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Project Background

Over the past several years, there has been a trend at NECC to publish “Institutional Documents” to the Intranet and the External, NECC web site. In the process of managing the web sites, document management issues arose. There were duplicate documents, outdated documents and others appeared unnecessary.

Upon investigation, we learned that there was no overseeing entity to establish and enforce document management policies. Each department was responsible for their own document management policies and procedures.

The absence of policies regarding the creation, storage, and distribution of institutional documents has resulted in inefficiencies including:

- Multiple versions of the same document residing on the web site
- Multiple versions of the same document distributed via other means, such as CDs, shared network drives, e-mail and flash drives
- Outdated documents being distributed
- No clear ownership of documents
- No complete inventory of all institutional documents
- Wasted time tracking down current, correct documents
- Increased potential for liability
- No institutional system for monitoring documents for ADA or other legal compliance
The prior Documents Management process management team dealt with records retention and the scanning initiative.

This Institutional Documents Management process management team addresses the creation, ownership, and distribution of documents that are shared between departments or with the public.

The NECC web site now includes 7901 pages and the Intranet 617 pages. On the NECC website alone, there are 1,329 documents generated outside of the Marketing Communications department. This represents a 22% increase year to date, from 851 documents on January 1, 2006. At a forecasted annual increase of 26%, the website will become unmanageable without polices regarding generation, management, and distribution of NECC documents.

These problems are not endemic to just the Marketing Communications department, but are present throughout most departments as indicated by flow charts provided by the Administrative Service Division, and Financial Aid.

In an attempt to find the root cause of these problems and to develop a plan for the improvement of the process of managing institutional documents, a thorough investigation has been performed, the results of which are contained in the following report.
Project Statement

To improve the process of updating and distributing institutional documents available to the public or accessed by multiple departments, either online or on the college network as measured by increasing student satisfaction and enrollment by supplying accessible and accurate documents, establishing an appropriate digital file location of the most up-to-date documents, by a decrease in document duplication, by improved retrieval time of documents, and by a savings of employee time and costs.
### OPERATIONAL DEFINITIONS

<table>
<thead>
<tr>
<th>Term</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Content Management</td>
<td>Content management, or CM, is a set of processes and technologies that support the life cycle of digital information. This digital information is often referred to as content or, to be precise, digital content. Digital content may take the form of text, such as documents, multimedia files, such as audio or video files, or any other file type which follows a content lifecycle which requires management.</td>
</tr>
<tr>
<td>Digital Asset Management (DAM)</td>
<td>Digital asset management consists of tasks and decisions surrounding the input, annotation, cataloguing, storage and retrieval of digital assets, such as digital photographs, animations, videos and music. Digital asset management systems are computer software and/or hardware systems that aid in the process of digital asset management.</td>
</tr>
<tr>
<td>Digital Assets</td>
<td>File stored digitally in any format, including documents, images, audio, and video.</td>
</tr>
<tr>
<td>Digital Storage</td>
<td>The storage of digital assets.</td>
</tr>
<tr>
<td>Document Management</td>
<td>The management of &quot;Institutional Documents&quot; by following established polices and the use software tools and storage devices.</td>
</tr>
<tr>
<td>Document Management System</td>
<td>A document management system (DMS) is a computer system used to track and store electronic documents and/or images of paper documents. The term has some overlap with the concepts of Content Management Systems, is often viewed as a component of Enterprise Content Management Systems, and is related to Digital Asset Management, Document Imaging, Workflow, and Records Management Systems.</td>
</tr>
<tr>
<td>Enterprise Content Management (ECM)</td>
<td>Enterprise Content Management is the technologies used to Capture, Manage, Store, Preserve, and Deliver content and documents related to organizational processes. ECM tools and strategies allow the management of an organization's unstructured information, wherever that information exists.</td>
</tr>
<tr>
<td>External web site</td>
<td>The NECC Web site located at: <a href="http://www.necc.mass.edu/">http://www.necc.mass.edu/</a>. The information on the Extranet is available on the world wide web.</td>
</tr>
<tr>
<td>Form</td>
<td>A document that has fields that can be filled in. This can be a hard paper copy, word form, pdf, or web-based form.</td>
</tr>
<tr>
<td>Institutional Document</td>
<td>Document, form, report, schedule, calendar, policy or any other file that is available to the general public or multiple departments of NECC.</td>
</tr>
<tr>
<td>Intranet /internal web site</td>
<td>NECC's internal web site, available via the LAN. This website can only be accessed from within the Campus. Content cannot be edited. by</td>
</tr>
<tr>
<td>Local Area Network - LAN</td>
<td>Local Area Network, the NECC internal network.</td>
</tr>
<tr>
<td>Office 2007</td>
<td>The most recent version of office.</td>
</tr>
<tr>
<td>Owner</td>
<td>The individual or group that holds the final responsibility for the document and its contents.</td>
</tr>
<tr>
<td>Records Management</td>
<td>Records management, or RM, is the practice of identifying, classifying, archiving, preserving, and destroying records. The ISO 15489: 2001 standard defines it as “The field of</td>
</tr>
</tbody>
</table>
management responsible for the efficient and systematic control of the creation, receipt, maintenance, use and disposition of records, including the processes for capturing and maintaining evidence of and information about business activities and transactions in the form of records”.

