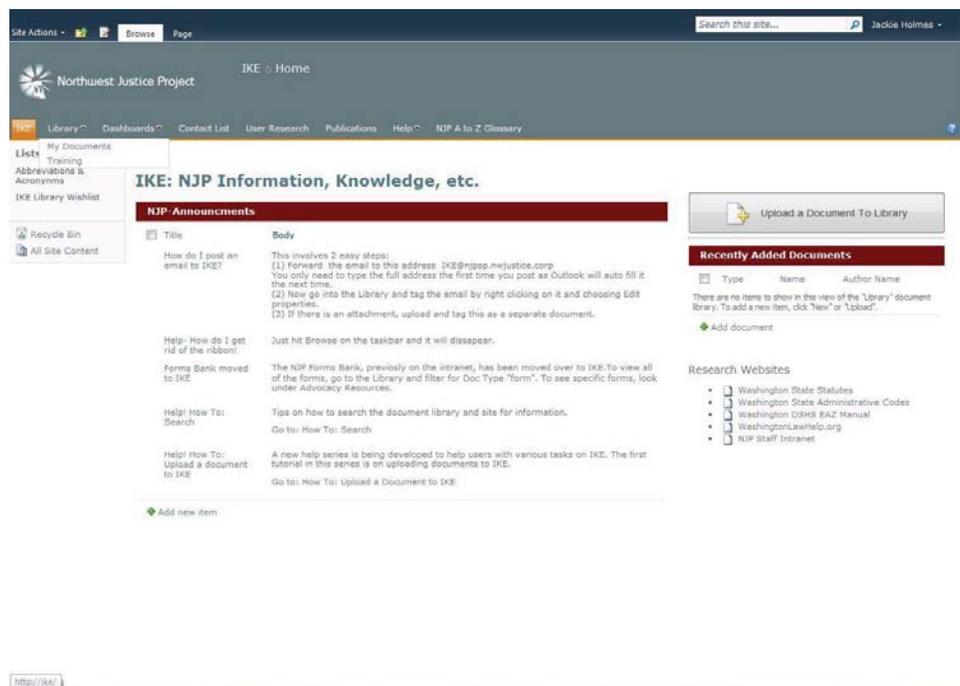


TESTING THE IKE LIBRARY



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November 2012

Finding and fixing usability problems in a new content management system

Usability tests were conducted over a three-week period to assess the Library of the Northwest Justice Project's new content management system, IKE. This report details the test design, results, and IKE team's response to the findings.

