Printing Green Proven Strategies To Reduce Your Ecological Footprint in the **Education Workspace**

Presented By: United Business Systems Bob Belli, Matt D'Amato and Andy Ruggiero





Table of contents

01 History of Printing in Education

12 How To Implement A Print Management Strategy



04 Choosing The Right Partners



Responsible Recycling of Toner Cartridges and Hardware

)6 Conclusions and Questions

01

History of Printing in Education





The Typical Education Print Infrastructure

- Fleet Of Copiers/MFP's In Main Offices, Teachers Rooms And Media Centers, Etc.
- 100's Of Single Function Printers In Each Classroom And On Each Desk For Administration Staff
 - Several Brands, Dozens Of Different Models
 - Dozens Of Print Drivers To Maintain
 - Unknown Age Of Fleet And Energy Star Compliance Status
 - Most Efficient Devices Not In Busiest Areas New Single
 Function Print Devices Are NOT Always The Most Efficient
- Print Servers Managed By In-district IT Staff
- Fax Machines/Boards Where Required (Main Office, Guidance, Nurses Office (HIPAA), Transportation Office
- Output Trays Full Each Morning Of Unclaimed Print Jobs

The Challenges Of Managing The Typical Education Print Infrastructure

Significant Management Burden To Internal IT and Staff

- Print Server Management, Patching, Updates, Virus Protection
- Print Driver Management Of Various Brands And Dozens Of Models
- Supply Management Of Various Brands And Models
- No Centralized Purchasing Strategy Of Hardware And Supplies
- No Supply Inventory Management Strategy
- Overflowing Closets Of Obsolete Toner
- 40% Of Helpdesk Calls Are Print Related
- Lack Of Actionable Data To Develop a Streamline Strategy
 - Limited Print Data Of Actual Usage
 - Historical Like For Like Replacement Strategy Resulting In Over/Under Utilized
 Assets And Accessories
 - The Need For And Lack Of Availability Of Color Printing
- No Cost Control
 - No Waste Control
 - Duplex Printing Not Set To Standard
 - Increased Fax Line Costs
- No Confidentiality Of Documents
 - Increases Reliance Of Personal Printers

02 How To **Implement A** Print Strategy





Keys to a Solid Print Strategy

- Install A Print Management Software
 - Who Has A Print Management Software?
 - Uniflow And Papercut Are The Two Most Common
 - Benefits Of Print Management Software
 - Secure Print (Also Known As Follow Me Print)
 - Eliminates The Need For Personal Printers
 - Universal Print Drivers
 - Significantly Reduces IT Burden
 - 40% Of Helpdesk Calls Are Print Related
 - Access Control Lists Managed At The Server vs. Individual
 - Control Who Has Access To Options Such As Color
 - Force Applications to Print BW Such As Emails
 - Actionable Data Reporting
 - Who Are You Biggest Users
 - What Types Of Files Printed (Word, PDF, Excel, Etc.)
 - When Are The Busiest Print Times In Your Environment
 - Where Do Your Users Print
 - You Can Now Find Out <u>WHY</u> They Needed To Print

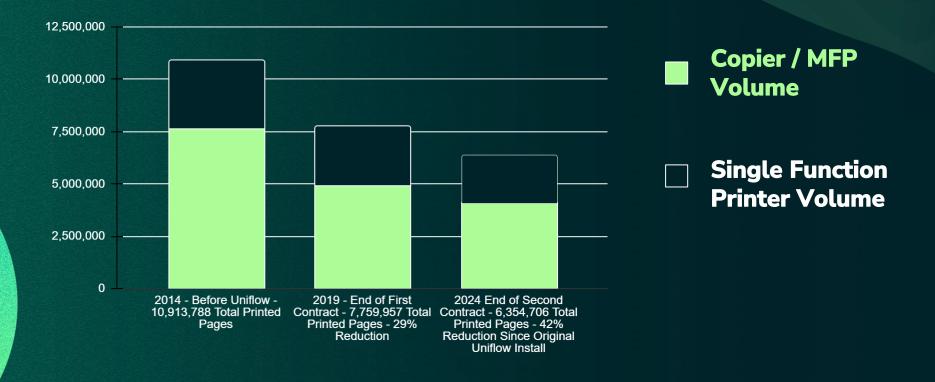
Keys to a Solid Print Strategy, Cont.

