMS was asked to conduct a comprehensive system review of the sustainability of the non-selective public four-year institutions in Pennsylvania, most of which are located in rural settings, given the extraordinarily difficult demographic and financing environment they are facing. NCHEMS analyzed enrollment trends and changes in population projections and in income and other demographic characteristics to paint a picture of the conditions for each institution. Additionally, these institutions had been slow to adapt to better meet the workforce demands in their regions, and NCHEMS helped emphasize the criticality of accelerating those efforts backed by evidence.

In projects conducted in numerous states, such as in North Dakota for the North Dakota Roundtable, in Illinois for the Illinois Board of Higher Education, and in Kentucky for the Council on Postsecondary Education, and in even in Oregon for the Higher Education Coordinating Commission (HECC), NCHEMS has contributed to or facilitated efforts to develop a statewide policy goal for postsecondary attainment or state strategic plans. Data and evidence play a critical role in these engagements, especially analyses of demographic and economic conditions to help understand the likely future demand for college enrollment and what characteristics (such as income and workforce demands) will be critical factors in defining that demand. In several of these engagements, NCHEMS built interactive models to help stakeholders better appreciate the choice sets they faced, leading to recommendations that were both feasible and in keeping with the documented requirements. Several of these engagements are also described later as background for the references that are supplied in support of NCHEMS’ involvement in this proposal.

Western Governor’s University

Undertook a study of the costs of delivery instruction at WGU in comparison to costs of different modalities in a diverse array of institutions

Midwest Higher Education Compact

Led the strategic planning activity for the organization

Governor's Office, State of Kentucky

Advised on approaches to better serve education needs in rural parts of the state

Oregon Education Investment Board

Advised on ways to align state investments in education with state goals

NCHEMS has extensive experience in gathering and analyzing demographic and economic data. Virtually every NCHEMS engagement begins with a thorough analysis of relevant data concerning population projections, demographic characteristics, economic conditions, workforce projections, etc. to establish a base of evidence on which the project subsequently builds. We have found that beginning a project that way helps establish a set of common understandings both with the project client and with stakeholder groups whose interest intersect with the project. Each of the projects for which NCHEMS supplied references included an extensive analysis of demographic and economic data and are emblematic of NCHEMS' approach to these efforts.

In addition to using demographic and economic analyses as a foundation for a strategic planning effort, NCHEMS is also routinely called upon to provide demographic and economic data for other partners. For example, NCHEMS annually provides data to the Lumina Foundation to support its annual Stronger Nation updates on progress toward their Big Goal, and to the Aspen Institute to support its competition for the Aspen Prize for Community College Excellence. The latter of these efforts involves the gathering and analysis of data on enrollment and completions for all community colleges in the nation, as well as demographic and economic analyses of the communities they serve supplemented with information on workforce outcomes of their graduates. All of these data then provide the basis for interviews with colleges selected to be finalists, which NCHEMS also conducts.

NCHEMS has extensive experience in gathering data from numerous publicly available data sources in order to conduct these analyses, including:

- U.S. Census Bureau (e.g., American Community Survey)
- National Center for Education Statistics (e.g., Integrated Postsecondary Education Data System)
- U.S. Bureau of Labor Statistics
- U.S. Bureau of Economic Analysis
- Publicly available data from state departments with responsibility for commerce, workforce development, education, and postsecondary education
- State-level unit-record data provided pursuant to an engagement, either provided as de-identified datasets or as aggregate data prepared by the state in response to a data request template NCHEMS created explicitly for the purpose of the project

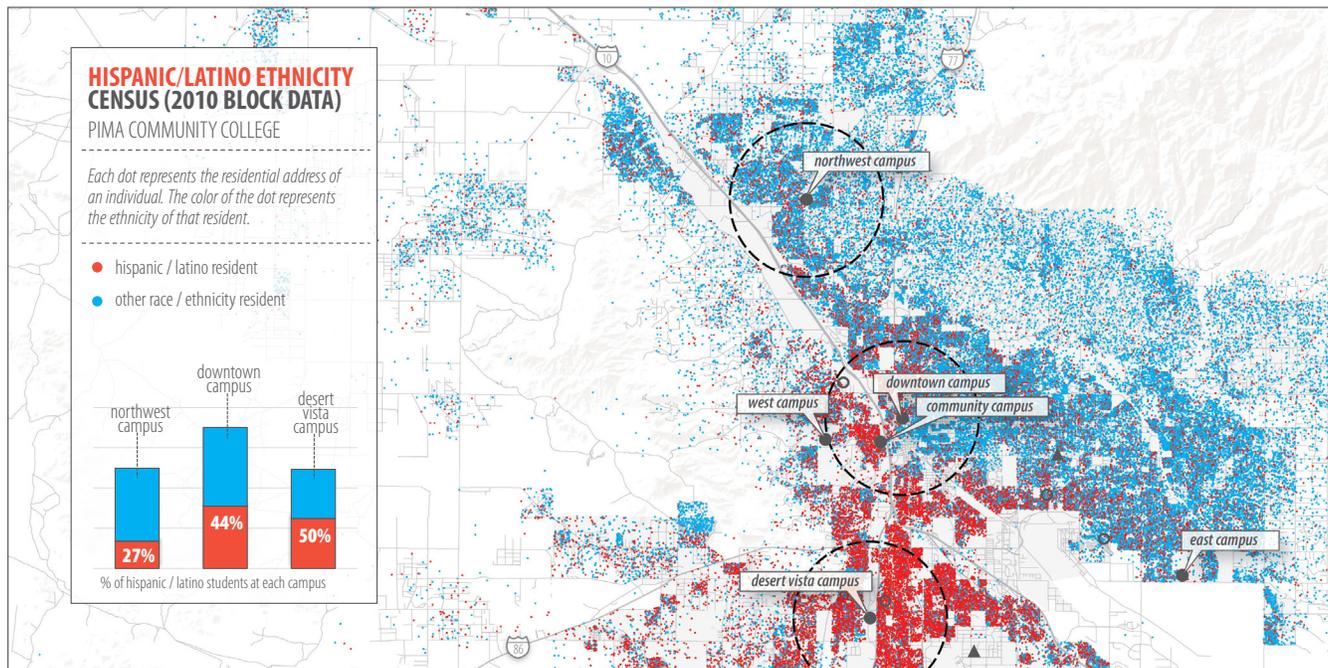
SmithGroup (GIS/Geo-mapping)

SmithGroup is an award-winning, multi-national organization that employs research data, advanced technologies and design thinking to help clients solve their greatest challenges.

Working across a network of 12 offices internationally, the SmithGroup team of 1,300 experts is committed to excellence in strategy, design and delivery—giving rise to new and innovative processes and methodologies that redefining the way they work as teams.

The SmithGroup has expertise with multiple GIS applications to synthesize data, generate vivid graphic depictions and model/evaluate future alternatives. Their capabilities allow us to integrate a broad spectrum of information in response to critical decision-point questions.

They are currently utilizing GIS for the benefit of institutions of higher education to align enrollment and student characteristic data with census tract data to inform strategic decisions regarding campus growth scenarios, locations of campuses and centers, new programmatic offerings, and programmatic migration opportunities.



The example shown above is from a planning project that Paulien completed in partnership with SmithGroup.

4.4 | Technical Proposal

4.4.1 Comprehensive Capital Needs Assessment

4.4.1.1 Need Analysis

Describe the process, policy or procedure that ensures thorough analysis of existing data when conducting a comprehensive capital needs assessment. Describe how that process policy or procedure will assess space capacity, existing space utilization, facility quality, special facilities and infrastructure in the development of the Plan.

Our team's many years of experience includes working on complex projects involving multiple stakeholders and campuses. One key to our success is understanding the key tasks and developing an implementation strategy at the beginning of the study to reach the desired outcomes. This includes a review of existing documentation and data, organization of on-site meetings, and understanding the analyses required to make informed decisions. We believe that the ultimate success depends on two key factors: sound data and meaningful stakeholder engagement.

We have organized the scope of work into three critical steps.

STEP 1 - DISCOVERY

Project Commencement

Upon authorization to proceed, our team will develop an agenda and schedule an initial meeting with HECC to discuss project expectations, strategic objectives, and desired outcomes of the process. Other objectives of this visit will be to: discuss stakeholder and campus participation strategies, establish specific project goals, identify known data issues, review schedule and project milestones, set specific dates for site visits, validate the products and duration of the tasks, and determine communication protocols.

Data Gathering

In order to have a data-informed process, Paulien will provide a detailed data request to coordinate and track materials typically available. This will include such items as campus space inventories, utilization data (or in the absence of data, Paulien will perform utilization analyses using course data), facility condition assessments, campus planning documents (including strategic plans, physical master plans and capital plans), staffing and enrollment data and any performance metrics which might be available.

A secure and project specific drop box will be established for the project. A unique username and password will be provided to the University for materials to be transmitted via this secure Paulien-hosted web-based file share site. This ensures that any materials provided by HECC and participating institutions are secure. This initial data assessment will help determine the engagement strategy for the first visits to each campus.

Facilities Inventory

Accurately recording the current space on each campus is an important component of space planning. A reliable space inventory ensures that recommendations are built on correct data, and the process has integrity and credibility.

Documentation of campus space inventories will include current space allocations across academic and administrative departments by space type. Specific fields that will be collected/reviewed include: building name, room number, primary space use code (per the National Center for Education Statistics' Postsecondary Education Facilities Inventory and Classification Manual, 2006 Edition), instructional space station counts, the amount of space (assignable square feet), primary occupant/department, and general features.

Paulien has developed database analytics, so that any anomalies or discrepancies with the data sets can be identified early in the process. It is not uncommon for space data to be incomplete or even non-existent. In these situations, Paulien has developed techniques and approaches to work around these short-comings. Eventually, accurate space data is highly desirable, and in the event that it is not available, Paulien can offer a variety of solutions, ranging from web-based survey tools for use by university staff to on-site, in-field surveys conducted by trained Paulien personnel for future space audits.

Stakeholder Meetings

As detailed in the Implementation Plan, the team will use portions of the first round of on-site kick-off meetings to verify and obtain the datasets which are available. During the second round of on-site stakeholder meetings at HECC and each campus, the Team will facilitate discussions using HECC strategic goals as a framework, to consider the results of the demographic, economic and occupational analysis. This will begin to identify potential gaps and opportunities in both programs and facility needs. The empirical and experiential information gathered during these meetings will help the team understand the envisioned direction of each University in relation to the statewide strategic goals. These meetings will also serve as a sounding board for issues and ideas that surface during the analysis phase. If appropriate and collectively agreed upon, external regional stakeholders can also be included, such as major employers, economic development offices or local governmental agencies.

STEP 2 - ENVIRONMENTAL SCANNING: INTERNAL AND EXTERNAL DATA COLLECTION, PROCESSING AND ANALYSIS

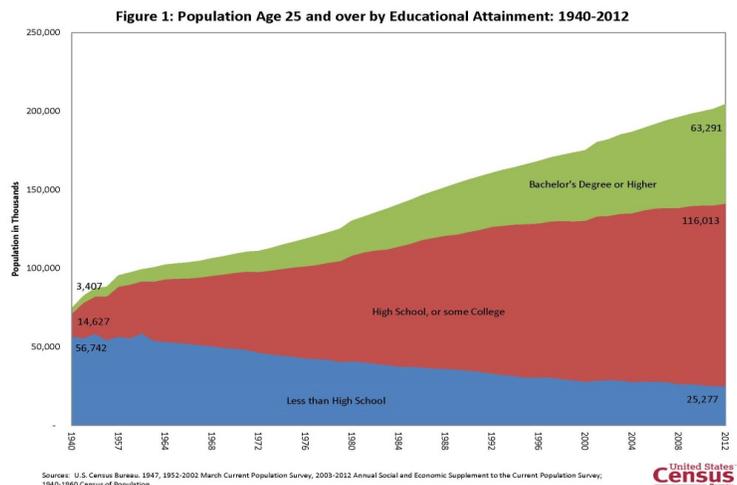
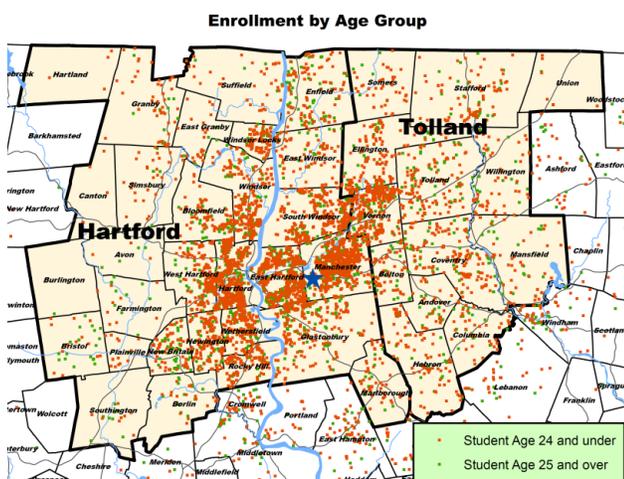
Environmental scanning is an external analysis that focuses on scanning, monitoring, forecasting, and assessing an institution's external environment. The goal of this process is to alert constituents to potentially significant external changes before they crystallize so that campus decision makers have sufficient time to react to impending changes.

