



samvad

Green Business and its Future



March Issue 2012

S.P. MANDAL'S
we school
Welingkar Education

About Us



OUR VISION

To nurture thought leaders and practitioners through inventive education

CORE VALUES

Passion

We Link and Care

Result Oriented, Process Driven Work Ethic

Breakthrough Thinking and Breakthrough Execution

“The illiterate of this century will not be those who cannot read and write, but those who cannot learn, unlearn, and relearn.” - Alvin Toffler

At WeSchool, we are deeply inspired by these words of this great American writer and futurist. Undoubtedly, being convinced of the need for a radical change in management education, we decided to tread the path that leads to corporate revolution.

Emerging unarticulated needs and realities need a new approach both in terms of thought as well as action. Cross disciplinary learning, discovering, scrutinizing, prototyping, learning to create and destroy-the mind's eye needs to be nurtured and differently so.

We school has chosen the 'design thinking' approach towards management education. All our efforts and manifestations as a result stem from the integration of design thinking into management education. We dream to create an environment conducive to experiential learning.

Message from the Group Director

Dear Readers!

It gives me great pleasure to welcome you to the second issue of Samvad in the month of March, 2012.

The first issue was launched last month and was received with much appreciation and applause from our faculty, alumni and business readers. I am extremely pleased that the Samvad team has continued their sincere efforts to bring to you a better edition this time.



**Prof. Dr. Uday Salunkhe,
Group Director**

Samvad aims to provide a forum for students to use their creativity, imagination and language skills to reflect upon various areas of management, i.e. operations, marketing, system, human resources, finance and entrepreneurship as well as in other areas of their interest. It has become absolutely critical to not only think about these matters deeply, but also share it with the world. To engage in a constructive and synergistic dialogue involving the student community, academicians, the corporate world and the society at large is the need of the hour.

At WeSchool, we constantly strive to create and nurture managers who are thought leaders through inventive and innovative education. This is absolutely necessary since the world has become highly competitive and Innovation is the order of the day. To enable this, WeSchool has set up an ecology that is set to encourage people to put design thinking in action. To keep abreast with the dynamic changes in the corporate arena, there is a dire need for students to develop a global mindset, increase their awareness, inculcate a holistic thinking approach, and nurture a sense of empathy and ethical perspective while employing business best practices. At WeSchool, all our efforts are towards grooming our students with these qualities and skill sets.

Samvad is a platform to share and acquire knowledge and develop ourselves into Integrative managers. It is our earnest desire to disseminate our knowledge and experience with not only WeSchool students, but also the society at large.

I welcome you to the World of Welingkar.

Prof. Dr. Uday Salunkhe,
Group Director

From the Editor's Desk

Dear Readers,

Welcome to the March Edition of Samvad!

Samvad has started its journey with a lot of oomph and excitement, and we are proud to say that it has lived up to the expectations of all. The response to Samvad has been overwhelming, and the support and appreciation that we have received has truly encouraged and motivated us.

With renewed vigour and passion, we bring to you the March edition of Samvad which revolves around the theme of "Green Business and its Future". This is a topic that is spoken of very regularly, may it be at Business forums or Conferences in corporate; MBA colleges or Political gatherings. There is a dire need to address this issue, not just to discuss it but to find and apply the solutions to it in our reality. As leaders of tomorrow, it becomes our responsibility to face this challenge head-on and to prepare ourselves to tackle the worst crisis that Nature may unfold upon us and emerge victorious, not by fighting against Nature, but by making it our ally and mentor.

As the war for sustainability continues, the quest for survival has become the cry of the hour. Any endeavour threatens to self-destruct unless it is backed by the promise of a better tomorrow. Business enterprises are characterized by different domains, and each of these can play a crucial role in ensuring a clean and green future.

This issue has articles which discuss topics ranging from 'Green HR' to 'Eco-innovation' & 'Sustainable Economic Development' to 'Green Supply Chains'.

The article on 'Green Marketing' is a must read. We hope that the ideas shared through this edition help inspire a solemn promise from each of us to build a sustainable world for our future.

The creation of Samvad has been the result of the contributions of many key individuals. We wish to thank everyone who has been a part of the inception and development of this magazine. We thank our Group Director Professor Dr. Uday Salunkhe for his constant motivation and support. We thank our friends and colleagues for their valuable suggestions. Above all, we thank all the students of the various MBA colleges who have sent their articles for this issue. Without your excellent contributions, this issue could not have been successful.

We hope you stay with us, read with us, share with us and grow with us!

Hope you have a great time reading Samvad!

Best Wishes,

Team Samvad.

*"Lives of great men all remind us, We can make our lives sublime,
And, departing, leave behind us, Footprints on the sand of time;"*

Acknowledgments

Team Samvad likes to extend their heartfelt thanks to certain key members of the We School family for their special efforts towards the making of this magazine.

We deeply appreciate the constant motivation & encouragement that our beloved **Group Director Prof. Dr. Uday Salunkhe** has always given us. His vision & result orientation has been the driving force in creating brilliant leaders and making WeSchool a name to reckon with, not only in India but also globally. His focus on the core values of Passion, We Link & Care, Result Oriented Process Driven Work Ethic and Breakthrough Thinking has formed the foundation of all the activities that we undertake as students of this esteemed institute.

We deeply appreciate the help and support given to us by both **Prof. Amarkant Jain** and **Prof. Deepa Dixit**. Their insights and expertise is our driving force to ensure the sustainability of our magazine.

We extend our heartfelt appreciation and thanks to **Prof V.H.Iyer** , Dean (Management Development Programs) for evaluating the articles for the Operations domain. Prof. V. H. Iyer is a Lead Auditor and Management Representative, Quality Management System for WeSchool.

We thank and appreciate **Prof. Vijayan Pankajakshan** for perusing and screening all the HR articles at a short notice. It is his unrelenting spirit towards his work and our magazine which motivates our team to perform better each time.

We thank **Prof. Sapna Malya** for screening and evaluating the Finance articles. Prof. Sapna Malya is a Chartered Accountant with more than 12 years of teaching experience. Her promptness and enthusiasm for Samvad is heart warming and we are extremely thankful to her.

We appreciate **Prof. Indu Mehta** for her help in selecting the best Marketing articles. Prof. Indu Mehta is part of our core Marketing faculty at WeSchool. Her readiness to help for the magazine's cause is highly commendable. She ensured that all the articles were graded on common parameters in line with the theme of the month.

We are indebted to **Prof. Jalpa Thakker** for all her help and guidance throughout. Her constant support and unwavering spirit is the guiding light for Samvad. The Samvad Team would truly be incomplete without her.

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Honorable President Smt. Pratibha Devisingh Patil visits WeSchool

The Honorable President of India, **Smt. Pratibha Devisingh Patil** inaugurated the Contributor Development Lab (CDL) at WeSchool. CDL is a unique pioneering platform to recognize, create and nurture its students as contributors to society. It aims to bring about self-awakening among the students so that they embark on a life-long journey of contribution. The President also inaugurated the 'Dmagics' (Design for Management and Growth in Corporations and Society Exhibition) set up by WeSchool to showcase socially beneficial innovative business concepts developed by its students.



Stressing the need for development of vocational and entrepreneurial skills for creating large scale self-employment opportunities, the president commended the contribution of We School towards the same. Among the other dignitaries who graced the occasion, were Shri K Sankaranarayan, governor of Maharashtra, along with Chief Minister Shri Prithviraj Chauhan, Dy. Chief Minister Shri Ajit Pawar and Shri Dilip Walse Patil- Speaker, Maharashtra Assembly.

Welingkar hosts Global Service Jam 2012

The Design classroom at Welingkar Institute was abuzz with activity as it became the high voltage play field of creativity, talent, entrepreneurship and design thinking coupled with out- of- box thinking. Over forty professionals from diverse backgrounds including designers, entrepreneurs, students from NID, MIT



and established businessmen had assembled at Welingkar Institute of Management Development and Research, Mumbai, to put their heads together for designing business plans over a fun filled weekend of jamming. The occasion was the annual Global Service Design Jam -2012, which brings together professionals from diverse backgrounds who are passionately interested in designing service and are game for a design-based approach to create a commercially feasible, sustainable and competitive strategy/proposition and to bring the same into existence. The theme for the year 2012 was 'Hidden Treasure'. And by the time it was announced around 1200 participants from over 100 cities all over the globe were eagerly waiting to hit the button .

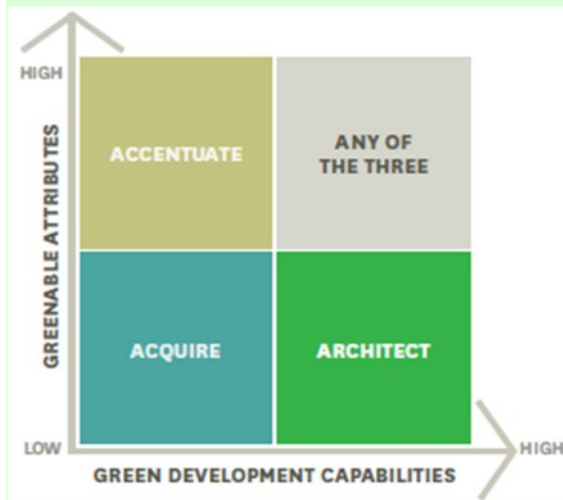
Featured Articles

Green Business & its future

By: Vipul Bali, PGP(2011-2013), IIM Rohtak

Introduction:

Green growth is at the top of many leaders' agendas, but the way forward is rarely clear. Given below are three broad product strategies that can help a business align their green goals with their capabilities.



