

Data Destruction: Easier Said than Done

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Agenda

- Data Destruction Drivers
 - Retention
 - Operational Requirements
 - Regulatory Requirements
 - Legal Holds
- Where Does Data Live?
- Mechanics of Deletion
- Parting Tips and Tricks



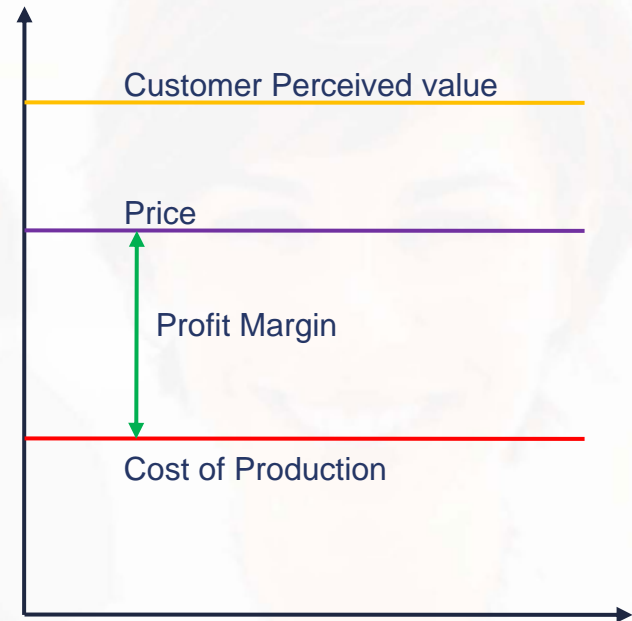
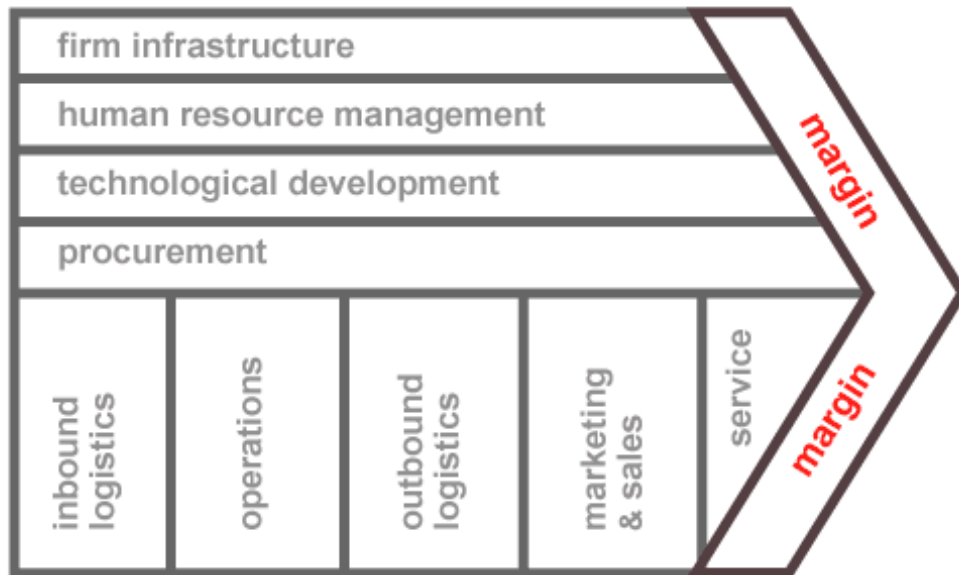
Introductions

- **Carl Winchester**, Mayer Brown
 - ADD INFO
- **Adam Hansen**, Sonnenschein
 - Director of Information Security
- **Bill Dean**, Sword & Shield
 - Director of Computer Forensics



Data Destruction Drivers

Back to the Basics – The Business



- Value Creation - driving cost of production down and/or customer perceived value up
- Strategy - a collection of plans designed to create advantage (or value)
- Competitive Advantage – describes a firm who is able to sustain a profit margin greater than 50% of their peers over the long-term

Cost of Production (Capital/Operating)

- Capital/Operating Cost
 - Not deleting data drives capital cost up, margin down
 - Despite capacity increases (thus decreasing cost per GB), overall capacity increases are increasing
 - Storage performance requirements impact price, however, are often underutilized in favor of “fastest with most reliability”
 - As a result of these trends, operating cost associated with storage has trended upward
 - Niche expertise
 - Multiple frames
 - Duplicate infrastructure
 - DR/BC

Cost of Production (Risk)

