


Understanding Incubation and Entrepreneurship
Understanding Incubation and Entrepreneurship
Dr. B.K. Chakravarthy
Department of Engineering Design
Indian Institute of Technology, Bombay

Module - 03
Innovation, Team Building and Problem Statement
Lecture - 05
Problem Statement Presentation

The third session in a module today is on Building the Problem Statement.

(Refer Slide Time: 00:29)



“The right **problem statement
will help **navigate** the entire
startup journey”**

In fact the right problem statement will help navigate the entire startup journey very very effectively.

(Refer Slide Time: 00:36)



Problem Statement - e.g. Netflix

Let us now look at our example of Netflix.

(Refer Slide Time: 00:41)

Defining the Problem

Version One

"Going to the video store is a pain. People don't like travelling back and forth just to rent a movie and they hate paying late fees even more"

Simple and accurate, but does not reflect the solution.

It needs to tell a story and make an emotional connect with your audience.

Again going to the video store has been a pain and people do not like traveling back and forth just to rent a movie and hate paying late fees.

(Refer Slide Time: 00:49)

Defining the Problem

Version Two

"Going to the video store requires fighting traffic, wandering the aisles and waiting in long queues just to get to a single movie"

This statement details out the pain, and is more descriptive and narrative.

And version two going to the video store requires fighting traffic, wandering through aisles and waiting in long queues just to get a single movie.

Both these statements have the same intent, but the second one details out the pain and brings out an excellent narrative which is very very critical for defining a problem statement.

(Refer Slide Time: 01:10)

Defining your

Problem Statement

Dr. Rupesh Ghyar CEO BETIC

(Refer Slide Time: 01:14)



Problem Statements - **IITH Teams**

Now, let us hear from Doctor Rupesh what he has to say about the problem statements developed by IIT Hyderabad students in their startup projects.

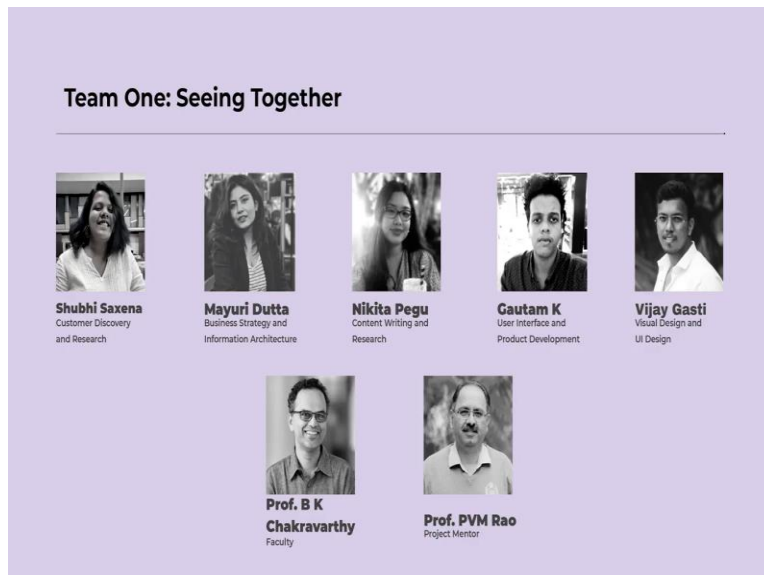
So, like again good afternoon all of you let us now today is a session where you are going to you know present your problem statement. Yesterday you formed your teams like you know we welcome Doctor Rupesh and we will see your problem statements and we will just support you with mentors depending upon what your problem statement is, because it is the first time you are presenting we will you know leave it to you know take this forward please go ahead Vijay.

(Refer Slide Time: 01:48)








Problem Statement - **Team - 1**

(Refer Slide Time: 01:51)

Team One: Seeing Together



A slide titled "Team One: Seeing Together" featuring seven team members. The first row contains five members: Shubhi Saxena (Customer Discovery and Research), Mayuri Dutta (Business Strategy and Information Architecture), Nikita Pegu (Content Writing and Research), Gautam K (User Interface and Product Development), and Vijay Gasti (Visual Design and UI Design). The second row contains two members: Prof. B K Chakravarthy (Faculty) and Prof. PVM Rao (Project Mentor). Each member has a small portrait photo above their name and role.

 Shubhi Saxena Customer Discovery and Research	 Mayuri Dutta Business Strategy and Information Architecture	 Nikita Pegu Content Writing and Research	 Gautam K User Interface and Product Development	 Vijay Gasti Visual Design and UI Design
 Prof. B K Chakravarthy Faculty	 Prof. PVM Rao Project Mentor			

Sir this is team 1, so like we are consists of five people Gautam Mayuri Nikita Shubhi and me.

