

Business and Sustainable Development
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Lecture - 08
Sustainable Products

Hello, welcome to the session and in this session, we will try to understand what is Sustainable Product and how do company they introduce sustainable product. Now, before getting into the sustainable product, let us summarize what we are trying to do in the last class about that why do company they undertake the sustainability initiative. And it is more about they have to mitigate the risk and, in that process, they will also get the profit.

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Why do Companies Undertake Sustainability Initiatives?

- Altruistic Benefit – concern for People and Environment
- A license to grow – Good and sustainable company
- Direct financial benefit – reduced energy, material cost etc
- The ability to continue – responding to the limit
- Regulatory compliance and Stakeholder acceptance -
- Protection against risk – Competitive advantages

MPTEL Source: Financial times briefing on Sustainable business, Brain Clegg, 2011

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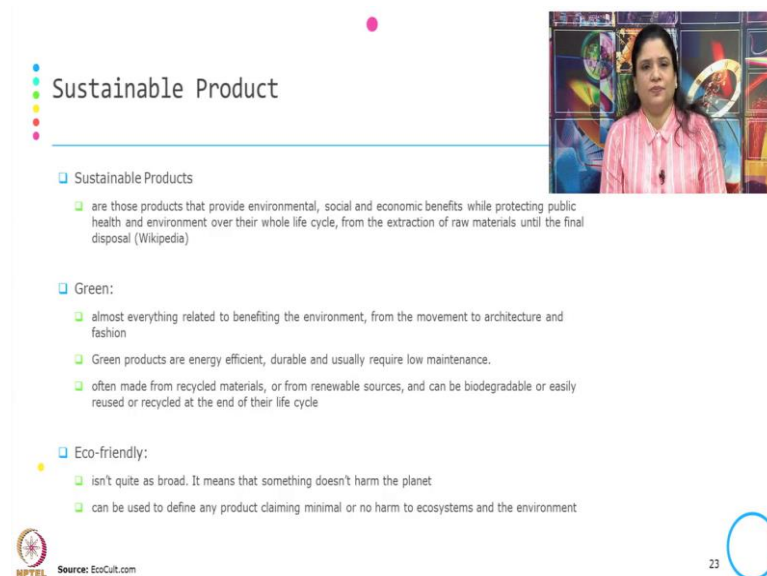
So, these are few of the factor which is summarized by Brain Clegg in his book the Financial Time Briefing in Sustainable Business and this covers everything that why this company they should take this sustainability initiative. The first point about this is that this is for the, because there is a concern for the people and environment, it is altruistic benefit and that is why the company they undertake the sustainability initiative.

This gives us a license to the; license to grow because if you are known as good and sustainable company, the growth in the market space is good and this gives us a license. There is a direct financial benefit in term of the reduced energy, material cost and also

the cost associated with pollution abatement. This gives us the ability to continue. So, if you remember, we introduced the concept of limit, there is a limit to resources. So, if there is a limit to resources unless this is being not responded well that will stop the ability to continue in the production.

Then, the regulatory compliance, stakeholder acceptance makes the company to undertake sustainability initiative. And as we discussed in the last class also, this gives a protection against risk and through this, they can also enhance the, or they can do a competitive advantage by addressing the sustainability agenda.

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Sustainable Product

- Sustainable Products**
 - are those products that provide environmental, social and economic benefits while protecting public health and environment over their whole life cycle, from the extraction of raw materials until the final disposal (Wikipedia)
- Green:**
 - almost everything related to benefiting the environment, from the movement to architecture and fashion
 - Green products are energy efficient, durable and usually require low maintenance.
 - often made from recycled materials, or from renewable sources, and can be biodegradable or easily reused or recycled at the end of their life cycle
- Eco-friendly:**
 - isn't quite as broad. It means that something doesn't harm the planet
 - can be used to define any product claiming minimal or no harm to ecosystems and the environment

HPTEL Source: EcoCult.com

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Now, what is sustainable product? The first definition is from Wikipedia. Sustainable products are those product that provide environmental, social, economic benefit while protecting the public health, environment over the whole lifecycle, from the extraction of raw material until the final disposal.

So, if you look at it talks about everything, it gives us the benefit that is environmental, social, economic benefit to the respective stakeholder, it protects the public health, environment over the whole lifecycle of the product from the extraction of the raw material to the end disposal.


