

Bergen Community College

ASSESSMENT REPORT FORM ADMINISTRATIVE AND EDUCATIONAL SUPPORT

Assessment Period: 11/2014----11/2015

AES Department: INFRASTRUCTURE SERVICES

Department Head: Sharyne Miller

Department Assessment Liaison: Timothy Burger

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❖ **Mission/goal statement or description of the Department:** INFRASTRUCTURE SERVICES MAINTAINS AND SUPPORTS THE COLLEGE'S CENTRAL TECHNOLOGY INFRASTRUCTURE AND APPLICATIONS INCLUDING SERVERS, NETWORK (WIRED AND WIRELESS), TELECOMMUNICATIONS, AND CORE APPLICATIONS (EMAIL, FILES, ANTIVIRUS, ETC)

❖ **Department's Core Objectives/Outcomes:** INFRASTRUCTURE SERVICES MAINTAINS SYSTEMS AVAILABILITY AND CONNECTIVITY TO ALLOW THE COLLEGE TO FUNCTION.

SEMESTER 1: CREATING A DEPARTMENT-LEVEL ASSESSMENT PLAN

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

Increase availability, security and reliability of wireless access across all three campuses of Bergen Community College.

2. Means of Assessment:

Currently Bergen's Wireless infrastructure is open to the public and access points have been placed on an ad-hoc as requested basis. In order to evaluate progress Bergen Community College will have a coverage assessment completed as well as a security assessment. Based on the results of these assessments we will develop and prioritize a plan to remediate security concerns as well as roll out new Access Points to fill in coverage gaps.

We have engaged with Cisco to produce a wireless survey of Pitkin Hall. We have provided building drawings and identified building material types such as Concrete, glass, sheetrock to help them provide a revised coverage map for the building. We have also provided a layout of existing access point deployments to show current coverage pattern.

- **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.

Bergen Community College IT Staff will provide floor plans containing all of the current access point locations as well as building construction materials to Cisco who will create a predictive wireless coverage and availability assessment for us. From there they will provide us with a new set of plan's showing the locations that they recommend to provide ubiquitous wireless access across all of our campuses.

Bergen Community College IT Staff entered into an agreement with ProMedia Technology to complete an IT Security Audit. One phase of this audit is to evaluate the security of our wireless network. After evaluation the Auditors will provide us with a list of recommended security remediation steps.

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

Increased security, ubiquitous network access, and reliable communications. Essentially we need to have a wireless network that is available everywhere across all three campuses and is available only to approved individuals. Furthermore, the access must provide sufficient speed and reliability to ensure that our faculty, staff, and students have access to the resources they need to be successful.

- **Feedback from CIE:**

SEMESTER 3: COLLECTING AND ANALYZING DATA

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

Cisco has completed their predictive survey and provided us with detailed floorplans showing where our coverage gap's are and where new Access Points should be provisioned to ensure seamless access. Additionally our security audit has been completed and recommendations have been made on how to secure the wireless network.

5. Recommendations for Improvement:

Cisco has recommended the placement of nearly 150 additional access points to ensure that our faculty, staff and students have full coverage and sufficient resources. Additionally our security audit has revealed a strong need for an authentication system to ensure that our wireless network is not being over-utilized by non-constituents thus limiting the available resources to our own students, staff and faculty.

- **Feedback from Vice President:**

SEMESTER 4: CLOSING THE LOOP AND SHARING KNOWLEDGE

6. Use of Results:

- a. Based on the results of Cisco's wireless survey and their additional recommendations the IT department has taken several actions. While we realized we could not roll out the recommended 150 access points due to budgetary constraints we decided that we could still make a concerted effort to implement the recommendations in a limited fashion. As a result of the findings we took the following steps.
 - i. 1.) We implemented a wireless security system which requires authentication to the network and allows students, faculty and staff to register their devices to be remembered for up to 1 semester.
 - ii. 2.) We rolled out an additional 30 access points across the first floor of the Pitkin Building to fill coverage gaps and provide increased density of coverage.
- b. Because there was no official measuring standard utilized prior to the start of this project the results are subjective and anecdotal in nature. We have received some positive feedback from students regarding the increased coverage on the first floor, however we have continued to receive fairly consistent complaints regarding speed. While the security steps we took were essential for the college they were less noticeable to the end users. After analyzing the issue further and reviewing the nature of the requests that we receive regarding the wireless networks on campus it appears that students may have been complaining less about the "WiFi Network" and more about the speed of internet access. Based on that assumption we have also increased our internet bandwidth by 40%.

7. UTILIZE THE RESULTS AS A TEMPLATE FRO FUTURE WIRELESS NETWORK SDEPLOYMENTS.

- **Feedback from CIE:**

Last Updated: August 2013