An environmental scan is usually the first step in the planning process. It answers the questions, "What occupations will be in demand?" and "How will changing population demographics impact the institution?"

Data Collection

We begin by reviewing key data sources at the national, state and local level, including the U.S. Census Bureau, the U.S. Department of Labor and the U.S. Department of Commerce. National trends in higher education are usually a starting point for the study, including the latest trends in technology and pedagogy.

At the state and local level, we typically work with economic development agencies and planning organizations to identify regional and statewide trends. Other areas of data gathering are directed at the student pipeline and changing educational paradigms.



Major units of analyses may include demography, technology, occupational, workforce and economic categories.

Demographic analyses can detect population changes and the migration of residents as well as future changes in age, ethnicity and educational attainment. Using Geographical Information Systems (GIS), the location of enrolled students can be portrayed visually and analyzed by multiple factors to look for patterns that could impact future enrollments.

Secondary data sources are helpful in obtaining a broad-based view of the demographic and economic conditions of the area. These data are especially useful in looking back 10 or more years and determining how a given area developed.

Occupational Gap Analysis

In the *Program Demand Gap Analysis*, (PDGA) we compare the supply of regional educational program completers with the demand of current and forecasted job openings. The analysis shows whether output from regional academic institutions and their programs are at, near, or below the market demand for workers in each program revealing fields that are experiencing both undersupply and oversupply of trained workers. The analysis also indicates occupations that education institutions in the region are not currently training for but which are in high demand in the local labor market. The results provide a framework for identifying opportunities for new programs and scaling or rightsizing existing programs.

Considering the real-time job posting data is a natural complement to the historic labor market data found in the Program Demand Gap Analysis. For each program, we will provide the top companies, skills, and job titles down to the zip code level.

Using Emsi and CareerBuilder's proprietary data, we will provide insights into who employs Oregon graduates and in what fields (i.e. job title). This data will help inform the mapping of programs to occupations within the *Program Demand Gap Analysis*. The job titles and employers can also be cross referenced with their program of study to determine whether there are any existing pathways between programs.

The goal of this step is to directly compare real-time job demand with institutional IPEDS completion data (degree and certificate awards) for Oregon programs. Consideration must also be given to students attending Oregon Universities from other states and countries, including full-online students, as they may not continue to reside in the state after completion, thus not contributing the economic vitality of the State.

An *Occupational Gap Analysis* will also be prepared. The analyses will disaggregate occupations by SOC code by level of educational attainment, so a better understanding of regional workforce needs can be developed and integrated into Oregon capital planning.

Using this supply and demand model, findings of the gap analysis will be integrated with stated campus-wide and regional economic goals to understand occupational areas with predicted oversupply or undersupply of graduates by campus location. The outcomes of this analysis will be used to develop recommendations for each campus.

Academic Plan Components

Components of the academic plan are divided into three areas.

- Academic Programs and Support Systems.
- Enrollment Projections.
- Utilization and Space Needs Analysis.

A significant portion of the academic plan will use findings of the environmental scan to identify opportunities for future program development. The largest driver of the space needs analysis is enrollment growth not only in existing academic and technical programs, but new programs as well.

The goal of this step is to directly compare job growth and occupational employment projections in key demand areas.

NCHEMS will be preparing interactive, heuristic models to:

- project student flow into and through post-secondary institutions and
- dynamically estimate workforce and programmatic needs

These models will inform anticipated changes in enrollment, which in turn will relate to academic program needs. These program needs will be translated into space needs.

STEP 3 - COMPREHENSIVE FACILITIES ASSESSMENT

Utilization Study

The space utilization study will begin with an examination of current University data, including existing classroom utilization data. Using benchmarks and metrics appropriate to each University and applicable state guidelines, we will develop meaningful comparisons and recommend strategies to maintain or increase efficiency levels. These recommendations will be directly applicable to strategies for dealing with any existing deficiencies or future needs.

Paulien will meld the course file and facilities inventory using our specialized analytic software. Outcomes will include the validation of hours per week of scheduled use, percentage of seats filled when the room is in use, and the space per student. These results provide an outline of major opportunities or deficiencies.

Our utilization studies reveal how classrooms and teaching laboratories were used during the most recent fall semester. For example, the outcomes include which rooms have very low average hours per week of use, low assignable square feet (ASF) per station, or lower than expected student station occupancy. The outcomes of the academic space utilization analysis will determine if:

- The existing learning spaces are suited for the desired pedagogy
- There too many chairs in a room to meet contemporary learning modalities and the course enrollment capacities
- There are classrooms that can be re-purposed to meet deficiencies of space such as informal learning spaces
- Certain teaching laboratories are only used for a few courses each term, thereby opening discussion as to whether these courses could be accommodated in a shared laboratory
- Renovations, technology upgrades, or space reallocations are needed to better align facilities with strategic academic goals

Our reports will be customized to ensure the outcomes are appropriately representative of individual scheduling blocks, the spaces intended for instruction (versus those that are primarily conference rooms and occasionally used for instruction), and other considerations. We can show utilization by types and sizes of classrooms, buildings, sectors of the campus, and by individual schools and colleges.

The graphic example shows scheduled classroom use by day and time and, percent of classrooms in use. Other utilization reports identify scheduled utilization for a specific room throughout the week with detailed course offerings. Utilization reports may also be illustrated by centrally scheduled versus departmental spaces, impact by building, outcomes by room amenities such as furniture type or technology level, and pedagogy (e.g., active learning spaces).

Scheduled Classroom Use by Day and Time (Fall 2015)

(Darker colors indicate a large percentage of rooms are scheduled.)

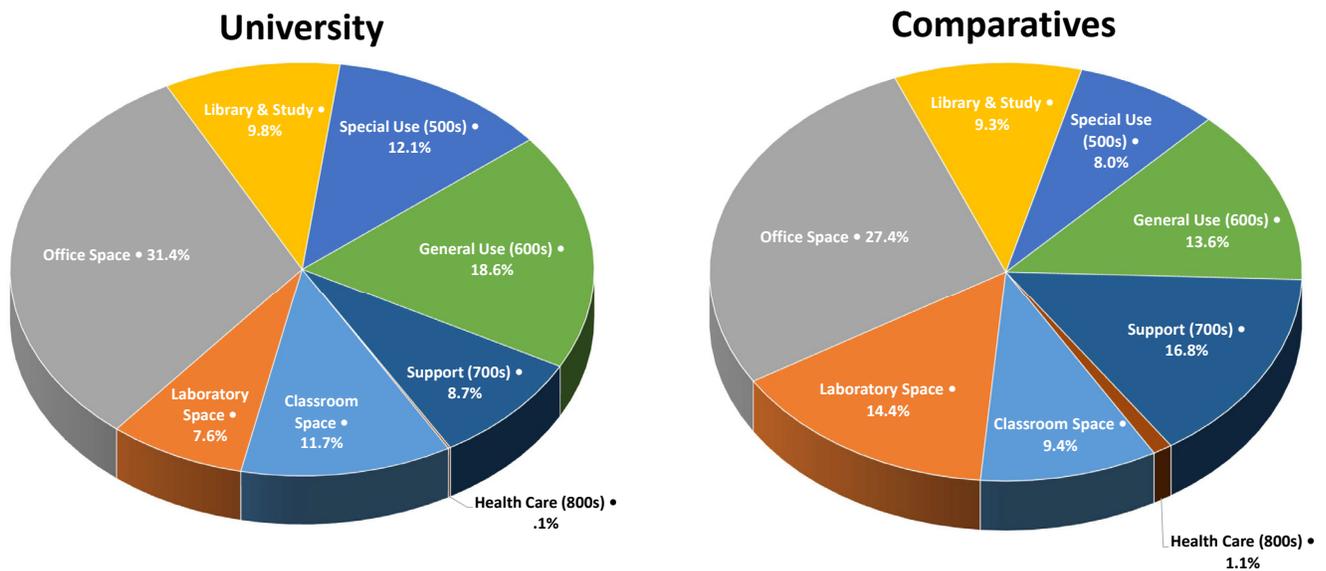
Time of Day	Monday		Tuesday		Wednesday		Thursday		Friday		Average	
	Rooms in Use	% In Use										
7:30 AM	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%
8:00 AM	7	37%	5	26%	6	32%	5	26%	5	26%	6	29%
9:00 AM	10	53%	13	68%	10	53%	13	68%	9	47%	11	58%
9:30 AM	10	53%	11	58%	10	53%	11	58%	9	47%	10	54%
10:00 AM	12	63%	15	79%	12	63%	15	79%	12	63%	13	69%
11:00 AM	10	53%	11	58%	11	58%	11	58%	11	58%	11	57%
11:30 AM	10	53%	11	58%	11	58%	11	58%	11	58%	11	57%
12:00 PM	6	32%	11	58%	6	32%	11	58%	8	42%	8	44%
12:30 PM	6	32%	0	0%	6	32%	0	0%	8	42%	4	21%
1:00 PM	5	26%	2	11%	6	32%	0	0%	4	21%	3	18%
2:00 PM	5	26%	8	42%	6	32%	6	32%	4	21%	6	31%
3:00 PM	3	16%	8	42%	3	16%	8	42%	1	5%	5	24%
4:00 PM	1	5%	3	16%	1	5%	4	21%	0	0%	2	9%
5:00 PM	1	5%	0	0%	1	5%	0	0%	0	0%	0	2%
6:00 PM	3	16%	3	16%	5	26%	0	0%	0	0%	2	12%
7:00 PM	2	11%	3	16%	4	21%	0	0%	0	0%	2	9%
8:00 PM	2	11%	3	16%	2	11%	0	0%	0	0%	1	7%
9:00 PM	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%

Total classrooms = 19

Space Needs Assessment

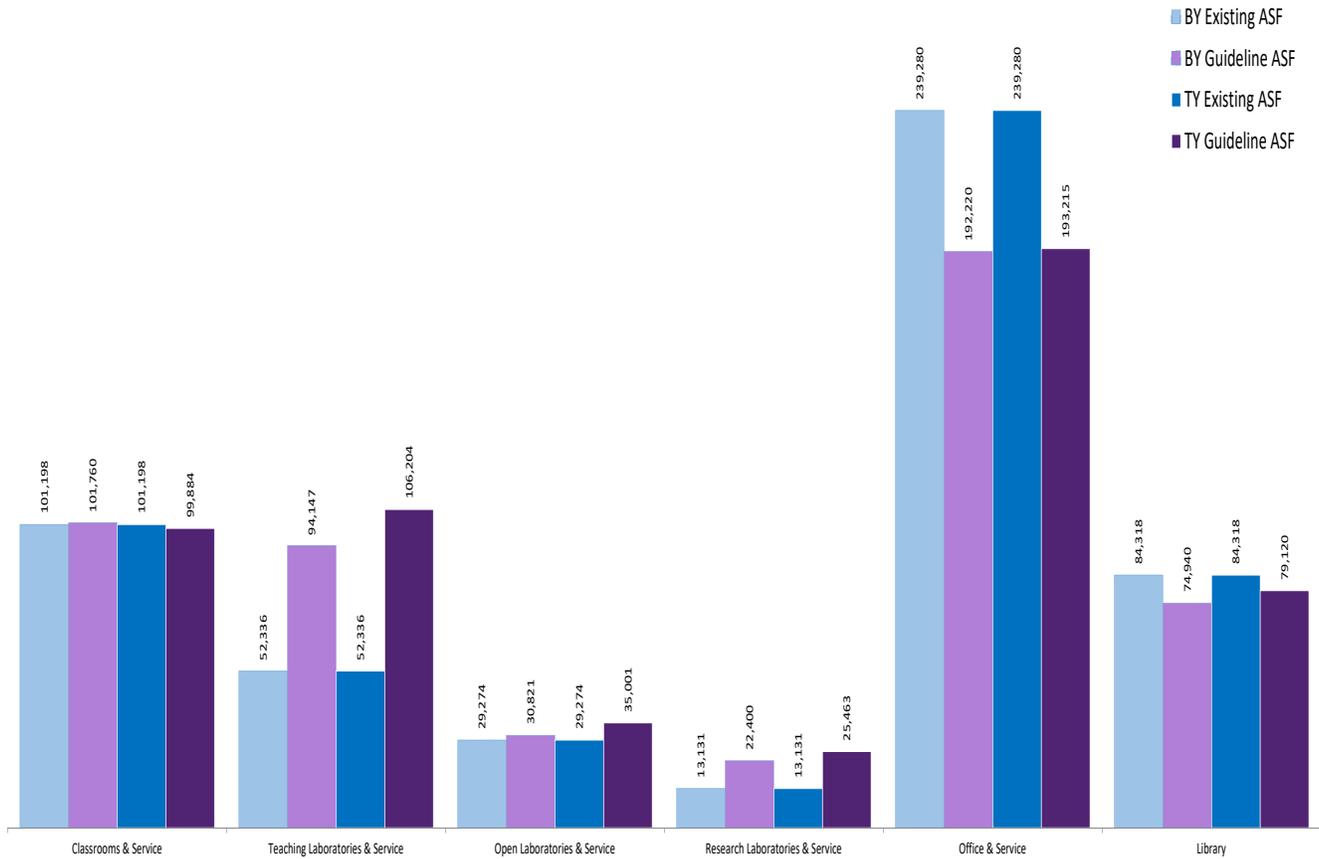
Paulien uses customized software tools aligned with current trends and space planning guidelines to determine the types and amounts of space needed by the University to meet its strategic goals. The model blends the University's data metrics such as the current facilities inventory, staffing levels, student enrollments, and research goals with appropriate utilization expectations and guidelines. The analysis is informed by the empirical information gathered during meetings on campus.