Testing the IKE Library

DISCOVERING AND FIXING USABILITY PROBLEMS IN A NEW CONTENT MANAGEMENT SYSTEM

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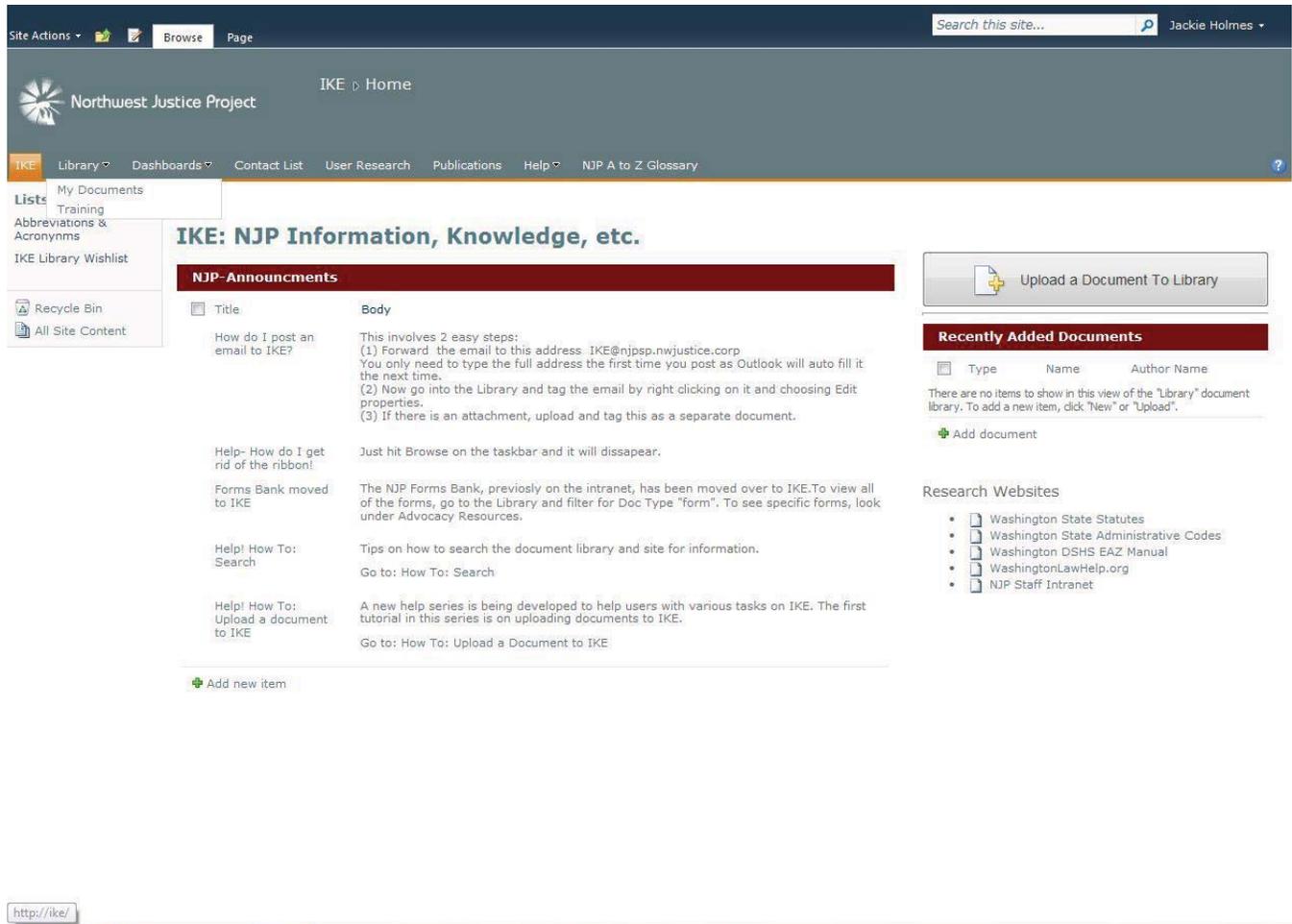
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Part I | Introduction

WHAT IS IKE?

Information, Knowledge, Etc. (IKE) is a new content management system developed using Microsoft SharePoint. Instead of distributing documents through multiple channels, such as emails, listservs, or drive folders, IKE was created to give Northwest Justice Project employees a central hub for information and document sharing.



PURPOSE OF USABILITY TESTS

Usability tests are used to assess how well a product serves a user's needs. Most often, the product is a website. In these tests, a participant uses the actual website or a prototype to try to complete tasks while a test administrator observes. The test is employed to measure one or more of the following five areas:

- Learnability – How easy is it for users to accomplish a task when they encounter the design for the first time?
- Efficiency – How long does it take to complete a task? How many steps does it take?

- Errors – How many mistakes did the tester make during the task?
- Memorability – How much does the tester remember after periods of not using the product?
- Satisfaction – How does the user feel about the task completed? (Nielsen, n.d.)

At NJP, a first round of usability tests was conducted to assess the usability of the main repository of IKE, the Library. Since IKE was new to most of the test participants, the tests helped measure how easily, efficiently and accurately users could use IKE to complete tasks and their satisfaction with the task.

Part II | Executive Summary

The NJP User Experience and Information Architecture (UX/IA) summer intern was the test administrator and conducted onsite usability tests at the NJP Seattle offices from July 30th, 2012 – August 16th, 2012. The purpose of the tests was to assess the usability of the IKE Library's information architecture and interface design.

Eight NJP employees participated in the usability tests. Participants were lawyers and legal assistants. Each session lasted 20-40 minutes and was conducted in the employee's office using their personal work computer. The test's evaluation tasks were designed to test the document uploading and browsing/search functions.

The results of the tests showed features that both hindered and helped usability. Naming issues (such as technical jargon that was not understandable to all users) was the most cited problem among users. Issues concerning visibility, lack of instructions, and unexpected features were also common. The properties dialog box, which appears when a user uploads a document or edits a document's properties, was a specific area that caused the most usability issues. Among appreciated features that made uploading and searching more efficient were the tag auto-suggest feature and the tag index.