(Refer Slide Time: 01:56)

Problem Statement

*How might we help a **visually impaired** person to be more **self reliant**?*

So, we came up with the idea like how we can help visually impaired person to be a more self reliant.

(Refer Slide Time: 02:04)

Daily Activities

Cooking	Shopping	Travelling & Commuting	Reading & Writing
Banking	Dating	Recreational Activities	Physical Activity/Exercise

Like in their daily activities like cooking, shopping, travelling, banking like a monetary transactions, dating, physical activities. So, we are targeting on shopping.

(Refer Slide Time: 02:18)

Problems within their shopping Experience

- High dependency on strangers (shopkeepers, retailers, etc)
- Lack of purchase information
- Lack of choice and confidence while choosing the products
- Lack of trust while handing over the money

Like while shopping there are some experiences like you know high dependency on strangers like shopkeepers retailers or lack of information while purchasing goods or lack of choice and confidence while choosing the products or lack of trust while handing over the money.

(Refer Slide Time: 02:33)

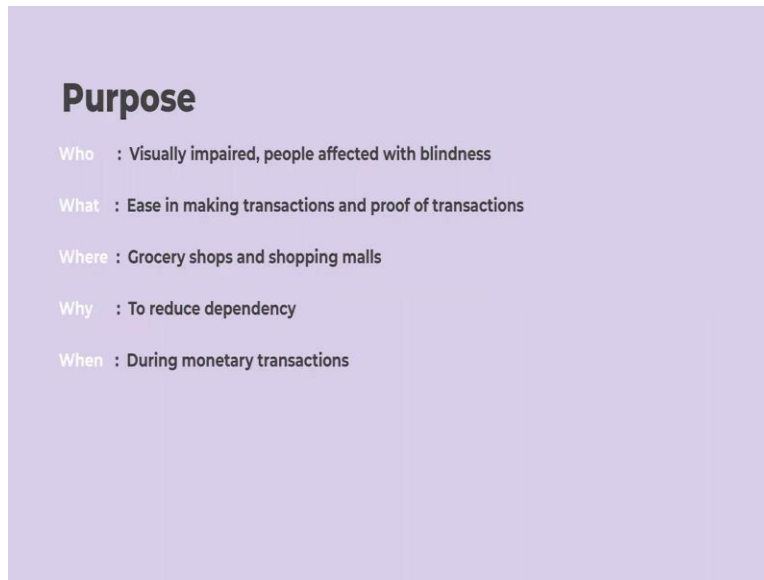
Redefined Problem Statement

*How might we reduce the dependency of **visually impaired** while they **make transactions for purchased goods**?*

So, how we might reduce dependency of the visually impaired while they make a transaction for

purchased goods.

(Refer Slide Time: 02:41)



Purpose

- Who** : Visually impaired, people affected with blindness
- What** : Ease in making transactions and proof of transactions
- Where** : Grocery shops and shopping malls
- Why** : To reduce dependency
- When** : During monetary transactions

So, here are the 5 W's like Who like the visually impaired, people affected with the blindness we are targeting like making transaction easier like and a proof of transaction or they face problems in a malls or grocery shops like also in a banking transaction also they have to depend on someone strangers.

(Refer Slide Time: 03:05)

Objective

We aim to come up with a product for the visually impaired that is customised for printing braille, essentially on the receipts of their purchase to remove their dependency on others for basic information

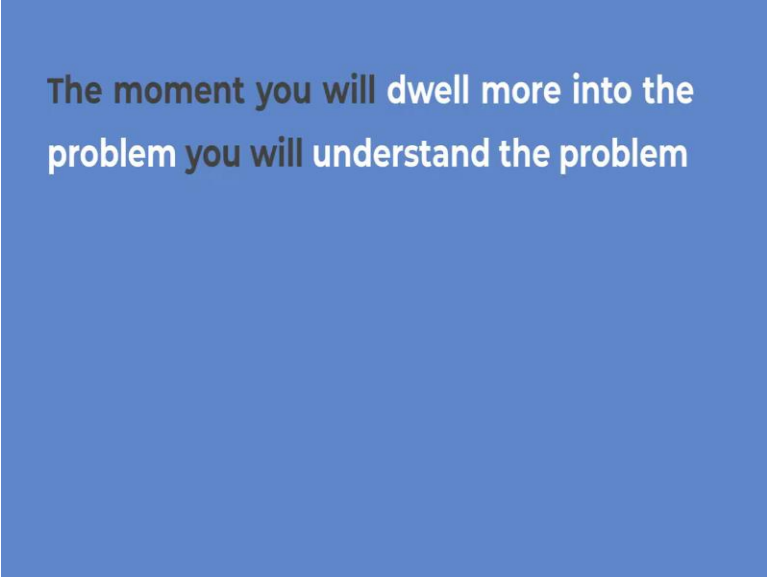
And this is the objective we are planning to come up with a product for the visually impaired that is customized for printing braille, essentially on the receipts for the purchase they do in a shopping malls to reduce their dependency on this for basic information's.

