

Tools for managing Corporate Sustainability Transformation



Defining corporate sustainability

- It can be defined as meeting the needs of a firm's direct and indirect stakeholders (such as shareholders, employees, clients, pressure groups, communities etc,) without compromising its ability to meet the needs of the future stakeholders as well.
- To achieve this a firm has to maintain and grow its economic, social and environmental capital

3 elements of corporate sustainability

- Integrating the economic, ecological and social aspects in 'triple bottom line'
- Integrating long term and short term aspects
- Consuming income and not the capital

Types of capital within triple bottom line

- Economic capital
- Natural capital
- Social capital

Economic capital

- Financial capital- equity, debt
- Tangible capital- machinery, land, stock
- Intangible capital-reputation, invention, know how, organizational routines

Economic capital

- Economically sustainable companies guarantee at anytime cash flow sufficient to ensure liquidity while producing a persistent above average return to their shareholders

Natural capital

- Natural resources
 1. Renewable resources
 2. Non-renewable resources

- Ecosystem services- water purification, soil remediation, reproduction of plants and plants

Natural capital

Industrial metabolism-

An industry is conceived as a living organism consuming energy and materials and producing the desired output (services and products) and undesired output (waste emissions) .

- If the industry consumes more energy and material than can be reproduced or emits more emissions than can be absorbed through the natural sink then the system becomes unsustainable

Social capital

- Human capital – skills, motivation of employees and business partners
- Societal capital – public services such as good educational system, infrastructure .

Social capital

- Socially sustainable companies add value to the communities within which they operate by increasing the human capital of individual partners as well as furthering the societal capital of these communities. Stakeholders should broadly agree with the companies value system

Non substitutability of capital

- Natural and social capital can partially but not totally be substituted by economic capital
- Natural resources can be replenished by enhancements in technology but its hard to substitute ecosystem services
- Social capital can be converted into economic capital through incentives but only to a certain extent

Irreversibility and non linearity of capital depletion

- Natural and social capital depletion is irreversible after a certain threshold point
- And the deterioration is non linear ie. The deterioration doesn't vary linearly with the amount of contamination.

Reason for transformation

- Today's firms try to increase ecological and social efficiency
- Such a strategy unfortunately not enough as the 3 kinds of capital are non substitutable, irreversible and non linear
- A firm need's to consider 'natural' and 'societal' cases as well as it operates close to both the environment and the society.

Components of Transformation

- Vision
- Skill Set
- Strategy
- Motivation
- Initiatives

Tools for managing transformation

Pollution Prevention

- Eliminating wastes before it gets created
- Integrating of the Environmental Management Systems in the business
- Aeroquip Manufacturing a \$2.5 billion company providing hoses, fitting equipments gained \$ 250 million by providing waste reduction equipment
- DRL carried out process modification work for Setraline HCl
 - The improvements in yield achieved is more than 15%,
 - reduction in solvent consumption (Toluene and Hexane) achieved is about 80% for Toluene and 40% for Hexane,
 - solid waste generated was reduced by more than 50%.
 - The solid waste, thus generated, is found to have fuel value, which is sold to a cement manufacturer instead of disposing in secured landfill.
 - All these have resulted into an estimated saving of Rs 0.30 million per ton of product.

