Brookdale Community College
Information Technology
Strategic Plan
2012-2015
January 2014
v. 2

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Executive Summary

The main Brookdale Community College campus is located in Lincroft, New Jersey, with a branch campus in Freehold and Higher Education Centers in Hazlet, Long Branch, Neptune, and Wall Township. The College offers 2-year associate degrees in over 50 programs, plus noncredit classes in many areas of personal and professional interest. Each year, approximately 22,000 students take credit bearing courses at the College, with a Fall term enrollment of 15,500. In FY12, students enrolled for 335,586 Student Credit Hours or 11,186 FTEs. In addition, almost 11,000 registrants attend a wide variety of non-credit programs throughout the year, ranging from professional educational to summer sports and adventure camps.

Purpose of the Information Technology Strategic Plan

The strategic use of technology is vital to every institution, especially one educating a large, diverse student body on multiple campus locations as well as online. Brookdale Community College's updated *Information Technology Strategic Plan* (ITSP) will guide the institution, and more specifically the Office of Information Technology (OIT), in executing the College's strategic priorities and addressing the future technology needs of students, faculty, staff and the community. The goals of the ITSP are aligned to the institutional goals outlined in the College's *2013-2017 Jubilee Plan* as well the objectives and strategies found in the *Educational Services Operational Plan* and the *Facilities Master Plan*.

The *Information Technology Strategic Plan* is designed to be a living document that is reviewed regularly to adjust to the changing higher education environment and Brookdale Community College's institutional priorities. The primary purpose of this plan is to ensure that BCC will be in a position to leverage technology to achieve its instructional and business objectives as it moves forward in meeting challenges over the next few years. The ITSP is also intended to provide a clear long-term direction for all IT projects and expenditures over the next three years and to ensure that there is agreement regarding the long-term direction.

Over the last several years, the *Information Technology Strategic Plan* has proven to be a decision-making model used to accomplish the academic and administrative goals inherent in the College mission. In following this model, a transformation has begun at Brookdale in support of creating a unified environment fostered by technology initiatives. Guided by the goals and objectives of the ITSP, the Office of information Technology

has developed a roadmap of projects and services, identified through collaboration among a variety of academic and administrative departments. Improved communication among all constituencies has begun to cultivate commitment towards technology innovation as well as enhanced existing mechanisms for the achievement of the College's mission and goals.

The *IT Strategic Plan* is also a collaborative effort with Ellucian (the SunGard Higher Education and Datatel merged company), as it provides the Office of Information Technology leadership and management for Brookdale Community College.

2009-2012 IT Strategic Plan Accomplishments

The last ITSP was approved by the Board of Trustees in 2009 and was in effect through FY 2012. Several accomplishments have been made in that three-year period of time, including the following:

Wireless Implementation

The College implemented a robust wireless infrastructure for Lincroft and all remote sites.

Server Upgrades

The College migrated to an improved server environment that also included an enterprise level backup utility system to improve the performance of the Ellucian Colleague enterprise resource planning system.

Operational Enhancements

- ImageNow (document imaging) implementation of workflow encompassing admissions, registration, and counseling
- Colleague (ERP) implementation of workflow, which streamlined processes in admissions, registration, and counseling and recruitment
- Online Self Service for Students implementation of wait listing functionality and the ability for students to opt in for text messages when a seat becomes available within the course
- Automated real time integration with the Colleague ERP system and the Active Directory
- Desktop Virtualization Interface development, which enabled students to access course material from a remote location through a private cloud, thus enhancing their levels of access and convenience

2012-2015 IT Strategic Plan Goals

As Brookdale embarks on the new strategic plan, which spans the timeframe of June 2012 through June 2015, it follows the completion of a business process analysis of the

use of technology in the core mission areas as well as a completed internal review of Brookdale's contracted services in support of information technology operations. The planning process also incorporates an examination of the plans and priorities for the use and support of information technology to deliver instructional and administrative services. Throughout the process, currently installed solutions have been reviewed, with a focus on aligning them with technology and educational industry trends.

The goals of the ITSP are aligned to the institutional goals outlined in the College's *2013-2017 Jubilee Plan* as well as with the objectives and strategies found in the *Educational Services Operational Plan* and the *Facilities Master Plan*. The *IT Strategic Plan* goals for 2012-2015 include:

Goal #1: Achieve Student Success

Brookdale will support the use of technology in order to provide an effective teaching and learning environment as well as provide for an infrastructure that supports future growth and institutional enhancements in order to sustain the social, academic, and developmental support needed to achieve each student's educational goals.

Goal #2: Provide Access through Opportunity and Innovation

Brookdale will continue to support the use of technology in order to provide for meaningful opportunities and innovation for academic and administrative programs aligning with the future in order to provide for high-quality learning environments supported by effective business processes.

Goal #3: Ensure Resource Development, Operational Efficiencies, State-of-the-Art Technologies

Brookdale will recognize the importance of integrating technology to create operational efficiencies and the need for the College to develop the ability to react and move quickly to take advantage of these areas.

Goal #4: Engage and Strengthen Brookdale's Regional Community

Brookdale will continue to establish partnerships to secure needed resources and opportunities for students and the community.

Specific objectives for each of the above goals can be found in the implementation grids at the end of this document. These goals and objectives provide the basis for the IT Advisory Council's (ITAC) annual tactical plans, which are oversee by the Executive Director for IT Services. Ultimately, the ITSP strives to enrich teaching and learning, foster communication, support and stimulate innovation, and facilitate personal and professional development.

