

PRINT OPTIMIZATION at THE UNIVERSITY OF REGINA

Advancing Responsible Consumption and Production in Higher Education: Inaugural Conference for the

International Association of Universities Cluster on Sustainable Development Goal 12

Luther College and the University of Regina

May 6-7, 2019



University
of Regina

About the U of R

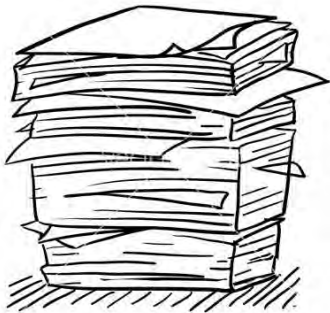
- Located in Regina, Saskatchewan.
- 15,500 undergrad and 1700 graduate students (growth of 20% since 2010).
- 425 permanent Faculty, 348 term academic staff, 814 permanent staff, 851 term/casual staff.
- 10 faculties comprised of 25 academic departments. Newest is the Faculty of Nursing.
- 3 affiliated colleges including, Champion, Luther, and the First Nations University of Canada.

The Start of Print Optimization

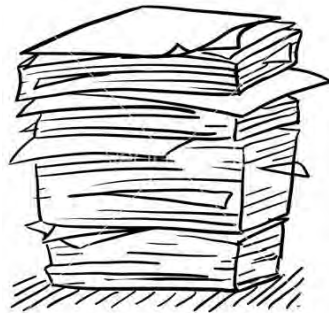
- Lease on copier contract was near end of term - 93 Copiers.
- Photocopier fleet and Central Printing Services usage was down.
- Printing/paper usage was up (desktop and personal printers).
- Purchasing department followed policy: Any job greater than \$2000 went out for tender. We competed against external companies for these jobs.
- Use it or lose it attitude: Departments and Faculties spent surplus funds at year end on printers (whether they needed them or not).



Who was responsible for what?



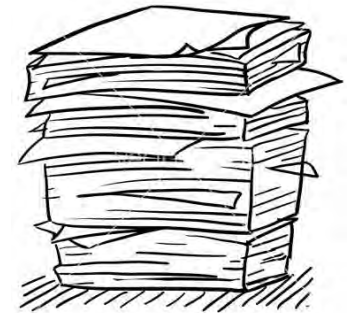
Copier/MFD Fleet
(Ancillary)



Desktop Printers
(free for all)



Printing Services
(Ancillary)



Outside Providers
(Purchasing)

Launching the Project

- Buy in
 - Convinced Senior Executive there was a problem.
 - Agreed to a review of existing print environment.
- Voluntary Participation
 - Approximately half of the campus agreed to be reviewed.
- Independent Consultant hired
 - RFP issued to 13 potential consultants, 3 shortlisted.
 - No manufacturer affiliation.
 - All aspects of print to be reviewed.
 - Awarded to Print Operations Group (POG).

Putting Consultants to Work

We requested that they:

- Find ways to improve end user satisfaction/productivity.
- Identify and quantify cost reduction opportunities.
- Develop a campus-wide print strategy.
- Review current asset management support.
- Assess environmental/“green” program.
- Document current security process.
- Benchmark. Identify best practices.
- Identify “not print”/automation opportunities.
- Generate a modeled target state.

Consultant's Findings

Consultant's report revealed following results:

- Print strategy, governance, policy is missing.
- There is no/limited output fleet support program.
- Lack of technology standards (173 unique devices).
- Ratio of staff to output device is 1.2 to 1.
- Distributed price is over double the industry average (industry standard is 9 cents per page, hardware included).
- "Green" sustainment/metrics program is missing.
- 72% of printing on campus is from desktop printers, and 23% of printing is colour!
- External security is OK. Risk is internal (from 2010, things have changed)!
- Annual tree equivalent consumption of paper was 490 trees!
- U of R is not a "one size fits all" organization.
- **U of R had double the industry average of printers per floor, but were doing 20% of the industry average for volume!**

Suggestions for Improvement

- Create one organization-wide output strategy.
- Consider an all-inclusive price per page pricing model.
- Introduce a standard suite of multi-functional devices.
- Deploy a centrally coordinated service to manage, measure, and optimize the entire print environment.
- A “Green” metrics program is required, or should be considered (i.e. Build awareness before you ask for change).
- Automate and streamline central repro services.
- Improve communications and awareness program.

