Team 4

PactSafe Final Report

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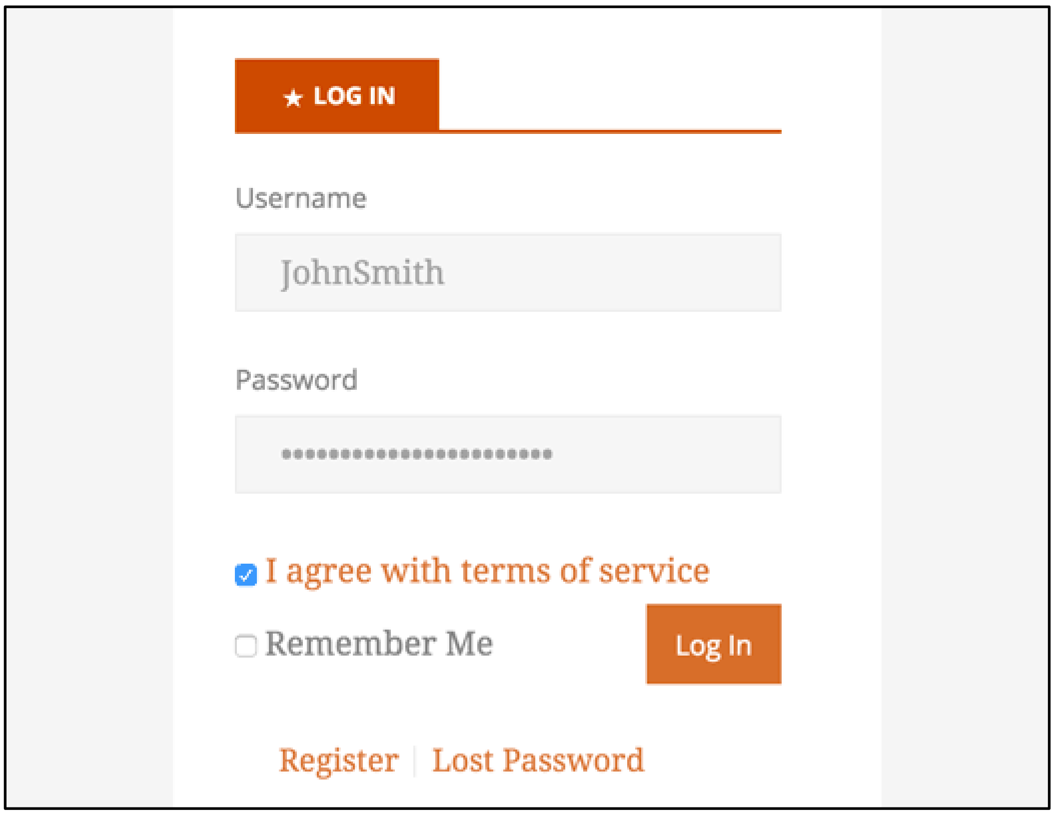
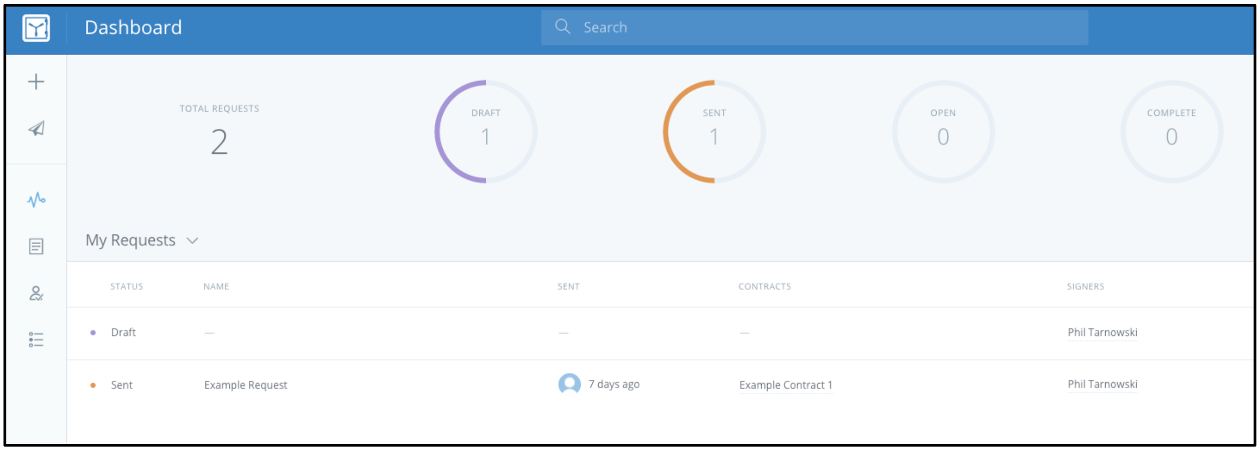
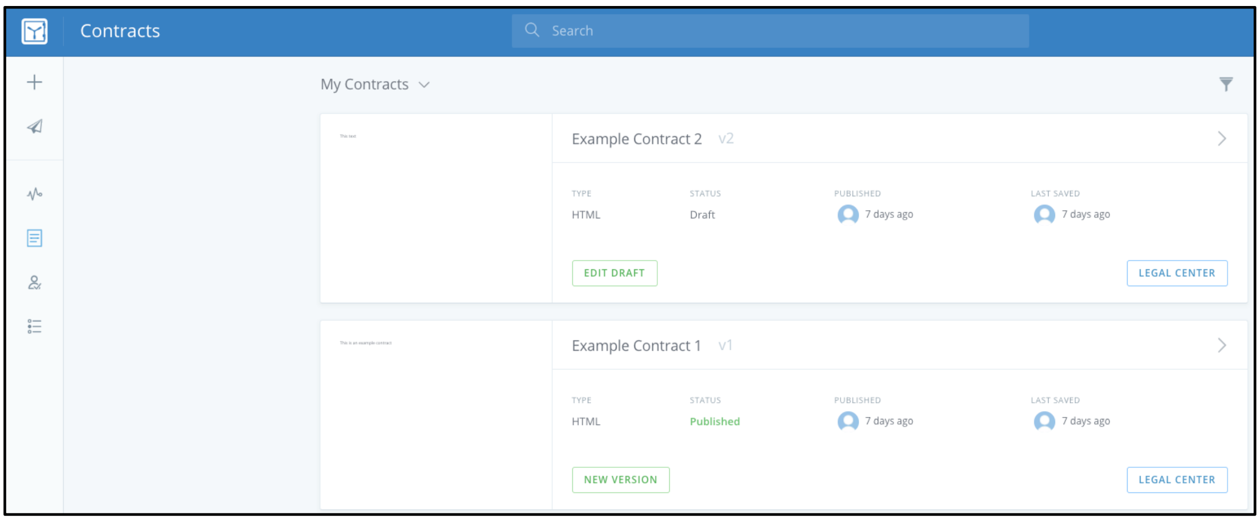
Introduction

PactSafe is a Business-to-Business software platform designed to protect companies from risk around terms of service in applications and websites. Their main selling point is around easily creating, updating, sending, and tracking terms of service contracts online. PactSafe gives companies documentation that users have accepted the company's terms of service agreement, which companies were unable to easily prove before. PactSafe can prove when users have agreed to a terms of service agreement, like users do when they select the checkbox in the example image below.



From a technical perspective, there are three main components of the software. PactSafe created a front-end software, a REST API, and an activity API. Clients of PactSafe use the activity API to put JavaScript tracking code in their application or website, much like Google Analytics. Once this code has been entered the platform, the front-end software (screenshots of the front-end software are below) allows non-technical employees to track data around terms of service agreements. Additionally, the REST API from PactSafe is often an upsell that gives clients access to much more data based on everything that PactSafe tracks, rather than just data available via the Activity API.





This study was conducted by four students enrolled in classes for their Master's of Human-Computer Interaction at IUPUI. All four students conducted think aloud interviews with one of the three main personas (Lawyers, HR Managers, and Website Managers), as well as post-test debriefing interviews to gather both quantitative and qualitative data. These interviews were conducted in an environment as similar to a normal office environment as possible, such as various study rooms across IUPUI or conference rooms.

One Mac laptop, as well as three Windows laptops, were used to demo the software to users. A combination of paper and pencil, audio recording, screen recording, and notes on the computer were used to capture data from the users. Interviews were conducted in person, and each session was documented by one of the four students. The interviewer and interviewee were the only one's present in the study room or conference room. The session captured data around navigational choices by the user during each task, the number of times users required help and direction, the number of prompts given to users to accomplish tasks, how easy each main task was for the user, as well as overall feelings and impressions of the system.