The problems faced by users were summarized, discussed between the UX/IA intern, NTAP Coordinator and SharePoint consultant, and offered a solution. The list of problems and solutions were entered into a 'Wishlist' on IKE to provide transparency between the IKE development team and users. Each problem is currently being addressed.

Part III | Methodology

RECRUITMENT & PARTICIPANTS

Participants were suggested to the test administrator by the NJP Director of Administration and recruited via email invitation. The invitation included information about test logistics and time slots during regular work hours. Willing participants replied via email with a chosen time.

All participants were NJP employees who had some to no experience using IKE. They were lawyers and legal assistants. 7/8 participants were employed at the Seattle offices and 1/8 was at a remote office.

EVALUATION TASKS

During the usability test, the administrator requested the participant to complete two tasks. Participants were encouraged to “talk aloud” while performing the task so the administrator could understand their decision-making.

The tasks were designed to discover how easily and quickly testers could upload a document and find an undefined document in the IKE Library:

- You have a document you want to share with your colleagues. Upload this document to the IKE library.
- Think about a time you had to do some research (such as looking online, searching the drives, talking to colleagues) in order to help a client. Show how you would use the IKE library to help you find documents related to a case.

SESSIONS

Each usability testing session was held in the office of the user with the participant’s personal work computer. The test administrator explained the purpose of the test to the participant and asked permission to use an audio recorder during the session before beginning the test. Three introductory questions concerning both IKE and e-document use were asked pre-test. During the test, the administrator sat next to the participant to better see the participant’s use of IKE. The test administrator also answered participant questions during the session. After the test, the administrator asked two closing questions.

RECORDING MATERIALS

A paper recording template created by the administrator was used to take handwritten notes during the tests. With the permission of the participant, an audio recorder was also used to record the session.

Part IV | Test Results

ANALYSIS OF RESULTS

In this round of usability tests, the data was largely qualitative, such as participant comments and questions. Qualitative results were analyzed through an affinity diagram. In an affinity diagram, participant observations, comments, and questions are written on individual sticky notes. Themes or categories of this content become apparent and the notes are grouped into theme clusters on a wall. The resulting affinity diagram from the usability test results is shown in Figure 1 with themes in the bright colors and the test content in pale yellow:

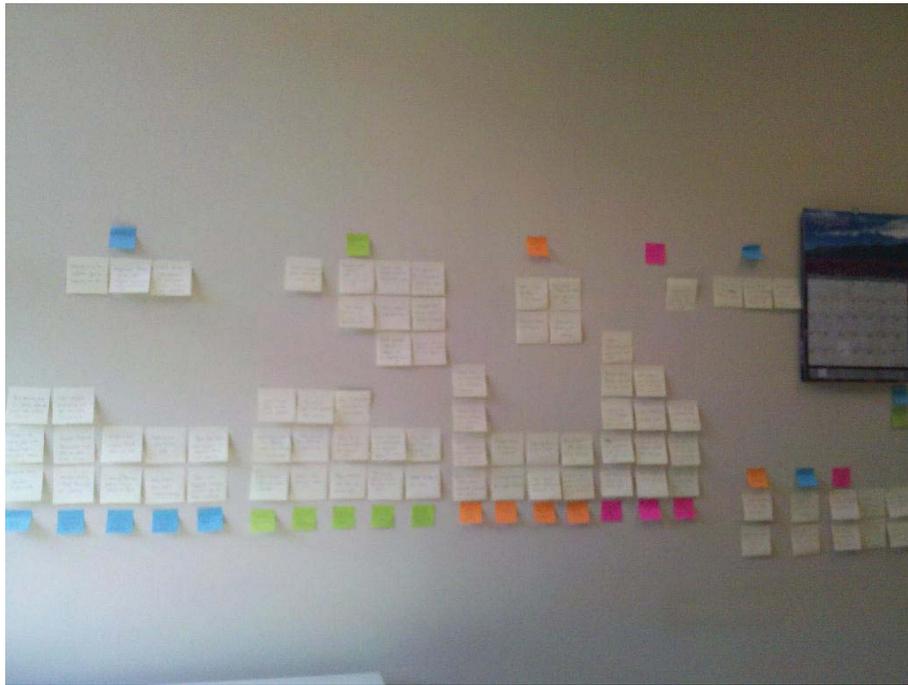


Figure 1. Affinity diagram of usability test results

TYPES OF ISSUES REVEALED

Since this was the first round of usability tests to be conducted on IKE Library, much of the feedback received by participants regarded problems experienced with the Library or suggestions for changes. The types of issues identified by the affinity diagram are found in Table 1.

