

**Innovation by Design**  
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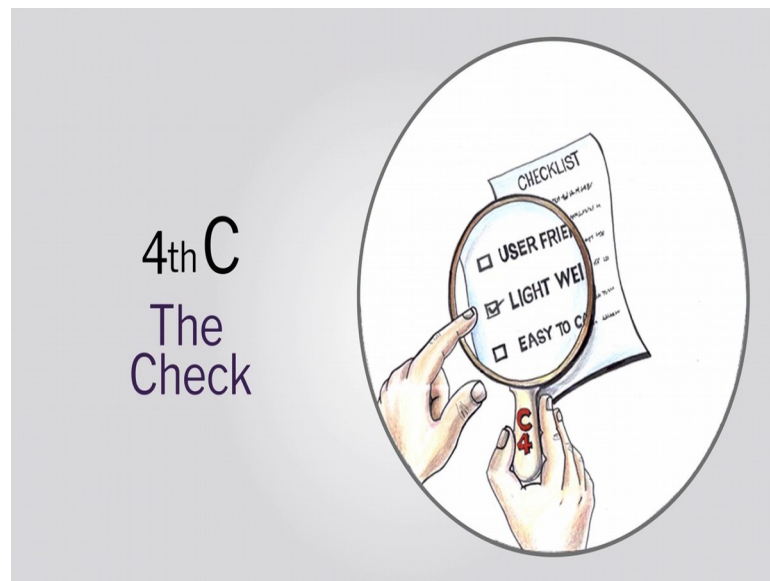
**Module – 05**  
**Lecture - 29**  
**4 th C The Check**  
**A durable palki for Vaishno Devi**

So, good morning all of you

Student: Good morning sir.

So, in today's lecture we will look at the 4<sup>th</sup> 'C' which is the Check.

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And this 'C' happens to be in the middle of the 7 Cs. So it is one of the most important aspect of innovation by design- the direction in which the project has to progress, the direction in which the ideas have to progress, the direction in which the marketing, management, the manufacturing has to go has to be very clear very early in the project.

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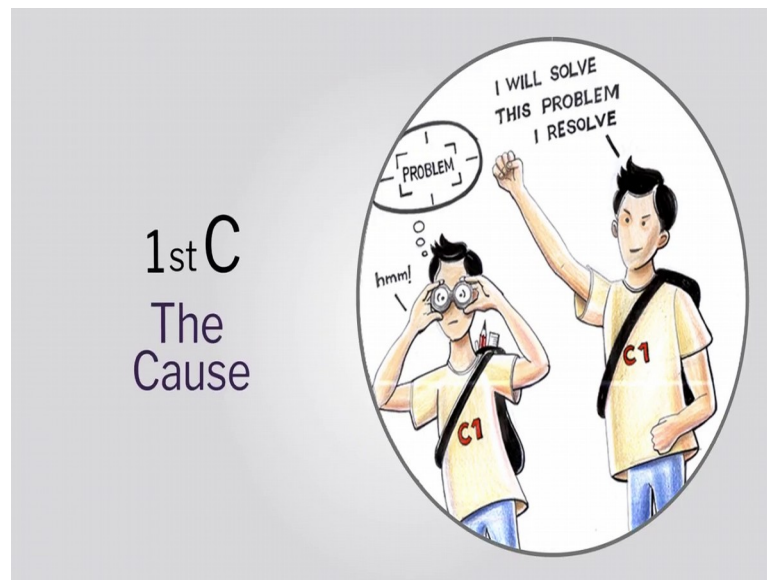
So, to make this happen there are lot of thinking tools which come in handy.