Working with each University, we will establish the guidelines to be used in determining space amounts needed at base and future year enrollment. The space analysis will take into account the projected student enrollments, the overall enrollment goals, changes in faculty levels, research expectations (and growth areas), opportunities for productivity-based research space (where appropriate), impact of functionally-derived office space as compared to more traditional allocations by employee type (also where appropriate based on conversations with Deans and the administration), areas for collaboration and interdisciplinary activities, functional relationships (adjacency priorities), and all other types of space needed to support the academic mission.



The current amount of space will be compared to that of similar institutions at which Paulien has worked. This provides context for understanding the amounts of space on campus, as well as that of similar campuses.

Base year space needs analysis will compare existing facilities to guideline space needs based on course offerings and staffing for the most recent fall term for which data is available. Appropriate instructional space utilization metrics will be applied, based on the outcomes of the utilization study and on conversations with the University's leadership. The projected enrollment space needs analysis will compare existing facilities to space needed to accommodate projected enrollment and staffing. Once space and program needs are identified, they can be translated into capital plans with input from each constituent campus.



4.4.1.2 Trend Analysis

Describe the process that will analyze Oregon and national trends including demographic trends, enrollment trends, job demand by discipline and the impact of technology on classroom instruction. Describe how this process will aid the design and development of the Plan.

The foundation of the plan we create for the State of Oregon will be based upon an analysis of a variety of data sets that ultimately leads to the development of innovative ideas and solutions. Data alone is not a useful tool. The data must be shaped and analyzed so that it can be presented in innovative and impactful ways that are graphical and easy to understand by all stakeholders.

The first step in data analytics is therefore the identification of what data is available, what is the quality of that data and how consistently is it available for all institutions. Often, we find that strategic solutions must be created with data you have and not the data you wish you had. While data is key to solving most challenges, potential limitations exist such as uneven data quality across institutions, data from different time periods, missing data and data that is incorrect.

Our experience in higher education data analysis will allow us to identify these data quality issues and account for them in our analysis. What is important is that we will be transparent with respect to problems, limitations and necessary assumptions.

The most important challenge of this study is to take voluminous data and turn those data into analytical information—then drawing conclusions that set the stage for the Strategic Capital Development Plan that is the desired outcome of this study. The following paragraphs provide more detailed information on the various data analyses we will be completing as a part of this project.

Oregon and National Trends:

We will start our analysis with a broad look at national trends and specific statewide trends currently shaping the talent pipeline in Oregon. Specifically, we will analyze demographic and occupational trends and demands that are likely to have impact on the Oregon higher education system over the next 5-10 years. It is also important to consider trends in program delivery, pedagogy and student success. With both academic planners and architects on staff, Paulien is well versed in these topics.

Demographic Trends:

Obviously, the future demand for education is driven by people seeking to increase opportunities in the work place by increasing their educational assets. The key to understanding where this demand will be is being able to predict where centers of population growth will occur. Our analysis will look at various population projections for age cohorts so that the Strategic Capital Development Plan is based on not where the population centers are but where they will be in the next 5-10 years.

Enrollment Trends:

Enrollment is driven by two main factors: (1) new students that elect to come to a campus and (2) the retention of students who have already enrolled at the institution. Our analysis of enrollment trends will look at both factors so that strategies can be developed to increase both enrollment and retention of existing students at each of the institutions.

Occupational Trend Analysis (Gap Analysis):

An efficient labor market requires a seamless flow of available talent between the educational institutions that train them and the employers that hire them. One factor behind workforce misalignment stems from when the needs of the employers evolve differently than the educational programs that educate the future talent pool.

These misalignments may happen at different times and for different reasons: 1) employer training becomes more tailored and comprehensive; 2) businesses come and go, and certain educational programs become more or less pertinent to a specific region; 3) rapid advances in technology and business create curriculum needs that few educational institutions possess; and 4) as economic conditions shift, businesses have different hiring requirements of their employees.

In light of these dynamics, an up-to-date understanding of the regional economy and the demand for current and future talent is vital to the planning efforts of colleges and universities seeking to adapt their program offerings to the requirements of an ever-changing workforce.

To gain better insight into economic conditions and workforce trends, Paulien and NCHEMS will conduct an overview of the region's economy and educational talent pipeline. In addition, using data from Emsi, a program demand gap analysis will be completed at a statewide level and for each of the seven four-year institutions.

The program demand gap analysis is performed by assessing the supply and demand of available talent and identifying the educational programs that need to be adapted in order to fill any existing or future gaps. The analysis weighs the educational output of each institution and other postsecondary educational institutions in the state/region against the number of job openings related to the college's program offerings to determine whether a deficit or an oversupply of talent exists. The goal of the analysis is to provide each institution with relevant data and information that it can use when making decisions about current and future program development as well as serve as a foundation for the Strategic Capital Development Plan.

This analysis is intended to serve as a point of departure for each of the institutions as they consider regional talent needs. A deficit (gap) or oversupply (surplus) of talent in a particular occupational category represents a potential problem for the region, making it important for each program and occupation group to be evaluated by the institution on a case-by-case basis. The purpose of this analysis is, therefore, to initiate the conversation on evaluating program effectiveness. Once evaluated internally within the college, specific implications may be considered for programs with substantial gaps or surpluses. Once the analysis has been completed for each institution this data can be used to inform the development of specific strategies in the Strategic Capital Development Plan.

Impact of Technology on Classroom Instruction:

Through the digital transformation and the rise of educational technology institutions have begun making innovative changes to their instruction and the physical make-up of their classrooms. Our assessment of the current trends in classroom technology indicate that the following six digital transformations are most likely to shape classrooms over the next 5-10 years:

1. Augmented Reality / Virtual Reality / Mixed Reality
2. Bring Your Own Device (BYOD)
3. Redesigned Learning Spaces
4. Artificial Intelligence
5. Personalized Learning
6. Gamification

New classroom technology and new learning models are exciting, and offer expanded learning opportunities for students but will require significant capital investment to both plan and implement. In addition, as student expectations increase around classroom technology, responsiveness to those needs must increase at the institutional level in order to remain competitive. As higher education institutions continue to innovate and adopt these digital transformation trends in Oregon, well-thought out planning will be essential to ensure that capital investment in these leaning enhancements are based upon actual implementable technology and not fads. The Strategic Capital Development Plan developed for this project will take into account the necessary planning and implementation required to make these innovations a reality for Oregon higher education institutions.

Describe how this process will aid the design and development of the plan:

Without data to guide our actions, we would be left making decisions based upon gut instinct, personal priorities, or anecdotal evidence. Decision-makers can use disaggregated data to pinpoint problems and assess the merits of possible solutions. In this respect, use of empirical data and analysis can help decision-makers tackle difficult questions of how to bolster critical challenges in capital expenditures and target resources efficiently to areas of greatest need or highest return on investment. Empirical data and analysis can also provide institutional leaders with information they can use to counter vested interests and make an evidence-based case to mobilize public support for difficult reforms. For these reasons, data will be the foundation on which all aspects of the Strategic Capital Development plan will be built.

4.4.2 Strategic Goal and Plan Alignment

4.4.2.1 Plan Alignment

Describe how the Plan will be designed to ensure substantial and appropriate alignment with the HECC's Strategic Plan provided as Exhibit 5 and include the deliverables outlined in the Exhibit 2 Deliverables Table.

From our perspective the Strategic Capital Development Plan should serve as an additional tool to help implement the HECC Strategic Plan. Each of the six goals outlined in the HECC Strategic Plan will only be successful if resources are adequately applied for their implementation.

The first step to ensure alignment of the Strategic Capital Development Plan and the HECC Strategic Plan will be to determine what gaps exist between the current state of higher education in Oregon and the strategic goals outlined in the HECC Strategic Plan. Since 2011, when Senate Bill 253 was passed by the Oregon legislature a significant amount of data analysis has been completed to document what must happen across the Oregon P-20 system to meet the 40-40-20 goal. Our work will examine currently existing data on progress toward that goal during the data gathering and analysis phase of the project. We will also complete, among other metrics, a fresh analysis of:

- Demographic trends
- Educational attainment
- Enrollment trends
- Occupational demand analysis

These analyses will help identify what gaps exist between the Strategic Goals and the current status. Once the gaps are identified specific strategies can be identified by working collaboratively with the seven higher education institutions to ensure capital resources are deployed effectively to attain the goals identified in the HECC Strategic Plan.

Ultimately, the Strategic Capital Development Plan should encourage consistency across the higher education system with regard to allocation of financial resources provided by the State of Oregon. The reality is that each of these seven institutions exist in unique environments that require distinct approaches to meet their regional demand for workforce talent.

To ensure complete alignment between the Strategic Capital Development Plan, the HECC Strategic Plan and the deliverables in Exhibit 2, these documents will serve as the foundation for the development of the Capital Plan. All of our work will be organized and driven by the goals outlined in the HECC Strategic Plan so that the two plans will work seamlessly together.

Throughout the development of the plan, the matrix of issues and potential actions will be collaboratively identified and discussed with stakeholders and tracked throughout the process to ensure continued transparency and alignment with the strategic plan and expected deliverables.

In Oregon as in other states, access to postsecondary education is not equal across geographies, and the programmatic needs in different places are different. In some cases it may be necessary to enhance existing space and facilities to meet the educational needs of different communities and population subgroups (including first-generation, low-income, and underrepresented minorities), but in many cases the costs of doing so—both in building that capacity and sustaining it—will be prohibitive. In addition to the development of capital improvement plans, our team will also assist in identifying cost effective educational delivery mechanisms that provide alternatives/supplements to traditional bricks-and-mortar capital development in all parts of the state, including:

- Competency-based models
- Distance and hybrid delivery
- Collaborations to offer courses/programs across multiple institutions, including two- and four-year campuses and/or co-located sites.

To get at these components, NCHEMS will:

- Draw on its considerable experience and knowledge of alternative delivery mechanisms, some of which it has helped pioneer (such as the establishment and development of Western Governors University)
- Leverage the costing model described earlier to estimate costs and trade-offs of adopting alternative delivery, both in initial development and for sustainability

- Engage community stakeholders during the project’s anticipated visits to communities scattered throughout the state to better understand the barriers to access and success in postsecondary education and what supports would best help to address those.

Developing this component of the project will require creative thinking about how capital financing models may be driven, at least in part, by the extent to which they address the capacity needs of the state, regardless of whether those come in the form of actual physical buildings. Thus, this component will also include designing a financing strategy to create and sustain capacity necessary to support the alternative/supplemental delivery modes described above—as well as the student supports needed to ensure student success among target populations. Specifically, the design will seek to:

- Fund capacity building in appropriate alternative delivery modes.
- Ensure that economies of scale can be activated for the efficient delivery of relevant and in-demand postsecondary opportunities all over Oregon.
- Include mechanisms to ensure that capacity to provide collaborative multi-campus programs is sustainable and thrives.
- Leverage state funding together with local funding sources to meet identified local and regional academic programming needs in pursuit of state goals by incorporating programming offered at public (and, where appropriate, private) two- and four-year institutions and K-12 partners.

