

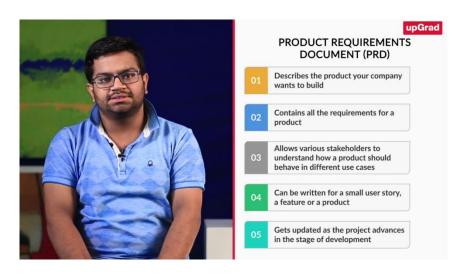
Transcription

Building A PRD



Hey there. So far, we've seen how a product backlog is created. As a PM, it is your responsibility to groom the backlog items. You find them and put them in a prioritized format.

We also learned that product requirements are conveyed to the team in terms of user stories or use cases. But there is another word that I often hear about in this ecosystem, a PRD. What is a PRD? Why do you need a PRD? Well, let's ask our subject matter expert.

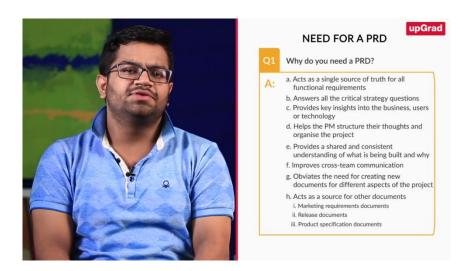




You have seen that product vision is where you want the product to go, and the product roadmap as the steps to get there. PRD or the product requirement document describes the product your company wants to build. It contains all the requirements for a certain product.

It is written to allow various stakeholders understand how a product should behave in different use cases. In today's lean and agile world, most companies, a PRD might be trimmed down. It can be written for a small user story or a feature or a product all in itself. It should contain all the requirements of a certain product. It is a working document. It gets updated as the project advances in the stage of development.

For example, when a product is being built, the PRD may not have a section on the go to market plan, but it will be added subsequently.



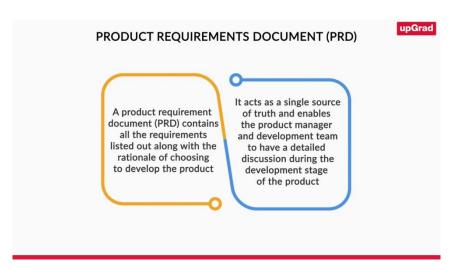
Why do you need a PRD? It acts as a single source of truth for all functional requirements related to a particular product development initiative. It answers all the critical strategy questions related to the need for the product and provides key insights about the business or users or technology.

A PRD helps the PM structure his thoughts and organize the project much better. As a PM, while creating a PRD, it is not suggested to write how to implement giving engineering designs or flows. Although, flow charts can be there to explain user journey.

Operationally, these providers shared and consistent understanding of what is being built and why, across the entire team and significantly improves cross team communication. PRD is written once updated several times and leverage always document. It obviates the need to create new documents for different aspects of the project.

Other kinds of documents, which are often seen, a marketing requirement document, released documents and product specification documents, which are parts extracted from an exhaustive PRD.



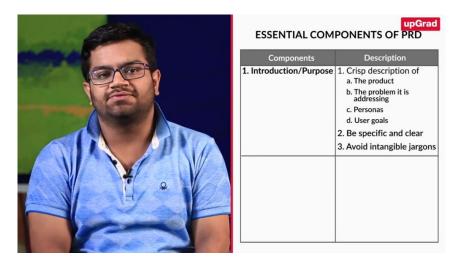


In this video, we've seen that a PRD is nothing but a product requirement document where all the requirements are listed out, along with the rationale for choosing to develop the product. It acts as a single source of truth and enables the product manager and development team to have a detailed discussion during the development. In the next video, let's find out the essential components of a PRD.



In the previous video, we have seen what a PRD is and why it is built. Now let's get into the details of a PRD. What are the essential components of a PRD?



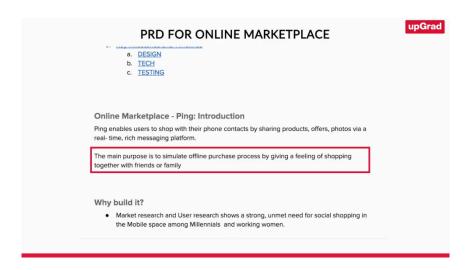


PRDs may vary in scope and length from 3 pages to 50 pages. Depending upon the extent and complexity of the project, it can be written for a user story, which is as more or less a use case or for the entire product altogether. Different companies follow different formats.

In today's agile and lean world, PRD stream to a greater extent. Let us see what are some of the core elements which we should include while writing a PRD.

Most of the PRD start with stating some introduction and purpose of the product. This might include crisp description of the product from an end user perspective.

What is the point of this product? What is the problem we are solving or the need we are addressing? For example, consider that feature you are building is a referral framework. So, this section contains something like referral is a feature to be added at certain critical points.



