

**Innovation, Business Models and Entrepreneurship**  
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**Lecture – 03**  
**Innovation in Current Environment**

Welcome friends. In our first 2 sessions, we discussed about the changing business environment, we discussed about the role of innovation, we discussed about the meaning of innovation, how we can differentiate we between invention and innovation? We also discussed some of the important myths and we discussed some of the realities with respect to innovation, we discussed that innovation does not begin with creativity it begins with curiosity.

We discussed about the iterative nature of innovation, we discussed the importance of effective risk mitigating strategies in the process of innovation. And now in this session we will like to discuss the role of innovation in current environment. What are the challenges? What are the opportunities, for innovation in the current environment particularly business environment.

If, you recall in our last session we discussed that definition of innovation given by Peter F Drucker, where Drucker mentioned that innovation is a tool, which help an entrepreneur to leverage, to take advantage, in the form of opportunity which are coming, which are raising, because of changes and using those opportunities entrepreneur starts different businesses, different services.

So, in this session we will elaborate the meaning of that change, we will elaborate the meaning of that opportunity, that what is the meaning of that change what is the meaning of those opportunities. So, we are going to discuss innovation in the current environment with respect of challenges and with respect of opportunities.

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Now, let us see what are the challenges? Now, the challenges which are there in front of any innovator or rather before we talk of innovator it will be good, if we talk of society.

And, my focus here is mainly the Indian society; we have 2 very important challenges in front of us. One is resistance to change I do not want to change, I am working with the particular way, with the particular product, with the particular process, and I do not want to change. That is a major challenge in front of we all people.

And, second is prediction disability. We do not know what is there in future? If you recall in our first session we discussed about uncertainty, because future is highly uncertain you cannot exactly conclude what is going to happen tomorrow? You can forecast to some extent about the weather, but even with billions of a money we are spending on research related to earthquake, you cannot predict when earthquake will come.

So, there are limitations to predict your future. You do not know when your life will end with all research nobody in this world can tell you when your life is going to end. So, there is so much uncertainty about future. So, that is another important challenge in front of any innovator, we do not know about the future, we cannot predict about the future, and when we do not know about the future, we always want to remain on there are if large number of paths available.

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## Challenges

- Resistance to Change
- Prediction Disability

The diagram shows three horizontal paths starting from 'X' on the left and ending at 'Y' on the right. The top path is labeled 'familiar' with a circled '1' above it. The middle path is labeled 'Y' with a circled '2' above it. The bottom path is labeled 'Unf' with a question mark '?' above it.

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If there are many paths available, I will like to travel on those paths which are familiar.

This is familiar path, this is familiar path, this is unfamiliar. So, given a choice I know that if I start from X this will take me to Y. I will start from X dash this will take me to Y dash. I am starting in this path X double dash I do not know where this path will take me. So, I am afraid I do not want to travel on this unfamiliar path.

And therefore, if you happen to see books related to innovation and entrepreneurship, the titles sometime is that the path less traveled. The meaning is this path is not a popular path; popular means it is not a familiar path. And you yourself know that when it is dark when it is late in evening when it is midnight, you will like to travel on your known paths, you will not like to adventure at that time.

And, similar case is in the, this journey of entrepreneurship also; because we do not want to get failed we feel that failure is not good for us. Therefore, we want to travel on path number 1 and 2 we will not like to travel on this unfamiliar path it is quite possible that. If you travel on this unfamiliar path you will be much ahead of Y and Y dash it is uncomparable, but since you do not know where this path will lead to you will not like to travel on that path.

So, the challenges are with respect to resistance and with respect to our disabilities to predict future. Let us see this resistance to change in slightly more detailed manner. Now,

what are the different forms of resistance to change? I do not want to change the way I am working. So, I am an officer in my office and one of my subordinate comes to me and subordinate says sir I have a good proposal for you. If we follow this type of scheme, we will be ahead of our competitors our performance will improve by 20 percent. And I just ignored what he was saying that is one very common way of resistance to change.

Ignoring the idea, I have not discussed with my subordinate that what he or she is saying I just ignored and that you all must have experienced is the most common way of resistance to change. You as a son or daughter go to your father go to your mother. And say that I have this fantastic idea about my future I want to do such course and this will take me to a very different domain of expertise, but since your father, your mother believed that, you should be an doctor, you should be an Engineer, you should be an IAS officer.