The result of this work will contribute to the specification of the educational delivery capacity needed to meet the needs of the state and its citizens, by geographic region. In sum, the work will intentionally seek to better address what types of supports are needed to ensure the success of students who will be the primary targets of these efforts, directly supporting the HECC’s strategic plan for enhancing student success and for effectively leveraging capital funding.

4.4.2.2 Plan Steps

Describe the process that will ensure that the Plan will establish clear steps to achieve the HECC 40-40-20 goals contained in HECC's Strategic plan as described in Exhibit 5 and include the deliverables outlined in Exhibit 2 Deliverables Table.

Overall, the HECC Strategic Plan contains a total of six specific goals. It is clear that the 40-40-20 goals are the primary focus of the HECC Strategic Plan. The other five goals that exist in the HECC Strategic Plan are designed to support the overarching goal of increasing the statewide educational attainment in Oregon by 2025. Our design and development of the Strategic Capital Development Plan will require complete alignment with the HECC Strategic Plan to ensure that the right amount of resources are allocated to the right goal within the right time frame to ensure attainment of the HECC Strategic Plan on an annual basis.

The structure of the HECC Strategic Plan as noted earlier identifies six priority goals. For each goal a series of specific strategies have been outlined to assist the HECC in attaining that goal. To ensure alignment of the two plans, the Strategic Capital Development Plan will create a corresponding/parallel capital development strategy within the plan to ensure that each strategic plan component is being implemented with the necessary financial resources to reach goal attainment. To ensure that the Strategic Capital Development Plan also meets the deliverables outlined in Exhibit #2, we will create a crosswalk matrix that will demonstrate the relationship between the goals and strategies in the Strategic Capital Development Plan, the HECC Strategic Plan and the specific deliverable for this project outlined in Exhibit #2. Regular meetings with HECC staff on-site and via teleconference will ensure that these goals are front and center.

4.4.3 The Plan

4.4.3.1 Summary of Capital Need

Describe the process that will ensure that the developed Plan will target the Oregon public university capital portfolio through 2029 and include a summary of capital need based on demographic, economic, industry, and other relative environmental factors.

The data analysis phase of this project will yield a variety of inputs which may factor into space needs and be translated into capital planning. Demographic and population data, participation rates of various population groups can all impact enrollment projections. The interactive heuristic models being developed will also project student flows through higher education by geographic region, low-income and under-represented populations and estimate the number of degrees needed to achieve the 40-20-20 goals. The program demand and gap analysis will identify academic programs which will be in high demand to meet future workforce needs. These all represent potential drivers of enrollment and therefore space needed in various academic programs. These vectors will need to be aligned with each campus and their program offerings, and a facilitated discussion among stakeholder will help identify gaps and opportunities. Stakeholders on each of the seven university campuses will certainly be included, but there may be a need for outreach to industry or local entities as part of the process to help inform academic program alignment with market needs. For example, a demand for workers in the health care fields, might suggest expansion of nursing programs and RN to BSN degree programs. These programs require very specific types of spaces for training.

However, academic programs are not the only drivers of space and capital needs. Programs to support K-12 outreach may be instrumental for sealing a “leaky pipeline” of college ready students. These could include co-location of K-12 on or adjacent to a campus. Once students matriculate, efforts aimed at student retention, success and persistence may involve the creation of new academic learning centers. For example, many libraries and student centers are being re-invented with advising and tutoring centers to provide at-risk students with the help they need to succeed. Additionally, research indicates that students not only learn in different ways, but that active learning environments can significantly improve learning outcomes over traditional ones. A reform of curriculum and pedagogy may require elements of teacher training, practice rooms and completely new learning spaces. Purdue University used their library to be the catalyst for curricular reform by renovating space for a teaching center and active learning classrooms.

We also know from Tinto’s theory of student retention that engagement is a key to success. Space can help facilitate engagement with her peer group, faculty, and staff through the development of learning communities and places for informal interaction outside of class. Newer classroom buildings, such as the one at Oregon State, provide both new learning environments as well as places for students to meet informally.

One important driver of economic development and job creation is research and development. The state’s research universities can play a critical role by aligning research clusters with current or targeted industry sectors. This was a key factor in CU Boulder’s investment in biomedical and life sciences research facilities and aerospace engineering, both of which were targeted in statewide economic development plans.

The assessment of space needs for each campus will take into account both data metrics as well as empirical feedback regarding the opportunities for academic and student programming and the needs of the external environments in which each university operates. Campys visits will be carefully orchestrated to include the appropriate stakeholders ranging from student services to regional partners. The space needs will be reported by space category as well as potential programmatic areas. Informed through on-campus engagement, constant referencing of statewide strategic goals, and a modeling of enrollment and other space drivers, the needs will be translated into facility responses. The prospective portfolio of facility responses to data-informed needs will constitute the basis for the capital plan.

4.4.3.2 Future Capital Portfolios

Describe how the Plan will be developed to ensure the ability to divide the existing and potential future capital portfolios, by region, according to ideal usage and utilization, estimate space need for different academic disciplines, by degree levels, and space function (instruction versus research, for example).

Our approach will be to develop the Strategic Capital Development Plan based on regions from the beginning. We will design the components of the plan so that via software the plans can be aggregated or disaggregated depending upon how the HECC wants to view the plan. The overall plan will be placed into a relational database so that individual data elements will be able to be queried so that either aggregated or disaggregated elements can be compared or removed. It is our understanding based upon information from the HECC that specific information regarding facility inventories, utilization, and space needs can only be supplied by the individual institutions. As such, it is unclear at the present time what facility information will be available consistently across all seven institutions. If selected for this project we will begin by submitting a data request to each institution to supply us with facility information. The information we typically request is outlined below:

- Building Inventory (College-Unit Level)
- Facilities Inventory (room-by-room list of facilities for the College Unit)
- Staffing Data (College-Unit Level)
- Credit Course Data (most recent fall term; all courses offered by College-Unit or held on campus) and Course Type
- Event Data (If Available)
- Program and Enrollment Data
- Research & Development Expenditures
- Other Data
 - Strategic Plan
- Organizational Chart or Structure
- Academic Plan
- List of planned or current construction projects
- PDF's or CAD files of floor plans for all buildings within the College unit

Once we have received responses from all of the colleges, we will review data across institutions to see what common sets of facility data is available for inclusion in this project. Due to the limited timeline for this project we do not anticipate the ability to collect data that is not currently available from the institutions. When this initial data exploration phase is completed we will then be able to provide a list of comparable facility data elements that can be analyzed for each institution.

We will also compile data for each institution for academic disciplines, degree levels and space function. This data will also be entered into the relational database so that when the database is completed the academic data will be able to be sorted and disaggregated by any of the categories in the database.

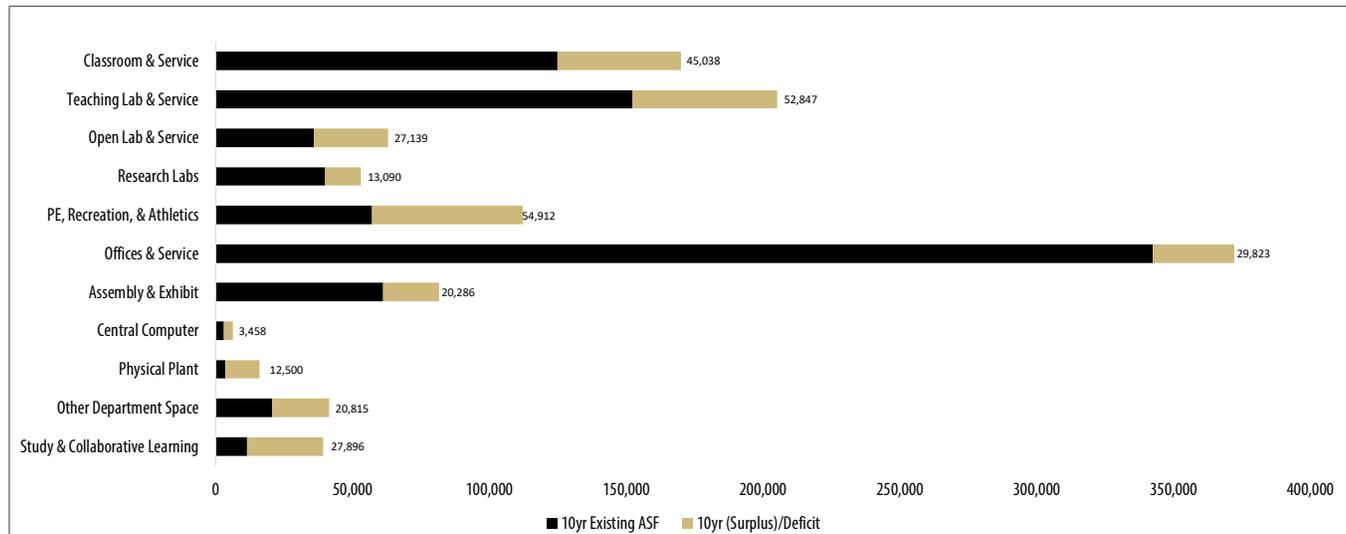
Early in the process, we will strategize with HECC regarding the specifics of a regional approach. It may make sense to subdivide the institutions according to two categories: research universities (PSU, OSU, and OU) and the regionals, including Oregon Tech. The research universities tend to have a larger recruitment area and have different types of economic impact, due to proximity to urban areas, research and development, or both.

The participation rates, enrollment figures, demographic and occupational data will be sorted by region and geo-mapped using GIS software. Space and facility data will be aggregated according to space types using the Federal Inventory Classification Manual (FICM), which will distinguish between such functions as classrooms, teaching labs, offices, and research labs. Since this is a widely used space inventory system, this will allow for benchmarking (and estimation when accurate data is not available). The space, staffing, and enrollment data will also be related to academic programs. Utilization can be calculated using Paulien's specialized software, or if available, the institution's own data can be used. Productivity analysis for research space can also be computed to identify potential opportunities and needs.

Paulien will develop a space model customized to each campus to project 2029 space needs based on space type (e.g., instructional space vs research space) and academic needs by accounting for enrollment projections, strategic research growth (as driven by either research expenditure projections or hiring of faculty lines) and other drivers of space needs.

Future Space Needs by Space Category

Assignable Square Feet (with Deficit shown)



Paulien has conducted a survey of all 50 states and determined benchmarks for classroom and teaching lab utilization and can model the impact of using different targets on instructional space needs. IF desired, Paulien can perform an analysis of scheduling practices to help a campus optimize the scheduling patterns of classrooms. Application of best practices can often increase utilization of existing space as an economical alternative to construction of new and costly facilities. For example, a recent analysis for one campus targeting significant enrollment growth over ten years showed that increasing the weekly room use of classrooms from 30 hours per week to 35 hours per week, could result in a net savings of 50,000 assignable square feet of new classrooms space.

Paulien's depth of experience in constructing space models for college campuses is unparalleled. Paulien is also a leader in creating new space standards for an evolving educational environment, where learning outside of the classroom can be as important to student success as the classroom environment itself, especially with the advent of team-based problem solving. The space model for each institution will be customized to account for differences and opportunities derived from the regional analyses. The space needs will then be translate into capital planning and programming. The results may include projects such as the renovation of existing classroom space to more engaging active learning or distance learning environments, new student success centers, research labs to support development of key economic sectors, or even infrastructure to promote alternative delivery of programs and increase access. The Paulien team has direct experience with developing capital project programs in conjunction with campus leadership and key stakeholders.

4.5 | Proposer References

4.5 Proposer References

Provide 3 references, on the provided Attachment D – Proposer References, from current or former client firms for similar projects performed for any clients within the last 5 years. References must be able to verify the quality of previous related Work. .

Proposer Reference 1

Dick Tully

***Associate Vice President for Facilities Planning (retired)
Ivy Technical Community College System***

During his first year on the job, Tully developed a metric based process to prioritize the need for new capital projects and has since adapted the process over time. His system has been used by State Trustees each biennium since 1986 to establish their priorities for the College's Capital Budget request. During his tenure, more than \$545 million in capital projects and 25 capital leases with a capital value of more than \$66 million were approved by the General Assembly.

