

Understanding Design Thinking and People Centered Design
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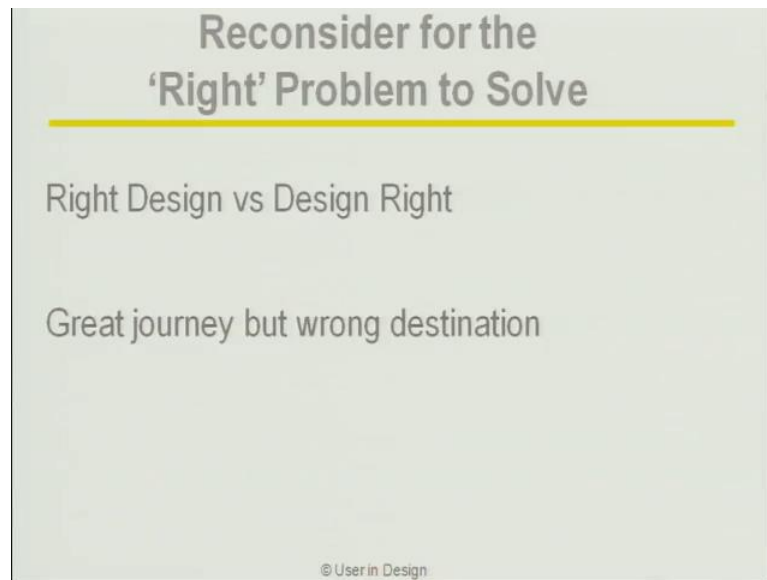
Lecture – 05
Introduction and Problem Discovery
Reconsider and arrive at the ‘right’ problem to solve

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So, now we going to start with sub part 5 which is reconsider and arrive at the right problem to solve. Again, this is continuing process of problem discovery and remember why I use the word discovery over here. It is actually a process of looking inwards then challenging the problem looking outwards and going through this entire process until we discover what is the right problem to solve, we evoke what is the right problem to solve as it says over here.

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So, what is it mean to reconsider for the right problem to solve thus this notion of right design verses design right. I think you may or may not have experience it happens a lot of times where you take up this project in an organization let us say and you worked on it so diligently the best people around the job.

They have done a wonderful job done it to budget done it on schedule and everyone so proud of the work that is come out and then it gets released in the market and it does not work because that is not people wanted. So, it was design right it was design very well, but it was not the right design.

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'Failure is not NOT an option..... the story of Radio Flyer'

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process.




So, there was example of vegan by this company called radio flyer. And they were in to designing children vegans. And they went through this entire process and they kept adding they kept making vegan better and better and better, but it in the end just right before launch they had to pull this off the market because they realized it is not the right design. The design had several problems and it was not what they had meant it to be it became much bigger and much more cloggier then what was originally planned. So, part of this discovery process is identifying what is the right design what is the right problem to solve.

So, that we can come up with the right design right and we do not end up with something that does not work. So, it is also you know you can look at it as you had a great journey. But you ended up at the wrong destination you had a wonderful ride getting to the place, but it was not the right place. So, this is what right design verses design right means and that is what we try to take care through this reconsideration approach.

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**Reconsider for the
'Right' Problem to Solve**

