# Lesson Proper for Week 9

What is a product backlog?

A product backlog is a prioritized list of work for the development team that is derived from the roadmap and its requirements. The most important items are shown at the top of the product backlog so the team knows what to deliver first. The development team doesn't work through the backlog at the product owner's pace and the product owner isn't pushing work to the development team. Instead, the development team pulls work from the product backlog if there is a capacity to either continually (kanban) or by iteration (scrum).

PRO TIP:

Keep everything in one issue tracker–don't use multiple systems to track bugs, requirements, and engineering work items. If it's work for the development team, keep it in a single backlog.

Start with the two "R"s

A team's roadmap and requirements provide the foundation for the product backlog. Roadmap initiatives break down into several epics, and each epic will have several requirements and user stories. Let's take a look at the roadmap for a fictitious product called Teams in Space.
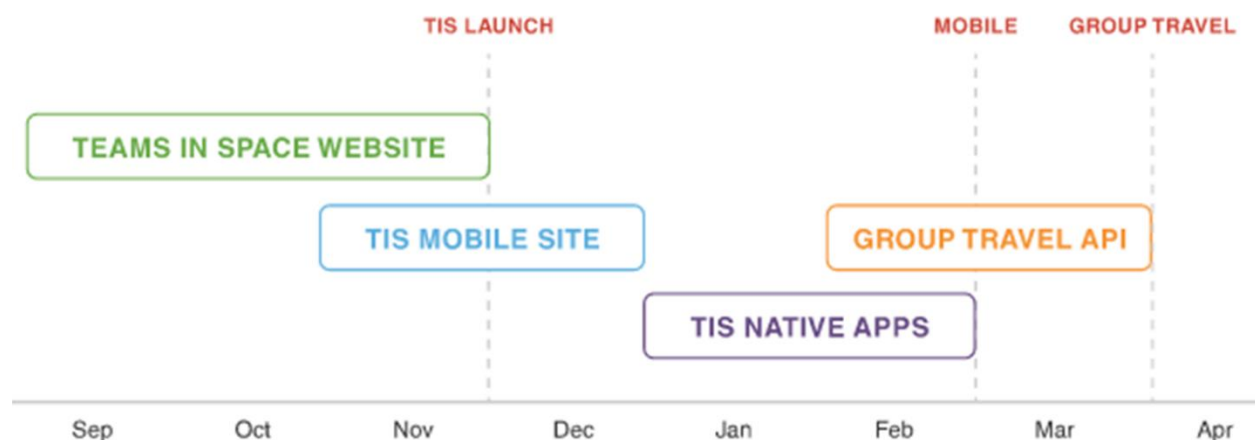
Since the Teams in Space website is the first initiative in the roadmap, we'll want to break down that initiative into epics (shown here in green, blue, and teal) and user stories for each of those epics.

User management

Create an account

Stored payment info

Linked family profiles

Travel preferences

Travel reservations

Book space travel

Book a hotel

Book rental space

Book group tickets

Promos and offers

Percentage discounts

Companion flies free

Customer loyalty

Family discounts

The product owner then organizes each of the user stories into a single list for the development team. The product owner may choose to deliver a complete epic first (left). Or, it may be more important to the program to test booking a discounted flight that requires stories from several epics (right). See both examples below.

Single epic
User management

Create an account
Stored payment info
Linked family profiles
Travel preferences

Multi epic
Release 1.0

Create an account
Stored payment info
Book space travel
Family discounts

What may influence a product owner's prioritization?

·   Customer priority

·   Urgency of getting feedback

·   Relative implementation difficulty

·   Symbiotic relationships between work items (e.g. B is easier if we do A first)

While the product owner is tasked with prioritizing the backlog, it's not done in a vacuum. Effective product owners seek input and feedback from customers, designers, and the development team to optimize everyone's workload and the product delivery.

Keeping the backlog healthy

Once the product backlog is built, it's important to regularly maintain it to keep pace with the program. Product owners should review the backlog before each iteration-planning meeting to ensure prioritization is correct and feedback from the last iteration has been incorporated. Regular review of the backlog is often called "backlog grooming" in agile circles (some use the term backlog refinement).

Once the backlog gets larger, product owners need to group the backlog into near-term and long-term items. Near-term items need to be fully fleshed out before they are labeled as such. This means complete user stories have been drawn up, collaboration with design and development has been sorted out, and estimates from development have

been made. Longer-term items can remain a bit vague, though it's a good idea to get a rough estimate from the development team to help prioritize them. The key word here is "rough": estimates will change once the team fully understands and begins work on those longer-term items.

The backlog serves as the connection between the product owner and the development team. The product owner is free to re-prioritize work in the backlog at any time due to customer feedback, refining estimates, and new requirements. Once work is in progress, though, keep changes to a minimum as they disrupt the development team and affect focus, flow, and morale.

PRO TIP:

Once the backlog grows beyond the team's long-term capacity, it's okay to close issues the team will never get to. Flag those issues with a specific resolution like "out of scope" in the team's issue tracker to use for research later.

Anti-patterns to watch for

·   The product owner prioritizes the backlog at the start of the project, but doesn't adjust it as feedback rolls in from developers and stakeholders.

·   The team limits items on the backlog to those that are customer facing.

·   The backlog is kept as a document stored locally and shared infrequently, preventing interested parties from getting updates.

How do product backlogs keep the team agile?

Savvy product owners rigorously groom their program's product backlog, making it a reliable and sharable outline of the work items for a project.

Backlogs prompt debates and choices that keep a program healthy–not everything can be top priority.

Stakeholders will challenge priorities, and that's good. Fostering discussion around what's important gets everyone's priorities in sync. These discussions foster a culture of group prioritization ensuring everyone shares the same mindset on the program.

