FISCAL YEAR 2024

CAPITAL OUTLAY MAJOR PROJECT REQUEST

Institution Name:	Grand Valley State University
Capital Outlay Code:	
Request Code:	
Project Title:	Blue Dot Lab
Project Focus:	Academic
Type of Project:	Renovation and Addition
Approximate Square Footage:	175,000 sf
Total Estimated Cost:	$140 Million
Estimated Duration of Project:	Three Years
Is the Five-Year Plan posted on the department's public Internet site?	Yes
Is the requested project included in the Five-Year Capital Outlay Plan?	Yes

Project Purpose.

GVSU Blue Dot Center for Talent, Technology and Transformation

Technological innovation is fundamentally transforming the world we live in, requiring all institutions of learning to update their course of study, spatial layouts, and enterprise relationships to align with the skills and dispositions required for the contemporary workplace. Business and industries are transforming with the evolution of technology, big data, and artificial intelligence, while facing the threats that there are insufficient numbers entering the workforce with the necessary human, digital and translational skills.

This paradigm shift in both education and business is best approached in partnership with one another to catalyze the opportunities to have more talent leaving higher education with future-ready skills and for the intersection of work, discovery and learning to make a profound positive impact on our companies and thereby our state.

Here in Michigan, Grand Valley State University seeks to become the intersection for this convergence of talent, transformation, and technology by establishing the Blue Dot Lab, a trans-disciplinary hub of teaching, learning, innovation, and research that will develop skills in every graduate for an ever-changing world. The Blue Dot Lab will be a regional and national beacon supporting the **1) building of digital literacies in all GVSU graduates 2) expanding the number of graduates with deep technical, computing, data, AI and related expertise and 3) expanding the applied research and business supports through increased synergies between GVSU, startup organizations, entrepreneurs, local businesses, and corporate partners to advance their digital transformations**.

Blue Dot will enable orchestrating a rich ecosystem of talent in a world-class facility that will produce superior learning outcomes through a new learning model, increasing experience and project-based learning for students, affording more solutions to critical problems for employers and supporting the regional economic development and economic transition as we migrate from an industrial to digital and AI economy. These collaborations will be designed to increase educational access as we facilitate future-ready 21st century digital literacy and expand the skills driving the new economy. By working together with business and combining the value offered by GVSU's digitally infused curriculum, students, faculty, and staff can generate breakthroughs and accelerate solutions to local and global challenges.

Scope of the Project.

The Blue Dot Lab will provide unique learning spaces that do not exist elsewhere on campus, central to business and industry designed to encourage interdisciplinary work that is key to deep learning and innovative thinking so desired by employers. The Blue Dot Lab will serve as GVSU's response to high-impact teaching and learning and applied research in critical areas. The Blue Dot lab is founded on a vision of creating proficiency in digital skills, catalyzing the highest forms of cooperation amongst GVSU and the community, and reducing the degree of separation between resources and the people needing them.

The facility will feature technology-rich teaching environments, flexible learning spaces, and transdisciplinary innovation centers. It will invite business and industry to bring forward their transformation and talent challenges to work together in design and solutions. A curated slate of physical - audio and video studios, fabrication labs, collision spaces, research labs, and presentation space - and software tools - audio and video editing, graphic design, data visualization, and 3-D modeling - will be integrated to create an easily accessible hub for the development of digital skills and their integration in all endeavors. Students, faculty, and the community will leverage Blue Dot Lab for its state-of-the-art talent, technology, and transformation resources. It will provide the home for and expansion of our computer science program and the Applied Computing Institute. These programs will build competencies in computing, data science, cybersecurity, machine learning, and adjacent fields. The Blue dot will also be home to a new transdisciplinary program at the intersection of business, technology, and design.

The environment will be rich with experiential learning, and industry collaboration with the aim of further enhancing learning opportunities for GVSU students, while simultaneously providing key industry partners with access to faculty, staff and student resources in computer science and related disciplines.

Below are examples of the types of spaces the Blue Dot Lab will incorporate.

