APPENDIX A - 209-2010 Addendum 2

Assessment Results
City of Winnipeg

Assessment Methodology

- Phase 1: Data Collection
  - Site walkthrough, device inventory, mapping & quantitative data collection
  - User Interviews for qualitative data collection
- Phase 2: Analysis
  - Derive current state TCO
  - Design future fleet
- Phase 3: Solution
  - Presentation outlining recommendations

City of Winnipeg Assessment Study Overview

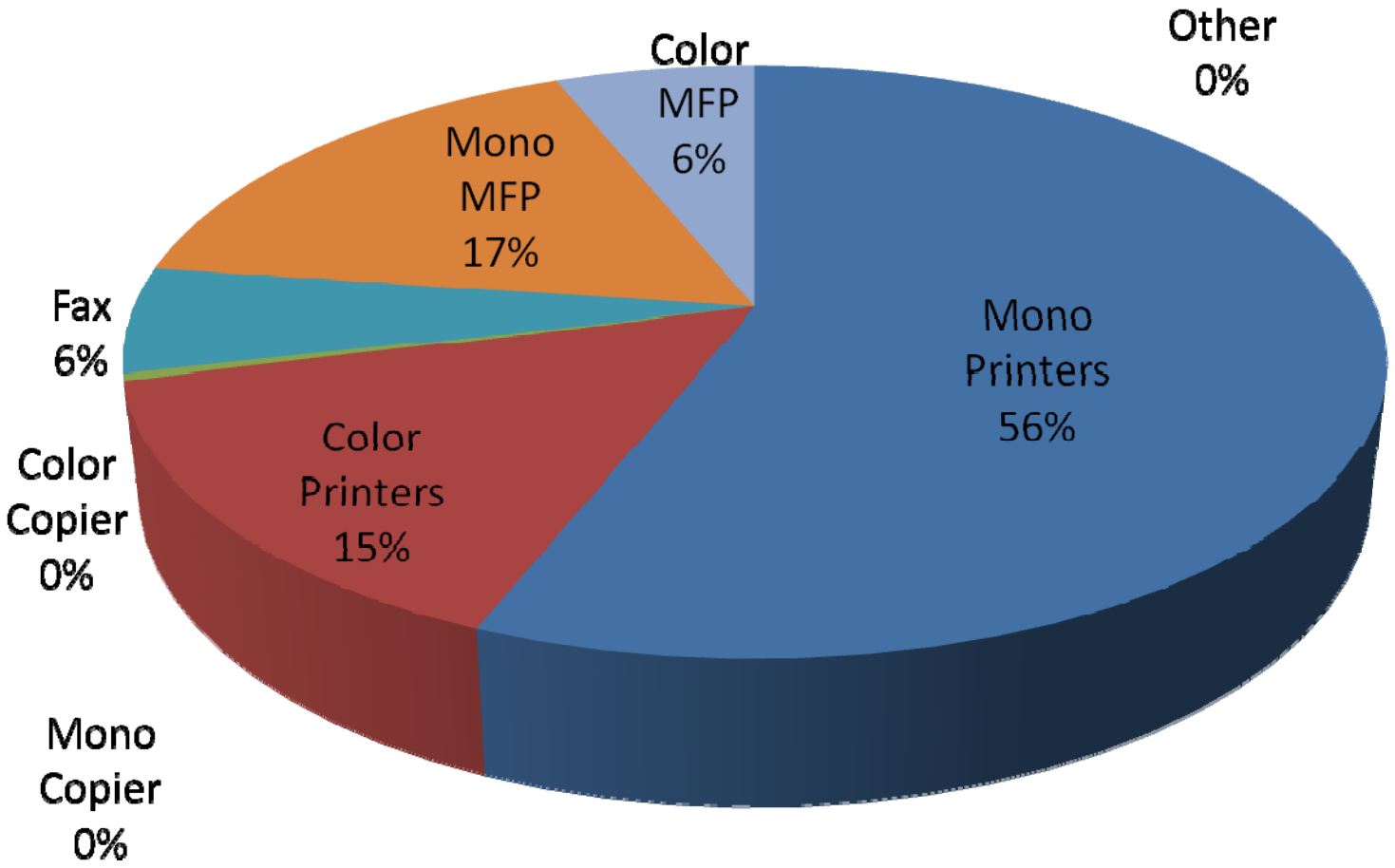
- 29 Different City of Winnipeg Office Locations Mapped
  - Library, Fire Departments, Police, Engineering, etc.
- 900-1100 users
- offices and city services environment
- discovered 539 print, copy & fax devices
- 11.349M pages annually
- 946 printed pages per person per month
- user-to-device ratio: 1.9:1
- 171 different print/copy/fax models
- 55% of the devices 5 years or older