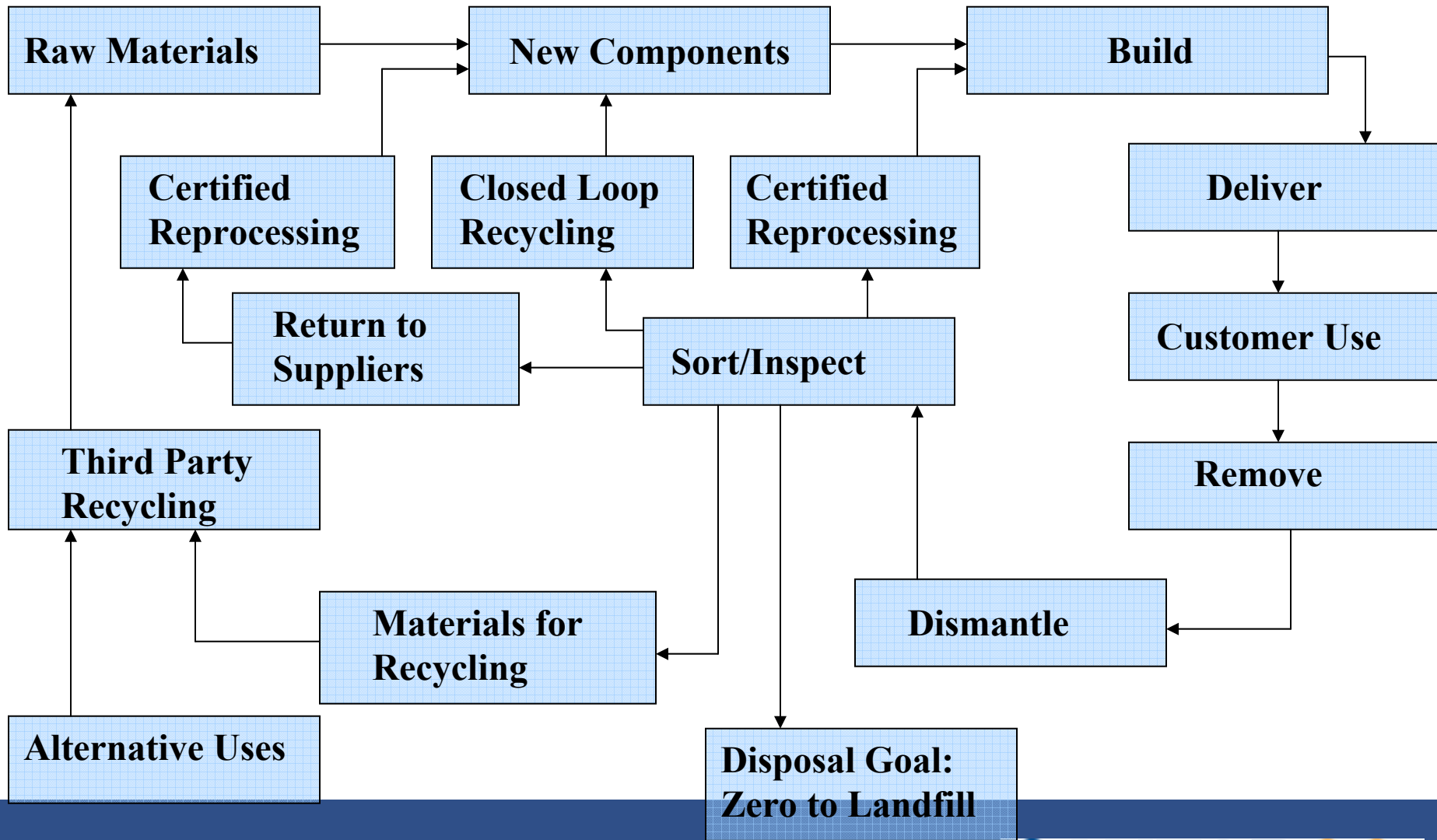
Product Stewardship

- Focuses on the entire life cycle impacts of the product
 - **Design For Environment (DFE)**
 - **LCA (Life Cycle Assessment)**

DFE

- Tool for creating products that are easier to reuse, recover and recycle.
- Xerox's ARM program uses leased Xerox copiers for high quality and low cost parts and components for new machines.
- ARM reported a savings of \$300 million in 1995 alone.
- Dunlop and Akzo Nobel introduced a radial tyre with aramid fibre instead of steel. This saves expensive cryogenic crushing to separate steel from other material and also reduces emissions.
- Kodak's single use camera that reduces the materials, number of batteries for photography and increases the number of recyclable/reuse components.

DFE Example - Xerox



Life Cycle Assessment

Fig 1: Structure of the Life Cycle Assessment (LCA)

