Using Technology to Make Your Non-Profit Greener

Not-for-Profit Leadership Summit IX
May 9, 2011
Doubletree Hotel Tarrytown

How can technology help your organization?

…save the environment
…save money
…work more efficiently

What Does "Greening" Your IT **Really** Mean?

- Greening is a combination of using
  - Software
  - Hardware
  - Internet
  - Practices

to save limited energy, resources and time...

Quick Poll..

Can you define the following..

1. Power Management
2. Virtualization
3. EPEAT
4. SaaS

Why Bother **"Greening"** Your IT?

- Save the Earth
  - ○ decrease energy use/your carbon footprint
- Save Time, Increase Efficiency
  - ○ limit time in car, time spent sending multiple emails, time coordinating projects, time filing, etc.
- Save Money
  - ○ lower travel costs, paper costs, printing fees, etc.

Some **"Green"**Statistics...

- **25%** of global CO2 emitted by ICT
- Some laptops consume 8.9 watts even when turned **OFF**.
- **50% to 70%** of the lifetime energy consumption of a computer is used before it's ever turned on.
- Average PC wastes **nearly half** of the energy it consumes as heat

Green Software...
(supporting Green IT & enabling IT for Green)

- Power Management
  - Cut PC energy use up to 70%, save about $50 - $60 per desktop
  - Improve power management
    - better default setting, idle & active power management
    - Tools for IT administrators, remote management, group policies & settings

Green Hardware....

- Computers & other electronics are the fastest growing & among the least recycled components of the waste stream
- Two million tons of used electronics discarded annually
- Starts with the purchase...
  - Electronic Product Environmental Assessment Tool (EPEAT)

Product Type: ☑ Desktops   ☐ Displays

☐ Integrated Desktop Computers ☐ Notebooks

☐ Thin Clients   ☐ Workstation Desktops

☐ Workstation Notebooks

Product: [   ]

Manufacturer:
To select more than one manufacturer, hold down the "Ctrl" key and click the manufacturer names

Daten Tecnologia Ltda	^
Dell, Inc.	
Ecomnets, Inc.	
EIZO NANAO Corporation	v

Country/Region:
To select more than one country/region, hold down the "Ctrl" key and click the country names

Select a country	^
United States	
Australia	
Austria	v

Rating: ☑ Bronze

☑ Silver

☑ Gold

☑ All Ratings

Product Status: ◉ Active Products Only

○ Active and Archived Products

○ Archived Products Only

Search by Optional Criteria

[Search]   [Reset]

31 Search Results Found

Options

[X] Export Product Info to EXCEL

[X] Export Product and Criteria Info to EXCEL

Search Again

**NOTE: Please use the Search Again button ab
return to the starting point of your search. Us
Back button may cause system errors and is
recommended.**

Compare Products

Compare	Product	Country	Product Category	Rating	Opt. Pts	Energy Star Version	Monitor Type	Monitor Size	Registration Date	Status	E
☐	DELL OptiPlex 960 Mini-Tower	United States	Desktops	Gold	19	5.0			10/7/2008	Active	
☐	DELL OptiPlex 960 Desktop	United States	Desktops	Gold	19	5.0			10/7/2008	Active	
☐	DELL OptiPlex 960 Small Form Factor	United States	Desktops	Gold	19	5.0			10/7/2008	Active	
☐	DELL OptiPlex 360 Desktop	United States	Desktops	Gold	19	5.0			10/13/2008	Active	
☐	DELL OptiPlex XE DT/D01D001	United States	Desktops	Gold	19	5.0			2/3/2010	Active	F
☐	DELL OptiPlex XE SFF/D01S001	United States	Desktops	Gold	19	5.0			2/3/2010	Active	F
☐	DELL Studio Hybrid	United States	Desktops	Gold	18	5.0			8/20/2008	Active	

Virtualization & **"Greening"**

- Two main types
  - Desktops
  - Server
- Benefits
  - reduced capital expenditures
  - fewer machines requiring power to run
  - fewer machines built, transported & disposed of

The **Green** Cloud...
(is it really?)

- Potential Benefits...
  - Higher server utilization
  - data centers optimized for energy efficiency
  - potentially greener sources of energy
  - avoid additional hardware
- Case study research still ongoing

What About **"Green"** Practices?