The product backlog also serves as the foundation for iteration planning. All work items should be included in the backlog: user stories, bugs, design changes, technical debt, customer requests, action items from the retrospective, etc. This ensures everyone's work items are included in the overall discussion for each of the iteration. Team members can then make trade-offs with the product owner before starting an iteration with complete knowledge of everything that needs to be done.

PRO TIP:

Product owners dictate the priority of work items in the backlog, while the development team dictates the velocity through the backlog. This can be a tenuous relationship for new product owners who want to "push" work to the team. Learn more in our article about work-in-progress limits and flow.

Example:

Product Backlogs (User Stories)

User Story Number	User Stories	User Stories Priorities	Revised Priority	Status
Middleman				
1.	As a Middleman, I should be able to check the sent report if it is valid.	1		**DONE**

2.	As a Middleman, I want to be able to send the validated report either to OSAS Head or to the Guidance Head or both.	1		**DONE**
3.	As a Middleman, I should be able to identify the incident by category.	1		**DONE**
Clicker				
4.	As a Clicker, I should be able to send a report in a picture or video format.	2		**DONE**
5.	As a Clicker, I should be able to send a report anonymously.	2		**DONE**
6.	As a Clicker, I'd like to be able to redeem my points from sending such issue and concern being encountered inside the campus.	2		**DONE**
7.	As a Clicker, I must be able to notify about my reported concern or issue.	3		**DONE**
8.	As a Clicker, I'd like to be able to redeem my points.	3		**DONE**
OSAS Head				
9.	As an OSAS Head, I must be able to see the list of reported concerns and issues by category.	3		**DONE**
10.	As an OSAS Head, I want to manage the monitoring of reported concerns and issues	4		**DONE**
Guidance				
11.	As a Guidance Head, I must be able to see the list of	4		**DONE**

User Story Number	User Stories	User Stories Priorities	Revised Priority	Status
	reported concerns and issues by category.			
12.	As a Guidance Head, I want to manage the monitoring of reported concerns and issues	4		**DONE**
Maintenance Staff				
13.	As a Maintenance staff, I must be able to provide a solution on the reported environment issue,	5		**DONE**
Administrative Staff				
14.	As an Administrative Staff, I want to be able to send the validated report either to OSAS Head or to the Guidance Head or both.	5		**DONE**
15.	As an Administrative Staff, I should be able to identify the incident by category.	5		**DONE**
Admin				
16.	As an Admin, I must be able to manage user accounts.	5		**DONE**

Product Backlogs (EIS Information Security)

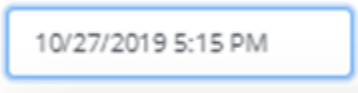| User Story Number	User Stories	User Stories Priorities	Revised Priority	Status
1.	As an Administrator, want to create a password recovery in case I forgot the password	5		**DONE**
2.	As a Product Owner, I want to have a login so that only the authorized individuals can access the system.	1		**DONE**
3.	As a Product Owner, I want that the usernames be	1		**DONE**
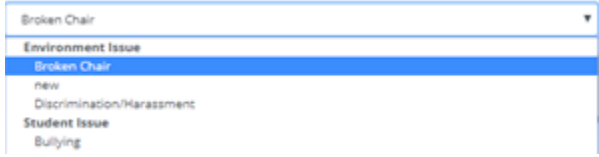
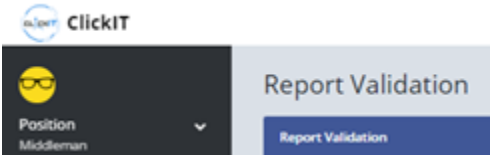| User Story Number	User Stories	User Stories Priorities	Revised Priority	Status
	unique for every user to avoid duplication of data.			
4.	As a Product Owner, I want the system to ensure that no invalid types are accepted when uploading.	3		**DONE**
5.	As a Product Owner, I want the users to be automatically logout once the tab was closed, in order to protect users from others. (session)	2		**DONE**

Product Backlogs (EIS Standards)

User Story Number	User Stories	User Stories Priorities	Revised Priority	Status
1.	As a Product Owner, I want to see all the input controls to know if the sizes are the same.	1		**DONE**
2.	As a Product Owner, I want to see a well-defined color combination of the template that is appropriate to the eyes of the users.	1		**DONE**
3.	As a Product Owner, I want to see the important data that may, and will be used in the system.	1		**DONE**

UI/UX Standards

Elements	Description	Examples
Input Controls		
Buttons	Is in implementation of a push button to trigger an action if the user clicks it.	

Text Area	Is a multiline text area that displays plain text.	Report Description Report Incident...
Text Fields	Is a text component that allows editing of a single line of non-formatted text.	2019-11-QC-OSAS
Date Fields	Is a component use for choosing year, month and day.	10/27/2019 5:15 PM
Combo Boxes	Is a component that combines button or editable field and a drop-down list.	Broken Chair Environment Issue Broken Chair new Discrimination/Harassment Student Issue Bullying
Navigation Components		
Date Time Picker	Used for picking the date and time.	October 2019 calendar — Su Mo Tu We Th Fr Sa ... 05 : 31 PM
Search Field	Used for searching important data.	Search:
Color		
White, Blue, Gray, and Black	These are the colors used in user-interface of the system.	ClickIT — Position Middleman — Report Validation
Black and White	A color use in text.	Contact Number — Your Account

Standard for Messages

Description	Examples
Data have been successfully updated!	Data have been successfully updated!
Are you sure you want to edit the report type?	Wait! Are you sure you want to edit the report type?