



Honorable Mention

2007 Jürgen Schönhut Memorial CIPPI Award

**Achieving Outstanding Customer Responsiveness as a
Result of Process Automation**

McCallum Printing Group Inc.

Section I: Background

Company's History

In January 2004, McCallum Printing Group was founded by a group of highly-recognized print experts in Edmonton. All 29 shareholders are also employees and many have worked together in previous companies founded and run by McCallum Printing Group's CEO, Richard McCallum.

The ownership structure of the company is extremely unique. A significant portion of McCallum Printing Group's employees are also shareholders. This means that everyone involved has a vested interest in making the company a success and building long-term customer relationships. We believe the ownership structure has also allowed the company to attract superior employees with the right attitude and skill sets. All of our employees, from the bindery to the reception desk, care about customers and pay attention to the details. They are all experts in their fields and consistently produce high-quality work.

The company's manufacturing plant and sales office is located in downtown Edmonton with 84 full-time and 6 part-time staff. We also currently operate three copy centers and one sales office at the University of Alberta, as well as a sales office in Vancouver, British Columbia.

Detailed Application Information

McCallum Printing Group's team of veterans understood the potential impact of building a new company from scratch. The group was able to incorporate the newest workflow tools, providing customers with a higher level of service than they had ever been exposed to before.

Our management team comes with decades of knowledge and experience and has always had an appetite to be involved with the latest technology. We are leaders in our market for the delivery of time sensitive product. We have a proven track record for providing on time delivery, high quality and competitive prices. Building on these principals, we've significantly exceeded all of our financial objectives, with sales that will exceed \$17.5 million (Canadian) this year.



We've found that new clients typically migrate small, low risk orders to us first, and after experiencing our superior quality and service will move the remainder of their print requirements to McCallum. In our market it seems that the single biggest factor for changing service providers is on-time product delivery.

We believe the Management Information System from Heidelberg (Prinance) has played a major role in our ability to provide exceptional service to clients. For our clients, sales, production or administration we have the information to create job data and manage production of the job data at a high level of efficiency creating it once and purposing it as needed.

Workflow Environment and Conditions Prior to Implementation

As mentioned earlier we started McCallum Printing Group in January 2004 so we had no prior conditions to compare against other than past experience. The environment that the workflow exists today evolved over the past three years and continues to evolve to this day.

Section II: Objectives

Motivation

When we started McCallum Printing we knew that computer-integrated manufacturing would soon be more than a dream of engineering gurus. The need to do more with less was one of our main focuses. We were also striving to build a company that would consistently meet and/or exceed the following benchmarks day in day out. In all cases we've been able to achieve these benchmarks and in most cases surpass them, making McCallum stand out in our market as a service leader.

- over 100 estimates per day by one estimator
- complete automated shop floor data collection with no human intervention
- estimates to quote letters are fully automated
- estimates to job tickets are fully automated
- job tracking system with full automation on CP 2000 presses
- detailed cost to estimate on the cost sheet

These goals were established knowing from our past experiences what the market place has come to expect from the printing industry. One hundred quotes plus per day in our market sector is a difficult task for any company. Our ability to achieve this has enabled our sales team to accept orders and often produce orders before the competition has even replied with an offer letter.

Qualitative Goals

- Provide speed of service that the competition would have difficulty matching
- Managing the speed of information coming in for order entry and have the ability to create Job Tickets for production in a matter of minutes with concise data

- From order entry to delivery, having the ability to use the information that resides in our Management Information System and purpose the information to do many tasks
- Standardize the information that goes into production to assist in eliminating errors
- Provide estimates on the same day 85% of the time
- Provide shareholders with consistent double digit profitability