Executive Summary

This usability study gathered data through think aloud and post-test debriefing interviews. These interviews were conducted from November 16, 2016 to November 25, 2016. The purpose of these interviews was to gather data around three main usability problems in PactSafe.

Three Main Usability Problems

1. Address if new users understand what actions and terms mean in the system.
2. Identify if navigation within the application is intuitive to new users.
3. Analyze if new users of PactSafe understand what consecutive tasks they need to take to achieve their goals within the system.

Based on data from previous methods, we found that these three problems encompassed many smaller problems that users had. We wanted to further analyze these to give more targeted recommendations to PactSafe.

Key Research Questions

We identified the key Research Questions which our study aims to answer. These questions helped us to draft the metrics for gathering relevant data and analyze it. The goals were to understand:

1. To what extent is the user able to accomplish tasks without assistance?
2. How and in what form does the user seek help in case of confusion?
3. During a task, is the guidance towards next steps effective?
4. Is the experience of completing tasks positive?

We used the above as guidelines for detailed analysis of tasks and subtasks. They also helped to identify key data points from the pool of data that what address our major usability problems.

More detail about the think aloud and post-test debriefing process used to gather data for the three main usability problems is below:

Think Aloud and Post-Test Debriefing Process

- Ten participants from the 3 representative user personas were recruited. Breakdown of interviews by persona was:
  - 5 Website Managers
  - 3 Lawyers
  - 2 HR Managers

- The think aloud was designed to gather data by having users complete the three representative tasks for users in PactSafe. The three tasks were:
    - Create a Contract
    - Update a Contract
    - Send an Existing Contract
- The whole process for the users was the following:
    - Introduction - 2 minutes
    - Background Interview - 3 minutes
    - Think aloud tasks - 10 to 20 minutes
    - Post-test Debriefing - 10 minutes
    - Total - 25 to 35 minutes
- Quantitative and qualitative data was gathered from both the think aloud and post-test debriefing, which is explained in much more detail in the “Results/Findings” section of the report.

Brief Overview of Results of Study

There were some common themes from participants in our study. Some of the themes were:

- Of the three main tasks, the order of the tasks from easiest to hardest was:
    - Creating a Contract
    - Updating a Contract
    - Sending a Contract
- Users were confused about icons as navigational elements. The lack of words by the icons made navigation challenging for users.
- Users were confused by inconsistencies of navigational elements in PactSafe. The “Next” button appeared inconsistently and in unconventional places throughout the platform, making users pause to figure out navigation.
- There was terminology in the system that wasn’t completely understood by the users. Users were unsure of the definition of some terms, including more technical terms, which made understanding the intended functionality of the system challenging.

What is Included in This Report

This report contains detail about think who was recruited for this usability study, as well as the tasks they completed. It has detail about the think-aloud and post-test debriefing methods used to gather data. The report contains the results of these methods, including both quantitative and qualitative data.

The report also contains data driven recommendations of how PactSafe can improve usability of their software. These recommendations are prioritized by impact to PactSafe’s usability. The report also contains limitations of the usability study. Finally, there is a conclusion for this usability study at the end of the report, as well as appendices containing more data about the research.

Project, Users, Tasks, and Environment

Environmental Analysis:

The PactSafe organization is relatively new to the online market. The concept of simplifying and automating the process of creating and managing a contract is novel and although there are few other websites similar to it in the same domain, they do not offer the robust functionality and simplified user experience offered by PactSafe. The organization therefore aims to leverage its position in the field and establish itself before it gains significant competition.

The product is aimed at covering a large audience of those who may want to use it for their personal use or for business. The product is targeted at individuals who wants to create and send contract while also being able to manage and keep track of it. The features of the website significantly help people in the legal department of any business as well as individuals having managerial tasks, hence the website is used more commonly by people belonging to above categories. A typical instance where the product is used would be by the HR Manager of an organization who might want to create and send contracts, from his office, to employees via email for them to sign digitally. He is likely to use PactSafe again to create a new version of the contract and manage employees who have acknowledged it.

The technology however is not well known among people as they are not aware or do not think that such technology is required. PactSafe is a small organization and the lack of manpower holds them from conducting research and gaining feedback over their website. It also takes effort to create awareness and improvements in design and functionality of the website take time to implement.

Competitive Analysis:

PactSafe offers robust functionality which distinguishes itself from few similar technologies in the same domain. Few websites similar to PactSafe which are in the same domain would be DocuSign(https://www.docusign.com) and ShakeLaw(https://www.shakelaw.com/). While all three offer functionality to create, edit and send a contract, few functionalities PactSafe offers, such as those used to get details over the interactions made by the signers to whom its send and options to create new versions of the contract, are missing from the other websites. Few more nuances make PactSafe a more viable option to create and manage a legal contract.

A feature which PactSafe lacks in comparison is the use of predefined templates to help in the creation a new contract. Since the other two websites are pretty well established and have been running for some time, both sites showcase a interface design which is consistent, user friendly, and also providing good user experience. While PactSafe needs to improve on those, the design of similar websites can help guide design choices to be made to enhance the PactSafe user experience.

Potential User Profiles

1. Aaron Brandon - HR Manager:

Aaron is 39 year old male with 16 years of experience in the industry. He is the Director of Human Resources, Staffing Manager and Talent Manager of leading company Pied Piper. He has a Bachelor's Degree majoring in business and a Master's Degree in Human Resources. He is fluent with tools like Microsoft Excel, Microsoft Word, Microsoft Powerpoint, OutLook and is well exposed to popular websites.

With important responsibilities on his shoulders , he needs to balance the needs and goals of the company with its employees. He oversees identifying, interviewing, and hiring of new staff.

His key goals and tasks include:

Key Goals:

- Balancing needs and goals of the company with its employees
- Increasing work efficiency
- Securing the future of the organization

Key Tasks:

- Performance Management and Compliance
- Effective Recruiting and Staffing
- Boost Employee Morale
- Employee onboarding
- Communicating between company administration and its employees

2. Nancy Shaw - Website Manager:

Nancy is a 32 year old female with 9 years of industry experience. She is the Manager of Website and Content Development at an e-Commerce company, Neoline. She has a Bachelor’s Degree majoring in Computer Science Engineering and a Master’s Degree in Business Administration. She has expert knowledge of JavaScript, HTML, CSS, besides being proficient in Microsoft Office, Excel and Data Management tools like Jira and SVN.

She is mainly concerned with services the website of the company provides. She manages the content on the website, oversees the development of content on the web, co-ordinates with the legal department, marketing and sales team, and product team on what she should put for the customers. She also works with the design team at times to understand use requirements and create a good experience for the user of the website.

Her key goals and tasks include:

Key Goals:
- Balancing needs and goals of the customer with the company
- Increasing work efficiency
- Improving customer experience

Key Tasks:
- Performance management and compliance
- Integrating new features in the website to improve user experience
- Efficient coordination with other teams

Based on the above user profiles we concluded few user scenarios that will be used to identify the key tasks the potential users try to accomplish and if they are able to achieve them successfully or not.

3. **Ray Patterson**

Ray is a 49 year old male with more than 20 years of work experience in corporate law. He is currently a part of the Legal department as well as the General Counsel for a branch of a Multinational company, Red Oak Inc. He has an undergraduate degree in Arts and Legal Studies, has a Juris Doctor degree, has passed both his law school admission test as well as the Bar Exam successfully, and is now considered an expert in the field of corporate law and legal management.

He is a part of the Legal Counsel which discusses and drafts contracts and terms of agreements for the branch of the organization he works at. He has a heavy workload as he tries to keep himself as well as the company upto date with organizational trends in policies. He actively communicates with company management and actively tries to keep the company legally compliant and away from legal issues. He is further designated work based on the vision of the company.

His keys goals and tasks are as follows:

Key Goals:

- Keep the company legally compliant with contracts and other paperwork.
- Help employees commit to the goals of the organization through contracts
- Prevent the company from losing money from lawsuits

Key Tasks:

- Discuss and create contracts based on the requirements of the organization
- Create new versions of a contract based on changes in the organization.
- Send contract to required individuals
- Defend the company in court if there is an incident filled against the organization.

Potential User Scenarios

The interaction of the user with the software can be both a positive experience and a negative experience. The obvious goal of the study is to enhance the positive aspects of the interaction and eliminate any negative interaction a user might have with the software. The following two scenarios give a glimpse of such interactions:

1. Onboarding paperwork at Pied Piper:

Aaron very organized HR Manager at Pied Piper is tasked with employee onboarding. He is in charge of having new employees fill out their onboarding paperwork, such as insurance forms, the employee handbook, and I-9 forms.

