WHEN IS THE RIGHT TIME TO RETIRE . . .

your IT assets?

PDS Technology Show
Milwaukee, WI
October 22, 2015

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Cascade Asset Management

-MART
WAL-MART
CHRISTY
We Work For You
PEOPLE GREETER
THANKS For STOPPING BY
I'M A WAL-MART SHAREHOLDER

Topics

- Optimize value of an asset during its life
  - While in use, and when it's time to retire
  - Calculate the best time to retire IT assets
- Selecting good retirement options
  - Promote organization's values
  - Prevent these assets from becoming a liability
  - Generating a return on your asset investment

Retirement Goals

Happy

- Positive impact
- Enjoyable experience

Healthy

- Lots of uptime
- Productive

Wealthy

- Positive ROI
- Wise - not wasteful

Align Goals

Make retirement great

What goes into the cost of a PC?

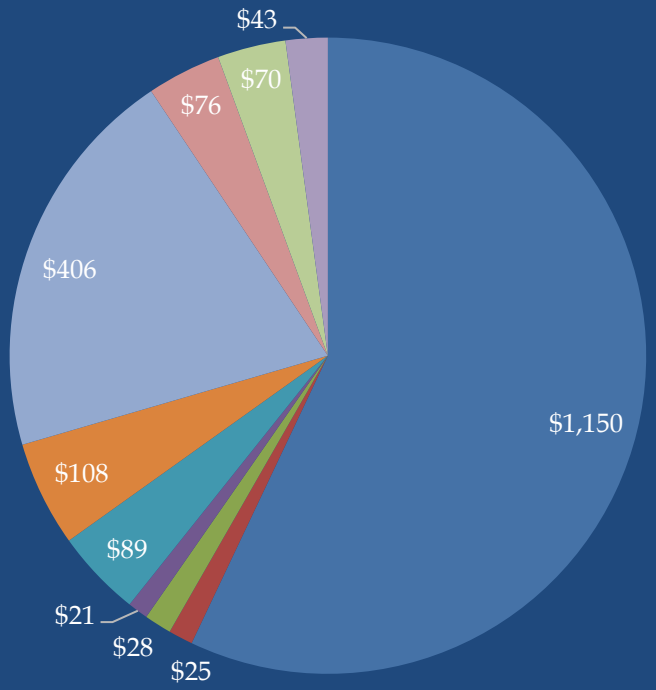
- **Total Cost of Ownership** is a method for the systematic accounting of all costs (direct & indirect) related to IT investments

- The initial purchase price is relatively small part of total cost or owning and operating IT products.
  - "Locked and Well-Managed Desktop": $3,310 TCO
    - 27% hardware/software, 72% operations, 1% disposal (Gartner, 2010)

Examples of Costs

Life cycle	Costs
Acquisition & Procurement	• Hardware purchase or lease, including all accessories • Software licenses • Admin costs (bid specs, contracts, tracking purchases, delivery, installation)
Operations & Maintenance	• IT and personnel training • IT support such as network and software management, help desk • Internet, energy, furniture and floor space costs • Software & hardware upgrades & related staff downtime
Disposition costs	• Admin costs (asset management, inventory tracking, contract services) • Sanitizing data • Storing, shipping and disposition costs

Laptop TCO, 4 year refresh cycle



- Acquisition Cost
- Training
- PC Engineering
- PC Deployment
- Software and Patch Deployment
- Help Desk
- Deskside Support
- Out of Warranty Repair
- Additional Upgrades & Peripherals
- Retrieval and Disposal Costs

TCO = $2,016

"Using TCO to Determine PC Upgrade Cycles,"
Mahvi & Zarfaty, 2009

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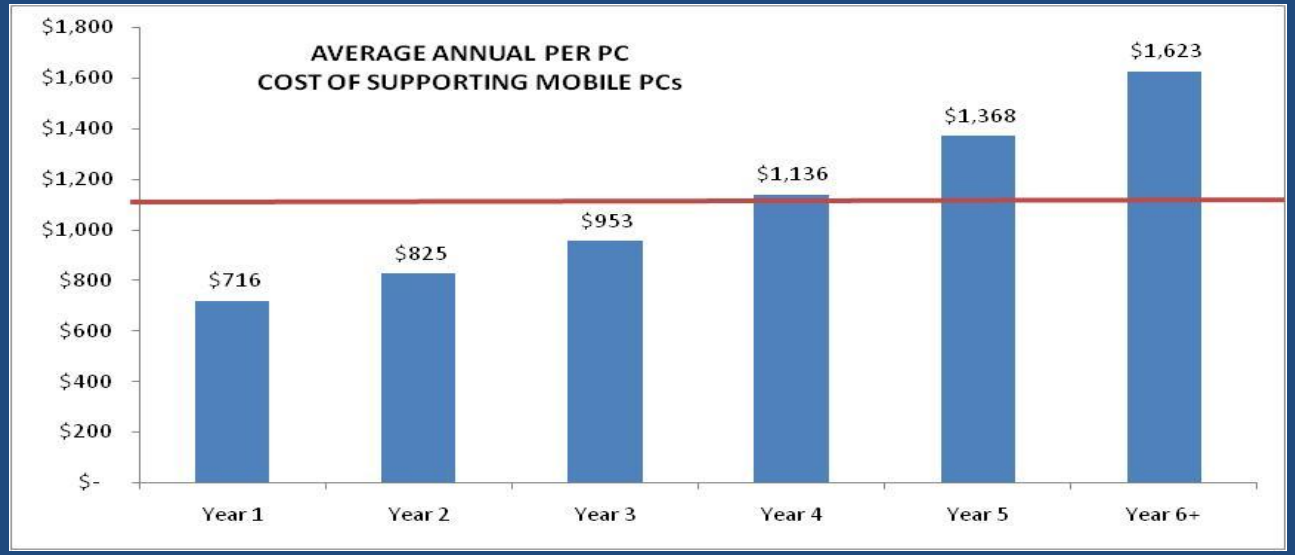
PC support costs grow every year