Very good, so like that that is like quite ok. So, we will go Rupesh any comments on that?

Yeah it is good start, but since I am aware of the field. So, maybe slightly prejudiced because what there is one IIT Bombay start up IIT Delhi people who have worked there are other people what they do is they have their mobile connected to there is a device which is called Digital Braille, there is a IIT student Shyam who worked on it. So, he the you would be surprised at the rate at which visually impaired people can read braille ok, it is fantastic as in the speed is phenomenal.

So, they made a device which had a digital braille, basically there are 6 rods which come up you feel that and that is how people can understand what is the language and these 6 letters as in 6, which one dot is up which dot is down based on that the letter comes up. So, he made a visual as in, he made a physical device which can convert this into whatever is connected to it whether it is mobile whether it is whatever.

(Refer Slide Time: 04:35)



**The moment you will dwell more into the
problem you will understand the problem**

So, the moment you dwell more into the problem you will understand the problem.

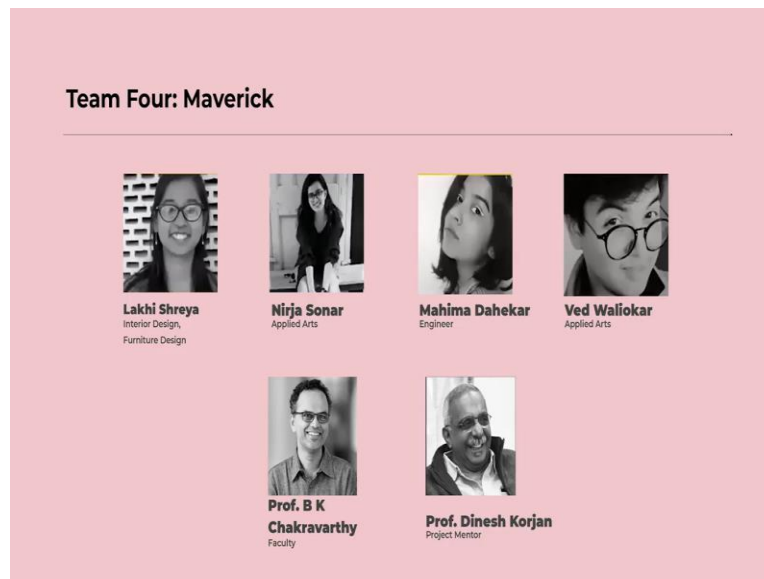
(Refer Slide Time: 04:38)



Problem Statement - Team - 4

Good afternoon everyone hi my name is Mahima.

(Refer Slide Time: 04:41)



And I am with Lakhi Shreya, Ved Waliokar, Nirja Sonar. We are team four and let us walk you through what our idea is. If you see nowadays we really cannot live without phones everyone needs phones we start our day with mobile phones or laptops and we end with them too.

Even during break times our main focus is let us just take a break ok we will just swipe the tabs and we will start playing games our life's are so dependent on these devices. But do you remember when we were kids we you know the currents would go out and every kid would be so happy that finally lights are out lets go out and play all the colony kids would get together and they would play various games like kho kho, you know [FL] they would play with those marbles and these are all nostalgic summer period memories.

Yes we do not bring them back what will happen to them they will be lost forever. Most of these games they help you with hand eye coordination with your concentration and mainly they help you with physical activity, our problem statement is that you know evolved from apes we are trapped in apps everyone is so bound in technology that looking beyond is growing impossible.

(Refer Slide Time: 05:54)

**We want to work around *Bachpan*
And bring all these *memories* back..**

Our whole idea is to work around [FL] and bring these things back.

Yeah looks good we will see how we can narrow down further know Rupesh we will just check up how the things can happen.

