

2021-2023 Biennium Internal Budget Proposal Narrative

Division: University-Wide

Evaluation Criteria: Proposals will be evaluated on every aspect of this template. It is highly recommended that the narrative portion touch on each area. Proposals forwarded to UPRC by unit leaders will be discussed at UPRC and authors are encouraged to attend so that they may answer questions and provide clarification.

Title: Telepresence as a Resource

This is a revised version of a previously submitted budget proposal.

If box is checked please briefly outline any significant changes and/or indicate why it is being resubmitted.

Statement of Purpose: *(What is the challenge or opportunity being addressed? How does the proposal address this challenge or opportunity? Limit response to 1 page – please link to any existing reports, data, supplemental materials, etc.)*

The purpose of the proposal is to develop several pilot projects that will enable us to sustain our telepresence capacity after the pandemic. Telepresence integrates high-performance audio, visual, and network technologies so people can interact across space and time, thereby reducing physical space needs, including classrooms, labs, studios, performance spaces, office and administrative spaces, support services, housing, food services, parking, and other physical infrastructure. The basic idea is to regard our telepresence technologies, along with the capacity to use them, as a valuable resource just like our physical infrastructure and support systems.

Specifically, support is requested for the following:

- *Mixed-Modality Classroom Model Demonstration Projects:* Technology in the majority of our current classrooms is designed to support on-site face-to-face instruction. To continue to serve remote learners, classrooms need to be redesigned to simultaneously accommodate both face-to-face and remote learners. Funding is requested for several classrooms representing different course designs, from small seminar rooms to large tiered lecture halls, and even remote access of labs and instrumentation. To maximize efficiency and impact, focus will be exclusively on the technological requirements for such hybrid classroom spaces, as opposed to a total classroom renovation. Such renovation needs can be covered with traditional classroom/lab upgrade funding. **Cost: \$50,000 for 2-3 demonstration mixed-mode classroom projects.**
- *Telepresence Support Center (The Innovation Studio):* The pandemic compelled us to develop a remote learning resource team, comprised of staff from Information Technology Services (ITS), Outreach and Continuing Education (OCE), and the Western Libraries. Unfortunately, there is currently no single physical location where faculty and staff can go for assistance with their telepresence needs, and to try out various technological solutions. The Innovation Studio would provide access to technology, training, and individualized support for exploring various applications of technology in the service of teaching, learning, and effective work practices. We propose locating this Studio in College Hall and housing ITS and OCE support personnel in the space. We will also explore additional partnerships with faculty and staff who are engaged in curricular embedded and co-curricular work. **Cost: \$50,000 for renovation and equipment needs.**
- *Collaborative Workspace Model Demonstration Projects:* With a significant proportion of our workforce able and interested in working remotely, at least part of the time, there is less need for dedicated workspaces and more need for collaborative spaces used intermittently. Such approaches include a “hoteling” approach to offices, “hot” desks reserved on an as-needed basis, team-based workstations, and collaborative spaces with the technology to connect with remote participants. We propose several projects where participants would opt in to explore various working arrangements: 1) a carousel model for an academic college; 2) a front-desk service area for an administrative unit; 3) a hoteling approach for an operations unit, comprised exclusively of staff; and, 4) a telepresence-enabled outdoor collaborative workspace. **Cost: \$100,000 for 3-4 demonstration workspace projects.**

Total Request: \$200,000 (one-time funding)

Anticipated Outcome(s):

Adopting a "telepresence as a resource" goal and infusing it across the institution will result in several significant outcomes:

Diversity and inclusive success. Telepresence will enable us to recruit and retain more diverse students, faculty, and staff who, free from the constraints of physically moving to Bellingham, would be more likely to become part of our community. It further supports the offering of academic programs to regions that comprise some of the most diverse and under-represented populations in the state as well as provides a means to extend access to these students across the U.S. and internationally.

Enhancing Academic Excellence. With the renewed focus on the development of broadband and wi-fi access across Washington and beyond, developing classroom infrastructure and the practices to successfully support learners allows Western to provide outstanding educational experiences to place-bound students across the state, nation, and world. Providing the resources and support to facilitate high-quality teaching and learning for diverse populations is integral to maintaining the quality learning experiences for which Western is renowned.

Washington Impact. Western research and scholarship will benefit from increased opportunities for collaboration, dissemination of information, and access to remote infrastructure and resources, and our assets will likewise be more accessible to partners across the state, country, and world. It is anticipated as faculty engage with the creative work of engaging in the Innovation Studio that empirical investigations of the impacts, successes, and challenges of telepresence, online, and virtual learning will present opportunities to engage in the *Scholarship of Teaching and Learning*.

Sustainable growth and operations. The greenest building is one that is never built. Telepresence allows for growth without constructing and maintaining more buildings and infrastructure. More students can be served without more classroom seats, lab benches, dorm rooms, and parking lots. More faculty and staff can be hired without constructing more offices and administrative spaces. When buildings are constructed or renovated, telepresence could provide invaluable "swing space," of which we have very little. By reducing our physical facility costs, more resources can be focused on programmatic and personnel needs. In the more immediate term, telepresence may help to reduce the intensity of use on existing physical assets, helping to reduce maintenance and utility costs.

