

Innovation by Design
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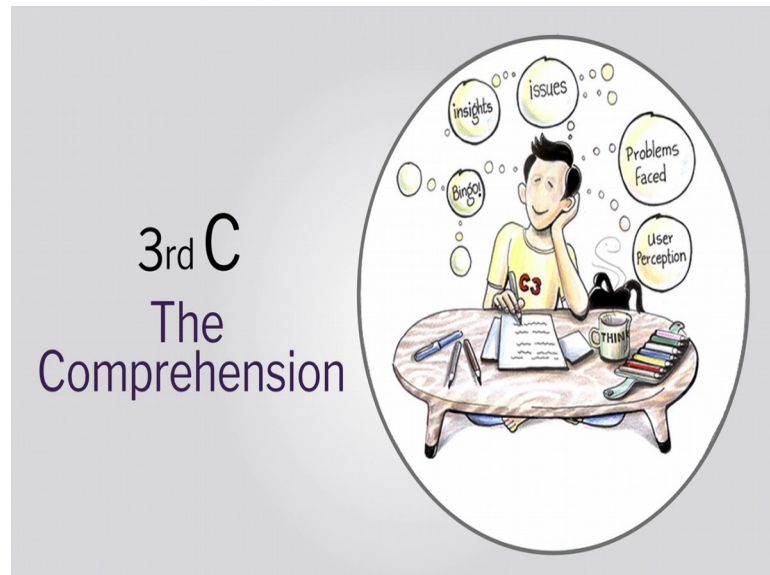
Module – 4

Lecture - 21

3rd C The Comprehension A user-friendly solar oven.

Today we are going to look at our third C which is the comprehension. You all noticing that most of our concerns for innovation are revolving around

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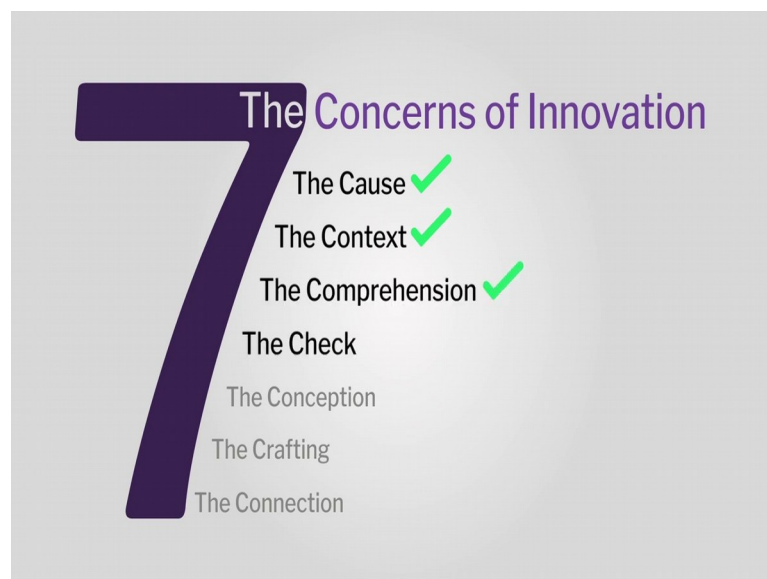


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- Understanding the problem
- Comprehending the problem
- Finding the solution

understanding the problem, comprehending the problem, finding out the things to do. Sometimes we just jump at our idea very early without even understanding all these things.

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That is why we are spending so much time on the first four Cs. We have already done the vein tracer, we dive into the problem issue, talk to multiple stake holders, come up with the innovation.

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It is still not innovation because it is still not reached the final mass production, then we came up with the CRPF bottle as the second.

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The context was very critical here. It was for CRPF jawans .

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Who go in for deep operations, 20 days without water, it is for a specific context.

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So, design as very very contextual, innovations is very contextual and we have to understand that. And now look at the third one which is the comprehension which is nothing, but arriving at design insights. So, we down this deep dive into the user problem with the understood everything about all these aspects, then what are we taking home? How are you synthesizing all this into a comprehension?

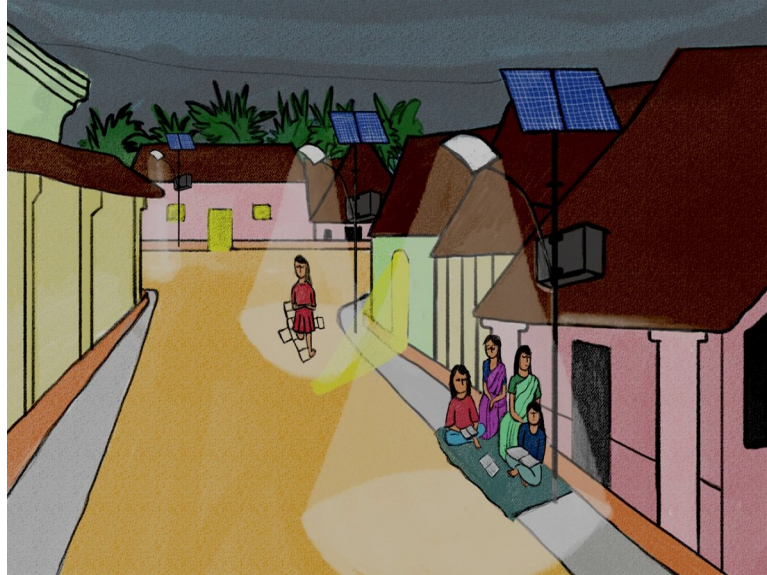
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For example if you are working on various aspects you look at the working principles, you have the technology involved, you look at the design insights: what type of insights

you got when you did the users studies, you will also make a plan of the socio economic structures there who is buying what happens.

