## Social Innovation in Industry 4.0 Professor J. Ramkumar Professor Amandeep Singh Department of Mechanical Engineering and Design Indian Institute of Technology, Kanpur Lecture 15 Definition of Values Generated by Social Innovations

Welcome to the next lecture on Definition of Values Generated by Social Innovation.

Introduction	Medical states
Social innovations play a crucial role in-	
Addressing social problems     Creating positive impact	
Social Innovations can generate a variety of values : VEERING	
Economic Values ocial Innovation in Industry 4.0	
Social Values     Dr. J. Ramkumar	
Institutional Values     The Amandoon Single	
Environmental Values     Med Tech	
Measuring these values enables us to assess	
effectiveness	
• scalability	
<ul> <li>sustainability of social innovation initiatives</li> </ul>	

Social Innovation plays a crucial role in addressing social problem and creating positive impact. This I have been repeating in almost every slide, you should understand this point is very very important.

The Social Innovation can generate a variety of values, it can be economical value, it can be social value, it can be institutional value, it can be environmental value. We will see this in detail. Measuring these values enable us to assess effectiveness, scalability and sustainability of Social Innovation.

So, these three are very important as I told you, this is an important point which tries to address the social problem and create positivity in the society. And, the last one is successful innovation will be measured for its effectiveness, scalability and sustainability.

Any product if you could sustain for 100 years in the market, I am not talking in terms of polymers. Any product which could sustain in the market for 100 years, then that is called as a sustainable product.

A product which can be used by generation-after-generation, I am not saying that the single product used for so long, but the same product which can be sold for multiple

generations, then it is called as sustainable. Of course, after every small interval of time period, the product has to reform.

What was a physical activity 50 years before? We cannot expect a 20-year-old kid to do the same physical activity today, because lot of technologies have come, lot of comforts have come. So, the fatigue or the physical labor which an individual has to undergo has changed exponentially down. We are now well-prepared for doing all soft jobs.



The Social Innovation is about coming up with a new creative idea to solve social problems or to improve the efficiency of the existing problem, both are ok, new idea or improved existing solution.

To improve people's quality of life, it includes create new technologies, create new business models, create new policies and product and services. So, all these things are part of Social Innovation.

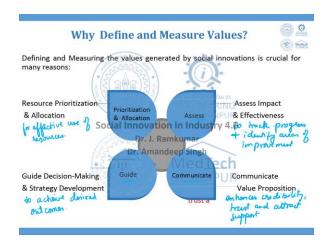
<b>Defining and Measuring values</b>	© Section
Defining values in the context of social innovation refers to clearly identiculating  social  environmental  economic benefits that a particular innovation aims to create  Measuring values involves  assessing  output  LAB LIT KANPUR  Social Innovation in Industry 4.0  assessing  quantifying	entifying and
extent to which those intended outcomes and positive changes are included developing inchrics, inductor and evaluation work to brack and measure the impact and effect of the social innovation.	ealized.

The defining values in the context of Social Innovation refers to clearly identifying and articulating social, environmental and economic benefit that a particular innovation aims to create. Very clear social, clearly identify and articulate social, environmental and economic benefit that a particular innovation aims to create.

Measuring values involve assessing and quantification to and to extend to which those intended outcomes and positive changes are realized. So, it includes developing metric, indicators and evaluation framework to track and measure the impacts and effectiveness of the Social Innovation.

The points, I am writing, these are all the key points. This is a culmination of lot of text. So, I have just put it into few points, whatever I write here, are points which has been consolidated.

So, the measuring values involve assessing and quantification extend to which those intended outcomes and positive changes are realized, which includes developing metrics, indicators and evaluation framework to track and measure the impact and effectiveness of the Social Innovation.



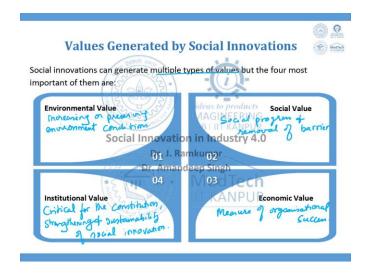
Why Define and Measure Values? Designing and Measuring the Values Generated by Social Innovation is crucial for many reasons. For prioritization and allocation, for assess, for communication and for guide. When we talk about prioritization and allocation, it is for effective use of resources. When we try to talk about assess, assess impact and effectiveness to track, progress and identify areas of improvement.

So, when we are trying to do Defining and Measuring the Values Generated by Social Innovation, one of the crucial factors is assess. Assess is impact assessment, that is what we talked about the metrics.