(Refer Slide Time: 06:06)

**A problem statement need not be
very very broad..**

**The context needs to be very clear
and concise.. Narrow your focus**

So, the problem statement is much much more clear the context to be very clear you clearly do not

want to use technology in this or is it technology enabled [FL] we really do not know. So, just get the clarity little bit there and then we are ok with you know and then unnecessary it is too broad.

So, you be very focus with you know I like your hand eye coordination, you know you focus only on that maybe that can be a great selling point. So, you need all these things in entrepreneurship. So, maybe more will come when you know take things forward.

Let there be a problem that has to be solved. So, there is a reason why it is called a problem right as in it is a good to have versus a problem windows are supposed to be there for quitting something open. So, wind can come in light can come in there is a reason for that.

(Refer Slide Time: 06:49)

Let there be a problem that has to be solved..

Define your problem then your persona can be developed, for what you are solving and for who can be defined..

So, may be define the problem which you are going to solve that if you can come down to slightly proper like professor Chakravarty said hand eye coordination, then your persona will get developed for whom you are developing. Maybe a good idea to understand if the kids who were playing outside there are certain advantages which are reported in some studies are missing in the current generation in the current.

So, if more people are wearing let us say spectacles because they are hooked on to mobile or the concentration is there. If there is an evidence based then that will help you to say that there is a

problem, which you are going to address, but it is a good stuff.

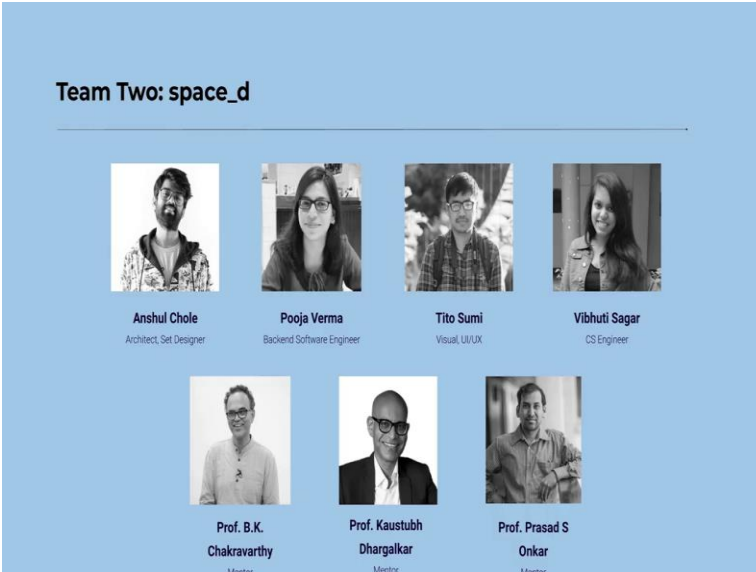
(Refer Slide Time: 07:23)










Problem Statement - **Team - 2**

Yeah, so we go to team 2 Anshul.

(Refer Slide Time: 07:27)



Team Two: space_d

 Anshul Chole Architect, Set Designer	 Pooja Verma Backend Software Engineer	 Tito Sumi Visual, UI/UX	 Vibhuti Sagar CS Engineer
 Prof. B.K. Chakravarthy Mentor	 Prof. Kaustubh Dhargalkar Mentor	 Prof. Prasad S Onkar Mentor	

And we are a team of four people Anshul, Pooja, Tito and Vibhuti, so this is what our problem statement is.

(Refer Slide Time: 07:35)

Problem Statement

Stress among people in colleges and offices due to long working hours..

A stress among people in colleges and office due to long working hours. So, can we make we were targeting on mental health of people. So, we were thinking of is there something that can be done to these people in the time of short breaks which we take.

(Refer Slide Time: 07:53)

Define context

WHAT	WHY	WHO	WHERE	WHEN
Stress, market research How many people	Lack of concentration Inefficiency in work	College students Working professionals	Colleges Offices	Working hours

