Pharos Systems

Berkeley College

# The Planning, Pitfalls & Payback of Implementing Pay-for-Print on Campus

## Pharos Systems International White Paper

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# Executive Summary

You have recognized a problem. The high volume of unmanaged printing on campus utilizes a disproportionate share of your technology budget, and distracts technology resources that are better utilized in the provision of additional services. You know that the costs of printing extend beyond the consumables of paper and toner to include the costs of providing the devices, the staff assistance, and supplementary resources. The fact that much of this cost is expended on printing that is duplicated, never used, or sometimes not even picked up is a clear indication that users are wasting resources. You're ready to implement an effective print management system.

This paper offers guidelines for getting started and for shepherding your print conservation project through from initial idea to successful installation based on the experience of Berkeley College.



## About Berkeley College

Berkeley College is a coeducational college specializing in business. It reached an exciting milestone in 2006—its 75th year of providing academic excellence and leadership. Since 1931 students have entered Berkeley with aspirations of career success. And while the years go by, one thing remains the same: Berkeley College's unyielding commitment to ensure that all students who enter its doors are afforded opportunities to reach their goals.

From the initial class of 50 students to the current combined student body of more than 6,000, growth continues at Berkeley College. Today, Berkeley College is convenient and accessible at seven locations in New York and New Jersey. Additionally, Berkeley College's unique online learning program continues to expand as a popular alternative to the traditional classroom learning environment.

Throughout all of the changes—the addition of more students, new campuses, technologies and programs— Berkeley has always maintained its primary focus on preparing students for career s

# Planning for your implementation

There is a basic planning process for any successful implementation, and it is based on the premise that there is accountability for stakeholder and customer satisfaction.



*Figure A: Recommended steps in planning and implementing your print management system*

## Ten Steps to Satisfaction

### Step 1: Identify the business need

Why implement pay-for-print?

Establish the business need: what you wish to accomplish.

- Reduce costs
- Generate revenue
- Increase environmental awareness/conserve resources

A wide range of people are potentially affected by a print management system. It's essential that you understand and are able to communicate the drivers for the decision.

### Step 2: Identify the stakeholders

Who around you is affected by the implementation, and what do they need in relation to it? Creating a stakeholder map provides you with a visual tool that makes planning easier.

