

Organization Development and Change in 21st Century
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Lecture - 03
Sustainable Development and Management of Change

So, in the last session we discussed about certain factors, which are affecting the nature of business, business model, and ways businesses are conducted; like demography, technology and globalization. So, these are the factors which are affecting business world and ways of doing business. As a result of that, you see so many different types and innovative business models coming up and that has impact on existing organizations as well as and that is resulting in emergence of new organizations.

Today, we are going to look at a very important factor, which has been recognized now as one of the most powerful factor, in front of the humanity and that is Sustainable Development. We will also look at how sustainable development and, concern for sustainable development are redefining the business landscape.

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What is Happening to Our Planet?

Ecological divide (1.5)

Social---economic divide (2.5)

Inner cultural or spiritual divide (3)



Scharmer, C. O., & Kaufer, K. (2013). *Leading from the emerging future: From ego-system to eco-system economies*. Berrett-Koehler Publishers.

So, before we talk about businesses, we need to first have some overview of what we are doing to our planet. Auto Scharmer and Kaufer in their book “Leading from the emerging future - From ego system to ecosystem economies”, have beautifully summarized, what we are doing to our planet. What humanity is doing to the planet.

They have given few numbers and I will explain just now what is the meaning of those numbers. Essentially, the proposition of Scharmer and Kaufer is that, there is an increasing divide in society and that divide is in terms of ecological divide, and in terms of socio economic divide, and, also in terms of inner cultural or spiritual divide. What does ecological divide mean? Ecological divide means, what is the impact of human activity on our ecology. So, that means, how much are we polluting, how we are producing the stuff, or what are the by-product of production activities on the planet and what these activities are doing to the plant.

So, there is assessment and there is a measurement called carrying capacity. So, carrying capacity of earth simply means, the ability of the earth to absorb or process the environmentally degrading stuff that is produced as a result of the human activity. Whenever production activities are going on we have some by products. Some of those by products are useful and some of them are waste. So, this measurement is about the waste. How much waste is being created? Earth carrying capacity is our joint ability, the planets ability to process that waste. It simply means, how much waste humanity can afford to create, which can be processed by our planetary ecosystem?

The result is that we are producing waste, which is one and a half time of the total earth's capacity to process. Certainly this is a very unsustainable way and details are even more gory because one and a half means we need one and a half size of the planet to absorb the waste that is being created as a result of human activity.

If we look at the nationwide data, we can see Living Earth statistics - there is a website and there is an organization called Living Earth, which tracks these activities and keeps releasing these measurements. If everybody on this planet starts consuming equivalent to the average American consumer, we will need seven earths to dispose of the waste being created in the process. What about the India's statistics?

India's earth carrying capacity is one; that means, if all the population of this world starts consuming equivalent to the average Indian consumer, then this one earth is sufficient to absorb that waste. We should not feel proud about it. This is because in India the socio-economic divide is very high. That is so in the US as well, but in India the top 14 percent population owns more than 80 percent of the wealth and obviously, their consumption is more and the waste that they create in the process is also much more. So, Indian story is

actually result of its poor who are actually consuming less. It is not due to well of people residing in India.

So, that is what is happening at the ecological divide – earth's carrying capacity is one and a half. We look at the socio-economic divide; top 2 percent of the wealthiest Americans own more than 80 percent of the wealth. Similar, stories in India as well. So, top 10 percent of the wealthiest population in India own more than 80 percent of the Indian wealth. This divide is unfortunately increasing and this economic divide has an impact on the aspiration of people, on social harmony, on the quality of life and so many things.

Large number of people are being brought out of the trap of the poverty - that is also happening, but this number - two and a half billion people, that is constant since last so many decades. People who are residing below the poverty line; that means, those people who are earning less than one dollar a day. This number is staring at us decades after decades. So, that is an indicator of the socio-economic divide.

If, we keep overlooking the environmental degradation, we will experience that in the form of the climate change, global warming, and increasing number of diseases, and eventually the quality of life. If, we overlook the socio-economic divide, that will be reflected in the social disharmony. That will be reflected in so many social unrest and that will definitely have impact on the intellectual, cultural, and scientific growth of humanity. We can understand this with a simple example. If we keep making policy keeping the benefit of 98 percent of population and 2 percent population or 3 percent population, who are in the deep forest and probably not part of the so called mainstream, if we keep ignoring their concerns, then these 2, 3 percent - so called marginalized group, they can take up weapons and they can make the quality of life miserable for rest of the population.