- Active Learning Classrooms - places to learn and develop critical digital competencies, whether that be how to create a succinct presentation or how to use photo/video editing tools to enhance a project for class.
- Audio / Video Production Labs – spaces to experiment and hone skills using the latest technology and software to create, develop and publish digital content. Creating new ways to use virtual reality (VR) or produce podcasts and digital videos. These are spaces to create digital content, not just consume it.
- 3D Fabrication Labs - creating hands-on learning opportunities where users can take the digital concepts they have created and turn them into physical objects and prototypes. These spaces bridge the gap between theory and reality.
- Research and Design Studios – reserve-able places for long-term or semester-long project teams can be used as a "home base" for their research or project-based learning courses. These places are located adjacent to the production and fabrication labs to take advantage of the latest technology and tools for these teams to further their exploration.
- Huddle Rooms – reserve-able and open rooms for short-term group projects. A place to collaborate with peers and to work on coursework and class projects.
- Technology Help Desk – It is not only important to have the latest technology available, but equally important that someone is there to show the users how to use the technology or software. The Help Desk will provide experts that are trained to use the equipment and technology in the Blue Dot Lab. They will also provide seminars and training courses on a variety of software and digital topics (cyber security, social media safety, etc.)
- Emerging Technology Hub – this space will have GVSU staff and students researching emerging technologies, partnering with industry leaders to beta test the newest technologies and software coming to market. It is important not only be digitally competent with today's digital world but also be prepared for tomorrow's as well.
- Global Classroom – this space will allow GVSU learners to collaborate with industry leaders and other institutions from around the world. These spaces will be equipped with technology that allows for easy transfer of information and collaboration virtually anywhere in the world. There will be places to hone presentation skills, especially for potential employers and investors.
- Simulation and Visualization spaces – Faculty and staff can use this space to create models, experiment with them, visualize them, and interact with them using state-of-the-art visualization tools and virtual and augmented reality environments.
- Faculty Research and Collaboration space – Creating spaces for faculty and staff to gather and collaborate on an interdisciplinary scale is critical. This is a space where faculty can find other "Big Idea Thinkers" to create new cross-disciplinary challenge courses or research new ways to increase on-line course offerings.
- Start-up and Community Partner space - This is an area specifically designed for the interaction of GVSU and Industry partners to explore, hone, and innovate with each other. This space allows a place for GVSU partners to gain access to faculty experts, the latest technology and to students with a passion for it.

Program Focus of Occupants.

There are three primary areas of focus:

1) *Digital skills enhancement across all programs and majors*.

No matter the major or degree pathway, all GVSU students need to have enhanced digital skills to meet the expectations of today's fast-moving and ever-changing workforce. The main purpose of the Blue Dot Lab is to serve as a learning and teaching place for all,

dedicated to supporting team-based, project-based, and problem-based learning, with students all the while, becoming increasingly more fluent with the emerging digital language and skill sets demanded by today's workforce and post-secondary education.

2) *Expand the number of graduates with deep technical, computing, data, AI and related expertise*

The facility will house computer science, data science, and transdisciplinary degrees at the intersection of computing, business, and the humanities. The profile of the graduate from these programs will be a perfect fit for the jobs of the future.

3) Expand the applied research and business supports through increased synergies between GVSU, startup organizations, entrepreneurs, local businesses, and corporate partners to advance their digital transformations

The Blue Dot Lab will also be a collaboration space and innovation accelerator for faculty and students working on applied research and development projects supported by digital simulation, data analytics and virtual environments. It will also be a beacon of opportunity igniting a new model of collaboration, transforming how we live and learn, through a unique blend and fusion between educational institutions, startup organizations, entrepreneurs, local businesses, and corporate partners.

How does the project support Michigan's talent enhancement, job creation and economic growth initiatives on a local, regional and/or statewide basis?

Employers need new talent, while at the same time they must up-skill 50 percent of their current workforce. They also have identified the most in-demand 'soft' skills as teamwork, communication and problem solving while the most desirable 'hard' skills as analytical skills, IT skills, and technical skills/computer knowledge (survey by zety.com of 200 hiring managers in 2021). According to the National Association of Colleges and Employers (naceweb.org), the top ten attributes in demand by employers for 2021 were: ability to work in a team (#1), problem-solving skills (#2), analytical/quantitative skills (#3), communication skills (#4), and technical skills (#8).

Encouragingly, this aligns with what most Americans want from their higher education institutions moving forward. The national survey by Populace revealed that, "American priorities for higher education paint a dynamic picture of learning in action, on-the-job training in the form of internships, hands-on workshops, lab-based classes, and instruction from professors who have industry bonafides over textbook credentials." The Blue Dot Lab will serve as GVSU's response to this new approach to teaching and learning - one that can help drive job creation throughout the region and serve as a national model of what the re-imagined, modern learning culture and environment looks like.