- Power Management Practices & Policies
- Travel reduction
    - remote desktops, SaaS, VPN
- Paperless processes
- Smart buildings
- Online faxing
- Working with teams

"Greening" Teams...

- Web Conferencing
  - Goto Meeting, WebEx, ReadyTalk
- File Sharing
  - Dropbox, sharepoint, GoogleDocs
- Comphrehensive
  - Hyperoffice, Zoho
- Extranets/Project Collaboration
  - basecamp

How Do We Start **"Greening"** Our IT?

- Power Management Settings
- Free Resources
  - Verdiem's Edison
- Collaboration Tools
  - Online Meetings (Skype, WebEx, ReadyTalk)
  - File sharing (Google Docs, Box.net)
  - Hosted Apps (Zoho, Google Apps)
  - Project Collaboration (Basecamp)
- Green Hosting

"Green" Wrap Up...

- Going green can often save you money (many people think it's expensive, can work with what you have first.)
- Changing the situation is easier than changing behaviors
- Use greener software, buy greener hardware and set defaults to automatically stop waste, rather than asking your staff to change.
- Look at steps: EASY - implement desktop power management practices; MODERATE - look at ways to reduce travel through remote and mobile access to IT; LONG TERM - next time you upgrade servers replace them with cloud applications or consolidate servers using virtualization software
- Talk with board, staff, volunteer and/or consultants. Decide what steps are best for you to take first
- Share these resources with other nonprofits!

"Greening" Resources & Websites

- Slides & information taken from www.techsoup.org/greentech
  (go there now for resources, articles, tips, tools, products, etc.)
- www.eapeat.net
- www.climatesaverscomputing.org
- www.verdiem.com/edison
  (an easy-to-use energy-monitoring application, absolutely free)
- www.epa.gov/aboutepa/states/ny.html
- www.federalelectronicschallenge.net
- www.energystar.gov
- www.printgreener.com
- http://fineprint.com/

"Greening" Resources & Websites

- Safe Hardware Disposal
  - www.computertakeback.com/corporate/who_takes_back.htm
  - www.electronicstakeback.com/recycling/find_a_responsible_recycler.htm
- Responsible Recyclers
  - http://search.earth911.com/?what=computer+recycling
  - http://e-stewards.org/fina-a-recycler/

Case Study

Virtual classrooms
OS virtualization

Pace University Computer Learning Center

Challenge:

Hands-on Project Management class offered two evenings per week for 11 weeks; traditional instructor-led model. Not appropriate for online course, as communication and interaction are key to success.

- Desire to green the course without lowering its present quality
- Adult students value convenience; they have many demands upon their time

Solution:

- Hybrid course.
- Once per week traditional instructor-led.
- Second evening synchronous online class using Webex platform and Blackboard virtual classroom.

- Traditional classroom allows students to know each other and instructors by sight.
- Real relationships and ease of interaction can transfer into the virtual sessions.
- Students appreciate convenience of having to attend class at Pace only once per week. They agree that the team projects are easier since they all get to know each other well.

·   Savings (based on class of 10 plus instructor)

o   Time: 2 hours each week for 11 weeks: 2*11*11 = 242 hours

o   Gas: 1.5 gallons per student per week: 1.5 * $4 * 11 * 11 = $726

o   Parking: $24: $24 * 11 * 10 = $2904

o   Classroom space – 1 classroom, for 11 evenings

o   Convenience, wear-and-tear, greater efficiency

Virtualization
Virtual is not free

Issue : Training facility needs to provide computer environments based on wide range of operating systems and applications in limited lab space.

Solution : Desktop Virtualization

Concerns : Costs exceed gains

Myths, Traps and Reality
Lessons Learned

- Technology management

- Short term costs vs.long term savings

- New expenses

- Complexity

Path to successful implementation

- Think beyond hardware and energy costs

- Temper expectations based on reality vs. myths

- Plan Plan Plan

Case Study

Web-based boiler controls
Web-based building security
Web-based human resources

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Building Communities. Changing Lives.