Pied Piper has been growing very rapidly, and they are expecting to hire 300 new employees In the month of May. Aaron feels very overwhelmed by all of this. He will be sending a lot of the onboarding documents through a legal transaction system Pied Piper just started using called PactSafe.

Aaron logs into his PactSafe account to upload the onboarding documents that the legal department has provided the text for. He clicks “Create Contract,” names the contract, and performs copy and paste to input the onboarding information into PactSafe. Aaron then clicks “Publish”, and now has a newly saved onboarding document.

Aaron is organized and on top of his deadlines, so he realizes it is time to send these documents to his new hires. He clicks “Send new contract.” He creates a signer in the system, and clicks “next.” Aaron then clicks “Finish.” He thinks the contract is sent, so he exits out of the system.

2. Website Manager That Updates External Terms of Service

Nancy, an experienced website manager, is employed with an eCommerce company - Neoline. She was asked to keep track of customers visiting the website and update the website terms of service with the Return Policy conditions for the purchases made. Her friend referred him to PactSafe and their services. After exploring more about PactSafe, Nancy went ahead and subscribed to an account for an year.

With an intent to create new terms-of-service document, Nancy logs into PactSafe account. She chooses “New Contract(‘+’)” from the menu and adds the terms-of-service content containing the proposed return policy conditions. She clicks on “Save” button to save and breaks for lunch. After the break she clicks “Publish” button to publish the new conditions on her PactSafe account.
She then sends the agreement document to the signers by including their email IDs and using the “Send” option from the main menu. Nancy now plans to wait for the signers to accept the new contract document and exits the portal using the “Sign Out” option from the top-right menu. She checks her “Activity Log” for the updates.

3. Legal Counsel Creates a New Version Of A Contract to Send

Ray, an experienced lawyer is currently a part of the Legal/ General Counsel for a branch of a Multinational company, Red Oak Inc. He is asked to create a new version of a contract which adds details to the company policy that recently got revised. He understands that contracts have been created through PactSafe and gets to know that a new version of the contract can be added in the same website from the management of the company. He gets the name of the contract that was created and also receives the *username* and *password* for the account he can access.

Ray opens PactSafe to create a new version of a contract. He logs in using the username and password he received. He then identifies and clicks on the ‘contract’ icon which redirects him to the list of contracts which have been created. He scrolls to see the contract he needs to change and clicks on the ‘New Version’ button. Using the text editor, he adds the new content and clicks on Publish to create the new version. He is happy to have completed his work and responds back to the management on the same.

Explanation of Methods

Study Design:

The usability study was designed aiming to address the above mentioned usability problems. We designed a metric system that would address the research questions we wanted to answer. The metric system was uniformly used by the team to grade a participant on her/his performance. The following is the grading metric we followed:

Rating	Criteria
5	Could accomplish the task very easily
4	Could accomplish the task with one wrong click, but completed without assistance
3	Could accomplish the task with a few wrong clicks, but completed without assistance.
2	Needed a question or two answered to complete the task
1	Needed step by step instructions to complete the task
0	Could not complete the task

With the above metric, we were able to stay consistent while collecting data. We chose Think-Aloud protocol to gather qualitative data about the participant experiences and collected them in the form of voice recordings and notes. (Interview Notes)
Besides the questions about the ease of tasks (Evaluation Questions), the following data was collected in terms of the frequency of their occurrence for each task.

1. How many times did the user required help and direction?
2. How many times did the user go to the homepage to start over the task?
3. How many times did the user click on wrong button?
4. Number of prompts given?
5. Count of errors of omission?

This gave us insights into most problematic tasks and the focus areas of our study.
The procedure of the study was as follows:

Introduction to the session (2 minutes)

Discuss:
- Participant’s experience with usability studies and focus groups.
- Importance of their involvement in the study
- Moderator’s role
- Device and recording systems used
- The protocol for the rest of the session
- Thinking aloud

Background interview (3 minutes)

Discussed the participant’s experience in creating and managing contracts, based on their profession.

Tasks (10 – 20 minutes)

The following tasks were asked to be performed by the participants:

Task 1 – Create & publish a contract (10 minutes)

- Participant starts at the homepage and is requested to create a sample contract.

Task 2 – Send an existing contract (10 minutes)

- Participant will start from the homepage and is requested to send an existing sample contract to a sample Email-ID

Task 3 – Create a new version of the contract (10 minutes)

- Participant will start from the homepage and is requested to revise an existing contract and create a new version of it.

Post-test debriefing (10 minutes)

The debriefing interview covered questions correspond to the number of tasks a user was expected to perform. The interview asked broad questions regarding the problems faced by the participant, their preference in each task flow, and there overall experience with the website.

Pilot

It was important for us to run a pilot for our study to identify possible loopholes. We organized a think aloud with two colleagues. We executed the whole script for the study procedure with interview questionnaire. We introduced the participant to the website and its goals. Then we asked them to perform the three main tasks on the website. We asked them to think aloud and took the notes from their responses on various questions. We verified the flow of our questions and also tried to identify weak areas where we would unintentionally give any cues unless asked for. Giving cues to perform task can corrupt data. We added several quantitative questions after the pilot study probing in details of the tasks.

Participant Recruitment

The participant recruitment was done based on the personas that guided us through our entire study.

Characteristic	**Desired Number of Participants**
Participant Type HR Manager Lawyer/Paralegal Website Manager	 2 3 5
Total Number of Participants	10
Age 21 - 30 31 - 40	 8 2
Gender Male Female	 5 5

The participants were reached out through email and by contacting them personally. We scheduled interviews with more number of participants, in case , people did not turn up. There were total 13 people contacted after which 11 interviews were conducted. 1 participant data was scraped as he turned out to be a non ideal candidate for the study. (Think Aloud Notes)

Tasks Evaluated

The three representative tasks are as follows:

1. Create a Contract
2. Update a Contract
3. Send a Contract

We further divided these tasks into subtasks to answer detailed usability questions. These were as follows:

Task	Sub Tasks
Create a contact	
	Find the create button
	Fill in details of the title and description
	Find the text editor for adding conditions
	Insert the objects in the text editor
	Save the contract
Update the contract	
	Find the 'contracts' section
	Find 'new version'
	Make changes to the contract
Send the contract	
	Find the Send icon in the left ribbon
	Click the "Next" button after filling out name and description
	Add someone with a new email address
	Select the next button after adding signers and recipients
	Select a contract
	Click the finish button after selecting a contract
	Fill out information on the Sending contract modal

These sub tasks were graded separately based on the grading metric we designed.

Data Collection and Analysis

We consolidated all the quantitative and qualitative data separately. We consolidated the graded questions into charts that answered the following questions.

1. Which Task requires more help?
2. On which task does the user make most mistakes?
3. How much does the user access homepage?
4. How easy is the task flow (based on sub tasks)?
5. For which Persona are the Tasks more easy?
6. What are 4 hardest sub tasks?

7. What areas of navigation are most confusing?

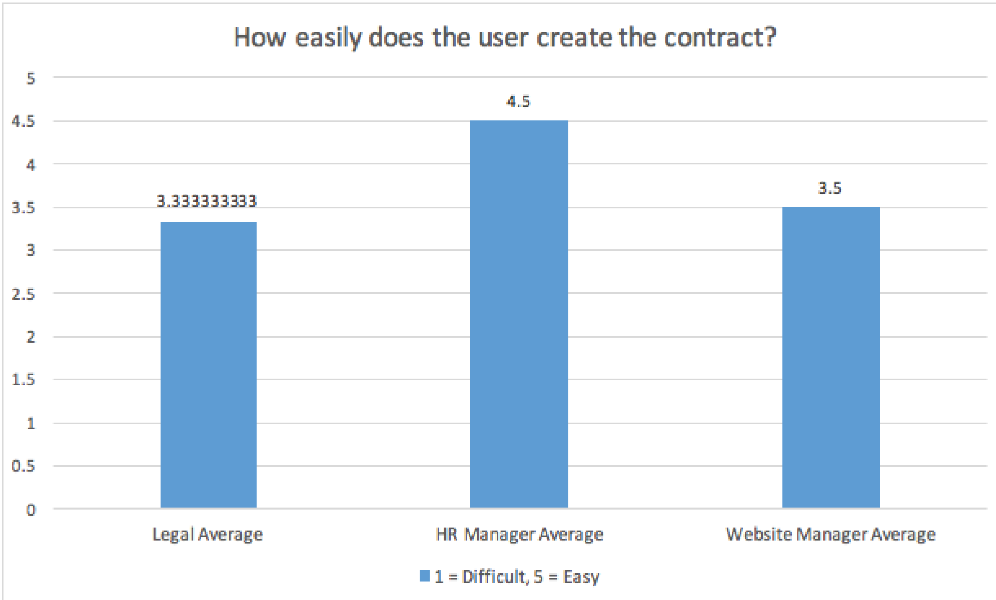
The above questions helped us consolidate data in more systematic manner.
For Qualitative data, we relied on the audio recordings and the interview notes. We collected the data and compiled them along with the screen shots of the problem areas. The detailed results are covered in the next section.