- Sources of Risk
 - 3rd Party Subpoena
 - Court order to Destroy Data
 - Malware infection landscape
 - Inconsistent retention schedules
 - Regulatory implications (SB1386, Lit Holds, HIPAA etc.)
- How Risk ties to Advantage
 - More data yields higher e-Discovery cost
 - Failure to delete in accordance with applicable standards could will raise defense costs and erode value/reputation
 - More data leads to increased security costs

Customer Value

- Sources of value creation from data
 - Search
 - KM
 - Experience
- Value impact
 - Since a small portion of stored data is actually relevant in value creating efforts, it is unnecessarily raising the cost line.
 - Many point applications for specific value creating purposes
 - Still suggests deleting data in a secure fashion will raise margin



Mechanics of Deletion

“Delete” Only Entertains You

Data Intact

- Business Ideas
- Documents
- Documents for Attorney
- Family Pictures
- Music
- ABC Client - 2009 Pricing Structure.doc
- ABC Company - 2009 Product information.ppt
- ABC Company - Emerging Markets - 2010.ppt
- ABC Company - New Products Briefing.ppt
- ABC Company Client contact list.xls
- ABC Company clients.mdb
- ABC Company Prospective Clients.doc

```
E:\>del *.*  
E:\*.*, Are you sure (Y/N)? y  
E:\>
```

```
E:\>dir  
Volume in drive E has no label.  
Volume Serial Number is E820-A4D0  
  
Directory of E:\  
  
File Not Found
```

Data After “Delete”

- | Name |
|--|
| Business Ideas |
| Documents |
| Documents for Attorney |
| Family Pictures |
| Music |
| New Folder |
| New Folder |
| New Folder |
| ABC Client - 2009 Pricing Structure.doc |
| ABC Company - 2009 Product information.ppt |
| ABC Company - Emerging Markets - 2010.ppt |
| ABC Company - New Products Briefing.ppt |
| ABC Company Client contact list.xls |
| ABC Company clients.mdb |
| ABC Company Prospective Clients.doc |
| New Microsoft Office Access Application.mdb |
| New Microsoft PowerPoint Presentation.ppt |
| New Microsoft Word Document.doc |

Notes

- **Entire Disk Array Not Needed to Recover Data**
 - Keep this in mind when sending “failed” hard drives to vendor
- **Gotchas of Windows Server and VISTA**
 - Volume Shadow Copy
- **Benefits of Blackberry**
 - True “Wiping” That Can Be Performed Remotely

Data Destruction Tools

- **Free**
 - Eraser – File Level
 - DBAN – Entire Hard Drives
 - Boot 'N' Nuke – Entire Hard Drives
- **Commercial**
 - Voom DriveWiper
 - WipeMASter





Where Does Data Live?

Where Does Data Live?

- **Email Systems**
 - Single or multi instance storage databases
 - Central or distributed messaging infrastructure
 - Email archive or journaling systems
 - Public folder servers
- **Document Managements Systems**
 - Cached copies on workstations and laptops
 - Copies in multiple DMS databases

Where Does Data Live?

- **Tape Backup**
 - Interleaving concerns
 - Storage catalogs
 - Disk based tape libraries
- **File Archive Systems**
 - WORM devices & file systems
- **Office Application Behavior**
 - Temporary directories and files
 - Citrix profiles

Where Does Data Live?

- **Thumb Drives, USB HDD's, etc**
 - Portable, unsecured, difficult to monitor
- **CD and DVD Rom's**
 - Client supplied
 - Internally created
- **Remote Storage Facilities**
 - Not just for tape media - remember locked boxes and containers

Where Does Data Live?

- Collaborative Applications
 - SharePoint for example
 - Site collections
 - SharePoint recycle bins
 - 3rd party recovery applications
- Loose File Systems
 - User home shares, departmental shares
 - Document reproduction groups



Parting Tips & Tricks

Kernels of Wisdom – Mechanics of Deletion

- Always “Wipe” Hard Drives before Disposal
- Retrieved Data Horror Stories
 - Personally Identifiable Information
 - Credit Card and Social Security Numbers
 - Medical Records
 - Intellectual Property Theft
 - Access to Power Grid (SCADA) Systems

Kernels of Wisdom – Understand Human Nature

- Educate, educate, educate your population of firm policies, abilities and expectations relating to data destruction.
- Encourage the periodic review of firm data retention and destruction policies.
- Trust but periodically verify your population adheres and understands policies.

Kernels of Wisdom – When You Get Home

- Know your Data
 - What kind do you get
 - Where is it stored
 - Are there any governing regulations
- Build a Plan
 - How do you delete the data now (documented it)
 - If that's not sufficient – change it
- Generate Awareness
 - Draw attention to the data can create risk
 - Explain that deleting is good (sometimes)
 - Deleting data properly is critical in reducing this risk
- It's doesn't have to be hard...



Questions?