IT Strategic Plan Content Review

The *2012-2015 Information Technology Strategic Plan* is grounded in substantial research, data collection, and analysis. It is specifically informed by key higher education information technology trends, New Jersey Council of County Colleges plans, and surveys of numerous members of the campus community. The following sections provide a review of this research, best practices, and data, presented from a macro-level of higher education technology trends to a micro-level of BCC survey participant feedback. ITSP goal implementation grids aligned to these findings are found at the end of this report.

Information Technology Trends in Higher Education

This plan will address key priorities for Brookdale Community College's use of technology over the next three years. Thus, it is important for the College to understand significant trends in higher education's use of information technologies and anticipate how to make purposeful and timely decisions to capitalize on these trends.

Horizon Report Trends

The New Media Consortium's (NMC) *2012 Horizon Report* notes the following trends that are having the greatest impact on higher education's use of technology:

- People expect to be able to learn and study whenever and wherever they want.
- The technologies we use are increasingly cloud-based, and our notions decentralized.
- The world of work is increasingly collaborative, and this is changing student academic projects.
- The abundance of resources made easily accessible through the Internet is challenging us to revisit our roles as educators.

- Education paradigms are shifting to include online, hybrid, and collaborative models.
- There is a new emphasis in the classroom on more challenge-based and active learning.

Mobile Computing

The "hottest" topic for higher education technology leaders is mobile computing, according to the *2011 Campus Computing Report*.   The *2012 Horizon Report* substantiates this finding and ranks mobile technologies and tablet computing at the top of the list for adoption during the next year. The *2011 Chronicle of Higher Education Digital Campus Report* warns that any successful mobile computing project is dependent upon the right campus infrastructure and adequate wireless network bandwidth, as well as getting professors, students, and staff to work together in exploring the educational potential of mobile devices so they intentionally support established student learning outcomes.

Game-Based Learning and Learning Analytics

In addition to mobile technologies, the *2012 Horizon Report* anticipates that game-

based learning and learning analytics are going to top of the list for adoption during the next two to three years. The *2012 Gartner Hype Cycle for Education* also sees game consoles as becoming more mainstream in the educational setting. The Hype Cycle also identified the learning analytics solutions of adaptive learning and student retention CRM (constituent relationship management) as two of its top emerging technologies.

EDUCAUSE Top 10 IT Issues

The *EDUCAUSE Top 10 IT Issues for 2012* article challenges colleges and universities to consider the following priorities as a part of their technology plans. The Brookdale Community College ITSP addresses several of these items. The article, located at http://www.educause.edu/ero/article/top-ten-it-issues-2012 outlines key questions that IT advisory groups should consider as they address these issues:

1) Updating IT Professionals' Skills and Roles to Accommodate Emerging Technologies and Changing IT Management and Service Delivery Models

2) Supporting the Trends toward IT Consumerization and Bring-Your-Own Device
3) Developing an Institution-Wide Cloud Strategy
4) Improving the Institution's Operational Efficiency through Information Technology
5) Integrating Information Technology into Institutional Decision-Making
6) Using Analytics to Support Critical Institutional Outcomes
7) Funding Information Technology Strategically
8) Transforming the Institution's Business with Information Technology
9) Supporting the Research Mission through High-Performance Computing, Large Data, and Analytics
10) Establishing and Implementing IT Governance throughout the Institution

Gartner Hype Cycle for Education Priority Matrix

The *2012 Gartner Hype Cycle for Education* identifies key priorities for colleges and universities to address during the upcoming five years. Several of these are areas that Brookdale Community College has begun to incorporate into its technology portfolio:

Benefit	Years to Mainstream Adoption	
	Less than 2 years	**2 to 5 years**
Transformational	• Media Tablets • Self-Publishing • Service-Oriented Architecture	• Cloud HPC (high performance computing) • MOOC (massive open online courses)
High	• Hosted Virtual Desktops • Organization-centric IAM (identity and access management) • Social Media in Education • Student Enrollment CRM (constituent relationship management)	• Cloud Email for Staff and Faculty • Emergency Mass Notification • Learning Stack • Open Source Learning Repositories • Social Learning Platform for Education

New Jersey Council of County Colleges IT Initiatives

The mission of the New Jersey Council of County Colleges is to provide statewide leadership for the advancement of New Jersey's 19 community colleges and to perform sector coordinating responsibilities as required by state law. The Council's IT Affinity Group (ITAG) provides direction for institutional members as they consider technology-related priorities for their campuses. Brookdale Community College's Executive Director for IT Services serves on ITAG and integrates the Council's priorities into the College's IT Strategic Plan and ensures that technology is a part of the statewide plan to address developmental education. Sample ITAG initiatives include:

Support for the Human Resources

ITAG will be researching technology that supports an online repository, which could be used to share professional development resources provided by the Human Resources Affinity Group. These resources could include materials such as documentation, video, training, and learning objects containing not only course material but assessments and interactive exercises. Part and parcel of this technology will include a database of adjunct contact information and credentials, which could be used for hiring purposes.

Support for the Distance Education

ITAG is investigating the potential of all community colleges purchasing the same learning management system (LMS), but managing them separately. This would help the member institutions better support and optimize their systems.

Development of a Common Wireless System

Community colleges are challenged to keep up with mobile computing demands by students, faculty, and staff. The Council's campuses are considering options for common cost effective, secure, manageable, and scalable network architecture solutions. ITAG is working with NJEDge in order to identify cost-effective solutions that would benefit a consortium of institutions in terms of architecture, hardware, and software.

Monitoring Best Practices in Social Media

ITAG will continue to identify ways that member institutions can support their Offices of Public Relations or Marketing in managing college Facebook and Twitter sites, as the benefit of using social media (through fostering collaboration, engagement, and brand recognition) does not go without its challenges.

