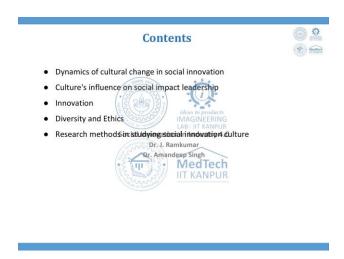
Social Innovation in Industry 4.0 Professor J. Ramkumar Professor Amandeep Singh Department of Mechanical Engineering and Design Indian Institute of Technology, Kanpur Lecture 45

Organizational Culture in the context of Social Innovation

Welcome to the next lecture on Organizational Culture in the Context of Social Innovation. We have studied in length Organizational Culture, but how are we going to map that to Social Innovation is very important. I will repeat if you do not have a good Organizational Culture, you will not be able to sustain your innovation. So, innovation, whatever you do, is a small entity, after that developing sustaining the product in the market, and sustaining your organization is also important. So, this is a very very important topic where in which we are trying to map some of the Organizational Culture with Social Innovation.



In this lecture, we will try to cover Dynamics of Cultural change. Change is one thing which is common. And, this change when it happens in mankind, it is going to have an impact on the culture. So, now Dynamics of Cultural Change is happening, it also happens in the field of Social Innovation. Then, Cultures Influence on Social Impact Leadership, then we will see Innovation, then Diversity and Ethics is a very important topic. Then finally, Research Methods in Studying Social Innovation Culture is also covered.



Organizational Culture can play a significant role in promoting Social Innovation. A strong positive culture can create an environment where employees feel empowered to take risks and try new things. In big corporate world they say 20 percent of your time, you will always work in a area which is not your normal one. For example, I am a typist.

So, my job is for example, if it is 8 hours, I work for 6 hours as a typographer, and then the rest 20 minutes, I will work in the HR department, not as a typist, but as a HR expert or a data analyst or a collection of data, and then keeping. So, by doing so what will happen is, they try to get exposure in another area, try to bring in new things. So, asking them to work all 100 percent in their own domain area, you give them some space, such that they try to think of new things and try to integrate new knowledge into that area.

So, for trying all these things the HR department and the typography department, both of them should be having a collaborative and cooperative work. So, a strong and positive culture can create environment, where in which the employees are given risk-taking capability or risk-taking time and trying out time.

The culture, that values diversity and inclusion, diversity means variation, inclusion means take people together, a culture that values diversity and inclusion can also help to promote Social Innovation by bringing together different perspectives and ideas. Social Innovation can also strengthen the Organizational Culture. What is Social Innovation? You are going to society identifying the unmet needs of society, and then you start working on a problem. So, if you are doing so, then you also should have a culture in your organization to have inclusivity. So, Social Innovation is going to strengthen Organizational

Dynamics of Cultural Change in Social Innovation Cultural change in social innovation involves transforming core values, beliefs, and behaviors to align with social impact objectives. Organizations must foster a culture of innovation, collaboration, and risk-taking to support social change efforts. Machine Machine

So, the Cultural change in Social Innovation involves transforming core values, beliefs, behaviors to align with social impact objectives. Government of the world organizations have declared saying that new SDGs, now rest of the world have to focus towards these 17 SDGs goals, and then try to map their organization with that. The organizations must foster a culture of innovation, collaboration and risk-taking to support social change efforts. The employee engagement and commitment are crucial in driving cultural change of Social Innovation initiatives.



There are a number of unique challenges and opportunities associated with the driving cultural change in Social Innovation initiatives. So, there are challenges, when there is a challenge there is an opportunity, challenge leading to opportunity. So, there are number of unique challenges and opportunities associated with driving cultural change in Social Innovation initiatives.

There are a number of unique challenges and opportunities associated with driving cultural change in Social Innovation initiative. The challenges of driving cultural changes in social innovations are balancing social impact and organizational goals, resistance to change, then cultural inertia. When we talk about resistance to change, it is fear of the unknown and uncertainty about role changes, that is what is resistance to change.

You have a fear of the unknown and uncertainty about the role change that is resistance to change. Cultural inertia is deeply ingrained norms slowing change. So, cultural inertia is deeply ingrained norms slowing changes. So, the opportunities in cultural change for Social Innovation is leveraging diversity and inclusion. Here, you fostering diverse perspectives and solutions, this is leveraging diversity and inclusion.

