Annual Assessment Report

EXECUTIVE SUMMARY

Unit name: **Division of Information Technology**   Assessment year**:   2021-22**

The Unit's Mission
The Information Technology (IT) Division provides innovative technology leadership and services to support LaGuardia's curriculum and student success initiatives with a high level of service through reliable and sustainable technology resources that support the instructional and operational goals of the College.

Assessment Results by Goal and Objectives

Goal 1: Maintain a safe, efficient, reliable and secure information technology and associated physical environment that protects the confidentiality of the users and the security of their data from internal and external threats in administrative and academic facilities.

   Supporting Strategic Plan Goal:
   1.   Build Student Access and Success

   Objective/Outcome 1.1
   Maintain and improve point of service and access tools for cyber security of the College campus, including regular, scheduled externally validated reviews for data and IT security.

   - **Measures**
     1. Successfully complete and pass CUNY's cyber security biannual attestation.
     2. Number of external attacks that were missed by network security systems.
        3. Average monthly number of spam messages that were blocked from emails.
     4. Number of times malware was detected and removed from work stations.

   - **Overview of Findings, Recommendations and Next Steps**

     Results:
     1. 100% Compliance- Monthly security meetings and measures have allowed the College to meet 2 of 2 biannual security attestation assessment audits and exceed our target.
     2. 0.007% attacks missed - Based on 1,472,615 average attacks in 2021/2022 stopped vs. 96 successful attacks. This exceeded our target of 0.01% percentage of external attacks missed by network security.
     3. 470,139 average monthly spam messages blocked from emails. This represents an increase of over 300% since last year in monthly spam messages blocked. As spam messages increased industry-wide, we were ready and able to successfully block the increase at LaGuardia. In addition, CUNY has provided us with vulnerability scanning tools to help detect and address possible issues.
     4. Average Endpoint Security malware detected is 211 monthly. This represents an increase of 422 % in monthly malware detected. Malware attacks increased industry-wide and we

successfully detected the increase at LaGuardia. As mentioned above, to help detect and address possible issues, CUNY provided us with vulnerability scanning tools.

Recommendations and Next Steps:
1. Adjust network and security policies as needed to align with CUNY-set requirements.
2. Identify, if possible, the root cause of successful attacks, as well as the impact. Take actions to help prevent future similar attacks.
3. Continue assessment of effectiveness of tools.
4. To make end-point security solution more effective, keep updated on patches as well as the databases for known viruses.
5. Establish a process to track the number of faculty & staff taking CUNY Cybersecurity course.
6. Create tools to measure cyberawareness effectiveness.

Goal 2: Partner with Student Affairs, Academic Affairs, Institutional Advancement, Administration, Adult & Continuing Education (ACE) to provide development and support of systems to increase operational efficiency and enhance the student experience.

Supporting Strategic Plan Goals:
1. Build Student Access and Success
2. Strengthen Learning for Students – and for Faculty, Staff and the College
3. Enrich the Student Experience

Objective/Outcome 2.1
Advance and develop tools to promote, track, and enhance student engagement and success.

- **Measures**
  1. ACE new software registration completed by July, 2022.
  2 Implement and connect to the ACE Student Information System (SIS).

- **Overview of Findings, Recommendations and Next Steps**

  Results:
  1. Successfully completed ACE new software registration.
  2. Successfully completed development and implementation of the ACE Student Information System (SIS). Completions resulted in:
     • 14,214 unique students
     • 10,396 payment transactions
     • 10 departments implemented, each with numerous programs.

  Recommendations and Next Steps:
  1. Based on success to date, identified and completing implementation of remaining Business Services programs.
  2. Complete remaining internal tasks including:
     • Creating Workforce Outcomes report.
     • Creating Perkins report.
     • O Drive Migration to XenDirect.