The strategic facilities plan analyzed enrollments and penetration rates, workforce data, marketing opportunities for Ivy Tech Community College. This information provided the groundwork on the location of campus and center sites and the types of technical programs needed on each site to serve the local regions. Paulien also provided a detailed space utilization study for classrooms and teaching laboratories statewide. A capacity analysis was also conducted, which resulted in the development of space guidelines for urban and rural campus sites and centers.

In addition, Paulien reviewed existing needs and readiness measures utilized at Ivy Tech Community College and policies involving campus development. We concluded the project by producing a statewide capital plan for the institution.

Proposer Reference 2

Judith Resnick

***Co-Chair of the Planning Commission
Connecticut Planning Commission for Higher Education***

Judy serves as a reference for work NCHEMS performed in as the sole staff support to this legislatively mandated, broadly representative Commission. In playing this role, NCHEMS provided environmental scan information that focused the decisions of the Commission, drafted the preliminary set of recommendations, facilitated regional meetings convened to review both the preliminary recommendations and the supporting information, wrote the final report, recommended a set of accountability metrics for monitoring progress toward goal attainment, advised on an approach to resource allocation consistent with stated goals. The goals established by the Commission have been enacted in statute. The state's approach to allocating student financial aid funds has been modified to better support goal attainment.

Proposer Reference 3

Larry Isaak

***President, former Chancellor of University of North Dakota System
Midwest Higher Education Compact***

Larry (in his former role as Chancellor of the North Dakota University System) serves as a reference for work NCHEMS did to support the North Dakota Roundtable, a 61-member group of political, education, and business leaders from all parts of the state. NCHEMS staff provided the background data, facilitated the meetings, drafted the report, and participated in a variety of broader meetings that led to acceptance of the final product. The result was a set of goals for higher education in North Dakota, a delineation of tasks to be performed and the groups responsible for the various implementation steps, an agreed upon set of accountability metrics linked to the goals, and a new set of relationships between higher education and state government -- institutions received much more autonomy in how they utilized resources in exchange for being held accountable for contributions to attainment of state goals.

4.6 | Cost Proposal

4.6 Cost Proposal

The Project Work Plan schedule included in Section 4.8 serves as the basis for the phasing of the cost proposal. This work plan aligns with and includes the Scope of Work and the Deliverables as Outlined in the RFP. The costs are broken into each phase of the work plan and according to fees and reimbursable expenses.

This cost proposal does not include the optional scope of work, as outlined in the Executive Summary Section 4.3. This optional work involves the development of a costing model for a variety of alternative approaches to educational delivery.

Note: See separate PDF file for full Cost Proposal

4.7 | Key Persons

Paul Leef, AIA LEED AP President and Principal

899 Logan Street, Suite 508 • Denver, CO 80203
(303) 823-3272 • pleef@paulien.com



As a planner and architect, Paul has more than 20 years experience in higher education facilities planning, programming, design, and construction with a focus on collaboration, teamwork, and balanced solutions. He is a passionate advocate for the physical and environmental settings of higher education, a leader and team player with a keen sense for strategic planning, and possesses proven communication skills critical for managing teams and guiding projects to successful outcomes.

Paul has led campus master plan projects, large scale design and construction projects, and numerous smaller scale efforts for his clients. As the former campus architect for Colorado's two oldest public universities, he brings a deep understanding of the business of higher education from the perspective of operations, finance, and academics.

EDUCATION

University of Virginia
Master of Architecture,
Bachelor of Science in Civil
Engineering

EXPERIENCE

President and Principal

January 2015 – Present

PAULIEN & ASSOCIATES, Denver, CO

- ***University of Nevada, Reno***
Life Sciences Laboratory Assessment
- ***California State University - Chico***
Utilization and Space Needs Study for Master Plan
- ***California State Polytechnic University-San Luis Obispo***
Facilities Inventory, Software Development
- ***Syracuse University (NY)***
Learning Classroom Technology Benchmarking Study
- ***University of Colorado Denver***
Utilization and Space Needs Analyses for Master Plan Update
- ***University of Illinois at Urbana-Champaign***
Space Utilization Analysis and Benchmarking Study
- ***Northern Arizona University***
Utilization, Space Needs, Comparative Analyses, Demographics Scan and Academic Plan for the College of Engineering, Forestry and Natural Science
- ***University of Texas-Austin***
Space Utilization and Migration Study
- ***North Dakota University System***
Master Plan Space Needs Analysis and Demographics Scan for entire System
- ***Children's Health Sciences Academy (Cairo)***
Program Plan for Medical Teaching Academy
- ***University of Missouri System- Columbia, Kansas City, St. Louis***
Utilization and Space Needs Analyses for each campus, including research productivity analyses
- ***Weber State University (UT)***
Programming and Space Needs Analysis for Social Sciences Building
- ***McHenry County College (IL)***
Environmental Scan, Campuswide Classroom and Laboratory Utilization Analysis, and Campuswide Space Needs Analysis

PAULIEN & ASSOCIATES

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President and Principal

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Leef Résumé

**Campus Architect/Director,
Planning Design & Construct** 2007 – 2013

UNIVERSITY OF COLORADO BOULDER, Boulder, CO

- Campus Architect/Director of Planning, Design and Construction
- Managed capital program valued at \$1 billion, including five LEED platinum buildings
- Managed space/GIS office and campus planning office
- Campus Master Plan aligned with Strategic Plan, Flagship 2030
- Responsible for rolling five year capital plan
- Science and Engineering Research Campus Plan
- Jennie Smoly Caruthers Systems Biotechnology Building
- JILA “X-Wing” Addition (Atomic Molecular Optics)
- Sustainability Energy and Environment Research Complex
- Ekeley Sciences Renovation
- Various Projects

**Campus Architect/Director,
Planning & Campus Development** 1996 – 2007

COLORADO SCHOOL OF MINES, Golden, CO

- Campus Architect/Director of Planning and Construction
- Strategic Plan
- Campus Master Plan
- Five year rolling capital plans
- Earth-Energy Research Institute Precinct Plan
- Marquez Hall Petroleum Engineering Building
- General Research Building
- Program Planning

**Assistant Health Sciences Center Architect,
Project Manager** 1985 – 1995

*UNIVERSITY OF VIRGINIA HEALTH SCIENCES CENTER
AND SCHOOL OF MEDICINE*

- Responsible for the design, construction, schedule and budget of multiple health care and laboratory projects.
- Prepared or supervised preparation of feasibility studies, programmatic and schematic designs, DD and CD drawings and specifications.

Paul Leef, AIA LEED AP

President and Principal

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EDUCATION

University of Virginia

Master of Architecture,
Bachelor of Science in Civil Engineering

REGISTRATIONS

Registered Architect, Colorado

AFFILIATIONS

Society for College and University Planning (SCUP)
American Institute of Architects (AIA)
LEED AP

SELECT PRESENTATIONS

Society for College and University Planners (SCUP)

- Pacific Regional (Portland) Panel on Alternative Project Delivery Methods
- Southern Regional: Capturing Administrative Space to Support Academic Mission

Association of University Architects

- Case Study: Master Planning for Strategic Enrollment Growth at Colorado School of Mines
- Various presentations on Sustainability Topics

International Town and Gown Association

- Partnering with the City of Boulder for integrated City and Campus Planning

AIA Academy of Health

- Tour of University of Virginia Health Sciences Center Research Facilities
- Presentation about and Tour of University of Colorado Boulder

Boulder Economic Council

- Presentation at annual economic summit regarding CU Boulder's \$1B Capital Plan

Labs21 National Conference

Case Study of LEED Platinum Research Facility

Society of Marketing Professional Services

- Presentation of Owner's perspective on Architecture/Engineering project proposals

Design Build Institute of America

- Presentation on Colorado State Building's first design-build project at Colorado School of Mines

PAULIEN & ASSOCIATES

Brian T. Prescott , NCHEMS

Associate Vice President

3035 Center Green Dr., Suite 150 • Boulder, CO 80301
(303) 497-0354 • brian@nchems.org



- Ph.D. in Higher Education
- Collaborative leader and consensus builder
- Demonstrated management skills for externally funded projects
- Author of reports, articles, policy briefs, and papers on demographics, financial aid, data systems, and workforce outcomes
- Strong analytical skills
- Detailed knowledge of the developing landscape of linked longitudinal education and workforce data systems
- Equally capable of conveying complex information to a lay or expert audience
- Capable relationship builder among policymakers, state agency and institutional officials, the media, funders, and colleagues

EDUCATION

The University of Virginia
Ph.D., Higher Education

The University of Iowa
M.A., Student
Development in
Postsecondary Education

*The College of
William and Mary*
A.B., History

EXPERIENCE

Associate Vice President May 2016 – present
NATIONAL CENTER FOR HIGHER EDUCATION MANAGEMENT SYSTEMS, Boulder, CO

- Lead state technical assistance activities on topics related to system governance, finance policy, student financial aid, and data systems use
- Leverage data from a variety of sources to build interactive tools that address policy issues such as college affordability and linkages between education and the labor market
- Provide consultation services to, and present to, a variety of audiences such as state policymakers, agency leaders, researchers, and others
- Author reports and policy briefs related to topics such as federal/state partnerships, college affordability
- Design and develop projects and initiatives for external funding

**Strategy Director for Data Initiatives
and Partnerships** December 2015 – May 2016
ASSOCIATION FOR INSTITUTIONAL RESEARCH, Tallahassee, FL

- Provide leadership and strategic direction in support of an interim executive director as the organization transitions away from its former leader
- Assist in the development of the program for AIR's annual conference, which attracts up to 2,000 members, including keynotes and featured sessions
- Serve as Principal Investigator for AIR's largest contracts to develop training resources about IPEDS submission and usage and to award research and dissertation grants on behalf of NSF and Access Group

Director of Policy Research July 2008 – November 2015
Senior Research Analyst November 2007 – June 2008
Research Associate August 2004 – November 2007
WESTERN INTERSTATE COMMISSION FOR HIGHER EDUCATION, Boulder, CO

- Co-managed the activities and guided the direction of WICHE's Policy Analysis and Research unit, including supervision of unit staff and budget preparation and implementation
- Developed proposals and managed externally grant-funded projects, highlighted by two multimillion dollar grants supported by the Gates Foundation to pilot a multi-state

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longitudinal data exchange spanning K-12 education, postsecondary education, and workforce data

- Analyzed and interpreted data related to higher education and demographics from federal and state-level datasets such as IPEDS and other NCES datasets, the Census Bureau, state unit record data systems, and others
- Served as a subject-matter expert at meetings and technical review panels convened by an array of sponsors on a variety of topics including postsecondary data, post-collegiate outcomes, state financial aid, and demography
- Facilitated high-level conversations among state policymakers and agency and institutional officials
- Authored of the two most recent editions of Knocking at the College Door, WICHE's projections of high school graduates by state and race/ethnicity
- Drafted policy briefs and author occasional papers related to higher education trends and issues
- Organized meetings of and made presentations to state officials and legislators on topics relating to higher education access, student success, affordability, and accountability
- Served on WICHE's presidential search committee

PROFESSIONAL SERVICE & ASSOCIATIONS

Education Commission of the States

- Member, State Financial Aid Advisory Group 2014 – 2015
- Member, Remediation Measurement Advisory Group 2014
- National Association for College Admission Counseling
- Member, Board of Directors 2012 – 2014
- National Postsecondary Education Cooperative Member 2009 – 2012
- Student Financial Aid Working Group Member 2010 – 2011
- Association for Institutional Research
- AIR/NCES Grant Program Review Team 2010, 2012
- National Center for Public Policy and Higher Education
- Associate's Program 2005 – 2006
- Association for the Study of Higher Education (ASHE)
- Co-Chair, ASHE-WICHE Collaborative on Connecting Research and Policy 2014 - 2015
- National Association of Student Personnel Administrators (NASPA) 1996 – 2001
- Assessment and Accountability Task Force 2006

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EDUCATION

The University of Virginia, Charlottesville, VA

Ph.D., Higher Education

Dissertation: Grant Aid as an Entitlement: Institutional Responses to Virginia's Tuition Assistance Grant (Advisor: Sarah Turner)

The University of Iowa, Iowa City, IA

M.A., Student Development in Postsecondary Education

The College of William and Mary, Williamsburg, VA

A.B., History

SELECTED PUBLICATIONS & REPORTS

Prescott, B.T. (2014). "Big Data and Human Capital Development and Mobility." In Jason E. Lane & D. Bruce Johnstone (eds.), *Building a Smarter University: Big Data, Innovation, and Ingenuity*. Albany, NY: State University of New York Press, pp. 263-289.

Prescott, B.T. (2014). *Beyond Borders: Understanding the Development and Mobility of Human Capital in an Age of Data-Driven Accountability*. Boulder, CO: WICHE.