Key Institutional Priorities and Initiatives

The Information Technology Strategic Plan goals and objectives reflect the College's strategic plan goals and other key institutional priorities:

Jubilee Plan Goals

- Inspire Student Success
- Leverage Brookdale's Excellence
- Maximize Resources
- Strengthen and Expand Brookdale's Alliances and Partnerships

Board of Trustees' Priorities

- Develop and communicate college-wide student success indicators
- Create a Strategic Enrollment Plan
- Conduct an independent Information Technologies (IT) Audit and develop plans for improvement of enterprise systems
- Promote Brookdale in all segments of Monmouth County
- Complete the Middle States Periodic Review Report (PRR)

Key Information Technology Initiatives

The ITSP also reflects the following key initiatives for which Information Technology Services has been tasked:

Enterprise Resource Planning System Evaluation

The campus is requesting qualified vendors to submit proposals for a thorough evaluation of its Colleague ERP system as well as the third party systems that integrate with this system. The evaluation will also include a review of the web component (WebAdvisor), which provides for a secure web interface that allow faculty, staff, and students to access and/or update information on a shared integrated database. Finally, a review of the reports generated from Colleague data will also be incorporated into the analysis. Results are intended to yield

recommendations that will significantly enhance the level of service to all constituents that rely on these services.

Data Center

The Phase I of the Gorman Hall upgrade, which has been approved, will increase the capacity of the data center by 50%. It will incorporate concepts for energy efficiency, including free-cooling, rack containment, in-rack coolers for high density racks, a new fire suppression system, and a new electrical service for Gorman Hall which will meet 10-year demands. Phase II of the project (still to be approved) will include badly needed interior improvements.

Business Continuity

An IT disaster is defined as any condition or event that alters normal information technology services to such a degree that the mission-critical business

operations of the institution are significantly compromised. The purpose of Brookdale's IT Disaster Recovery Plan (in the process of being finalized) is aimed at re-establishing IT services that support the institution's business continuity needs, as well as outlining strategies for responding to a disaster and ensuring that appropriate back-up procedures, off-site storage, and co-location plans are in place. The plan will also focus on ensuring fully redundant Internet connectivity, beginning with the Lincroft campus and then moving to the Higher Education Centers. NJEDge has been assisting Brookdale with providing options for this service.

IT Governance Structure

At Brookdale, Information Technology Governance (ITG) involves several groups, including the IT Committee of the Board of Trustees, the Information Technology Executive Council (ITEC), the Information Technology Advisory Council (ITAC), and the Information Technology Case Review Teams. IT governance plays a critical role in ensuring that decisions about technology are widely understood. Brookdale strives to continue to enhance its IT practices so decisions are made in a coordinated and purposeful way.

IT Executive Council

The executive level governance body is the Information Technology Executive Council (ITEC), which reports directly to the President of the College. ITEC includes the Executive Vice President for Administration, Operations, and Technology (AO&T), the Executive Vice President for Educational Services, the Executive Director for IT Services, the Executive Director for the Office of IT, the Director of Educational Services, and the Assistant to the Executive Director of AO &T. This body is responsible for:

- Establishing and articulating institutional technology directions
- Reviewing and approving technology strategic and operational plans
- Establishing technology priorities
- Reviewing and approving proposed technology policies
- Developing IT budget alternatives for the institution

IT Advisory Committee

Responsible for the IT Strategic Plan, the IT Advisory Committee (ITAC) works

proactively with ITEC to ensure an integrated approach to technology planning and implementation with sufficient communication to all members of the campus community. ITAC membership represents a cross-section of the Brookdale Community and is tasked with comprehensively addressing the information and educational technology needs of the college. In addition, ITAC is charged with ensuring that Brookdale users prioritize technology-related requests in accordance with institutional guiding principles. ITAC is guided by the *Educational Services Master Plan* and the *Facilities Master Plan* as it plans technology initiatives according to specific timelines and operational needs.

Case Review Teams

The Case Review Teams focus on functional issues associated with the use of administrative systems, including the Colleague ERP System and third party applications that integrate with Colleague (i.e. ImageNow, PowerFaids, MyCampus Portal, and the ANGEL learning management system). The teams also prioritize project requests from the institution in support of technology enhancements and operational efficiency. Case Review Teams include representatives from Educational Services, Accounting, Finance, Financial Aid, and Human Resources. In addition, module custodians ensure the integration of projects into the IT Strategic Plan as well as facilitate discussions with stakeholders to consensus.

Project Approval Process

In order to promote a more coordinated approach to IT decision-making and investments, Information Technology Services has developed an approval process for new projects. Project approval criteria include a consideration of the proposed project's benefit and need, its anticipated institutional impact, and its alignment with the IT strategic plan. A copy of the form is located in Appendix B of this document.

Constituent Priorities and Needs Related to Information Technology

Each year the Executive Director for IT Services conducts surveys and focus groups with campus constituents to gather feedback on information technology needs, priorities, and levels of satisfaction. This feedback, as presented below, informs the *Information Technology Strategic Plan's* goals and objectives.