<table>
<thead>
<tr>
<th>Secure web site</th>
<th>A web site that is safe from penetration or interception by unauthorized persons.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Server</td>
<td>A computer that makes services, as access to data files, programs, and peripheral devices, available to workstations on a network.</td>
</tr>
<tr>
<td>Share Drive</td>
<td>A location on the LAN where users can share documents.</td>
</tr>
<tr>
<td>TREENO</td>
<td>The document scanning tool recently deployed by NECC. Their web site is <a href="http://www.treenosoftware.com/">http://www.treenosoftware.com/</a> Formerly known as Docutron.</td>
</tr>
<tr>
<td>Versioning</td>
<td>Also known as Revision control or version control, is the management of multiple revisions of the same document.</td>
</tr>
<tr>
<td>Vista</td>
<td>The most recent Microsoft operating system that NECC will deploy Summer, 2008.</td>
</tr>
<tr>
<td>WIKI</td>
<td>A collaborative website whose content can be edited by anyone who has access to it.</td>
</tr>
</tbody>
</table>

*Note that many definitions were obtained from www.wikipedia.com and www.dictionary.com.*
Document is send from on of approx 100 sources in one of 10 formats. The history is unknown.

Received via Email, 90%

Received via Hard Copy

Other Source CD, Flash more

Document is sent to the Web Editor on duty, Cindy, Betsy or Rob

Added to Inventory and renamed

Formatted for the web, converted to PDF, or HTML page created

Published to the Intranet

Original File is Deleted

Published to the Extranet

Document is available to the Public

Document is available on Campus

Missing Action is to review the document for accuracy, content, timeliness, and legal compliance. It is assumed that the original source of the document has completed this review prior to sending to the web content team.
Financial Aid
Document Flow Chart

The three main ways that documents are sent from Students Records to Marketing for uploading to the Internet:

1. Documents are created by Financial Aid or Student Records staff → Documents are PDF’d by the Student Records or FA manager → Documents are sent to Cindy or Betsy to be uploaded to the Web.

2. Documents are created by Healthcare Program Coordinators in Lawrence and emailed to Student Records → Documents are PDF’d in Student Records → Documents are uploaded to the Web by Cindy or Betsy.

3. Changes to documents are sent to Student Records by non-health care program coordinators → Changes are made to documents in Student Records and PDF’d → Documents are uploaded to the Web by Cindy or Betsy.

All documents are also sent to reprographics to be printed and distributed to students. Many additional documents are created in Student Records and sent to other departments such as Admissions, Registrar, Welcome Express, FA, the Lawrence Campus. Some of them find their way to the Web; many are distributed as hard copies to students.
A user need is established for a document to communicate policies, procedures and information, to track assets, authorize payments, establish contracts, and collect information.

Concept authorized by VP of Administration.

Administration staff develop document with user input.

Document sent to college legal counsel for review through Administration office.

Document sent to user for review and test done to ensure accurate information is processed.

Document location established either at local access network and delivered via email, hard copy delivered via intercampus mail, Banner, or NECC website.

Document sent to VP of Administration for authorization.

Document sent to college legal counsel for review through Administration office.

User supervisor authorizes document.

User supervisor returns document to VP Administration for authorization.

Document sent to college legal counsel for review through Administration office.

Form returned to VP of Administration for authorization.

Information utilized. Form/Contract information completed and sent to user supervisor for authorization.

Document accessed either via email, hard copy delivered via intercampus mail, Banner, or NECC website.

User requires document to access policies, procedures and information, track assets, authorize payments, establish contracts, or to collect information.

Document location established either at local access network and delivered via email, hard copy delivered via intercampus mail, Banner, or NECC website.

Document sent to user for review and test done to ensure accurate information is processed.

Document sent to college legal counsel for review through Administration office.