Reduced travel and commuting costs. If people can learn and work together without being in the same place, the need to travel also becomes less necessary, allowing us to avoid a host of travel-related impacts, from direct impacts like commuting time and vehicle expenses, to indirect impacts like travel infrastructure, health, and affordable housing.

Affordable housing opportunity. With less need for dormitories and parking lots, these spaces could be converted into affordable housing for employees, allowing them to live closer and reduce transportation emissions even further. Demand on housing stock and transportation infrastructure in the surrounding community would also decrease, thereby decreasing growth and freeing up tax dollars for other pressing community needs.

Reduced environmental impact. The two main sources of our carbon emissions are buildings and transportation (commuting and work-related travel). With less people needing to physically travel to and work from campus, both of these emissions sources could be drastically reduced.

New audiences. It will help Western's graduate and continuing education programs reach new audiences by extending opportunities to diverse regions and lowering barriers for engagement. Audiences that may benefit from this engagement include international students, working professionals, and other place-bound populations.

Metrics: *(How will outcomes be measured? Please include current data points and goals. If this proposal will have any impact on the [Overall Metrics](#) included in the university's strategic plan, please indicate which specific ones here.)*

The following metrics would be used to measure the outcomes above:

Diversity and inclusive success. Percent of underrepresented students, faculty, and staff. Pell-eligible students. Retention, graduation rates, and time to graduation of underrepresented students.

Enhancing Academic Excellence. Opportunities afforded to place-bound students. Faculty use of and engagement in the Innovation Studio.

Washington Impact. Engagements of faculty using telepresence resources. Publications on teaching and learning related to mixed-modality delivery as well as other applications of online, hybrid, and virtual learning.

Sustainable growth and operations. Infrastructure use intensity, measured as space per student and per employee.

Reduced travel and commuting costs. Travel and commuting metrics include number of trips for commuting and university business by travel mode, number of miles per commute by travel mode, numbers of vehicles on campus.

Affordable housing opportunity. Housing affordability metrics include average mortgage and rental costs. For students, the metric is primarily rental cost. For faculty and staff, an important metric is both rental and mortgage costs, along with the percent of homeowners.

Environmental impact. A useful overall metric is carbon emissions, as measured per individual and per square foot. It is also important to measure the equity implications of these emissions.

New programs and audiences. Important metrics include new programs created as a result of telepresence capacity, number of students served by those programs, degrees and certificates awarded, and revenues generated.

How does this proposal align with your departmental/divisional strategic priorities? *(Please reference specific items from the recently completed departmental/divisional strategic plan and attach a copy.)*

This is a university-wide proposal. See next section for how this proposal supports the University Mission and Strategic Objectives.

How does this proposal support the University Mission and Strategic Objectives? *(Please refer to the [2018-2025 Strategic Plan](#) and indicate which core theme(s) this proposal will help achieve.)*

Advancing Inclusive Success. The ability to live in Bellingham is a privilege that many potential Western students just do not have. If we are to meaningfully increase retention and persistence rates and the number of graduates, we need to acknowledge the locational constraints faced by students from diverse and under-represented socio-economic backgrounds. Telepresence will help us reach those students with our programs, increase retention and graduation rates, and reduce time to graduation.

Increasing Washington Impact. Telepresence enables us to expand access to our programs to place-bound and non-traditional students. At the same time, experience with telepresence technology will help prepare graduates work and social environments where technology and automation are driving employment trends and significantly changing the nature of work and relationships. Advancements in applied research on teaching and learning are also anticipated.

Enhancing Academic Excellence. Telepresence will allow us to be a more diverse and inclusive organization by attracting faculty and staff who otherwise may not have the ability or interest in living in Bellingham. Developing the infrastructure and the practices to successfully support remote learners will also allow Western to better provide quality learning experiences in the various modalities that are needed in the contemporary teaching landscape.

What are the consequences of not funding this proposal?

One of the most important lessons learned from the pandemic is that we can work, teach, and learn effectively through telepresence technologies. We are in the early phases of exploring the impacts of this revolution. A significant step forward is needed to build on this work through establishing the physical and human infrastructures to support our emerging practices. Many students will still want to come to campus for a “real” college experience. Some employees cannot work from home, and some work cannot be done remotely. Yet as the need for flexibility for individuals across their work and educational lives remains, and telepresence technologies and approaches continue to improve, more and more people will be looking for options that have demonstrated effectiveness. Unless we build on our existing telepresence tools and experience to catalyze this change, we will be at a serious competitive disadvantage to other educational institutions who make these telepresence commitments and investments. Challenges to addressing various aspects of advancing inclusive success, increasing Washington impact, and enhancing academic excellence will also remain outstanding.

What alternatives were explored?