The sample map on the next page includes common stakeholders to demonstrate the part they may play, and what they may need from your organizing team if the implementation is to go smoothly. For example, on the site represented by this map, the Technology Administrator is responsible for installing and supporting the print management system on campus. This stakeholder requires quite a bit of information, support, and resources to realize the implementation. They will have more enthusiasm and more support for the program if you recognize and satisfy their requirements.
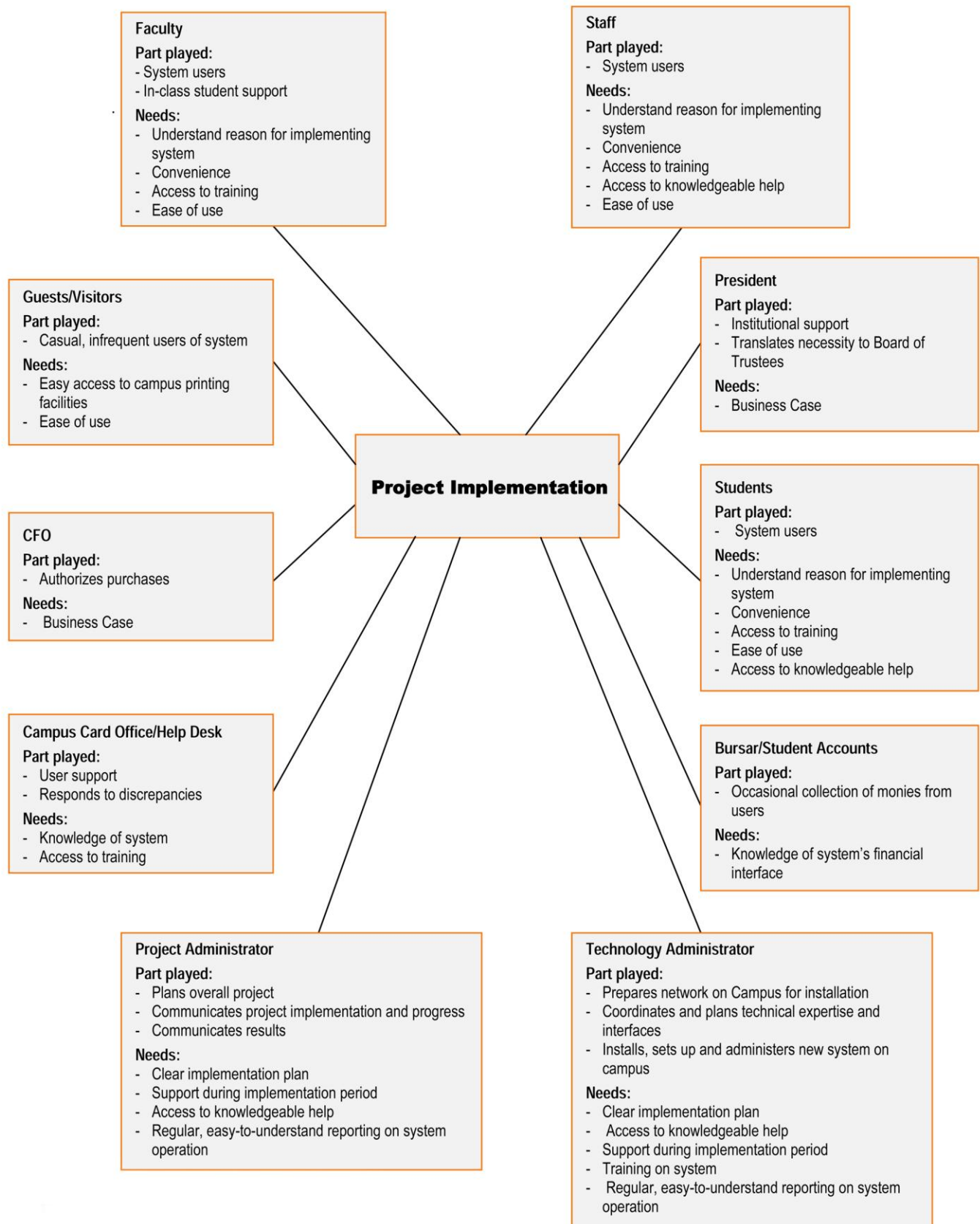
**Faculty**

**Part played:**
- System users
- In-class student support

**Needs:**
- Understand reason for implementing system
- Convenience
- Access to training
- Ease of use

**Staff**

**Part played:**
- System users

**Needs:**
- Understand reason for implementing system
- Convenience
- Access to training
- Access to knowledgeable help
- Ease of use

**Guests/Visitors**

**Part played:**
- Casual, infrequent users of system

**Needs:**
- Easy access to campus printing facilities
- Ease of use

**President**

**Part played:**
- Institutional support
- Translates necessity to Board of Trustees

**Needs:**
- Business Case

**Project Implementation**

**CFO**

**Part played:**
- Authorizes purchases

**Needs:**
- Business Case

**Students**

**Part played:**
- System users

**Needs:**
- Understand reason for implementing system
- Convenience
- Access to training
- Ease of use
- Access to knowledgeable help

**Campus Card Office/Help Desk**

**Part played:**
- User support
- Responds to discrepancies

**Needs:**
- Knowledge of system
- Access to training

**Bursar/Student Accounts**

**Part played:**
- Occasional collection of monies from users

**Needs:**
- Knowledge of system's financial interface

**Project Administrator**

**Part played:**
- Plans overall project
- Communicates project implementation and progress
- Communicates results

**Needs:**
- Clear implementation plan
- Support during implementation period
- Access to knowledgeable help
- Regular, easy-to-understand reporting on system operation

**Technology Administrator**

**Part played:**
- Prepares network on Campus for installation
- Coordinates and plans technical expertise and interfaces
- Installs, sets up and administers new system on campus

**Needs:**
- Clear implementation plan
- Access to knowledgeable help
- Support during implementation period
- Training on system
- Regular, easy-to-understand reporting on system operation

*Figure B: Recommended steps in planning and implementing your print management system*

## Step 3: Specify benefits

What benefits will the print management system bestow on the site as a whole, and to each stakeholder individually? The stakeholder map is easily expanded to include benefits.

This step is often overlooked or viewed as unnecessary, but getting everybody on board with the project before you begin can make the difference between a positive and negative experience for everyone on site.

