# BC XR LAB

## 2019/20 REPORT & 2020/21 BUDGET



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# EXECUTIVE SUMMARY

The past twelve months have marked the first full year that the XR Lab has been operational in the new lab space in the Bellevue College Library. During that time, the XR Lab has hosted a third iteration of the Virtual Worlds course, has run or participated in 150+ events (with 3500+ attendees) and has supported a range of faculty and student-led initiatives at Bellevue College.

Some of the highlights of the year since our last report include:

- Hosting and/or participating in 150+ events, where we reached 3500+ attendees.
- Developing new XR workshops for a diverse range of subjects (including art, architecture, biology, history and computer science).
- Supporting major student events (such as the Global Game Jam hosted by DMA and RISE.
- Building a strong student team to run the day to day activities of the lab.
- One of our student employees (Brandae) receiving a prestigious IGDA Velocity Scholarship including an all-expenses paid trip to San Francisco for the Game Developers Conference (GDC).



James Riggall speaking at the Eastside VR Industry Meetup in Bellevue.

A VR Industry Panel Organised by the XR Lab in Collaboration with RISE.

- Working with RISE to run the Virtual Reality Faculty Learning Cohort (VR-FLC) project, which is an opportunity for BC faculty to learn more about applying VR in their own classes.
- Working with RISE, IBIT, Interior Design and the BC Grants Office to develop an NSF grant concept (with final applications due in October).
- Establishing an XR for Education community with representation from a 10+ community colleges and universities who are exploring the use of XR at their own institutions.
- A range of external events and presentations, including presentations at Eastside VR, Code Day TMobile, the League of Innovations Conference and a keynote at the Washington Library Association's CLAWS Conference.

This has undoubtedly been the biggest year since the XR Lab started, with a focus on fine-tuning our team, our systems and processes and our governance model to ensure that the lab can continue to grow and increase its positive impact over the coming months and years.

This report will outline our activities over the past 12 months in a little more detail, as well as presenting our anticipated operational budget requirement for 2020-21. We are seeking $147,000 for that financial year, which will enable us to scale up our XR Lab operations to a level commensurate with the latent capacity represented by our space, available equipment and highly capable team of faculty and students.

# ACTIVITIES & EVENTS

This year represents the first full academic year in which the XR Lab has been operational in the Bellevue College Library with its own budget, team and allocated space. This newfound flexibility and capacity has enabled the XR Lab to substantially increase its impact over the past twelve months. As was the case in our previous report, the XR Lab team has continued to track activity and events with a high degree of granularity. This tracking enables us to report that since our last annual report we have hosted or participated in 150+ events and that across these events, we have reached 3500+ attendees.

