

Understanding Design
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Module - 02
Start of Section 3
Lecture - 10
Understanding user experience

Professor Chakravarthy will tell us more about users and context with the examples of a fascinating project he worked on recently. It involved a special kind of seat for police constables on duty, right?

I notice we are in a sense continuing with our chair theme, although the seats that I designed for the police are far from comfortable office chairs we use. In Mumbai city it is common to find police constables standing on roads for long hours to ensure law and order during public events. During the survey we found, that they spend many hours on road sides providing security to the visit of dignitaries. Standing unsupported for hours is very very painful for the legs and back.

They desperately need to have some support and we sometimes see them using their police stick as a prop to lean on. This was spotted by a journalist and she promptly put it in the newspaper. The joint commissioner was pretty hurt. He requested me to work on such a design, so that the policemen could get rest while they are still on duty, he requested me to find a solution.

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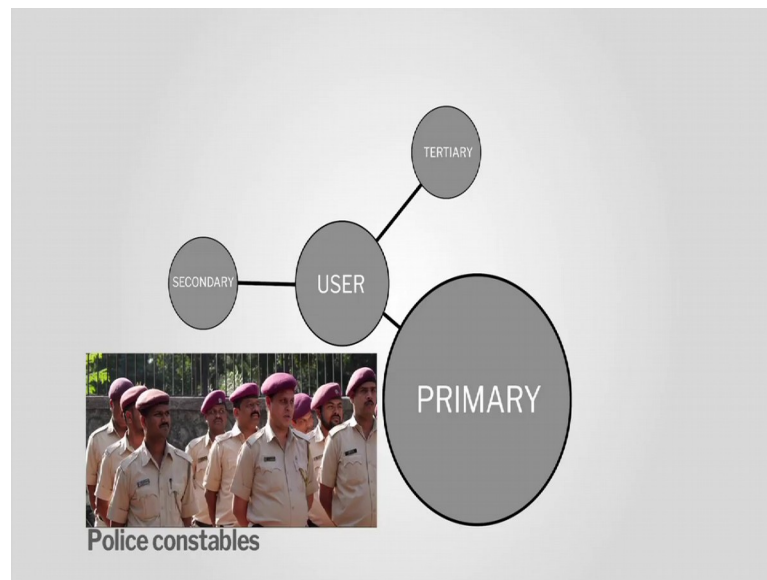
And suggested I look at the cricket umpire seat as a starting point. When we first explored this suggestion, it proved to be unsuitable for the context. It would be an additional item they would have to carry and that would hinder them in their regular duties.

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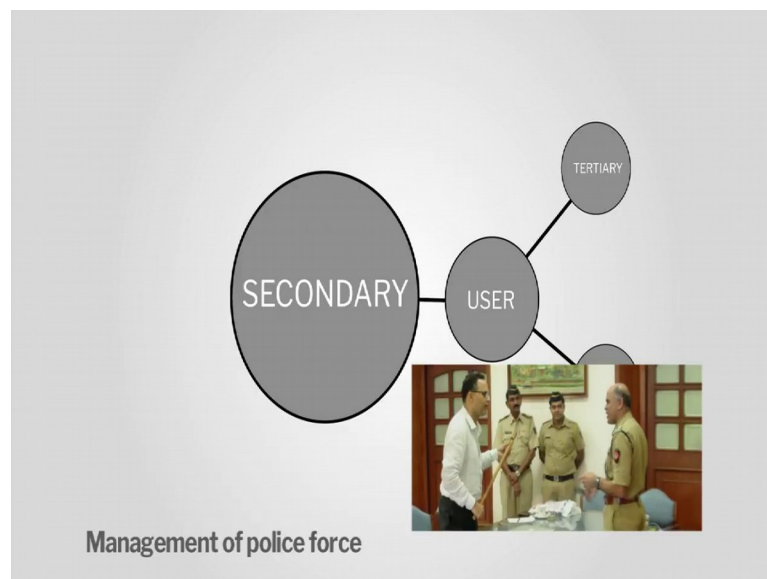
At best such designs from other contexts could serve as inspiration, but our context demanded a new design. This underlines how any attempted design without adequate understanding of a user group in its context is likely to be unsuccessful.

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In this case, the primary users were the police constables.

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The secondary users were the police commissioner, and the people in the procurement and stores departments.

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The tertiary users were the manufacturers and distributors of the seat would have their own requirements like storage, and dispensing.

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So, what did you have to study?

Getting a clear understanding of the context in which the police work meant understanding all the physical and environmental conditions that they face. The grounds on which they stand while on duty are varied. The seat we designed had to work on concrete, tar roads, and even on grass. We also had to understand the tedious process of

procurement and issue; moreover we had to be mindful of the cultural context in which the product would function.

This meant that we would not suggest something so; obviously, out of place as a plastic chair we use in houses. From our study of secondary users, the management, we found out that the cost also was very critical because if this if the seat is lost the policeman had to replace it himself. From the tertiary users we came to know that the scale of manufacture had to be large to make it affordable. So, we had to start designing with all these considerations in mind. The first mock up we made was in thermocol and it was a seat prop design which would actually sit on top of the police stick.

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We could take it to a formal presentation, because it could neither be tried and it could not be shown to anybody.

So, what did you do?

We had to come up with an idea to actually work out a working prototype. So, we looked at this office chair and we said if we can break this armrest into two parts and use it together to make a prototype we could actually test with the policeman.

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So, we actually broke the armrest of the chair in the two parts, joined them together and we had a cycle handle grip fitted to this.

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So, now we could actually fit it on the police stick and also try it out and see whether it is really restful?

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And it was very very comfortable, we ourselves were very happy. And then we took this whole design to the police commissioner's office and they tried it out and they were very very happy with the design and they approved it instantly in their office.

That is very nice. What did you do next?

Encouraged by this response we came back and designed a CAD model of the design and went for mass manufacturing.

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We created a high quality rubber prototype which could be mass produced too with the same tooling. This prototype now would fit on the stick very comfortably and this also we found out that they were having multiple types of sticks which they were using.

So, they could use it on the transparent stick as well as on the lathi which they traditionally use. We manufactured 200 numbers of these and sent them to the police stores for issue to the field. The service showed that 80 percent of the primary users approved of the design and of course, the tertiary and the secondary users were very very happy.

User satisfaction is extremely important, and this can only be assessed by observing the users actually using the designed object.

The process is iterative, meaning we must be ready to revise our prototypes as often as necessary until the users are fully satisfied.

Many methods have been devised to understand users better, one obvious method is observation. But, when observation is not sufficient designers ask questions or engage in conversation with users because a free-wheeling conversation often reveals things that the designers may have never thought of. Let us see some examples of how we can learn more about users, click on the next tab to learn more about designing for user experience.