Appendix D

H#	Issue	Jira	Pivotal Tracker	Severity	Pic ID	Suggestions
1	No feedback ensuring that the sprint was created successfully.	T(6)	-	2	-	Providing feedback.
	No response when pressing on the Cancel button.	-	T(1)T(5)T(6) T(13)	3 _	P14.1	Cancel button should close the current interface and display the previous interface to the user.
2	The option" Issue Type" is not expressive.	T(5)	-	3	-	Use an expressive label such As "Issue Settings".
	The user may not be familiar with the label "Collapse" and used to save and close the story.	-	T(4)T(5)T(8)	3	P4.2	Use an expressive label such As "Save and Collapse".
	The "history" metaphor does not clearly reflect the story's history.	-	T(4)	3	P4.2	Use an expressive metaphor.
	The " Owner" field reflects the members, while the "Requester" reflects the product owner or someone else in a customer role, and that person will also do the final acceptance of the story.	-	T(8)	4	P8.2	Use words that the user is familiar with such as member instead of the owner.
3	The priority options list forces the user to choose a new priority while removing the current option from the list and not offering any cancellation option.	T(5)	-	2	Pic5.3	-
	The sprint was created directly after pressing the "Create Sprint" button with no option to go back or cancel.	T(6)	-	2	-	It is better to open a new window after clicking on the "Create sprint" button and let the user enter all the sprint details.
	The manage account page has no back button because it was opened on a new webpage, which can be confusing and cause the user to close the browser.	T(13)	-	2	-	Open the manage account page within the current page.
	There is no exit such as "Back/Cancel" when the user creates a project.	-	T(1)	4	P1.3	Providing an exit button.

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H#	Issue	Jira	Pivotal Tracker	Severity	Pic ID	Suggestions
4	The order or position of the buttons are not consistent with the rest of the interfaces and other systems.	T(1)T(2)T(3) T(12) T(13) T(14)	T(1)T(2)T(3) T(12) T(13) T(14)	2	Pic1.4 Pic2.5.2 P1.4 P13.4 P14.4.1 P15.4 Pic3.4and8 Pic13.4 P1.4 Pic14.4	Keep positions and order of the buttons consistent.
	Edit story form shows the priority as uneditable while it can be edited.	T(5)	-	3	Pic5.4.1	Use a clickable GUI component.
	Discard button is not consistent with the rest of cancel buttons in the tool.	T(5)	-	2	-	Use Cancel to maintain consistency.
	The "Create Sprint" button is in grey and placed at the bottom of the page, while active buttons are usually in bright colors and button for creating new items are expected to be found at the top of the page.	T(6)	-	3	Pic6.4.1	Place the crate sprint on the top of the page in bright color.
	All fields in the "Edit Sprint" form are in grey which look like they are uneditable.	T(6) T(7)	-	2	Pic6.4.2	Use standard colors for forms with white background and colored frame.
	Remaining work was displayed in blue color while it was displayed in red in the burndown chart	T(10)	-	2	Pic12.4and8 Pic10.8	Use consistent color such as red to reflect the remaining work.
	Using a dropdown list for entering a new label while it is empty.	-	T(3)	3	P4.3.1	Using a text field for entering new values.
	The Delete and Cancel buttons' colors are unusual and not consistent with the rest of the interfaces in the tool and other systems.	-	T(3)	2	P3.4	Using consistent colors for the buttons
5	The form provides autocomplete for email addresses using the same domain of the administrative.	T(2)	-	3	Pic2.5.1	Removing autocomplete
	The label" Names and emails" is misleading as only emails are allowed.	T(2)	-	3	Pic2.5.2	Removing "Names" from the label.
	No confirmation messages before adding the member.	T(2)	-	3	-	Displaying a confirmation message before adding the new member (Privacy).
	Issue type is chosen by default, which the user may not notice.	T(3)	-	3	Pic3.5.1	Forcing the user to choose the issue type, with no default value.