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User requires document to access policies, procedures and information, track assets, authorize payments, establish contracts, or to collect information.

Document location established either at local access network and delivered via email, hard copy delivered via intercampus mail, Banner, or NECC website.
The four components of Institutional Documents Management are dispersed to each department. These include documents creation, digital and physical storage, delivery to the end user, and documents management (including regulatory compliance, branding, accessibility, and more).

NECC documents are managed at the departmental level.

There is a trend to post common forms and documents on the NECC public web site.

This trend has resulted in some confusion regarding the correct version of the document and who is responsible for managing the document. There is also a concern about the appropriateness of placing NECC internal forms and documents on an external web site, particularly in the absence of an overseeing entity.

The Intranet houses some documents, however the intranet presently cannot be accessed from off campus. Accessing forms off campus is required due to the large number of adjunct faculty that do not have an office on campus. The launch of an intranet, which can be securely logged onto from offsite, would be a complex project per the IT department.

There are tools available at NECC which could improve the management of documents. A few existing tools include:

**Documents and Forms Creation Tools:**

- Adobe PDF Pro and Designer. This software has many built-in features for standardizing and controlling the versions of documents.
- Word and Excel have advanced features for document creation
- MIS for creating web forms and manage data in Banner

**Storage Solutions:**

- Banner- to store the data.
- Treeno Scanning Software – for storing pdf forms and delivering them via the web site
- Shared hard drives – departments can centralize digital storage
- The Mac server in Marketing Communications
Delivery Options:

- The NECC public web site
- The Intranet, internal to NECC campuses only
- Banner information via the Banner log in
- Portfolio Server Software, for Marketing Images
- Treeno has the ability to publish documents to a web site

Although these tools are available, limiting factors are present. There is inadequate training available for use of these tools for Documents Management. There are also limited employee and financial resources available for creating web-based forms or utilizing Treeno as a documents delivery tool.

Limiting Factors:

The current state of document management functions and tools do not include:

- searching across multiple repositories
- enterprise taxonomy – naming and filing conventions
- ability to review documents because the required software may not be installed
- adequate training on software for documents creation
- training on best practices in documents creation and management
- training in accessibility and compliance
- a central authority to review and enforce policies and regulatory requirements
- a standardized workflow
- integration with business applications (Banner, Treeno, Portfolio, and others do not communicate)
- ability to authenticate external users of web forms (outside of Banner)
- financial and human resources to create and manage documents and data, particularly web based forms.
- a robust content management application
- institutional policies
- adequate employee time resources
Name of individual: ____________________________________________

Name of interviewee: __________________________________________

Date: _______________________________________________________

Questionnaire: Please check all that apply.

1. Do you have a Document Management/ECM (enterprise content management) individual—ONE person who oversees all documents coming from your department that are being made available to the public or are being accessed by multiple departments?
   - Yes
   - No

   If no, how many people in your department fill this role (create and send documents to be made available to the public or shared by multiple departments)? __________

2. Does your department have an established procedure/checklist for document management?
   - Yes
   - No

   If yes, are these procedures written? (Can we have a copy please?)
   - Yes
   - No

3. Where are the digital versions of the documents stored?
   - Hard drive
   - Individual Network Drive
   - Departmental Share Drive
   - External device (disk, zip disk, CD, jump drive, etc.)
   - Other server
   - Other: __________________________________________________

4. How are documents/blank forms shared with internal Departments?
   - Intranet
   - Website
   - Email
   - External device (disk, zip disk, CD, jump drive, etc.)
   - Hard Copy
   - Other: __________________________________________________

5. How are documents/blank forms delivered to the end user?
   - Email
   - Disk/CD/Jump Drive
   - Hard Copy
   - Internet
   - Intranet
   - Other: __________________________________________________

6. Have you experienced difficulty with any of the following:
   - Establishing file ownership – who is responsible for final product
   - Locating the latest version of a file
   - Not sure where to store the final product
   - People not being able to access documents online and having to mail hard copies

   - Other: __________________________________________________
The Process Management team conducted a survey of six NECC departments or individuals. Three of the respondents had one individual designated for handling their Institutional Documents, three shared the responsibility within the department.

Two had standards and procedures for document management and one in writing.

Final versions of documents were stored on the Share drive (5), hard drive (4), an individually owned server (2) NECC website (1).

Delivery options for the documents included email (4), NECC website (3) Hard copy (1), Share drive (1) and intranet (1).

All departments are managing their own documents with little collaboration between departments or with administration.
Name of institution/individual: ____________________________________________________________

Name of interviewee: ............................................................................................................

