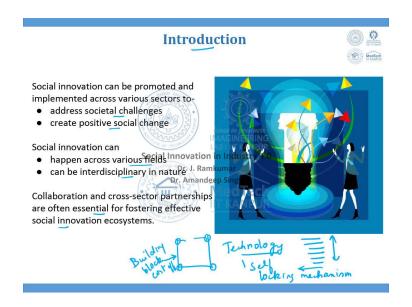
Social Innovation in Industry 4.0 Professor J. Ramkumar Professor Amandeep Singh Department of Mechanical Engineering and Design Indian Institute of Technology, Kanpur Lecture 10 Sectors for promotion of Social Innovation

Welcome to the next lecture on Sectors for the Promotion of Social Innovation.



Social Innovation can be promoted and implemented across various sectors to address societal challenges, and to bring a positive change. The Social Innovation can happen across various fields. It can be interdisciplinary in nature too, many a times it is yes. Collaboration and Cross-Sector partnerships are often essential for fostering effective and Social Innovation Ecosystem.

So, the Social Innovation itself is to address societal challenge and is to promote positive change to the society. For example, India started to build-up a solution for construction of toilets attached to their house or little far-off from their house to stop open defecacy. So, this is a positive societal change.

If people could come-up with technologies where in which they use building blocks to build, and the joints, which are there at the corner. For example, every corner you have a joint, if they could make an innovative joint so that without adding any material they cold use self locking mechanism to lock the blicks or the building blocks, to construct a small building or a small room where in which they can make it for bathrooms and restrooms.

So, here the challenge is, how do we build this building block in a cost effective way? And in this, what is the technological challenge? Technological challenge is along the line you are trying to lock it, and then across the line also you are trying to lock it. And, if you can bring in self locking mechanism that is a Social Innovation, where construction can happen very fast and you do not add new materials, like a building block, like your jigsaw puzzle, you have several building blocks, using these building blocks you lock it with a self locking mechanism. And, Cross-Sector Partnership are often essential for fostering effective and Social Innovation Ecosystems.



So, there are various sectors for the Promotion of Social Innovation. The key sectors are HealthCare, Education, Environmental and Sustainability, Urban Planning and Transportation.

Urban Planning is very important today. People are all moving towards urban cities. At urban cities handling waste, handling transportation, and giving accommodation, these are all challenges. The traffic maximum is getting choked in roads because of improper urban planning.

So, Urban Planning and Transportation, Poverty Alleviation and Economic Development, Civic Engagement and Governance. Art, Culture and heritage there also Social Innovation can be thought of.

If we can arrange heritage trips to heritage venue by providing a token amount. This token amount can be used in uplifting the heritage part, paying the people who are allied

with it, maintaining the heritage and improving the livelihood of a society of people around it.

This is a Social Innovation where every school, every college or every society, if they can plan to have heritage trips frequently during a season where the sun is not very harsh or the rains are not very heavy.

So, then during a lean period you plan for heritage trips. So, now, this is a Social Innovation. Trying to take people along, try to educate the school kids when they try to move to the heritage Part. At the heritage Part talk about the history, the best part of their society, community, best practices, and then collect an entry fee, make them a model which is sustainable. That is technological and digital innovation which we have seen many social service and welfare human rights and social justice. All these areas you can have Social Innovation. It is not product it is service.

So, in Education you can have, taking the education to the door steps, trying to learn at his or own pace at a flexible time and a flexible way of grading. So, that makes today education more and more lucrative. People today are earning and learning. So, this could happen in a big way, and upskilling can happen in a big way because of digitization, which is nothing, but an online class.

Healthcare, people what they do is, they are trying to telemedicine, remote healthcare, are part of Healthcare. People try to optimize in collecting pathology sample in a village, or in a closed area, collect all the samples and one person commutes to a nearby city, gets all the pathology report, and all the reports are posted back digitally to their smartphone. They try to see what is their status without commuting to the cities.

So, by doing so, they try to reduce the time, there is a societal impact, pollution is reduced, and people try to get everything on their smartphones. This helps them to take a decision, whether to do, what is to be done in the next level.

Then, Environmental and Sustainability, people are looking for many alternative solutions. So, now we are talking about credit cards where in which it can be used for transfer of money and collection of money. The RFID tags, which are attached to the cards, is a Social Innovation, there is a technology, the RFID tags, there is a money which is loaded to the RFID tag, and when you use the service of the road, the money from the tag is auto deducted when you cross the toll booths. So, that is an environment, why, because initial there used to be a huge crowd, then there used to be a paper which is getting commuted, then there used to be a change which is dispersed. So, all these things are reduced.