Design a better walking stick



Design a 'companion product' for elderly which does not make them feel old

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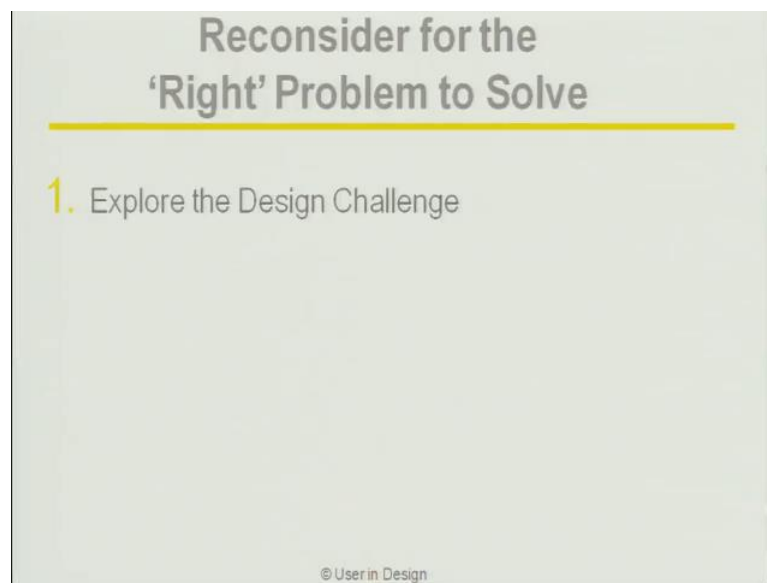
So, let us look at this you know example of design better walking stick, so if I give you the problem of design, a better walking stick you can run off and start designing that is what most of us might do. However, if you think a little deeper stop for a moment reflect on this issue and say who is this walking stick for you do not even have to be talking to users just reflect just introspect and say. Who is this for this for elderly people? What is the issue with walking sticks? If you have noticed a lot of elderly people they do not like using walking sticks they actually hate walking sticks they use them only because they have to.

So, you could come up with even nicer looking walking stick maybe brass plated and maybe with a wonderful interesting head and all that. But does it still you know make the person feel good because it is the sense of dignity that about the elderly the feeling that you know I look old.

So, it is not just about you might need and want the use of a walking stick, but psychologically emotionally it makes you feel like you are being perceived as old. So, a lot of elderly people I have noticed do not like to use a walking stick. So, if designing a better walking stick the problem I do not know perhaps of we look some more and thought about all this factors that I just mention to you about how people feel about a walking stick.

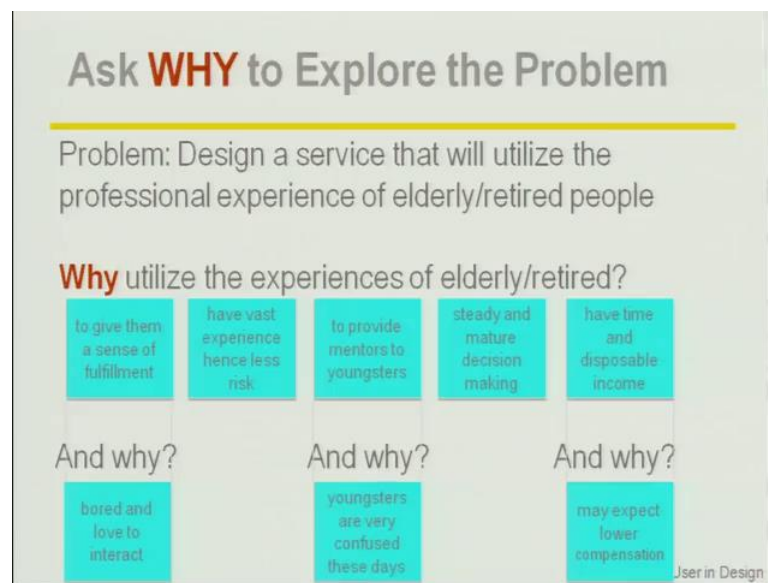
Perhaps, if we had made up problem design a companion product for elderly which does not make them feel old perhaps you would have come up with a very different and very innovative solution to this if we have thought about this very differently. So, this perhaps is the right problem to solve because it thinks of it as a companion it is thinks of this notion which says that it does not make them feel old does not make them psychologically feel like a dependent right. So, this is the reconsideration that we do in order to arrive at the right problem to solve.

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So, the first thing we do is explore the design challenge. Now we going to be pushing the boundaries and questioning and trying to understand and explore the challenge and say why is this right. And then we frame the design challenge after having gone through all this consideration examination looking at it from different angles we now say that we put a frame around this problem and this is the new problem we going to solve.