The next one is going to be, communication value proposition, it enhances credibility, trust and attract support, that is what is Communicate Value Proposition, it is going to enhance the credibility. So, in the previous lecture we saw, how important is to have the Value Proposition Communication done.

Then, when we talk about guide, the guide helps in decision-making and strategy development to achieve desired outcomes.

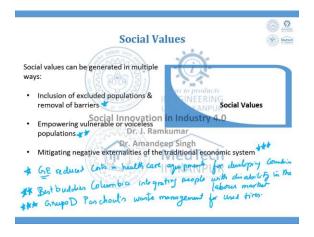
So, these are the four crucial reasons. Assess, communicate, guide and prioritize and allocation. This is very important. So, that is why we always keep Define and Measure.



The Values Generated by Social Innovation. The Social Innovation can generate multiple types of values, but the four most important of them are environmental value which increasing or preserving environment conditions.

Next, when we talk about social values, it is social progress and removal of barrier. The third one, economic value is measure of organizational success, this is the value, then, institutional value is critical for the constitution, strengthening and sustainability of Social Innovation. So, this is very important. So, these are the four values, which are very important.

Multiple values are there, but these are the four values. Four most important Values for Generating Social Innovation are environmental value, social value, economic value and institutional value.



When we look into social values, the social values can be generated in multiple ways. It is nothing, but inclusion of excluded population and removal of barrier. For example, GE

reduced costs in healthcare equipments for developing countries, this is inclusion of excluded population and removal of barrier, cost is been removed by this company.

Next is, empowering vulnerable and voiceless population. So, here what is an example we will see. So, here it is, Best Buddies Columbia integrating people with disability in the labour market.

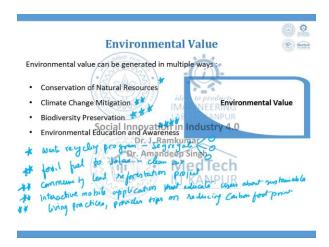
Another example, so they started having inclusive society in their offices, they had space for everybody. Now, many of the corporate world as their social responsibility try to integrate people with locomotive disability, with visual disability, with hearing disability, they try to integrate them and also try to give them a good responsibility in their offices.

Empowering vulnerable and voiceless population Best Buddies Columbia did this. So, all companies are also doing it. Then, mitigating negative externalities of the traditional economic system. So, this is very very important, mitigating, adjusting, negative externalities of the traditional economic system. Here the example is, Grupo DPaschoals waste management for used tires.

So, mitigating negative externalities of the traditional economic system. So, here now in our campus also there is a start-up company which works on recycling of tires. So, what they do is, they take the tire, they extract the tire, converted into strips, and these strips are used for blending and generating three dimensional objects. It is very good. So, it has also brought in international market, and this is done by a community of people, a cluster which works on recycling of tires.

They do not burn it, they just strip a tape from the tire and then they blend it. So, that is what is, mitigating negative externalities of the traditional economic system. So, what are the economic values? Maximizing organizational benefits while minimizing the production cost, organizational benefit while minimizing the production cost. The components which are involved in economic value is, customer satisfaction and meet the needs. So, here the customer benefits are preserved, and the value in the product is still maintained.

The efficient use of resources here, to maximize the impact and minimize the waste. Next is, price exceeding production cost is ensuring that the initiative is financially sustainable and can continue creating social impact. Example, social impact bonds, very interesting topic, I would give this lecture assignment as social impact bonds. What are they? How are they done? What is the benefit which is given to the society through this bond? So, you can read it and make a 2-page assignment for this particular lecture.



So, when we are trying to look at environmental, environmental values can be created in multiple ways.

Conservation of natural resources, So, here it is going to be waste recycle program is run, such that the society of people are encouraged to segregate the waste into containers, such that the recyclability process can be done in a quicker fashion and in an efficient way. Next is climate change mitigation.

Climate change mitigation is, people are talking about moving out of fossil fuel to solar. So, that is climate change mitigation. Solar power projects which enable people to still enjoy the same thing as which got the power using burning of fossils.

Moving out of fossils, it also gives us clean air. Next is biodiversity preservation. This biodiversity preservation is very very important. So, here community lead reforestation projects, which will try to help in restoring what was biodiversity which was lost. Community lead reforestation project is one thing which is thought of in biodiversity preservation and the environmental education and awareness.

So, here the interactive mobile application that educate users about sustainability, such as sustainable living practices, which provides tips on reducing carbon footprint is part of environmental education and awareness.

