Bergen Community College

ASSESSMENT REPORT FORM
ADMINISTRATIVE AND EDUCATIONAL SUPPORT

Assessment Period: 2016-2018

AES Department: Information Technology

Department Head: Stephen Valkenburg

Department Assessment Liaison: Amarjit Kaur

Date Submitted: 11/29/2016

❖ **Mission/goal statement or description of the Department**:

The Information Technology department will provide a reliable, secure, integrated & forward looking technology environment that supports and enables the college community.

❖ **Department's Core Objectives/Outcomes**:

Technology is an integral part of our student's learning experience at Bergen Community College. Be it classroom technologies such as the projectors, TVs, screens, sound system or be it the technologies in the lab such as the VDIs, deployment of new and innovative technologies enhances the teaching & learning experience. Further, deployment of access control technologies ensures a safer environment. Therefore, one of the main objectives of the Information technology department is to maintain a secure, reliable and scalable information technology infrastructure, enabling innovative uses of technology for educational excellence.

SEMESTER 1: CREATING A DEPARTMENT-LEVEL ASSESSMENT PLAN

1. Department's Goal(s) or Outcome(s) to be assessed (from the above section):

The Information Technology department would like to assess the new technologies deployed in the Health Professions Building and their impact on user experience, efficiency, staffing. The technologies that we will be assessing are:

- Virtual Desktops - VDIs
- Classroom Technology

- Access Control System

2. Means of Assessment:

We will be using multiple strategies to gather data to complete the assessment. We will collect data from our Ticketing System. We will use surveys to collect feedback from faculty about their classroom experience. We will also use data in the CBORD system to analyze the usage of the access control system.

Feedback from Vice President:

SEMESTER 2: DEVELOPING ASSESSMENT TOOL (s) and TIMELINE

3A. Describe or attach assessment tool (s), including sources of data, timeline for data collection and how data will be analyzed.

ITS will be utilizing a variety of tools to assess the Goals identified in Semester 1. Below is outline of the tools that we plan to use for each goal.

Virtual Desktops:

The effect of the implementation of VDI units in the Health Profession Building will assessed under two categories – student impact & staffing impact. To understand student impact, surveys will be sent to students from the Health profession program. To capture the impact on staffing, data from the helpdesk ticketing system will be analyzed. Data generated from imaging tools used for imaging regular PCs vis-à-vis imaging tools used for VDIs will be used.

Source of Data: Mange Engine ticketing system, Student Surveys, Data from Unidesk/Ghost/SCCM systems. There are approximately 1600 HBP students and employees that will be analyzed.

Timeline for Data Collection: Summer 2017 – Spring end 2018

How Data Will be Analyzed:

1. We will be looking at the user experience and impact whether positive or negative.

2. The efficiency and ease of management through Unidesk; how long does it take to image all the computers in the college (Ghost vs Unidesk).

3. Staffing improvements; the number of technicians needed, training required/transfer of knowledge; remote support vs onsite support.

Classroom technology:

Source of Data: Survey of Faculty experience and possibly ticketing system through Manage Engine.

Timeline for Data Collection: Summer 2017 – Spring end 2018

How Data Will be Analyzed: Data will be analyzed for positive/negative feedback from faculty on the ease of use of current classroom technology involving touchscreens in classrooms, sound quality and the efficiency of use.

Access Control:

        Source of Data: Interview Public Safety, survey HBP staff and faculty on user experience

        Timeline for Data Collection: Fall of 2017 – end of Spring 2018.

        How Data Will be Analyzed: Measureable data will be noticeably less calls to public safety for access to building/rooms.

3B. Desired results department and Vice President would like to see.

Virtual Desktops:

1. Positive impact on students and staff
2. Simple student transition in accessing desired course documents and programs both campus and at home (hopefully)
3. Ability to access files remotely and with ease
4. We can complete more tickets with less technicians
5. Increase of remote support
6. Reduced response time to help desk tickets
7. Reduction in the number of help desk tickets
8. Imaging time reduction using SCCM & Unidesk

Classroom Technology:

1. Positive Collaborative experience with students; ease of file and video sharing
2. Intuitiveness – ease of use of technology by faculty
3. Captivating the audience and keeping their attention

Access Control:

1. Less of a burden on public safety in allowing access into rooms and building.
2. Ability to pinpoint access to locations and rooms and identify who is unlocking doors.
3. Producing a secure environment for expensive equipment/sensitive data with limitation of access
4. Eliminate the need for a locksmith

5. Negative impact with inability to give access to doors remotely. This would require the appropriate cameras installed in strategic locations to identify individuals who are requesting the access.