Device Statistics

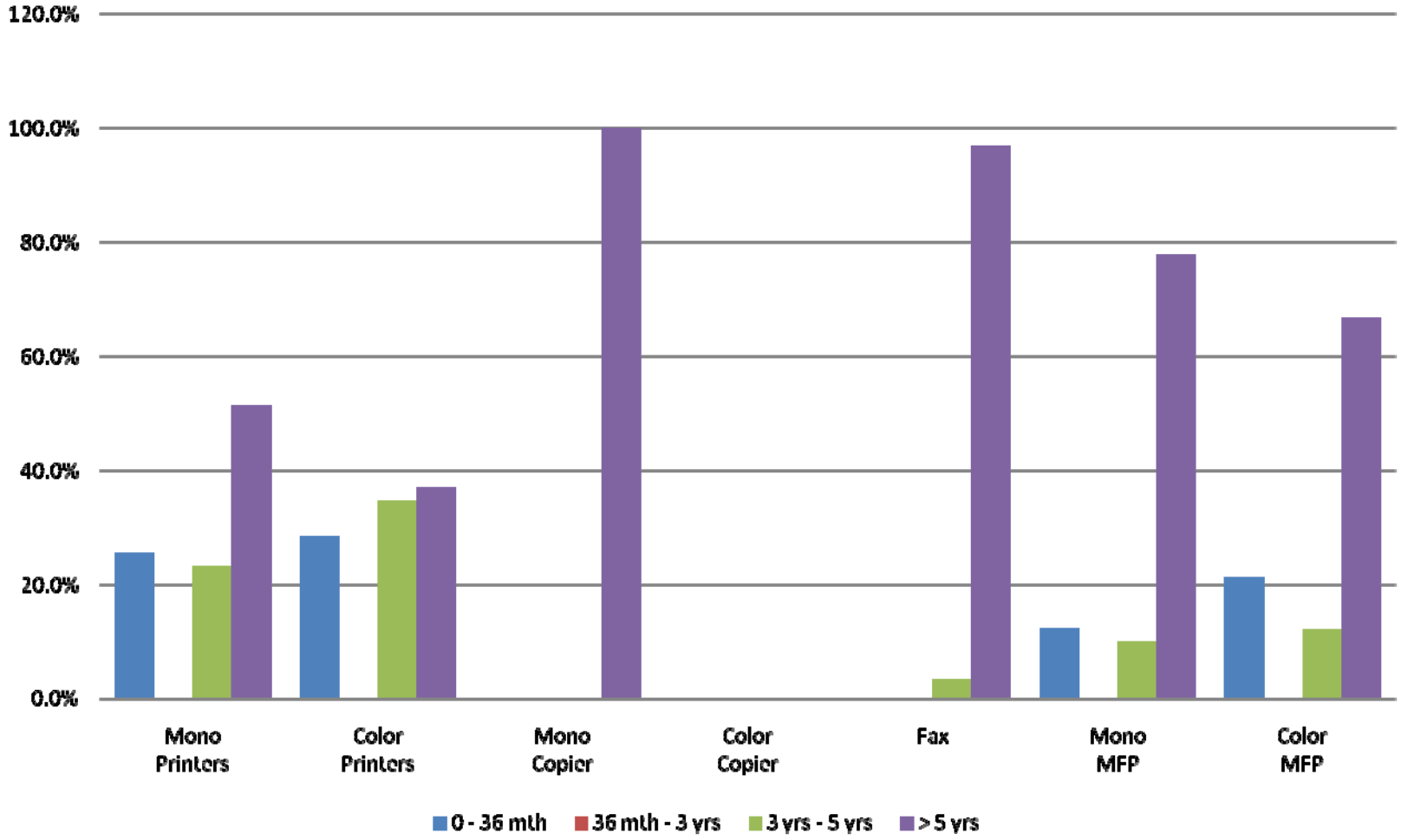
- Printers & MFPs*
  - 383 printers, 123 MFP
  - 392 mono, 114 color
  - 236 network, 270 local connect
  - 171 models
    - 110 mono, 61 color
  - 10 unique manufacturers
  - 203 unique toner cartridges
  - 11,302,440 pages/year
  - 99% of total pages
  - 55% of the printers are 5 years or older
  - User to device ratio – 2.0 : 1
- Copiers*
  - 2 Copiers
  - 2 models
  - Same manufacturers
  - 15,447 pages/year
  - 0.6% of total pages
  - User to device ratio – 0.0 : 1
- Fax
  - 31 fax machines
  - 46,872 pages/year
  - 0.6% of total pages
  - User to device ratio – 32.3 : 1