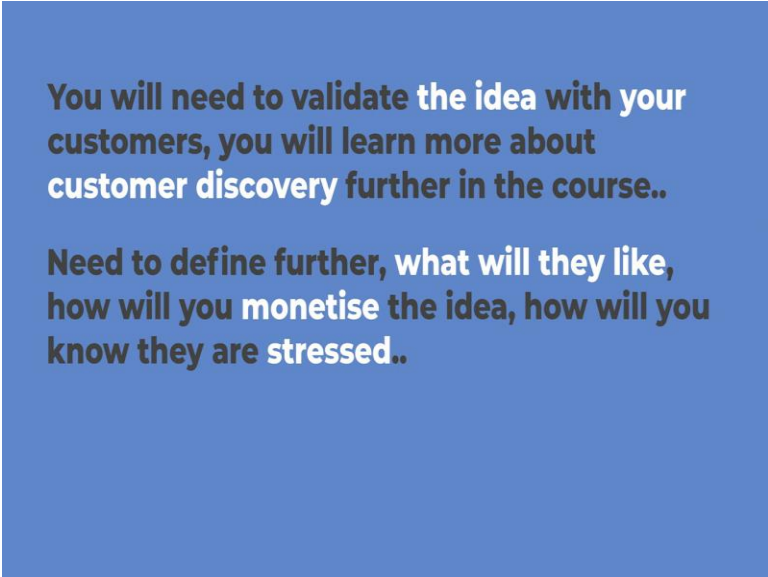
Root Cause : Long working hours, no change of space, less time more work, less break time

Like everyone has our brain has brain is programmed to just focus for 1 hour and then it is

important to take a 15 minutes break. So, that we again refocus and that keeps the efficiency of every person. So, can we what could be done in those 15 minutes which can be better for a person to be more efficient? So, what our thought was like 5 minutes break which we have sometimes in the in class also if we take a if there is a 5 minutes of nap like it is like a power nap if it feels much fresher than a half an hour or 1 hour of sleep this is what our idea was.

So, in what way could we do that. So, previously basically we already in previous project we had done a project on this with virtual reality and we were thinking [FL] that was just a experiment which is like a POC of concept that we tried at that time and what we wanted is now we want to develop that as a product or some kind of a evolution to the second level which can be implemented in something.

(Refer Slide Time: 08:57)



You will need to validate the idea with your customers, you will learn more about customer discovery further in the course..

Need to define further, what will they like, how will you monetise the idea, how will you know they are stressed..

But one once you go you know ahead in the course you will also understand customer discovery, whom are you making for when you talked about college students you will when you go deep dive; there you know what would they like and how will you monetize it is all that will come for sure into the things.

But you can also you know define it further you know like basically during short breaks. So, rather than you know long thing and then how would you know how would you know that they are

stressed?

(Refer Slide Time: 09:22)

If you are aware of Elon Musk and aware of the brain mapping device, one of their elements of neuralink is proven to reduce stress..

If you are aware of Elon Musk and if you are aware of the brain device that he is working on, one of their elements work on a device which gives you kind of an energy there is a device tufts related technology through which you can try to reduce stress. So, there has been effort in that direction which has proven to reduce stress.

(Refer Slide Time: 09:46)

Make your problem statement more descriptive, covering all the aspects and tell us the story, almost everything about your problem..

So, but we make the statement little bit more you know from the all the aspects should come in more into this statement, yeah the statement should give us everything about your problem.

(Refer Slide Time: 09:55)

Problem Statement - **Team - 3**

(Refer Slide Time: 09:57)

Course : Understanding Incubation & Entrepreneurship MODULE : Problem statement

MEET THE TEAM 3

behind Hocus Focus



Name	Roles
Siddhika	<ul style="list-style-type: none">• Research• Qualitative interviewing• UX design
Maithilee	<ul style="list-style-type: none">• Prototyping• Material sourcing• Product development
Chaitrali	<ul style="list-style-type: none">• Concept Development• Branding• Illustration
Aishwarya	<ul style="list-style-type: none">• Product design• Marketing strategy• Branding
Twinkle	<ul style="list-style-type: none">• Product design• Marketing strategy• UX Research

So, our problem is what we collectively realized is that guided meditation is boring and even though it is really boring is really needed.

(Refer Slide Time: 10:10)

Problem Statement

HMW

Develop assistive tools to facilitate stress reduction through mindfulness.



And we the problem statement thus came down to finding alternatives and aids to developing mindfulness. Mindfulness is a concept that talks about living from moment like experiencing

moment from moment to moment and not (Refer Time: 10:25) on things that are in the past or in the present.

And we were wondering if there could be a way where this act of focusing on your body on your breath on different points of the body through yoga and guided meditation, it usually falls like the burden of attaining enlightenment falls on the person and his ability to concentrate.

So, we were just thinking what would be a better way to assist this path to enlightenment or feeling more mindful and we decided to look for product design solutions wherein there could be something as simple as a bug or a piece of marble; that when you lie down it travels across your body and it guides you where you should be focusing upon yeah and we are just exploring how we can get into the market which is already quite saturated for the lot of apps and products that encourage guided meditation.