- Print Management Software's Provide, Cont.
 - Ability To Scan To / Print From Cloud Destinations
 - Google Docs, One Drive, Microsoft TEAMS, Sharepoint, Etc.
 - Document Delegation (Add Jobs To Someone Else's Queue)
 - **Guest and Mobile Printing** (Allow Guest Printing Without Burdening IT)
 - Board Members, Contractors, Special Services, Etc.
 - Users Can Send Print Jobs To Their Queue From Home
 - Lessens Morning Prep-time For Faculty And Staff
 - Completely Eliminates Waste
 - No More Unclaimed Jobs On Output Trays, Document Security Issue
 - Eliminating Waste Reduces Overall Print Volume On Average Of 15%
 - Significant Cost Savings \$\$\$
 - Eliminates Downtime Due To Printer Maintenance
 - As Print Jobs "Follow You", Just Go To Any Available MFP Device
 - Cloud Versions Eliminate The Need For Print Servers
 - Significantly Increases Network Security
 - Reduces IT Burden And Costs
 - Print Servers Cost \$2,000-5,000 Per Year To Maintain
 - Significantly Reduces Power Needs Of Servers

Keys to a Solid Print Strategy, Cont.

- Implement A Managed Print Service Program For Single Function Printers
 - Clearly Define Your Goals With You Chosen Provider
 - Reduce Or Eliminate Single Function Printers (Especially Inkjet)
 - Its Easier Than You Think Once You Have Uniflow Or Papercut Providing Secure Print And Advanced Scanning Capabilities
 - Choose A Provider Who Utilizes Parts And Supplies Adhering To GSA Regulations
 - Most Products Made In China Are Non-conforming And Under Perform – Ninestar Ban Due To Forced Labor
 - Implement an Auto Supply Management Program
- Implement A Digital Cloud Faxing Service (Biscom, E-Gold Fax, Etc.)
 - Digital Cloud Services Utilize Network Vs. Costly Copper Phone Lines
 - Needs Are Declining While Costs From Phone Companies Are Increasing
 - Eliminate Fax Waste (Local Deli Menus, Roofer Advertisements, Etc.)
- Real World Customer Testimonial Frank Ceurvels / Matt Paladino

Ramapo-Indian Hills UniFLOW Effect



Ramapo-Indian Hills Estimated Environmental Impact Reduction

Print Reduction

42% Total Print Reduction vs. 2014 Starting Point (10 years) 3,558,295 Less MFP Pages/Yr 3,558,295 x .005 (Avg CPC BW) + 1,000,787 Less Printer Pages/Yr 1,000,787 x .015 (Avg CPC BW) = **\$32,803.28 Annual Savings**

CO2 Reduction

4,559,082 Sheets Of Paper = 339,000 Pounds CO2 (Equivalent As 30.8 Cars Operated/Yr) https://c.environmentalpaper.org/in dividual.html

Paper Reduction

4,559,082 Less Sheets Of Paper Required In 2024 Vs. 2014 Or 912 Cases Of Paper @ \$56.00 Per Case (WB Mason 30% recycled) = **\$51,072 Savings Per Year**

Trees Saved

4,559,082 Sheets Of 30% Recycled Paper = **382 Trees Saved Per Year Compared To 2014 Volumes** https://savvycalculator.com/paper-totree-calculator/