Date: ...............................................................................................................................  

**Questionnaire:**  

Please check all that apply.

7. Do you have a Document Management/ECM (enterprise content management) department or individual  
   - For your entire institution?
   - For your individual department?
   - Other: ____________________________________________
   - None  

If yes, can you share an organizational chart or flow chart showing reporting lines?  
   ☐ Yes  
   ☐ No

8. Does your department have an established procedure/checklist for document management?  
   ☐ Yes  
   ☐ No  

If yes, are these procedures written? (Can we have a copy please?)  
   ☐ Yes  
   ☐ No

   ☐ Does your organization employ a Content Management Software system such as: Docutron, ImageNow (For a list of document management software providers see: http://www.aiim.org/solprovider/solutions-providers.asp)  
   ☐ Yes, what is it:_____________________________________
   ☐ No

9. Where are the digital versions of the documents stored?  
   ☐ Hard drive  
   ☐ Individual Network Drive  
   ☐ Departmental Share Drive  
   ☐ External device (disk, zip disk, CD, jump drive, etc.)  
   ☐ Other server  
   ☐ Other:______________________________________________

10. How are documents/blank forms shared with internal Departments?  
    ☐ Intranet  
    ☐ Website  
    ☐ Email  
    ☐ External device (disk, zip disk, CD, jump drive, etc.)  
    ☐ Hard Copy  
    ☐ Other:______________________________________________

11. How are documents/blank forms delivered to the end user?  
    ☐ Email  
    ☐ Disk/CD/Jump Drive  
    ☐ Hard Copy  
    ☐ Internet  
    ☐ Intranet  
    ☐ Other:______________________________________________

12. How is versioning control handled?

13. Is there a solution for users to work collaborative to create and edit documents and/or projects, such as a wiki, MS sharepoint, or others.
EXTERNAL SURVEY RESULTS

Our team members interviewed 6 colleges and businesses, attended a seminar on Best Practices in Documents Management and conducted extensive online research.

Of the respondents interviewed. Only two had a centralized person or department for documents management, Liberty Mutual and the Boston Architectural College. Liberty Mutual has an ECM division with a content manager and documents manager as well as several staff positions reporting to a VP. Boston Architectural College has a Documents Management Committee and a full time archivist/records retention manager.

The remainder of the respondents managed their documents at a departmental level or individual level.

However, all respondents did have a central location on a networked server for all departments to store their documents and share them with the remainder of the organization.

Most respondents were also moving toward a centralized document management process.

Per the AIIM seminar, all panelists agreed that the key trends in document management were:

- Centralized ECM (Enterprise Content Management)
- Information is a corporate asset, not a departmental asset
- Management of digital assets is being driven by business processes, not IT initiatives
- Skyrocketing liability costs, lessening technology costs
- Merging of technology solutions providers, so that no one provider has a distinct advantage over another
- Organizational change management is critical to successfully adapting an enterprise level documents and content management system.
- Cost savings and cost avoidance are the driving forces

See related web site links for further support.
The recommendation by this process management team to move towards a centralized management model is supported by interviews with external resources, industry standard as supported by trade organizations, and a measurable cost savings and liability avoidance.
This relations diagram distinguishes the difference between the root cause of the document duplicity
problem, and the symptoms of the problem.¹

This is a pictorial diagram of the key elements involved in a process. The cause and effect relations are
shown by using an arrow connecting the key elements. The head of the arrow points to the effect
(tail = cause).¹

**Key Elements**

- **Document**: Any active document that is shared with multiple users either internally or to the
  public.
- **File Ownership**: Person responsible for the final version of the document (compiles edits and
  approves before distribution to end users).
- **Source**: Person(s) responsible for contributing edits to the document or establishment
  responsible for providing the document (such as an online form from an external website, hard
  copy of a form from State, etc.).
- **Staff Time**: Time spent creating, updating and distributing documents.
- **Legal Compliance**: Legal guidelines for duplication, distribution, privacy, etc. for document
  usage.
- **File Location**: Location where the final version of the document resides (network drive, share
  drive, disk, hard copy file, multiple PCs, etc.).
- **Software**: Software used to manage the document storage and/or distribution.
- **File Distribution**: Mechanism for which the documents are delivered to the end user (web site,
  intranet, disk, email, shared drive, hard copy).
- **Accessibility**: Enabling the document to be accessed by the appropriate end users as needed in
  the correct format—formats needed for those with disability challenges.