So, they simply ignored what you are saying you have narrated your entire story and then your father says oh [FL] this is your tuition time, now get ready and I will drop you to the tuition class. So, this is we all are very much habitual. So, ignoring the idea is one very common form of resistance to change, then another important aspect of resistance to change is fear of failure.

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The slide is titled "Resistance to Change" and features a list of four items: "Ignoring the Idea", "Fear of Failure", "Inertia", and "Lack of confidence". A handwritten note in red ink next to "Inertia" reads "I can ~~not~~ do it → I can do it". The slide footer includes the IIT ROORKEE logo, the NPTEL ONLINE CERTIFICATION COURSE logo, and the number 4.

## Resistance to Change

- Ignoring the Idea
- Fear of Failure
- Inertia *I can ~~not~~ do it → I can do it.*
- Lack of confidence

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As I just mentioned we do not want to fail we feel failure is bad, we feel or we have categorized that failure is bad. And therefore, we always want to get success it is good oh no doubt we should strive for success.

But, success is impossible without failures. If you have not tested failures you do not know what is the fun of having successful? But, unfortunately particularly in our society we are not liking failures, we feel that this person is a failure person. And therefore, he is not worth talking he is not worth having a cup of coffee with me and that is very unfortunate situation. So, fear of failure is another important point linking to resistance of change. And therefore, we want success at any cost and for that purpose we do not want to innovate rather, we want to remain in the confined zone of tested formula.

What others have followed? What others have done? I will also follow the same path. Because, this will take me from X to Y. I am a student and if I do engineering, I will get a job of engineer and I will get some 25,000 30,000 per month and that will be sufficient for my a starting salary. So, that is a kind of success formula we feel. And therefore, we do not want to experiment, we do not want to change from this success formula. So, fear of failure is another important reason of resistance to change.

Then inertia we all have inertia. Now, it depends from individual to individual that how much external force is required to overcome that inertia. Because, many a times we as individuals do not know our potential, we do not know our potential and we feel that I cannot do this and when I feel that I cannot do this that is the statement related to inertia, I cannot do it. Now, I need some kind of external force, which can help me to remove this word not and which can convert this statement I cannot do it to I can do it.

Now, how much force is required? For removing this not in my statement, that is individual to individual. And if I take you to a very popular story a methodological story from Indian scriptures in Ramayana. The very famous story when Ravana took Sita and when a fleet of Monkeys, led by a Hanuman, Jambavanth, were searching about Sita. So, that fleet reach to seashore and then they stopped, that we cannot cross the sea.

At that time Jambavantha told Hanuman, that he were capable of crossing the sea. You can jump over the sea, you have that much of potential and then Hanuman realized yes I am capable of I can do it. Before, Jambavanth before Jambavanth came into picture

Hanuman was saying Hanuman was feeling that oh now our search is over we could not find [FL] Sita.

But, when Jambavanth told Hanuman that you have potential and you can cross this sea then Hanuman cross this sea and then we all know what happened after that Hanuman could find Sita [FL] and or finally, Ram went to Sri Lanka and that famous war took place Ravana was killed and Sita came to Ayodhya.

So, we require large number of Jambavanths we all are Hanuman you are hanuman, but you also need some Jambavanth, who can remove these knots from your statements and convert these statements from I cannot do it to I can do it.

So, therefore, inertia that you are not aware of your capabilities, you are having infinite energy, but we hardly know that we are that source of energy. So, that is another important challenge for our change and therefore, because we feel that we cannot do it, we keep doing, what we all doing? We never think of something new and lack of confidence. We are not very confident about our as I was just mentioning about our abilities. And we most of the time think negatively about our abilities. And therefore, this is another important reason; we do not want to change.

So, ignoring the idea, fear of failure, lack of believe in your abilities, lack of confidence, all these things are you can say different way of representation of resistance to change I do not want to change. Similarly, another important challenge in current environment for innovation is prediction disability. Now, there is a very popular word nowadays that acronym not word it is an acronym VUCA VUCA.