Empowering employees innovation. So, here you are encouraging employees, encouraging experimentation and idea exploration, then purpose-driven identity. So, here we try to talk about attracting individuals passionate about social changes. Purpose-driven is attracting individuals passionate about social changes is the opportunity in cultural change for Social Innovation.



There are a number of factors that influence cultural change both, internally and externally. Intrinsic and extrinsic both are very important behavior for an organization. So, the internal Factors are going to be organizational mission and values aligned with social impact, then leadership commitment and buy-in to Social Innovation, organizational culture and decision-making process.

These are all internal factors for a organization. What are the external factors? It is societal trends and demands for social responsibility, collaboration with stakeholders and external partners.

Managing Cultural Change for Social Innovation



There are a number of strategies that organizations can use to manage cultural change for social innovation, including-

- Create a Compelling Vision
 - o Develop an inspiring vision aligned with social innovation goals.
- Communicate the Vision
 - o Engage employees and stakeholders through transparent communication. Dr. J. Ramkumar
- Involve Employees and Stakeholders ed Tech
- Dr. Amandeep Singh o Empower individuals in co-creating the social innovation culture.
- Build Trust and Collaboration
 - o Foster openness and collaboration for innovative social solutions.

There are a number of strategies that organizations can use to Manage Cultural Change for Social Innovation, which include create a compelling vision, communicate the vision involve employees and stakeholders, build trust and collaboration. properly,

These are all the strategies that can manage cultural change for Social Innovation, create a compelling vision, develop an inspiring vision aligned with Social Innovation goals. For example, if there are students studying 8 semesters, you say every student that one semester, they should work on some socially relevant problem, which is in their society or an organization or to his best knowledge.

And, you say part of the curriculum you have one semester, Social Innovation work you have to do, social innovative work you have to do. So, that is develop an inspiring vision aligned with Social Innovation goal, or in your factory, you will ask people every year to submit a proposal which is talking about their work, which they have done for society and every year he will be given an award or a reward. So, it is inspiring.

Developing an inspiring vision aligned with Social Innovation goal. When we talk about communicate the vision, whatever decision you take on the board, you have to Engage employees and stakeholders disseminate now. through transparent communication.

Nowadays, you have digital communication through digital communication, smart communication, try to communicate with the people and disseminate whatever was the vision document or the vision to rest of the people. Involve employees and stakeholders, empower individuals in co-creating Social Innovation culture. So, what you do is, you

try to have groups, every week you try to ask this group to meet once in a while, and in this group you have a mixed bag of people from different segments, they come and work together and you try to ask them, Amongst themselves, please identify a leader and then that leader will empower every two team member to work on a common goal, to achieve a Social Innovation and promote Social Innovation culture.

Then, build trust and collaboration, foster openness and collaboration for innovative social solutions, foster openness. So, in the various cultures, we saw hierarchical culture and all, where in which they say, the roles and responsibilities of individuals are done, and they disseminate what information is required to a lower level, only that. So, the openness may be lagging there. So, here foster openness. Keep the openness, try to be transparent, allow people to engage and promote. So, that will lead for collaboration of innovative social solutions.



The social impact leadership is the ability to lead an organization in a way that creates positive social change. The relationship between the organizational culture and a social impact leader. A leader should not think of working on micromanagement. A leader should always think for the future.

A leader will always try to take risk and have a gut feel, and try to take people ahead, a company ahead, an innovation ahead. If there is a decline or if there is a mistake the leader stands up and takes the responsibility for his team. The leader should have a quality of openness. A leader should have a quality of diversity.

He should be open to accept criticisms and good ideas. So, what is the relationship between organizational culture and social impact leadership is very important. The relationship is, it is shaping culture for Social Innovation. So, the leader influence culture by aligning actions with social impact goals. Cultivating a culture of innovation.

The effective leader values social responsibility, risk-taking, and collaboration, because these three lead to the culture of innovation. Then, empowering employees for social change. They empower employees to pursue Social Innovation with purpose.



The characteristics of effective social impact leaders are visionary and purpose-driven. There has to be a clear vision for a Leader. I will take the company from x position to y position through Social Innovation. Make all the employees happy, make my management also happy, is a visionary and a purpose-driven.

