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

## Module -1 Start of section 3 Lecture - 03 Challenges to Innovation

What is the process of innovation like when a designer leads it? Can we think of a step by step process from idea to final solution?

Yes, we can, although the process is iterative; we may trace the journey of a design idea through several stages before it can lead to a final solution. I have found it useful to think of these steps in terms of the 7 concerns of the innovation process.

What you call Chakku's 7 Cs.

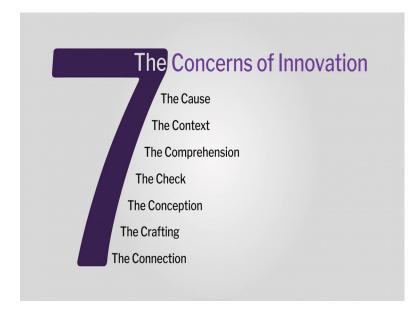
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Yes, the 7 Cs are all about concerns for innovation; it is with the help of these 7 concerns that I walk my students through the innovation process.

So, what are these 7 Cs?

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Let me now take you to my classroom, where I introduced these 7 Cs of innovation through detailed case studies.

Wonderful, Professor Chakravarthy will now take you through a number of case studies and offer you insights into each of these concerns. Let us enter the world of innovation by design.

Good morning all of you.

Student: Good morning, sir.

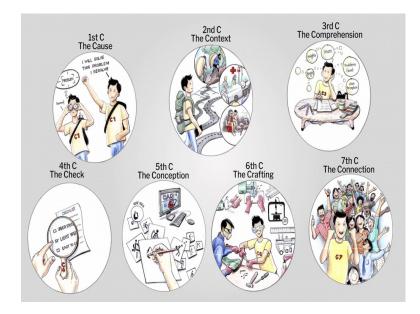
Today, I would like to quickly show you this very small case study on how we actually looked at this whole issue of innovation in a real life domain.

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This came in Mumbai Mirror. Additional Commissioner of Police at that time Mister Sadananda Dathe, a close friend of ours send this picture to me and said Professor Chakravarthy can you do something? Our policeman are stationed for 18 to 24 hours sometime at a stretch when there is a VIP movement; they are on that duty all along the road for that many number of hours and it is very taxing. So, they need to have you know some type of rest and you know; some of them use a stick to support themselves and later on get hurt.

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So, we went very systematically. The first concern being the cause where we go deep into the issues of the problem in hand and also feel for the problem; that is an very important work on designer innovation.