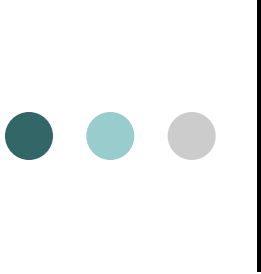




Environmental Sustainability at Wipro: “Green IT” and “IT for Green”

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"Wipro, an iconic Indian brand, prides itself on its strength in the Technology and Enterprise domains. It is high time it uses these strengths to make the much needed shift to clean production and build a competitive edge by introducing products that do not cause harm to the environment or to people"

-Greenpeace India during the toxic campaigning

"We firmly believe business cannot be built at the cost of ecology. It is not sustainable. Ecological sustainability will be increasingly be the defining force for society and business globally"

- Azim Premji, Chairman Wipro Limited



Why a “Green IT”???

- Study from McKinsey & Co suggests IT industry adds to 2% of world's total carbon emissions.
- Amazing fact is this figure matches with that by the aviation sector.
- If this trend continues, then by 2020 there will be a further 1% growth in the Carbon emission.



What is “IT for Green”???

“...ecological and social sustainability will create the big business opportunities in the 21st century”

-Azim Premji, Chairman WIRPO Ltd

- Green IT is an opportunity which we are pursuing where as the bigger opportunity is IT for Green.
- It is the transformation of the opportunity provided by the opportunities provided due to the “Green IT” into business.
- Helps protect environment, secure resources for future and helps business grow with the efficient mechanism.



WIPRO's Green Journey-Highlight “Green IT”

- 2005 – Wipro indicated by the Karnataka State Pollution Control board
- Allegation of dumping huge volumes of hazardous e-waste in the illegal recycling units in Bangalore.
- Allegation on Wipro by Greenpeace India.
- Greenpeace India hands over to Wipro 500kg of e-waste collected from unapproved recycling outfits at Bangalore, Chennai & Delhi.
- Evidences of harmful chemicals like PVC, BFR from these products exposing hazard for environment as well as the workers in these sites.



WIPRO's Transformation-Highlight “IT FOR GREEN”

- 2006 – Offering by Wipro on e-waste clearance for its customers in 17 cities at a very nominal price.
- 2007-Sets up Wipro Green Computing process to manage the e-waste efficiently.
- Company claims e-waste disposal mechanism is ISO 14001 complaint
- Ensures e-waste disposal at manufacturing facility as well as those generated after sales.
- 2007-08 disposes 1220 kg of e-waste

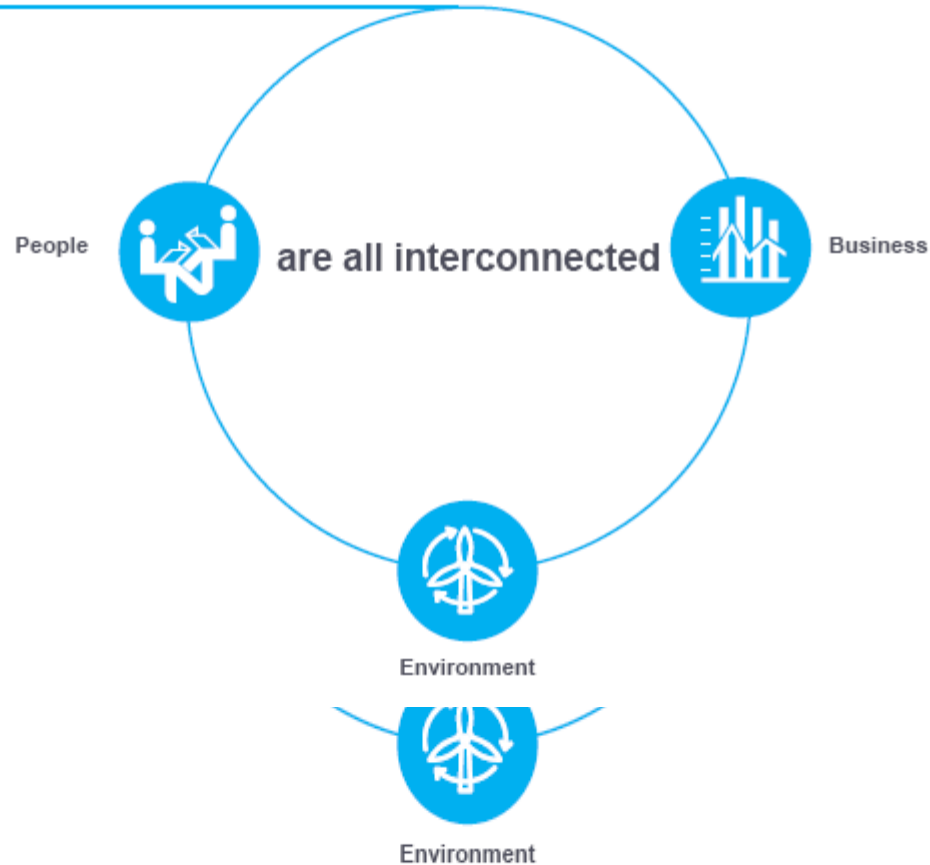


WIPRO's Transformation-Highlight “IT FOR GREEN” (CONTD.....)