Utilitarian principles, means doing good for the largest number of people is not the logic on which social and economic policy can work upon.

Now, come to the third example. If, you simply compare the time and space given in the media about incidents related to terrorism, accident, war. How much percentage of the time and space do you think is given to these issues? War, terrorism, and accidents, and crimes?

Large percentage very large percentage. Yes, if you read the local newspaper, other than the first page which gives international news or some national news, most of the other pages are filled with incidents about war, accident and crimes. How much can one read? And, we hear about the meaninglessness, mental health, depression and anxiety that people are suffering from. We hardly get to hear about these things, we hardly talk about these things. But if you look at the statistics, at the number of people dying, the number of people committing suicides is thrice of the total number of people dying with the joint impact of war accident and crimes.

So, this is the kind of meaninglessness and anxiety prevailing in our society. How many people actually look forward going to work on Monday morning? There are large number of statistics about the Gallup survey, about employee engagement survey, about many organizations that are conducting surveys about mental health. A large number of people – roughly one third of earth's population is having some or other type of mental disturbance anxiety, depression or insomnia and that is resulting in more severe somatic diseases like blood pressure and heart attack. In India, it is particularly relevant and a matter of concern, because many of you might not be aware that, India is the capital of youth suicides in the world. So, if we look at the suicide rates in the group of 18 years to 28 years the percentage of the deaths being caused due to suicide in India is amongst the highest comparing to the whole world. So, ecological degradation, huge inequality and cultural divide and spiritual divide, lack of meaning in life, these are different and very concerning parameters to understand what is happening to the planet? Now, why should businesses worry about it - that is the question.

But, we should bother about this because most of the production activities are done in the organizations. More than the 70 percent of World GDP is produced in business organizations. If, you look around yourself in this room and wherever to whatever extent you can see, other than oxygen which we are getting from the plants and the water we are getting because it is a rainy season. It is difficult to find anything in this room which is not created by organization. A large number of people are part of some or other organization. That is why organizations cannot remain oblivious to these things. Organizations are the new forms of collective life. After family and society, organizations are the third form of the collective life. They have emerged so powerful in

last 100 and 50 years. But, they cannot remain oblivious to what is happening to the planet.

Because, business and all other activities they carry out depends on the situation on the planet and situation of the society. That is why sustainable development and sustainability is a very important criteria and one of the most important factors of the management of the change.

So, in this session we will look at how this factor is redefining the business and has to redefine the business.

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General Perception about Environmentally Sustainable Business Process

- Producing Green Products places us in disadvantageous position vis a vis our rivals in developing countries
- Suppliers cannot provide green inputs or transparency
- Sustainable manufacturing demands additional investment in technology and equipments
- Customers will not pay for ecofriendly products during recession



If, we talk about the environmentally sustainable business process, still a large number of business students and the business executives carry certain perceptions. What are those? The perceptions are that producing green products places us in disadvantages position. We will lag behind our rivals in developing countries. If, I am a multinational, if I am producing environmentally eco-friendly product, then cost increases and when the cost increases, I do not remain competitive in the developing country.

Another concern is that suppliers cannot provide green input or transparency of the process. I want to provide the eco-friendly product, but I cannot produce all the stuff all the component, I have to rely the suppliers and suppliers are not competent to give this

green inputs, or they do not give do not provide the kind of a transparency, which is needed to be ensured that what they are supplying is eco-friendly?.


Sustainable manufacturing demands additional investment in technology and equipment. While facing the challenge of reducing cost every day, putting up machinery to produce environmentally friendly product is certainly an additional cost.

Last, but not the least how many customers are actually willing to pay premium for the environmental friendly products. Customers are not willing to pay more. So, in India they are not willing to pay, because we are very cost sensitive – that is often the logic that is given.