Clear vision and inspiring communication has to be there. A true Leader will have an inspiring communication. Then, ethical and transparent, strong ethical values and transparency to build trust is important characteristics of a effective social impact leader.

Strong ethical values and transparency. Collaborative and inclusive, value diverse perspectives and foster inclusivity accepting people should be leaders characteristic. Then, resilient and adaptive embraces change and overcome challenges. See when a leader says or when a leader sees a change is happening, then immediately a leader will go back to his organization, and say please let us also change to world requirement. It is going to be slow, it is going to be challenging, but he will have to take it to meet the environmental change.

So, resilient and adaptive, he has to have the perseverance to push people to go for a change, and while doing so, several challenges, and these challenges he has to convert into opportunities, and he should start working with the group of people and move forward. For Social Innovation, the leader plays a very very important role. Empowering and supportive, if there are decisions taken and if there are mistakes, stand up and say yes, I am responsible be supportive for every decision they take. Suppose, if one of the

colleague has an emergency, he takes off for today try to fill in his gap, and make sure the team wins the show. Empowering and supporting, provide support and opportunity for growth. These are the characteristics of effective social impact leader. A leader leads an organization.



What is the link between culture and innovation in social impact organization? Impact on innovation is going to be culture influences innovation in social impact organization, which creates values creativity, risk-taking, experimentation faster of innovative ideas is the impact on innovation. Then, support for Social Innovation is going to be a strong cultural alignment, with social impact goals encourages innovative solution. It inspires fresh perspectives and groundbreaking approaches. So, the support for social impact is fresh perspectives and groundbreaking approach.



The elements of innovative culture is open communication and collaboration. Embrace of failure as a learning opportunity, every fall leads to a learning curve, so, learning

opportunity. Empowering and autonomy, giving responsibility without autonomy is of no use. Empower and give them autonomy to take decisions.

Recognition and rewards for innovation. And, the last one is going to be continuous learning and adaptability. These are the elements of innovative culture. So, under openness and collaboration, it is going to be increase collective problem solving. This is going to be open communication and collaboration encourage collective problem-solving. Embrace of failure as a learning opportunity, here, promoting experimentation and creativity.

Empowerment and autonomy is empower employees to take ownership of Social Innovation initiatives. The next one is recognition and rewards for innovation, here, you try to motivating further contribution. Then, continuous learning and adaptability is enabling effective responses to social challenge. These are the elements of innovative culture. The Strategies for Creating a Culture of Social Innovation.



So, here embedding Social Innovation in the culture. Align culture with social impact goals and values. Then, encourage risk-taking and experimentation, we have seen it in plenty. Promote learning from failure. These are the possible things which can come under the umbrella of embedding Social Innovation in the culture.

So, empowering employees for Social Innovation are grant autonomy and decision-making authority is empowering employees. Then, provide resources and support, that is empower the employee for Social Innovation. Next one is provide resources and support for Social Innovation initiative. Allocating fund for Social Innovation projects and providing access to mentors and experts. So, these are the other providing resources and support for Social Innovation.



So, the culture and diversity for Social Innovation are importance of diverse and inclusion, it is diverse perspectives, empathy and understanding, and social impact. These are the important diversity and inclusion. The organizations can create an inclusive culture by setting clear expectations for diversity and inclusions. Providing training on diversity and inclusions and create a culture of belonging. When we are trying to talk more about diverse perspective, it is bringing varied viewpoints, that is diverse perspectives.

Empathy and understanding to better understand and address diverse social needs. Social impact, it is embracing diversity aligns with the principles of social justice and equitable impact, this point is very very important, social impact equitable impact.



Ethical Consideration in Social Innovation Culture, the Social Innovation culture must prioritize ethical decision-making without affecting the society, society means

environment and health of employee. So, this is ethical decision-making. Then, ethical considerations involving weighing the potential social impact and consequences of action.

Then, the next one is addressing ethical dilemmas is essential to ensure positive and sustainable social change. This is very very important to have ethical consideration in Social Innovation culture. The ethical considerations are important in all aspects of Social Innovation, from the development of new ideas to the implementation of new solutions.



The role of organizational culture in promoting ethical behavior and social responsibilities are establishing ethical values. Cultivate a culture that emphasis ethical values and social responsibilities amongst the employees.