Quantitative Goals

- The standardization of order entry has provided our staff clear understanding of the tasks that they have to perform.
- From Direct Access the sales team and/or a client can enter job specifications that fill estimating fields to create an estimate. Jobs can be estimated in 2 to 3 minutes.
- The quote letter is generated from the estimate through scripted macros to create a Microsoft Word file. Order confirmations can be created in the same manner.
- The Job Ticket is generated using estimate data and the planner who is responsible for creating the ticket adds any additional information that came in with the order supplementing the estimate information. At the same time a Job Ticket is created, a Paper Ticket is also created so that the receiving department can manage the incoming paper.
- The planner has the ability to send a JDF folding scheme into prepress that can be auto filled by the prepress department. The proof can be generated with a savings of up to 10 minutes of production time on a 16 page signature.
- The information from the management information system provides the press with sheet size and thickness of the paper which allow the preset functions of the press to carry out the automated setup functions.
- Cost sheets show estimated costs versus actual costs.
- Linking information such as stock status to the Work In Progress report.
- Address management is very flexible.
- Sales Analysis provides time period comparison for monitoring of large orders year to year.
- Ability to customize searches in the Archives.
- Invoice produced from existing data eliminates re-keying information.

Section III: Methodology

We had the opportunity over the years to see a number of MIS systems including Programmed Solutions, Parsec and Hagen.

We watched as the MIS industry evolved with printCafé and PrintTalk and the subsequent mergers and positioning of the remaining companies providing integrated solutions to the printing industry. There was an air of uncertainty in what was possible as far as integration was concerned.



We also wanted to align our company with a vendor that would grow with our needs and have more at stake than just a MIS system. Concern existed regarding dealing with multiple vendors as we thought situations could arise where issues may not be resolved effectively due to competing vendors refusing to work together. This would ultimately negatively affect our business.

Heidelberg's Prinance was a great fit for our company and we found a comfort level with Heidelberg, confident that they were in the MIS business to stay. From our perspective it was a natural fit for the equipment manufacturer to be involved with integration of the printing process.

Section IV: Implementation

Timeline

We implemented Prinance for approximately six staff members and the training was over a three day period. After which we were left to our own devices to solve issues and learn from our mistakes. Prinance was implemented with the following milestones:

Day 1

- Estimating and quote letter generation
- Job ticket creation from the estimate
- Job costing from a cost sheet
- Delivery notes from Prinance

After 6 months

- Capacity planning tools implemented for scheduling with data from the estimates
- Statistical analysis from our clients developed from the MIS system
- Job status update from shop floor data

After 1 Year

- Install VPN to do remote access of estimating, plate-making and press room monitoring from any location

After 2 Years

- Paper catalogue developed in estimating for automated material costs
- Implement Direct Access for sales staff and clients - the data for quotation requests feeds estimating with the information to create an estimate in 1 to 2 minutes
- Implement CP 2000 shop floor data collection for presses (full automated data collectors that feed all tasks completed and materials used to complete a job to the cost sheet)

After 3 Years

- Develop the ability to push folding scheme down through signastation and have the JDF information available for pre press to auto fill the layouts
- Implement Prinect press room reporting that provides statistical data of all production completed



Training

The training that we initially received from Heidelberg just opened the door to Prinance; we were up and running which was the #1 objective. The need for additional training and ongoing training for our staff was important to the growth of our company. Heidelberg Canada had very limited resources for training mainly due to the product Prinance was very new to the North American market and they had only one individual who worked out of Atlanta, Georgia who could provide training.

We knew as a company that training in a JDF workflow had to be developed. So McCallum Printing embarked on a training program with the assistance of NorQuest College (a local community college) that provided entry level training in printing. Our goal was to add an additional element to the training, with the ability to educate future students in a fully functional JDF environment and have students bring new skills to the workplace, such as estimating, job planning and costing. The need to address this sector of the printing industry was also important due to the aging workforce that typically held these higher-skilled positions in many printing plants in our region.

Heidelberg Canada also saw the need for a training facility that would assist their customer base to acquire training with Prinance and provide a JDF experience for their clients. With the partnership established, the college created a working lab with ten seats of Prinance and ten seats of Printready available, to not only the student base, but industry too.

Training of NorQuest staff was completed and a two year program for students developed. One of the first students from the NorQuest College program was employed as an estimator / planner by McCallum Printing Group during the summer semester break and we are very excited with the potential we see with this individual.

As JDF workflows are not implemented in many printing facilities, it will become increasingly important to have this type of program available to the industry. We now can train new employees and improve skills of existing employees in a more structured environment at NorQuest College.

Experiences / Obstacles

Obstacles are inevitable with a new implementation of software and or hardware. One of the initial obstacles were our employee base. We would often hear “that’s not how we used to do it.” We had to change mindsets and old habits to get to where we are today. In the end, it was the realization from our employees that things did run smoother, faster and with less effort in the JDF world than the non-integrated world.