Explanation of Results/Findings

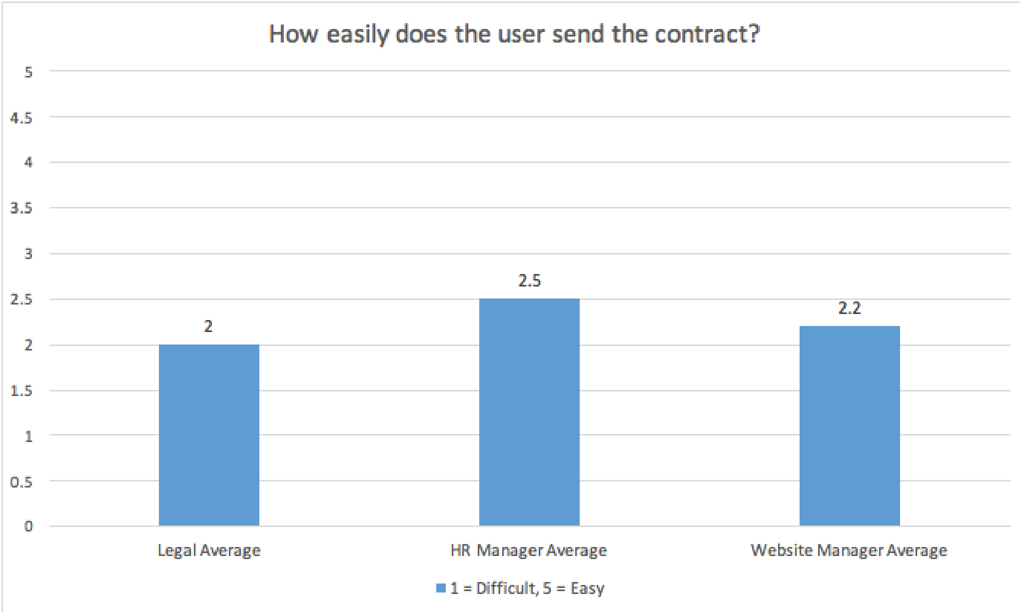
To each of the above questions, charts were framed to visualize the data and yield insights over certain problems, its characteristics and its probable solution. The solutions will later act as suggestions to improve the usability of the product.
To each of the questions, quantitative data was measured from a scale of 0-5 suggested in design study.

The below charts indicates how easily a user was able to create, send and update a contract based on the three personas that were discovered during the initial phases of the study.

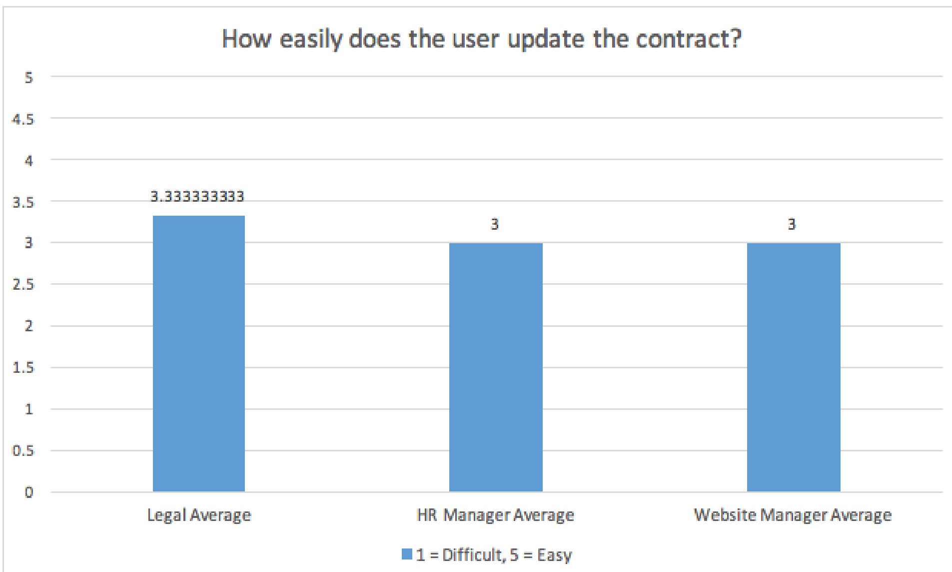
Create Contract:



Send Contract:

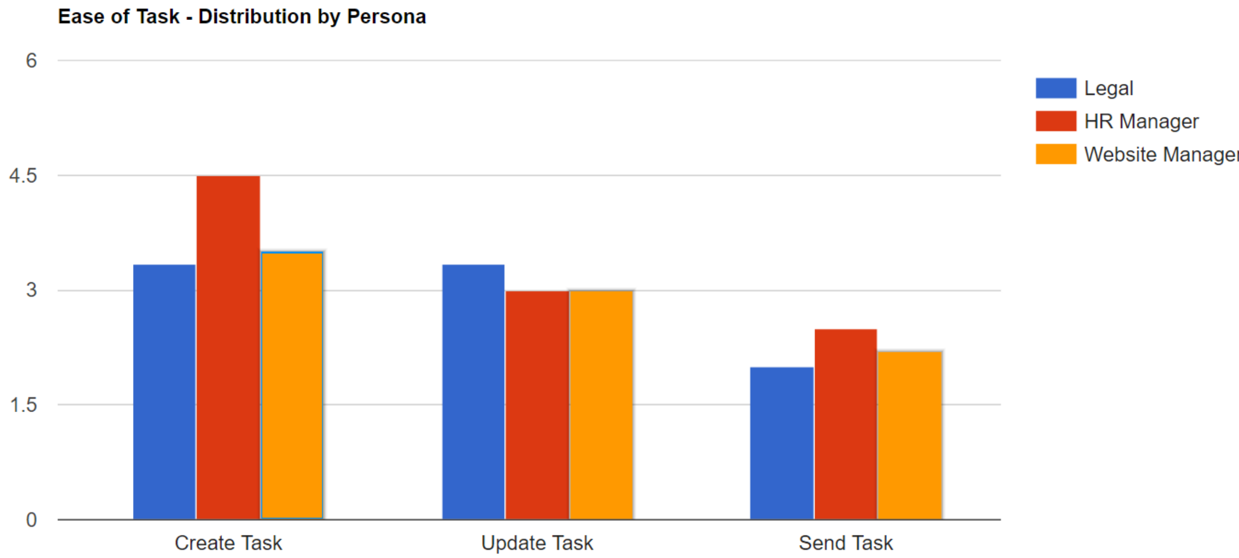


Update a contract:

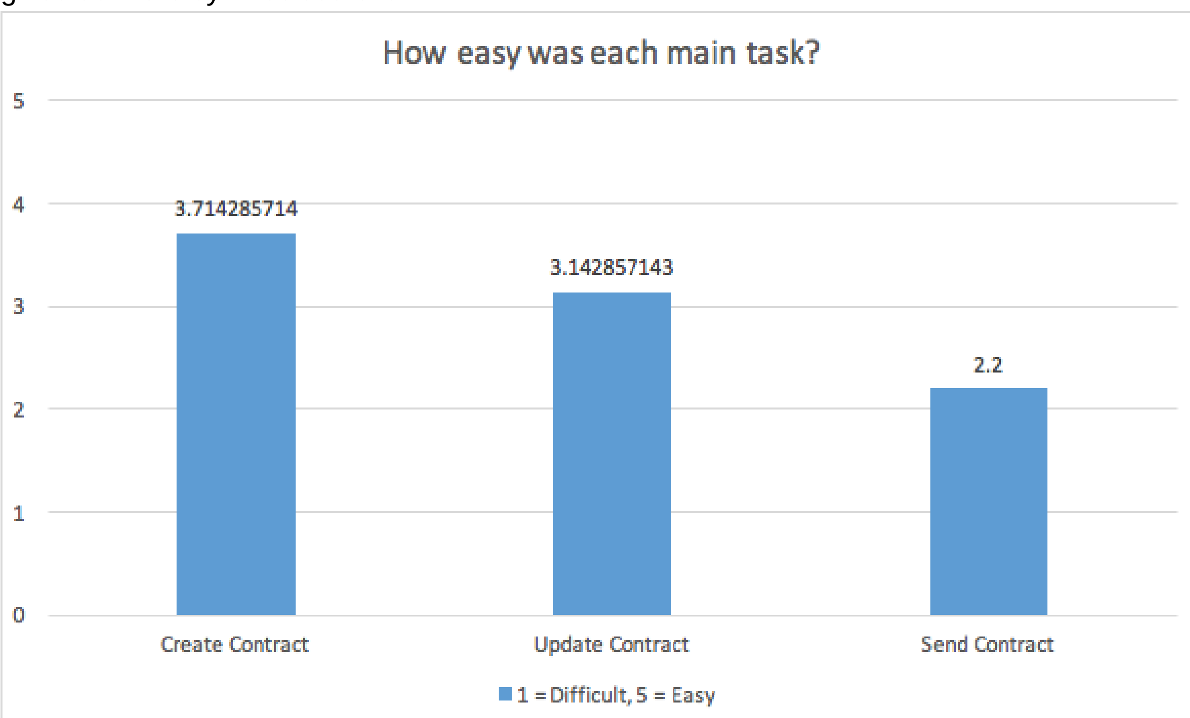


Based on the above charts and qualitative data that were collected, our hypothesis that people of law are not too competent with technology and have a slower learning curve than that of a HR or a Website Manager was confirmed and the two latter were more well exposed to technology and other websites.

To gain a broader view of the above charts, a combined chart which allowed for comparisons between tasks and personas was created to make observations more easily.

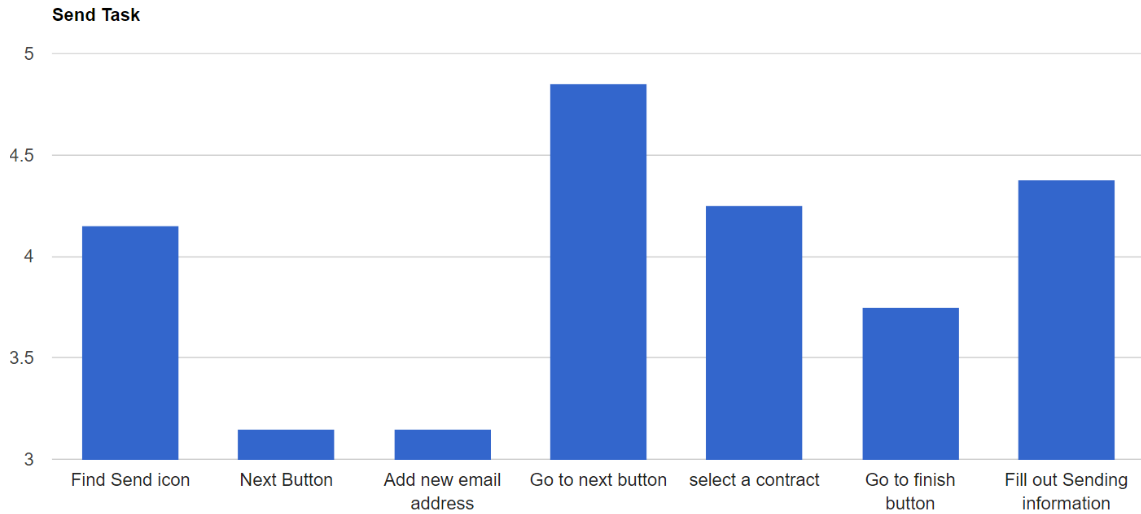


In order to focus more on the tasks themselves and how easy it was, data was stretched to gives us more synthesised chart.



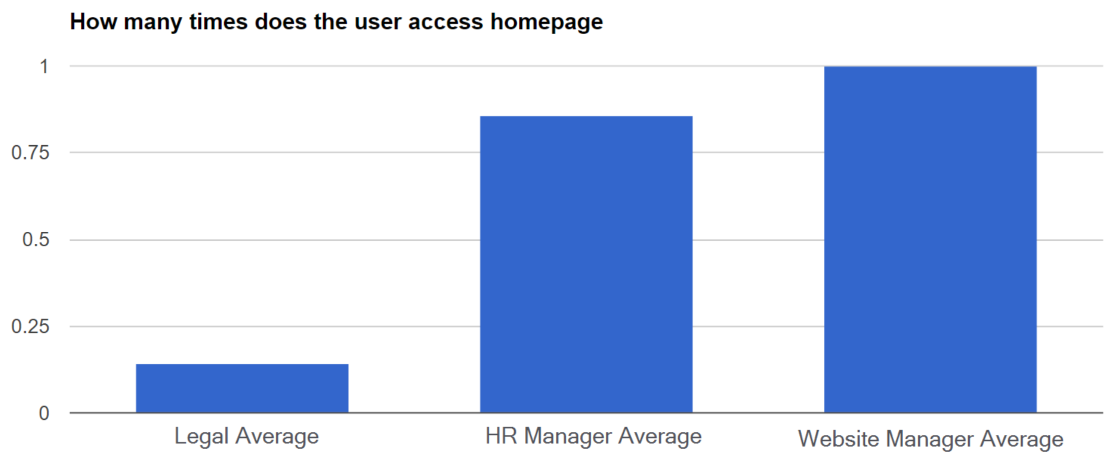
Our analysis declared that ‘sending a contract’ was the most difficult task a user was asked to perform over the website. We decided to give this task priority over other tasks and chose to focus onto this problem first and suggest changes to the ‘send contract’ task above all other issues.

To better understand the problem, each of the subtasks involved in the ‘send contract’ task was measured to hone into specific usability challenges.



The evidence from our visualization showed the that selecting the ‘next button’ and ‘adding a new email address’ was the subtasks which were creating the most problems. This finding, coupled with the qualitative data of how user’s reported their experience of being confused with navigation inconsistencies, led us to recommend improvements over these aspects of the ‘send contract’ task.

Our study over the navigational aspects of the website extended to us measuring how often people try to access PactSafe’s homepage. Although our expectation was that people might tend access the homepage to a considerable extent, our data indicated otherwise. Our finding reported that people rarely access, or try to access, the homepage of the website. Due to this, we decided to avoid suggestions over this aspect of the website’s design.



Through the think-aloud technique, observations were made over people’s preferences over features and it’s placements. Other observations which were common to all participants were incorporated to suggestions made as a part of our recommendations. Think-Alouds are detailed in the appendix.

Explanation of Recommendations

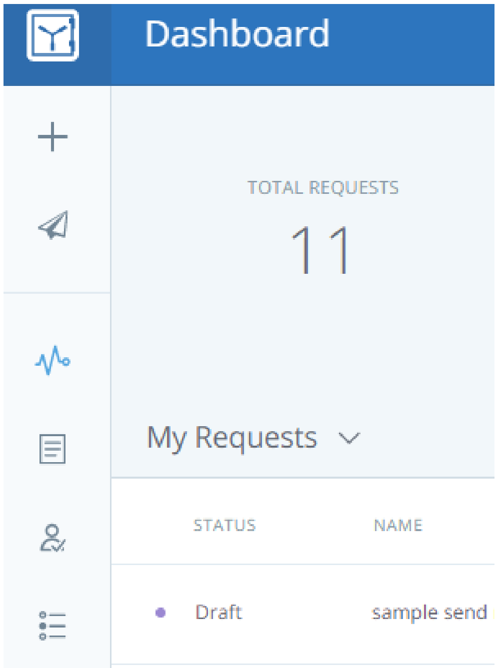
Based on our results and findings from the usability testing sessions, we have provided the following recommendations for the *PactSafe* product. In comparison to the number of usability issues found during the evaluation, the task of sending the contract surfaced majority of the usability problems. Hence, most of the below recommendations are concentrated towards the interfaces involved while sending a contract to a signer.

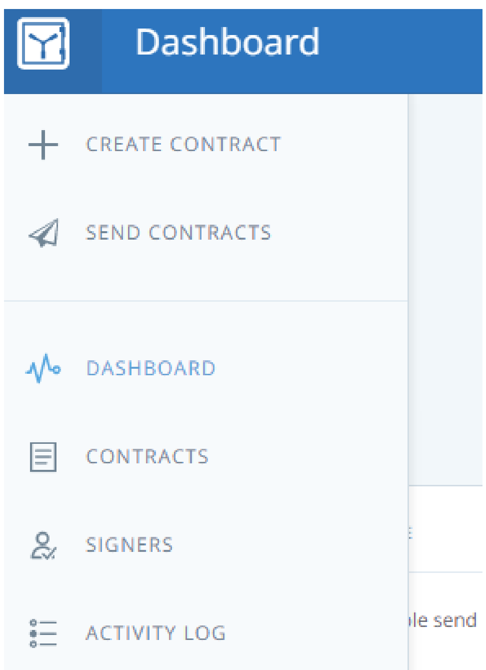
Recommendation: *Provide labels for the buttons under the main menu in the dashboard interface.*

Below is the table indicating the change recommended along with the justification which is based on usability evaluation results.