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So, let us look back again at designing a service that will utilize the professional experience of elderly retired people ok. The way we reconsider problem, one of the most important tools that are used is asking why asking the question why? So, you take the problem that you have at face value and start asking why do we want to utilize the experiences of elderly retired why. Why would we want to do that? Why do not we just let them be at home perhaps to give them a sense of fulfillment, because of all the reason I mentioned earlier perhaps they have vast experiences and if were to utilize those experiences it perhaps might be less risky. If, we are utilizing their services in some thing you know of some kind of a business because their experiences a much more solid and stable.

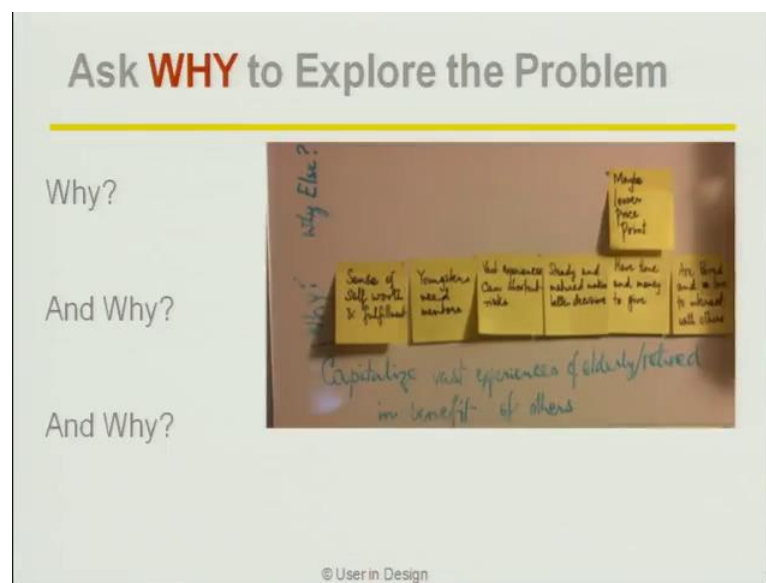
To provide mentors to youngsters' right, we know that a lot of youngsters could perhaps do with mentoring. So, maybe their services could be very good to provide mentors to youngsters. Because they are steady and mature in their decision making. Why else because they have time and they have disposable income. So, by asking the question why we have come out with all this different possibilities we have push the boundary we have challenged our problem we have challenged it and we are trying to push it out right.

So, if you know to give this content let us think about a person who is let us say, a retired medical rep. A medical representative and he had very full career been traveling a lot and now he suddenly retired right, perhaps, you know just to give you a little bit throw some

more light on this perhaps, you know he would be his services would be in listed to help people understand how to take medication right. So, this is just an idea that I am talking to you about. So, we have asked the question why in order to push the boundaries and we then say why else and why. So, to why do we want to give them a sense of fulfillment, because perhaps, they are bored and they love to interact. And why do we want to provide mentors to youngsters? Because youngsters are very confused these days and perhaps, they could do with some mentoring.

And why do we want why are we looking into the fact that they have time and disposal income. So, if they were to be employed perhaps, they may expect lower compensation. So, there some of the business angles also that we can be thinking about as we try to design this service. So, by asking the question why we have come out now with various possibilities that may make our problem very different than the one we started out with that design a service that will utilize the professional experiences of elderly retired people.

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So, again to show you this is how we were doing the why and the why else and you know what are the different factors we would consider by asking the question why and why and why. So, this is what we used to explore the problem further let us look at another example right.

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Ask WHY to Explore Problem

I ask you: 'build a bridge for me'

You: could go off and build a bridge

Or you: could come back to me with

'Why do you need a bridge?'

I would likely tell you: 'I need to go to the other side of the river'

Aha! This opens up a frame of possible solutions.

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So, let us say I ask you build a bridge for me. You can go run off and start building the bridge you can start designing the bridge on paper and then you go off and start building the bridge instead.