Green business strategies explained:-

- **Accentuate strategy:** It deals with highlighting the existing portfolio and the green attributes it contains therein.
- **Acquire strategy:** In this the company acquires a new business that is a green business.
- **Architect strategy:** Alternatively, a company can develop a green brand or business from scratch if it has the available resources and capabilities.

For the above strategies to be successful, it is necessary to understand customer preferences and competitors threats. Another, point to beware of is that activists will not hesitate to point out green washing when they see it.

With an understanding of the three paths to green growth, managers can begin to craft a strategy that suits their objectives and their business context.

They should begin by evaluating each option for feasibility, desirability and Implementation

Feasibility

In this step companies take stock of their assets along two dimensions: green able attributes of their existing products and brands, and organizational green product and brand development capabilities. The first requires a careful review of opportunities to promote brands' green benefits. Of course, each product will have its own category-specific attributes, ranging from recyclability to energy efficiency to reduced toxicity.

Marketing

Making Green growth happen

Desirability

In this step, managers assess the strategic fit of each option with the company's objectives and the resources they can bring to bear on the green initiative. They need to consider speed to market and the investments, reputation, and competencies that the initiative will require.

For example, an acquire strategy will deliver high speed to market for a company setting out with low green credentials and low to medium green capabilities—but it involves significant investment. A company choosing an architect strategy must have high green capabilities and medium to high green credentials—and be prepared for a low speed to market. Companies unwilling or unable to allocate

major resources for green initiatives will find accentuation the most attractive way to enter green markets. For others, green growth may be part of an enterprise wide sustainability initiative to retool operations, shift the culture, and, ultimately, reposition the organization.



Implementation

This third step involves acting on all the factors that affect successful execution. Companies must align their green strategy with their existing product portfolio and devote or develop the resources and capabilities needed to achieve their strategic goals. They must ensure that the strategy satisfies customers' expectations and, when possible, takes advantage of competitors' green weaknesses. Finally, they must address "red flag" issues that could undermine implementation.

Whatever path one chooses—accentuate, acquire, or architect—activists, customers, and the public won't see your green initiatives as independent of your other activities and offerings. Rather, they will be viewed as part of the organization's overall approach. That means the companies that ultimately succeed in growing green will be distinguished by their commitment to corporate wide sustainability as well as the performance of their green products.

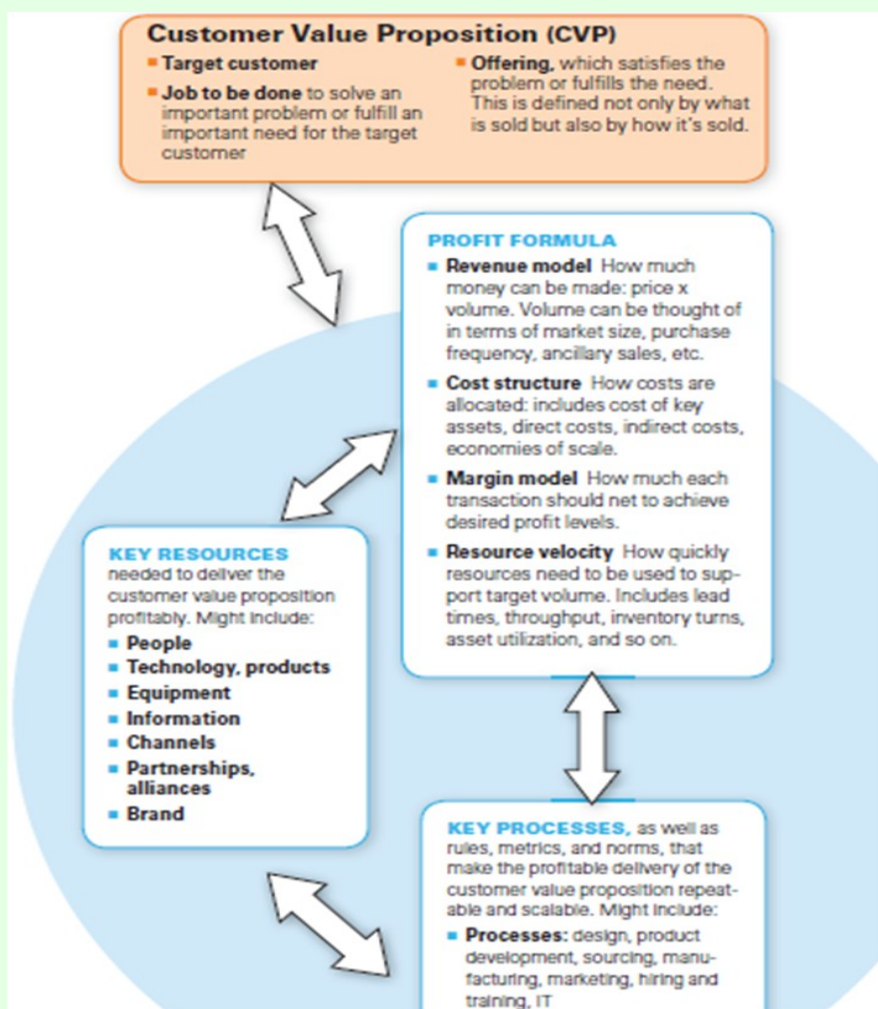
Now, through the example of a green business venture and the various aspects of its business model, I would like to explain how the business venture can be made sustainable and capable of generating profits.

Green Business

Whatever path one chooses—accentuate, acquire, or architect—activists, customers, and the public won't see your green initiatives as independent of your other activities and offerings. Rather, they will be viewed as part of the organization's overall approach. That means the companies that ultimately succeed in growing green will be distinguished by their commitment to corporate wide sustainability as well as the performance of their green products. Now, through the example of a green business venture and the various aspects of its business model, I would like to explain how the business venture can be made sustainable and capable of generating profits.

This example describes Patna-based **Husk Power Systems (HPS)**, a five-year-old off-grid electricity company, using proprietary technology that has been developed by the firm that cost effectively generates electricity using a biomass gasifier that creates fuel from rice husks, a waste product of the rice hullers that separate the husks as chaff from the rice, a staple food in the region and currently provides services to more than 400 villages in rural Bihar.

The various aspects of the business model are as described below:



Marketing

Customer Value proposition

Target Population

Among the population in India without electricity are the residents of 125,000 villages that have no power accessible to them. This green business not only cares for the environment but also addresses a very important need for people of Bharat.

The customer value proposition comes from the gelling together of three different metrics i.e. Profit formula, Key resources and Key processes. These metrics are explained further:

Profit Formula

Revenue Model

The revenue will be generated from selling electricity to the power starved villages of Bharat.

To make the profitable delivery of customer proposition repeatable and scalable we need to identify the key processes that go with it. This is explained below:-

Key Processes

Processes

Local residents are employed to feed rice husks into the converter, to collect payments in advance and to monitor the electricity usage by customers, who are typically, allocated enough electricity to each home for several hours each evening to power two 15-watt CFLs and to recharge cell phones. Additional power could be purchased to power appliances that used more power than the basic allotment.

Key Resources

People

CEO Gyanesh Pandey, two other members of the team, Charles "Chip" Ransler and Manoj Sinha, are working day in and day out. They are trying to generate capital through various business plan contests and otherwise by using best management practices. This company imbibes the spirit of the 3rd Industrial revolution by providing a renewable energy resource to the people at the Bottom of the Pyramid. This model is based on principles of sustainability and TBL approach. Thus, the future seems very bright for it.



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Green Marketing

Green Marketing- Initiatives, Opportunities & Benefits

By: Rohit Ranjan, MBA -Agri-business (2011-2013), SIIB

Environmentalism has fast emerged as a global phenomenon and people are becoming more health and environmental conscious. This concern has led to the rise in the products like organic food, environment friendly electric and electronic equipments, herbal cosmetics, organic fertilizers and integrated pest management systems. Green marketing began in Europe in the early 1980s when certain products were found to be harmful to the earth's atmosphere incorporates a broad range of activities, including product modification, changes to the production process, packaging changes, as well as modifying advertising. A green product should not endanger the health of people or animals, damage the environment at any stage of its life, consume a disproportionate amount of energy and other resources, tested unnecessarily up-on an animal and use materials derived from threatened species or environments. The people who are buying green products are called green consumers.

Green Consumers:

A recent survey discovered that 94 % of all consumers prefer to do business with companies that demonstrate that they care about the environment and almost 80 % said they would pay more for environmentally friendly products. A survey of 100 Indian companies by Johnson Controls, a consultant in energy efficiency management found a marked increase in green consciousness and inferred that 72% of Indian firms were green compared to just 39% in the US. A study to assess the purchase behavior concluded that 14% of consumers regularly buy products in refill-able packaging, 19% buy products made from or packaged in recycled materials, 28% avoid buying products in aerosol containers and 29% use biodegradable, low- phosphate detergents. It inferred that consumers are turning to green products at the rate of 4-5 % annually. As demands change, many firms see these changes as an opportunity.



McDonald's replaced its clam shell packaging with waxed paper because of increased consumer concern relating to polystyrene production and Ozone depletion. Another initiative to convey environmental information to consumers is "eco-labeling."

Eco-labeling programs are typically voluntary, third-party expert assessments of the environmental impacts of products. The Energy Star label, for example, now appears on 11,000 different companies' models in 38 product categories. However, in some cases firms have misled consumers in an attempt to gain market share, which needs to be avoided.