Change	Justification	Severity
Provide labels for the main menu options by default in the dashboard interface (Refer to the screen images in the below table).	An average rating of 3.71 (out of 5) was provided by the participants for the easiness of finding ‘Create Contract’, ‘Update Contract’, and ‘Send Contract’ menu options when they attempted the tasks. 4 out of 10 participants made a mistake of choosing ‘Contracts’ menu option instead of ‘Send Contract’ option while trying to send a contract.	High

The following table contains the screenshots related to the aforementioned recommendation:





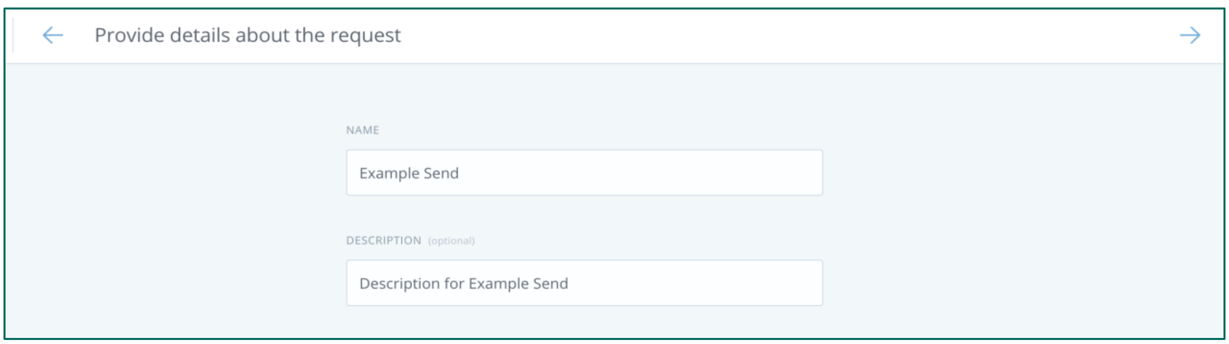
Existing Main Menu options Recommended Main Menu View

Recommendation: *While sending a contract, provide "Next" button at the bottom of the form instead of placing at top-right corner of the page (Include a "Next" label along with the arrow button").*

Below is the table indicating the change recommended along with the justification which is based on usability evaluation results.

Change	Justification	Severity
Placement of “Next” button needs to be present at the bottom of the page. (Refer to the screen images in the below table).	An average rating of 3.5 (out of 5) was provided by the participants for the easiness of finding the “Next” button when they attempted the task of sending a contract.	High

The following table contains the screenshots related to the aforementioned recommendation:



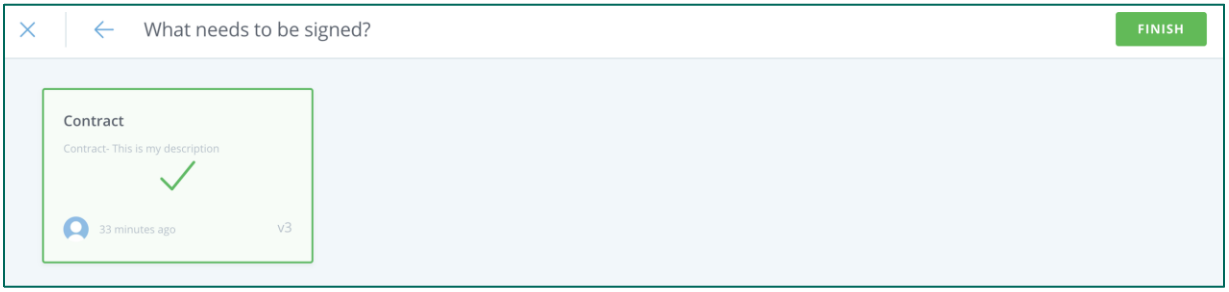
The “Next” button arrow to be placed at the bottom of the form and with a label - “Next”.

Recommendation - *While sending a contract*, *provide a selectable option on the contracts list (similar to checkbox).*

Below is the table indicating the change recommended along with the justification which is based on usability evaluation results.

Change	Justification	Severity
Provide a selectable option on each of the contracts. (Refer to the screen image in the below table).	An average rating of 3.5 (out of 5) was provided by the participants for the easiness of selecting a contract from list of contracts when they attempted the task of sending a contract.	High

The following table contains the screenshots related to the aforementioned recommendation:



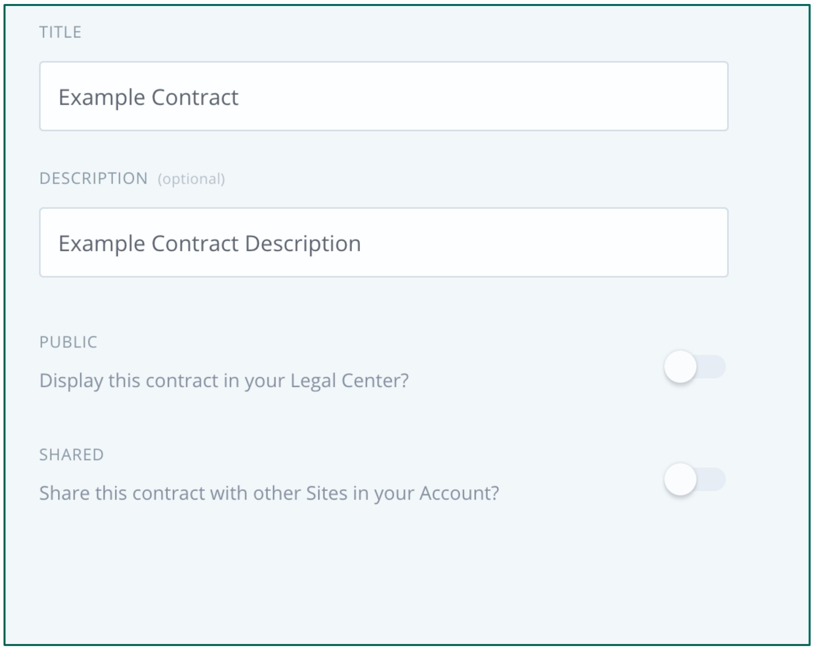
The plane contract boxes did implicitly convey they are selectable for a first time user. By including a selectable option similar to checkbox over the box would avoid skipping them.

Recommendation - *While creating a contract*, *provide information about the terminology in the form of help and documentation for ‘Public’ and ‘Shared’ terms.*

Below is the table indicating the change recommended along with the justification which is based on usability evaluation results.

Change	Justification	Severity
Provide information about the terminology used under ‘Create Contract’ interface (Refer to the screen image in the below table).	An average rating of 1.8 (out of 5) was provided by the participants for the easiness of creating a contract when they attempted the task of sending a contract (This measure is based on the number of times they required help).	High

The following table contains the screenshots related to the aforementioned recommendation:



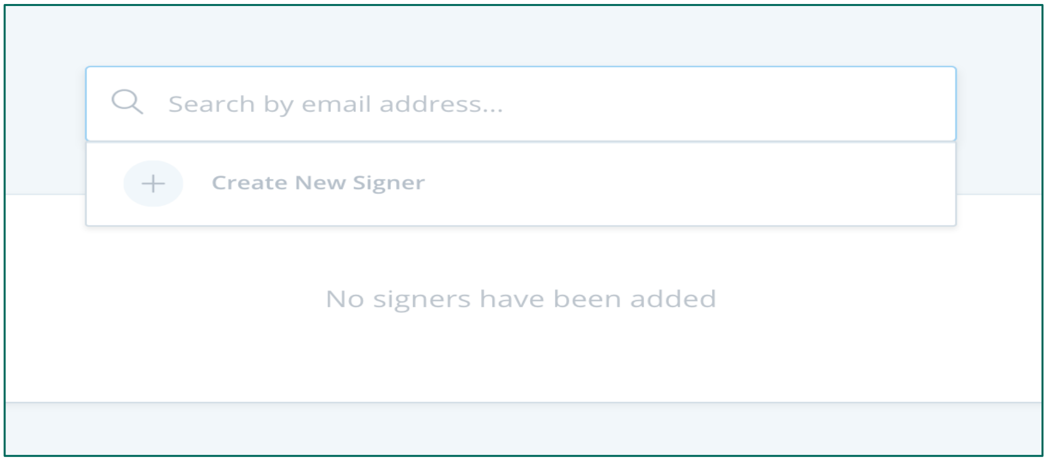
During ‘Create Contract’ task, the interface with contract details requires help and documentation for the terms - ‘Public’ and ‘Shared’.

