



SNS COLLEGE OF TECHNOLOGY

(An Autonomous Institution)

Coimbatore – 35.



DEPARTMENT OF BIOMEDICAL ENGINEERING

UNIT – 2

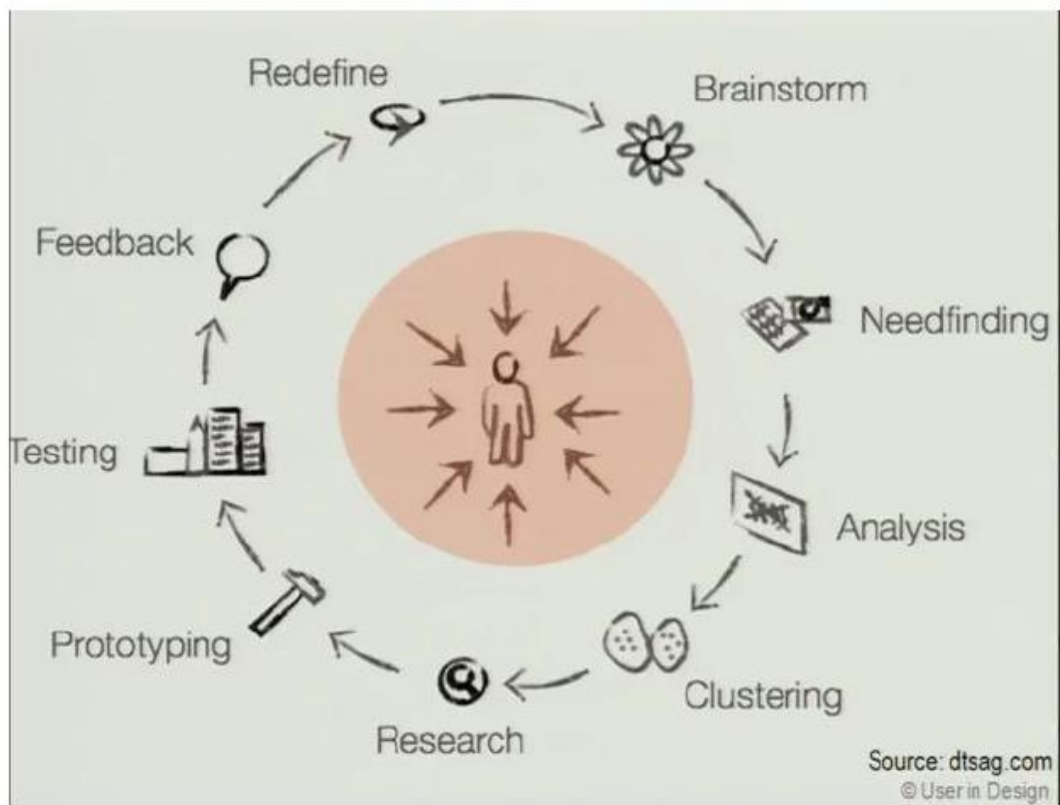
Uncovering and Investigating Community Concerns

Why is it so important? Why can't we just design products without worrying about all those people?



So, here is this little dog. I am sure many of you love dogs and you see this cute looking thing and you go near it, you know doggy, doggy and very excited and all that. And when you go close, this is what it does. So, this happens right and this is what it feels like when a product is not designed from the user perspective.

