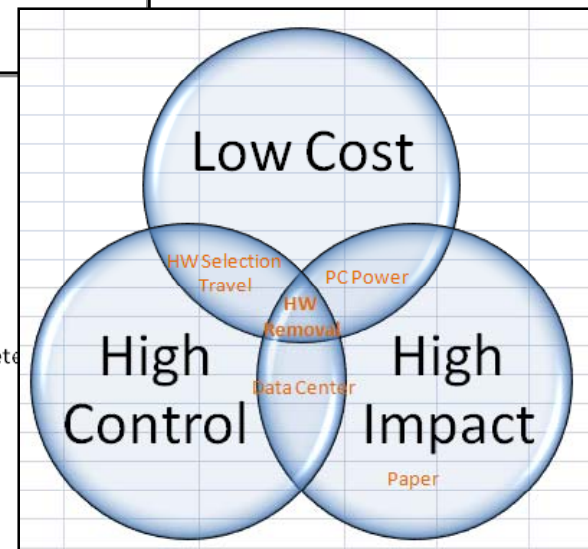
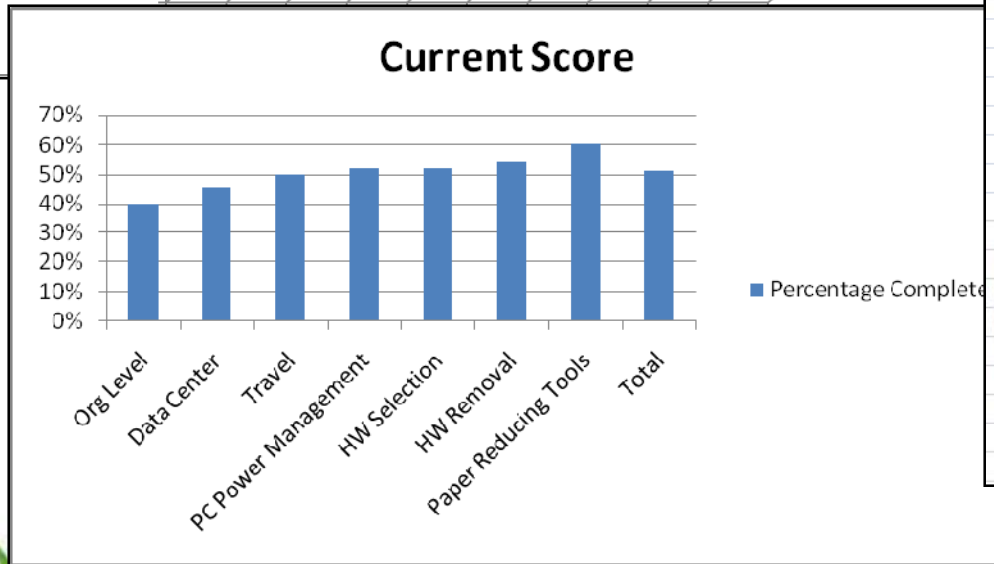
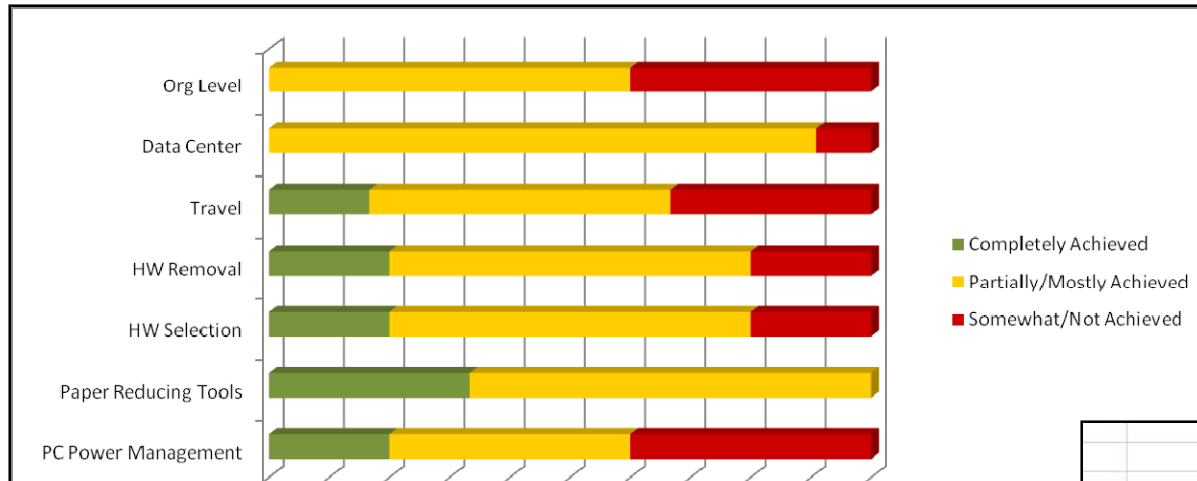