Recommendation - *While sending a contract*, *separate the options of ‘searching an existing signer’ and ‘creating a new signer’.*

Below is the table indicating the change recommended along with the justification which is based on usability evaluation results.

Change	Justification	Severity
Provide separate options to Create a new signer and search an existing signer. (Refer to the screen image in the below table).	An average rating of 3.3 (out of 5) was provided by the participants for the easiness of selecting a signer when they attempted the task of sending a contract.	High

The following table contains the screenshots related to the aforementioned recommendation:



Since the email suggestions does not show up immediately and adding a new signer is blocked, the participants expressed difficulty. The two functionalities - ‘Searching’ and ‘Creating a new signer’ can be separated to ease up the signer addition.

Limitations

As is expected with any usability study, there were some limitations. Every method of usability research has both its strengths and weaknesses, and below is a list of our limitations in this study, followed by a more detailed explanation of each limitation.

Limitations

1. User behavior might be different when they are not being watched.
2. Think alouds slow down the thought process of users, so they might be more careful when analyzing the system.
3. Participants were in the same field as our personas, but they were not the exact description of our personas
4. The test environment is not identical to where real users would use PactSafe

<u>User behavior might be different when they are not being watched</u>

Based on the test environment of the think aloud where a moderator directly watches the participant, it is possible that user behavior was affected by the pure nature of being observed. When people are being watched, they don’t act completely natural. A user might just start clicking around to learn when they are not being watched, but they might try to behave more logically if they are watched.

Think alouds slow down the thought process of users, so they might be more careful when analyzing the system

Due to the nature of think alouds, participants tend to take actions slower in the system because they have to vocalize their thoughts. Users are talking out loud as they are navigating, which makes them really think through what they are saying, instead of just trying to navigate through the site first. This slowed thought is a limitation because users won't be acting exactly the same when navigating in the system in their own office environment.

Participants were in the same field as our personas, but they were not the exact description of our personas

As previously mentioned, the 3 personas that we identified as representative of our target users are Lawyers, HR Managers, and Website Managers. We were able to recruit Website Managers that were very similar to our personas, but we had to recruit participants that were not exactly our target users for Lawyers and HR Managers.

For the Lawyer persona, we interviewed law students. For the HR Manager persona, we interviewed a Technical Recruiter and an HR Specialist. These users were in the same field as our target users, which is why we selected them. However, the fact that these users didn't have the exact job role is a limitation in our study.

The test environment is not identical to where real users would use PactSafe

As previously stated, our think aloud and post-session debriefing interviews were conducted in various study rooms across IUPUI or conference rooms. They were conducted in a quiet environment with minimal distractions. The interviewer and the participant were the only two people in the room.

The limitation is that various study rooms across IUPUI and conference rooms are not identical to the office environment where representative users would use PactSafe. In an office environment, there could be interruptions such as coworkers interrupting work with a conversation, phone calls making distracting noise, or other various distractions that come with working in an office. Some office environments might be really quiet and similar to the environment we created in our study, and it is hard to know if PactSafe would be used in a quiet or loud office since each office is different. However, the limitation is that the environment in our study and an office environment are not identical.

Conclusion

The overall goal of our usability study was to explore how people use PactSafe and provide recommendations which will improve the usability of the product. After the initial phases where the group finished exploring the system through cognitive and heuristic evaluations, study was extended to the potential users of the application to see how it best fit their needs.

Characterizing personas from the context of use and the description provided by PactSafe helped the group focus on a representative population over which insight could be gathered. These insights were aimed at providing improvements to the design and functionality of the product.

Recognizing PactSafe's goals, data was gathered over users of the representative population through the application of various usability measuring techniques such as interviews, think alouds and observations. These methods provided insightful data which could be characterized as 'quantitative' or 'qualitative'.

The gathered data was analyzed based on hypothesis constructed from our research and recommendations were framed to improve the user's experience with the product. The results of our study will be provided to PactSafe to help PactSafe benefit from their future work and subsequent iterations of the product.

Appendices

Interview Questionnaire

Issues to Explore	**Success Criteria**
How easily does the user log into the PactSafe system? (circle one) ● Very easily ● One wrong click, but completed without assistance ● A few wrong clicks, but completed without assistance ● Needed a question or two answered ● Needed step by step instructions	User logs into the PactSafe system
How easily does the user create the contract? (circle one) ● Very easily ● One wrong click, but completed without assistance ● A few wrong clicks, but completed without	User creates a contract and clicks the “Save” or “Publish” button.

assistance • Needed a question or two answered • Needed step by step instructions	
How easily does the user update the contract? (circle one) • Very easily • One wrong click, but completed without assistance • A few wrong clicks, but completed without assistance • Needed a question or two answered • Needed step by step instructions	User updates the text of an existing contract and clicks the “Save” or “Publish” button.
How easily does the user send the contract? (circle one) • Very easily • One wrong click, but completed without assistance • A few wrong clicks, but completed without assistance • Needed a question or two answered • Needed step by step instructions	User successfully sends the contract to ptarnows@iupui.edu

Think-Aloud Notes

Lawyer Person - Interview 1

Task: *Creating a new contract*

- Asked if they could upload a local contract because people don’t type things from scratch.
- Expected an option to display contract templates or those which were already created, so that they could use them and create a new one (preferred using templates cus that’s what people do).
- They don’t type entire drafts. Wasn’t sure if there was spellcheck. Assumed spellcheck was to be activated using a button.
- Clicked on the ‘three horizontal lines’ and tried closing the pane by moving the mouse to the border of the pane and the document and trying to resize it.

Task: *Sending a contract to a signer*

- Could not find the send contract button initially. Later found it.
- They were confused with what ‘request’ meant.
- To them, ‘name’ implied name of the contract to send.
- They were confused, had to help them. Did not know where the ‘next’ button was(had to help).
- They indicated a use case where the sending option wouldn’t work if one single contract required two or more signatures.
- Did not realize they needed to select a contract before clicking on ‘Finish’.
- Was confused, had to teach them that they needed to select a contract first before sending it.
- They felt like the process was a maze in general. Would’ve preferred it to be more simple.

Task: *Create a new version for an existing contract*

- Clicked on the contracts page on her first try (don’t know if it was luck or if actually remembered from previous attempts).
- Clarified with me if the ‘new version’ was what was required.
- They realized that they was right.
- Finished creating a new version. Some experience from using the website might have helped them.

General notes:

Dashboard icons look clickable. Never used the home button and never figured out what it was. preferred a tutorial at the beginning which showed possibilities and the icon information. What if ‘contracts’ icon opened up and indicated two options ‘create new contract’ and ‘view existing contract’. Prefered if everything was clearly worded cus they really don’t want to make a mistake with anything and the website could help with that.

Lawyer Person - Interview 2

Task: *Creating a new contract*

- Legal center and other stuff were not looked at, directly clicked on ‘create’ button.
- Expected borders, but figured out where to type.
- Space in right and left could be used for options such as the ‘three horizontal lines’.
- Clicked on the ‘resources’ icon as she assumed it would help with the contract creation.
- Asked what a ticket was.
- Tried clicking on the back button and was entirely confused.
- Took a couple of minutes for her to get back to the document page. But it was empty and they were upset that the typed content wasn’t automatically saved.

Task: *Sending a contract to a signer*

- Could not find the send contract button initially. Later found it.
- Typed her name in the 'name' section. Had to explain what 'name' meant.
- The participant did not know where the 'next' button was (had to help).
- Proceeded to next step. Did not realize she needed to select a contract before clicking on 'Finish'.
- Elements in the sending page were a bit confusing to her but thought it was really useful after I explained things. Sent the contract.

Task: *Create a new version for an existing contract*

- The participant started off at the home page. Clicked on each page one by one.
- The participant reached the contracts page but she misunderstood the meaning of 'new version'.
- The participant assumed 'new' would create something which was entirely new and that it wasn't going to be a revision. Had to help her out on that.

General notes: Dashboard icon looked like 'math' which made her anxious. Didn't really like the empty dashboard. Preferred something indicating her location, weather, activity information, better ways to write a contract etc. wasn't really specific. Became extremely anxious cus she didn't know a lot of things. Never clicked on the home button(never opened the side-pane either). Dashboard icons look clickable.