Mobile PCs in Year 4 experience a 59% increase over year 1 support costs

Cost Drivers

- Updating PCs
- PC Diagnosis and Repair
- Isolate and Recover Infected PCs
- Hard Disk Failures

Source: Wipro Consulting Product Strategy and Architecture Practice primary research with 100 US and European companies, March 2009

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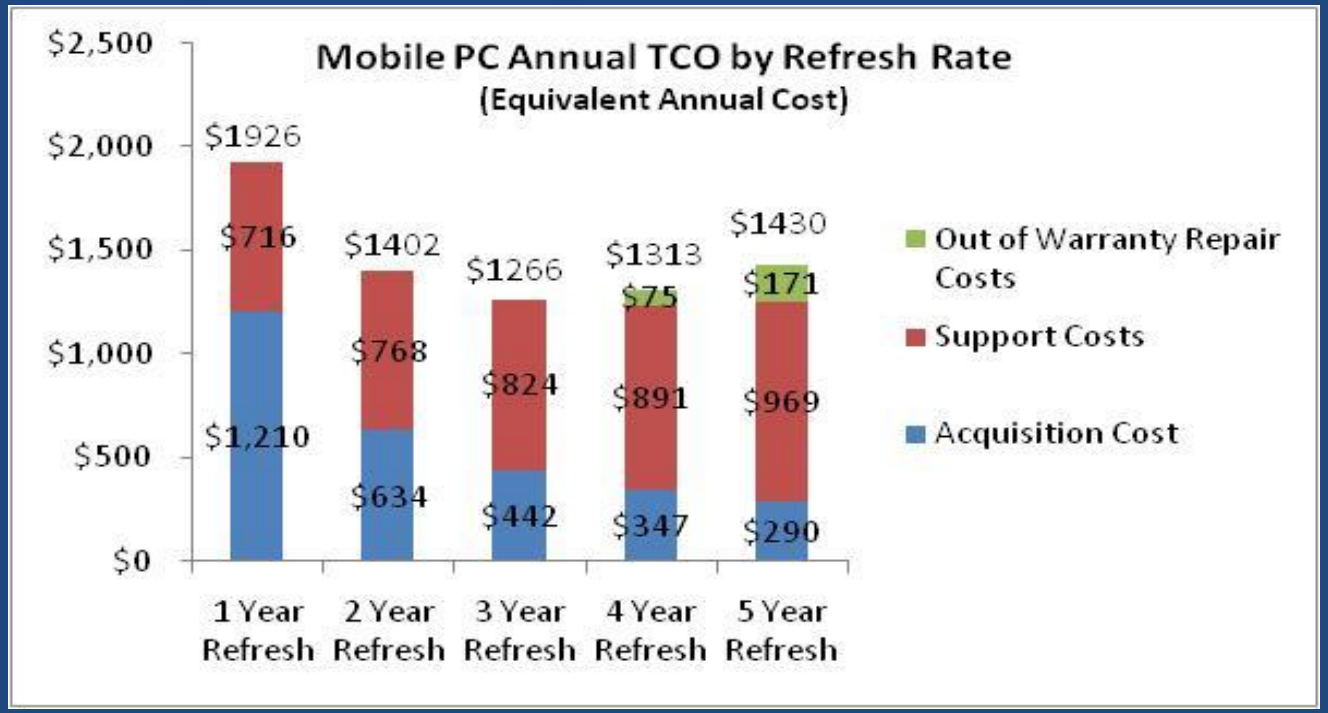
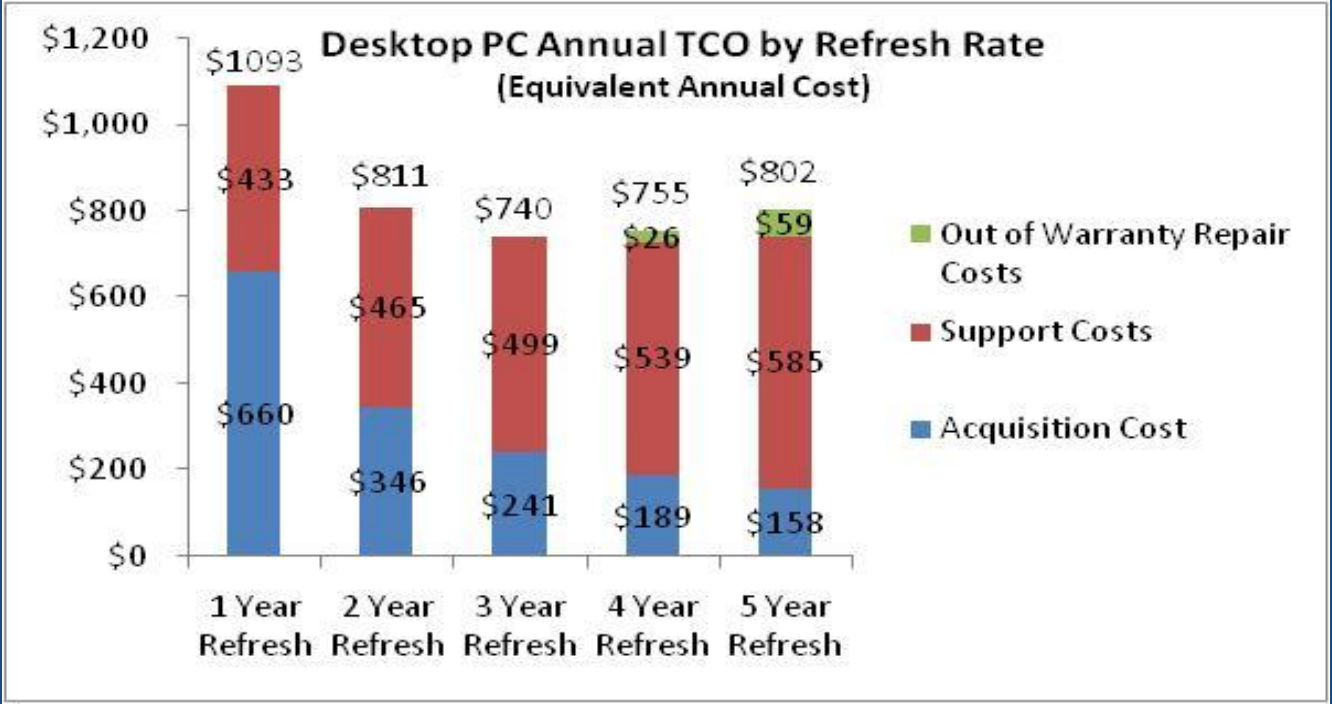
3 year is optimal refresh for laptops