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**Prediction Disability**

- Volatility
- Uncertainty
- Complexity
- Ambiguity

VUCA

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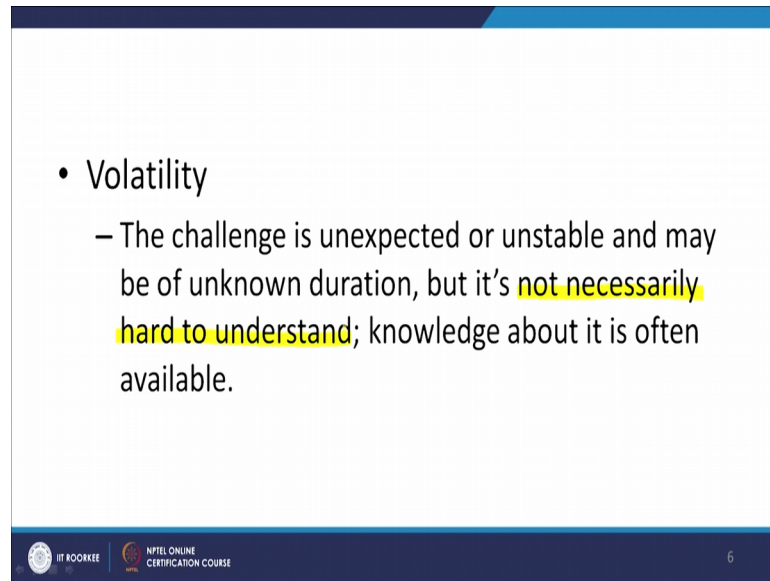
And, this VUCA is explained by 4 different English words one is volatility, second is uncertainty, third is complexity, and fourth is ambiguity.

Now, the 4 different concepts the environment highly volatile the environment is uncertain, it is highly complex and it is full of ambiguity. These things make our ability to see future more difficult. We have some kind of forecasting models, we do extrapolation, we do develop causal relations, we do lot of qualitative assessment of future, but since these volatile environment, uncertain environment, complex environment, ambiguous environment, these things are creating another kind of challenge for our prediction.

And therefore, our prediction disability is adding a new challenge to innovation, because you are not able to see future. Therefore, again you want to work again you want to travel on the path which is known to you.

Already we have discussed we have fear of failure and when I know that the new path the uncertain path has so, many challenges why will I like to travel on that path. So, therefore, my problem has compounded now I have already some resistance. And, now I cannot see and let us slightly discuss these 4 words that what do we mean by volatile environment?

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• Volatility

- The challenge is unexpected or unstable and may be of unknown duration, but it's **not necessarily hard to understand**; knowledge about it is often available.

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Now, the volatile environment this is from Harvard business review, that this VUCA concept came. And in that VUCA the HBR says the volatile environment is the challenges is unexpected or unstable. And may be of unknown duration, but it is not necessarily hard to understand, knowledge about it is often available. The meaning is that there will be some sudden change there will be something unexpected, which will happen in the market.

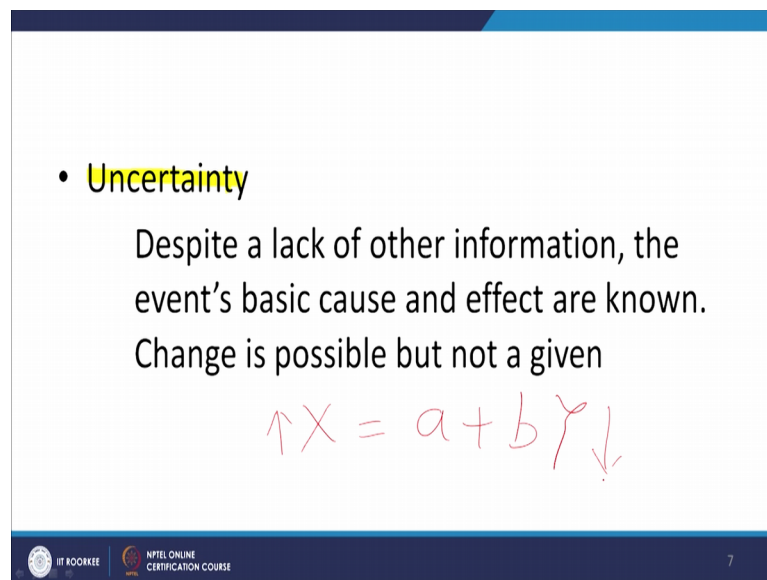
But, you do that why it is happening? And you know that how you will handle this? For an example in India de monetization happened and when de monetization happened on 18th November 2016, it is unexpected and everything became unstable, but we all were aware that this instability is because of de monetization. And, that effect was also not permanent everybody was knowing that it may take 2 weeks, 3 weeks, 1 month, 2 month to stabilize these situation.