Smart Building Controls

Traditional heat timers
- Manual settings
- Work off of outside temperature

New web-based controls
- Can be controlled from anywhere via internet
- Use outside temperature
- Use inside temperature in variety of apts

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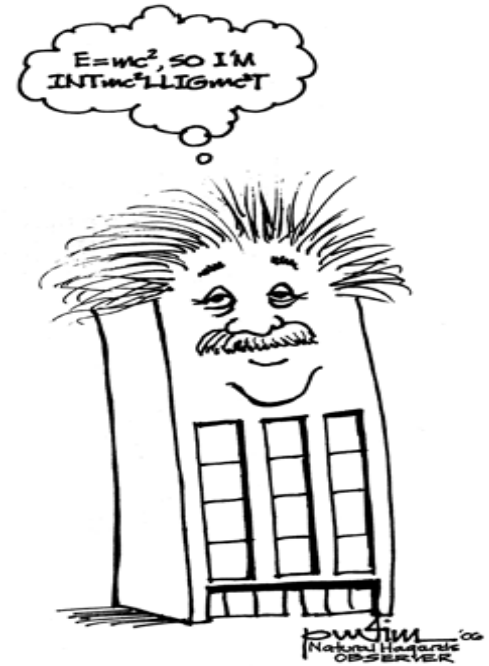
Smart Building Controls

Advantages

Takes control out of hands of on-site super

Heat level in building can be monitored, adjusted remotely by managers

Allows remote users to print reports re
        Boiler temperature
        Apartment temperature
        Domestic hot water temperature
        Etc.

<u>Can result in significant fuel savings</u>!

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Video Surveillance

Goal: Maintain Safety and Security of our Buildings

One Tool: Video security systems with remote monitoring

Enables 1 staff member to monitor 16 buildings in 3 cities

We used to have to send staff to each building to "see" what was going on

Web-based video monitoring saved payroll, travel

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Video Surveillance

As technology progressed:

Started with Video Cassette Recorders monitoring one location

Moved to Digital Video Recorders with hard drives and DVD drives connected to DSL lines

Now using IP cameras connected to a PC connected to DSL lines. Recording is motion-activated to save storage.

Can remotely search back in time, make recordings

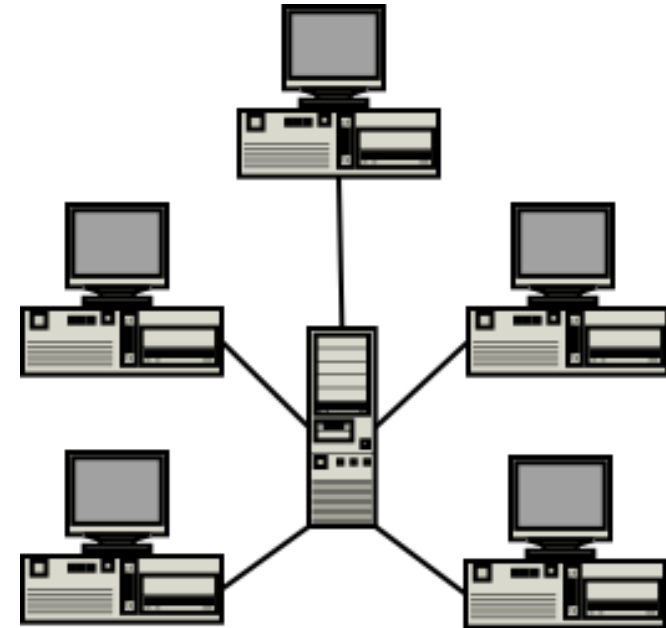# Human Resources Software

Old Model:

Purchase payroll and HR software

Install on a server.

Network PCs and install "client" on each to access server.

Purchase tape drives, tapes to perform daily backups.

Take tapes home ("off-site") nightly.

Pay for support and install software updates as needed.