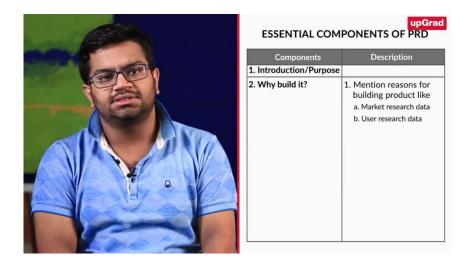
For example, post payment and browsing stage, wherein a user can invite acquaintances who might be interested in taking a product in return for some incentive. Or take the example of online marketplace as our product. The purpose might be as simple as simulate, offline purchase process by giving a feeling of shopping together with friends or family.



PRD should also contain who is it for, what they can do, what is the underlying infrastructure? When it was mentioned real-time platform, it essentially means that it is not SMS.

This is essentially the part where we mention personas, user goals and how the product serves the purpose.

When mentioning the purpose of the product, be clear and specific. Avoid intangible jargons like this product makes the app personalize and immersive. Rather explain how it does.



The next essential section would be why build it. A clear description of why we are building this product along with summary of how we have validated the problem using data, user research and pointers to detail the analysis.



So, for the example of online marketplace app, it might look something like this. Market research and user research shows a strong unmet need for social shopping in the mobile space, among millennials and working women. The project will provide us with very valuable user data like social or trust graphs, or interest data, and build stickiness around the app.

Internal user research, validates this opportunity via direct contact with our user. You can then explain the details of the user research and the number of users you contacted, maybe by phone or email. Then describe what business or technology or user insight drive this product and how the product helps us achieve our strategic goals.





Components	Description
1. Introduction/Purpose	
2. Why build it?	Mention reasons for building product like a. Market research data b. User research data Avoid accepting internation as rationald

Avoid listing the derive information from internal stakeholders as rationale. For example, business wants this, engineering build this, design thinks this is cool. Always backup insights with the data. If there are any assumptions taken, which are not tested, state them clearly, so that all stakeholders are on the same page.

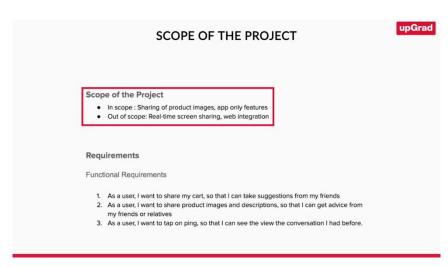


Components	Description
1. Introduction/Purpose	
2. Why build it?	
3. Reference sections	
4. Scope	a. What is in scope b. What is not in scope

PRD may also have reference sections where we write the inspiration or research studies refer to while thinking about the product.

Next, include what is the scope? A high-level description of what is in scope for the project and what is not in scope needs to be mentioned.





Sharing of product images, app only features, is in scope, whereas real time screen-sharing, web integration is not in scope.

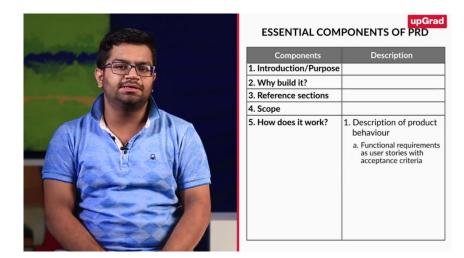


So, in a PRD, we should write the brief description of the product, the rationale behind creating it, with its scope and what it is not. Let us see what else should be included in a PRD.

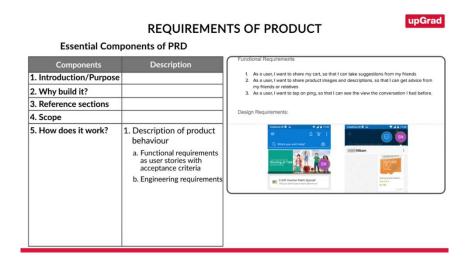




Now let's find out more about the other essential components of a PRD.

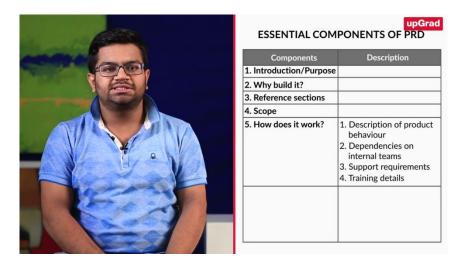


After this, we have to answer how part. It doesn't mean how to implement it in the system, rather it includes how does the product work or behave? So, a description of the behaviour of the product at a level of detail that is sufficient for the functional teams like engineering or design to develop and test the solutions. The functional team need to sign off on specifics in the PRD before starting development.