The Equivalent Annual Cost of owning a Mobile PC is lowest for a 3-year lifecycle – indicating that a 3-year refresh is the optimal refresh option for Mobile PCs

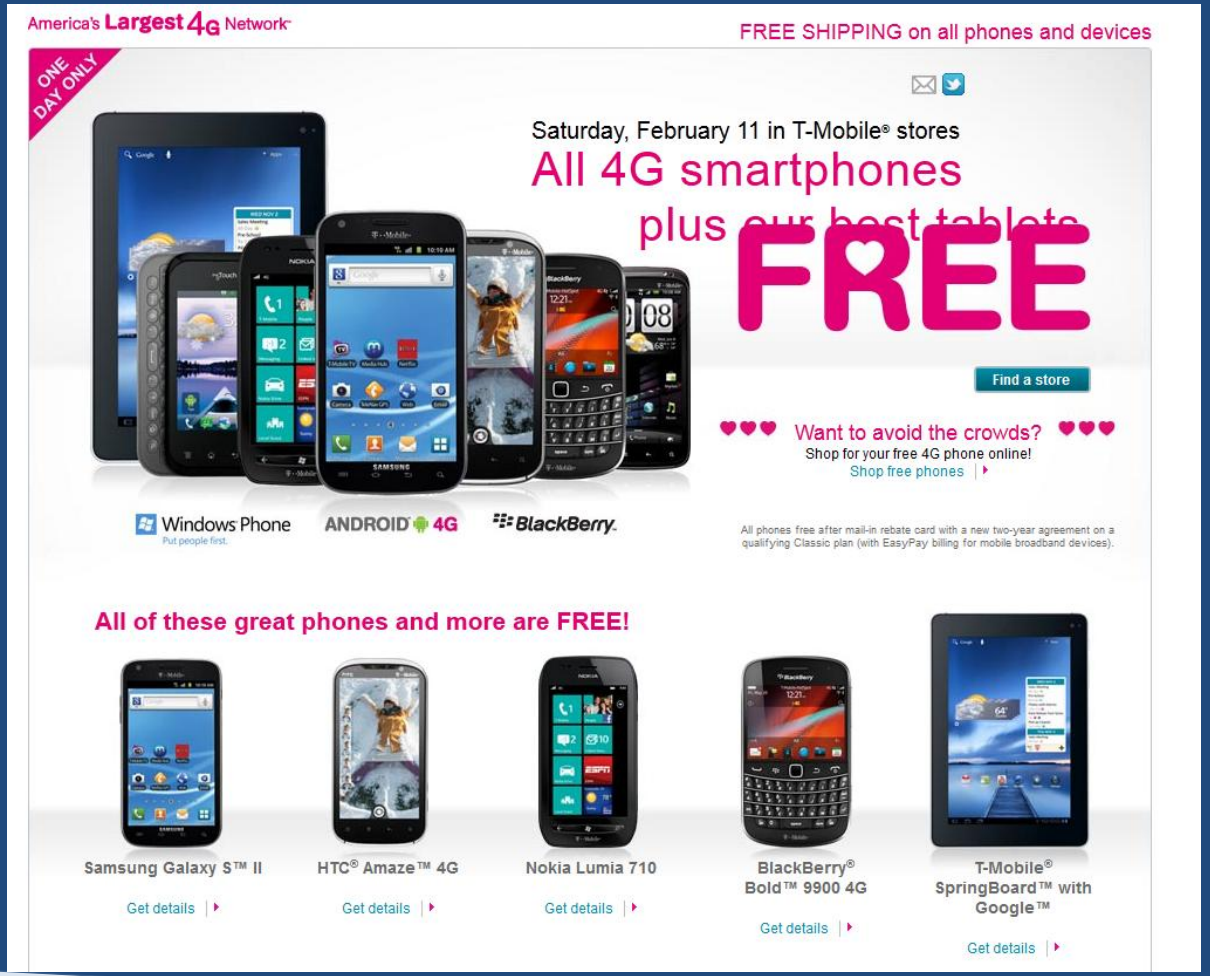
Source: Wipro Consulting Product Strategy and Architecture Practice primary research with 100 US and European companies, March 2009