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Stage 1: Viewing compliances as opportunity

- Voluntary codes at times precede regulatory requirements. Ex. Greenhouse Gas Protocol, Forest Stewardship Council Code, Electronic Products Environmental Assessment Tools
- Following highest standard in all markets instead of basic requirements of different requirement in more beneficial
- Ex. HP's research on environment friendly substitute of lead solder, Electronic Recycle joint platform of HP, Sony, Braun and Electrolux



So, we will see that these logics are primary logic but they may not hold true, when we look at what is going on at one level in the world. That happens partly because of the enlightened leadership. And largely because there are so, many voluntary organizations which are releasing some codes.

So, for example, greenhouse gas protocol, forest stewardship council code, electronic product environmental assessment tools, these frameworks are not given by regulatory bodies. These frameworks are given by professional bodies, but they are sometimes more stringent than the regulatory requirements. Number 1, they create a competition amongst the players in the field.

So, these codes many a time act as precursors to the regulatory requirement. There are two options for organizations; either you follow the least required norms, while operating in a market? So, if I am operating in Africa, I follow what is at least required in Africa. If, I am operating in India, I follow what is least required in India, and if I am also for operating in US and America. Let me follow what is least required thing in terms of being environmentally responsive. And, environment means social environment as well as the natural environment that is one logic.

What is found in their study? They found that instead of following the lowest criteria, if we follow the highest criteria, that gives edge to not only in the more developed economies, where the regulations are more stringent, in the long run it gives advantage to developing economies as well. So, there are a few examples like HP recognize that lead based solders and lead is environmental unfriendly stuff. So, they are using a lot of components which have lead and in the 90s HP recognized that they needed to find a substitute which is more environmentally friendly. They invested on that and around 2000, 2001 a regulation came in Europe to stop these lead based things by 2006.

Many organizations started research to find an eco-friendly substitute of lead, after this announcement was made. So, they had practically only 5 years; whereas, HP had a backing of the research of more than 12 to 15 years to address this issue. So, the moment it was launched, they launched one year before it became a regulatory requirement. And, then they became a business leader in that category.


Another example where again HP is involved, is electronic recycling. It became very clear at some point of time that electronic waste is a big matter of concern. It was recognized that there will be some regulation. Before actually regulation came up, Electrolux, HP, Braun, and Sony, they came together a build-up platform a business platform for the electronic recycling.

So, that involved collecting the used products and recycling them. That gave them a competitive advantage, they that also gave them a major value in the process of recycling. So, viewing compliance is an opportunity for not only doing environmental and responsible thing ; it can be a good business sense as well.

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Stage 2: Making Value Chain Sustainable

- At this stage organizations focus on reducing the consumption of non renewable resources. The drive to adopt environmental friendly processes move from manufacturing to supply chain. The organizations at this stage work with suppliers and retailer to supply and adopt eco friendly products and processes. Make their operations, workplace and product returns more eco friendly.
- Tools and heuristics useful in this journey is Enterprise Carbon Management, Carbon and Energy Footprint Analysis, Life cycle Assessment etc.
- Ex. Cargil and Unilever have invested in technological development and work with farmers in sustainable practices in cultivation of palm oil, soyabean cacao and so on. Unilever aimed at 100% sourcing from sustainable sources, Fuel Sense program of FedEx and replacement of old aircraft with Boeing 737. IBM, AT&T and McKesson policy of telecommuting, Cisco's policy and value recapturing process of product returns



Next stage is making value chain sustainable. An organization, which is following regulations or which is proactively following some norms about providing eco-friendly products and services; next stage for them is making the value chain also sustainable.

What does that mean? It means, at this stage organizations focus on reducing the consumption of non-renewable resources. So, the drive to adopt environment friendly processes move from manufacturing to the supply chain; that means, organizations at this stage work with suppliers and retailers to supply and adopt eco-friendly products and processes. Make their operations, workplace product return policy more eco friendly.

So, you can see that at this stage it is not only about one product or some component in the product, but the whole value chain becomes the focus area. There are certain tools which can help to make the supply chain more responsible way, towards the social environment as well as natural environment.

