Building Energy and Clean Tech Companies

Two perspectives for success

April 2013
Sustainability has become a Key Business Metric…

**Cost and Scarcity of Resources**

- Increasing cost of key resources like energy & water and scarcity of virgin materials
- We are consuming natural resources at a rate faster than the Earth can replenish them - currently consuming the equivalent of 1.5 planets to support human activities.

**Laws & Regulations**

- Governmental and Industry regulations
- Mandated Disclosures and Reporting

**Competitive Landscape**

- The quest for sustainability is already starting to transform the competitive landscape forcing companies to change their business models.

**Investor Demands**

- $5 trillion in socially responsible investment funds
- Investors now look at sustainability performance e.g. Bloomberg ESG Indicators, DJSI, ESI, MSI (Media), GlobeScan (India)

Source: Various from press releases, and public domain, WWF
...and is influencing Business Strategy

- Salmonella outbreak at a Georgia manufacturing plant – economic impact estimated more than US $1B
- **Puma Shoes** - Environmental impacts valued at €145 m 2010. €8 m from core operations, remaining €137 m from external suppliers.
- **Cement Conglomerate** – Water Positive Certification

- **Home Depot** - 'Eco Options' save $740m in utility bills to customers
- **Siemens** – Environment Portfolio to exceed €40 billion
- **GE** – ‘Ecomagination’ sales of USD $105 billion, 142 products
- **Wal-Mart** – Selling $1bn in locally sourced food annually

- **Xerox** – Waste-free factory, annual savings of US $45 M
- **Interface, Inc** - in Atlanta, GA has eliminated over $90M in waste
- **Unilever** – Sustainable sourcing with top 10 agricultural raw material groups account for 70% agricultural raw material
- **Pepsi Co** – 4.3 Billion litre in water savings

Source: Press releases and public domain
Securing the Future

- These linkages have always existed but with a rapidly growing world population with increasing demands for basic services and growing desires for higher living standards and the resource deficit they have become more obvious and urgent.

- Availability and access to sufficient, safe and nutritious food to meet the dietary needs and food preferences for an active and healthy life

- Access to clean, reliable and affordable energy services for cooking and heating, lighting, communications and productive uses

- Access to safe drinking water and sanitation

Source: UNDP: Millennium Development Goals, UN Secretary General’s Advisory Group, FAO
Drivers of Success

- PASSION

- LEVERAGE EXPERIENCE / EXPERTISE / SKILL SET

- ADDRESS SPECIFIC GAP WITH DIFFERENTIATED OFFERING

- EXECUTE

- ADAPT TO CHANGES – BE WILLING TO DESTRUCT TO RE-INVENT

- DREAM GLOBAL; PLAN NATIONAL; ACT LOCAL
Environmental and economic sustainability can be achieved through:

**Operational Efficiency**
- Effective Utilization of Resources (e.g. Energy, water, materials)
- Lower operating costs with increased efficiency programs (driven by technology, systems and products)
- Lower ‘Total’ Lifecycle Costs (e.g. proactive waste management)

**Financial Benefits**
- Savings stream driven by the operational efficiency and Income through carbon credits
- Opportunity to qualify for the “Green Incentives” program that needs to be instituted to support this initiative

**Establishing a new global delivery system to address the opportunities**
- Developing products and services for the new ‘awakening’ customer
- Proactively plan and manage for any business or regulatory impact to the business
Naturenomics™ has been designed to turn the climate change crisis into an opportunity for developing countries.

The impact that an organization’s activity has on the environment can be measured by estimating the consumption footprint across Land, Energy, Water, Waste, Air and Carbon (LEWWAC) to give the Naturenomics™ Consumption Carbon Footprint (NCF).

Naturenomics™ initiatives are designed to lower the footprint with projects that deliver both economic and ecological benefits

Naturenomics™ relates to capital formation for a region or organization through the creation of ecologically ‘compliant’ assets in a sustainable manner.
360 approach to deliver ecological competitiveness

Six Forces of Ecological Competitiveness:

- Land
- Energy
- Water
- Waste
- Air
- Carbon
Six Forces of Ecological Competitiveness

- Land
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Information Technology is a key transformational enabler

- E-governance & National Resource Management Systems
- Compliance Dashboard, Enterprise Data Warehouse Reporting Systems
- Carbon and Consumption Management toolkit
- Green Supply chain & Procurement, Measurement & Monitoring Systems
- Assessment & Reporting tools

Advocacy

Diagnostics (Baseline and Initiatives)

Compliance Management (Statutory & Voluntary)

Implement (Business & IT Solutions)

Monetization (CDM)

Certification (LEED, NatureSecure™)

IT Enablers
In line with our strategic objective to be a responsible corporate citizen, our constant endeavour is to reduce the impact from our operations to the environment.

TCS’ vision is to decouple business growth and ecological footprint from its operations to address the environment bottom-line...... From green buildings to green IT to a green supply chain, our mantra is to grow sustainably and help our customers achieve sustainable growth through our green solutions and service offerings”

N Chandrasekaran, MD & CEO, TATA Consultancy Services

**Sustainable Operations**

Initiatives under 5 Themes:
- Sustainable Infrastructure design and planning
- Efficient Operations
- Employee Engagement
- Sustainable Supply chain & Procurement
- Human Capital Sustenance

**Corporate Social Responsibility**

“Impact through Empowerment”
- Utilize IT to solve large-scale societal problems
- Volunteer in communities where TCS operates
- Partner with NGO’s & governmental bodies
- Support Large-scale disaster relief efforts

**Sustainable Marketplace**

Drive eco-sustainability services across the value chain of our customers by addressing:
- Profitability
- Growth & Innovation
- Risk to Brand & Reputation
Thank You