▪ **Feedback from CIE:**

SEMESTER 3: COLLECTING AND ANALYZING DATA

4. Summary of Results (attach aggregated data table, survey tool, etc., to support the summary)
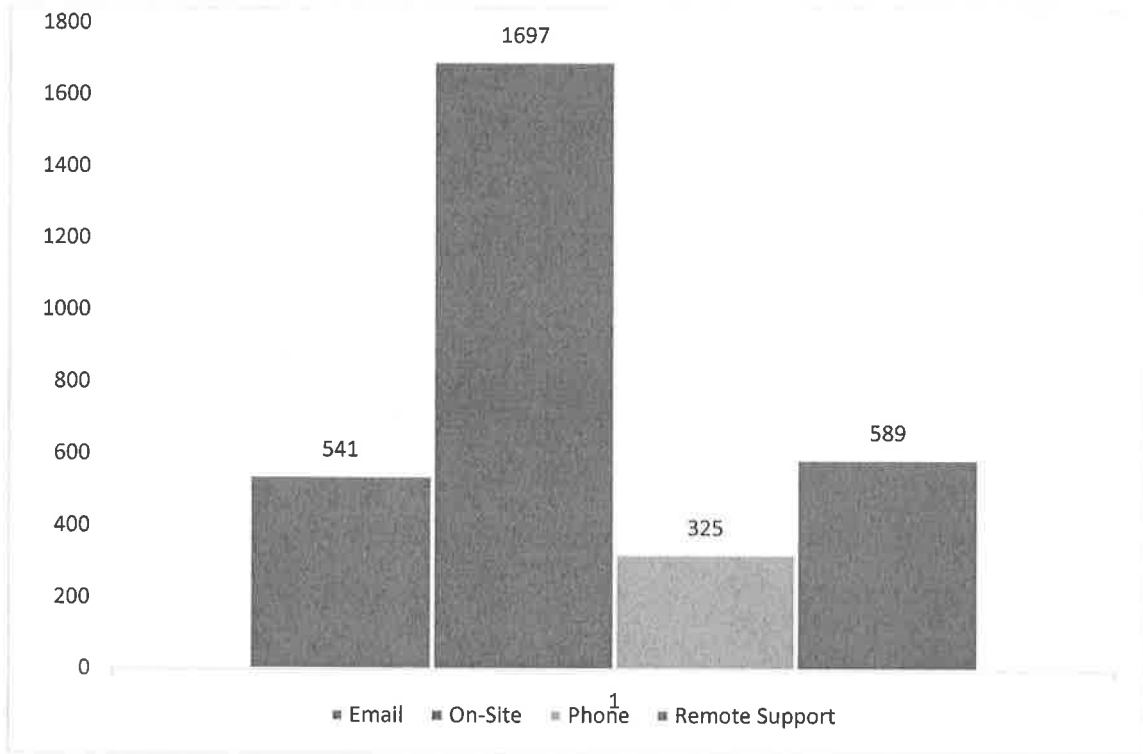
Virtual Desktops (VDI Units)

Data was extracted from the helpdesk ticketing system to analyze the effect of implementation of the VDI Units in the HP Building on how tickets were resolved. All tickets created between July 1, 2016 and June 30, 2017 were analyzed. Tickets were separated into two categories – VDI & PC. The tickets analyzed were limited to those related to general computer issues. All tickets related to access requests or specific applications such as Colleague were removed from the dataset.