Marketing

The life stage of product would include the following:

Stage- I Development stage:

Traditionally characterized as the acquisition of raw materials, component parts, and sub-assemblies. The alternative approach advocated here encourage manufacturer to check the environmental programs of suppliers, to require minimal packaging of inputs, and to consider sources of materials that could be easily replenished or are recyclable.

Stage-II Production stage:

Manufacturing companies are encouraged to reduce emission, toxicity and waste, and to conserve water and energy. They are also encourage to seek and develop alternative uses for waste products, to revise the manufacturing process, to minimize waste generation, to minimize energy use or to attempt to find alternative sources of energy.

Stage-III Consumption stage:

Minimization of packaging, conservation of energy and minimization of waste from product maintenance and service are strongly urged.

Stage-IV Disposal stage:

The final stage of a product is its disposal, green marketing introduce the concepts of reuse and recyclability, in addition to the concept of waste reduction.

Green Marketing Opportunities:

Many organizations see Green Marketing as a wonderful strategy for promoting their product and achieving a niche in the fast paced world of branding and advertisement:

1. More profits and business opportunities:

Firms may also use green marketing in an attempt to address cost or profit related issues. Disposing of environmentally harmful by-products are becoming increasingly costly and in some cases difficult. Therefore firms that can reduce harmful wastes may incur substantial cost savings. In some cases they often develop more effective production processes that not only reduce waste, but reduce the need for some raw materials. In other cases firms try to find markets or uses for their waste materials, where one firm's waste becomes another firm's input of production. ITC's Green Centre in Gurgaon, which US secretary of state Hillary Clinton called a "monument to the future" made her to articulate that if all new buildings were designed to the same standards as the ITC Green Center is, we could eventually cut global energy use and greenhouse pollution by more than 20 %, and save money at the same time. The building has cut its water need by 40 % by recycling and using rainwater that lands on it. By using bio-blocks in toilets, it saves 300 kilolitres of water every year. It has reduced its energy consumption by 51 %.

Green Marketing

2. Increased Market Share and a Competitive advantage:

It is increasingly evident that environmental innovation brings competitive advantage. Some companies like Fujitsu have gone on to make products designated as Super Green Products. They meet the preconditions for Green Products and are top class in terms of low energy consumption, 3R. The Japanese carmaker Toyota advertises its hybrid car PRIUS through Internet on the automobile sections of the popular portals by projecting itself as a green or environmental friendly car.



3. Better Products & Environmental sustainability:

From an organizations perspective, it is essential that the environmental issues are balanced with primary customer needs and are integrated into all aspects of product lifecycle and its marketing. Green products attract the costumers because they perceive it of high quality, low on the demands of energy, and non-toxic. Creating products that are more in sync with nature also allows us to personally contribute to environmental clean-up and a better future.

4. Corporate Social Responsibility or Corporate Sustainability Management?

Many firms are beginning to realize that they are members of the wider community and therefore must behave in an environmentally responsible fashion. Firms in this situation can take two perspectives. They can use the fact that they are environmentally responsible as a marketing tool or they can become responsible without promoting this fact. There are examples of firms adopting both strategies. Organizations like the Body Shop heavily promote the fact that they are environmentally responsible. An recent example is solid waste management by ITC Limited in India where it takes scrap & waste papers from houses, schools and other institutions, sends it to its recycle facility and hands over new notebooks or equivalent to the contributors.

Managerial/ Strategic Implication of Green Marketing:

Green marketing subsumes green products as well as greening firms. Managers need to identify what ought to be green: systems, processes or products? A research model has been developed for the purpose of this study.

Marketing

This consist of five major sets of variables, namely

1. **Antecedents**
2. **Mediators**
3. **Strategy**
4. **Outcomes**
5. **Moderators**



Antecedents are all those factors affecting firm's environmental orientation, which subsequently shapes marketing strategy. According to political economy paradigm, there are four groups of antecedent factors, namely external polity i.e. socio-political and regulatory system in which the firm operates, external economy i.e. prevailing and prospective economic environment surrounding the firm, internal polity i.e. the way power, authority are handle within the firm and internal economy i.e. the way existing resources are allocated to produce sufficient and satisfactory out-put. The antecedents have an impact on firm's values, belief and attitude towards environmentalism and related aspects, which acts as a **mediator** on environmental marketing strategy. Environ-marketing **strategy** provides the central construct of the model, comprising environmental adjustments of the traditional marketing mix elements (product, price, promotion & place) to a specific target market setting. Environ-marketing strategy implementation will have certain financial, market, customers and competitive **outcomes** for the organization with regard to its marketing performance. Finally the effect of strategic factors on marketing performance is controlled by a number of **moderators**, which can be found either internally i.e. organizational size, scope of operations etc. or externally, i.e. Industry type, industry growth rate etc., to the organization.

Conclusion



Rising energy prices, growing pollution and resource consumption in the world, and political pressures to address climate change are driving innovation toward healthier, more-efficient, high-performance products. At present, firms are in the be-ginning of the greening process to develop an environmental competitive advantage but as firms further develop their greening activities, they will require additional expertise to enable more substantial environmental improvements. The process has just begun.

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Green Marketing

Green Marketing: Is It Worth The Buck Spent On It ?

Sourabh Sahu & Sundeep Suthar, PGP (2011-2013), IIM Indore

According to the American Marketing Association, Green marketing is the marketing of products that are presumed to be environmentally safe. Off-lately it has turned into a global phenomenon which has enabled the re-marketing and packaging of existing products of various global brands. It has also opened the door of opportunity for companies to co-brand their products into separate line augmenting its green-friendliness before the customers like never before. But such marketing techniques did not just evolve just as an innovation in a board-room but also as a direct result of awareness and concern for environment in the mind of today's consumer. As a result of this, businesses have increased their rate of targeting consumers who are concerned about the environment. But in an effort to present itself 'head-to-heel' as green, the recent campaigns by many of the companies have given rise to this one important question that majorly affects the cost-constraints of those companies that 'Is Green Marketing worth the buck spent on it ?' In this article we would be taking you through the recent trends adopted by many companies in India regarding green marketing and what does it mean for you and me in the short and the long term.

Present Trends In Green Marketing In India

With rising awareness among the masses about environmental degradation, firms have realized that consumers prefer products that eco-friendly, herbal and have no negative consequences on their health. Firms want to foray into the league because of

Getting a first-mover advantage

Develop a competitive edge

Creating a brand-image as an environment conscious body

Adopting value-creating CSR activities.

When we studied various industries, we found out that two broad type of approaches are increasingly been adopted in by firms:

Use the fact that they are environmentally responsible as a marketing tool –

Most of the firms getting into this green revolution phase like SBI, WIPRO, NEROLAC, TATA etc. like their customers to know about the various initiatives they are taking in this direction.



Marketing

Become responsible without prompting this fact –

COCA-COLA is one such firm which has invested heavily in various recycling activities and modified packaging to minimize its environmental impact but did not use this as a marketing tool. Also Walt Disney World (WDW) has put in place an extensive waste management program and infrastructure in place, yet do not highlight it in their promotional activities.

Is it really working for businesses?

When we actually looked into the various campaigns across companies for the last few years regarding green-marketing, we found out some astonishing facts. Those companies have actually started/expecting reaping profits from there initiative and the returns are expected to soar high above in the future too. Many of them were actually apprehensive of the projects they initiated for it turned out that without proper planning and a good vision, they set to sail far off (off course with the exception of few, but that do happens in every business). Here are some of the projects we studied and what they did for their organizations.



State Bank of India: Green IT@SBI:

By using eco and power friendly equipment in its 10,000 new ATMs, the banking giant has not only saved power costs and earned carbon credits, but also set the right example for others to follow.

Lead Free Paints from Kansai Nerolac:

Kansai Nerolac Paints Ltd. has worked on removing hazardous heavy metals from their paints. The hazardous heavy metals like lead, mercury, chromium, arsenic and antimony can have adverse effects on humans. Lead in paints poses danger to the Central Nervous System, kidney and reproductive system.

Indian Oil's Green Agenda:

Indian Oil has invested about Rs. 7,000 crore so far in green fuel projects at its refineries; ongoing projects account for a further Rs. 5,000 crore. Also the R&D Centre of Indian Oil is engaged in the formulations of eco-friendly biodegradable lube formulations.

Wipro Green IT:

Wipro Infotech was India's first company to launch environment friendly computer peripherals. For the Indian market, Wipro has launched a new range of desktops and laptops called Wipro Greenware. These products are RoHS (Restriction of Hazardous Substances) compliant thus reducing e-waste in the environment.

Green Marketing

Going Green: Tata's new mantra:

Tata Motors is setting up an eco-friendly showroom using natural building material for its flooring and energy efficient lights. The Indian Hotels Company, which runs the Taj chain, is in the process of creating eco rooms which will have energy efficient mini bars, organic bed linen and napkins made from recycled paper. Another eco-friendly product that is in the works is Indica EV, an electric car that will run on polymer lithium ion batteries.

Conclusion

We know that for any corporate business, it's the financial gain and economic profit that matters the most. But now, the steps taken for sustainability of business which cause harm to the environment are being frowned upon gradually across the globe. Businesses have by large understood the fact that this is the right time to select "Green Marketing" globally. But they do need to realize that Green marketing should not be considered as just one more approach to marketing, but has to be pursued with much greater vigor, as it has an environmental and social dimension to it. Also every penny spent on it is worth it. Though there can be some hiccups or over-flooding of markets with 'green-products', it would ultimately give rise to sustainable development and preservation of environment.