Explored the resources icon at the bottom, but was confused with a lot of things. She liked the 'release notes' and preferred reading that before she started using the site. Preferred knowing who created the website so she could contact them in case of a hacking incident or whatever. Couldn't close the resources tab.

HR Manager Persona - Interview 1

Creating contract

- Button is on the side and easy to get to
- He didn't know what to do for the legal center; wasn't sure what it meant by public related to contracts
- He clicked menu button on the contract screen after saving the contract; he wasn't sure what it did or if he needed to add more options
- Once he clicked publish, he wasn't sure he was done

Sending Contract

- He clicked top right arrow of contract from the "Contracts" screen because he was there after publishing the contract
- He didn't really understand "provide details to request"
    - Thought the 2 fields were the same
    - No enter button or anything, and thought top right placement didn't jump out

- On search email, he clicked around a lot
    - He got frustrated here
    - It didn't really make sense because he had to enter before being able to create someone with an email
    - He tried clicking on the create
- On dashboard after selecting contract, he clicked "send"
    - Send screen made sense
    - He liked the circle gauge updating status

Creating a new Version
- Figured out creating a new version pretty simply
    - He got there from the dashboard, and he seemed to use the dashboard as the home screen
    - He liked show differences feature
    - He forgot to publish it the first time, and had to go back to publish it

HR Manager Persona - Interview 2

Creating a Contract
- She misunderstood the functionality of the legal center
    - She said she doesn't want contract to be public to everyone
    - She assumed people outside of the software system would view the contract if it was "public"
    - She thought it would be public to other people in the world, not within the company/software of PactSafe
- Bottom right help window bothered her; she didn't close it out for a little bit, but eventually got annoyed and closed it out
- She wasn't sure what all needed to be added after typing the content of the contract
    - Didn't know what a token was; field too
    - She didn't click save and just published the contract

Updating a Contract
- She first looked for editing a contract on the left ribbon
    - The button "new version" was not intuitive to her that you were actually "editing" an existing contract
- The first time she created a contract, she didn't click save but just clicked "publish"
    - The second time, she clicked save and publish

Sending a Contract
- She first clicked on the edited version of the contract again from the contracts screen
    - She then clicked send on the left ribbon to successfully get there
- She felt the arrow CTA should be in the bottom right when sending
- Terminology was confusing of signer/recipient

    - She thought if trying to send a contract to someone, they would be the recipient, but she also wasn’t sure what that would mean about who the signer would be
- She thought she was completely done after clicking “Finish”
    - Got annoyed that the word finish was there when the process wasn’t really finished
    - It was easy for her to send, but she wasn’t sure that she had successfully done it
- She didn’t know why the resend option appeared right after successfully sending, or why you would resend it
    - She thought option to resend shouldn’t be there immediately
    - She also didn’t think she was done the dashboard progress bar didn’t get to “complete”

Website Manager Persona - Interview 1

Task: *Sending a Non-Disclosure Agreement to a signer*
The participant was given the task of sending a contract from a list of existing contracts to the singers’ email address provided and was initiated from the point of website login.

Think-Aloud notes

- The participant mentioned that to send a contract they wanted to start from a list of contracts in the website and found the ‘Contracts’ button the main menu as the appropriate one and totally ignored the ‘Send Contracts’ button present in the main menu.
- The participant got confused as the ‘>’ (arrow button) present on the particular contract did not lead to them to any ‘Send’ functionality for that contract.
- The participant decided to go back and try again.
- The participant was happy when they found out the ‘Send Contracts’ button in the main menu and told that they missed this button since the button icon was not clear of its action.
- The participant mentioned that adding signers’ email could be more easy.
- Again, the participant mentioned the next button in not in the expected place (at the bottom of the page).

Website Manager Persona - Interview 2

Task: *Sending a ‘Product Delivery Terms And Conditions agreement’ to a signer*
The participant was given the task of sending a contract from a list of existing contracts to the singers’ email address provided and was initiated from the point of website login.

Think-Aloud notes

- Since the dashboard icon was not active even though the website interface was showing dashboard, the participant expressed his confusion about this.

- The participant mentioned that suggestion list shown during signer email addition should become active for single character input and not wait for user to input entire email address.
- The participant told the 'Next' button is placed at top instead of placing at the bottom of interface.
- Also, the participant mentioned that overall UI is responsive but options for contracts in the list of contracts is missing.
- The participant expressed that for the first time it took many actions to perform the task but once explored, this task would be easy.

Website Manager Persona - Interview 3

Task: *Sending a 'Terms of Service agreement' to a signer*
The participant began with the task of sending a contract with terms of service from a list of existing contracts to the singers' email address provided and was initiated from the point of website login.

Think-Aloud notes

- The participant was confused about the initial action. Whether to choose 'Send Contract' or go to 'Contract list' from the main menu to perform the task.
- It required the participant to go to the homepage many times to figure out the appropriate send action.
- The participant told the 'Next' button is placed at top instead of placing at the bottom of interface.
- Also, the participant expressed that they were not able to get feedback if their contract sending action is complete and what is the next step.
- The participant required help and direction more than five times during the tasks.
- The participant mentioned that providing checkboxes when choosing contracts would help provide feedback on contracts selected.
- Also, the participant told if the system can provide a notification that none of the contracts were chosen and to go back choose from the list, would help avoid mistake.

Website Manager Persona - Interview 4

Task*: Send a Contract*
The participant was given the task of publishing a contract from the existing contracts.

Think-Aloud notes

- On Contracts page, the participant had trouble finding how to publish the contract.
- On Send Contracts page, the send button greyed out signifying some fields were missing.
- Errors occurred while sending the contract , but there are no clear instructions on how to rectify those errors.

- No indication of on where is the published contract. Maybe the keyword “publish” is misleading.
- Activity log does not provide any useful information.
- What are signers? Not sure of the terminology.
- Lot of click required to find the send button.
- The term “Finish” is misleading. It could be “Next”.

Task*: Create a Contract*
The participant was given the task of creating a contract from the existing contracts.

Think-Aloud notes
- Contracts button was fairly easy to find
- Drafting the contract by inserting elements was a bit confusing.
- The insert button had some integrated tasks, which were denoted by symbols. Did not completely understand what they meant.
- No difference between the “required” field in the Token button. Does not make any difference on the token inserted.

Website Manager Persona - Interview 5

Task*: Create a Contract*
The participant was given the task of publishing a contract from the existing contracts.

Think-Aloud notes
- No idea about what Description, Legal Center or Sharing sites means.
- How to introduce “I agree” token in the system. Struggling to find it.
- Difficulty in understanding and Editing a token.

Task*: Send a Contract*
The participant was given the task of sending a contract from the existing contracts.

Think-Aloud notes
- Do i need to share the link like a “google docs”.
- Not sure how to reach the send screen.
- Adding signers was fairly easy.

Task*: Update a Contract*
The participant was given the task of updating a contract from the existing contracts.

Think-Aloud notes
- Not sure if the previous one contract will be edited or will stay the same.
- Unable to create a new version, without assistance.

Post-Task Debriefing Questions

Questions(Asked based on the task executed)	**Notes**
What do you think about the process of creating a contract?	The process is a bit confusing. Specially the insert options. The functionality of Tokens is unclear
What about the process of updating a contract that already existed?	It was several clicks before he could find the screen to update the contracts.
How easy was it to send the contract?	Sending the contract was easy. There were several errors, but there was no guidance on what to do if an error occurs.
Did you understand what all the terminology meant within the system?	Some terms were confusing, like the Legal Center and Site Account. Some help would have come handy.
What are your overall impressions of PactSafe?	It is a fairly simple website with neat design. It is a bit difficult to grasp in the beginning and takes some time to get a hang of it
Is there anything else you think we should know ?	No

Evaluation Questions

How easily does the user create the contract?	
	How easily does the user find the create button
	How easily does the user successfully fill in details of the title and desctiption
	How easily does the user find the text editor for adding conditions
	How easily is the user able to insert the objects in the text editor
	How easily is the user able to save the contract
How easily does the user update the contract?	
	How easily is the user able to find the 'contracts' section

	How easily is the user able to find 'new version'
	How easily was the user able to make changes to the contract
How easily does the user send the contract?	
	How easily does the user find the Send icon in the left ribbon?
	How easily does the user click the "Next" button after filling out name and description?
	How easily does the user add someone with a new email address?
	How easily does the user select the next button after adding signers and recipients?
	How easily does the user select a contract?
	How easily does the user click the finish button after selecting a contract?
	How easily does the user fill out information on the Sending contract modal?