So, there are few important thing, that I will like to highlight, that it is not necessarily hard to understand; like the instability unexpected event of de monetization and whatever happened because of that, it was not difficult to understand. We were all aware that because of this de monetization these things were happening. When GST was implemented there were short supply of large number of materials in the market. Again it was simply known to everybody, because there is a transition period therefore, materials are not coming and everybody was clear that why it is happening?



To some extent you can also add the natural disasters changes which are happening; because of disasters are also the part of this volatile environment. So, knowledge about it is often available as I just mentioned, that you know that why these things are happening? What type of strategy you should adopt during a volatile environment?.

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• **Uncertainty**

Despite a lack of other information, the event's basic cause and effect are known.  
Change is possible but not a given

$\uparrow X = a + b Y \downarrow$

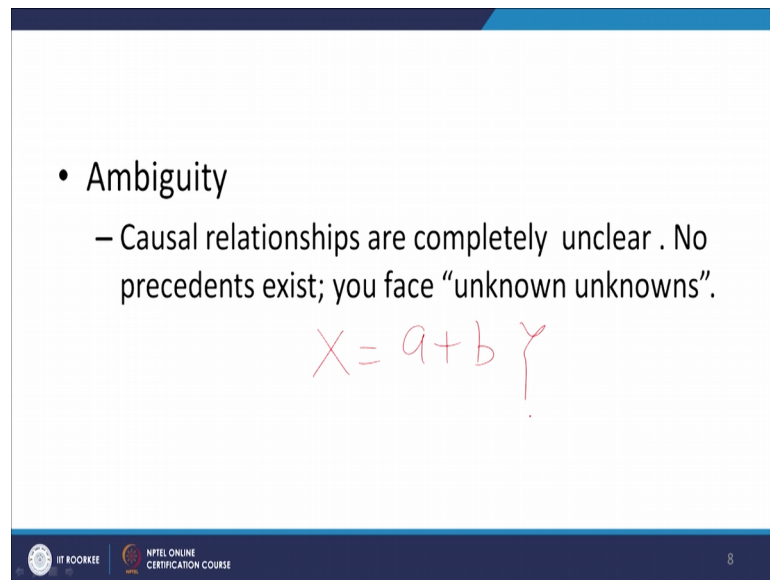
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Next is u after VU VUCA. So, in uncertainty you have despite a lack of other information the events basic cause and effect are known change is possible, but not a given thing you know some type of cause and effect relationship.

And in this case you have some variable, which help you like a X equals to a plus b Y. So, you know that X is depending upon Y. So, this cause and effect relationships are known to you, but even after this cause and effect relationship is known to you there may happen some changes in X which may not be explained by Y alone. So, even know this relationship is known, but the changes may be possible which are not given by this relationship.

So, this uncertainty is there that you are focusing that if I know how the Y will behave and accordingly I can predict the behavior of X ah, but sometimes it is possible that Y may behave independently and X may not behave on the relationship, which you have developed between X and Y. So, that is the uncertain environment that is another important challenge for current time.

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• Ambiguity

- Causal relationships are completely unclear. No precedents exist; you face “unknown unknowns”.