If you say come back to me and you challenge me and you say why do you need a bridge right. So, then most likely, I would tell you I need to go to the other side of the river alright. Now this opens up a frame of possible solutions what are the different ways we could think about to go to the other side of the river right.

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Ask WHY to Explore Problem

You may now: think of a tunnel, a ferry, a paddle, a canoe, a rope way, a hot-air balloon...

You: can open the frame even farther by asking

'Why do you want to get to the other side of the river?'

Imagine I told you: 'I work on the other side'

Aha! This again, provides valuable information and broadens the range of possible solutions even more.

Maybe there are ways for me to work without going across the river.

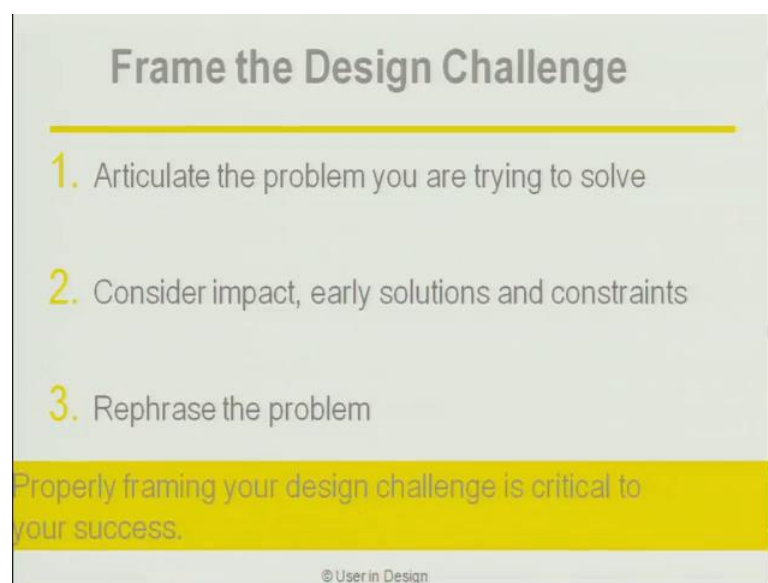
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So, you may now think maybe a tunnel, maybe a ferry, maybe a paddle, maybe a canoe, maybe a rope way, maybe a hot air balloon there so many possibilities right. By challenging the problem we have come to all these other possibilities.

Now you can challenge at even further by asking why do you want to get to the other side of the river what is the need to get to the other side of the river. So, imagine that I told you I work on the other side of the river. Now this has again given you valuable information and has broadened the range of possible solutions even more right. Maybe, there are ways for you to work without crossing the river maybe there are ways to work on this side of the river.

So, this was an example from Michel Barry and I thought it was you know it is an interesting way for you to start thinking about taking a problem and then pushing the boundaries by asking the question why and then you might end up with a very different problem statement.

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Now, that we have examined the problem statement we have you know reconsider little bit we have reflected on it now is time to frame the design challenge. We have to look at all these different possibilities and put it together put a frame around it and say this is the new problem that we going to be working on.

So, what does frame the design challenge mean. It means that you need to articulate the problem that you are trying to solve use different words if necessary if your problem has changed completely and articulate the problem and define it as the new problem. While, you do it consider the impact of that problem consider some of the early solutions, consider some of the constraints, as you define your new problem statement and then rephrase the problem.

And this becomes your new problem statement. Properly framing your design challenge is critical to your success I cannot over emphasize this enough and hopefully through all these examples that I have shown you have already gotten a sense about how important it is to frame the right problem the solution is going to be as good as the problem that you have framed. And therefore, this is the starting point of this whole exercise of the design thinking journey as you look at problem and then go forward after all the reconsideration towards framing it.

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Frame Your Design Challenge

What is the problem you're trying to solve?
Improving the lives of children.

1) **Take a stab at framing it as a design question.**
How might we improve the lives of children?

2) **Now, state the ultimate impact you're trying to have.**
We want very young children in low-income communities to thrive.