Also the marketers here have the responsibility to make the consumers understand the need for and benefits of green products as compared to non-green ones. In green marketing, consumers are willing to pay more to maintain a cleaner and greener environment. In these times, Green marketing assumes even more importance and relevance in developing countries like India.



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Marketing

For Coca-Cola, Green is the new Red

By: Mohil Chhabra, MBA(2011-2013), University Business School, Punjab



Is the Red giant beverage firm travelling the green road, with its vision 2020? Coca-Cola since 2004 has been continuously boasting the green efforts in its Sustainability Report and the same came when its Eighth edition was made online. One latest feather which got attached to the coke's going green initiative came with its announcement to partner the World Wildlife Fund-UK to protect rivers in England. This comes as a result of its goal to return nature the same amount of water, which it had used till now in making the beverages. Realizing the pressure under which England's rivers are today considering the rising population, Coke came with a statement that it wanted to lead the way in water stewardship. Coke is currently promoting this long term initiative, through which it assesses the vulnerability of freshwater sources and plans are formulated for their preservation. This also comes as an encouragement for others to play their part. This comes as almost 97 percent of the drinks consumed in Great Britain are made within the country itself.

Not many of us know but Coca Cola uses an average of 2.3 liters of water to make 1 liter of drink for its consumers, with 4:1 ratio in India. Thus, it is one of the biggest enemies of freshwater on the planet. But it is very easy to point finger towards Coca-Cola as a brand without considering its environmental initiatives. The consumption of water has reduced 16.3 percent since 2004, thus moving Coke towards its yet another goal of lowering water usage by 20 percent. The major chunk of the above achievement comes as a result of increase in the efficiency of water usage along with wastewater management. It aims at 100% wastewater usage by 2015.

Plant Bottle

This creation in 2009 helped Coca-Cola hit the greener world, by introducing a 100% recyclable and redesigned plastic PET beverage bottle, part of which includes sugarcane and Molasses. Coca-Cola saved 60,000 barrels of oil by the introduction 2.5 billion Plant Bottles which grew to 10 billion mark by the end of 2011. Coca-Cola has also been honored for Best New Product at the 2011 Edison Awards, and one should not forget the DuPont award for Packaging Innovation.



Green is the new Red

Reducing Initiatives

Coca-Cola has gone a step closer towards its 2020 vision with reductions in global carbon emissions without keeping down the main objective to grow the business. Hydro fluorocarbon (HFC) – free refrigeration systems is another ingredient to the green Coca-Cola recipe for CO₂ emission reductions. With numbers increasing from 277,000 in 2010 to 500,000 such units by the start of 2012, Coca-Cola has been advancing at a faster speed towards 100% replenishment of traditional refrigeration systems with their newly born environmentally friendly and a more efficient brother by 2015. Company has been able to reduce the emissions by nearly 10 percent. Other 5% greenhouse gas emissions have been reduced by the usage of HFC-free insulation foam in the newly made coolers.



Under this green project Coca-Cola has also initiated a product named eKOCool for the rural areas in India which are deprived of electricity. This is a refrigeration system product which runs on solar power giving it a competitive edge over other players in the rural market, having the capacity to hold 48 300ml Coke bottles.



In another innovative step towards green business Coca-Cola has installed a 60*60 foot billboard along with World Wide Fund in Manila, Philippines. Largely made up of Fukien tea plants, it aims at absorption of CO₂ emissions, averaging 13 pounds per year. Organic fertilizers and recycled Coca-Cola bottles are used as pots.

Reduction in diesel consumption in the distribution fleet at Coca-Cola through introduction of hybrid trucks is yet another step towards environment. These trucks run both on electricity and diesel thus has resulted in making them 30 percent efficient. Currently, Coca-Cola's fleet includes 200,000 vehicles across the globe, and along with optimization of delivery routes, hybrid vehicles has helped in a reduction of CO₂ emissions by 40 percent.

Marketing

The green story of Coca-Cola does not stop here; Coca Cola has made strides in their organization to make this world better. It is the Coca-Cola bottler in Louisiana which is the innovator of Leadership in Energy and Environment Design (LEED certified technology). Recycled steel has been used to make columns, joints and grinders of the building and recycled materials were used in the office furniture. A white reflective roof and concrete instead of asphalt, which absorbs less, heat than normal covers the building. This has now been applied to maximum of its centers in the developing countries with Turkey topping the charts. Also at the Coca-Cola plant, Atlanta, water fountain in front of the building was replaced with thousands of crushed bottles to reduce carbon footprint.



Coca Cola is making the world a happier and greener place to be, and has also brought the focus of its 'Live Positively' campaign towards its green business. No one can doubt the future of Coca-Cola green campaigns, with millions and millions of fans attached to the firm, hence, incorporating sustainability in company as well as environmental growth.



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Eco Innovation

Eco innovation: Solution for the future

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If global progress is measured not by GDP, but by the “quality of development”, there would be a shift towards a form of development that is citizen-enhanced and ecologically committed.

Introduction:

Humanity is demanding ever greater economic productivity at a time when natural resources, the inputs that feeds this productivity, are dwindling. As climate change and the depletion of natural resources continue to threaten our future, we need to change the way we think, the way we live and the way we do business.



With a seventh of the world’s human population, **India is at the nexus of this challenge.** The oil spill crisis, record heat and economic unease imply that interdependent energy, environmental and economic challenges are more pressing than ever. Now is the time for individuals, business leaders and Government across all sectors to forge an approach to environmental stewardship that will drive growth and prosperity for companies and communities. This can be done only when we strive to develop innovative ideas and technologies, where eco innovation has a major role to play.

Eco innovation is a term used to describe products and processes that contribute to sustainable development. The objective must be to reduce the impact of economic growth and economic development on the environment by achieving a more efficient and responsible use of natural resources, including energy.

Determinants of Eco innovation:

Apart from supply side, demand side, and institutional and political influences, Eco innovation along with it entails 3 other major perspectives:

- Eco-innovation does not necessarily involve new knowledge or new technologies – it is as much about **how and where** we use existing technologies. As an illustration, when Kao Corporation, Japan’s leading beauty care and household products company launched a version of its detergent category : “**Attack Neo**” liquid detergent in China in August 2010, sales soon outstripped the company’s projections. They carefully tailored local consumer needs: As China suffers from shortage of water, so people there want a detergent that washes effectively and also rinses out fast to save water. By combining these two qualities, this detergent makes a practical contribution to help solve a serious national problem.

Technology

- **Governments need to increase co-ordination** amongst ministries and levels of government in order to promote eco-innovation. A comprehensive national strategy for ecoinnovation can help to do this. Strategies must take into account the size of the domestic market for environmental goods and services, the national capacity to innovate, and the vigour of the country's venture capital industry. As an illustration, in the case of electric cars, where technological options are many and mutually exclusive, countries can choose to shift swiftly to full electric cars, or use hybrids as a transition. The decision will depend on the size of the domestic market, urban density and the share of renewable in electricity generation.
- Another aspect is the **interactions between policies to support eco-innovation and market dynamics**. The push for improved carbon capture and storage (CCS) provides a good illustration. In Germany, where there is a price on carbon emissions, the power sector developed innovative CCS technologies to reduce the CO₂ emitted by coal-fired power plants. France, where no gas is produced and power is predominantly generated through nuclear industry, has yet another economic interest in developing CCS technologies – it sells them to other countries.



Challenges:

- **High costs:** The most significant barriers considered are too high costs of innovative activity as it is quite uncertain to predict the success rate of an innovative measure taken by the companies which lead to an increased reluctance in taking a step ahead. Direct investment in clean technology by large companies during the first half of 2010 increased by 325% compared with the same period last year, according to the Cleantech Group.
- **Lack of an awareness and appropriate source of finance:** This is a general problem related to innovation activity in all sectors.

As there is always an existing degree of reluctance regarding hit rate of eco innovations, Venture capital financing can only be seen as a partial solution to the problems of financing eco-innovation, which should be dealt with in a more comprehensive fashion, paying attention to the different stages in the development of eco-innovative solutions and the changing levels of risk and financing needs. Business angels (informal venture capital investors) can play an important role in exploring the potential of new ideas, as they are able to consider a number of small size investments which would not attract the attention of other investors.

- **Unimaginative approach to innovation:** The mitigation mindset "sends a very unfortunate message, encouraging people to think of the world's current energy, forestry, and farming regimes as 'normal,' and just in need of some adjustments and emissions reductions to make" the threat go away. This encourages a defensive, unimaginative approach to innovation.

Eco Innovation

It dampens innovative thinking, progress, and profit. So government as well as companies should motivate employees to think out of the box; not only as a CSR activity, as the trend is now, rather for the whole world. An illustration to this is apparent from this eco innovation: Indian activist Bunker Roy's Barefoot College has achieved a miracle by training some 140 African grandmothers in "solar engineering" in six-month-long training courses imparted by Indian grandmothers in rural Rajasthan. The skilled African elders returned home and provided solar power to over 9,100 homes in 21 African countries.



- **Socio-cultural factors:** These are the socio cultural factors that influence innovativeness. It includes four characteristics relevant to eco innovation:

Cultural Capital: Refers to the cultural background and basic value system that is shared by the individual and is manifested in the individual's attitudes and habits, including consumption i.e. consumer behaviour.

Human capital: Represents the knowledge, skills and attributes derived from education and training which also influence consumption pattern and pose a challenge to eco innovators.

Social capital: Refers to the shared norms, values and understanding that facilitate cooperation within or among groups. Eco-innovation can have a distributional impact (within and across countries) that needs to be monitored.