In addition, West Michigan is poised to capitalize on the knowledge-based economy. Already, more than 1,100 IT establishments call greater Grand Rapids home and provide more than 11,500 jobs. The sector has a projected job growth rate of more than 18% and needs to be supported by a substantial increase in tech graduates each year. The growth required in technical, engineering and STEM is 10 X our current degree production over the next decade.

In sum, the work of the Blue Dot Lab is a catalyst for accelerating that work preparing all GVSU students to imagine and actively participate in the growth economy and through new and expanded programs being developed, the expansion of computing and the new transdisciplinary programs, GVSU will have graduates specifically prepared for the jobs of the future with a cross-disciplinary training, a collaborative mindset, and a keen awareness of the many interactions between technology, human behaviors, and human values in the future of Michigan and beyond.

The Blue Dot Lab's infrastructure will also create a "local innovation ecosystem," something MIT's Elizabeth Hoffeker defines as a "place-based community of interacting actors engaged in producing innovation and supporting processes of innovation, along with the infrastructure, resources, and enabling environment that allow them to create, adopt, and spread more effective ways of doing things."

How does the project enhance the core academic, development of critical skill degrees, and/or research mission of the institution?

Beginning in 2022, GVSU added digital literacy as a required outcome of all undergraduate students, regardless of program. The purpose is to ensure that all students have the requisite digital skills to function in today's society and beyond. This would include directed and self-directed pathways, curricular/co-curricular/extracurricular mechanisms, needed academic supports, and practice opportunities. Faculty from every department will integrate the resources in the Blue Dot Lab into their coursework. Business and industry will inform and transform our coursework to best design solutions to their talent challenges. We will provide the development of digital literacies or those capabilities which equip an individual for living, learning, and working in a digital society. Here are just a few examples of digital skills, fluencies, and competencies they will learn:

- Data and Information literacy
- Digital image manipulation
- Digital object creation and Multimedia composition creation
- Digital collaboration with teams and projects
- Selection, use, and critique of digital tools and platforms
- Digital learning and personal learning networks
- Digital identity management and wellbeing

The Blue Dot Lab will provide the learning spaces/environment that will allow students from across all academic programs to engage in active, team-based learning centered on the new university-wide learning outcome requirement of digital literacy. This facility will provide the unique learning spaces that do not exist elsewhere on campus, which encourage interdisciplinary work that is key to deep learning desired by employers. The Blue Dot Lab will provide an environment that facilitates this type of critical learning to help prepare students for the new world of work. Ultimately, through a common platform of digital literacy required as a learning outcome across all undergraduate programs, top employability skills of collaboration/teamwork, technical/digital literacy, and interdisciplinary are taught, experienced, and practiced in this new learning laboratory.

The Blue Dot will be home to new academic transdisciplinary programs, integrating technology, business, and humanities. These programs are currently under development and set to start within a year. They include full bachelors and masters degrees as well as stackable badges and certificates. Employers in our state have clearly articulated a need for "new talent" and the need to up-skill half of the current workforce. The Blue Dot lab will provide the anchor for the creation and enhancement of the critical skills workers that the future must have.

The Blue Dot Lab has been designed to be accessible to all students, faculty, and community members to enhance the development of their educational pathways, by providing access to cutting-edge programs, experiential learning, relationship-rich community spaces, and a personal network of mentors and advisors. The Blue Dot Lab will create the opportunity for people to connect and learn from each other. This reciprocity of learning (learning from not only experts but peer-to-peer learning) will be embedded in the culture of the space.

The Blue Dot Lab is not "owned" by any one department or college at the University, rather it will be managed by an internal team who are responsible to all degrees, departments, and colleges at the University. It will not matter which educational pathway a person is on, all students will be able to utilize the Blue Dot Lab. No longer will a student's ability to have access to this new digital technology be based on who they know.

Key to the DNA of the Blue Dot Lab is its ability to create hands-on, experimental learning for the GVSU community. Students, faculty and staff will have the same access to these tools to further the research and innovation of their education and coursework. There are places and spaces for teams to work on innovating new technology, and spaces "to find other Big Idea Thinkers." There are places for people to see what others are doing and to be seen by others. This will build a community of innovation that gives GVSU students an advantage in their future pursuits. It will also create a new model of collaboration, transforming how we live and learn, through a unique blend and fusion between educational institutions, startup organizations, entrepreneurs, local businesses, and corporate partners. This level of collaboration is critical to the success of GSVU students on their pathway to employment.