Desktops also best at 3 year refresh



The Equivalent Annual Cost of owning a Desktop PC is lowest for a 3-year lifecycle – indicating that a 3-year refresh is the optimal refresh option for Desktop PCs

Source: Wipro Consulting Product Strategy and Architecture Practice primary research with 100 US and European companies, March 2009


America's Largest 4G Network
FREE SHIPPING on all phones and devices
ONE DAY ONLY
Saturday, February 11 in T-Mobile® stores
All 4G smartphones
plus our best tablets
FREE
Find a store
Want to avoid the crowds?
Shop for your free 4G phone online!
Shop free phones
Windows Phone
Put people first.
ANDROID 4G
BlackBerry
All phones free after mail-in rebate card with a new two-year agreement on a qualifying Classic plan (with EasyPay billing for mobile broadband devices).
All of these great phones and more are FREE!
Samsung Galaxy S™ II
Get details
HTC® Amaze™ 4G
Get details
Nokia Lumia 710
Get details
BlackBerry® Bold™ 9900 4G
Get details
T-Mobile® SpringBoard™ with Google™
Get details

Smart phones and tablets

Upfront and contract costs of smart phones –

subsidized by contract subscription

Does not include support costs!

iPhone 6S, 64GB	AT&T	Verizon	Unlocked
Upfront cost of phone	$225	$0.00	$749
Phone installment costs (over 2 years)	$450	$750	$0.00
Activation fee	$45	$0.00	$20 (SIMcard)
Monthly smartphone access charges (over 2 years)	$960	$480	$480
2 year contract costs (15/18GB data, unlimited talk/text)	$2,400	$2,400	$1,920
Total 2 year costs	**$4,080**	**$3,630**	**$3,169**

TCO of smartphones

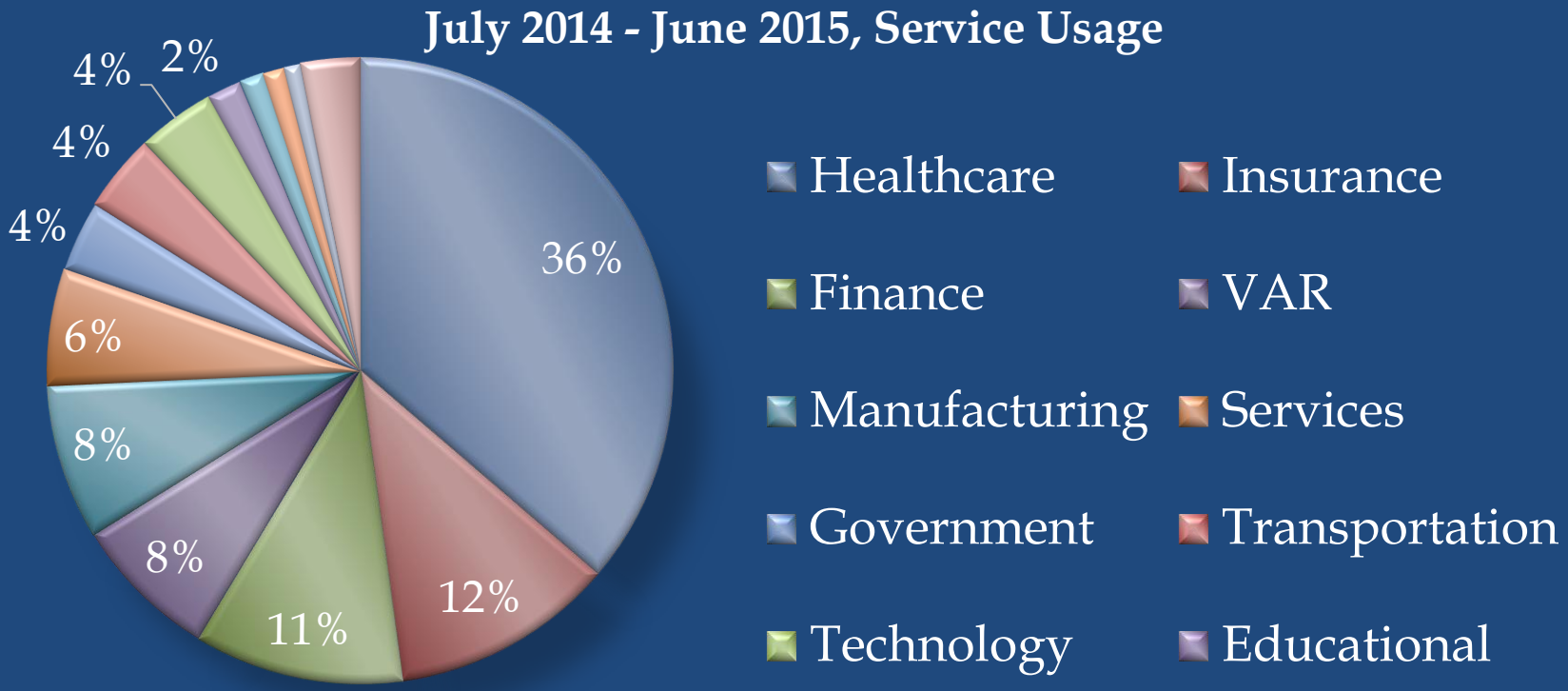
- 43% of annual costs are related to "HR issues"
  - Mobile device management policy & training
  - Help desk assistance
  - Security management
- $1,913.90 Equivalent Annual Cost
  - Hardware = $252.10 (13%)
  - Carrier charges = $840.00 (44%)
  - Human resource costs = $821.80 (43%)