Those tools are enterprise carbon management carbon and energy footprint analysis, life cycle assessment etcetera. There are some interesting examples and we can look at two significant examples. These examples come from some of the very large corporations, which have huge network and presence all across the world. Those organizations are Cargil and Unilever. They invested not only in the technological development, but they have also worked with the communities to make and to follow the sustainable practices, in cultivating oil, cocoa, soya bean etcetera. In India as well, which is a one of the

biggest markets for Unilever, they declared that by 2015, complete supply chain, the value chain will be sustainable. That meant, there will be no child labour, there will be no harmful chemicals being used, there are the processes being followed in producing all the input will be responsible not harming the environment. You can imagine how big project this could be but they were able to achieve that.

There was a time when Coca Cola was criticized for using lot of water. So, they would say that many times of the quantity of the water present in the bottle of the coca cola is being wasted in the process of producing one bottle of Coca Cola. So, at one point of time they decided to be the water positive. They reformed the supply chain in certain way, that now Coca Cola India is water positive - that is what they claim.

There are some other examples, where not only the manufacturing companies, but even the services companies have used the sustainability logic in their value chain. For example, FedEx. FedEx replaced their old aircraft with the new ones, which obviously had huge cost involved, but in that process they saved more than 35 percent of their fuel consumption and; obviously, their carbon footprint. IBM, AT&T McKesson - these are the organizations, which have used telecomputing as an option for the sustainable value chain.

So, more than 3 lakh employees in IBM mostly work from home. There is one other example of the McKesson, which is an organization which provides nursing services. They have 1000 plus nurses and most of them work from home and this is one of the most appreciated workplace in terms of employee engagement.

Cisco's policy and value recapturing process of the product return: when product return was not a regulatory requirement, recycling was the not the regulatory requirement, Cisco adopted this policy of the taking back the products. 80 percent of of the product they received back was actually functional in nature and many of those with some tinkering, some modification could be sold to some other market. Rest 20 percent could be used for the value recapturing in a sustainable manner.

Third stage, where organizations achieve the sustainability in their process and systems is designing sustainable products and services. So, not only making the supply chains environmentally responsive and socially responsive, producing manufacturing the products itself which are sustainable in nature. So, at this stage organization aim at


catering to the environmentally conscious customers with sustainable and eco friendly products and services; the example is of the P&G. We talked about life cycle assessment, product life cycle assessment in the previous slide. As a result of their life cycle assessment, they realized, that after automobiles, electricity that is being used for the domestic purpose is the biggest cause for the environmental degradation. And, out of the domestic consumption 3 percent is used , for making hot water for the washing purpose. This insight was a result of their life cycle assessment. So; that means, for the washing purpose all the machines worked on the hot water. They said that if we can make a product which does not require hot water, which works with the cold water, we can save lot of energy and in one of the Hackathon they developed this idea and then in few months, they could develop the line of the washing powders, which would work equally good with the cold water.

So, in Europe they launched cool clean and they launched Tide-Cold water in USA, they launched one brand of Ariel in Europe, which would work equally well with the cold water. And, as a result of that they could help in saving lot of energy and that process was good for the planet.

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Stage 3: Designing Sustainable Products and Services

- At this stage the organization aim at catering to the environmentally conscious customers with sustainable and eco friendly product and services.
- Ex. P&G's Tide Cold Water in USA and Cool Clean, a large percentage of customers switched to washing with cold water, Clorox launched the non synthetic cleaning products spending 20 million \$ to research to develop Green Works Line and partnering with Sierra Club, WalMart and Safeway, More than 80 percent of the company's sales are generated from brands that hold the No. 1 or No. 2 market share positions in their categories and 88 percent employee engagement,



Another example, is of Clorox; this company launched the non-synthetic cleaning product, after spending 20 million dollars in research and after postponing the launch for 2-3 times. So, as a result of that research they launched the green works line. So, the 5

products detergent and washing products, all non-synthetic and eco-friendly, they were instrumental in changing the behaviour of the customers. In USA in some European markets, where 2 percent and 5 percent customers were using the environmentally friendly product for the cleaning and washing, that percentage rose from 2 percent and 5 percent to 25 percent and 40 percent. So, 40 percent people converted with the launch of these products, towards using more environmentally friendly product.

So, this was the willingness of the customers to use and they adopted one more goal for themselves and that goal was – we need to provide the products, which are better or equally good comparing to the conventional synthetic product.