So, run courses, run orientation, run skill development, whatever it is, amongst the employees keep doing it, so that cultivate a culture that emphasis ethical values and social responsibilities. Clearly communicate ethical guidelines and standards to all employees this is very very important. Many a times the board decision are not communicated to employees.

What is the bosses decision has not been communicated to the employees. For example, in many companies the boss decides that we will make dustbins, and all these dustbins will be bought, it will be kept at various locations, but what is to be done with the dustbin, how are people going to disperse that in the waste into the dustbin is a question.

Until and unless the dissemination of knowledge happens from the top to the bottom, and involve everybody the cleanliness of the company cannot be improved. So, that is, what is clearly communicate all the ethical guidelines and standards to all the employees

ethical leadership, the leader must embody ethical behavior and lead by examples, you should lead by examples. If you say something and if you yourself do not practice, then it is going to be very difficult to be a ethical leader or you will not have a ethical leadership quality. Transparent decision-making processes promote trust and ethical conduct.



Encourage ethical discussions. What is good, what is bad to the society, keep discussing. Foster open dialogues on ethical challenges and dilemmas. For example, every day morning every house in a learned society disperses 200 to 300 grams of plastic material. So, every day 300 grams, in a month multiplied by 30, it is going to be 9000 grams. So, 9000 grams is going to be 9 kilos of waste from every house.

If there are 1000 house, though it is 9 kg into 1000, it is going to be 9000 and it is going to be 9 tons of plastic waste. How are we going to disperse? Big challenge. Foster open dialogues. So, the open dialogues are going to be, you go to every house or involve every housemate, and then tell them please do not try to buy or take material which is packed by plastic. Apart from that decision, you cannot remove the plastic from its waste.

So, at the source you have to stop. When you are buying a material do not try to choose products which are packed heavily with plastics. So, foster open dialogue on ethical challenges and dilemmas The next thing is supporting maids in your house less than 18. So, their education is affected, their health is affected, all these things, their mental growth is affected, they have a jump, they did not have money, now they will earn money. So, they do not know what to do with that money.

So, these are all dialogues of ethical challenges and dilemmas. So, encourage employees to voice concerns and seek guidance when facing ethical issues. This is a quality which has to be there with a leader ethical leader. So, he has to encourage employees to voice concerns and seek guidance when facing ethical issues. Next is ethical risk assessment is

also a new topic which is getting more and more emphasized today. Risk taking in terms of money, risk taking in terms of time, risk taking in terms of ethics.

Ethical risk assessment is also a very important topic of discussion today which comes under ethical consideration in social culture. So, conduct ethical risk assessment for Social Innovation initiatives, ethical risk assessment. You have a matrix, in that matrix, you have a ethical risk matrix, and then try to take every factor every factor you will try to do this, and then you will try to give a value to it. Consider potential impacts on stakeholders and the broader community. Monitoring, risk assessment is one, and monitoring and accountability is also the other.

Implementing systems to monitor ethical compliance and accountability. Whether whatever you have preached, whether they have practiced, and if they have practiced, have they entered it somewhere, it should not be a story. It has to be in terms of a number which can be later converted into an index.

So, implement systems to monitor ethical compliance and accountability, then establish consequences for unethical behavior to uphold ethical standards. So, unethical behavior you have to see and see what is the impact of this unethical behavior, and tell them that no you have to move towards ethical standards. The Research Methods for Studying Organizational Culture for Social Innovation, it is going to be qualitative research method.



Qualitative research method offers valuable insights into organization culture in the context of Social Innovation. Three commonly used qualitative methods are case studies, interview, thematic analysis, three things. So, the case study is nothing, but in-depth understanding of organizations, and their Social Innovation culture comes under case

study, it is all qualitative. Next is data from documents, observation, and interview for rich insights have been collected.

So, that can be used as a research method. The next one is going to be interviews, explore perceptions and experiences of the culture by various employees in the factory. Open-ended questions for nuanced information on Social Innovation initiatives has to be asked in the interview.



Thematic analysis is identifying and analyzing themes or patterns in qualitative data. Uncovering key aspects of Social Innovation culture is the third way of doing a qualitative research work. To get a better insight into organizational culture where Social Innovation is the prime focus.