Annual Student Survey

One thousand-five hundred-sixty-four (1564) Brookdale students responded to the Fall 2011 survey. The top priorities identified by participants included:

Item	% of Respondents Indicating this Item is Important
Campus Wireless Access	90%
Online Registration	90%
MyBrookdale Portal	89%
Library Access via the Web	87%
Online Payments	81%
Student Email	80%
Document Storage	65%

Participants also rated technology services according to their levels of satisfaction:

Item	% of Respondents Satisfied with this Item
Communication Tools	77%
Connection Reliability when Accessing the College Network from Off-Campus	74%
Connection Speed when Accessing the College Network from Off-Campus	74%
MyBrookdale Portal	72%
Connection Reliability when Accessing the College Network from On-Campus	70%

Connection Speed when Accessing the College Network from On-Campus	70%
Hardware/Software Reliability in Labs and Classrooms	70%
Technical Support	65%
Communication to Campus Community to Inform of Upcoming Downtimes and IT Announcements	64%
Wireless on Campus	60%
Printing Availability in Labs	60%

Several enhancements have been made since the survey was administered. For instance, the Office of IT has developed a communication plan to more proactively and consistently notify campus constituents of planned and unplanned outages, services, and announcements. Additionally, several improvements have been made to the MyBrookdale Portal based on student feedback. Other priority areas are represented as objectives for the *IT Strategic Plan*, such as continued enhancements to wireless access and document management.

IT Communication Planning Workshop Constituent Feedback

A variety of end users participated in focus groups during the May 2012 IT Communication Planning Workshop to articulate their needs and expectations for campus communications, as well as their perceptions of Information Technology communication strengths and opportunities for enhancement. Participants shared the following feedback to incorporate into the communication plan:

Student Focus Group Feedback

Student Focus Group Feedback	
Best Methods for IT-Related Communications	- E-mail - OIT Website - Portal
Needs and Expectations for IT-Related Communications	- For the Department to proactively communicate how to route Brookdale e-mail to personal e-mail accounts - For the Department to more effectively communicate password re-set procedures.
Perceived Strengths for Current IT-Related Communications	- The Portal's content and single sign-on capabilities; it is considered their "one source" for accessing all their key systems - Notifications of upcoming maintenance
Perceived Weaknesses and Opportunities for Improving IT-Related Communications	- Students perceive the Portal has "too many entrances and exits" (between it and the website). - Students noted "some mystery" around the Portal. - Students would like to receive proactive communications informing them how to re-set or change their passwords. - Students would like to receive a text message to notify them if the internet goes down. - Students would like the Angel Help Desk phone number on the main Portal page.

Faculty Focus Group Feedback

Faculty Focus Group Feedback	
Best Methods for IT-Related Communications	OIT Website
Needs and Expectations for IT-Related Communications	- For OIT to better explain the rationale for changing passwords, as well as the process to change passwords - For OIT to more clearly indicate how to locate 800# for ANGEL help desk
Perceived Strengths of Current IT-Related Communications	Notifications of upcoming maintenance
Perceived Weaknesses and Opportunities for Improving IT-Related Communications	- Some faculty do not perceive that the timing of IT-related projects coincides well with the academic calendar. - Faculty perceive that students are confused by the different email sources (Brookdale email - also known as Gmail and Portal email - and ANGEL email)

Staff Focus Group Feedback

Staff (Departmental Managers and Leaders) Focus Group Feedback	
Needs and Expectations for IT-Related Communications	• For the Office of IT to work collaboratively with Ed Services to base decisions and projects on the academic calendar • For the Office of IT to communicate with educators and service providers about upcoming changes in a more timely manner
Perceived Weaknesses and Opportunities for Improving IT-Related Communications	• Participants would like the Office of IT to better define what goes in the Portal, on the website, and in both locations. • Department managers/leaders would like to have a departmental IT liaison. • Participants noted an interest in establishing a common administrative user/provider group ▪ Note: The Office of IT does have the following user/provider groups in place – Colleague Module Custodians, Colleague Users, and Patches (testers).

Overall End User Feedback Findings

Overall, end user focus group feedback was consistent with findings from previous surveys and forums. For instance, in the Fall 2011 *College Life Communication Survey* of Brookdale employees, respondents noted that there were too many communication sources and expressed that campus constituents need one main source of information to manage information overload.

It is also worthwhile to note that while faculty and staff reported that students dislike the portal, students attending the focus group spoke very favorably of the portal as their central source for single sign-on into all of their systems and for information access. The Office of IT Services had made many changes to the portal since November 2011 in response to its survey of students, and these changes seem to have addressed many of the issues that students had expressed at that time.

Finally, while end user feedback tended to be consistent among the audience segments, each segment seems to prefer and utilize different communication methods. This indicates that OIT will need to continue to manage and effectively use various channels of communication, while streamlining information and ensuring that users know how and when they will receive certain types of information.

About the Office of Information Technology

The Office of Information Technology (OIT) is responsible to guide, assess, plan, develop and execute state-of-the-art information technologies in support of all academic disciplines and administrative functions. The department provides the following services:

- 24x7x365 Help Desk services
- Campus computers and lab support
- MyBrookdale Portal support
- MyBrookdale NetID support
- MyBrookdale Mobile support
- Brookdale website support
- Campus-wide Wi-Fi services
- Email services for students, faculty, and staff
- Avaya telecom/telephone system support
- Network infrastructure on all campuses
- Ellucian Colleague enterprise resource planning system

The Office of Information Technology staff includes the Executive Director, a Director of IT Projects, a Technical Director, a Director of Administrative Systems, a Network Manager, a Telecommunications Manager, a User Services/Desktop Support Manager, a trainer, and their staff members. The Office works closely with – and submits weekly project updates to - the Executive Director of IT Services, who serves as the OIT spokesperson to the campus, the Deans' Council, the IT Advisory Council, and the IT Executive Committee. The Office reports up to the Executive Vice President for Administration, Operations, and IT.

Two other offices provide technology services at Brookdale. Those include the Teaching and Learning Center (TLC), which supports the ANGEL learning management systems and provides instructional design assistance for faculty teaching online and hybrid courses, and the Educational Technology Services (ETS) office, which oversees classroom technologies and media services. Both of these departments report through Educational Services and provide training to faculty and staff specific to their areas. Additionally, Human Resources is charged with providing training on Microsoft Office applications; thus the OIT Trainer is focused on administration system training.