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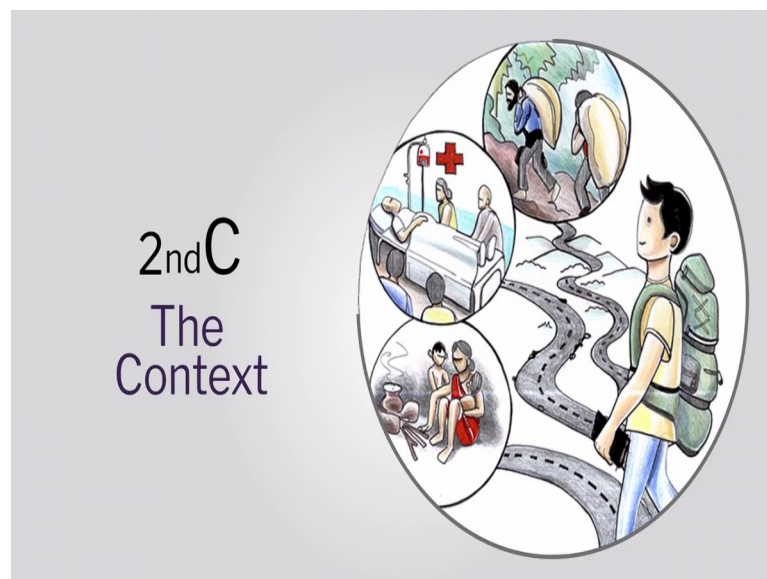
So, we will show you through this case study of redesign of a palki for Vishno Devi shrine how we went about checking out what type of you know mockups we need to do, what type of prototypes we need to do, how do you engage with the users to understand what the aspects of the users are.

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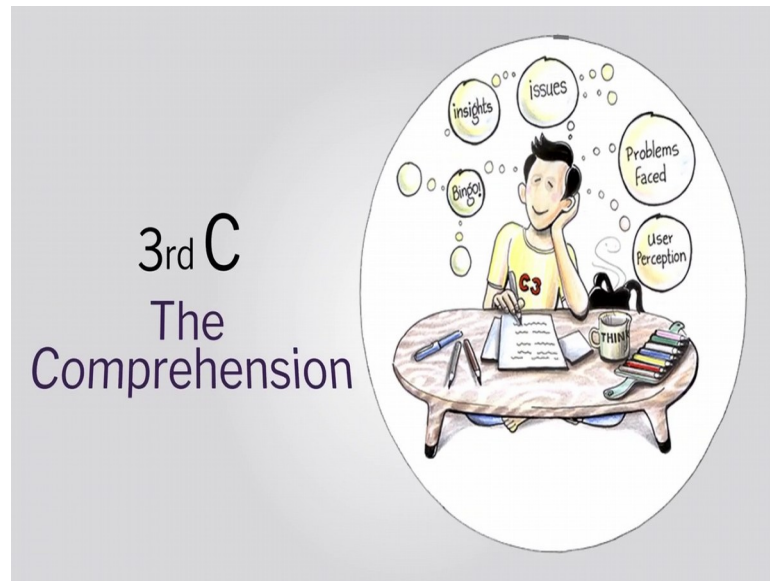
The 1st C was talking about social sciences.

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The 2nd C which is the context also looked at sociology and design in a interesting way.

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The 3rd C also dwelt upon sociology, sciences and to some extent engineering. The 4th C actually is strategy. You have to be very clear what you are doing. So this also is a collaborative discipline. None of the aspects in innovation are individual discipline oriented. So every aspect of innovation is multidisciplinary that is a very important thing we need to realize.

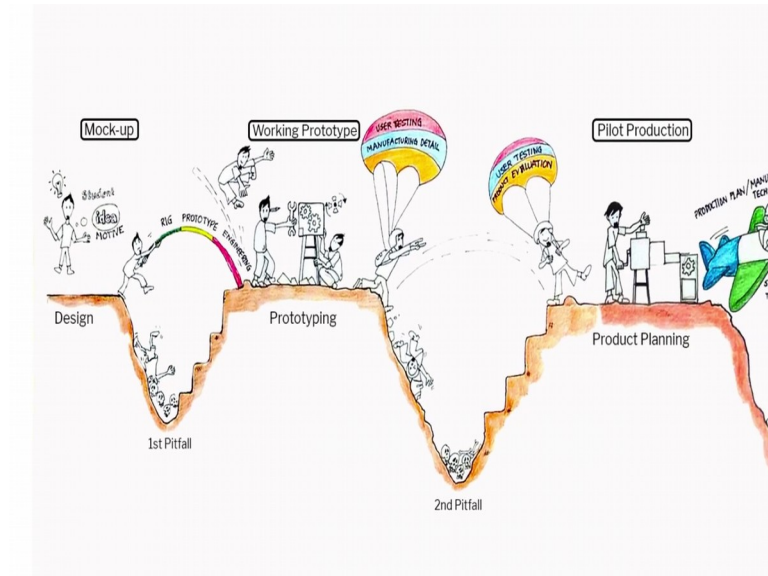
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Here we also look at the design driven innovation. We are talking about design in a very big way because design embodies a number of disciplines in itself. Become an