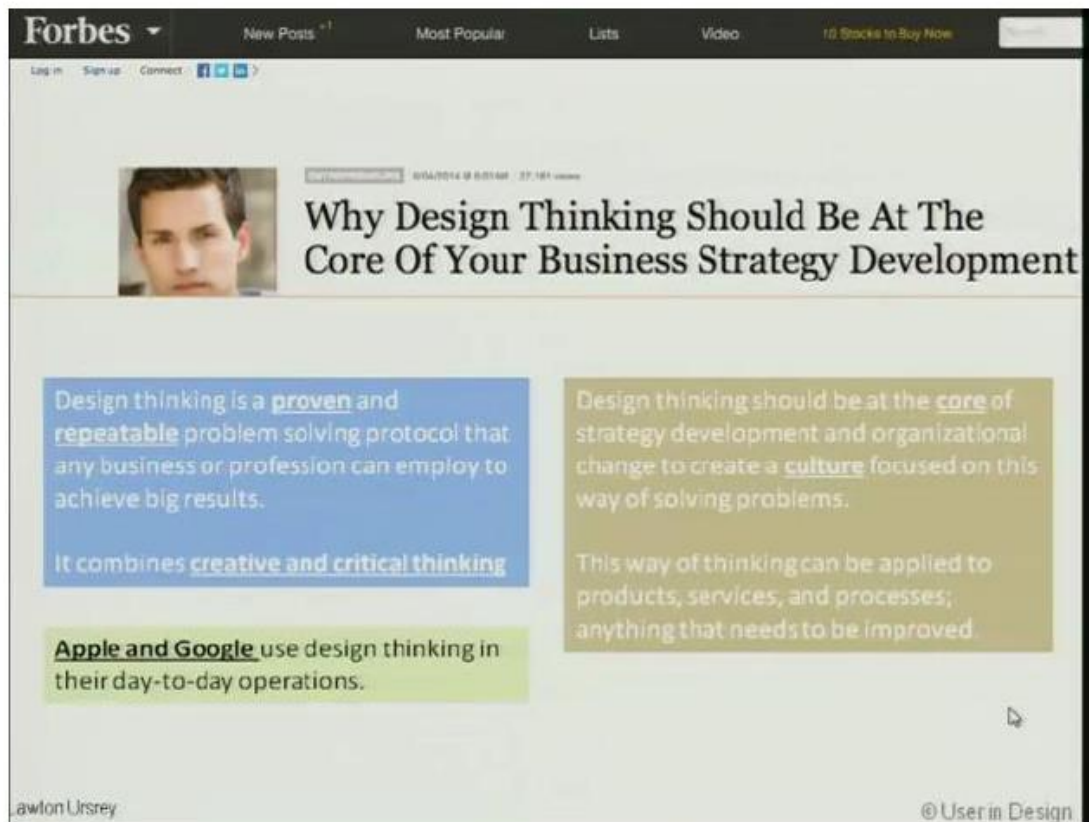
So, it can either be something that is comfortable and pleasant as an experience or it can be something that you expect to be comfortable and pleasant and when you go and start interacting with it, it comes to bite you, not literally, but it becomes very unpleasant. So, the other take away from this is that products that are not designed from user centric prospective, not only do they not behave as you would expect them to, but also that, you know, it is not just about the appearance, but it is also about the behavior. So, it appears a certain way but it behaves in a very different way.



Every organization believes that they are customer centric. If you look at the product creation process at organizations, they more or less look something like this- You know the different cycles that they go through of need finding, analysis, research, testing feedback, and etcetera and so on and so forth.

Nobody believes that they are not customer centric, but innovation, true innovation happens when we put people at the center of this process and we begin to look at this very differently. The minute we put the people at the center of the process, our whole approach, our whole thinking starts to be very different. Because we are solving their problems and we are not

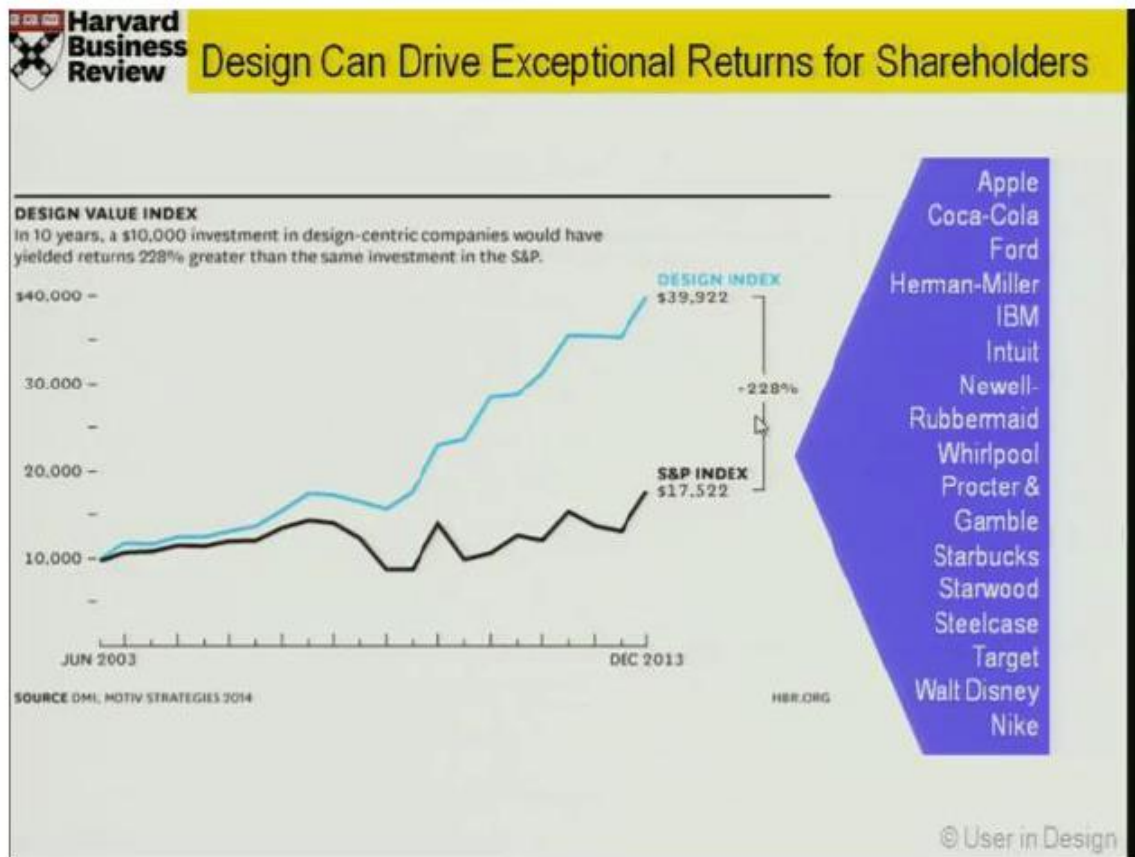
solving the problems that we think need to be solved. We are solving the problems that they need solved, they, the people.