Organizational capital: refers to the company's culture, routines, structure, ethics and management styles. It is important to raise awareness of entrepreneurs, consumers and the general public on the damage to the environment resulting from their activities.

- **Stalled initiatives:** The first conference of the parties (COP 1) took place in Berlin in 1995 and at present COP 17 is taking place in Durban: and there are no significant achievements in the same regard in 15 years. So it has created a two way impact: Initiatives taken to bring out innovation or resurgence in ecology not being met have eroded the confidence of the general public at the same time consuming a country's financial resources.

The way forward:

For a Great Transition to happen, countries should focus on:

1. **3C (Communication, Commitment and Continuity)** should be the basis for goals and metrics of performance which also enable transform thinking and inspire innovation. Nike, for example, has made a public long-term goal to design fully "closed loop" products that create no waste. To get there, the company has developed metrics for both footprint reduction and design innovation.

Technology

2. **Standardization:** In order to successfully address sustainability issues, it is important to consider the design, production and manufacturing of a product across its entire life cycle. The use of a holistic life cycle perspective helps manufacturers and policymakers to identify improvements that could be made at any stage. This complex web of collaboration can only be managed through standards to facilitate communication.

3. **Partnerships accelerate development and deployment.** Achieving transformation requires thinking systemically and collaborating with outside partners. No single organization has a monopoly on good ideas. The environmental innovation challenge requires that we open up, and the public expects private industry, NGOs and public officials to work together to accelerate deployment and adoption of improved technologies. A good example is the pilot projects on carbon capture and storage.

4. **Embracing failure:** Eco-innovation means new thinking. And not all new thinking works. To avoid pulling back at every setback, organisation needs to collect interesting examples of different levels of eco-innovation from around the world and conducting an in-depth study on processes that help achieve eco-innovation in order to draw lessons.

Dupont provides an outstanding illustration in this context: It was considered as America's worst polluter in 1990s. Later it started a complex journey towards sustainable production and after 10 years of hard work and unflinching self improvement, Dupont even won the Presidential Green Chemistry Award, (given to creators of chemical products and processes that reduce or eliminate the use or generation of hazardous substances).

Conclusion:

Eco innovation is a global challenge, but also a global opportunity. Every country should develop a vision on how it can grow its economy in a more sustainable way and put in places policies and strategies to take it towards the set goal by using its resources and also through global cooperation.

More specifically, countries should try to inculcate all the perspectives, namely, **technological innovation**, **organizational innovation** (Business model innovation related to innovative ways of organising work in areas such as workforce management, distribution, finance and manufacturing) and **social innovation**.



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Triple Bottom Line

Green business – Everyone has to contribute

By: Mohit Gupta & Saurabh Bansal, MBA(2010-2012), XLRI, Jamshedpur

Human life is dependent upon the natural environment, which, most would agree, is rapidly degrading. Business enterprises are a dominant form of social organization and contribute to the worsening, and enhancement, of the natural environment.

Companies' today talk about the *triple bottom line* - the three P's people, profits and planet. As the firm notes the gains that accrue due to the green business strategy, there is a growing interest among top managers regarding the green business and its impact. A firm can approach green management practices or broadly speaking environmental social responsibility in four ways.

First is *obstructionist* approach. In this case management does not behave responsibly toward the environment. Second we have *defensive* approach, where management abides the legal requirement of environmental responsibility. Then there is *accommodative* approach, where firms acknowledge the need to support ESR and try to balance the needs of different stakeholders in it. Finally we have the proactive *approach*. In this case firms go out of their way to learn about the needs of the environment and are willing to use organizational resources for the same.

Once the management has decided upon their approach to ESR, they need to consider it when formulating their corporate and business strategies. Like any other component of the strategy, for ESR to be successful it has to become the part of the goals of different parts of organizations. The yearly goal setting process should also consider ESR activities. Why is it more important for companies to include progress on environmental measures in their annual performance ratings and Balanced Score Cards? Because of the age old principle that what you measure is what you get. The green agenda needs to move from being just an adornment on the company's mission statement to practical and measurable goals for all employees.

So let us have a look as to how the different functions of the organizations can contribute to the green business strategies.



Operations

Operations department of an organization can contribute to the cause by adopting overall optimization strategy. In order to push a green strategy apart from six sigma and TQM, companies should stress on the 4Rs Reduce, Reuse, Recycle and Recovery.

Human Resources

Reuse and recycle programs, water consumption reduction are some of the programs that have already been implemented by multiple organizations. Some of the measures can also result in increased cost of the operations. If this cost is to be transferred to the customers, there has to be a corresponding value creation for the customer by the marketing department.

Marketing

Let's see how the four Ps of marketing fit into the new Green Business Model:-

Product: Apart from developing energy efficient and non polluting products, companies should look at the entire life cycle of the product. They should be concerned about what happens to the product after its use. Use of eco-friendly packaging should be made whenever possible. Companies have also started providing services to consumers for safe disposal of their products after use. Nokia, one of the world's largest cell phone manufacturers recently launched a Phone Recycling program to help the consumers safely dispose off their old phones.



Price: Companies can grade products into different levels according to environment friendliness, wherein the environment conscious consumers would be willing to pay more for products on a rated higher. This is already happening with companies charging a premium for products having higher BEE ratings

Place: Studies have established that online shopping is much more environment friendly as it saves fuel and store space. Outsourcing firms should use more of video conferencing and avoid air travel for business meetings.

Promotion: Companies should start to shift their promotion from print to online, as printing uses paper and ink. Product labeling should clearly indicate ingredients and carbon footprints. Apart from the product, companies should advertise their green initiatives to consumers. This can also be used for brand building. For example - after Coca Cola was accused of depleting ground water levels, it started an aggressive campaign to highlight that its operations are water neutral.



Finance

Studies have shown that announcements of positive environmental policies have an impact on the firm valuation. For example if a company decides to fulfill its energy requirement from renewable sources, then it will require high upfront investment in lieu of future reduction in per unit energy cost. To justify such investment, the net present value of such a project has to be positive.

Triple Bottom Line

Hence, the finance department would need to help the firms in estimating the implications of such moves so that the changes are beneficial for the shareholders as well.

Human resource

It is important for companies to include progress on environmental measures in their annual performance ratings because what you measure is what you get. Green measure has to be converted to measurable goals of the employees. Simultaneously HR can also support the effort by making environmentally friendly policies like work from home to reduce travel and hence energy consumption. Similarly there are other activities like use of recycled paper, electronic form fillings. These moves are environmentally friendly and cost effective. Human resource department of the organization plays a major role in making environmental responsibility a part of the corporate mission statement.



Business organization will play a critical role in mitigating the effects of climate change in the future. For this companies need to take on-board all stakeholders - employees, customers and government, that there is a need to change business models and processes to achieve these objectives. And that it would create value for everyone.



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Human Resources

Green HR

By: Anjali Sardana & Jagriti Bhattacharyya, MBA(2010-2012), IIT Chennai



Human Resources was once seen as a recruiter of relative green thorns for some green currency that made the rest go "GREEN" with envy. Another perception was that it is merely a security guard of the organisation that has no seat in strategy setting meetings. The greener side of HR is that it has become a strategic partner in almost all functions of the organisation. It has also shown potential to drive innovation and stimulate a sustainable economic recovery that changes business to achieve social and environmental change.

"Green HR" is an employment model designed to assist industry professionals in retaining, recalling, preserving, and developing talent needed to ensure that future business initiatives and strategies are met. Efficiency afforded by the "Green HR" model can lower operational costs and enables industry professionals to better utilize their investment in knowledge capital. It's an important issue for HR because it is clearly an important issue for all employees, as well as customers and other stakeholders. It's also one in which HR can have a big impact without causing much expenditure – good environmental management can improve sales and reduce costs, provide funding for green benefits to keep staff engaged. Examples of these include IKEA giving all their employees a bike at Christmas and Anglian Water offering employee's £1/day if they agree to walk to work. Green HRM encompasses two major elements: environmental-friendly HR practices and the preservation of the knowledge capital. HR of the organization plays a major role in making environmental responsibility a part of the corporate mission statement. HR can implement incentive programs based on waste reduction ideas generated by staff. This can be executed by simply rewarding any ideas that reduce waste and increase efficiency, and then take the suggestions seriously.

"Greener jobs" can be planned by Human Resources to improve productivity and attract professionals who are increasingly looking for more sustainable workplaces. Human Resource teams can survey their organization for "environmental impacts", and identify which jobs are already "greener" with tasks, knowledge bases and training that improves environmental resources such as clean air, renewable energy, energy efficiency, and sustainable community qualities.

- HR can benefit by attracting and retaining better talent, who are drawn to firms with CSR ethic. An added benefit is that more productive workers will become more interested in a firm that shows investment in its employees, its community and the environment.
- HR can also incentivize employees for carpooling or mass transit, working from home once or twice a week (to reduce travel), recycling programs and encourage the use of water coolers and reusable water bottles instead of bottled water.