GVSU Reach Higher 2025

Concurrently, with the development of the Blue Dot Lab program, GVSU has adopted a strategic plan for the university called Reach Higher 2025. There are three key strategies in the Reach Higher 2025 plan:

- Empowered Educational Experience - develop an educational pathway reflective of our students' unique experiences and passions. We accomplish this through cutting-edge programs, experiential learning, a foundation of liberal education, a relationship-rich community, and your personal network of mentors and advisors.
- Lifelong Learning - the approach to teaching and learning integrates liberal and professional education in both disciplinary and interdisciplinary ways and is directly relevant to the worlds you will shape. Our faculty will model the passionate pursuit of lifetime learning through cutting-edge research, scholarship, and expression. We will pursue reciprocal relationships with alumni and community partners to create sustainable and supportive learning networks.
- Educational Equity - Together, we ensure that our community serves as a catalyst towards a more just and sustainable world on our campuses and beyond. We work to eliminate disparities and obstacles for student success, especially those that have historically been along lines of race, gender, class, and social structures.

The Blue Dot Lab will be an integral component for GVSU to achieve these strategic goals.

Is the requested project focused on a single, stand-alone facility?

Yes, the Blue Dot Lab would be a single stand-alone facility on the Grand Valley State University Campus.

The Blue Dot Lab would be the renovation of an existing 1988 academic building plus a new addition.

How does the project support investment in or adaptive re-purposing of existing facilities and infrastructure?

This renovation and expansion would repurpose and transform an existing 1988 academic building to support and accommodate the Project Purpose and Scope of the Project as described in this Capital Outlay Major Project Request. The existing building structure, size, and location are very favorable for adaptive reuse for the University.

Structure: The existing building is structurally sound, fully utilized, functional and has served the University well over the past 34 years. However, a facility condition assessment was completed in 2020 which identified requirements for asset replacement and capital improvements totaling $32M by 2026, with an FCI of 0.40. Building systems have reached or exceeded their useful life and the spaces no longer meet the needs of academic programs. Capital improvements are required to improve building performance, increase energy efficiency, and ensure code compliance. This project will support investment in existing infrastructure, offset future major deferred maintenance costs, reduce annual maintenance, and reduce operating costs.

Size: The existing academic building is 10 stories and approximately 160,000 sf. The project would include demolition of a portion of the building with a new addition in its place, increasing the building to 175,000 sf. The existing building and new addition would be strategically reconfigured, repurposed and optimized to accommodate the space required for the Project Purpose and Scope of Project described above.

Location: The location of the existing building is in the heart of the Grand Rapids Pew Campus which is intentional and strategic for the success of the proposed programs.

Does the project address or mitigate any current health/safety deficiencies relative to existing facilities?

Yes. By completing capital improvements identified in the facility condition assessment, occupant health and safety will be improved.

- The building will be renovated to meet current adopted codes under the jurisdiction of the Michigan Bureau of Fire Services.
- Mechanical and controls systems will be replaced and designed to optimize energy performance, improve indoor air quality, improve occupant thermal comfort which will improve overall health, wellness, and productivity.
- Electrical systems will be replaced to improve lighting levels and systems, increase daylighting, provide lighting controls, and increase distribution of power and services to support flexible learning and proposed building programs. Emergency lighting and exit signs would be updated for code compliance.
- Fire suppression and fire alarm systems would be updated for code compliance.

How does the institution measure utilization of its existing facilities, and how does it compare relative to established benchmarks for educational facilities? How does the project help to improve the utilization of existing space and infrastructure, or conversely how does current utilization support the need for additional space and infrastructure?