- Implementation of workforce dashboard
- Implementation of ACE leadership dashboard.
- XenDirect financial integration.
3. Continue to explore integration of SSO (Single Sign-On) feature for ACE students.
4. Evaluate benefits of proceeding with the development and implementation of XenDirect's CRM module/features.

Objective/Outcome 2.2

Ensure that students have access to suitable facilities for the completion of academic work.

- **Measures**
  1. Number of additional split classrooms created to allow hybrid learning.
  2. The College website downtime.

- **Overview of Findings, Recommendations and Next Steps**

  Results:
  1. Due to continued reliance on remote and on-campus learning, four additional split classrooms requested and created. Currently, there are no further requests for split classrooms.
  2. The College website downtime was 0.22%, based on 19 hours downtime during 8,760 total hours in a year. Although the downtime was extremely low, it was below our target of 0.02%. The downtime was unavoidable due to an unusual hardware malfunction that caused numerous servers to become unavailable on our local area network November, 2021.

  Recommendations and Next Steps:
  1. A total of fifteen newly created hybrid classrooms, which includes two additional to the thirteen created last year, will allow hybrid learning, where courses requiring physical presence can be done on campus, while remote learning is used for other applications. In addition, professors can use available OWL webcams to temporarily convert a traditional smart classroom into a virtual hybrid one.
  2. There is currently no demand for additional hybrid classrooms. However, should the request for additional rooms occur, we will evaluate the need and provide the latest technological solution to fit the request.

Objective/Outcome 2.3

Ensure students have ready, responsive and up to date access to software, databases and information technology services.

- **Measures**
  1. Percentage of students using each technology access point, e.g., My LaGuardia (ML) Student Portal, Students Resource website page, etc.
  2. Percentage of students using remote learning tools and services.
  3. Develop and implement website redesign creative brief, including WBS. (Work Breakdown Structure in Project Management.), estimated cost, etc., and submit to Executive Leadership for approval.
  4. Identify, research and recommend preferred Content Management System (CMS) platforms. Initiate RFIs and RFPS among prospective vendors.

- **Overview of findings, recommendations and next steps**

  Results:
  1A. On average 46% of students registered for Spring I '22 used ML weekly compared to average of 52% of students registered for Spring I 2021 that used ML weekly. This continues a trend of steadily decreasing use of ML on a weekly basis due to distance learning and the resulting increase in the use of the mobile app to access apps and services.
  1B. From April 1 - June 30, 2022 there were 955 unique visitors to the Student Resources website page, appx. 10.1% of students registered for Spring I '22. There was a slight increase of visitors to the page than 2021. Note: Google Analytics can't specify if visitors were students.
  1C. 12,682 unique users used the mobile application from January through June 2022, an increase of 107.7% when compared to 6,106 unique users who used the mobile app from January through June in 2021. The increase is likely due to the need to show a digital ID and to the ability to log into other apps and systems remotely.
  1D. There was a substantial decrease in the following sessions in 2021 when compared to 2020 due to the drop in student enrollment and ongoing distance learning.
  In 2021:
    - 7,967 requested live chat sessions (2020 – 23,613).
    - 4,250 accepted live chat sessions (2020 – 12,055).
    - 2,500 declined live chat sessions (2020 – 8,270).
    - 3,711 missed live chat sessions (2020 – 9,947).
  2A. The Virtual Student Orientation Fall 2021 survey revealed that 89.4% of the students surveyed said the Technology Resources presentation was helpful in learning about the many technology resources available. There was a slight increase in the results of the Virtual Student Orientation survey when compared to 2020.
  2B. Using the online appointment app, 16,438 appointments were made by students from 8/10-12/30/21 with many support services including advising, ASAP, etc. Due to a decrease in the number of students, there was a slight decrease compared with 18,875 appointments made by students from 3/6 to 8/9/21.
  3. Developed and implemented website redesign creative brief, including WBS, estimated cost, etc. Approved by Executive Leadership. The Redesign project was delayed to finalize the website vision and redevelopment strategy.
  4. Identified, researched and recommended preferred Content Management System (CMS) platforms. Prepared RFIs and RFPS for use with prospective vendors. The process of selecting and implementing the new CMS has been slowed by the overall delay of the project as well as by the multiple steps necessary in the lengthy procurement process.