$$X = a + b Y$$

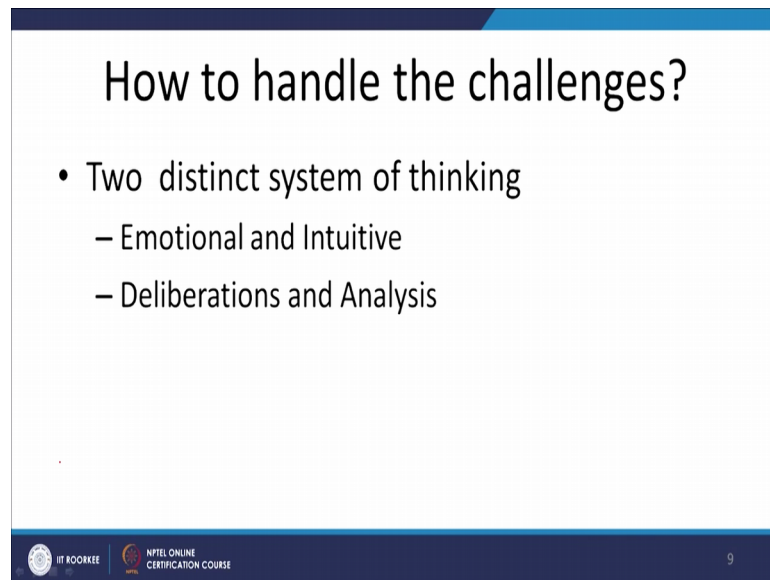
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Then ambiguity, ambiguity is a situation where a relationships are unclear like in the previous case you have X equals to a plus b Y.

But, now in this case when we have the ambiguity you do not know what is the relationship between this X and Y. So, what type of relationships are there and you do not have any kind of precedence and you are actually handling the total unknown entity. Like you are entering to a new market where you do not have any history, you are entering into a new product line where you do not have any kind of core competency. So, that is the kind of ambiguity.

So, when you have these types of situations you enter a new market, where you do not have any kind of precedence you do not have any kind of knowledge of that market, you enter a new product line where you do not have any kind of core competency. So, in those cases the ambiguity element will be there.

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The slide features a white background with a blue header and footer. The title 'How to handle the challenges?' is centered at the top in a large, black, sans-serif font. Below the title is a bulleted list with two main items: 'Two distinct system of thinking' and 'Deliberations and Analysis'. The footer contains the IIT Roorkee logo on the left, the text 'IIT ROORKEE' and 'NPTL ONLINE CERTIFICATION COURSE' in the center, and the number '9' on the right.

## How to handle the challenges?

- Two distinct system of thinking
  - Emotional and Intuitive
  - Deliberations and Analysis

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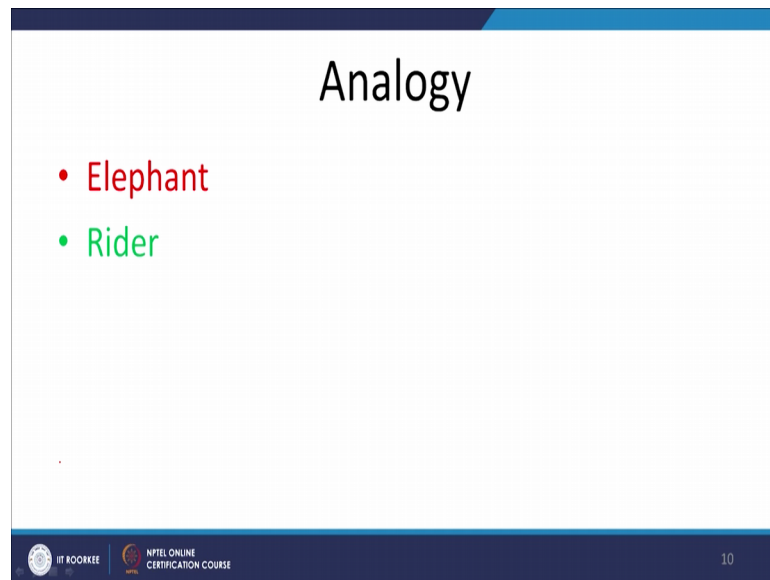
Then, you have the system of handling these challenges. How will you handle the challenge? Now to handle these challenges we have a very typical analogy and that analogy depends on our 2 distinct system of thinking.

We have one system of thinking, which is we all know that we have 2 parts of brain and it is related to that aspect only one part deals with the emotional and intuitive thinking and another part deals with deliberations and analysis. Now, when we have become expert, when you are driving your car? So, for initial few drives when you are learning, you become very careful and you are highly concentrated only on your driving.

But, when you become an expert in driving at that time what happens your family is also sitting with you in the car and you are continuously chatting with your family and at the same time, you are driving your car perfectly. So, sometime we are either using only one system of thinking and some time you become an expert and both these system are in perfectly sync with each other and you can use the those both systems in perfect harmony with each other.

So, for handling the challenges related to innovation, we also need to learn this art of handling both this system of thinking process one is emotional and another is more analytical and deliberated in it is nature.