* Large percentage of existing multi-function devices are not networked thus acting as stand-alone copiers, but they are still MFPs

Fleet Distribution by Device Type



Fleet Obsolescence



TCO Contributors

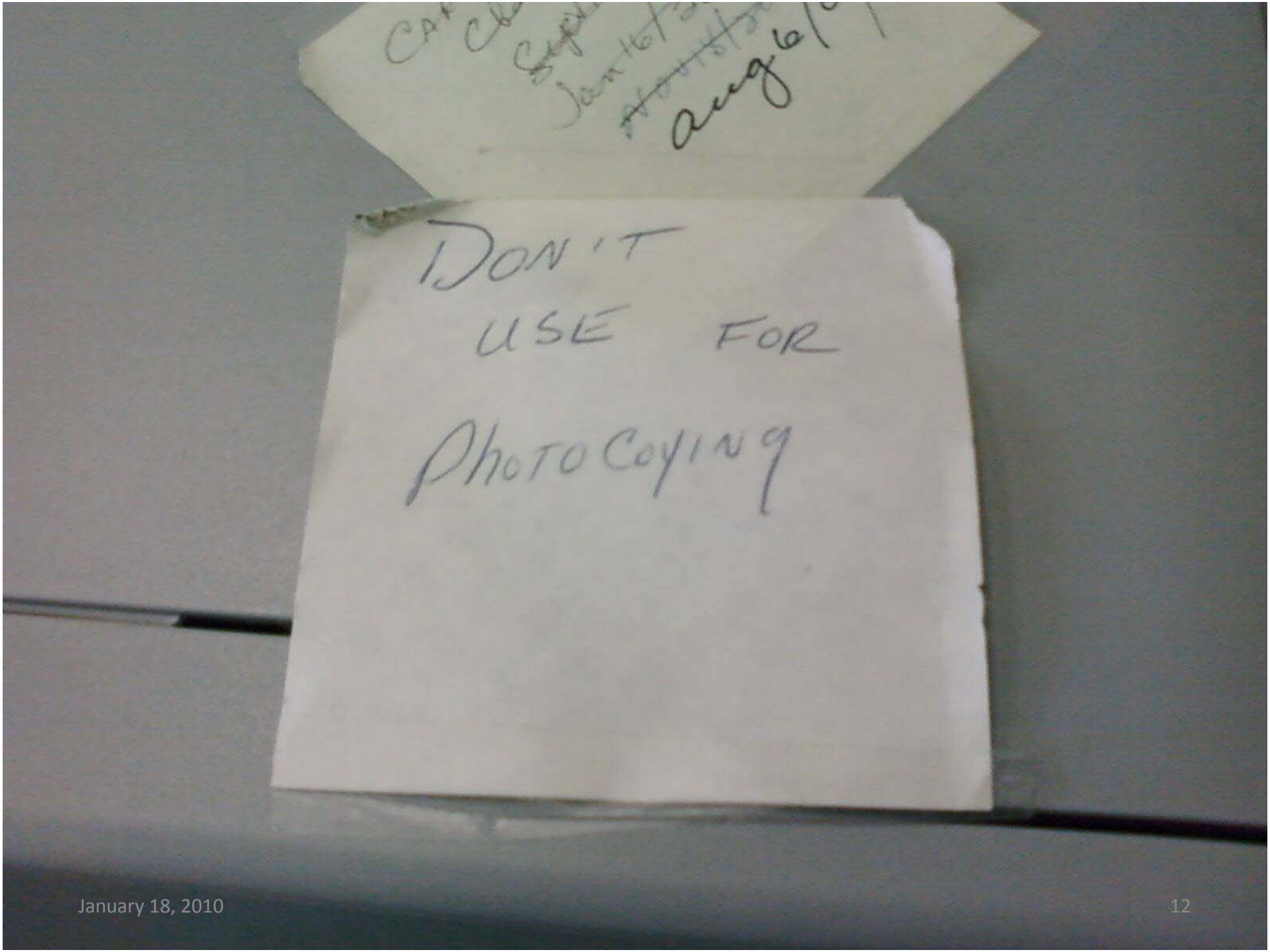
Industry Contributors	Description	Source
Hardware	Acquisition costs (lease or purchase), hardware upgrades	Industry Standards + some City-supplied copier lease information
Supplies	Toner & Ink	Industry Standards
Maintenance	Maintenance kits, drum units, print heads, etc.	Industry Standards
Service & Support	Maintenance contract costs, warranty costs, time and materials services	Industry Standards
Energy	Power costs	Industry Standards
Paper	Paper costs	City-supplied
Purchasing Costs, Stocking, Logistics	Cost to create a purchase order and pay an invoice, cost of unused toner and other supplies stored and around devices	Industry Standards
IT Operations	Print administration, installation and configuration, disposal, asset administration, Help Desk costs, analog fax lines	Industry Standard