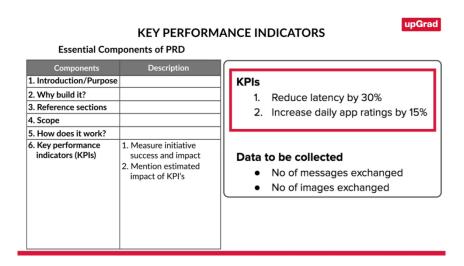


A PM can provide requirements in terms of user stories or user cases and their acceptance criteria, etc. This section also might contain subsections like engineering requirements, design requirements. Each subsection contains detailed functional requirements and pointers to functional solutioning. For example, engineering system design, architecture and wireframes.



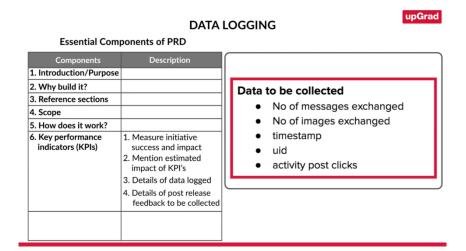


Functional leaders like architects or designers are the owners of the architecture document and wireframes, etc., and are responsible for keeping those up to date. Dependencies if any are also listed down. A description of internal teams or systems that are impacted with this initiative and support requirements will be listed. Training of support teams or respective stakeholders also comes under this.

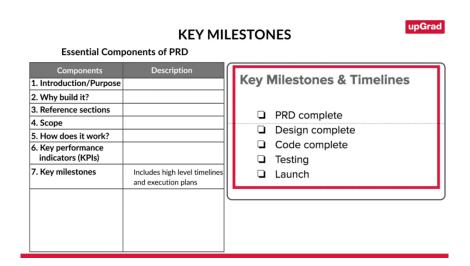


Another essential component would be success metrics or key performance indicators. A description of how you will measure the success of the initiative and estimated impact should be mentioned. For example, it could be a reduction of latency by 30%. If you don't know the extent of impact outlined, which critical domains will get affected and the range of impact. For example, this feature will increase app daily ratings by say, 15%.





It should contain details of data and logging, what events and metrics you will need to capture to assess the success. And iron out rough areas in your product post-launch. Also, details on how post release feedback is planned to be collected.



Some PMs or companies tend to put key milestones and high-level timelines in the PRD, where high level execution plan along with pointers to project planning and tracking documents are mentioned. The following milestones are most common and key to the development process. PRD complete, design complete, code complete, testing, and finally launch.



upGrad **LAUNCH PLAN Essential Components of PRD** 1. Introduction/Purpose 2. Why build it? 3. Reference sections 4. Scope 5. How does it work? A/B Testing for initial 10% of users Marketing Plan: Medium blog posts, Tw 6. Key performance indicators (KPIs) 7. Key milestones 8. Launch plan Description of: 1. Market release of produc 2. Marketing plan

In the launch plan, a description of how you will release the product to the market and the launch process post sign off with key stakeholders is written down.

For example, are we rolling the feature to all users on all platforms at the same time, or are we doing AB testing? Or is it a phased rollout? What is the plan for marketing? Is it through PR, blog posts, tweets? When to sign up from legal or business or customer support? Do we need to send release notes or is there any training required or not? So, basically these are the different sections which are incorporated in a PRD, but you may or may not need all these sections.



So, in a PRD, we also include product requirements in terms of user stories, along with their acceptance criteria. Engineering and design team members elaborate the required technical and design requirements. Sometimes key milestones and launch plan, our go to market strategy are also added as the development of the product progresses. In the next video, we will see how PRD is developed for a feature.

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In the previous video, we saw the essential components of a PRD. Now let's find out more about how a PRD is created for a given feature.



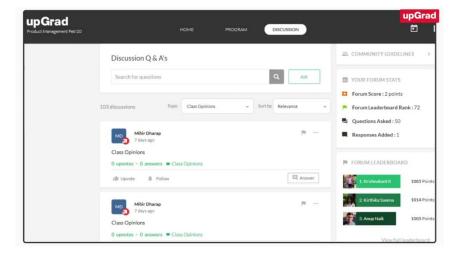
Hey, so in this session, let's talk about what a PRD is. Why do we create them? And then finally, I will take you through a sample PRD, which we have created here at upGrad. So, what is a PRD? PRD is a product requirement document, and most of you already know that. But why do we create them?





So, in my opinion, like there are two main reasons why we create a PRD. One is it enhances the communication because written communication is more accountable than a verbal communication. It enhances collaboration between teams and communication between teams.

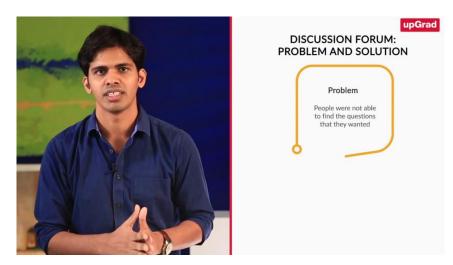
The second most important reason is it actually helps you clarify your thought process as a product manager. Because then most of the times when you start writing things, you get more clear view on different things. So, these are the two most important reasons. One is communication collaboration, second, the clarity of thought, it brings value, write it down.