So, interactive mobile applications are there, online teaching is also there, lot of websites are there, which interacts with the people and it tries to educate the people, and also tells them how sustainability can be made as a life practice or a living practice.



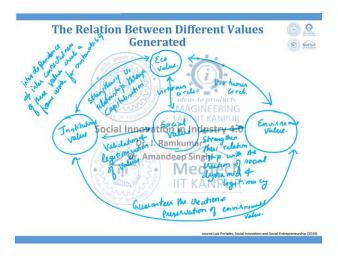
The critical for the constitution, strengthening, and sustainability of the Social Innovation institutional value is there, which generally tries to focus on generating institutional conditions for long-term impact for maintaining the overall values which are generated over time.

Focus on generating institutional conditions for long-term impact for maintaining the overall values which are generated over a period of time, is the prime focus for institutional values.

So, the importance of institutional conditions is assessed to rights and opportunity, social justice and equity, third one is democratic governance and participation and the fourth one is collaboration and partnership. So, these are the four importance of institutional condition. So, assess of right and opportunities is empowered stakeholders.

Next is social justice and equality, again it is same, promote human rights, reduce disparities etcetera. The third one is, democratic governance and participation is more of transparency and strengthening governance, and the collaboration and partnership is to give a comprehending support and solutions. So, these are the institutional values.

The important of the institutional value conditions are assess to right and opportunity, social justice and equity, democratic governance and participation, and collaboration and partnership engagement.



So, the relationship between different values can be represented in this figure. The relationship between different values generated are, the first circle you will have social value, the next circle you will have been institutional value.

The third one what we draw is going to be environment value, the fourth one in the top is going to be economic value. So, the combination of these two is the virtuous circles, then from here to hear it is also you write it as virtuous circle, between this and this, it is strengthening.

Their relationship with the creation of social dynamics and legitimacy. So, this is between environmental and social value, again from here to hear you will have validation and legitimization of values.

So, from here to hear it is going to be strengthening your relationship through capitalization. Now, what is left, institution and environment. It guarantees the creation and preservation of environmental value.

See, how beautifully the circle has come. This circle clearly tells us, the inter-dependency and inter-connectedness of these values create a framework for sustainability and impact to the innovation.

So, you look at it, this clearly says economic value, social value, institutional value, environmental value, between the social and economic it is a virtuous circle, and between economical and environment it is a virtual circle. Between social and environment, it tries to strengthen the relationship with the creation of social values. Institutional, it is validation and legitimization of values can happen here.

Institutional and environmental, it guarantees the creation and preservation. So, the institutional and environmental value, you see that there is a lot of guarantee the creation and preservation of environmental happens. This diagram is very clear and it talks about

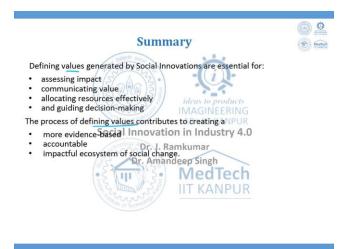
the inter-dependency and inter-connectedness of values and create a framework for sustainability.



Measuring the Values Generated by Social Innovation. There are several approaches to measure. One is qualitative method; quantitative method and you have participatory method.

The quantitative methods are by survey, data, analysis and indicators, and qualitative methods are by interviews, case studies and storytelling. The participatory methods are stakeholder engagement, co-creation, social impact assessment. Each approach has its own strength and weakness, and a combination of hybrid method may be used depending upon the context for Social Innovation.

So, each approach has its own strength. Qualitative versus quantitative, it has its own strength. Quantitative versus participatory method, it has its own benefit. So, if you could have a hybrid method, then this hybrid method will be used for the measurement very nicely, for the matrices, whatever you have developed.



To Summarize this lecture, we were defining values generated by Social Innovation are essential for assessing impact, communicating values, allocating resources and guiding decision-making. These are the values generated out of Social Innovation.

The process of defining values contribute to creating a more evidence-based, accountable, and impactful ecosystem of social change. So, this talks about the process of defining values contributing to creating more evident-based, accountable, and impactful. In this lecture, while teaching itself, I have given you an assignment.

The assignment is all about social impact bonds. What are these bonds and why are they called social impactful and who gets the benefit, how are every stakeholder getting value added, what is the USP of any one bond you take, and what is its USP compared to the others.

With that I would like to thank you? Before I thank, I would like to show you the reference book. We have used Luis Portales, Social Innovation and Social Entrepreneurship book, which got published in 2019. With this I would like to thank you for patiently listening to this lecture.

Thank you very much.