**How is a relations diagram made¹**

1. In the center of the page is the problem, document duplicity.
2. Key elements circle the problem.
3. Ask the questions if the first element were to improve would it cause the second element to
   improve or vice versa. Whichever would improve most gets the head of the arrow. The ether
   element gets the tail. If one does not improve the other, no line is used to connect the two.
4. Count the number of heads and tails. Record the results for each element. The element with the
   most heads is a root effect. The element with the most tails is a root cause.

¹Stanley E. Jensen, Ph.D., *Continuous Process Improvement / AQIP Team Development for Colleges and
The Problem:
Document Duplicity

Institutional Document Management Relations Diagram

Accessibility
- Cause-Effect 2-4

File Distribution
- Cause-Effect 3-3

Software
- Cause-Effect 6-0

File Location
- Cause-Effect 4-3

Document
- Cause-Effect 3-4

Ownership
- Cause-Effect 7-0

Source
- Cause-Effect 4-1

Staff Time
- Cause-Effect 0-8

Legal Compliance
- Cause-Effect 1-7
## RELATIONS DIAGRAM ANALYSIS

<table>
<thead>
<tr>
<th>Root Causes of Document Duplicity (tails)</th>
<th>Major Effects of Document Duplicity (heads)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Ownership</strong></td>
<td><strong>Staff Time</strong></td>
</tr>
<tr>
<td><strong>Software</strong></td>
<td><strong>Legal Compliance</strong></td>
</tr>
<tr>
<td><strong>Source</strong></td>
<td><strong>Accessibility</strong></td>
</tr>
<tr>
<td><strong>File Location</strong></td>
<td><strong>Document</strong></td>
</tr>
</tbody>
</table>
Our analysis has indicated the potential for considerable cost and employee time savings by developing policies and procedures for Institutional Document Management. The savings involved in documents management can be identified as controlling operational costs and cost avoidance.

**Operational costs that will be controlled are:**

- Printing and shipping costs will be reduced upon moving content to the intranet and public web site
- Redundant employee efforts will be diminished by controlling ownership and versioning of the documents
- Regulatory compliance and ADA requirements will be met by having a single, governing entity, that promotes education and compliance
- Decreasing time spent in searching for documents. An information employee spends approximately 40% of their time searching for documents, per AIIM seminar, 11/07.
- Decrease in printing costs if the incorrect version is printed and distributed

The NECC Magazine could be an example of a cost savings. Currently, the magazine costs approximately $240 to print and is manually distributed throughout the campus. If this print piece were distributed digitally, the printing and distribution costs could be minimized or eliminated. It is likely that there are many areas where distributing the document digitally would reduce printing and distribution costs.

**Future costs to be avoided include:**

- Legal liability if current institutional documents are not reviewed for compliance and accessibility.
- The cost of discovery would increase if multiple versions are present. The cost of discovery has reached “1 million per month for document review by outside counsel” per Gordy Hoag, AIIM seminar 11/07.
- Potential costs associated with disseminating incorrect financial information (tuition, fees)

A fictitious example of cost avoidance would be an emergency at NECC that resulted in a lawsuit. Upon discovery, there were 4 versions of the emergency response plan, in print and digital media, with differing
policies, and no policy stating were the current, official, version should be stored. The discovery costs would increase and the defense of NECC would weaken.

After reviewing our analysis, our results are depicted in the systematic diagram from which we developed an improvement theory for optimum document management of institutional documents for on and off campus use by students, faculty and staff. Therefore, based on our research and data collected, we suggest the following improvements for document management:

1. That a Document Management Committee is formed that will be a cross-section of college departments. We recommend that a member of this process management team and a current student of the college be members of the committee at least during its early phase.

   a) We suggest that this committee should develop and write policies and procedures to govern document ownership, development, relevancy, and continuity of a current document on file; including the development of a standardized format for in-house forms with ADA compliance guidance.

   b) We suggest that the committee review processes for how documents are distributed, including overseeing research, reviews and recommendations of software choices. The committee should begin by assessing the technology solutions that are currently available at NECC, particularly integrating Treeno with online document delivery. Also, that the research and analysis of software should include technology resources or options for creating and distributing documents institutionally. The committee should work closely with MIS, IT, Marketing Communications and Faculty and Staff Development throughout the decision making process.

   c) All human resources should be aware of their involvement in the document management process early in the planning process.

   d) We suggest that the committee establish approval procedures and the method of approval verification of documents. In addition, that the committee is empowered to enforce these procedures.

   e) We suggest that this committee be a clearinghouse for institutional documents; approving format standards for forms (for ADA compliance). That the committee will keep current on best practices and regulatory compliance for document management.
f) We suggest that the committee will communicate and educate responsible document management throughout the college.