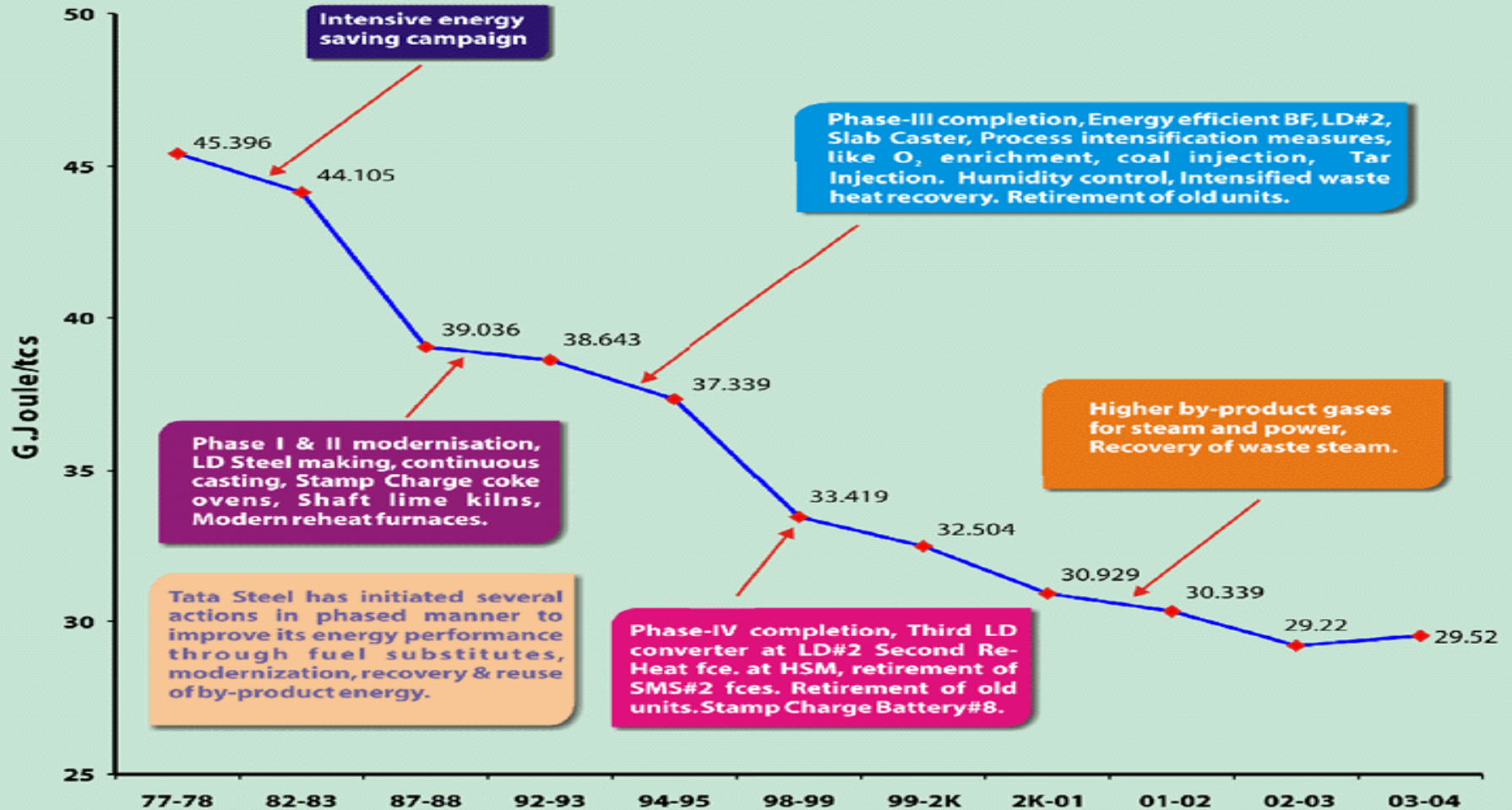


Cleaner Technology

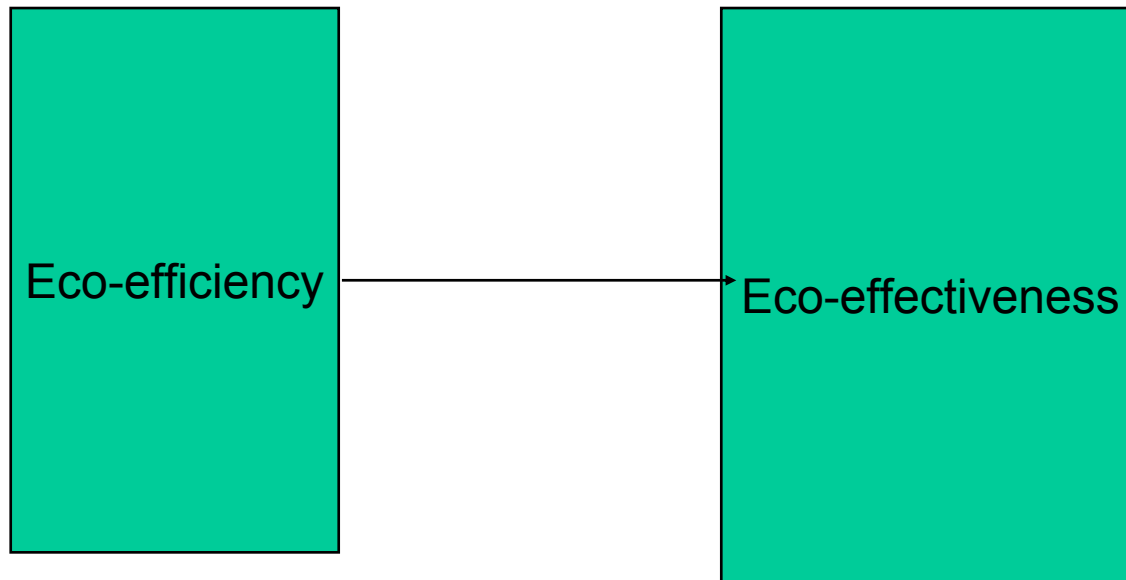
- Is the environmental performance of the products limited by the existing competency base?
- Is there potential to realize major improvement through new technology?
- Monsanto shifting its technical base from bulk chemicals to bio technology. They argue that bioengineering of crops yield a sustainable growth to yield of crops rather than application of chemical pesticides.