Paper Impact

- Paper Study:
  - 32,379,750.00 Total Pages
  - 102.94 Per Pack overall
  - 363,500 forms and lower per pack (250)
  - 945,000 standard tabloid-size (11” x 17”) pages
  - 32,016,250 standard letter-size (8.5” x 11”) pages
  - 88.08 per pack forms and lower
  - 14.86 per pack standard 20 lb. paper
  - $0.02972 per page cost of paper
- To reduce paper costs:
  - Implement or fully utilize the digital workflow projects underway
  - Implement a city wide digital fax strategy

End-user feedback

- Copiers are not reliable
  - "Break early – break often"
- Older print devices are too slow
- Don't have a way to collate/staple at the MFP/printer
- Sorting through print jobs is frustrating
- Don't print multiple originals because…
  - Copiers are less expensive to use (User Perception)
  - Didn't know I could
- Problems with auto feeder, paper jams


DON'T
USE FOR
PHOTOCOPYING


311
311
ECOTONEplus
ECOTONEplus


Canon
Canon
Canon
FX2
FX2
FX2
42A
42A
hp


hp

Carbon footprint analysis

Annual Carbon Footprint	Current Fleet	Future Fleet
Printing Power (kWh)	107,797	
Printing Carbon Emissions (kg)	1,509	
Paper (kg)	52,207	
Print Server Power (kWh)	9,700	
Print Sever Carbon Emissions (kg)	136	
Print and Server Power Cost	$11,863	

LAN fax solution savings versus desktop fax (examples)

Labour cost	Manual fax machine	Fax server
Time to fax (minutes)	8	1
X number of faxes/day	180	180
= Total time (hours)	24	3
X average labor costs	$22/hr	$22/hr
Total cost per day	$528	$66

Source: Davidson Consulting

Major Recommendations

- Centralize the output fleet operating budget
  - You cannot effectively implement policy changes without budgetary control
- Appoint an “Output Czar”
  - Put someone in charge of the overall fleet (see Gartner document HARD-WW-DP-0576 for additional recommendations)
- Update the fleet
  - With 55% of devices 5 years old or older, ongoing maintenance costs and time required are higher than necessary
- Network all devices
  - Today, large percentage of existing multi-function devices are not networked thus acting as stand-alone copiers
  - You cannot effectively manage what you cannot measure

Major Recommendations (2)

- Adjust City network firewall rules
  - From within the City, there was no single location that had visibility to all networked devices in the City fleet
- Get out of the “printer/copier business”
  - Contract a qualified third-party to manage and maintain the updated City fleet
- Better understand the digital workflow projects already in-place/underway
  - existing LAN-based fax solutions
  - HP Autostore

Fleet Design Recommendations

- Enforce a City-wide output design strategy
  - Put in place appropriate policies for shared & personal print
  - Move user-to-device ratio from the current 1.9:1 to a shared networked environment with at least 3.9:1 on average
  - Develop a City-wide list of standard equipment
    - leverage consistent supplies where appropriate
- Enable electronic sending capabilities using multi-function devices
  - Implement a city-wide digital fax strategy to reduce analog fax lines
  - Reduce/eliminate standalone fax machines in favour of this digital strategy
- Consider secure access technologies like smart cards or proximity cards where security is paramount
  - for example, police stations
- Deploy monochrome and colour printers to satisfy remaining output requirements
- Re-deploy existing devices where appropriate

Other Operational Recommendations

- Centralize fleet management through industry-best tools
  - The City has many locations, centralized management would help reduce costs of managing so many devices wide spread out across the organization
- Create a proactive management strategy versus reactive management
  - Use fleet management tools to enable consistent configuration of devices across the fleet
- Move to an automatic just-in-time supplies delivery model
  - reduce inventory carrying costs, eliminate risk of supplies obsolescence, and storage space requirements