- 2008 – Unveiled an enterprise wide charter called eco-eye.
- Aim is to promote the ecologically sustainable practices in its business, both internal and external.
- Campaign driven by Mr Azim Premji himself.
- Aim is to percolate to all the employees 96,000 in 55 countries.

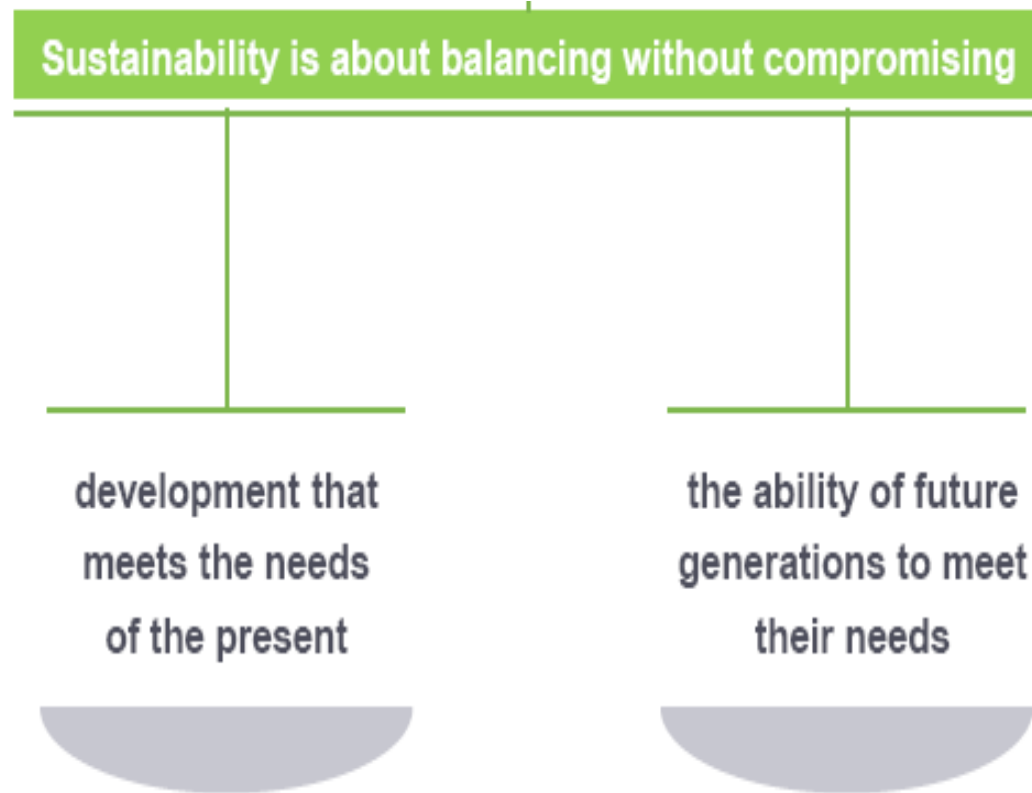
WIPRO's Green Initiative

Business Fundamentals



WIPRO's Green Initiative (CONTD...)

Defining Sustainability



WIPRO's Green Initiative (CONTD...)

Wipro's Sustainability Framework



Ecological

Minimize Wipro's internal footprint on energy, water and waste



Workplace

Promote employee diversity, empowerment & continuous learning



Education & community

Work jointly with education and civil society networks on sustainability programs



Customer stewardship

Provide products and solutions that enable customers to become greener



Supplier

Collaborate with suppliers to help them become more sustainable



Public regulation & policies

Shape policies by engaging with government, NGOs and industry networks

WIPRO's Green Initiative (CONTD...)



Clean Energy

Products and Services in Energy Efficiency and Renewable Energy

Managed Energy Services

IT platform-based remote energy management services

Products

Solar PV, biogas and solar thermal

Projects

Green buildings, utility scale solar, cooling and lighting efficiency



Green IT Infrastructure

Products and Services that target IT's own footprint

Green Computing

Energy Star 5 desktops and laptops

Green Data Centers

Deliver 10-15% more energy efficiency



IT for green

Products and services that enable GHG reductions for the balance
98%

Process Optimization

Includes supply chain, dematerialization and inventory efficiency

Smart Grids

IT solution for enabling smart grid infrastructure

WIPRO's Green Initiative (CONTD...)