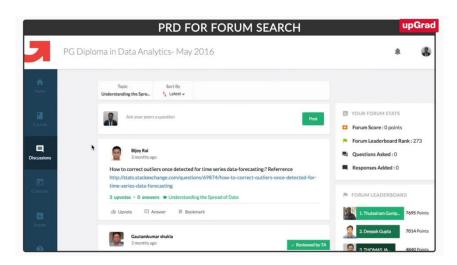
Now, I will take you through a sample PRD, which is our discussion forum PRD. So, most of you have gone through the discussion forum of upGrad. And you might have posted some questions, answered some of the questions as well.

So, while we were like going through the discussion forum redesign, I would say, we came up with different problems that people in data analytics course were facing.

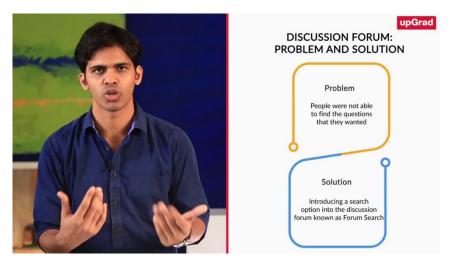




And this problem was people were not able to find the questions they wanted to find.



So, I'll give you a simple example. In our data analytics course, there are hundreds of questions posted every week in different topics. Now, as a student who is normally studying one topic at a time, if he wants to go there, he can filter that particular topic and see the questions. But even then, there are hundreds of questions on that particular topic. So, how does a user arrive at a question that he's looking at?



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So, our solution was very simple. It's widely used, it was basically introducing a search into discussion forum and we called it forum search.



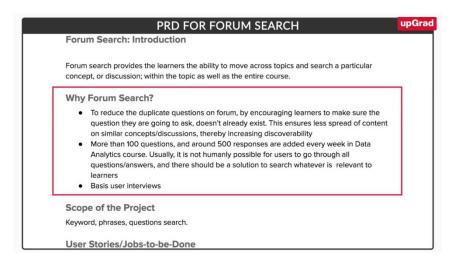
Now that we understood the pain points users are facing and the potential solution for the same, let's figure out how a PRD is created for this feature, forum search.



So, while designing a particular PRD, you first put table of content. It helps anybody and everybody who is going to the PRD to navigate easily through the PRD. And it also gives them a glimpse of what is in the PRD. So, for example, you can see here, like the first is forum search introduction. So here, we introduce what the product is.

The second is why forum searches needed. The third is what is the scope of the project as in, what is in the scope of the project, what is not. The fourth is user stories or jobs to be done? The fifth would be the success KPIs, as in what are the success parameters on which this particular product will be gazed upon. And the sixth would be key milestones. And like what are the functional requirements? Like what is the design requirement, what is the tech requirement and what is the QA requirement? Or more specifically the acceptance criteria, right?





So, these six pointers, we are going to see in the PRD, that is below. So, starting with the first thing, which is forum search introduction, this basically gives you a good introduction about the topic or about the product that we are going to make.

So, for example, forum service provides learners the ability to move across topics or search for a particular concept within the topic or within the entire course topics.

So, notice that this is a very abbreviated or very precise format for the product that we are going to write in detail in the PRD. So, we have mentioned words like let them search across topics or across all topics or a particular topic. It also mentions that it gives them an ability to put keyword or phrases to search. So, basically in two or three sentences, I define the introduction of forum search.

Next is why forum search is needed? So, this part contains mostly some data points, some user research or some logical anecdotal points. So, like the first thing is it increases the discoverability of the content, which removes the duplicate questions in the forum.

The second point that you see is since more than a hundred questions are posted in data analytics scores, students have to discover them fast. Otherwise it's a burning problem for them. Because they have to then post the duplicate questions, which again, delays the response on those questions.

The third is based on our user interviews. So, we conducted some user interviews in Bangalore where we asked users, what was the pain point that they were facing in our particular product, like in our learning platform. And one of the key points that they mentioned is whenever they go through a discussion forum, they are not able to find whether the question has been asked before or not. So, then we thought that why not introduce search, right? Because search lets you find those keywords or phrases in different questions.

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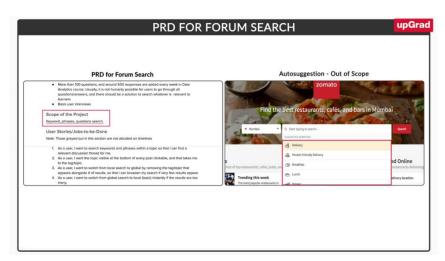
So, in a PRD, just like any other document, it is best to put out a table of content so that the users can easily navigate and locate the section they want to view. The first section is an introduction to the feature or product, wherein detailed description of the feature.