Prescott, B.T. & Longanecker, D.A. (2014). *States in the Driver's Seat: Leveraging State Aid to Align Policies and Promote Access, Success, and Affordability*. Boulder, CO: Western Interstate Commission for Higher Education.

Prescott, B.T. & Bransberger, P. (2012). *Knocking at the College Door: Projections of High School Graduates by State and Race/Ethnicity (8th Ed.)*. Boulder, CO: Western Interstate Commission for Higher Education.

Prescott, B.T. & Longanecker, D.A. (2011). *Thinking Anew About Institutional Taxonomies*. Paper prepared for December 1-2, 2011 Mapping Broad-Access Higher Education Convening, Stanford University.

Prescott, B.T. & Paulson, K. (2011). *A Review of Data Governance Structures, Policies, and Practices Affecting Hawai'i's Statewide Longitudinal Data System Development Efforts*. Report to Hawai'i P-20 Partnerships for Education.

Prescott, B.T. & Longanecker, D.A. (2009). *An Evaluation of Colorado's College Opportunity Fund and Related Policies*. Report to the Colorado Department of Higher Education.

Prescott, B.T. (2008). *Knocking at the College Door: Projections of High School Graduates by State and Race/Ethnicity (7th Edition)*. Boulder, CO: Western Interstate Commission for Higher Education.

Kelly, P.J. & **Prescott, B.T.** (2007). "Playing the Numbers: American Higher Education and the Nation's Ability to Compete in the Global Economy," *Change Magazine* (March/April).

SELECTED PRESENTATIONS

Prescott, B.T., Flores, S., Hillman, N., Zaback, K., Cooper, M.A., Saenz, V., & Sponsler, B. (2015, November 5). *Translating Research to Policy to Reduce Inequality in State Higher Education Outcomes: Lessons Learned from Multi-Sector Collaborations*. Presidential Session at the Association for the Study of Higher Education Annual Conference, Denver, CO.

Prescott, B.T. & Carlson, A. (2015, September 15). *Informing Policy Decisions: Trends in State Higher Education Funding*. WICHE Legislative Advisory Committee, Portland, OR.

Prescott, B.T. (2015, June 3). *Radio Higher Ed Podcast*.

Carlson, A., Zaback, K., & **Prescott, B.T.** (2015, May 27). *Defining and Developing a Model*

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- for Higher Education Affordability. Association for Institutional Research Annual Forum, Denver, CO.
- Prescott, B.T.** & Redd, K. (2015, February 20). Aligning Enrollment and Aid Allocation Decisions with Institutional Mission. College Board Western Regional Forum, Newport Beach, CA.
- Keller, C., Phillippe, K., **Prescott, B.T.**, & Massa, T. (2014, May 29). Post-Collegiate Outcome Measures: Who, What, Where, When, Why? Association for Institutional Research Annual Forum, Orlando, FL.
- Prescott, B.T.** (2014, April 14). States in the Driver's Seat. Lumina Foundation New Models of Student Financial Supports Papers Press Release Event, Washington, D.C.
- Prescott, B.T.** (2014, January 12). Changing Demographics and Economic Trends: Higher Education's Case of the "Ities." College Board Colloquium, Coronado, CA.
- Prescott, B.T.** & Longanecker, D.A. (2013, December 16). WICHE's Pilot Data Exchange. Washington Student Achievement Council Meeting, Seattle, WA.
- Prescott, B.T.** (2013, December 12). Knocking at the College Door: Projections of High School Graduates. AACC/AASCU/APLU/CASE Higher Education Government Relations Conference, San Francisco, CA.
- Prescott, B.T.** (2013, November 7). Knocking at the College Door: Projections of High School Graduates. NCSL Legislative Institute, Denver, CO.
- Prescott, B.T.**, Gallagher, S., Denley, T., & Montiel, L. (2013, October 30). Using Big Data to Shape Academic Planning and Strategy. SUNY Building a Smarter University Meeting, New York, NY.
- Prescott, B.T.**, Shapiro, D., & Kelly, P. (2013, October 25). Postsecondary Mobility, College Completion Rates, and Workforce Outcomes. College Board Annual Forum, New York, NY.
- Prescott, B.T.**, Beard, M., King, D., & Reilly, M. (2013, April 16). Big Data: Facilitating Development of Multistate Longitudinal Data. American Association of Collegiate Registrars and Admissions Officers Annual Meeting, San Francisco, CA.
- Prescott, B.T.** (2013, February 14). Knocking at the College Door: WICHE's Projections of High School Graduates and an Increasingly Competitive Market. United Negro College Fund Institute for Capacity Building Leadership Conference, Atlanta, GA.
- Prescott, B.T.** (2013, January 6). New Voices of Changing Demographics: What Lies Ahead. College Board Colloquium, Clearwater Beach, FL.
- Prescott, B.T.**, Anderson, R., & McCurdy, C. (2012, August 9). Innovative State Aid Programs. State Higher Education Executive Officers Higher Education Policy Conference, Chicago, IL.
- Prescott, B.T.** & Shireman, R. (2012, July 11). Reconstructing Financial Aid to Increase College Completion and Maintain Affordability. Education Commission of the States Annual Forum, Atlanta, GA.
- Prescott, B.T.** (2010, December 9). Aligning Postsecondary Outcomes and Workforce Needs. Education Commission of the States Winter Meeting, Las Vegas, NV.
- Prescott, B.T.** & Van Horn, B.N. (2009, November 4). An Evaluation of Colorado's College Opportunity Fund. Association for the Study of Higher Education Public Policy Forum, Vancouver, British Columbia, Canada.
- Prescott, B.T.** & Purcell, J. (2009, September 29). State Financial Aid Programs: Strategies for Student Success. WICHE's Legislative Advisory Committee Annual Meeting, Boulder, CO.

Oregon - Higher Education Coordinating Commission (HECC)

P. Leef

Paulien

NCHEMS

**Marty Mahler,
Ph.D.**

**Steve
Schonberger,
AIA**

**Frank Markley,
Ph.D.**

Dennis Jones

**Brian Prescott,
Ph.D.**

EMSI

**Advisory
Board**

SmithGroup

**Russ Deaton,
Ph.D.**

Patrick Lenz

**Sally
Montemayor
Lenz, Ph.D.**

4.8 | Project Implementation

4.8 Project Implementation

Describe how Proposer would carry out the major activities of this project in context with the Scope of Services. Provide a management plan that the Proposer intends to follow to implement the Plan. Illustrate how the Plan will serve to coordinate and accomplish the work.

The Implementation Plan, as outlined in the following table, follows several sequential steps. Throughout each phase, the consultant team will be:

- Coordinating and Communicating with HECC
- Communicating with stakeholders
- Tracking issues and opportunities against the strategic plan framework
- Consulting with our consulting Advisory Board of subject matter experts

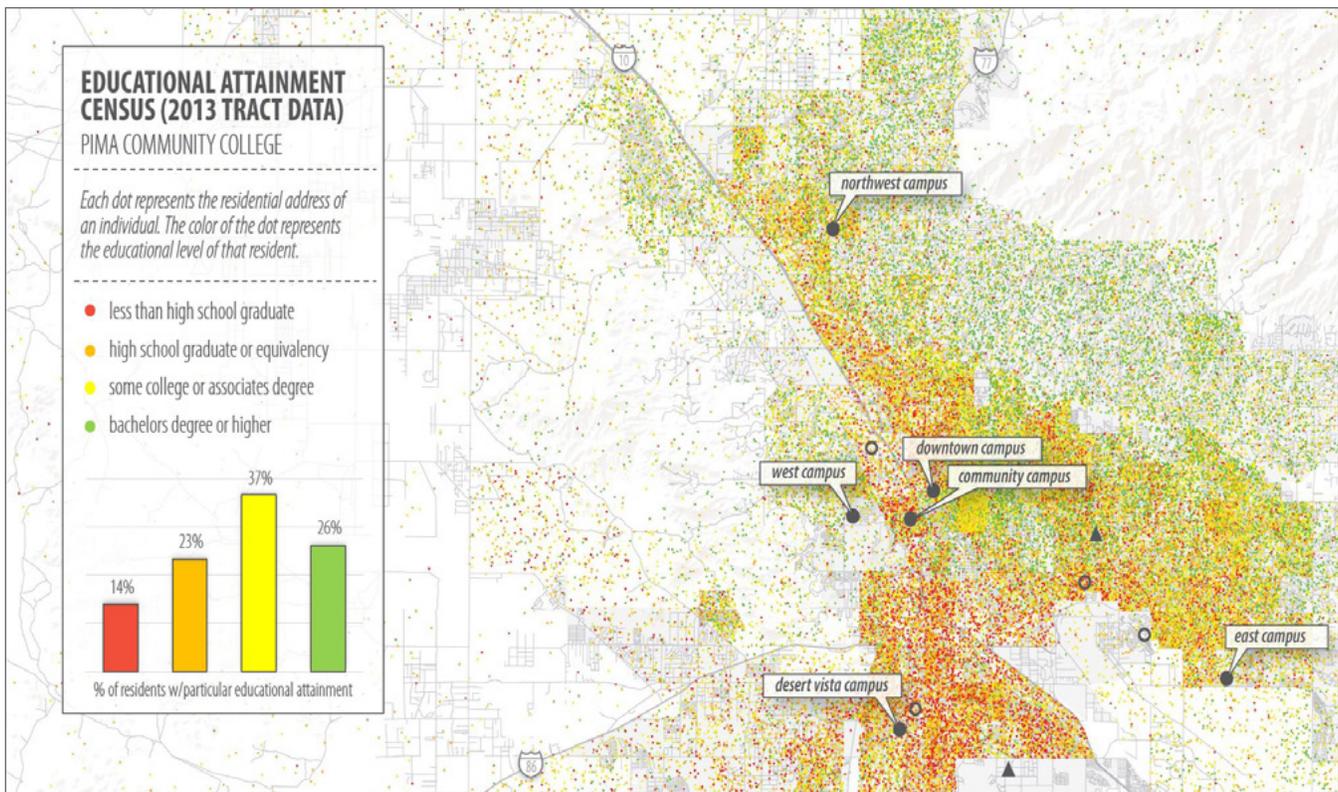
Phase 1: Kick-off, Process Preparation, Data Collection and Review

The first phase of work includes the project kick-off, preparation and refinement of the study process, and data collection and review. During the kick-off, the consulting team will meet with HECC to identify stakeholders, develop the engagement process, and review the schedule. This will also begin the collection of data from both HECC as related to strategic plan goals and metrics, statewide data sources with whom NCHEMS is already familiar, and the campuses themselves. Campus data includes enrollment and student location, performance metrics, utilization data and/or course and staffing files, academic program information including CIP codes, facility space inventories and any relevant planning documents. The consulting team will assemble these data sets and identify any inconsistencies or gaps and develop action plans with HECC to resolve them. Benchmarking space data for similar institutions will also be collected from the Paulien database and other sources.

Since stakeholder engagement is key to the credibility and success of the project, we will work with HECC to develop a communication plan and protocol for outreach to the stakeholder institutions and agencies. It may also be beneficial to engage local or regional institution partners, if time allows. The phase of work will initiate messaging about the project, scheduling of meetings and arrangement of logistics for campus visits. Once these are carefully choreographed with HECC staff, the team will begin the first round of campus meetings to meet with HECC divisions, state agency and campus stakeholders. This trip will serve to inform participants about the process, to assist with data collection and review strategic goals as the basis of future discussions. Initial feedback will be solicited and documented. Although not officially included in the scope of work, the Oregon Health and Science University may be considered as an institution to be added.

Phase 2: Data Analysis

The data analysis phase will begin as the datasets coalesce and a linked database is developed. As described elsewhere in this proposal in greater detail, the environmental scanning will provide demographic data, educational attainment statistics, income levels, occupational demand by region, academic program demand, and a gap analysis between academics and programs. Information about best practices in student recruitment, retention, success and completion will be collected. This information will be analyzed to determine opportunities and gaps for academic and student support programming, which could potentially be translated into capital needs. Additionally NCHEMS will develop interactive heuristic models to project student flow into and through higher education and workforce and program demands. This data will be made accessible and visual through the use of dashboards and geo-mapping of data via GIS during this stage, in preparation for presentation back to key stakeholders. This information will also be organized or related to HECC statewide strategic goals via a crosswalk.



Additionally, data regarding utilization and space amounts will be documented and shared in comparison with similar institutions and national practices, based upon Paulien's extensive higher education planning experience.