2. We recommend that each department should establish one person for management of departmental documents – this person will be the file owner and contact person. The file owner will be the liaison to the document management committee. In addition, the file owner would receive policy and procedure training through the document management committee to enable departmental development of documents.

a) We recommend that each department establish an inventory of documents; including Document Name, Owner, Creator, Expiration Date, Approval Date, Approving Person, other relevant information. The committee would review this information and inform of best practices.

3. We recommend that the file owners manage their documents by working with sources to update documents, that they establish expiration dates for documents, and ensure that documents meet policy guidelines. In addition, file owners should determine the best method of document distribution to end users. Finally, file owners should annually review inventory for expired, incorrect, and unnecessary documents; including review of distribution methods for time and cost savings.

If our suggested improvements are adopted by Steering Committee support, we anticipate that the results would be a savings in student and employee time by a minimization of confusion and duplicity through a standardization of development and distribution processes of college documents. Future costs to the college may be suggested by the Document Management Committee after research and review of software and human resources required.
Implementation Plan

“Quality is meeting and exceeding the customers’ needs and expectations and then continuing to improve”. – W. Edwards Deming

– Quality Philosophy – Continuous Process Improvement, Stan Jensen, page 1.2

The Institutional Document Management Team is asking for Steering Committee approval to move forward with our suggested Improvement Theory. We are also asking the President’s Leadership Team to provide leadership and guidance in forming a Document Management Committee. We are recommending that the President’s Leadership Team appoint members to the Document Management Committee, which should include one representative from these College sectors:

1. President’s Office
2. Faculty and Staff Development
3. Academic Affairs Administration
4. Faculty
5. Enrollment Services
6. Student Leadership
7. Institutional Technology
8. Institutional Research
9. Institutional Advancement
10. Administration & Finance
11. Human Resources
12. Division of Corporate & Continuing Education
13. A member of this Process Management Team

That this Document Management Committee be set up according to College committee guidelines and have the authority consistent with other College standing committees. That this committee selects a chairperson from among its members, set a monthly meeting schedule, keep minutes of meetings, and report to the President or his designee.

According to our analysis and theory, through the implementation of a standing committee, the College can manage and provide more accurate, better accessible and structured documents. After the committee is formed, instructions from the committee will be sent to departments regarding requirements to begin the document management process.
Initially, this team does not foresee a large investment of money – start-up costs to the implementation would be employee time. However, some document management initiatives, which may result from recommendations by the committee, could include costs of new personnel, system hardware, system software, consulting services, legal expenses, and training. This Process Management Team will provide the Steering Committee with any future recommendations of specific employee, equipment or consulting costs.

The second proposal of our Implementation Plan is that each Vice President / Dean appoints departmental liaisons – file owners – as appropriate for the division. These file owners would be the liaisons to the Document Management Committee. The duties and responsibilities of file owner(s) is (are) to:

1. Manage documents
2. Inventory department documents/forms
3. Report to the committee for document review and approval
4. Ensure documents meet policy guideline and legal compliance
5. Distribute documents
6. Establish expiration of document
7. Work with sources to update documents
8. Annually review inventory for expired, incorrect, and unnecessary documents
9. Annually review distribution methods for time and cost savings
10. Remove expired documents

Included in the second proposal, we suggest, that an inventory of all College documents is compiled by the file owners.

Outcomes of our Implementation Plan will be monitored by the committee and this process management team through internal and external surveys and reports of file owners, students and employees. We will report to the Steering Committee on the Document Management Committee and file ownersowner’s status, document control, future survey results and cost effectiveness of this plan.
**Institutional Document Management**

**Forcefield Analysis**

### Driving Forces
- Legal compliance
- Other colleges are addressing same issues
- Decrease in mailing
- Eliminate duplicate documents
- Improve accessibility
- Decrease duplicate efforts to save employee time and costs
- Removal of expired documents
- Anticipation of new leadership (who may have documents management processes in place)
- Cost avoidance

### Restraining Forces
- No documented policies
- No training
- No file ownership
- No inventory of documents
- Resistance to change – from department heads/people who handle documents
- Employee time
- Multiple software solutions
- Too many locations of files

### Actions to be Taken
- Form a committee
- Write policies for creation, management, and distribution of institutional documents
- Choose software(s)
- Inventory documents
- Establish file ownership by department
- Train key employees
Institutional Document Management
Systematic Diagram