## Step 4: Create your team

Who will lead your implementation project? You need a strong Project Manager and Technical Manager. Skilled and knowledgeable leaders who are able to work collaboratively are necessary.

Identify the person accountable for successful implementation.

You may or may not wish to form a committee to ensure that all stakeholders are heard and their needs considered.

*Advantages include:*

- Collaboration and input from various stakeholders;
- Added benefit of experts from various departments;
- Enhanced communication throughout the project;
- Shared responsibilities, requiring less individual effort;
- Greater breadth of expertise

*Potential drawbacks are:*

- Greater efforts to reach consensus;
- Conflicting opinions, which can cause tension and delays;
- Delays in organizing meetings, meeting deadlines, etc.

Whatever the size of your team, meet frequently and keep the project rolling.

**The Berkeley College experience**

Berkeley's project committee included:

- Director of Auxiliary Services
- Senior Technology Coordinator
- Blackboard Administrator
- Senior Programmer
- Senior Vice President, Academic
- Affairs
- Technology Department Chairs, NY
- and NJ
- Students
- Others as needed

Possible sub-committees may include:

- Technology Experts
- Senior Administrators/College
- Leadership
- Instructional/Academics
- Student Focus Groups

## Step 5: Set project goals, milestones and timeline

Do you understand your current environment?

Make sure that you have a sufficiently clear description of the environment as it exists, software, hardware, and setups, including the network and infrastructure and integrated systems. Your print management system needs to fit into and work within this environment.

Gather data to establish the baseline:

- Track current printing costs over a specified period

- Establish a profile of site print costs, including paper, toner, staffing, repair, hardware/software.

- Convert site print cost to FTE cost based on the number of Full-Time Equivalent users at your institution.

- Define the pay-for-print goal:
  Charge for all prints (Pay-for-print) or charge once print credits expire (print conservation)? The language that you use when communicating your project may affect how the program is accepted. The acceptance of the implementation of the program and attainment of the goals of the project are defined by how the program is communicated to your stakeholders.

- Set the goals and the desired outcome of the implementation. Constantly evaluate the implementation against the perceived business needs that kicked off the project.

- Are they compatible? It is important that you continually ask "Am I still on track in meeting my goals and desired outcome?"

- Construct a realistic timeline for your project.
    - Determine a desired completion date
    - Build in contingency time for testing and setbacks
    - Allow time to pilot the program to test functionality and user acceptance: Pilot in increments? Pilot by location?
    - Delay timeline when necessary to ensure successful implementation

**The Berkeley College experience**

Printing trends, prior to print conservation initiative:

- 153 networked printers

- 35 labs, classrooms and libraries

- Average print per FTE was 80 copies per FTE per month

- Annual print costs in excess of $100,000 not including staffing or hardware costs

Berkeley tracked costs using simple spreadsheets.

| Analysis of Paper Costs | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Campus | FTE | # Pages | Paper Cost | # Toners | Toner Cost | Total Costs | Cost per FTE | Yearly Cost per FTE | Average Mntly FTE | Total Yearly Cost |
| GMT | 824 | 61,675 | 463 | 10 | $1,150 | $1,613 | $1.96 | $23.48 | 1,146 | $26,912.57 |
| MDL | 272 | 27,389 | 205 | 7 | $805 | $1,010 | $3.71 | $44.58 | 387 | $17,251.39 |
| BGN | 184 | 11,900 | 89 | 3 | $330 | $419 | $2.28 | $27.34 | 282 | $7,717.39 |
| NYC | 1227 | 92,034 | 690 | 15 | $1,725 | $2,415 | $1.97 | $23.62 | 1,753 | $41,407.75 |
| WST | 350 | 28,237 | 212 | 6 | $690 | $902 | $2.58 | $30.92 | 526 | $16,270.64 |
| SYSTEM | 2857 | 221,235 | 1,659 | 41 | $4,700 | $6,359 | $2.23 | $26.71 | 4,095 | $109,365.07 |