Category	# of unique comments	# of comments mentioned by more than one participant
Naming Issues (i.e. Do not know what "advocacy resources" are)	10	4
Visibility Issues (i.e. Did not see the "add document" button)	8	5
Desired Features (i.e. Want a dashboard for legal assistants)	5	0
Lack of Instructions Issues (i.e. Do not know how to add own tags)	5	3

Testing the IKE Library

Unexpected Features issues (i.e. Seeing features you're not permitted to use)	5	0
Term Set Issues (i.e. Did not find an appropriate tag to describe document)	2	2
Tiring Feature Issues (i.e. Too much scrolling to get to "add document" button)	2	0

Table 1. Results of the affinity diagram based on category.

The table shows naming issues were the most frequently cited issue while the same term set issues (not finding an appropriate tag to describe a term set and not being able to type in own tags for Doc Type Issues, and Substantive Area tag fields) were repeated most by multiple users.

The comments were also categorized by area or feature on IKE (see Table 2). This view helped to show which areas may need the most attention for changes.

	Visibility	Instructions	Naming	Term Set	Features Wanted	Unexpected Features	Tiring Features	TOTAL ISSUES
Global Nav	0	0	1	0	2	0	0	3
Key Filters	1	0	1	0	1	0	0	3
Library	0	2	1	0	0	0	1	4
Library Tools	2	0	1	0	0	1	0	4
Properties Dialog Box	2	3	4	0	1	4	1	15
Search Box	1	1	0	0	0	0	0	2
Tags	0	0	1	2	0	0	0	3

Table 2. Results of the affinity diagram based on category and IKE Library area.

The properties dialog box that appears when a user uploads a document or edits properties caused the most issues, most likely because it has more features and functions than the other areas listed.

Not all comments were negative or called for change. Five comments were positive opinions about IKE features and functions:

- Easy to upload a document
- Feel process to upload a document is self-explanatory
- Likes search box at the top, where it's expected to be
- Likes auto-complete for tag fields
- Likes list of tags so you can see options/specificity

Both positive and negative feedback is often received in usability tests.

Part V | Implications and Recommendations

RELATION TO USABILITY MEASURES

As mentioned before, the usability tests were meant to measure the ease, efficiency and accuracy of completing given tasks on IKE and the participant's satisfaction with the task. Each of these areas is explored below:

Learnability/Ease and Efficiency

In the uploading task, many users commented on not being able to easily find the upload document button. There were also several comments about not being able to find tags to best describe their document. Thus, the state of IKE at the time of the tests was not designed in a way that gave users the easiest and most efficient uploading experience. For the finding task, some users did not understand what Key Filters were or how they worked and some did not see the search box. Both of these browse/search features may have helped them find a useful document, but the lack of instructions and visibility hindered easy and efficiency.

Errors/Accuracy

All participants successfully uploaded a document to IKE, but mistakes were often made during tagging portion of the uploading process. Many participants tried to enter their own tags into fields that restricted this action. IKE would alert the participant to this mistake and all users were able to then understand there was a list of tags to choose from for these fields. Since IKE was programmed to alert the participant to the mistake, they could fix the problem and increase the accuracy of correctly tagging a document. The type of mistake made in the finding task was not clicking the "Apply" button when using Key Filters. This reduced the accuracy of finding a useful document since the Library was not filtered on the participant's criteria when it was expected.