Green HR

- HR can advocate for greener purchasing (e.g. high post-consumer waste paper, pens with reusable barrels, tissue products from old growth forests) and reduced use of paper.
- HR can encourage natural, non-toxic cleaning products for the safety of their cleaning staff, and all employees.
- Company- run shuttle buses are an excellent way to keep cars off the road, but making sure that they go where the employees live.
- As environmental regulations tighten, lifelong learning becomes the standard "best practice" for productive green careers. Certificates for specific specialized classes, certifications, college degrees and related experience all help professionals qualified to handle the more complex requirements for "going green".
- Solutions for Green provides general information about green business operations and training, as well as links to related green, sustainable and high performance business training that helps protect and restore a clean, self-sustaining environment.
- Some companies provide employees with incentives to encourage more green behaviour around the office. Companies provide rewards in the following ways: provide special employee recognition, give prizes, incentives and offer monetary rewards.
- Workplace education is easy, green, a powerful motivator and innovation strategy.
- Knowledge-based sourcing by manufacturers and suppliers shares commitment to improve each other's capabilities. For example at Honda Motor Company, during meetings with suppliers, the executives write their proposed actions and agreements on a whiteboard. In the end, contents of the whiteboard are typed up and the supplier and the automaker sign them, and the contract is complete. Thereafter, both sides focus on executing the plan. Honda and its suppliers thus avoid the drawn-out, querulous negotiation process that is commonly seen at automakers, a process that can last months and even then sometimes



Human Resources

blow up without reaching a resolution. With this approach, manufacturers and suppliers share a long-term commitment to improving each other's capabilities, starting by working together to eliminate wasted effort and inefficiencies.



As per Don Sanford, managing director of Buck's Communication practice who directed the survey, "Many employers now recognize that green programs in the workplace can promote social responsibility among workers and help retain top talent. More than 60% of survey respondents have made environmental responsibility part of their organization's mission statement."

According to the survey:

- 78% of respondents use Web or teleconferencing to reduce travel.
- 76% promote the reduction of paper use.
- 68% implement wellness programs to foster employee's proper nutrition, fitness and healthy living.

Conclusion

Green ideas and concepts are beginning to gather pace within the HR space, often complementing existing sustainability-based initiatives. Increasingly they are delivering tangible benefits to the business, rather than simply adding a gloss to brand and reputation. We also expect to see future growth in green training programs, environmentally responsible investment options and recruiting employees with green skills. Green business training includes environmental knowledge, clean technology skills, and compliance with regulations.

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Green Supply Chain

Green Supply Chains

By : Anjita Upadhyay , PGDM (2011-2013), WeSchool



The environment is changing and we can observe turbulent weather patterns that are becoming extreme throughout the world, everything from record heat waves, rains, snowfall, and hurricanes. The resource depletion issue is not far left. India and china are growing economically at double digit rates, and the population of world grows creating a shortage of resources (that we can use as granted).

A Green Supply Chain can be defined as “The process of using environmental friendly inputs and transforming these inputs through change agents, whose by-product can improve or be recycled within the existing environment. This process develops outputs that can be reclaimed and re used at the end of their life cycle thus, creating a sustainable supply chain.” Green supply chain defines the idea of reducing costs by helping and keeping a balance in the environment.

Earlier companies were thinking of reducing unit costs. They used new mechanisms to reduce the cost on per unit of material. But with changes in global trends companies now have started looking at usage costs with a piece of equipment (i.e. what are my cost per copy when using a copier). Today’s thinking should be related to reducing the life cycle costs of piece of equipment or supply chain process to make the world more sustainable and better place to live.

The chart, given on the next page, shows a green supply chain process within a company. On February 1 2007, Wal-Mart president and CEO Lee Scott unveiled “Sustainability 360” – a sustainable green supply chain. This effort is aligned with an initiative to reduce overall packaging by 5%, expected to prevent millions of pounds of trash from reaching landfills and save 667,000 metric tons of carbon dioxide from entering the atmosphere.

Operations

In addition to the above, there are four more benefits to the organisations to be realized by applying green supply chain besides the protection of environment. These are decreased operating costs, increased customer service and sales, opportunities for innovation, and regulatory risk mitigation.



Increased innovation is another benefit. The most immediate benefit is reduced operation costs. Supply chain management inc., Wal-Mart's third party logistics service provider (3PL) in Canada, has changed the way it ships products by shifting from road to rail, it has reduced carbon emissions by 2,600 tons. In addition 3PL converted 20 truck generators to electric power, saving about 10,000 gallons of fuel. These two measures together yield more than \$2 million in annual cost savings. Also the adoption of plastic crates instead of cardboard shipping crates is expected to save \$4.5 million and reduce waste by more than 1,400 tons per year.

Green supply chains leads to increased customer satisfaction and higher yields. Dell through product recovery programs has designed a customised solution that recovered 2,300 servers of Centre for Computational research at the University of Buffalo, making four pickups' with 60 racks each, utilising 79 custom made pallets. This helped them get rid of old equipment in a cost effective way and it helps to get new, faster equipment that is under warranty. In addition to secure destruction of hard drive data, dell ARS maintains zero landfill policy- meaning that all equipment that is unable to be resold are broken down into component parts and re-distributed back into primary materials manufacturing market.

Let us compare supply chain management and green supply chain. Supply chain management is the process of planning, implementation, and controlling the operations of the supply chain as efficiently as possible. It includes acquisition, storage, and movement of raw materials, work in process inventory, and finished goods from point of origin to point of consumption.

Green Supply Chain

The broad scope of supply chain management makes “green” supply chain more difficult to define; still there are two main aspects that differentiate green supply chains from traditional supply chains.

Firstly, green supply chain aims to improve the environmental performance of its existing supply chain through environmental monitoring and collaboration through application of environmental technologies.

Secondly, the supply chain is augmented to include reverse supply chain management that builds a closed –loop system for the products.

A reverse supply chain comprises the activities required to retrieve a used product from a customer and either dispose of it or reuse it. Although there are many positive results, greening the supply chain is not without its problems. There are four broad areas that present risks to the future success of green supply chains: fierce resistance to change, lack of consensus, media perceptions, and solution myopia. Large companies with financial and political resources resist changing, especially because of the large capital and infrastructural investments in the status quo.’



Further limiting the credibility is the limited scope of the environmentally friendly initiatives. While improving environmental performance may slow down the rate of pollution, it does not ultimately prevent waste. Therefore, it may have the unintended, insidious consequence of a false sense of accomplishment and prevent true innovation.

Green supply chain concepts manage environmental impacts where they occur ideally before they occur.

In order to ensure that future generations will have resources for their lifetime we need to adopt the green supply chain management. Organizations finally acknowledge the ability of green supply chains to ensure business continuity, minimise cost, and maximise profits.

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Operations

Green Supply chain and the way ahead

By: Biplab Mahanti, MBA(2011-2013), SJMSOM,IIT Bombay

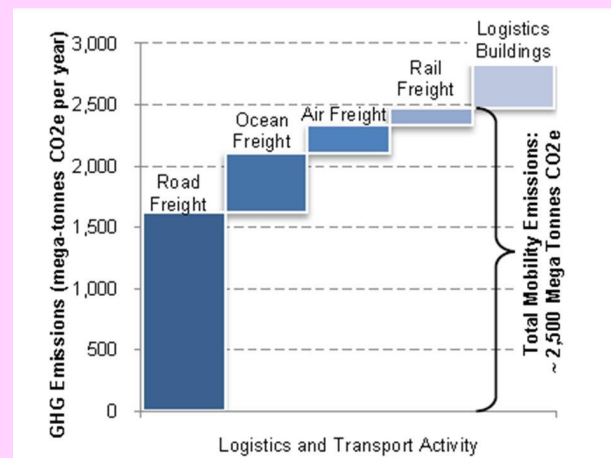
Current Situation

In the awakening of people's concern towards environmental management as a response to the climate changes and its hazards, companies are looking deeper into their supply chain processes for reducing carbon emissions. According to World Economic Forum, Logistics and Transport sector emits 2,800 mega-tonnes of CO₂ or 5.5% of the total emissions¹. The Copenhagen Climate Conference that took place in December 2009 recognized the need to hold the increase in global temperature to less than 2° degrees by 2050². As a result of this accord companies across the world will have more and more regulations on carbon emissions. India's engagement to reduce carbon emissions has been immediate as the budget allocation (Budget 2010-11) for renewable energy is up 61% to Rs 1000 crores.

Supply Chain

A supply chain is a system of organizations, people, technology and activities involved in moving a product or service from supplier to a customer (Definition from Wikipedia). A typical end to end supply chain consists of the following activities:

- Procurement – Raw Materials Extraction and Transport
- Production – Manufacturing of the product
- Transport and Distribution
- Retail
- Consumption
- Disposal – Divided into two parts:
 - Recycled
 - Waste



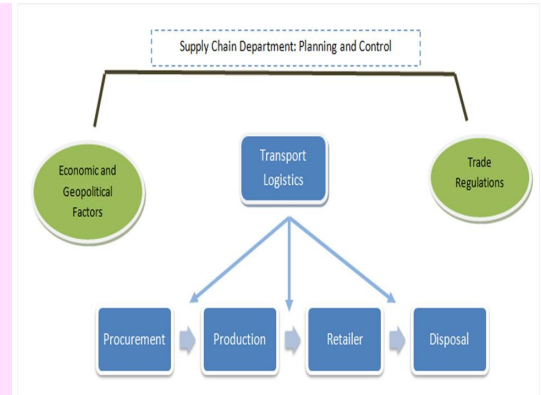
Carbon Emissions (WEF 2009)

Green Supply Chain

Green supply chain management integrates the environmental consciousness and the supply chain management for achieving energy efficient activities and reducing wastages. The fundamental drivers for green supply chain are:

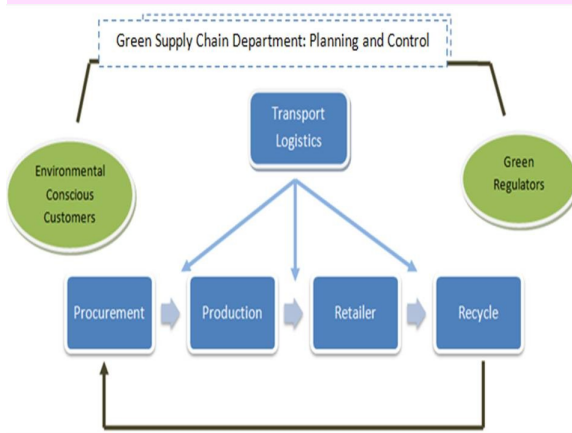
Supply Chain Development

- Regulations by the government to reduce emissions.
- Fuel Prices are on a rise across and an alternate energy fuel saves money.
- Consumer is becoming more and more energy conscious.
- Decreasing production costs through reducing wastages and making efficient processes.