  Recommendations and Next Steps:
  1. The website redesign and new CMS selection will continue to move forward until complete. The selection process for a new CMS was completed – WordPress was selected – but the procurement process has prevented us from meeting the June, 2022 target. To help expedite the process, we have moved away from RFPs and are working with AWS (Amazon Web Services) and 3rd Party reseller for procurement of hosting services. Once the new CMS is purchased, we will convert existing content and/or implement new redesign elements to the CMS to meet a projected June, 2023 relaunch.

2. Increase student usage and awareness of the mobile app's integration and access to other systems and programs.
3. Data verifies that students are using the online tools and services available to them. We will continue to ensure students have access to these tools and services, and any new tools that become available.

Overall Summary
- **Goal 1**
  Maintain a safe, efficient, reliable and secure information technology and associated physical environment that protects the confidentiality of the users and the security of their data from internal and external threats in administrative and academic facilities.
  IT continued its ongoing commitment to the goal of maintaining a safe, efficient, reliable and secure information technology and associated physical environment to protect the College community. Since March of 2020, that goal has included distance learning and working remotely.

  Both the target of 99.9% successful pass of the biannual attestation and 0.01% percentage of external attacks missed by network security were met, demonstrating success in achieving cyber security on campus. Using the successful results of the 2019-20 and 2020-21 Plans as benchmarks, the targets for 2021-22 were favorably met.

  Substantial industry-wide increases in spam attacks and security malware attacks led to significant increases at LaGuardia during 2021-22. However we were ready and able to control these increases so that:
    1. An average of 470,139 monthly spam messages were blocked from emails. This represents an increase of over 300% since last year in monthly spam messages blocked.
    2. Average Endpoint Security malware was detected at 211 monthly. This represents an increase of 422 % in monthly malware detected.

  For 2022-23, we will:
    1. Adjust network and security policies as needed to align with CUNY-set requirements.
    2. Identify the root cause of successful attacks, as well as the impact. Take actions to help prevent future similar attacks.
    3. Continue assessment of effectiveness of tools.
    4. To make end-point security solutions more effective, keep updated on patches as well as the databases for known viruses.
    5. Establish a process to track the number of faculty & staff taking CUNY Cybersecurity course.
    6. Create tools to measure cyberawareness effectiveness.

- **Goal 2**
  Partner with Student Affairs, Academic Affairs, Institutional Advancement, Administration, Adult & Continuing Education (ACE) to provide development and support of systems to increase operational efficiency and enhance the student experience.

  - **Objective/Outcome 2.1**
    Advance and develop tools to promote, track, and enhance student engagement and success.

Continuing the work that began in 2019-20, ACE IT focused on completing the development of the greatly needed new ACE SIS software and registration program.

1. The new ACE software registration was completed by the new target date of July, 2022.
2. We successfully completed development and implementation of the ACE Student Information System (SIS). Completions resulted in:
   • 14,214 unique students
   • 10,396 payment transactions
   • 10 departments implemented, each with numerous programs.

For 2022-23:
1. We have identified and will complete the implementation of remaining Business Services programs.
2. Complete remaining internal tasks including:
   • Creating Workforce Outcomes report.
   • Creating Perkins report.
   • O Drive Migration to XenDirect.
   • Implementation of workforce dashboard
   • Implementation of ACE leadership dashboard.
   • XenDirect financial integration.
3. Continue to explore integration of SSO (Single Sign-On) feature for ACE students.
4. Evaluate benefits of proceeding with the development and implementation of XenDirect's CRM module/features.