These events range from the classes that are run for CMST116, (which frequently feature industry guest speakers and which are open to the wider campus community attend), tours for local high school students, faculty training workshops and hosted workshops where faculty from a range of disciplines bring their students to the XR Lab to experience VR in the context of an existing course.
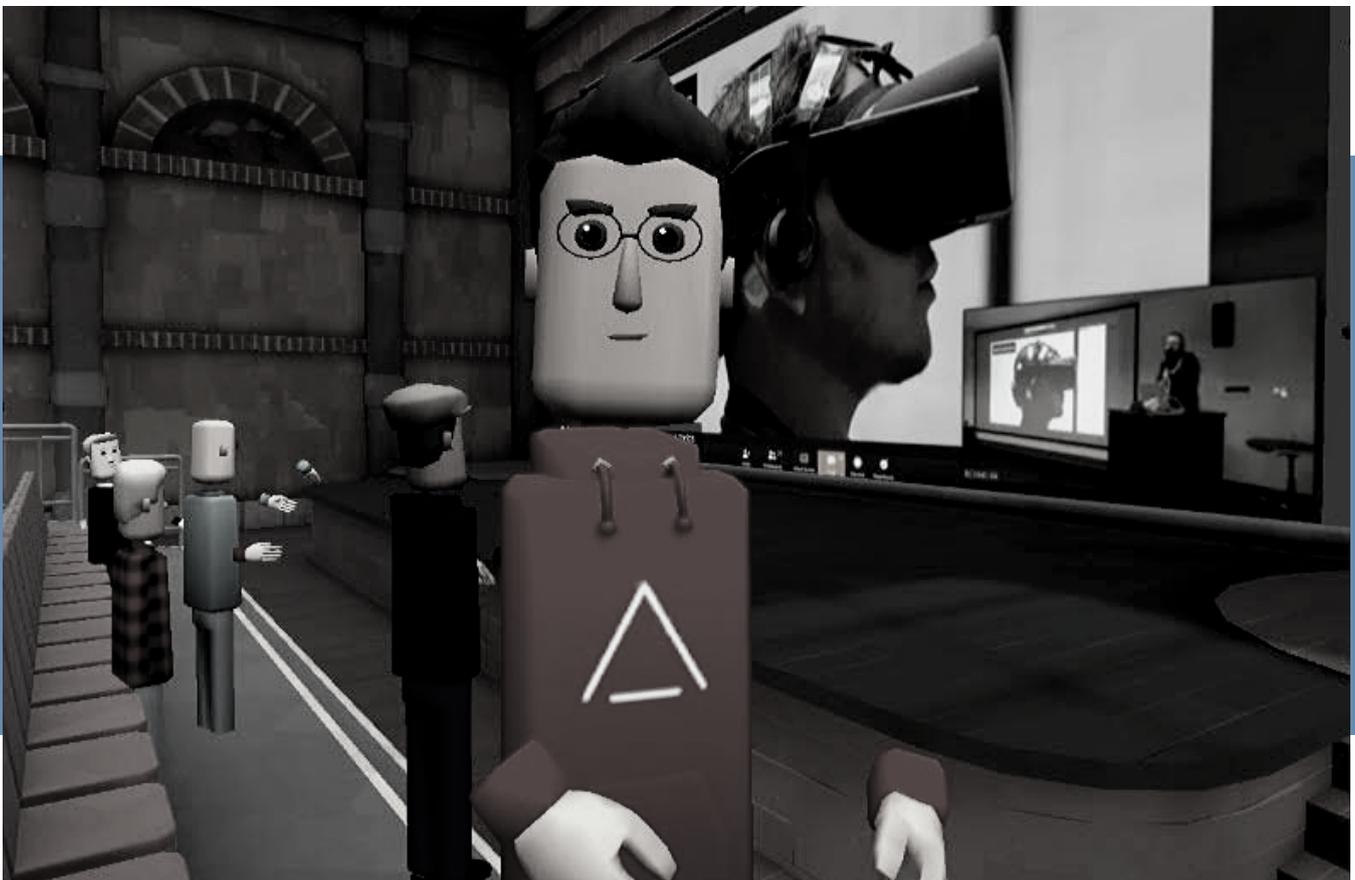


Bruce Wolcott Attending CMST116 in AltSpaceVR.

Our flagship VR course, CMST116, has had a particularly successful year this year. For the first time since we've started running the course at Bellevue College, the class filled quickly, reaching capacity a few days after enrollments opened for Winter Quarter. This is a strong early sign that demand for this course and related programs is continuing to grow and that awareness of the XR Lab and the course has improved across the campus.

There were a number of other interesting aspects to the course this year. As in previous years, we hosted an industry guest speaker each week for CMST116. These speakers included representatives from Oculus (Facebook), MXT Reality, AltspaceVR (Microsoft) and Rec Room, as well as a psychologist, a VR pioneer and a VR artist. These guest speaker presentations have continued to be a highly successful part of the course delivery.

In the past, we have live-video-conferenced this course out to other participating institutions via Zoom. We did this again this year, with students joining our course remotely from places as far-flung as Australia and Nigeria, as well as a mix of attendees from elsewhere in the United States. This year, in addition to our normal Zoom stream, we also live-streamed our course directly into virtual reality. Attendees could visit our classroom in the virtual reality application AltspaceVR and watch our class unfold live on a cinema-screen within virtual reality.

The XR Lab team has also been busy running workshops for Bellevue College students and faculty, attending and supporting student events, hosting tours for visiting high school students who are considering enrolling at Bellevue College, and raising the profile of the College by participating in external events such as delivering a presentations at the Eastside VR Meetup, the League for Innovation Conference and the Washington Library Association CLAWS conference, where James from the XR Lab team delivered a keynote presentation.

In addition to these core activities, the XR Lab team have also been active in supporting a range of student and faculty-led events on campus (such as bringing virtual reality equipment to student club events). One highlight from the past year was our participation in Bellevue College's Global Game Jam node, where 5 teams completed VR projects. We have also attended some substantial events outside of Bellevue College, such as sponsoring and providing support to Code Day which happened on the T-Mobile campus in February and was attended by 150 local high school students.

Overall, this has been a very busy year for the XR Lab team and we're looking forward to continuing to expand our activities and program of events in 2020 and 2021.

# FACULTY
# & GRANTS

Now that the XR Lab is largely established and we have worked through most of the initial challenges of renovation, building a team and establishing procedures and management structures, etc., we're now starting to look towards our potential for wider impact and our capacity for bringing in additional funding to help cover our costs.

In this spirit, in 2020, we applied for an ASG grant for $22,000, which was intended to go directly towards funding student employee positions with a focus on driving student-led activity (beyond our existing core activities, such as class workshops, which are largely driven by faculty). Unfortunately, this grant submission was not successful and we were not awarded any funding this year. The implication of the feedback we received was also that the XR Lab won't qualify for this funding source in the future either.