Human Resources Software

New Model:

Faced with replacing a 6-year-old server, switching to "cloud"
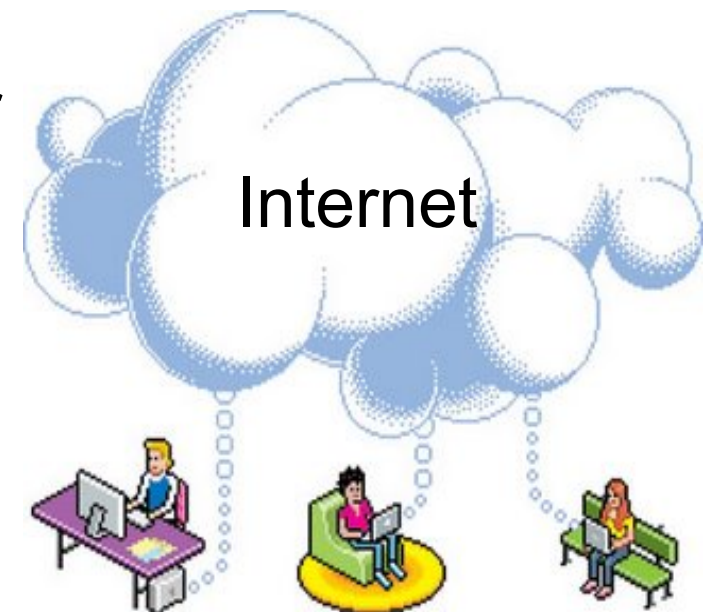
Application hosted on provider's server

Can be accessed from anywhere

Enables work from home.

Enables employee self-service

Costs less (no server, no software to buy)

Focus now is on adequacy of Internet connection, security

Internet

Case Study

Hosted email:
Exchange

About us...

- Children's advocacy agency established in 1914

- Work with government, service providers, and other stakeholders to make sure that children's needs are met.

- Effective Communication is a MUST with us.

Before

- E-mail accessed through POP accounts.
  - Couldn't utilize all of Outlook
    - Ex. Out of Office Assistant
  - No sharing of calendars
  - No sharing of contacts
    - All five staff members had to individually update a contact if the contact moved or changed numbers

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Attempted Solution

- Got licenses for Exchange 2003 through TechSoup

- Installation was "successful" but consultant couldn't get the sharing component to work

- Proposed solutions to problems involved loss of data and more time, investment, and training

The straw

Luck

- Worst case scenario
  - Losing our server (although data was being backed up off-site and on)
  - Losing all five computers and our e-mails.

Why not Google Apps?

- Ability to share contacts was limited.
- Uncomfortable with product support
- Vendor provided assistance with conversion

The sticking point –
The cost of Microsoft Exchange
($10 per user)

Cons

- Had to add global contacts manually onto the web interface.
- Syncing to other devices
- Certain staff members had to get accustomed to the notion of limits and archiving.

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Pros

- Incentive for staff to create personal e-mail accounts.
- Ability to share
- Ability to
  - View calendar online
  - Conduct conferences on the Web
  - Share documents
- Spam Filtering

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Next Steps

- Should we migrate to "cloud computing" to address our aging server issue?
  - No longer have to purchase hardware
  - No longer have to purchase extra hard drives for onsite backup

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Case Study

Hosted email: Google Apps

About Us ...

- health center providing free primary care to low-income uninsured residents of Bergen County
- young organization - operational November 2009
- started with only 2 staff, currently 10 staff

Decision Factors

- no steady revenue stream (entirely reliant on donations)
  - on-going costs needed to be minimal
- no dedicated technology staff
  - easy to administer vs full functionality
- limited technology comfort level for most staff
  - not much interest in shared contacts/ calendars

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What You Get ...

- easy to administer; no cost
- sign up using your own domain name
  user@yourdomain.com vs user@gmail.com
- up to 200 users (can request more)
- 25 GB of email storage per user
- Outlook/Blackberry interoperability
- shared personal calendars
  invitations; reminders; free/busy settings; choice of privacy settings
- shared contacts (sort of)
- other collaboration apps

