

Innovation by Design
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Module – 02
Lecture – 07
1st C The Cause
A vein tracer for blood banks

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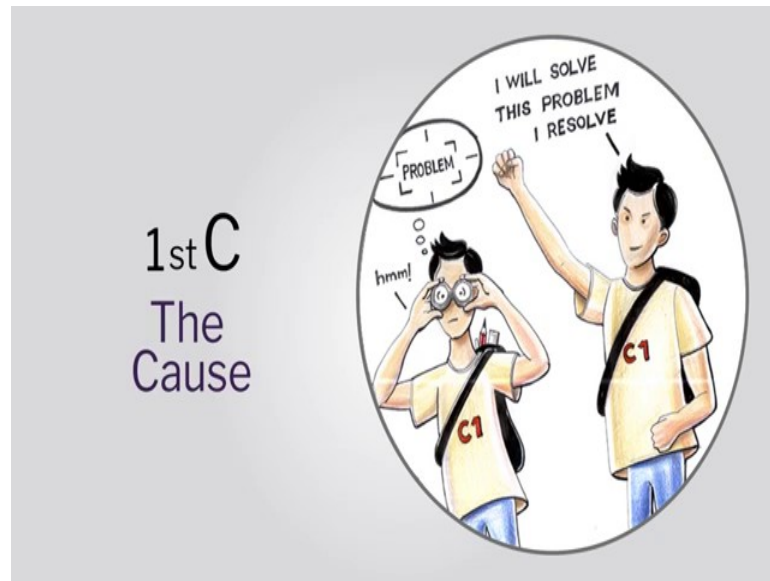


So, good morning all of you.

Student: Good morning sir.

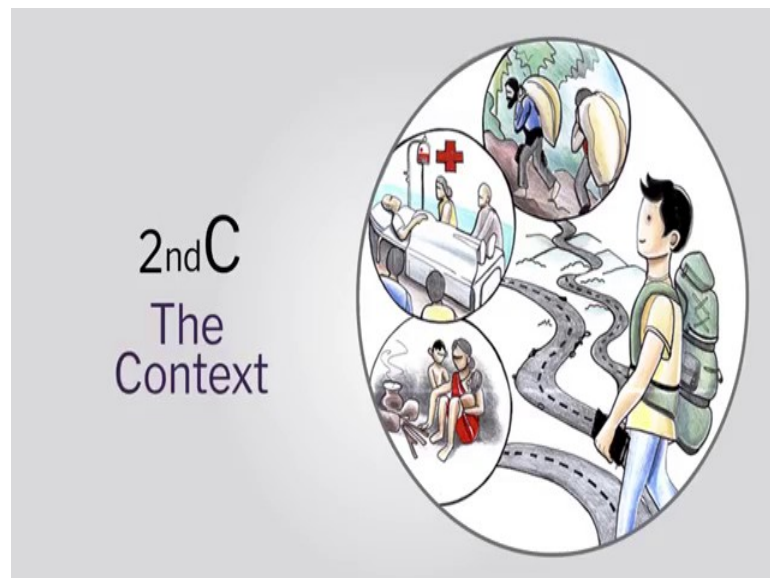
Today we are going to discuss the 1st C remember we were talking about the 7 Cs for innovation I am calling it Chakku's 7 C's for innovation.

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So, the 1st C is the cause. Cause is to identify an unmet need, to find out where there is a problem and also go deep and check what the various issues are of this problem.

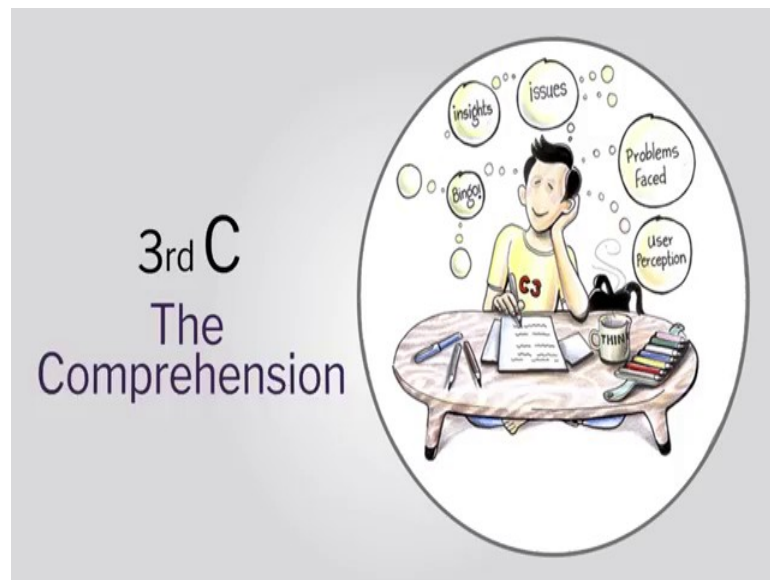
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The second one?

Student: Context.