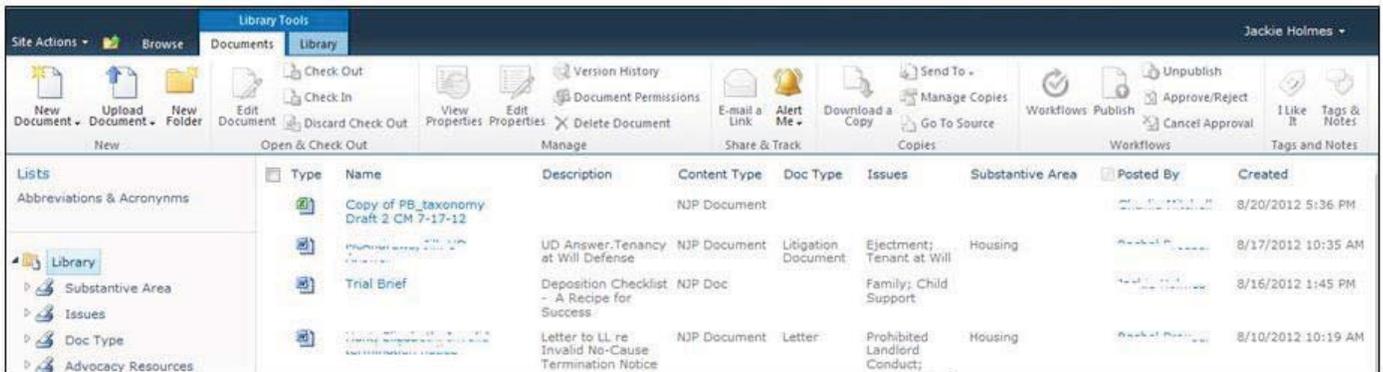
Satisfaction

Many participants had suggestions and commented on changes, suggesting they were not completely satisfied with the current state of IKE. Common comments were that the uploading process took too long to complete because there were too many fields to enter and that the many features that appear in the Library Tools ribbons were unclear to the participant. Thus, participants were not completely satisfied with the state of IKE during the usability tests.

CHANGES MADE TO IKE

The affinity diagram results were shared with the NJP UX/IA intern, NTAP Coordinator and SharePoint Consultant to collaborate on solutions to the most severe issues, or those that needed immediate attention. One of these issues was to making the search bar visible at all times. When a participant opened Library Tools, the resulting ribbon would cover the search bar. The search bar was thus moved to the top of the page to always be visible (see Figure 2).

Before



After



Figure 2. Search box moved to the top of the page based on participant feedback.

Another suggestion raised by test participants was to increase the visibility of the Library's document upload buttons. Thus, the SharePoint Consultant added a large upload button to the IKE Homepage (see Figure 3).

Before

Site Actions + Browse Page Search this site... Jackie Holmes

Northwest Justice Project IKE Home

Library Dashboards Training Contact List User Research Publications Help

Lists: Abbreviations & Acronyms Recycle Bin All Site Content

IKE: NJP Information, Knowledge, etc.

NJP-Announcements

Title	Body
How do I post an email to IKE?	This involves 2 easy steps: (1) Forward the email to this address: IKE@njps.njustice.org. You only need to type the full address the first time you post as Outlook will auto fill it the next time. (2) Now go into the Library and tag the email by right clicking on it and choosing Edit properties. (3) If there is an attachment, upload and tag this as a separate document.
Help: How do I get rid of the ribbon?	Just hit Browsers on the taskbar and it will disappear.
Forms Bank moved to IKE	The NJP Forms Bank, previously on the intranet, has been moved over to IKE. To view all of the forms, go to the Library and filter for Doc Type "Form". To see specific forms, look under Advocacy Resources.
Help: How To: Search	Tips on how to search the document library and site for information. Go to: How To: Search
Help: How To: Upload a document to IKE	A new help series is being developed to help users with various tasks on IKE. The first tutorial in the series is on uploading documents to IKE. Go to: How To: Upload a Document to IKE

Research Websites

- Washington State Statutes
- Washington State Administrative Codes
- Washington DHS EAZ Manual
- WashingtonLawhelp.org
- NJP Staff Intranet

Add new item

After

Site Actions + Browse Page Search this site... Jackie Holmes

Northwest Justice Project IKE Home

Library Dashboards Contact List User Research Publications Help NJP A to Z Glossary

Lists: My Documents Training Abbreviations & Acronyms IKE Library Wishlist Recycle Bin All Site Content

IKE: NJP Information, Knowledge, etc.