A total of 3152 PC tickets were created during this period. Of this 53% (1697) required an onsite visit by a member of our technical support team. On average, each onsite visit takes 20 minutes to complete. This means around 500+ hours were spent by the tech support team on onsite visits. Techs were able to resolve the issues remotely only 18% of the time.
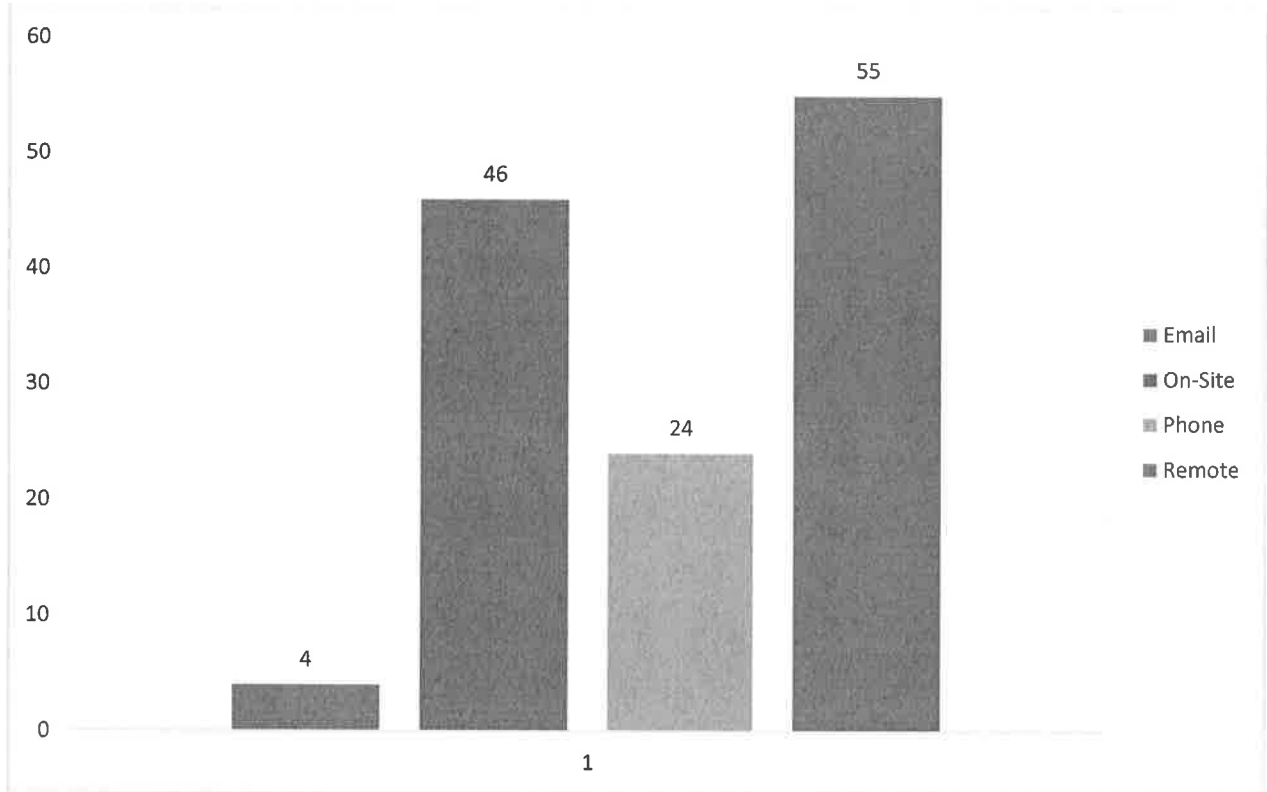
A total of 129 VDI tickets were created during the same period. Of this, 35% required an onsite visit while 43% were resolved remotely. The number of tickets resolved remotely increased by almost 25%. This meant reduced time spent on onsite visits.

Below are the graphs for the two categories of data:

PC Tickets Created

	Value
Email	541
On-Site	1697
Phone	325
Remote Support	589

Legend: ■ Email ■ On-Site ■ Phone ■ Remote Support

VDI Tickets Created

	Value
Email	4
On-Site	46
Phone	24
Remote	55

Legend: ■ Email ■ On-Site ■ Phone ■ Remote

Further, the imaging processes – the process that requires each academic PC to be completely wiped at the end of the academic year and restored – was significantly impacted by the implementation of the VDI units. In the PC environment, the technical support team spends almost 4 weeks in the summer reimaging all academic PCs. The VDI units do not need to be reimaged at the end of the year. Due to the virtual nature of the units, the student units are restored to the base image every time a student logs off. There is no end of the year marathon exercise needed to reimage the VDI units thereby saving considerable time and resources.