3) **What are some possible solutions to your problem?**
Think broadly. It's fine to start a project with a hunch or two, but make sure you allow for surprising outcomes.
Further nutrition, parents engaging with young kids to spur brain development, better education around parenting, early childhood education centers, better access to maternal care and vaccines.

4) **Finally, write down some of the context and constraints that you're facing.**
They could be geographic, technological, time-based, or have to do with the population you're trying to reach.
Because children aren't in control of their circumstances, we wanted to address our solution to their parents.
We want a solution that could work across different regions.

5) **Does your original question need a tweak? Try it again.**
How might parents in low-income communities ensure children thrive in their first five years?

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Now, here is an example template and we will share it with you that help you frame your design challenge. So, the first thing it is asks you what is the problem you are trying to solve. So, over here you might write perhaps, your original problem statement or some version of it. Then it is say take a stab at framing it as a design question the same challenge now you ask it as a question how might we do this how could we you know utilize the services.

Now state the ultimate impact you are trying to have what is the impact you are trying to have with this problem. Why are you solving this problem? In order to do what, remember, in the example I share with you earlier about the product that we worked on were we wanted to bring the set up time down to 15 minutes.

And there the impact was that the impact that we trying to have was that this needs to be a product that is a self install this needs to be a product that can go on it is own that does not need the services of a customer service (Refer Time: 15:04) to accompany the product. So, that is the ultimate impact we are trying to have. So, in this case what is the ultimate impact that you trying to have what are some possible solutions to your problem think broadly, it is fine to start a project with the hunch or 2, but make sure you allow for surprising outcomes do not say the most obvious thing right.

Then the next step is finally, write down some of the context and the constraints that you may be facing and now think about does your original question need a tweak try it again. So, this is where you re-frame your design challenge. So, I will share now with you an example solved by idea on one of the project they would work. And they were initially working or wanting to work in the area of children's education, they realize this huge vast area.

So, they needed to narrow the scope, but they did want to do something around children. So, they started wondering should it be all children, should it be youngsters, teens or baby what should it be. So, because of the great importance of early childhood development the decision was made through this whole reconsidering process that they would work on the 0 to 5 age group and the project (Refer Time: 16:33) to be known as the first 5 years of life. So, how can we make the first 5 years of life particularly low income communities where you know those are the critical 5 years of life for that is when often times right opportunities, the right perhaps medical sustenance and nutrition and lot of these things do not happen.

So, how can we make that happen in the first 5 years of life and then after thinking about this some more it was realized that basically children a very helpless. Children in the first 5 years of life in particular they are not in a position to do anything. So, how can we enlist the parents in order to help the parents for their children to have a wonderful first 5

years of life? So, this is the example and you can look at it as you know what is a problem you are trying to solve improving the lives of children right.

Could have started running with this and trying to do all kinds of solutions to improve the life of the children. But then through this reconsidering process what is the next step that was done by the team take a stab at framing it as a design question how might we improve the lives of the children. So, the minute you take your problem and frame it as a question it turns around to you asking you how we might do it and almost suggesting to you that there are various ways to do this there is in just that one way.

Now state the ultimate impact you are trying to have what is it say over here we want very young children in low income communities to thrive that is the ultimate impact we trying to have ok. Now what is some possible solutions to your problems better nutrition, parents engaging with young kids to spur brain development, better education around parenting, early childhood education centers, better access to neonatal care and vaccines. These were all the possible you know initial ways to solve this problem. So, number 4 is write down some of the context and constraints that you are facing what were the constraints because children are not in control of their circumstances like I said children are helpless they are not in a position to do anything about this we wanted to address our solution to their parents.

So, the realization that while we are trying to improve the lives of children the real people that we have to be targeting this to his parents. However, a rider to that is we must send go off in that direction. So, that our entire focus our entire energy our entire solutions becomes focused on improving the lives of parents that is not the point. So, keeping all that in mind what was the new problem statement that was defined how might parents, in low income communities ensure children thrive better in their first 5 years. So, remember in trying to be aware that this is not about to doing something for parents but, putting the onus on the parents to make better the first 5 years of life of their children.