NJP-Announcements

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Help: How do I get rid of the ribbon?	Just hit Browsers on the taskbar and it will disappear.
Forms Bank moved to IKE	The NJP Forms Bank, previously on the intranet, has been moved over to IKE. To view all of the forms, go to the Library and filter for Doc Type "Form". To see specific forms, look under Advocacy Resources.
Help: How To: Search	Tips on how to search the document library and site for information. Go to: How To: Search
Help: How To: Upload a document to IKE	A new help series is being developed to help users with various tasks on IKE. The first tutorial in the series is on uploading documents to IKE. Go to: How To: Upload a Document to IKE

Upload a Document To Library

Recently Added Documents

Type	Name	Author Name
There are no items to show in this view of the "Library" document library. To add a new item, click "New" or "Upload".		

Add document

Research Websites

- Washington State Statutes
- Washington State Administrative Codes
- Washington DHS EAZ Manual
- WashingtonLawhelp.org
- NJP Staff Intranet

Add new item

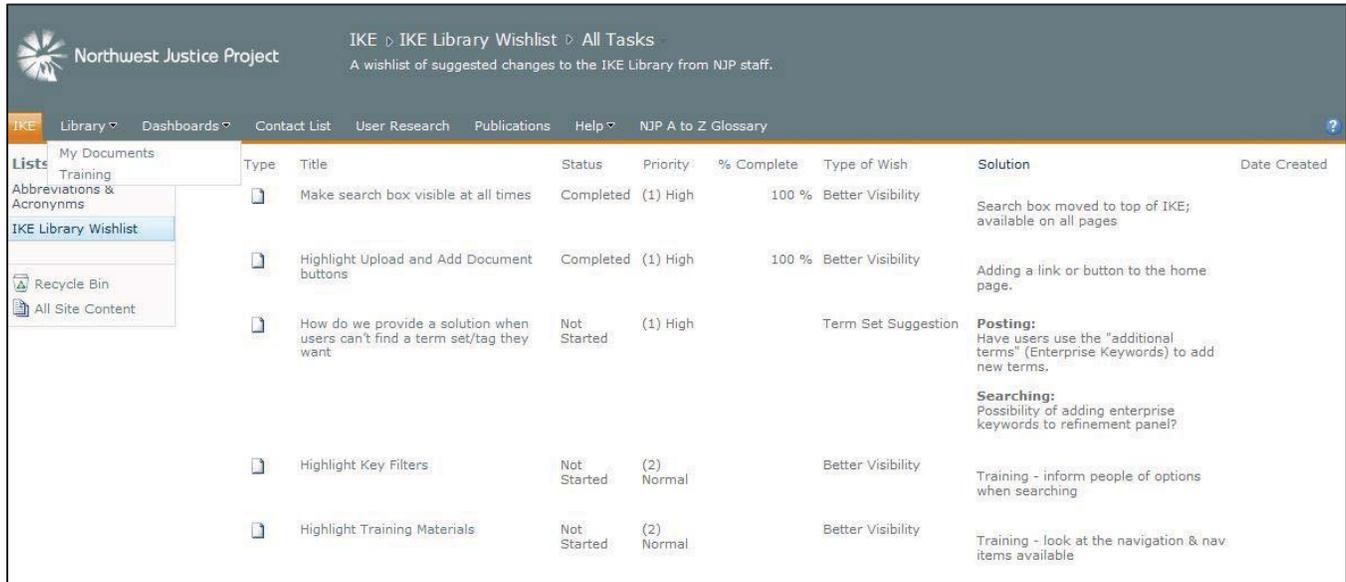
Figure 3. Upload button added to the Homepage based on participant feedback.

WISHLIST BASED ON RESULTS

The issues or suggestions that were not yet addressed were entered into IKE in an IKE Library Wishlist. The description of the issue or suggestion, type of 'wish', completion status, priority, % complete, and

Testing the IKE Library

proposed solution were determined and entered by the UX/IA intern and SharePoint Consultant (see Figure 4). The wishlist was shared to create transparency between the IKE team and the participants and to demonstrate how participant feedback is being valued. Changes to IKE based on the wishlist are still in progress. For NJP employees, the wishlist can be viewed at <http://ike/Lists/IKE%20Library%20Wishlist/AllItems.aspx>



The screenshot shows the 'IKE Library Wishlist' page with a table of suggested changes. The table has columns for Type, Title, Status, Priority, % Complete, Type of Wish, Solution, and Date Created. The 'IKE Library Wishlist' menu item is highlighted in the left navigation pane.