Source: Gartner, Total Cost of Ownership of Mobile Devices: 2012 Update

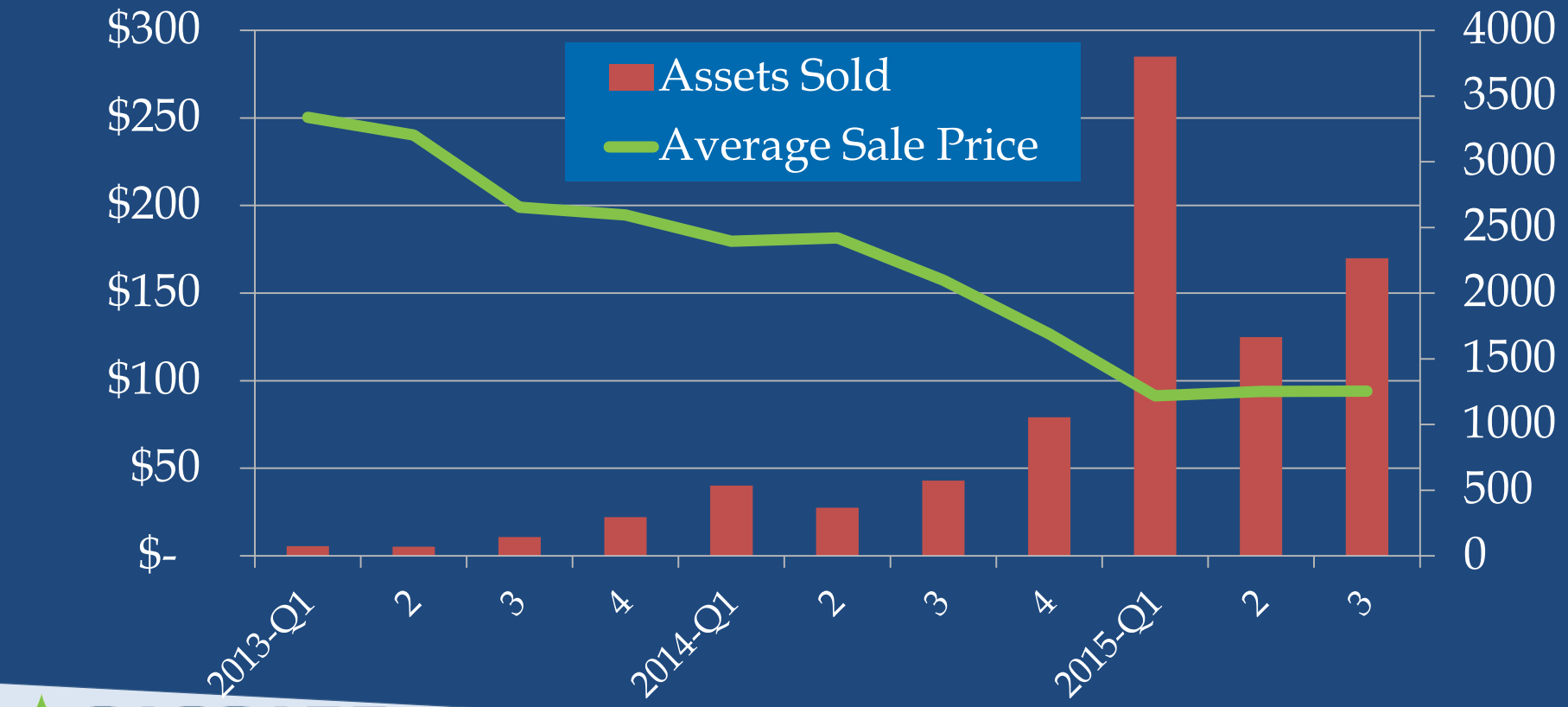
What are the values of retired IT assets?

- Cascade sales reviewed: Q1, 2013 – Q3, 2015
- Desktops, Laptops, Smart Phones
  - Tested to perform to manufacturer specs
  - Some cosmetic cleaning and repair
  - No Operation Systems (or restored to factory settings)
- >74,000 desktops and >34,000 laptops sold
  - Processor Architecture (dual core, i3, i5, i7, Xeon)
  - Smartphone model and capacity