Very good I personally like this topic a lot. So, I will be you know I will look forward for a solution this is fabulous area and like but you could be very you know I think your problem statement is too wide.

(Refer Slide Time: 11:31)



“Your problem statement is too wide, narrow it down to specific activities like say just meditation or support to meditation which is more intuitive, inherent, just more definitive”.

Narrow down to just meditation narrow down to just support during meditation which will be more

intuitive which will be more you know inherent. So, things like that may be much more definition your problem statement and you know we all know the advantages of meditation is phenomenal. So, you know you can just go there because that was exactly the problem you face.

(Refer Slide Time: 11:50)

“Your problem statement is too wide, narrow it down to specific activities like say just meditation or support to meditation which is more intuitive, inherent, just more definitive”.

“Check how many other people are facing the same problem.. So you have evidence to support your problem statement”

And we will check how many other people are facing that problem and what type of health benefits they get. So, that is anyway their knowledge is there. So, like and product design solution will be fabulous actually, your because you know we really do not know whether it is possible to build such a solution. But with your creative thinking you can surely build such solutions yeah Rupesh what do you say this looks like a very very interesting area.

(Refer Slide Time: 12:13)

"Pin-point your problem, come to the part to what is the value you will be adding, differentiate from a good to have, something that is an accessory or ancillary but make it a need based solution "

Yeah, so again interesting Pin-Point problem and come down to that part where is the value that you will be adding differentiate from good to have something which is just an accessory or an ancillary products to something which is a need based thing maybe that is something there are lot of people who want to do this, but they do not know whether they are progressing. So, monitoring is also something which helps you identify if you quantify something. So, that is something which you could try you will be able to come out properly.

Like one of the aspects of mindfulness is also focused breathing and we also realized that while practicing mindfulness can be a way to better react and respond to symptoms of asthma and COPD and if that kind of mindfulness can be developed in patients with this disease it would be helpful. So, those are the kind of utilities we are also looking for and may be it can be more pinpointed in that direction.

(Refer Slide Time: 13:11)

“Define your unmet clinical need, if it going to be towards treatment, alleviation, or support therapy etc if it supports a medical need then your are in a medical device zone *”**

Eg. ECG device v/s Apple watch (never claims clinical/medical use)

NOTE: **All medical devices have regulatory compliances that have to be met..

Yeah yeah, it is a good area it is so define your unmet clinical need if it is going to be towards any treatment alleviation or supporting any therapy. If that is what you are then you are in medical device zone say there is a difference between fitbit versus temperature which is thermometer which is medical grade ECG versus Apple watch because apple watch never claims that it is for clinical use or medical use it is something which you can measure you can move.

But there is no clinical relevance to it. So, try to figure out whether you are going to be in a first zone or the second zone, because when the regulatory compliances are difficult. So, choose the product accordingly both are valid both segments are good.

Actually we were mostly thinking to start it up as a brand and sell it as a brand instead of a product. So, brand that sells products which are designed to so that people can pursue mindfulness.

(Refer Slide Time: 14:11)

BRAND v/s PRODUCT..

"Always come back to the part of value, Amazon is a brand but finally it delivers a service. Every solution could be either a product or a service. It has to be either one of the two"

Always come back to the part of value, finally Amazon could be a brand, but there is a service which either it is a product or service either it has to be one of that that is it.

I am very happy that you are only talking about product planning, where you have 6 products and you choose a product you want fabulous. That is of course good, but that comes you know little you know like further in the street this where you have defined your you know statement very well your you know your brand you know the brand statement of what is your brand standing for.

So, you know and then maybe you are not in the clinical space, so think about that if you are in the clinical space the situation will be very different yeah.

(Refer Slide Time: 14:46)

Problem Statement - **Team - 7**

(Refer Slide Time: 14:48)