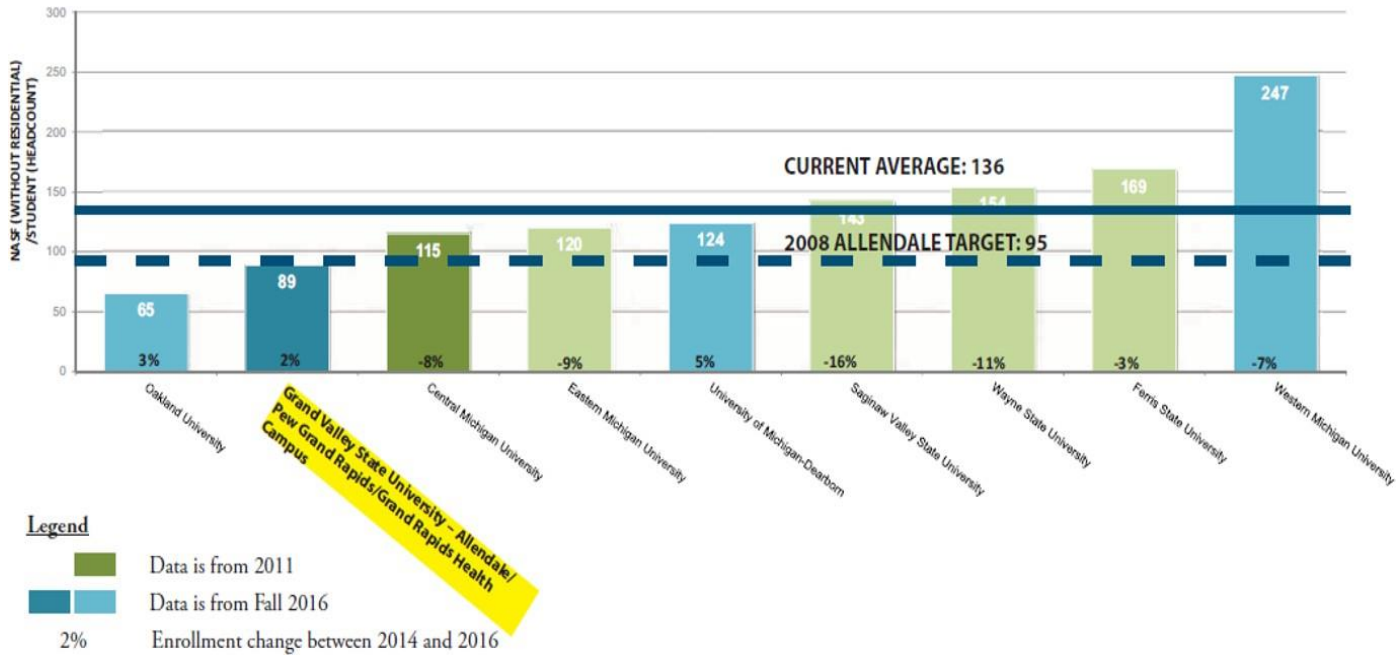
Utilization: GVSU has a detailed report of its facility utilization within the Capital Outlay 5 Year Master Plan submittal.

Benchmarking: As written in the GVSU Campus Master Plan, a benchmarking study was completed of GVSU-identified peers, both in-state and out-of-state, to understand how GVSU compared in the amount of space/student (NASF/headcount). Currently, GVSU is slightly below the target for space/student set in 2008, the university has not kept pace with its peer competitors in terms of space/student. The peer benchmarking conducted for the 2018 campus master plan continues to show that the campus remains undersized compared to many of its peer institutions.

Michigan public institutions were evaluated regarding total NASF/headcount. This study offers a great range of differences with regard to student enrollment, demographics, and academic programs. To create a more equitable peer comparison, GVSU elected to take out data from public institutions that had student enrollment less than 9,000 students or larger than 30,000 students or were categorized as Carnegie High Research-Intensive institutions. Those universities with enrollment under 9,000 students that were not included are the University of Michigan-Flint, Michigan Technological University, Northern Michigan University, and Lake Superior State University.

The remaining eight in-state, public, four-year universities selected by GVSU for benchmarking were:

- Central Michigan University
- Eastern Michigan University
- Ferris State University
- Saginaw Valley State University
- Oakland University
- University of Michigan – Dearborn
- Wayne State University
- Western Michigan University



At 89 NASF per student headcount for academic space, GVSU is well below the state peer average of 136 NASF/headcount.

The existing building will be reconfigured, repurposed, and enlarged to support the Project Purpose and Scope of Project described above. It will include technology-rich learning environments such as digital labs, fabrication workshops, makerspace, active learning classrooms, and collaboration and design studios. Flexible space for startup organizations, entrepreneurs, local businesses, industry partners will be provided to support connections with faculty and experiential learning opportunities for students leveraging intellectual talent to solve problems and challenges faced by our state today.

Departments, classes, and programs that currently reside in the existing building that are not closely associated with the Project Purpose will be moved to other university buildings with capacity for higher utilization.

How does the institution intend to integrate sustainable design principles to enhance the efficiency and operations of the facility?

Implementing LEED sustainable design principles improves the environment for human beings to work and learn. Occupant well-being, environmental performance and economic returns are achieved using established and innovative practices, standards and technologies that are incorporated in the design, construction, and operations of the building. GVSU strives to achieve a balance between creating environmental responsible buildings that concentrate on sustainable sites, energy performance, material and resources and indoor environmental quality, while being fiscally responsible stewards of public funds.