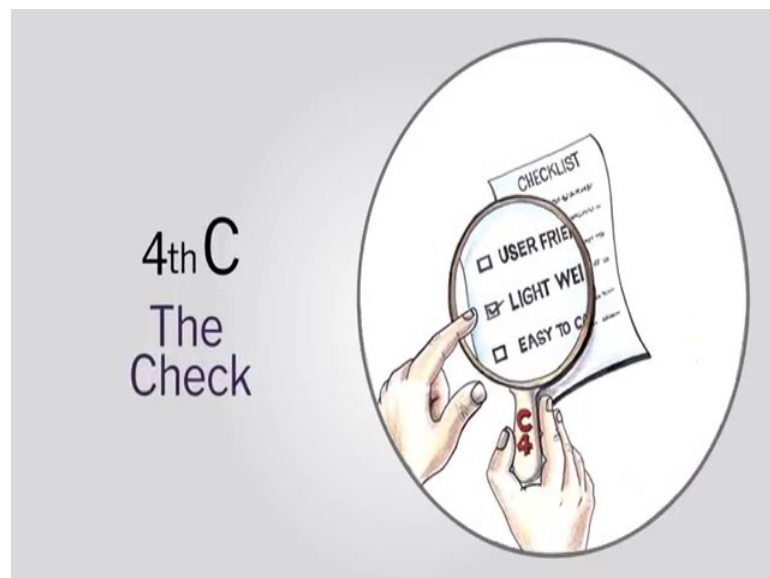
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Context the third one?

Student: Comprehension.

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Fourth?

Student: Check.

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Fifth?

Student: Conception.

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Then the next.

Student: Crafting.

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And the final one which is the most critical one is the?

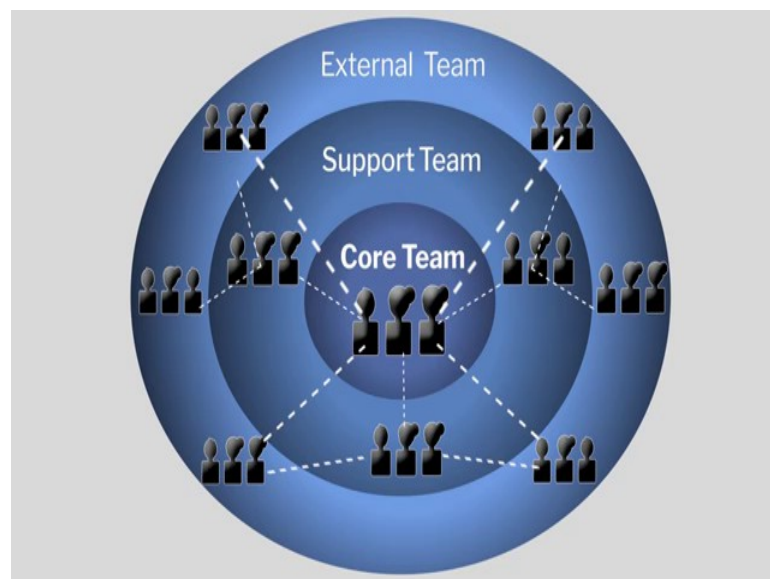
Student: Connection.

So, innovation does not happen till there is connection. So, connection means getting back there to the user. So, every C has to be connected to the user very very strongly at multiple levels, and we have seen that during this process, you need to repeat the connection with the user n number of times. Because if you are not really concerned from point of view of the problem, it will not really work because without that you know empathy you just cannot come up with innovation.

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Collaborative Model for Innovation

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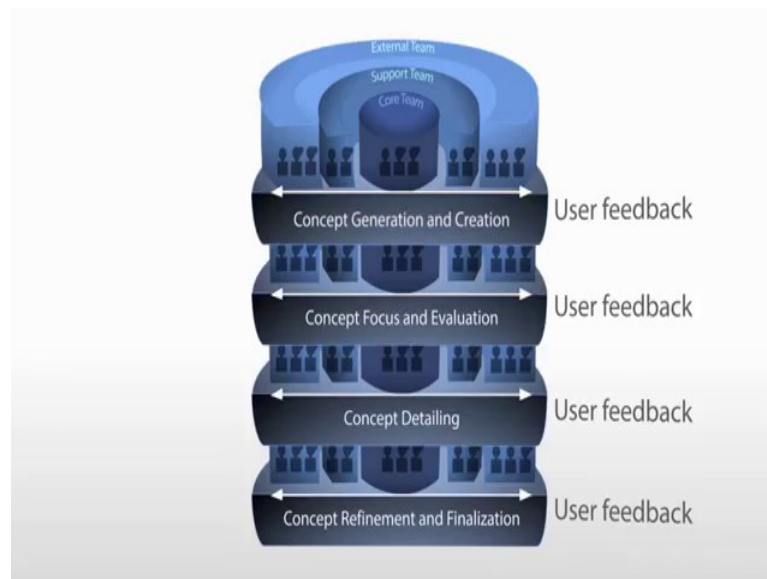
We came up with this very simple model called the core team, the enterprise wide team and the external team. This is in the context of industry. If you take the context now of your class what will the core team be? Core team will be the ten people who are part of the team what would be the enterprise wide team be? Faculty on the campus who else.