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I will tell you it is very nice example of how one of the governments very very early put up solar street lights by using batteries within no time those street lights where you know gone and nobody replace that.

So, the issue of how you can look at the social economic structure across the governments, the people, the society is very very important.

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Comprehension

- Mapping latest technologies to the current problem

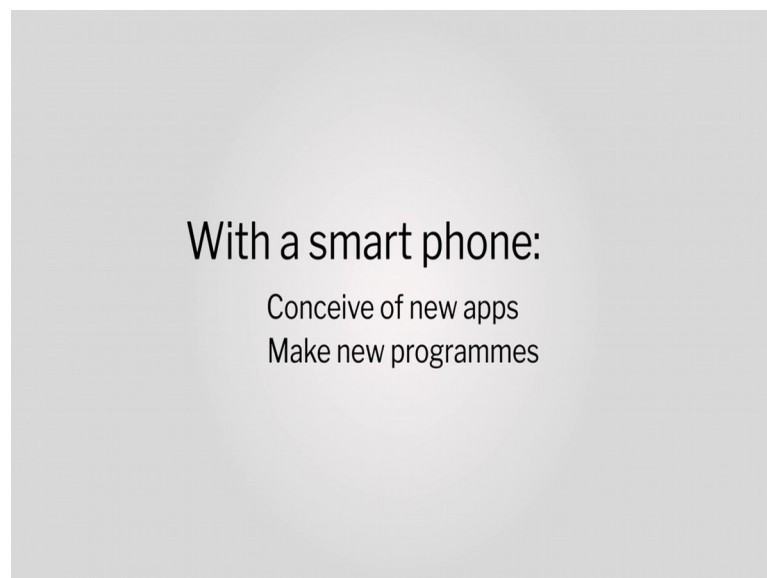
You have to understand what are the new technologies for a current problem.

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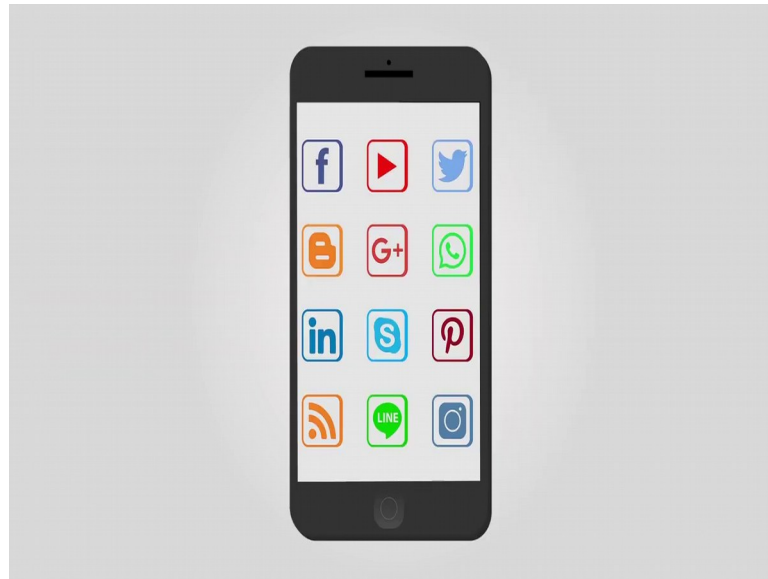
For example we looked at the people, elderly had a problem with mobile phones. So, which context which aspect of this mobile phone was critical? Was it an android phone, was it an normal phone?

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If it is an android phone you can look at how you can make new apps or you can make new programs.



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If it is an older phone you will come up with a new may be lens, to keep it a head of the phone and see the display.

So, the whole solutions differ from the type of problem in hand.

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Changing Technologies			
	Cycles	Sports Shoes	Telephones
Old materials			
New materials			

So, that becomes very very important for you to study, the technologies available for the problem in hand, and similarly we are looking at the study of new materials for the same problem, what are the older new materials which have being used.

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So, here I have my student Avinash Prabhune came back to came back to work with me on this solar oven.

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Avinash you can just come here, we had an problem in an we said that why will not people use solar ovens which is so, good which are free for people to use and the government gives a lot of concessions.

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So, Avinash was this you know young M.Des student at that time, and then he said I will go and check at homes. So, he went to the houses and found out from various resources, various you know contexts, what is the issue which is you know very critical and why they do not you know use these solar ovens. Some of the key things are that if people were using solar ovens find it very inconvenient to use. You know they love the cooking,

they love the type of product which comes out of the cooking but it is very very inconvenient.

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What is the inconvenience? That is also very critical and then he checked out what is happening and then see look at people here in rural areas, but why I am studying rural context in comprehension, you need to understand all the aspects and in this context Avinash went to flats in Bombay who have bought solar ovens. You know the solar ovens we are talking about the box type solar oven which opens up it has a mirror and it has a closed flat surface body which heats up and then you know cooking happening.

So, those are the biggest challenges which people face and it does not came into picture. The Ministry of Non Renewable Energy and Resource one is one thing why people are not buying it.