Social Innovation in Education Sector	
Online	· · · MedTech
 Social innovation in the education sector involves developing new and creative approaches to address the challenges opportunities in education It focuses on transforming traditional educational systems to be more inclusive It focuses on transforming traditional education in Industry 4.0 Dr. J. Ramkumar Iearner-centered responsive to the needs of students and communities 	

So, what are all the Social Innovation in Education Sector? Social Innovation in Education Sector involves developing new and creative approach, route learning is thrown out of the window, people try to do learning by doing. So, when we start doing learning by doing, students have to be attached with several kits.

These kits are to be made, and these kits are to be sustained and there has to be a sharing of resources within a community. So, that is what is part of Social Innovation, now several groups are doing this in this country.

So, it is to involve develop new and creative approaches to address the challenges and opportunities in education. It focuses on transforming traditional education system to be more inclusive learner-centered and responsive to need of students and community. So, here it talks about skilling and upskilling.

So, here you can try to make it as reskilling and upskilling. Learner-centered, since, it is becoming online teaching, the pace in which the data is transferred or the teaching is done, the evaluation pattern, all these things are focused towards learner-centered. So, this is a Social Innovation in Education Sector.

The online class has made a big paradigm shift in the thought process. People used to commute from one place to other only for taking tutorials for understanding more subjects. Now, online, after it has come into existence, it has reduced the transportation, it has made the life more efficient and it is cater to mass need very nicely.

0 **Social Innovation in Healthcare** · @ · MedTech Social innovation in the healthcare sector involves the development and implementation of • new ideas 🦯 approaches solutions median to address challenges and improvation in Industry 9.0 Results (deb) healthcare delivery / Dr. J. Ramkumar accessibility 🤛 🍐 Dr. Amandeep Singh 111 MedTech outcomes. 🧭 **IIT KANPUR** : Telemediane Government intratives

Next in Healthcare, the Social Innovation in Healthcare Sector, involves development and implementation of new ideas, approaches, and solutions to address challenges and to improve healthcare delivery, accessibility, and outcomes. Healthcare delivery is nothing, but you try to deliver medicines, try to deliver pathology lab result etcetera.

Healthcare delivery, and then accessibility, and outcomes. now today if you see, lot of government initiatives in healthcare is on telemedicine.



Next is in Environment and Sustainability Sector, plays a crucial role in addressing environment and sustainability challenges, the Social Innovation can contribute significantly to Environment and Sustainable Sector by combining innovative thinking and focusing on social and environmental impact. For example, constructing large massive dams are no way environmental effective, that means to say you disturbed the fauna and flora there, and then you try to construct a dam for maybe betterment of trying to generate electricity, store water, whatever it is, but, constructing massive dam and moving people, affecting the biodiversity is not a acceptable solution.

So, we are trying to look at small dams where and which you make multiple small dams and still try to get the same efficiency what you have in the massive dam. So, there people are looking for Social Innovation.



Then, Urban Planning and Transportation Sector, the solar in these, the Social Innovation in Urban Planning and Transportation focuses on developing innovative solutions to create more sustainable, livable, and efficient cities.

So, this is why in all the cities we are trying to have metro rail where and which the people can commute very fast, lesser the traffic jam, lower the pollution and they are assured at the time in which they will start and they will get reached to the destiny. So, metro rails are part of Urban Planning which is also a Social Innovation. Social Innovation can contribute to the building cities that enhances the well-being and quality of life for residence by addressing their needs of the community, integrating technology and data prioritizing environmental sustainability.

So, all these things are part of Social Innovation which is towards Urban Planning and Transportation Sector. So, considering needs of the community, integrating technology and data, prioritizing environmental sustainability.

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innovative solutions to address poverty create economic opportunities promote inclusive growth	ideas to products IMAGINEERING LAB IIT KANPUR	
Social innovation can play a vital re the well-being of marginalized con addressing systemic issues Dr fostering inclusive approaches promoting sustainable practice	Amandeep Singh MedTech	proving

Then, Poverty Alleviation and Economic Development Sector. Here, the Social Innovation in this involves development and implementation of innovative solutions to address poverty, create economic opportunities, and promote inclusive growth.

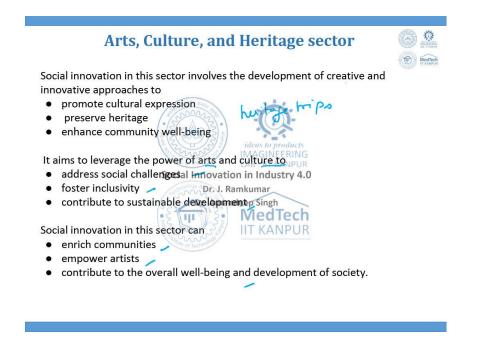
The Social Innovation can play a vital role in creating opportunities and improving wellbeing of marginalized communities by addressing systemic issues, fostering inclusive approaches, and promoting sustainable practices.