Now, if you have seen in most of the cases, we use the word in synonym sometimes, we use the word sustainable, sometimes we use the word green, sometimes we use the word

eco-friendly, sometimes we use the word environmental friendly. So, we use this interchangeably, but let us see what the differences between this, different kind of product what we used in synonym.

So, green typically green covers almost everything related benefiting to the environment, from the movement for environmental benefit to architecture, to design and to the fashion everything that comes under green. Green products are energy efficient, durable usually require low maintenance and these are often made from recycled materials from renewable sources and can be biodegradable or easily reused, recycled at the end of their lifecycle.

Now, what is eco-friendly? It is not as broad as the previous two types of product, it means something does not harm the planet. And it can be used to define any product claiming minimal or no harm to the ecosystem and environment that is why we call them as the eco-friendly or environmental friendly. And this consists of the product that claiming minimal or no harm to the ecosystem or the environment.

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Sustainable Product

- Sustainable Product
 - represents the wide scope of issues and activities that, according to the United Nations, **do not compromise the ability of future generations to meet their needs.**
 - Sustainability includes eco-friendly activities and green products, but green doesn't necessarily mean sustainable
 - For instance, a product made from renewable resources is considered green, yet if a life-cycle analysis shows that it required a lot of energy to manufacture and ship to you, and if there isn't a proper way to dispose of the product, then it's not considered sustainable

Source: EcoCult.com

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So, if you look at green, eco-friendly and sustainable product, possibly in the sustainable product, it we represent the wide scope of issues and activity according to the UN that is do not compromise the ability of the future generation to meet the need this is what from the definition of sustainable development. So, our actions, our activity, our the way we consume, produce it should be such that, it should not compromise the ability of the

future generation to meet their needs. And sustainable product try to represent those issues activity, which has been the part of the sustainable development definition.

So, sustainability includes eco-friendly activities, green product, but green does not necessarily be sustainable. Like a product made from renewable resources is considered green, but if you do a lifecycle analysis of the product, you will find that it requires lot of energy to manufacture and ship to you right. So, there is a energy associated with manufacturing, energy associated with logistic and if you there is no proper way to dispose the product, then it will also create the harm to the environment. So, this is not consider sustainable.

This can be green because product made from the renewable resources, but if you do a lifecycle analysis, you will find that there is a, impact associated with the other loop of the product life cycle. So, we cannot consider as a sustainable. So, it is very difficult to get a sustainable product as a whole, where the impact is low or impact is minimum at each loop of the product life cycle.

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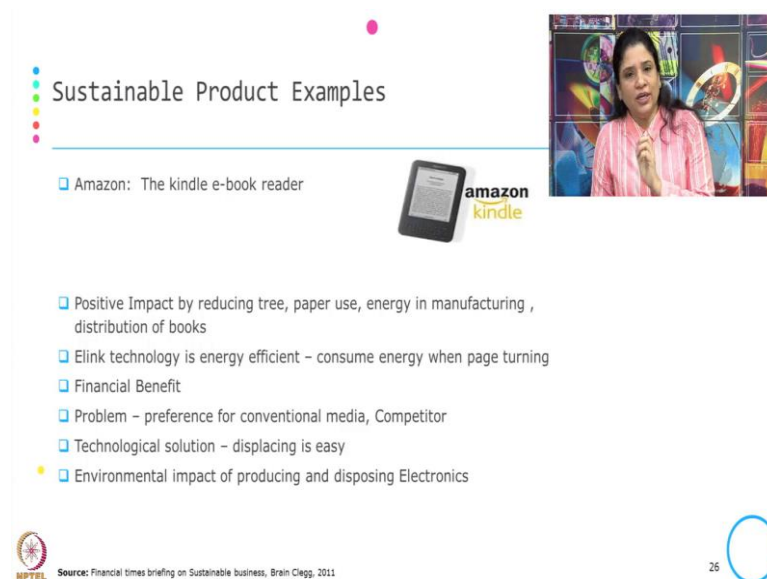


Now, this is given by Kevin Brady in Green Biz that what is the sustainability attributes of a product. And it is initially the attributes are given by classical and more detail eco-design and sustainable strategy by Han Breziti and Martin Charter which is further added or further like complemented in by Kevin Brady in his site that is Green Biz and this is what the sustainability attributes of product.