IT for GREEN Solutions from WIPRO



Paperless
office



Smart
sensors



Supply chain
sustainability



Smart grid
and smart
metering



Green
discovery



Integrated
sub daily
planning
system



Water
management



Productized
solutions



Managed
services for
energy
management



Sustainability
advisory

WIPRO's Green Initiative (CONTD...)

Green IT-Solutions from WIPRO



Green Computing

Committed to Green Computing since 2006 built green PC based on three pillars

- 99% RoHS
- Energy Efficiency and
- Responsible E-waste Management



Green Data centers

Deliver 10-15% more energy efficiency



Green IT Infrastructure

Deliver 10-15% more energy efficiency



WIPRO's Green IT Measures GREENWARE

- First IT company in India to launch hardware that adhered to RoHS (Reduction of Hazardous substances).
- Limits the usage of toxic metals during manufacture of electronic goods.
- Priced competitively to encourage consumers to buy eco-friendly products.
- Greenpeace India appreciated Wipro's proactive initiative this time.
- Energy star rating for the product.
- Packaged in reusable and degradable packing materials.



WIPRO's Green IT Measures GREEN BUILDINGS

- Wipro premises at Gurgaon and Kochi certified by USGBC.

Features in these buildings includes:

- Building designed to increase natural cooling and enable use of natural light at least 75% during day time.
- Re-use rain water
- Waste water treatment
- Use of renewable energy viz Solar and biomass.
- Abundant vegetation on ground and terrace to prevent against dust and heat.



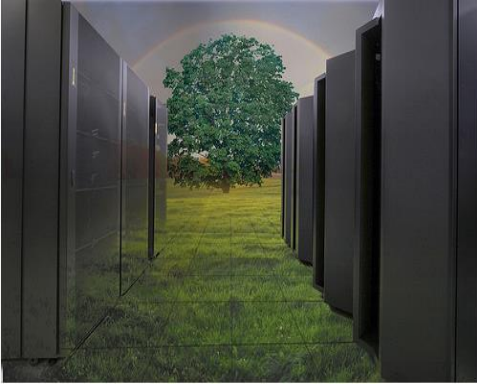
WIPRO's Green IT Measures GREEN BUILDINGS (CONTD...)

- Reserved parking facilities for cycles
- Pooled cars
- Battery recharge station for electric cars.
- Ensures all the new upcoming facilities comes with all the green measures.
- Result of all the initiatives is WIPRO is able to conserve energy to an extent of 46%.



WIPRO's Green IT Measures GREEN DATA CENTERS

- Consolidation of the data centers to reduce the impacts.
- Total number was reduced from 400 to 100.
- Free cooling for the UPS room based on the low ambient conditions prevailing during winter and during night
- Designed the most efficient UPS configuration with less electrical losses . Low PUE of 1.6 achieved
- Enhanced ventilation rates in occupied spaces, use of high efficiency filters and tracking the VOC pollutants in interior finishing materials
- Proper orientation of the buildings, high performance envelope design and 'heat gains' control through roof



WIPRO's Green IT Measures GREEN DATA CENTERS(CONTD...)

Wipro Greater Noida Data Center (GNDC)

	Standard Data center	GNDC	Savings
Energy Consumption (kWh)	4,03,10,760	3,32,98,410	17.33%
Co2 emission / Annum	36279 Ton	29968 Ton	6311 ton/ annum
Potable water plumbing fixtures	99,599 Gallons	29,976 Gallons	70% reduction
Potable water for AC make up	77744 KL/year	36038 KL/ year	41706 KL/ year

Energy Savings Resulting from Server Consolidation:

DESCRIPTION	ORIGINAL	REVISED
Number of Servers	47	10
Power (kWh/year)	288,204	61,320
Cooling (BTU/Hour)	112,288	23,891
Carbon Emissions	34	7
Racks	5	1

Total Savings

80%



WIPRO's Green IT Measures ENERGY CONSERVATION

- Substitution of CRT monitors with LCD monitors.
- 32,000 new LCD monitors installed.
- Deployment of power management tools.
- Installation of LED lighting and solar power panels

Net Results:

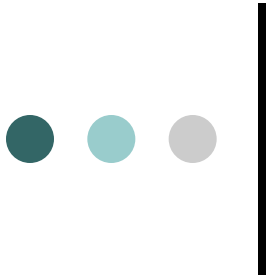
- Energy savings of 66% per desktop.
- Helped company save space.
- Reduction of power consumption to an extent of 26%.



WIPRO's Green IT Measures

Learning from the case

- Encourage the new IT premises to go for Green Buildings.
- Encourage the Green Data Centers.
- Enhance awareness amongst employees & business partners(suppliers & customers) and make them follow green initiatives.
- Encourage employees to commute with eco friendly medium.
- Energy saving mechanisms like LCD monitors, automatic sensors.
- Recycling of waste water, e-waste



Q&A ???