Softchoice's EcoTech Assessment



The EcoTech Assessment

Designed to Be

- A great first step in understanding the opportunities available to “green” your IT operations.
- An assessment of your IT environment & policies in comparison to the industry’s leading green practices and technologies.
- A prioritization plan for future green IT projects.

Process

1. Self-assessment workbook is completed by the customer.
2. Softchoice compiles the results.
3. Assessment and consultation is delivered.



Benefits of the Assessment

- ✓ Baseline for current state before beginning the green IT strategy
- ✓ Shows the 'low-hanging' fruit that you can start working on today
- ✓ Use assessment as a checklist while building your green IT strategy
- ✓ Can continue to update the assessment as you complete projects
- ✓ Show off IT's progress and sustainability leadership to your organization's management
- ✓ Use reports in your Sustainability/Corporate Social Responsibility Report
- ✓ Apply for the Softchoice Green IT Impact Awards



EcoTech Assessment Categories



EPEAT
SEARCH & BUY



TRAVEL-REDUCING
TECHNOLOGY



E-WASTE
DISPOSAL



PC POWER
MANAGEMENT




PAPER-REDUCING
TECHNOLOGY



DATA CENTER
EFFICIENCY



The EcoTech Assessment Workbook

 DATA CENTER EFFICIENCY	
Data Center Efficiency	Score
IT managers see and analyze all data center bills.	
IT managers receive incentives or recognition to lower data center bills.	
An audit/assessment of data center efficiency has been performed (energy, utilization, equipment, etc).	
A server consolidation and/or virtualization strategy has been implemented to reduce the number of servers required.	
Storage tiering is utilized to move non-critical data to less energy-demanding storage sites.	
Air flow under the raised floor (e.g. clustered cables, vented floor tiles) has been maximized.	
The average age of data center equipment is less than 2 years (i.e. cooling plant, UPS, air conditioners and other equipment)	
The entire server install base is comprised of high density (1u/2u) servers.	
Best practices have been implemented for floor layout/design (e.g. hot/cold aisle, supplemental cooling, enclosed rack systems).	
Software has been implemented to reduce the amount of duplicate data (eg. duplicate emails) to shrink storage requirements	
Servers have been organized according to specific cooling needs and the entire data center is not kept at the same temperature.	
Prioritization Matrix	Y/N
Addressing data center efficiency will have a large positive impact on our organization.	
Addressing data center efficiency is entirely under IT's control and ability.	
Addressing data center efficiency would require minimal resources and expense.	

You score your organization from 1 – 5 on the level that each outcome has been achieved



You rate the level of control, impact and cost for each category based on your organization



Scoring System

SCORING:

The outcome is completely achieved - 5 points

The outcome is mostly achieved - 3 points

The outcome is partially achieved - 2 points

The outcome is somewhat achieved - 1 point

The outcome is not achieved - 0 points

This outcome is not applicable - N/A





SAMPLE Results

As of October 2008



Sustainability at the Organization Level

Organization Level Strategy, Policies and Measurement	Score
The executive leaders of the organization have an explicit company-wide environmental commitment and vision.	2
There is a clear set of responsibilities and an owner of environmental initiatives at the organization.	2
An audit/assessment on overall corporate environmental sustainability has been performed and shared with employees.	0
There are published goals for energy efficiency, savings and/or carbon reduction. E.g. Sustainability Report, Environmental Vision	0
There are formal programs to encourage employees to suggest, identify and spread “green” practices.	0



