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

Module – 04
Start of section 8
Lecture - 28
Finishing touches: A product plan

(Refer Slide Time: 00:04)

And now we said if we have to a product plan your product should work in different circumstances not only on the South side wall somebody wants to use in a garden why not. So, this the case if you are putting so much investment you put up a stand and you can be in the garden too.

(Refer Slide Time: 00:16)

So, you look at now different product plans and take it forward.

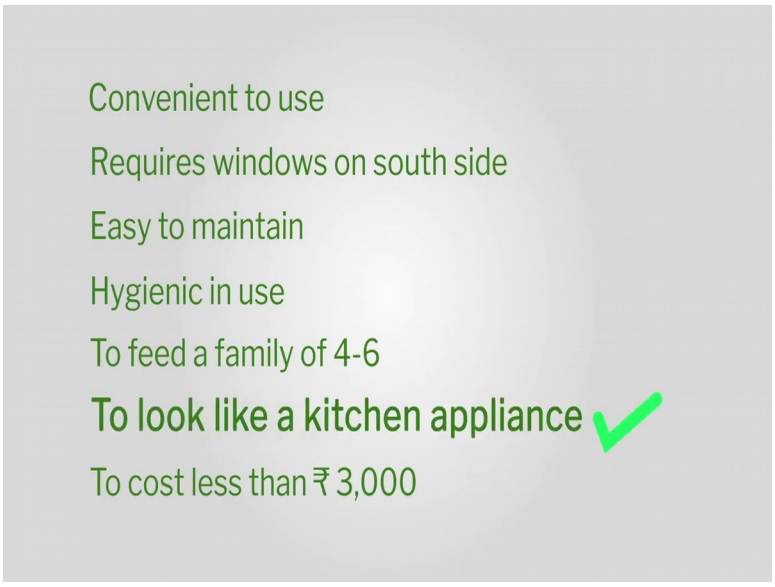
(Refer Slide Time: 00:23)

And you know like we worked on various forms and you know how the design will further refine for ease of manufacturing, what type of shape, what type of form will work the best for our work and we went back to the cad modeling.

(Refer Slide Time: 00:36)

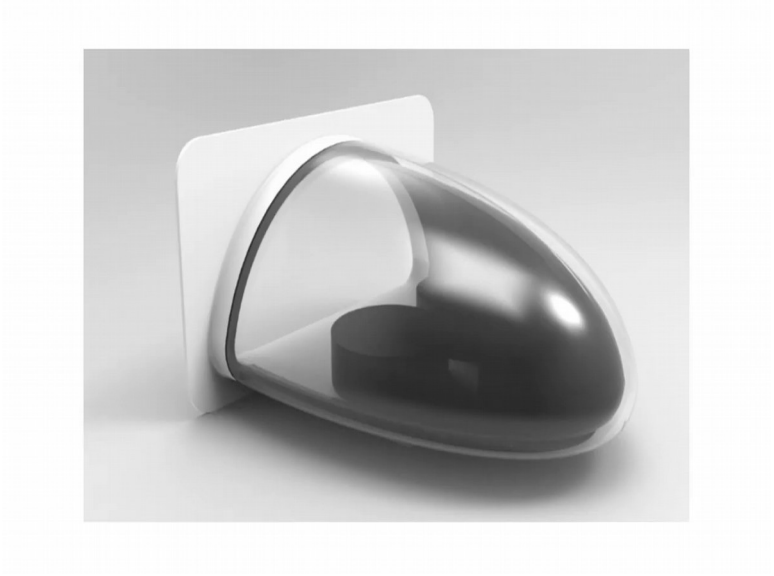
And lot of discussions on what will this product look from the outside.

(Refer Slide Time: 00:41)



It should look at your kitchen equipment and at the same time there should have good perception and it should also sell by itself. So, somebody sees its jutting out he should be curious oh my what is this can I also see what it is and if its a solar oven why do not I buy it. So, your product has to do multiple functions when its in the market.