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H#	Issue	Jira	Pivotal Tracker	Severity	Pic ID	Suggestions
	The tool allows to add an issue to a released version.	T(7)	-	4	-	Preventing the user from adding an issue to a released version
	The tool allows to release a version with no issues.	T(7)	-	4	-	Preventing the user from releasing a version unless it contains a completed issue/s
	The tool allows the user to duplicate the task name within the same story.	-	T(4)	2	P4.5	Preventing the user from duplicating task names within the same story
	There is no confirmation message appears to the user when the user transfers a story from the Backlog to the current iteration by mistake.	-	T(6)	3	-	Providing a confirmation message
	The tool allows the user to enter a release date that precedes its acceptance date.	-	T(7)	4	P7.5	The release date must be restricted to be after the acceptance date
	The owner and requester should not be the same member however, no warning message was displayed.	-	T(8)	3	P8.2	Differentiating between the two roles.
6	Too many steps are needed to activate the priority for each project.	T(5)	T(5)	4	Pic5.4.2	Make the priority option active by default.
	Too many steps are needed to enable the feature.	T(6) T(7) T(10)	-	3	-	Make the priority option active by default.
	Too many steps are needed to access the project's settings	-	T(1)	3	P1.6	Providing a direct access to project settings.
	Adding a member to a story is not visible, the user must press on the story title to expand the story options and find the owner field.	-	T(8)	2	P8.2	Placing an add button beside the story title.
	The burndown chart is not clearly visible like the other charts, the user has to click on the link for each release in order to display its burndown chart.	-	T(10)	2	P10.6	Presenting the burndown chart immediately with the other charts in the "Project Overview".
7	There is no flexibility in terms of changing the iteration starting date.	-	T(6)	4	-	Allowing the user to create a new iteration and specifying the iteration starting date.
	To add a task for a release, it should be added above the release item in the current iteration list.	-	T(7)	3	P7.7	Add an option in the release item to choose from the current tasks.
	The list of assigned stories to the member includes all assigned work in different statuses.	-	T(11)	2	P12.7	Separating the assigned stories to the member into different lists based on the story state.

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H#	Issue	Jira	Pivotal Tracker	Severity	Pic ID	Suggestions
	Can only show the progress of one member as a list at a time and cannot be for multiple members.	-	T(11)	2	P12.7	Allow displaying the progress of all members within the same interface.
8	Too much text is displayed to provide basic information needed only by beginners in agile project management.	T(1)	-	1	Pic1.8.1	Using a 'More info' box.
	Providing unneeded option (JIRA: Adding the options for changing the template and type are not needed at adding the project details window, Pivotal Tracker: Reports and Analytics option is included when clicking on account metaphor, which is not needed).	T(1)	T(13)	2	Pic1.8.2 Pos1.8.2 P14.8	Excluding unnecessary options.
	There is no need for the "Create" button because the functionality for creating a story is already provided under the project left-hand side banner.	T(3)	-	3	Pic3.8.1	Removing the "Create" button.
	To add a story the user must select "Story" to specify the issue type by clicking on the small arrow in the "create issue field", which is not to be expected by the user.	T(3)	-	3	Pic3.8.2 Pic3.8.3	Displaying "issue type" as a title to the dropdown list instead of the metaphor (metaphor).
	The displayed text "What to be done?" in the "create issue field" does not reflect the needed action.	T(3)	-	2	POS3.8	Replacing the displayed text with an informative one such as "Enter your story".
	Initially, the sprint was added with a default name by Jira, and to change the sprint name or details the user must click on the "..." button, which may not be expected by the user.	T(6)	-	3	Pic6.8.1	It is better to open a new window after clicking on the "Create sprint" button and let the user enter all the sprint details. In addition, to changing the "add dates" link to "Edit Sprint".
	List of completed issues were displayed in the burndown chart report, while it is not needed.	T(10)	-	3	Pic10.8	Display only the incompleted issues.
	The "done" work percentage is duplicated.	T(11)	-	2	Pos12.8	-
	There are other similar options that may distract the user (Profile, Personal Settings).	T(13)	-	2	Pic14.8	It may be better to combine all three options to be under only one.

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H#	Issue	Jira	Pivotal Tracker	Severity	Pic ID	Suggestions
	Using meaningless names: The current project name is used as a label for the projects menu, while it includes a general option not related to the current project.	-	T(1)	3	P1.6	Changing the menu label to "Projects"
	Several "Add Story" buttons are provided within the same interface but under different categories (current iteration, Backlog, icebox).	-	T(3)	4	P 3.8	Providing one button for adding the story.
	Too many fields are displayed within the same interface in the same color and font, which affects the visibility of the owner field.	-	T(8)	2	P8.2	Placing an add button beside the story title.
	Providing unneeded information: No need to add the creation information since they are available in the story "history" button).	T(3)	-	2	Pic3.4 and 8	-
	Accounts is shown under profile option while it can be accessed from the profile page.	-	T(13)	2	-	-
9	Uninformative error message sage was displayed when entering an invalid email address while preventing from moving to the next step.	T(2)	-	4	Pic2.9	Providing an informative error message to the user.
	Uninformative error message: when entering a wrong email format an error message is displayed "No one found matching".	-	T(2)	3	P2.9.1	Providing an informative error message to the user.
	Missing error messages: when starting a sprint without adding a task should not be allowed.	T(6)	-	2	-	Providing an error message clarifying the error to the user.
	Missing error messages: when the user entered two emails one correct and one wrong and pressed on enter only the correct email will be listed as an invitee while the wrong one will be kept in the invite field with no error message displayed.	-	T(2)	3	P2.9.2	Providing an error message clarifying the error to the user.
	Presenting an error code number with the error message.	-	T(1)	3	PP1.9 P1.9	Use a clear plain language for error messages.