Current Green Supply Chain

Green Supply Chain Implementations



Future Green Supply Chain

Companies across the globe are taking green supply chain as an important initiative towards reducing carbon emissions and achieving cost savings in the process. 'Green Supply Chain' has become a category in the supply chain awards given to companies that demonstrate superior supply chain management. Ford gained the 2009 honors for its 'Motorways of the Sea' concept. Ford's objective was to improve CO₂ footprint by increasing the share of vehicle transportation using short sea and river transportation for finished goods. Water transportation emits lesser carbon-dioxide than any other mode of transport. .

Changing Horizons:

Procurement:

Traditionally procurement refers to getting the raw material to the manufacturing location at the lowest cost possible. With the changing times and demanding customers this notion is going to change in a way that will be more environmental friendly and sustainable.

A major portion of emissions will be from the procurement and transportation of raw materials and finished products. Facing a scarcity of raw materials and severe regulations on emissions these processes will be completely redefined in a new manner suited to the environment and to the end user.

Operations

Production and Packaging

If we take the example of Apple, Apple has come a long way from developing an 18.3 kg 15" iMac in 1998 to an 8.3 kg 20" iMac in 2009. As Apple developed smaller, thinner and lighter products

The story behind Apple's environmental footprint.

To accurately measure a company's environmental footprint, you must look at the impact that company's products have on the planet. Apple uses comprehensive life cycle analysis to determine exactly where our greenhouse gas emissions — all 10.2 million metric tons of them¹ — come from.

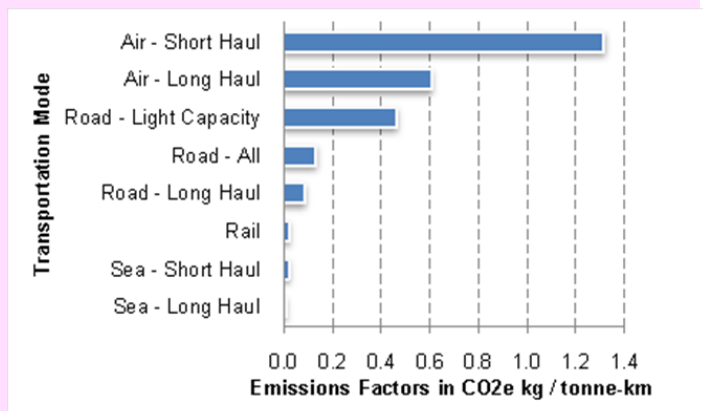


it saved material usage of 10,000 metric tonnes. This would be the main goal for all organizations; we shall see slimmer cell-phones, televisions and laptops. Apple has also worked towards toxic substance removal like brominated flame retardants (BFRs), mercury, phthalates, and polyvinyl chloride (PVC) from its products. Apple uses paper and ink for packaging of products and strives to reduce the carbon emissions.

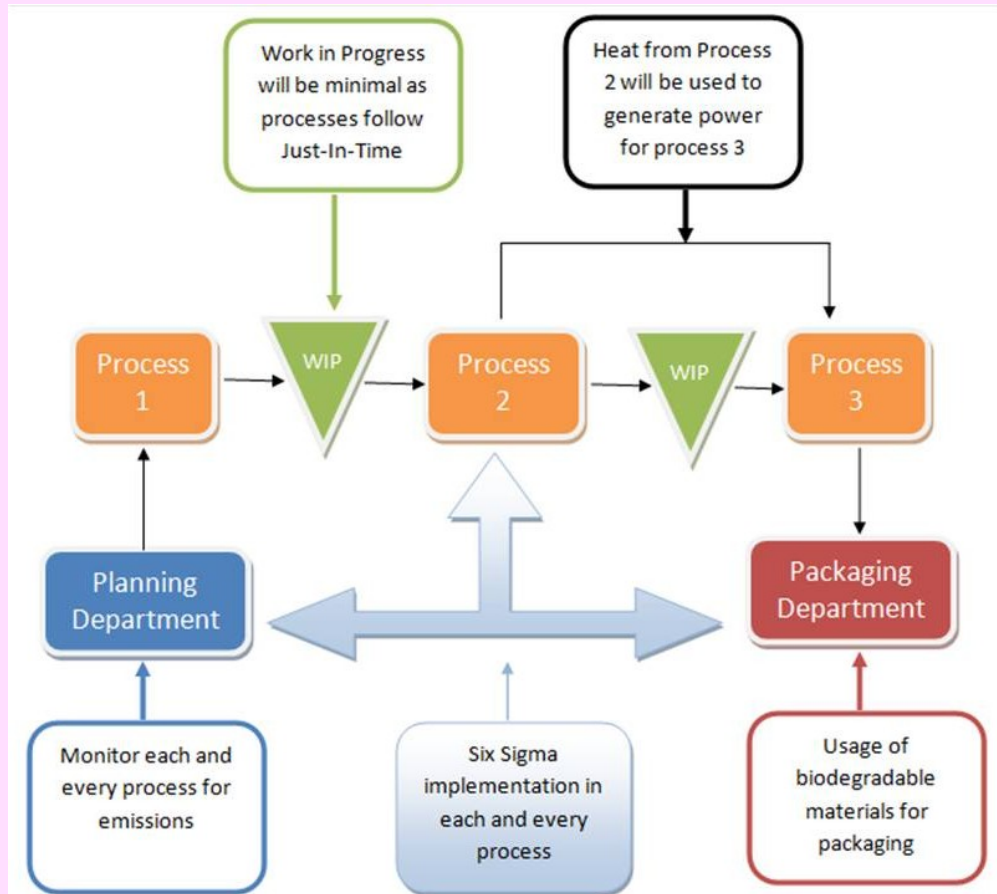
Logistics and Transportation

Logistics and transportation sector has the highest foot-print across all the divisions in a supply chain. This sector has a carbon footprint of 2,800 mega tonnes of CO₂.

The carbon footprint is affected by the mode of transport used for the logistic activity. Today, Road freight result for 57% of the emissions while ocean freight is way behind with 17%. Air freight has the highest per tonne-km of carbon followed by road freight. Ocean freight and Rail freight have the lowest emissions. So building a futuristic logistic model depends on increasing ocean and rail freight and effective management of road freight.



Supply Chain Development



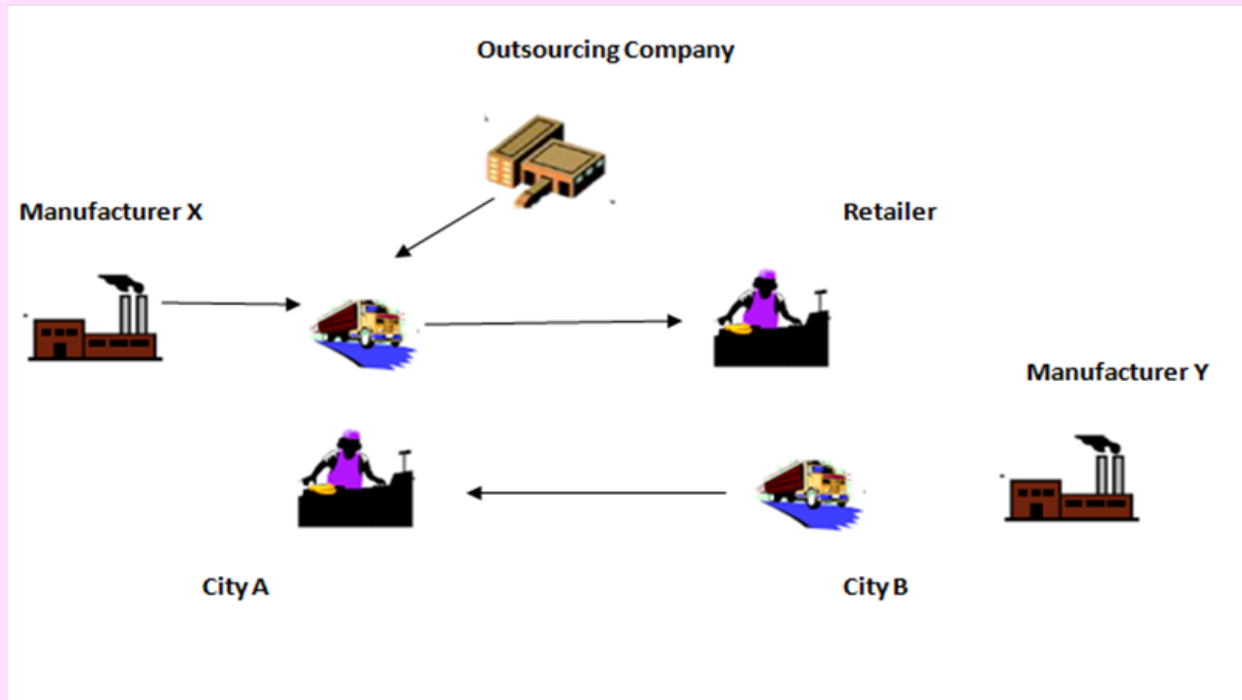
Proposed Production Process

Effective Usage of Road Freight

In the future projection road freight still occupies a share of 30% though the per-tonne emissions are high. The reason behind this is that road is the simplest way of transportation across near-by places. The road freight shall run on alternate fuel sources like biodiesel that are much cleaner than the fossil. This can be better explained with a diagram.

