

**Understanding Design**  
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**Module - 01**  
**Start of Section 6**  
**Lecture - 06**  
**Design is concerned with the user**

So, if practically everything around us is designed, can every designer design everything? Of course not, most designers have their own domain expertise as you showed in the tree of design. Each discipline has developed its own skill set, tools and design processes. Not to mention super specializations within disciplines.

Meet my colleague Professor B K Chakravarthy, a product designer on our faculty here at IDC. He will be joining us for some of the modules, welcome Professor Chakravarthy.

Thanks Nina, and cheers to all the design enthusiasts out there, design mediates across several disciplines.

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Design creates access.

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Design enables.

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And design facilitates, it does this through a process of identifying needs, and solving problems to enhance everyday living. At its core, design is concerned with the user and so we say that design is human-centered.

Let's explain what we mean by design being human-centered. Take this office chair, Professor Chakravarthy will explain what makes this piece of furniture a designed object, and what went into creating it.

Who does not love a good chair? But what does a good chair mean to you Nina?

A chair that is kind to one's back?

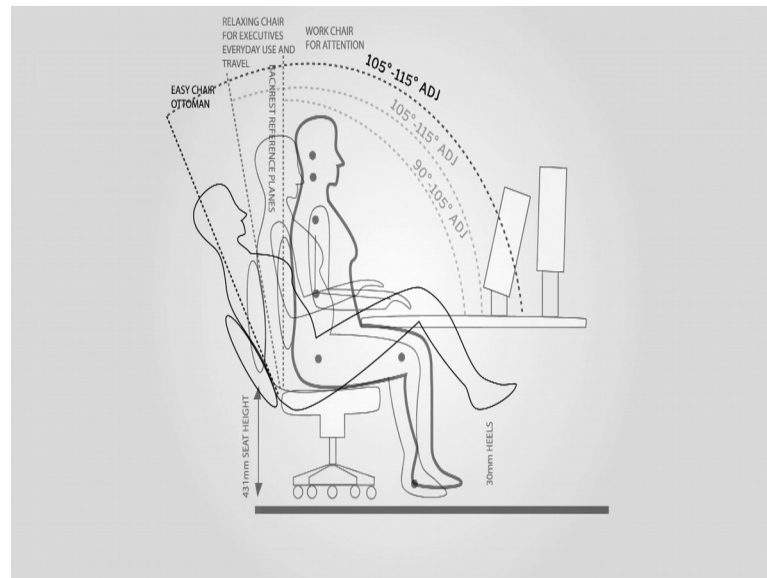
Yes, comfort is of major importance, the user does not want to end up with aches and pains. So the core requirement is being able to sit for long hours without discomfort. The office chair is a pretty good example of user centered design. Let us trace the design steps that must have gone into creating this office chair right here.

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First of all, the designer would have determined the overall dimensions for adults, we will be using this chair.

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The anthropometric data, in other words, is the data of the human body, so as to benefit the maximum number of people. Because here the challenge is that the chair is going to be mass produced and people with different dimensions should be comfortable using it. How can it then be useful to different human beings, some short and some tall, some hefty, and some slender?

The answer lies in the concept of adaptability. At the outset, the designer of this chair would have calculated the various adjustments needed to fit all sizes.

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The seat height is easily adjusted by this pneumatic adjustment lever on my right. This allows the user to have their feet flat on the floor. I will do this, just to show how this works.

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My feet are on the floor.

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And my hands are horizontal to the desk, now my thighs are horizontal and this is a very comfortable position for working for long hours. The next important parameter is the back support.

Please adjust my chair.

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Would you turn Nina? This chair has a wonderful lumbar support adjustment. The knobs over here allow the back to take the curvature of the lumbar, and this way you will be able to get the right contour at the back.

Wow it is quite restful.

The seat cushion is also a very important feature. Care has to be taken so that it is not too soft. And at the same time, it has to be firm so that you can actually move and your posture will then be better. It should not be hard either, because if it is hard, it can hurt.

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Did you see this chair has this wonderful netting in the back? This netting lets you have air circulation and it also moulds itself to the contours of the upper back. Now, let us sit down and examine the accessories which give us the additional comfort. The armrests which reduce strain in the arms, the swivel, the wheels which let us move chair forward and backward.

Why do these office chairs have so many legs and all these wheels?

All chairs have at least 5 prongs in the bottom, because these make the chair very stable, especially when you reach out for something, you could easily fall down. And the wheels are very important because when you are working your posture is very good, to come close to the table and when you need to get up, you need to move backward and get up slowly like this.

Thanks that was most enlightening.