The hard reality is that after the pandemic ends, some percentage of our students and employees will continue to demand remote learning and remote work arrangements. The alternative to a deliberative, thoughtful investment in telepresence is that this will unfold in an ad hoc and chaotic fashion. It could also be that we decide to actively prohibit or discourage remote learning and work. In either case, we will be less able to meet our organizational goals and be at a significant competitive disadvantage to peers who acknowledge that telepresence will increasingly be part of our lives.

Which units (departments, colleges, etc.) will be involved?

The implications of this proposal are university wide. However, the units most centrally involved with carrying this out include:

- Information Technology Services (ITS)
- Outreach and Community Engagement (OCE)
- Capital Planning and Development
- Academic Space Administration

Equipment needed:

For major (>\$25k) purchases, please provide the following information.

Mixed Modality Classroom Model Demonstration Projects (2-3 projects)

Item: IT equipment: cameras, displays, microphones, related hardware

Purpose: To enable simultaneous synchronous participation by both face-to-face and remote learners, a remote troubleshooting by IT and STS staff.

Cost: \$50,000

Anticipated Useful Life: 5-7 years

Replacement Cost if any: NA

Telepresence Support Center (The Innovation Studio)

Item: 1) IT equipment (i.e., cameras, displays, microphones, related hardware, etc.); 2) office furnishings, and 3) light renovation (i.e. paint, floor covering, etc.)

Purpose: To design and construct a resource room where faculty and staff can come for technical support for their telepresence needs.

Cost: \$50,000

Anticipated Useful Life: 5-7 years

Replacement Cost if any: NA

Collaborative Workspace Model Demonstration Projects (3-4 projects)

Item: 1) IT equipment (i.e., cameras, displays, microphones, related hardware, etc.); 2) office furnishings, and 3) light renovation (i.e. paint, floor covering, etc.)

Purpose: To design and construct model collaborative workspaces that accommodate intermittent physical presence, supports collaboration, and connects digitally with remote students and colleagues.

Cost: \$100,000

Anticipated Useful Life: 5-7 years

Replacement Cost if any: NA

Human Resources *(Complete the table below adding additional rows if necessary):*

No additional human resources are requested. Existing technical support staff are in place in ITS and OCE. Design and planning activity will also be taken on by existing Capital Planning and Development Academic Space Administration staff. Ad hoc planning and design teams will be created from various stakeholders across campus. It is also expected that the Sustainable Campus Planning Studio will adopt several of the projects and contribute design concepts.

Operating & Maintenance Costs (include service contracts, installation costs, etc.):

It is expected that existing spaces will be repurposed for the model demonstration projects. As such, current operation and maintenance costs for those spaces will continue to be used once they are repurposed.

Space Requirements:

Mixed- Modality Classroom Model Demonstration Projects:

What type of space is needed for this proposal? (e.g., private office, lab space, group work/study space, etc.) 2-3 existing classrooms, representing a range of sizes and teaching formats.

What features must this space have? (e.g., fume hoods, plumbing, 3-phase power, etc.)

Spaces do not have to be recently renovated. We recommend selecting more “typical” conditions in order to better demonstrate how telepresence technologies can turn average classrooms into missed modality learning environments. In teaching labs, the demonstration would include remote access to instrumentation by STS, thus enabling access for user training, lab courses, and research. It also lower the barrier to outside instruments users (e.g. community colleges). However, there are several technological hurdles to increasing remote access.

1. *High-Quality Interactive Environment.* Positioning and control of multiple cameras is required to offer multiple camera angles for lab exercises. STS does not have expertise in this area and thus would benefit from such a demonstration facility.
2. *Remote Control of Software.* Remote control access of instrumentation would be used to increase access and allow STS staff to trouble-shoot remotely. We currently are able to access some instruments remotely, but other high-use instruments (e.g. JEOL SEM) remain a challenge.

What needs can be accommodated within your existing space? There is currently no space dedicated to these model demonstrations.

How much new space will be required?

2-3 existing classrooms will be retrofitted with telepresence IT equipment.

Telepresence Support Center (The Innovation Studio):

What type of space is needed for this proposal? (e.g., private office, lab space, group work/study space, etc.) An existing space in College Hall will be repurposed to this use.

What features must this space have? (e.g., fume hoods, plumbing, 3-phase power, etc.) The space in College Hall is currently an open floorplan layout with multiple workstations. Minimal renovations are needed.

What needs can be accommodated within your existing space? The space is ideally suited to these purposes as OCE is located in College Hall and is close to ITS. It is readily accessible by faculty and staff.

How much new space will be required?

See description above.

Collaborative Workspace Model Demonstration Projects:

What type of space is needed for this proposal? (e.g., private office, lab space, group work/study space, etc.) 2-3 existing workspaces, representing a range of work environments, from academic units to student support and operations units.

What features must this space have? (e.g., fume hoods, plumbing, 3-phase power, etc.) We recommend selected spaces with few renovation requirements, allowing most of the funds to be dedicated to collaborative work IT equipment and furnishings.

What needs can be accommodated within your existing space? There is currently no space dedicated to these model demonstrations.

How much new space will be required?

2-3 workspace complexes will be retrofitted.

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