Student: TAs.

Teaching assistants very good what else? Who would be your enterprise wide team here? Lab assistants in labs, vendors who supply equipment to your labs, all those become your people around you whom you can get to; PhD students in the labs. Okay and then who would be your network external team? All outside resources- industries, large organizations very interestingly these some of these organizations, we just send them email they give you loads of data.

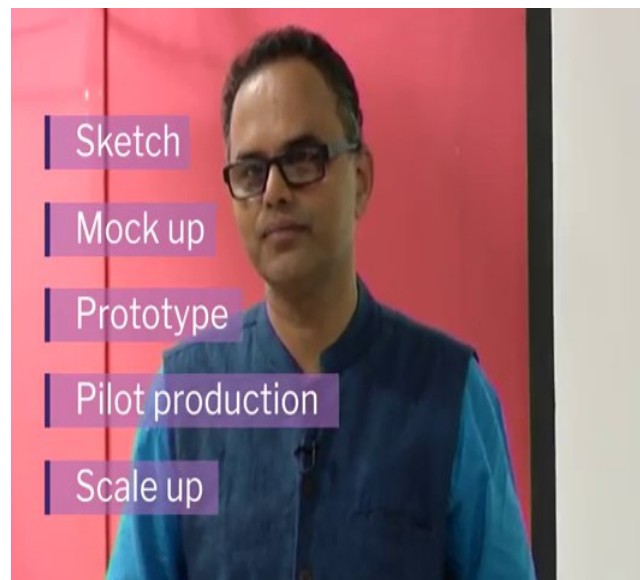
For example, if you are you know designing a bottle and I say I am working on a new material for a bottle, which is you know hygienic and which can stay for long durations without you know fungus developing inside and I write to the largest pet manufacturers in the world, they send you catalogs, they send you information, They are ready to talk to you.

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So, for example, similarly in my research and I got this very interesting insight. Out of the analysis which said that you need to have a constant user feedback loop along the process of design from day 1 to the connection. So, this user feedback loop which you are seeing you know around the whole process of design and innovation has to happen at every junction. That is very tedious right it is very difficult to have a user react to you very early.

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For example, you make a sketch you want a user reaction, you make a mockup model you want a user reaction.

You make a prototype you take user reactions, you make pilot production you take user reactions and then you produce you know large quantities, you are you know sure to succeed because your users are part of your feedback loop ok?

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So, we will see that happening in action in this you know project where we are working on a low cost vein tracer. What is a vein tracer, any clue?

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When you go for a blood donation and you know they want to take blood from your veins, we need to do multiple pricks and it is quite painful. And then the average attempts in a child is 2.35 this is pretty high.

So, who are the target users here? The target users are the doctors and the caregivers and the secondary users here are the people.

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Now, let us know what are the methods of understanding your user? You have to be in the location where the problem is happening, while it is happening and conduct an enquiry to understand the problem at hand, understand their socio cultural aspects, understand their livelihoods because all those are very very important for your design intervention.

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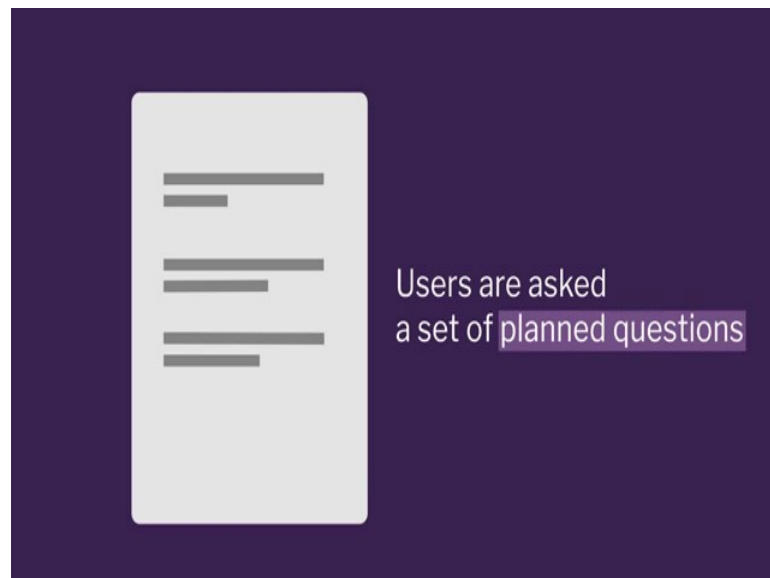
So, for example, you know in our context of a blood bank, you will have to be in the blood donation camp itself continuously for a couple of days to understand what happens.

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So, what is important over here is, what you think is the output mechanisms for all this.

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What should be the output of these studies any guess? For example, the experience mapping what should be the output of this study? What we will use as a resource to take back home where after doing this study? Time motion analysis, video footages and there are special softwares to even map these videos on to exactly tell you what is happening it when and every area is got deep research knowledge. There are thousands and thousands

of researchers working on every user you know like technique which I just mentioned to you.