And what are the sustainability attributes of the product? We start with the we do these attributes starting from the resource base, what is the lifecycle impact and benefits, what is the human and ecological toxicity profile of this product. Then socio economic impacts and benefit, total cost and the lifecycle cost and finally, the technical performance and fit for purpose.

So, typically when we do, or we do we evaluate the product whether those are sustainable products or not typically, these attributes are being used starting from the resource base what kind of resource are being used till the time this is the technical performance of the product is done and how much they are fit to you for the purpose or fit to the use.

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Sustainable Product Examples

- Amazon: The kindle e-book reader
- Positive Impact by reducing tree, paper use, energy in manufacturing , distribution of books
- Elink technology is energy efficient – consume energy when page turning
- Financial Benefit
- Problem – preference for conventional media, Competitor
- Technological solution – displacing is easy
- Environmental impact of producing and disposing Electronics

Source: Financial times briefing on Sustainable business, Brain Clegg, 2011

Now, I will give you three examples which can be taken as a sustainable product example. This is again these examples are taken from Financial Time Briefing on Sustainable Business, this is by Brain Clegg which is published in 2011. The first example is Amazon Kindle. So, this is a, Amazon comes out with this e-book reader Kindle.

Now, what are the impacts? They give positive impact because since it is e-reader, there is no paper used over here, there is a reducing paper use, there is no paper use, there is no energy in manufacturing the paper or the books, then there is no energy associated with the distribution of books, because this is electronically you can get. And there is impact

in term of reduction of; there is no reduction of tree, there is no reduction of paper use, there is no reduction, there is no use of energy in manufacturing and also there is no energy or the other cost associated with the distribution of the books.

The e-link technology is energy efficient what is being used in this product and it only consume energy when the when we turn the page. It gives financial benefit, how it gives financial benefit?

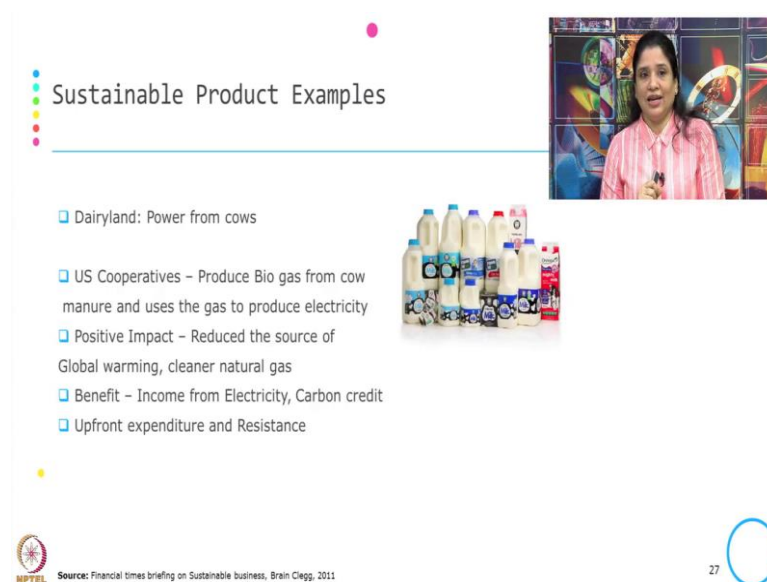
Because we are not using paper, there is no cost in the manufacturing, there is no cost associated with the distribution of the books. Now, what is the problem with this product? Till the time the behavior, the consumer behavior of accepting such kind of product. So, when it comes to book or newspaper, we always prefer to or many people prefer to go for the conventional media.

So, they still feel that if it is a book, they want to have a hardbound book what they can read, keep, after 20 years, 30 years, they again want to read that book and also there are. So, initially there was no competitors, but over a period of time, the competitors they started also getting into the space.

So, mostly two problems associated with associated with the product, one the consumer behaviour associated with the product, how consumer they respond to such product and second is that competitors getting into the space.

Also, since the entire product is just based on the technology or the technological solution, displacing such kind of product becomes easy. And somehow even if the product looks sustainable, what is being ignored over here is that since it is a, electronics product, there is environmental impact associated with producing and disposing the electronics.

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Sustainable Product Examples

- Dairyland: Power from cows
- US Cooperatives – Produce Bio gas from cow manure and uses the gas to produce electricity
- Positive Impact – Reduced the source of Global warming, cleaner natural gas
- Benefit – Income from Electricity, Carbon credit
- Upfront expenditure and Resistance

MPTEL Source: Financial times briefing on Sustainable business, Brain Clegg, 2011

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Now, let us get into the second example. Second example is the Dairyland, and the tagline is power of cows. This is by US cooperatives and what they do? They produce the biogas from the cow manure and use that gas to produce the electricity.