In this case, what do you mean by forum search, should be written? Further, the details of user research or market research that is conducted and how those insights are mapped to the feature could be written.

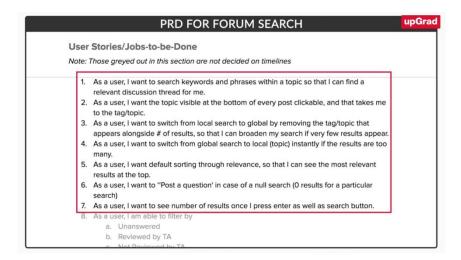


Let's see how Deepak went about creating other sections of forum research PRD.



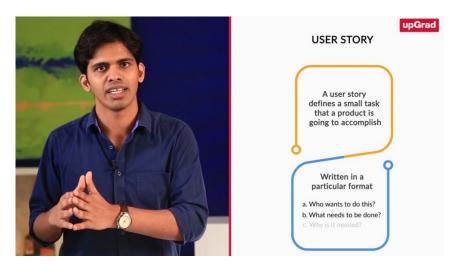


The next point is the scope of the project. As you can see, the keyword, phrase and question search, you can notice that we haven't mentioned auto suggestion, for example, in this. Because we know that auto suggestion might take a lot of tech bandwidth and the job won't be done on time if we start including everything and anything that comes under search domain. So, for this particular project, the scope is you can search keywords, phrases and questions.

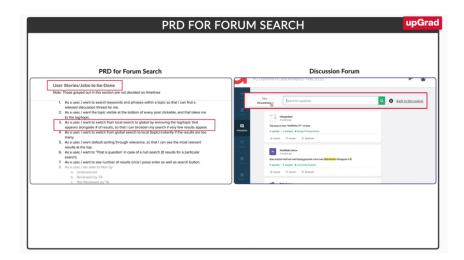


The next bit is user stories or jobs to be done. And here, I write all the user stories, that are relevant to this particular product.





Now what is a user story? So, a user story is something which defines a small task that the project or the product is going to accomplish. And you write in a particular format, which is like, who wants to do this, what needs to be done and why is it needed?



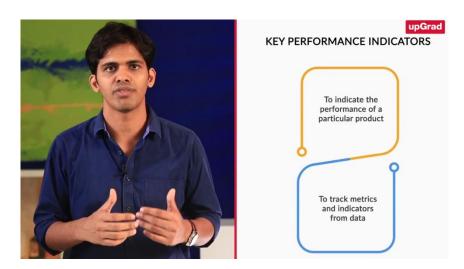
So, for example, as you can see, like I'm writing as a user, I want to search keywords and phrases within a topic so that I can find relevant discussion thread for me. So, this covers all the three aspect. I mean, the user wants this, what does he want and why does he want it.

As you can see the second one, which is as a user, I want the topic visible at the bottom of every post clickable, so that I can go to that tab or topic, right? So, this is another user story.

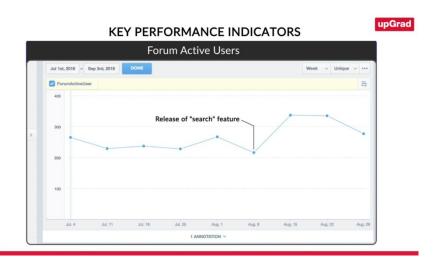
As a third example, it can be like, as a user, I want to switch from local search to global by removing the tags and topic that appears alongside number of results. So, if I see that there are less number of results, I want to broaden the topics. If I see there are many results, so I want to narrow down to specific topic. So, that only few results, which I can see at one glance appear.



And then you can see there are other user stories as well. As you saw in the note above, there are some which are grid out, and these are basically out of scope of the current project or sprint. These are more of something that we will do when we move later with this project.



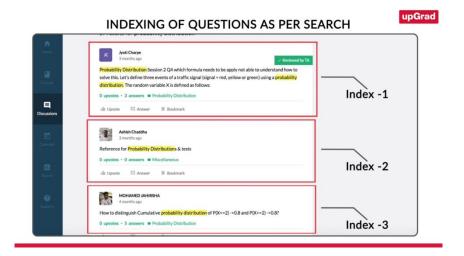
Next, coming to the success KPIs. So, what are KPIs? Let me talk about that first. So, KPIs or key performance indicators. So, these indicate the performance of a particular product. So, whenever you ship or launch a particular feature or product, you want to see if the objective was met.