- **Objective/Outcome 2.2**
  Ensure that students have access to suitable facilities for the completion of academic work.
  The creation of split classrooms was very successful with 13 classrooms completed compared to seven that were first planned. The overall target number of split classrooms is 15, so two more classrooms are currently planned. Based on the success of the hybrid classrooms and the need for more based on the beginning of the return to campus for Fall 2021, additional classrooms have been planned which will utilize various technologies to provide a great learning experience while keeping costs low.

  Website downtime became more important given the increased reliance on accessing our website for information related to distance learning and working remotely. The downtime was extremely low in 2019-20, e.g., two hours, but improved in 2020-21 to one hour of downtime. We will continue to take the necessary steps to minimize website downtime.

  For 2021-22, we will:
  1. Closely monitor and meet student needs in this changing and transitional environment where there is a continued need for distance learning but increasing hybrid environment in preparation for a projected full return to campus in Fall 2022.
  2. Improve on College website downtime.

- **Objective/Outcome 2.3**
  Ensure students have ready, responsive and up to date access to software, databases and information technology services.

  The My LaGuardia (ML) portal continues to provide students with one place where they can easily access software, databases and services. Due to distance learning and the resulting increase in the use of the mobile app to access apps and services, 2021-22 ML usage results showed a continued trend of steadily decreasing use of ML on a weekly basis since 2019-20. An average 46% of students registered for Spring I '22 used ML weekly compared to average of 52% of students registered for Spring I 2021 that used ML weekly.

  Data verified that students are using the many online tools and services available to them. The data collected will serve as a baseline to compare against future results.
  - From April 1 -June 30, 2022 there were 955 unique visitors to the Student Resources website page, representing a slight increase of visitors to the page than 2021.
  - From January through June 2022, 12,682 unique users used the mobile application – an increase of 107.7% compared to 2021. The increase is likely due to the need to show a digital ID and to the ability to log into other apps and systems remotely.
  - Due to the drop in student enrollment and ongoing distance learning, there was a substantial decrease in the following sessions in 2021 when compared to 2020.
    In 2021:
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  - The Virtual Student Orientation Fall 2021 survey revealed that 89.4% of the students surveyed said the Technology Resources presentation was helpful in learning about the many technology resources available. There was a slight increase in the results of the Virtual Student Orientation survey when compared to 2020.
  - Due to a decrease in the number of students, there was a slight decrease in the number of students using the online appointment app – 16,438 appointments were made by students from 8/10-12/30/21 with many support services including advising, ASAP, etc., when compared with 18,875 appointments made by students from 3/6 to 8/9/21.

  Redesign the College website to ensure that we maximize the student experience while providing them with easy access to the online tools and services they need. It will also help increase interest and actions on the site by prospective and current students that leads to increased enrollment rates as well as integrate non-credit to credit pathway.

  We began the process of the College Website Project by developing and starting the implementation of the website redesign creative brief, including WBS, estimated cost, etc. The brief was approved by Executive Leadership. The Redesign project was delayed to finalize the website vision and redevelopment strategy.

  To ensure efficient website development while providing flexibility to quickly adapt to changing higher education and learning environments, we identified, researched and recommended preferred Content Management System (CMS) platforms. We also prepared RFIs and RFPS for use

with prospective vendors. Implementing the new CMS has been slowed by the overall delay of the website redesign project as well as by the multiple steps necessary in the lengthy procurement process.

For 2021-22:
1. The website redesign and new CMS selection will continue to move forward until complete. The selection process for a new CMS was completed – WordPress was selected – but the procurement process has prevented us from meeting the June, 2022 target. To help expedite the process, we have moved away from RFPs and are working with AWS (Amazon Web Services) and 3rd Party reseller for procurement of hosting services. Once the new CMS is purchased, we will convert existing content and/or implement new redesign elements to the CMS to meet a projected June, 2023 relaunch.
2. Increase student usage and awareness of the mobile app's integration and access to other systems and programs.
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