Cascade Customer breakdown



Resale Values from Laptops with i5 Processors



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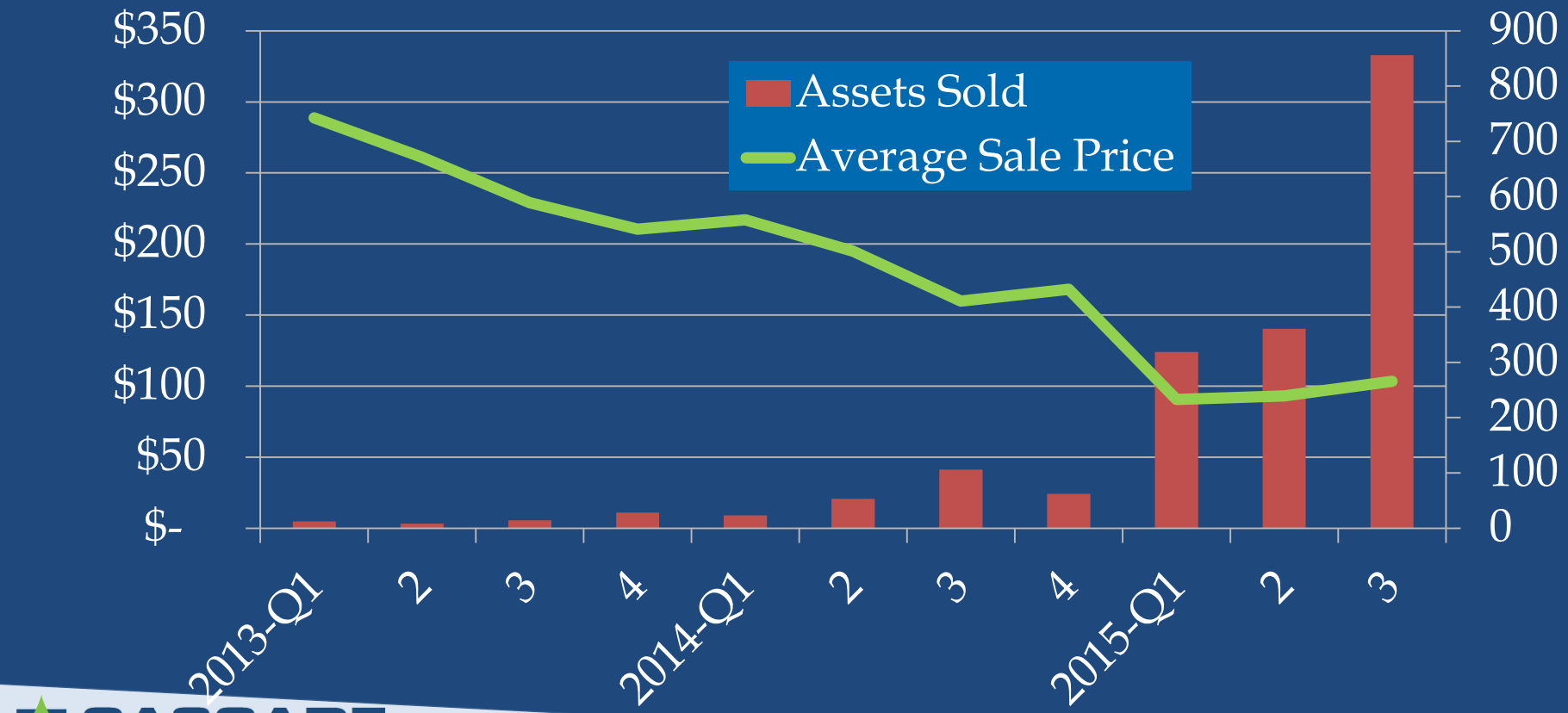
Resale Values from Desktops with i5 Processors



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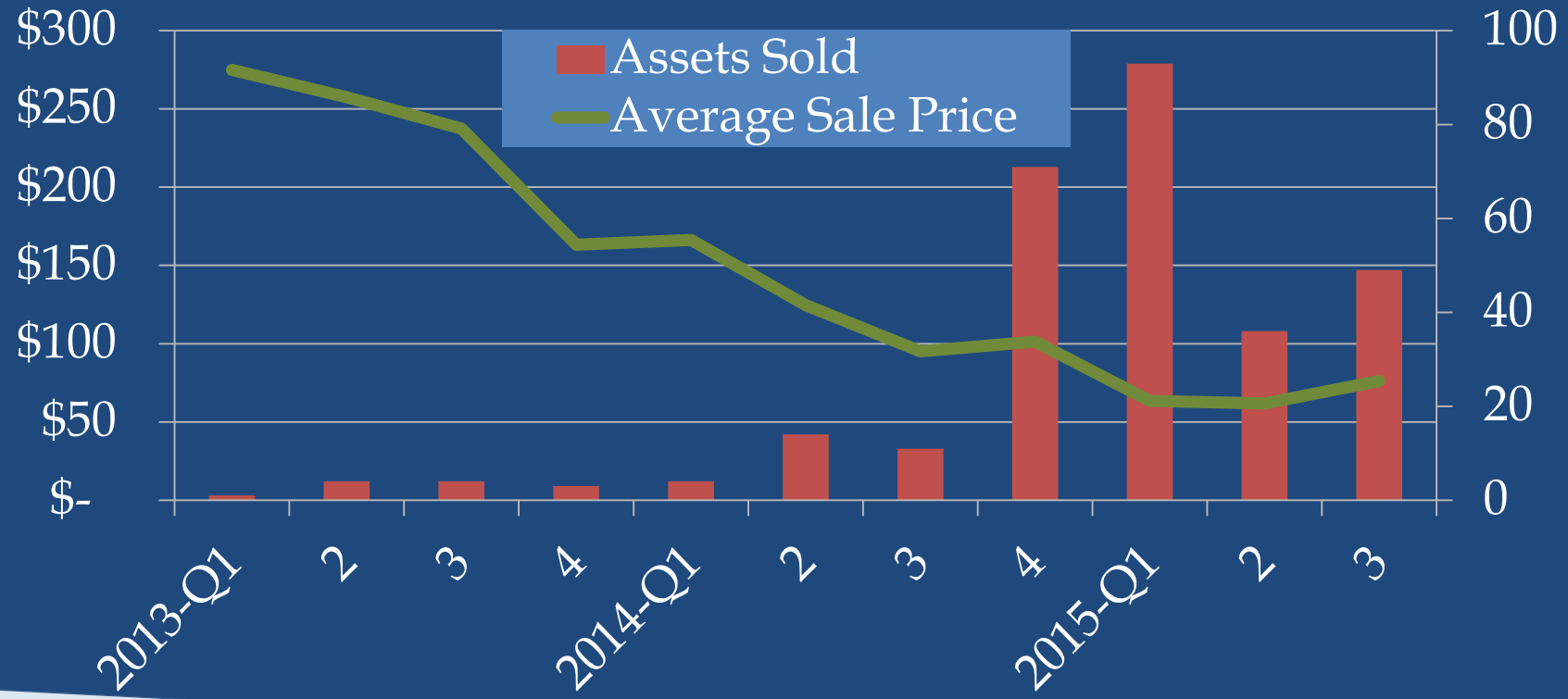
Resale Values of iPhone 4S (16GB)

