

**Understanding Design**  
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**Module – 07**  
**Start of Section 1**  
**Lecture – 37**  
**Innovation by Design**

Hello there, welcome back to understanding design, this is the 7th and last session of our course. By now we have had discussion on various aspects of design and we have seen how design interacts with human activity in diverse ways. It is concerned with users in their context, it makes technology accessible to all.

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It impacts society and the environment and is often a collaborative effort.

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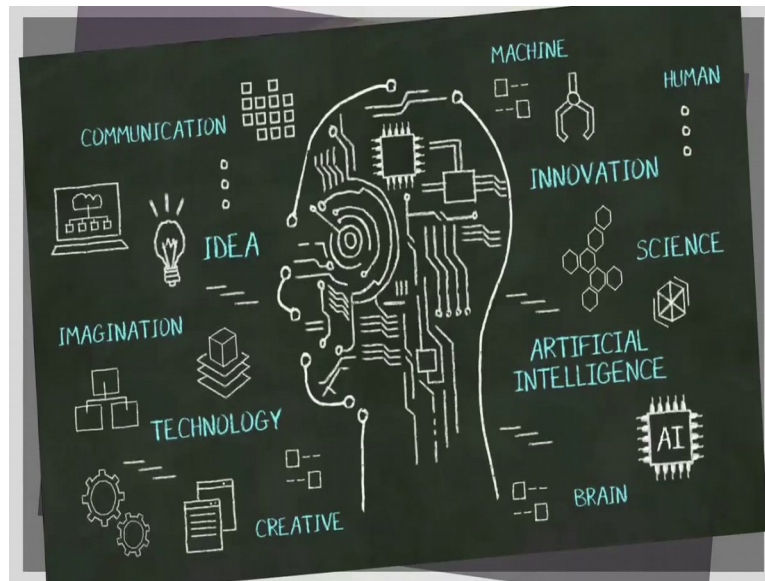


But beyond this there is something intrinsic to design, something that brings design into existence. That element is innovation. Innovation is the buzzword today and everyone speaks of it as an absolute necessity for success, just like design there are many ways that innovation is defined and perceived. Every organization talks about bringing in innovation not only to products they create, but processes by which they manufactured and sell their products.

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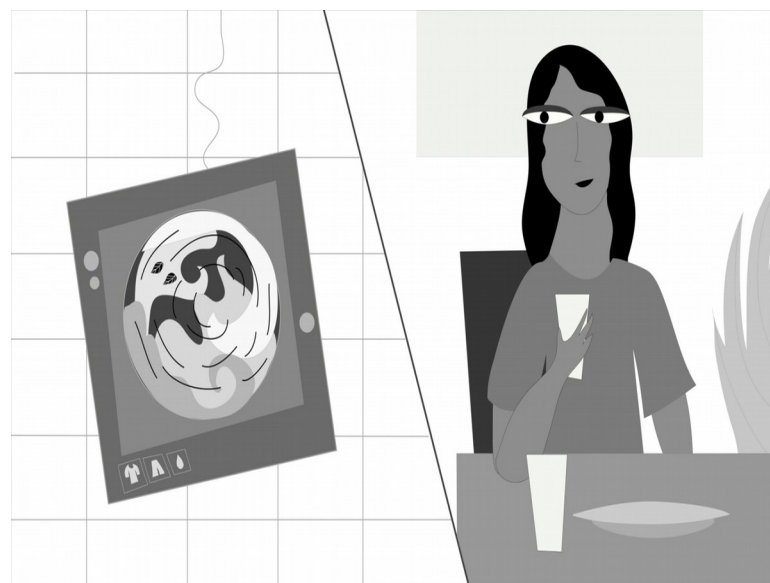


Creative people think of innovation as new ideas, as a way of making new connections between materials, as ways of using and reusing them, or new ways of communicating. Some talk of innovation as something new, a novelty, as something that never existed before like a new technology or a new application of an existing technology.