Phase 3: Facilitation of Meetings and Discussions

A critical step in the process will be to share the data analysis with stakeholder groups within HECC (e.g. OWIB, SSIC, and SSOC), state agencies and the public universities. A presentation of the data analysis will provide a spring board for crucial conversations about potential program gaps, enrollment growth, opportunities and strategies to address HECC statewide goals. This feedback will be solicited through facilitated, on-site meetings at every campus, during which the HECC strategic plan will serve as a framework for discussions. Concepts for translating these programmatic opportunities into space needs will be explored. This feedback will be documented, synthesized and summarized for HECC; it will also be factored into development of the capital planning framework in the next phases of the project. These on-campus engagements will be carefully orchestrated in advance to ensure participation by critical stakeholders which may range from local industry, academic affairs, student affairs, student groups or campus planning. The optimal mix will be informed, in part, by issues raised during the analysis phase.

Phase 4: Development of Space Needs and Capital Plan Framework

The space data collected in Phase 2 will be used to develop space profiles and space metrics for each institution which can be used for comparative benchmarking. This can provide preliminary macro-level analysis of each campus space portfolios. Using information developed through the analysis phase, space models will be developed considering such factors as:

- Demographics and enrollment projections
- Program and occupational demands
- Economic development related to research clusters
- Pedagogy and program delivery
- Student engagement and success

Paulien is a pioneer in the development of space planning standards related to emerging and evolving spaces which are critical for student success. Tinto's theories and recent research suggest that student engagement with the campus and academic learning communities has a positive impact on student persistence and success. The need for collaborative and informal learning space as well as student service programs need to be factored into the modeling of space needs for the campus. Campus facilities such as the library will also be evaluated. It is likely that different sets of needs emerge for the regional technical and comprehensive institutions than the research universities, and common denominators for each will be identified. The space models in this phase will be examined through the lens of the HECC strategic plan, and serve as the basis for capital planning proposals.

The capital planning efforts will translate space needs into actionable capital plans. Examples might be:

- Classroom renovations to improve technology and promote active learning
- Library renovations to promote academic success centers and collaborative learning
- New facilities to meet growth in programs with occupational demand (nursing, STEM, etc)
- Expanded facilities to accommodate strategic delivery of expanded student services
- Infrastructure for alternative program delivery

The following table details the activities related to each phase of the work plan and an estimated timetable for those activities.

**Oregon Higher Education Coordinating Commission Strategic Capital Development Plan
Plan Process and Project Timeline**

Phases		Project Timeline									
Phase / Task	Work Description	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	
1.0	Kick-off: Process Preparation, Data Collection and Review Phase										
1.1	Internal kickoff with HECC to validate scope, process, participants and engagement strategy, data needs, planning assumptions, definitions, deliverables, meeting logistics, communication protocols and schedule	○									
1.2	Identify internal and external data to drive analyses, including demographics, occupational data, Academic program CIPs, space, planning documents, HECC reports, strategic plan performance metrics										
1.3	Internal and External Document and Data Collection										
1.4	Consultant review of documentation, reports, publications, planning documents, data sources										
1.5	Identify data and information gaps and work with HECC on strategy to fill these gaps										
1.6	Web Meeting for campus introductions		○								
1.7	Develop and implement communication plan; issue updates and agenda for Formal Kick-off meetings	○	○								
1.8	#1 On-Site Meetings: Formal Kick-off meetings on-site at HECC, State Agencies and 7 institutions (at each campus); possibly incl Health Sci		●								
2.0	Data Analysis Phase										
2.1	Continued data collection from campuses										
2.2	Benchmarking other universities and best practices										
2.3	Synthesis and Analysis of Campus Data										
2.4	Environmental analysis: Demographics, Economics, Occupational Demand and Academic Program Gap Analysis										
2.5	GIS-based geo-mapping of data, including educational attainment, demographics, income levels, enrollment data and occupational demand to identify opportunities and gaps										
2.6	Identify issues related to Strategic Plan and 40-40-20 metrics										
2.7	Identify academic program needs and opportunities										
2.8	Develop preliminary data tools and dashboards										
2.9	Provide communication updates; As-Needed WebEx clarification meetings			○	○	○	○				
3.0	Facilitation of Discussions and Meetings										
3.1	#2 On-site Meeting (HECC): Review Preliminary Findings				●						
3.2	#3 On-site Meeting: Onsite Campus Meetings to review preliminary findings of data analysis; workshop to discuss academic program and space needs to address opportunities and gaps; discuss needs based on region and university mission					●					
4.0	Development of Space Needs and Capital Plan Framework										
4.1	Develop space profiles										
4.2	Development of space models										
4.3	Development of capital plans										
4.4	Development of space planning tools										
4.5	Identify common denominators of need at technical/regional and largest public universities										
4.6	Confirm continued alignment with strategic plan goals										
4.7	#4 Meeting (Webcast): Present assessment of common denominators, preliminary capital development framework and draft recommendations (on-site at HECC and Webcast to stakeholders)							●			
4.8	Communication updates					○	○	○			
5.0	Final Documentation and Implementation										
5.1	Review and comment period Following Meeting #4										
5.2	SWOT of best practices, using benchmarking data and Consultant Advisory Board										
5.3	Finalize process draft to HECC										
5.4	Review and Comment period for draft										
5.5	Meeting #5: Final Presentation									●	
5.4	Final Documentation										
5.6	Communication updates								○	○	

- Communication Updates (e-mailers)
- On-site Meetings
- WebEx Meetings

The capital planning framework and preliminary recommendations will be shared with the consulting Advisory Board, which has been chosen for experience with capital planning, student success and aligning capital planning with statewide strategic goals. A preliminary draft will be shared with HECC and subsequently with all project stakeholders via Webcast.

Phase 5: Final Documentation and Implementation

During this or a previous phase, a survey of best practices will be conducted and some key case studies will be shared. A SWOT analysis of practices will be conducted with input from the consulting Advisory Board, many of whom have direct experience with capital planning policies and procedures. A comment period will be allowed for stakeholder input and this feedback will be shared and discussed with HECC. The draft plan will be adjusted accordingly and final documents prepared and submitted. This will include electronic files in various formats as outlined in the RFP. A final presentation will be scheduled and held at HECC offices.

4.9 | Underrepresented Students

4.9 Underrepresented Students

Describe how the Plan will identify capital investments that facilitate the ability for underrepresented, first-generation, low-income and rural students to pursue their degrees. How will this support those students in their pursuit of higher education?

As the demand for more college graduates continues to escalate, there is a need to identify and reach out to cohorts of students who have not traditionally chosen to attend higher education institutions. An estimated 50 percent of the college population is comprised of people whose parents never attended college according to a 2010 study by the Department of Education. The National Center for Education Statistics indicates that 30 percent of all entering freshmen are first-generation college students. Low-income and students from rural backgrounds also struggle at higher education institutions.

Underrepresented students who are first-generation, low-income and from rural backgrounds are disadvantaged across a myriad of variables. According to the National Center of Education Statistics only 11 percent of students who begin at community colleges end up with bachelor's degrees. Being a first-generation college student is one of the most often cited predictors of higher education failure—a status that universally leads to lesser educational outcomes.

Past research has indicated that students from underrepresented groups whose parents have no education beyond high school are significantly less likely to graduate than peers whose parents have at least a bachelor's degree. Nationally, nearly 90 percent of low-income first-generation students leave college within six years without a degree. More than a quarter leave after their first year — four times the dropout rate of higher-income second-generation students.

Obviously, there is a great amount of work to be done to identify and encourage underrepresented students and then providing support for those students once they are on college campuses. As outlined above, underrepresented students have a much lower retention rate than any other population on college campuses. More than 30 years of research has identified many variables found to influence undergraduate retention. The most often cited variables impacting student success and retention are academic preparation, academic engagement, social engagement, college affordability, and demographic characteristics. Each of these variables has been found to directly or indirectly influence students' ability or desire to both initially attend and graduate from higher education institutions.

With this data and information as a backdrop, it will be critically important for the Strategic Capital Development Plan to be aligned with both the HECC Strategic Plan and existing institutional strategies for identifying and addressing the needs of underrepresented students.

During the discovery phase we will work with both state-level and institution level representatives to identify the work that is current being carried out to address challenges for underrepresented students. We propose that we would collaborate with the HECC Student Success and Institutional Collaboration (SSIC) and the Student Success Oversight Committee (SSOC) at the state-level and student success representatives from each of the seven institutions in Oregon. Next, we will assess how successful the current initiatives have been in increasing the number of underrepresented students attending institutions of higher education in Oregon. We will also work with state-level representatives and institutional representatives to see if recent best practices in this area have been identified that should be added to the existing strategies already being implemented. Finally, the last step in this process of alignment with the Strategic Capital Development Plan will be to identify a series of strategies comprised of successful existing initiatives and new strategies based on best practices and incorporate those into the plan. We will also ensure that the identified strategies are also aligned with the Oregon HECC Strategic Plan goals.

Through these focused strategies and the appropriated financial resources to support the implementation of the strategies, underrepresented students will have support structures in place at each campus to ensure their success. Annual data collection and analysis regarding these strategies will inform leaders on a yearly basis the performance of each strategy and whether it should be continued or replaced with a more promising strategy.

Building upon experience developed with the Western Governor's University and similar projects, NCHEMS will identify, evaluate and cost estimate alternative program delivery options to leverage investments proposed in the capital plan.

Attachments

ATTACHMENT B – AFFIDAVIT OF TRADE SECRET

NOT APPLICABLE

_____ (Affiant), being first duly sworn under oath, and representing [Paulien & Associates] (hereafter “Proposer”), hereby deposes and swears or affirms under penalty of perjury that:

1. I am an employee of the Proposer, I have knowledge of the Request for Proposals referenced herein, and I have full authority from the Proposer to submit this affidavit and accept the responsibilities stated herein.
2. I am aware that the Proposer has submitted a Proposal, dated on or about [insert date] (the “Proposal”), to the State of Oregon (State) in response to Request for Proposals [insert number], for [insert brief description of the goods and/or services sought in the RFP] and I am familiar with the contents of the RFP and Proposal.
3. I have read and am familiar with the provisions of Oregon’s Public Records Law, Oregon Revised Statutes (“ORS”) 192.410 through 192.505, and the Uniform Trade Secrets Act as adopted by the State of Oregon, which is set forth in ORS 646.461 through ORS 646.475. I understand that the Proposal is a public record held by a public body and is subject to disclosure under the Oregon Public Records Law unless specifically exempt from disclosure under that law.
4. I have reviewed the information contained in the Proposal. The Proposer believes the information listed in Exhibit A is exempt from public disclosure (collectively, the “Exempt Information”), which is incorporated herein by this reference. It is my opinion that the Exempt Information constitutes “Trade Secrets” under either the Oregon Public Records Law or the Uniform Trade Secrets Act as adopted in Oregon because that information is either:
 - A. A formula, plan, pattern, process, tool, mechanism, compound, procedure, production data, or compilation of information that:
 - i. is not patented,
 - ii. is known only to certain individuals within the Proposer’s organization and that is used in a business the Proposer conducts,
 - iii. has actual or potential commercial value, and
 - iv. gives its user an opportunity to obtain a business advantage over competitors who do not know or use it.
 - or
 - B. Information, including a drawing, cost data, customer list, formula, pattern, compilation, program, device, method, technique or process that:
 - v. Derives independent economic value, actual or potential, from not being generally known to the public or to other persons who can obtain economic value from its disclosure or use; and
 - vi. Is the subject of efforts by the Proposer that are reasonable under the circumstances to maintain its secrecy.

5. I understand that disclosure of the information referenced in Exhibit A may depend on official or judicial determinations made in accordance with the Public Records Law.

Affiant's Signature

State of Colorado

) ss:

County of _____)

Signed and sworn to before me on _____ (date) by _____ (Affiant's name).