Initially released
September 2011
for $649



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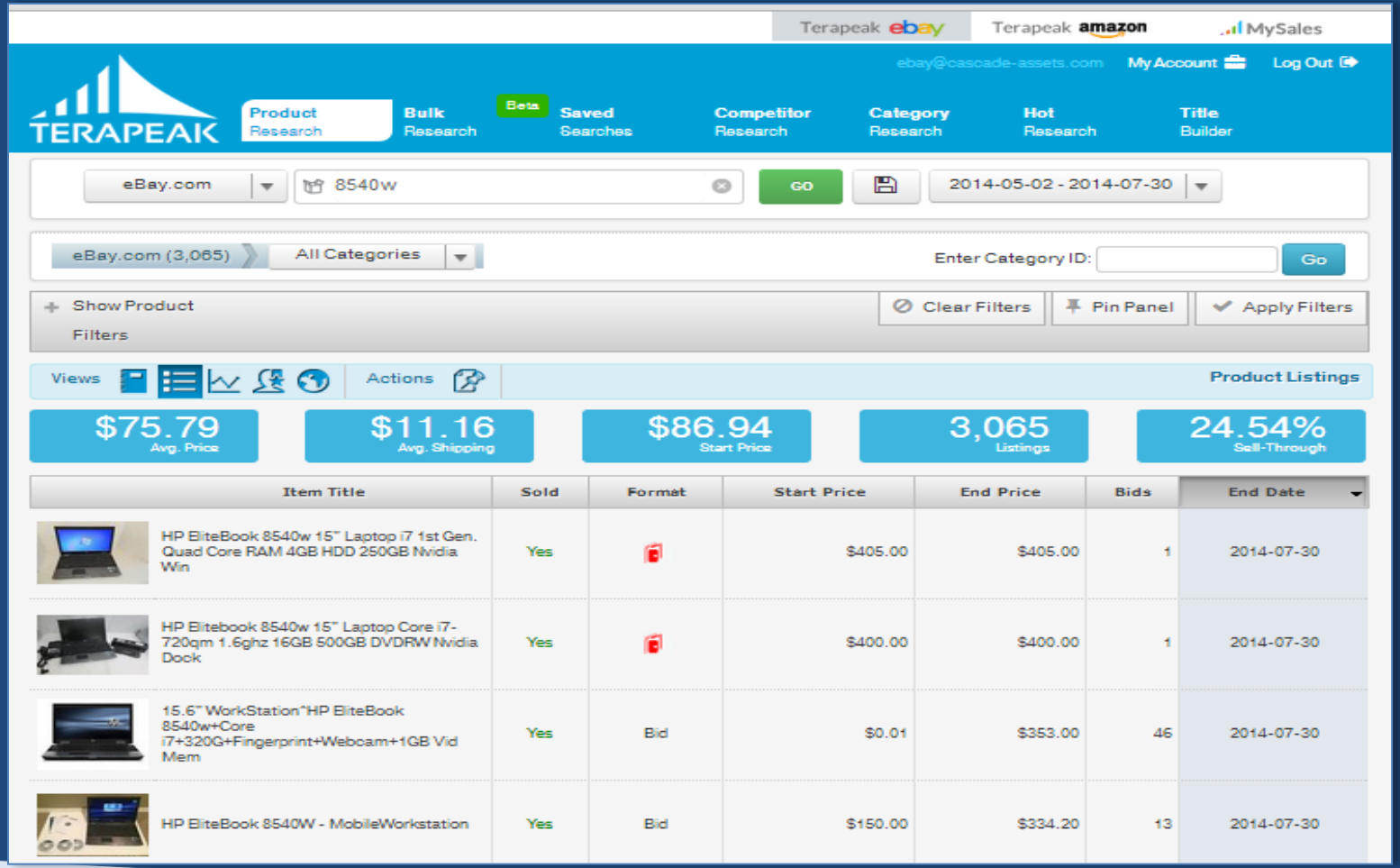
How do these values compare?

TERAPEAK

Archives historical pricing on Amazon and eBay. Track sell through rates and final selling prices (not just listing prices.)

UsedPrice.com™
The Orion Blue Book Online

Prices from nationwide surveys of dealers of used products. Only consider items sold within 30 days of listing. Grade product as "Used Retail" *(what it sells for at a shop)* and "Trade in Mint/Average" *(what you would sell the item for at a pawn store.)*



Cascade "sells" at retail price and "rebates" clients at trade-in price *(generally)*