There are still issues with the existing software that we will see addressed by Drupa 2008. Namely, conflicts with North American measurements, most notably grams per square meters vs. pounds per 1000 sheets. There is a built-in converter that does not always give a perfect conversion, but close enough so that we can easily work with the results. It is doubtful that North America will work in grams per square meter for a number of years, so with a North American standard system enabled, we hope to open up other modules of Prinance.



Training for the more in-depth aspects of Prinance was a challenge. We are very excited about what we have achieved at NorQuest College to date, as mentioned earlier. I think the highlight of what NorQuest College can do was in May of this year, when ten printing companies from North America (two of which came from Mexico City) completed a session at NorQuest College, test driving the JDF experience with the Prinect workflow, developed by Heidelberg and spearheaded by McCallum Printing Group.

Section V: Resulting Workflow/Processes

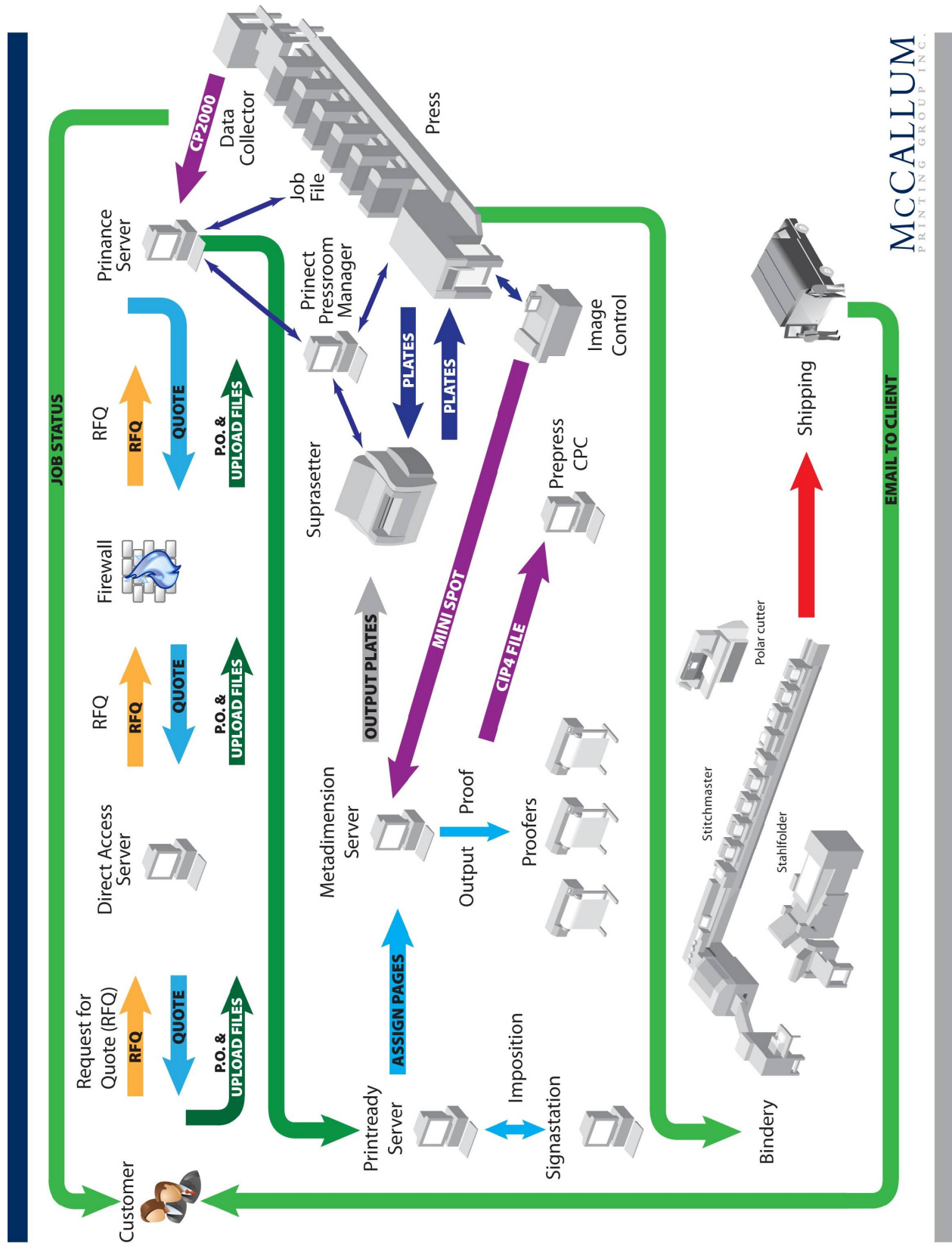
Workflow

In a typical print job, the workflow may be as follows:

- Customer submits a request for a quote online through Direct Access
- Estimator supplies price(s) through Prinance's estimating module
- Customer accesses quote via Direct Access
- Customer approves quote and supplies purchase order number and uploads files for job, if necessary, all via Direct Access
- Planner is alerted to new order in Prinance and confirms details and outputs a stock ticket and job ticket which also then creates a JDF file
- JDF file is automatically imported into the Printready server and creates job ticket for prepress work
- JDF file contains imposition information and communicates with Signastation to complete imposition layout
- RIPPed pages (PDFs) are assigned to the imposition layout and proof(s) output to plotter
- Proofs may also be emailed to customer using JDF information
- Upon approval of proofs, plates are output on Suprasetter and a CIP4 file sent to the Prepress CPC
- Prinect Pressroom Manager oversees all aspects of post-prepress (plating, scheduling, quality control, press)
- Image Control is used for quality control and sends mini spot data back to the Metadimension servers
- Job data (sheet size and stock thickness) is communicated to press from Prinance
- Press automatically sends live job data to the Prinance server
- The press operator can request the output of plates directly from their press console
- Bindery equipment will use JDF info or the job ticket to set up equipment for finishing the print job
- Shipping department will use Prinance to generate shipping labels and packing slips
- Final shipment in Prinance will trigger an email alert to customer

All throughout the progress of the print job, shop floor data collectors are used to update the status of the print job. From the proofing cycle, to receiving the stock, to outputting plates, a print job's status can be readily checked internally through Prinance or any shop floor data collector. Finding a print job in the shop is no longer a huge time consumer. This status information can also be displayed through the Direct Access server so that customers can check the status of their jobs themselves.

(See workflow on next page.)



Vendor and Product Names

Heidelberg is the vendor of the Management Information System that falls under the Prinect workflow with the following products and versions:

- Prinance version 4.56
- Printready version 3.0
- Metadimension version 6.2
- Signastation version 3.0.10
- CP 2000 data collector
- Prinect Pressroom reporting
- Pressroom interface
- Image control
- Shop floor data collectors

Section VI: Biggest Improvement in Efficiency and Customer Responsiveness as a Result

Scheduling

In our marketplace, the ability to take on rush orders and provide next day delivery is challenging to all staff involved. Prinance gives us the ability to have precise schedules for the equipment, giving us the information to make effective decisions on equipment loading. Again, the information is repurposed from the estimate eliminating any order entry or scheduling board tickets. The whole scheduling process can be completed in minutes a day and the accuracy of the schedule provides you the confidence to make commitments to customers that makes many sleepless nights for the competition.

Results to Date

As a commercial printing company that is equipped and focused on providing service in a very competitive market, there is no doubt in our mind that our ability to provide clients overnight service on their projects while having the ability to concurrently track the events that are taking place with any order at any time of day, has given many clients the desire to use our company as their preferred supplier. Prinance and the tools that we use in the program have enabled us to increase our sales in the first year of business from \$13 million Canadian to \$17.5 million Canadian in 2007 with an increase of only 1 person in administration. The profit margin has been outstanding and would likely put us in the highest percentile of NAPA printing companies as measured by profit percentage as compared to sales.

Profits to Date

Have always exceeded double digit profit as a percentage of sales and can be audited to substantiate.



Testimonials

Dropping a line to say “great job” on the latest Community Report project. Received in good order today and the prints look great!

Thanks very much to you and McCallum Printing for your continued, quality service to our College.

Talk to you soon.