Civic Engagement and Governance Sector . fp . MedTech Social innovation in this sector involves developing innovative approaches to • enhance citizen participation judgement improve governance structures AT foster inclusive decision-making processes social innovation can strengthen democracy, improve governance Social innovation in industry 4.0 effectiveness, and foster more inclusive and equitable societies by Dr. J. Ramkumar promoting Dr. Amandeep Singh • citizen participation MedTech HL. transparency **IIT KANPUR** collaborative decision-making

Civic Engagement and Governance Sector approaches to enhance citizen participation, improve governance structures, and foster inclusive decision-making processes. So, that is what you see today, AI is being used for judgement, the judges are able to generate data or get similar case data, or try to get some support from AI towards the final decision of the legal cases, so, that is one.

And, Governance Sector is at the state center, the capital are able to connect with the customer, or with the agriculturist, or with the needy person. On a particular scheme they get connected directly, and the details of them are acquired and Data Analytics is done. And, we try to get more interpretation from the Data Analytics.

Social Innovation can strengthen democracy, improve governance effectiveness, and foster more inclusive and equitable societies by promoting citizen participation, transparency, and collaborative decision-making.



Art, Culture, and Heritage Sector, here also they try to do Social Innovation. It involves development of creative and innovative approaches to promote cultural expression, preserve heritage, enhance community well-being. I told you. So, have heritage trips, this will try, is a Social Innovation. A community of people start doing it.

Once they do it, it attracts customers for that particular place. The place gets revive. The people around get revive, they get money and the people who come here, the students or the people who visit through this heritage trip, get to know more about that city. So, what is already existing? We are now make it streamlined, structure, and we are trying to use it for the development.

So, promote cultural expression, preserve heritage, enhance community well-being. It aims to leverage the power of arts and culture to address social challenges, foster inclusivity and contribute to sustainable development. The Social Innovation in these sectors are enriched communities, empower artists, and contribute to the overall wellbeing and development of society.

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innovativ • app • tool	ve roaches 🦯 s	sector focuses of	on using technolo of nd communities	ogy to create	
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The Technology and Digital Innovation. It focuses on using technology to create innovative approaches, tools and platforms that benefit individuals and community.

The Social Innovation in each sector can contribute to create a more equitable and sustainable future by leveraging digital solutions and innovative approaches.

Social innovation in this sector focuses on creating new models programs interventions that enhance the effectiveness and impact of social services. social innovation can enhance the effectiveness and impact of social services, improve well-being, and promote social inclusion by promoting person-centered approaches r-Amandeep Singh collaboration evidence-based practice
innovative models of service delivery

Social Service and Welfare Sector focuses on new models development, programs, interventions that could enhance the effectiveness and impact of social service.

Social Innovation can enhance the effectiveness and impact of social services, improve well-being and promote social inclusion by promoting person-centered approach,

collaboration, evidence-based practice and innovative models of service delivery. So, these are some of the promotions like for example, effectiveness and impact of social service, improve well-being and promote social inclusion by promoting these things.

Human Rights and Social Justice sector	
Social innovation in this sector focuses on • addressing systemic issues • empowering marginalized groups • creating positive social change	
Social innovation contributes to creating more equitable societies by promoting Social Innovation in Industry 4.0 legal empowerment Dr. J. Ramkumar technology for human rightSamandeep Singh social entrepreneurship	
inclusive approaches IIT KANPUR	

Human Rights and Social Justice Sector. So, here also you can do Social Innovations. Social Innovation in this sector focuses on addressing systemic issues, empowering marginalized groups, creating positive social change. The change whatever you create has to be positive. People should enjoy, people should take solution and the solution should be sustainable.

Social Innovation contributes to creating more equitable societies by promoting legal empowerment, then technology for human rights, social entrepreneurship and inclusive approaches.

Summary	
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The promotion of social innovation across sectors is	crucial for
 addressing complex social challenges, 	
promoting positive change	
 creating a more inclusive and sustainable societ 	V
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Social innovation drives transformative solutions that	at go beyond traditional
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To Conclude this lecture, we have seen in this lecture the promotion of Social Innovation across sectors is crucial for addressing complex social challenges, promoting positive change, creating a more inclusive and sustainable society.

The Social Innovation drives transformative solutions that go beyond the traditional model by harnessing the power of creativity, collaboration and forward thinking approaches. The Social Innovation offers opportunities to reimagine systems, empower marginalized groups, and promote equity.

So, in this lecture we saw various types of Social Innovations, which can happens in various sectors of life. So, now as part of this lecture we will have an assignment. This assignment focuses on try to list down Socio-Economic Innovation which has revolutionized several countries. At least write three Socio-Economic Innovation which has revolutionized several countries. Please read literature, and based on the literature, whatever you have, you try to draft it in your own way.

Thank you very much.