(Refer Slide Time: 00:57)

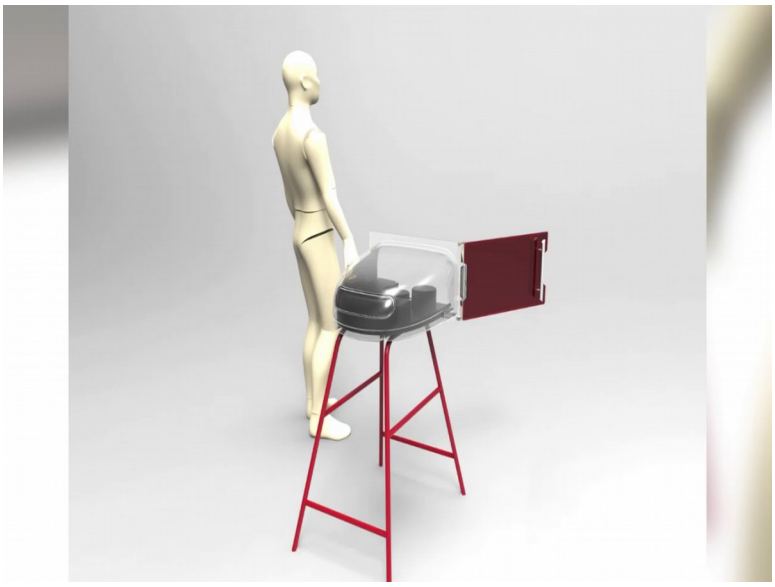


So, it should really look very good from outside and very encouraging. So, we were very clear with a brief the form should be such that it should nothing should get stuck. So, we are no ridges on the top see we have very very clean surfaces and you know the surfaces further improve. See what happens if I have this and I will have less volume right my containers will not fit in. So, I have to lift this you know up and make it little bit more squarish, but the roundedness is still there. So, that is very important. So, we did a lot of these options to work out and see how we can improve it further.

(Refer Slide Time: 01:27)

Now, the you know flanges and all are coming into place.

(Refer Slide Time: 01:30)

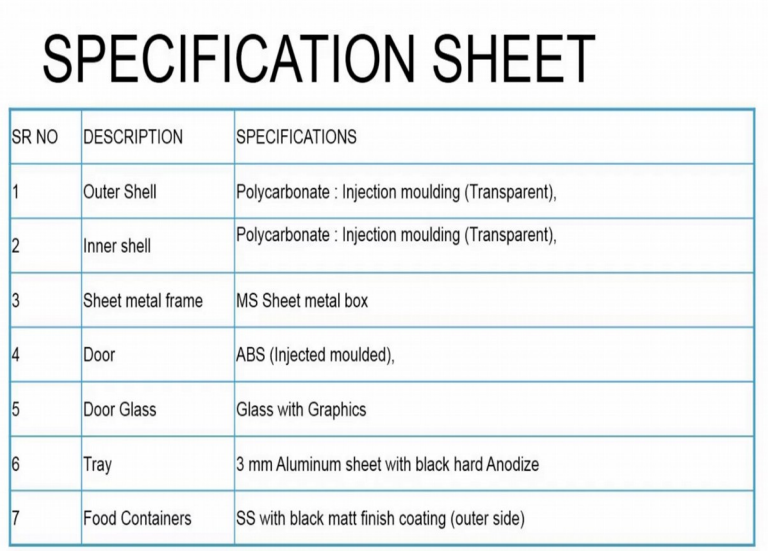


You know the cad model is further improving and then you know we did the door and we you know see how it will work on a stand, how it will work on a window.

(Refer Slide Time: 01:37)

This how it look from outside the house and this how it looked from inside very convenient to use you can actually go into the existing slot where people have left slots for air conditioners.

(Refer Slide Time: 01:49)



And then we have a specification sheet. So, very important aspect here is that the outer shell is made of polycarbonate. polycarbonate is extremely tough it does not break if somebody even stands on it is not going to buckle.