This is an article. We look a little bit now at the business impact, the business side of things and design thinking. How it works from the business prospective and for the business. So, this is an article in the business magazine called Forbes and it says ‘Why design thinking should be at the core of your business strategy development.’ These are some excerpts out of the article. It says design thinking is a proven and repeatable problem-solving protocol that any business or profession can employ to achieve very big results.

It combines creative and critical thinking, some of things we just discussed earlier-creative and critical thinking. It also says design thinking should be at the core of strategy development and organizational change to create a culture, focused on this way of solving problems. When we are talking about shifting the culture of an organization, shifting the whole, you know, way that the organization thinks about their customers, what we are talking about is mindset changes. Mindset changes of the type that we are engaging in through this course. This way of thinking can be applied to products, services and processes, anything that needs to be improved. And he further says Apple and Google use design thinking in their day

to day operations and we can see that happening, right. We can see what is happening through their products.



This was a study reported in Harvard business review, which is another business magazine, that talks about ‘Design can drive exceptional returns for shareholders.’

So, now it is not just about the people for whom we are designing, it is also for the business, it is needs to finally, make business sense. So, this company called Motive Strategies and Design Management Institute conducted this research, where they tried to find, define and locate companies that are design centric, where design thinking is part of their DNA. And they were all able to only identify 12 companies and these are those 12 companies. And they defined, what they called is a design value index and they studied the performance of these companies over a 10-year period versus companies that were not design centric and what they found is that there is a huge difference in the return for shareholders. So, it yielded returns; 100000 investments in the design centric companies would have yielded returns 228 percent greater than the same investment in companies that were not design centric. So, this is another interesting angle that helps you understand the design also impacts the business.



This was the cover page of business week several years ago and it had this front-page article about all the technology and you know, complexity associated with technology related grief that users, customers, on day to day basis, have to go through. It says- from VCRs and telephones, to copiers and microwaves, poorly designed machines, cluttered with unwanted features are driving consumers crazy. Whatever happened to user friendly? So, we can see that, it is not just about us, you know creating a product and then creating product to be user centric, but also understanding that it impacts the business.

Return on Investment



This graph from the Mozilla KPI Dashboard shows the volume of questions (in solid blue) in the Mozilla support forum before, during, and after the 3-month UX activities (red box).

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nnngroup.com

So, this is a study that I would like to share with you and reported by the Nielsen Norman Group. This is from a study of the Mozilla Firefox, the web browser. And they were basically trying to go through a redesign of their support sites and this redesign happened over this period; January, February and March. And this is showing you how results were evident as a result of this redesign after that period. So, one of the things you can see, is the volume of questions that users opposing to their support side, the customer support side, dropped from this to this and also the percentage that they were able to respond to, within a 24-hour period, rose. Thus, they were able to respond to a lot more questions.

Cost of bad Design for People

American Airline Flight 965



December 1995, departed from Miami to Cali Columbia

On Landing approach, pilot had to pick the next radio-navigation selection called 'ROZO'
He selected 'R', which populated the Flight Management System Interface with all starting with 'R'

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Route from Miami to Cali



The pilot selected the very **first** of these
Instead of 'ROZO' he selected 'ROMEO'
132 miles north-east (descending into the valley)

courtesy Persistent Systems

Now, let us look at an example from the people perspective. This is the story of American Airlines Flight 965, this was in 1995; flying from Miami to Colombia, Cali. And this was the route that they were flying. So, it departed from Miami to Cali, Columbia. On the landing approach, before landing, the pilot had to pick the next radio navigation selection and the code they pick, called airport codes and the correct code was ROZO. Now, he selected R and the flight management system got populated with all the Rs and he did something which is a very normal, natural, human thing to do. He picked the first of those options and you and I know that we do this all the time, right. See something reasonable enter, enter, enter. Just get through it quickly, right. So, he picked R and what happened is, by selecting the first of these, instead of ROZO, he selected ROMEO. That was the first of those selections.