Classroom Technology

A survey was sent out to 236 HP Faculty who taught in Fall 2016, Winter 2017, Spring 2017, Summer 2017 & Fall 2017. The survey included five questions to assess the satisfaction of respondents with the classroom technologies used in the HP Building. The technologies that were included in the questionnaire are:

- Interactive Television
- Touchscreen Feature on the Television
- Audio in the classroom
- VDI Units – Teacher's station

The respondents were given three weeks to complete the survey. Reminders were sent during this period. 27 responses were received. 38% of respondents frequently used the interactive TVs in the classroom while the same percentage said they never really used it. A very small population used the Touchscreen and audio features (<20%). More than 50% of the respondents regularly used the VDI units in the classroom.

Majority of the respondents were satisfied with the technologies deployed in their classrooms. An overwhelming number of respondents however did show interest in additional training especially for the interactive TVs and the touch screen feature.

The survey results are included in the Appendix of this document.

Access Control

Unfortunately, no quantitative data was available to analyze the effects of the access control system put in place in HP building. However, an Interview with ED Zingg from Public Safety revealed the following:

1. Access Control in the HP Building was put in place in Fall 2017. Before that (between Fall 2016 & Fall 2017) 400+ keys were issued to faculty and staff

2. Before access control, Public Safety would receive at least 10 calls per days from the HP building to open doors. The Public Safety officers spent at least an hour a day opening doors in the HP Building.

3. Before access control, there was no way of knowing who went into the classroom other than by monitoring the cameras in the hallway. The access control system database maintains a complete history of cards used to access the offices and classrooms.

5. Recommendations for Improvement:

While the assessment reconfirmed the fact that the VDI units have a clear strategic advantage over the PCs, the communication associated with the roll out of the VDIs in the HP building posed some challenges. To address these challenges, we need to develop a more robust communication plan before we deploy the VDI units to the rest of the environment so that users are better prepared for this new experience.

With regard to the classroom technologies, as the assessment exercise shows, most users have a positive experience with the technology. However, more training sessions need to be planned in collaboration with the HP administration to educate the faculty on the technologies available in the classroom and how they can best utilize them to improve the student learning experience.

- **Feedback from Vice President:**

SEMESTER 4: CLOSING THE LOOP AND SHARING KNOWLEDGE

6. Use of Results:

Virtual Desktops (VDI Units)

With the introduction of Ellucian personnel to the Information Technology Department a professional evaluation of VDI was reported on in a "White Paper". The report was presented to the President of Bergen Community College to provide an overview, executive summary and business justification for the continued migration of personal computers to a virtual desktop environment. This report included data collected, realized and projected cost benefits, operational improvements, security and business continuity implications as well as challenges encountered and expected to be encountered and is meant to be a guiding document for moving forward in the best interests of Bergen Community College. These realized benefits including the ones in this assessment have already been shared to the Board of Trustees in justifying the expansion of Bergen Community College's VDI initiative and we expect to continue on this path in years to come. The IT Department, Public Safety and the Health Professions' employees have been test groups for VDI and experienced firsthand the benefits and challenges of this virtual environment and as such we will continue to use this knowledge to efficiently support the user community here at Bergen Community College and take advantage of the ease of classroom imaging as

well as employee application layering and disaster recovery as we expand the virtual experience to other areas of the college and other campuses.

Access Control

The access control assessment confirmed by Ed Zingg allows the Public Safety office to effectively scale their employee job responsibilities accordingly and more efficiently. In the future, the growth of access control technology could continue to be a powerful tool in maintaining security and restricting/ permitting door access to all sensitive areas on campus as well as for accountability during investigations. Our hope is that in years to come all classroom doors as well as office doors would have card access control and the appropriate faculty and staff would have access built into their ID cards with a few keystrokes upon hire or removed upon leaving the employment of Bergen Community College and further lessen the burden on Public Safety Officers of opening doors campus-wide.

Classroom Technology

The assessment results are shared with faculty and cabinet members as the need for new technologies is considered in the classroom. Through this survey we realize that high tech devices such as TVs with touch screens are not widely used by the majority of faculty and we need to tailor our discussions with the end users accordingly as we lifecycle our classrooms. It is challenging to note that even when presented with the opportunities to learn and train on new technologies, they are not necessarily taken advantage of and for this reason the dialogue of classroom technology and training continues. Our goal is for faculty and students to equally benefit from technology in the classroom and be able to collaborate effectively without overburdening anyone and this remains a difficult balance with varying levels of technology experience and knowledge.

- **Feedback from CIE:**