So, our design is such a way that you know it does not get because anything jutting out into the environment has to be really robust and strong and for us it has to be transparent. Then the inner shell also we use polycarbonate to reduce cost we could have used other materials for inside, but we found out polycarbonate is very good for very high temperatures and we are going as has 110 degrees inside. So, we use the inside shell also with polycarbonate and injection molding

(Refer Slide Time: 02:26)

The outside sheet metal frame is powder coated thus very strong. So, your plastic is getting fixed on the sheet metal.

(Refer Slide Time: 02:33)

The door is inside the house. So, its made of ABS; ABS is Acrylonitrile butadiene styrene and these are used in scooter parts all the plastic parts of scooters the two pier mopeds you go are all made up of this plastic parts and then we have the you know glass door with graphics.

(Refer Slide Time: 02:44)

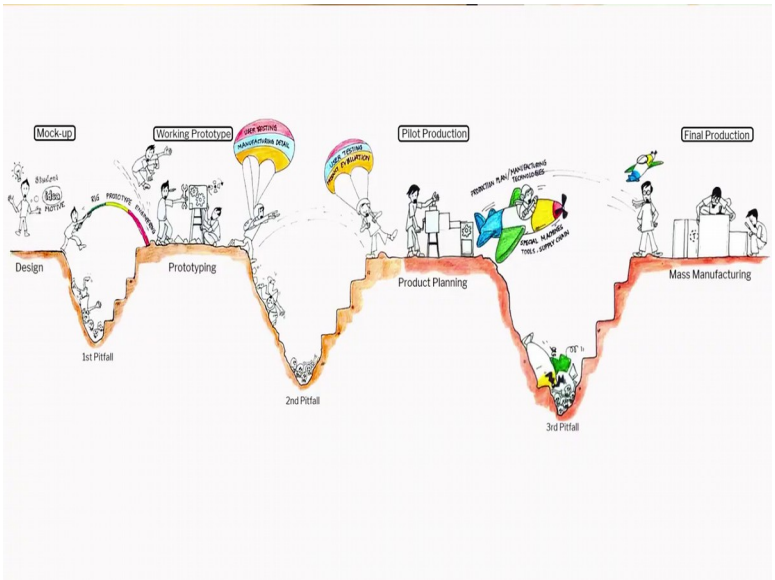
(Refer Slide Time: 02:48)

Then we have the tray which is 3mm aluminum sheet which is matte finished in black it could be either powder coated or it could be anodized, but aluminum has a problem of leaching into fools. So, people have some preferences.

(Refer Slide Time: 03:04)

And now we design the food containers also effectively. So, that the transitivity and conductivity is very very good.

(Refer Slide Time: 03:10)



So, with this journey we have reach the stage of prototype still we are still struggling in the value of death which is the second one as soon as we come up with our ten prototypes we are going to put this 10 pilot production.

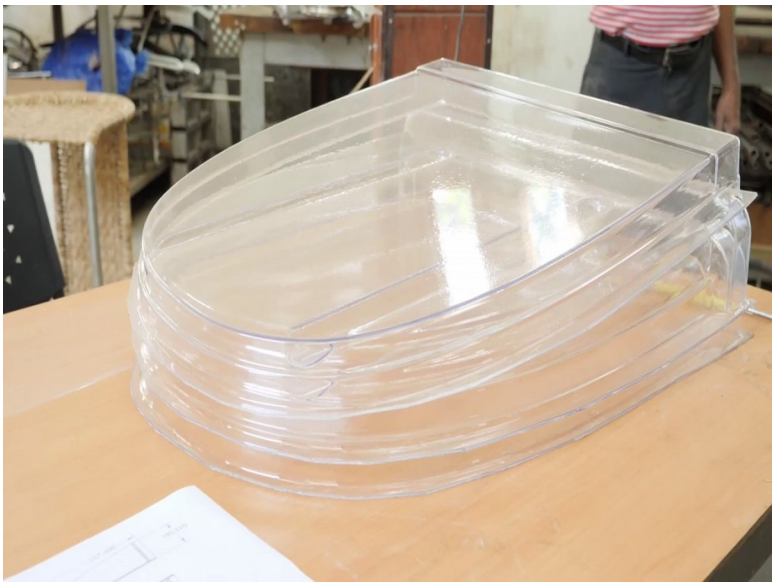
(Refer Slide Time: 03:29)

As you know even after pilot production we get. So, much of insights that we need to go back to our drawing board and make for a final production.