Technology Principles, Mission, Vision, and Goals

Technology use will have the greatest impact only when it directly supports and aligns with the institutional mission, vision, and goals. These are reflected in the Brookdale Community College technology mission, vision, and goals below.

Technology Principles

The institutional focus on technology is guided by principles that offer a clear direction for the College in pursuing its mission. As a result, Brookdale Community College's information technology strategy must:

1. Develop a systemic approach to information technology enhancement.
2. Promote technology improvements that focus on the student as learner and client.
3. Focus upon solutions which are integrated, student-centered, and supportive of the College's diversity goals and initiatives.
4. Propose information technology industry-standard solutions wherever and whenever possible.
5. Contribute to enhancing the College's "collective wisdom" and "collaborative" culture with every effort to eliminate technical, cultural, hierarchical, and procedural boundaries that divide or isolate people and/or processes.
6. Help people search, select, filter, and integrate data, not just capture it.
7. Focus on system flexibility and growth potential and not wait for the "perfect" solution(s).
8. Ensure that administrative systems provide analytical capabilities permitting the institution to conduct long-term analyses at a variety of organizational levels.
9. Encourage ongoing support for purposeful examination and use of "leading edge" technologies.
10. Seek to develop technological tools which are integrated, effective, and efficient.
11. As appropriate, resource allocation and technology applications should emphasize a multi-purpose and shared-use approach.

Technology Mission

The following technology mission serves to guide the priorities of technology investments at Brookdale Community College:

The Office of Information Technology mission is to support Brookdale Community College students, faculty, and staff in the use of technologies to enhance and strengthen the teaching and learning process.

Technology Vision

The following vision statement serves as the inspiration for the desired future state of technology at Brookdale Community College:

Information Technology will support Brookdale Community College in achieving its vision of playing a transformative role in our community, providing educational, cultural and professional programs and offerings to enable, empower and inspire all community members to fulfill their aspirations to the best of their ability.

Technology Goals

The Information Technology Strategic Plan goals are based on the College's strategic priorities:

Achieve Student Success

Provide Access through Opportunity and Innovation

Ensure Resource Development, Operational Efficiencies, State-of-the-Art Technologies

Engage and Strengthen Brookdale's Regional Community

ITSP

Significant changes were made by ITAC to the ITSP goals and objectives in order to make them more strategic and less tactical/operational in nature. Items that were omitted will be incorporated into the implementation grid of the ITSP. The final review affirmed that the goals and objectives in the ITSP are in alignment with IT Vision. The final ITSP is as follows:

Achieve Student Success

- Collaborate with Educational Services to assess, prioritize, and implement technology solutions that enhance student learning, success, and satisfaction. All
- Support new student transitions and student success. All
- Support the use of technology for assessing and addressing basic skill needs of high school students
- Ensure all systems are ADA compliant
- Ensure training offerings to support success in using new technologies
- Utilize business intelligence solutions to support informed decisions

Provide Access through Opportunity and Innovation

- Ensure the IT infrastructure meets the needs for emerging technologies
- Adopt a collaborative approach in the selection and implementation of technology solutions
- Use technology to support alternative delivery systems.
- Ensure technologies that support user growth, needs, and expectations.
- Ensure integrity and effectiveness of security technologies
- Develop a comprehensive communication and collaboration strategy for the College community

Ensure Resource Development, Operational Efficiencies, State-of-the-Art Technologies

- Identify opportunities to meet institutional needs and optimize enterprise systems
- Enhance the use of existing and new technologies to improve operational efficiencies
- Periodically examine IT Governance structure
- Ensure technology is used efficiently to recruit, hire, and train candidates
- Enhance training to support the use of new and existing technologies
- Provide for disaster recovery/business continuity
- Utilize business intelligence solutions to make informed decisions
- Explore technology opportunities to expand capacity and reduce costs
- Integrate technology needs into facilities planning
- Standardize document management

Engage and Strengthen Brookdale's Regional Community
- Identify opportunities to use technology in support of the institutional vision
- Assess and prioritize technology needs that support college goals for expanded community access.
- Leverage technology to expand/improve relationships with external constituencies
- Provide information technology support for state-wide initiatives.

Implementation Grids

The following Information Technology Strategic Plan Implementation Grids contain information that will assist the impacted departments/functions in achieving their goals and ultimately realizing their vision. Institutional departments and functions will develop tactical work plans that are aligned with this strategic plan and ensure the realization of each goal.

The following elements are included in the Implementation Grid

- **Goals** include the technology goals set by this plan for 2012-2015.

- **Key Performance Indicators** identify completion characteristics or milestones of progress for each goal.

- **Objectives** associated with each goal identify implementation actions.

- **Dependencies** are those events or environments that must take place or be in existence before implementation of an objective can begin.

- **Responsible Party** identifies the individual, department, or council that has responsibility for each of the objectives. Typically it will be the responsibility of these individuals or groups to develop the annual tactical work plans and appropriate budget requests for each of the assigned objectives as well as project plans. Where multiple owners are listed, the first individual or group listed has primary responsibility for ensuring the implementation of the objective.

- **FY** (Fiscal Year) shows the implementation timeline for each strategy. An "X" placed in any single FY column indicates completion of a task in that year. The appearance of X's in multiple FY columns indicates multi-year efforts.