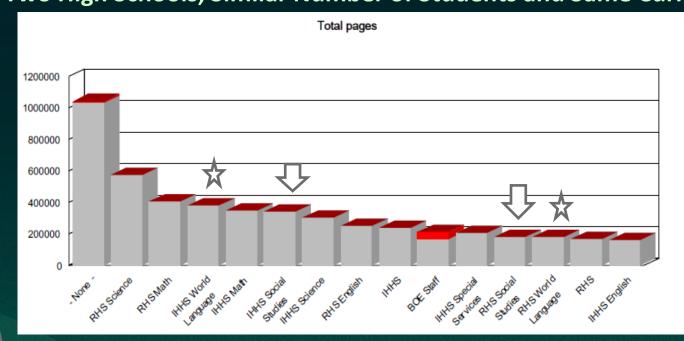
Water Reduction

4,559,082 Sheets Of Paper = 475,000 Gallons Of Water (Equivalent As 342 Clothes Washers Operated/Yr) https://c.environmentalpaper.org/in dividual.html

Total Energy

4,559,082 Sheets Of Paper = **512 Million BTU's (Equivalent As 612 Residential Refrigerators Operated/Yr)** https://c.environmentalpaper.org/in dividual.html

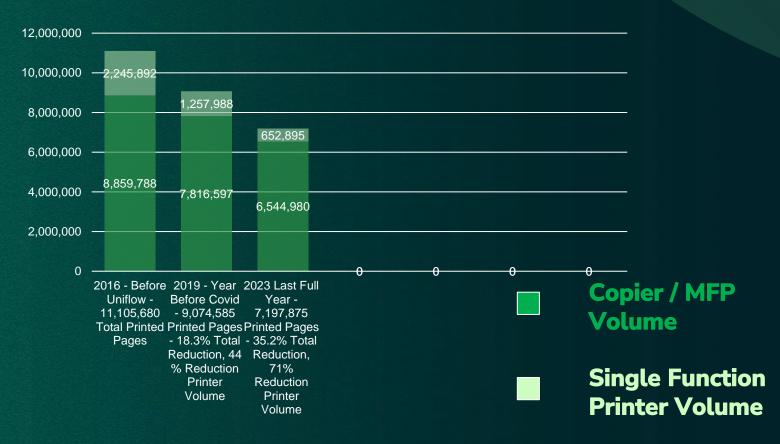
Ramapo-Indian Hills Actionable Data Two High Schools, Similar Number of Students and Same Curriculum



Why is IHHS World Language Printing Twice RHS World Language? Why is IHHS Social Studies Printing Nearly Twice RHS Social Studies? Discovery: One Location Printed And Handed Out Classwork Assignments While Another Scanned And Digitally Distributed.



Belleville Schools UniFLOW Effect



Belleville Schools Estimated Environmental Impact Reduction

Print Reduction

35.2% Print Reduction vs. 2016 Starting Point (8 years) 2,314,808 Less MFP Pages/Yr 2,314,808 x .005 (Avg CPC BW) + 1,592,997 Less Printer Pages/Yr 1,592,997 x .015 (Avg CPC BW) = **\$35,469.00 Annual Savings**

CO2 Reduction

3,907,805 Sheets Of Paper = 291,000 Pounds CO2 (Equivalent As 26.4 Cars Operated/Yr) https://c.environmentalpaper.org/in dividual.html

Paper Reduction

3,907,805 Less Sheets Of Paper Required In 2024 Vs. 2016 Or 782 Cases Of Paper @ \$56.00 Per Case (WB Mason 30% recycled) = **\$43,792 Savings Per Year**

Trees Saved

3,907,805 Sheets Of 30% Recycled Paper = 327 Trees Saved Per Year Compared To 2016 Volumes https://savvycalculator.com/paper-totree-calculator/

Water Reduction

3,907,805 Sheets Of Paper = 407,000 Gallons Of Water (Equivalent As 294 Clothes Washers Operated/Yr) https://c.environmentalpaper.org/in dividual.html