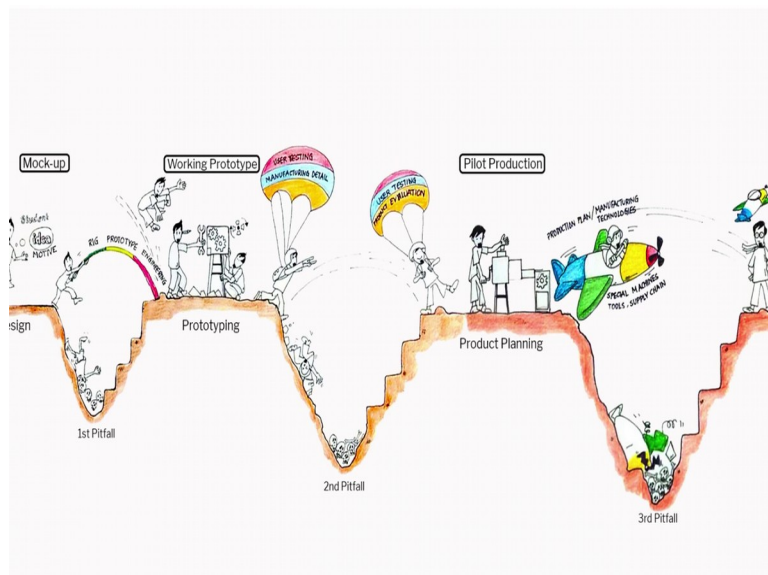
ethnographer when you doing your user study, you become an engineer when you doing you know your prototype development. So come up with design inventions and innovations.

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So, if you again look at the you know valleys of death for innovation, you see out of every one or two products which becomes innovative you have hundreds and hundreds of products or services which are dead and those are those valleys of death where they are you know lying.

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These are important lessons which we learnt while we went through these processes. That is the reason I am trying to show you. So, in this case what is very critical here is number of times in the palki project we came till the pilot production, then user testing failed. We came back again to the square one into the design and mock up and prototype phase.

So that journey I will show how that has happened. So there is a nice history to this whole palki project. All of you know what palki is right? It is this people who carry people who are you know handicapped or elderly.

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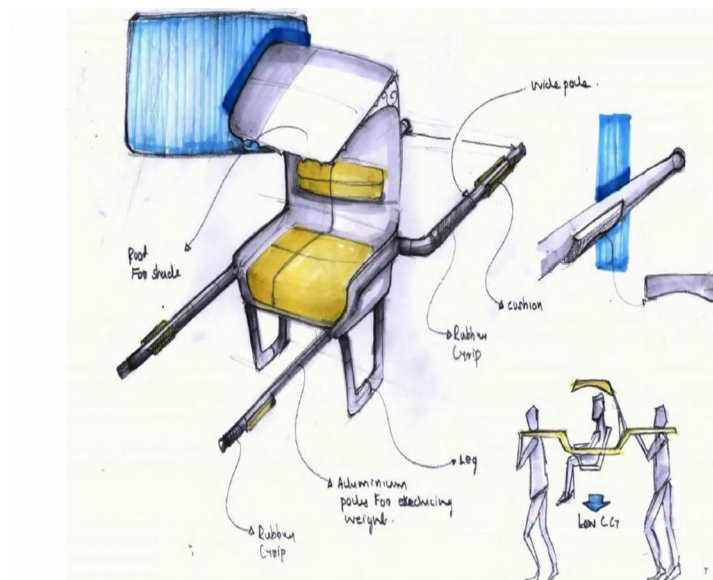
And then one of our students went to Ajanta caves.

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And he came back and told me you know sir I want to work on a palki for Ajanta. I said that is a good project.

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So, we sponsored the project then we did the design.

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We studied the palki. Porters are very very ingenious and they are very hard working. They come up with very innovative ideas.

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They use an existing chair and they actually tied logs to it and they use it as a palki. Nobody gave them any idea of what you know they can do innovatively, whether they can use different materials. Nobody told them all that, but they do whatever they can do best in local context now that is called grassroot innovation.



So, we studied all that and came back and said what happens if we use you know thinner materials stainless steel pipes which are very strong which are very lightweight and we design this palki and give to them. Because porters have to buy or manufacture their own palki because they are expensive for them.

So that is where we said we need to work for the porters and see to it that we make the government provide them the good palanquins, then you can control the price of how much they should charge. They were very very happy, the porters wanted. It had complete stainless steel pipes it is very light weight.