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Now, to give you one interesting analogy of this thinking with respect to challenges we discussed the resistance to change and prediction disability, we have a very interesting concept of elephant and rider.

We know elephant and if I say you what are the characteristics of Elephant. So, what will you say what are the characteristics of Elephant. We know that elephant is a big animal, it is a powerful animal, but it is slightly lazy animal. And rider on the other side who controls the elephant, he is sitting at the top of elephant and when he is sitting at the top of elephant rider feels that he is more powerful than elephant because he is controlling the elephant. So, elephant is an animal of around 6 tons and rider is 60 kg nothing in front of that elephant.

But, rider feels that I am controlling the elephant and let us see what happens in our story elephant represents the emotional side.

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## Elephant (Emotional side)

- Heavy
- Powerful
- Slow moving

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It is powerful it is heavy, but slow moving and rider represents the analytical side.

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## Rider (Analysis side)

- Ability to see
- Powerless
- Intelligent

Slide 12 features a blue header and footer. The footer contains the IIT ROORKEE logo, the text 'IIT ROORKEE', the NPTEL ONLINE CERTIFICATION COURSE logo, and the number '12'. A hand-drawn diagram in red ink shows the word 'Elephant' in a circle. A line from the top of the circle points to 'Rider' in a circle. Three lines from the right side of the circle point to 'Green grass' (with a circled 1), 'Tiger' (with a circled 2), and 'Water' (with a circled 3).

It is intelligent, it has ability to see because of its height; it is sitting at the top of elephant. So, it can see far and, but because of power of elephant because elephant has a 6 ton advantage, this tiny rider is powerless in front of that elephant.

Now, for innovation to take place, we need to have a perfect harmony between elephant and rider. If elephant and rider are in harmonic your elephant is representing emotional side and it is guided by rider. So, rider will remove the problem of prediction disability.

This is your elephant and this rider is sitting at the top of elephant. Now, there are 3 different this is elephant this is rider.

Now, here is tiger no rider can see that tiger is on this path number 2 these are 3 paths. The rider is on path number 2. And there is green grass at the end of path number 1. So, rider will, but elephant is habitual to go for drinking water using path number 2.

So, if there is perfect harmony between rider and elephant in that case elephant will be able to eat this green grass, but if harmony is not there. So, it is not difficult to predict who will win; obviously, elephant because elephant has that 6 ton advantage and in that case because of it is resistance to change elephant will move along path number 2.

And, on path number 2 because it is following resistance to change analogy tiger is already waiting for elephant and this tiger will attack on elephant. So, it is very very important that we need to develop harmony between these 2 elements rider and elephant. If, we do not have this harmony between rider and elephant then you have resistance to change and that resistance to change will be a impediment for your entrepreneur journey.

And, if you can overcome that resistance to change and if you follow your rider then you will be moving ahead on the path of innovation on the path of entrepreneurship, and success this green grass is waiting for you and you can move away from tiger no risk will come, and your journey will be a more harmonious journey a journey full of enjoy a journey full of more prosperity, that is the role of innovation in the current environment.

But, it is very important to understand that our rider and elephant should be in harmony with each other then only this journey is possible. Otherwise always elephant will win and just to tell you a very small story to close this session, that during winter season we all feel that our examinations are there and we should get up early in the morning at 5 o'clock we put alarm in our mobile phones or 5 o'clock when alarm rings. So, when we are putting the alarm in the mobile phone, that time my rider is active a rider is saying that getting up early in the morning is studying in the morning is very good you learn a lot.

So, I am putting alarm in my mobile phone of 5 o'clock, but when 5 o'clock is there in the morning and alarm rings and I am in my bed at that time what I do I switch off the alarm. At that time my elephant is active and elephant is not letting me coming out of my bed. If my elephant follows the rider what will happen I will get up, I will start studying,

and I will get good marks, I will pass the examination with good marks, I will get selected for good competitive examinations, if I follow the rider.

But, many a times we do not follow the rider and elephant wins and therefore, most of us remain at the bottom of the pyramid very few people those who follow their rider reach to the top of the success pyramid. So, with this we come to end of this session. And in our next session we will discuss various types of innovation, what are the different types of innovation which are available.

Thank you very much.