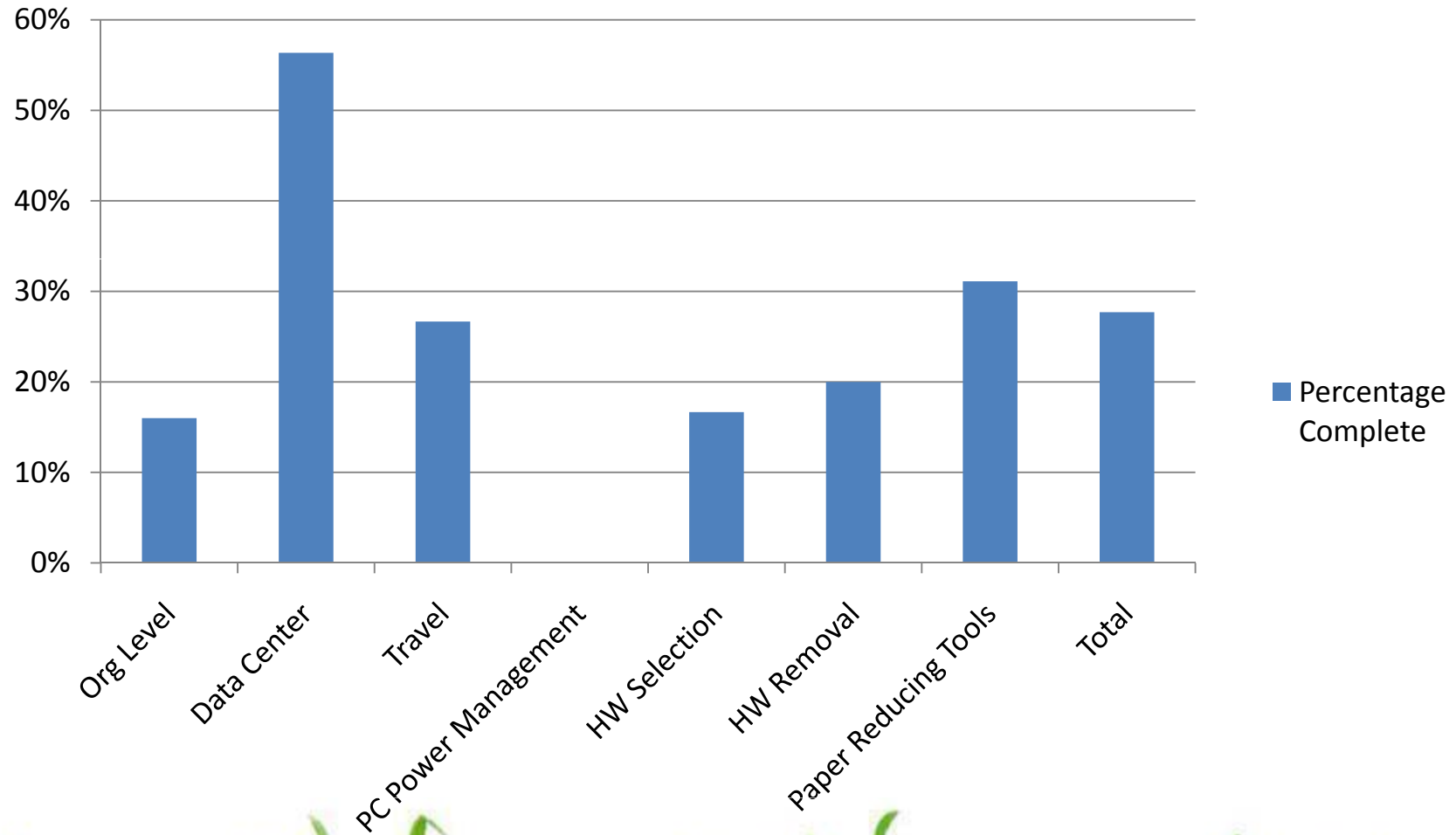
Jump Start your Green Strategy

- Show this assessment to those responsible for sustainability and energy bills
- Do an overall corporate sustainability assessment
- Send a letter to your major suppliers to get them thinking about green.
 - The Softchoice sample letter is attached to this email. It's what we sent to our suppliers, feel free to use it.
- Set goals and publicly announce them
 - Softchoice's: <http://www.softchoice.com/about/sustainable/default.aspx>

