

# How to Plan an Agile Project in 15 Minutes



## Introduction

This tutorial will guide you through planning an agile project in fifteen minutes. You will learn how to:

- Create a User Story
- Plan a Release
- Kick off an Iteration
- Track progress during an Iteration
- View Iteration status with a Burndown Chart
- Wrap up an Iteration

**Let's get started!**

## Simba's Safaris Roars



Simba's Safaris is a thriving adventure travel group, but their current reservation system is manual and out of date. Simba wants to modernize with an online booking system before the next rainy season hits.

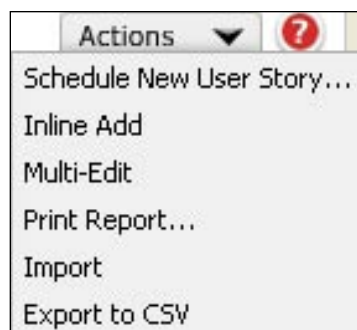
We've already planned part of the project to help you get started. Now It's up to you and your team to finish the planning and deliver on time.

## Create Your First User Story

Simba wants the new reservation system to accept credit cards. Let's create a user story that captures this requirement:

1. When you log into Rally, the Backlog page appears by default. Click the Actions drop-down button on the right hand side of the screen and select **New User Story**.

A **Create User Story** dialog box will appear on top of the Backlog page.



2. Type `Pay with credit card` in the Name box.

*“Agile” software development refers to a set of principles and practices centered on small, self-organized and cross-functional teams who work with the business daily to evolve requirements and to iteratively and incrementally deliver solutions.*

*Scrum, XP, and Lean Software Development are all well-known agile frameworks. In Scrum, an iteration is called a sprint.*

*A **User Story** describes what the system should do, in a way that emphasizes value to a user or customer. It is usually written in one or two sentences of everyday language.*

*The **product backlog** is the list of all the work the team will do for the product. It includes stories and defects.*

3. Type the User Story in the Description box:

As a safari purchaser, I want to pay for my jungle safari by credit card so that I can immediately confirm my reservation.

ID:	
Name:	Pay with credit card
Description:	<p><b>B</b> <i>I</i> <u>U</u> [List Icon] [Link Icon] [Image Icon]</p> <p>As a safari purchaser, I want to pay for my jungle safari by credit card so that I can immediately confirm my reservation.</p>

4. Drop down the State list to see the choices, but leave the Defined option selected:

State:	Defined
Release:	
Plan Est:	

Defined

Defined

In-Progress

Completed

Accepted

- Defined - The user story is described.
- In-Progress - We've started work.
- Completed - Tasks are finished.
- Accepted - We've demonstrated working, fully tested software and it's been accepted by the product owner.

5. Drop down the Iteration list to see the choices, but leave the Unscheduled option selected (Unscheduled stories remain in the backlog):

Iteration:	Unscheduled
Task Est:	

Unscheduled

3 - After Safari

2 - Streamline Operations

1 - Browse and Book

Cancel

Iterations are typically named for a theme, for example "Browse and Book" to develop all the user stories related to browsing and booking a safari. In your own project, you would name iterations based on the stories your team was focusing on for that iteration.

6. Enter 4 story points in the Plan Estimate box.

Plan Est:	4	Points
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*A best practice for user stories is to write them from the point of view of the user. This template is often used:*

As a [type of user or customer],  
I want to [achieve some goal]  
so that [some benefit].