Goal #1: Achieve Student Success

Key Performance Indicator(s):
- 1st to 2nd term retention rates
- 1st to 2nd year retention rates
- Graduation and completion rates
- Academic progression in gateway courses
- % of students maintaining satisfactory academic progress (SAP)
- Student satisfaction with WiFi, mobile technologies, classroom and lab technologies, and technology training

OBJECTIVES	DEPENDENCIES	RESPONSIBLE PARTY OWNER(S)	FY 12 13	FY 13 14	FY 14 15
1.1. Support the use of video-conferencing and mobile technologies to provide remote academic counseling services at convenient times to students.	Technology, Network, Training	OIT/Counseling	X	X	
1.2. Support the use of web-based applications and online portal communities to provide more self-service and remote career and job readiness services.	Software, Website, Training	Experiential Learning/OIT	X	X	
1.3. Assess the viability of a OneCard/SmartCard system to enhance the use of electronic student identification technology that enables integrity of learning.	Network, Hardware, Software, ERP, 3rd Party Applications	Ed Services, Procurement, Finance, Auxiliary Services, A&O	X		
1.4. Collaborate with Educational Technology Services and the Teaching and Learning Center to assess and prioritize technology solutions that enhance student learning, success, and satisfaction.		ETS, TLC, OIT, ITS	X	X	
1.5. Enhance the First Year Experience portal to support new student transitions and first-to-second year retention rates.	Website, Portal	Student Services, OIT, Counseling	X	X	
1.6. Collaborate with Counseling and PAR to support the use of technology that expands outreach to high school students/teachers for assessing and addressing basic skills needs prior to students entering BCC.		Student Services, OIT, Counseling, Admissions	X	X	

1.7. Assist the Teaching and Learning Center in investigating technical solutions to support full-time and adjunct faculty in instructional design and classroom/online instruction.	Hardware, Software, Training	TLC, OIT, ETS	**X**	**X**	
1.8. Evaluate and implement tools to audit the BCC website, learning management system, and portal to ensure ADA compliance.	Website redesign	OIT, ITS, Public Relations	**X**	**X**	**X**
1.9. Enhance student training offerings to support their success in using new technologies.	Technology, documentation, training, consortium resources	OIT, ITS, NJEDge, Student Services, Counseling	**X**	**X**	**X**
1.10. Utilize business intelligence solutions (such as digital dashboards) to make informed decisions to support student success and communicate college-wide retention and degree-completion indicators.	Surveys, Technology (Dashboard, ERP, Portal)	OIT, Ed Services, AO&T, Institutional Research, Student Services	**X**	**X**	**X**
1.11. Collaborate with Ed Services and Institutional Research to identify technologies that compile student learning outcomes, assess program effectiveness, and manage data and documentation for regional and specialized accreditation standards.	Surveys, Technology (Dashboard, ERP, Portal)	OIT, Ed Services, AO&T, Institutional Research, Student Services	**X**	**X**	**X**

Goal #2: Provide Access through Opportunity and Innovation

Key Performance Indicator(s):
- % of network uptime
- Campus constituent satisfaction with communication technologies, including the portal
- Faculty and staff satisfaction with video-conferencing
- # of courses using mobile technologies
- Cost savings from desktop virtualizations
- Increase in student applications and enrollments

OBJECTIVES	DEPENDENCIES	RESPONSIBLE PARTY OWNER(S)	FY 12 13	FY 13 14	FY 14 15
2.1 Upgrade the College network (WAN, LAN) to enhance wireless internet connectivity and provide the infrastructure needed for mobile technologies, video-conferencing, and desktop virtualizations.	Data Center Upgrade, NJEDge	OIT, ITS	X	X	X
2.2 Collaborate with faculty and administrators to pilot mobile technologies projects that use technology to support alternate delivery systems.	Network, Training, Data Center Upgrade	OIT, ITS, Ed Services	X	X	X
2.3 Collaborate with the Teaching and Learning Center to support the optimization and extensibility of a learning management system to support user growth, needs, and expectations.	LMS, Network, Training, Instructional Design	TLC, OIT, ITS	X	X	X
2.4 Expand desktop virtualization throughout disciplines to enhance remote access to campus systems and applications.	Network, Training, Data Center Upgrade	OIT, ITS, Ed Services	X	X	X
2.5 Evaluate and implement security technologies to ensure the privacy and integrity of information resources (such as password management).	Hardware, Software, Network	OIT, ITS	X	X	X
2.6 Expand student self-service and WebAdvisor applications to provide convenience through remote 24/7 access to	ERP, Network	OIT, Ed Services, ITS	X	X	X

systems.					
2.7 Develop a comprehensive unified communication and collaboration strategy for the College community that addresses the portal, academic/administrative communities, email, SMS, video-conferencing, and other vehicles.	Network, Portal, ERP	Public Relations, OIT, Ed Services, AO&T, Student Services	**X**	**X**	**X**
2.8 Identify technologies (such as constituent relationship management solutions and communication tools) that support of Brookdale's Strategic Enrollment Management Plan.		AO&T, Ed Services, Recruitment Services, Admissions	**X**		

Goal #3: Ensure Resource Development, Operational Efficiencies, State-of-the-Art Technologies

Key Performance Indicator(s):

- Identification and deployment of ERP audit recommendations
- Senior leader and departmental manager satisfaction with access to quality data for decision-making and reporting, as measured on campus surveys
- % of IT projects receiving IT Governance approval
- Time savings from technologies deployed to enhance operational efficiencies
- Faculty and staff satisfaction with document management and collaboration tool strategy