Getting to Work

- Business Case developed and presented to Senior Leadership.
- Marketed results of POG report
 - Met with Deans, other groups, and committees on campus.
 - Increased voluntary participation/economies of scale.
- Developed University Policies
 - Acquisition of Print Equipment and related software
 - Obtaining Printing Services
- Decided on an all-inclusive cost per page structure
 - No minimum requirements per device, and no separate lease fees passed on to end users.
 - Covers toner, paper, maintenance, service, and lease.

Getting to Work

- **Determined Centralized Support needs**
 - Set up process through IT Support Centre (Help Desk).
 - Device requests, ordering toner and paper, maintenance, and service calls.
 - Automated process for Tickets escalated to vendor.
- **Developed marketing plan**
 - Highlighted positive (features, functions, capability, environment, and electrical savings).
 - Informed Senior Leadership of potential benefits.
- **Created Pricing model**
 - Matrix showed optimum monthly volume to cost justify each device on supported products platform to allow vendor to recommend appropriate sized and priced gear to meet each department's business and budget needs.
- **Linked project benefits to President's Strategic Plan**
 - Key initiative on sustainability, President adopted project as poster child.
 - Academic Areas began to jump on board. Project doubled in size.



Assessment and Deployment

- Vendor completed on site department by department assessments
 - Created current state floor plan and inventory of all devices.
 - Interviewed end users to determine business needs, and gathered print volumes.
 - Developed custom plan for “optimizing” each print environment for Faculty and Admin unit (matching the capacity of the printers to the actual demand of each area).
- Each plan reviewed by IS/Printing to ensure vendor had not oversized environment.
- Forwarded to department for review and subsequent approval.
- Site survey, arrange for power/network drops, and order equipment.
- Equipment order was coordinated so that devices would arrive on site after network drop installation was complete.
- Communications and Marketing continued
 - Provided Senior Leadership with progress report card monthly.
 - Ad campaign showing environmental benefits.

Where are we now?

- 8 approved models supported
- Multi-function (end users voluntarily reduce desktop printers, faxes, scanners). Devices better matched to user requirements.
 - Correct capacity, less colour printing.
 - Limited A4 devices (11x17) as 1.3% of volume printed is 11 x 17.
 - Significant reduction in print devices on campus.
- Usage Reporting
 - Papercut monitors usage by device, department, or person. Reports can be generated on request in the Papercut Admin interface.
 - Average University sector consumption per employee per year is 8,568 pages (Lexmark), U of R average per year is 3600.



Sustainability

- U of R Strategic plan includes Sustainability.
- Reduced number of devices.
 - Went from 1196 devices in 2010 to 432 in 2019 so far. Goal to reduce down to 317.
 - Supporting 8 models instead of 173.
 - University FTE equivalent grew over 30% from 2010 to 2018
- Increased person to printer ratio from 1.2 to 5.8.
 - POG's recommended goal was 3.3. Higher Ed average is 3.0
- Sustainability metrics
 - Reduced power consumption over first 5 years by 9.6%.
 - Reduced CO2 emissions over first 5 years by 40%.
 - Paper Consumption has decreased 21% across campus (down to 387 trees).
- 5 year costs before optimization were approximately \$4,551,849
 - (Toner and ink costs were \$2,600,000).
- Current 5 year costs are \$1,302,027.
- Colour printing is presently 8.7% of total volume.

Sustainability

University
of Regina

Realize. A **Greener** Solution.



It takes **5.5 Million glasses of fresh water** each year, just to produce the paper used on uncollected print and copy jobs at organizations of similar size to U of R.

