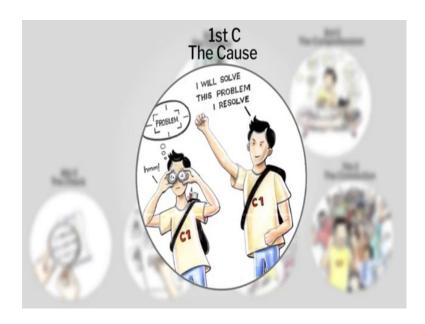
Innovation by Design
Prof. Nani Sabnani
Dr. B. K. Chakravarthy
Department of Engineering Design
Indian Institute of Technology, Bombay

Module – 01 Start of section 4 Lecture – 04 Understanding Users

(Refer Slide Time: 00:05)



Let us check out what all is happening in this first issue of cause, when we stand for this we make a commitment that we will reach the end. So, here we are we went ahead we checked out what is happening, what are the critical aspects of the stick they use, what is the stick supporting them for and also all the type of duties they get and we also checked that there are not one user.

Generally, for every product there are multiple levels of users. Who is a user of your product? There is sometime called the primary user. The primary user is somebody who is actually got the problem and is using the product, but there are secondary users and there are tertiary users. So, who are the secondary users? The officers, the commissioners, the storekeepers in the police depot, the people who order the police sticks; all these people are secondary users of the stick. Why we need to know the police stick so, well when we just getting a job to make a seat?

You are supposed to be on a [FL]'bandobast' (administer) duty and you are supposed to be standing and you are supposed to get some rest and you cannot sit anywhere. Because you said you will lose your view that is why you cannot sit. In this contradictory situation it is more-more important for us to find out what happens behind the you know the secondary users, how do they order for these products.

So, how do you design a product which is cost effective? So, everything is coming from our discussions on the context, then you look at these stores depot of the police how do they order for these which is to the tendering process.

(Refer Slide Time: 01:29)



So, you need to work on the specifications of materials very closely you have to also work on the quality control very closely. So, it looks like a simple problem, but you need to go much more deeper when you go into the context study, where all these aspects come into picture.

Then who is your tertiary user? The tertiary users is all the manufacturers who are supplying these sticks to the police, it is very critical for us to understand. Through the stick what all happens behind the ordering process of the accessory for the policemen and what type of timelines are there what type of budgets are there? Everything becomes very critical.

(Refer Slide Time: 02:06)



(Refer Slide Time: 02:07)



(Refer Slide Time: 02:11)



So, we need to have to take care of all aspects of the supply chain, all aspects of the manufacturing, all aspects of the procurement, all aspects of the issue you know how many policemen are there in Mumbai? Any guess? 50,000. Next guess? Two and a half lakh policemen then you look at the scale the most probably around 50,000 to 60,000 you want [FL] 'bandobast' (administer) duty. So, now, we need to make all our insights right.

We now have multiple users, we also understand the socio economic issues the type of money they can spend, what they can do and we also are looking at the issues of cultural aspects how they can sit how they cannot sit. The police rules what they are allowed to do what they are not allowed to do.

So, we have a very clear understanding of what is happening and we come up with these insights. This is the police stick which is in the market. The police stick is made up of transparent polycarbonate. The polycarbonate is used in police stick because because of strength and toughness. Then very interesting Sadananda Dathe (Refer Time: 03:04) the Additional Commissioner was in touch with us is a cricket enthusiast and he knew that cricket umpire use some props.

(Refer Slide Time: 03:11)



You know cricket umpire has a stand for long hours and they could very tired. So, they use this prop, then we went ahead and check what are other you know the stools available then we looked at hiking chairs, then we looked at portable sport seats where you can carry them along and we comprehend all the insights. So, you comprehend the problem, you comprehend the context in all aspects which come into play.