Total Energy

3,907,805 Sheets Of Paper = 439 Million BTU's (Equivalent As 523 Residential Refrigerators Operated/Yr) https://c.environmentalpaper.org/in dividual.html

03

Fleet Optimization





Optimize Your Print Environment

- Knowledge Is Power
 - UBS Recommends Installing A Data Collection Agent (DCA)
 - Installing DCA's Are Free From United Business Systems
 - DCA's Provide Usage Statistics Of Your Entire Fleet Of Network Printers And MFP's Regardless Of Brand/Model
 - Most DCA's Can Provide Device Age And Energy Star Status
 - Eliminate As Many Personal/Single Function Printers As Possible
 - MFP's Will Encourage Scanning
 - MFP's Have Significantly Lower Usage Costs Than Personal Printers
 - Consider A4 Vs. A3 Devices In Shared Areas To Replace Classroom And Media Center Printers
 - A4 Devices Do Everything Traditional MFP's Do Except For Print On Paper Sizes Of 11x17 And Larger
 - 11x17 Printing Is Extremely Uncommon Need In Education
 - Most Education Output Is Letter Size Only

Optimize Your Print Environment, Cont.



A3 MFP Characteristics

- Color And BW Models Available
- Ability To Print On Letter, Legal AND 11x17
- Copy, Scan, Print And Fax Capabilities
- Stapling And Hole Punching Abilities
- Multiple Paper Drawers Available
- Console Type Only
- 25 To 105 Page Per Minute Options
- Better Intended For High Volume Areas

A4 MFP Characteristics

- Color And BW Models Available
- Ability To Print On Letter And Legal
- Copy, Scan, Print And Fax Capabilities
- Stapling Capabilities
- Multiple Paper Drawers Available
- Console And Desktop Versions Available
- 25 To 70 Page Per Minute Options
- Smaller Footprint For Small Spaces

Optimize Your Print Environment, Cont. Ask Your Provider For Environmental Calculator Statistics

| Current Fleet Break Down | | |
|--|----|-------------------------------|
| Model | | Monthly Copy /Print Volume |
| Ricoh (Savin) MP 2555SPDF | 7 | 17,542 |
| Ricoh (Savin) MP 3055SP | 1 | 750 |
| Ricoh (Savin) MP 3555SP | 2 | 5,190 |
| Ricoh (Savin) MP 4002/4002G/4002SP/4002SPG | 1 | 934 |
| Ricoh (Savin) MP 4055 | 2 | 20,108 |
| Ricoh (Savin) MP 6002SP | 3 | 11,916 |
| Ricoh (Savin) MP 6503 | 3 | 11,214 |
| Ricoh (Savin) MP 7502SP | 3 | 20,274 |
| Ricoh (Savin) MP 7503 | 13 | 308,425 |
| Ricoh (Savin) MP 9002SP | 2 | 10,520 |
| Ricoh (Savin) MP 9002SP | 2 | 8,754 |
| Ricoh (Savin) Pro 8200s | 3 | 146,178 |
| Ricoh (Savin) MP C307 | 6 | 3,582 |
| Ricoh (Savin) MP C6004 | 1 | 6,509 |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| τοται | 49 | 571 896 |

| Proposed Fleet Break Down | | | | |
|-------------------------------------|--------------------|-------------------------------|--|--|
| Model | Number of Units | Monthly Copy /Print Volume | | |
| Canon ImageRUNNER ADVANCE DX 49251 | 1 | 3,671 | | |
| Canon ImageRUNNER ADVANCE DX 49351 | 2 | 4,952 | | |
| Canon imageRUNNER ADVANCE DX 4945i | 1 | 2,566 | | |
| Canon ImageRUNNER ADVANCE DX 529IF | 1 | 934 | | |
| Canon ImageRUNNER ADVANCE DX 529IFZ | 9 | 20,322 | | |
| Canon ImageRUNNER ADVANCE DX 68551 | 10 | 59,490 | | |
| Canon ImageRUNNER ADVANCE DX 68601 | 1 | 4,350 | | |
| Canon ImageRUNNER ADVANCE DX 68701 | 3 | 31,524 | | |
| Canon imageRUNNER ADVANCE DX 69801 | 10 | 283,380 | | |
| Canon imageRUNNER ADVANCE DX 8995i | 3 | 149,178 | | |
| Canon ImageCLASS MF746Cdw | 7 | 4,179 | | |
| Canon ImageRUNNER ADVANCE DX C58501 | 1 | 6,509 | | |
| | | | | |
| | | | | |
| TOTAL | 49 | 571,055 | | |