The process of conducting case study, interview, and thematic analysis case studies are nothing, but select organizations with notable Social Innovation initiatives. Gather data through interviews, observations, and documents analyze data for patterns and themes. This is the way they process the case studies. The interviews are identify key stakeholders and participants, develop interview questions exploring Social Innovation culture, and record responses for analysis.

Research Methods for Studying Organizational Culture for Social Innovation

- Thematic Analysis:
 - o Transcribe and organize qualitative data.
 - o Identify recurring themes.
 - o Analyze themes for meaningful insights.

Social Innovation in Industry 4.0

Dr. J. Ramkumar

Dr. Amandeep Singh

MedTech

IIT KANPUR

When we talk about thematic analysis transcribe and organize qualitative data, identify recurring themes and analyze themes for meaningful insight.

This is how the process of conducting case study interviews and thematic analysis are been done. So, for case studies, interviews, and thematic analysis uncover essential information, informing practices for impactful social change, or innovation, this is very v ery important. So, case study, interview, and thematic analysis uncover essential that is what I always say unmet needs.

Uncover essential information, informing practices for impactful social change, and innovation are coming out of this qualitative research. When we are trying to talk about quantitative research methodologies surveys, metrics, statistical analysis will be used.

So, survey is survey gathers numerical data on Social Innovation culture and employees perception. So, close-ended questions offer standardized response for analysis. So, you ask a question, you say 1, 2, 3, 4, 5. So, he takes either 1, 2 or 3, or it is 5 levels or 7 levels you can have, and then you try to get the feedback. Next one is metrics, metrics involve quantifying specific aspects of Social Innovation culture, metrics.

Metrics is you give a matrix, and then you start filling it, provide measurable data to assess cultural elements. Quantitative is more impactful than qualitative. Statistical analysis moment you convert that data you survey into a data which is usable, then that usable data when you start doing statistical analysis. The statistical techniques analyze quantitative data to draw conclusions. Identifying relationship, trends, and correlation in the data is very easy when you do a statistical analysis.

Research Methods for Studying Organizational Culture for Social Innovation

Process of Quantitative Research:

- Designing and Administering Surveys:
 - o Identify key aspects of social innovation culture to measure.
 - Develop structured survey questions with rating scales or multiplechoice options.
 Dr. J. Ramkumar
 - o Administer surveys to targeted participants, ensuring data validity and reliability.

 MedTech
 IIT KANPUR
- Developing Metrics:
 - o Define measurable indicators for social innovation culture.
 - Develop a scoring system or scale to assess cultural elements quantitatively.
 - Apply metrics consistently across the organization

There are several statistical tools today where in which they try to do quantitative research analysis to find out the social impact in the organization. So, designing and administering surveys identify key aspects of Social Innovation culture to measure. So, the process is, you have to design and find out the important points where you will do administering survey. Identify key aspects, for example, if you say the food is tasty, why. So, you have to come up with 4, 5 elements, and then each element you will say 1, 2, 3, 4, 5, 1, 2, 3, 4, 5.

Now, this will be shown to the customer and he will say 5, 4, 3, 2, and then 1. then it says because of this the food is tasty, because of this the food is tasty, something like. Identify key aspects of Social Innovation culture to measure. Then, develop structured survey questions with rating scales or multiple-choice options have yes, no, or 1, 2, 3, 4, 5. Then, administer survey to targeted participant, ensuring data validity and reliability. If you are trying to do a Social Innovation, try to attack that community of people where really there is a need.

Do not try to go to some other person and get a feedback, and then plunge it into it. Then, that becomes a noisy response into a signal and this can digress the signal. So, administer survey to targeted participant, so that you can do a Social Innovation. Then, developing matrix define measurable indicators for Social Innovation culture. Then, develop a scoring system or scale to assess cultural element quantitatively. Apply matrix consistently across the organization, same matrix has to be used across the organization.