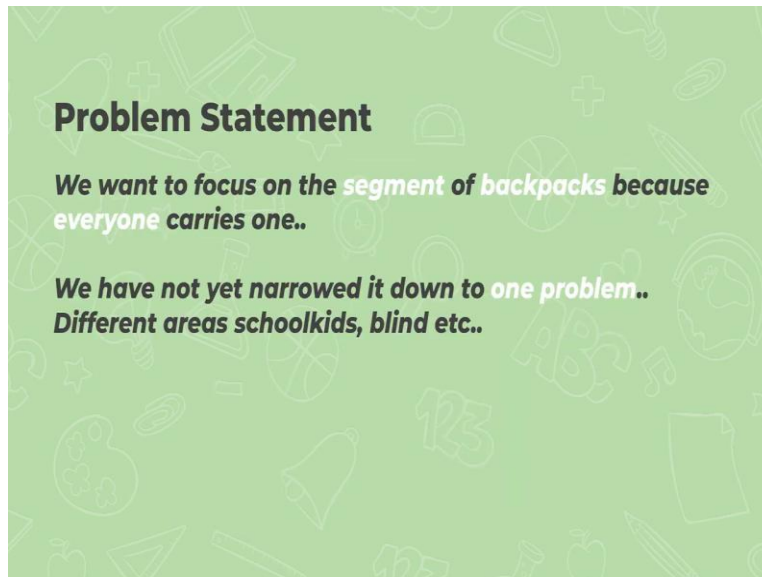


The slide features a green background with faint white icons of various design tools and symbols. At the top, the text 'Team Seven: Swagpack' is displayed in a bold, black font. Below this, five individual team members are presented in a grid-like layout. Each member's name is written in bold, followed by their professional title and affiliation in a smaller font. The members are arranged in two rows: three in the top row and two in the bottom row.

Name	Role	Institution
Amir Nawed	Architect	MDes Student at IIT Hyderabad
Gaurav Singh	Lifestyle Accessories Designer	MDes Student at IIT Hyderabad
Karan Raj Singh	Product & UX Designer	MDes Student at IIT Hyderabad
Prof. B K Chakravarthy	Professor	IDC IIT Bombay
Mr. Ashok Panwalkar	HOD at ISD	Rubika, Pune

Hi this is Amir we are group seven team members are me Gaurav and Karan all are sitting here.

(Refer Slide Time: 14:52)



We want to focus on the segment of backpacks, because backpack is something that everyone carries and sometimes in the form of a bag sometimes in the form of a trolley. So, we have not narrowed it down to one problem statement, but we are focusing on one segment and what we did was we brainstormed on the problems related to the backpacks trolleys.


And this particular segment we jotted down every kind of and any kind of problem that we face the first one was a gamification of bags for school kids, trying to make the backpacks interactive for the children, second one was a backpack for blinds they cannot see it so, make it something tactile and something in nature that a blind person can feel and interact with the back pack.

(Refer Slide Time: 15:41)

- ***Backpacks with sitting and standing support.***
- ***Gamification of bags for school kids***
- ***Self weighing bags***
- ***Difficulty in accessing things from backpack***
- ***Portable/Convertible backpacks***

All the areas are perfect. So, we will you know backpacks with sitting or standing support like that was talking about chair wear project. Fabulous again gamification of bags for school kids do not know weight of the luggage before going to airport wow fabulous a very important problem in taking out stuff from bag when it is on the back, wow we did this for the postman you know where we had a both sling and a back support, portable or convertible backpack for a immigration labor workers wow.

(Refer Slide Time: 16:06)



***“All areas are fabulous, we will look at it again when you have narrowed it down”
Find your need..***

All of them too good very nice let us have much more detail and we will know by tomorrow yeah very good.

Yeah.

Sure sir.

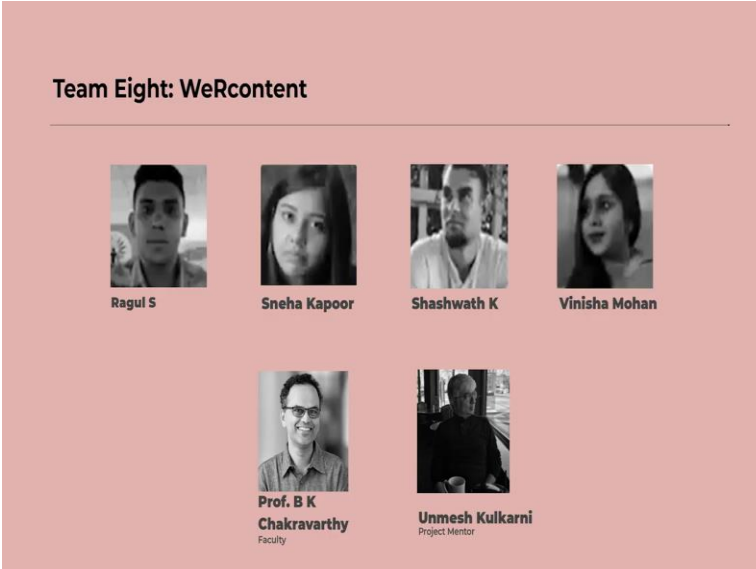
(Refer Time: 16:13) next group.