1. Establish a Committee
   - Create written policies
   - Initiate training for key employees
   - Meet annually to update/review policies & inventory
   - Enforce policies

2. Establish File Owners
   - Create an inventory of documents
   - Committee review inventory
   - Committee enforce policies
   - Annually review inventory for expired, incorrect, and unnecessary documents
   - Remove expired documents

3. File Owners manage documents
   - Work with sources to update documents
   - Establish expiration of document
   - Distribute document to end users
   - Annually review distribution methods for time and cost savings
   - Ensure documents meet policy guidelines and legal compliance
<table>
<thead>
<tr>
<th>Action</th>
<th>Month 1</th>
<th>Month 2</th>
<th>Month 3</th>
<th>Month 4</th>
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<th>Month 10</th>
<th>Month 11</th>
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<tr>
<td>Committee Reviews Process Management report and Current Processes</td>
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<td>Policy Document includes the appropriate technology resources for the creation, storage and delivery of documents</td>
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<td>Key personnel are notified of changes if the new policies impacts them</td>
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<td>Each Department Designates an individual's) to manage forms</td>
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<td>Schematic Diagram</td>
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<td>Compiled Survey Results into an Implementation Plan</td>
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<tr>
<td>Presented to the Steering Committee</td>
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</tbody>
</table>
The processes developed for the management of Institutional Documents should be considered and applied when managing all NECC Information Assets. Information Assets are materials generated by Faculty, Staff, and Students including; Course Material, Reports, Surveys and Results, Print Materials, Web Content, Software Code, Data stored in Databases, Audio and Visual Files, and more.

By moving the management of institutional assets from the department level to the enterprise level, there will be considerable time and materials savings. This process should be managed from the highest level down to improve efficiencies. Managing entities, such as the Board of Higher Ed, The State of Massachusetts as well as professional organizations and other schools, should be consulted for input on best practices for information management and potential for technology sharing.

Processes should be developed and technology applied for managing these valuable assets. For instance, the Marketing Communications recently purchased Portfolio Server, to manage photographic assets. There are many existing technologies available on campus, other technology solutions under development, and more solutions to be considered and managed. All departments should coordinate their efforts to maximize the use existing tools and processes and coordinate to apply new processes and tools.

There is a spreadsheet incorporated in this report that lists all known internal resources for distributing and storing data. External resources are unknown, but may include privately owned storage (laptops, ipods, flash drives) third party providers (Google Groups, Survey Money, PBWiki and more).

Improving the management of all digital assets will extend the benefits indicated by this Process Management team. These benefits include compliance to legal regulations, limiting liability by controlling confidential or negative information, reducing employee time, eliminating multiple sources of information, saving printing and mailing costs, reducing data retrieval time resulting in improved employee efficiency, all leading to increased enrollment.
Web Sites and Links

AIIM - the Enterprise Content Management Industry Association
http://www.aiim.org/index.asp

AIIM New England Chapter
http://www.aiimne.org/

2008 AIIM Exposition and Conference
Real-World Strategies and Solutions to Help You Contain and Control Your Content and Information Assets

Best Practices in Information & Records Management
Industry Experts Address Key Issues

ARMA International, Records and Information Management Association
http://www.arma.org/

ECM Connection
http://www.ecmconnection.com/content/homepage/default.asp?VNETCOOKIE=NO

Information World
http://www.infoworld.com/

State of Massachusetts Records Management Unit
http://www.sec.state.ma.us/arc/arcrmu/rmuidx.htm