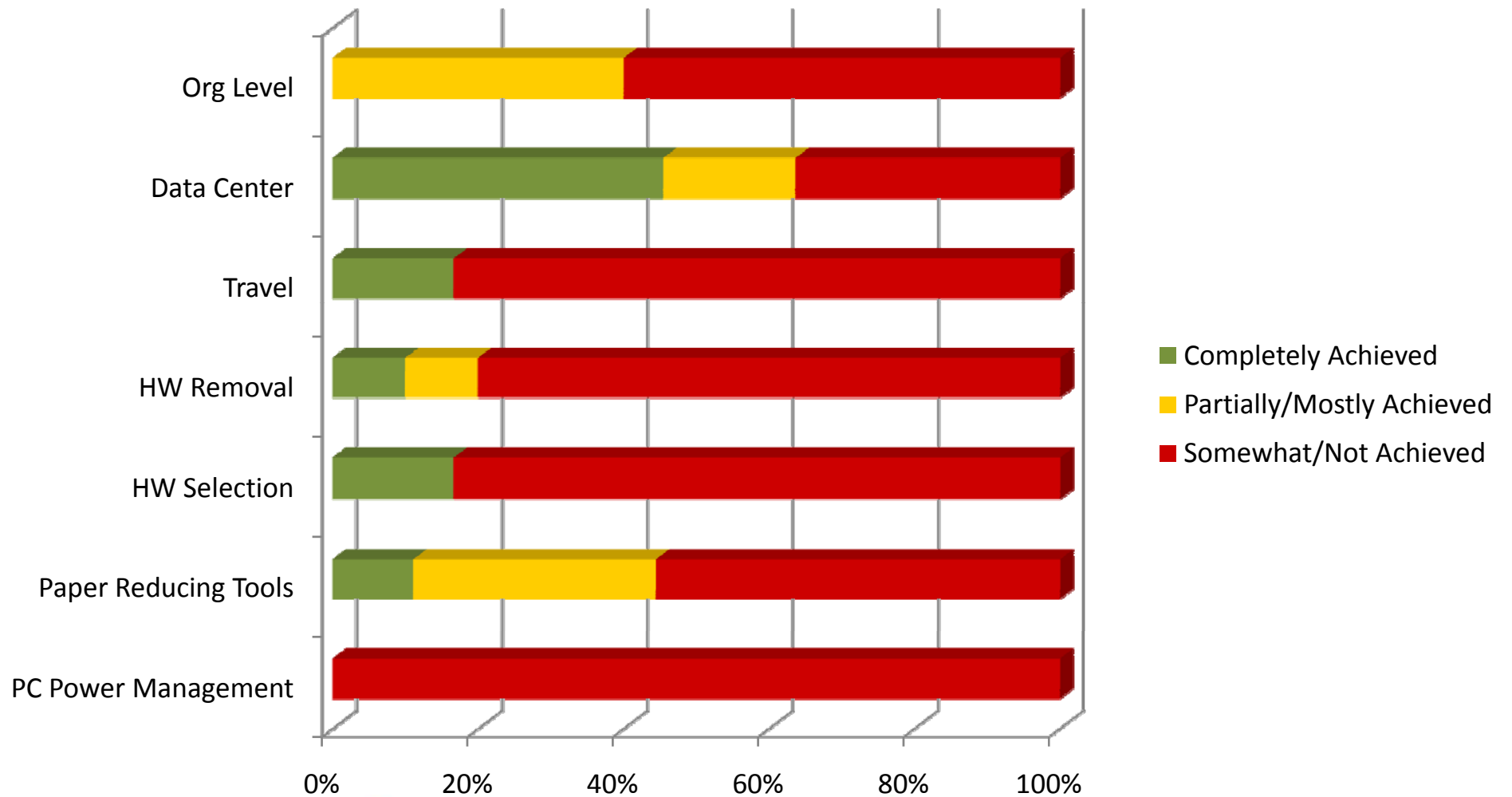


Score Assessment by Potential

Current Score



Achievement Assessment



Assessment Details & Recommendations

- Top Score
 - Data Centre Efficiency
- Opportunities for Improvement
 - Paper-Reducing Technology
 - Travel – Reducing Technology
- Just Getting Started
 - HW Removal
 - HW Selection
 - PC Power Management