Now, what is the positive impact of the product? The positive impact of the product is that since typically the cow manure they produce the methane, and they stay long in the atmosphere. Because of since it is being used from use biogas and again to produce electricity, it reduce the source of global warming.

And the gas what we get from this cow manure is typically cleaner than gas what we get from the other sources, the natural gas what we get from the other sources. Then, the other benefit is that there is a, income generation through the electricity and also the carbon credit project can be taken from the since this is being used, this can be also part of the carbon credit and whatever the credit you earn in this project that becomes the benefit.

Now, what is the problem associated with the product? The problem associated with product is that it needs lot of upfront expenditure. So, unless there is no third party, there is no businesses get business getting into this for the farmers getting into this system produce at a scale, which will be again converted into electricity becomes a problem and also, you will find in the countryside there is always a resistance for such kind of use. So, there is a resistance for biogas, there is also a resistance for also wind turbine.

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Sustainable Product Examples

- Natura: Cosmetics with a sustainable twist
- Brazilian – Ekos product designed from sustainable use of materials from rainforest and farms
- Sustainable plantation and Fair trading
- Reusable container to reduce waste
- Benefit – increased growth, awards, image of great employer
- Difficulty – move to 100 percent natural content in product line, acquisition of natural medicine company

natura
bem estar bem

MPTEL Source: Financial times briefing on Sustainable business, Brian Clegg, 2011

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Now, let us get into the third example that is Natura that is the tagline over here is that cosmetic with a sustainable twist. This is a Brazilian company and their Ekos product is designed from sustainable use of materials from rainforest and farm. So, how they do it? They do a sustainable plantation and also, they do the fair trading with the farmer, even they use the reusable container to reduce the waste. And what is the benefit?

The benefit over is there, there is a increase growth because the product is known as sustainable product, there are lot of awards, rewards what they got because they have incorporated the sustainability. And also, they enhance the, their image that is image of a great employer by that they could retain their existing employee and they can also, they could also find out or they could also employ the better employee for the company .

Now, the difficulty over here is that it is very difficult to get into 100 percent natural content in the product line of cosmetics. When you know that cosmetic is initially it is all about the artificial so, changing entire 100 percent to natural content in the product line in this space is difficult. So, although they did a acquisition of the natural medicine company, but it was still getting difficult that how do they change this entire 100 percent content into the natural; natural in the product line.

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Path to Develop Sustainable Product

- Accenture
 - Highlight green attributes of existing product
- Acquire
 - A green brand
- Architect
 - Build from scratch

MPTEL Source: Unruh and Ettenson-HBR

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Now, the other thing what is given by is that, what are the different paths to develop a sustainable product? Since, I was giving you an example over here is that since they wanted to move into the 100 percent natural content in the product line, they acquire a natural medicine company. So, this is one of the paths that how you create a sustainable product or how you create a sustainable product line.

So, this is given by Unruh and Ettenson that there are three paths to develop a sustainable product; one accentuate that is through which we highlight the green attributes of the existing product. Second you acquire a brand which is green and you develop the sustainable product and architect is which is more difficult is that you start the sustainable product or the sustainable brand from the scratch.

So, it is up to the firms, it is up to the company that what kind of path they would like to choose. Whether they want to accentuate just the highlight the green attribute of the existing product and working more on that and converting that into a sustainable product or acquire a green brand and develop the develop a sustainable product or architect build from the scratch entirely a new sustainable product.

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How to make a successful one?

- Central rather than bolt-on
- Being transparent
- Ensuring sustainability benefit from new project
- Being prepared to use new technology
- Applying sustainability to what you do well
- Clear goal, priorities, reward and recognition

NPTEL Source: Financial times briefing on Sustainable business, Brian Clegg, 2011

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Now, whenever you plan, whatever path you whatever the path the company chose whether they accentuate, whether the architect or whether they acquire, how to make a successful one when you are introducing a sustainable product or when you are launching a product and environmental friendly product in the market, how to make a successful one?