Tata Steel-Process Modification

Specific Energy Consumption (Steel Works) Continual Improvement



Eco-effectiveness



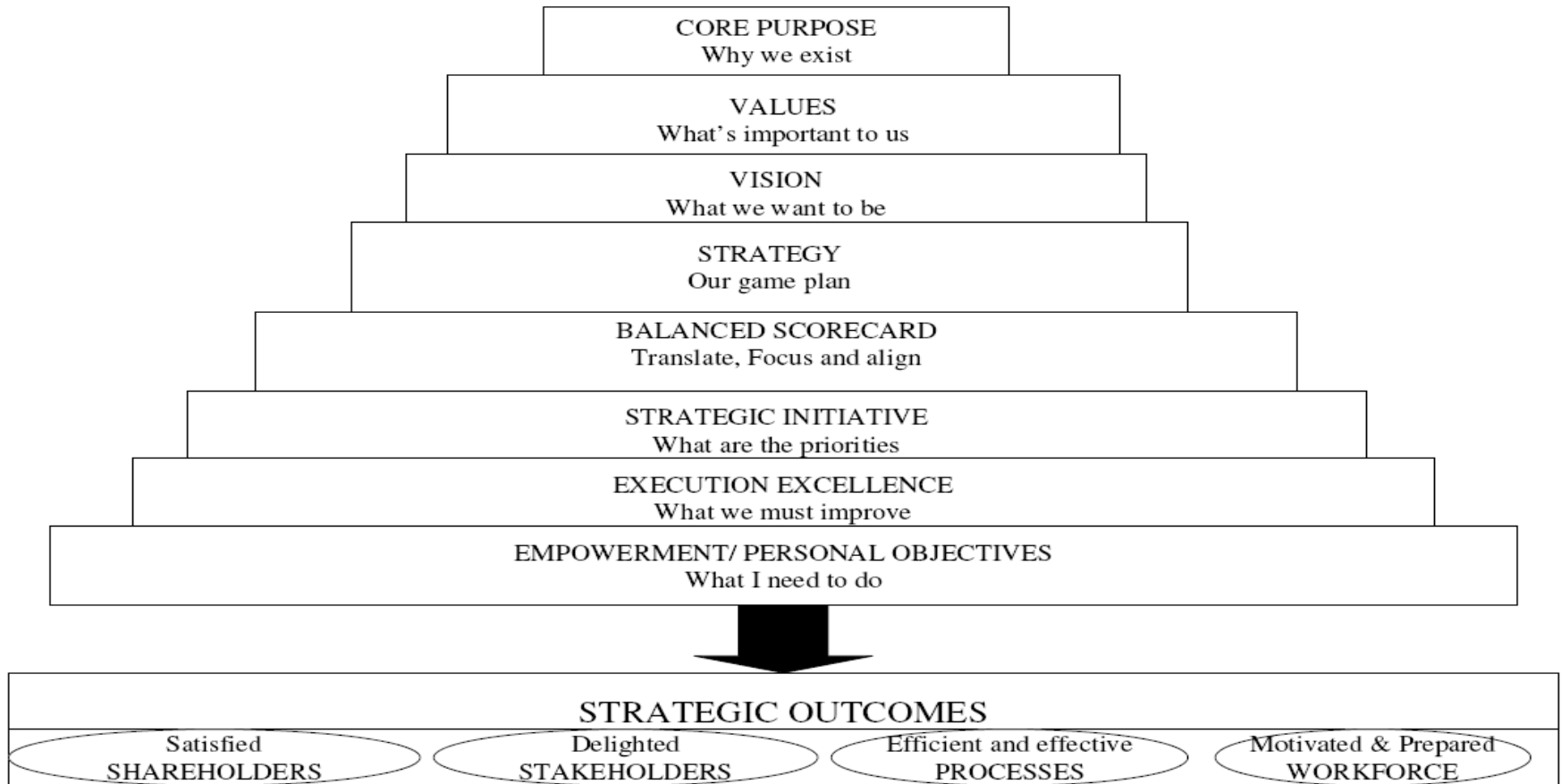
Socio-effectiveness

- Shifting the focus from Socio-efficiency to Socio-Effectiveness, i.e. developing services for the Bottom of the Pyramid (BOP)
- The ITC e-Choupal and Choupal Saagar infrastructure - a combination of digital, human and physical assets - already serves over 3.5 million farmers and is potentially an efficient delivery channel for rural development.
- ITC's social farm forestry strategy enables the creation of substantial employment both on farms and off farms

Balanced Scorecard at DRL



Balanced Scorecard Approach



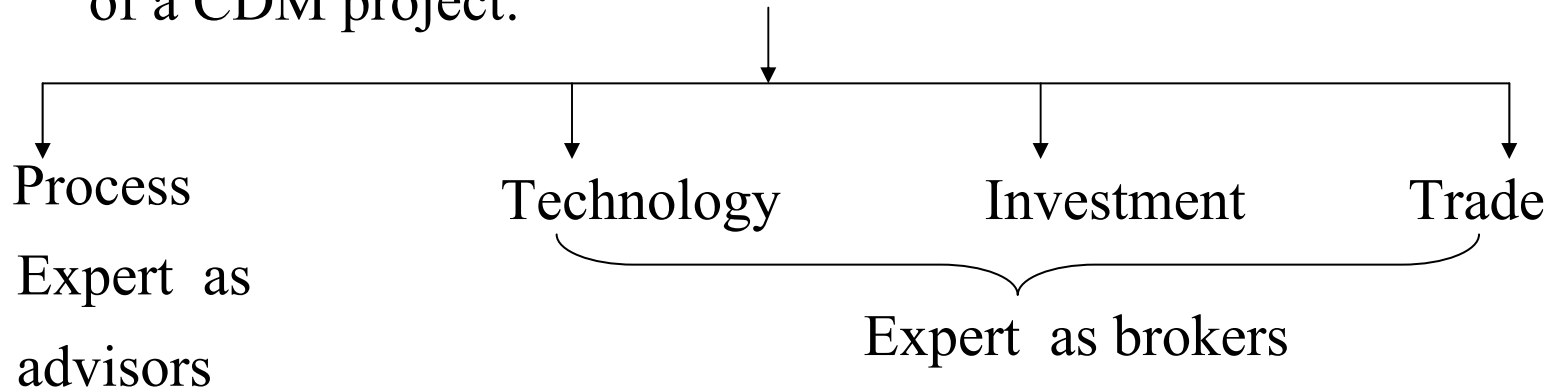
CANTOR CO₂e



CANTORCO2e

- Created as a merger of CO2e.com LLC (jointly owned by Cantor Fitzgerald and Mitsui), and Cantor Environmental brokerage (a wholly owned subsidiary of Cantor Fitzgerald) on 12 March 2007.
- is a subsidiary of Cantor Fitzgerald (major share holder) and Mitsui
- Cantor Environmental Brokerage was formed in 1992 to implement the groundbreaking emissions trading markets introduced under the Clean Air Act and established a long list of firsts in emission trading .
- Cantor Fitzgerald :
 - Founded in 1945 – a leading global financial services institute
 - equity sales and trading, fixed income sales and trading, investment banking, brokerage services, asset management, foreign exchange and research/market analysis
 - has over 1,900 professionals in 25 offices worldwide
 - US\$45 billion in assets, consolidating into a parent company balance sheet of over US\$50 billion
 - US\$112 billion of daily average trading volume in equities (US\$26.7 trillion per annum)
 - US\$30 billion of daily average trading volume in fixed income (US\$7.2 trillion per annum)