*A **product owner** is the person on the team who defines the value, holds the vision, and identifies the acceptance criteria for the product. The product owner owns and manages the product backlog and seeks guidance from architects, testers and developers to appropriately size backlog items, and to rank these items on behalf of the customer.*

*An **iteration** is a short (1 to 4 week) development cycle focused on delivering working, quality software. Each iteration delivers another increment of tested product functionality.*

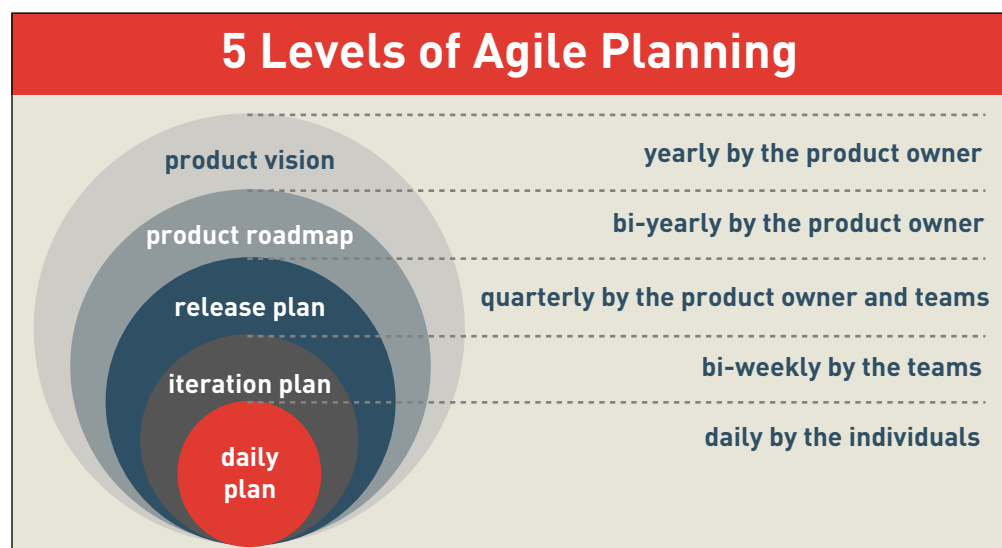
***Story points** are a unit of measure for expressing the overall size of a story.*

7. Choose the Save & Close button to save your work.



We've already provided the other user stories for the safari booking system, so let's move on to Release and Iteration planning.

## Create Your First Release



Planning in Agile takes place at 5 Levels; we're going to focus on release and iteration planning in this tutorial.

We've already done the first part of release planning for you:

- We created the list of desired features that need to be built — this is represented by user stories in the backlog. You added to the backlog when you wrote your *Pay with credit card* user story.
- We prioritized the stories in the backlog and did a rough estimate of effort for each.

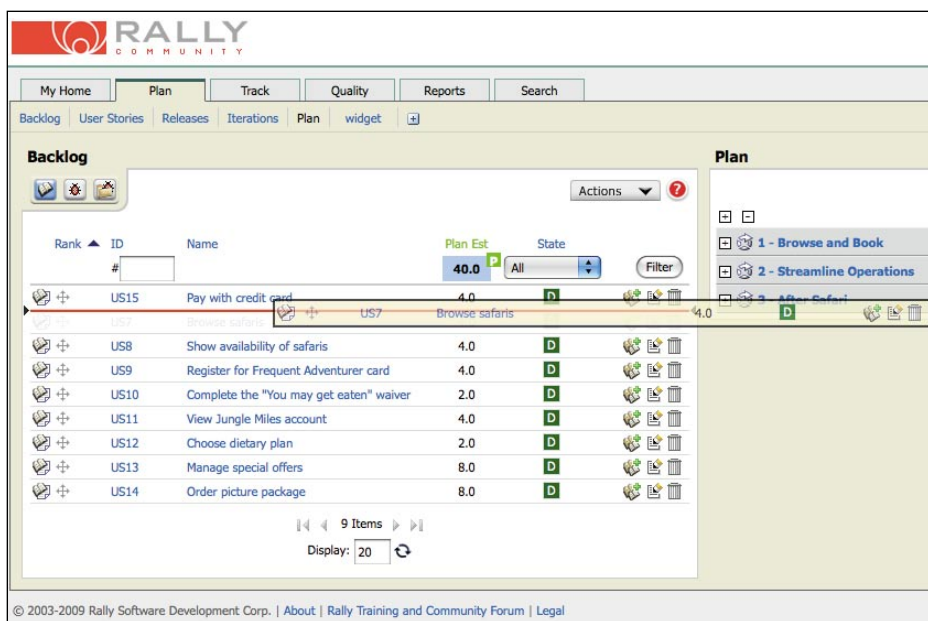
*A **release** is a set of product capabilities that are delivered to the customer for use. Releases are implemented through a series of iterations. Whether teams release every iteration or only once per year, they can benefit from mid-range planning: looking ahead 3-6 iterations*