Type	Title	Status	Priority	% Complete	Type of Wish	Solution	Date Created
Completed	Make search box visible at all times	Completed	(1) High	100 %	Better Visibility	Search box moved to top of IKE; available on all pages	
Completed	Highlight Upload and Add Document buttons	Completed	(1) High	100 %	Better Visibility	Adding a link or button to the home page.	
Not Started	How do we provide a solution when users can't find a term set/tag they want	Not Started	(1) High		Term Set Suggestion	Posting: Have users use the "additional terms" (Enterprise Keywords) to add new terms. Searching: Possibility of adding enterprise keywords to refinement panel?	
Not Started	Highlight Key Filters	Not Started	(2) Normal		Better Visibility	Training - inform people of options when searching	
Not Started	Highlight Training Materials	Not Started	(2) Normal		Better Visibility	Training - look at the navigation & nav items available	

Figure 4. A portion of the IKE Library Wishlist showing feedback from participants.

Part VI | Conclusion

Participants in the usability tests helped discover several problems with IKE such as naming, visibility, and term set issues as well as others. The tests also helped to assess how well IKE is working to complete users' tasks by measuring the ease and time taken to complete a task, number of errors made, and participants' satisfaction with a completed task. The feedback from participants was used to make changes on IKE and to identify areas that will require training with users. Continuing to work with users will ensure a website designed with the users' needs as a central focus.

Bibliography

Nielsen, J. (n.d.). *Usability 101: Introduction to Usability*. Retrieved from <http://www.useit.com/alertbox/20030825.html>.

IKE Library Access and User Testing Plan: Recording Sheet

User name:

Date:

Pre-Test Questions

Before we begin, I'd like to ask you a few background questions...

- 1) Have you used IKE before?

- 2) When at work, where do you usually look for an electronic document?

- 3) What kind of documents do you use most often?

IKE Library Access and User Testing Plan: Recording Sheet

Task #1: Ease of uploading

You have a document you want to share with others on IKE. Please upload the document.

Total time:

Process:

Where would you go first to upload the document?

Is the upload/add document button where you would expect to find it?

What do the tags mean to you?

How would you rate the *ease* of uploading a document from 1-10 (1 being extremely difficult, 10 being extremely easy)?

1 2 3 4 5 6 7 8 9 10

Comments:

IKE Library Access and User Testing Plan: Recording Sheet

Task #2: Access to resources – find a defined document.

You are looking for an “Order to Shorten Time” form. Show how you would look for such a document and what you find.

Total time:

Process:

How would you begin looking for a document?

Why did you choose this method/feature over another?

Search keywords or tags used:

of items found:

If you did not find the document you needed, what would have helped you find it (different tags, filtering options, etc.)?

How would you rate the *ease* of finding a document from 1-10 (1 being extremely difficult, 10 being extremely easy)?

1 2 3 4 5 6 7 8 9 10

Comments:

IKE Library Access and User Testing Plan: Recording Sheet

Task #3: Access to resources – find an undefined document

You are looking for a document on [participant's choice]. Show how you would look for such a document and what you find.

Total time:

Process:

How would you begin looking for a document?

Why did you choose this method/feature over another?

Search keywords or tags used:

of items found:

If you did not find the document you needed, what would have helped you find it (different tags, filtering options, etc.)?

How would you rate the *ease* of finding a document from 1-10 (1 being extremely difficult, 10 being extremely easy)?

1 2 3 4 5 6 7 8 9 10

Comments:

IKE Library Access and User Testing Plan: Recording Sheet

Post-test questions

Is the document you found useful/Is the document what you were looking for? Why or why not?

(If yes): How will you use the document?

(If no): If you had found an appropriate document, how would you have used it?

Using the following scale, how likely are you to continue to use IKE?

Very likely

Somewhat likely

Unsure

Somewhat not likely

Not likely

Why did you choose this rating?

What would make IKE easier to use? What changes would you make?

IKE Library Access and User Testing Plan: Recording Sheet