Martin Schuldhaus
Acting Manager, Communications

I just wanted to pass along a huge thank you to you and all the staff involved in printing the Dare to Deliver Academic Plan. The entire process went incredibly smoothly from beginning to end and the printed piece turned out exactly as I had hoped it would. Many thanks for a job very well done and for turning this around in such a short timeline as well. Please pass along my gratitude to everyone.

Best regards,

Marcey

I just wanted to say a quick ‘Thank You’ to both of you for getting all those items to us on Friday. They all arrived in time, not to mention the FANTASTIC job you guys did on the boxes and the Kellett items. You are so great to deal with and I do appreciate the extras you guys do :)

I will inform Santa as we are practically neighbours.

Thanks again,

Tammie



ASSET MANAGEMENT AND PUBLIC WORKS

MEMORANDUM

March 1, 2007

To: Fadiel Razkalla
Production Coordinator
Communications Services

From: Terry J. Loat, Manager
Housing Branch

Subject: Housing Brochure

Please accept my thanks for the great work and commitment you provided in working with my communications advisor Denise Gee in creating the *Building the Capital Partnership - Growing Housing Needs and Effective Edmonton Solutions* brochure.

Thank you for accommodating the extremely short timelines and I commend your suppliers, John Smith and Rachel Loveless from Artsmith Design, and Carey Prins from McCallum Printing on the great turnaround to design, print, and then reprint our document in time for the February 21 presentation to the provincial Affordable Housing Task Force. The City of Edmonton put forward a positive image and message with the document.

Thanks again for a job well done.



TJL/smf

c: Mary Pat Barry, Branch Manager, Communications
Denise Gee, Communications, AM&PW



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Attn: Sandra Pysklywyc

Re: Letter of Reference for McCallum Printing Group

Dear Sandra,

It is with great confidence that I provide a letter of reference for McCallum Printing Group and their sales representative Craig Bell. As a member of the Western Canada Summer Games Strathcona County Municipal team, I have no doubt that McCallum Printing will provide top quality, professional, on-time and on-budget products and service.

As Coordinator of Marketing and Business Development for Strathcona County Economic Development and Tourism, I spend a great deal of time producing and co-producing brochures and lure pieces to market Strathcona County, Greater Edmonton and other regional projects. Not only has McCallum Printing continuously come in as one of the lowest bidders on all projects, but they have continuously provided us with exemplary service. I cannot count the number of times Craig Bell has hand delivered proofs, only to come back a few hours later to pick them up again.

I have referred Craig and McCallum Printing to a number of other colleagues, including the Sherwood Park and District Chamber of Commerce, and am happy to provide a reference for them for the Western Canada Summer Games.

If you have any questions, please don't hesitate to contact me at 464-8259.

Best regards,



Erica Thomas
Coordinator, Business Development and Marketing
Strathcona County Economic Development and Tourism



A quick hello to say thank you for doing such a fabulous job with cards and brochures. We were very happy with the final product and the brochures were perfect. It was such a joy to work with you and your team and you were exceptionally helpful through the whole process.

Thank you and I look forward to working with you again in the near future.

Aleina Whytock
Just for You Intimate Dining

Absolutely OUTSTANDING.

They look terrific and I'm sure they will be a great hit at the sales conference. We will have them in each of our offices by Monday morning for the sales teams.

Thanks again for the quick turnaround, great quality and service.

Antonina MacDonald
Manager, Event & Merchandising
Pattison Outdoor Advertising
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I had the pleasure of seeing the SIGUCCS conference materials in their final form earlier this week. Very nice work on the printing; the program, session abstract and personal schedule all looked professional and, you will be delighted to know, received a round of applause from a group of attendees.

Thank you for your professionalism. It was a pleasure working with you.

Best regards,

Linda



Thank you for the annual report samples.

And thank you for the team work Marc, Odette, Bev, and Sandra.

Marvin and his gang are very, very pleased with it which makes me very, very pleased.

The printing and paper stock is beautiful Bonar.

Nice work everyone!!

With appreciation and pride,

Cynthia

I just had a chance to take a look at the new folder...Absolutely Stunning!! You folks did an amazing job; the orange look even better, the silver actually looks like silver and the registration is razor sharp.

Thanks a bunch and please thank your team for us as well. Great Work!!

Scott Lauder
Art Director
Chalk Media – ‘The experts in how-to content’
slauder@chalk.com