Source: Lexmark Paper
Waste Study, May 2006



Sustainability

University
of Regina

Realize. A **Greener** Solution.



If we planted a forest of **5000 trees**, it would take them **10 Years** to offset the CO₂ produced annually by print devices at organizations of similar size to the U of R.

Source: United States Environmental Protection Agency



Sustainability

University
of Regina

Realize. A **Greener** Solution.

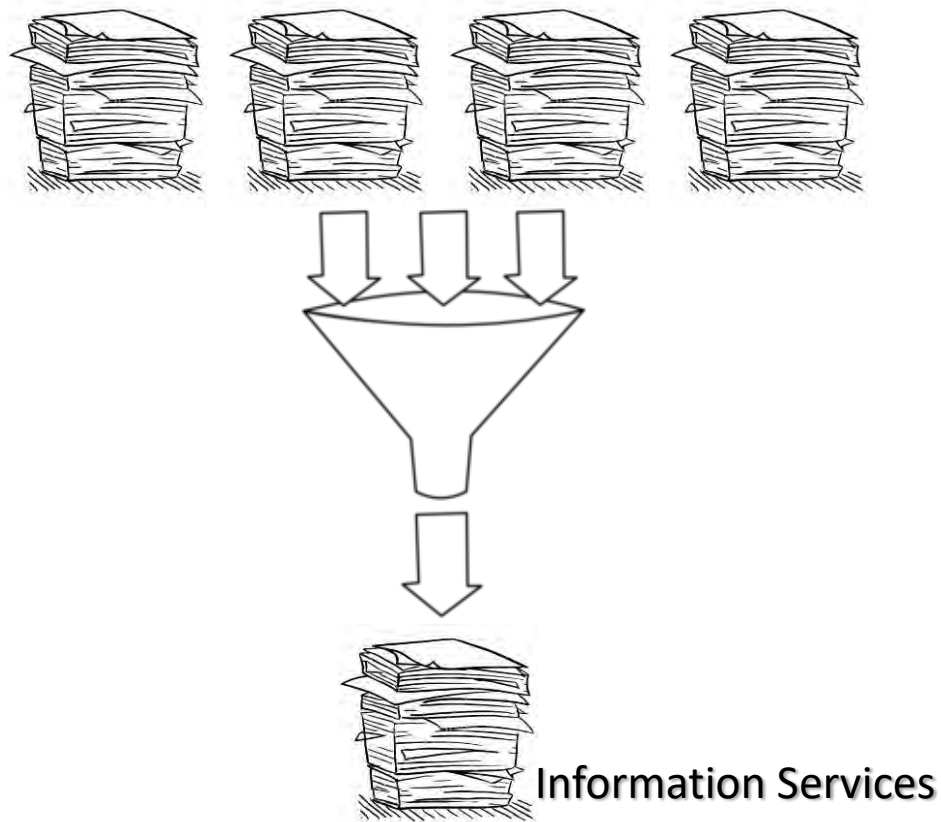


The U of R can reduce our electricity consumption by **147359 kWh per year** by optimizing our print environment.

The annual energy savings from the optimization could power **17 homes** in Saskatchewan for one year!

Source: SaskPower

Responsibility for Print at U of R



What's Next?

- Nearing the end of a 2nd 5 year contract (consolidating 11 leases to 7).
- Goal is to continue device count reduction.
- Document Management: Content by Perceptive, and Hyland Software.
- Accommodate electronic workflows with scanners.
- Continue to manage device counts.
- Continue to measure!

Lessons Learned

- You can't manage what you don't measure! (Bill Hewlett, Hewlett-Packard co-Founder). Begin by capturing metrics on:
 - Quantity and types of devices (inkjet vs laser) per floor, faculty, and number of people sharing a device.
 - Volumes printed
 - Paper consumed
 - Costs
- Keep Measuring!
- You need to have the appropriate authority to manage the entire process (all print processes, not just printer fleet). Create the necessary university level policies.
- Get Senior Leadership support and get them to walk the talk (example).
- Empathize – understand how the device affects the department workflow, the user's workflow, etc.