Top Score

Data Center Efficiency	Score
IT managers see and analyze all data center bills.	5
IT managers receive incentives or recognition to lower data center bills.	1
An audit/assessment of data center efficiency has been performed (energy, utilization, equipment, etc).	0
A server consolidation and/or virtualization strategy has been implemented to reduce the number of servers required.	5
Storage tiering is utilized to move non-critical data to less energy-demanding storage sites.	5
Air flow under the raised floor (e.g. clustered cables, vented floor tiles) has been maximized.	5
The average age of data center equipment is less than 2 years (i.e. cooling plant, UPS, air conditioners and other equipment)	2
The entire server install base is comprised of high density (1u/2u) servers.	3
Best practices have been implemented for floor layout/design (e.g. hot/cold aisle, supplemental cooling, enclosed rack systems).	5
Software has been implemented to reduce the amount of duplicate data (eg. duplicate emails) to shrink storage requirements	0
Servers have been organized according to specific cooling needs and the entire data center is not kept at the same temperature.	0



Recommendations

- Undergo a more complete data center energy efficiency assessment
 - Softchoice has partners that can do this, or it can be done through manufacturers such as IBM or HP.
- Look at solutions to reduce the amount of storage space needed
 - Many manufacturers have data de-duplication technology
 - Increase virtualization where possible
- Consider increasing the temperature in the data center or using “smart” or “dynamic” cooling to only cool servers that need it.



Resources

- Have attached some whitepapers from the Green Grid which talk about data center efficiency
- Useful sites:
 - <http://www.softchoice.com/about/sustainable/ecotech/datacenter/>
 - <http://www.softchoice.com/about/sustainable/ecotech/datacenter/resources.aspx>



Opportunities for Improvement

Paper-Reducing Technology	Score
Print Management Software has been fully implemented to measure printing on both a user and printer level.	0
Print quotas or bill-back have been set to help reduce or track the amount of printing by department/user/customer.	2
All printers and copiers have the ability to print duplex (double-sided) and are set to duplex as a default.	1
Electronic faxes are used all across the organization (instead of paper faxes).	1
Electronic signatures are widely accepted and utilized.	0
Information is stored electronically wherever possible (e.g. scanners and pdf instead of paper in filing cabinets).	3
All applicable employees edit using electronic documents and are trained to utilize paper-saving collaboration software.	2
Customers of the organization are able to select electronic over paper based processes when possible (e.g. electronic invoicing).	5
Only Forest Stewardship Council (FSC) approved recycled paper is purchased.	0



Recommendations

There are a few simple software programs that can be pretty cost effective and help to reduce some of the paper you consume:

- <http://www.hp.com/go/smartwebprinting> - HP Smart Printing is a free download from their website. It helps for when you print things off internet browsers so that you can remove the ads and other elements that tend to eat up pages of paper, so that you only print exactly what you need.
- Other technologies that helps to delete un-necessary printing are FinePrint: <http://www.fineprint.com/> and GreenPrint www.printgreener.com .These are really basic solutions that help to reduce extra pages from being printed.
- A bigger solution requires software that can actually measure the printing that you do, so that you can analyze the data and figure out where most of the paper waste in your organization comes from. The solution that Softchoice is currently using in our office is Printelligence by Preo Software <http://www.softchoice.com/about/sustain-enable/ecotech/paper/preo.aspx> If you are interested in learning more about this product we can set up a meeting for you with them.