However, while this was disappointing, we have also been working on other projects that have been leading in much more positive directions.



One of the First Faculty Learning Cohort Meetings in the XR Lab.

David Wikstrom and Diane Dietrich Exploring the Use of XR for Interior Design.

One example is a collaboration between Christina Sciabarra and Bruce Wolcott, on the "Virtual Reality Faculty Learning Cohort" (VR-FLC) project. Funded by a Lockwood Grant, this project has enabled a group of 12 faculty members to work together to explore the potential for VR in their own classes. Some faculty members are exploring the use of existing VR applications for their classes, others are exploring the use of 360 video content and the potential for creating that content themselves, and a third group are working with our student team to create brand new prototype VR applications for use in their class. This project has been more popular than expected and the level of engagement from the participants has been high, in spite of a disrupted and difficult quarter this winter.

The early success of the VR-FLC has to led us to develop another new project concept, which we're working with the grants office to develop into an NSF proposal. The grant we're targeting funds up to $600,000 over three years. The project, if we are successful, would be to run an interdisciplinary student capstone course, where students from technical disciplines build prototypes for teaching applications that have been proposed by BC faculty. The students would have industry support, access to a studio space on campus and the projects they complete will be tested in live classroom environments after the course concludes. Early progress on this grant application has been made, with an aim to submit a full application in early October 2020.

# LIBRARY & ELEARNING

The XR Lab continues to benefit from its association with the Bellevue College Library and eLearning teams. The Lab continues to be more accessible for students in the Library than it would be if it were elsewhere on campus and we've enjoyed a consistent increase in our visibility over the past year, with students finding us more easily as a result of our prominent signage and growing awareness of the Lab on campus and in student/faculty communities.

We have been grateful for continued strong support from the Library and eLearning management teams. The Library (particularly Heath and Christa) have been instrumental in helping us manage our budgets and administration and their support is one of the reasons it's possible to run the Lab with a comparatively low operating budget.

Additionally, this year, the eLearning team have enabled their new eLearning Manager, Ron Austin, to contribute to activities in the Lab. This support from the eLearning team has



David Bruckner Experimenting with the TV Services Green Screen.

Bruce Wolcott Running an Interior Design Workshop in the XR Lab.

enabled us to build a stronger connection between the two projects and has led to some exciting new opportunities (such as an exploration of the use of 360 video and green screens to create new kinds of eLearning content).

Ron has also assisted us in the day to day management of the Lab, in particular, by providing a management point of contact for the student employee team. It's this additional support from eLearning that gives us the confidence to grow our student team and expand our capacity and opening hours in the upcoming financial year.

Now that the XR Lab is well established, we're starting to explore the ways in which we can work more closely with the Library and eLearning teams (as well as other high priority groups, such as RISE, DMA and Interior Design) to develop collaborative projects. Largely as a result of Ron's help and support, we've been able to blaze this trail in 360 video and green screen production and it's clear that there's a group of faculty members on campus who are interested in exploring these technologies for use in their own online course delivery.

The XR Lab and eLearning teams have also worked together on a number of conference presentations this year, including a presentation at NW eLearn in October 2019, as well as two presentations at the League for Innovation Conference in March 2020.

# 2020/21 BUDGET

The XR Lab has continued to run efficiently and under budget over the past two years.  Moving into this next financial year, we'd like to expand our capacity (particularly by adding additional student employees without necessarily having to rely entirely on work-study funding to pay for our student team).  By expanding our student team to six students (two lead students and four assistants) we will be able to expand our opening hours to be more in-line with the Library's core opening hours, as well as increasing our capacity to support faculty XR projects and class workshops.

To enable this growth into 2020/21, we are requesting $147,000 for the upcoming financial year.  While this is a substantial increase on our previous budget, we anticipate making some savings throughout the year and running at a surplus overall. It's difficult to predict this surplus exactly, as it relies on uncertainties including, the amount of our surplus in the current financial year and the availability of student workers who qualify for work-study.

Two CMST116 Students Using Oculus Quest Headsets in the XR Lab Lobby.

# 2020/21 BUDGET*

## Operations

| Item | Cost |
|---|---|
| Faculty Wages | 59,700 |
| Support Staff Wages | 50,300 |
| Visiting Scholar Expenses | 14,000 |
| Equipment & Consumables | 10,000 |
| Software | 4,000 |
| Travel & Transport | 4,000 |
| Marketing | 1,500 |
| Contingency (0.25%) | 3,500 |
| | 147,000 |
| | 147,000 |

* This is a high level summary; a more detailed budget breakdown and accompanying notes can be found attached.