GREEN IT @ SUNWAY

Green IT is the Choice We Make!

At Sunway Group, we take our Corporate Responsibility role very seriously. Sunway looks towards a sustainable Corporate Responsibility platform that protects, nurtures and enables human capital to reach its best potential. To achieve these objectives, the program runs on three main pillars; human capital excellence in terms of Education, Healthcare and the External Environment.

We believe that **GREEN IT** is yet another way forward to conserve the environment. As the world's accelerating concerns over climate change and the sustainability of Planet Earth has placed a spotlight on businesses and social circles to reduce our carbon footprints, we aim at making all IT aspects (operational, services and systems configurations) support low energy consumption and paperl-ess environment.

In mid 2008, all IT Heads of the Group carried out an exercise to identify and streamline our current practices and energy usage and made a concerted effort to take further steps to embark upon a green savvy journey.

The Sunway Green IT Booklet is the culmination of the ***Green IT Choices*** that we have made, the savings to be enjoyed when we go green and the next steps in our continuous endeavours for greener IT.

The Green IT message is communicated to all Sunway employees in a series of tips and information via various communications channel for easy understanding.

With employees' support and smart Choices, Sunway can achieve a **GREENER IT**!

GREEN IT, CHOICES WE HAVE MADE

Reduce Paper Consumption

1. Use of e-Forms in Office Automation

   e-Forms to replace physical forms.

   Requests for stationery, staff, annual leave, IT support, legal contracts and numerous business specific forms such as credit verification is now conducted in a paperless environment. e-Forms and other office automation solutions have greatly reduced the use of physical forms and in some cases, eliminated entirely – e.g: Sunway Monash Campus has introduced e-billing for their printing services campus wide.

2. Use of e-FAX

   Using e-FAX, electronically approved purchase orders are automatically faxed to suppliers

   A centrally located procurement system eliminates the need for physical request forms. With the use of e-FAX, orders are automatically faxed to suppliers and we reduced faxing purchase orders (PO) by approximately 3,000 – 4,000 pages per month. On a larger scale, the business benefits from a speedier process and a reduction in clerical intervention.

3. Use of Online Interface/Digital Media

   Sunway Medical Centre's Pyxis project introduces an online interface.

   The project successfully eliminated the traditional need for printing "Patient Label", "Medication Label" and "Charge Form". Instead of printing and then attaching the labels for control and billing purposes, such information is now automatically passed from system to system. At 200 beds, this Green IT project has saved an estimated printing cost value at RM60,000 annually. Additionally, it improves billing accuracy and timeliness.

4. Use of Double-Sided Printing

   Replace traditional single-sided printers with modern printer.

   Although we have significantly reduced the amount of office printing, nevertheless paper printing is still required. Thus, we have replaced traditional single-sided printers with modern printers capable of printing duplex to reduce the amount of paper required.

Our Initiatives to Reduce Power Usage

1. Refresh End-User IT Equipment with newer energy efficient devices

   Replaced older 'tube' monitors with newer energy efficient LCD monitors.

   The result is 56% reduction in power usage per monitor (from 80w to 35w). On a large scale, it translates to significant power savings as monitors are in use for long hours. It makes a significant difference in hotel and healthcare industries.

2. Reduce the amount of Hardware Needed to Power the Business

   Virtualization technology to reduce the amount of servers needed.

   Servers are larger computers which are used to run the many business applications to power our businesses. Traditionally, each application will run on one physical server. Ironically, the more IT savvy an organization is, the more business applications it will have which translates to more physical servers – using more power.

   A Virtualisation technology is now deployed across all the Business Units in Sunway Group. Instead of running 8 servers to power 8 business applications, we now use virtualization technology to run all 8 business applications in a single server thus reducing our energy consumption.

3. Set on Standby and Shutdown Unused Equipment

   Set Power Save Mode for Desktops and Notebooks.

   At Sunway IT, we have chosen to Set Power Save Mode for Desktops and Notebooks. Shutdown mechanism is utilised for PC when not in use or non-frequent use data centre equipment (eg. archiving server) to save power.

4. Adoption of Web Conferencing Solutions

   Audio and video conferencing to reduce the need to travel

   Use of audio and video conferencing to reduce the need to travel to regular operations meeting.

5. Purchasing decision

   Energy savings equipment

   Preference for energy savings equipment, part of our evaluation criteria

GREEN IT, WHAT'S NEXT FOR SUNWAY

Engaging IT's feedback from the onset in conceptualizing a new building or workplace can improve space utilization and facility operating costs

Green Approach to Data Center

Go 'Green' Data Center using several approaches such as IT innovation and efficiency:

1. Use power management software
2. Conduct a study to revise data center layout (or design) to reduce power consumption and floor space
3. Replace servers more than a few years old with new energy-efficient models
4. Scheduled archiving of old data or data that's infrequently accessed
5. Look outside the normal dimension for cooling issue (e.g. Highmark Inc that was ranked no. 1 Green IT users by www.computerworld.com uses a 100,000-gallon water tank to collect rainwater that runs off the roof and then uses the water to cool the data center)
6. Servers that goes to sleep if it's not being used

On the other hand, reengineering existing paradigm and processes yields significant result:

1. Approach the issue from IT infrastructure and site infrastructure savings. Site infrastructure is a data center's lighting, power delivery, and cooling systems. In the IT infrastructure, savings can be primarily gained via better handling servers. Greening network and storage will have less of an impact. Site infrastructure can account for half or more of all energy used by data centers, and so this is also a good place for enterprises to target.
2. Make energy efficiency a priority in buying decisions for data center equipments
3. Green IT engagements need to start with energy efficiency assessments and integrated monitoring of energy consumption across IT assets, data centre hardware and facilities services. Why? The primary barrier to the organization to invest in energy efficiency is that it rarely has comprehensive data on energy cost. On the other hand, facilities management pay the energy bills but have no understanding of what drives energy consumption
4. Tie incentives to drive down energy usage (e.g. Microsoft started tying annual bonuses of data center facilities managers to efficiency improvements which leads to behavioral changes. In one case, a facility manager cleaned the roof to improve heat reflection. That improved energy efficiency so the company makes sure all data center roofs are kept clean (Greener Computing, July 2008))

5. Charge business units for the amount of energy used by their servers. Business Units will become more conscious of the amount of servers used to perform their work

As more efforts are made to research on data center efficiency, options will be plenty for companies and it is crucial that management fully understand the underlying opportunities to save cost and, save the environment too.

Company-wide Procurement Policy

A golden opportunity exists to develop company-wide procurement policy that reflects our commitment to environmental stewardship and sustainability. Proposed purchases must be evaluated for total cost of ownership, including energy. Products that have a complete and extensive engineering assessment for energy impacts in the building, data center, and central plant etc should be given preferences.

The policy should cover a wider range of office equipment such as computers, copiers, power adapters, fax machines, laptops, monitors, multifunction devices, printers, scanners, and water coolers as well as appliances like dehumidifiers, refrigerators, freezers, and room air conditioning units.

Corporate Reporting and Green IT Audit

The organization should include Green IT initiatives and policies in corporate reporting (e.g. sustainability report, corporate social responsibility reports) and widen the scope of audit to include Green IT initiatives. As a start, Group Internal Audit Department can include this in their existing internal audit exercises.

Sustainability reporting creates linkages across the entire value chain. Within an organization, the report can be used to better manage operations while minimizing risks. Externally, technology companies can use the report to clarify their environmental advantage in the marketplace with competitors, regulators, the public and consumers (PWC, February 2008).

This give more credibility to the efforts besides satisfying customers, investors and stakeholders demand for greater accountability and transparency from companies on environmental and social issues.

Continuous Management Review on Green IT Initiatives

Management teams that are serious about the initiatives should conduct review on current and future possible initiatives regularly. The initiatives should align with organizational direction. Quarterly, a group wide review should be done so that it can be a platform to share best practices, synchronized effort, leveraging on know-how and standardizing quantifiable results.

Sound Disposal of IT Assets or E-Waste

Recycle old computers, printers, monitors, peripherals and other systems. Best still, engage computer and electronics companies to offer take-back programs for

old items. Create equipment disposal policy, process, control and audit trail as a form of governance.

IT Equipment Recycling Programs

The organization has a program to recycle unused/discarded high-tech equipment and also has a program to recycle technology-related consumables (e.g. printer cartridges and printer paper). If possible, donate old computers, printers, monitors and peripherals to various charities and non-profit organizations.

Green Everyone in the Organization – awareness/sustainability

Education is critical to ensuring sustainability and is a catalyst for change. Everyone involved with the organization from corporate leaders, employees, customers right to suppliers should understand the environmental effects of what they do and how their organization has committed to change.

Raising awareness can be done through:

1. Sharing articles on Green IT, compulsory agenda for management meeting, email circulation and email signatures
2. Developed an employee awareness program coupled with public awareness campaign to reduce power consumption inside the organization, community and area businesses
3. Constantly remind people to be committed to the Green IT effort (e.g. video awareness display at Menara Sunway lobby)
4. Sharing relevant information to get people to buy into the idea (e.g. share record of previous monthly printing cost so that employees are aware)
5. Seek opinion from employees through surveys and feedbacks
6. Publicize efforts done by your employees. Recognition is an effective motivational factor

Ultimately, we want people to raise the ‘green’ questions when making decisions.

No Cost Energy Saving Tips/Policies

Printing:

1. Make duplexing (double-side printing) the default mode for copiers and printers
2. Use paper saving features (e.g. use Adobe Reader "page scaling" and set to print multiple pages per sheet)
3. Change the margin by narrowing down the default margins for all of your documents so that you can help save paper (refer www.changethemargins.com)
4. Single side printers can be easily used to print duplex by using the print odd and print even settings successively
5. Avoid printing email conversation.

Others:

1. Run scheduled tasks every half-hour and checks to see if anyone has logged into computers. If the computers are idle, they are put into standby mode
2. Plug equipment into surge protectors, then turn these off when not in use
3. Increase recycling and using recycled paper – easily accessible recycling bins
4. e-Marketing

CONCLUSION

Engaging green IT requires the organization to navigate through unpredictable challenges, sometimes in uncharted terrains. The trick is how to turn them into opportunities. Often times, organization are faced with the difficult task to balance financial needs, stakeholders opinion and environmental protection.

It is critical for decision makers to be informed of possible choices and to adapt quickly, committing people, resources and inspiring them to achieve something great for the organization; improved financial results and measurable environmental benefits through green IT initiatives.