Adaptive reuse of existing building infrastructure is one major sustainable design principal. Reusing existing utilities, superstructure, envelope, core, and other building elements continues the usage of materials and systems with long life. Demolition of debris and disposal in landfills is reduced, avoiding unnecessary waste.

Site is previously developed, and disruption of surrounding environment and natural habitat is minimized.

The building is located within walking distance to multiple bus routes, bike, and pedestrian paths. The building is located on an urban campus with close access to residential neighborhoods, food service, retail, and healthcare. The building has a reduced parking footprint and provides bicycle facilities.

Many new sustainable design features would be implemented in the renovation. Including water use reduction, optimizing energy performance, roof and envelope improvements, use of sustainable and low emitting materials, conservation of resources, indoor air quality strategies, thermal comfort, construction waste reduction, daylighting and other strategies that meet or exceed the University standards in building sustainability.

Are match resources currently available for the project? If yes, what is the source of the matching resources? If no, identify the intended source and estimated timeline for securing said resources.

The land is University owned. Yes, matching resources will come from a combination of University Reserves, Debt Issuance, and/or, University donor Funds. If bank or market financing is determined to be required for this project, funds can be obtained in 6 months.

If authorized for construction, the state typically provides a maximum of 75% of the total cost for university projects and 50% of the total cost of community college projects. Does the institution intend to commit additional resources that would reduce the state share from the amounts indicated? If so, by what amount?

Yes, GVSU is requesting the State to fund $35 Million of the project cost, with GVSU funding the remaining $105 Million of the project cost. The university is supporting 75% of the project cost and requesting the state to support 25% of the project cost.

Will the completed project increase operating costs to the institution? If yes, please provide an estimated cost (annually, and over a five-year period) and indicate whether the institution has identified available funds to support the additional cost.

The renovation of the existing building is expected to decrease annual operating costs as a result of the infrastructure improvements being proposed. The new addition is estimated to add $60,000 to annual operating costs, or $66,000 over a 5-year period. Funding is available for the operations and maintenance of the proposed building.

What impact, if any, will the project have on tuition costs?

There will be no impact on tuition costs because of this project.

If this project is not authorized, what are the impacts to the institution and its students?

The type of skills and learning opportunities the Blue Dot Lab will provide its students are among the most essential for those entering the workforce. Consequently, not authorizing this project would seriously hinder not just Grand Valley's, but also Michigan's efforts to proactively prepare its residents for the challenges and opportunities of our rapidly changing modern world.

Projects like Blue Dot allow our state to demonstrate its understanding of the ways the world is changing - and how its own systems and structures must change as well. Indeed, our hope and expectation are that the insights and energy that it generates will help spread across campuses and communities, as a living model of what the future of learning must actually look like - and require.

What alternatives to this project were considered? Why is the requested project preferable to those alternatives?

Alternatives included the construction of a new stand-alone building. However, the adaptive reuse of this existing building in its central location for the proposed programs was more favorable and cost effective. Renovating an existing building with a new addition provides the needed space, visibility and opportunities for intersection and collaboration. Other alternatives are limited given the need to provide technology rich spaces, labs, design studios, and research space for the computing and data science degrees. This project and the transformation of an existing academic building centrally located between the associated colleges and the business community is essential to accomplish the teaching and learning, research and development, and collaboration outcomes described above.

1) *Digital skills enhancement across all programs and majors*.

The Blue Dot Lab will serve as a central learning and teaching hub, dedicated to supporting team-based, project-based, and problem-based learning resulting in skill sets demanded by today's workforce. Unique, technology-rich, flexible learning spaces made available to students across all academic programs would not be as successful in other existing buildings. Other university buildings are not of the size and location required to provide a synergistic center necessary for this interdisciplinary work.

2) *Expand the number of graduates with deep technical, computing, data, AI and related expertise*

The facility will house computer science, data science and transdisciplinary degrees at the intersection of computing, business, and the humanities. Additional program space is not available in the engineering, computing, and business colleges. The existing academic building proposed to be renovated is adjacent to the associated colleges with renovation opportunities that are achievable to meet the program requirements.

3) Expand the applied research and business supports through increased synergies between GVSU, startup organizations, entrepreneurs, local businesses, and corporate partners to advance their digital transformations

The Blue Dot Lab will also be a collaboration space and innovation accelerator for faculty and students working on applied research and development projects supported by digital simulation, data analytics and virtual environments. The location of the existing building is in the heart of Grand Rapids and is intentional and strategic to provide opportunities for collaboration and fusion between the university, entrepreneurs, business, and corporate partners.