OBJECTIVES	DEPENDENCIES	RESPONSIBLE PARTY OWNER(S)	FY 12 13	FY 13 14	FY 14 15
3.1 Conduct an independent audit of the Colleague Enterprise Planning Resource system and third party applications to identify opportunities to meet institutional needs and optimize enterprise systems.	ERP	ITS, Ed Services, Counseling, Registrar	X		
3.2 Assess opportunities to enhance the use of existing and new technologies (such as workflows, eForms, and automation of manual processes) to improve college operational efficiencies.	ERP	ITS, Ed Services, OIT	X	X	
3.3 Continue to enhance the IT Governance structure to evaluate technologies as compared to Brookdale's needs, prioritize and approve technology investments, and foster two-way communications with the campus community.		ITS, ITAC, ITEC	X	X	
3.4 Collaborate with Human Resources to identify ways to use technology efficiently to recruit, hire, onboard, and train highly qualified candidates that have diverse skill sets.	Technology, Network, Security, training	HR, ITS, ITAG, ITAC	X	X	X

			X	X	X
3.5 Continue to enhance training to support faculty and staff in effectively using new and existing technologies in their efforts.	Training, technology	HR, ITS, ITAG, ITAC	X	X	X
3.6 Provide for disaster recovery/business continuity through such strategies as ISP (internet service provider) redundancy, alternative power sources, system back-ups, and co-location sites.	Technology, Network, Infrastructure	ITS, OIT	X	X	
3.7 Utilize business intelligence solutions (such as digital dashboards) to make informed decisions to support institutional effectiveness and departmental success.	ERP, 3rd Party, Audit	ITS, OIT, Ed Services, Administration, Institutional Research	X	X	
3.8 Explore opportunities for cloud computing, shareware, and open source to expand capacity and reduce costs.	Network, Data Center Upgrade, Software, Licensing, Security	ITS, OIT, Ed Services	X	X	X
3.9 Create a central database of all hardware, software, and associated maintenance schedules/life-cycle replacement schedules to ensure optimal performance and reliability.	Technology	OIT	X		
3.10 Collaborate with Educational Technologies Services and Facilities to identify classroom equipment configurations and technology that address the needs of members of the College community.	Network, Hardware Configurations, Software, ERP, 3rd party applications	OIT, ETS, Ed Services, ITS, Facilities	X	X	X
3.11 Develop a document management strategy that establishes a standard methodology and collaboration tools for storing, sharing, and updating documents internally.	Network, Hardware, Software, Training and Documentation	OIT, Ed Services, ITS, NJCCC, NJEDge	X	X	X
3.12 Utilize technology to support adjunct faculty and hourly staff engagement and productivity.	Network, Hardware, Software, Training and Documentation	OIT, Ed Services, ITS, NJCCC, NJEDge	X	X	X

Goal #4: Engage and Strengthen Brookdale's Regional Community

Key Performance Indicator(s):
- # of non-credit program enrollments
- # of distance education/online student enrollments
- Grants revenue

OBJECTIVES	DEPENDENCIES	RESPONSIBLE PARTY OWNER(S)	FY 12 13	FY 13 14	FY 14 15
4.1 Identify opportunities to use technology in support of the institutional vision for enrollment growth, course offering efficiencies, and quality services at Lincroft and the Higher Education Centers.	ERP, 3rd Party, Portal, Network, Storage	OIT, ITS, Ed Services	X	X	X
4.2 Assess and prioritize technology needs that support college goals for expanded Brookdale regional community access to traditional courses, distance education/online courses, Communiversity, and OBCD programs.		ITS, Ed Services, OBCD			
4.3 Deploy technology to expand/improve communications and BCC's relationship with external constituencies.	Network, technology	Foundation, OBCD, Ed Services, OIT, Public Relations	X	X	X
4.4 Provide information technology support for state-wide initiatives.	Network, NJEDge, NJCCC	ITS, OIT, Ed Services	X	X	X
4.5 Collaborate with county/state agencies to achieve economies of scale, identify grant opportunities, and utilize resources effectively.	Network, NJEDge, NJCCC	ITS, OIT, Ed Services	X	X	X
4.6 Partner with businesses to achieve mutual workforce training and development goals.	Network, technology	Foundation, OBCD, Ed Services, OIT, Public Relations	X	X	X
4.7 Work with College and local community members to investigate technology to more fully integrate BCC with county community.	Network, NJEDge, NJCCC, Public Relations	ITS, OIT, Ed Services	X	X	X
4.8 Work with College Relations to provide a web presence that is compatible with mobile technologies.	Network	College Relations, OIT, Ed Services	X	X	X

Next Steps

BCC's next step will be to outline the action items that will achieve each goal and its objectives set forth in the implementation grids. It is important to establish a mechanism for overseeing the implementation of strategic and tactical technology plans, as each of the objectives requires an owner who will be responsible for moving the individual objective forward under the oversight of the IT governance structure. Furthermore, it is imperative that the plan be considered holistically. A review of all objectives, regardless of the goals they are intended to support, reveals patterns and identifies common activities that can be leveraged in support of these goals.