1. CantorCO2e provides services which covers entire project cycle of a CDM project:



2. Share risk but provide max return to seller:

Association for the entire crediting period

Accessing the market and selling in retails

Maximise the carbon asset value by proper timing of sale

3. CantorCO2e understands the world emission trade market, have access to all of them, can swap between the various markets

4. CantorCO₂e has a very different approach in CER transaction which maximises CER value
- Operating EUdesk – huge network of buyers and understanding of their expectations
 - Safe keeping of CERs in Escrow – assurance to buyers & sellers, eliminate DNA approval process for buyers, reduce price risk
 - Multiple tranches of sale:
 - Spot sale
 - Forward sale
 - Auction
 - Using various methods:
 - Bidding
 - Auction
 - Multiple transaction structures:
 - Fixed price
 - Market linked price
 - Securitisation of cash flow
 - Any combination of above

5. CantorCO2e global team consist of experts in various fields and are behind the success of a number of complex projects.
6. Many of key team members each have over fifteen years experience each working in environmental and energy markets
7. Has worked in the emissions markets for 20 ten years
8. CantorCO2e Indian team holds substantial share in the Indian CDM market.
9. CantorCO2eIndia provides a complete and unmatched package for CDM projects.

Services offered

- CantorCO2e offers following services to the Indian market
 1. Identification of CDM projects
 2. Development of projects (Documentation → registration)
 3. Monitoring of projects (Monitoring → Issuance of CERs)
 4. Structuring, managing and brokering transactions – getting the best deal on the best terms
 5. Escrow
 6. Equity – helping finance your project
 7. Equipment finance – a less costly alternative to equity
 8. Technology sourcing

Safeguarding delivery - Escrow

Benefits:

- it gives assurance sellers will get paid if the CERs are delivered;
- increases assurance for buyers that they will receive CERs, which helps to increase contract prices;
- eliminates the need for multiple signatures on documentation for larger projects where there is more than one buyer (only the seller and the escrow agent need be project participants);
- allows the buyer to avoid the liabilities associated with being a project participant;
- enables CERs from smaller projects to be easily aggregated in a vehicle that is attractive to buyers;
- allows sellers to time their sale to suit their own strategy, without needing a buyer in place before the CERs can be issued (since the escrow agent will obtain the Annex 1 party approval);
- allows sellers to spot trade;
- helps sellers to maintain a reserve to maximise prices of CER sales; and
- enables transfer (and hence trading) of CERs before the International Transaction Log (ITL) is established, making such CERs more attractive to buyers.

CANTORCO₂e has reputation

- Environmental finance firm – globally known
- CO₂e.com rated as Best broker of Kyoto credits for last four years voted by the readers of Environmental finance
- Cantor Environmental Brokerage rated as Best broker of Emission Reduction Credits for 2002,2003,2004 voted by the readers of Environmental finance
- Successfully completed contracts for tens of millions of tCO₂e
- CO₂e.com Received Energy risk award 2005

“Emission house of the year”

Also received silver award in 2006

- is consistently recommended by independent organisations and media

CANTORCO₂e is innovative

- CANTORCO₂e is responsible for many ‘firsts’ in the global market, including the first CERs into Europe and Canada, and the only CERs into Japan in 2004.
- has been responsible for the only CER ‘secondary market deals to date
- has been instrumental in building the innovative voluntary offset market
- the only structured transactions involving CERs.
- also innovates in the primary CER markets, and has introduced a number of innovative means of enhancing the credit worthiness of certain CER transactions.

Thank You

Contact me at:

Dr Ram Babu

email: rbabu@cantorco2e.com

tel: 98 201 35929

tel: 98 675 31202