Lessons Learned

- **Communications**
 - Utilize internal Communications Department to assist with communications plan.
 - Develop an Organizational Change Management Plan. End Users need to understand “what’s in it for me?”.
 - Marketing can’t start too soon. Tout the benefits.
 - Report on progress to C-Level Management (VP, Provost, President) regularly.
- **Customer Satisfaction**
 - Important to measure baseline before (conduct a survey).
 - Follow up and address issues after.
- **Emotional Attachments**
 - Do not underestimate Emotional Attachment to print devices.
 - Many people are apparently emotionally attached to their personal printers.
 - Some are not interested in the environment or the bigger picture.
 - Convenience of legacy personal devices is hard to compete with.

Key People Who Made it Happen

- Vianne Timmons, President
- Dave Button, VP Administration
- Tom Chase, Provost and VP Academic
- David Wilson, AVP Information Services

- Ray Konecsni, Project Manager (Director, IS Customer Support Services)
- Rita Matt, Assistant Manager, Printing Services
- Judy Peace, Manager, Printing Services
- Ryan Bazylewski, Sr. Print Technician
- Lori Pelletier, Manager IT Support Group
- U of R Network Services staff, Drew Baldock, Mark Haidl, Dianne Haskewich

Project Recognition

★ Awards ★

- ★ Runner up for InfoTech's "Greenest IT in Canada Award" in November 2011.
- ★ Won the University of Regina Service Excellence Award.
- ★ Winner of the RCE Sask. (Regional Centre of Expertise on Education for Sustainable Development) Award in 2012 and 2017.
- ★ Received CUPMAC's Green Award, June 2016.

Project Recognition

- Whitepapers and Articles

- Featured in U of R Report “Writ Large” in February 8, 2010.
- Featured in the U of R Blog “Its just a small printer” in 2011.
- Featured in the U of R’s “The Place for Sustainability” video in 2012 (<https://youtu.be/3iL2YOZ1zYM>).
- Featured by the manufacturer, Lexmark as a feature success story white paper in 2011.
- Featured in an article in IT Canada Magazine July/August 2011 *Cum Laude Paper Policies*.
- Featured as a case study white paper by Print Operations Group in November 2011.
- Featured as a success story white paper by WBM in 2011.
- Featured in Purchasing B2B Magazine April 9, 2012.
- Featured in the President’s report to the community (Sustainability).
- Published in NACAS “College Services” magazine in April 2016.
- Interviewed by Computerworld Canada in August 2012.

- Conferences and Webinars

- Presentation on Print Optimization NACAS Canada day in June 2012.
- Presentation on Print Optimization at CANHEIT in June 2012.
- Conducted a web conference with CUPMAC members in 2015.
- Presented at CUPMAC’s 50th Anniversary Conference in 2017.

Project Recognition

Some of the organizations we have talked to about the project:

- Sask. Polytechnic
- City of Vancouver
- Tarrant County College (Fort Worth Texas)
- University College (London England)
- University of Connecticut
- Algonquin College
- University of California
- University of Waterloo
- Southeast Regional College, Saskatchewan
- Conexus Credit Union
- University of Winnipeg
- University of Manitoba
- University of Lethbridge
- Bloomfield College
- SaskPower
- City of Regina
- Red River College
- Lakehead University (Thunder Bay)
- Regina Catholic School Division
- OCAD University (Toronto)
- School District 38 (Richmond BC)
- Middle State Tennessee University
- E and I Cooperative Services (Long Island New York)
- University of Calgary
- Western University in Ontario
- Carleton University
- University of Ottawa
- York University
- University of Washington
- Stony Brook University in New York
- University of Saskatchewan
- Franklin County Public Schools, Rocky Mount Virginia
- Saskatchewan Indian Institute of Technologies
- Laurentian University
- Northern Alberta Institute of Technology

Questions?

Thank you!