The College values the importance of metrics and accountability and the Information Technology Strategic Plan incorporates measurements to provide evidence of progress and achievement of the goals set forth in the plan. The Implementation Grids contain suggested Key Performance Indicators (KPIs). Baseline and target measurements of the selected KPIs should be established to insure progress can be properly monitored during the life of the plan.
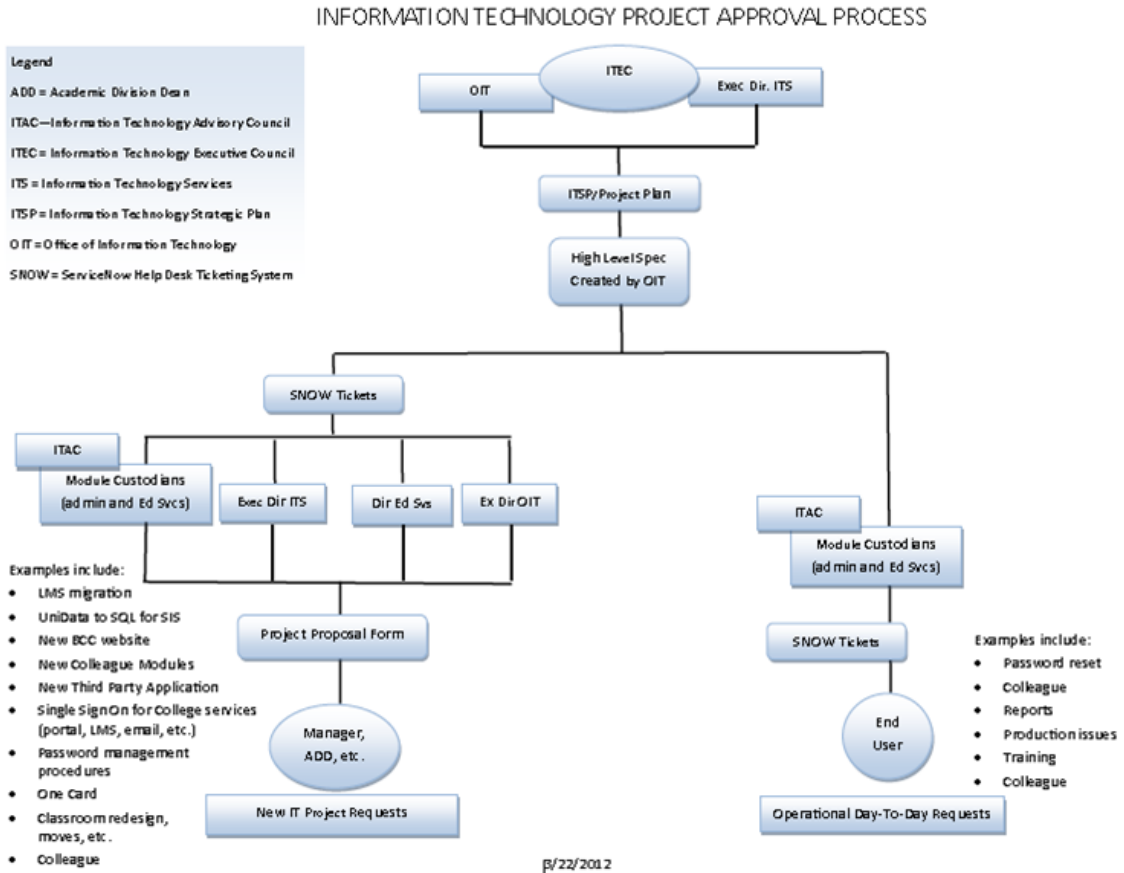
An important culmination of this process is communicating the plan to the College community. This will ensure the vision for technology use is shared among all of the constituencies served. Future communication on both changes to and progress on the plan should also be conveyed on a continuing and timely basis.

This plan should serve as a basis for the annual work plan process which outlines tactical action items that align to the goals and objectives. Additionally, as some goals are dependent on funding, the ITSP will feed into the budgeting process for technology for the coming three years. The Annual Report will summarize key achievements related to the ITSP.

Radical shifts in the environment that invalidate some of the planning assumptions should trigger a review of the plan for continued relevance. Without this examination, new opportunities could be missed.

Appendix A – BCC IT Governance Organizational Chart

The following diagram represents the approval process and operational procedures that are followed for all new projects and daily requests.

INFORMATION TECHNOLOGY PROJECT APPROVAL PROCESS

Legend

ADD = Academic Division Dean

ITAC—Information Technology Advisory Council

ITEC = Information Technology Executive Council

ITS = Information Technology Services

ITSP = Information Technology Strategic Plan

OIT = Office of Information Technology

SNOW = ServiceNow Help Desk Ticketing System

Examples include:
- LMS migration
- UniData to SQL for SIS
- New BCC website
- New Colleague Modules
- New Third Party Application
- Single Sign On for College services (portal, LMS, email, etc.)
- Password management procedures
- One Card
- Classroom redesign, moves, etc.
- Colleague

Examples include:
- Password reset
- Colleague
- Reports
- Production issues
- Training
- Colleague

3/22/2012

Appendix B – New IT Project Proposal Form

Proposal Name: _____

1. Proposal Identification

> ➤ Identify requestor and department submitting proposal. _____

> ➤ Identify name of Senior College Administrator responsible for the project._____

> ➤ Identify who will be leading this project. _____

2. Proposal Benefit/Need

Check all Benefit/Need Categories that apply:

This project will: Support regulatory/strategic mandate	Deliver/maintain competitive advantage
Improve service (internally)	Improve service (externally)
Reduce current costs	Avoid future costs
Increase revenue	Avoid revenue loss

Based on the categories checked above, describe why this project is important (i.e., the results/outcomes to be realized).

Describe the project objectives, deliverables.

What is the estimated timeline?

3. Proposal Visibility/Impact

Check all College Constituencies that are impacted:

	Internal Enhancement/Improvement for - External Enhancement/Improvement for - Faculty		Alumni
	Undergraduate Students		Undergraduate Applicants
	Communiversity Students		Communiversity Applicants
	Staff		New Hires/Retirees
	Facilities		Parents/Friends
	Other (specify)		Community

Describe the project scope. Please be as detailed as possible and indicate whether training is required.

Identify the goal and objective from the ITSP, ESOP, or FMP where this project aligns.

Department Manager Approval_____