(Refer Slide Time: 03:36)

So, we are going to set up a intellectual property agreement where we share the intellectual property with the company for a share of revenue, if you sell thousand pieces you know we will give us a royalty figure which will let us you know take our design innovation studio forward. So, we want to just let you know how comprehension getting the user insights at and every stage of the journey is very very critical.

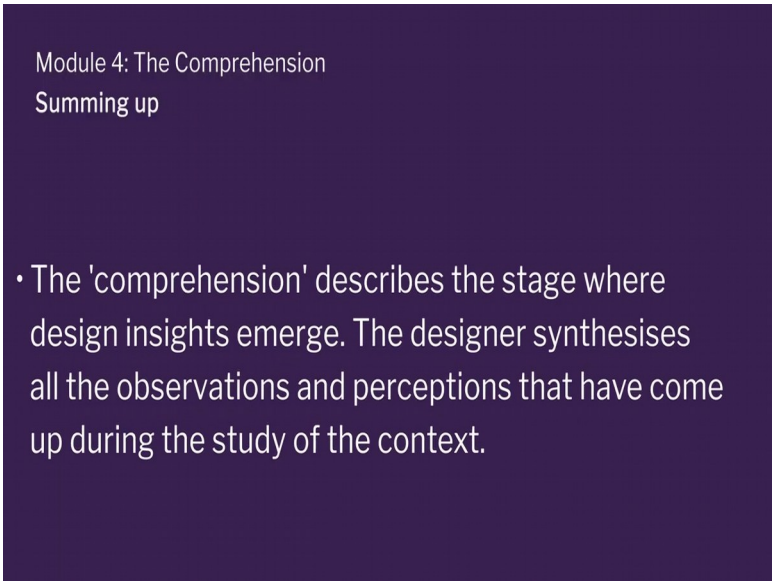
(Refer Slide Time: 03:59)



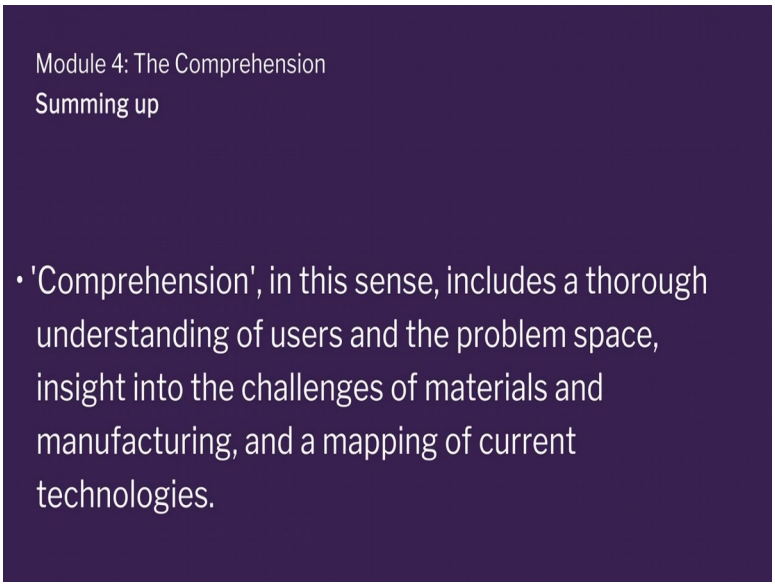
And it plays a vital role and you have to keep coming back to your synthesis and analysis to see that you can come up with life projects which are very very successful in the market. So, that is the biggest challenge we have we were having I think we will do that so.

Thank you.

(Refer Slide Time: 04:21)



(Refer Slide Time: 04:32)



(Refer Slide Time: 04:42)