So, how might parents in low income communities ensure children thrive in the first 5 years? So, if you look at the original problem statement improving the lives of children and if you look at this one now how might parents in low income communities ensure children thrive in their first 5 years? I think it is very clear to you that the second one has

a lot more focus has a lot more sort of the real reality set in to it the understanding of what the different nuances of the problem are as well as what is the right problem to solve what is the right area to solve and how as in dinging parents into it.

This is not just talking about how might we ensure children in low income communities thriven the first years, but it is bringing the parents in to the fold and saying how might parents ensure ok. So, framing of the problem in this way then makes it a launch pad for you to start your research and to start your research on the right (Refer Time: 21:26) all right. So, that was the first part of our course understanding design thinking and people centered design. So, in this we first got introduce to design thinking, we understood what we mean by design thinking, we then understood why it is important to be people centered why we cannot ignore the people and just keep doing our designs what is the people centered design methodology the broad structure within which we have a very flexible frame work with which to work.

Then we started our design thinking journey where we try to understand how do we evoke the right problem to solve we do this by examining and reflecting on the problem. And we do it also by reconsidering and arriving at the right problem to solve. And at the end of this we have a framed problem perhaps a new problem that when now ready to begin working on with great enthusiasm.

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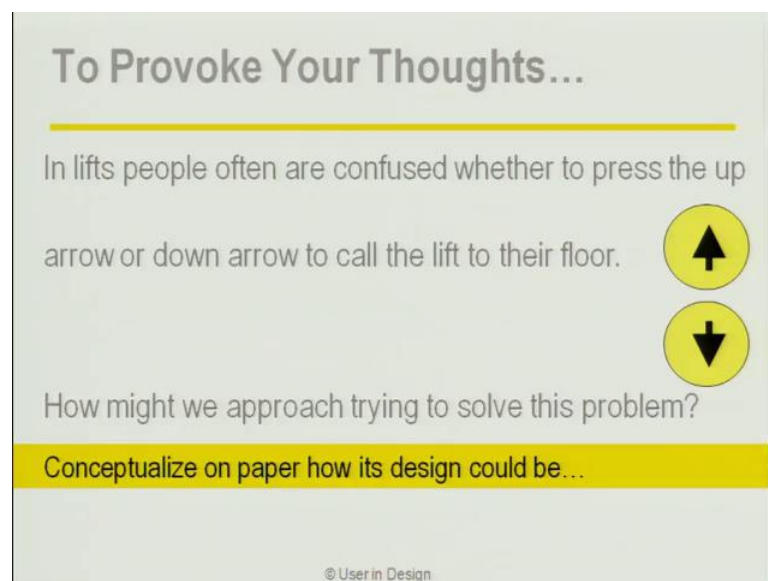


So, to bring you back to the framework of the course we just covered this first section introduction and problem discovery. And in the next lectures we will cover the next 3 parts which is research and analysis concepting and building testing refining and pitching.

Now one thing I would like to tell you while in this course we are not doing a project and I have already told you that the learning of all these concepts come to life only when you apply it to a project. However, what I am doing for you is at the end of the first second and third module I am giving you something to provoke your thought it is something that will challenge you and you can take that up and try and solve it using some of the tools and methods that we discussing over here.

This is not an assignment it is not going to be graded it is just for you as you open up your eyes mind and thinking towards this new way of looking at the world to provoke your thoughts and perhaps coming up with different possibilities to solve this.

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So, the first one that I have is that the one that I already described to you that in lifts people often are confused whether to press the up arrow or the down arrow to call the lift to their floor. How, might we approach trying to solve this problem try and conceptualize this on paper how its design could be? So, as I mentioned this is just for your practice just for you to have some fun and do have fun as you do it all right use some of the thoughts and the processes and techniques that we discussed.

Thank you.