Companies across the world should increase the rail freight usage especially for transportation between cities. Roads should supplement railways by addressing the short distance travel.

Operations



Retail

This sector has to gear up to satisfy the needs of the growing middle class in the developing countries who are backed by their raising level of disposable income. People will prefer farm products from local areas as they will have less carbon foot print and can be fresh. There will also be a major shift the crop producing patterns around the world owing to the global temperature increases. The industry and the people have to balance between these two factors moving in the opposite

Technology Advancements

The Internet can create more sourcing opportunities for raw materials. Spot market simulation shows how combining long-term contracts with spot market purchases can reduce safety stocks and their associated holding costs. The emerging standards like Web Services (XML, SOAP, UDDI, and WSDL) can simplify information exchange and business processes within the enterprise and between supply chain partners.

Most importantly, Moore's Law will continue to scale the effects of new technologies in ways never before seen. For example, **RFID technologies** will play a big role in the future. The new combination **RFID-GPS** systems that integrate the two technologies into sensors and cellular devices play a significant role in the logistics.

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Sustainability

Sustainable Economic Development and Sustaining Revolutionary Innovation

By: G. Ashwin George, PGDM(2011-2013), BIM, Trichy

Introduction:

"The power of population is so superior to the power of the earth to produce subsistence for man", said Thomas Malthus. Didn't the innovations disprove it? The difference in the standard of living, which a single innovation could bring to people, is phenomenal. Here, Edison's contribution is worth being mentioned. India stands fifteenth in Global Innovation index with an innovation index of -0.02 and is growing at a rate of 8%(average) every year. How sustainable is our growth? Are we growing at the expense of *Gen-next*? Don't we have the wit to challenge Townsend's "The Impossibility Theorem" on sustainable development?



Need for a sustainable economic development:

Sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs. In India, Economic growth rate has increased as a consequence of the liberalization process. A sense of urgency shown by the industries to reap as many benefits as possible is apparently visible. We want our production capacity to increase, profits to sky-rocket in the industrial sector. We also need the most efficient sources of transport, the best machines to churn out goods, etc. All the demands can be met only by the manipulation of natural resources. It is understandable that it is impossible for an economy to survive without coal petroleum, electricity, wood and steel. At the same time, industries should realize the resources are fast depleting. If the resources are not used efficiently, the future generation may even be deprived of drinking water. How selfish are we?

Targets of a sustainable economy:

A business man knows where to invest in order to maximize the shareholder's value by increasing firm's future cash flows. As long there is capital, business runs. Apart from the said economic aspect, there are natural and social aspects of a sustainable development. If a business disrupts its environment, it disrupts itself. Efficient work force is essential for economic prosperity, which is possible only if the concentration of wealth to a limited set of individuals is reduced. It becomes mandatory for something new to emerge out if all three requirements of economic, social and natural sustainability are to be met.

The New Economics:

There have been times when countries were struggling to make their way out of huge economic distress, one could recollect '*The Great Depression*' -1930. This demanded a '*New Economics*' which could drive the country out of it. Unsustainable development which was perceived dimly as a major worry a few decades ago has become a major area of concern for many economies, now. Does it

Finance

demand a new economy? It does! A shift from business-centered to people-centered economic system and from money measured economic growth to the one which is measured in terms of the degree of sustainability achieved.

In short terms, a country which has a GDP growth rate of 6% could be equivalent to a 5.2% growth rate plus a 10-point increase in the country's **sustainability index** (calculated on a y-o-y basis). After all, it is our own gene and blood which has to earn its livelihood in this same land in the upcoming decades.

Sustaining versus disruptive innovation:

"Business has only two functions – Marketing and Innovation", the words of Kundera are true indeed. Any organisation cannot sustain its competitive advantage without innovation. Innovation can be disruptive – creating a new market and value network disrupting the existing market and value network or Sustaining – evolving existing value networks with better ones. If it is sustaining it can 'evolutionary' or 'revolutionary'. If one is curious to find as to whether the present day industries need something transformational or revolutionary to meet sustainability? The answer is 'Yes!'.

Operationalizing sustainable development:

Let every project be Alexandria's Pilot Project! If a project is new it should begin with establishment of relationship between the project development and spatial dynamics of the zone, a study of spatial evolution of the place followed by a study of natural, anthropic, social and economical elements (achievable through a method of 'Cartography') restricting the 'Go Ahead' of the project. All the activities mentioned above must be regulated and monitored. We need a separate committee for the same. If there can be a 'LokPal', why not an 'EcoPal'? Why not an NDA for Sustainable Development, as in Ecuador?

Sustainable economic development through sustaining innovation:

There is a sheer lack of concentration visible in developing innovative products and processes that could serve our purpose. Businesses have to evolve in the direction of sustainable development. Any idea which could drive the businesses in the required direction must be encouraged and rewarded. The idea should sustain the existing processes and productivity at the same time, ensure sustainability. The cost incurred for implementing the idea could be tax exempted. A revolutionary industry process aided by government policies, in favour of sustainable development could be set up and mandated. As we all know, one idea can change the world!

Conclusion:

Any economy cannot grow without exploiting or depleting its resources and 'sustainable development' may seem like an oxymoron. But a development should not end itself. It will, unless it takes care of the causes of it. It is high time, the importance of sustainable development be communicated to the next generation. Ideas be entertained, tinker those for feasibility enhancement and be implemented.

Let us not take away their '*right to live and live happily*' Let us live and also let others live.

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Project Udaan—Putting Wind beneath Their Wings



Kashmir once hailed as Paradise on Earth has been ravaged time and again due to conflicts. We look at Kashmir as an issue of land occupancy and to which territory it belongs. We look at the Indian Army and send out our wishes for their well being. But what we forget is that Kashmir is also home to One Billion people who have live in fear and struggle for survival. From this land, a few brave ones dare to venture beyond what is normal and pursue their passion to learn and grow and live a comfortable life.

Due to incessant conflicts in the state, the growth and development have dampened. The state has little or no interaction with the outside world. As a result the youth lack exposure to the realm beyond their state and thus lack the necessary employable skills.

Project Udaan, a joint initiative of NSDC- Government of India and corporate body CII, is a novel initiative to help Kashmiri youth join the mainstream of corporate India. Welingkar played the perfect host to the group of management students from Jammu and Kashmir, the state of longstanding political and social avalanches. While tourism, handicrafts, handloom and horticulture have been the main business activities of the once flourishing mountain state the constant resurgence have played havoc with its socio-economic scenario making growth and development nearly impossible. With little or no interaction with the outside world, the young Kashmiri youth are losing out on best job opportunities in corporate India

Project Udaan aims at helping these youth to hone their skills and become more corporate suitable and thus increasing their chances of employability. The action oriented agenda aims to provide the students with exposure to the Business environment together with educating them on available career opportunities in various sectors. It gives special thrust on entrepreneurship, training and development.

These enthusiastic youth were invited by We School to interact with our senior faculty and students. The faculty emphasized on the points that a young manager is required to be dynamic in all aspects and apprised them on various opportunities and challenges that lie ahead for them. They were educated on how a management student is no longer required to just focus on his specialization but only requires to be acquainted with all other domains to keep up with changing demands of the industry.

We School has been one of the pit stops for these youth to charge them with confidence and suffuse them with enthusiasm to complete their arduous task.



Call For Articles

We invite articles for the April, 2012 edition of Samvad.

The Theme for the next month: April, 2012—**Innovation**

The articles can be from Finance, Marketing, Human Resources & Operations domains.

Submission Guidelines:

- Word limit: 1000 words or a maximum of 4 pages with relevant images.
- Cover page should include your name, institute name, course details & contact no.
- Send in your article in .doc or .docx format, Font size: 12, Font: Constantia, Line spacing: 1.05' to **samvad.we@gmail.com**.
- Please name your file as: <YourName>_<title>_<MBAvertical e.g. Marketing/Finance/BMS>
- Subject line: <YourName>_<InstituteName>_<Year>
- Ensure that there is no plagiarism and all references are clearly mentioned.
- Like our Fb pg: [Samvad: WeSchool Students Magazine](#)
- Deadline for submission of entries: **20th April, 2012.**

Team Samvad



From right to left :

- Rakesh Marar (Creative Designer)
- Stita Pragyna Misra (Editor)
- Prof. Jalpa Thakker (Mentor)
- Shapnaa Sridharan (Sub-Editor)

For any queries, please mail us at
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Imagine

Imagine there's no heaven

It's easy if you try

No hell below us

Above us only sky

Imagine all the people living for today

Imagine there's no countries

It isn't hard to do

Nothing to kill or die for

And no religion too

Imagine all the people living life in peace

You, you may say

I'm a dreamer, but I'm not the only one

I hope some day you'll join us

And the world will be as one

Imagine no possessions

I wonder if you can

No need for greed or hunger

A brotherhood of man

Imagine all the people sharing all the world

You, you may say

I'm a dreamer, but I'm not the only one

I hope some day you'll join us

And the world will live as one

— John Lennon