Notary Public for the State of _____

My Commission Expires: _____

Proposer identifies the following information as exempt from public disclosure:

ATTACHMENT C — PROPOSER INFORMATION AND CERTIFICATION SHEET

Legal Name of Proposer:	Paulien & Associates						
Address:	899 Logan Street, Suite 508	City, State, Zip:	Denver, CO 80203				
State of Incorporation:	Colorado		Entity Type:	Corporate			
Contact Name:	Paul Leef	Telephone:	(303) 823-3272	Email:	pleef@paulien.com		
Oregon Business Registry Number (if required):							

Any individual signing below hereby certifies they are an authorized representative of Proposer and that:

1. Proposer understands and accepts the requirements of this RFP. By submitting a Proposal, Proposer agrees to be bound by the Contract terms and conditions in Attachment A and as modified by any Addenda, except for those terms and conditions that Agency has reserved for negotiation, as identified in the RFP.
2. Proposer acknowledges receipt of any and all Addenda to this RFP.
3. Proposal is a Firm Offer for 180 days following the Closing.
4. If awarded a Contract, Proposer agrees to perform the scope of work and meet the performance standards set forth in the final negotiated scope of work of the Contract.
5. I have knowledge regarding Proposer’s payment of taxes and by signing below I hereby certify that, to the best of my knowledge, Proposer is not in violation of any tax laws of the state or a political subdivision of the state, including, without limitation, ORS 305.620 and ORS chapters 316, 317 and 318.
6. Proposer does not discriminate in its employment practices with regard to race, color or ethnicity, gender (including actual or perceived gender identity), marital status, creed, age, religious affiliation, disability, sexual orientation, national origin. When awarding subcontracts, Proposer does not discriminate against any business certified under ORS 200.055 as a disadvantaged business enterprise, a minority-owned business, a woman-owned business, a business that a service-disabled veteran owns or an emerging small business. If applicable, Proposer has, or will have prior to contract execution, a written policy and practice, that meets the requirements described in ORS 279A.112 (formerly HB 3060), of preventing sexual harassment, sexual assault and discrimination against employees who are members of a protected class. Agency may not enter into a contract with an anticipated contract price of \$150,000 or more with a Proposer that does not certify it has such a policy and practice. See <https://www.oregon.gov/DAS/Procurement/Pages/hb3060.aspx> for additional information and sample policy template.
7. Proposer and Proposer’s employees, agents, and subcontractors are not included on:
 - A. the “Specially Designated Nationals and Blocked Persons” list maintained by the Office of Foreign Assets Control of the United States Department of the Treasury found at: <https://www.treasury.gov/ofac/downloads/sdnlist.pdf>, or
 - B. the government wide exclusions lists in the System for Award Management found at: <https://www.sam.gov/portal/>

8. Proposer certifies that, to the best of its knowledge, there exists no actual or potential conflict between the business or economic interests of Proposer, its employees, or its agents, on the one hand, and the business or economic interests of the State, on the other hand, arising out of, or relating in any way to, the subject matter of the RFP. If any changes occur with respect to Proposer's status regarding conflict of interest, Proposer shall promptly notify the State in writing.
9. Proposer certifies that all contents of the Proposal (including any other forms or documentation, if required under this RFP) and this Proposal Certification Sheet are truthful and accurate and have been prepared independently from all other Proposers, and without collusion, fraud, or other dishonesty.
10. Proposer understands that any statement or representation it makes, in response to this RFP, if determined to be false or fraudulent, a misrepresentation, or inaccurate because of the omission of material information could result in a "claim" {as defined by the Oregon False Claims Act, ORS 180.750(1)}, made under Contract being a "false claim" {ORS 180.750(2)} subject to the Oregon False Claims Act, ORS 180.750 to 180.785, and to any liabilities or penalties associated with the making of a false claim under that Act.
11. Proposer acknowledges these certifications are in addition to any certifications required in the Contract and Statement of Work in Attachment A at the time of Contract execution.
12. Proposer acknowledges that if Proposer believes any of its Proposal is exempt from disclosure under Oregon Public Records Law (ORS 192.410 through 192.505), a fully redacted version of its Proposal, clearly identified as the redacted version must be submitted with their Proposal. Proposer further acknowledges that failure to submit a redacted version of the Proposal identifying the portions claimed to be exempt from disclosure, Proposer has waived any future claim of non-disclosure of that information.
13. Proposers acknowledges that in the event the estimated contract value exceeds \$500,000 and proposer employs 50 or more full-time workers Proposer must submit to DAS PS a true and correct copy of an unexpired Pay Equity Compliance Certificate, issued to the Proposer by the Oregon Department of Administrative Services. ORS 279B.110(2) (f) requires that Proposer provide this prior to execution of the Price Agreement.

[Additional Requirements for Contracts/Price Agreements using federal funds may be added here]

Authorized Signature

August 20, 2018

Date

Paul M. Leef, President and Principal

(Printed Name and Title)

ATTACHMENT D - REFERENCE CHECK FORM

Proposer Reference 1

Firm Name:	Ivy Technical Community College System
Address:	5697 Cherryleaf Drive
City, State & Zip:	Indianapolis, IN 46268
Contact Person:	Dick Tully
Title:	Associate Vice President for Facilities Planning (retired)
Phone:	(317) 4094769
E-mail:	tully95@earthlink.net

Proposer Reference 2

Firm Name:	Connecticut Planning Commission for Higher Education
Address:	c/o Higher Education & Employment Advancement Committee Legislative Office Building, Room 1800
City, State & Zip:	Hartford, CT 06106
Contact Person:	Judith Resnick
Title:	Co-Chair of Planning Commission
Phone:	(860) 949-8791
E-mail:	judykresnick@gmail.com

Proposer Reference 3

Firm Name:	Midwest Higher Education Compact
Address:	105 Fifth Avenue South, Suite 450
City, State & Zip:	Minneapolis, MN 55401
Contact Person:	Larry Isaak
Title:	President, former Chancellor of University of North Dakota System
Phone:	(612) 677-2761
E-mail:	larryi@mhec.org

ATTACHMENT E — COST PROPOSAL FORM

See separate PDF file for full cost proposal

ATTACHMENT F – CERTIFIED DISADVANTAGED BUSINESS OUTREACH PLAN

Proposer Name: Paulien & Associates **Date:** 8/16/2018

Contact Name: Paul Leef **Telephone:** (303) 832-3272 **Email:** pleef@paulien.com

“Certified Firm” means a small business certified under ORS 200.055 by the Oregon Certification Office for Business Inclusion and Diversity (COBID) as minority-owned businesses, woman-owned businesses, businesses that service-disabled veterans own, and emerging small businesses.

Certified Firms must have an equal opportunity to participate in the performance of contracts financed with state funds. By submitting its offer, Proposer certifies that it has taken, and if there are further opportunities, will take reasonable steps to ensure that Certified Firms are provided an equal opportunity to compete for and participate in the performance of any subcontracts resulting from this procurement.

The information submitted in response to this clause will not be considered in any scored evaluation.

1. Is Proposer an Oregon certified firm? No

If yes, indicate all certification type(s): DBE MBE WBE SDV ESB and supply

Oregon State Certification Number: _____

2. Include a list of Certified Firms that Proposer has had a contractual relationship with within the last two years.

NONE

3. Include a list of firms that Proposer has had a contractual relationship with within the last two years that are not Certified Firms but may be minority-owned, woman-owned, service-disabled veteran-owned or emerging small businesses.

NONE

4. Does Proposer foresee any subcontracting opportunities for this procurement? No

If no, do not complete the rest of this form and submit this first page with your Proposal.

If yes, please complete the following pages and submit all pages with your Proposal.

5. Describe the steps Proposer will take to solicit Certified Firms for subcontracting opportunities if awarded a contract from this procurement.

6. Describe the subcontracting opportunities and the approximate dollar value of each that may be available, if awarded a Contract.

7. Would Proposer be willing to report the identity of each subcontractor and the value of each sub-contract to COBID if awarded a Contract from this procurement?

ATTACHMENT G - RESPONSIBILITY INQUIRY

Agency will determine responsibility of a Proposer prior to award and execution of a Contract. In addition to this form, Agency may notify Proposer of other documentation required, which may include but is not limited to recent profit-and-loss history, current balance statements and cash flow information, assets-to-liabilities ratio, including number and amount of secured versus unsecured creditor claims, availability of short and long-term financing, bonding capacity, insurability, credit information, materials and equipment, facility capabilities, personnel information, record of performance under previous contracts, etc. Failure to promptly provide requested information or clearly demonstrate responsibility may result in an Agency finding of non-responsibility and rejection.

18. Does Proposer have available the appropriate financial, material, equipment, facility and personnel resources and expertise, or ability to obtain the resources and expertise, necessary to demonstrate the capability of Proposer to meet all contractual responsibilities? **YES**

19. Within the last five years, how many contracts of a similar nature has Proposer completed that, to the extent that the costs associated with and time available to perform the contract remained within Proposer's control, Proposer stayed within the time and budget allotted, and there were no contract claims by any party?
Number: **70**

How many contracts did not meet those standards? Number: **0** If any, please explain.

Response:

20. Within the last three years has Proposer (incl. a partner or shareholder owning 10% or more of Proposer's firm) or a major subcontractor (receiving 10% or more of a total contract amount) been criminally or civilly charged, indicted or convicted in connection with:

- obtaining, attempting to obtain, or performing a public (Federal, state, or local) contract or subcontract,
- violation of federal or state antitrust statutes relating to the submission of bids or Proposals, or
- embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, tax evasion, or receiving stolen property? **NO**

If "YES," indicate the jurisdiction, date of indictment, charge or judgment, and names and summary of charges in the response field below.

Response:

21. Within the last three years, has Proposer had:

- any contracts terminated for default by any government agency, or
- any lawsuits filed against it by creditors or involving contract disputes? **NO**

If "YES," please explain. (With regard to judgments, include jurisdiction and date of final judgment or dismissal.)

Response:

22. Does Proposer have any outstanding or pending judgments against it? **NO**

Is Proposer experiencing financial distress or having difficulty securing financing? **NO**

Does Proposer have sufficient cash flow to fund day-to-day operations throughout the proposed contract period? **YES**

If "YES" on the first question or second question, or "NO" on the third question, please provide additional details.

Response:

23. Within the last three years, has Proposer filed a bankruptcy action, filed for reorganization, made a general assignment of assets for the benefit of creditors, or had an action for insolvency instituted against it? **NO**

If "YES," indicate the filing dates, jurisdictions, type of action, ultimate resolution, and dates of judgment or dismissal, if applicable.

Response:

24. Does Proposer have all required licenses, insurance and/or registrations, if any, and is Proposer legally authorized to do business in the State of Oregon? **YES**

If "NO," please explain.

Response:

25. Pay Equity Certificate. This certificate is required if Proposer employs 50 or more full-time workers and the prospective contract price is estimated to exceed \$500,000. [This requirement does not apply to architectural, engineering, photogrammetric mapping, transportation planning or land surveying and related services contracts.] Does a current authorized representative of Proposer possess an unexpired Pay Equity Certificate issued by the Department of Administrative Services? **N/A**. [If the certificate was provided with the Bid or Proposal submitted for a solicitation related to the prospective contract, then it is not necessary to resubmit it. Just indicate "see Bid" or "see Proposal" in the response field. Otherwise, if applicable, submit a copy of the certificate with this form.]

Response:

AUTHORIZED SIGNATURE

By signature below, the undersigned Authorized Representative on behalf of Proposer certifies to the best of his or her knowledge and belief that the responses provided on this form are complete, accurate, and not misleading.

Proposer Name: Paulien & Associates	RFP: DASPS-2880-18
	Project Name: Strategic Capital Development Plan



August 20, 2018

Authorized Signature

Date

Paul M. Leef

President and Principal

Print Name

Title

ATTACHMENT H – KEY PERSONS

1. Contractors Key Person # 1

Name: Paul M. Leef

Title: President and Principal

Phone: (303) 832-3272

E-mail : pleef@paulien.com

2. Contractors Key Person # 2

Name: Brian Prescott

Title: Associate Vice President

Phone: (303) 497-0354

E-mail : brian@nchems.org

3. Contractors Key Person

Name: Dennis Jones

Title: President

Phone: (303) 497-0316

E-mail : dennis@nchems.org

4. Contractors Key Person

Name: Marty Mahler

Title: Associate Principal

Phone: (402) 440-6392

E-mail : mmahler@paulien.com

5. Contractors Key Person

Name: Patrick Lenz

Title: Consultant

Phone: (916) 806-0329

E-mail : patrickjlenz1@gmail.com

6. Contractors Key Person

Name: Russ Deaton

Title: Consultant

Phone: (615) 366-3958

E-mail : russ.deaton@tbr.edu

7. Contractors Key Person

Name: Sally Montemayor Lenz

Title: Consultant

Phone: (916) 532-4279

E-mail : sallymlenz@gmail.com

8. Contractors Key Person

Name:

Title:

Phone:

E-mail :

9. Contractors Key Person

Name:

Title:

Phone:

E-mail :

10. Contractors Key Person

Name:

Title:

Phone:

E-mail :

11. Contractors Key Person

Name:

Title:

Phone:

E-mail :

12. Contractors Key Person

Name:

Title:

Phone:

E-mail :