**Figure C:** *Tracking printing costs to establish a baseline period*

| | LIVE PERIOD | | | | | |
|---|---|---|---|---|---|---|
| | MARCH | MARCH | PAGES | COST | $ SAVINGS | TOTAL |
| CAMPUS | FTE | # PAGES | PER FTE | PER FTE | PER FTE | SAVINGS |
| GMT | 1,161 | 34,208 | 29 | 1.33 | $2.32 | $2,689.26 |
| MDL | 384 | 16,146 | 42 | 1.89 | $2.64 | $1,013.44 |
| BGN | 365 | 8,656 | 24 | 1.07 | $1.84 | $672.75 |
| NYC | 1,721 | 54,442 | 32 | 1.42 | $1.95 | $3,359.05 |
| NYD | 302 | 7,870 | 26 | 1.17 | $0.00 | $0.00 |
| WST | 568 | 14,038 | 25 | 1.11 | $2.52 | $1,430.40 |
| Total | 4,501 | 135,360 | 30 | 1.35 | $2.21 | $9,941.02 |

**Figure D:** *Track printing costs on a monthly basis*

### Step 6: Investigate the vendors

How will you identify, evaluate, and select the print management system that best meets your goals?

Survey the available vendors.

- Identify products that interface with existing campus systems: software, hardware, setups

- Look at your campus card: if you don't use one, consider the value of introducing one. If you do use one, be sure that it can interface with the proposed vendor.

- Consider and list the features/capabilities that will meet the needs of your stakeholders.

- Note whether your institution needs to track and sort users:
  - Students by major
  - Students by year
  - Faculty
  - Administrative staff
  - Technical/support staff

- Research practices in other institutions:
  - Visit and speak with faculty, staff, and students
  - Phone those in technical, administrative, and other roles who are directly responsible for implementing and supporting the print management program

When selecting a vendor, look for:

- Accessibility during your working day
- Ability to effectively address emergencies
- Customer reputation: product and service
- Promoters: consider their motivation
- References – check them!

### *Step 7: Prepare for change*

What considerations will ensure that the installation proceeds smoothly?

The time you spend on this step rewards you with:

- Greater user acceptance
- Smoother transition
- Saving time and putting out fires later
- Reduced complaints and anxiety

The following are important things to work through.

- Identify how your users will interact with the system, for example:
  - How will users log on?
  - If needed, how will they transfer cash into the system?
  - How will users release print jobs?

  Take the time to build specific use cases for each of these, as well as other questions. In building these use cases, ask yourself and others:
  - What capabilities do you wish to utilize for ease of use?
  - How will the hardware and software integrate?

  These use cases may seem time-consuming, but they establish the criteria that the system must meet and enable you to do a much more effective job of planning the best configuration for the system.

- Map the features available in the chosen product to the use cases you have written.

- Make sure you understand the scope and the implications of each feature.

- Clarify the implications that the installation may have for surrounding / integrated systems. This includes devices such as printers, MFPs and card readers, operating systems, billing systems and the accounting structure, and any other site infrastructure. By identifying the existing systems and devices the new system may impact before you implement it, you allow yourself time to seek third-party input into the changes that will make. This input may guide you in technical and non-technical areas, even if it simply lets you discover that other products you use are also moving to a new version.

- Establish pricing and set credit limits:
  - Determine the number of prints required for course work and research
  - Consider building in extra prints for technical malfunctions, such as low toner and crumpled pages
  - Realize that it is easier to add additional print credits than it is to take away any perceived excess later

- o Avoid implementing fee-based programs immediately following fee hikes or after new fees have been initiated for technology or other reasons.

- Determine who you need to involve as you prepare to implement your project:
  - o Academics (provost, deans, faculty)
  - o Students
  - o Administrators (financial, student development, IS)

- Specify your customer service goals and design the service activity that you need to provide to meet those goals: don't underestimate the importance of understanding, convenience, seamlessness, and rapid response to problems.
  - o Pilot the plan so users may adjust their current usage.
    - Implement a pilot period where users are not penalized for account arrears.
  - o Offer live help via functioning Help Desk
  - o Help users to budget
    - Send out low balance notifications during the pilot and live period of implementations.
  - o Offer convenient options for adding funds. Allow students to add funds:
    - by credit card online 24 hours/day
    - in person during operational hours
    - through a cash load machine on site
  - o Plan for after-hours help
    - Allow Help Desk to credit accounts for emergencies beyond in-person operational hours
  - o Develop service signs, screensavers, emails, postings, and online live help to provide clarification or immediate assistance