*Did you know that 64% of the features included in products are rarely or never used [Johnson 2002]? Rally helps eliminate this waste by allowing product owners to continually prioritize only the most important features.*

- We defined three, two-week iterations for the release, each with a unifying theme:
  - **Browse and Book:** all of the user stories needed to browse online for a safari and book the reservation.
  - **Streamline Operations:** user stories to help simplify the logistics of registering a user for a safari and other “back-office” operations.
  - **After Your Safari:** capabilities that support our customers after they’ve completed their safari (e.g., ordering pictures).
- We specified resources available, in story points, for each iteration. The resources available and our user story effort estimates are combined to determine how many user stories we can fit in an iteration.

The next step is to schedule our prioritized backlog of user stories into our three iterations:

1. Make sure that you are on the Plan tab.  
If you are not, click the tab now.
2. Select the Plan link from the sub-navigation.
3. Note how the user stories in the backlog are shown on the left of the page (labeled as Backlog), while the release and iterations (labeled as Plan) are shown on the right side of the page.
4. Drag the user story *Browse safaris* from the backlog to the Browse and Book iteration. Click on the + icon to expand the iteration and see the *Browse safaris* story.



**Story points** are a unit of measure for expressing the overall size of a user story. Story points are relative. A story that is assigned a four should be twice as much effort as a story that is assigned a two.

**Resources** represent the number of story points your team can complete within an iteration.

*“A good plan violently executed now is better than a perfect plan executed next week.” - General George S. Patton*

*The making and meeting of commitments is a critical success factor in agile development. Agile teams do not commit to more work than they can get accepted within an iteration.*

5. Notice how the Resource Commitment box changes to show that a third of the resources available for the iteration have been committed. Rest your mouse over the Resource Commitment box to see more details.

06-16 - 06-29 33%		
Resources	Plan Est	Available
12.0	4.0	8.0

Note that there are 12 points of resources available for the iteration. The *Browse safaris* user story was estimated at 4 points, therefore, we now have 8 points still available.

6. Drag the following stories to the Browse and Book iteration:

*Show availability of safaris*

*Pay with credit card*

*Register for frequent adventurer card*

Notice how the Resource Commitment box changes to red to show that this iteration is overcommitted. To get us back in line, we'll remove one of the user stories.

06-16 - 06-29	133%
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7. Drag the *Register for Frequent Adventurer card* user story from the iteration and drop it to the left of the screen into the backlog.
8. Schedule the next two iterations on your own, taking into account user story priority and the capacity of our iteration.  
**Hint:** You won't be able to fit the last user story in; leave it in the backlog.



*The Agile Impact Report from QSMA reports that Rally customers are 50% faster-to-market and 25% more productive than their peers.*



# Kicking off an Iteration

Iterative development is the essence of Agile. We produce working, fully tested software every iteration and demonstrate and confirm value with the product owner or customer. This check-in ensures that we build the right features while speeding and better predicting our release date.