Resources

- <http://www.softchoice.com/about/sustainable/ecotech/paper/resources.aspx>
 - There are many whitepapers and tips on reducing paper use on this site
- <http://www.preosoftware.com/printstudy/overview.html>
 - Free Print Study on your print environment. You will get:
 - Print cost by application
 - Volume by color and mono
 - Annualized print cost
 - Top 10 users based on cost of print
 - Forecasts and ROI



Opportunities for Improvement

Travel-Reducing Technology	Score
Telecommuting (work from home) is encouraged where possible and all the necessary equipment and support is provided.	5
Adequate video and/or web conferencing systems have been implemented that can substitute for any employee's travel.	1
The use of video or web conferencing has been mandated and/or travel budgets have been reduced to force increased usage.	1
Virtual workspaces and online portals are widely utilized to share information across branches and access it remotely (tele-commuting).	1
Instant messaging is utilized across the organization to quickly communicate with employees across locations.	0
Travel management software is utilized to track and report on all business travel expenses, policies, and bookings.	0



Recommendations & Resources

- The cost of video and web conferencing has come down significantly in the last year.
 - HP, Microsoft and Adobe all have some great options
- <http://www.softchoice.com/about/sustainable/ecotech/travel/resources.aspx>
 - Great whitepapers and case studies to help build a business case for video conferencing



Just Getting Started

Hardware Selection (EPEAT & Energy Star)	Score
There is an explicit policy and practice to only purchase EPEAT registered technology where possible.	0
An assessment has been performed of the number or percentage of EPEAT purchases as compared to the whole fleet.	0
A measurement of the positive environmental benefits of EPEAT purchasing has been performed and communicated.	0
Where EPEAT registration is not available Energy Star IT equipment is always given purchasing preference.	0
All hardware purchases are adequately forecasted to ensure shipments are consolidated and come from the closest warehouse.	0
CRT monitors have been completely phased out in favor of LCD or other energy saving technology.	5



Recommendations & Resources

- Search to see if any of your current PCs, laptops and monitors are EPEAT rated
 - Search here: <http://www.softchoice.com/about/sustainable/ecotech/epeat/>
 - Or Softchoice can do a free EPEAT TechCheck to give you an exact count of EPEAT hardware in your environment and a customized environmental benefits report. (sample attached to email)
- Include EPEAT as a requirement in your purchasing policy
 - A sample of a purchasing policy is attached to the email
 - If you decide to include EPEAT in your policy, you can have your company name listed on www.epeat.net
- <http://www.softchoice.com/about/sustainable/ecotech/epeat/resources.aspx>
 - Resources and information on EPEAT



Just Getting Started

SAFE Hardware Removal	Score
All end-of-life IT equipment (e.g. non-usable PCs, laptops, monitors, printers) are securely and environmentally safely removed or recycled.	1
All still valuable IT equipment are donated to local charitable organizations or resold to a reputable refurbisher/remarketer.	1
All technology-related consumables (e.g., printer cartridges, toner) are environmentally safely removed and recycled.	5
All recycling, refurbishing and donation partners have been audited and meet ISO 14001 standards, Federal Government Security/Data-wiping standards (DOD/RCMP) and have Zero Landfill/Domestic recycling policies.	0
During a hardware upgrade the cost of safe recycling or revenue from re-sale of old hardware is calculated in the project budget.	0
The policy regarding end-of-life assets has been communicated to employees in all locations (including remote).	0
There is a permanent on-site ability for employees to safely dispose of small hardware (mouse, keyboard, CDs, cables, phones, cartridges, etc).	3
Proof of destruction is given and archived for all hardware recycled to ensure environmental protection and eliminate liability.	0
Data is securely destroyed through the shredding of hard drives or data erasure via industry standard software.	0
Hardware removal owners are fully aware and compliant in all applicable laws and regulations regarding the disposal of electronic waste.	0

Recommendations & Resources

- Use the Softchoice Criteria when selecting partners for recycling, donation or refurbishing
 - Criteria documents are attached to the email
- If you would like Softchoice to recommend some good recycling companies we can.
- If you would like to keep up to date on new laws coming to Ontario on Electronics recycling you can visit:
 - <http://www.ontarioelectronicstewardship.ca/>
- <http://www.softchoice.com/about/sustainable/ecotech/ewaste/resources.aspx>
 - Resources and tools for SAFE (Secure and Friendly to the Environment) hardware removal



Just Getting Started

PC Power Management	Score
IT managers see and analyze all power utility bills.	0
IT managers receive incentives or recognition to lower all power utility bills.	0
Programs exist to encourage all employees to save energy (e.g. turn off unused monitors).	0
A comprehensive audit/assessment of PC power consumption has been performed.	0
Specialized PC power management software has been fully deployed.	0