Optimize Your Print Environment, Cont. Environmental Calculator Statistics

Annual Environmental Footprint Summary



With the proposed fleet you will save the equivalent of:

| | Paper | Sheets of paper manufactured (Based on the electricity used) | - | The electricity used in manufacturing 50,915 sheets of 100% recycled paper |
|----|----------|--|---|--|
| 谷 | Trees | Number of Trees (Based on COr sequestered) | : | The carbon sequestered by 7 trees seedlings grown for 10 years |
| EÌ | Gasoline | Gallons of gasoline consumed | i | The CO2 emissions from 48.6 gallons of gasoline consumed |
| 0 | Water | Gallons of water used in the production of paper | | 148,006.6 gallons of water used in the production of paper |

Metrics based on the Average Commercial Electricity price for USA

04

Choosing The Right Partner





Choosing The Right Partner

- Choose An Experienced, Major Provider In NJ Education Who Has:
 - Extensive References In The NJ Education Marketplace
 - Extensive Print Management Software Experience
 - If You Are Choosing A Cloud Version Software MAKE SURE YOU SPEAK TO REFERENCES USING THE EXACT SOFTWARE BEING PROPOSED. Some Cloud Versions Are Not Yet Ready
 - United Business Systems Is The Only Major Provider In NJ Education To Sell/Support Both Uniflow And Papercut
 - We Wont Push One Software Over The Other
 - Ask Your Chosen Provider To Provide An Onsite Demonstration Device To See How The Product/Software Performs In YOUR Environment
 - Make Sure Your Partner Uses GSA Approved Supplies (OEM Or Remanufactured) Which Can Be Recycled. No Compatible Clones Which Cannot Be Recycled!
 - UBS Can Provide Recycling Services For Hardware And/Or Exhausted/No Longer Needed Supplies

05 Responsible **Production and Recycling of** Toner **Cartridges** and Hardware





What Are The Three Different Kinds Of Printer Cartridges?

OEM - HP, Sharp, Xerox, Canon, etc.

- High quality
- Can be recycled, remanufactured
- o Higher Cost

Compatibles/Clones

- Imported from overseas some being banned from US markets due to forced labor
 Ninestar, Cartridge World, Amazon
- Injection molded core made new with inferior plastics that can't be reused or recycled. Ends up in our landfills.
- Subpar manufacturing offer lower page yields & uneven quality
- Many fail to meet health and safety regulations & contain carcinogens
- Considered a single-use plastic which is being banned in most states

Remanufactured - Clover Imaging Group (UBS)

- High Quality The only aftermarket manufacture proven through ongoing 3rd Party comparative testing against the OEM to match the OEM quality and reliability.
- Re-use an existing OEM cartridge. (Reuse is highest form of sustainability followed by recycling) 52%
 Carbon footprint savings over the OEM
- Supports a circular economy; can be remanufactured multiple times
- Made in USA and Mexico (TAA Compliant)- more stable supply chain, supports North America economy
- CLOVER IMAGING GROUP is the only
 Remanufacturer Authorized to Represent Their
 Imaging Supplies on Federal Government GSA
 Multiple Award Schedule (MAS)







New!