## Each iteration is QUALITY software

Think of iteration as little cycles, where you're gathering requirements, designing, writing code, and testing. Each cycle produces working, quality software:

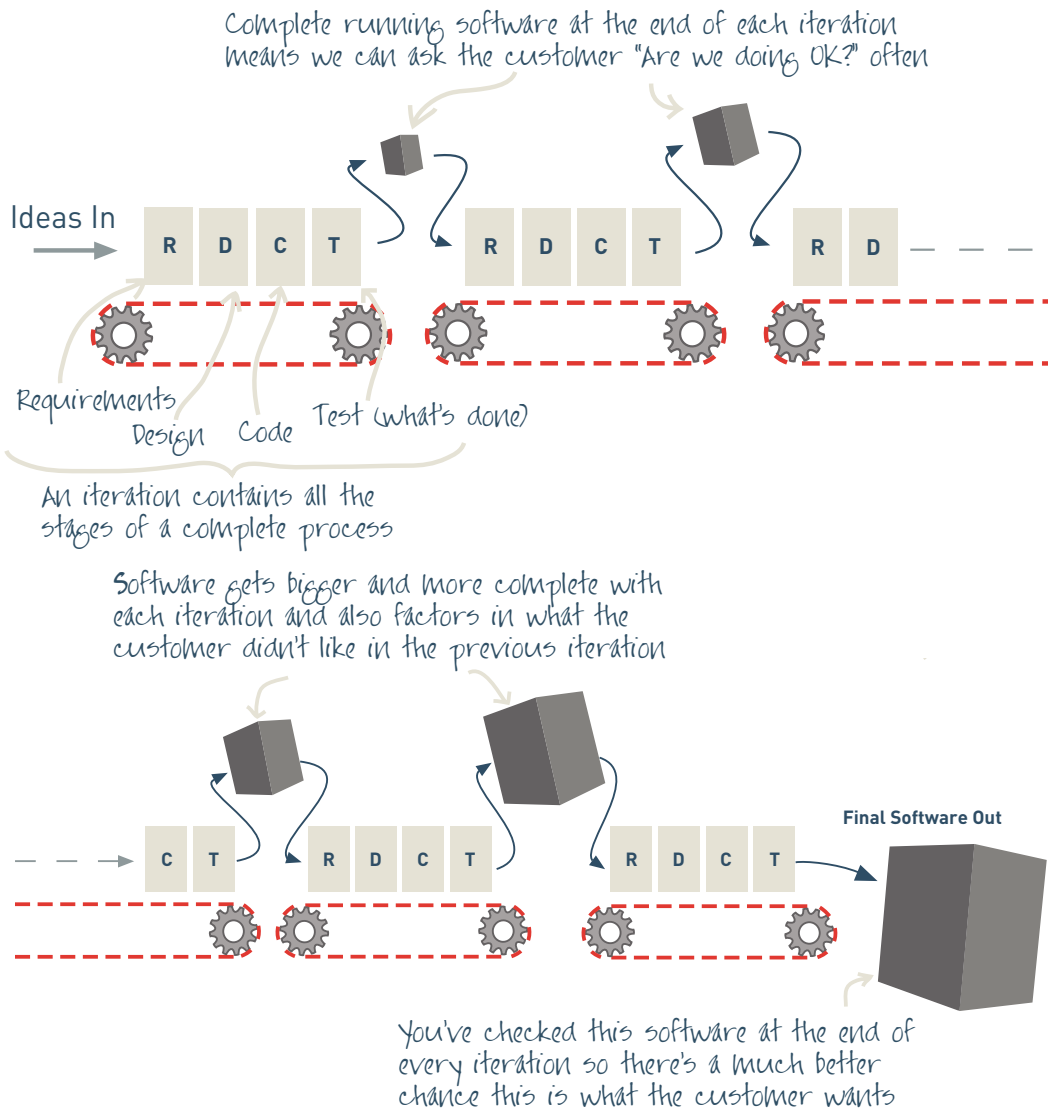


Image from Head First Software Development, Dan Pilone and Russ Miles [2008]

The general steps for iteration planning are:

1. Identify a goal or theme for the iteration.
2. Select User Stories to be developed.
3. Split the user stories into tasks.

Typically, all tasks necessary to go from a user story to working, fully tested software are identified. This includes test tasks and helps engage testers at the start of the iteration.