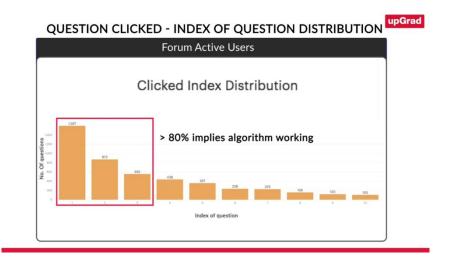
And to do that, you track a couple of metric or a couple of indicators from data. Like, in this particular example, we track like number of searches that were happening per day, so that we can see if it is needed or not. Or users who search at least once divided by total forum active users. So, this will tell me what percentage of users is it useful for.

The third would be total forum active users, which we intend to increase through this feature. Because what we feel is as the discoverability and experience enhances, the people who were off the platform, because they are not able to find something on the platform, will come back to the platform. And hence, our forum active users should increase by 10 to 20%.





The fourth is index of question click distribution. Let me first tell you what this is. So, whenever you search something, there are search results. And the first result has index of let's say zero or one. The second is two, third is three, fourth is four. And what you want is you want people to click on first two or three results, because you think that you are giving them very relevant results.



But sometimes you are not right. And how do you gauge that? So, you gave that by measuring how many people are clicking on first two or three results, out of the total clicks that are happening. And if there are 80% of people who are clicking on the first two or three results, you know that your algorithm is working, whatever you are putting in search results is actually working.



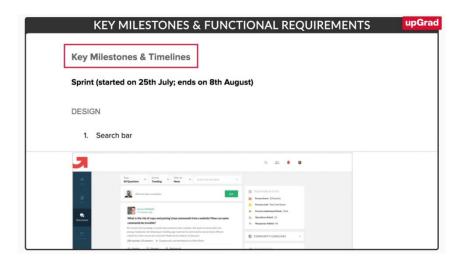






Next, once you have defined the KPIs, you also mention data to be collected. So, for example, here we collected, or we are going to collect the keyword searched, time-span, UID, number of results. And for click data, we are going to store search ID, which question was clicked, what was the index and what was the timestamp?

So, these particular data that I'm going to store in my database can actually help me answer whether the KPIs are improved or not. So, this is the success KPI section.



Next, we move to the key milestones and functional requirements. So here, you mention every function, one by one, which is design, tech and QA. And then you basically try to put the designs in the design section, the tech discussions in the tech section, and the QR function or whatever the acceptance criteria is in the third section, so that your team can refer and see in the document, whether the designs are complete or whether all the technical discussions are covered, or whether like acceptance criteria are written so that the QA person can take them and actually test your product.

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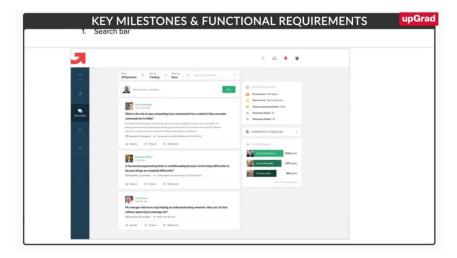


We have seen how user requirements are derived from the user research, and by understanding pain points of the user. User stories are written down, and a note on what are in scope for the current version is also highlighted in a PRD. Identifying key performance indicators of a given feature, and the details of the same should also be mentioned in a PRD.



In the previous video, we've seen how functional requirements are written down in a PRD. Now let's get into the details of these requirements and the remaining components of a PRD.





So, as you can see, the first thing is the search bar design, which is, how the search bar looks if a user comes first to the discussion forum. So, it's a simple search bar where if a user clicks, he moves to the second design, which is search bar expand.

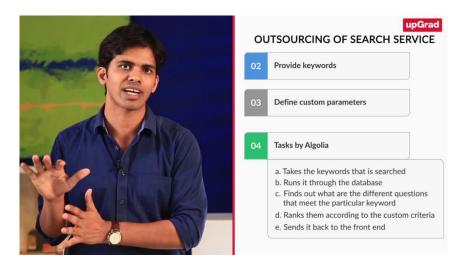
So, the search bar basically expands and the only thing you are left on the top of it is this particular search bar, along with the topics that the person can filter into, which is an indication that the person can actually select a topic and search into that. Which is the functionality we wanted to develop when we first conceptualized this product.

The third is a search result space. So, what happens if the person typed something and then clicks on the search bar? So, there is the search results page where the different search results are listed down the page.



Now we enter into tech. So, in tech, I have Algolia search. So, you might not be familiar with the term Algolia because it's a company which provides search as a service. So, what does it mean is normally to build a search algorithm in house, you have to write a lot of code? So, just like you outsource your analytics services, you outsource your search service.





So, what you have to do is you have to provide your database of questions and responses to Algolia and a keyword, and then define some custom parameters. Like, what do you want to take into account? Is it like the number of votes? Is it like the number of answers to a particular question?