Comparative Life

Cycle Assessment (LCA)

Here are some of the key findings from the third-party, peer reviewed LCA:



www.cloverimaging.com/LCA



The Environmental Impact of Single-Use Printer Cartridges

The Impact We Make Is Real Number of cartridges entering If you recycle 1,000 printer cartridges this year you will have recycled 3,310 lbs of materials including: U.S. landfills each year:1 350,000,000 Plastic Aluminum Steel 679 LBS* Copper 1988 LBS* 240 LBS* $5 LBS^*$ How much metal and plastic 2.5 ounces EACH cartridge adds to a landfill:² How much oil it takes to produce the per ink cartridge plastic in a new-build cartridge:3 3.5 quarts OIL per toner cartridge How long each cartridge takes to decompose: What percentage of toner) vears cartridge components can be recycled:s 2019 1900 3019

Toner Recycling Resources – Free of Charge

CANON LASER CONSUMABLE RETURN PROGRAM

In 1990, Canon became the first company to collect and recycle used copier toner cartridges. With the cooperation of our customers, Canon has collected more than 444,000 tons around the world.

WHY RECYCLE MY TONER CARTRIDGE?

Toner Cartridges and Toner Containers

Unlike Canon's all-in-one cartridges, toner containers are made mainly of plastic material making them suitable for local recycling and local energy recovery in many areas of the country. When local recycling is utilized, the environmental impact associated with the transportation of containers is reduced.

If local recycling or energy recovery is not available in your area, Canon asks that customers ship them to the address below. Both cartridges and containers can be shipped together.

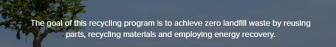
Canon Toner Recycling Center

5980 Industrial Drive

Gloucester, VA 23061

Recycle and Reuse

Toner cartridges are taken apart, sorted, and parts are then reused, recycled, or put through the energy recovery process. This process produces plastics, metals, and reconditioned parts that can be used in the manufacturing of new cartridges and other products.



PRINT LABEL



Canon Return Label Process

Fill Out The Online Forms Shown Below And Download Your Shipping Label

| YΟ | UR | IN | FΟ |
|----|----|----|----|
|----|----|----|----|

| Please fill out the information below for | r your free pre-paid return label. |
|---|------------------------------------|
|---|------------------------------------|

| Printer Type | ~ | | | |
|--------------------------------------|-------|--|---------------------------------|--|
| | | | | |
| First Name | | Last Name | | |
| | | | | |
| Street Address (Max 25 char allowed) | | P.O. Box, Apt #, Unit etc (Max 9 char allowed) | | |
| | | | | |
| City | State | ~ | Zip Code (Max 5 digits allowed) | |
| | | | | |
| Email Address | | Confirm Email Ac | ddress | |
| | | | | |

Phone Number (Max 10 digits allowed)

I have read and I agree with the Canon U.S.A Inc. Laser Consumable Return Program

CANCEL

REVIEW

Review your information below

Toner Type ImageRUNNER ADVANCE Toner

| Your Information | Email |
|----------------------------------|-----------------|
| Bob Belli | bob@ubscopy.com |
| 302 Rt 46 | Phone |
| Fairfield, New Jersey (NJ) 07004 | 9732766299 |

Please note

- For customers wishing to make a return from Hawall, Alaska or a U.S. Territory, please contact 1-800-OK-CANON.
- Canon only authorizes the use of this site to print labels to return acceptable genuine Canon Branded toner cartridges/bottles and waste toner containers. No third party remanufactured or refilled cartridges/bottles of any kind will be accepted.
- Any unauthorized use of this service may result in the return of the shipment to sender at sender's expense, as well as denial of access to the service in the future.
- For the Canon Laser Consumable Return Program guidelines, please <u>click here</u>.



Canon Return Label Process, Cont.