In release planning we determined the order that features would be delivered. We took priorities and capacity into account, but our effort estimates were rough. As we start planning our iteration, we increase the accuracy of our estimates by decomposing user stories into tasks.

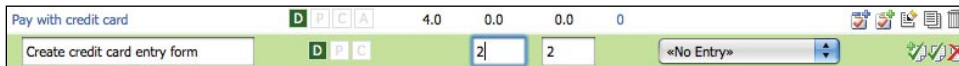
Let's "task out" our *Pay with credit card* user story to see how Rally tracks our estimates relative to capacity.


# Adding Tasks to the “Pay with credit card” User Story

1. Click on the Track tab. The Iteration Task Status page displays by default.
2. Check that the iteration list is at the left of the page display  
1 – Browse and Book. If not, drop down the Iteration list, and select this option.



3. Find the *Pay with credit card* user story and select the first icon from the set on the right  to add an inline task.
4. Enter the following information for the task:
  - a. In the Name box, enter `Create credit card entry form`.
  - b. In the Estimate box, enter `2`.
  - c. Drop down the Owner list and select your user name. As you add additional users to your project, they will become available in this drop-down list.



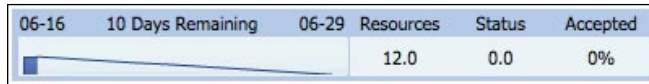
5. Select the middle icon  from the set on the right to save your Task entry.



A **task** is a single small item of work that helps the team move a particular user story completion. Tasks should be 1 to 16 hours long.

Agile teams strive to fix all bugs in the iteration in which they are discovered. Task estimates include time for fixing any bugs or a separate “Fix Bugs” task is identified and estimated.

Notice how your task estimates are reflected at the top of the column and how the burndown thumbnail changes to reflect that you have two hours of work to do in the iteration.



A **burndown chart** visually indicates on a daily basis the amount of work left to do for the iteration.

6. Finish tasking out the *Pay with credit card* user story by entering the following additional tasks:

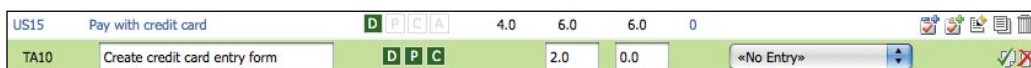
Name	Estimate	Owner
Interface with payment gateway	2	You
Display "Wait" page	1	You
Display confirmation page	1	You


## Tracking Progress During the Iteration

During the iteration, your development team will provide status on task progress as they begin work and complete activities. This is often done in a daily standup meeting.

Let's record progress for the *Create the credit card entry form* task that is part of the *Pay with credit card* user story:

1. You should still be on the Iteration Task Status page. Find the *Pay with credit card* user story row and click on the + sign if tasks are not already shown.
2. Double-click on the *Create the credit card entry form* task near the status icons (the D/P/C icons) to activate inline editing.
3. Click on the **C** icon to show that this task has been completed. (The **P** icon is used to indicate work that is in-progress. This is now updated in the user story).