Treeno Software – NECC Document Management Software

Wikipedia, a collaborative online encyclopedia
http://en.wikipedia.org/wiki/Main_Page
<table>
<thead>
<tr>
<th>Features</th>
<th>Local Hard Drive (individual PC or MAC)</th>
<th>Share Drive, Lan</th>
<th>NECC Public Web Site</th>
<th>Treeno Software</th>
<th>Portfolio Server, located on the MAC Server in Marcom</th>
<th>WEB CT</th>
<th>Streaming Media Server</th>
<th>Banner</th>
<th>Raisers Edge</th>
<th>External Device (CD, Memory Stick, External Hard drive, Ipod,Phone)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical Storage (Server)</td>
<td>On Local Network, shared</td>
<td>On Local Network</td>
<td>On NECC On MIS owned Server</td>
<td>Treeno Server, located on the MAC Server in Marcom</td>
<td>On CT owned Server</td>
<td>Window Media Server</td>
<td>On Banner</td>
<td>Unknown</td>
<td>Individual Device</td>
<td></td>
</tr>
<tr>
<td>Who Manages the Server and OS</td>
<td>Help Desk</td>
<td>IT</td>
<td>IT</td>
<td>MIS</td>
<td>Marcom Contractor</td>
<td>CIT</td>
<td>CIT</td>
<td>IT</td>
<td>Alumni</td>
<td>Anyone</td>
</tr>
<tr>
<td>Who Manages the Application Software</td>
<td>Help Desk</td>
<td>IT</td>
<td>IT</td>
<td>MIS</td>
<td>Marcom Contractor</td>
<td>CIT</td>
<td>CIT</td>
<td>MIS</td>
<td>Alumni</td>
<td>Anyone</td>
</tr>
<tr>
<td>Who Manages the Content</td>
<td>Individual User</td>
<td>Individual User/Department</td>
<td>Marcom</td>
<td>Distributed management to HR, Finaid, and others</td>
<td>Marcom</td>
<td>CIT oversees/Distributed to Faculty</td>
<td>CIT oversees/Distributed to Faculty</td>
<td>MIS manages data, data input distributed to Banner users</td>
<td>Alumni</td>
<td>Anyone</td>
</tr>
<tr>
<td>Are there established polices and procedures for use of distribution method</td>
<td>Yes- under network usage</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>No- but primarily used for image storage</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Unknown</td>
</tr>
<tr>
<td>Available for use by (use=editing content, not viewing)</td>
<td>Faculty and Staff</td>
<td>Faculty and Staff</td>
<td>Faculty and Staff</td>
<td>Faculty, Staff and Students</td>
<td>Faculty, Staff and Students</td>
<td>Marcom Staff</td>
<td>Faculty</td>
<td>Faculty</td>
<td>Faculty, Staff and Students</td>
<td>Alumni</td>
</tr>
<tr>
<td>From where can the content be viewed</td>
<td>Only from NECC Network On Campus</td>
<td>Only from NECC Network On Campus</td>
<td>Any Location on or off Campus</td>
<td>From NECC+Campus with Login</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Any Location on or off Campus</td>
<td></td>
</tr>
<tr>
<td>Can information be Shared/worked on collaboratively</td>
<td>No</td>
<td>Yes within Shared Drives as set up by IT</td>
<td>No</td>
<td>No</td>
<td>No/or yes?</td>
<td>Yes within Marcom</td>
<td>Yes - within Discussion boards</td>
<td>No</td>
<td>No</td>
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<tr>
<td>Primary types of digital file served</td>
<td>any digital file *</td>
<td>any digital file *</td>
<td>any digital file *</td>
<td>any digital file *</td>
<td>Mostly images</td>
<td>any digital file *</td>
<td>mainly media/movies</td>
<td>Database</td>
<td>Database</td>
<td>Any</td>
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### Sample Document Inventory Page

<table>
<thead>
<tr>
<th>Name</th>
<th>Department</th>
<th>Description Or original Name</th>
<th>Conta</th>
<th>Type</th>
<th>Size</th>
<th>In Folder on Server</th>
<th>Modified or</th>
<th>Expired or</th>
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- **Note:** The field labeled "Must Be updated Regularly" is marked with the date 8/2007.
In Appreciation

The Institutional Document Management Team wishes to express their thanks and appreciation to:

David Hartleb

Stan Jensen

The Steering Committee, especially Ron Taber, our Sponsor

Our Trainer:
Jennifer Long

Our Resource Members:
Sue Beaumont
Jim Cotton
Donna Felisberto
David Gomes
Sharon McDermott
Marie McDonnell

Our Contributors:

Dina Brown
Cynthia Cargill
Donna Felisberto
David Gomes
Libby Jensen
David McAskill
Nancy Moran
Scott Proctor

Bentley College
Berkshire Community College
Bunker Hill Community College
Cargill, Cooper, Chant Law Office
Liberty Mutual Life Insurance
Mass College of Architecture
### Ideas for Improvement

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
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<tbody>
<tr>
<td>1.</td>
<td>Formation of Document Management Committee with representation from all divisions/departments of the college. The Committee will implement the Improvement Theory presented in this Process Management Report. The Committee will be empowered to establish and enforce policies and procedures regarding institutional documents management. This committee will also research best practices, compliance, and technology resources, then make suggestions for continuous improvement.</td>
</tr>
<tr>
<td>2.</td>
<td>Appoint departmental document file owner(s) that will be responsible for maintaining an inventory of documents in their control and act as a liaison between their department and the Document Management Committee.</td>
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</table>