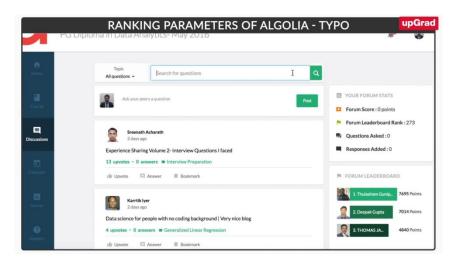
You provide these custom parameters. What Algolia does is it takes the keyword, that is searched, it runs it through the database, finds out what are the different questions that meet the particular keyword, ranks them according to the criteria that you provided, and finally sends it back to the front end.

Normally all the work that it does, you don't have to do. And that it does very cost effectively within like 30, 40, 50 dollars. So, it was a no brainer to kind of use this as a service rather than building it in house because there are two reasons.



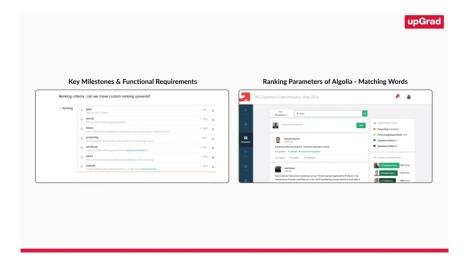
One is the cost of building this in house might increase the cost of actually taking such a tool. And the second is basically there is an opportunity cost associated with it. You might work on something else, by outsourcing this particular thing. The third is obviously the feasibility part of it, which you cannot know, unless you write down all the technical requirements.





So, in Algolia, there are different ranking parameters that you can play around with. One is like typo. So, for example, if I type let's say R value, and if I type it VALU, and I miss the E, so what Algolia does is it actually matches VALU to value. So, that type of tolerance, you can define in it. Like, as in if there are more than one typo, one-word typo in a four word or five- or 10-word character, go for it. If there is one typo in three-word character, don't go for it. That is a tolerance of it.

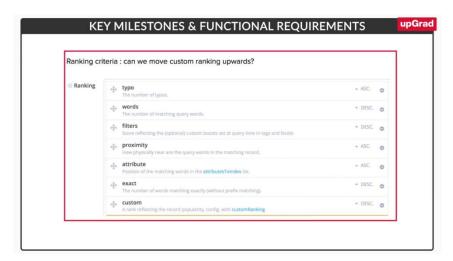
So, suppose if I write TWO, and I write TW, so it won't match TWO or with TW, because what I have told Algolia is don't go for typo correction, if it is less than four characters. So, that is typo tolerance, which you can define, which is pretty cool if you see it. Because to code it, it would be like very difficult to code.



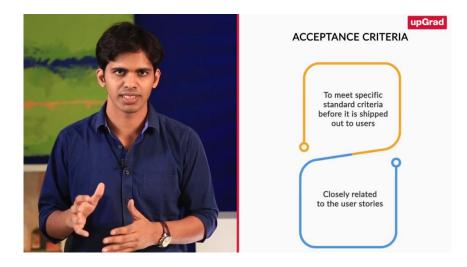
And then there are these like other parameters as well that you can play around with, like matching words, how many words are matching, are they close to one another? Like let's say I say that R value criterion. So, there might be two different questions, which have R value and criterion, these three worlds.

But the proximity of R and value and criterion in search query resembles closely to one particular question. So, that should be ranked higher in order. So, this is what the tech requirements look like.





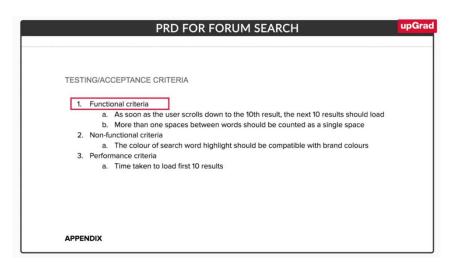
So, as a PM, you sometimes have to actually go read the documentation of how a particular system works and then put it into product requirement document. Alternately, you can sit with engineers and do this thing with them. So, that is the tech.



So, the last part is testing or acceptance criteria. You define these criteria because you want your product to meet certain specific standard criteria before it is shipped out to users. In absence of these criteria, the product might not work as well as you expected, right?

And these acceptance criteria are closely related to the user stories that you wrote back, because those are the things that you want to do through, through your product. So, you have to write acceptance criteria on the basis of them.



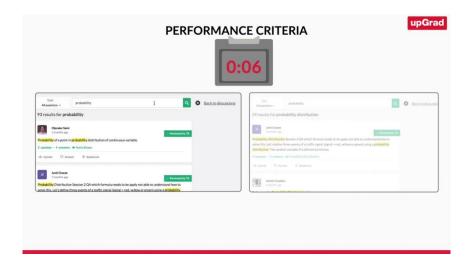


Now coming to the first one, which is a functional criterion, it is more of related to the functionality of the product. So, for example, as soon as the user scrolls down to the 10th result, the next 10 results should load. So, what it means is when user searches for something and you show him 10 results and he scroll down to the 10th results, show him another 10 results. Because in absence of that, the user will think that there are just 10 results. And that is a UX killer.