4. Click on the  green checkmark icon in the icon set to the far right to save your task status update.

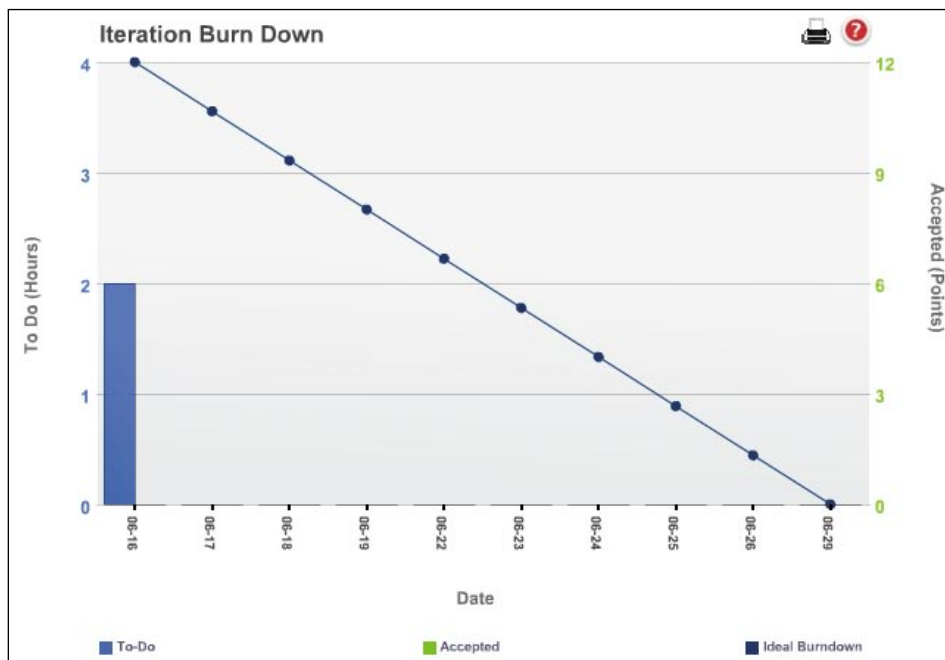
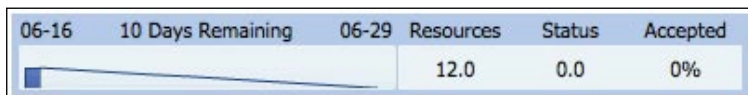
A **standup meeting**, also called a Daily Scrum, is a 15-minute daily status meeting in which team members prioritize their work. Members actually stand up as each person answers three questions:

1. What did I do yesterday?
2. What do I plan to do today?
3. What is getting in my way?

Developers can update their tasks from within Eclipse or Visual Studio IDE's using free Rally Connectors.



5. Notice how the burndown thumbnail changes to reflect the completed task. Click on the thumbnail to display the full-sized iteration burndown chart.



Now mark the remaining tasks as completed.


*You can create bug reports within Rally, bundle them into suites of related bugs, attach them to stories and add them to the backlog so they can be scheduled into an iteration.*

*Rally also integrates with popular defect management systems.*

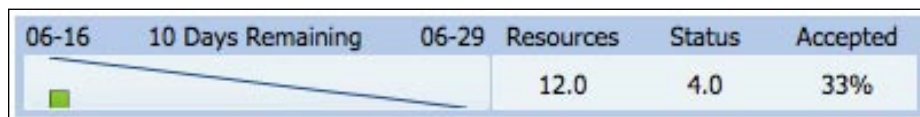
# Wrapping up an Iteration

At the end of your iteration, your team will get together to demonstrate your completed user stories to the product owner. A user story is not done until it has been tested by a member of the team and accepted by the product owner or customer.

Let's mark the *Pay by credit card* user story as Accepted.

1. Double-click the *Pay by credit card* user story near the status icons to activate in-line edit.
2. Click the [A] icon to mark the story as accepted.
3. Click on the  checkmark icon in the icon set to the far right to save your status update.

You will notice that the burndown thumbnail and the full chart both adjust to show story acceptance.



## Review

Our introductory tour of Rally is complete. You now know how to:

- Create a user story
- Plan a release
- Kick off an iteration
- Track progress during an iteration
- View iteration status with a burndown chart
- Wrap up an iteration

If you're evaluating Rally for a multi-team/multi-project development, request a free Enterprise Edition trial from your sales representative. You may also want to join the Agile Community at <http://www.agilecommons.org> to learn more about how Agile teams use Rally.

*Agile teams use acceptance tests as part of the “definition of done” for a User Story. Acceptance tests are also referred to as story-tests or customer-facing tests and are used to demonstrate the story to the product owner.*

*Rally provides test management capabilities for storing acceptance tests and more granular code-facing or unit tests.*

*Tests can be attached to stories or grouped into folders and test suites.*

*Rally integrates with HP Quality Center as well as popular open source testing tools.*