Recommendations

- Maximize PC Power Settings in your environment:
 - The Environmental Protection Agency's EZ Wizard helps easily enable and optimize power management settings for your monitor and computer on systems running Windows 2000 or Windows XP.
 - http://www.energystar.gov/index.cfm?c=power_mgt.pr_power_mgt_ez_wiz
 - The Environmental Protection Agency's EZ GPO tool provides Group Policy Objects for centrally configuring power management settings.
 - http://www.energystar.gov/index.cfm?c=power_mgt.pr_power_mgt_ez_gpo



Recommendations

- The PC Power Management tool that Softchoice implemented was PowerSave by Faronics. Here is the information about that Software:
 - Learn more about PC Power Management at the Faronics weekly webinar every Tuesday at 10am PST: <https://faronics.webex.com>
 - Download the free demo today:
<http://www.faronics.com/html/download.asp?software=18,%2016&code=UHGJQ>
- There are also similar PC Power Management solutions from 1e and Scriptlogic too: <http://www.softchoice.com/about/sustainable/ecotech/pcpower/featured.aspx>
- If you implement PC Power Management, you can become a affiliate member of the Climate Savers Initiative and put their logo on your website:
<http://www.climatesaverscomputing.org/act/join/>



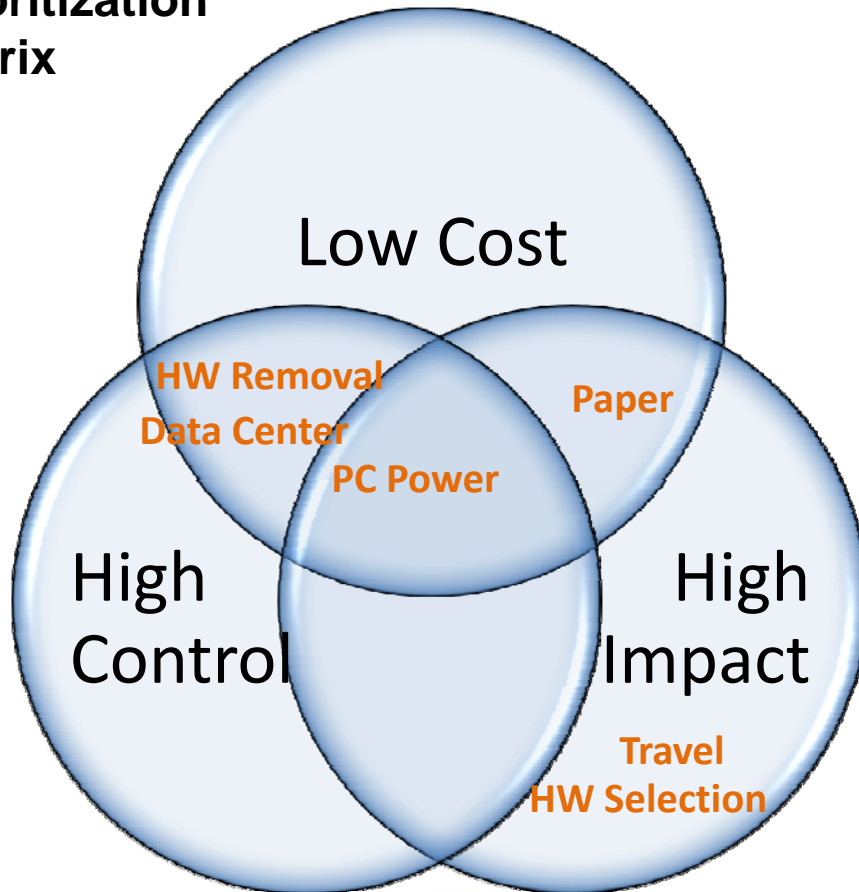
Resources

- More information on PC Power Management (Calculators, Case Studies etc): <http://www.softchoice.com/about/sustainable/ecotech/pcpower/resources.aspx>



Prioritizing the Projects

Prioritization Matrix



Internal Priorities

PC Power Management	1
SAFE Hardware Removal	2
Data Center Efficiency	3
Paper-Reducing	4
Travel-Reducing	5
HW Selection	6