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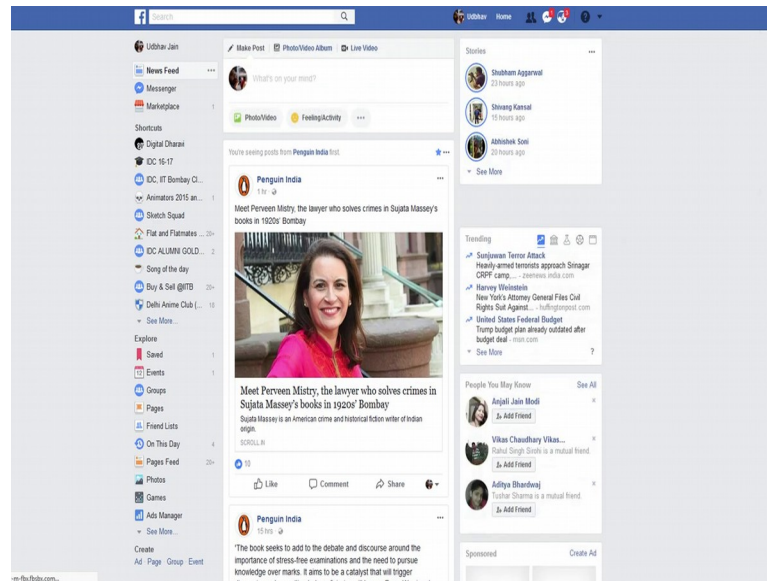


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Take the internet, the technology existed for many years in research organizations and labs way before it became the place for anyone seeking some information and getting it instantly.

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Or wanting to share with the world that thoughts, feelings, photos, work you know, so many things. Today we cannot even imagine the world without the www dot, can you? So now we come to our theme for the day innovation by design. We need to understand innovation and how design enables innovation. We have with us once again my colleague Professor Chakravarthy who will speak to us about this very crucial aspect, he works in the field of product innovation, so that is what he will talk about. Welcome back to understanding design, could you elaborate on the meaning of the phrase innovation by design, I mean is not all of design innovation?

Well, innovation by design is a practice of using design tools, and methods to create user centered novel products. At the core of this process is empathy for the user and innovative use of technology to arrive at solutions, the process is widely recognized as design thinking.

The key elements are empathize, observe, ideate, prototype and test right?

Yes.

So, would you say ideas are the most important after empathy?

Yes they are, but it is hardly enough to have an out of the box idea unless we are able to give it a concrete shape. Anyone can come up with ideas, many of these ideas may have the potential to radically change our surroundings.

I read somewhere that every seed is a promise of a tree, but not all seeds become trees they need to be nurtured.

Exactly, for a product design idea to be successful, it has to be manufactured and distributed and it has to reach the hands of a large number of users for its potential to be realized.

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Yes of course, innovation actually comes into its own when it makes an impact, when we see a large number of delighted users we can say we have an innovation. The satisfaction of these many users is the ultimate test of innovation in design isn't it?

I am sure, that you appreciate how challenging innovation by design is. And also why every idea that sounds good may not turn into an innovation.

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In order to translate ideas into tangible products what the designer requires is a comprehensive understanding of the needs of the users and how they could be satisfied.

Users again we have already spoken about different kinds of users, now let us talk about different kinds of innovation.

Yes, there are many types of innovation; we could have radical innovations, where a completely new technology replaces an old one.

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Like what we saw with the coming of solid state audio players, like the iPods, that swept away all our old walkmans.

Now, we do not even need a separate music player it is all on our phone and the music is available online.

It could be innovation at different stages of product development, for instance there could be innovation in manufacturing to reduce the cost of a product.

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A good example is the Tata Nano car where innovative manufacturing reduced the cost drastically to make an affordable small car.

You will find material on this in the resources tab of module 7 on the course platform.

Another category of innovation could be in the distribution chain, a packaging idea of making miniature packs at low cost makes several products accessible to consumers of lower income groups.



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Like the miniature stashes of shampoos, coffee, masala, chutneys you know we see them hanging all over local shops and roadside stalls.

These reached all over the country even in areas that were not regarded as potential markets for such products. As the idea caught on, a number of other household products became available in affordable small packaging.

Like the chota recharge for your mobile phones.

[laughter].

[laughter].

Yes, we can see how innovation traverses across various domains, we also have business process innovation in the popular supermarket chains in our cities and small towns.

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They make purchases in bulk and keep the prices low by taking support of special softwares.

They sell in large quantities through special offers and promotions across different consumer segments all of which result in brisk business.

And if I may add there is also user centred innovation.

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Take for example, the gaming consoles that use motion sensors that detect human gestures, such games compel players to respond with body movements in order to play. As they keep playing the players developed greater skills and precision and that takes them through the next level.

Sports, dance and fitness are other popular workout games, these benefit users in multiple ways because they let them stay fit even as they are playing indoors.