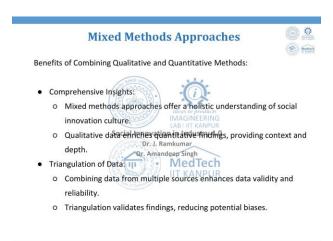
Research Methods for Studying Organizational Culture for Social Innovation

- · Conducting Statistical Analysis:
 - o Clean and organize survey data for analysis.
 - Utilize statistical software to conduct descriptive and inferential
 analysis
 - Interpret results to draw conclusions about social innovation culture.
 Social Innovation in Industry 4.0



Conducting statistical analysis. Clean and organize survey data for analysis is for statistical analysis. Utilize statistical software to conduct descriptive and interfacial analysis. Then, interpret results to draw conclusions about Social Innovation culture. So, basically you are trying to convert qualitative data into quantitative data, then you do statistical analysis, so that you try to come up with some understanding of various models, model 1, 2 and 3.

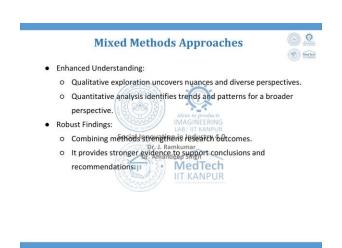
When you talk a model, then you also say the constraints. Within this constraint, within this bandwidth, this model works good, then what have you done? You have a problem, you have defined the constraints to the problem. So, now you can look for solutions, this is the domain where people are there, then you have put the constraints. Now, what is that is, if you go back to your design thinking, this is a definition stage. In definition stage for an innovation to happen, you will always try to convert the qualitative data into quantitative data, then this quantitative data, you can use it for making various ideations.



So, what are the benefits of combining qualitative and quantitative methods? We get a comprehensive insight, mixed method approaches offer a holistic understanding of Social Innovation culture.

The qualitative data enriches quantitative findings, providing context and depth, qualitative data enriches the quantitative finding, that is what I said qualitative-quantitative, quantitative-statistical modeling, provides context and depth. Triangulation of data, combining data with multiple sources enhances data validity and reliability. We use the terminology called triangulation. Triangulation validates finding, reducing potential biases, by triangulation we do it.

Triangulation is a mathematical technique which is used for data. In mobile phones also, we use triangulation and here also we use triangulation of data.



Then, enhance understanding, the qualitative exploration uncovers nuances and diverse perspectives. The quantitative analysis identifies trends and patterns for a broader perspective. So, uncover nuances by qualitative and trends and patterns by quantitative. The robust finding will be combining both the strengths research outcomes of qualitative and quantitative, together is the robust finding, And, it provides strongest evidence to support conclusions and recommendations. Based upon the conclusions and recommendations starts your innovation.



So, some of the case studies we will see, ACME social solution. ACME, a non-profit organization, aimed to enhance social impact in underserved communities. The cultural change strategies focus on building an inclusive culture valuing diverse perspectives and fostering innovation, that is, what is this ACMI, you see leading through innovation. You see, you remember I was talking about the vision statement logo. So, all these things play and for these things play a very important role for the organization culture.

Organization cultural change strategy is focused on building an inclusive cultural valuing diverse perspective and fostering innovation. The impact is going to be empowered employees to take ownership of social innovative projects, leading to increased community-driven initiatives.

Then, inclusive culture attracted new talent dedicated to last social changes. So, these two are very important very important and it is it makes an impact. So, impact is empower employees to take ownership of Social Innovation projects, leading to increased community-driven initiatives. Next is inclusive culture attracted new talent dedicated to lasting social change.



The next case study is going to be sustainable tech. Sustainable tech is a technology startup, sustainable tech aimed to integrate, sustainability principles into its culture. So, aligned mission with environmental responsibilities, embraced a culture of continuous learning and innovation. So, developed groundbreaking eco-friendly products, attractive eco-conscious customers and investors.

Rapid growth and positive environmental impact is the success of sustainable tech startup. These are the references. To summarize this lecture, dynamic of cultural change, Social Innovation demands a shift from traditional business model, which can challenge established culture. This traditional business model has to be changed, that is what, which can challenge established culture. Next one, the cultures influence on social impact leadership are leaders shape the culture by setting a vision for impact and promoting innovation. Innovation is cultures valuing creativity, risk-taking and collaboration driven innovation and problem-solving.

Diversity and inclusion is inclusive culture with diverse perspective leads to more innovative solutions. Ethics, ethical considerations are essential in all social innovative efforts. Research methods, various research methods help, understand and foster Social Innovation culture, both quantitative and qualitative. Today hybrid mode, qualitative, quantitative mixture mode is also used in promoting or identifying the unmet needs for Social Innovation.

Thank you very much for the patient hearing.