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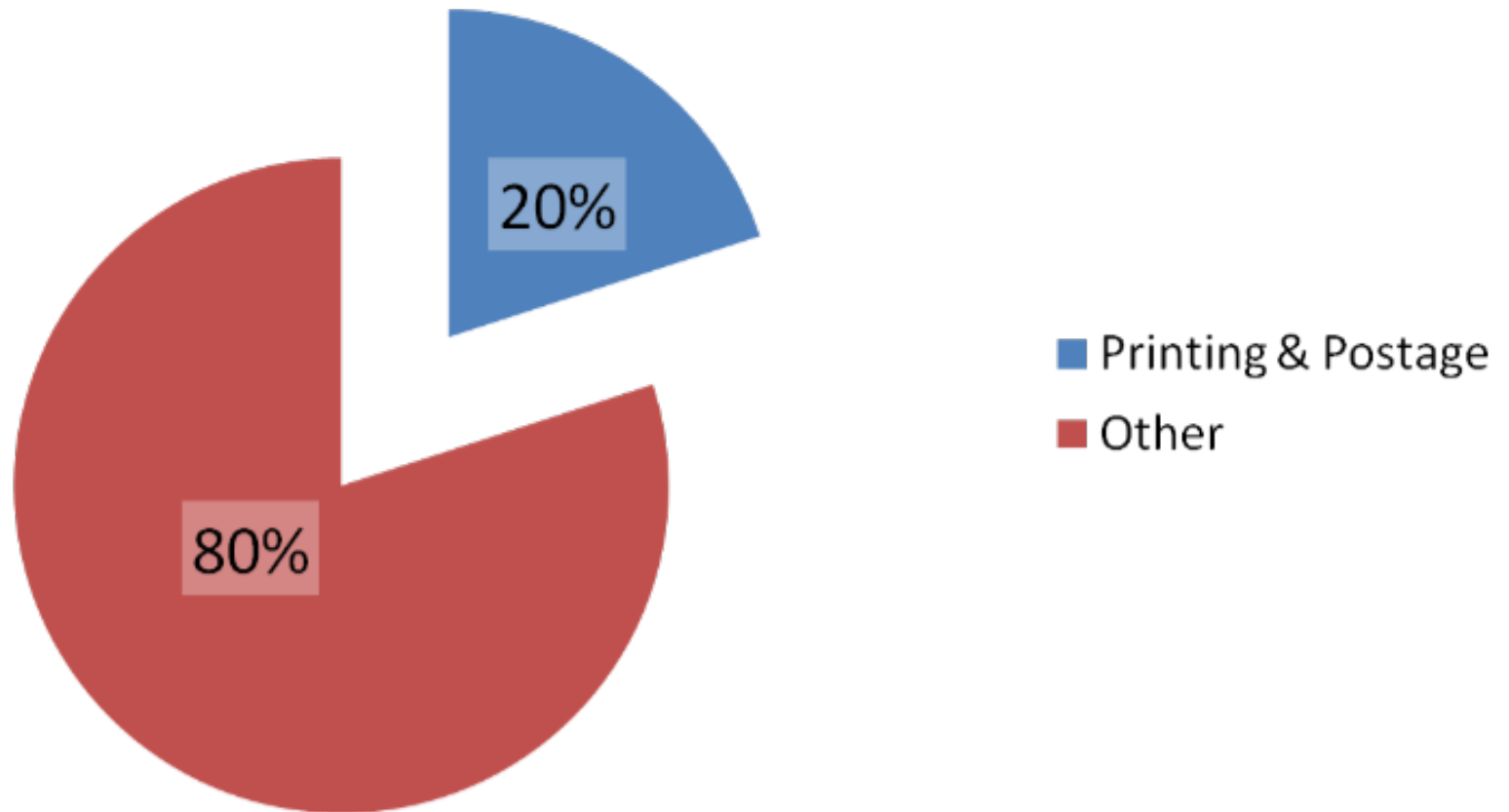NOT-FOR-PROFIT
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Case Study

Online document management
Online communication

About the club…

- At 2008, over 1,000 members.
- Holds annual Golden Apple Ride. Recently awarded 501(c)(3) status
- Involved in bike advocacy efforts throughout the region
- Monthly newsletter sent via first class postage

The Dilemma

The 2008 Budget

Analysis

- Annual Membership was $20/yr.
- Members who wanted a printed newsletter paid an extra $5/yr.
- The cost of print and postage to deliver a newsletter to one member was $31/yr.

ALL members were paying for a printed newsletter, even if they didn't want it.

What we got…

- Extra money went towards club events and advocacy efforts.

- Awarded Bike Club of the Year by the League of American Bicyclists.

Questions?

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To access this presentation
and other resources, visit us at:

www.wnptc.org