Cognitive Walkthrough Evaluation Results:
Task X Action Y will be referred to as Task (X) A(Y) (All the tasks with their actions are presented in Figures 6 and 7). All pictures
captured during t h e evaluation can be found in: https://tinyurl.com/2k34nh5v.

no	Issue	Jira	Pivotal Tracker	Pic ID[2]	Suggestions
Q1: Will the user try to achieve the right effect?					
1	The main features are not provided within the main menus by default. Such as priority features, sprints, and releases.	T(5)A(2) T(6)A(2) T(7)A(2) T(10)A(1)	T(5)A(2)	-	Enabling priority by default.
2	The navigation may not match the user's mental model.	-	T(1)A(4) T(7)A(3) T(7)A(4) T(11)A(2) T(11)A(3)	CW_P1.1	Providing consistent steps for the main function-alities that closely match the user expectations. In addition, providing direct access to the main features such as the dashboard within the main interface.
3	The tools did not allow the user to flexibly create several sprints with different settings.	-	T(6)A(2) T(6)A(3)	-	Allowing the user to create several sprints with different settings for each sprint.
4	The user will be expecting the left side panel is fixed.	T(5)A(6) T(6)A(6) T(10)A(4)	-	-	Expanding the project settings in the same panel while keeping the main options.
Q2: Will the user notice that the correct action is available?					
5	Missing buttons for adding, edit-ing, or saving.	T(3)A(6) T(6)A(7)	T(3)A(4)	CW P3.4.1	Providing a clearly visible button for adding, edit-ing or saving as needed.
6	Displaying clickable text as plain text will confuse the user.	T(3)A(7) T(4)A(2)	-	Pic3.8.5	Using clearly visible clickable components such as buttons.
Q3: Will the user associate the correct action with the effect that the user is trying to achieve?					
7	Inexpressive labels/metaphors.	T(2)A(1) T(3)A(4) T(5)A(3) T(13)A(2)	T(1)A(4) T(5)A(9) T(8)A(6) T(4)A(7) T(7)A(4) T(7)A(6) T(8)A(4) T(11)A(2) T(11)A(3)	P1.6 Pic2.8.1 P8.2 P7.4 P8.2	Using labels that reflect the activity accurately and clearly.
8	Lack of informative messages to the user to clarify the next action the user must take to complete the current task.	T(3)A(6)	-	Pic3.8.5	Clarify the expected next action by the user by a tooltip text, or providing standard buttons such as (Save and Cancel).
9	The story name is used to access the edit story information page.	T(3)A(7) T(4)A(3)	-	Pic3.8.5	Adding an 'Edit Story' button as editing is one of the main functionalities.
10	Using an entry component that is not usually used for entering data such as a dropdown list.	-	T(3)A(4)	CW P3.4.1	Use a suitable component for entering data.
11	Displaying hyperlinks as unclick-able text, which the user may not expect to click on it.	T(7)A(4) T(12)A(4) T(14)A(5)	T(4)A(3) T(5)A(6) T(12)A(3)	P11.7 Pic7.4.3	Showing hyperlinks as clickable text, for example by using the blue font color and underlining which are standard formats for hyperlinks.
Q4: If the correct action is performed, will the user see that progress is being made toward the solution					
12	Incorrect feedback on the email format.	T(2)A(3)	-	-	Providing correct feedback such as "Enter correct email address".
13	No feedback was provided after pressing on 'Create Sprint' button.	T(6)A(6)	-	-	A confirmation message or show the newly added sprint package as activated so the user can easily identify it.
14	This option provides the burndown chart for only one release at a time, not for the whole current iteration	-	T(10)A(4)	P10.6	Providing the burndown chart for the whole itera-tion at the same time.