- Develop a training program and timeline:
  - o Help Desk: plan for your Help Desk staff to have hands-on experience with the product during the testing period, create scenarios based on prepared use cases, and develop manuals or written instructions.
  - o Train faculty to immediately address problems in classrooms and provide frontline assistance.
  - o Retrain faculty to change their own current printing practices and reduce print usage:
    - Request assignments online
    - Don't require students to print unnecessary exams, course materials, color copies, etc
    - Use online tools such as Blackboard
    - Report unresolved problems to the Help Desk when necessary

- Begin your internal marketing campaign: communicate, communicate, communicate!
  - o Use multiple methods: Emails, website, surveys, postings, forums, newspaper, in-class announcements, table tents
  - o Modify message appropriately for target audiences: Students, faculty, staff, community

## Step 8: Pilot the system

Test the proposed system in a pilot installation. This is a key step.

You must ensure that your implementation will operate in the way that you are expecting, that it will integrate into your site with few problems, and that it will satisfy your use cases - before you roll it out across campus.

- Limit pilot by time (e.g. student breaks), location (campus, lab) and/or user group
- Track costs during the pilot and measure results against baseline parameters.
- Review results and user experiences with key stakeholders: This ensures that you understand the ramifications of the installation, and also allows you to make any adjustments to your plan that stakeholders may require based on the pilot. Your key stakeholders should not experience any surprises.

## Step 9: Install

Done all the above? Now you're ready. Let it rip…. ☺

## Step 10: Review and ongoing evaluation
- Continue to track use and costs both during pilots and live periods.

- Plan maintenance and upgrade schedules.

- Set up performance monitoring to ensure you have parameters for future upgrades.
  Measuring system operation and performance load provides you with a baseline against which to assess post-upgrade performance: network speeds, logon and access times, page counter performance, report data access, network traffic, system uptime, etc.

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**The Berkeley College experience**

Berkeley implemented a three-phase pilot with Pharos Uniprint.

- **Phase I: January to March**
  Pilot I consisted of a test implementation on two campuses where a limitless credit and $0 value were assigned to all users for printing.

- **Phase II: April to June**
  Pilot II consisted of a test implementation of all six campus locations where a limitless credit and $0 value were assigned to all users for printing.

- **Phase III: July to September**
  Pilot III consisted of implementation of an actual credit value, and assigned print charges for all black-and-white and color prints.  During this period, low balances were automatically credited with extra credit values, so that users would not run out of prints.

**The print management system rolled out in October**

- Positioned as print conversation program rather than pay-for-print.
- All users (faculty, staff, and students) received $17.00 credit per quarter.
- Black-and-white charged at $0.08 per print.
- Color charges at $0.30 per print
- Students fund their own excess usage.
- Additional faculty and staff credits added as necessary.

# Pitfalls to look out for

## Communication

Remember:

- You can never communicate too much.
- Regardless of how much you say and how often you say it, there is always someone who doesn't know what's happening.
- Don't assume that the members of any group will reliably pass the message on to one another, or to the members of any other group.
- Don't assume faculty and staff will justify the program to students on your behalf
- Neither students nor staff will read long communications.

## Stakeholders

Have you forgotten someone? Users who are often forgotten include:

- Non-credit classes
- Alumni
- Users renting computer classrooms and labs
- Guests

## Installation

Be cautious with third-party installations:

- The installation may take longer than anticipated.
- You may lack product knowledge in less commonly implemented configurations.
- Make sure you specify who will handle your installation when you scope out the project

## Planning

Anticipate worst case scenarios:

- Student protests
- Vendor unavailability
- Unsupportive user community

Make it easy on yourself: double-check the timing of the implementation.

- Have you initiated other fees recently?
- Is there a time when you will have fewer users on campus?

# Paybacks enjoyed at Berkeley

The general paybacks are identified in the marketing material for any print management system; and paybacks there are. Berkeley College has achieved:

- Cost savings of over $50,000 during the pilot period
- Cost savings of $90,000 during the first 12 months of implementation
- Cost savings of over $125,000 since the initial implementation (first pilot period)
- Recovery of all costs within the first seven months of the pilot.

In addition, since the inception of the program, printing has fallen from 80 to 22 prints per FTE per month. A 72% reduction in prints per FTE has occurred since the baseline period, and a 54% reduction in total pages. The College continues to track costs.

Careful planning and organization of your print management implementation is key to the successful outcome of the project. By carefully evaluating the needs of the institution, and matching them with the plan design, you will achieve your goals with greater efficiency and ease.