(Refer Slide Time: 16:14)









Problem Statement - **Team - 8**

(Refer Slide Time: 16:16)



Team Eight: WeRcontent

 Ragul S	 Sneha Kapoor	 Shashwath K	 Vinisha Mohan
	 Prof. B K Chakravarthy Faculty	 Unmesh Kulkarni Project Mentor	

So, we zero down our focus area on traditional learning and classroom learning which I think all of us have questioned after COVID with the online system setting in.

(Refer Slide Time: 16:27)

Problem Statement :

Remedial measures to transform the traditional classroom educational system to a newer more flexible version that is robust, agile, spatial and tech-enabled.

So, our problem statement that we have zero down right now is to remedial measures to transform the traditional classroom education system into a new and more flexible version which is robust agile special spatial and tech enabled. So, we are still thinking on how we are going to do this forward, though we do have a project that we have been working on since earlier on education.

(Refer Slide Time: 16:52)

“You will have to be more specific, maybe within the education what are you seeing. Say remedial measures for people who do not pass classes, the people who don’t learn something but they go to the next class, because of that they can’t go forward, they need help to cope up..”

You let you know will be more specific maybe, you know within the education what exactly are you seeing. What is the remedial measures? You are seeing remedial measure when the people who are not passing out in classes you know people were not you know able to. Because they do not learn something and they go to the next class because of they have not learned something they cannot go forward know that is the remedial you know classes they have. So, that they can cope up with you know the education.

So, just check out those things and I think it is surely a good problem to solve, but you know from a business angle from a, you know what would you pinpoint on for making it very effective. Because lot of these online platforms are coming in how do you measure how do you take things forward it could be a very good you know thing for all these people you know very good topic and very you know pertinent for our condition.


(Refer Slide Time: 17:41)




Problem Statement - Team - 10

(Refer Slide Time: 17:44)


Team Ten: Lucid




Akanksha Singh
Business and
Design Strategy




Sawant Saurabh
Brand Marketing
and Development




Ria Francis
Operations and
Finance




Senjuti Chakraborty
R&D



Shubham Patil
Technical Strategist



**Prof. B K
Chakravarthy**
Faculty



Ms. Vani Singh
Project Mentor

I am going to present for the next group. So, this is the team and we started discussing and brainstorming and after our discussion we just came across with common points that we all felt like working towards.

(Refer Slide Time: 17:58)

Problem Statement :

How might we bridge gaps in the varied social interactions..

After period of gap like social sabbaticals, parent-children interactions, new university students, school children etc..

And the problem statement that we all agreed to work on was how might we bridge the gaps in the

different social interactions. So, there are different types of social interactions and interactions are very important because they are not only a part of a social life. But they affect us emotionally mentally in all of those ways.

So, we were thinking that what are the different gap areas or how do social interactions affect us. So, some questions that have been mind boggling us are basically the experience of say an individual who is been at home for so long and now needs to go out in the world and needs to do reconnect with people.

So, interactions between them or maybe just children or kids who have been at home and have not been going to school for years now for three four years of schooling and then they are suddenly have to be in that environment.

So, other important things were generational gap like there is not any game that you can play with your parents to just have a interaction or promoting your thoughts or listening to what they think.

So, we just categorizing the different social different gaps in social interaction and trying to understand how we can bridge this and the initial vague idea that we have right now are kind of some sorts of games or activities or say even a template form of enhancing or encouraging such conversations.

(Refer Slide Time: 19:27)

"Add details in your problem statement like say social interactions with your kids, actually the toughest problem is the reduced social interaction between the elders and the youngsters, uncles or nieces, game based bridging of the gaps".

This is a; this is a fabulous area Ananya very nice, but we can actually add all those things social interaction between the elders and games. So, whatever that and you can add in that other aspect also. So, you can build the problem statement already and lock in over there.

Ok.

Because a toughest of the problem is actually social interaction between you know like the you know the elders and the you know youngsters, the parents and children or uncles and nieces whichever way and you know you are talking about game. So, it can be a game based attracts, so a game based you know gap bridging social interaction between elder.

Do something that is an icebreaker.

No icebreaking will that will be a solution that will be separate thing, but your problem statement could be this way you are you know bridging the gap between you know elders and you know like you know two age groups basically with the game. So, game is very fixed you know like the gap is fixed and the people are fixed.

So, you need to really fix that and please you know lock that and it is a really really good area and it could be you know varied you know aspect which you did not come up with. So, will have

detailed presentations later on when we have all the mentors and all together. But today is just to you know how to get our problem statement right.