And the second point in functional requirement is, if there are more than one spaces between words, they should be counted as a single space because sometimes user can put just this by mistake and your product should be able to recognize that.

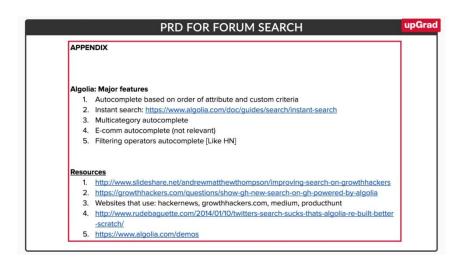
Coming to the second part, which is non-functional criteria, this is more of related to a design. Like the colour of search word highlight should be compatible with brand colours. Because if that is not the case, then the product might look a bit weird.

So, the third bit is performance criteria, which is more of a technical thing. So, like the time taken to load first 10 results. And the reason you put it here is because if the page doesn't load for a particular time, particular amount of time, it might be a UX issue.



So, I'll give you a simple example. If you're searching for something and the results don't appear within, let's say 10 seconds, then that might be an issue for the user.



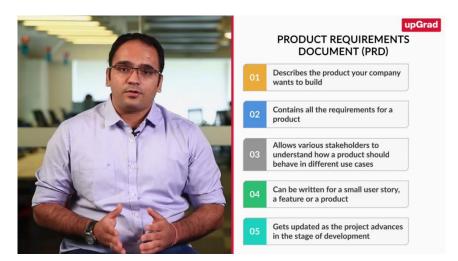


So, this is what a typical PRD look like. The last part is appendix, where you can put things which don't belong to the topics that you mentioned above. And that said, this is just a sample PRD. And you can always innovate and experiment with the outline of a PRD. But these are the essential components that you should definitely keep in your PRD. So, as everyone can refer to a single source of truth, and then you can roll out a brilliant product.

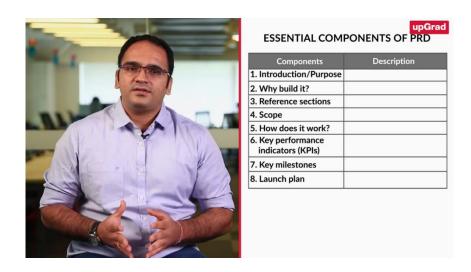


When writing a PRD, as a PM, you might have to learn about different technologies or services available in the market. After discussing with the team, you should mention the requirements if found any in a PRD. Also, writing testing criteria or acceptance criteria in a PRD will make it easy for anyone working on developing this product to be on the same page. So, next up, a quick summary of what we've learned in this session.





That was a great session on PRD. Let us do a quick recap of all the concepts. First, we started off with the PRD being nothing but a product requirement document wherein all the requirements are listed out, along with the rationale for choosing to develop the product. It acts as a single source of truth and enables the product manager and the development team to have a detailed discussion during the development.



Next, we saw the essential components or sections of a PRD. The first section containing details about what is the product, which primarily includes a brief description of the product. Next, we include why this product is built, wherein you write the rationale behind the decision. Details of user research and insights gathered from the analysis that written over there.

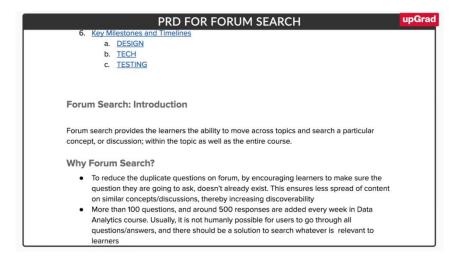
Next essential component and list details about how the product should behave. This section will have lists of requirements and details of what is the scope and what is not. The product requirements with their acceptance criteria and some functional requirements like technical or design requirements are also listed down in PRD with the help of all team members.

Some PRDs also contained launch plan, or go to market strategies and key milestones to be achieved with their timelines in it, so that PRD can be one place where you can find all that is required to know for working on that product.





Now that you've gone through the concepts covered in this session, let's recap the examples you saw to understand these concepts better. To understand the essential components of a PRD, you saw the PRD of an online marketplace product wherein you saw how different sections of a PRD are written and understood the importance of each section.



You also know how the introduction of referral framework to be written in a PRD. Later, we saw how a PRD for a feature called forum search is created and understood the thought process behind each of the section in detail, from our SME.





As a part of understanding the thought process, you came across Algolia, which provides search engine as a service, how ranking is done, what are the specifications to consider while taking up such a service? You also saw how key performance indicators are figured out for the feature forum search.

That is all about PRD. In the future modules, let's learn about product deployment and other technical concepts that a PM should know. Until then, keep exploring and have fun.

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