So; obviously, they could not. They had to charge some premium. In some market they charge, but along with charging premium, they also did the networking with the WalMart and Safeway; they are the retailers to position their products and communicate about the benefits of this product to the customers. At the same time, they partnered with the Sierra Club which is an an NGO working for environmental friendly activities. They got the endorsement from the Sierra Club and in return of that they gave some fees to Sierra Club.

That fee helped Sierra Club to carry out their activities and their endorsement to this product was also used as a confidence measure and an important message to the customers. Though they were criticized for this kind of a business deal, but you will see in this session we are going to look at how business and environmental concerns are getting blurred more and more with time.

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Stage 4: Developing New Business Model

- Discovering novel way of capturing revenue and providing services at the level of other companies
- Ex. FedEx collaboration with Kinko Print Shop for electronically delivering the documents, Calera builds business model on Biomimicry and finds alternate source of revenue



Fourth stage is developing new business model itself on the sustainability logic. So, discovering novel way of capturing revenue and providing services at the level of other companies in a very innovative way and that is where the role of innovation comes so prominently. You can understand this with two examples. FedEx recognized that transferring the stuff physically from one place to another results in causes lot of energy consumption. So, they collaborated with the Kinko print shop. FedEx developed a line of service, where they gave a proposition to the customers, that instead of sending a document in the physical copy, in the hard copy, you can transfer it electronically to wherever you wish to. And, if you want this to be delivered in hard copy, the Kinko Shop at that place will print that document and deliver it to the recipient. This became a new business line.

Another example is even more fascinating. This company Calera is into the waste management, you might have heard the process called biomimicry, it means learning something mechanical or scientific process looking at nature. So, that is the process called biomimicry and if you want to know more about it you can check a website called Ask Nature. So, Ask Nature gives so many examples where nature does certain things, which sometimes human beings are also required to do and it shows how human beings can learn from those things in the nature? For example, how to make a chamber, which has the room temperature of 25 degrees in desert. We can learn it from the nature by looking at how some ants actually make their nest, which has the temperature of 25

degree, under the hot summer in desert areas where normal temperature is 45 degree or more than that.

Corals have a process – they release carbon dioxide in the sea water. With the help of carbon dioxide and magnesium, they produce the coral covering. Learning from this process they developed a technology of passing the CO₂ into the sea water and producing some cement, which is similar to the coral material. Now, that cement is not of very high quality. It cannot be used in a very sophisticated structures which require huge strength. However, it is useful at many places like parking lot – where such a cement is sufficiently strong to be used. So, they developed this technology, started producing cement and started convincing the construction companies to use this cement, wherever it was appropriate to be used. They also started giving this cement free of cost to these construction companies. Now, where are they getting revenue from? It is a for profit business. They are getting their revenue from the industry pollutants, which are releasing lot of carbon dioxide. So, if you are releasing carbon dioxide, Calera will say that on the logic of the carbon credit they will take the CO₂, they will also get money from polluting organizations and use that CO₂ to produce that cement.

So, these are the kind of business models coming up which are redefining the business. It is happening in the new businesses, it is happening in the existing businesses all these examples which we have discussed most of them are being incorporated in the existing businesses.

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Stage 5: Creating Next Practice platform

- Intellectual and financial investment in challenging the existing paradigm
- Ex. Smart Grid technology, and emerging field of social entrepreneurship



5th and last stage is where organizations are creating next practice platforms; making, intellectual and financial investment in challenging the existing paradigms.

So, one example is Smart Grid Technology. Smart Grid technology is a combination of the electrical engineering and computer science and when it is used it can optimize the uses of electricity in most of the instruments. When they are not in use, their electricity condition can come down a smart grid can take care of so, many of these things.

There is a very significant field emerging these days – that of social entrepreneurship, which is about business models, that take care of social, environmental or spiritual divides – and that looks like the future of humanity.

So, if you have to say, what is going to redefine the business in decades to come, today it is looking like, artificial intelligence, robotics machine learning etcetera; but you will see in your career that sustainability logic is going to redefine the business space. Like no other factor is redefining. These things have already started happening. We are going to discuss how these things have started happening.