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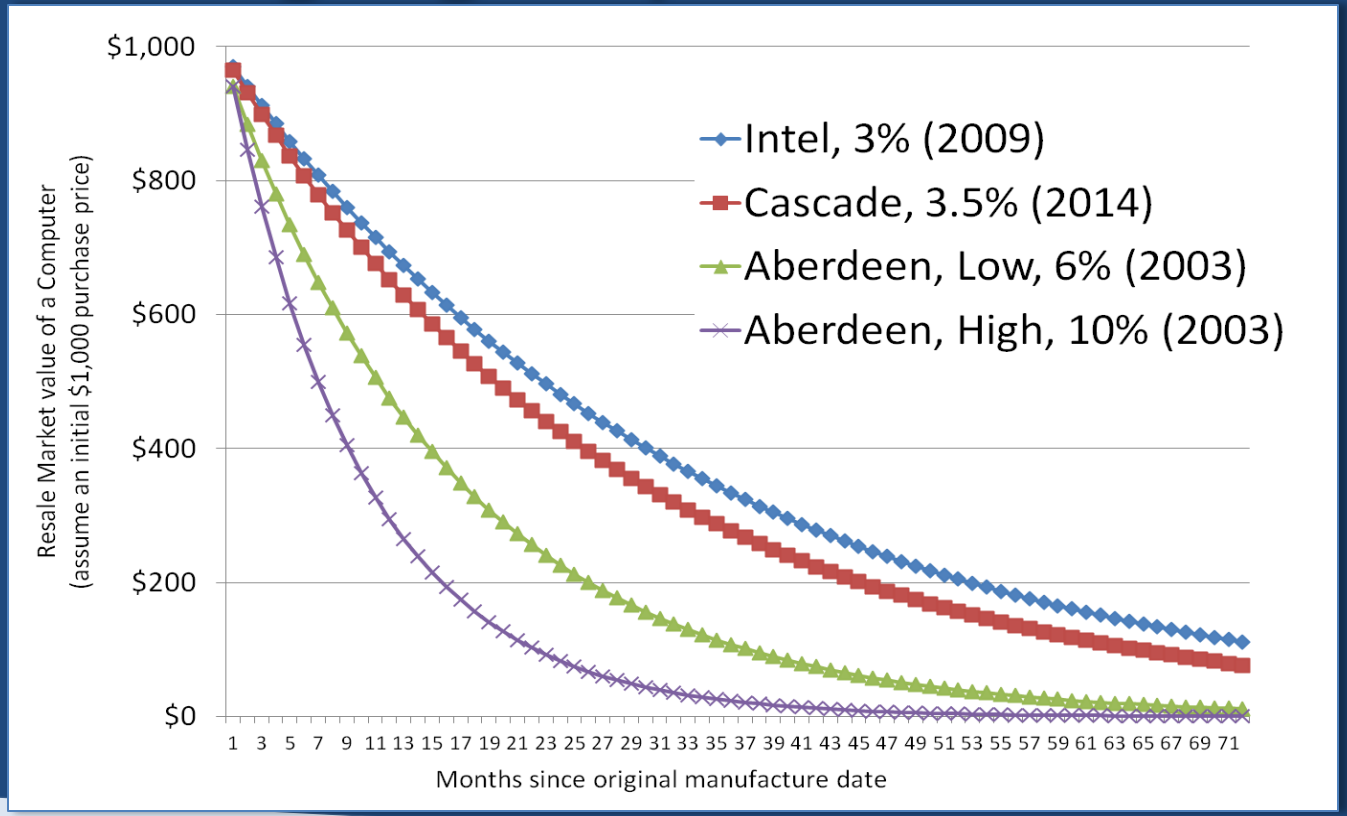
Changing depreciation rates



2015 Cascade rates:

Desktops: 3.4%

Laptops: 2.9%

iPhones: 3.8%

Making Resale Data Useful in Forecasting

How can we predict what future values will be for equipment we try to resell?

TCO modeling tool

Upfront Costs
- Hardware/Software
- Training
- PC Engineering (Build)
- Software and Patch Deployment

Ongoing Maintenance Costs
- Help Desk Support
- Desk Side Support
- Out of Warranty Repairs (if necessary)
- IT Asset Management

Retirement Activities
- Retrieval and Decommissioning Costs
- Disposition Costs (Logistics)
- Recovery Revenue

Other Variables
- Refresh Cycle
- Labor Cost Adjustments over time
- Asset Depreciation Rates
- Warranty Periods

Consistent refresh = lower ITAM costs

- By retiring equipment on a consistent basis
  - Reduce storage costs
  - Reduce maintenance costs from supporting old and broken technology
  - Reduce compliance costs
  - Reduce personal property taxes
  - Stop subscription charges
- Reduce your costs and keep resale values consistent

Other benefits of a planned retirement program

- Promote organization's values
- Prevent these assets from becoming a liability
- Generating a return on your asset investment

Asset retirement that benefits an organization

- ✓ Support sustainability goals (reuse and recycle)
- ✓ Donate to charitable organizations
- ✓ Repurpose or redeploy within the organization
- ✓ Turn IT into a revenue generator
- ✓ Responsible use of stakeholder assets

Liabilities from bad retirement

Guiyu China, 2013 (BAN photo)

Domestic recycling is not always responsible, either

U.S. firms (AZ, CO, MD, OH, PA) abandoned more than 25,500 tons of leaded CRT glass in 2013 - 2014.

Problems in our own backyard

Onconto County, WI

Photo by WI DNR
Sep 2014

Security concerns from bad disposal

- Coca-Cola, 2014: an employee tasked with dealing with computers coming out of service stole laptops containing records for 74,000 current and former employees.
- "Disposal issues resulted in more than 5% of the data security incidents, globally. When combined with theft/physical loss, which frequently happens when decommissioned equipment is stockpiled at various company locations, disposal/physical loss issues account for more than 20% of data security incidents." *Verizon 2014 Data Breach Investigations Report*

See more stories at http://cascade-assets.com/datasecurity.html

Accounting for good retirement

- Know where your equipment is going – be sure it is managed by a responsible processor

- Asset disposition reporting is key – track what happens to your assets
  - Ensures accountable data destruction and disposition
  - Helps provide feedback on your ITAM program

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Thank You!

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