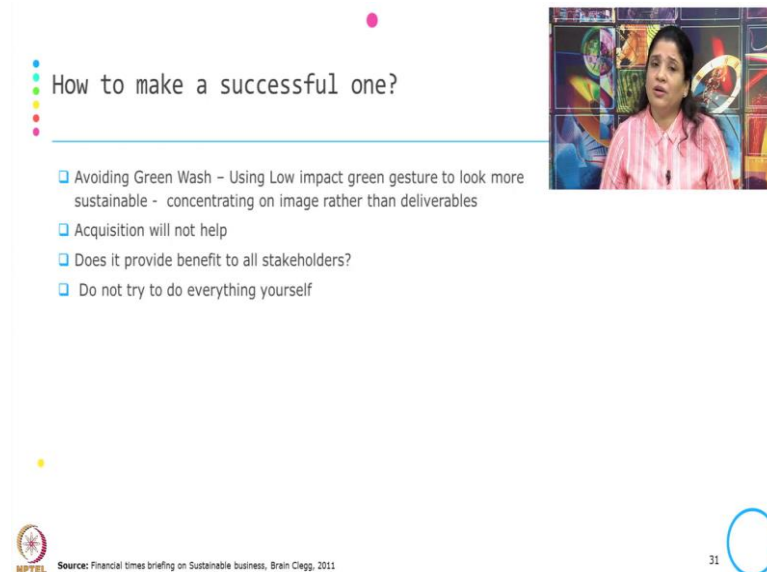
The first thing is that it is it should not be a ad hoc one, the strategy of sustainable product or building a sustainable product, it is not about a ad hoc plan, it has to be a it has to be part of the central strategy. Second, the company has to be transparent about the product, the success factor also about the failure factors, they should ensure the sustainability benefit from new project.

It is not about only it is a cost center since you are offering a sustainable product, if it is not it is creating only a cost to the company over a long period of time, possibly this will not work it may not be a successful one. So, ensuring the sustainability benefit of the new project or the new product, being prepared to use new technology since you are developing a new sustainable product. And typically, sustainable product should not be something very new or not the part of the core business line.

So, whatever the company is doing well, whatever the firms doing well, they should apply sustainability to do that and see how they develop a sustainable product. And there should be a clear goal setting, prioritizing and also there should be a provision for reward

and recognition for the employees and other stakeholder who are making this product as the successfully successful one.

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How to make a successful one?

- ☐ Avoiding Green Wash – Using Low impact green gesture to look more sustainable - concentrating on image rather than deliverables
- ☐ Acquisition will not help
- ☐ Does it provide benefit to all stakeholders?
- ☐ Do not try to do everything yourself

MPTEL Source: Financial times briefing on Sustainable business, Brain Clegg, 2011

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Then, few things what are the companies need to avoid in order to make a successful one is that first thing is to avoid the green wash. And how to avoid green wash or typically, what companies they do is that they use a low impact green gesture to look more sustainable, in the long run it is not going to work and it will be considered as the green washing.

Second also you will find that few of the company they concentrate image rather than deliveries, they spend more effort in creating a image of a sustainable product rather than look really delivering a sustainable product, both involves the green wash. Typically, this has to be avoided in order for to get a successful product on the sustainable brand. Always acquisition will not help unless the changes are not happening to the product or the whatever the development of the sustainable product.

Whatever the changes needed that has to be done, only acquiring a brand will not makes the existing company a green brand. And also need to assess does it provide benefit to all stakeholder. When I mean all stakeholder by producing this green product or the producing this sustainable product, whether the company gets the benefit, whether consumer gets the satisfaction or whether the other stakeholder they get the share their

share of benefits if it happens, then only the sustainable product become the sustainable one.

And the last one is that the company should not be trying doing everything on their own. So, in some of the part of the product lifecycle, if they find that they are not having the capability or the it can be better if it is being outsource, possibly they should outsource what they cannot do or what they do not have the capability in order to meet the successful sustainable product.

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The image shows a presentation slide titled "Session Summary". Below the title is a bullet point: "Understanding Sustainable product, path to develop". In the top right corner, there is a small video inset showing a woman with dark hair, wearing a pink and white striped shirt, speaking. The NPTEL logo is visible in the bottom left corner, and the slide number "32" is in the bottom right corner.

So, in this session, what we are trying to understand is that what is known as the sustainable product, what the company they should do in order to introduce a sustainable product or what are the different paths to develop, what are the success factors and what may be the possible failure factors.

Thank you.