Download Your Shipping Label

Be

sure to follow

2

packaging

and

shipping instructions

BOB BELLI 9732766299 302 RT 46 FAIRFIELD NJ 07004 1 OF 1 4 LBS RS SHIP TO: 16313305000 CARTRIDGE RETURN CENTER GLOUCESTER BUSINESS PARK GLOUCESTER VA 23061 VA 236 9-04 UPS GROUND TRACKING #: 1Z 0A0 28F 90 9652 6247 BILLING: P/P DESC: imageRUNNER ADVANCE Toner RETURN SERVICE XOL 24.03.15 NV45 13.0A 03/2024*

Print

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ASE Return Label Process

Fill Out The Online Forms Shown Below And Download Your Shipping Label

Free pre-paid shipping labels for empty inkjet and laser toner cartridges

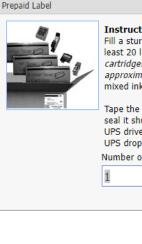
Fill out the required fields below and click "Continue". For a list of the cartridges that can be recycled, click here. We also accept printer fusers. We do not accept toner tubes or toner bottles

| Iron | it a man in | | bubble wrap | | a riginal | n a alca aina | to proto of | during a s | - hinne on |
|------|-------------|-----------|-------------|----------|-----------|---------------|-------------|------------|------------|
| vrao | liems in | newspaper | DUDDIE WIAL |) or use | ondinal | Dackading | io proieci | aurina s | sniomen |
| | | | | | | | | | |

-

Download

| Email Address | | |
|-------------------|-------------------------|------------------------------|
| *Company Name | United Business Systems | |
| *Your Name | Bob | |
| *Address Line 1 | 302 Rt 46 | |
| Address Line 2 | | |
| *City | Fairfield | |
| *Country | United States 🔹 | |
| *State / Province | • | |
| *Postal Code | ##### | |
| *Phone Number | ### ### #### | |
| | I'm not a robot | reCAPTCHA Privacy - Terms |
| | Continue | |



Free pre-paid shipping labels

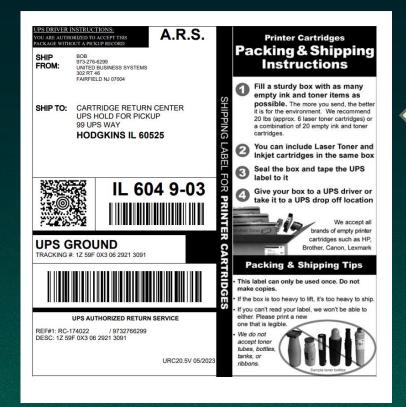
Instructions: Fill a sturdy box with at least 20 lbs (6 empty toner cartridges weigh approximately 20 lbs), or 20 mixed ink/toner items

Tape the label to the box, seal it shut, and give it to a UPS driver or take it to a UPS drop off location. Number of Labels:

Need a pallet pickup for 100 or more cartridges? Click here

ASE Return Label Process, Cont.

Download Your Shipping Label



ASE Program requests a minimum of 6 cartridges (or 20 pounds) per shipping box returned.

United Business Systems Hardware Recycling

Items Which Can Be Recycled*

- Copiers/MFP's
- Printers
- PC's
- Laptops
- Smartboards

*Some items without a wholesale value may be chargeable to recycle

Thank You!

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Please complete the form below to receive your copy of the PRINTING GREEN presentation.

| Name (Required) | |
|--------------------------------------|------------------|
| First | Last |
| | |
| | |
| Company / School District (Required) | Email (Required) |
| | |

Please check the boxes below for the topics you would like more information on (Required)

- Print Management Software (Uniflow, Papercut, etc.)
- Managed Print Services
- Cloud Printing
- Cloud /Digital Faxing
- Data Collection Agent for Print Analytics
- Environment Calculator Comparison
- Toner Recycling Programs
- Hardware Recycling Programs (Printers, PC's, Laptops, Smart Boards, Etc.)
- United Business Systems

Notes / How can we help?

To Download a Copy Of this Presentation and For More Information On All Of These Topics, Please Scan The QR Code Below And Fill Out The Online Survey

